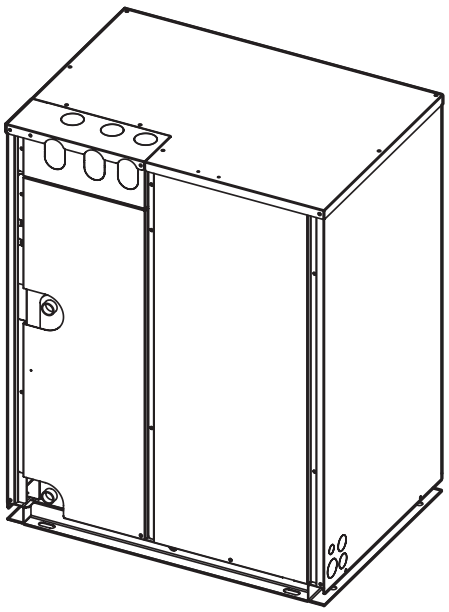
ENGINEERING MANUAL

INVERTER-DRIVEN MULTI-SPLIT SYSTEM
HEAT PUMP AND HEAT RECOVERY AIR CONDITIONERS



Engineering Manual

< Water Source Units >

208/230V

(H,Y)VWH(P,R)072B32S, (H,Y)VWH(P,R)096B32S,
(H,Y)VWH(P,R)120B32S, (H,Y)VWH(P,R)144B32S,
(H,Y)VWH(P,R)168B32S, (H,Y)VWH(P,R)192B32S,
(H,Y)VWH(P,R)216B32S

460V

(H,Y)VWH(P,R)072B42S, (H,Y)VWH(P,R)096B42S,
(H,Y)VWH(P,R)120B42S, (H,Y)VWH(P,R)144B42S,
(H,Y)VWH(P,R)168B42S, (H,Y)VWH(P,R)192B42S,
(H,Y)VWH(P,R)216B42S

TC-18006

IMPORTANT NOTICE AND SAFETY SUMMARY

1. Introduction

This Engineering Manual concentrates on heat pump and heat recovery air conditioning units.
Read this manual carefully before performing installations or operations.

This manual should be considered as a permanent part of the air conditioning equipment and should remain with the air conditioning equipment.

(Transportation/Installation Work) > (Refrigerant Piping Work) > (Electrical Wiring Work) > (Ref. Charge Work) > (Test Run) > (User)

2. Important Safety Instructions

Signal Words	
⚠ WARNING	Indicates a hazardous situation that, if not avoided, could result in death or serious injury.
⚠ CAUTION	Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates information considered important, but not hazard-related (for example, messages relating to property damage).

General Precautions

⚠ WARNING	To reduce the risk of serious injury or death, read these instructions thoroughly and follow all warnings or cautions included in all manuals that accompanied the product and are attached to the unit. *Refer back to these safety instructions as needed.*

- This system should be installed by personnel certified by Johnson Controls, Inc. Personnel must be qualified according to local codes and regulations. Incorrect installation could cause leaks, electric shock, fire or explosion. In areas where Seismic Performance requirements are specified, the appropriate measures should be taken during installation to guard against possible damage or injury that might occur in an earthquake. If the unit is not installed correctly, injuries may occur due to a falling unit.
- Use appropriate Personal Protective Equipment (PPE), such as gloves and protective goggles and where appropriate, have a gas mask nearby. Also use electrical protection equipment and tools suited for electrical operation purposes. Keep heat shields, fire blankets, and a fire extinguisher nearby during brazing. Use care in handling, rigging, and setting of bulky equipment.
- When transporting, be careful when picking up, moving, and mounting these units. Although the unit may be packed using plastic straps, do not use them for transporting the unit from one location to another. Do not stand on or put any material on the unit. Get a partner to help, and bend with your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut fingers, so wear protective gloves.
- Do not touch or adjust any safety devices inside the indoor or water source units. All safety features, disengagement, and interlocks must be in place and functioning correctly before the equipment is put into operation. If these devices are improperly adjusted or tampered with in any way, a serious accident can occur. Never bypass or jump-out any safety device or switch.
- Johnson Controls will not assume any liability for injuries or damage caused by not following steps outlined or described in this manual. Unauthorized modifications to Johnson Controls products are prohibited as they…
  - May create hazards which could result in death, serious injury, equipment damage, or property damage;
  - Will void product warranties;
  - May invalidate product regulatory certifications;
  - May violate OSHA standards;

NOTICE	Take the following precautions to reduce the risk of property damage.

- Be careful that moisture, dust, or variant refrigerant compounds not enter the refrigerant cycle during installation work. Foreign matter could damage internal components or cause blockages.
- If air filters are required on this unit, do not operate the unit without the air filter set in place. If the air filter is not installed, dust may accumulate and breakdown may result.
- When installing the unit in a hospital or other facility where electromagnetic waves are generated from nearby medical and/or electronic devices, be prepared for noise and electronic interference Electromagnetic Interference (EMI). Do not install where the waves can directly radiate into the electrical box, controller cable, or controller. Inverters, appliances, high-frequency medical equipment, and radio communications equipment may cause the unit to malfunction. The operation of the unit may also adversely affect these same devices. Install the unit at least 10 ft. (approximately 3m) away from such devices.
- When a wireless controller is used, locate at a distance of at least 3.3 ft. (approximately 1m) between the indoor unit and electric lighting. If not, the receiver part of the unit may have difficulty receiving operation commands.
- Do not install the unit with any downward slope to the side of the drain adaptor. If you do, you may have drain water flowing back which may cause leaks.
- Be sure the condensate hose discharges water properly. If connected incorrectly, it may cause overflow.
- Do not install the unit in any place where oil can seep onto the units, such as table or seating areas in restaurants, and so forth. For these locations or social venues, use specialized units with oil-resistant features built into them. In addition, use a specialized ceiling fan designed for restaurant use. These specialized oil-resistant units can be ordered for such applications. However, in places where large quantities of oil can splash onto the unit, such as a factory, even the specialized units cannot be used. These products should not be installed in such locations.
- Do not install the unit where water can seep into the unit or where there is high humidity that can affect the unit.

Installation Precautions

⚠ WARNING	To reduce the risk of serious injury or death, the following installation precautions must be followed.

- When installing the unit into…
  - A wall: Make sure the wall is strong enough to hold the unit's weight. It may be necessary to construct a strong wood or metal frame to provide added support.
  - A room: Properly insulate any refrigerant tubing run inside a room to prevent "sweating" that can cause dripping and water damage to walls, floors, or property within the space.
  - Damp or uneven areas: Use a raised concrete pad or concrete blocks to provide a solid, level foundation for the unit to prevent water damage and abnormal vibration.
- Do not install the unit outdoor, do not install the unit in the following places. Doing so can result in an explosion, fire, deformation, corrosion, or product failure.
  - Explosive or flammable atmosphere
  - Where fire, oil, steam, or powder can directly enter the unit, such as in close proximity or directly above a kitchen stove.
  - Where oil (including machinery oil) may be present.
  - Where corrosive gases such as chlorine, bromine, or sulfide can accumulate, such as near a hot tub, hot spring or swimming pool.
  - Where dense, salt-laden airflow is heavy, such as in coastal regions.
  - Where the air quality is of high acidity.
  - Where harmful gases can be generated from decomposition.
- Do not install the unit in the place where water may enter the unit.
- Do not position the condensate pipe for the indoor unit near any sanitary sewers where corrosive gases may be present. If you do, toxic gases can seep into breathable air spaces and can cause respiratory injuries. If the condensate pipe is installed incorrectly, water leakage and damage to the ceiling, floor, furniture, or other property may result. If condensate piping becomes clogged, moisture can back up and can drip from the indoor unit. Do not install the indoor unit where such dripping can cause moisture damage or uneven locations. Use a raised concrete pad or concrete blocks to provide a solid, level foundation for the unit to prevent water damage and abnormal vibration.

- Before performing any brazing work, be sure that there are no flammable materials or open flames nearby.
- Perform a test run to ensure normal operation. Safety guards, shields, barriers, covers, and protective devices must be in place while the compressor/unit is operating. During the test run, keep fingers and clothing away from any moving parts.
- Clean up the site when finished, remembering to check that no tools, metal scraps, or bits of wiring have been left inside the unit being installed.
- During transportation, do not allow the backrest of the forklift make contact with the unit, otherwise, it may cause damage to the unit and also may cause injury when stopped or started suddenly.
- Remove gas inside the pipe closure (cap) when the brazing work is performed. If the brazing filler metal is melted with remaining gas inside, the pipes will be blown off and it may cause injury.
- Be sure to use nitrogen gas for an airtight test. If other gases such as oxygen gas, acetylene gas or fluorocarbon gas are accidentally used, it may cause explosion or gas intoxication.

After installation work for the system has been completed, explain the “Safety Precautions,” the proper use and maintenance of the unit to the customer according to the information in all manuals that came with the system. All manuals and warranty information must be given to the user or left near the Indoor Unit.

Water Piping Precautions

NOTICE	Take the following precautions to reduce the risk of property damage.

- Select the water piping according to local or national regulation.
  Supply water must be clean tap water or industrial water. (Refer to Section 6.4 “Water Quality Requirements” for details.)
- Do not connect the drain outlet to the water piping.
  Install condensate piping to proper drainage. Improper condensate piping may result in water leakage and property damage.
- Perform piping work in such a way no water may drop on the service panels of the water source unit. Securely fasten the service panels. Otherwise, dust or water may enter the unit causing fire or electric shock.
- Water source unit must be used with closed type cooling tower. Open type cooling tower can not be used.
  Be sure to check the water pipeline construction, water quality monitoring, and water treatment.
- This product is equipped with plate type heat exchangers. In the plate type heat exchanger, water flows through a narrow space between the plates.
  Water strainer must be installed at the water inlet side of water piping near the product.
  Otherwise, impurities and water scales will damage heat exchanger. Be sure to regularly clean the strainer according to the clogging degree.
- Perform thermal insulation up to the water inlet/outlet of heat exchanger and the water piping to prevent sweating and freezing.
  Otherwise, damage may be caused by freezing during low ambient temperature and thermal loss.
  Amount of insulation depends on pipe temperature, air temperature, and humidity.
- Be sure to check the position of connection pipe. Do not connect inlet and outlet pipe reversely.
  Connection pipe and pipe joint on heat exchanger should be removal to make operation and clean work more convenient.
- There must be an extra bracer to support piping and piping joints. Use a sleeve to protect the pipes at the point where they go through a wall.
- Perform a thorough inspection of the unit to check for leaks both inside and outside of the system.
  Open fully the water inlet and outlet valves to the unit. Ensure valve flow to the inlet and outlet piping.
  Ensure air purge and drain valves are functioning on the water piping.
  Remove the valve handle to prevent the valve from being opened. If this valve is opened during operation, water blow-off can cause disruption.
  Set the drain valve at lower points in the water system to allow thorough discharge of water to the heat exchanger and system.
- When shutting down the unit for a long period, drain the water from the water piping by opening the drain plug or the air purge plug.

- In winter, when the ambient temperature is low, equipment and piping can be damaged during the shutdown periods at night, because the water in the pump or piping will be frozen. To prevent the water from freezing operate the pumps even during the shutdown periods. In case there is still a danger of freezing, completely drain the water from the piping. After a long stoppage, be sure to check and clean the unit in the water system thoroughly before initial startup.

Refrigerant Precautions

⚠ WARNING	To reduce the risk of serious injury or death, the following refrigerant precautions must be followed.

- As originally manufactured, this unit contains refrigerant installed by Johnson Controls. Johnson Controls uses only refrigerants that have been approved for use in the unit's intended home country or market. Johnson Controls distributors similarly are only authorized to provide refrigerants that have been approved for use in the countries or markets they serve. The refrigerant used in this unit is identified on the unit's faceplate and/or in the associated manuals. Any additions of refrigerant into this unit must comply with the country's requirements with regard to refrigerant use and should be obtained from Johnson Controls distributors. Use of any non-approved refrigerant substitutes will void the warranty and will increase the potential risk of equipment damage, property damage, personal injury, or death.
- Take measures to ensure that the refrigerant limitations in ASHRAE Standard 15 (Canada: B52), or other local codes, are followed. If refrigerant gas has leaked during the installation work, ventilate the room immediately.
- Check the design pressure for this product is 601 psi (4.15MPa). The pressure of the refrigerant R410A is 1.4 times higher than that of the refrigerant R22. Therefore, the refrigerant piping for R410A must be thicker than that for R22. Be sure to use the specified refrigerant piping. If not, the refrigerant piping may rupture due to an excessive refrigerant pressure. Pay attention to the piping thickness when using copper refrigerant piping. The thickness of copper refrigerant piping differs depending on its material.
- The refrigerant R410A is adopted. The refrigerant oil tends to be affected by foreign matters such as moisture, oxide film, or other non-condensables. Perform the installation work with care to prevent moisture, dust, or different refrigerant from entering the refrigerant cycle. Foreign matter can be introduced into the cycle from such parts as expansion valve and the operation may be unavailable.
- To avoid the possibility of different refrigerant or refrigerant oil being introduced into the cycle, the sizes of the charging connections have been changed from R407C type and R22 type. It is necessary to prepare the tools listed in Section 3.2 before performing the installation work.
- Use refrigerant pipes and joints which are approved for use with R410A.
- A compressor/unit comprises a pressurized system. Never loosen threaded joints while the system is under pressure and never open pressurized system parts.
- Before installation is complete, make sure that the refrigerant leak test has been performed. If refrigerant gases escape into the air, turn OFF the main switch, extinguish any open flames and contact your service contractor. Refrigerant (Fluorocarbon) for this unit is odorless. If the refrigerant should leak and come into contact with open flames, toxic gas could be generated. Also, because the fluorocarbons are heavier than air, they settle to the floor, which could cause asphyxiation.
- When installing the unit, and connecting refrigerant piping, keep all piping runs as short as possible, and make sure to securely connect the refrigerant piping before the compressor starts operating. If the refrigerant piping is not connected and the compressor activates with the stop valve opened, the refrigerant cycle will become subjected to extremely high pressure, which can cause an explosion or fire.
- Tighten the flare nut in the indoor unit with a torque wrench in the specified manner. Do not apply excessive force to the flare nut when tightening. If you do, the flare nut can crack and refrigerant leakage may occur.
- When maintaining, relocating, and disposing of the unit, dismantle the refrigerant piping after the compressor stops.
- When pipes are removed out from under the piping cover, after the insulation work is completed, cover the gap between the piping cover and pipes by a packing (field-supplied). If the gap is not covered, the unit may be damaged if snow, rain water or small animals enter the unit.

- Do not apply excessive force to the stop valve at the end of opening. Otherwise, the stop valve flies out due to refrigerant pressure. At the test run, fully open the gas and liquid valves, otherwise, these devices will be damaged. (It is closed before shipment.)
- If the arrangement for water source units is incorrect, it may cause flowback of the refrigerant and result in failure of the water source unit.
- The refrigerant system may be damaged if the slope of the piping connection kit exceeds $\pm 15^{o}$.

Electrical Precautions

⚠ WARNING	Take the following precautions to reduce the risk of electric shock, fire or explosion resulting in serious injury or death.

- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate grounding can cause property damage, serious injury, or death.
- Perform all electrical work in strict accordance with this manual and all the relevant regulatory standards.
- Before servicing, open and tag all disconnect switches. Never assume electrical power is disconnected. Check with meter and equipment.
- Only use electrical protection equipment and tools suited for this installation.
- Use specified cables between units.
- The new air conditioner may not function normally in the following instances:
  - If electrical power for the new air conditioner is supplied from the same transformer as the external equipment* referred to below.
  - If the power supply cables for this external equipment* and the new air conditioner unit are located in close proximity to each other.

    External Equipment*: (Example): A lift, container crane, rectifier for electric railway, inverter power device, arc furnace, electric furnace, large-sized induction motor and large-sized switch.

    Regarding the cases mentioned above, surge voltage may be inducted into the power supply cables for the packaged air conditioner due to a rapid change in power consumption of the device and an activation of a switch.
    Check field regulations and standards before performing electrical work in order to protect the power supply for the new air conditioner unit.
- Communication cable shall be a minimum of AWG18 ($0.82mm^2$), 2-Conductor, Stranded Copper. Shielded cable must be considered for applications and routing in areas of high EMI and other sources of potentially excessive electrical noise to reduce the potential for communication errors. When shielded cable is applied, secure properly and terminate cable shield as required per Johnson Controls guidelines. Plenum and riser ratings for communication cables must be considered per application and local code requirements.
- Use an exclusive power supply for the air conditioner at the unit's rated voltage.
- Be sure to install circuit breakers (ground fault interrupter, isolating switch, molded case circuit breaker and so on), with the specified capacity. Ensure that the wiring terminals are tightened securely to recommended torque specifications.
- Clamp electrical wires securely with a cable clamp after all wiring is connected to the terminal block. In addition, run wires securely through the wiring access channel.
- When installing the power lines, do not apply tension to the cables. Secure the suspended cables at regular intervals.
- Make sure that the terminals do not come into contact with the surface of the electrical box. If the terminals are too close to the surface, it may lead to failures at the terminal connection.
- Turn OFF and disconnect the unit from the power supply when handling the service connector.
  Do not open the service access cover or service panel to the indoor or water source units without turning OFF the main power supply.

- After ceasing operation, be sure to wait at least five minutes before turning off the main power switch. Otherwise, water leakage or electrical breakdown may result. Disconnect the power supply completely before attempting any maintenance for electrical parts. Check to ensure that no residual voltage is present after disconnecting the power supply.
- Do not clean with, or pour water into, the controller as it could cause electric shock and/or damage the unit. Do not use strong detergent such as a solvent. Clean with a soft cloth.
- Check that the ground wire is securely connected. Do not connect ground wiring to gas piping, water piping, lighting conductor, or telephone ground wiring.
- If a circuit breaker or fuse is frequently tripped, shut down the system and contact your service contractor.
- Perform all electrical work in accordance with this manual and in compliance with all regulations and safety standards.
- Do not open the service access cover or service panel of the indoor or water source unit without first turning OFF the power at the main power supply.
- Do not open the electrical box cover of the water source unit without first removing the condensate buildup on the covers.
- Residual voltage can cause electric shock. At all times, check for residual voltage after disconnecting from the power supply before starting work on the unit.
- This equipment can be installed with a Ground Fault Circuit Breaker (GFCI), which is a recognized measure for added protection to a properly grounded unit. Install appropriate sized breakers / fuses / overcurrent protection switches, and wiring in accordance with local codes and requirements. The equipment installer is responsible for understanding and abiding by applicable codes and requirements.

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1. General Information (Features)

VRF Air Conditioners

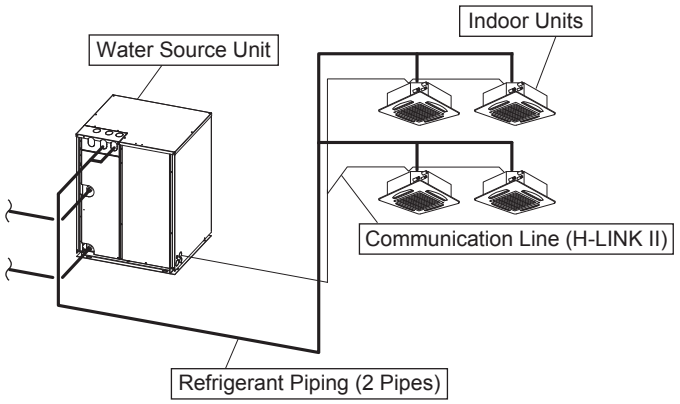
Johnson Controls proudly introduces new Variable Refrigerant Flow (VRF) air conditioners, a highly-efficient and reliable air-conditioning system. Currently, increased numbers of buildings are requiring "Intelligent" facilities that include communication networks, office automation, and a comfortable environment. In particular, a comfortable environment is becoming more of a year around requirement in office buildings. The VRF multi-split system air conditioner meets these requirements. The proven combination of the scroll compressor and inverter provides the best air conditioning for small and medium office buildings.

- VRF System
  Johnson Controls has developed the VRF system with its customers in mind.
  This system, which is unique in the world, allows the interconnection of indoor units for all our VRF air conditioners.

  This system provides the consumer with greater flexibility for installation, which means that the air-conditioning systems will integrate better within complex facility structures.

- Wide Product Range of Water Source Units
  Along with space, structure, and necessary functions, and in-line with evolution in building design, the requirements for air conditioning have also diversified.
  Because the most suitable unit can be selected from a wide range of heat pump and heat recovery type models, you can create a custom air conditioning environment to satisfy your specific building conditions.

System Configuration

<table>
<tr><th></th><th>Heat Pump System</th></tr>
<tr><td>System / Appearance</td><td> 
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<tr><td rowspan="3">System Device</td><td>Indoor Unit + Controller Option + ● Decorative Panel Option for Cassette Type + Other Optional Parts</td></tr>
<tr><td>Multi-Kit For Branch Connection of Indoor Units</td></tr>
<tr><td>Water Source Unit + Other Optional Parts</td></tr>
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: Required Equipment for System

: Optional Equipment depending on Application

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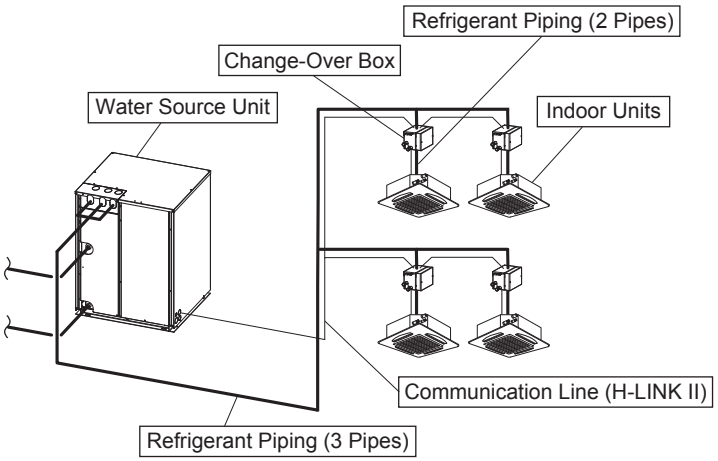
<tr><td></td><td>Heat Recovery System</td></tr>
<tr><td>System / Appearance</td><td> 
</td></tr>
<tr><td rowspan="4">System Device</td><td>Change-Over Box (Generation 2) (Single Branch Type or Multiple Branch Type)</td></tr>
<tr><td>Indoor Unit + Controller Option + ● Decorative Panel Option for Cassette Type + Other Optional Parts</td></tr>
<tr><td>Multi-Kit For Branch Connection of Indoor Units</td></tr>
<tr><td>Water Source Unit + Other Optional Parts</td></tr>
</table>

: Required Equipment for System

: Optional Equipment depending on Application

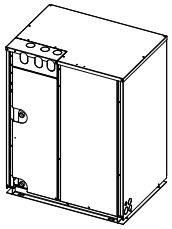
Series Line-Up

Water Source Unit

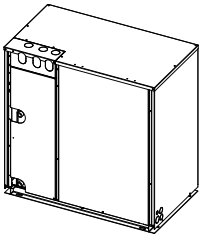
Series	Water Source Unit Capacity MBH (RT)						
	72 (6)	96 (8)	120 (10)	144 (12)	168 (14)	192 (16)	216 (18)
Water Source	★	★	★	★	★	★	★

★: New Line-up (Single Module)

72, 96, 120 MBH



144, 168, 192, 216 MBH

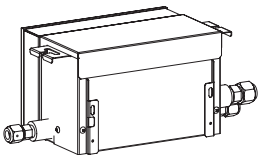


Change-Over Box (Generation 2) for Heat Recovery System

Series	Change-Over Box Capacity (Indoor Unit Maximum Connection Capacity) MBH				
	48	96	132	264	
Single Branch Type	●	●	-	-	-
Multiple Branch Type	-	-	● (4 Ports)	● (8 Ports)	● (12 Ports)

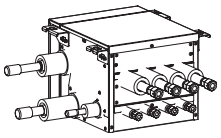
●: Current Line-up (Single Module)

Single Branch Type

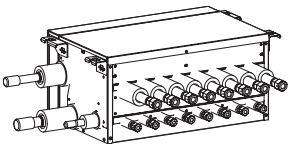


Multiple Branch Type

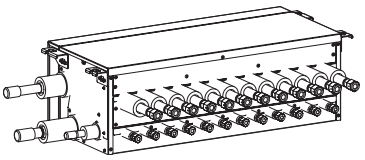
4 Ports



8 Ports



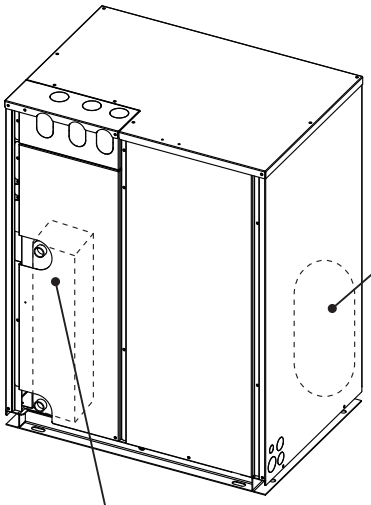
12 Ports



Improved Cooling and Heating Performance

SCHE (Simultaneous Cooling and Heating Efficiency) has been improved by optimizing refrigerant cycle control and improving compressor performance.

Energy Saving Technology



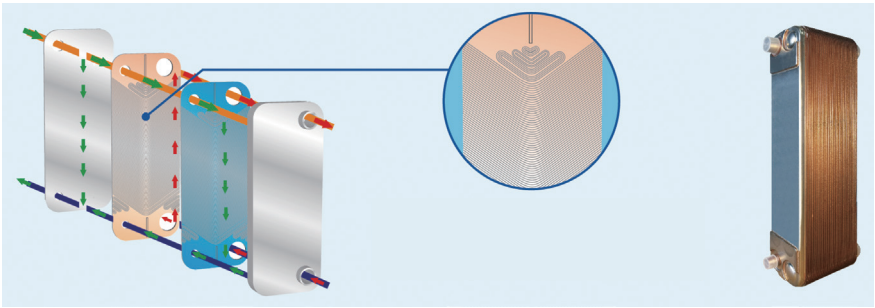
Compressor

< Improved Compressor Efficiency at Low Load Operation >

Optimized oil return to the compressor allows the operating range to be extended under low load conditions.

Heat Exchanger

Uses a stainless steel plate heat exchanger where the narrow paths inside the heat exchanger cause turbulence that maximizes the effect of heat exchange between refrigerant and water.

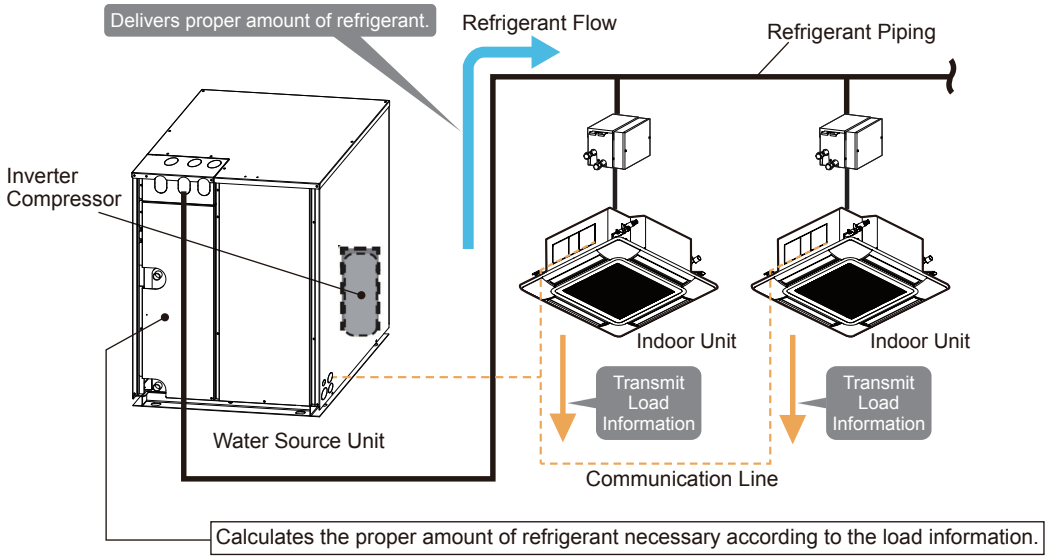


Operation Control

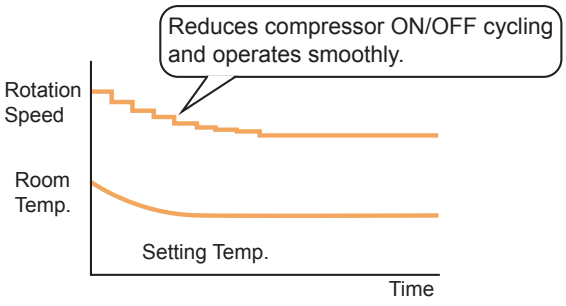
■ Smooth Drive Control System

Calculates the amount of refrigerant necessary according to the load information from the indoor units. Controls inverter compressor rotation speed and delivers the proper amount of refrigerant to each indoor unit per demand. Reduces compressor ON/OFF cycling at a low load operation for better energy efficiency and smoother operation.

■ Concept of Smooth Drive Control



■ At Low Load Operation

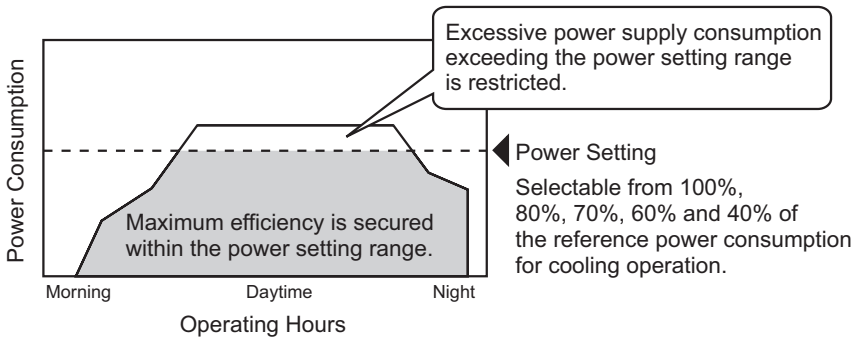


(Conceptual Drawing at Cooling Operation)

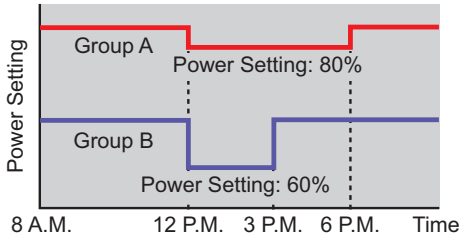
Energy-Saving Improvement through Schedule Setting of "Self-Demand Function"

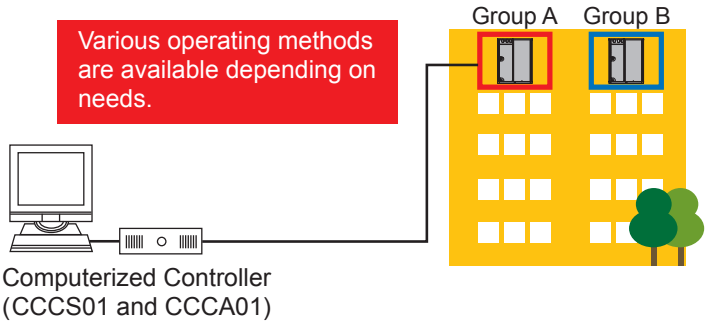
"Self-Demand Function" restrict the power consumption and saves capacity by demand current control based on the power setting range.
"Self-Demand Function" can be set for each water source unit from a Computerized Central Controller (CCCS01 and CCCA01) or Wired Controller (CIW01).
For small and medium buildings, it facilitates power saving. The energy-saving operation can be adjusted to conform an operating environment and individual needs.

■ Self-Demand Function



Setting Example: Schedule Setting for Each Group by Computerized Controller

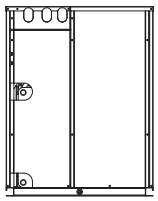
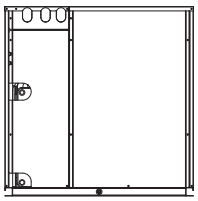




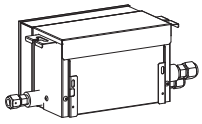
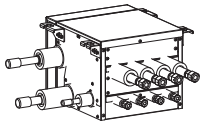
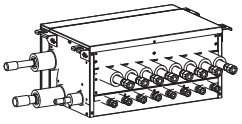
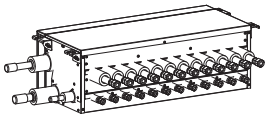
The specific water source unit and the period of time can be set from computerized controller.

Flexibility of Facility Design

■ Module Number of Water Source Unit

RT	6 to 10	12 to 18
New Model	 1 Unit	 1 Unit

■ Single and Multiple Branch Type Change-Over Box for Heat Recovery System
- Available to select from single branch type and multiple branch type to customize your own design.
- Line up 4-port, 8-port and 12-port Change-Over Boxes for multiple branch types.

Type	Single Branch Type		Multiple Branch Type		
Indoor Unit Maximum Connection Capacity MBH	48	96	132	264	
			4 Ports	8 Ports	12 Ports
Current Model (Generation 2)					

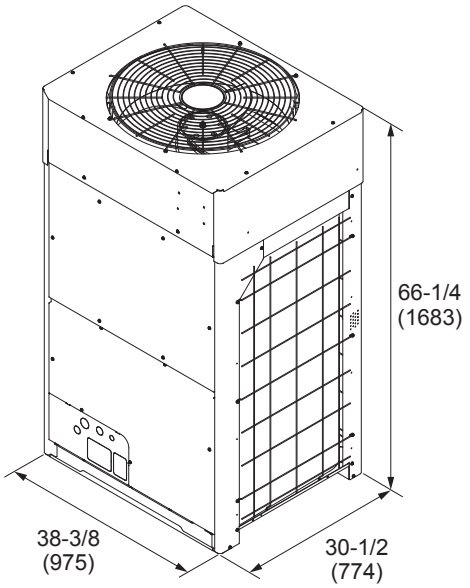
■ Compact and Lightweight Design

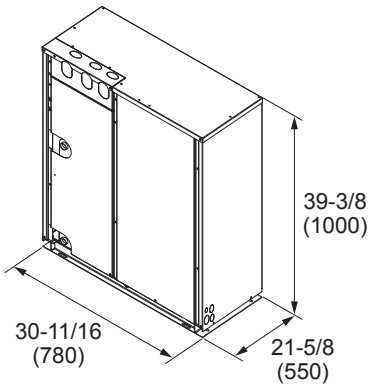
Placement and flexibility of installation are much improved due to the lightweight and compact design of the water source unit compared to an air source model.

For Example:
Comparing (H,Y)VAHR072B32S (Air Source Model) and (H,Y)VWHR072B32S (Water Source Unit)

* Floor Area: **56% Decrease**
* Net Weight: **70% Decrease**

Unit: inch (mm)





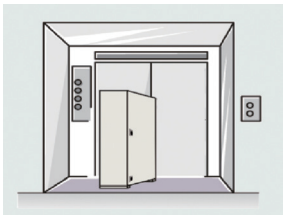
(H,Y)VAHR072B32S

Net Weight = **527 lbs**
(239kg)
Nominal Capacity = 72,000 Btu/h

(H,Y)VWHR072B32S

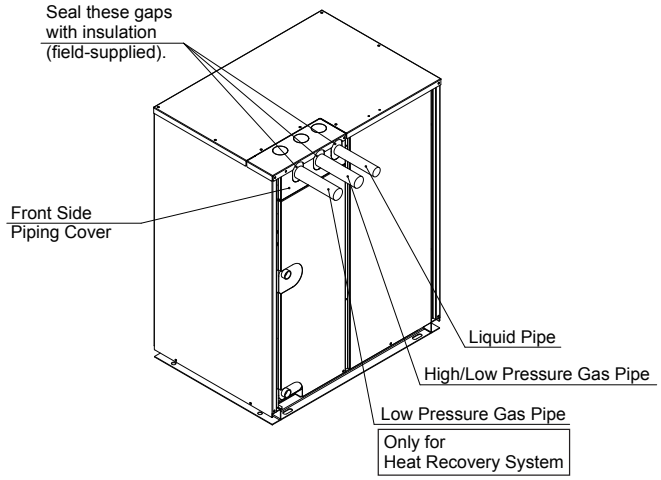
Net Weight = **370 lbs**
(168kg)
Nominal Capacity = 72,000 Btu/h

- Water source unit(s) are installed inside the building so the appearance of the building is not affected and helps reduce overall construction costs.
- With its compact chassis, the water source units can be installed in a machine room, enclosed balcony or other indoor rooms. Also, it can be installed using stacked frames to further reduce floor space requirements. (Refer to Section 2.6 “Service and Installation Space”.)
- Due to its lighter weight and compact size, water source units can be easily transported in an elevator. (No cranes required for delivery.)

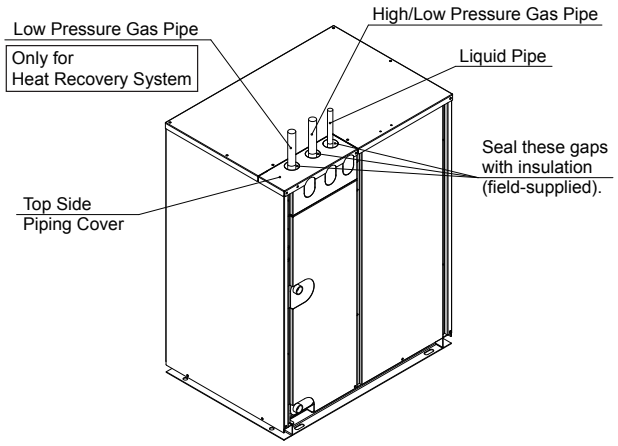


- Flexible and easy installation in the field with refrigerant connections selectable from front or top side.

For Pipes from Front Side Piping Cover



For Pipes from Top Side Piping Cover

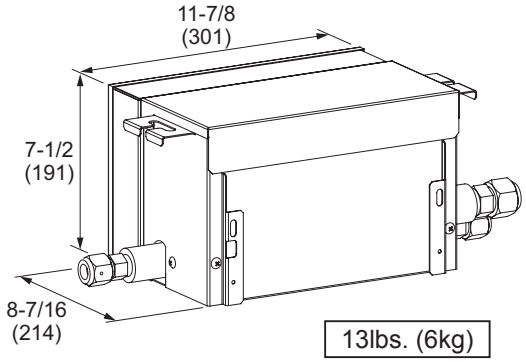


- Water source units can promote a quiet, comfortable environment compared to traditional chiller systems.

■ Lightweight Change-Over Box
The lightest multiple branch type in it's class.

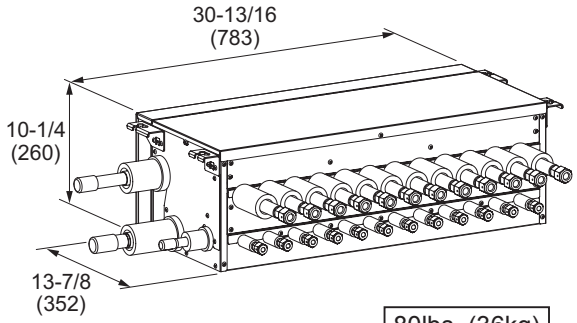
Unit: inch (mm)

Single Branch Type



13lbs. (6kg)

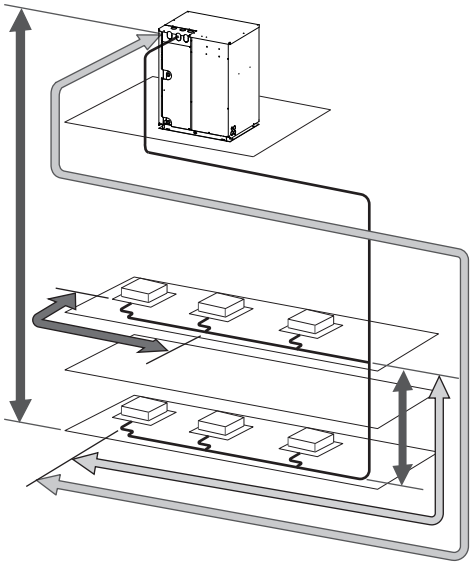
Multiple Branch Type
(Example: 12 Ports)



80lbs. (36kg)

■ Design Flexibility

• Water source units can have up to 164ft (50m) of vertical separation between the outdoor unit and lowest indoor unit. (For water source unit installation located above the indoor unit.)

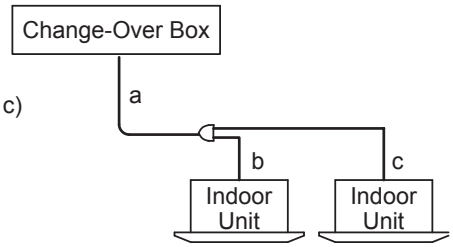


• The piping limitation between indoor units connected to the same Change-Over Box (Single Branch Type) is up to 131ft (40m).

Example: COBS048B22S

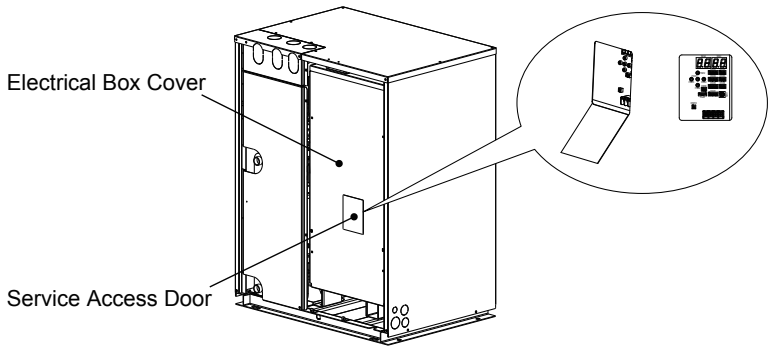
Total Piping Length between
Indoor Units Connected to the Same Change-Over Box (= a + b + c)

New Model
131ft
(40m)

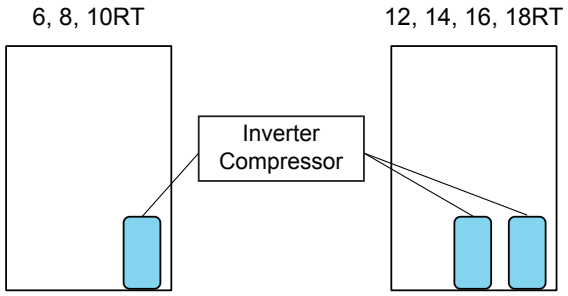


Ease of Service

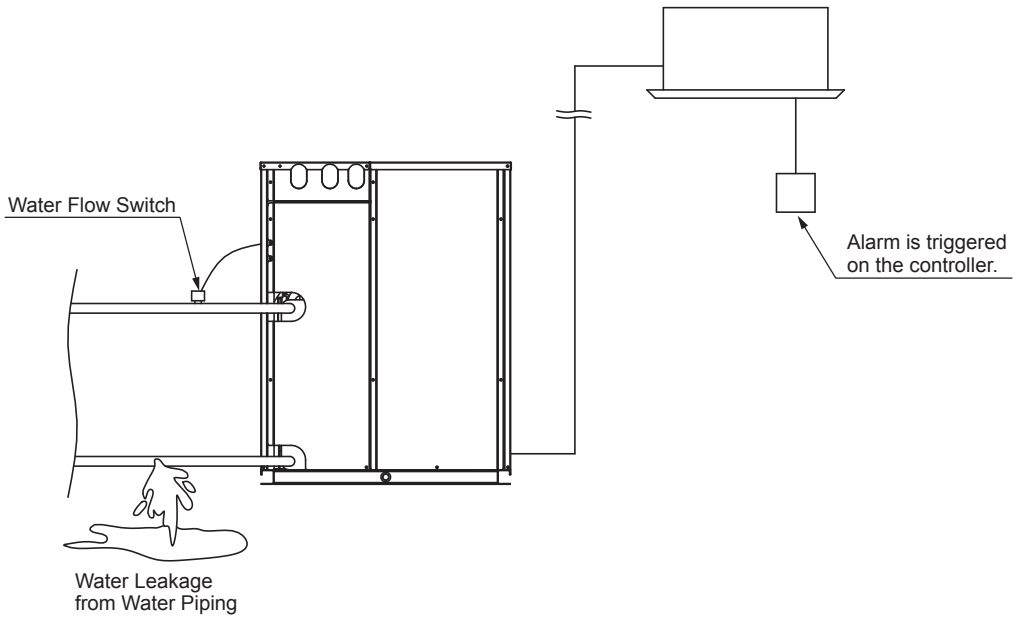
■ Easy Service and Maintenance Access
DIP switch setting and 7-Segment inspection is available without removing the electrical box cover and opening the service access door.



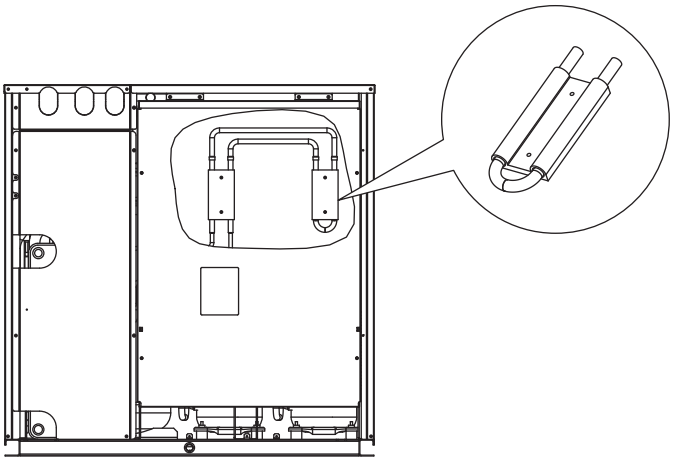
■ All Inverter-Type Compressors
Inverter compressors are in all water source models to increase efficiency.



■ Water Flow Failure Detection
In case the water flow switch (field-supplied) connected to the water outlet side of water source unit detects no water flow during operation, the alarm occurs and stops the unit.



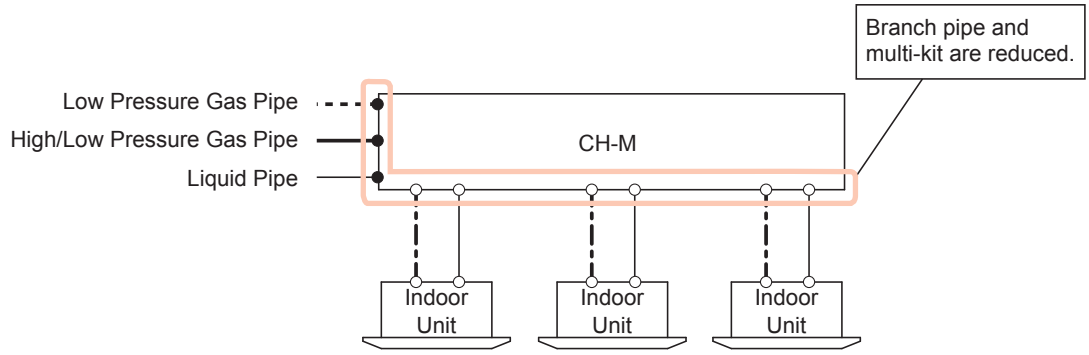
■ Adopts Refrigerant Cooled Inverter Technology
Refrigerant rate for cooling circuit is controlled by the expansion valve that adjusts depending on the surface temperature of the inverter module. This prevents condensate build up.



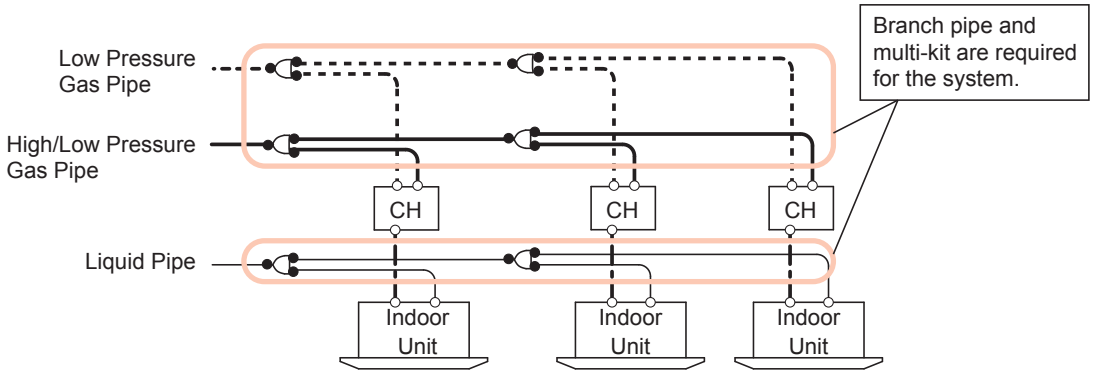
■ Simplified Installation, Lower Cost for Heat Recovery System

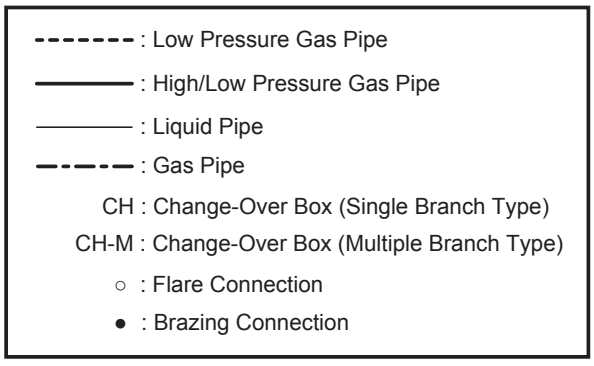
The inlet and outlet piping design of the multi-port change-over box allows for a more streamlined installation that can reduce the number of multi-kits.

With Change-Over Box (Multiple Branch Type)



With Change-Over Box (Single Branch Type)



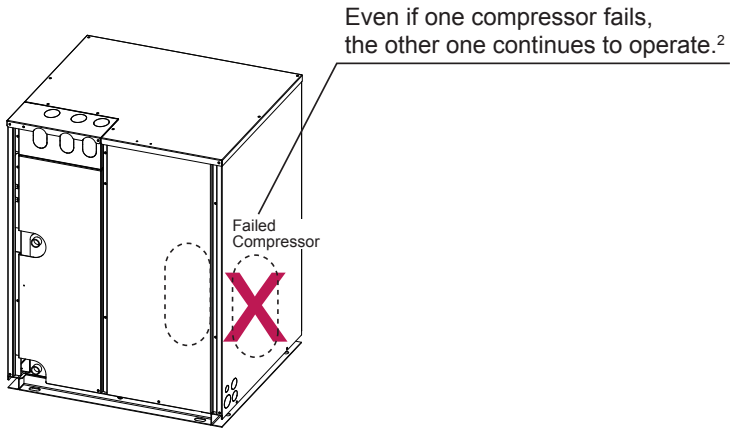


■ Alarm Log Tracking

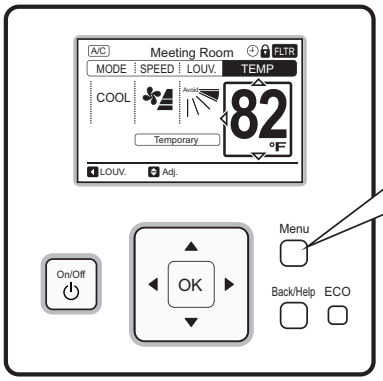
If an alarm occurs during the cooling or heating operation, a data log is stored in the control PCB. This data can be used for quick troubleshooting of the alarms.

Backup Operation Function for Emergency

The Backup Operation Function prevents the system from coming to a complete stop when a compressor failure occurs. [1]
The wired controller starts an emergency operation after an alarm occurrence.[3]



NOTE:
1: Unit with two compressors is required for this function.
2: Do not perform emergency operation for more than eight hours. Doing so may damage the unit.
3: Emergency operation is available when specific alarm code occurs.
Refer to the following.

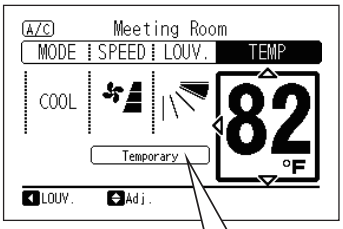


Procedure for Emergency Operation

Press “Menu” button at least 3 seconds when the alarm code is displayed on the LCD.

Emergency operation is available when the following codes are displayed:

Inverter Compressor Failure
- 06: Abnormality of Inverter Voltage
- 23: Abnormality of Discharge Gas Thermistor
- 48: Activation of Overcurrent Protection Device
- 51: Abnormality of Inverter Current Sensor
- 53: Inverter Error Signal Detection



Emergency Operation Indication

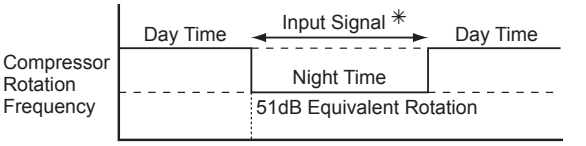
Noise Reduction Preference Mode

■ Noise Reduction Preference Mode (Optional Function)
With the Noise Reduction Preference Mode, the sound pressure level for a particular time zone can be set for noise sensitive areas. [1]

- Select from three Stages of Sound Pressure Level by setting at the Water Source Unit PCB External Input and Output Function

Control Function No.	Item	Sound Pressure Level (dB) (Approx. Value) [2]
11	Low Noise Setting 1 (Standard Value -2dB)	53
12	Low Noise Setting 2 (Standard Value -4dB)	51
13	Low Noise Setting 3 (Standard Value -6dB)	49

Setting Example
Low-Sound Operation during Night Time only by Using Timer



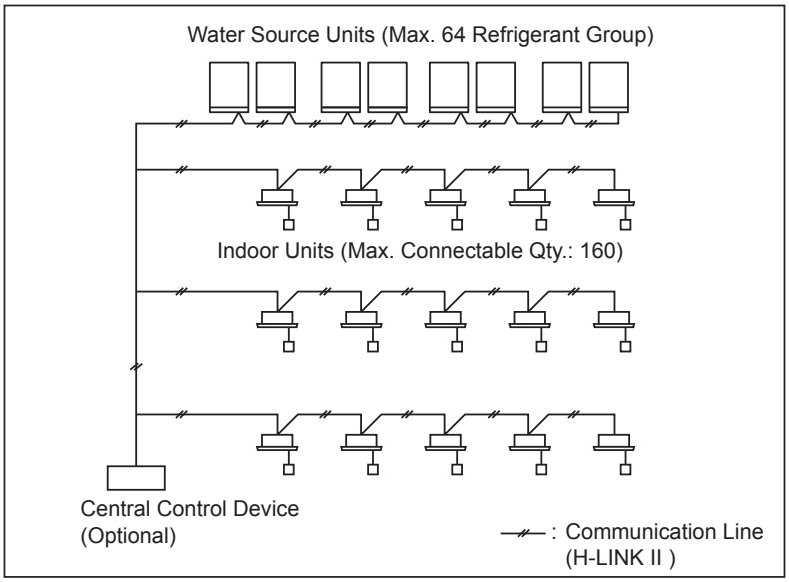
✳: Perform the electrical wiring work on-site when setting input signal.

NOTE:
1: The range of performance and operation is restricted because the operating frequency of the compressor is reduced.
Target Capacity of Each Setting
Low Noise Setting 1: 80% of Standard Capacity
Low Noise Setting 2: 60% of Standard Capacity
Low Noise Setting 3: 40% of Standard Capacity
2: The table above shows an approximate value for a 72 MBH model.
In some cases, the value may temporarily become higher than the approximate value in the table above because of an operating condition and the reflected sound.

H-LINK II System

The VRF water source units utilize the H-LINK II transmission system. A maximum (max.) of 64 refrigerant groups and a maximum 160 indoor units can be controlled by just one central control device. This is possible when all equipment including the central control device, indoor units, and wired controllers are in the same H-LINK II transmission system.

System Example



■ H-LINK II System

The H-LINK II wiring system requires only one communication cable (AWG18 2-Wire Stranded/Shielded) interconnected to each indoor unit and water source unit for up to 64 refrigerant systems, and to connect wires for all indoor units and water source units.

Specifications

- Communication Cable: AWG18 2-Wire (18/2 Shielded recommended for high EMI locations)
- Polarity of Communication Cable: Non-Polar Cable
- Maximum Water Source Units to be Connected: 64 Units per System
- Maximum Indoor Units to be Connected: 160 Units per H-LINK II System
- Maximum Cable Length: Total 3,280 ft. (1,000m) (including central controller if connected)
- Recommended Cable: Communication Cable with Shield, AWG18 or larger (Equivalent to KPEV-S)
- Voltage: DC5V

2. Water Source Units

2.1 Unit Nomenclature

● Water Source Units
Model Descriptions

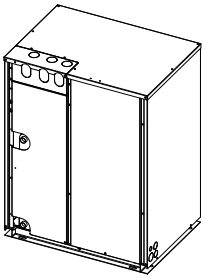
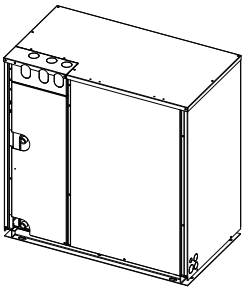
Example

H V W HR 072 B 4 2 S

Nomenclature Description

H = Hitachi Brand Y = York Brand	H
VRF	V
W = Water Source	W
HP = Heat Pump HR = Heat Recovery	HR
072 = 72 MBH = 6 RT 096 = 96 MBH = 8 RT 120 = 120 MBH = 10 RT 144 = 144 MBH = 12 RT 168 = 168 MBH = 14 RT 192 = 192 MBH = 16 RT 216 = 216 MBH = 18 RT	072
B = R410A	B
3 = 208/230Volts - 3Phase - 60Hz 4 = 460Volts - 3Phase - 60Hz	4
1 = 1st Generation 2 = 2nd Generation	2
S = Standard (Factory Options)	S

Unit: inch (mm)

6, 8, 10RT	12, 14, 16, 18RT
Outer Dimension: W30-11/16 x D21-5/8 x H39-3/8 (W780 x D550 x H1000)  (H,Y)VWH(P,R)072, 096, 120B32S (H,Y)VWH(P,R)072, 096, 120B42S	Outer Dimension: W39-3/8 x D21-5/8 x H39-3/8 (W1000 x D550 x H1000)  (H,Y)VWH(P,R)144, 168, 192, 216B32S (H,Y)VWH(P,R)144, 168, 192, 216B42S

2.2 Line-up

Type	Voltage	Model	Capacity (MBH)	Tonnage (RT)
Heat Pump	208/230V	(H,Y)VWHP072B32S	72	6
		(H,Y)VWHP096B32S	96	8
		(H,Y)VWHP120B32S	120	10
		(H,Y)VWHP144B32S	144	12
		(H,Y)VWHP168B32S	168	14
		(H,Y)VWHP192B32S	192	16
		(H,Y)VWHP216B32S	216	18
	460V	(H,Y)VWHP072B42S	72	6
		(H,Y)VWHP096B42S	96	8
		(H,Y)VWHP120B42S	120	10
		(H,Y)VWHP144B42S	144	12
		(H,Y)VWHP168B42S	168	14
		(H,Y)VWHP192B42S	192	16
		(H,Y)VWHP216B42S	216	18
Heat Recovery	208/230V	(H,Y)VWHR072B32S	72	6
		(H,Y)VWHR096B32S	96	8
		(H,Y)VWHR120B32S	120	10
		(H,Y)VWHR144B32S	144	12
		(H,Y)VWHR168B32S	168	14
		(H,Y)VWHR192B32S	192	16
		(H,Y)VWHR216B32S	216	18
	460V	(H,Y)VWHR072B42S	72	6
		(H,Y)VWHR096B42S	96	8
		(H,Y)VWHR120B42S	120	10
		(H,Y)VWHR144B42S	144	12
		(H,Y)VWHR168B42S	168	14
		(H,Y)VWHR192B42S	192	16
		(H,Y)VWHR216B42S	216	18

2.3 General Data

2.3.1 Heat Pump Type

(1) 208/230V

Category		Ton			6RT		8RT		10RT		12RT	
Model					(H,Y)VWHP072B32S		(H,Y)VWHP096B32S		(H,Y)VWHP120B32S		(H,Y)VWHP144B32S	
Model (Individual)		Unit A			(H,Y)VWHP072B32S		(H,Y)VWHP096B32S		(H,Y)VWHP120B32S		(H,Y)VWHP144B32S	
		Unit B			-		-		-		-	
		Unit C			-		-		-		-	
Power Supply					208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz	
Capacity *1	Cooling	Capacity (Nominal)	Btu/h	(kW)	72,000	(21.1)	96,000	(28.1)	120,000	(35.2)	144,000	(42.2)
	Heating	Capacity (Nominal)	Btu/h	(kW)	81,000	(23.7)	108,000	(31.7)	135,000	(39.6)	162,000	(47.5)
Efficiency Ratings *2 (Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	69,000	(20.2)	92,000	(27.0)	115,000	(33.7)	138,000	(40.4)
		EER	Btu/Wh	(W/W)	13.60	(3.99)	12.60	(3.69)	13.00	(3.81)	14.00	(4.10)
		IEER	Btu/Wh	(Wh/Wh)	22.50	(6.59)	22.30	(6.54)	22.60	(6.62)	23.80	(6.98)
	Heating	Capacity (Rated)	Btu/h	(kW)	77,000	(22.6)	103,000	(30.2)	129,000	(37.8)	154,000	(45.1)
		COP	W/W		4.65		4.40		4.62		5.00	
Efficiency Ratings *2 (Non-Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	69,000	(20.2)	92,000	(27.0)	115,000	(33.7)	138,000	(40.4)
		EER	Btu/Wh	(W/W)	17.10	(5.01)	13.70	(4.02)	14.40	(4.22)	15.00	(4.40)
		IEER	Btu/Wh	(Wh/Wh)	29.00	(8.50)	25.20	(7.39)	26.10	(7.65)	24.90	(7.30)
	Heating	Capacity (Rated)	Btu/h	(kW)	77,000	(22.6)	103,000	(30.2)	129,000	(37.8)	154,000	(45.1)
		COP	W/W		6.30		5.05		4.95		5.42	
Cooling Operating Range		Indoor	°F WB (°C WB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Heating Operating Range		Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cabinet Color (Munsell Code)			-		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	Height		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Width		in	(mm)	30-11/16	(780)	30-11/16	(780)	30-11/16	(780)	39-3/8	(1000)
	Depth		in	(mm)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)
Package Dimensions	Height		in	(mm)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)
	Width		in	(mm)	33-7/16	(850)	33-7/16	(850)	33-7/16	(850)	42-1/4	(1073)
	Depth		in	(mm)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)
Weight	Net		lbs	(kg)	370	(168)	370	(168)	381	(173)	556	(252)
	Gross		lbs	(kg)	390	(177)	390	(177)	401	(182)	582	(264)
Connection Ratio	Standard *4		%		130 - 50		130 - 50		130 - 50		130 - 50	
	Max. (Recommended) Indoor Units/System *4		Q'ty		13 (8)		16 (8)		23 (8)		26 (10)	
Heat Exchanger	Type		-		Plate Type		Plate Type		Plate Type		Plate Type	
	Material		-		Stainless Steel		Stainless Steel		Stainless Steel		Stainless Steel	
	Rated Water Flow Rate		gpm	(L/min)	15.1	(57)	20.3	(77)	25.4	(96)	36.5	(138)
	Range of Water Flow Rate		gpm	(L/min)	11 ~ 31	(40 ~ 120)	14 ~ 39	(50 ~ 150)	20 ~ 56	(72 ~ 214)	22 ~ 63	(81 ~ 241)
Compressor	Type		-		DB65PHD-A2YC2 x1		DB65PHD-A2YC2 x1		DC80PHD-A2YC2 x1		DB65PHD-A2YC2 x2	
	Start Method		-		inverter		inverter		inverter		inverter	
	Operation Range		%		10~100		10~100		10~100		10~100	
	Refrigeration Oil Type		-		FVC68D		FVC68D		FVC68D		FVC68D	
Crankcase Heater			W×Q'ty		32 (240V) ×2		32 (240V) ×2		32 (240V) ×2		32 (240V) ×4	
Electrical	Min Circuit Amps		A		20/18		32/29		38/34		37/34	
	Maximum Overcurrent Protective Device		A		30/30		50/45		60/50		50/45	
	Maximum Fuse Size		A		30/30		50/45		60/50		50/45	
Sound Pressure Level *5			dB (A)		55		57		60		58	
Protection devices	Cycle		-		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)	
	Inverter		-		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection	
	Compressor		-		Over-heat protection		Over-heat protection		Over-heat protection		Over-heat protection	
	PCB		-		Over-current protection		Over-current protection		Over-current protection		Over-current protection	
Refrigerant	Type		-		R410A		R410A		R410A		R410A	
	Factory Charge Amount		lbs	(kg)	7.7	(3.5)	7.7	(3.5)	10.4	(4.7)	13.7	(6.2)
Refrigeration Oil	Factory Charge Amount		gal/Unit	(L/Unit)	1.59	(6)	1.59	(6)	1.82	(6.9)	2.09	(7.9)
Main Refrigerant Piping	Gas Line		in	(mm)	3/4	(19.05)	7/8	(22.2)	7/8	(22.2)	1-1/8	(28.58)
	Liquid Line		in	(mm)	3/8	(9.52)	3/8	(9.52)	1/2	(12.7)	1/2	(12.7)
Water Piping Connections	Water Inlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
	Water Outlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
Drain Connection	Drain Outlet		in	(mm)	1/2 NPT		1/2 NPT		1/2 NPT		1/2 NPT	

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C) DB
66.2°F (19°C) WB

Entering Water Temperature: 86°F (30°C)

Heating

Indoor Air Inlet Temperature: 68°F (20°C) DB

Entering Water Temperature: 68°F (20°C)

Piping Length: 24ft. 7-3/16 in. (7.5m), Piping Lift: 0ft. (0m)
This unit cannot be installed outdoor. Install indoor .
Ambient condition of this unit should be 35~104°F DB (1.7~40°C DB), ~80% Relative Humidtiy (RH).

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for cooling, heating and cooling & heating operation range. For details, refer to “2.12 Operation Temperature Range”.

4 For details, refer to “2.13 Combination of Indoor Units and Water Source Units”.

5 Measure Point: 3.3ft. (1m) from each surface and 3.3ft. (1m) from floor level
The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

Category		Ton			14RT		16RT		18RT	
Model					(H,Y)VWHP168B32S		(H,Y)VWHP192B32S		(H,Y)VWHP216B32S	
Model (Individual)		Unit A			(H,Y)VWHP168B32S		(H,Y)VWHP192B32S		(H,Y)VWHP216B32S	
		Unit B			-		-		-	
		Unit C			-		-		-	
Power Supply					208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz	
Capacity *1	Cooling	Capacity (Nominal)	Btu/h	(kW)	168,000	(49.2)	192,000	(56.3)	216,000	(63.3)
	Heating	Capacity (Nominal)	Btu/h	(kW)	189,000	(55.4)	216,000	(63.3)	243,000	(71.2)
Efficiency Ratings *2 (Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	160,000	(46.9)	184,000	(53.9)	206,000	(60.4)
		EER	Btu/Wh	(W/W)	13.20	(3.87)	12.30	(3.60)	10.70	(3.14)
		IEER	Btu/Wh	(Wh/Wh)	20.40	(5.98)	21.00	(6.15)	19.50	(5.71)
	Heating	Capacity (Rated)	Btu/h	(kW)	180,000	(52.8)	206,000	(60.4)	232,000	(68.0)
		COP	W/W		4.90		4.50		4.05	
Efficiency Ratings *2 (Non-Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	160,000	(46.9)	184,000	(53.9)	206,000	(60.4)
		EER	Btu/Wh	(W/W)	13.90	(4.07)	12.90	(3.78)	11.30	(3.31)
		IEER	Btu/Wh	(Wh/Wh)	22.70	(6.65)	20.90	(6.13)	20.31	(5.95)
	Heating	Capacity (Rated)	Btu/h	(kW)	180,000	(52.8)	206,000	(60.4)	232,000	(68.0)
		COP	W/W		5.30		4.85		4.30	
Cooling Operating Range		Indoor	°F WB (°C WB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Heating Operating Range		Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cabinet Color (Munsell Code)			-		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	Height		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Width		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Depth		in	(mm)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)
Package Dimensions	Height		in	(mm)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)
	Width		in	(mm)	42-1/4	(1073)	42-1/4	(1073)	42-1/4	(1073)
	Depth		in	(mm)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)
Weight	Net		lbs	(kg)	558	(253)	558	(253)	558	(253)
	Gross		lbs	(kg)	584	(265)	584	(265)	584	(265)
Connection Ratio	Standard *4		%		130 - 50		130 - 50		130 - 50	
	Max. (Recommended) Indoor Units/System *4		Q'ty		29 (12)		33 (14)		33 (14)	
Heat Exchanger	Type		-		Plate Type		Plate Type		Plate Type	
	Material		-		Stainless Steel		Stainless Steel		Stainless Steel	
	Rated Water Flow Rate		gpm	(L/min)	44.1	(167)	51	(193)	56	(212)
	Range of Water Flow Rate		gpm	(L/min)	24 ~ 70	(90 ~ 268)	27 ~ 79	(101 ~ 301)	27 ~ 79	(101 ~ 301)
Compressor	Type		-		DB65PHD-A2YC2 x2		DB65PHD-A2YC2 x2		DB65PHD-A2YC2 x2	
	Start Method		-		inverter		inverter		inverter	
	Operation Range		%		10~100		10~100		10~100	
	Refrigeration Oil Type		-		FVC68D		FVC68D		FVC68D	
Crankcase Heater			W×Q'ty		32 (240V) ×4		32 (240V) ×4		32 (240V) ×4	
Electrical	Min Circuit Amps		A		41/37		55/50		71/64	
	Maximum Overcurrent Protective Device		A		50/50		70/60		90/80	
	Maximum Fuse Size		A		50/50		70/60		90/80	
Sound Pressure Level *5			dB (A)		58		59		59	
Protection devices	Cycle		-		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)	
	Inverter		-		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection	
	Compressor		-		Over-heat protection		Over-heat protection		Over-heat protection	
	PCB		-		Over-current protection		Over-current protection		Over-current protection	
Refrigerant	Type		-		R410A		R410A		R410A	
	Factory Charge Amount		lbs	(kg)	15.4	(7.0)	15.4	(7.0)	15.4	(7.0)
Refrigeration Oil	Factory Charge Amount		gal/Unit	(L/Unit)	2.09	(7.9)	2.22	(8.4)	2.22	(8.4)
Main Refrigerant Piping	Gas Line		in	(mm)	1-1/8	(28.58)	1-1/8	(28.58)	1-1/8	(28.58)
	Liquid Line		in	(mm)	5/8	(15.88)	5/8	(15.88)	5/8	(15.88)
Water Piping Connections	Water Inlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
	Water Outlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
Drain Connection	Drain Outlet		in	(mm)	1/2 NPT		1/2 NPT		1/2 NPT	

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C) DB
66.2°F (19°C) WB

Entering Water Temperature: 86°F (30°C)

Heating

Indoor Air Inlet Temperature: 68°F (20°C) DB

Entering Water Temperature: 68°F (20°C)

Piping Length: 24ft. 7-3/16 in. (7.5m), Piping Lift: 0ft. (0m)
This unit cannot be installed outdoor. Install indoor .
Ambient condition of this unit should be 35~104°F DB (1.7~40°C DB), ~80% Relative Humidtiy (RH).

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for cooling, heating and cooling & heating operation range. For details, refer to “2.12 Operation Temperature Range”.

4 For details, refer to “2.13 Combination of Indoor Units and Water Source Units”.

5 Measure Point: 3.3ft. (1m) from each surface and 3.3ft. (1m) from floor level
The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

(2) 460V

Category		Ton			6RT		8RT		10RT		12RT	
Model					(H,Y)VWHP072B42S		(H,Y)VWHP096B42S		(H,Y)VWHP120B42S		(H,Y)VWHP144B42S	
Model (Individual)		Unit A			(H,Y)VWHP072B42S		(H,Y)VWHP096B42S		(H,Y)VWHP120B42S		(H,Y)VWHP144B42S	
		Unit B			-		-		-		-	
		Unit C			-		-		-		-	
Power Supply					460V/ 3PH 60Hz		460V/ 3PH 60Hz		460V/ 3PH 60Hz		460V/ 3PH 60Hz	
Capacity *1	Cooling	Capacity (Nominal)	Btu/h	(kW)	72,000	(21.1)	96,000	(28.1)	120,000	(35.2)	144,000	(42.2)
	Heating	Capacity (Nominal)	Btu/h	(kW)	81,000	(23.7)	108,000	(31.7)	135,000	(39.6)	162,000	(47.5)
Efficiency Ratings *2 (Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	69,000	(20.2)	92,000	(27.0)	115,000	(33.7)	138,000	(40.4)
		EER	Btu/Wh	(W/W)	13.60	(3.99)	12.60	(3.69)	13.00	(3.81)	14.00	(4.10)
		IEER	Btu/Wh	(Wh/Wh)	22.50	(6.59)	22.30	(6.54)	22.60	(6.62)	23.80	(6.98)
	Heating	Capacity (Rated)	Btu/h	(kW)	77,000	(22.6)	103,000	(30.2)	129,000	(37.8)	154,000	(45.1)
		COP	W/W		4.65		4.40		4.62		5.00	
Efficiency Ratings *2 (Non-Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	69,000	(20.2)	92,000	(27.0)	115,000	(33.7)	138,000	(40.4)
		EER	Btu/Wh	(W/W)	17.10	(5.01)	13.70	(4.02)	14.40	(4.22)	15.00	(4.40)
		IEER	Btu/Wh	(Wh/Wh)	29.00	(8.50)	25.20	(7.39)	26.10	(7.65)	24.90	(7.30)
	Heating	Capacity (Rated)	Btu/h	(kW)	77,000	(22.6)	103,000	(30.2)	129,000	(37.8)	154,000	(45.1)
		COP	W/W		6.30		5.05		4.95		5.42	
Cooling Operating Range		Indoor	°F WB (°C WB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Heating Operating Range		Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cabinet Color (Munsell Code)			-		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	Height		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Width		in	(mm)	30-11/16	(780)	30-11/16	(780)	30-11/16	(780)	39-3/8	(1000)
	Depth		in	(mm)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)
Package Dimensions	Height		in	(mm)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)
	Width		in	(mm)	33-7/16	(850)	33-7/16	(850)	33-7/16	(850)	42-1/4	(1073)
	Depth		in	(mm)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)
Weight	Net		lbs	(kg)	379	(172)	379	(172)	390	(177)	564	(256)
	Gross		lbs	(kg)	399	(181)	399	(181)	410	(186)	591	(268)
Connection Ratio	Standard *4		%		130 - 50		130 - 50		130 - 50		130 - 50	
	Max. (Recommended) Indoor Units/System *4		Q'ty		13 (8)		16 (8)		23 (8)		26 (10)	
Heat Exchanger	Type		-		Plate Type		Plate Type		Plate Type		Plate Type	
	Material		-		Stainless Steel		Stainless Steel		Stainless Steel		Stainless Steel	
	Rated Water Flow Rate		gpm	(L/min)	15.1	(57)	20.3	(77)	25.4	(96)	36.5	(138)
	Range of Water Flow Rate		gpm	(L/min)	11 ~ 31	(40 ~ 120)	14 ~ 39	(50 ~ 150)	20 ~ 56	(72 ~ 214)	22 ~ 63	(81 ~ 241)
Compressor	Type		-		DB65PHD-D2YC2 x1		DB65PHD-D2YC2 x1		DC80PHD-D2YC2 x1		DB65PHD-D2YC2 x2	
	Start Method		-		inverter		inverter		inverter		inverter	
	Operation Range		%		10~100		10~100		10~100		10~100	
	Refrigeration Oil Type		-		FVC68D		FVC68D		FVC68D		FVC68D	
Crankcase Heater			W×Q'ty		40 (240V) ×1		40 (240V) ×1		40 (240V) ×1		40 (240V) ×2	
Electrical	Min Circuit Amps		A		11		17		20		20	
	Maximum Overcurrent Protective Device		A		15		25		30		25	
	Maximum Fuse Size		A		15		25		30		25	
Sound Pressure Level *5			dB (A)		55		57		60		58	
Protection devices	Cycle		-		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)	
	Inverter		-		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection	
	Compressor		-		Over-heat protection		Over-heat protection		Over-heat protection		Over-heat protection	
	PCB		-		Over-current protection		Over-current protection		Over-current protection		Over-current protection	
Refrigerant	Type		-		R410A		R410A		R410A		R410A	
	Factory Charge Amount		lbs	(kg)	7.7	(3.5)	7.7	(3.5)	10.4	(4.7)	13.7	(6.2)
Refrigeration Oil	Factory Charge Amount		gal/Unit	(L/Unit)	1.59	(6)	1.59	(6)	1.82	(6.9)	2.09	(7.9)
Main Refrigerant Piping	Gas Line		in	(mm)	3/4	(19.05)	7/8	(22.2)	7/8	(22.2)	1-1/8	(28.58)
	Liquid Line		in	(mm)	3/8	(9.52)	3/8	(9.52)	1/2	(12.7)	1/2	(12.7)
Water Piping Connections	Water Inlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
	Water Outlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
Drain Connection	Drain Outlet		in	(mm)	1/2 NPT		1/2 NPT		1/2 NPT		1/2 NPT	

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C) DB
66.2°F (19°C) WB

Entering Water Temperature: 86°F (30°C)

Heating

Indoor Air Inlet Temperature: 68°F (20°C) DB

Entering Water Temperature: 68°F (20°C)

Piping Length: 24ft. 7-3/16 in. (7.5m), Piping Lift: 0ft. (0m)
This unit cannot be installed outdoor. Install indoor .
Ambient condition of this unit should be 35~104°F DB (1.7~40°C DB), ~80% Relative Humidtiy (RH).

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for cooling, heating and cooling & heating operation range. For details, refer to “2.12 Operation Temperature Range”.

4 For details, refer to “2.13 Combination of Indoor Units and Water Source Units”.

5 Measure Point: 3.3ft. (1m) from each surface and 3.3ft. (1m) from floor level
The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

Category		Ton			14RT		16RT		18RT	
Model					(H,Y)VWHP168B42S		(H,Y)VWHP192B42S		(H,Y)VWHP216B42S	
Model (Individual)		Unit A			(H,Y)VWHP168B42S		(H,Y)VWHP192B42S		(H,Y)VWHP216B42S	
		Unit B			-		-		-	
		Unit C			-		-		-	
Power Supply					460V/ 3PH 60Hz		460V/ 3PH 60Hz		460V/ 3PH 60Hz	
Capacity *1	Cooling	Capacity (Nominal)	Btu/h	(kW)	168,000	(49.2)	192,000	(56.3)	216,000	(63.3)
	Heating	Capacity (Nominal)	Btu/h	(kW)	189,000	(55.4)	216,000	(63.3)	243,000	(71.2)
Efficiency Ratings *2 (Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	160,000	(46.9)	184,000	(53.9)	206,000	(60.4)
		EER	Btu/Wh	(W/W)	13.20	(3.87)	12.30	(3.60)	10.70	(3.14)
		IEER	Btu/Wh	(Wh/Wh)	20.40	(5.98)	21.00	(6.15)	19.50	(5.71)
	Heating	Capacity (Rated)	Btu/h	(kW)	180,000	(52.8)	206,000	(60.4)	232,000	(68.0)
		COP	W/W		4.90		4.50		4.05	
Efficiency Ratings *2 (Non-Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	160,000	(46.9)	184,000	(53.9)	206,000	(60.4)
		EER	Btu/Wh	(W/W)	13.90	(4.07)	12.90	(3.78)	11.30	(3.31)
		IEER	Btu/Wh	(Wh/Wh)	22.70	(6.65)	20.90	(6.13)	20.31	(5.95)
	Heating	Capacity (Rated)	Btu/h	(kW)	180,000	(52.8)	206,000	(60.4)	232,000	(68.0)
		COP	W/W		5.30		4.85		4.30	
Cooling Operating Range		Indoor	°F WB (°C WB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Heating Operating Range		Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cabinet Color (Munsell Code)			-		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	Height		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Width		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Depth		in	(mm)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)
Package Dimensions	Height		in	(mm)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)
	Width		in	(mm)	42-1/4	(1073)	42-1/4	(1073)	42-1/4	(1073)
	Depth		in	(mm)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)
Weight	Net		lbs	(kg)	567	(257)	567	(257)	567	(257)
	Gross		lbs	(kg)	593	(269)	593	(269)	593	(269)
Connection Ratio	Standard *4		%		130 - 50		130 - 50		130 - 50	
	Max. (Recommended) Indoor Units/System *4		Q'ty		29 (12)		33 (14)		33 (14)	
Heat Exchanger	Type		-		Plate Type		Plate Type		Plate Type	
	Material		-		Stainless Steel		Stainless Steel		Stainless Steel	
	Rated Water Flow Rate		gpm	(L/min)	44.1	(167)	51	(193)	56	(212)
	Range of Water Flow Rate		gpm	(L/min)	24 ~ 70	(90 ~ 268)	27 ~ 79	(101 ~ 301)	27 ~ 79	(101 ~ 301)
Compressor	Type		-		DB65PHD-D2YC2 x2		DB65PHD-D2YC2 x2		DB65PHD-D2YC2 x2	
	Start Method		-		inverter		inverter		inverter	
	Operation Range		%		10~100		10~100		10~100	
	Refrigeration Oil Type		-		FVC68D		FVC68D		FVC68D	
Crankcase Heater			W×Q'ty		40 (240V) ×2		40 (240V) ×2		40 (240V) ×2	
Electrical	Min Circuit Amps		A		22		29		37	
	Maximum Overcurrent Protective Device		A		25		40		50	
	Maximum Fuse Size		A		25		40		50	
Sound Pressure Level *5			dB (A)		58		59		59	
Protection devices	Cycle		-		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)	
	Inverter		-		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection	
	Compressor		-		Over-heat protection		Over-heat protection		Over-heat protection	
	PCB		-		Over-current protection		Over-current protection		Over-current protection	
Refrigerant	Type		-		R410A		R410A		R410A	
	Factory Charge Amount		lbs	(kg)	15.4	(7.0)	15.4	(7.0)	15.4	(7.0)
Refrigeration Oil	Factory Charge Amount		gal/Unit	(L/Unit)	2.09	(7.9)	2.22	(8.4)	2.22	(8.4)
Main Refrigerant Piping	Gas Line		in	(mm)	1-1/8	(28.58)	1-1/8	(28.58)	1-1/8	(28.58)
	Liquid Line		in	(mm)	5/8	(15.88)	5/8	(15.88)	5/8	(15.88)
Water Piping Connections	Water Inlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
	Water Outlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
Drain Connection	Drain Outlet		in	(mm)	1/2 NPT		1/2 NPT		1/2 NPT	

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C) DB
66.2°F (19°C) WB

Entering Water Temperature: 86°F (30°C)

Heating

Indoor Air Inlet Temperature: 68°F (20°C) DB

Entering Water Temperature: 68°F (20°C)

Piping Length: 24ft. 7-3/16 in. (7.5m), Piping Lift: 0ft. (0m)
This unit cannot be installed outdoor. Install indoor .
Ambient condition of this unit should be 35~104°F DB (1.7~40°C DB), ~80% Relative Humidtiy (RH).

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for cooling, heating and cooling & heating operation range. For details, refer to “2.12 Operation Temperature Range”.

4 For details, refer to “2.13 Combination of Indoor Units and Water Source Units”.

5 Measure Point: 3.3ft. (1m) from each surface and 3.3ft. (1m) from floor level
The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

2.3.2 Heat Recovery Type

(1) 208/230V

Category		Ton			6RT		8RT		10RT		12RT	
Model					(H,Y)VWHR072B32S		(H,Y)VWHR096B32S		(H,Y)VWHR120B32S		(H,Y)VWHR144B32S	
Model (Individual)		Unit A			(H,Y)VWHR072B32S		(H,Y)VWHR096B32S		(H,Y)VWHR120B32S		(H,Y)VWHR144B32S	
		Unit B			-		-		-		-	
		Unit C			-		-		-		-	
Power Supply					208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz	
Capacity *1	Cooling	Capacity (Nominal)	Btu/h	(kW)	72,000	(21.1)	96,000	(28.1)	120,000	(35.2)	144,000	(42.2)
	Heating	Capacity (Nominal)	Btu/h	(kW)	81,000	(23.7)	108,000	(31.7)	135,000	(39.6)	162,000	(47.5)
Efficiency Ratings *2 (Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	69,000	(20.2)	92,000	(27.0)	115,000	(33.7)	138,000	(40.4)
		EER	Btu/Wh	(W/W)	13.60	(3.99)	12.60	(3.69)	13.00	(3.81)	14.00	(4.10)
		IEER	Btu/Wh	(Wh/Wh)	22.50	(6.59)	22.30	(6.54)	22.60	(6.62)	23.80	(6.98)
	Heating	Capacity (Rated)	Btu/h	(kW)	77,000	(22.6)	103,000	(30.2)	129,000	(37.8)	154,000	(45.1)
		COP	W/W		4.65		4.40		4.62		5.00	
	Heating and Cooling	SCHE	Btu/Wh (Wh/Wh)		12.41		15.05		19.80		19.90	
Efficiency Ratings *2 (Non-Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	69,000	(20.2)	92,000	(27.0)	115,000	(33.7)	138,000	(40.4)
		EER	Btu/Wh	(W/W)	17.10	(5.01)	13.70	(4.02)	14.40	(4.22)	15.00	(4.40)
		IEER	Btu/Wh	(Wh/Wh)	29.00	(8.50)	25.20	(7.39)	26.10	(7.65)	24.90	(7.30)
	Heating	Capacity (Rated)	Btu/h	(kW)	77,000	(22.6)	103,000	(30.2)	129,000	(37.8)	154,000	(45.1)
		COP	W/W		6.30		5.05		4.95		5.42	
	Heating and Cooling	SCHE	Btu/Wh (Wh/Wh)		21.70		16.60		21.78		21.89	
Cooling Operating Range		Indoor	°F WB (°C WB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Heating Operating Range		Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cooling & Heating Operating Range	Cooling	Indoor	°F DB (°C DB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
	Heating	Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cabinet Color (Munsell Code)			-		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	Height		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Width		in	(mm)	30-11/16	(780)	30-11/16	(780)	30-11/16	(780)	39-3/8	(1000)
	Depth		in	(mm)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)
Package Dimensions	Height		in	(mm)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)
	Width		in	(mm)	33-7/16	(850)	33-7/16	(850)	33-7/16	(850)	42-1/4	(1073)
	Depth		in	(mm)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)
Weight	Net		lbs	(kg)	370	(168)	370	(168)	381	(173)	556	(252)
	Gross		lbs	(kg)	390	(177)	390	(177)	401	(182)	582	(264)
Connection Ratio	Standard *4		%		130 - 50		130 - 50		130 - 50		130 - 50	
	Max. (Recommended) Indoor Units/System *4		Q'ty		13 (8)		16 (8)		23 (8)		26 (10)	
Heat Exchanger	Type		-		Plate Type		Plate Type		Plate Type		Plate Type	
	Material		-		Stainless Steel		Stainless Steel		Stainless Steel		Stainless Steel	
	Rated Water Flow Rate		gpm	(L/min)	15.1	(57)	20.3	(77)	25.4	(96)	36.5	(138)
	Range of Water Flow Rate		gpm	(L/min)	11 ~ 31	(40 ~ 120)	14 ~ 39	(50 ~ 150)	20 ~ 56	(72 ~ 214)	22 ~ 63	(81 ~ 241)
Compressor	Type		-		DB65PHD-A2YC2 x1		DB65PHD-A2YC2 x1		DC80PHD-A2YC2 x1		DB65PHD-A2YC2 x2	
	Start Method		-		inverter		inverter		inverter		inverter	
	Operation Range		%		10~100		10~100		10~100		10~100	
	Refrigeration Oil Type		-		FVC68D		FVC68D		FVC68D		FVC68D	
Crankcase Heater			W×Q'ty		32 (240V) ×2		32 (240V) ×2		32 (240V) ×2		32 (240V) ×4	
Electrical	Min Circuit Amps		A		20/18		32/29		38/34		37/34	
	Maximum Overcurrent Protective Device		A		30/30		50/45		60/50		50/45	
	Maximum Fuse Size		A		30/30		50/45		60/50		50/45	
Sound Pressure Level *5			dB (A)		55		57		60		58	
Protection devices	Cycle		-		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)	
	Inverter		-		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection	
	Compressor		-		Over-heat protection		Over-heat protection		Over-heat protection		Over-heat protection	
	PCB		-		Over-current protection		Over-current protection		Over-current protection		Over-current protection	
Refrigerant	Type		-		R410A		R410A		R410A		R410A	
	Factory Charge Amount		lbs	(kg)	7.7	(3.5)	7.7	(3.5)	10.4	(4.7)	13.7	(6.2)
Refrigeration Oil	Factory Charge Amount		gal/Unit	(L/Unit)	1.59	(6)	1.59	(6)	1.82	(6.9)	2.09	(7.9)
Main Refrigerant Piping	Low Pressure Gas Line		in	(mm)	3/4	(19.05)	7/8	(22.2)	7/8	(22.2)	1-1/8	(28.58)
	High/Low Pressure Gas Line (Not Used for Heat Pump System)		in	(mm)	5/8	(15.88)	3/4	(19.05)	3/4	(19.05)	7/8	(22.2)
	Liquid Line		in	(mm)	3/8	(9.52)	3/8	(9.52)	1/2	(12.7)	1/2	(12.7)
Water Piping Connections	Water Inlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
	Water Outlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
Drain Connection	Drain Outlet		in	(mm)	1/2 NPT		1/2 NPT		1/2 NPT		1/2 NPT	

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C) DB
66.2°F (19°C) WB

Entering Water Temperature: 86°F (30°C)

Heating

Indoor Air Inlet Temperature: 68°F (20°C) DB

Entering Water Temperature: 68°F (20°C)

Piping Length: 24ft. 7-3/16 in. (7.5m), Piping Lift: 0ft. (0m)
This unit cannot be installed outdoor. Install indoor .
Ambient condition of this unit should be 35~104°F DB (1.7~40°C DB), ~80% Relative Humidtiy (RH).

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for cooling, heating and cooling & heating operation range. For details, refer to “2.12 Operation Temperature Range”.

4 For details, refer to “2.13 Combination of Indoor Units and Water Source Units”.

5 Measure Point: 3.3ft. (1m) from each surface and 3.3ft. (1m) from floor level
The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

Category		Ton			14RT		16RT		18RT	
Model					(H,Y)VWHR168B32S		(H,Y)VWHR192B32S		(H,Y)VWHR216B32S	
Model (Individual)		Unit A			(H,Y)VWHR168B32S		(H,Y)VWHR192B32S		(H,Y)VWHR216B32S	
		Unit B			-		-		-	
		Unit C			-		-		-	
Power Supply					208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz		208/230V/ 3PH 60Hz	
Capacity *1	Cooling	Capacity (Nominal)	Btu/h	(kW)	168,000	(49.2)	192,000	(56.3)	216,000	(63.3)
	Heating	Capacity (Nominal)	Btu/h	(kW)	189,000	(55.4)	216,000	(63.3)	243,000	(71.2)
Efficiency Ratings *2 (Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	160,000	(46.9)	184,000	(53.9)	206,000	(60.4)
		EER	Btu/Wh	(W/W)	13.20	(3.87)	12.30	(3.60)	10.70	(3.14)
		IEER	Btu/Wh	(Wh/Wh)	20.40	(5.98)	21.00	(6.15)	19.50	(5.71)
	Heating	Capacity (Rated)	Btu/h	(kW)	180,000	(52.8)	206,000	(60.4)	232,000	(68.0)
		COP	W/W		4.90		4.50		4.05	
	Heating and Cooling	SCHE	Btu/Wh (Wh/Wh)		20.50		25.40		17.55	
Efficiency Ratings *2 (Non-Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	160,000	(46.9)	184,000	(53.9)	206,000	(60.4)
		EER	Btu/Wh	(W/W)	13.90	(4.07)	12.90	(3.78)	11.30	(3.31)
		IEER	Btu/Wh	(Wh/Wh)	22.70	(6.65)	20.90	(6.13)	20.31	(5.95)
	Heating	Capacity (Rated)	Btu/h	(kW)	180,000	(52.8)	206,000	(60.4)	232,000	(68.0)
		COP	W/W		5.30		4.85		4.30	
	Heating and Cooling	SCHE	Btu/Wh (Wh/Wh)		22.60		26.50		19.30	
Cooling Operating Range		Indoor	°F WB (°C WB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Heating Operating Range		Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cooling & Heating Operating Range	Cooling	Indoor	°F DB (°C DB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
	Heating	Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cabinet Color (Munsell Code)			-		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	Height		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Width		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Depth		in	(mm)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)
Package Dimensions	Height		in	(mm)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)
	Width		in	(mm)	42-1/4	(1073)	42-1/4	(1073)	42-1/4	(1073)
	Depth		in	(mm)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)
Weight	Net		lbs	(kg)	558	(253)	558	(253)	558	(253)
	Gross		lbs	(kg)	584	(265)	584	(265)	584	(265)
Connection Ratio	Standard *4		%		130 - 50		130 - 50		130 - 50	
	Max. (Recommended) Indoor Units/System *4		Q'ty		29 (12)		33 (14)		33 (14)	
Heat Exchanger	Type		-		Plate Type		Plate Type		Plate Type	
	Material		-		Stainless Steel		Stainless Steel		Stainless Steel	
	Rated Water Flow Rate		gpm	(L/min)	44.1	(167)	51	(193)	56	(212)
	Range of Water Flow Rate		gpm	(L/min)	24 ~ 70	(90 ~ 268)	27 ~ 79	(101 ~ 301)	27 ~ 79	(101 ~ 301)
Compressor	Type		-		DB65PHD-A2YC2 x2		DB65PHD-A2YC2 x2		DB65PHD-A2YC2 x2	
	Start Method		-		inverter		inverter		inverter	
	Operation Range		%		10~100		10~100		10~100	
	Refrigeration Oil Type		-		FVC68D		FVC68D		FVC68D	
Crankcase Heater			W×Q'ty		32 (240V) ×4		32 (240V) ×4		32 (240V) ×4	
Electrical	Min Circuit Amps		A		41/37		55/50		71/64	
	Maximum Overcurrent Protective Device		A		50/50		70/60		90/80	
	Maximum Fuse Size		A		50/50		70/60		90/80	
Sound Pressure Level *5			dB (A)		58		59		59	
Protection devices	Cycle		-		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)	
	Inverter		-		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection	
	Compressor		-		Over-heat protection		Over-heat protection		Over-heat protection	
	PCB		-		Over-current protection		Over-current protection		Over-current protection	
Refrigerant	Type		-		R410A		R410A		R410A	
	Factory Charge Amount		lbs	(kg)	15.4	(7.0)	15.4	(7.0)	15.4	(7.0)
Refrigeration Oil	Factory Charge Amount		gal/Unit	(L/Unit)	2.09	(7.9)	2.22	(8.4)	2.22	(8.4)
Main Refrigerant Piping	Low Pressure Gas Line		in	(mm)	1-1/8	(28.58)	1-1/8	(28.58)	1-1/8	(28.58)
	High/Low Pressure Gas Line (Not Used for Heat Pump System)		in	(mm)	7/8	(22.2)	7/8	(22.2)	7/8	(22.2)
	Liquid Line		in	(mm)	5/8	(15.88)	5/8	(15.88)	5/8	(15.88)
Water Piping Connections	Water Inlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
	Water Outlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
Drain Connection	Drain Outlet		in	(mm)	1/2 NPT		1/2 NPT		1/2 NPT	

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C) DB
66.2°F (19°C) WB

Entering Water Temperature: 86°F (30°C)

Heating

Indoor Air Inlet Temperature: 68°F (20°C) DB

Entering Water Temperature: 68°F (20°C)

Piping Length: 24ft. 7-3/16 in. (7.5m), Piping Lift: 0ft. (0m)
This unit cannot be installed outdoor. Install indoor .
Ambient condition of this unit should be 35~104°F DB (1.7~40°C DB), ~80% Relative Humidtiy (RH).

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for cooling, heating and cooling & heating operation range. For details, refer to “2.12 Operation Temperature Range”.

4 For details, refer to “2.13 Combination of Indoor Units and Water Source Units”.

5 Measure Point: 3.3ft. (1m) from each surface and 3.3ft. (1m) from floor level
The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

(2) 460V

Category		Ton			6RT		8RT		10RT		12RT	
Model					(H,Y)VWHR072B42S		(H,Y)VWHR096B42S		(H,Y)VWHR120B42S		(H,Y)VWHR144B42S	
Model (Individual)		Unit A			(H,Y)VWHR072B42S		(H,Y)VWHR096B42S		(H,Y)VWHR120B42S		(H,Y)VWHR144B42S	
		Unit B			-		-		-		-	
		Unit C			-		-		-		-	
Power Supply					460V/ 3PH 60Hz		460V/ 3PH 60Hz		460V/ 3PH 60Hz		460V/ 3PH 60Hz	
Capacity *1	Cooling	Capacity (Nominal)	Btu/h	(kW)	72,000	(21.1)	96,000	(28.1)	120,000	(35.2)	144,000	(42.2)
	Heating	Capacity (Nominal)	Btu/h	(kW)	81,000	(23.7)	108,000	(31.7)	135,000	(39.6)	162,000	(47.5)
Efficiency Ratings *2 (Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	69,000	(20.2)	92,000	(27.0)	115,000	(33.7)	138,000	(40.4)
		EER	Btu/Wh	(W/W)	13.60	(3.99)	12.60	(3.69)	13.00	(3.81)	14.00	(4.10)
		IEER	Btu/Wh	(Wh/Wh)	22.50	(6.59)	22.30	(6.54)	22.60	(6.62)	23.80	(6.98)
	Heating	Capacity (Rated)	Btu/h	(kW)	77,000	(22.6)	103,000	(30.2)	129,000	(37.8)	154,000	(45.1)
		COP	W/W		4.65		4.40		4.62		5.00	
	Heating and Cooling	SCHE	Btu/Wh (Wh/Wh)		12.41		15.05		19.80		19.90	
Efficiency Ratings *2 (Non-Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	69,000	(20.2)	92,000	(27.0)	115,000	(33.7)	138,000	(40.4)
		EER	Btu/Wh	(W/W)	17.10	(5.01)	13.70	(4.02)	14.40	(4.22)	15.00	(4.40)
		IEER	Btu/Wh	(Wh/Wh)	29.00	(8.50)	25.20	(7.39)	26.10	(7.65)	24.90	(7.30)
	Heating	Capacity (Rated)	Btu/h	(kW)	77,000	(22.6)	103,000	(30.2)	129,000	(37.8)	154,000	(45.1)
		COP	W/W		6.30		5.05		4.95		5.42	
	Heating and Cooling	SCHE	Btu/Wh (Wh/Wh)		21.70		16.60		21.78		21.89	
Cooling Operating Range		Indoor	°F WB (°C WB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Heating Operating Range		Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cooling & Heating Operating Range	Cooling	Indoor	°F DB (°C DB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
	Heating	Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cabinet Color (Munsell Code)			-		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	Height		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Width		in	(mm)	30-11/16	(780)	30-11/16	(780)	30-11/16	(780)	39-3/8	(1000)
	Depth		in	(mm)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)
Package Dimensions	Height		in	(mm)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)
	Width		in	(mm)	33-7/16	(850)	33-7/16	(850)	33-7/16	(850)	42-1/4	(1073)
	Depth		in	(mm)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)
Weight	Net		lbs	(kg)	379	(172)	379	(172)	390	(177)	564	(256)
	Gross		lbs	(kg)	399	(181)	399	(181)	410	(186)	591	(268)
Connection Ratio	Standard *4		%		130 - 50		130 - 50		130 - 50		130 - 50	
	Max. (Recommended) Indoor Units/System *4		Q'ty		13 (8)		16 (8)		23 (8)		26 (10)	
Heat Exchanger	Type		-		Plate Type		Plate Type		Plate Type		Plate Type	
	Material		-		Stainless Steel		Stainless Steel		Stainless Steel		Stainless Steel	
	Rated Water Flow Rate		gpm	(L/min)	15.1	(57)	20.3	(77)	25.4	(96)	36.5	(138)
	Range of Water Flow Rate		gpm	(L/min)	11 ~ 31	(40 ~ 120)	14 ~ 39	(50 ~ 150)	20 ~ 56	(72 ~ 214)	22 ~ 63	(81 ~ 241)
Compressor	Type		-		DB65PHD-D2YC2 x1		DB65PHD-D2YC2 x1		DC80PHD-D2YC2 x1		DB65PHD-D2YC2 x2	
	Start Method		-		inverter		inverter		inverter		inverter	
	Operation Range		%		10~100		10~100		10~100		10~100	
	Refrigeration Oil Type		-		FVC68D		FVC68D		FVC68D		FVC68D	
Crankcase Heater			W×Q'ty		40 (240V) ×1		40 (240V) ×1		40 (240V) ×1		40 (240V) ×2	
Electrical	Min Circuit Amps		A		11		17		20		20	
	Maximum Overcurrent Protective Device		A		15		25		30		25	
	Maximum Fuse Size		A		15		25		30		25	
Sound Pressure Level *5			dB (A)		55		57		60		58	
Protection devices	Cycle		-		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)	
	Inverter		-		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection	
	Compressor		-		Over-heat protection		Over-heat protection		Over-heat protection		Over-heat protection	
	PCB		-		Over-current protection		Over-current protection		Over-current protection		Over-current protection	
Refrigerant	Type		-		R410A		R410A		R410A		R410A	
	Factory Charge Amount		lbs	(kg)	7.7	(3.5)	7.7	(3.5)	10.4	(4.7)	13.7	(6.2)
Refrigeration Oil	Factory Charge Amount		gal/Unit	(L/Unit)	1.59	(6)	1.59	(6)	1.82	(6.9)	2.09	(7.9)
Main Refrigerant Piping	Low Pressure Gas Line		in	(mm)	3/4	(19.05)	7/8	(22.2)	7/8	(22.2)	1-1/8	(28.58)
	High/Low Pressure Gas Line (Not Used for Heat Pump System)		in	(mm)	5/8	(15.88)	3/4	(19.05)	3/4	(19.05)	7/8	(22.2)
	Liquid Line		in	(mm)	3/8	(9.52)	3/8	(9.52)	1/2	(12.7)	1/2	(12.7)
Water Piping Connections	Water Inlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
	Water Outlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
Drain Connection	Drain Outlet		in	(mm)	1/2 NPT		1/2 NPT		1/2 NPT		1/2 NPT	

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C) DB
66.2°F (19°C) WB

Entering Water Temperature: 86°F (30°C)

Heating

Indoor Air Inlet Temperature: 68°F (20°C) DB

Entering Water Temperature: 68°F (20°C)

Piping Length: 24ft. 7-3/16 in. (7.5m), Piping Lift: 0ft. (0m)
This unit cannot be installed outdoor. Install indoor .
Ambient condition of this unit should be 35~104°F DB (1.7~40°C DB), ~80% Relative Humidtiy (RH).

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for cooling, heating and cooling & heating operation range. For details, refer to “2.12 Operation Temperature Range”.

4 For details, refer to “2.13 Combination of Indoor Units and Water Source Units”.

5 Measure Point: 3.3ft. (1m) from each surface and 3.3ft. (1m) from floor level
The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

Category		Ton			14RT		16RT		18RT	
Model					(H,Y)VWHR168B42S		(H,Y)VWHR192B42S		(H,Y)VWHR216B42S	
Model (Individual)		Unit A			(H,Y)VWHR168B42S		(H,Y)VWHR192B42S		(H,Y)VWHR216B42S	
		Unit B			-		-		-	
		Unit C			-		-		-	
Power Supply					460V/ 3PH 60Hz		460V/ 3PH 60Hz		460V/ 3PH 60Hz	
Capacity *1	Cooling	Capacity (Nominal)	Btu/h	(kW)	168,000	(49.2)	192,000	(56.3)	216,000	(63.3)
	Heating	Capacity (Nominal)	Btu/h	(kW)	189,000	(55.4)	216,000	(63.3)	243,000	(71.2)
Efficiency Ratings *2 (Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	160,000	(46.9)	184,000	(53.9)	206,000	(60.4)
		EER	Btu/Wh	(W/W)	13.20	(3.87)	12.30	(3.60)	10.70	(3.14)
		IEER	Btu/Wh	(Wh/Wh)	20.40	(5.98)	21.00	(6.15)	19.50	(5.71)
	Heating	Capacity (Rated)	Btu/h	(kW)	180,000	(52.8)	206,000	(60.4)	232,000	(68.0)
		COP	W/W		4.90		4.50		4.05	
	Heating and Cooling	SCHE	Btu/Wh (Wh/Wh)		20.50		25.40		17.55	
Efficiency Ratings *2 (Non-Ducted)	Cooling	Capacity (Rated)	Btu/h	(kW)	160,000	(46.9)	184,000	(53.9)	206,000	(60.4)
		EER	Btu/Wh	(W/W)	13.90	(4.07)	12.90	(3.78)	11.30	(3.31)
		IEER	Btu/Wh	(Wh/Wh)	22.70	(6.65)	20.90	(6.13)	20.31	(5.95)
	Heating	Capacity (Rated)	Btu/h	(kW)	180,000	(52.8)	206,000	(60.4)	232,000	(68.0)
		COP	W/W		5.30		4.85		4.30	
	Heating and Cooling	SCHE	Btu/Wh (Wh/Wh)		22.60		26.50		19.30	
Cooling Operating Range		Indoor	°F WB (°C WB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Heating Operating Range		Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cooling & Heating Operating Range	Cooling	Indoor	°F DB (°C DB)		59 (15)~73 (23)		59 (15)~73 (23)		59 (15)~73 (23)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
	Heating	Indoor	°F DB (°C DB)		59 (15)~80 (27)		59 (15)~80 (27)		59 (15)~80 (27)	
		Entering Water	°F (°C)		50 (10)~113 (45) *3		50 (10)~113 (45) *3		50 (10)~113 (45) *3	
Cabinet Color (Munsell Code)			-		2.5Y 8/2		2.5Y 8/2		2.5Y 8/2	
Outer Dimensions	Height		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Width		in	(mm)	39-3/8	(1000)	39-3/8	(1000)	39-3/8	(1000)
	Depth		in	(mm)	21-5/8	(550)	21-5/8	(550)	21-5/8	(550)
Package Dimensions	Height		in	(mm)	44-13/16	(1138)	44-13/16	(1138)	44-13/16	(1138)
	Width		in	(mm)	42-1/4	(1073)	42-1/4	(1073)	42-1/4	(1073)
	Depth		in	(mm)	23-11/16	(602)	23-11/16	(602)	23-11/16	(602)
Weight	Net		lbs	(kg)	567	(257)	567	(257)	567	(257)
	Gross		lbs	(kg)	593	(269)	593	(269)	593	(269)
Connection Ratio	Standard *4		%		130 - 50		130 - 50		130 - 50	
	Max. (Recommended) Indoor Units/System *4		Q'ty		29 (12)		33 (14)		33 (14)	
Heat Exchanger	Type		-		Plate Type		Plate Type		Plate Type	
	Material		-		Stainless Steel		Stainless Steel		Stainless Steel	
	Rated Water Flow Rate		gpm	(L/min)	44.1	(167)	51	(193)	56	(212)
	Range of Water Flow Rate		gpm	(L/min)	24 ~ 70	(90 ~ 268)	27 ~ 79	(101 ~ 301)	27 ~ 79	(101 ~ 301)
Compressor	Type		-		DB65PHD-D2YC2 x2		DB65PHD-D2YC2 x2		DB65PHD-D2YC2 x2	
	Start Method		-		inverter		inverter		inverter	
	Operation Range		%		10~100		10~100		10~100	
	Refrigeration Oil Type		-		FVC68D		FVC68D		FVC68D	
Crankcase Heater			W×Q'ty		40 (240V) ×2		40 (240V) ×2		40 (240V) ×2	
Electrical	Min Circuit Amps		A		22		29		37	
	Maximum Overcurrent Protective Device		A		25		40		50	
	Maximum Fuse Size		A		25		40		50	
Sound Pressure Level *5			dB (A)		58		59		59	
Protection devices	Cycle		-		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)		High pressure switch at 601psi (4.15MPa)	
	Inverter		-		Over-current protection Over-heat protection		Over-current protection Over-heat protection		Over-current protection Over-heat protection	
	Compressor		-		Over-heat protection		Over-heat protection		Over-heat protection	
	PCB		-		Over-current protection		Over-current protection		Over-current protection	
Refrigerant	Type		-		R410A		R410A		R410A	
	Factory Charge Amount		lbs	(kg)	15.4	(7.0)	15.4	(7.0)	15.4	(7.0)
Refrigeration Oil	Factory Charge Amount		gal/Unit	(L/Unit)	2.09	(7.9)	2.22	(8.4)	2.22	(8.4)
Main Refrigerant Piping	Low Pressure Gas Line		in	(mm)	1-1/8	(28.58)	1-1/8	(28.58)	1-1/8	(28.58)
	High/Low Pressure Gas Line (Not Used for Heat Pump System)		in	(mm)	7/8	(22.2)	7/8	(22.2)	7/8	(22.2)
	Liquid Line		in	(mm)	5/8	(15.88)	5/8	(15.88)	5/8	(15.88)
Water Piping Connections	Water Inlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
	Water Outlet		in	(mm)	1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)		1-1/4 - 11-1/2 NPT (ANSI-ASME B1.20.1)	
Drain Connection	Drain Outlet		in	(mm)	1/2 NPT		1/2 NPT		1/2 NPT	

NOTES:

1 Rating Conditions:

Cooling

Indoor Air Inlet Temperature: 80.6°F (27°C) DB
66.2°F (19°C) WB

Entering Water Temperature: 86°F (30°C)

Heating

Indoor Air Inlet Temperature: 68°F (20°C) DB

Entering Water Temperature: 68°F (20°C)

Piping Length: 24ft. 7-3/16 in. (7.5m), Piping Lift: 0ft. (0m)
This unit cannot be installed outdoor. Install indoor .
Ambient condition of this unit should be 35~104°F DB (1.7~40°C DB), ~80% Relative Humidtiy (RH).

2 Efficiency ratings are based on the AHRI 1230 test standard.

3 There are some exceptions and notes for cooling, heating and cooling & heating operation range. For details, refer to “2.12 Operation Temperature Range”.

4 For details, refer to “2.13 Combination of Indoor Units and Water Source Units”.

5 Measure Point: 3.3ft. (1m) from each surface and 3.3ft. (1m) from floor level
The operation sound is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

2.4 Dimensional Data and Weights

2.4.1 Overall Dimensional and Weight Data

208/230V

Model	Height [in (mm)]	Width [in (mm)]	Depth [in (mm)]	Net Weight [lbs (kg)]
(H,Y)VWH(P,R)072B32S	39-3/8 (1000)	30-11/16 (780)	21-5/8 (550)	370 (168)
(H,Y)VWH(P,R)096B32S	39-3/8 (1000)	30-11/16 (780)	21-5/8 (550)	370 (168)
(H,Y)VWH(P,R)120B32S	39-3/8 (1000)	30-11/16 (780)	21-5/8 (550)	381 (173)
(H,Y)VWH(P,R)144B32S	39-3/8 (1000)	39-3/8 (1000)	21-5/8 (550)	556 (252)
(H,Y)VWH(P,R)168B32S	39-3/8 (1000)	39-3/8 (1000)	21-5/8 (550)	558 (253)
(H,Y)VWH(P,R)192B32S	39-3/8 (1000)	39-3/8 (1000)	21-5/8 (550)	558 (253)
(H,Y)VWH(P,R)216B32S	39-3/8 (1000)	39-3/8 (1000)	21-5/8 (550)	558 (253)

460V

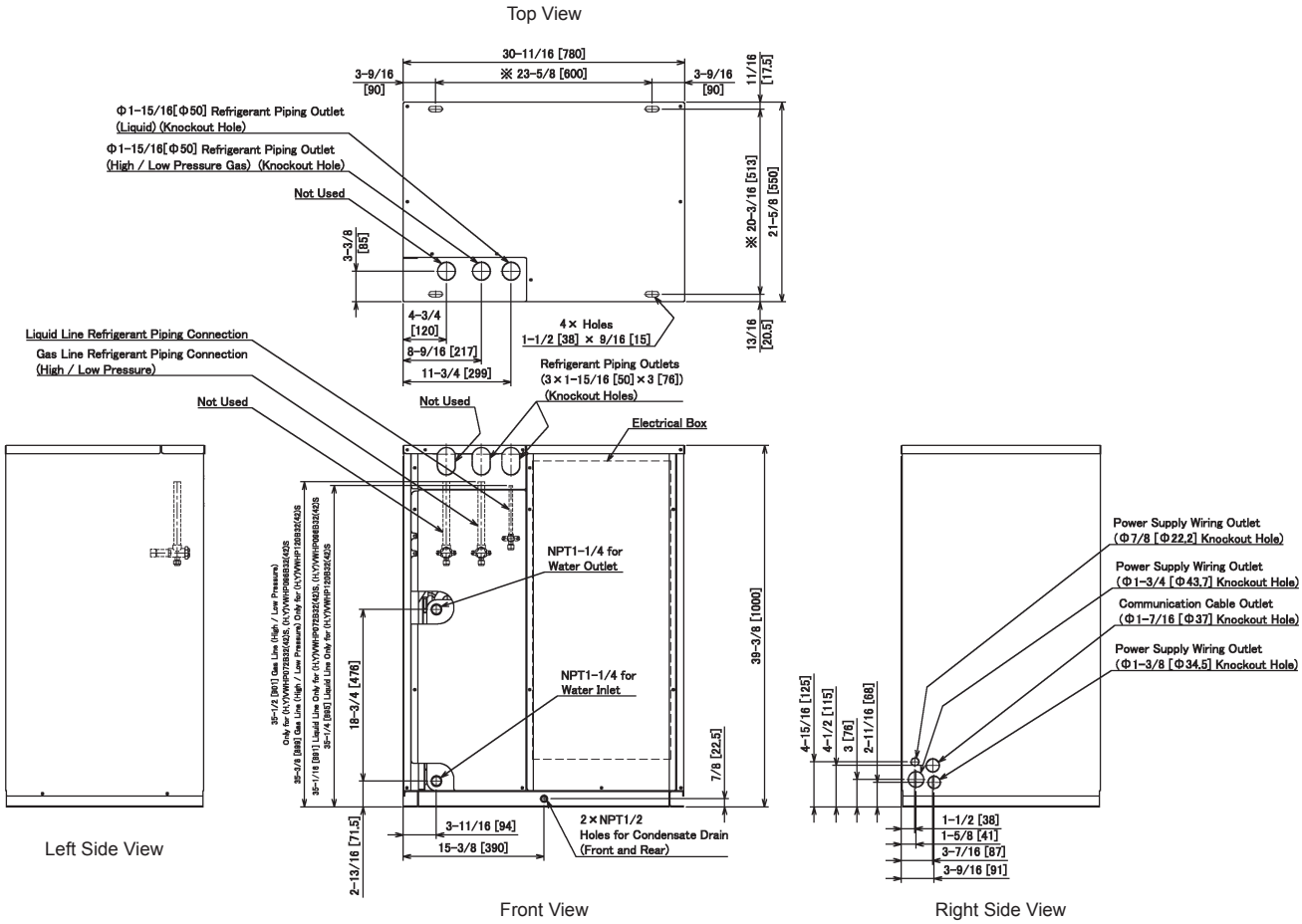
Model	Height [in (mm)]	Width [in (mm)]	Depth [in (mm)]	Net Weight [lbs (kg)]
(H,Y)VWH(P,R)072B42S	39-3/8 (1000)	30-11/16 (780)	21-5/8 (550)	379 (172)
(H,Y)VWH(P,R)096B42S	39-3/8 (1000)	30-11/16 (780)	21-5/8 (550)	379 (172)
(H,Y)VWH(P,R)120B42S	39-3/8 (1000)	30-11/16 (780)	21-5/8 (550)	390 (177)
(H,Y)VWH(P,R)144B42S	39-3/8 (1000)	39-3/8 (1000)	21-5/8 (550)	564 (256)
(H,Y)VWH(P,R)168B42S	39-3/8 (1000)	39-3/8 (1000)	21-5/8 (550)	567 (257)
(H,Y)VWH(P,R)192B42S	39-3/8 (1000)	39-3/8 (1000)	21-5/8 (550)	567 (257)
(H,Y)VWH(P,R)216B42S	39-3/8 (1000)	39-3/8 (1000)	21-5/8 (550)	567 (257)

2.4.2 Water Source Units

Heat Pump Type

Model: (H,Y)VWHP072B(3,4)2S, (H,Y)VWHP096B(3,4)2S and (H,Y)VWHP120B(3,4)2S

Unit: inch [mm]

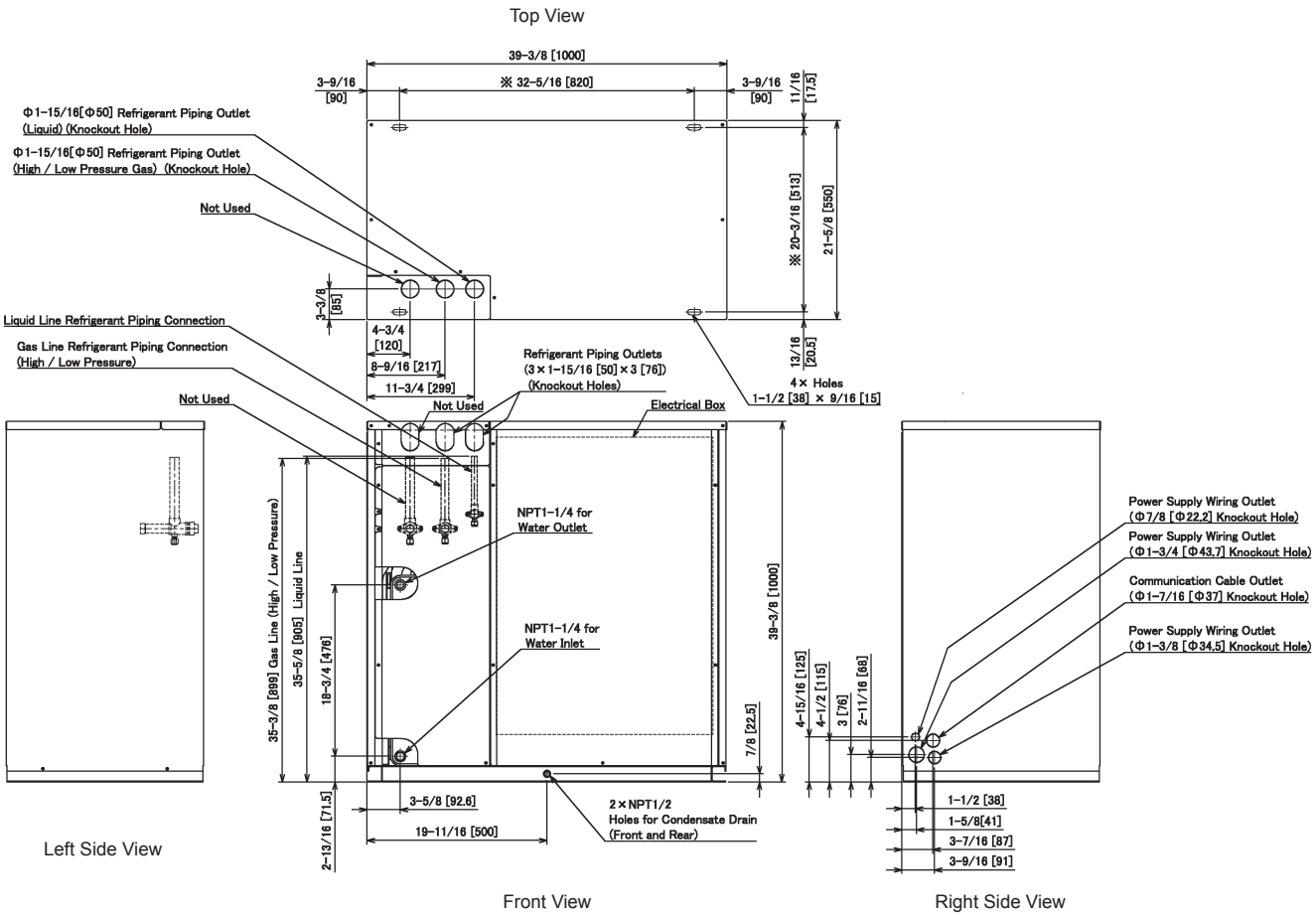


NOTES:

1. Perform condensate pipe work while paying attention to the following.
   1) The diameter of condensate pipe should be same as the diameter of unit connection (1/2 inch (12.7mm)) or more.
   2) Install condensate pipe with a downward slope of 1/50 or more.
   3) Do not install any traps.
   4) Insulate the condensate pipe to prevent condensation.
   5) After completing the condensate pipe work, make sure that the water runs smoothly without any clogging by dust.
   6) Connection ports for condensate pipe are located in the front and rear side of unit.
      By default, the condensate plug is attached on the rear side.
      When using the rear side port, be sure to change the plug from the rear side to the front side and securely close it.
2. The dimensions marked with ※ indicates the mounting pitch dimension for anchor bolts.

Model: (H,Y)VWHP144B(3,4)2S, (H,Y)VWHP168B(3,4)2S, (H,Y)VWHP192B(3,4)2S and (H,Y)VWHP216B(3,4)2S

Unit: inch [mm]



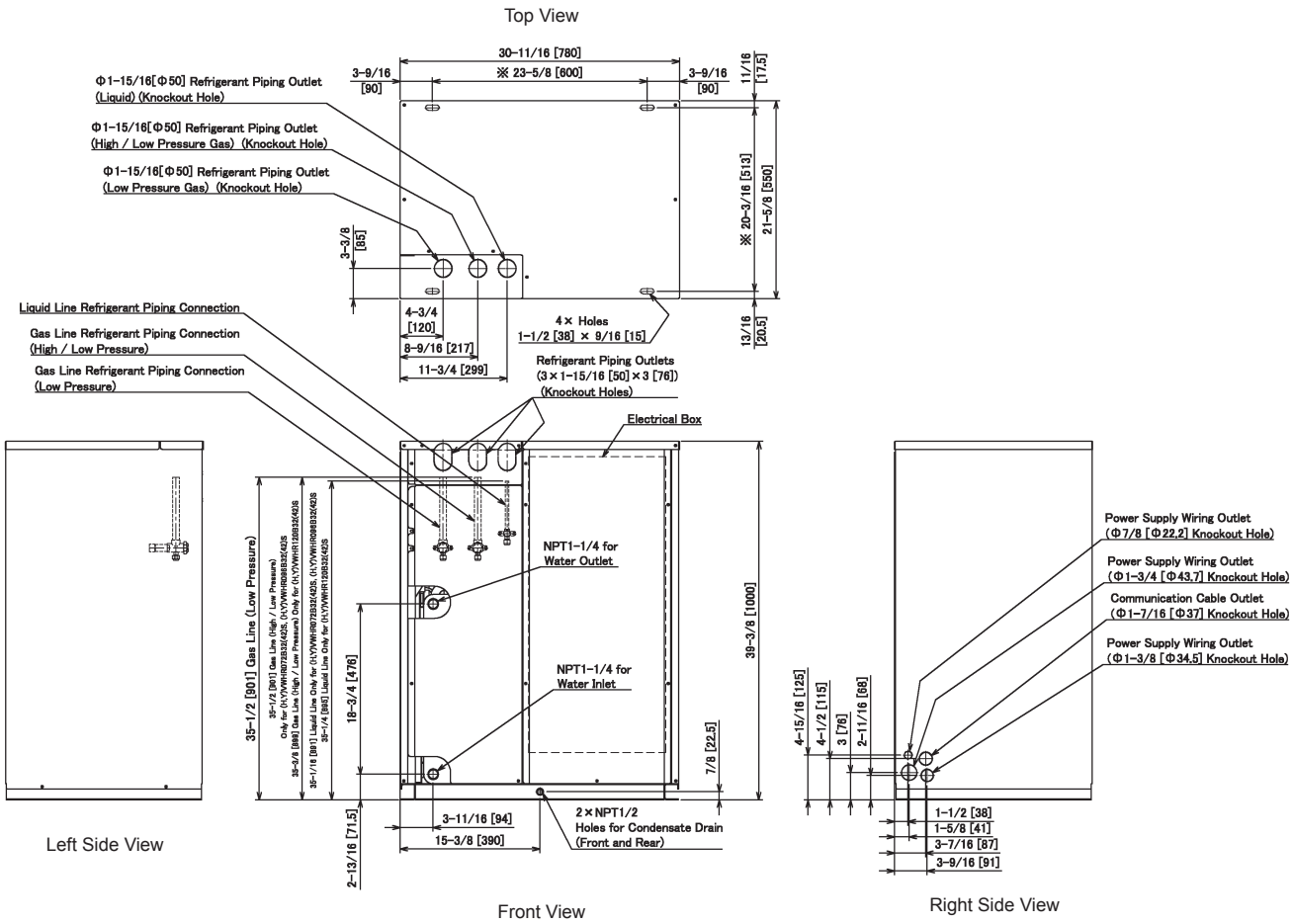
NOTES:

1. Perform condensate pipe work while paying attention to the following.
   1) The diameter of condensate pipe should be same as the diameter of unit connection (1/2 inch (12.7mm)) or more.
   2) Install condensate pipe with a downward slope of 1/50 or more.
   3) Do not install any traps.
   4) Insulate the condensate pipe to prevent condensation.
   5) After completing the condensate pipe work, make sure that the water runs smoothly without any clogging by dust.
   6) Connection ports for condensate pipe are located in the front and rear side of unit.
      By default, the condensate plug is attached on the rear side.
      When using the rear side port, be sure to change the plug from the rear side to the front side and securely close it.
2. The dimensions marked with ※ indicates the mounting pitch dimension for anchor bolts.

Heat Recovery Type

Model: (H,Y)VWHR072B(3,4)2S, (H,Y)VWHR096B(3,4)2S and (H,Y)VWHR120B(3,4)2S

Unit: inch [mm]

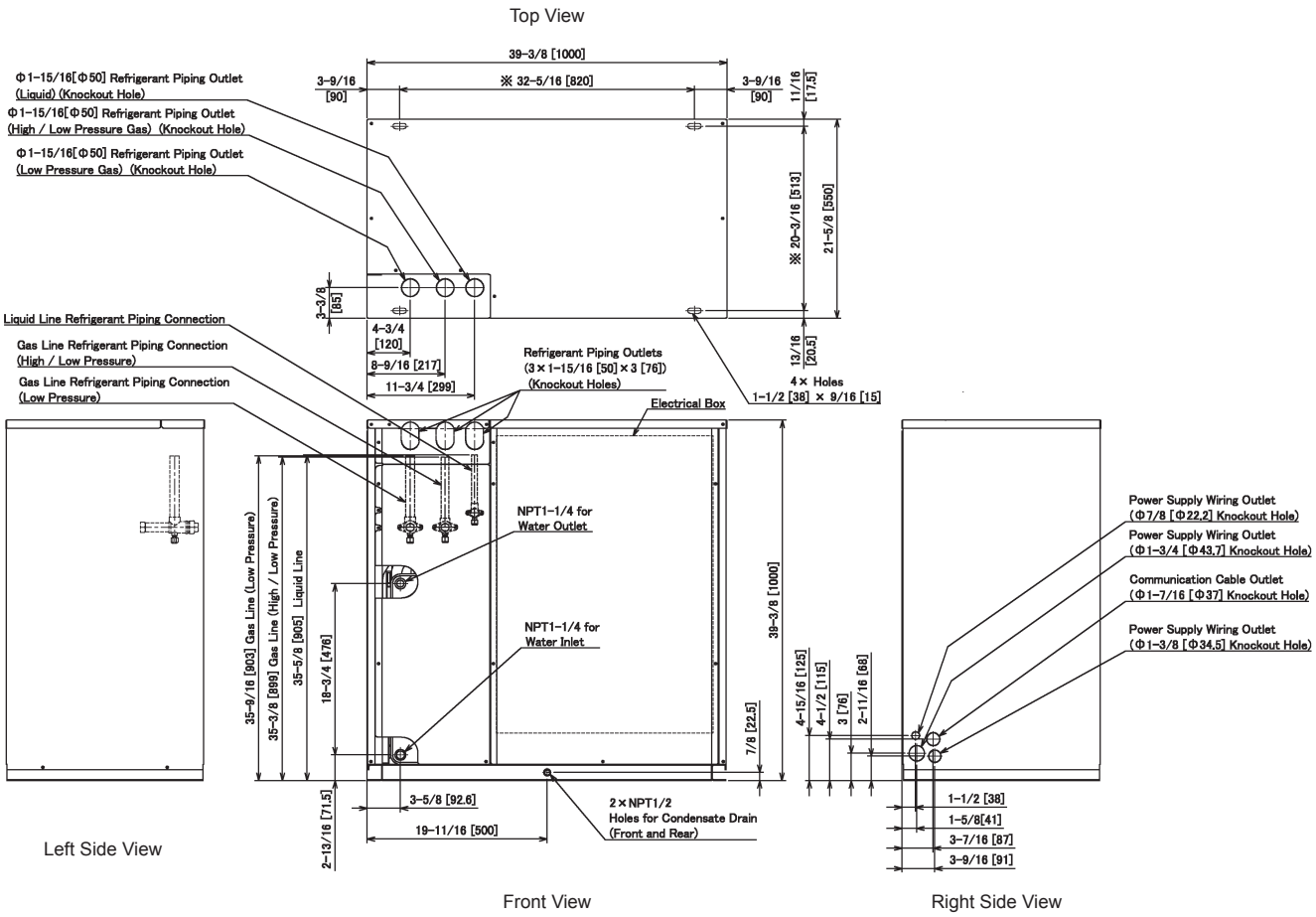


NOTES:

1. Perform condensate pipe work while paying attention to the following.
   1) The diameter of condensate pipe should be same as the diameter of unit connection (1/2 inch (12.7mm)) or more.
   2) Install condensate pipe with a downward slope of 1/50 or more.
   3) Do not install any traps.
   4) Insulate the condensate pipe to prevent condensation.
   5) After completing the condensate pipe work, make sure that the water runs smoothly without any clogging by dust.
   6) Connection ports for condensate pipe are located in the front and rear side of unit.
      By default, the condensate plug is attached on the rear side.
      When using the rear side port, be sure to change the plug from the rear side to the front side and securely close it.
2. The dimensions marked with ※ indicates the mounting pitch dimension for anchor bolts.

Model: (H,Y)VWHR144B(3,4)2S, (H,Y)VWHR168B(3,4)2S, (H,Y)VWHR192B(3,4)2S and (H,Y)VWHR216B(3,4)2S

Unit: inch [mm]



NOTES:

1. Perform condensate pipe work while paying attention to the following.
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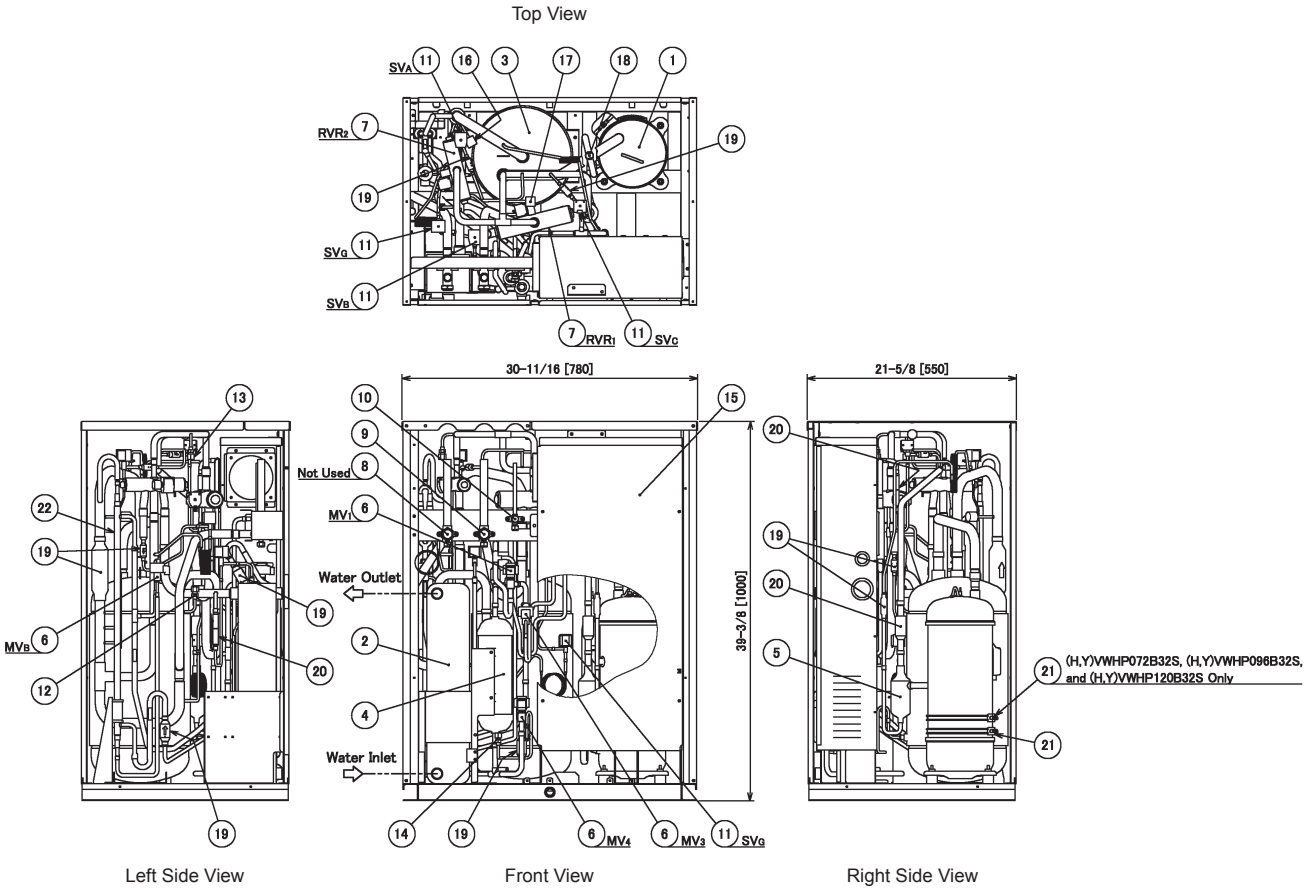
   5) After completing the condensate pipe work, make sure that the water runs smoothly without any clogging by dust.
   6) Connection ports for condensate pipe are located in the front and rear side of unit.
      By default, the condensate plug is attached on the rear side.
      When using the rear side port, be sure to change the plug from the rear side to the front side and securely close it.
2. The dimensions marked with ※ indicates the mounting pitch dimension for anchor bolts.

2.5 Structure

Heat Pump Type

Model: (H,Y)VWHP072B(3,4)2S, (H,Y)VWHP096B(3,4)2S and (H,Y)VWHP120B(3,4)2S

Unit: inch [mm]

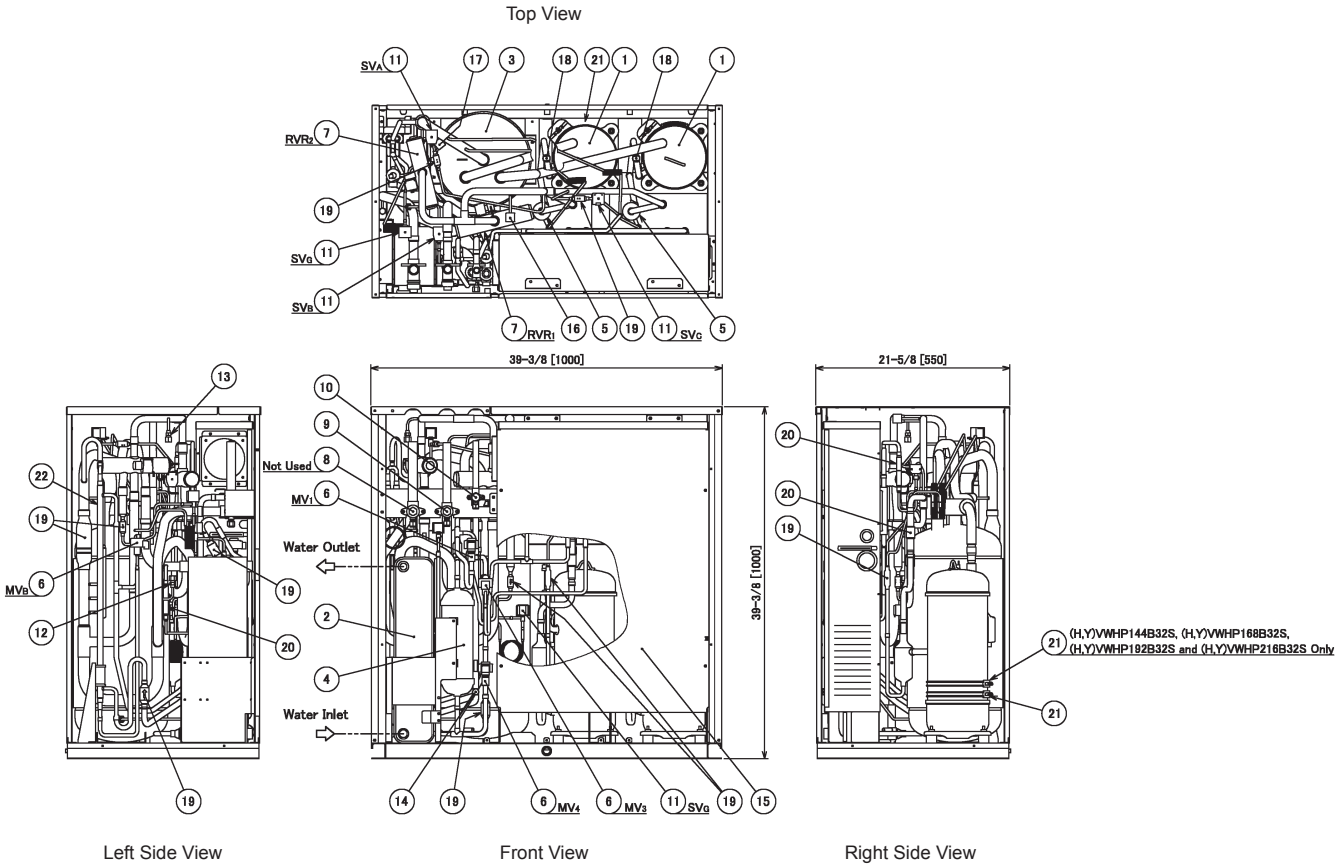


No.	Part Name
1	Compressor (Inverter)
2	Plate Type Heat Exchanger
3	Accumulator
4	Receiver
5	Oil Separator
6	Electronic Expansion Valve (4 pcs.)
7	Reversing Valve (2 pcs.)
8	Stop Valve (Low Pressure Gas)
9	Stop Valve (High/Low Pressure Gas)
10	Stop Valve (Liquid)
11	Solenoid Valve (5 pcs.)

No.	Part Name
12	Access Port (Low)
13	Access Port (High)
14	Access Port (for Oil)
15	Electrical Box
16	Low Pressure Sensor
17	High Pressure Sensor
18	High Pressure Switch for Protection
19	Strainer (9 pcs.)
20	Check Valve (3 pcs.)
21	Crankcase Heater (1 or 2 pcs.)
22	Double Tube Type Heat Exchanger

Model: (H,Y)VWHP144B(3,4)2S, (H,Y)VWHP168B(3,4)2S, (H,Y)VWHP192B(3,4)2S and (H,Y)VWHP216B(3,4)2S

Unit: inch [mm]



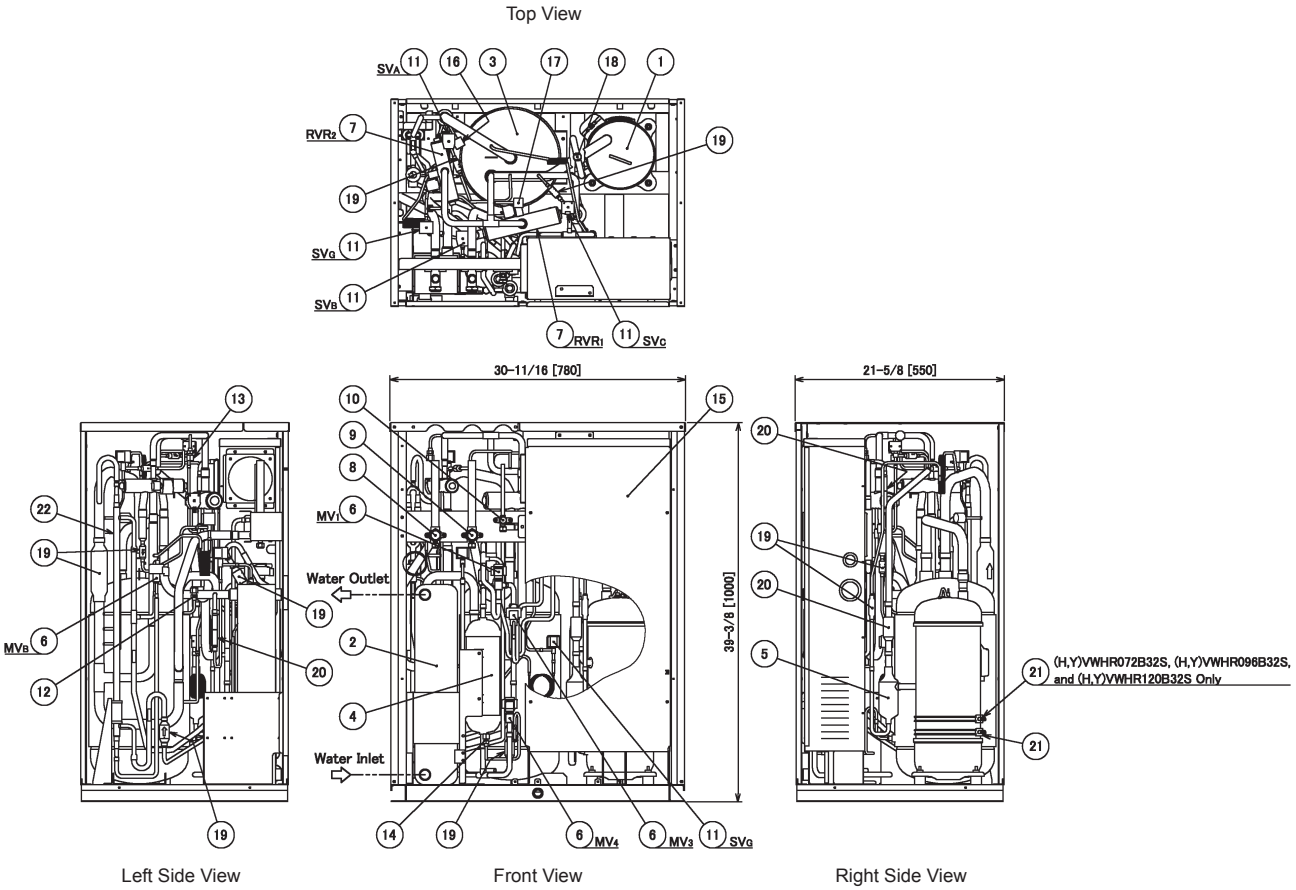
No.	Part Name
1	Compressor (Inverter) (2 pcs.)
2	Plate Type Heat Exchanger
3	Accumulator
4	Receiver
5	Oil Separator (2 pcs.)
6	Electronic Expansion Valve (4 pcs.)
7	Reversing Valve (2 pcs.)
8	Stop Valve (Low Pressure Gas)
9	Stop Valve (High/Low Pressure Gas)
10	Stop Valve (Liquid)
11	Solenoid Valve (5 pcs.)

No.	Part Name
12	Access Port (Low)
13	Access Port (High)
14	Access Port (for Oil)
15	Electrical Box
16	Low Pressure Sensor
17	High Pressure Sensor
18	High Pressure Switch for Protection (2 pcs.)
19	Strainer (10 pcs.)
20	Check Valve (3 pcs.)
21	Crankcase Heater (2 or 4 pcs.)
22	Double Tube Type Heat Exchanger

Heat Recovery Type

Model: (H,Y)VWHR072B(3,4)2S, (H,Y)VWHR096B(3,4)2S and (H,Y)VWHR120B(3,4)2S

Unit: inch [mm]

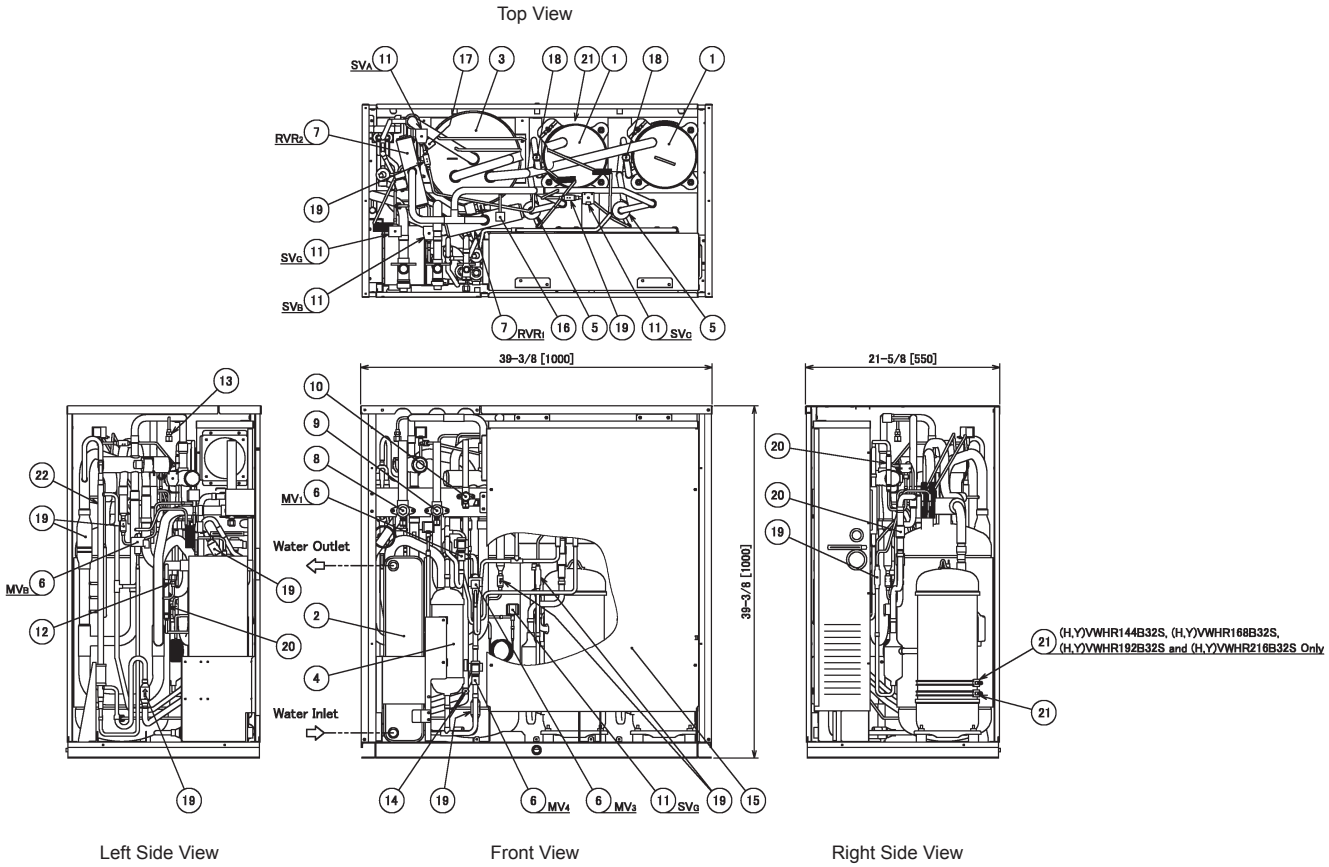


No.	Part Name
1	Compressor (Inverter)
2	Plate Type Heat Exchanger
3	Accumulator
4	Receiver
5	Oil Separator
6	Electronic Expansion Valve (4 pcs.)
7	Reversing Valve (2 pcs.)
8	Stop Valve (Low Pressure Gas)
9	Stop Valve (High/Low Pressure Gas)
10	Stop Valve (Liquid)
11	Solenoid Valve (5 pcs.)

No.	Part Name
12	Access Port (Low)
13	Access Port (High)
14	Access Port (for Oil)
15	Electrical Box
16	Low Pressure Sensor
17	High Pressure Sensor
18	High Pressure Switch for Protection
19	Strainer (9 pcs.)
20	Check Valve (3 pcs.)
21	Crankcase Heater (1 or 2 pcs.)
22	Double Tube Type Heat Exchanger

Model: (H,Y)VWHR144B(3,4)2S, (H,Y)VWHR168B(3,4)2S, (H,Y)VWHR192B(3,4)2S and (H,Y)VWHR216B(3,4)2S

Unit: inch [mm]



No.	Part Name
1	Compressor (Inverter) (2 pcs.)
2	Plate Type Heat Exchanger
3	Accumulator
4	Receiver
5	Oil Separator (2 pcs.)
6	Electronic Expansion Valve (4 pcs.)
7	Reversing Valve (2 pcs.)
8	Stop Valve (Low Pressure Gas)
9	Stop Valve (High/Low Pressure Gas)
10	Stop Valve (Liquid)
11	Solenoid Valve (5 pcs.)

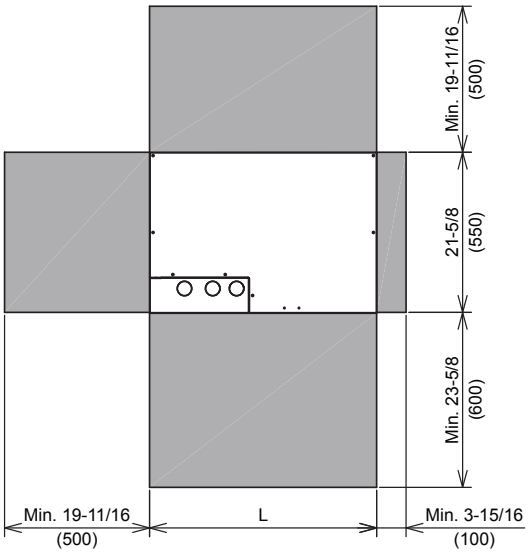
No.	Part Name
12	Access Port (Low)
13	Access Port (High)
14	Access Port (for Oil)
15	Electrical Box
16	Low Pressure Sensor
17	High Pressure Sensor
18	High Pressure Switch for Protection (2 pcs.)
19	Strainer (10 pcs.)
20	Check Valve (3 pcs.)
21	Crankcase Heater (2 or 4 pcs.)
22	Double Tube Type Heat Exchanger

2.6 Service and Installation Space

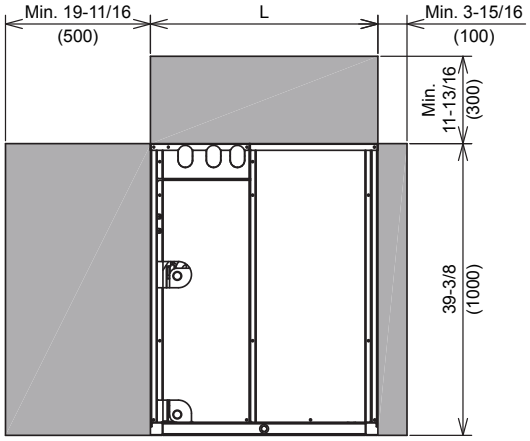
Install the water source unit with sufficient space around it for operation and maintenance access as shown in the following figures.

- Service Space
  Secure following space when replacing parts or service maintenance access.

Unit: inch (mm)



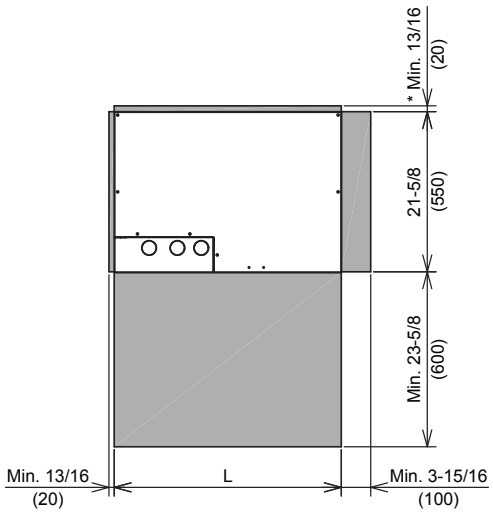
Top View



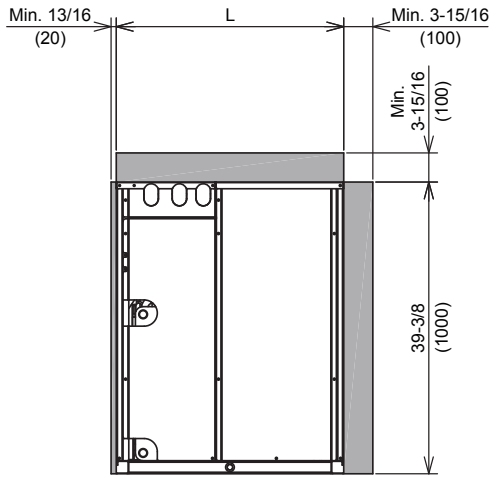
Front View

- Installation Space
  Single installation with refrigerant pipes from front side piping cover and condensate pipe from front side of unit.

Unit: inch (mm)



Top View

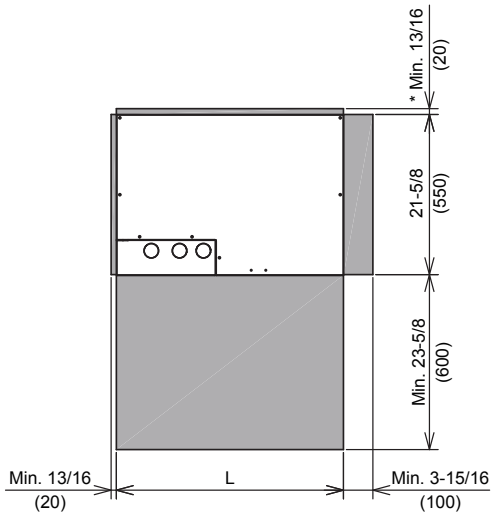


Front View

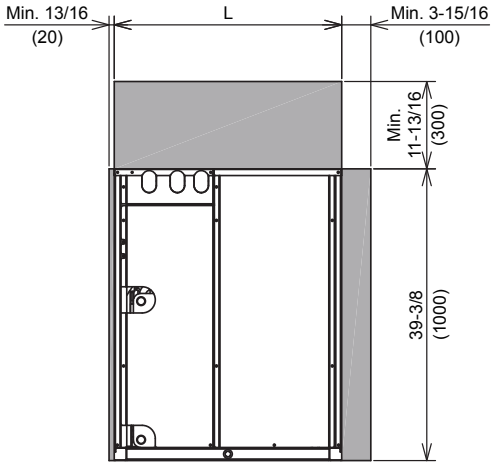
* Provide minimum of 19-11/16 inches (500mm) space for condensate pipe from rear side of unit.

Single installation with refrigerant pipes from top side piping cover and condensate pipe from front side of unit.

Unit: inch (mm)



Top View

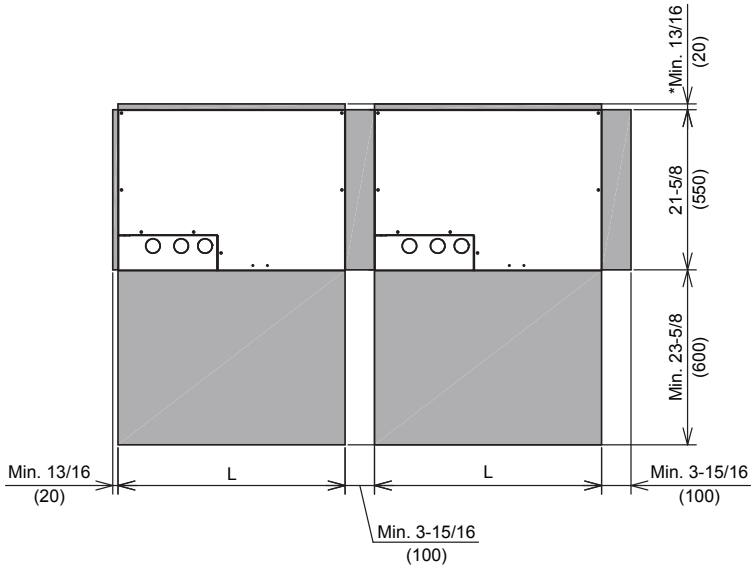


Front View

* Provide minimum of 19-11/16 inches (500mm) space for condensate pipe from rear side of unit.

Multiple installation with condensate pipe from front side of unit.

Unit: inch (mm)

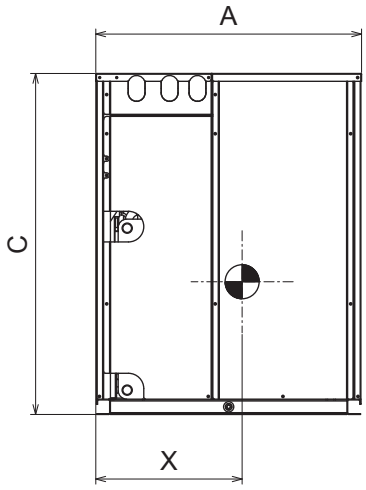


Top View

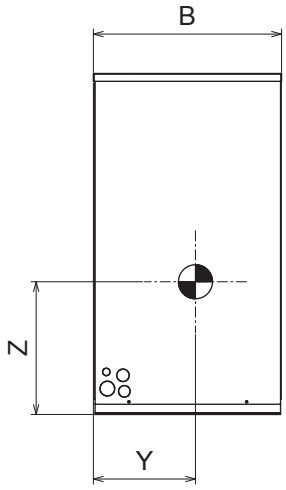
* Provide minimum of 19-11/16 inches (500mm) space for condensate pipe from rear side of unit.

Model	L
72, 96 and 120	30-11/16 (780)
144, 160, 192 and 216	39-3/8 (1000)

2.7 Center of Gravity



Front View



Right Side View

208/230V

Model	Net Weight (lbs [kg])	Center of Gravity (inch [mm])			Outer Dimensions (inch [mm])		
		X	Y	Z	A	B	C
(H,Y)VWH(P,R)072B32S	370 [168]	16-3/4 [425]	11-13/16 [300]	15-3/8 [390]	30-11/16 [780]	21-5/8 [550]	39-3/8 [1000]
(H,Y)VWH(P,R)096B32S							
(H,Y)VWH(P,R)120B32S	381 [173]	16-5/16 [415]	11-7/16 [290]	15-3/4 [400]	30-11/16 [780]	21-5/8 [550]	39-3/8 [1000]
(H,Y)VWH(P,R)144B32S	556 [252]	20-1/2 [520]	12-3/16 [310]	15-3/16 [385]	39-3/8 [1000]	21-5/8 [550]	39-3/8 [1000]
(H,Y)VWH(P,R)168B32S	558 [253]	20-1/2 [520]	12-3/16 [310]	15-3/16 [385]	39-3/8 [1000]	21-5/8 [550]	39-3/8 [1000]
(H,Y)VWH(P,R)192B32S							
(H,Y)VWH(P,R)216B32S							

460V

Model	Net Weight (lbs [kg])	Center of Gravity (inch [mm])			Outer Dimensions (inch [mm])		
		X	Y	Z	A	B	C
(H,Y)VWH(P,R)072B42S	379 [172]	16-15/16 [430]	11-5/8 [295]	15-3/16 [385]	30-11/16 [780]	21-5/8 [550]	39-3/8 [1000]
(H,Y)VWH(P,R)096B42S							
(H,Y)VWH(P,R)120B42S	390 [177]	16-9/16 [420]	11-1/4 [285]	15-9/16 [395]	30-11/16 [780]	21-5/8 [550]	39-3/8 [1000]
(H,Y)VWH(P,R)144B42S	564 [256]	20-11/16 [525]	12 [305]	14-15/16 [380]	39-3/8 [1000]	21-5/8 [550]	39-3/8 [1000]
(H,Y)VWH(P,R)168B42S	567 [257]	20-11/16 [525]	12 [305]	14-15/16 [380]	39-3/8 [1000]	21-5/8 [550]	39-3/8 [1000]
(H,Y)VWH(P,R)192B42S							
(H,Y)VWH(P,R)216B42S							

2.8 Electrical Data

(1) 208/230V 60Hz

Model	Unit Main Power			Applicable Voltage		Power Supply		Compressor		Fan Motor
	VOL	PH	Hz	Max.	Min.	MCA [A]	MOP [A]	MOC [A]	LRA [A]	OPT [kW]
(H,Y)VWH(P,R)072B32S	208/230	3	60	253	188	20/18	30/30	15.4/14.0	54	0.016
(H,Y)VWH(P,R)096B32S						32/29	50/45	25.0/22.7	54	0.016
(H,Y)VWH(P,R)120B32S						38/34	60/50	29.8/27.0	50	0.016
(H,Y)VWH(P,R)144B32S						37/34	50/45	16.4/14.8 + 16.4/14.8	54 + 54	0.016
(H,Y)VWH(P,R)168B32S						41/37	50/50	18.0/16.4 + 18.0/16.4	54 + 54	0.016
(H,Y)VWH(P,R)192B32S						55/50	70/60	24.3/22.0 + 24.3/22.0	54 + 54	0.016
(H,Y)VWH(P,R)216B32S						71/64	90/80	31.2/28.3 + 31.2/28.3	54 + 54	0.016

(2) 460V 60Hz

Model	Unit Main Power			Applicable Voltage		Power Supply		Compressor		Fan Motor
	VOL	PH	Hz	Max.	Min.	MCA [A]	MOP [A]	MOC [A]	LRA [A]	OPT [kW]
(H,Y)VWH(P,R)072B42S	460	3	60	506	414	11	15	8.0	47	0.016
(H,Y)VWH(P,R)096B42S						17	25	13.0	47	0.016
(H,Y)VWH(P,R)120B42S						20	30	15.5	47	0.016
(H,Y)VWH(P,R)144B42S						20	25	8.5 + 8.5	47 + 47	0.016
(H,Y)VWH(P,R)168B42S						22	25	9.4 + 9.4	47 + 47	0.016
(H,Y)VWH(P,R)192B42S						29	40	12.7 + 12.7	47 + 47	0.016
(H,Y)VWH(P,R)216B42S						37	50	16.3 + 16.3	47 + 47	0.016

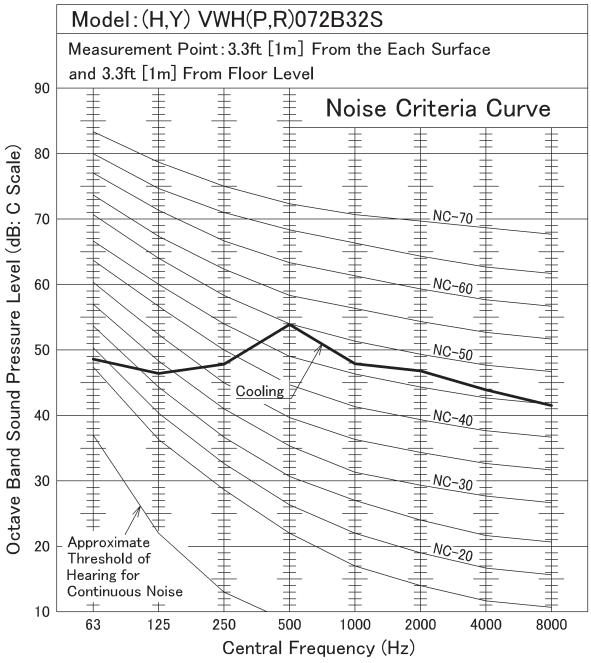
VOL: Rated Unit Power Supply Voltage (V)
PH: Phase (ϕ)
HZ: Frequency (Hz)
MCA: Minimum Circuit Ampacity (A)
MOP: Maximum Overcurrent Protection (A)
MOC: Maximum Operating Current (A)
LRA: Locked Rotor Ampacity (A)
OPT: Rated Motor Output (kW)

NOTES:

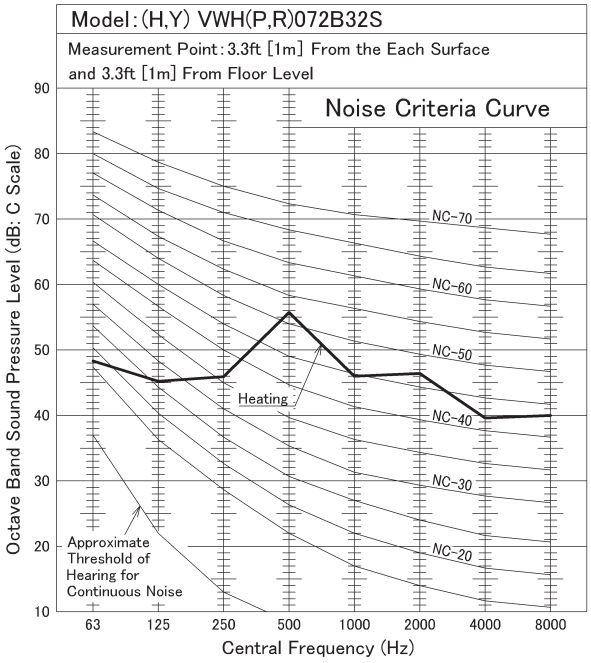
- Power supply voltage should be satisfied with the following.
  Supply Voltage: Rated Voltage within ±10%
  Starting Voltage: Rated Voltage within -15%
  Operating Voltage: Rated Voltage within ±10%
  Imbalance between Phases: Within 3%
- The compressor is started by an inverter, resulting in extremely low starting current.

2.9 Sound Data

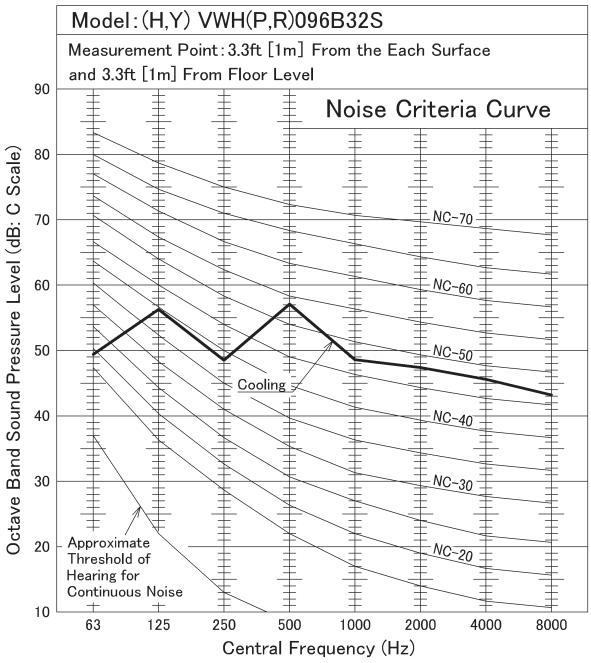
(1) 208/230V



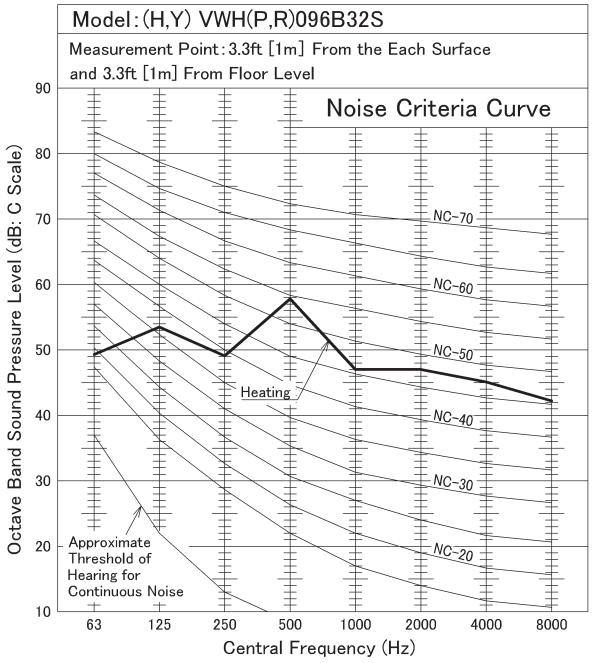
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	48.6	46.4	47.8	53.9	47.9	46.8	43.9	41.5	55



Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	48.3	45.2	45.9	55.7	46.0	46.4	39.6	40.0	55



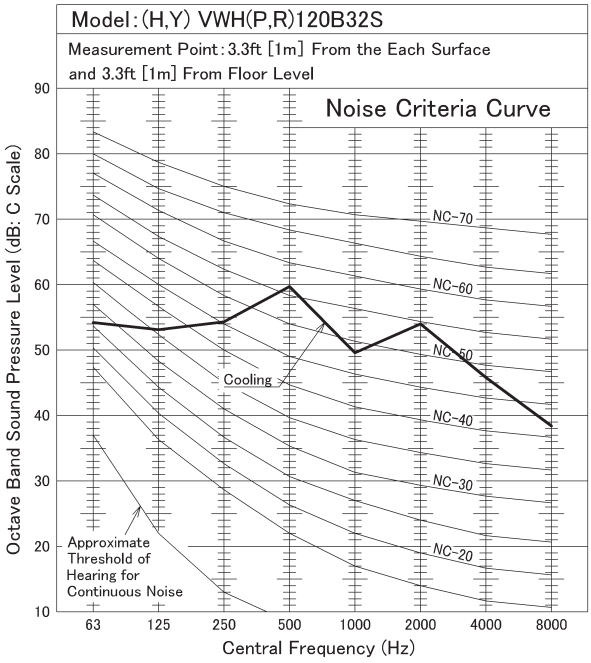
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	49.4	56.3	48.5	57.1	48.6	47.4	45.6	43.2	57



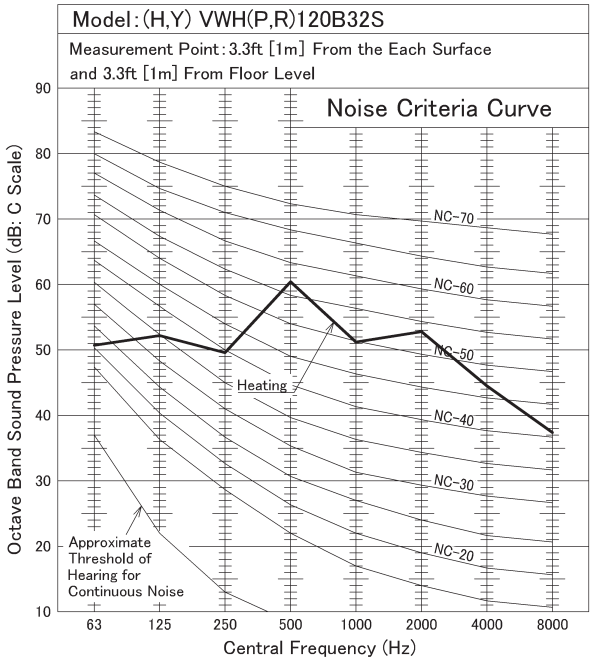
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	49.3	53.5	49.1	57.8	47.0	47.0	45.1	42.2	57

NOTICE:

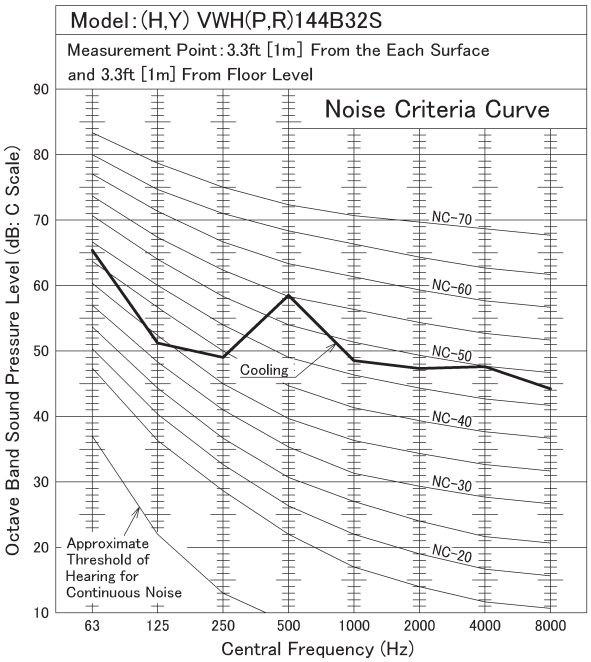
The sound data is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.



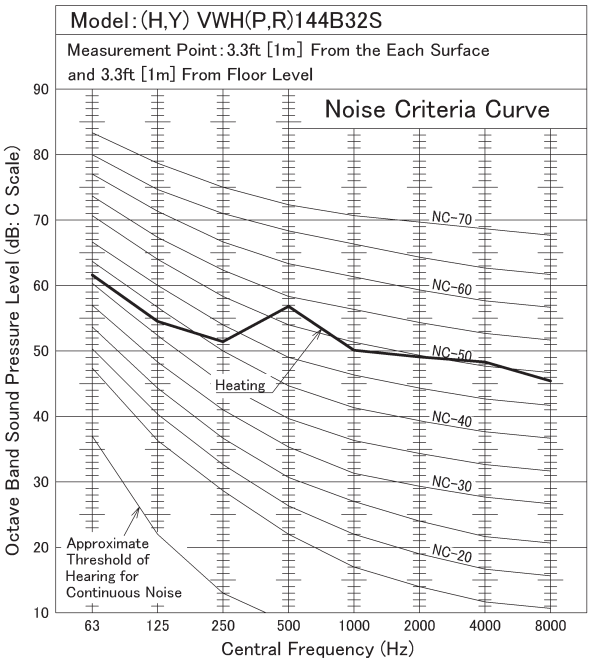
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	54.2	53.1	54.3	59.7	49.6	54.0	45.8	38.4	60



Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	50.7	52.2	49.6	60.4	51.2	52.8	44.5	37.4	60



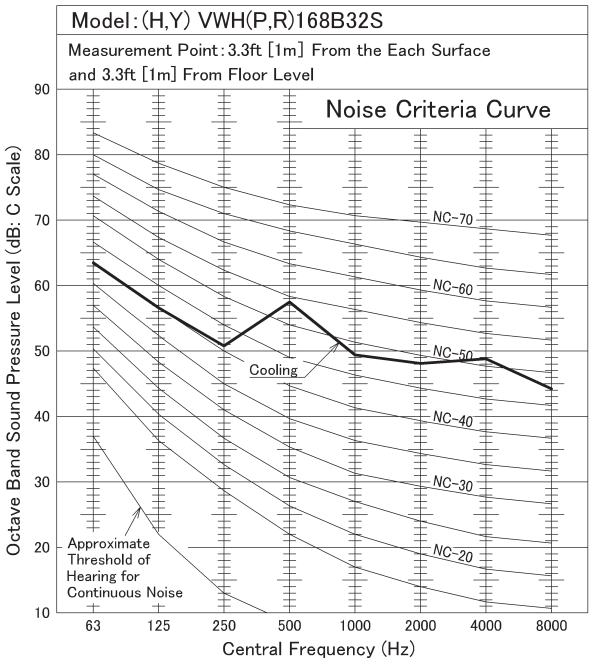
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	65.4	51.2	49.0	58.5	48.5	47.3	47.6	44.2	58



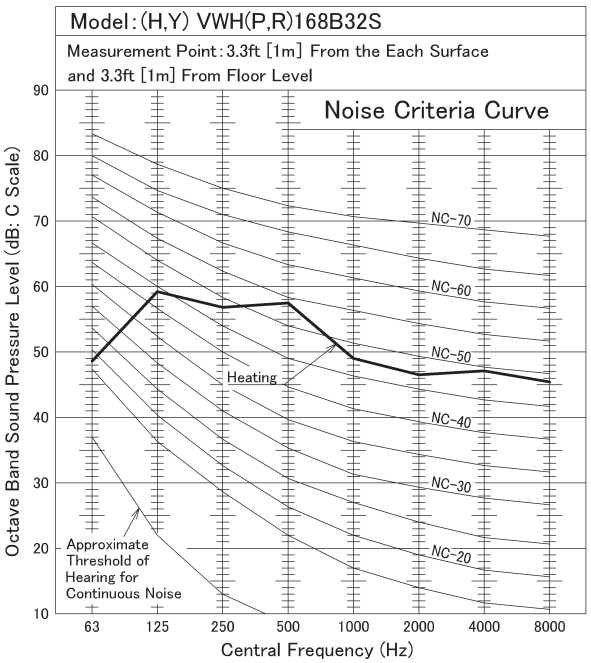
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	61.6	54.5	51.4	56.8	50.1	49.1	48.3	45.4	58

NOTICE:

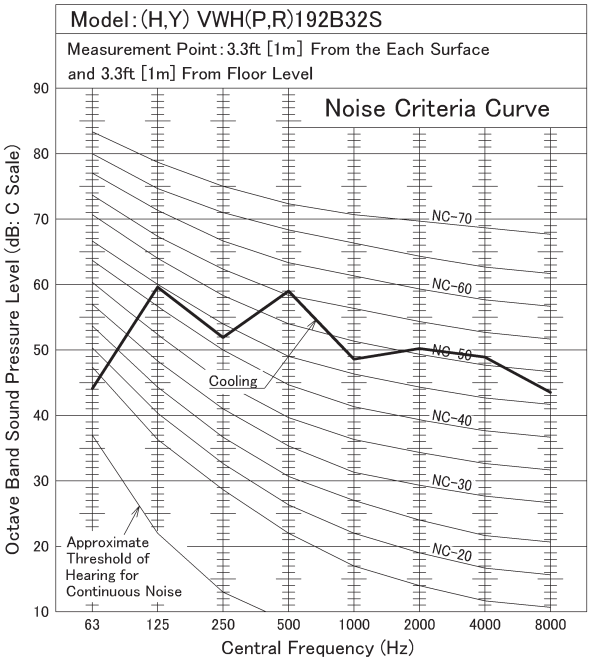
The sound data is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.



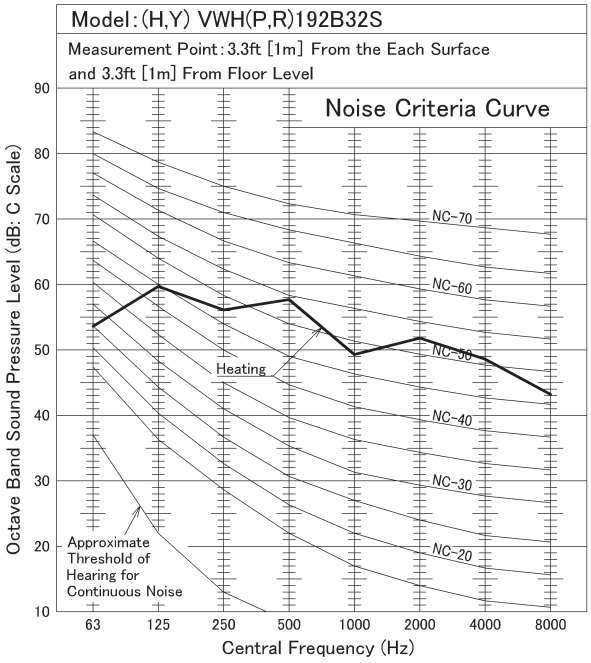
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	63.5	56.6	50.8	57.5	49.4	48.1	48.8	44.2	58



Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	48.6	59.2	56.8	57.5	49.0	46.5	47.1	45.4	58



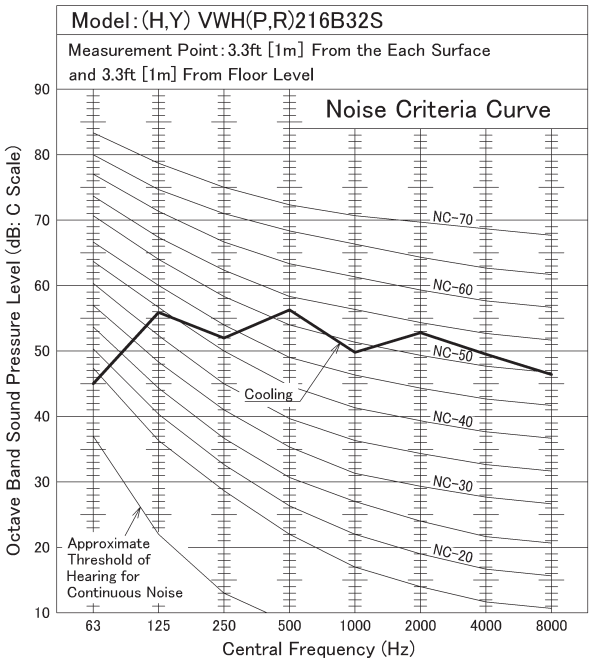
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	44.1	59.6	51.9	59.0	48.6	50.2	48.9	43.5	59



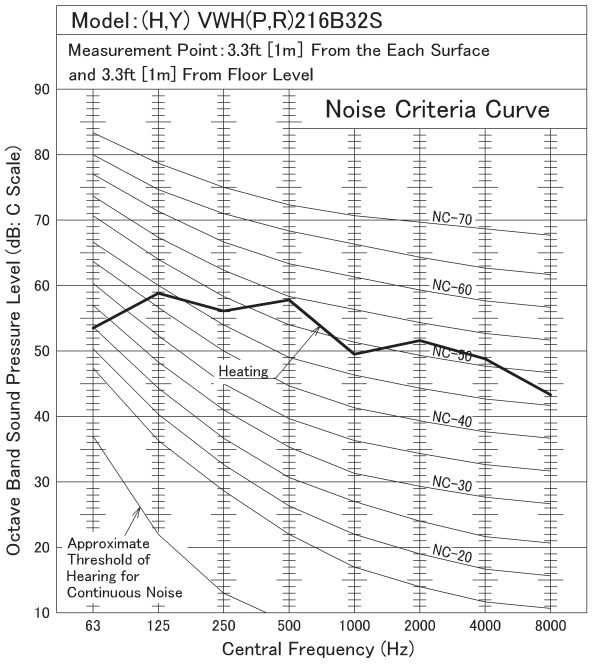
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	53.6	59.7	56.1	57.7	49.3	51.8	48.6	43.2	59

NOTICE:

The sound data is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.



Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	45.0	55.9	52.0	56.3	49.8	52.8	49.5	46.4	59

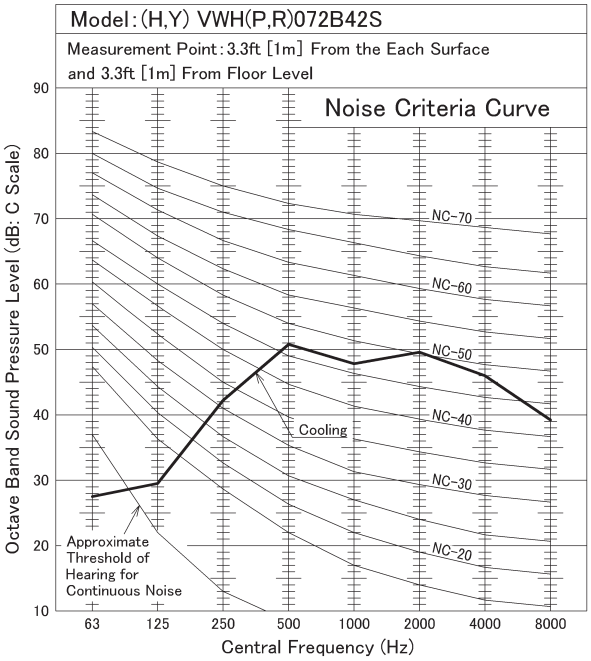


Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	53.5	58.8	56.1	57.8	49.5	51.6	48.8	43.3	59

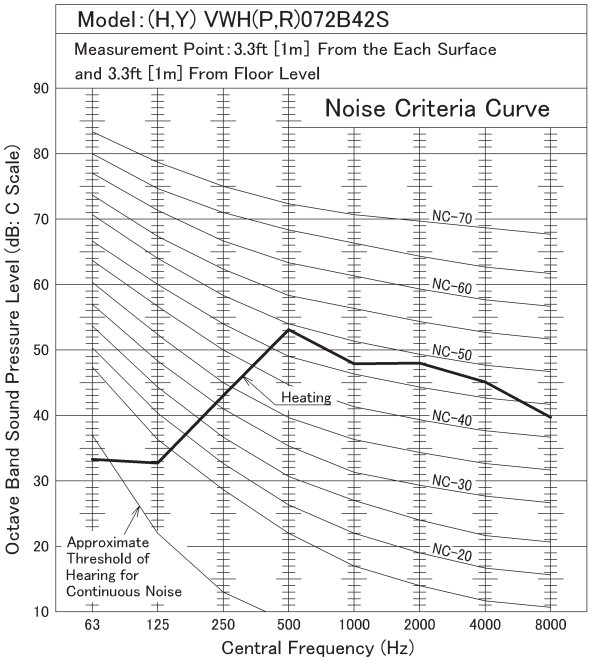
NOTICE:

The sound data is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

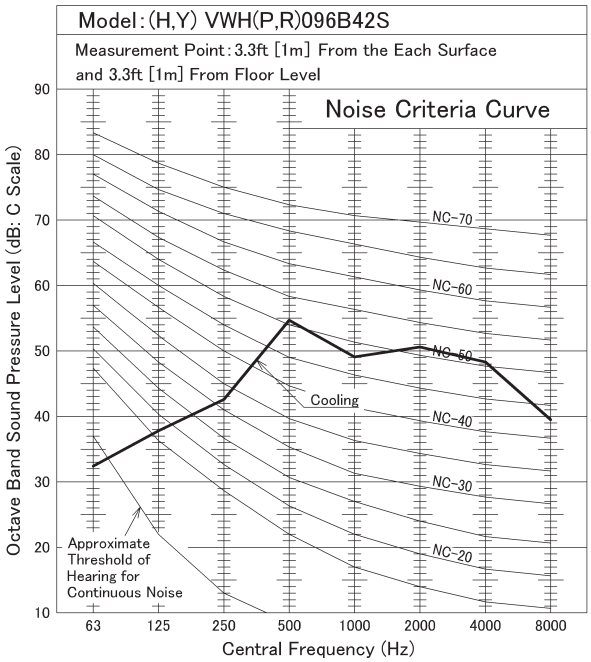
(2) 460V



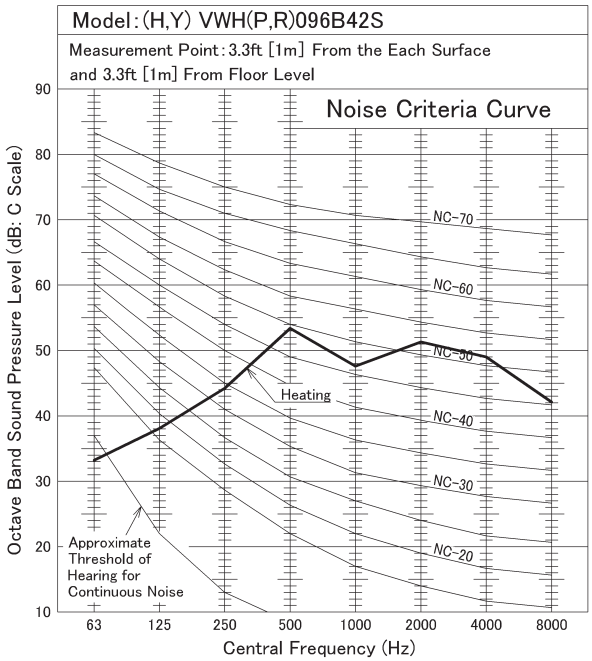
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	27.5	29.5	42.2	50.8	47.8	49.6	46.0	39.2	55



Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	33.3	32.7	43.0	53.1	47.9	48.0	45.1	39.7	55



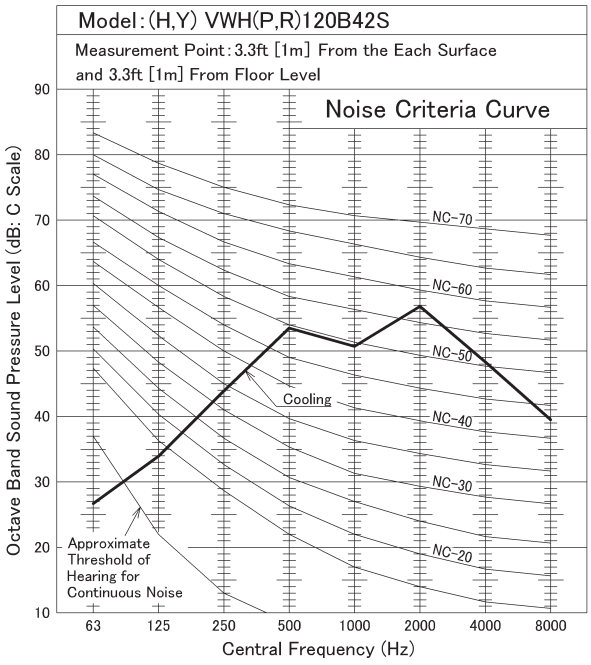
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	32.4	37.8	42.6	54.7	49.1	50.6	48.3	39.5	57



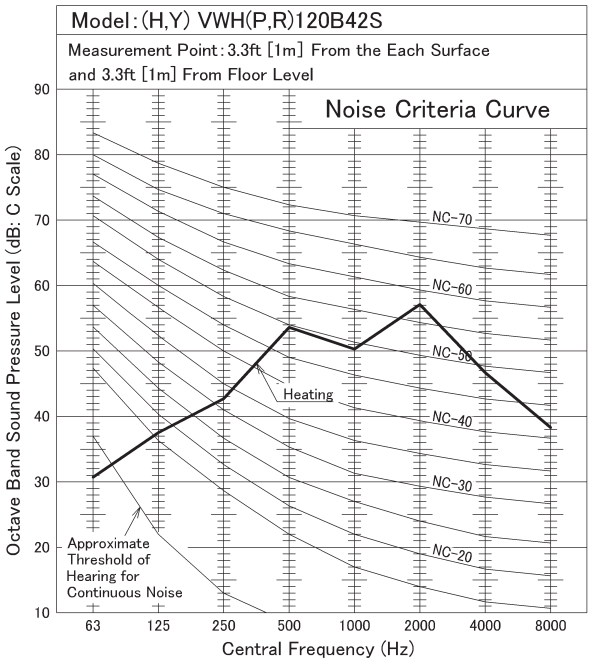
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	33.2	38.1	44.2	53.4	47.6	51.3	49.0	42.1	57

NOTICE:

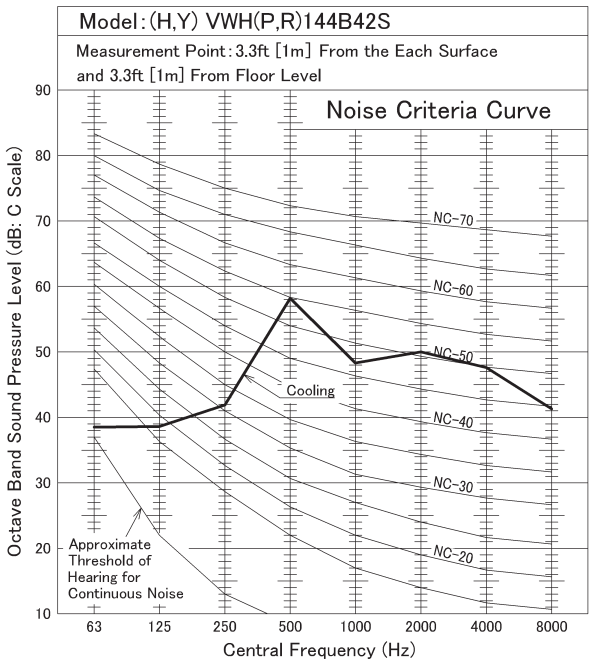
The sound data is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.



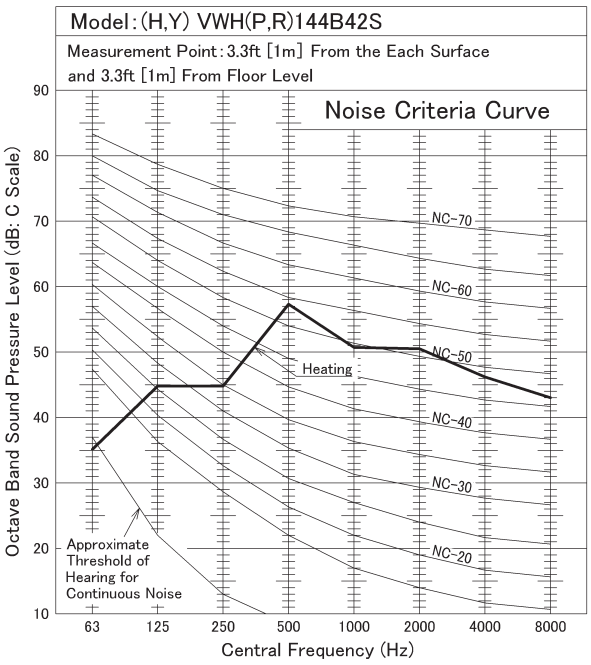
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	26.7	33.9	43.9	53.5	50.7	56.8	48.3	39.5	60



Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	30.7	37.5	42.7	53.6	50.3	57.1	46.7	38.3	60



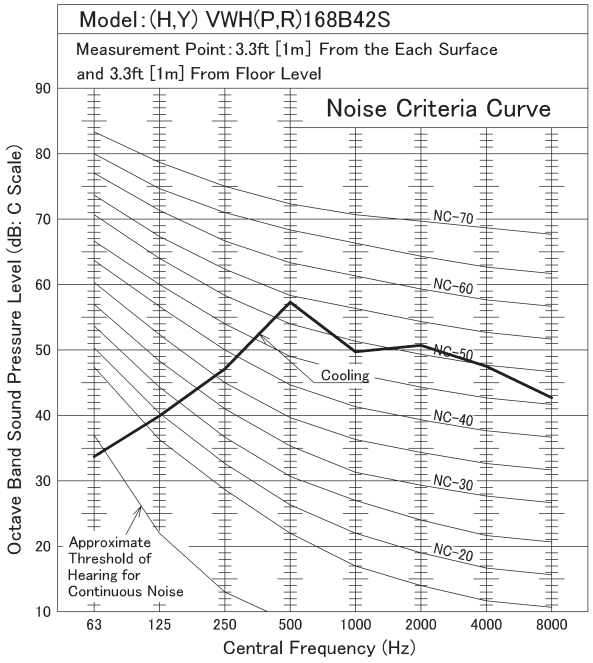
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	38.5	38.6	41.9	58.2	48.3	50.0	47.6	41.3	58



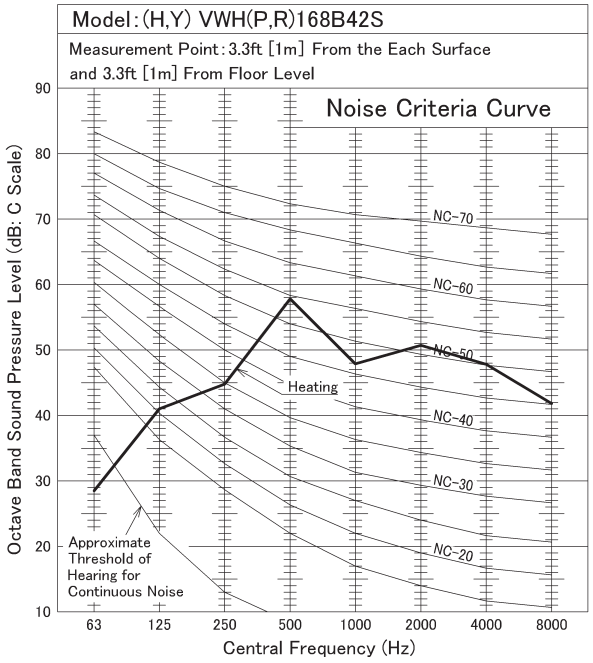
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	35.1	44.8	44.8	57.3	50.7	50.5	46.2	43.0	58

NOTICE:

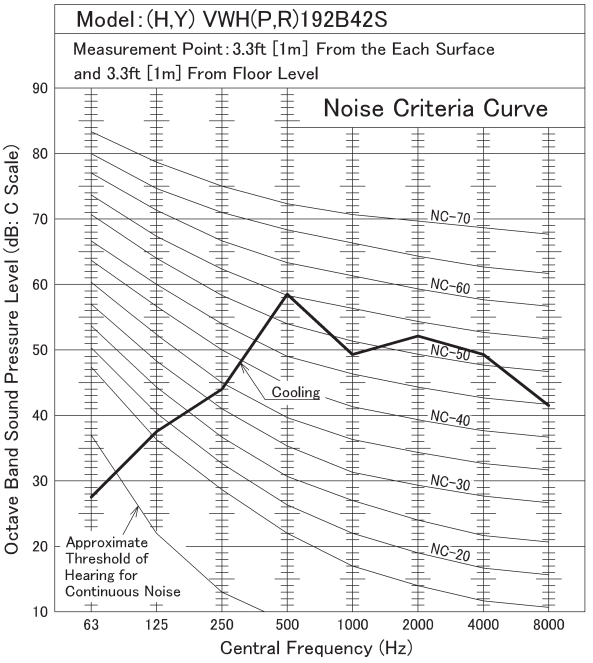
The sound data is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.



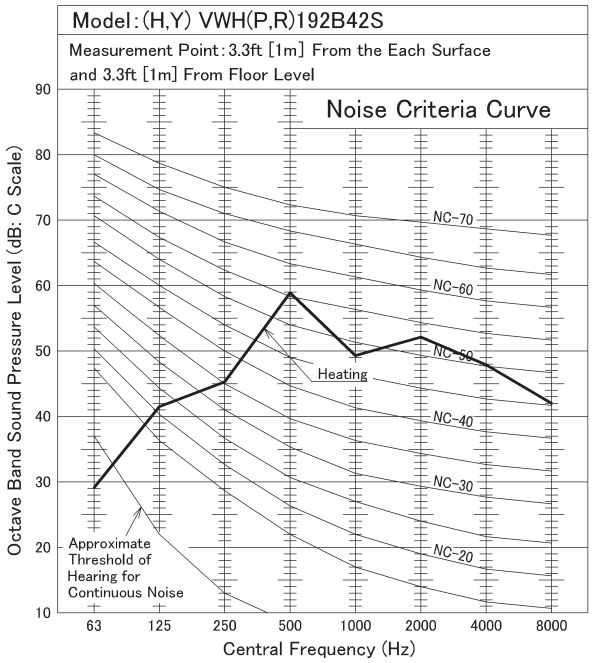
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	33.7	39.9	47.1	57.3	49.7	50.7	47.5	42.7	58



Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	28.5	41.0	44.8	57.8	47.9	50.7	47.8	41.8	58



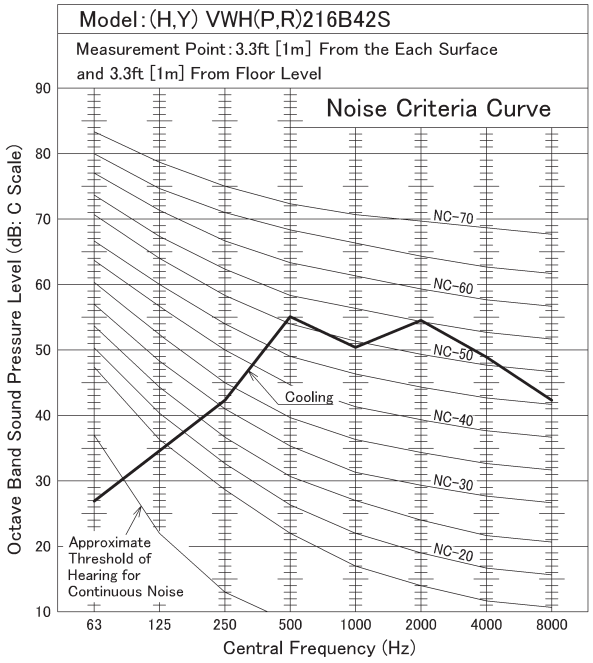
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	27.5	37.5	44.0	58.5	49.3	52.1	49.3	41.5	59



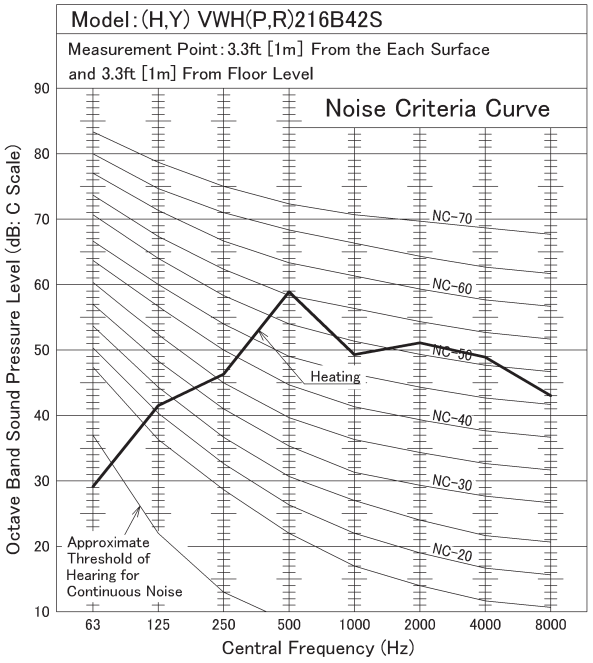
Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	29.1	41.5	45.3	58.9	49.3	52.1	47.9	42.0	59

NOTICE:

The sound data is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.



Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Cooling	26.9	34.6	42.3	55.1	50.4	54.5	48.9	42.3	59



Central Frequency (Hz)		63	125	250	500	1000	2000	4000	8000	Overall (A Scale)
Sound Data (dB) (C Scale)	Heating	29.1	41.5	46.3	58.9	49.3	51.1	48.9	43.0	59

NOTICE:

The sound data is measured in an anechoic chamber. However, the actual operation sound may appear louder or with an echo because of surrounding environmental noise. Be sure to check environmental conditions before installation.

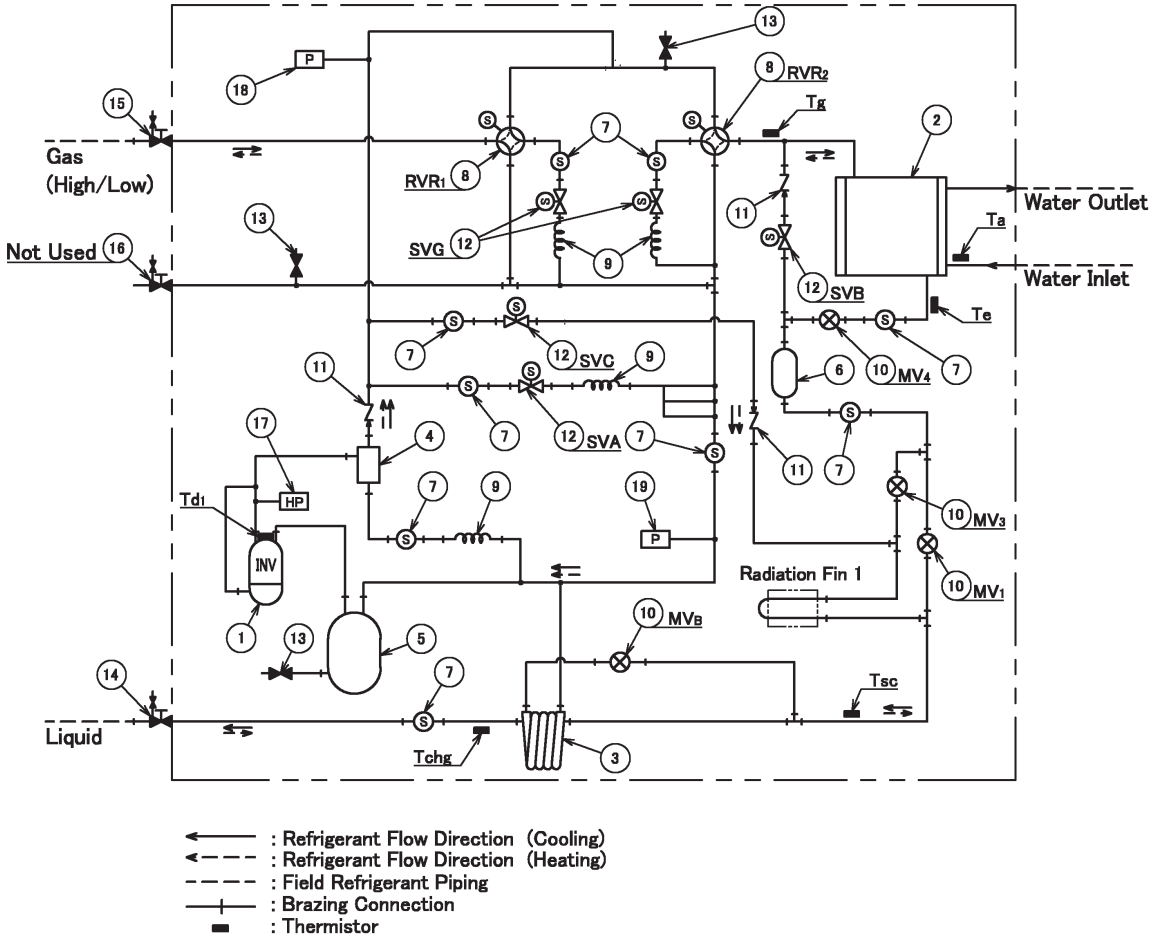
2.10 Control System

2.10.1 Refrigerant Cycle

Heat Pump Type

Model: (H,Y)VWHP072B(3,4)2S, (H,Y)VWHP096B(3,4)2S and (H,Y)VWHP120B(3,4)2S

Unit: inch (mm)

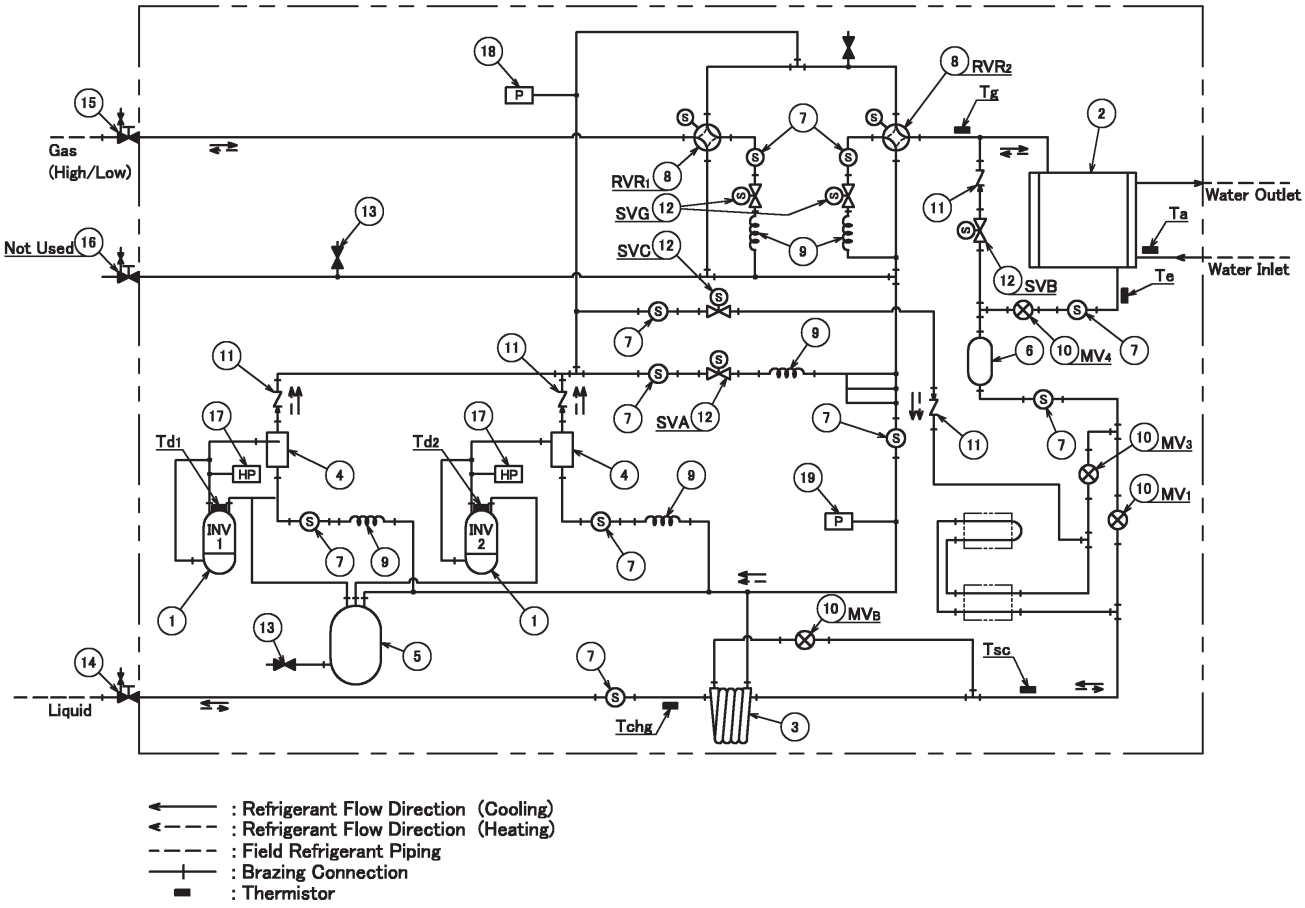


Mark	Part Name
①	Compressor
②	Plate Type Heat Exchanger
③	Double Tube Type Heat Exchanger
④	Oil Separator
⑤	Accumulator
⑥	Receiver
⑦	Strainer
⑧	Reversing Valve
⑨	Capillary Tube
⑩	Electronic Expansion Valve
⑪	Check Valve
⑫	Solenoid Valve
⑬	Access Port
⑭	Stop Valve for Liquid Line
⑮	Stop Valve for Gas (High/Low) Line
⑯	Stop Valve for Gas (Low) Line
⑰	High Pressure Switch for Protection
⑱	Sensor for Refrigerant Pressure (High Pressure Sensor)
⑲	Sensor for Refrigerant Pressure (Low Pressure Sensor)

Mark	Name
Td_1	Thermistor for Upper Side of Compressor 1
Tg	Thermistor for Heat Exchanger Gas Side
Ta	Thermistor for Entering Water
Te	Thermistor for Heat Exchanger Liquid Side
Tsc	Thermistor for Subcooler Inlet
Tchg	Thermistor for Liquid Stop Valve

Model: (H,Y)VWHP144B(3,4)2S, (H,Y)VWHP168B(3,4)2S, (H,Y)VWHP192B(3,4)2S and (H,Y)VWHP216B(3,4)2S

Unit: inch (mm)



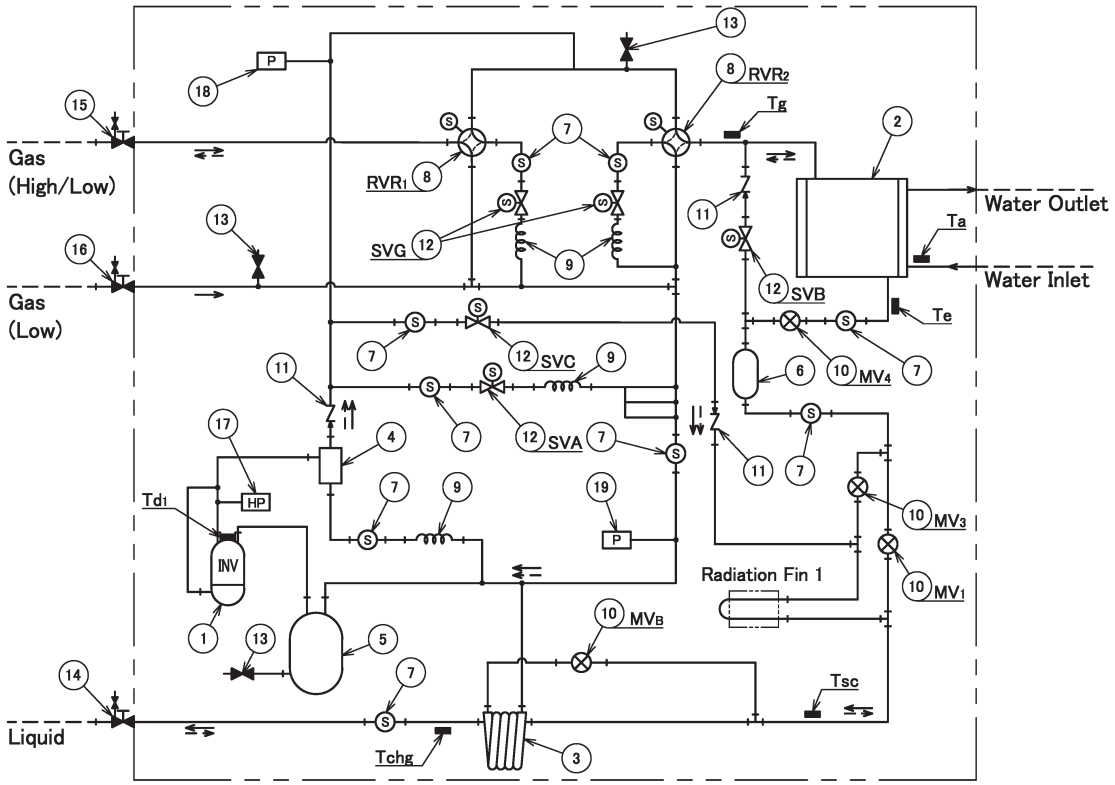
Mark	Part Name
①	Compressor
②	Plate Type Heat Exchanger
③	Double Tube Type Heat Exchanger
④	Oil Separator
⑤	Accumulator
⑥	Receiver
⑦	Strainer
⑧	Reversing Valve
⑨	Capillary Tube
⑩	Electronic Expansion Valve
⑪	Check Valve
⑫	Solenoid Valve
⑬	Access Port
⑭	Stop Valve for Liquid Line
⑮	Stop Valve for Gas (High/Low) Line
⑯	Stop Valve for Gas (Low) Line
⑰	High Pressure Switch for Protection
⑱	Sensor for Refrigerant Pressure (High Pressure Sensor)
⑲	Sensor for Refrigerant Pressure (Low Pressure Sensor)

Mark	Name
Td1	Thermistor for Upper Side of Compressor 1
Td2	Thermistor for Upper Side of Compressor 2
Tg	Thermistor for Heat Exchanger Gas Side
Ta	Thermistor for Entering Water
Te	Thermistor for Heat Exchanger Liquid Side
Tsc	Thermistor for Subcooler Inlet
Tchg	Thermistor for Liquid Stop Valve

Heat Recovery Type

Model: (H,Y)VWHR072B(3,4)2S, (H,Y)VWHR096B(3,4)2S and (H,Y)VWHR120B(3,4)2S

Unit: inch (mm)



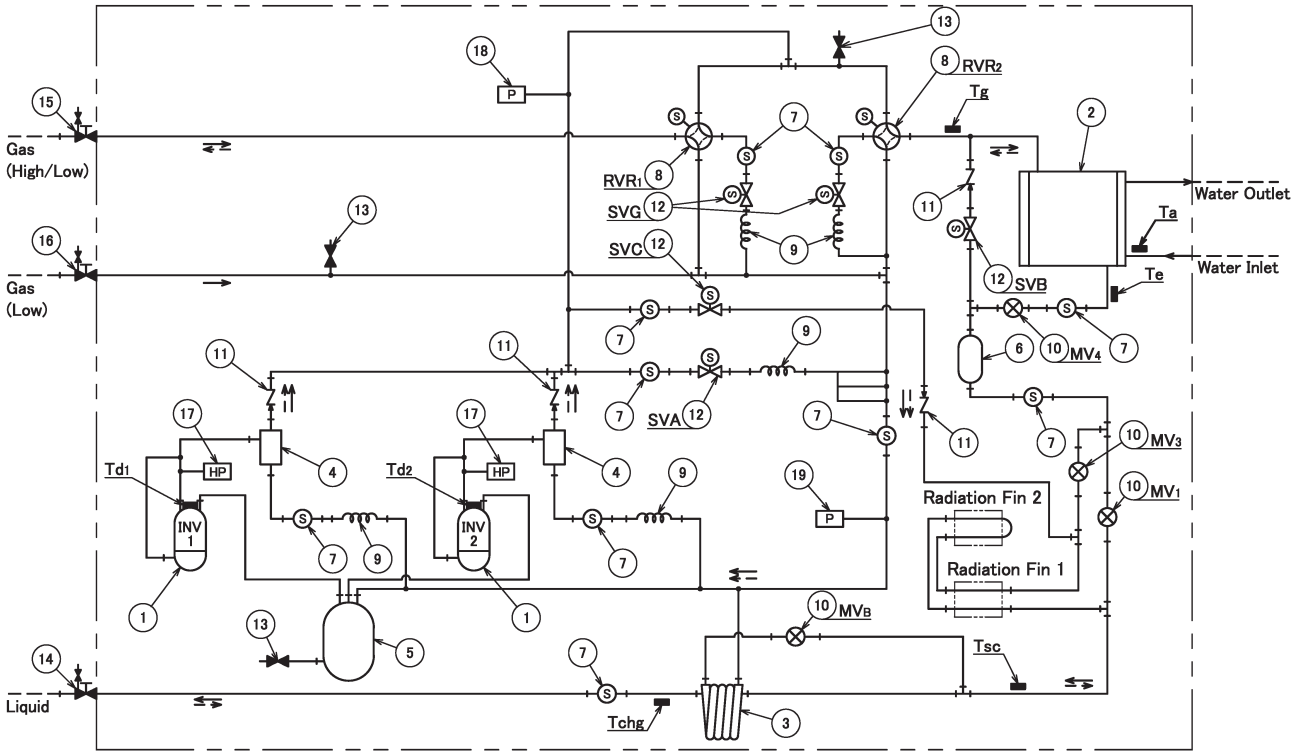
: Refrigerant Flow Direction (Cooling)
: Refrigerant Flow Direction (Heating)
: Field Refrigerant Piping
: Brazing Connection
: Thermistor

Mark	Part Name
①	Compressor
②	Plate Type Heat Exchanger
③	Double Tube Type Heat Exchanger
④	Oil Separator
⑤	Accumulator
⑥	Receiver
⑦	Strainer
⑧	Reversing Valve
⑨	Capillary Tube
⑩	Electronic Expansion Valve
⑪	Check Valve
⑫	Solenoid Valve
⑬	Access Port
⑭	Stop Valve for Liquid Line
⑮	Stop Valve for Gas (High/Low) Line
⑯	Stop Valve for Gas (Low) Line
⑰	High Pressure Switch for Protection
⑱	Sensor for Refrigerant Pressure (High Pressure Sensor)
⑲	Sensor for Refrigerant Pressure (Low Pressure Sensor)

Mark	Name
Td1	Thermistor for Upper Side of Compressor 1
Tg	Thermistor for Heat Exchanger Gas Side
Ta	Thermistor for Entering Water
Te	Thermistor for Heat Exchanger Liquid Side
Tsc	Thermistor for Subcooler Inlet
Tchg	Thermistor for Liquid Stop Valve

Model: (H,Y)VWHR144B(3,4)2S, (H,Y)VWHR168B(3,4)2S, (H,Y)VWHR192B(3,4)2S and (H,Y)VWHR216B(3,4)2S

Unit: inch (mm)



: Refrigerant Flow Direction (Cooling)
: Refrigerant Flow Direction (Heating)
: Field Refrigerant Piping
: Brazing Connection
: Thermistor

Mark	Part Name
①	Compressor
②	Plate Type Heat Exchanger
③	Double Tube Type Heat Exchanger
④	Oil Separator
⑤	Accumulator
⑥	Receiver
⑦	Strainer
⑧	Reversing Valve
⑨	Capillary Tube
⑩	Electronic Expansion Valve
⑪	Check Valve
⑫	Solenoid Valve
⑬	Access Port
⑭	Stop Valve for Liquid Line
⑮	Stop Valve for Gas (High/Low) Line
⑯	Stop Valve for Gas (Low) Line
⑰	High Pressure Switch for Protection
⑱	Sensor for Refrigerant Pressure (High Pressure Sensor)
⑲	Sensor for Refrigerant Pressure (Low Pressure Sensor)

Mark	Name
Td1	Thermistor for Upper Side of Compressor 1
Td2	Thermistor for Upper Side of Compressor 2
Tg	Thermistor for Heat Exchanger Gas Side
Ta	Thermistor for Entering Water
Te	Thermistor for Heat Exchanger Liquid Side
Tsc	Thermistor for Subcooler Inlet
Tchg	Thermistor for Liquid Stop Valve

2.10.2 Control System

(1) Cycle Control

Control Device		Summary of Control					
		Cooling Operation*		Heating Operation		Simultaneous Operation	
		Purpose of Control	Contents of Control	Purpose of Control	Contents of Control	Purpose of Control	Contents of Control
MC1, MC2	Inverter Frequency of Compressor	Cooling Capacity Control	Inverter Frequency Control is carried out to bring the I.U. air inlet temperature to temperature setpoint.	Heating Capacity Control	Inverter Frequency Control is carried out to bring the I.U. air inlet temperature to temperature setpoint.	Mainly Cooling: Cooling Capacity Control	Inverter Frequency Control is carried out to bring the Cooling I.U. air inlet temperature to temperature setpoint.
						Mainly Heating: Heating Capacity Control	Inverter Frequency Control is carried out to bring the Heating I.U. air inlet temperature to temperature setpoint.
MV1	Electronic Expansion Valve for W.S.	W.S. HEX SC Control	MV1 opening is adjusted to achieve the target value of W.S. HEX SC.	W.S. HEX SH Control	MV1 opening is adjusted to achieve the target value of W.S. HEX SH.	Mainly Cooling: Pd Control	MV1 opening is adjusted to achieve the target value of Pd.
						Mainly Heating: W.S. HEX SH Control	MV1 opening is adjusted to achieve the target value of W.S. HEX SH.
MV3	Electronic Expansion Valve for Inverter Radiation	Inverter Temperature Control	MV3 opening is adjusted to suppress Inverter Temperature Increase.	Inverter Temperature Control	MV3 opening is adjusted to suppress Inverter Temperature Increase.	Inverter Temperature Control	MV3 opening is adjusted to suppress Inverter Temperature Increase.
MV4	Electronic Expansion Valve for Plate Type HEX	—	Fully Open	W.S. HEX SH Control	MV4 opening is adjusted to achieve the target value of W.S. HEX SH. (Only for Ps increase condition. Otherwise fully open)	Mainly Cooling: —	Fully Open
						Mainly Heating: W.S. HEX SH Control	MV4 opening is adjusted to achieve the target value of W.S. HEX SH. (Only for Ps increase condition. Otherwise fully open)
MVB	Electronic Expansion Valve for Double Tube Type HEX	Temperature Difference of Double Tube Type HEX Control	MVB opening is adjusted to achieve the target value temperature difference between upstream and downstream of Double Tube Type HEX.	Temperature Difference of Double Tube Type HEX Control	MVB opening is adjusted to achieve the target value temperature difference between upstream and downstream of Double Tube Type HEX.	Temperature Difference of Double Tube Type HEX Control	MVB opening is adjusted to achieve the target value temperature difference between upstream and downstream of Double Tube Type HEX. (Basically Close)
MV	Electronic Expansion Valve for Indoor Unit	I.U. HEX SH Control	MV opening is adjusted to achieve the target value of I.U. HEX SH.	I.U. HEX SC Control	MV opening is adjusted to achieve the target value of I.U. HEX SC.	Cooling Operation I.U.: I.U. HEX SH Control	MV opening is adjusted to achieve the target value of I.U. HEX SH.
						Heating Operation I.U.: I.U. HEX SC Control	MV opening is adjusted to achieve the target value of I.U. HEX SC.
SVA	Solenoid Valve to Bypass High/ Low Pressure	1. Pd Increase Protection 2. Ps Decrease Protection	1. Pd≥522psi (3.6MPa): Open 2. Ps≤29psi (0.2MPa): Open	1. Pd Increase Protection 2. HEX Freeze Protection	1. Pd≥522psi (3.6MPa): Open 2. Ps≤67psi (0.46MPa): Open	1. Pd Increase Protection 2. Ps Decrease Protection (Only for Mainly Cooling) 3. HEX Freeze Protection (Only for Mainly Heating)	1. Pd≥522psi (3.6MPa): Open 2. Ps≤29psi (0.2MPa): Open 3. Ps≤67psi (0.46MPa): Open
SVB	Solenoid Valve to Bypass Plate Type HEX	—	Fully Close	Ps Increase Protection	Ps≥189psi (1.3MPa): Open	Mainly Cooling: —	Fully Close
						Mainly Heating: Ps Increase Protection	Ps≥189psi (1.3MPa): Open
SVC	Solenoid Valve to Bypass Inverter Radiation Piping	1. Inverter Condensation Protection 2. Pd Decrease Protection	1. Tf≤Dew Point Temperature of 80% Humidity: Open 2. Pd≤232psi (1.6MPa): Open	Inverter Condensation Protection	Tf≤Dew Point Temperature of 80% Humidity: Open	1. Inverter Condensation Protection 2. Pd Decrease Protection (Only for Mainly Cooling)	1. Tf≤Dew Point Temperature of 80% Humidity: Open 2. Pd≤290psi (2.0MPa): Open
SVG	Solenoid Valve for Blocking High/Low Pressure	Blocking High/ Low Pressure Gas Bypass during Stoppage	During Operation: Open During Stoppage: Close	Blocking High/ Low Pressure Gas Bypass during Stoppage	During Operation: Open During Stoppage: Close	Blocking High/Low Pressure Gas Bypass during Stoppage	During Operation: Open During Stoppage: Close

(*): Dry operation is included in the cooling operation.

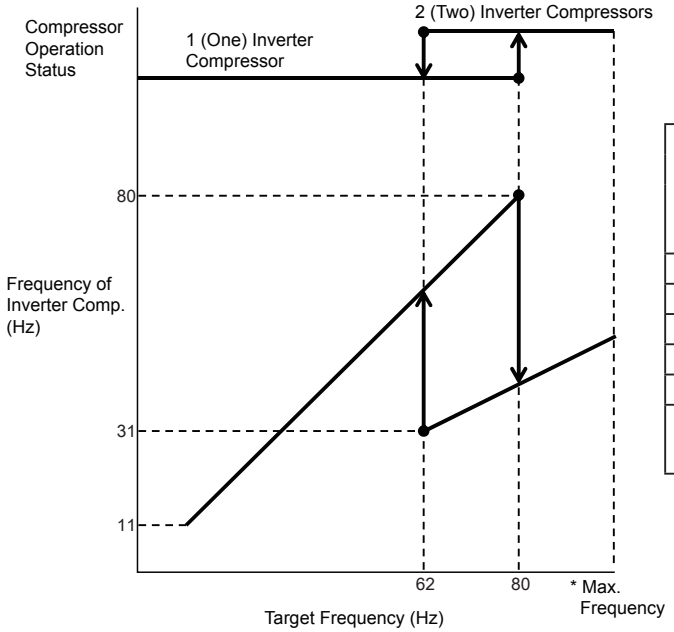
Pd: Discharge Pressure
Ps: Suction Pressure
SH: Superheat
SC: Subcool
Tf: Inverter Temperature
W.S.: Water Source Unit
I.U.: Indoor Unit
HEX: Heat Exchanger

(2) Compressor Frequency Control

Compressor Operation Control adjusts the output frequency of an Inverter Compressor according to Target Frequency.
(Target Frequency is determined by capacity control according to cooling and heating loads.)
Therefore, when the load is smaller, all compressors may not operate.

■ Single water source unit with two inverter compressors installed

(H,Y)VWH(P,R)144B(3,4)2S, (H,Y)VWH(P,R)168B(3,4)2S, (H,Y)VWH(P,R)192B(3,4)2S and (H,Y)VWH(P,R)216B(3,4)2S



Target Frequency [Hz]	Each Compressor Frequency [Hz]					
	Increase Direction			Decrease Direction		
	Comp. Operation Status	No.1 Comp.	No.2 Comp.	Comp. Operation Status	No.1 Comp.	No.2 Comp.
11.0	1	11.0	—	1	11.0	—
61.0	1	61.0	—	1	61.0	—
62.0	1	62.0	—	2	31.0	31.0
80.0	1	80.0	—	2	40.0	40.0
81.0	2	40.5	40.5	2	40.5	40.5
⋮	⋮	⋮	⋮	⋮	⋮	⋮

(3) Compressor Capacity Control

The operating speed of the compressor is determined according to the temperature difference (ΔT) between setting temperature and indoor unit air inlet temperature detected by each indoor unit under cooling/heating thermo-ON operation and the variation of ΔT to control compressor frequency.

The frequency is calculated as follows:
Current Frequency × Coefficient Based on the Temperature

Cooling Operation

The coefficient becomes larger when the value of ΔT (the temperature difference between setting temperature and air inlet temperature is large) or variation of ΔT is larger.
The coefficient becomes smaller when the value of ΔT (the temperature difference between setting temperature and air inlet temperature is small) or variation of ΔT is smaller.

Heating Operation

The coefficient becomes larger when the value of ΔT (the temperature difference between setting temperature and air inlet temperature is large) or variation of ΔT is larger.
The coefficient becomes smaller when the value of ΔT (the temperature difference between setting temperature and air inlet temperature is small) or variation of ΔT is smaller.

NOTE:
The temperature of the thermistor in the wired controller is utilized instead of indoor unit air inlet temperature when the thermistor in the wired controller is set by functional setting mode.

(4) Heat Exchanger Mode Control

In accordance with the connectable indoor unit operation mode, the water source unit heat exchanger is switched as shown in the table below.

W.S. Heat Exchanger Mode at Cooling: Condenser [COND]

W.S. Heat Exchanger Mode at Heating: Evaporator [EVAP]

The Number of Water Source Unit: 1 (one)

Heat Exchanger Mode		Cooling Mode	Mainly Cooling Mode		Mainly Heating Mode	Heating Mode
		COND	D1	D1-1	D4	EVAP
Heat Exchanger Condition		[COND]	[COND]	[cond]	[EVAP]	[EVAP]
Reversing Valve	RVR2	OFF	OFF	OFF	ON	ON
	RVR1	ON	OFF	OFF	OFF	OFF
Expansion Valve	MV1	HEX SC	Pd	Pd	HEX SH	HEX SH
	MV3	Tf	Tf	Tf	Tf	Tf
	MV4	Fully Open	Fully Open	Fully Open	W.S. HEX SH	W.S. HEX SH
	MVB	Tsc-Tchg	Tsc-Tchg	Tsc-Tchg	Tchg-Tsc	Tchg-Tsc

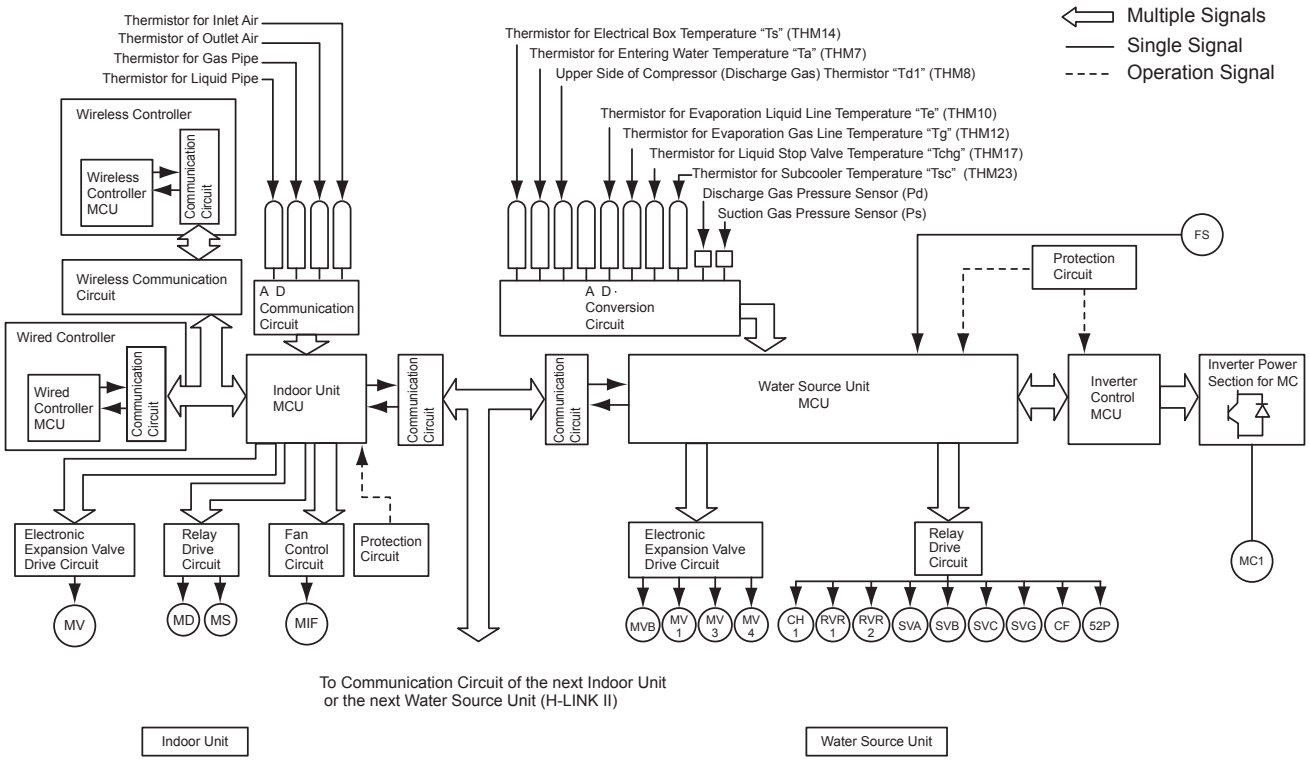
NOTES:

1. Heat Exchanger Condition
   - [COND] : Use as Condenser
   - [cond] : Avoid the use of Heat Exchanger (under a high pressure condition)
   - [EVAP] : Use as Evaporator
2. Control Method of Expansion Valve
   - HEX SC: To adjust to achieve the target value of W.S. heat exchanger SC
   - HEX SH: To adjust to achieve the target value of W.S. heat exchanger SH
   - Pd: To adjust to achieve the target value of Discharge Pressure
   - Tf: To adjusted to suppress Inverter Temperature increase
   - Tsc-Tchg, Tchg-Tsc: To adjusted to achieve the target value temperature difference between upstream and downstream of Double Tube Type HEX
3. COND, D1, D1-1, D4 and EVAP are the reference numbers.

(5) Control System Diagram

The figure below is a representation of the control system.

Example: Combination of Base Units, (H,Y)VWHR072B(3,4)2S + Indoor Unit

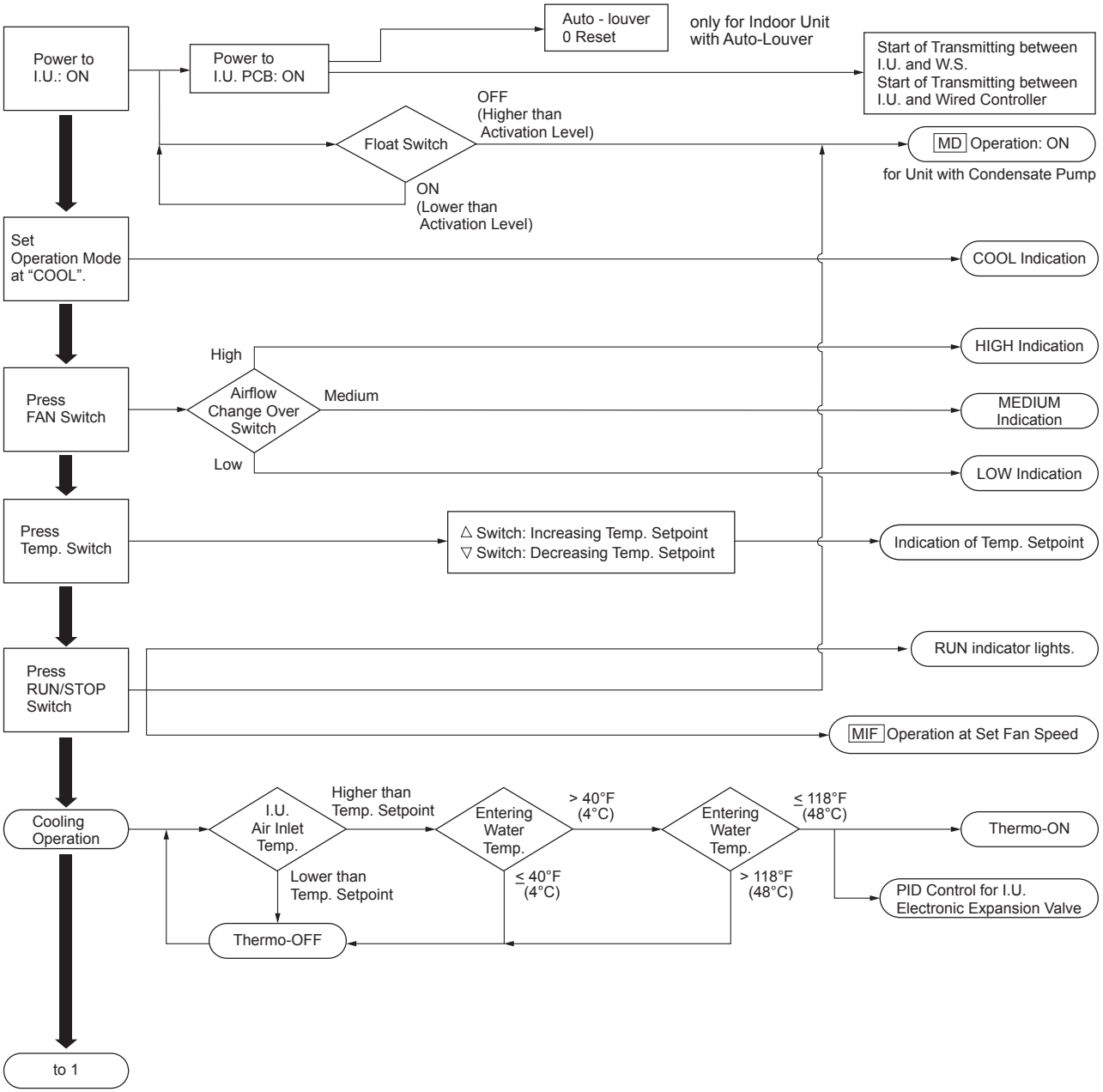


Symbol	Name
THM	Thermistor
MCU	Microcontroller
MC_1	DC Motor (for Inverter Compressor)
CF	Cooling Fan
MIF	Motor (for Indoor Fan)
MS	Motor (for Auto-Louver)
MD	Motor (for Condensate Pump)
MV	Electronic Expansion Valve (for Indoor Unit)
MV_1	Electronic Expansion Valve (for Water Source Unit)
MV_3	Electronic Expansion Valve (for Inverter Radiation)
MV_4	Electronic Expansion Valve (for Plate Type Heat Exchanger)
MVB	Electronic Expansion Valve for Double Tube Type Heat Exchanger
SVA	Solenoid Valve (to bypass high/low pressure)
SVB	Solenoid Valve (to bypass plate type heat exchanger)
SVC	Solenoid Valve (to bypass inverter radiation piping)
SVG	Solenoid Valve (for blocking high/low pressure)
RVR_1	Reversing Valve
RVR_2	Reversing Valve
CH_1	Crankcase Heater
52P	Relay for Water Pump (Field-Supplied)
FS	Water Flow Switch (Field-Supplied)

2.10.3 Standard Operation Sequence

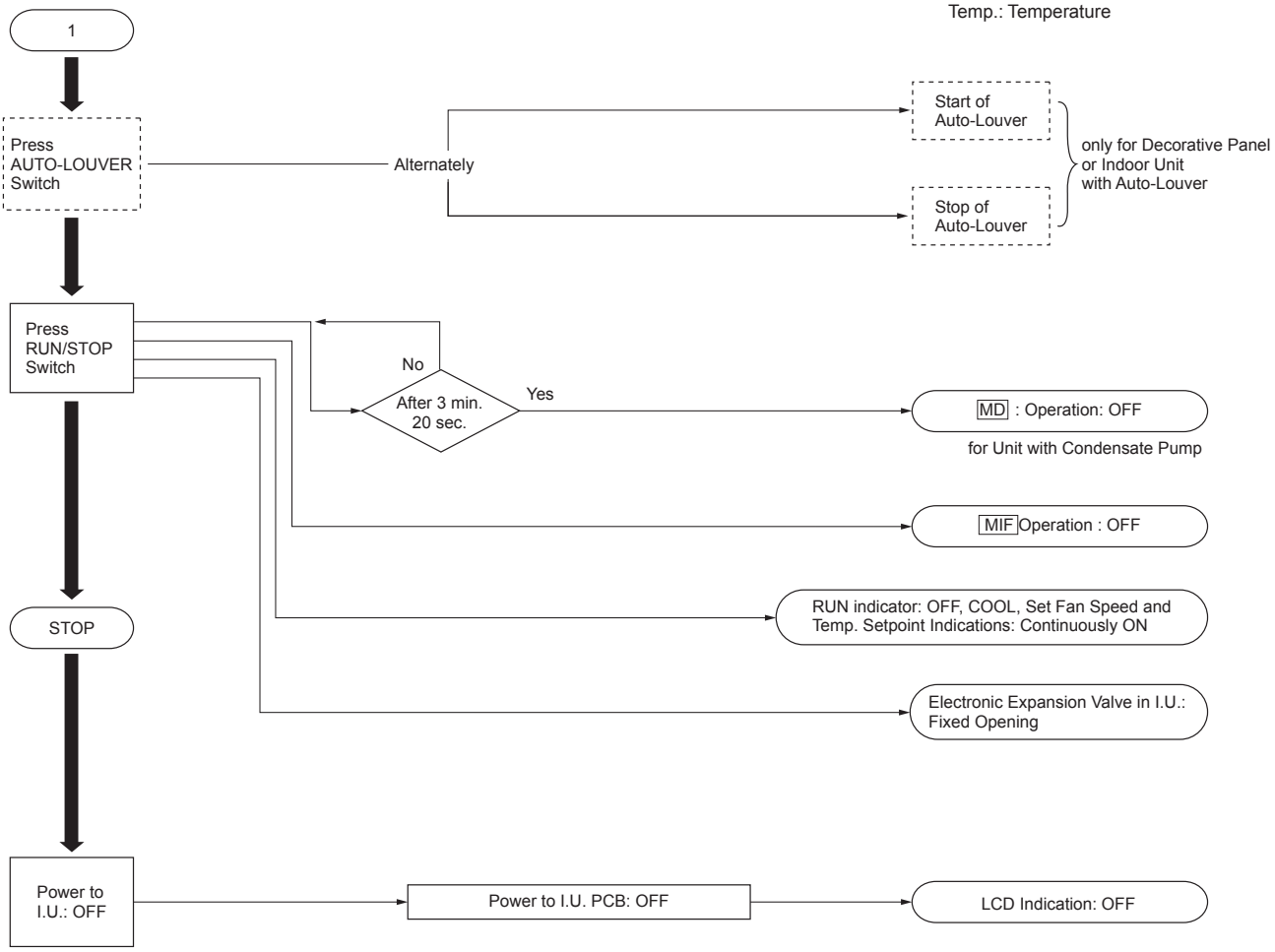
(1) Cooling Operation

I.U.: Indoor Unit
W.S.: Water Source Unit
MD: Motor (for Condensate Pump)
MIF: Motor (for Indoor Fan)
PID: Proportional/Integral/Derivative
Temp.: Temperature



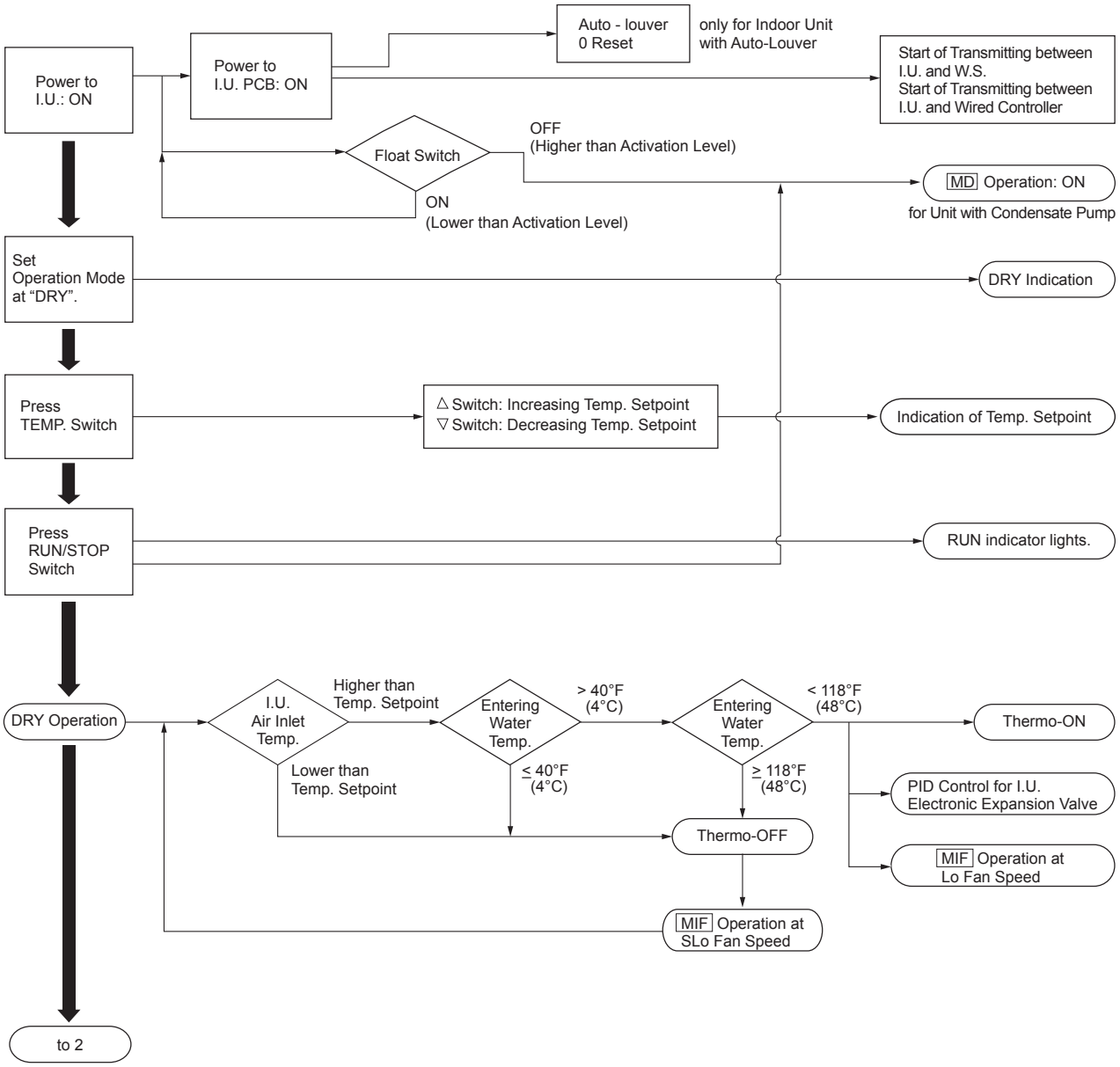
Cooling Operation

I.U.: Indoor Unit
MD: Motor (for Condensate Pump)
MIF: Motor (for Indoor Fan)
Temp.: Temperature



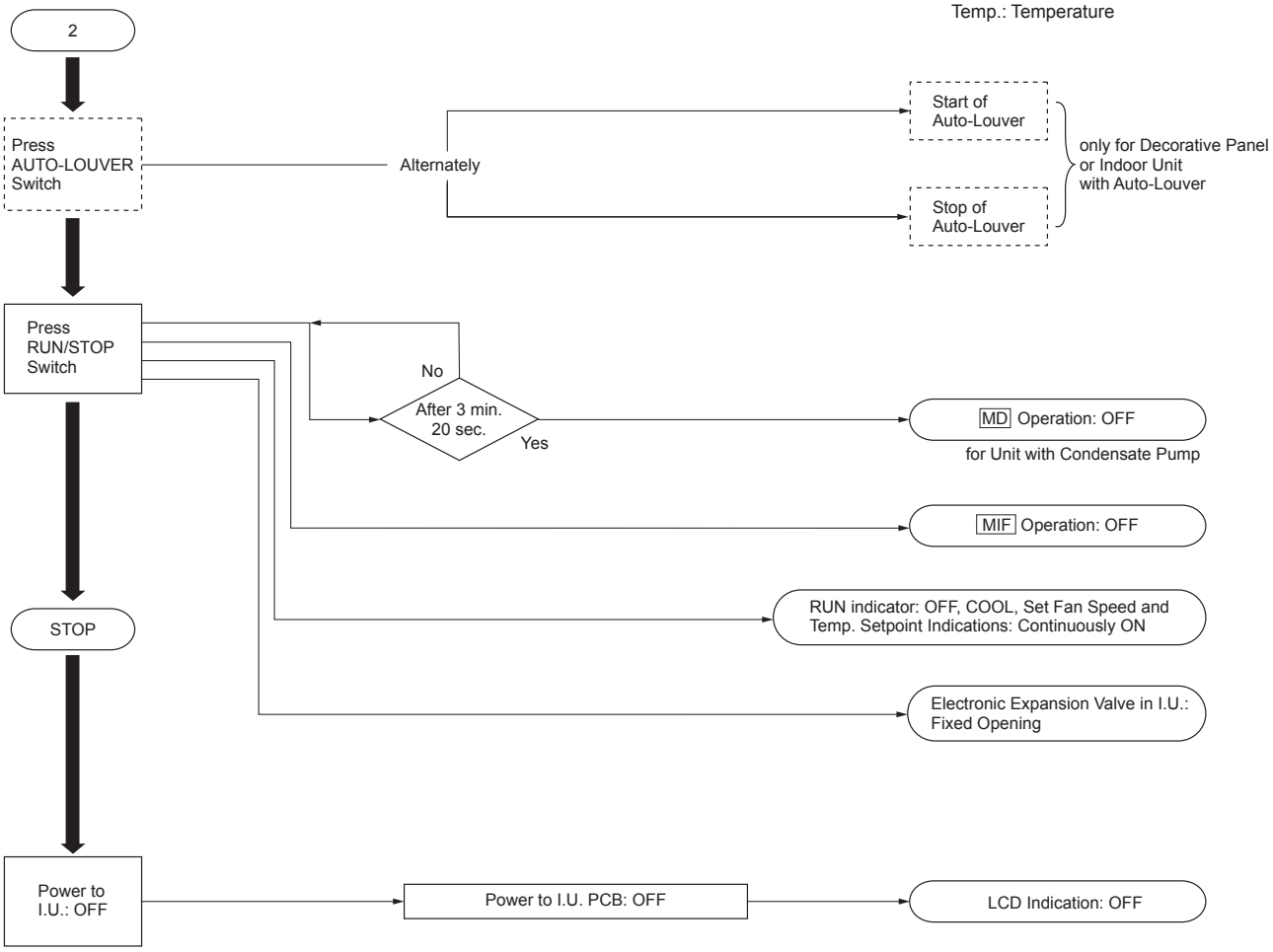
(2) Dry Operation

I.U.: Indoor Unit
W.S.: Water Source Unit
MD: Motor (for Condensate Pump)
MIF: Motor (for Indoor Fan)
PID: Proportional/Integral/Derivative
Temp.: Temperature



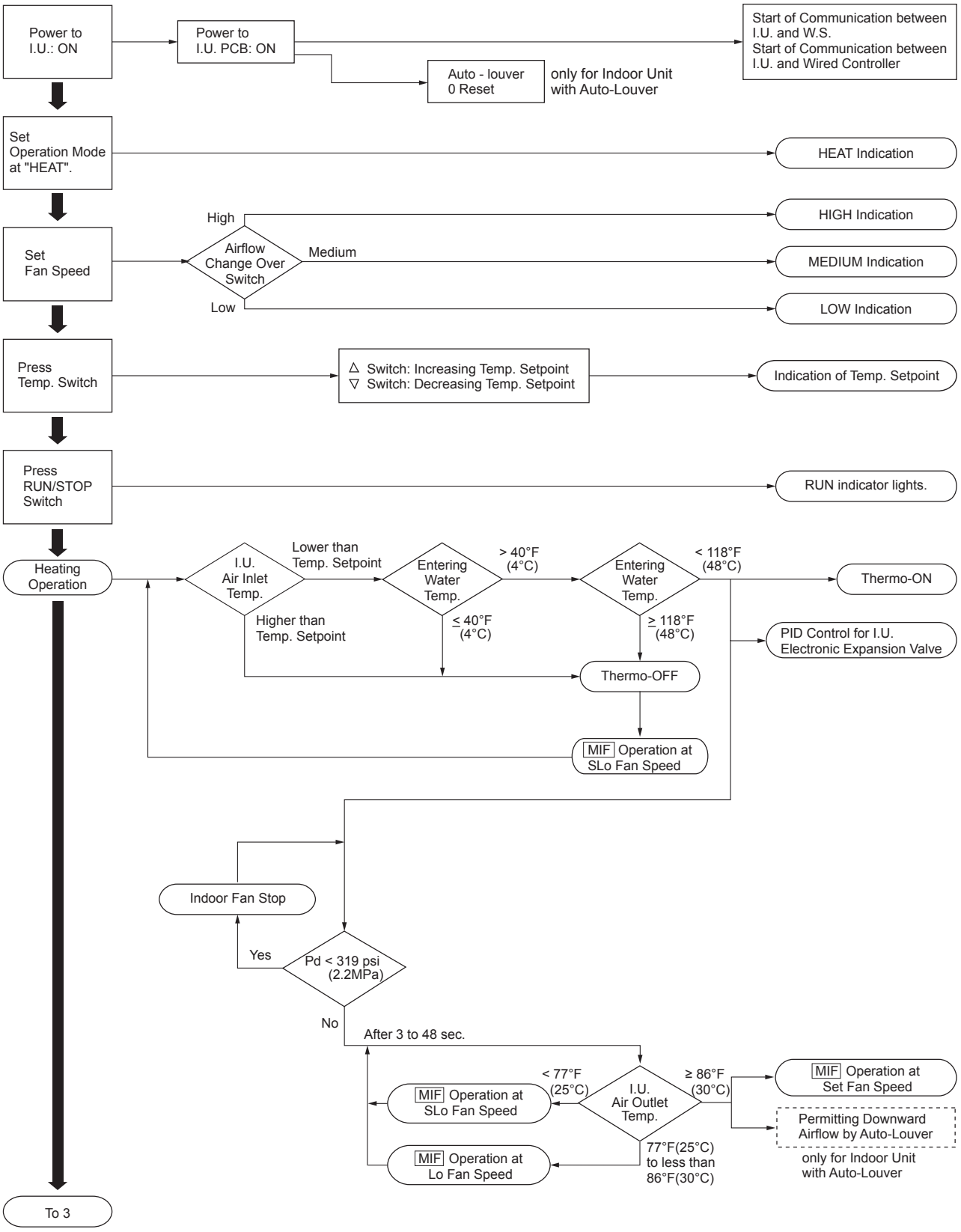
Dry Operation

I.U.: Indoor Unit
MD: Motor (for Condensate Pump)
MIF: Motor (for Indoor Fan)
Temp.: Temperature

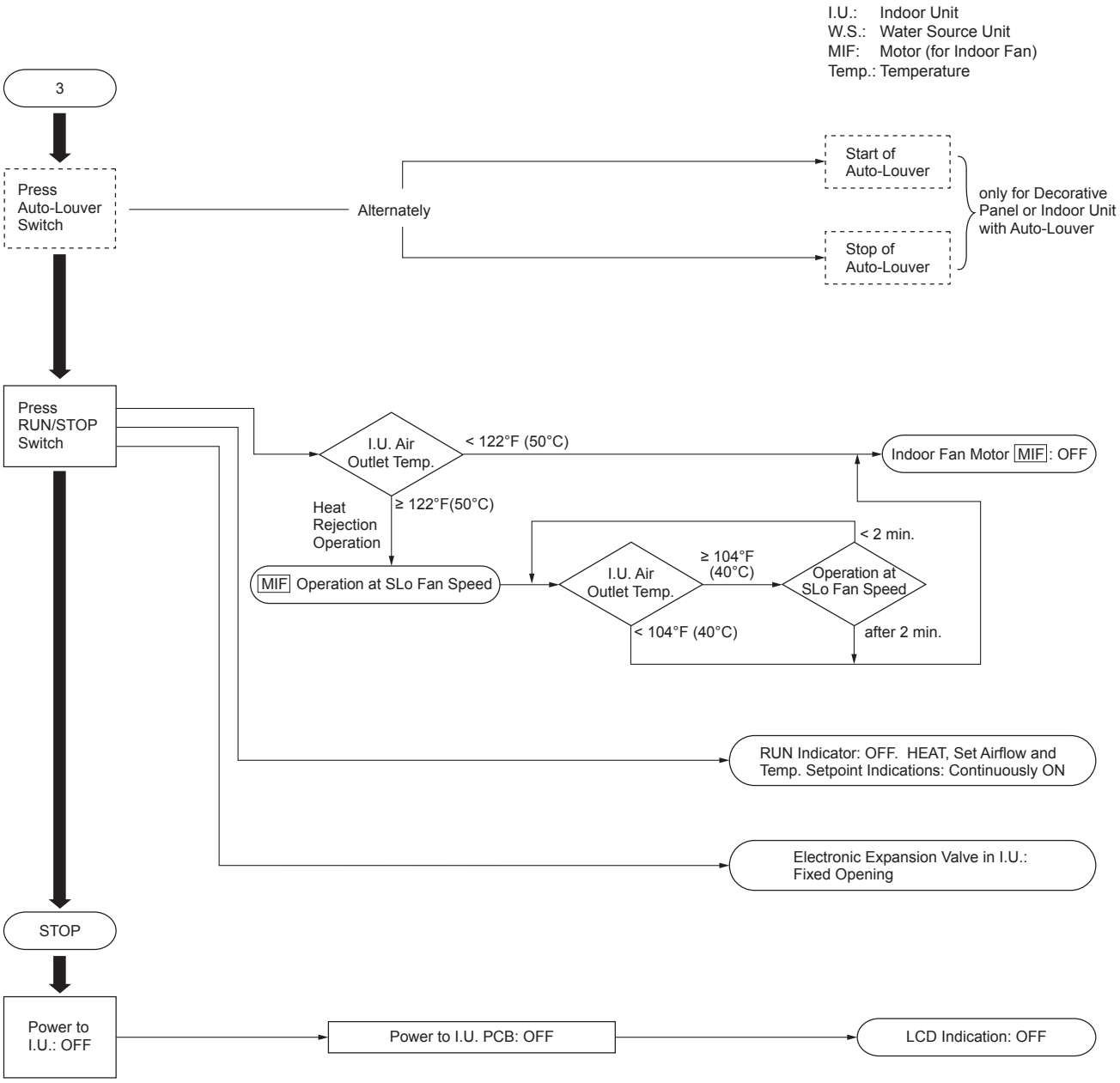


(3) Heating Operation

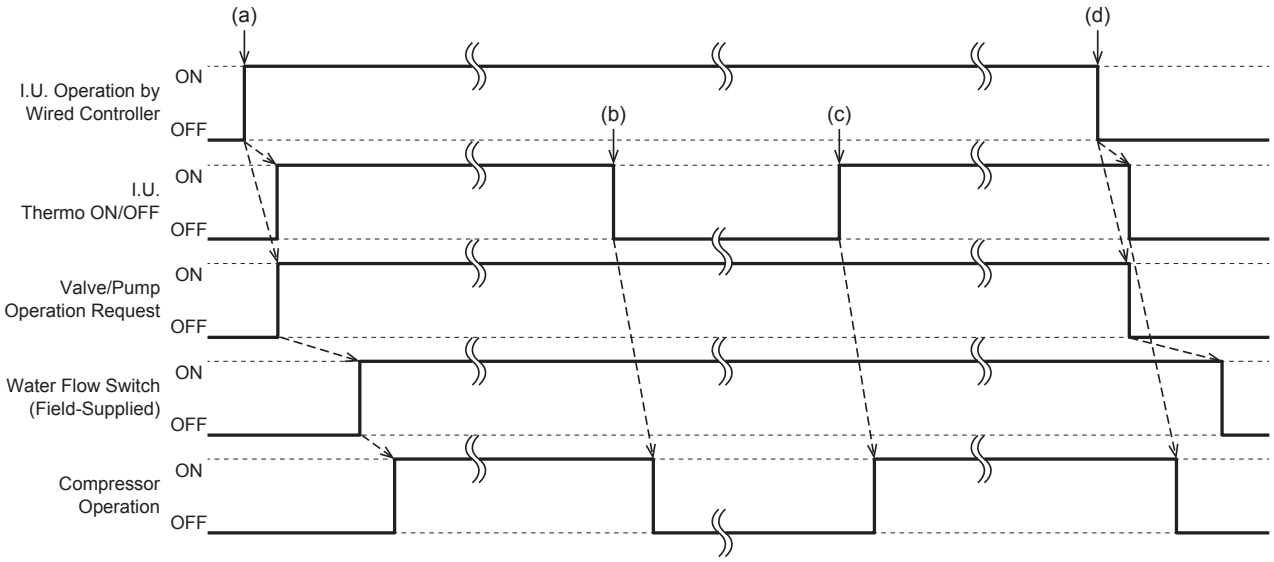
I.U.: Indoor Unit
W.S.: Water Source Unit
MIF: Motor (for Indoor Fan)
PID: Proportional/Integral/Derivative
Temp.: Temperature



Heating Operation

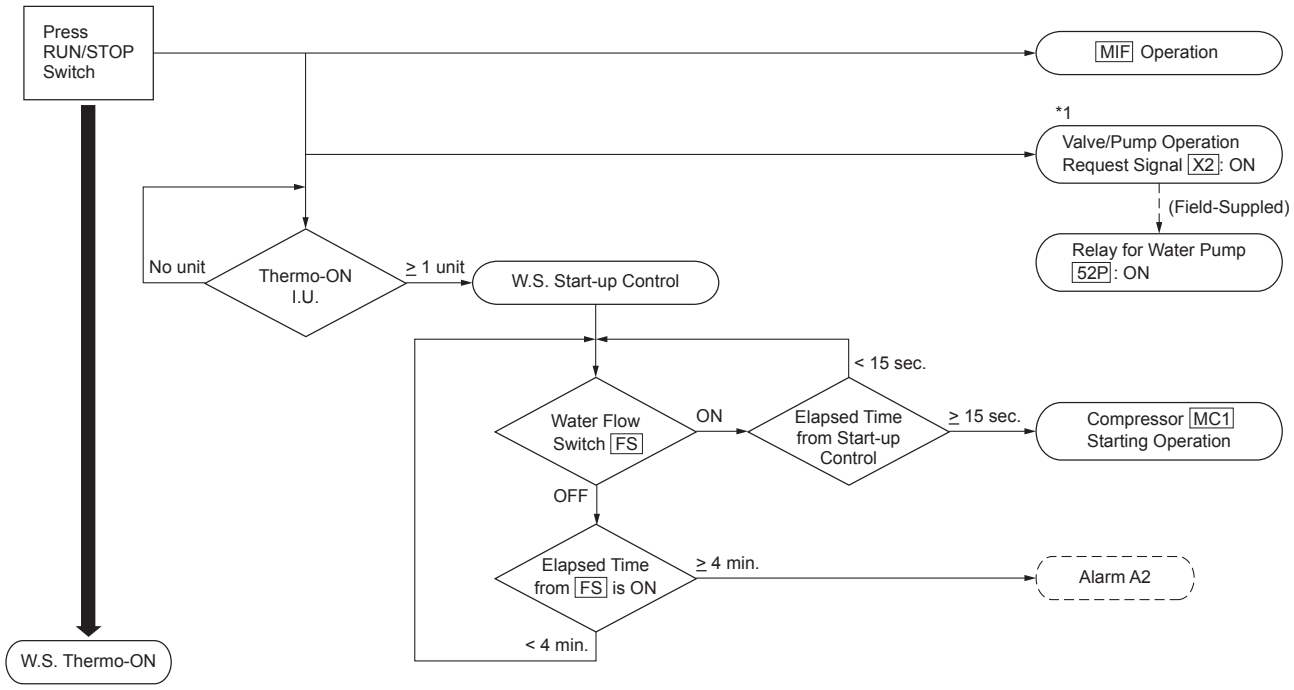


(4) Water System Sequence



(a) Starting Operation

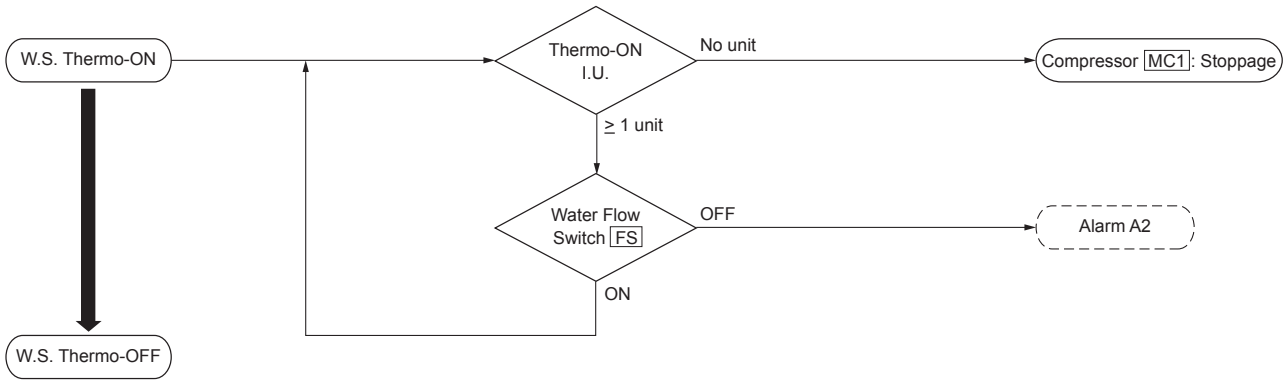
I.U.: Indoor Unit
W.S.: Water Source Unit
MIF: Motor (for Indoor Fan)
MC1: DC Motor (for Inverter Compressor)



*1: Valve/Pump Operation Request Signal X2 is ON, while one or more operation I.U. (including FAN mode).

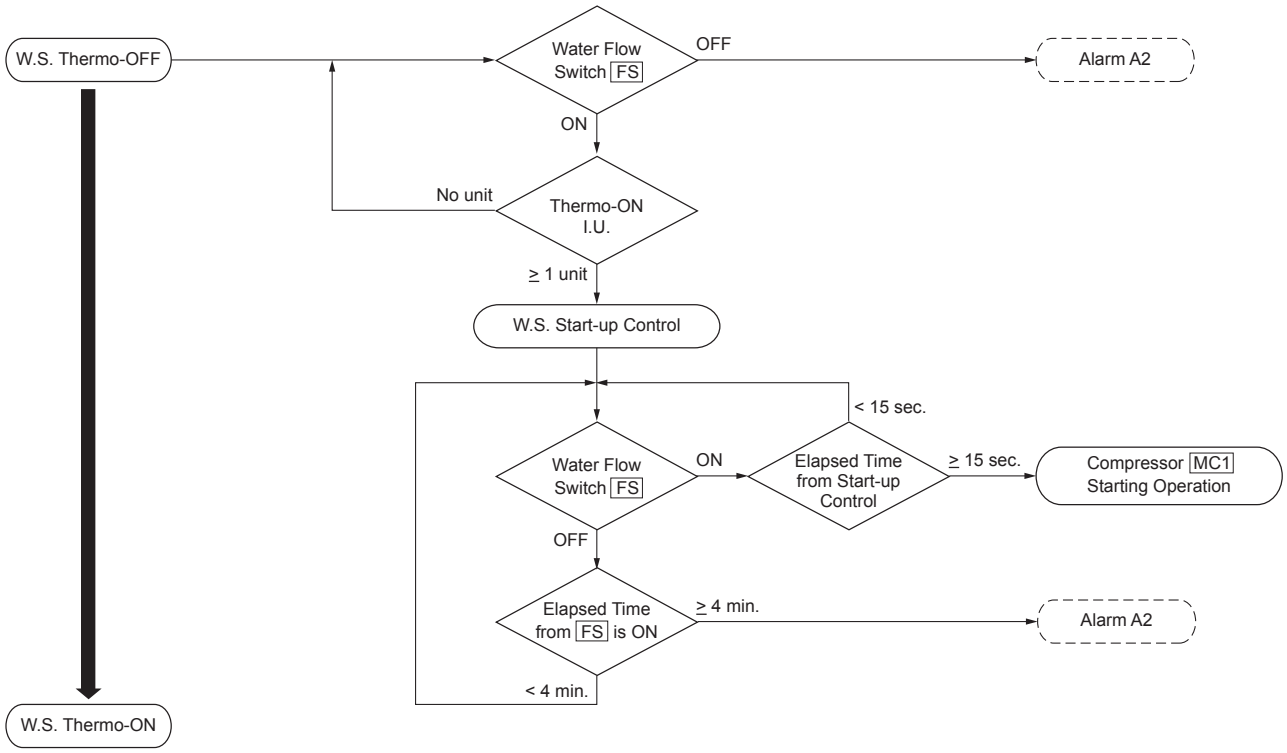
(b) Thermo-OFF (There is no Thermo-ON I.U. in the system.)

I.U.: Indoor Unit
W.S.: Water Source Unit
MC1: DC Motor (for Inverter Compressor)



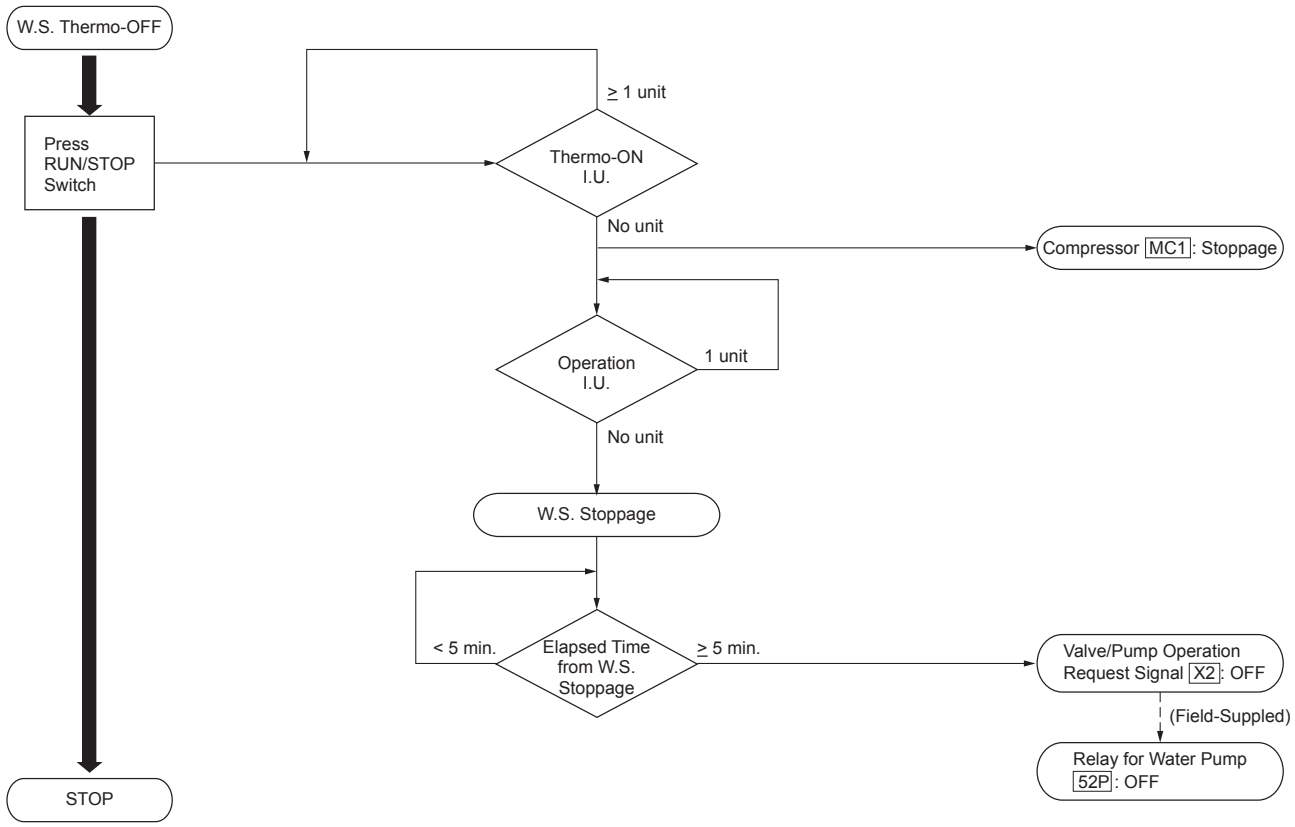
(c) Restart from Thermo-OFF

I.U.: Indoor Unit
W.S.: Water Source Unit
MC1: DC Motor (for Inverter Compressor)



(d) Switch-OFF (There is no operation I.U. in system.)

I.U.: Indoor Unit
W.S.: Water Source Unit
MC1: DC Motor (for Inverter Compressor)



2.10.4 Protection Control

- Whenever protection control sequences are activated, the corresponding code is displayed on the 7-segment LED array of the main control board.
- Protection control code is displayed when a unit protection mode has been initiated. The code disappears once the cause of protection is addressed.

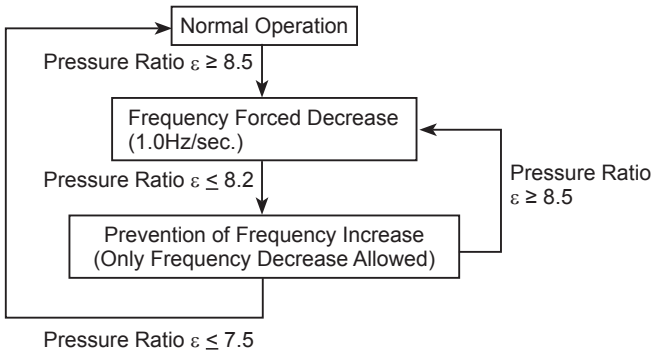
Indicated Contents

Indication	Protection Control Contents	Code During Override (Degeneration) Control
P01	Pressure Ratio Protection Control	Pc1
P02	High Pressure Increase Protection Control	Pc2
P03	Inverter Current Protection Control	Pc3
P04	Inverter Temperature Increase Protection Control	Pc4
P05	Discharge Temperature Increase Protection Control	Pc5
P06	Low Pressure Decrease Protection Control	—
P09	High Pressure Decrease Protection Control	
P0A	Demand Current Control	
P0d	Low Pressure Increase Protection Control	

(1) P01: Pressure Ratio Protection Control

(a) Pressure Ratio Increase Protection Control
Pressure Ratio Increase Protection Control is performed in order to protect the compressor from an increase of pressure ratio.

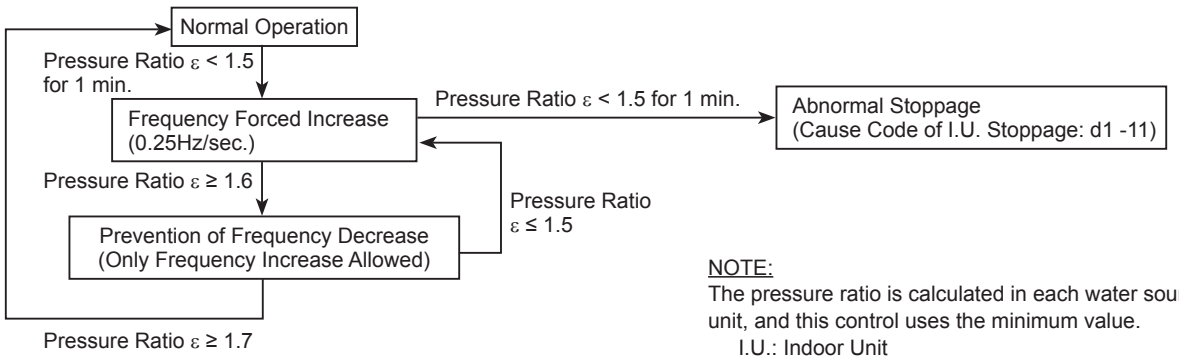
Details of Control



NOTE:
The pressure ratio is calculated in each water source unit, and this control uses the maximum value.
ε= (Pd [psi]+15) / (Ps [psi]+15)
ε= (Pd [MPa]+0.1) / (Ps [MPa]+0.1)
Pd: Detected Value of High Pressure Sensor [psi]
Ps: Detected Value of Low Pressure Sensor [psi]

(b) Low Compression Ratio Protection Function
This function is activated to protect the compressor during occurrences of low compression ratio.

Details of Control

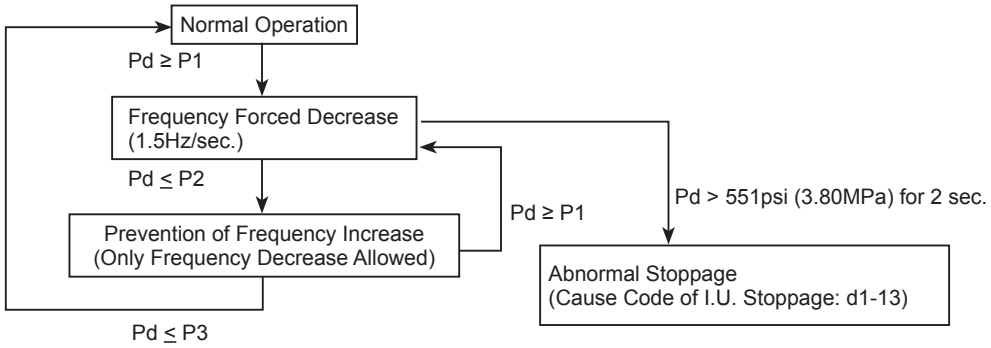


NOTE:
The pressure ratio is calculated in each water source unit, and this control uses the minimum value.
I.U.: Indoor Unit

(2) P02: High Pressure Increase Protection Control

High Pressure Protection Control is performed in order to prevent activation of a protection device caused by a high pressure increase during an abnormality and to protect the compressor from an excessive increase of discharge pressure.

Details of Control



NOTE:
High pressure is detected in each water source unit, and this control uses the maximum value.
Pd: Detected Value of High Pressure Sensor [psi (MPa)]
I.U.: Indoor Unit

Control Value [psi (MPa)]

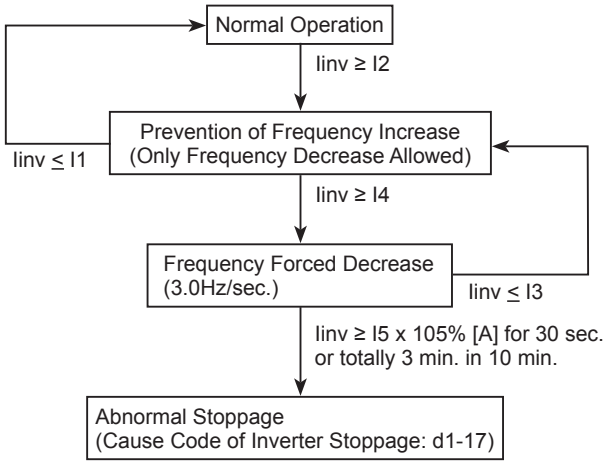
Operation Mode		P1	P2	P3
Cooling		500 (3.45)	493 (3.40)	464 (3.20)
Heating		486 (3.35)	479 (3.30)	450 (3.10)
Simultaneous	Mainly Cooling	500 (3.45)	493 (3.40)	464 (3.20)
	Mainly Heating	486 (3.35)	479 (3.30)	450 (3.10)

(3) P03: Inverter Current Protection Control

Inverter Current Protection Control is performed in order to prevent an inverter trip caused by an increase of inverter secondary current value.

(a) Inverter Secondary Current Protection

Details of Control



Control Value

208/230V [A]

Model	I1	I2	I3	I4	I5
(H,Y)VWH(P,R)072B32S	35.5	36.5	37.0	38.0	38.0
(H,Y)VWH(P,R)096B32S	35.5	36.5	37.0	38.0	38.0
(H,Y)VWH(P,R)120B32S	44.5	45.5	46.0	47.0	48.0
(H,Y)VWH(P,R)144B32S	35.5	36.5	37.0	38.0	38.0
(H,Y)VWH(P,R)168B32S	35.5	36.5	37.0	38.0	38.0
(H,Y)VWH(P,R)192B32S	35.5	36.5	37.0	38.0	38.0
(H,Y)VWH(P,R)216B32S	35.5	36.5	37.0	38.0	38.0

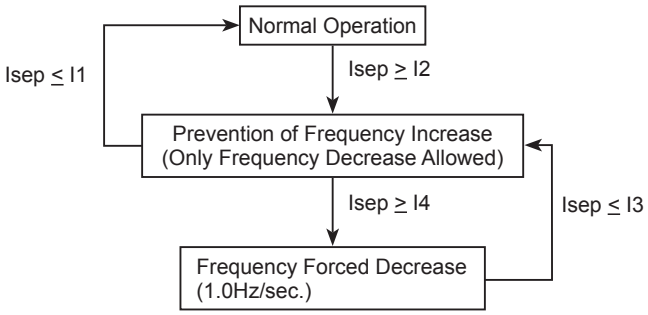
460V [A]

Model	I1	I2	I3	I4	I5
(H,Y)VWH(P,R)072B42S	22.5	23.0	23.5	24.0	26.0
(H,Y)VWH(P,R)096B42S	22.5	23.0	23.5	24.0	26.0
(H,Y)VWH(P,R)120B42S	22.5	23.0	23.5	24.0	26.0
(H,Y)VWH(P,R)144B42S	22.5	23.0	23.5	24.0	26.0
(H,Y)VWH(P,R)168B42S	22.5	23.0	23.5	24.0	26.0
(H,Y)VWH(P,R)192B42S	22.5	23.0	23.5	24.0	26.0
(H,Y)VWH(P,R)216B42S	22.5	23.0	23.5	24.0	26.0

NOTE:
In case of two inverter PCB installed in a water source unit, the maximum current value detected at each inverter PCB is utilized.
Iinv: Detected Value of Inverter Secondary Current Sensor [A]

(b) Primary Current Protection for each Inverter PCB

Details of Control



Control Value

208/230V [A]

Model	I1	I2	I3	I4
(H,Y)VWH(P,R)072B32S	37.5	39.0	39.0	39.5
(H,Y)VWH(P,R)096B32S	37.5	39.0	39.0	39.5
(H,Y)VWH(P,R)120B32S	48.0	49.5	49.5	50.0
(H,Y)VWH(P,R)144B32S	37.5	39.0	39.0	39.5
(H,Y)VWH(P,R)168B32S	37.5	39.0	39.0	39.5
(H,Y)VWH(P,R)192B32S	37.5	39.0	39.0	39.5
(H,Y)VWH(P,R)216B32S	37.5	39.0	39.0	39.5

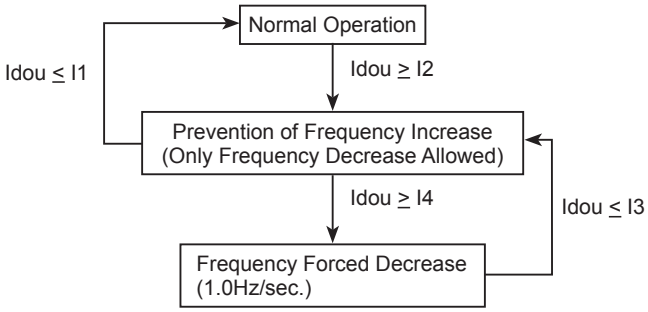
460V [A]

Model	I1	I2	I3	I4
(H,Y)VWH(P,R)072B42S	23.5	24.5	24.5	25.0
(H,Y)VWH(P,R)096B42S	23.5	24.5	24.5	25.0
(H,Y)VWH(P,R)120B42S	23.5	24.5	24.5	25.0
(H,Y)VWH(P,R)144B42S	23.5	24.5	24.5	25.0
(H,Y)VWH(P,R)168B42S	23.5	24.5	24.5	25.0
(H,Y)VWH(P,R)192B42S	23.5	24.5	24.5	25.0
(H,Y)VWH(P,R)216B42S	23.5	24.5	24.5	25.0

NOTE:
In case of two inverter PCB installed in a water source unit, the maximum current value detected at each inverter PCB is utilized.
Isep: Inverter Primary Current [A]

(c) Primary Current Protection for each Water Source Unit

Details of Control



Idou: Total Value of Primary Current of all the Inverter PCB in a water source Unit [A]

Control Value

208V [A]

Model	I1	I2	I3	I4
(H,Y)VWH(P,R)072B32S	12.4	13.9	13.9	14.4
(H,Y)VWH(P,R)096B32S	21.5	23.0	23.0	23.5
(H,Y)VWH(P,R)120B32S	27.2	28.7	28.7	29.2
(H,Y)VWH(P,R)144B32S	29.6	31.1	31.1	31.6
(H,Y)VWH(P,R)168B32S	33.0	34.5	34.5	35.0
(H,Y)VWH(P,R)192B32S	45.5	47.0	47.0	47.5
(H,Y)VWH(P,R)216B32S	58.0	59.5	59.5	60.0

230V [A]

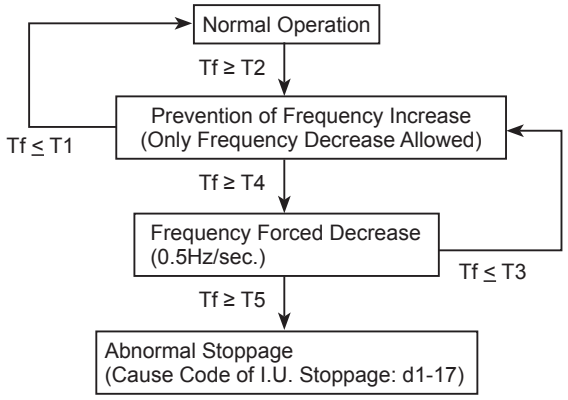
Model	I1	I2	I3	I4
(H,Y)VWH(P,R)072B32S	11.0	12.5	12.5	13.0
(H,Y)VWH(P,R)096B32S	19.3	20.8	20.8	21.3
(H,Y)VWH(P,R)120B32S	24.5	26.0	26.0	26.5
(H,Y)VWH(P,R)144B32S	26.7	28.2	28.2	28.7
(H,Y)VWH(P,R)168B32S	29.7	31.2	31.2	31.7
(H,Y)VWH(P,R)192B32S	41.0	42.5	42.5	43.0
(H,Y)VWH(P,R)216B32S	52.3	53.8	53.8	54.3

460V [A]

Model	I1	I2	I3	I4
(H,Y)VWH(P,R)072B42S	6.0	7.0	7.0	7.5
(H,Y)VWH(P,R)096B42S	10.7	11.7	11.7	12.2
(H,Y)VWH(P,R)120B42S	13.7	14.7	14.7	15.2
(H,Y)VWH(P,R)144B42S	15.0	16.0	16.0	16.5
(H,Y)VWH(P,R)168B42S	16.7	17.7	17.7	18.2
(H,Y)VWH(P,R)192B42S	23.2	24.2	24.2	24.7
(H,Y)VWH(P,R)216B42S	29.7	30.7	30.7	31.2

(4) P04: Inverter Temperature Increase Protection Control
Inverter Temperature Increase Protection Control is performed in order to prevent an inverter trip caused by a temperature increase of the inverter.

Detail of Control



NOTE:
In case of two inverter PCB installed in a water source unit, the maximum temperature detected at each inverter PCB is utilized.
Tf: Inverter Temperature Sensor Detected Value
I.U.: Indoor Unit

Control Value

208/230V [°F (°C)]

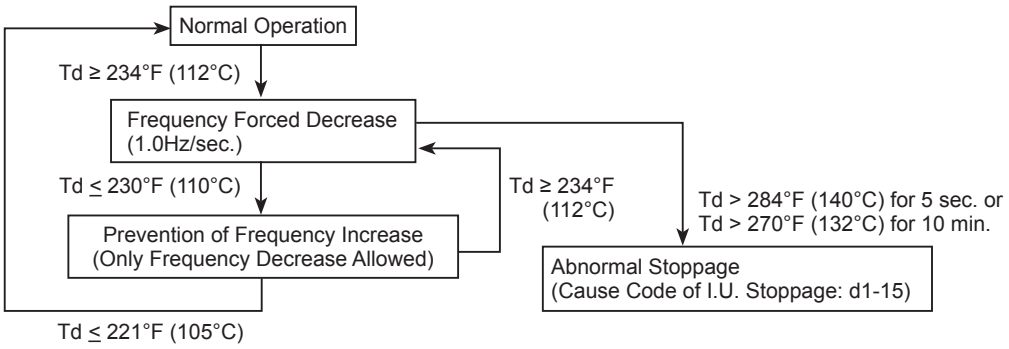
Model	T1	T2	T3	T4	T5
(H,Y)VWH(P,R)072B32S	96	98	98	100	106
(H,Y)VWH(P,R)096B32S	96	98	98	100	106
(H,Y)VWH(P,R)120B32S	101	103	103	105	111
(H,Y)VWH(P,R)144B32S	96	98	98	100	106
(H,Y)VWH(P,R)168B32S	96	98	98	100	106
(H,Y)VWH(P,R)192B32S	96	98	98	100	106
(H,Y)VWH(P,R)216B32S	96	98	98	100	106

460V [°F (°C)]

Model	T1	T2	T3	T4	T5
(H,Y)VWH(P,R)072B42S	100	102	102	104	110
(H,Y)VWH(P,R)096B42S	100	102	102	104	110
(H,Y)VWH(P,R)120B42S	100	102	102	104	110
(H,Y)VWH(P,R)144B42S	100	102	102	104	110
(H,Y)VWH(P,R)168B42S	100	102	102	104	110
(H,Y)VWH(P,R)192B42S	100	102	102	104	110
(H,Y)VWH(P,R)216B42S	100	102	102	104	110

(5) P05: Discharge Temperature Increase Protection Control
Discharge Temperature Increase Protection Control is performed in order to protect the compressor motor coil from an increase of discharge temperature during an abnormality.

Details of Control

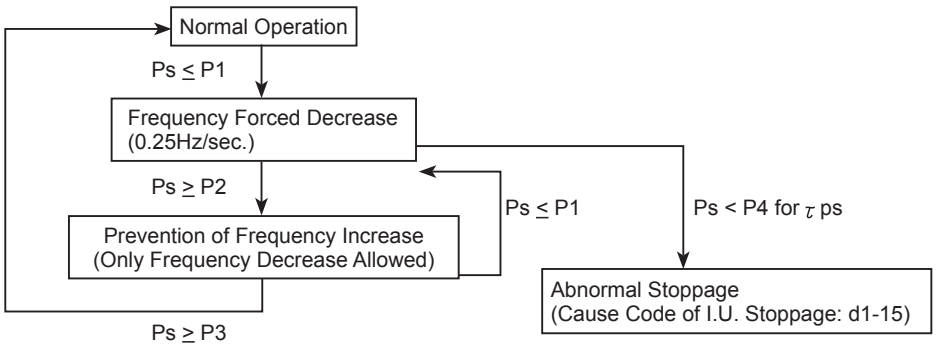


NOTE:
In case of two inverter compressors installed in a water source unit, the maximum temperature detected at each inverter compressor is utilized.
Td: Detected Value of Discharge Gas Thermistor [°F (°C)]
I.U.: Indoor Unit

(6) P06: Low Pressure Decrease Protection Control

Low Pressure Decrease Protection Control is performed in order to protect the compressor from a decrease of suction pressure. And when the plate type heat exchanger is used as Evaporator, this control is performed in order to protect it from freeze.

Details of Control



Ps: Detected Value of Low Pressure Sensor [psi (MPa)]
I.U.: Indoor Unit

Control Value [psi (MPa)]

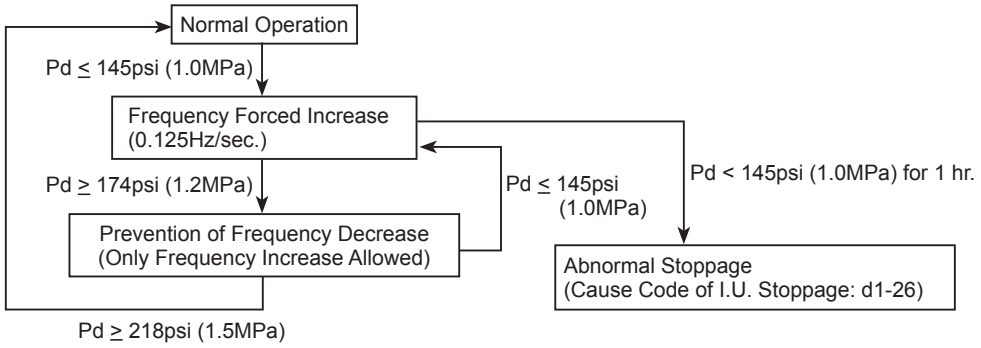
Operation Mode		P1	P2	P3	P4	τ ps [min.]
Cooling		15 (0.10)	22 (0.15)	29 (0.20)	13 (0.09)	12
Heating		87 (0.60)	93 (0.64)	102 (0.70)	65 (0.45)	1.5
Simultaneous	Mainly Cooling	15 (0.10)	22 (0.15)	29 (0.20)	13 (0.09)	12
	Mainly Heating	87 (0.60)	93 (0.64)	102 (0.70)	65 (0.45)	1.5

(7) P09: High Pressure Decrease Protection Control

During a decrease of high pressure, the compressor operation frequency is controlled by this protection control for the following purposes.

- To prevent insufficient refrigerant supply to indoor units installed at different height locations.
- To keep the refrigerant oil supply in the compressor.

Details of Control



Pd: Detected Value of High Pressure Sensor [psi (MPa)]
I.U.: Indoor Unit

(8) P0A: Demand Current Control
The compressor operation frequency is controlled to set at the setting value of the water source unit inverter primary current (40% to 100% of rated current of cooling operation). This function is detailed in the “External Input and Output Setting”. Refer to the Service Manual for details.

Operating Conditions
The demand current control can be performed under the following conditions.

(a) The demand signal is input from the centralized operation controller.
(b) The demand signal is input at the external input terminals of the water source unit from external equipment such as a building management system or a utility with a smart meter.
(c) The demand function settings are set from the water source unit PCB.
(d) The wave function is set from the water source unit PCB.
(e) The demand signal is input from the indoor unit (wired controller).

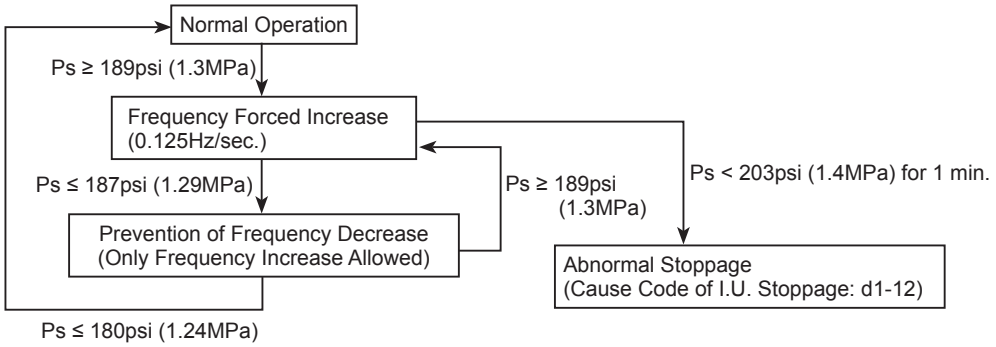
If the operation current exceeds each setting function value, the compressor operation frequency is controlled.

Cancellation Condition
The input signal is stopped at each condition (a) to (e).

NOTE:
This function is not available when the compressor starts and the oil return control.

(9) P0d: Low Pressure Increase Protection Control
The compressor operation frequency is controlled to protect the compressor from suction pressure transitional increasing.

Details of Control



Ps: Detected Value of Low Pressure Sensor [psi (MPa)]
I.U.: Indoor Unit

(10) Priority of Protection Control

If two or more protection controls meet a condition, the protection controls perform according to the following.

Rank Order	Indication	Protection Control Performed
1	P01	Pressure Ratio Protection Control
2	P02	High Pressure Increase Protection Control
3	P03	Inverter Current Protection Control
4	P04	Inverter Fin Temperature Increase Protection Control
5	P05	Discharge Temperature Increase Protection Control
6	P06	Low Pressure Decrease Protection Control
7	P0A	Demand Current Control
8	P0d	Low Pressure Increase Protection Control
9	P09	High Pressure Decrease Protection Control

		② Lower Rank Order of Protection Control Function			
		Forced Decrease	Forced Increase	Prevention of Increase	Prevention of Decrease
① Higher Rank Order of Protection Control Function	Forced Decrease	①	①	①	①
	Forced Increase	①	①	①	①
	Prohibited Increase	②	①	②*	①
	Prohibited Decrease	②	②	②	②

*: Discharge Temperature Increase Protection Control (P05) is higher than the following protection controls.
a) Low Pressure Decrease Protection Control (P06)
b) Demand Current Control (P0A)

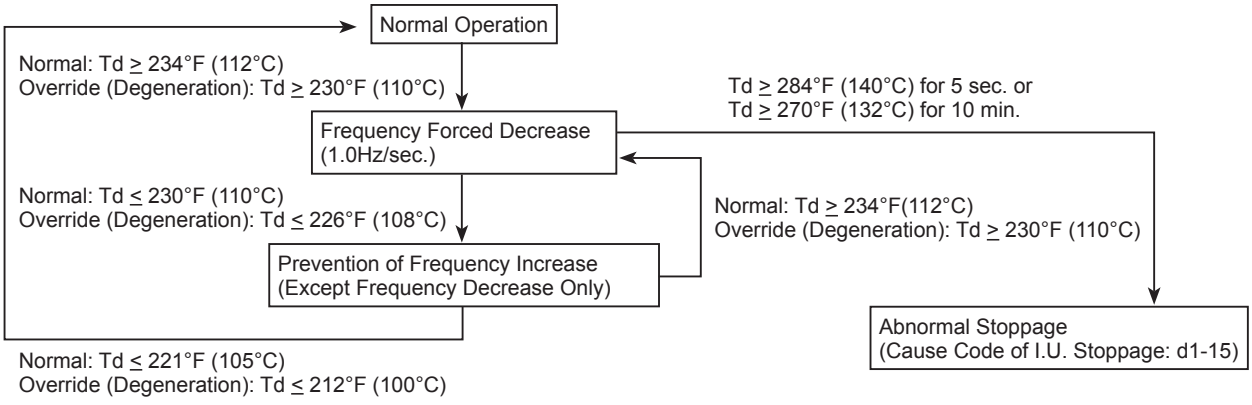
(11) Override (Degeneration) Control

Override (Degeneration) Control is performed to change the protection control range.
This control sequence will suppress re-occurring alarms in response to repeated equipment restarts during protection control conditions listed below.

Related Protection Control

(1) Pressure Ratio Decrease Protection Control (P01)
(2) High Pressure Increase Protection Control (P02)
(3) Inverter Current Protection Control (P03)
(4) Inverter Fin Temperature Increase Protection Control (P04)
(5) Discharge Temperature Increase Protection Control (P05)

Example of Discharge Temperature Increase Protection Control



Td: Detected Value of Discharge Gas Thermistor [°F (°C)]
I.U.: Indoor Unit

(12) Oil Return Control

Oil return control is performed in order to avoid insufficient oil supply to the compressor caused by extended low frequency operation. This control is utilized to return the oil flow out to the indoor unit side from the compressor.

Activating Condition

This control function is started the compressor runs below the specified speed for 1 hour continuously (refer to the table below).

Compressor Speed for Oil Return Control

Heat Pump System [Hz]

Model	Cooling Mode	Heating Mode
(H,Y)VWHP072B(3,4)2S	32	32
(H,Y)VWHP096B(3,4)2S	38	38
(H,Y)VWHP120B(3,4)2S	50	54
(H,Y)VWHP144B(3,4)2S	66	72
(H,Y)VWHP168B(3,4)2S	66	72
(H,Y)VWHP192B(3,4)2S	66	72
(H,Y)VWHP216B(3,4)2S	66	72

Heat Recovery System [Hz]

Model	Cooling Mode	Heating Mode	Simultaneous Mode
(H,Y)VWHR072B(3,4)2S	32	32	32
(H,Y)VWHR096B(3,4)2S	38	32	32
(H,Y)VWHR120B(3,4)2S	50	46	46
(H,Y)VWHR144B(3,4)2S	66	66	66
(H,Y)VWHR168B(3,4)2S	66	66	66
(H,Y)VWHR192B(3,4)2S	66	66	66
(H,Y)VWHR216B(3,4)2S	66	66	66

Detail of Control

Compressor:

Increase the compressor speed above the required value to return the oil to the compressor.

Expansion Valve:

(In the Case of Cooling Operation) Open the expansion valve of the indoor unit under thermo-ON.

(In the Case of Heating Operation) Open the expansion valve of the water source unit.

Deactivating Condition

This control function is canceled when the oil return control continues for more than 60 sec. (for cooling operation) /120sec. (for heating operation).

2.10.5 Safety and Control Device Setting

208/230V 60Hz

Model		(H,Y)VWH(P,R)072B32S	(H,Y)VWH(P,R)096B32S	(H,Y)VWH(P,R)120B32S	(H,Y)VWH(P,R)144B32S	(H,Y)VWH(P,R)168B32S	(H,Y)VWH(P,R)192B32S	(H,Y)VWH(P,R)216B32S
High Pressure Increase Protection		Automatic Reset, Non-Adjustable						
High Pressure Increase Protection Control	psi	551	551	551	551	551	551	551
	(MPa)	(3.80)	(3.80)	(3.80)	(3.80)	(3.80)	(3.80)	(3.80)
Pressure Switch		(for each compressor)						
Cut-Out	psi	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}
	(MPa)	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$
Cut-In	psi	464 ±21	464 ±21	464 ±21	464 ±21	464 ±21	464 ±21	464 ±21
	(MPa)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)
For Inverter Compressor		Automatic Reset, Non-Adjustable						
Over Current Inverter Current Protection Control	A	38	38	48	38	38	38	38
Fuse	A	40	40	50	40	40	40	40
Over Heat		Automatic Reset, Non-Adjustable						
Discharge Temperature Increase Protection Control								
for 5sec	°F	284	284	284	284	284	284	284
	(°C)	(140)	(140)	(140)	(140)	(140)	(140)	(140)
for 10min	°F	270	270	270	270	270	270	270
	(°C)	(132)	(132)	(132)	(132)	(132)	(132)	(132)
For Fan Motor (Electrical Box)		Automatic Reset, Non-Adjustable						
Fuse	A	3.15	3.15	3.15	3.15	3.15	3.15	3.15

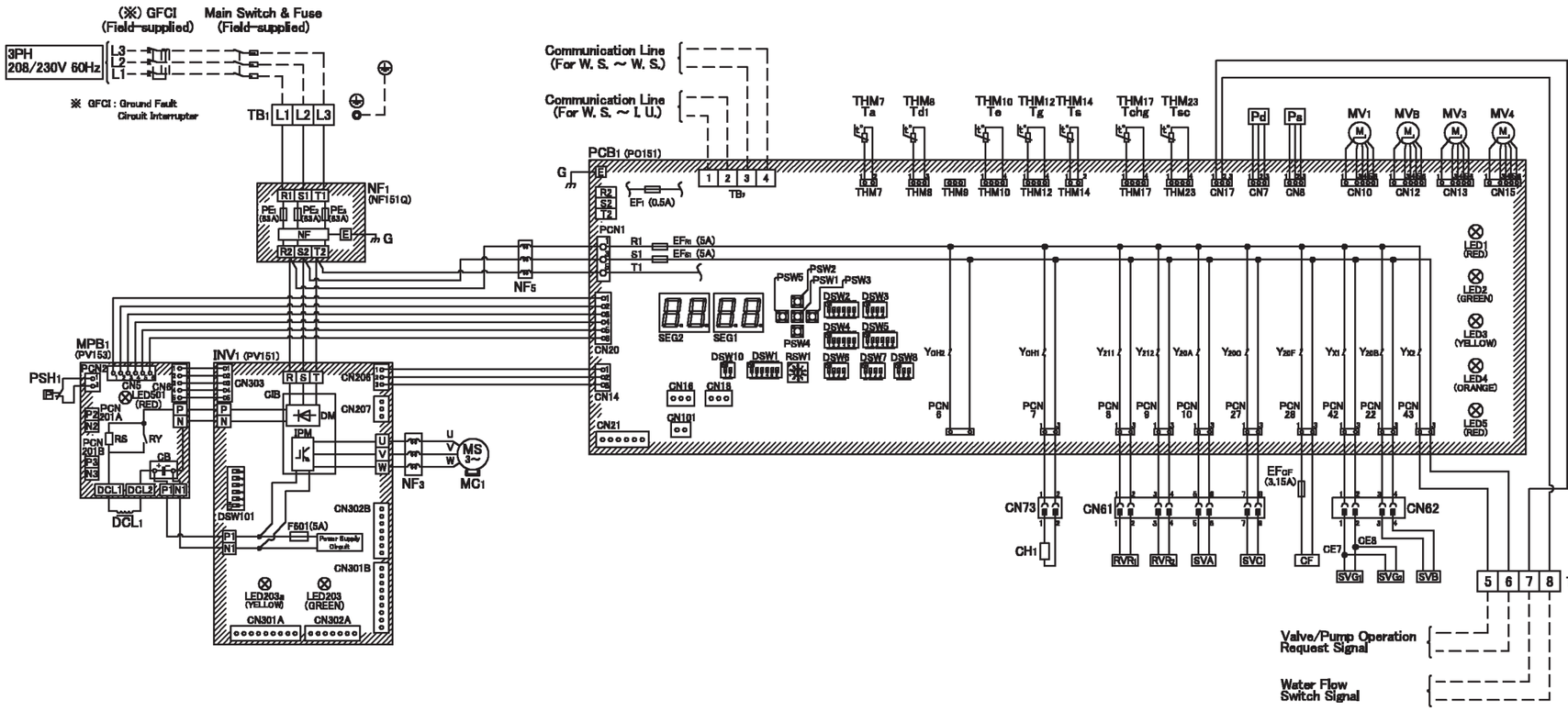
460V 60Hz

Model		(H,Y)VWH(P,R)072B42S	(H,Y)VWH(P,R)096B42S	(H,Y)VWH(P,R)120B42S	(H,Y)VWH(P,R)144B42S	(H,Y)VWH(P,R)168B42S	(H,Y)VWH(P,R)192B42S	(H,Y)VWH(P,R)216B42S
High Pressure Increase Protection		Automatic Reset, Non-Adjustable						
High Pressure Increase Protection Control	psi	551	551	551	551	551	551	551
	(MPa)	(3.80)	(3.80)	(3.80)	(3.80)	(3.80)	(3.80)	(3.80)
Pressure Switch		(for each compressor)						
Cut-Out	psi	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}	601^{-7}_{-21}
	(MPa)	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$	$(4.15^{-0.05}_{-0.20})$
Cut-In	psi	464 ±21	464 ±21	464 ±21	464 ±21	464 ±21	464 ±21	464 ±21
	(MPa)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)	(3.20 ±0.15)
For Inverter Compressor		Automatic Reset, Non-Adjustable						
Over Current Inverter Current Protection Control	A	26	26	26	26	26	26	26
Fuse	A	25	25	25	25	25	25	25
Over Heat		Automatic Reset, Non-Adjustable						
Discharge Temperature Increase Protection Control								
for 5sec	°F	284	284	284	284	284	284	284
	(°C)	(140)	(140)	(140)	(140)	(140)	(140)	(140)
for 10min	°F	270	270	270	270	270	270	270
	(°C)	(132)	(132)	(132)	(132)	(132)	(132)	(132)
For Fan Motor (Electrical Box)		Automatic Reset, Non-Adjustable						
Fuse	A	3.15	3.15	3.15	3.15	3.15	3.15	3.15

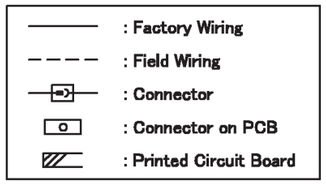
2.10.6 Electrical Wiring Diagram

(1) 208/230V 60Hz

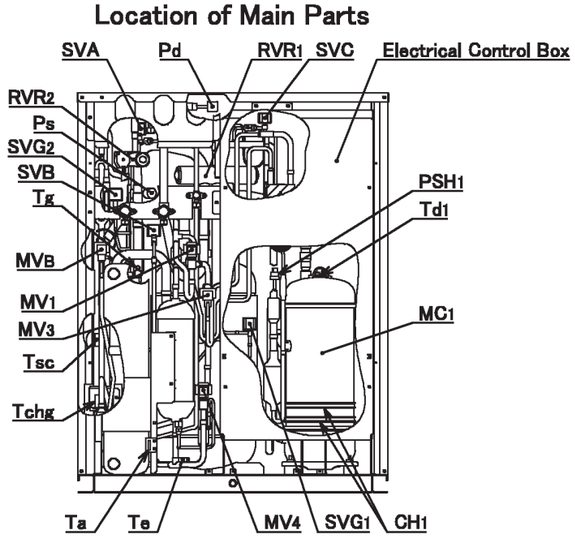
MODELS: (H,Y)VWH(P,R)072B32S, (H,Y)VWH(P,R)096B32S and (H,Y)VWH(P,R)120B32S



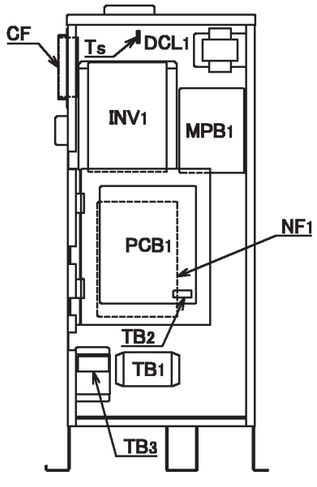
Mark	Name
CB	Capacitor
CF	Cooling Fan
CH1	Crankcase Heater
CIB	Converter Inverter Brake Module
CN16	Connector for External Output
CN18	Connector for External Input
CN101	Connector for H-LINK II
DCL1	Reactor
DM	Diode Module
EFCF	Fuse
EFR1,S1,1	Fuse on PCB1
F601	Fuse on INV1
G , ⏚	Ground
INV1	Inverter PCB
IPM	Intelligent Power Module
LED1~5	Signal Light on PCB1
LED203,203a	Signal Light on INV1
LED501	Signal Light on MPB1
MC1	Motor for Compressor
MPB1	Main Power PCB
MV1,3,4,B	Electronic Expansion Valve
NF1	Noise Filter (PCB)
NF3,5	Noise Filter
PCB1	Printed Circuit Board
Pd, Ps	Sensor for Refrigerant Pressure
PF1,2,3	Fuse on NF1
PSH1	Pressure Switch for Protection
RS	Resistor
RVR1,2	Reversing Valve Relay
RY	Relay
SVA,B,C,G1,G2	Solenoid Valve
TB1	Terminal Block for Power Supply Wiring
TB2	Terminal Block for Communication Wiring
TB3	Terminal Block for Water Flow Switch and Water Pump Signals Wiring
THM7~23	Thermistor



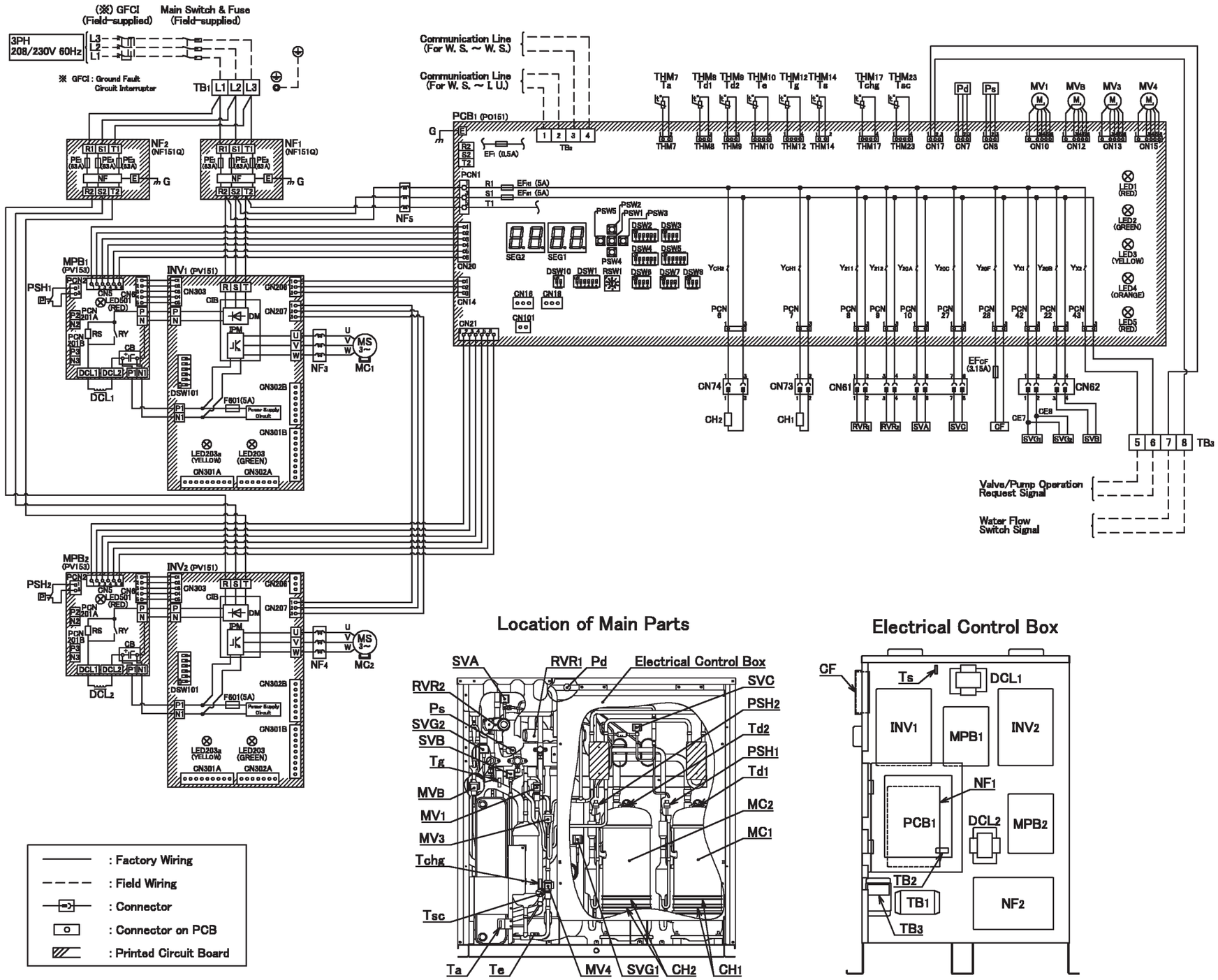
Location of Main Parts



Electrical Control Box



MODELS: (H,Y)VWH(P,R)144B32S, (H,Y)VWH(P,R)168B32S, (H,Y)VWH(P,R)192B32S and (H,Y)VWH(P,R)216B32S



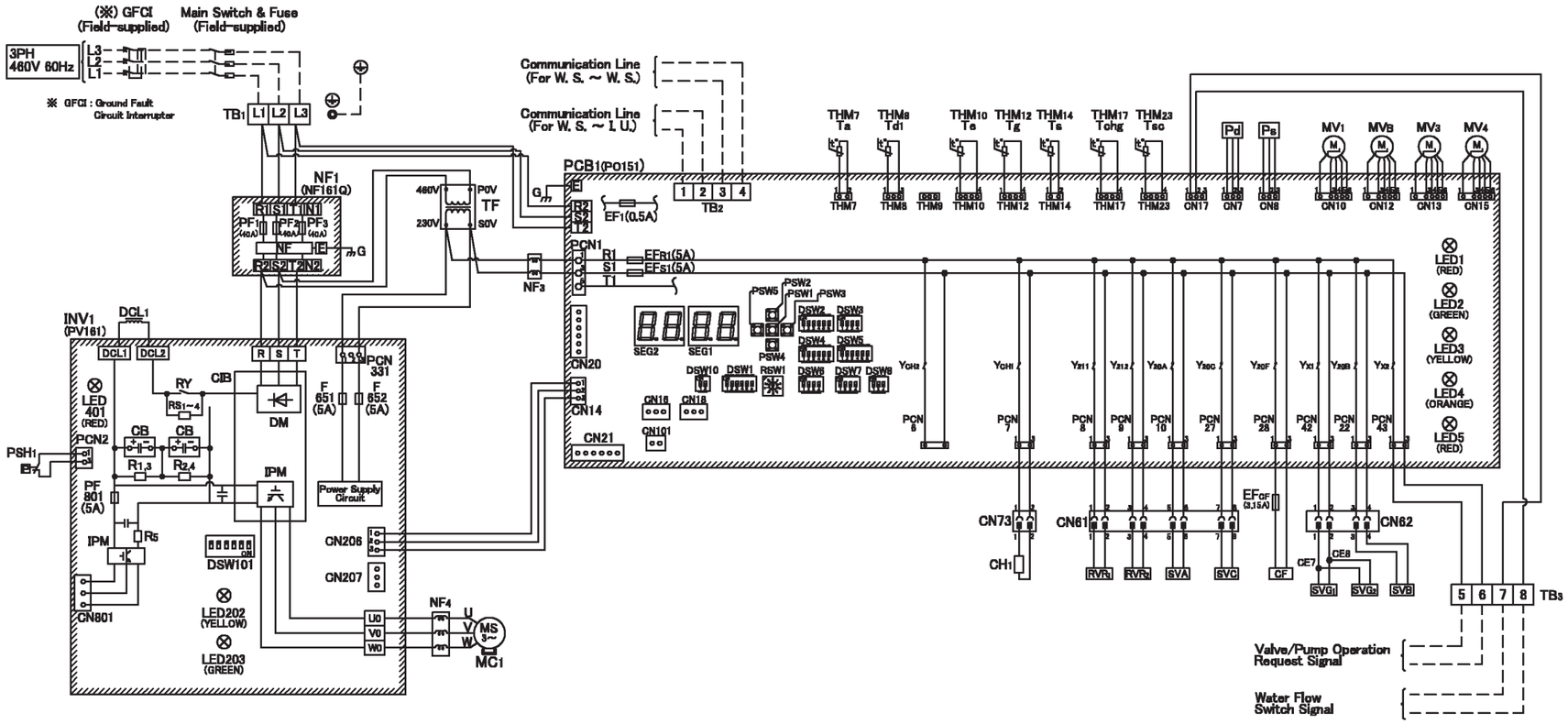
Location of Main Parts

Electrical Control Box

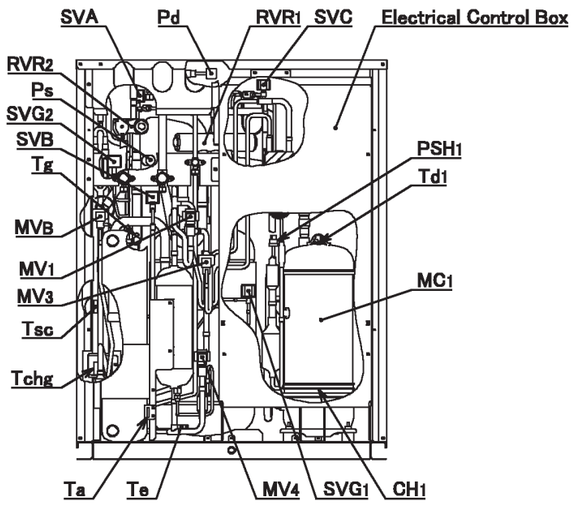
Mark	Name
CB	Capacitor
CF	Cooling Fan
CH1,2	Crankcase Heater
CIB	Converter Inverter Brake Module
CN16	Connector for External Output
CN18	Connector for External Input
CN101	Connector for H-LINK II
DCL1,2	Reactor
DM	Diode Module
EFCF	Fuse
EFR1,S1,1	Fuse on PCB1
F601	Fuse on INV1,2
G , ⏚	Ground
INV1,2	Inverter PCB
IPM	Intelligent Power Module
LED1~5	Signal Light on PCB1
LED203,203a	Signal Light on INV1,2
LED501	Signal Light on MPB1,2
MC1,2	Motor for Compressor
MPB1,2	Main Power PCB
MV1,3,4,B	Electronic Expansion Valve
NF1,2	Noise Filter (PCB)
NF3~5	Noise Filter
PCB1	Printed Circuit Board
Pd, Ps	Sensor for Refrigerant Pressure
PF1,2,3	Fuse on NF1,2
PSH1,2	Pressure Switch for Protection
RS	Resistor
RVR1,2	Reversing Valve Relay
RY	Relay
SVA,B,C,G1,G2	Solenoid Valve
TB1	Terminal Block for Power Supply Wiring
TB2	Terminal Block for Communication Wiring
TB3	Terminal Block for Water Flow Switch and Water Pump Signals Wiring
THM7~23	Thermistor

(2) 460V 60Hz

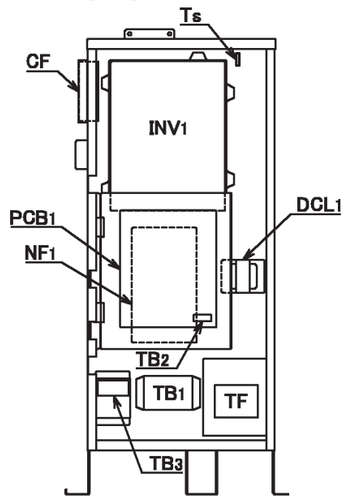
MODELS: (H,Y)VWH(P,R)072B42S, (H,Y)VWH(P,R)096B42S and (H,Y)VWH(P,R)120B42S



Location of Main Parts



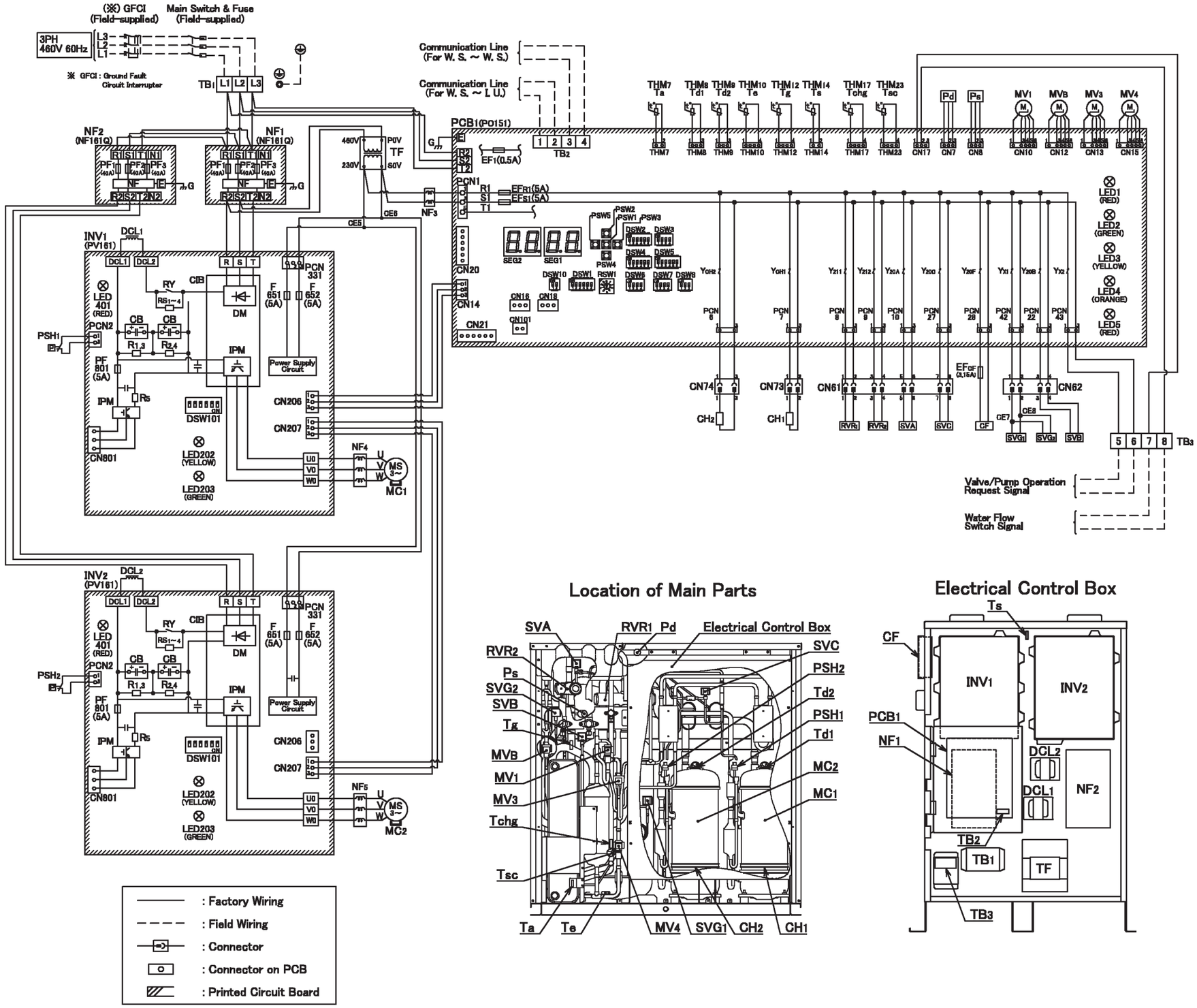
Electrical Control Box



: Factory Wiring
: Field Wiring
: Connector
: Connector on PCB
: Printed Circuit Board

Mark	Name
CB	Capacitor
CF	Cooling Fan
CH_1	Crankcase Heater
CIB	Converter Inverter Brake Module
CN16	Connector for External Output
CN18	Connector for External Input
CN101	Connector for H-LINK II
DCL_1	Reactor
DM	Diode Module
EF_{CF}	Fuse
$EF_{R1,S1,1}$	Fuse on PCB_1
$F_{651,652}$	Fuse on INV_1
G , ⏚	Ground
INV_1	Inverter PCB
IPM	Intelligent Power Module
LED1~5	Signal Light on PCB_1
LED202,203,401	Signal Light on INV_1
MC_1	Motor for Compressor
$MV_{1,3,4,B}$	Electronic Expansion Valve
NF_1	Noise Filter (PCB)
$NF_{3,4}$	Noise Filter
PCB_1	Printed Circuit Board
Pd, Ps	Sensor for Refrigerant Pressure
$PF_{1,2,3}$	Fuse on NF_1
PF_{801}	Fuse on INV_1
PSH_1	Pressure Switch for Protection
R_1~5, RS_1~4	Resistor
$RVR_{1,2}$	Reversing Valve Relay
RY	Relay
SVA,B,C,G_1,G_2	Solenoid Valve
TB_1	Terminal Block for Power Supply Wiring
TB_2	Terminal Block for Communication Wiring
TB_3	Terminal Block for Water Flow Switch and Water Pump Signals Wiring
TF	Transformer
$THM_{7~23}$	Thermistor

MODELS: (H,Y)VWH(P,R)144B42S, (H,Y)VWH(P,R)168B42S, (H,Y)VWH(P,R)192B42S and (H,Y)VWH(P,R)216B42S

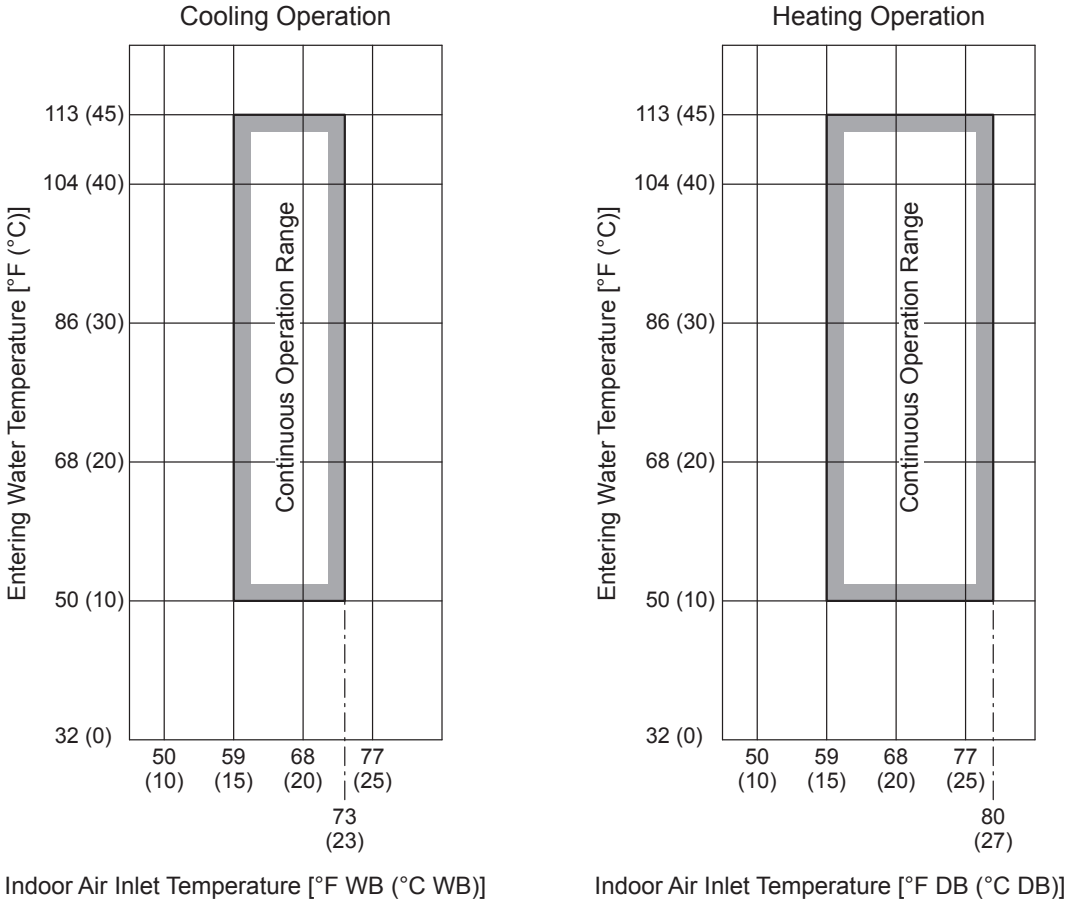


Location of Main Parts

Electrical Control Box

Mark	Name
CB	Capacitor
CF	Cooling Fan
CH1,2	Crankcase Heater
CIB	Converter Inverter Brake Module
CN16	Connector for External Output
CN18	Connector for External Input
CN101	Connector for H-LINK II
DCL1,2	Reactor
DM	Diode Module
EFCF	Fuse
EFR1,S1,1	Fuse on PCB1
F651,652	Fuse on INV1,2
G , ⏚	Ground
INV1,2	Inverter PCB
IPM	Intelligent Power Module
LED1~5	Signal Light on PCB1
LED202,203,401	Signal Light on INV1,2
MC1,2	Motor for Compressor
MV1,3,4,B	Electronic Expansion Valve
NF1,2	Noise Filter (PCB)
NF3~5	Noise Filter
PCB1	Printed Circuit Board
Pd, Ps	Sensor for Refrigerant Pressure
PF1,2,3	Fuse on NF1,2
PF801	Fuse on INV1,2
PSH1,2	Pressure Switch for Protection
R1~5, RS1~4	Resistor
RVR1,2	Reversing Valve Relay
RY	Relay
SVA,B,C,G1,G2	Solenoid Valve
TB1	Terminal Block for Power Supply Wiring
TB2	Terminal Block for Communication Wiring
TB3	Terminal Block for Water Flow Switch and Water Pump Signals Wiring
TF	Transformer
THM7~23	Thermistor

2.11 Operation Temperature Range



Temperature

Indoor Unit Inlet Air Temperature	Cooling Operation Range		°F WB (°C WB)	59 (15) ~ 73 (23)
	Heating Operation Range		°F DB (°C DB)	59 (15) ~ 80 (27)
	Cooling & Heating Simultaneous Operation Range (Only for Heat Recovery)	Cooling Indoor Unit	°F WB (°C WB)	59 (15) ~ 73 (23)
		Heating Indoor Unit	°F DB (°C DB)	59 (15) ~ 80 (27)
Water Source Unit Entering Water Temperature			°F (°C)	50 (10) ~ 113 (45)

DB: Dry Bulb, WB: Wet Bulb

1. When operating the water source unit under the low cooling load conditions and in the low entering water temperature (approx. 59°F (15°C) or less), the indoor unit may Thermo-OFF to prevent the heat exchanger of the indoor unit from frost.
2. When operating the water source unit under the low heating load conditions and in the entering water temperature (approx. 77°F (25°C) or more), the water source unit may Thermo-OFF to protect the compressor from failure.
   In particular, when the heating operation indoor unit capacity ratio is low (approx. 10% or less) and the heating load condition is low (the indoor unit inlet temperature is approx. 75°F DB (24°C DB) or more), the indoor unit may not re-start heating operation due to protection for the compressor.
   If continuous operation in the low heating load conditions is necessary, design the entering water temperature not so high.

2.12 Combinations of Indoor Units and Water Source Units

Table 2.1 Indoor Unit Model List

Indoor Unit Model			Capacity (MBH)												
			6	8	12	15	18	24	27	30	36	48	54	60	72	96
Ducted	Ducted (High Static)	(H,Y)IDH_B21S					○	○		○	○	○			○	○
		(H,Y)IDH_B22S				○	○	○	○	○	○	○	○			
	Ducted (Medium Static)	(H,Y)IDM_B21S	○	○	○	○	○	○		○	○	○				
		(H,Y)IDM_B22S	○	○	○	○	○	○	○	○	○	○	○			
	Ducted (Slim)	(H,Y)IDS_B21S	○	○	○	○	○									
	Air Handler with DX-Kit	(H,Y)MAHP_B21S					○	○		○	○					
		(H,Y)MAHP_C21S									○	○		○		
		(H,Y)MAHP_D21S										○		○		
		(H,Y)MAHP_D22S												○		
Non-Ducted	Ceiling-Mounted 4-Way Cassette	(H,Y)IC4_B21S		○	○	○	○	○		○	○	○				
	Ceiling-Mounted 4-Way Cassette Mini	(H,Y)ICM_B21S		○	○	○	○									
	Ceiling-Mounted 2-Way Cassette	(H,Y)IC2_B21S					○	○								
	Ceiling-Mounted 1-Way Cassette	(H,Y)IC1_B21S	○	○	○	○										
	Wall-Mounted	TIWM_B21S	○	○	○	○	○	○		○						
	Ceiling Suspended	(H,Y)ICS_B21S				○		○		○	○					
	Floor Exposed	(H,Y)IFE_B21S	○	○	○	○										
	Floor Concealed	(H,Y)IFC_B21S	○	○	○	○										

○ : Available

The number of indoor units that can be connected to a water source unit is defined in Table 3.2:
Comply with the following conditions when installing the unit.
A maximum and minimum total capacity as opposed to the nominal water source unit capacity can be obtained through combination of indoor units.

Table 2.2 System Combination

Model: (H,Y)VWH(P,R)_B(3,4)2S

Water Source Unit Capacity (MBH)	Minimum Capacity at Individual Operation (MBH)	Maximum Number of Connectable I.U.	Recommended Number of Connected I.U.	Connectable Indoor Unit Capacity Ratio	
				Maximum	Minimum
72	6	13	8	130%	50%
96		16	8	130%	50%
120		23	8	130%	50%
144		26	10	130%	50%
168		29	12	130%	50%
192		33	14	130%	50%
216		33	14	130%	50%

NOTICE:

The connectable indoor unit capacity ratio can be calculated as follows:

Connectable Indoor Unit Capacity Ratio = Total Indoor Unit Capacity / Total Water Source Unit Capacity

In a system where all the indoor units operate simultaneously, the total indoor unit capacity should be less than the water source unit capacity. Otherwise, a decrease in operating performance and an increase in the operating limit can result in an overload.

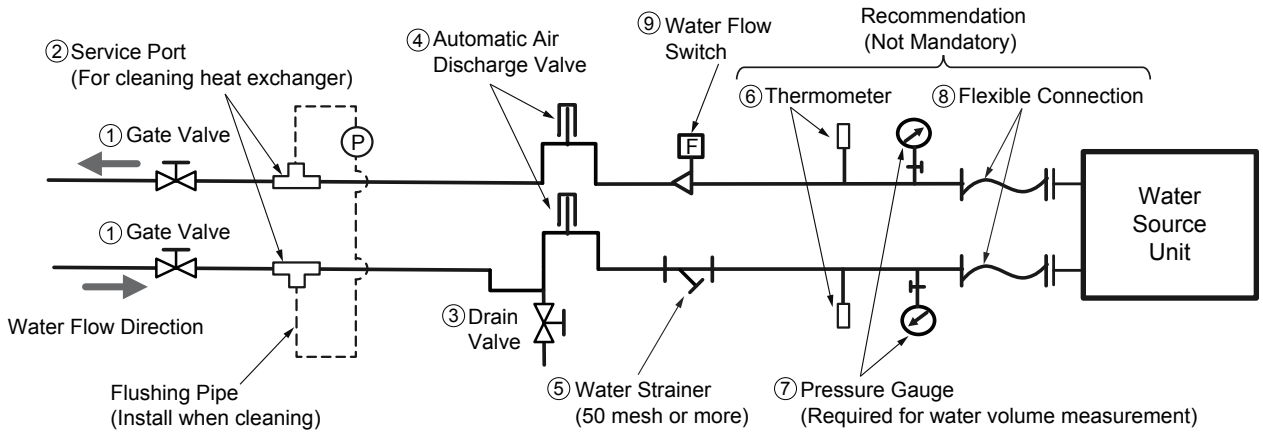
In a system where all the indoor units do not operate simultaneously, the total indoor unit capacity is available up to 130% of the water source unit capacity.

The air flow volume for indoor units of 6 and 8 MBH is set higher than that for indoor units of 12 MBH or more. Make sure to select appropriate indoor units for installation where a cold draft may occur during heating operation.

2.13 Water Piping Work

2.13.1 Piping Connection

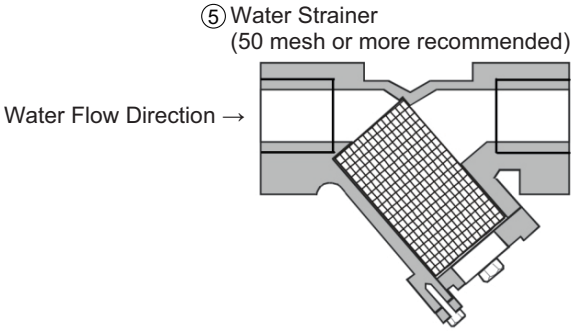
Example of basic water piping connection to the water source unit is shown below.



Basic Water Piping Connection

Perform the piping connection work for the water source unit while paying attention to the following.

- Make sure to select appropriate water pump (field-supplied) depending on water source unit model and number of units. Refer to Section 2.13.2 for water flow rate and pressure drop for each water source unit.
- Install ①gate valves at the inlet and outlet piping to isolate from other water circuit and allow service of the water source unit.
- It is recommended to install ②service ports to allow convenient chemical cleaning of plate heat exchanger.
- Equip ③drain valve and ④automatic air discharge valves on the water piping.
  The drain valve handle should be removed so that the valve can not be opened under normal circumstances.
  If this valve is opened during operation, water blow-off may occur and be a problem.
  Set the ③drain valve at lower points in water system, to discharge water in the plate heat exchanger and system thoroughly.
  Install ④automatic air discharge valves at the higher position where air is likely to collect and to discharge air in piping.
  If air remains inside the water piping then it may decrease the operating performance and cause corrosion.
- Provide a 50 mesh or more ⑤water strainer at the water inlet side of water piping within 3.3~6.6 ft. (approximately 1~2m) from the water source unit. Otherwise, damage to the plate heat exchanger may occur. In the plate heat exchanger, water flows through a narrow space between the plates.
  Therefore, there is a possibility that freezing or corrosion may occur if foreign particles or dust clog the flow of water between the plates. Also, install a cleanable water strainer at the portion close to the water inlet side of water pump.



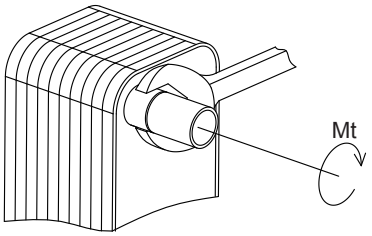
NOTE:

Be sure to install the water strainer horizontally on the water inlet side. In case the water flow downwards, vertical installation is allowed.

- It is recommended to install ⑥thermometer and ⑦pressure gauge at the water inlet and outlet side of water source unit for easy service.
- It is recommended to have ⑧flexible connections to the water inlet and outlet side of water piping, so that vibration is not transmitted and prevent piping crack.
- Provide ⑨water flow switch (field-supplied) at the water outlet side of water piping within 3.3~6.6 ft. (approximately 1~2m) from the water source unit to check the water flow. Refer to Section 2.13.3 for details.
- Connect water piping to water inlet and outlet of the water source unit. Be sure to check the position of connection piping. Do not connect inlet and outlet piping backwards. Tighten securely the connection of water piping and socket with tightening torque not exceeding the upper limit value in the following table.

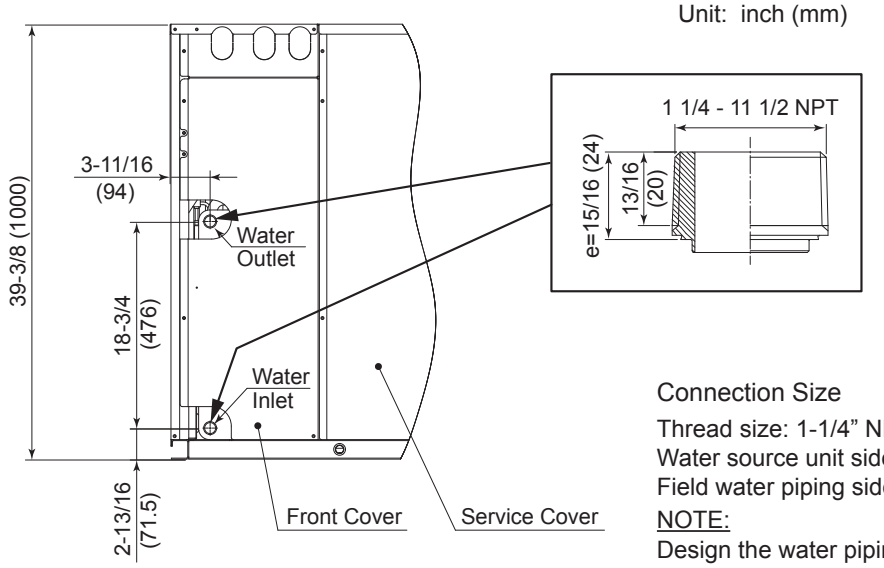
for Heat Exchanger Connection

Maximum Tightening Torque Mt [ft·lbs(N·m)]
177 (240)



Position of Piping Connection
The water piping connection is located in the front side of unit.

Unit: inch (mm)



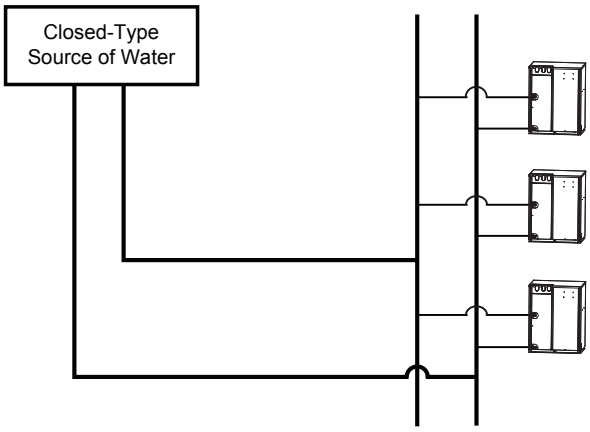
Connection Size

Thread size: 1-1/4” NPT (Threads per inch :11-1/2 pcs)
Water source unit side: Male thread (outside thread)
Field water piping side: Female thread (inside thread)

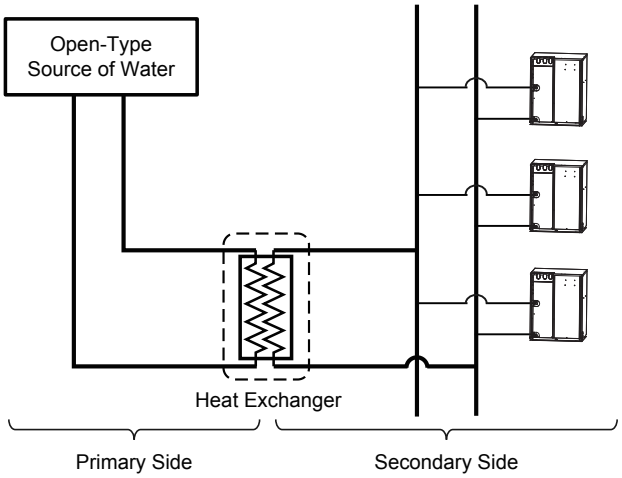
NOTE:
Design the water piping size with consideration for pump size and overall length of piping.

Water Piping Connection and Socket of Heat Exchanger

- Water pressure resistance of the water piping of this water source unit is 285 psi (1.96 MPa).
- Water piping size to the unit should not be less than that of pipe joint on the unit.
- Select the water piping according to local or national regulation.
- Before installation, flush all water piping thoroughly to keep no foreign particles from entering. Be careful not to flush any foreign particle into plate heat exchanger.
- Make sure the water circuit supply to the water source unit is a closed loop water circuit and water is not exposed to the atmosphere. In case open-type cooling tower is used, provide heat exchanger between the cooling tower and water source unit system piping. Make sure the water circuit supply to the water source unit is a closed loop water circuit. Otherwise, corrosion may occur.



Closed-Type Water Circuit



Open-Type Water Circuit with Heat Exchanger

- Sufficiently perform insulation to keep the water piping cool and to prevent sweating of the piping. Thermal loss may also occur.
- If the water is frozen, the plate heat exchanger of the water source unit may damaged. Prepare freeze protection while paying attention to the following.

Examples of freeze protection:

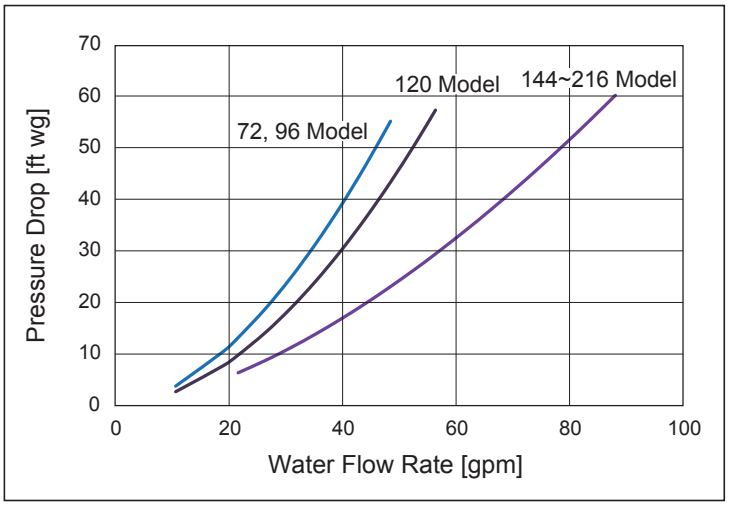
- Use heater or boiler to prevent water from freezing.
- Install water source unit in an environment with an ambient temperature above 35°F DB (1.7°C DB).
- When water piping temperature or water temperature is low, operate the water pump to prevent freezing while the water source unit is stopped.
- When the water source unit is not being used for long periods in low ambient conditions, completely drain the water from the water source system. Be sure to check and clean the water source unit in water system thoroughly before initial startup after a long stoppage.

2.13.2 Water Flow Rate and Pressure Drop

Water Flow Rate and Pressure Drop
Select the water pump (field-supplied) according to the following table.

Model		72	96	120	144	168	192	216
Rated Water Flow Rate [gpm (ℓ/m)]		15.1 (57)	20.3 (77)	25.4 (96)	36.5 (138)	44.1 (167)	51.0 (193)	56.0 (212)
Allowable Water Flow Rate [gpm (ℓ/m)]	Maximum	31 (120)	39 (150)	56 (214)	63 (241)	70 (268)	79 (301)	79 (301)
	Minimum	11 (40)	14 (50)	20 (72)	22 (81)	24 (90)	27 (101)	27 (101)

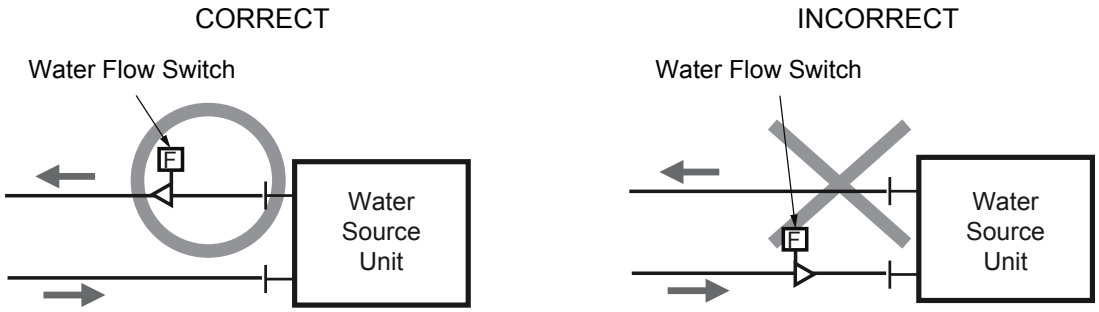
Relation of water flow rate and pressure drop of each water source unit model is shown in the chart below.



In case the water source unit operates above the rated water flow rate, the water pump power consumption is increased. It is recommended to operate below the rated water flow rate.

2.13.3 Water Flow Control

Water source unit is damaged if it is operated with no water circulating through the water piping.
It is necessary to provide the water flow switch (field-supplied) on water outlet side of water piping within 3.3~6.6 ft. (approximately 1~2m) from each water source unit to realize stop protection.
If water flow switch is OFF (open) while the water source unit is operating, “A2” alarm occurs.
Be sure the water flow switch is turned ON (close) in 240sec. or less after water source unit starts operation.
Water flow switch closes to verify water flow.



NOTICE:

- Select water flow switch (field-supplied) which output close signal when minimum flow rate is satisfied for each water source unit. Refer to the table at Section 2.13.2.
- Install water flow switch by following their installation procedure.
- If water flow switch is NOT properly installed (non-detectable), plate heat exchanger may burst due to water freeze or compressor may damage due to increased pressure. On the other hand, if the water flow switch is detected easily, then the water source unit is forced to stop frequently.
- Water flow switch is not required to detect overflow rate.
  However overflow rate may cause refrigerant cycle trouble.

2.13.4 Water Quality Requirements

⚠CAUTION

- **Water source unit must be used with closed type cooling tower. Open type cooling tower will face poor quality-water, corrosion and sediment. Be sure to check the water pipeline construction, water quality monitoring, and water treatment.**
- **Make sure to use anti-corrosion agent or deterioration treatment agent when the steel piping is not protected by protection layers. Corrosion may occur when the water temperature is above 104°F(40°C).**
- **Do not use once-through cooling water. Otherwise, corrosion may occur.**
- **Make sure that any water scales inhibitor or water treatment doesn't damage stainless steel or copper piping associated with the local water treatment facility.**
- **When treated water is used, it rarely causes scale deposits or other damage to equipment. However, well water or river water does in most cases contain suspended solid matter, organic matter, and scale in great quantities.**
  Before using such water, filter the water or apply a softening treatment with chemicals. It is also necessary to analyze the quality of water by checking pH, electrical conductivity, ammonia ion content, sulfur content, and others, and to utilize treated water only if problem is encountered through these checks.

For circulating water and make-up water, used in a closed-type water circuit such as a closed-type cooling tower, follow the standards in the table below.

Table 6.1 Water Quality Requirement (Reference)

Items Based on Guideline of Water Quality for Refrigeration and Air Conditioning Equipment (JRA GL02E-1994)			Circulating Water 68~140°F (20~60°C)	Make-up Water	Tendency	
					Corrosion	Scale
Standard Items	pH (77°F (25°C))		7.0~8.0		○	○
	Electrical conductivity (77°F (25°C))	[mS/ft (mS/m)]	< 9.1 (30)		○	○
	Chloride ions	[mg Cl^-/ℓ]	< 50		○	
	Sulfate ions	[mg SO_4^{2-}/ℓ]	< 50		○	
	Acid consumption (pH 4.8)	[mg $CaCO_3$/ℓ]	< 50			○
	Total hardness	[mg $CaCO_3$/ℓ]	< 70			○
	Calcium hardness	[mg $CaCO_3$/ℓ]	< 50			○
	Ionic silica	[mg SiO_2/ℓ]	< 30			○
Reference Items	Iron	[mg Fe/ℓ]	< 1.0	< 0.3	○	○
	Copper	[mg Cu/ℓ]	< 1.0	< 0.1	○	
	Sulfate ions	[mg S^{2-}/ℓ]	—		○	
	Ammonium ions	[mg NH_4^+/ℓ]	< 0.3	< 0.1	○	
	Residual chlorine	[mg Cl/ℓ]	< 0.25	< 0.3	○	
	Free carbon dioxide	[mg CO_2/ℓ]	< 0.4	< 4.0	○	
	Stability Index		—		○	○

NOTE:
- These items represent typical causes of corrosion and scales.
  The circle marks "○" in the columns "Tendency" indicate a tendency for corrosion or scales to develop.
- Do not use antifreeze solution.

2.13.5 Maintenance of Water Circuit

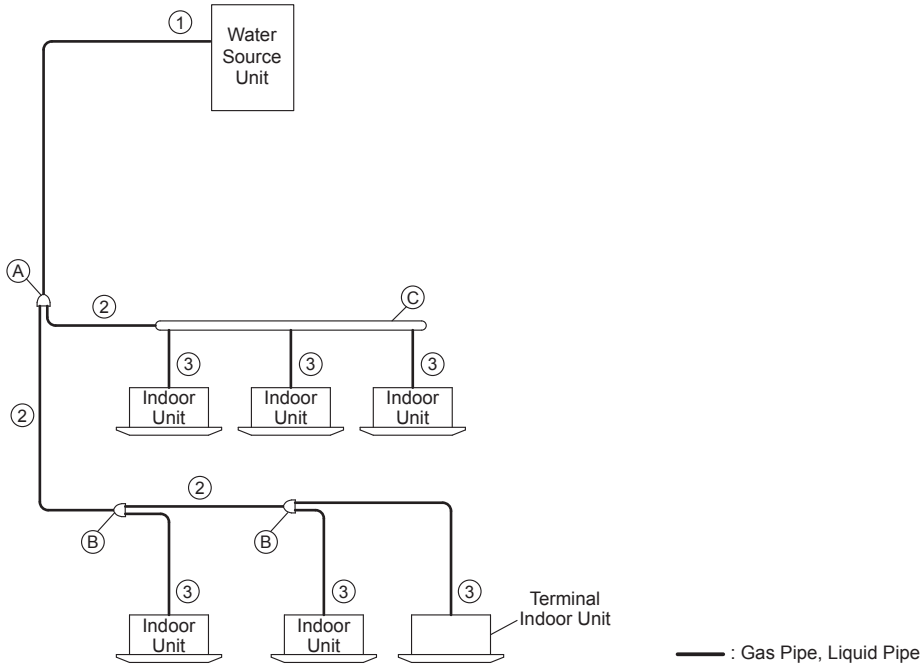
If the water pressure difference at the water inlet and outlet sides of the plate heat exchanger changes compared to during Test Run, the water strainer may be clogged.
Be sure to regularly clean the water strainer according to the clogging degree and check the water flow rate (or pressure drop).

- If clogging in the plate heat exchanger is serious insufficient cooling performance or freezing in the heat exchanger takes place. It is strongly recommended that the plate heat exchanger be cleaned at the same time when the water strainer is cleaned.
- In case of removing the scale formed on the plate heat exchanger, it is recommended to use 5% diluted solutions that contains formic acid, citric acid, oxalic acid, acetic acid or phosphoric acid.
  Do not use corrosive solutions with hydrochloric acid or nitrate.
- Circulate the cleaning solution of 122~144°F (50~62°C) by using a water pump for 2 to 5 hours.
  Cleaning time depends on the change of the dirtiness (color) of cleaning solution.
  After circulating the cleaning solution, remove the solution from the plate heat exchanger.
  Then circulate the neutralization solution such as 1~2% sodium hydroxide (NaOH) or sodium bicarbonate ($NaHCO_3$) for 15~20 minutes.
- When using any cleaning detergent sold in the market, make sure that it does not cause corrosion to stainless steel and copper. For details of cleaning method, contact the manufacturer of cleaning detergent.
- Cleaning of plate heat exchangers must be performed by specialists. Contact your contractor or distributor.
- After cleaning is completed, make sure that the unit operates normally.
  When the freeze protection is activated during operation, make sure to remove the cause before restarting the operation. In case the freezing is repeated, the heat exchanger becomes damaged and refrigerant leakage or water entering the refrigerant pipe may occur.
- When the water pressure difference during operation is over the allowable range, make sure to stop the water source unit and remove the cause.

2.14 Refrigerant Piping Work

2.14.1 Piping Size and Multi-Kit Selection

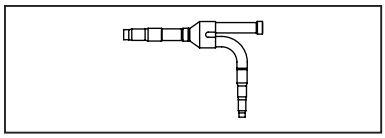
2.14.1.1 Heat Pump System



Multi-Kit (Optional Parts)

Line Branch

Branch using Multi-Kit (MW Model)



If Ⓑ "Multi-Kit after First Branch" is larger than Ⓐ "Multi-Kit for First Branch", use the same model as Ⓐ "Multi-Kit for First Branch".

Ⓐ Multi-Kit for First Branch

Water Source Unit Capacity (MBH)	Model
72 - 96	MW-NP282A3
120 - 144	MW-NP452A3
168	MW-NP692A3
192 - 216	MW-NP902A3

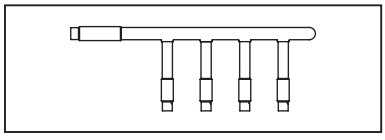
NOTE:
Header branch can also be used instead of the multi-kit as first branch.

Ⓑ Multi-Kit after First Branch

Total Indoor Unit Capacity (MBH)	Model
≤ 95	MW-NP282A3
96 - 143	MW-NP452A3
144 - 215	MW-NP692A3
≥ 216	MW-NP902A3

Header Branch

Branch using Multi-Kit (MH Model)



Ⓒ Header Branch

Total Indoor Unit Capacity (MBH)	No. of Header Branches	Model
36 - 60	4	MH-NP224A
36 - 96	8	MH-NP288A

Refer to the figure at the beginning of Section 2.14.1.1.

Piping Size Unit: inch (mm)

① Main Pipe Diameter
(Water Source Unit to First Branch)

Model: (H,Y)VWHP_B(3,4)2S

Water Source Unit Capacity (MBH)	Gas	Liquid	
		Equivalent Piping Length between Water Source Unit and Ⓐ "Multi-Kit for First Branch"	
		< 263 ft (80m)	≥ 263 ft (80m) *1
72	3/4 (19.05)	3/8 (9.52)	1/2 (12.7)
96	7/8 (22.2)	3/8 (9.52)	1/2 (12.7)
120	7/8 (22.2)	1/2 (12.7)	5/8 (15.88)
144	1-1/8 (28.58)	1/2 (12.7)	5/8 (15.88)
168 - 216	1-1/8 (28.58)	5/8 (15.88)	3/4 (19.05)

*1 In some cases, it is required to prepare the reducer (field-supplied).

② Diameter of Pipe after First Branch

If the size of ② "Diameter of Pipe after First Branch" is larger than the size of ① "Main Pipe Diameter", adjust the size of ② "Diameter of Pipe after First Branch" to the same size as ① "Main Pipe Diameter".

Total Indoor Unit Capacity (MBH)	Piping Length between First Branch and Indoor Unit	
	Gas	Liquid
≤ 47	5/8 (15.88)	3/8 (9.52)
48 - 71	3/4 (19.05)	3/8 (9.52)
72 - 95	7/8 (22.2)	3/8 (9.52)
96 - 119	7/8 (22.2)	1/2 (12.7)
120 - 143	1-1/8 (28.58)	1/2 (12.7)
144 - 215	1-1/8 (28.58)	5/8 (15.88)
216 - 299	1-3/8 (34.93)	3/4 (19.05)

③ Diameter of Pipe Connected to Indoor Unit

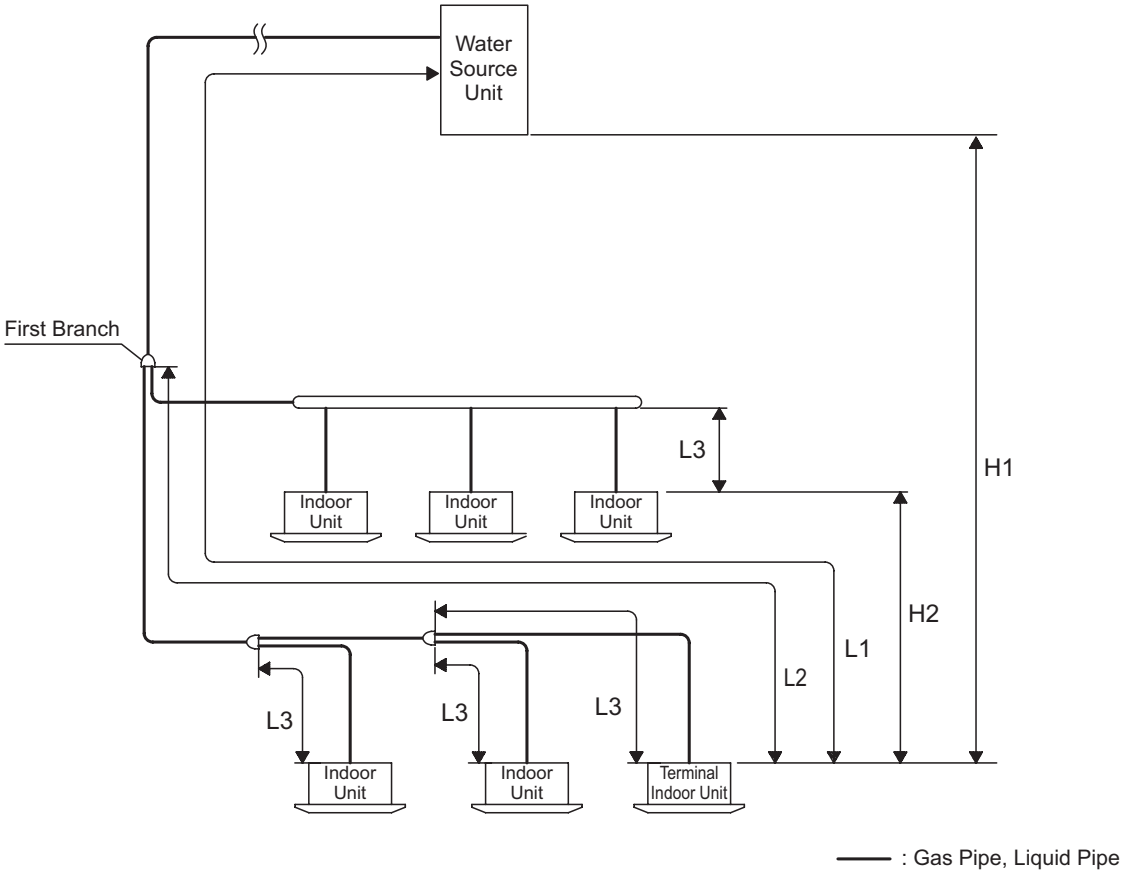
Be sure the pipe diameter is the same as the indoor unit pipe connection size.

Indoor Unit Capacity (MBH)	Gas	Liquid
6 - 15	1/2 (12.7)	1/4 (6.35) *2
18 - 54	5/8 (15.88)	3/8 (9.52)
60 - 72	3/4 (19.05)	3/8 (9.52)
96	7/8 (22.2)	3/8 (9.52)

*2 When liquid piping length is longer than 49 ft (15m), use 3/8 inch (9.52mm) diameter pipe to connect to the indoor unit.

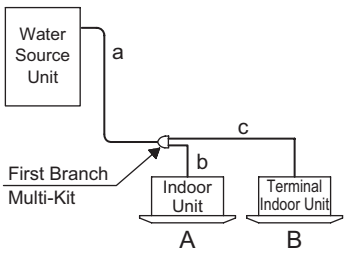
- Piping Work Conditions

Comply with the following when installing the unit.



Item	Parameter		Details
Total Piping Length	Ex1	a+b+c	The total amount of all piping actual length.
Maximum Piping Length	Ex1	a+c	The actual piping length between the stop valve of the water source unit and the terminal indoor unit.
Piping Length	-		The actual length of pipe that takes no account for equivalent lengths for pressure drops of elbows.
Equivalent Piping Length	-		The combination of the straight pipe length plus the equivalent length of elbows and other pressure drop calculations.

Example 1)
If a Line Branch Including Main Branch



ft (m)

Item		Parameter	Allowable Piping Length
Total Piping Length		-	984 (300)
Maximum Piping Length	Actual Length	L1	393 (120)
	Equivalent Length		459 (140)
Maximum Piping Length between Multi-kit of 1st Branch and Terminal Indoor Unit		L2	131 (40)
Maximum Piping Length between Each Multi-kit and Each Indoor Unit	Maximum	L3	98 (30)
	Recommend		49 (15)
Height Difference between Water Source Units and Indoor Units	W.S. is Higher	H1	164 (50)
	W.S. is Lower		131 (40)
Height Difference between Indoor Units		H2	49 (15)

NOTICE

Comply with the following conditions when installing the unit.

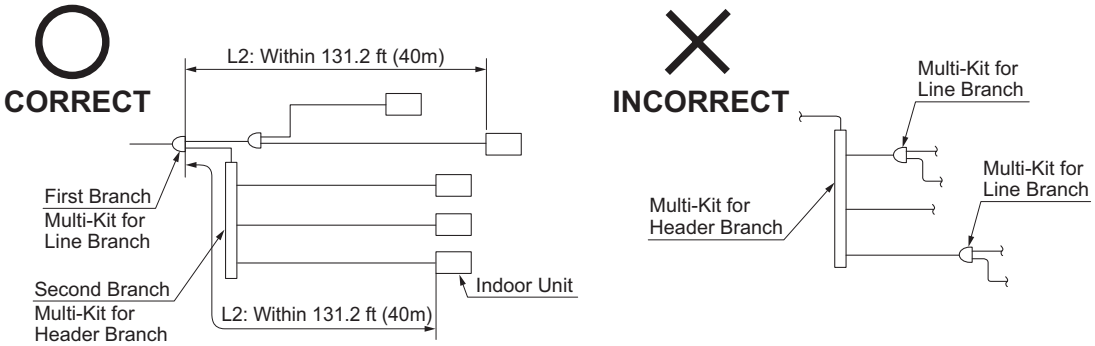
1. Allowable total piping length may not exceed 984 ft (300m) because of the limitation of maximum additional refrigerant amount as described in the following table. Make sure that the additional refrigerant volume does not exceed the maximum additional refrigerant amount as shown below.

Water Source Unit Capacity (MBH)	72, 96	120	144, 168	192, 216
Maximum Additional Refrigerant Charge: lbs (kg)	61.7 (28.0)	83.8 (38.0)	88.2 (40.0)	99.2 (45.0)

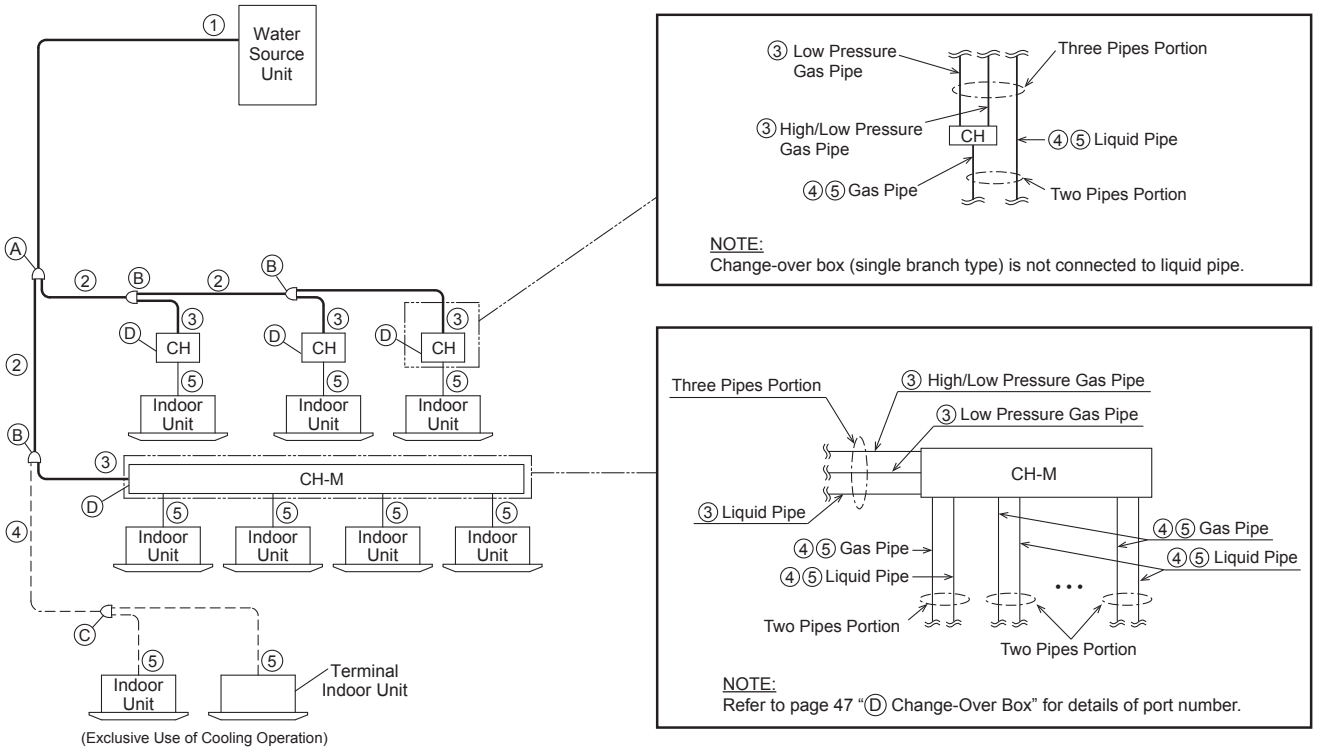
2. If the piping length (L3) between each multi-kit and indoor unit is considerably longer than other indoor unit, refrigerant may not flow well and may lessen the unit's performance compared to other models. (Recommended Piping Length: Within 49 ft (15m))
3. When completing on-site piping, install bent piping or horizontal loop piping to absorb any expansion or contraction due to changing temperatures.

- Piping Branch Restriction

Header branch can be used with a line branch.
Header branch can also be used after the second branch. Do not connect a line branch to a header branch.

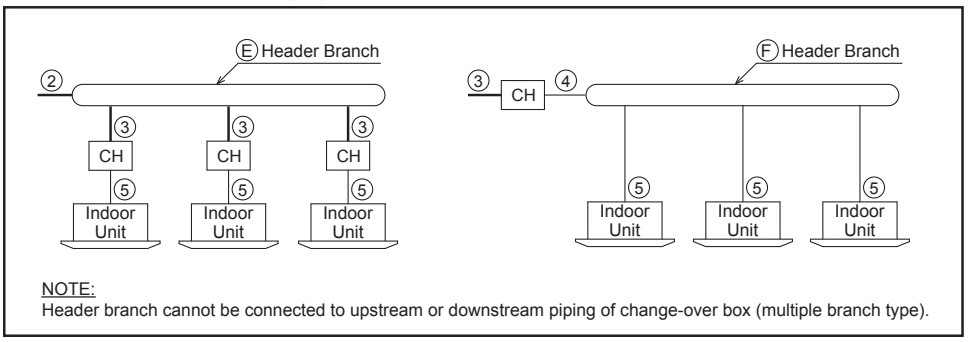


2.14.1.2 Heat Recovery System



—— : High/Low Pressure Gas Pipe, Low Pressure Gas Pipe, Liquid Pipe
—— : Gas Pipe, Liquid Pipe
- - - - - : Low Pressure Gas Pipe, Liquid Pipe
CH : Change-Over Box (Single Branch Type)
CH-M : Change-Over Box (Multiple Branch Type)

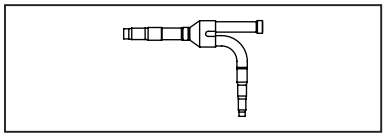
If header branch is used instead of Ⓑ Ⓒ multi-kit.



Multi-Kit (Optional Parts)

Line Branch

Branch using Multi-Kit (MW Model)



If Ⓑ "Multi-Kit after First Branch" is larger than Ⓐ "Multi-Kit for First Branch", use the same model as Ⓐ "Multi-Kit for First Branch".

Ⓐ Multi-Kit for First Branch

Water Source Unit Capacity (MBH)	Model
72 - 96	MW-NP282X3
120 - 144	MW-NP452X3
168	MW-NP562X3
192 - 216	MW-NP902X3

NOTE:
The change-over box (multiple branch type) or header branch can also be used instead of the multi-kit as first branch.

Ⓑ Multi-Kit after First Branch (Three Pipes Portion)

Total Indoor Unit Capacity (MBH)	Model
≤ 47	MW-NP142X3
48 - 95	MW-NP282X3
96 - 143	MW-NP452X3
144 - 215	MW-NP562X3
≥ 216	MW-NP902X3

Ⓒ Multi-Kit after First Branch (Two Pipes Portion)

Total Indoor Unit Capacity (MBH)	Model
≤ 95	MW-NP282A3
96 - 143	MW-NP452A3
144 - 215	MW-NP692A3
≥ 216	MW-NP902A3

Ⓓ Change-Over Box

● Single Unit for 1 Port

Model	Indoor Unit Side Port Number	Indoor Unit Maximum Connection Capacity	Indoor Unit Maximum Connection Capacity for 1 Port
COBS048B22S	1	≤ 54	≤ 54
COBS096B22S	1	≤ 96	≤ 96
COB04M132B22S	4	≤ 132	≤ 96 *1
COB08M264B22S	8	≤ 264	≤ 96 *1
COB12M264B22S	12	≤ 264	≤ 96 *1

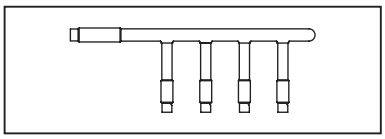
*1 Up to two 60, 72 or 96 type indoor units can be connected to the change-over box within the “Indoor Unit Maximum Connection Capacity” shown in above table.
Make sure to increase the pipe connection size by using the appropriate accessory pipe.

● Multiple Units for 1 Port

Model	Indoor Unit Side Port Number	Maximum Number of Connected Indoor Units for 1 Port	Indoor Unit Maximum Connection Capacity	Indoor Unit Maximum Connection Capacity for 1 Port
COBS048B22S	1	7	≤ 41	≤ 41
COBS096B22S	1	8	≤ 71	≤ 71
COB04M132B22S	4	6	≤ 114	≤ 41
COB08M264B22S	8	6	≤ 216	≤ 41
COB12M264B22S	12	6	≤ 216	≤ 41

Header Branch

Branch using Multi-Kit (MH Model)



Ⓔ for Three Pipes Portion

Total Indoor Unit Capacity (MBH)	No. of Header Branches	Model
36 - 72	8	MH-NP288X

Ⓕ for Two Pipes Portion

Total Indoor Unit Capacity (MBH)	No. of Header Branches	Model
36 - 60	4	MH-NP224A
36 - 72	8	MH-NP288A

Refer to the figure at the beginning of Section 2.14.1.2.

Piping Size Unit: inch (mm)

① Main Pipe Diameter
(Water Source Unit to First Branch)

Model: (H,Y)VWHR_B(3,4)2S

Water Source Unit Capacity (MBH)	Low Pressure Gas	High/Low Pressure Gas	Liquid	
			Equivalent Piping Length between Water Source Unit and Ⓐ "Multi-Kit for First Branch"	
			< 263 ft (80m)	≥ 263 ft (80m) *2
72	3/4 (19.05)	5/8 (15.88)	3/8 (9.52)	1/2 (12.7)
96	7/8 (22.2)	3/4 (19.05)	3/8 (9.52)	1/2 (12.7)
120	7/8 (22.2)	3/4 (19.05)	1/2 (12.7)	5/8 (15.88)
144	1-1/8 (28.58)	7/8 (22.2)	1/2 (12.7)	5/8 (15.88)
168 - 216	1-1/8 (28.58)	7/8 (22.2)	5/8 (15.88)	3/4 (19.05)

*2 In some cases, it is required to prepare the reducer (field-supplied).

② Diameter of Pipe after First Branch *3

Total Indoor Unit Capacity (MBH)	Low Pressure Gas	High/Low Pressure Gas	Liquid
≤ 47	5/8 (15.88)	1/2 (12.7)	3/8 (9.52)
48 - 71	3/4 (19.05)	5/8 (15.88)	3/8 (9.52)
72 - 95	7/8 (22.2)	3/4 (19.05)	3/8 (9.52)
96 - 119	7/8 (22.2)	3/4 (19.05)	1/2 (12.7)
120 - 143	1-1/8 (28.58)	7/8 (22.2)	1/2 (12.7)
144 - 215	1-1/8 (28.58)	7/8 (22.2)	5/8 (15.88)
216 - 299	1-3/8 (34.93)	1-1/8 (28.58)	3/4 (19.05)

*3 If the size of ② "Diameter of Pipe after First Branch" is larger than the size of ① "Main Pipe Diameter", adjust the size of ② "Diameter of Pipe after First Branch" to the same size as ① "Main Pipe Diameter".

③ Diameter of Pipe between Change-Over Box and Multi-Kit

For Change-Over Box *4

Change-Over Box Model	Total Indoor Unit Capacity (MBH)	Low Pressure Gas	High/Low Pressure Gas	Liquid *5
COBS048/096B22S COB04M132B22S COB08/12M264B22S	≤ 47	5/8 (15.88)	1/2 (12.7)	3/8 (9.52)
	48 - 71	3/4 (19.05)	5/8 (15.88)	3/8 (9.52)
	72 - 95	7/8 (22.2)	3/4 (19.05)	3/8 (9.52)
	96 - 119	7/8 (22.2)	3/4 (19.05)	1/2 (12.7)
	120 - 143	1-1/8 (28.58)	7/8 (22.2)	1/2 (12.7)
	144 - 215	1-1/8 (28.58)	7/8 (22.2)	5/8 (15.88)
	216 - 264	1-3/8 (34.93)	1-1/8 (28.58)	3/4 (19.05)

*4 If the size of ③ "Diameter of Pipe between Change-Over Box and Multi-Kit" is larger than the size of ① "Main Pipe Diameter", adjust the size of ③ "Diameter of Pipe between Change-Over Box and Multi-Kit" to the same size as ① "Main Pipe Diameter"

*5 Change-Over Box (COBS048/096B22S) is not connected to liquid pipe.

Piping Size Unit: inch (mm)

④ Diameter of Pipe (Two Pipes Portion)

Total Indoor Unit Capacity (MBH)	Gas *6	Liquid
≤ 47	5/8 (15.88)	3/8 (9.52)
48 - 71	3/4 (19.05)	3/8 (9.52)
72 - 95	7/8 (22.2)	3/8 (9.52)
96 - 119	7/8 (22.2)	1/2 (12.7)
120 - 143	1-1/8 (28.58)	1/2 (12.7)
144 - 215	1-1/8 (28.58)	5/8 (15.88)
216 - 299	1-3/8 (34.93)	3/4 (19.05)

*6 For the exclusive use of cooling operation, connect the low pressure gas pipe to the gas pipe of line branch or header branch for two pipes portion.

⑤ Diameter of Pipe Connected to Indoor Unit (Two Pipes Portion)

Be sure the pipe diameter is the same as the indoor unit pipe connection size.

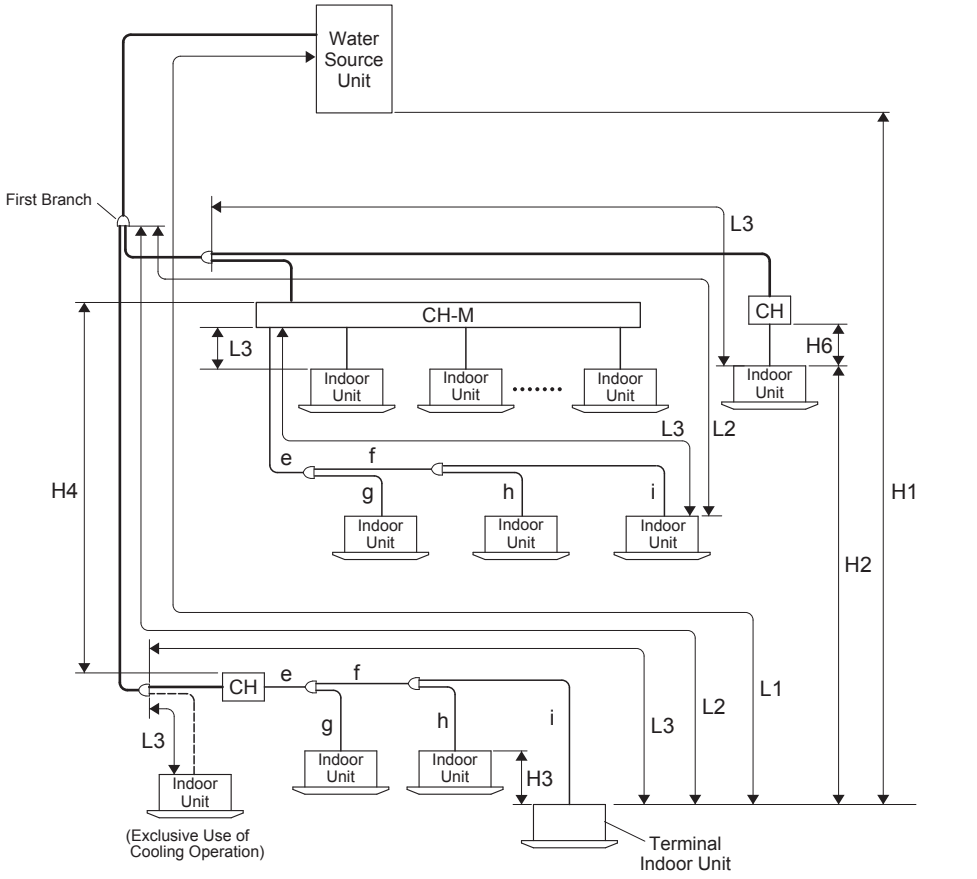
Indoor Unit Capacity (MBH)	Gas *7	Liquid
6 - 15	1/2 (12.7)	1/4 (6.35) *8
18 - 54	5/8 (15.88)	3/8 (9.52)
60 - 72	3/4 (19.05)	3/8 (9.52)
96	7/8 (22.2)	3/8 (9.52)

*7 For the exclusive use of cooling operation, connect the low pressure gas pipe to the gas pipe of the indoor unit.

*8 When liquid piping length is longer than 49 ft (15m), use 3/8 inch (9.52mm) diameter piping, to connect to the indoor unit (two pipes portion).

- Piping Work Conditions

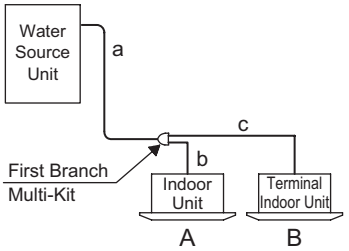
Comply with the following when installing the unit.



——: High/Low Pressure Gas Pipe, Low Pressure Gas Pipe, Liquid Pipe
——: Gas Pipe, Liquid Pipe
- - - - -: Low Pressure Gas Pipe, Liquid Pipe
CH : Change-Over Box (Single Branch Type)
CH-M : Change-Over Box (Multiple Branch Type)

Item	Parameter		Details
Total Piping Length	Ex1	a+b+c	The total amount of all piping actual length.
Maximum Piping Length	Ex1	a+c	The actual piping length between the stop valve of the water source unit and the terminal indoor unit.
Piping Length	-		The actual length of pipe that takes no account for equivalent lengths for pressure drops of elbows.
Equivalent Piping Length	-		The combination of the straight pipe length plus the equivalent length of elbows and other pressure drop calculations.

Example 1)
If a Line Branch Including Main Branch



ft (m)

Item		Parameter	Allowable Piping Length
Total Piping Length		-	984 (300)
Maximum Piping Length	Actual Length	L1	393 (120)
	Equivalent Length		459 (140)
Maximum Piping Length between Multi-kit of 1st Branch and Each Indoor Unit		L2	131 (40)
Maximum Piping Length between Each Multi-kit or Change-Over Box (Multiple Branch Type) and Each Indoor Unit	Maximum	L3 [5]	98 (30)
	Recommend		49 (15)
Total Piping Length between Change-Over Box and Each Indoor Unit per Port		e+f+g+h+i	131 (40)
Height Difference between Water Source Units and Indoor Units	W.S. is Higher	H1	164 (50)
	W.S. is Lower		131 (40)
Height Difference between Indoor Units		H2	49 (15)
Height Difference between Indoor Units Connected to Same Port of Change-Over Box		H3	13 (4)
Height Difference between Change-Over Box		H4	49 (15)
Height Difference between Change-Over Box and Indoor Unit		H6	49 (15)

NOTICE

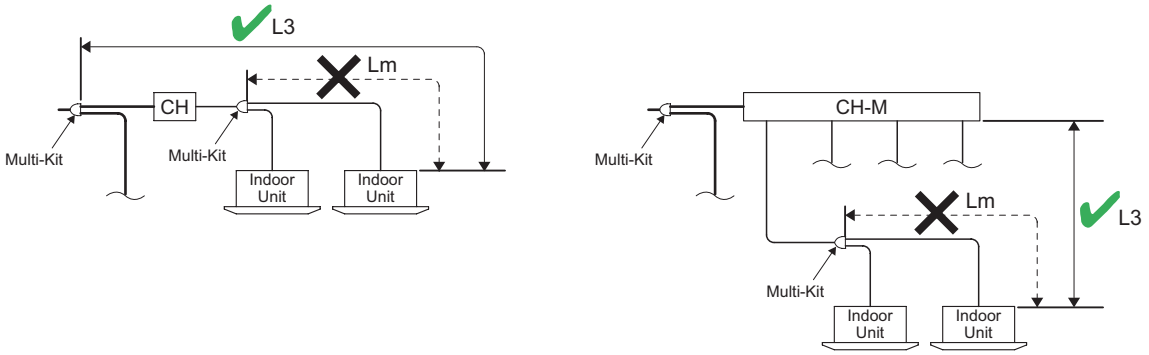
Comply with the following conditions when installing the unit.

1. If an indoor unit is to be used for cooling only operation, connect the low pressure gas line and liquid line directly to the unit without using a change-over box. Be sure the total capacity of the cooling only unit(s) is less than 50% of the total indoor unit capacity.
2. Allowable total piping length may not exceed 984 ft (300m) because of the limitation of maximum additional refrigerant amount as described in the following table. Make sure that the additional refrigerant volume does not exceed the maximum additional refrigerant amount as shown below.

Water Source Unit Capacity (MBH)	72, 96	120	144, 168	192, 216
Maximum Additional Refrigerant Charge: lbs (kg)	61.7 (28.0)	83.8 (38.0)	88.2 (40.0)	99.2 (45.0)

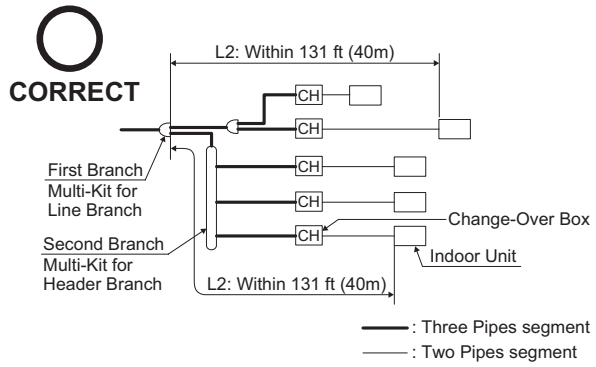
3. If the piping length (L3) between each multi-kit and indoor unit is considerably longer than other indoor unit, refrigerant may not flow well and may lessen the unit's performance compared to other models. (Recommended Piping Length: Within 49 ft (15m))
4. When completing on-site piping, install bent piping or horizontal loop piping to absorb any expansion or contraction due to changing temperatures.
5. The piping length calculation is not included in the multi-kit between change-over box and indoor unit(s). (Lm in following examples is NOT L3.)

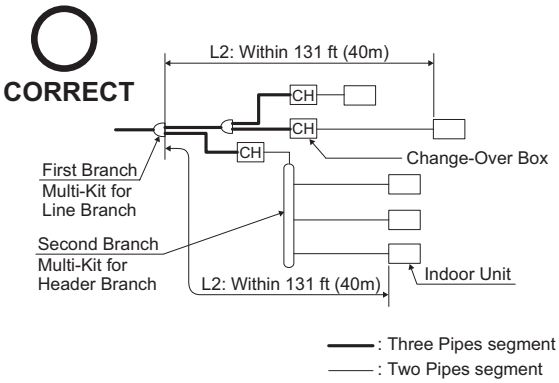
Example

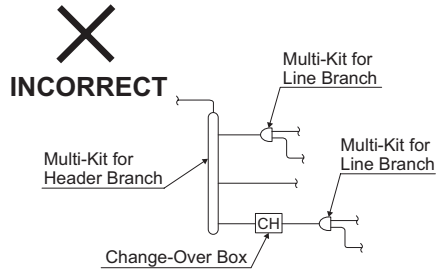


- Piping Branch Restriction

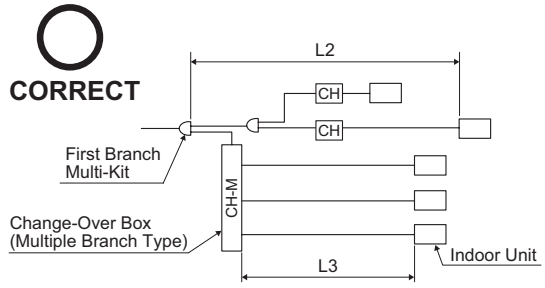
Header branch can be used with a line branch at the three pipes portion and two pipes portion.
Header branch can also be used after the second branch. Do not connect a line branch to a header branch.

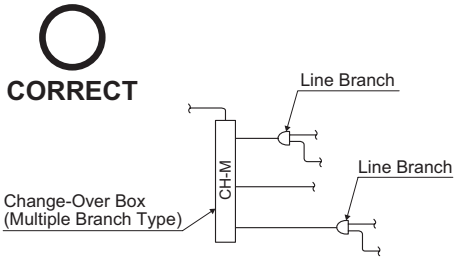




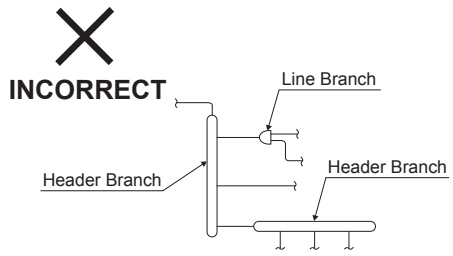


In case of the change-over box (multiple branch type) is connected, the following restrictions apply.

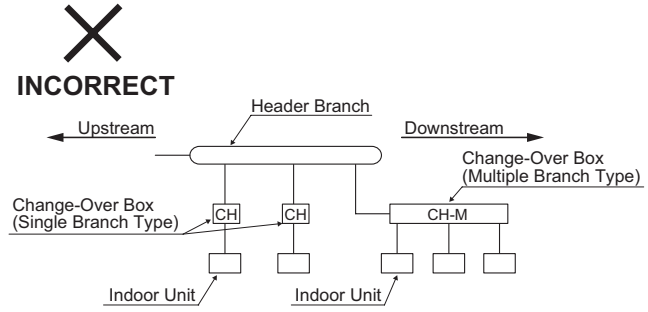


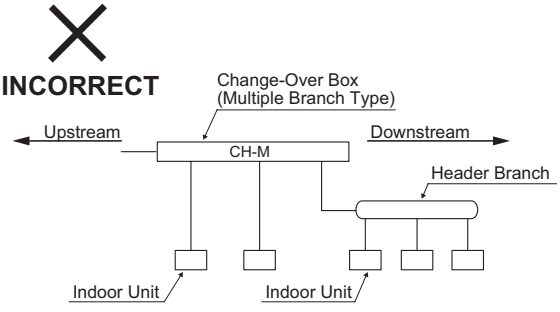


Header branch can not connect to another header branch.



Header branch cannot be connected to upstream or downstream piping of change-over box (multiple branch type).





2.14.2 Interchangeability between Generation 1 and 2 Change-Over Boxes

- Generation 2 change-over box is compatible with the generation 2 water source unit.

Determining Propriety of Connection between
Change-Over Box and VRF Water Source Unit (Heat Recovery)

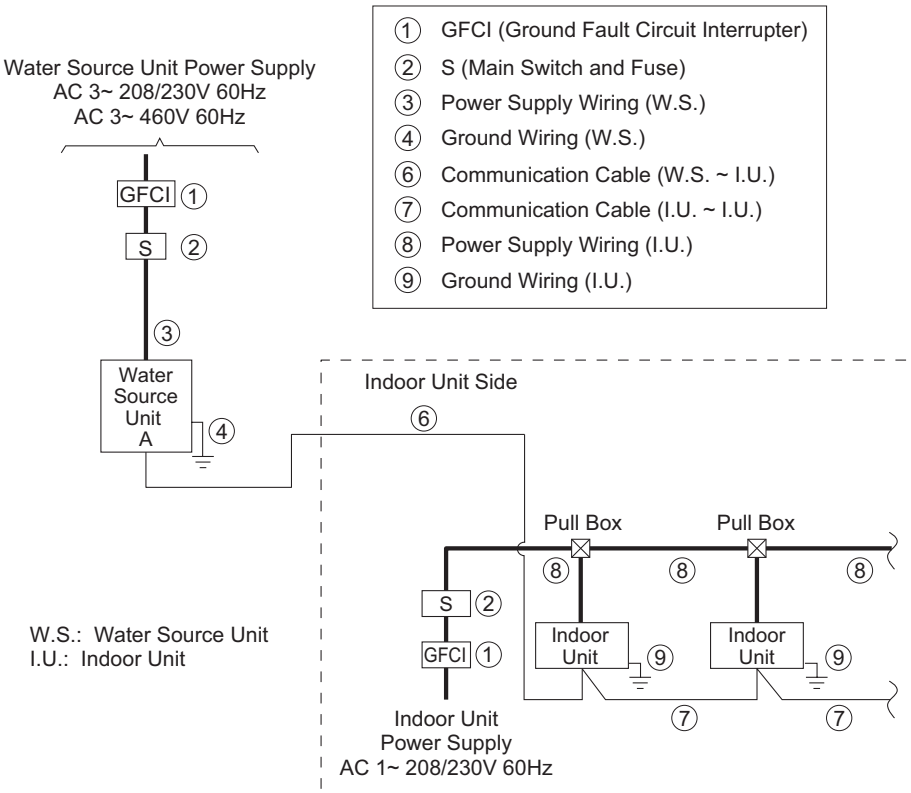
Model of Change-Over Box and VRF Water Source Unit			Change-Over Box			
			Generation 1		Generation 2	
			Single Branch Type	Multiple Branch Type	Single Branch Type	Multiple Branch Type
			COBS048B21S COBS096B21S	-	COBS048B22S COBS096B22S	COB04M132B22S COB08M264B22S COB12M264B22S
VRF Water Source Unit (Heat Recovery)	Generation 2 (This Manual)	208/230V Type	(H,Y)VWHR072B32S (H,Y)VWHR096B32S (H,Y)VWHR120B32S (H,Y)VWHR144B32S (H,Y)VWHR168B32S (H,Y)VWHR192B32S (H,Y)VWHR216B32S	✕ Not Available		○ Available
		460V Type	(H,Y)VWHR072B42S (H,Y)VWHR096B42S (H,Y)VWHR120B42S (H,Y)VWHR144B42S (H,Y)VWHR168B42S (H,Y)VWHR192B42S (H,Y)VWHR216B42S			

2.15 Electrical Wiring Connection

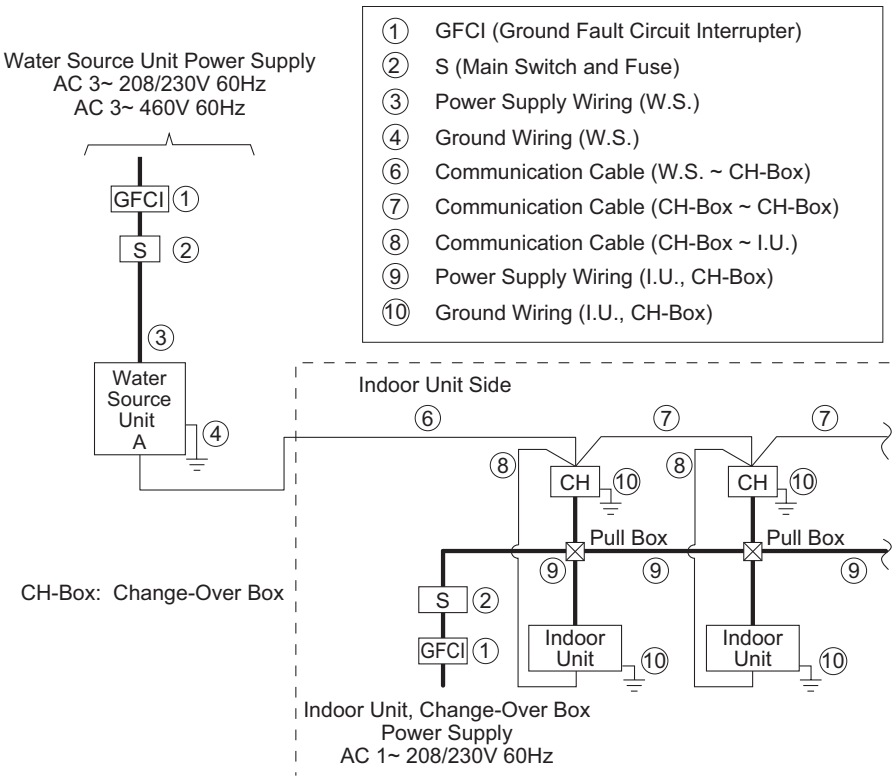
2.15.1 Power Supply Wiring

Supply power supplies to each water source unit and indoor unit group respectively.
This method is a basic principle of power supply wiring.

Heat Pump System



Heat Recovery System



2.15.2 Electrical Characteristics

Note the following when selecting wiring:

- Use the charts below to select appropriate sized breakers / fuses / overcurrent protection switches and wiring in accordance with local codes.
- Ensure communication cable is a minimum of AWG18 (0.82mm^2), 2-Conductor, Stranded Copper. Shielded cable must be considered for applications and routing in areas of high EMI and other sources of potentially excessive electrical noise to reduce the potential for communication errors. When shielded cable is applied, secure properly and terminate cable shield as required per Johnson Controls guidelines. Plenum and riser ratings for communication cables must be considered per application and local code requirements.

Table 2.3 Electrical Characteristics and Recommended Wiring Size

208/230V

Model	Water Source Unit							Inverter 1	Inverter 2	Fan Motor 1
	Hz (Hz)	Voltage (V)	Max. (V)	Min. (V)	MCA (A)	MOP (A)	Max. Fuse (A)	MOC (A)	MOC (A)	FRA (A)
(H,Y)VWH(P,R)072B32S	60	208/230	253	188	20/18	30/30	30/30	15.4/14.0	-	0.08
(H,Y)VWH(P,R)096B32S	60	208/230	253	188	32/29	50/45	50/45	25.0/22.7	-	0.08
(H,Y)VWH(P,R)120B32S	60	208/230	253	188	38/34	60/50	60/50	29.8/27.0	-	0.08
(H,Y)VWH(P,R)144B32S	60	208/230	253	188	37/34	50/45	50/45	16.4/14.8	16.4/14.8	0.08
(H,Y)VWH(P,R)168B32S	60	208/230	253	188	41/37	50/50	50/50	18.0/16.4	18.0/16.4	0.08
(H,Y)VWH(P,R)192B32S	60	208/230	253	188	55/50	70/60	70/60	24.3/22.0	24.3/22.0	0.08
(H,Y)VWH(P,R)216B32S	60	208/230	253	188	71/64	90/80	90/80	31.2/28.3	31.2/28.3	0.08

Model	INV Comp. 1	INV Comp. 2	Fan Motor 1	Wiring Size		
	LRA (A)	LRA (A)	Output (kW)	Power Supply Wiring (AWG)	Ground Wiring (AWG)	Communication Cable (AWG)
(H,Y)VWH(P,R)072B32S	54	-	0.016	12/14	12/14	18
(H,Y)VWH(P,R)096B32S	54	-	0.016	8/10	8/10	18
(H,Y)VWH(P,R)120B32S	50	-	0.016	8/8	8/8	18
(H,Y)VWH(P,R)144B32S	54	54	0.016	8/8	8/8	18
(H,Y)VWH(P,R)168B32S	54	54	0.016	6/8	6/8	18
(H,Y)VWH(P,R)192B32S	54	54	0.016	6/6	6/6	18
(H,Y)VWH(P,R)216B32S	54	54	0.016	2/4	2/4	18

460V

Model	Water Source Unit							Inverter 1	Inverter 2	Fan Motor 1
	Hz (Hz)	Voltage (V)	Max. (V)	Min. (V)	MCA (A)	MOP (A)	Max. Fuse (A)	MOC (A)	MOC (A)	FRA (A)
(H,Y)VWH(P,R)072B42S	60	460	506	414	11	15	15	8.0	-	0.08
(H,Y)VWH(P,R)096B42S	60	460	506	414	17	25	25	13.0	-	0.08
(H,Y)VWH(P,R)120B42S	60	460	506	414	20	30	30	15.5	-	0.08
(H,Y)VWH(P,R)144B42S	60	460	506	414	20	25	25	8.5	8.5	0.08
(H,Y)VWH(P,R)168B42S	60	460	506	414	22	25	25	9.4	9.4	0.08
(H,Y)VWH(P,R)192B42S	60	460	506	414	29	40	40	12.7	12.7	0.08
(H,Y)VWH(P,R)216B42S	60	460	506	414	37	50	50	16.3	16.3	0.08

Model	INV Comp. 1	INV Comp. 2	Fan Motor 1	Wiring Size		
	LRA (A)	LRA (A)	Output (kW)	Power Supply Wiring (AWG)	Ground Wiring (AWG)	Communication Cable (AWG)
(H,Y)VWH(P,R)072B42S	47	-	0.016	18	18	18
(H,Y)VWH(P,R)096B42S	47	-	0.016	14	14	18
(H,Y)VWH(P,R)120B42S	47	-	0.016	12	12	18
(H,Y)VWH(P,R)144B42S	47	47	0.016	12	12	18
(H,Y)VWH(P,R)168B42S	47	47	0.016	12	12	18
(H,Y)VWH(P,R)192B42S	47	47	0.016	10	10	18
(H,Y)VWH(P,R)216B42S	47	47	0.016	8	8	18

MCA: Minimum Circuit Ampacity (A)
MOP: Maximum Overcurrent Protective Device (A)
MOC: Maximum Operating Current (A)
LRA: Locked Rotor Ampacity (A)
FRA: Fan Motor Running Ampacity (A)

⚠CAUTION

Install a multi-pole main switch with a space of 1/8 inch (3.5mm) or more between each phase.

ATTENTION:

1. When the power supply wiring is longer, select the minimum wiring size that has a voltage drop within 2%.
2. Power supply voltage should be satisfied with the followings.
   Supply Voltage: Rated Voltage within ±10%
   Starting Voltage: Rated Voltage within -15%
   Operating Voltage: Rated Voltage within ±10%
   Imbalance between Phases: within 3%
3. Do not connect the ground wiring to gas piping, water piping, or a lightning conductor.
   Gas Piping: An explosion and ignition may occur if there is escaping gas.
   Water Piping: There is no effective electrical ground provided if hard vinyl piping is used.
   Lightning Conductor: The electrical potential of the earth increases when a lightening conductor is used.

2.15.3 Electrical Wiring for Water Flow Control

2.15.3.1 External Input/Output Signal

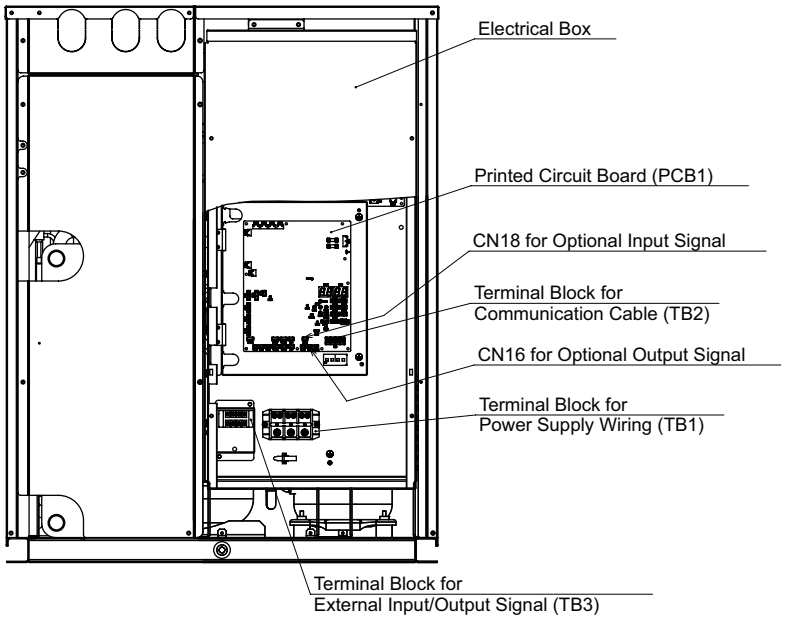


Figure 2.1

NOTES:

- Relay of AC contactor should be connected to terminal block TB3 #5 and #6. Water pump cannot directly operate from terminal block TB3 #5 and #6.
- Water flow switch must be connected to terminal block TB3 #7 and #8 when operating this unit.
- Do not reverse the connections on terminal block TB3 #5 and #6, and terminal block TB3 #7 and #8. Incorrect wiring will short circuit and printed circuit board (PCB) is burned and destroyed.

Do not use these terminals for other purposes.

No.		Connection Port	Signal Item	Remarks
Output	1	Terminal Block 3 (TB3) (Terminals No.5-6)	Valve/Pump Operation Request	Output = 208/230VAC (Depending on unit power supply input) Acceptable current: 0.1A or less
	2	Connector on Control PCB (PCB1) (Pins 1 and 2 of CN16)	System Operation Signal	2 output signals can be selected from 4 items. Output = 12VDC Acceptable current: 75mA
			Compressor Operation Signal	
	3	Connector on Control PCB (PCB1) (Pins 1 and 3 of CN16)	Error Signal	
			Defrost Signal (Not Used)	
Input	1	Terminal Block 3 (TB3) (Terminals No.7-8)	Water Flow Switch	This signal must be connected. Contact Close: 12.8VDC, 9mA
	2	Connector on Control PCB (PCB1) (Pins 1 and 2 of CN18)	Forced Stoppage	Input signal can be selected from 5 items. Contact Close: 12.8VDC, 9mA
			Demand (Current Reduction)	
			Sound Noise Reduction	
			Cooling Only	
			Heating Only	

2.15.3.2 Connection for Water Pump

If “Valve/Pump Operation Request” output signal is used for water pump, separate external power supply to operate water pump is required.

NOTE:
Do not use terminal block 3 (TB3) terminals No.5-6 to supply power for the water pump.
Otherwise, serious accident and malfunction of the water source unit may result.

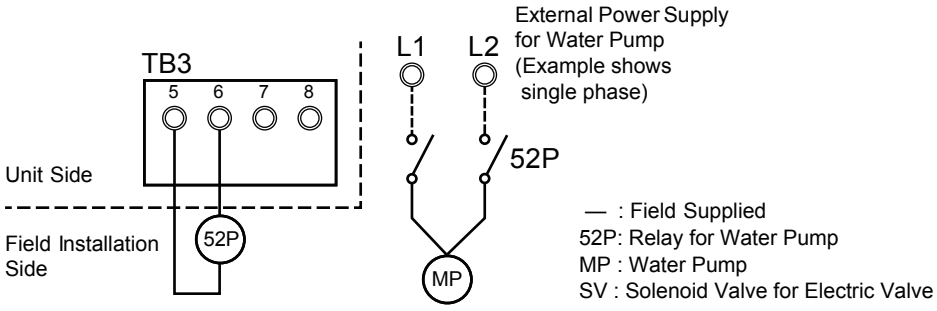


Figure 2.2 Water Pump Wiring

Connection for Solenoid Valve of Electric Valve
Solenoid valve can be connected to terminal block 3 (TB3) terminals No.5-6 directly.
If output is 0.1A or more, be sure to use relay and external power supply same connection as water pump.

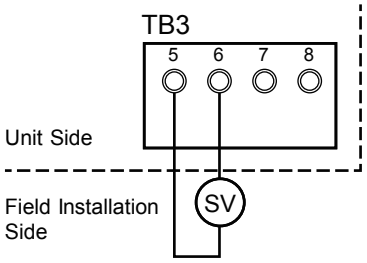


Figure 2.3 Solenoid Valve Wiring

2.15.3.3 Connection for Water Flow Switch

Connect water flow switch with shielded cable to the terminal block TB3 of the unit.
Terminal of water flow switch should be placed in proper position for easy wiring.
It must be interlocked with the unit. Wire the circuit as shown below.

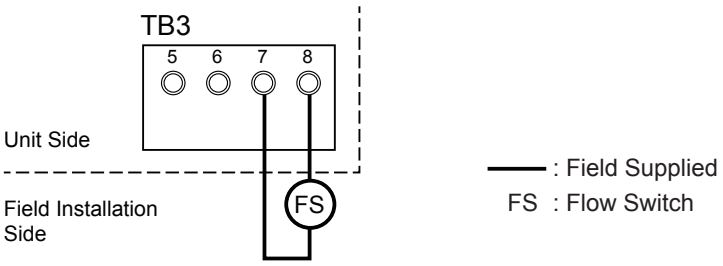


Figure 2.4 Water Flow Switch Wiring

2.16 Additional Refrigerant Change Calculation

(1) Calculating Method of Additional Refrigerant Charge WT [lbs (kg)]

<table>
<tr><th>No.</th><th>Symbol</th><th>Step</th><th>Additional Charge</th></tr>
<tr><td>1</td><td>W1</td><td>Additional Refrigerant Charge Calculation for Liquid Piping W1 [lbs (kg)]
<table>
<tr><th>Pipe Diameter [inch (mm)]</th><th>Total Piping Length [ft (m)]</th><th>Refrigerant Charge for 1 ft Pipe [lbs/ft (kg/m)]</th><th>Additional Charge [lbs (kg)]</th></tr>
<tr><td>7/8 (22.2)</td><td></td><td>× 0.20 (0.30) =</td><td></td></tr>
<tr><td>3/4 (19.05)</td><td></td><td>× 0.16 (0.24) =</td><td></td></tr>
<tr><td>5/8 (15.88)</td><td></td><td>× 0.10 (0.15) =</td><td></td></tr>
<tr><td>1/2 (12.7)</td><td></td><td>× 0.06 (0.09) =</td><td></td></tr>
<tr><td>3/8 (9.52)</td><td></td><td>× 0.027 (0.04) =</td><td></td></tr>
<tr><td>1/4 (6.35)</td><td></td><td>× 0.013 (0.02) =</td><td></td></tr>
<tr><td colspan="3">Total Additional Charge For Liquid Piping =</td><td></td></tr>
</table></td><td>lbs (kg)</td></tr>
<tr><td>2</td><td>W2</td><td>Depending on connection of indoor unit capacity, additional refrigerant charge is required.
Select adequate refrigerant charge from the table below.
Additional Refrigerant Charge for Each Indoor Unit Connected W2 [lbs (kg)]
<table>
<tr><td>Indoor Unit Capacity (MBH)</td><td>6, 8</td><td>12-54</td><td>60 or more</td></tr>
<tr><td>Additional Ref. Charge [lbs (kg)/unit]</td><td>0.7 (0.3)</td><td>1.1 (0.5)</td><td>2.2 (1.0)</td></tr>
</table></td><td>lbs (kg)</td></tr>
<tr><td>3</td><td>W3</td><td>Determine the ratio of indoor unit connection capacity.
The Ratio of Indoor Unit Connection Capacity (Indoor Unit Total Capacity/Water Source Unit Capacity) Additional Charge W3 [lbs (kg)]
<table>
<tr><th>Condition</th><th>Additional Charge [lbs (kg)]</th></tr>
<tr><td>I.U. Capacity Ratio is less than 100%</td><td>0.0 (0.0)</td></tr>
<tr><td>I.U. Capacity Ratio is 100% or more</td><td>1.1 (0.5)</td></tr>
</table></td><td>lbs (kg)</td></tr>
<tr><td>4</td><td>W4</td><td>If Change-Over Boxes Multiple Branch type are connected (for heat recovery system only), additional refrigerant charge is required.
Select adequate refrigerant charge from the table below.
Additional Refrigerant Charge for Change-Over Box Model Connected W4 [lbs (kg)]
<table>
<tr><th>Change-Over Box Model</th><th>Additional Charge [lbs (kg)/unit]</th></tr>
<tr><td>COB04M132B22S</td><td>0.3 (0.1)</td></tr>
<tr><td>COB08M264B22S</td><td>0.5 (0.2)</td></tr>
<tr><td>COB12M264B22S</td><td>0.7 (0.3)</td></tr>
</table></td><td>lbs (kg)</td></tr>
<tr><td>5</td><td>WT</td><td>Calculation of Additional Charge WT [lbs (kg)] =
W1 + W2 + W3 + W4 =</td><td>lbs (kg)</td></tr>
</table>

Ensure that the total additional charge WT does not exceed the maximum additional refrigerant charge as shown in the table on the following page.

Maximum Additional Refrigerant Charge Quantity Allowed [lbs (kg)]

Water Source Unit Capacity (MBH)	72, 96	120	144, 168	192, 216
Maximum Additional Refrigerant Charge [lbs (kg)]	61.7 (28.0)	83.8 (38.0)	88.2 (40.0)	99.2 (45.0)

Initial Refrigerant Charge Amount of W.S. (Before Shipment) W0 [lbs (kg)]

Water Source Unit Capacity (MBH)	72, 96	120	144	168 - 216
W0 Water Source Unit Refrigerant Charge [lbs (kg)]	7.7 (3.5)	10.4 (4.7)	13.7 (6.2)	15.4 (7.0)

W0 is the water source unit refrigerant charge prior to shipment.

(2) Record of Additional Charge
Total refrigerant charge of this system is calculated in the following formula.

Total Refrigerant Charge = WT [lbs (kg)] + W0 [lbs (kg)] = ☐ lbs (☐ kg)

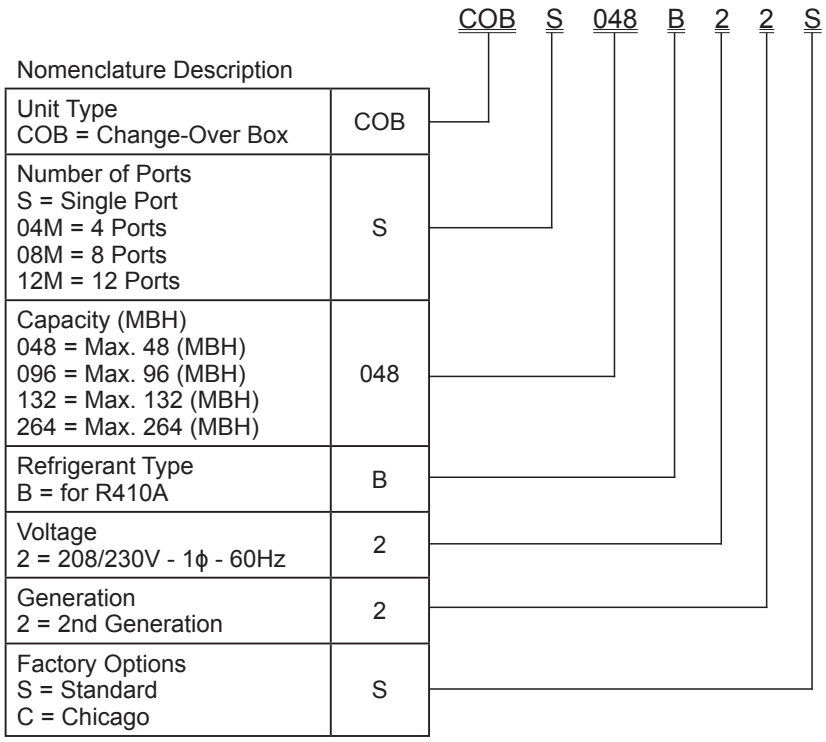
When refrigerant is recovered or charged due to repairs, operating, or adjusting the unit, record the refrigerant quantity again.

- Special Attention Regarding Refrigerant Gas Leakage

Make sure that the entire VRF system meets ASHRAE Standard 15, or any local codes, regarding Safety. The ASHRAE Standard 15-2013 provides safeguards for life, limb, health, property, and prescribes safety requirements.
The standard is recognized as the main guide for personal safety involving refrigeration systems. It strives to ensure a safe application of refrigerant systems by limiting the maximum charge as follows so that a complete discharge due to a leak into a small, occupied, and enclosed room can never exceed the allowable limit for the room.

3. Change-Over Box

3.1 Unit Nomenclature



Nomenclature Description

Unit Type COB = Change-Over Box	COB
Number of Ports S = Single Port 04M = 4 Ports 08M = 8 Ports 12M = 12 Ports	S
Capacity (MBH) 048 = Max. 48 (MBH) 096 = Max. 96 (MBH) 132 = Max. 132 (MBH) 264 = Max. 264 (MBH)	048
Refrigerant Type B = for R410A	B
Voltage 2 = 208/230V - 1ϕ - 60Hz	2
Generation 2 = 2nd Generation	2
Factory Options S = Standard C = Chicago	S

3.2 Line-up

Type	Capacity		Model
	RT	MBH	
Change-Over Box	4	48	COBS048B22S
	4	48	COBS048B22C
	8	96	COBS096B22S
	8	96	COBS096B22C
	11	132	COB04M132B22S
	22	264	COB08M264B22S
	22	264	COB12M264B22S

3.3 General Data

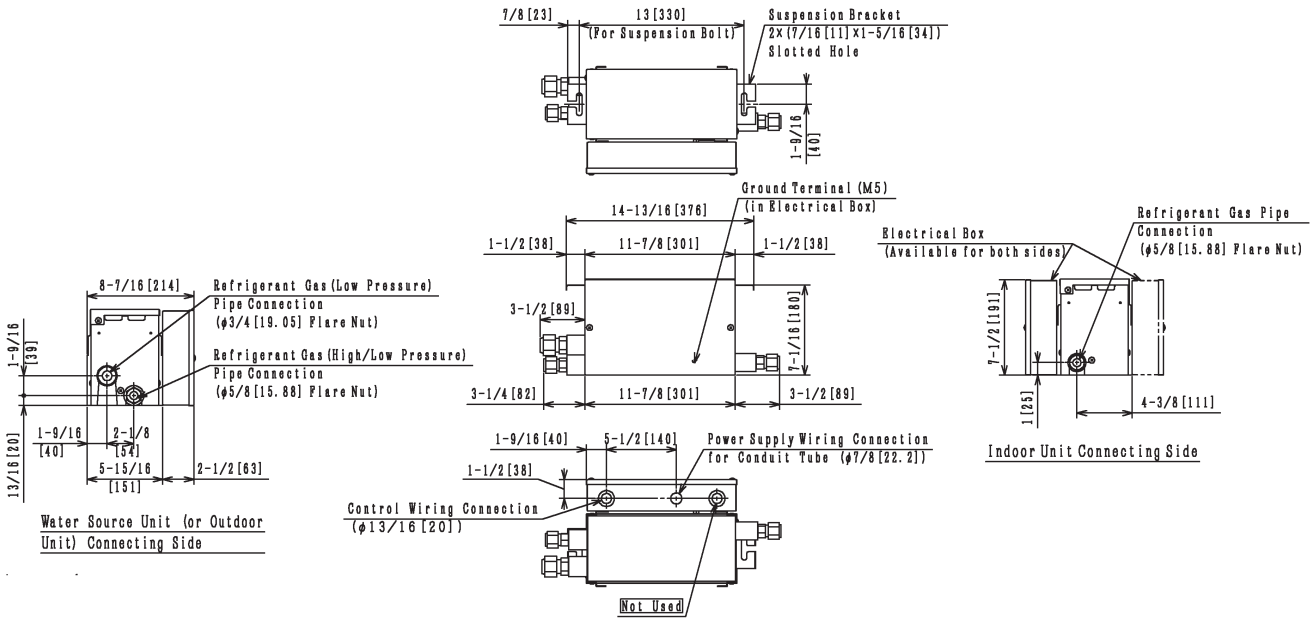
Type			Single Branch		Multiple Branch		
Model			COBS048B22S/C	COBS096B22S/C	COB04M132B22S	COB08M264B22S	COB12M264B22S
Power Supply			AC 1Phase, 208/230V, 60Hz				
Power Consumption		W	5	5	11.2	22.4	33.6
Number of Ports (for Indoor Unit)			1	1	4	8	12
Single Unit Per Port	Maximum Total Capacity of All Connected Indoor Units	MBH	≤ 54	≤ 96	≤ 132	≤ 264	≤ 264
	Maximum Total Capacity of Connected Indoor Units Per Port	MBH	≤ 54	≤ 96	≤ 96 [1]	≤ 96 [1]	≤ 96 [1]
Multiple Units Per Port	Maximum Number of Connected Indoor Units Per Port	-	7	8	6	6	6
	Maximum Total Capacity of All Connected Indoor Units	MBH	≤ 41	≤ 71	≤ 114	≤ 216	≤ 216
	Maximum Total Capacity of Connected Indoor Units Per Port	MBH	≤ 41	≤ 71 [3]	≤ 41	≤ 41	≤ 41
Outer Dimensions	Height	in. (mm)	7-1/2 (191)	7-1/2 (191)	10-1/4 (260)	10-1/4 (260)	10-1/4 (260)
	Width	in. (mm)	11-7/8 (301)	11-7/8 (301)	11-15/16 (303)	21-3/8 (543)	30-13/16 (783)
	Depth	in. (mm)	8-7/16 (214)	8-7/16 (214)	13-7/8 (352)	13-7/8 (352)	13-7/8 (352)
Net Weight		lbs. (kg)	13 (6)	13 (6)	31 (14)	56 (25)	80 (36)
Refrigerant		-	R410A				
Minimum Circuit Ampacity		A	0.1	0.1	0.2	0.4	0.6
Recommended Fuse/Breaker Size		A	15	15	15	15	15
Maximum Fuse Size		A	15	15	15	15	15
Refrigerant Piping (from Water Source Unit)	Gas Line (High/Low Pressure)	in. (mm)	5/8 (15.88)	5/8 (15.88)	7/8 (22.2)	7/8 (22.2)	1 [2] (25.4) [2]
	Gas Line (Low Pressure)	in. (mm)	3/4 (19.05)	3/4 (19.05)	1 [2] (25.4) [2]	1-1/8 (28.58)	1-1/8 (28.58)
	Liquid Line	in. (mm)	-	-	1/2 (12.7)	1/2 (12.7)	5/8 (15.88)
Refrigerant Piping (from Indoor Unit)	Gas Line	in. (mm)	5/8 (15.88)	3/4 (19.05)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)
	Liquid Line	in. (mm)	-	-	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)

1. Up to two 60, 72, 96MBH type indoor units can be connected to the change-over box within the "Maximum Total Capacity of All Connected Indoor Units" shown in above table. Make sure to increase the pipe connection size by using the appropriate accessory pipe.
2. Apply reducer (accessory pipe) for changing the pipe size to ϕ7/8 inch (22.2mm) for field pipe connection.
3. 60MBH type indoor unit can not be connected to single port of this change-over box, if multiple indoor units are connected.

3.4 Dimensional Data

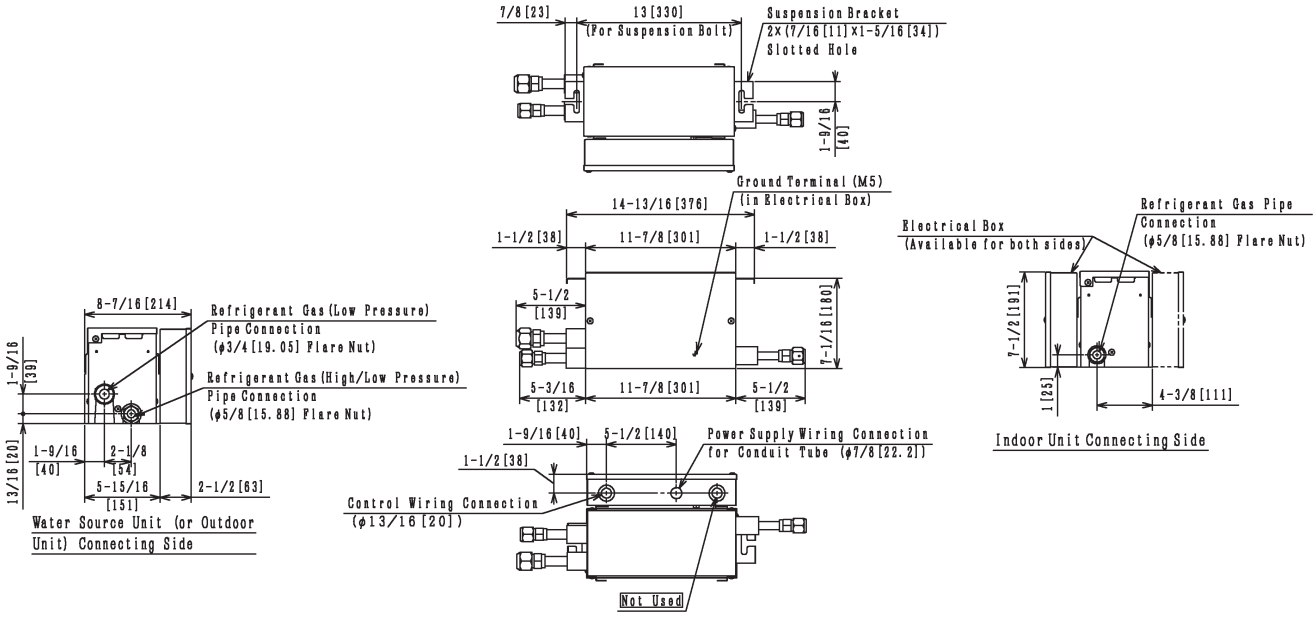
COBS048B22S

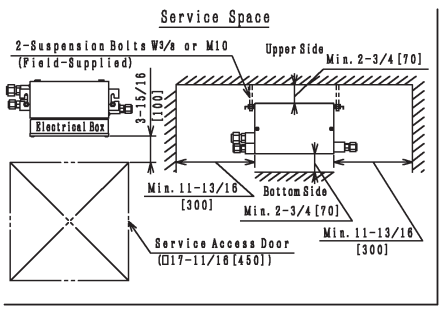
Unit: inch (mm)



COBS048B22C

Unit: inch (mm)





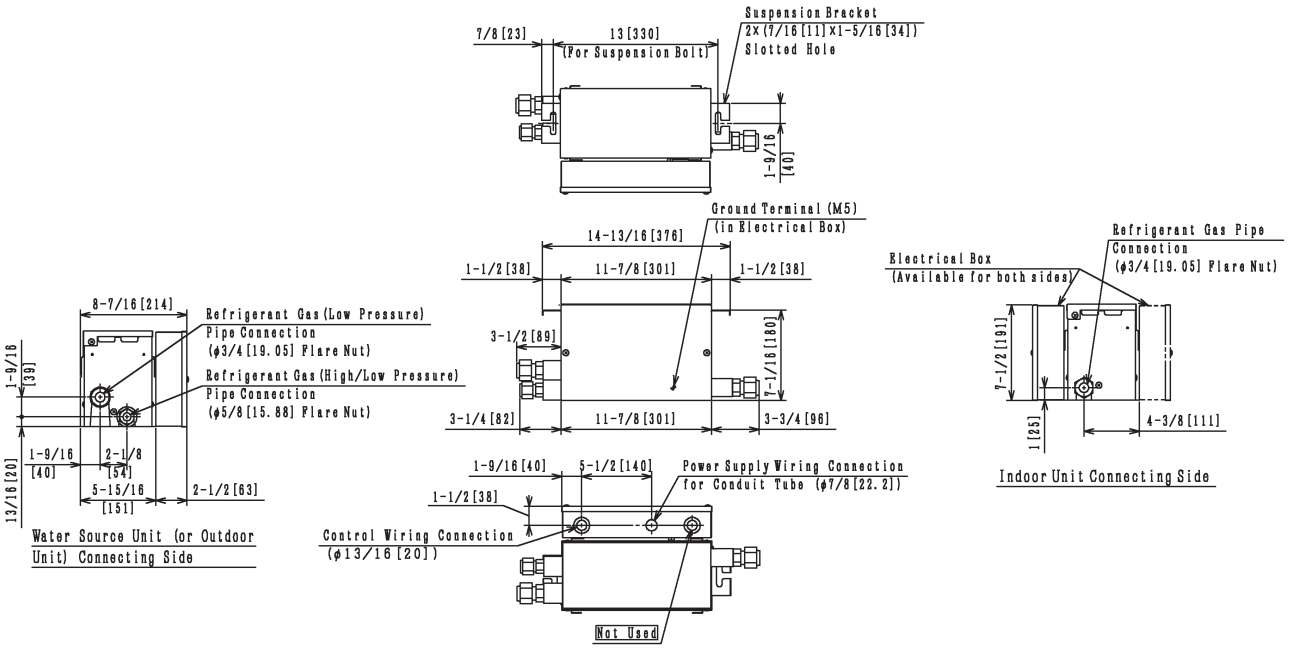
NOTES:

1. Change-Over Box is composed of mechanical parts such as electronic expansion valves for switching cooling/heating operation. Therefore, make sure to install the service access doors on the electrical box side and indoor unit connecting side.
2. Operating sound and refrigerant flow sound may be heard from the Change-Over Box when the electronic expansion valves in the Change-Over Box are activated for RUN/STOP, Thermo-ON/OFF, defrosting or switching operation. Therefore, install the Change-Over Box in the ceiling of corridor so the refrigerant flow sound may not heard in the room. As for the ceiling material, select a material like a plaster board (at least 3/8inch (9mm)) which minimizes operation sound.
3. Do not install the Change-Over Box in a place near bed room or hospital rooms since the refrigerant flow sound may be heard from the Change-Over Box when switching between cooling/heating operation.
4. Make sure liquid pipe is correctly installed to the appropriate unit.

CHANGE-OVER BOX

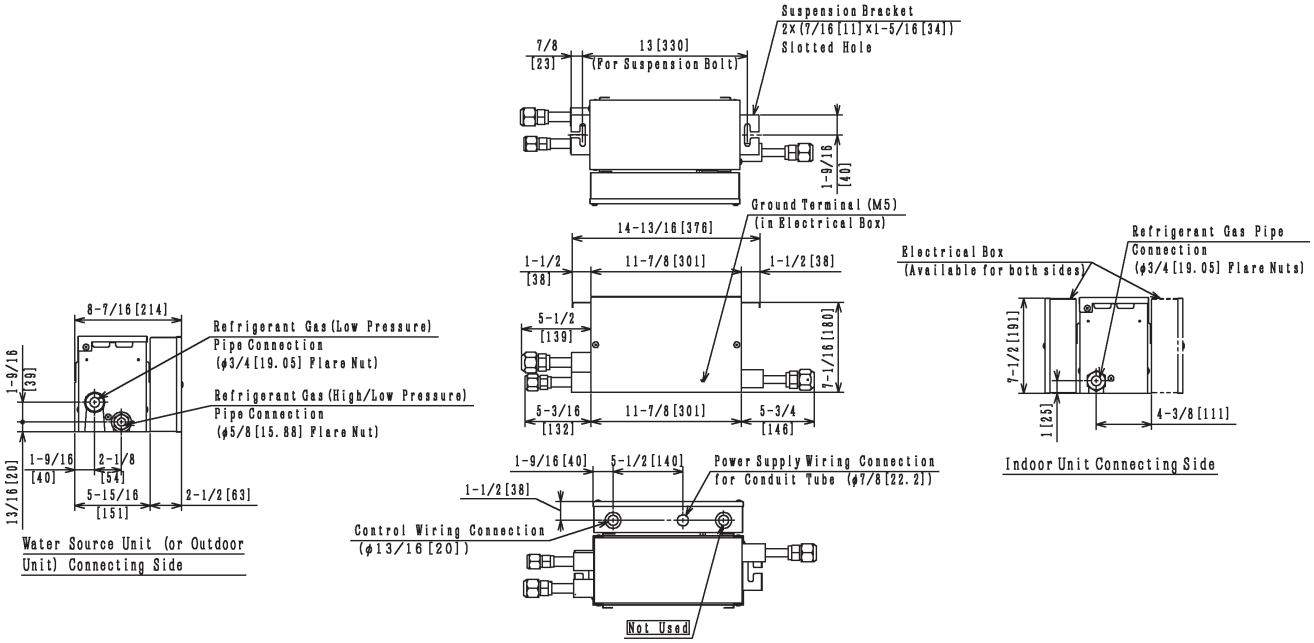
COBS096B22S

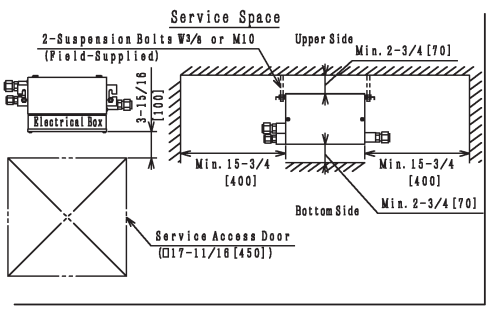
Unit: inch (mm)



COBS096B22C

Unit: inch (mm)



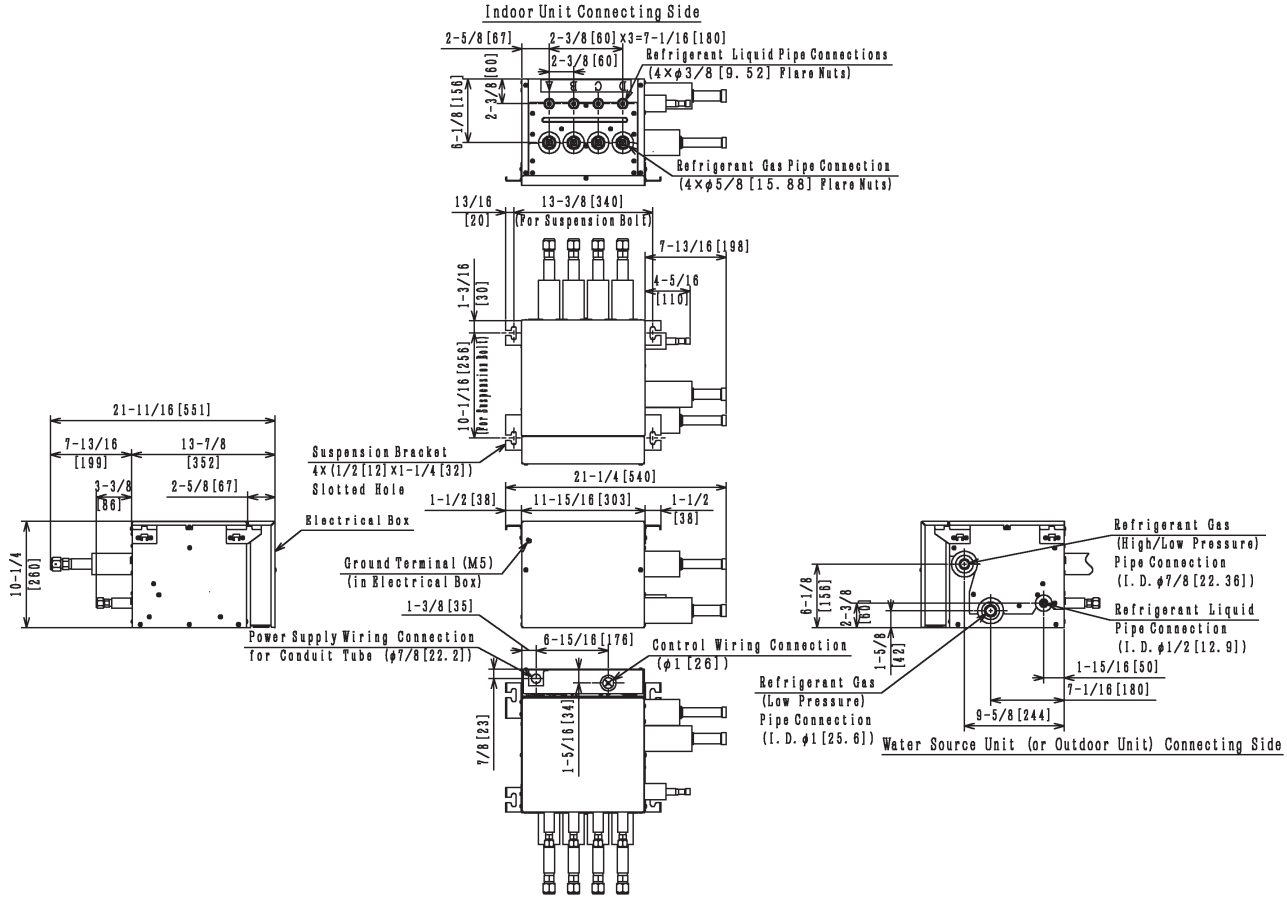


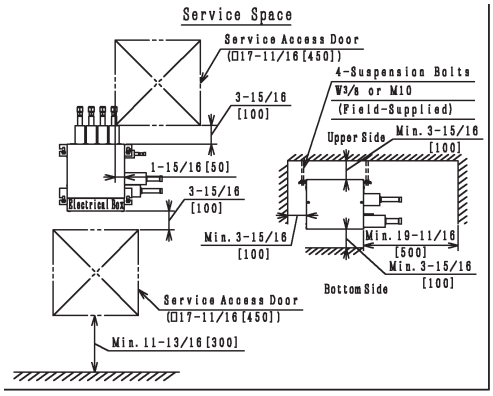
NOTES:

1. Change-Over Box is composed of mechanical parts such as electronic expansion valves for switching cooling/heating operation. Therefore, make sure to install the service access doors on the electrical box side and indoor unit connecting side.
2. Operating sound and refrigerant flow sound may be heard from the Change-Over Box when the electronic expansion valves in the Change-Over Box are activated for RUN/STOP, Thermo-ON/OFF, defrosting or switching operation. Therefore, install the Change-Over Box in the ceiling of corridor so the refrigerant flow sound may not heard in the room. As for the ceiling material, select a material like a plaster board (at least 3/8inch (9mm)) which minimizes operation sound.
3. Do not install the Change-Over Box in a place near bed room or hospital rooms since the refrigerant flow sound may be heard from the Change-Over Box when switching between cooling/heating operation.
4. Make sure liquid pipe is correctly installed to the appropriate unit.

COB04M132B22S

Unit: inch (mm)





NOTES:

1. Change-Over Box is composed of mechanical parts such as electronic expansion valves for switching cooling/heating operation. Therefore, make sure to install the service access doors on the electrical box side and indoor unit connecting side.
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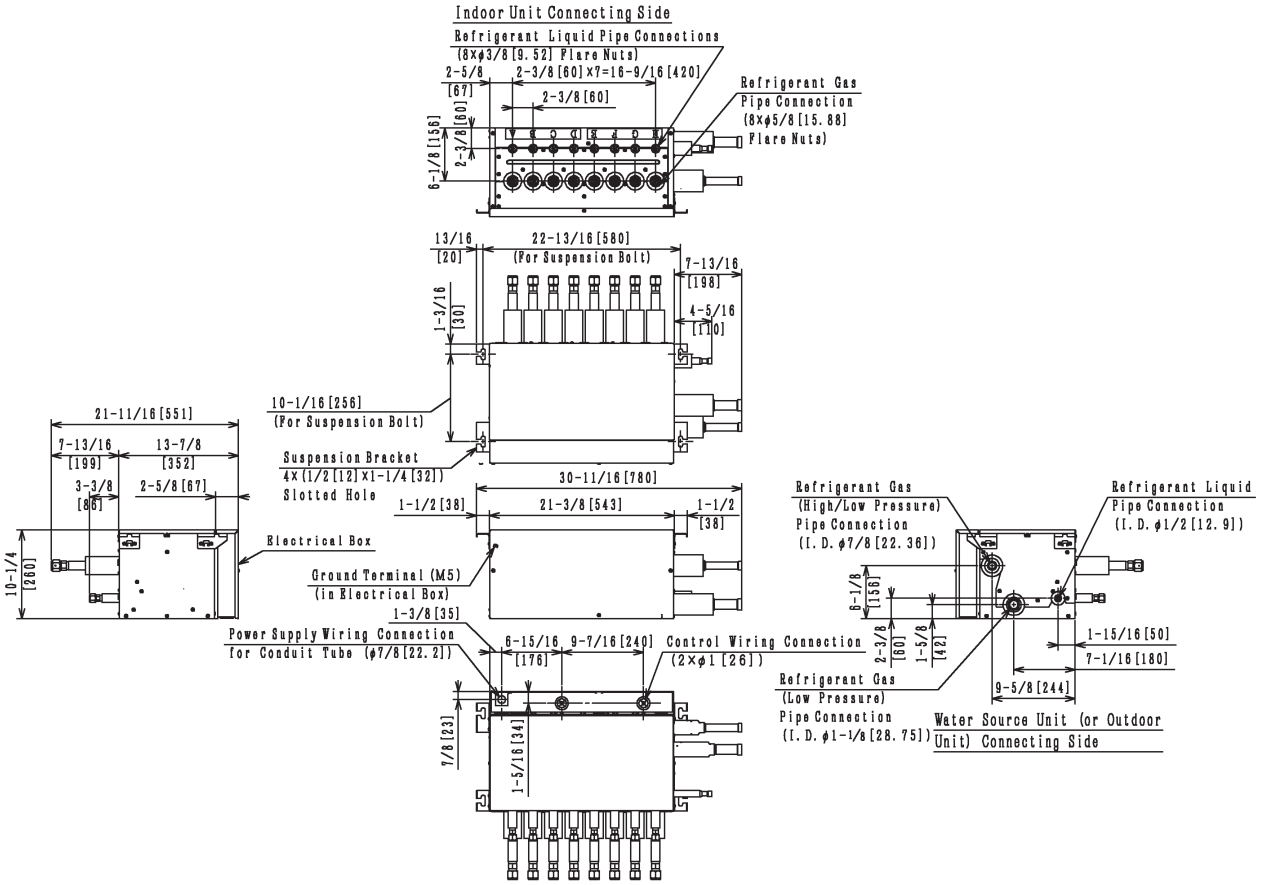
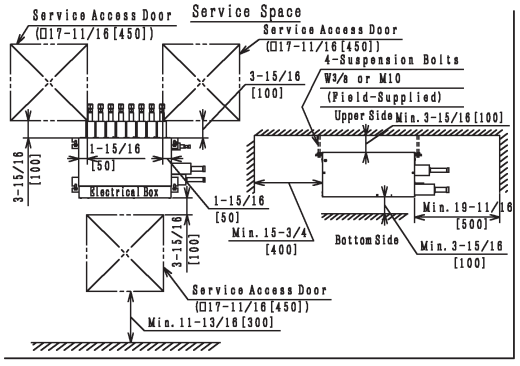
3. Do not install the Change-Over Box in a place near bed room or hospital rooms since the refrigerant flow sound may be heard from the Change-Over Box when switching between cooling/heating operation.
4. Make sure liquid pipe is correctly installed to the appropriate unit.

COB08M264B22S

Unit: inch (mm)



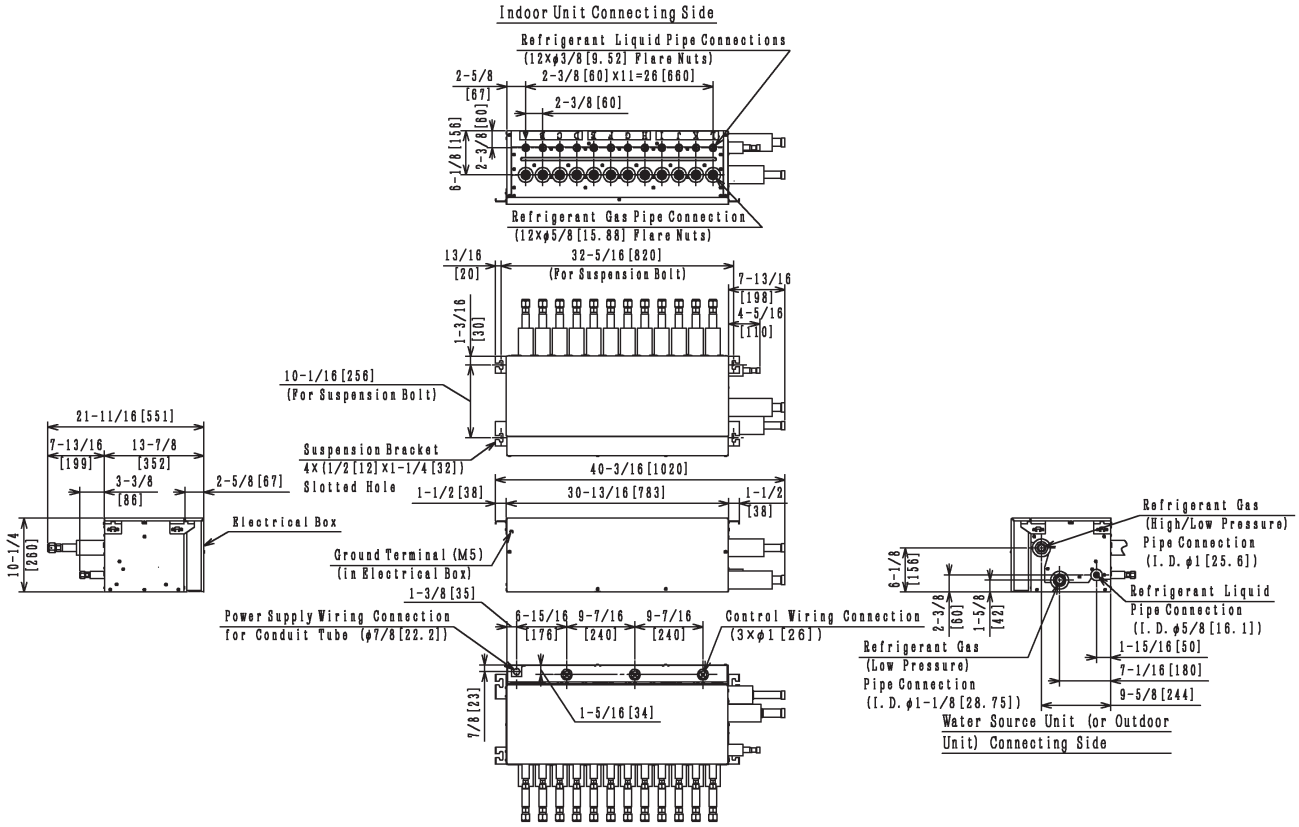


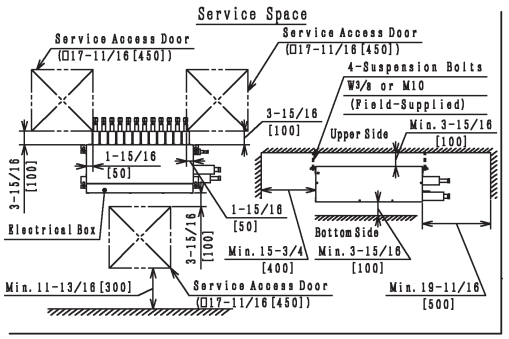
NOTES:

1. Change-Over Box is composed of mechanical parts such as electronic expansion valves for switching cooling/heating operation. Therefore, make sure to install the service access doors on the electrical box side and indoor unit connecting side.
2. Operating sound and refrigerant flow sound may be heard from the Change-Over Box when the electronic expansion valves in the Change-Over Box are activated for RUN/STOP, Thermo-ON/OFF, defrosting or switching operation. Therefore, install the Change-Over Box in the ceiling of corridor so the refrigerant flow sound may not heard in the room. As for the ceiling material, select a material like a plaster board (at least 3/8inch (9mm)) which minimizes operation sound.
3. Do not install the Change-Over Box in a place near bed room or hospital rooms since the refrigerant flow sound may be heard from the Change-Over Box when switching between cooling/heating operation.
4. Make sure liquid pipe is correctly installed to the appropriate unit.

COB12M264B22S

Unit: inch (mm)

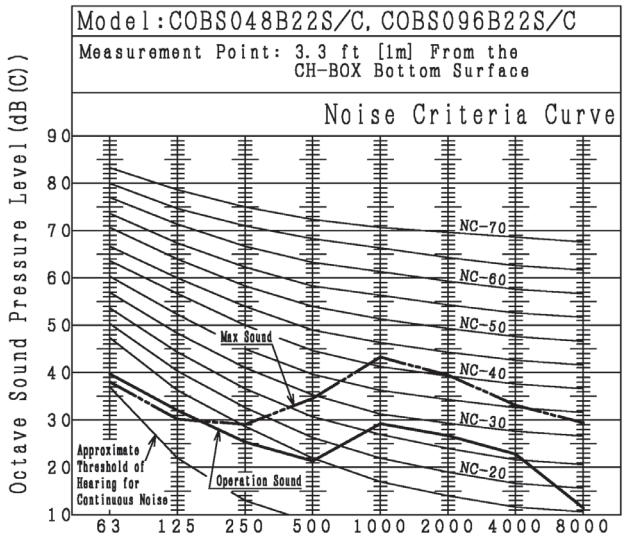




NOTES:

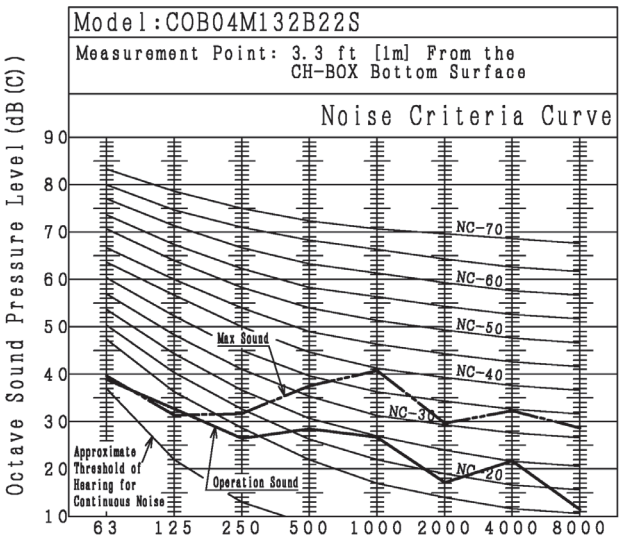
1. Change-Over Box is composed of mechanical parts such as electronic expansion valves for switching cooling/heating operation. Therefore, make sure to install the service access doors on the electrical box side and indoor unit connecting side.
2. Operating sound and refrigerant flow sound may be heard from the Change-Over Box when the electronic expansion valves in the Change-Over Box are activated for RUN/STOP, Thermo-ON/OFF, defrosting or switching operation. Therefore, install the Change-Over Box in the ceiling of corridor so the refrigerant flow sound may not heard in the room. As for the ceiling material, select a material like a plaster board (at least 3/8inch (9mm)) which minimizes operation sound.
3. Do not install the Change-Over Box in a place near bed room or hospital rooms since the refrigerant flow sound may be heard from the Change-Over Box when switching between cooling/heating operation.
4. Make sure liquid pipe is correctly installed to the appropriate unit.

3.5 Sound Data



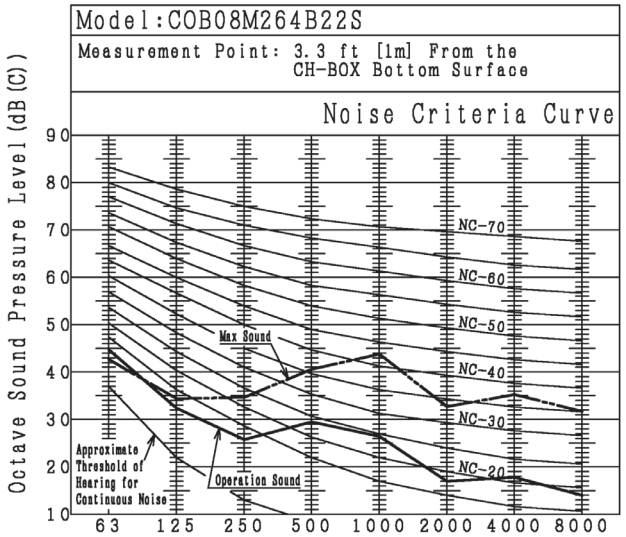
Overall

Operation Sound	33dB(A)
Max Sound	46dB(A)



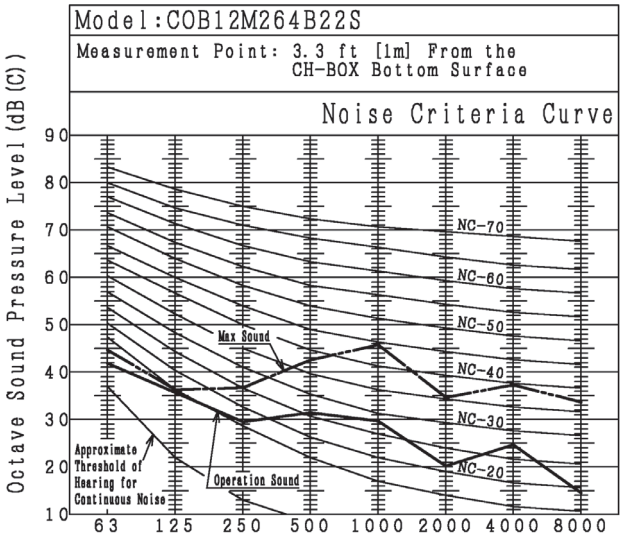
Overall

Operation Sound	31dB(A)
Max Sound	43dB(A)



Overall

Operation Sound	31dB(A)
Max Sound	46dB(A)



Overall

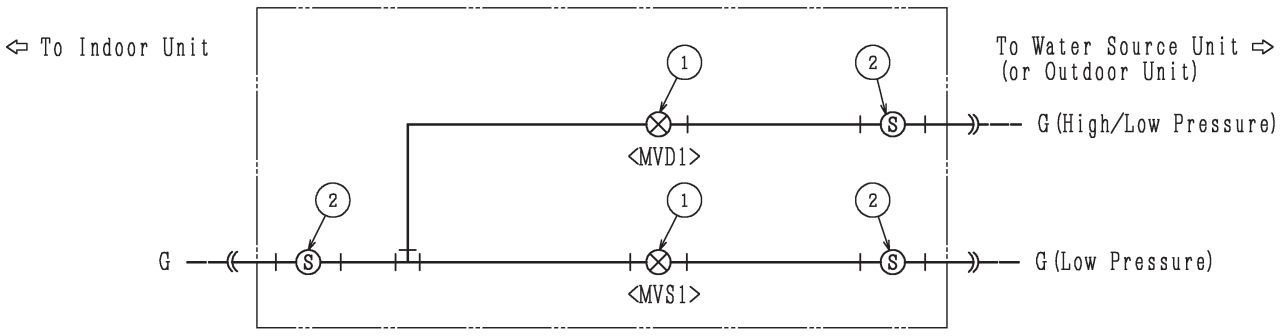
Operation Sound	34dB(A)
Max Sound	48dB(A)

NOTES:

1. The readings were taken in anechoic chamber. Sound in actual status may get bigger due to surroundings noise or echo. Take noise source into consideration to look for proper installation location.
2. Change-Over Box operation sound may be heard even if the indoor unit has stopped while the water source units are in operation and the other indoor units are at Thermo-ON.
3. “Operation sound” is the Change-Over Box operation sound when the whole system is in either cooling or heating operation. (Not in cooling and heating operation)
4. “Maximum sound”is the maximum value of Change-Over Box operation sound while the unit is in cooling and heating operation or defrosting.
5. The maximum sound may be exceeded during transient operation.
   Ensure the installation place. Do not install the Change-Over Box in a place near bedrooms or hospital rooms.
   (Refer to the Installation manual.)

3.6 Refrigeration Cycle

COBS048B22S, COBS096B22S, COBS048B22C and COBS096B22C

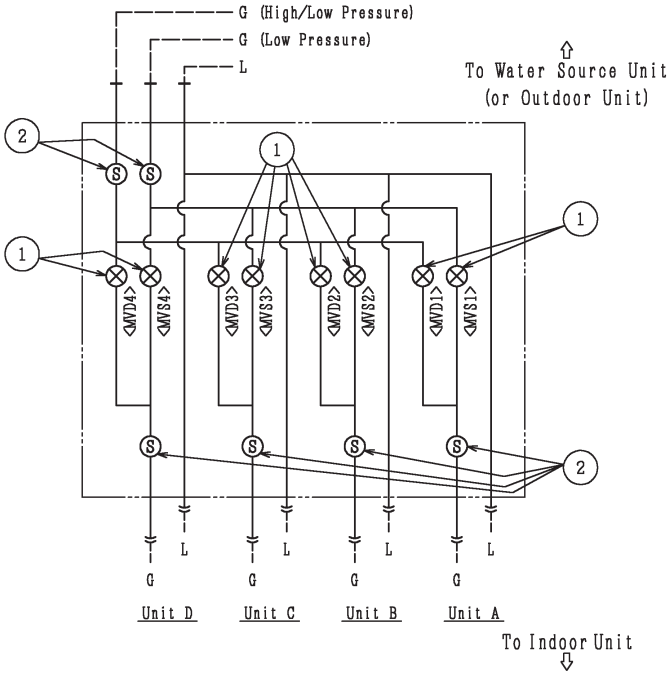


G : Refrigerant Gas Pipe Connection
—— : Field Refrigerant Piping
-((: Flare Connection
—|— : Brazing Connection
⬚ : Change-Over Box

Mark	Part Name
①	Electronic Expansion Valve
②	Strainer

NOTE:
Refer to Section 3.7 "Wiring Diagram" for details on <MVD1> and <MVS1>.

COB04M132B22S

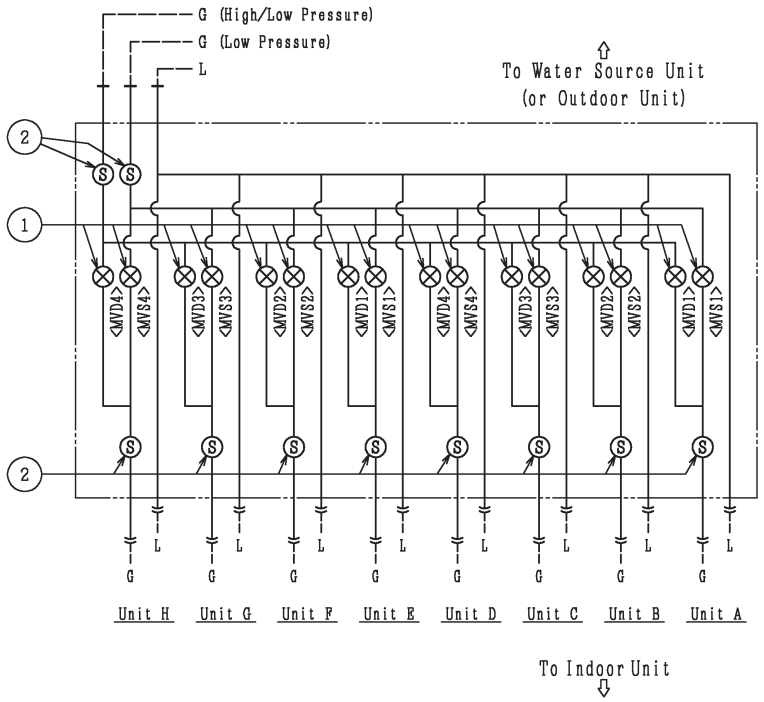


G : Refrigerant Gas Pipe Connection
L : Refrigerant Liquid Pipe Connection
—— : Field Refrigerant Piping
-((: Flare Connection
—|— : Brazing Connection
⬚ : Change-Over Box

Mark	Part Name
①	Electronic Expansion Valve
②	Strainer

NOTE:
Refer to Section 3.7 "Wiring Diagram" for details on <MVD1>, <MVD2>, <MVD3>, <MVD4>, <MVS1>, <MVS2>, <MVS3> and <MVS4>.

COB08M264B22S

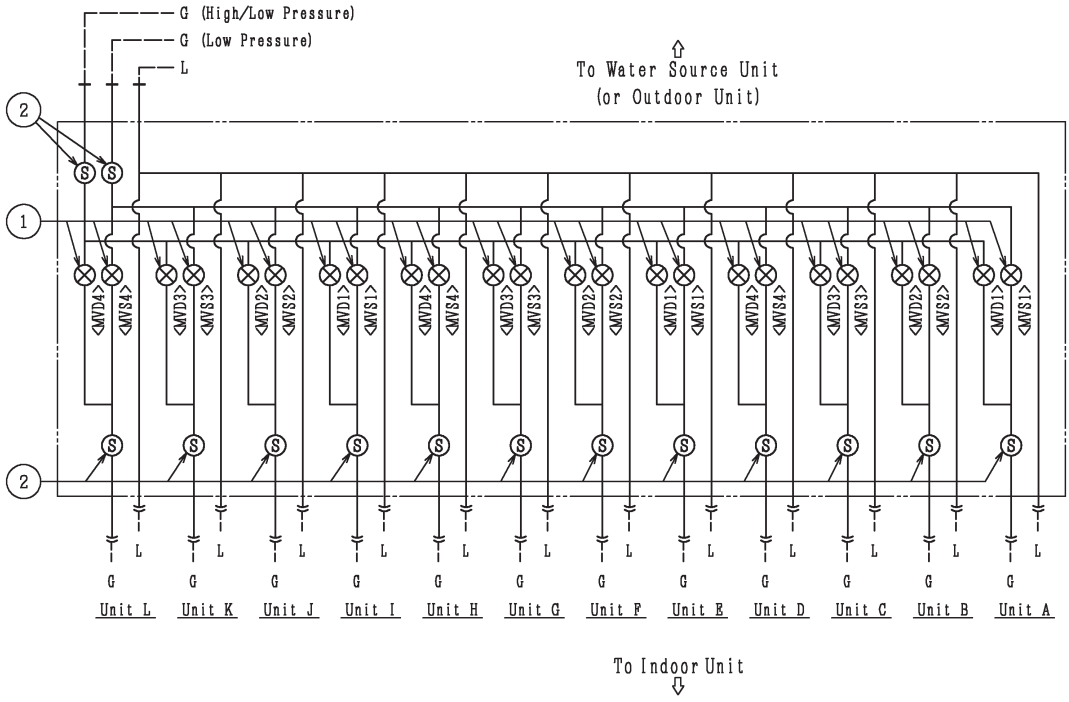


G : Refrigerant Gas Pipe Connection
L : Refrigerant Liquid Pipe Connection
—— : Field Refrigerant Piping
-((: Flare Connection
—|— : Brazing Connection
[ ] : Change-Over Box

Mark	Part Name
①	Electronic Expansion Valve
②	Strainer

NOTE:
Refer to Section 3.7 "Wiring Diagram" for details on <MVD1>, <MVD2>, <MVD3>, <MVD4>, <MVS1>, <MVS2>, <MVS3> and <MVS4>.

COB12M264B22S



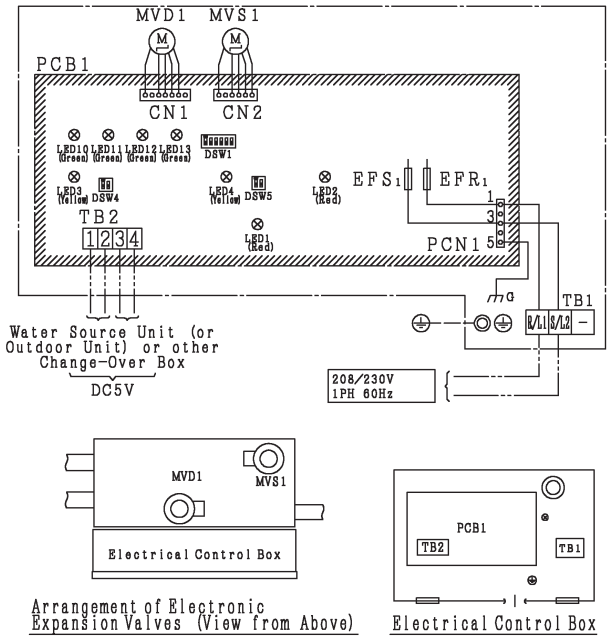
G : Refrigerant Gas Pipe Connection
L : Refrigerant Liquid Pipe Connection
—— : Field Refrigerant Piping
-((: Flare Connection
—|— : Brazing Connection
[ ] : Change-Over Box

Mark	Part Name
①	Electronic Expansion Valve
②	Strainer

NOTE:
Refer to Section 3.7 "Wiring Diagram" for details on <MVD1>, <MVD2>, <MVD3>, <MVD4>, <MVS1>, <MVS2>, <MVS3> and <MVS4>.

3.7 Wiring Diagram

COBS048B22S, COBS096B22S, COBS048B22C and COBS096B22C



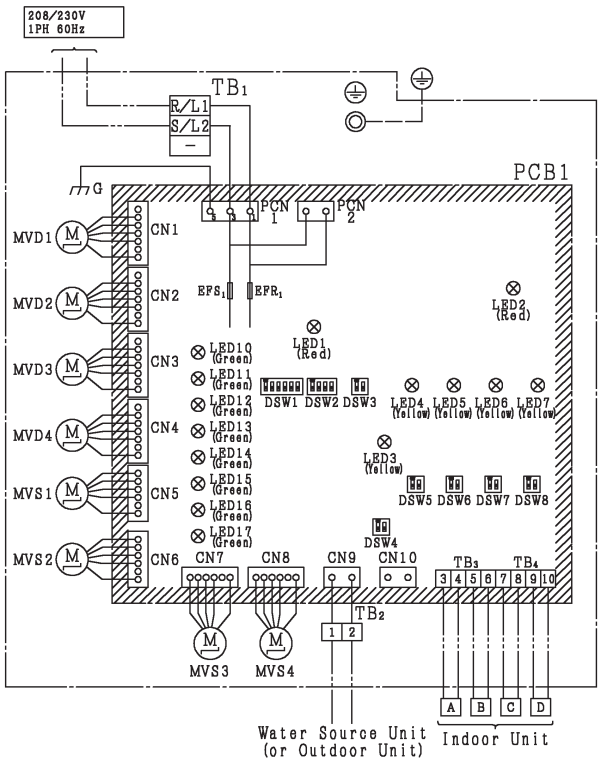
Mark	Name	Remark
PCB1	Printed Circuit Board	
TB1	Terminal Block	for Power Supply
TB2	Terminal Block	for Communication
MVD_1, MVS_1	Electronic Expansion Valve	
EFR_1, EFS_1	Fuse	
LED1	LED [Red]	Power Status
LED2	LED [Red]	DC Power Status
LED3	LED [Yellow]	Communication [Water Source Unit (or Outdoor Unit)]
LED4	LED [Yellow]	Communication [Indoor Unit]
LED10~13	LED [Green]	
DSW1	DIP Switch	
DSW4	DIP Switch	Communication [Water Source Unit (or Outdoor Unit)]
DSW5	DIP Switch	Communication [Indoor Unit]

Mark	Torque to tighten the terminal
TB1	0.7~1.0 (lbf·ft) [1.0~1.3 (N·m)]
TB2	0.5~0.8 (lbf·ft) [0.7~1.1 (N·m)]

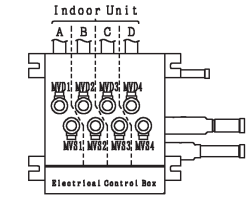
——: Factory Wiring ——: Ground Wiring
——·——: Change-Over Box ——: Field Wiring
: Main PCB

Note:
1. All the field wiring and equipment must comply with local codes.

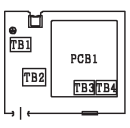
COB04M132B22S



Mark	Name	Remark
PCB1	Printed Circuit Board	
TB1	Terminal Block	for Power Supply
TB2	Terminal Block	for Communication [Water Source Unit (or Outdoor Unit)]
TB3, 4	Terminal Block	for Communication [Indoor Unit]
$MVD_{1\sim4}$	Electronic Expansion Valve	
$MVS_{1\sim4}$	Electronic Expansion Valve	
EFR_1, EFS_1	Fuse	
LED1	LED [Red]	Power Status
LED2	LED [Red]	DC Power Status
LED3	LED [Yellow]	Communication [Water Source Unit (or Outdoor Unit)]
LED4~7	LED [Yellow]	Communication [Indoor Unit]
LED10~17	LED [Green]	
DSW1~3	DIP Switch	
DSW4	DIP Switch	Communication [Water Source Unit (or Outdoor Unit)]
DSW5~8	DIP Switch	Communication [Indoor Unit]



Arrangement of Electronic Expansion Valves (View from Above)



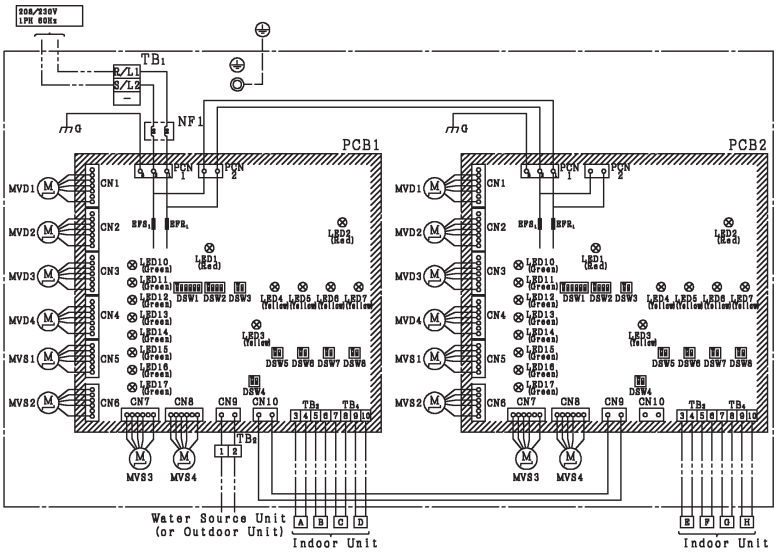
Mark	Torque to tighten the terminal	Screw Size
TB1	0.7~1.0 (lbf·ft) [1.0~1.3 (N·m)]	M4
TB2	0.7~1.0 (lbf·ft) [1.0~1.3 (N·m)]	
TB3,4	0.5~0.8 (lbf·ft) [0.7~1.1 (N·m)]	M3.5

Indoor Unit	Mark		
Indoor Unit A	PCB1	TB3-3 TB3-4	MVD1 MVS1
Indoor Unit B		TB3-5 TB3-6	MVD2 MVS2
Indoor Unit C		TB4-7 TB4-8	MVD3 MVS3
Indoor Unit D		TB4-9 TB4-10	MVD4 MVS4

——: Factory Wiring ——: Ground Wiring
——·——: Change-Over Box ——: Field Wiring
: Main PCB

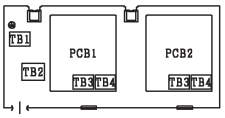
Note:
1. All the field wiring and equipment must comply with local codes.

COB08M264B22S

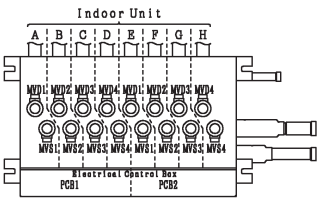


Mark	Torque to tighten the terminal	Screw Size
TB1	0.7~1.0 (lbf·ft) (1.0~1.3 (N·m))	M4
TB2	0.7~1.0 (lbf·ft) (1.0~1.3 (N·m))	
TB3,4	0.5~0.8 (lbf·ft) (0.7~1.1 (N·m))	M3.5

Indoor Unit	Mark		
Indoor Unit A	PCB1	TB3-3 TB3-4	MVD1 MVS1
Indoor Unit B		TB3-5 TB3-6	MVD2 MVS2
Indoor Unit C		TB4-7 TB4-8	MVD3 MVS3
Indoor Unit D		TB4-9 TB4-10	MVD4 MVS4
Indoor Unit E	PCB2	TB3-3 TB3-4	MVD1 MVS1
Indoor Unit F		TB3-5 TB3-6	MVD2 MVS2
Indoor Unit G		TB4-7 TB4-8	MVD3 MVS3
Indoor Unit H		TB4-9 TB4-10	MVD4 MVS4



Electrical Control Box



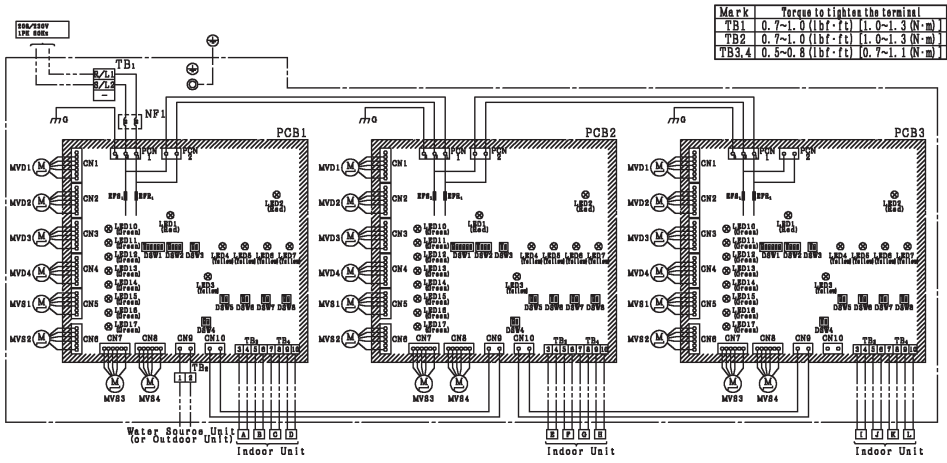
Arrangement of Electronic Expansion Valves (View from Above)

——: Factory Wiring ——: Ground Wiring
– – –: Change-Over Box –·–·–: Field Wiring
▭: Main PCB

Note:
1. All the field wiring and equipment must comply with local codes.

Mark	Name	Remark
PCB1, 2	Printed Circuit Board	
TB1	Terminal Block	for Power Supply
TB2	Terminal Block	for Communication (Water Source Unit (or Outdoor Unit))
TB3, 4	Terminal Block	for Communication (Indoor Unit)
$MVD_{1\sim4}$	Electronic Expansion Valve	
$MVS_{1\sim4}$	Electronic Expansion Valve	
NF1	Noise Filter	
EFR_1, EFS_1	Fuse	
LED1	LED (Red)	Power Status
LED2	LED (Red)	DC Power Status
LED3	LED (Yellow)	Communication (Water Source Unit (or Outdoor Unit))
LED4~7	LED (Yellow)	Communication (Indoor Unit)
LED10~17	LED (Green)	
DSW1~3	DIP Switch	
DSW4	DIP Switch	Communication (Water Source Unit (or Outdoor Unit))
DSW5~8	DIP Switch	Communication (Indoor Unit)

COB12M264B22S

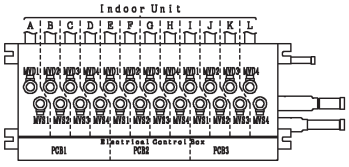


Mark	Torque to tighten the terminal	Screw Size
TB1	0.7~1.0 (lbf·ft) (1.0~1.3 (N·m))	M4
TB2	0.7~1.0 (lbf·ft) (1.0~1.3 (N·m))	
TB3,4	0.5~0.8 (lbf·ft) (0.7~1.1 (N·m))	M3.5

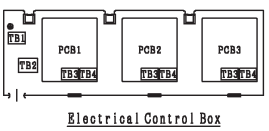
Indoor Unit	Mark		
Indoor Unit A	PCB1	TB3-3 TB3-4	MVD1 MVS1
Indoor Unit B		TB3-5 TB3-6	MVD2 MVS2
Indoor Unit C		TB4-7 TB4-8	MVD3 MVS3
Indoor Unit D		TB4-9 TB4-10	MVD4 MVS4
Indoor Unit E	PCB2	TB3-3 TB3-4	MVD1 MVS1
Indoor Unit F		TB3-5 TB3-6	MVD2 MVS2
Indoor Unit G		TB4-7 TB4-8	MVD3 MVS3
Indoor Unit H		TB4-9 TB4-10	MVD4 MVS4
Indoor Unit I	PCB3	TB3-3 TB3-4	MVD1 MVS1
Indoor Unit J		TB3-5 TB3-6	MVD2 MVS2
Indoor Unit K		TB4-7 TB4-8	MVD3 MVS3
Indoor Unit L		TB4-9 TB4-10	MVD4 MVS4

——: Factory Wiring
– – –: Change-Over Box
——: Ground Wiring
–·–·–: Field Wiring
▭: Main PCB

Note:
1. All the field wiring and equipment must comply with local codes.



Arrangement of Electronic Expansion Valves (View from Above)



Electrical Control Box

Mark	Name	Remark
PCB1~3	Printed Circuit Board	
TB1	Terminal Block	for Power Supply
TB2	Terminal Block	for Communication (Water Source Unit (or Outdoor Unit))
TB3, 4	Terminal Block	for Communication (Indoor Unit)
$MVD_{1\sim4}$	Electronic Expansion Valve	
$MVS_{1\sim4}$	Electronic Expansion Valve	
NF1	Noise Filter	
EFR_1, EFS_1	Fuse	
LED1	LED (Red)	Power Status
LED2	LED (Red)	DC Power Status
LED3	LED (Yellow)	Communication (Water Source Unit (or Outdoor Unit))
LED4~7	LED (Yellow)	Communication (Indoor Unit)
LED10~17	LED (Yellow)	
DSW1~3	DIP Switch	
DSW4	DIP Switch	Communication (Water Source Unit (or Outdoor Unit))
DSW5~8	DIP Switch	Communication (Indoor Unit)

4. Optional Parts

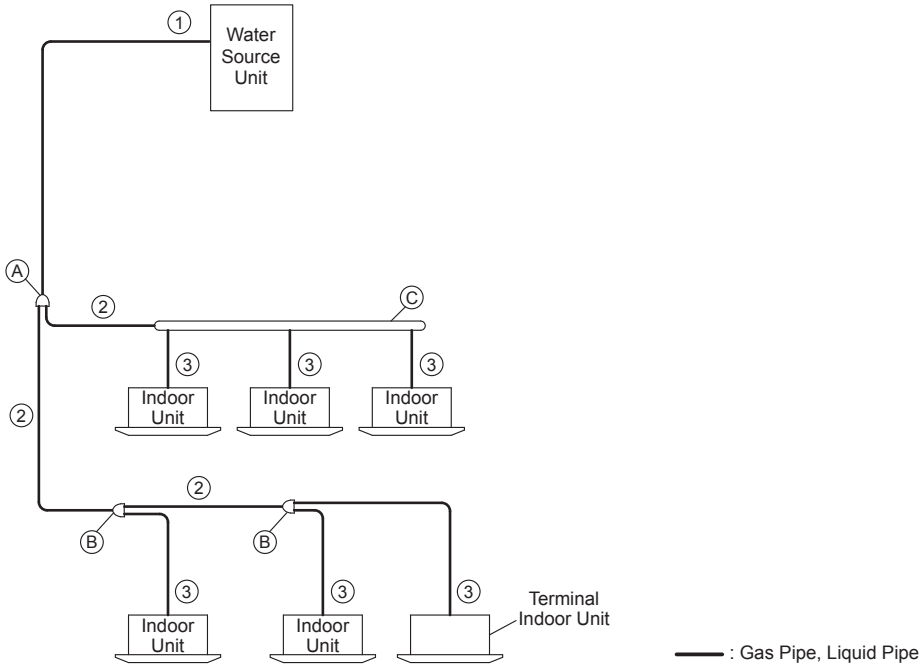
4.1 Line Up

Item No.	Type	Adopting Model Name	Item No.	Optional Parts	Optional Parts Model Name
4.2	Piping Kit	—	4.2.1	Multi-Kit (Line Branch) for Heat Recovery System (3-Pipes Connection)	MW-NP142X3
					MW-NP282X3
					MW-NP452X3
					MW-NP562X3
					MW-NP902X3
			4.2.2	Multi-Kit (Line Branch) for Heat Pump System and Heat Recovery System (2-Pipes Connection)	MW-NP282A3
					MW-NP452A3
					MW-NP692A3
					MW-NP902A3
			4.2.3	Multi-Kit (Header Branch) for Heat Recovery System (3-Pipes Connection)	MH-NP288X
			4.2.4	Multi-Kit (Header Branch) for Heat Pump System and Heat Recovery System (2-Pipes Connection)	MH-NP224A
					MH-NP288A

4.2 Piping Kit

■ Piping Kit Selection

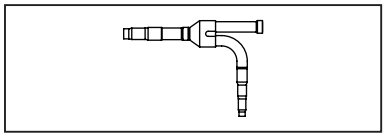
Heat Pump System



Multi-Kit (Optional Parts)

Line Branch

Branch using Multi-Kit (MW Model)



If Ⓑ "Multi-Kit after First Branch" is larger than Ⓐ "Multi-Kit for First Branch", use the same model as Ⓐ "Multi-Kit for First Branch".

Ⓐ Multi-Kit for First Branch

Water Source Unit Capacity (MBH)	Model
72 - 96	MW-NP282A3
120 - 144	MW-NP452A3
168	MW-NP692A3
192 - 216	MW-NP902A3

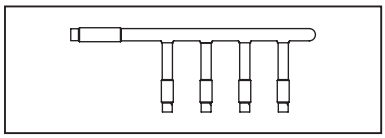
NOTE:
Header branch can also be used instead of the multi-kit as first branch.

Ⓑ Multi-Kit after First Branch

Total Indoor Unit Capacity (MBH)	Model
≤ 95	MW-NP282A3
96 - 143	MW-NP452A3
144 - 215	MW-NP692A3
≥ 216	MW-NP902A3

Header Branch

Branch using Multi-Kit (MH Model)



Ⓒ Header Branch

Total Indoor Unit Capacity (MBH)	No. of Header Branches	Model
36 - 60	4	MH-NP224A
36 - 96	8	MH-NP288A

Refer to the figure at the beginning of Section 2.14.1.1.

Piping Size Unit: inch (mm)

① Main Pipe Diameter
(Water Source Unit to First Branch)

Model: (H,Y)VWHP_B(3,4)2S

Water Source Unit Capacity (MBH)	Gas	Liquid	
		Equivalent Piping Length between Water Source Unit and Ⓐ "Multi-Kit for First Branch"	
		< 263 ft (80m)	≥ 263 ft (80m) *1
72	3/4 (19.05)	3/8 (9.52)	1/2 (12.7)
96	7/8 (22.2)	3/8 (9.52)	1/2 (12.7)
120	7/8 (22.2)	1/2 (12.7)	5/8 (15.88)
144	1-1/8 (28.58)	1/2 (12.7)	5/8 (15.88)
168 - 216	1-1/8 (28.58)	5/8 (15.88)	3/4 (19.05)

*1 In some cases, it is required to prepare the reducer (field-supplied).

② Diameter of Pipe after First Branch

If the size of ② "Diameter of Pipe after First Branch" is larger than the size of ① "Main Pipe Diameter", adjust the size of ② "Diameter of Pipe after First Branch" to the same size as ① "Main Pipe Diameter".

Total Indoor Unit Capacity (MBH)	Piping Length between First Branch and Indoor Unit	
	Gas	Liquid
≤ 47	5/8 (15.88)	3/8 (9.52)
48 - 71	3/4 (19.05)	3/8 (9.52)
72 - 95	7/8 (22.2)	3/8 (9.52)
96 - 119	7/8 (22.2)	1/2 (12.7)
120 - 143	1-1/8 (28.58)	1/2 (12.7)
144 - 215	1-1/8 (28.58)	5/8 (15.88)
216 - 299	1-3/8 (34.93)	3/4 (19.05)

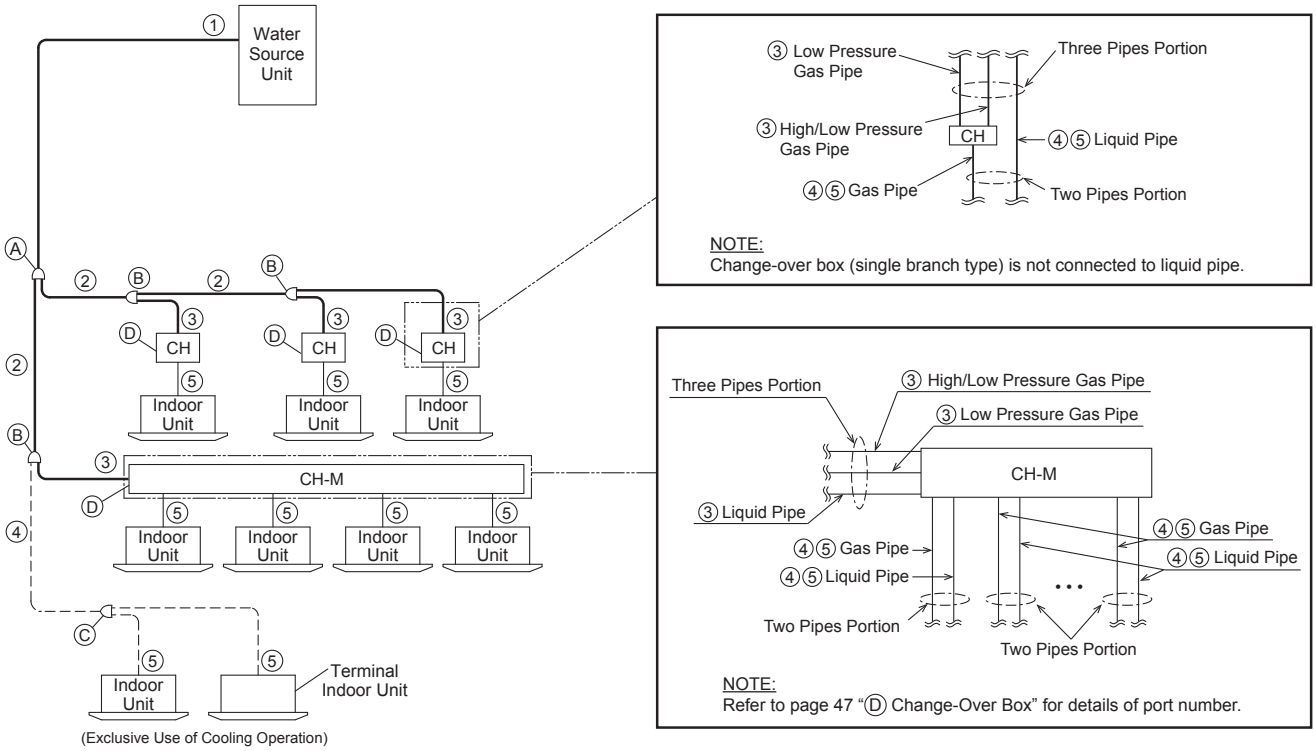
③ Diameter of Pipe Connected to Indoor Unit

The pipe diameter should be the same as the indoor unit pipe connection size.

Indoor Unit Capacity (MBH)	Gas	Liquid
6 - 15	1/2 (12.7)	1/4 (6.35) *2
18 - 54	5/8 (15.88)	3/8 (9.52)
60 - 72	3/4 (19.05)	3/8 (9.52)
96	7/8 (22.2)	3/8 (9.52)

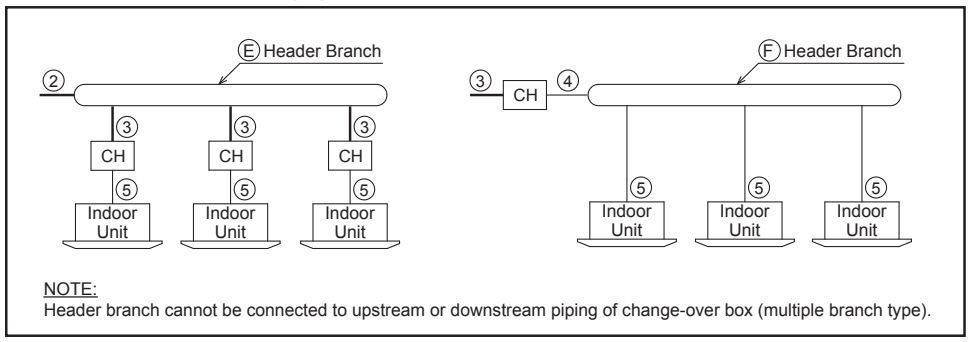
*2 When liquid piping length is longer than 49 ft (15m), use 3/8 inch (9.52mm) diameter pipe to connect to the indoor unit.

Heat Recovery System



—— : High/Low Pressure Gas Pipe, Low Pressure Gas Pipe, Liquid Pipe
—— : Gas Pipe, Liquid Pipe
- - - - - : Low Pressure Gas Pipe, Liquid Pipe
CH : Change-Over Box (Single Branch Type)
CH-M : Change-Over Box (Multiple Branch Type)

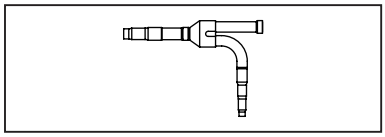
If header branch is used instead of Ⓑ Ⓒ multi-kit.



Multi-Kit (Optional Parts)

Line Branch

Branch using Multi-Kit (MW Model)



If Ⓑ "Multi-Kit after First Branch" is larger than Ⓐ "Multi-Kit for First Branch", use the same model as Ⓐ "Multi-Kit for First Branch".

Ⓐ Multi-Kit for First Branch

Water Source Unit Capacity (MBH)	Model
72 - 96	MW-NP282X3
120 - 144	MW-NP452X3
168	MW-NP562X3
192 - 216	MW-NP902X3

NOTE:
The change-over box (multiple branch type) or header branch can also be used instead of the multi-kit as first branch.

Ⓑ Multi-Kit after First Branch (Three Pipes Portion)

Total Indoor Unit Capacity (MBH)	Model
≤ 47	MW-NP142X3
48 - 95	MW-NP282X3
96 - 143	MW-NP452X3
144 - 215	MW-NP562X3
≥ 216	MW-NP902X3

Ⓒ Multi-Kit after First Branch (Two Pipes Portion)

Total Indoor Unit Capacity (MBH)	Model
≤ 95	MW-NP282A3
96 - 143	MW-NP452A3
144 - 215	MW-NP692A3
≥ 216	MW-NP902A3

Ⓓ Change-Over Box

● Single Unit for 1 Port

Model	Indoor Unit Side Port Number	Indoor Unit Maximum Connection Capacity	Indoor Unit Maximum Connection Capacity for 1 Port
COBS048B22S	1	≤ 54	≤ 54
COBS096B22S	1	≤ 96	≤ 96
COB04M132B22S	4	≤ 132	≤ 96 *1
COB08M264B22S	8	≤ 264	≤ 96 *1
COB12M264B22S	12	≤ 264	≤ 96 *1

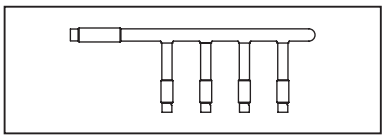
*1 Up to two 60, 72 or 96 type indoor units can be connected to the change-over box within the “Indoor Unit Maximum Connection Capacity” shown in above table.
Make sure to increase the pipe connection size by using the appropriate accessory pipe.

● Multiple Units for 1 Port

Model	Indoor Unit Side Port Number	Maximum Number of Connected Indoor Units for 1 Port	Indoor Unit Maximum Connection Capacity	Indoor Unit Maximum Connection Capacity for 1 Port
COBS048B22S	1	7	≤ 41	≤ 41
COBS096B22S	1	8	≤ 71	≤ 71
COB04M132B22S	4	6	≤ 114	≤ 41
COB08M264B22S	8	6	≤ 216	≤ 41
COB12M264B22S	12	6	≤ 216	≤ 41

Header Branch

Branch using Multi-Kit (MH Model)



Ⓔ for Three Pipes Portion

Total Indoor Unit Capacity (MBH)	No. of Header Branches	Model
36 - 72	8	MH-NP288X

Ⓕ for Two Pipes Portion

Total Indoor Unit Capacity (MBH)	No. of Header Branches	Model
36 - 60	4	MH-NP224A
36 - 72	8	MH-NP288A

Refer to the figure at the beginning of Section 2.14.1.2.

Piping Size Unit: inch (mm)

① Main Pipe Diameter
(Water Source Unit to First Branch)

Model: (H,Y)VWHR_B(3,4)2S

Water Source Unit Capacity (MBH)	Low Pressure Gas	High/Low Pressure Gas	Liquid	
			Equivalent Piping Length between Water Source Unit and Ⓐ "Multi-Kit for First Branch"	
			< 263 ft (80m)	≥ 263 ft (80m) *2
72	3/4 (19.05)	5/8 (15.88)	3/8 (9.52)	1/2 (12.7)
96	7/8 (22.2)	3/4 (19.05)	3/8 (9.52)	1/2 (12.7)
120	7/8 (22.2)	3/4 (19.05)	1/2 (12.7)	5/8 (15.88)
144	1-1/8 (28.58)	7/8 (22.2)	1/2 (12.7)	5/8 (15.88)
168 - 216	1-1/8 (28.58)	7/8 (22.2)	5/8 (15.88)	3/4 (19.05)

*2 In some cases, it is required to prepare the reducer (field-supplied).

② Diameter of Pipe after First Branch *3

Total Indoor Unit Capacity (MBH)	Low Pressure Gas	High/Low Pressure Gas	Liquid
≤ 47	5/8 (15.88)	1/2 (12.7)	3/8 (9.52)
48 - 71	3/4 (19.05)	5/8 (15.88)	3/8 (9.52)
72 - 95	7/8 (22.2)	3/4 (19.05)	3/8 (9.52)
96 - 119	7/8 (22.2)	3/4 (19.05)	1/2 (12.7)
120 - 143	1-1/8 (28.58)	7/8 (22.2)	1/2 (12.7)
144 - 215	1-1/8 (28.58)	7/8 (22.2)	5/8 (15.88)
216 - 299	1-3/8 (34.93)	1-1/8 (28.58)	3/4 (19.05)

*3 If the size of ② "Diameter of Pipe after First Branch" is larger than the size of ① "Main Pipe Diameter", adjust the size of ② "Diameter of Pipe after First Branch" to the same size as ① "Main Pipe Diameter".

③ Diameter of Pipe between Change-Over Box and Multi-Kit

For Change-Over Box *4

Change-Over Box Model	Total Indoor Unit Capacity (MBH)	Low Pressure Gas	High/Low Pressure Gas	Liquid *5
COBS048/096B22S COB04M132B22S COB08/12M264B22S	≤ 47	5/8 (15.88)	1/2 (12.7)	3/8 (9.52)
	48 - 71	3/4 (19.05)	5/8 (15.88)	3/8 (9.52)
	72 - 95	7/8 (22.2)	3/4 (19.05)	3/8 (9.52)
	96 - 119	7/8 (22.2)	3/4 (19.05)	1/2 (12.7)
	120 - 143	1-1/8 (28.58)	7/8 (22.2)	1/2 (12.7)
	144 - 215	1-1/8 (28.58)	7/8 (22.2)	5/8 (15.88)
	216 - 264	1-3/8 (34.93)	1-1/8 (28.58)	3/4 (19.05)

*4 If the size of ③ "Diameter of Pipe between Change-Over Box and Multi-Kit" is larger than the size of ① "Main Pipe Diameter", adjust the size of ③ "Diameter of Pipe between Change-Over Box and Multi-Kit" to the same size as ① "Main Pipe Diameter"

*5 Change-Over Box (COBS048/096B22S) is not connected to liquid pipe.

Piping Size Unit: inch (mm)

④ Diameter of Pipe (Two Pipes Portion)

Total Indoor Unit Capacity (MBH)	Gas *6	Liquid
≤ 47	5/8 (15.88)	3/8 (9.52)
48 - 71	3/4 (19.05)	3/8 (9.52)
72 - 95	7/8 (22.2)	3/8 (9.52)
96 - 119	7/8 (22.2)	1/2 (12.7)
120 - 143	1-1/8 (28.58)	1/2 (12.7)
144 - 215	1-1/8 (28.58)	5/8 (15.88)
216 - 299	1-3/8 (34.93)	3/4 (19.05)

*6 For the exclusive use of cooling operation, connect the low pressure gas pipe to the gas pipe of line branch or header branch for two pipes portion.

⑤ Diameter of Pipe Connected to Indoor Unit (Two Pipes Portion)

The pipe diameter should be the same as the indoor unit piping connection size.

Indoor Unit Capacity (MBH)	Gas *7	Liquid
6 - 15	1/2 (12.7)	1/4 (6.35) *8
18 - 54	5/8 (15.88)	3/8 (9.52)
60 - 72	3/4 (19.05)	3/8 (9.52)
96	7/8 (22.2)	3/8 (9.52)

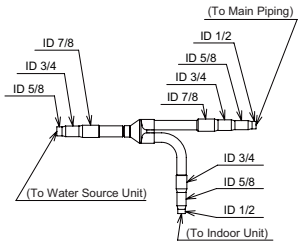
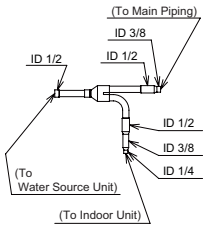
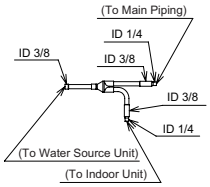
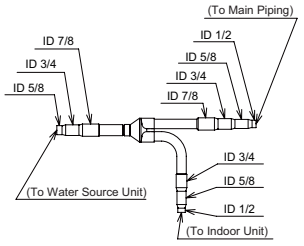
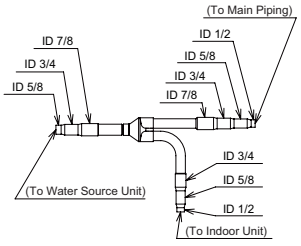
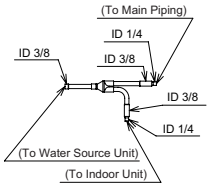
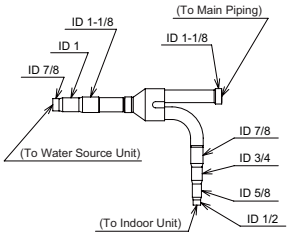
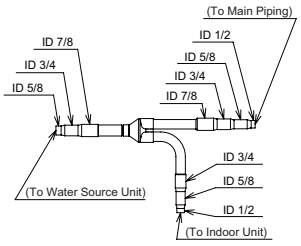
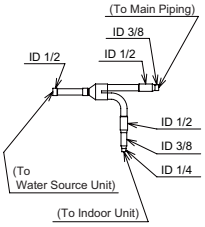
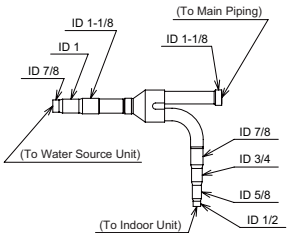
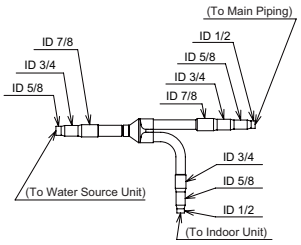
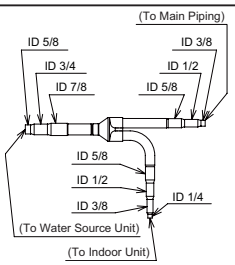
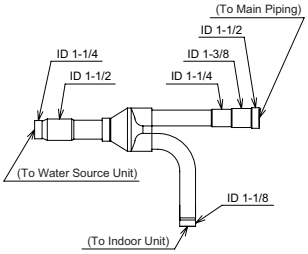
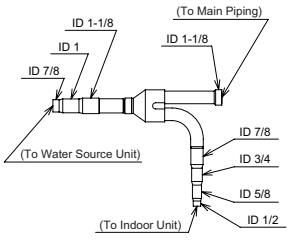
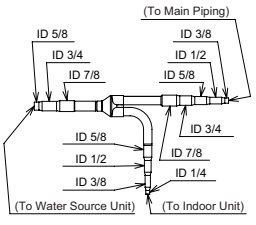
*7 For the exclusive use of cooling operation, connect the low pressure gas pipe to the gas pipe of the indoor unit.

*8 When liquid piping length is longer than 49 ft (15m), use 3/8 inch (9.52mm) diameter piping, to connect to the indoor unit (two pipes portion).

4.2.1 Multi-Kit (Line Branch) for Heat Recovery System (3-Pipes Connection) MW-NP142X3, MW-NP282X3, MW-NP452X3, MW-NP562X3 and MW-NP902X3

Piping Connection Size

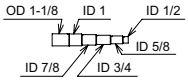
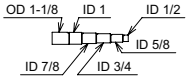
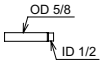
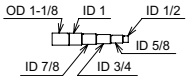
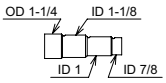
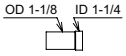
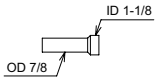
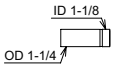
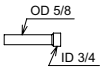
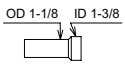
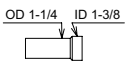
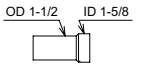
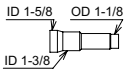
The ends of the multi-kits are finished as shown in the following figures. Cut the end of the pipe to meet with the pipe size.

Model	Branch Pipe for Low Pressure Gas Line	Branch Pipe for High/Low Pressure Gas Line	Branch Pipe for Liquid Line
MW-NP142X3			
MW-NP282X3			
MW-NP452X3			
MW-NP562X3			
MW-NP902X3			

Unit: inch, ID: Inner Diameter

NOTE:

Refer to the “Installation Manual for Multi-Kit” for more details.

Model	Reducer for Gas Line					Reducer for Liquid Line	
MW-NP142X3	—	—		—		 (Qty. 2)	
MW-NP282X3	—	—		—			
MW-NP452X3		—		—			
MW-NP562X3		—		—			
MW-NP902X3	 (Qty. 2)		 (Qty. 2)				
		 (Qty. 2)		 (Qty. 2)			

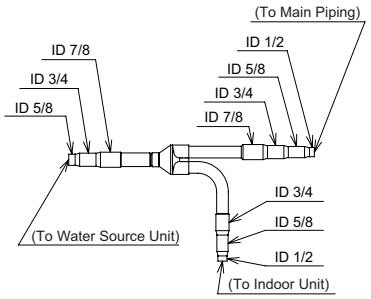
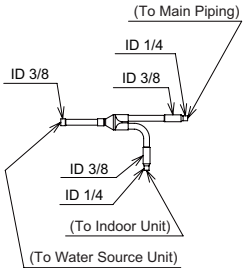
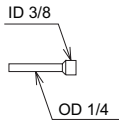
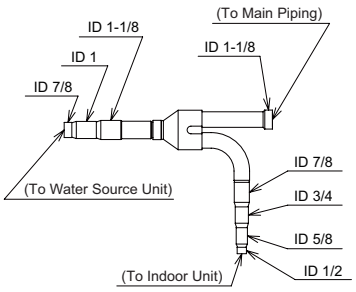
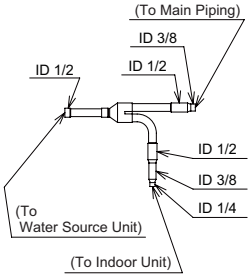
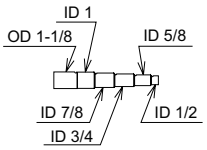
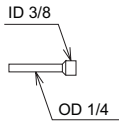
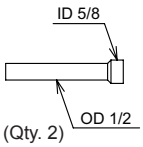
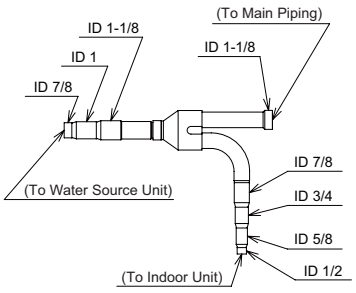
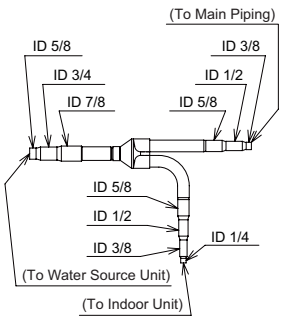
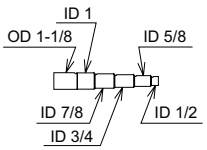
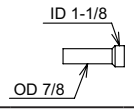
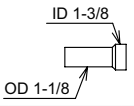
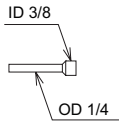
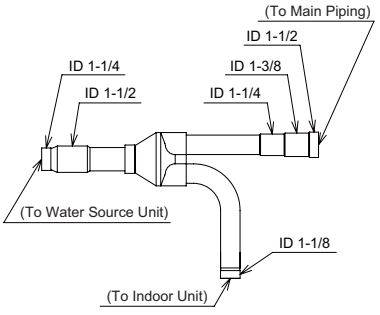
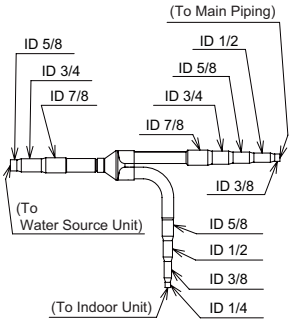
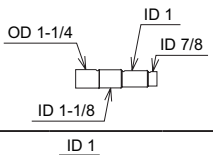
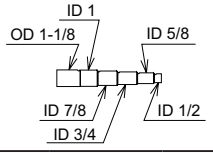
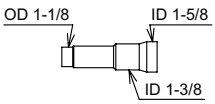
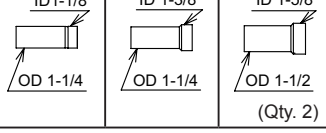
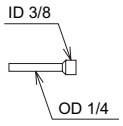
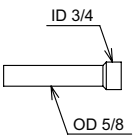
Unit: inch, ID: Inner Diameter, OD: Outer Diameter

NOTE:
Refer to the “Installation Manual for Multi-Kit” for more details.

4.2.2 Multi-Kit (Line Branch) for Heat Pump System and Heat Recovery System (2-Pipes Connection)
MW-NP282A3, MW-NP452A3, MW-NP692A3 and MW-NP902A3

Piping Connection Size

The ends of the multi-kits are finished as shown in the following figures. Cut the end of the pipe to get the right pipe size.

Model	Branch Pipe for Gas Line	Branch Pipe for Liquid Line	Reducer for Gas Line	Reducer for Liquid Line
MW-NP282A3			—	 (Qty. 2)
MW-NP452A3				  (Qty. 2)
MW-NP692A3			   (Qty. 2)	
MW-NP902A3			    (Qty. 2)	 

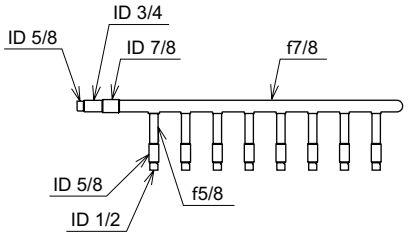
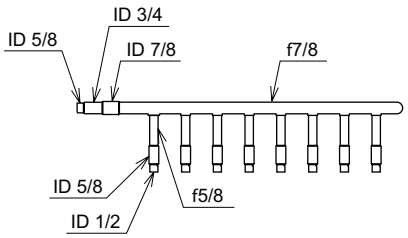
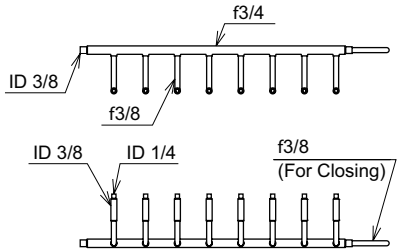
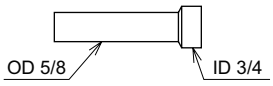
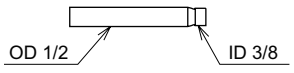
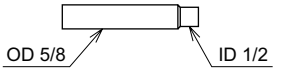
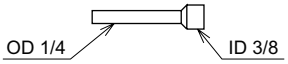
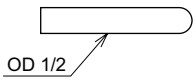
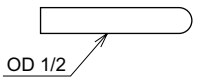
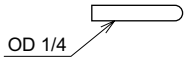
Unit: inch, ID: Inner Diameter, OD: Outer Diameter

NOTE:
Refer to the “Installation Manual for Multi-Kit” for more details.

4.2.3 Multi-Kit (Header Branch) for Heat Recovery System (3-Pipes Connection) MH-NP288X

Piping Connection Size

The ends of the multi-kits are finished as shown in the following figures. Cut the end of the pipe to get the right pipe size.

Name of Parts	MH-NP288X		
Low Pressure Gas Line			
High/Low Pressure Gas Line			
Liquid Line			
Expander	(For Low Pressure Gas Line)  Qty: 2 (For End of Multi-Kit Connection)	(For High/Low Pressure Gas Line)  Qty: 8 (For End of Multi-Kit Connection)  Qty: 1 (For End of Multi-Kit Connection)	(For Liquid Line)  Qty: 10 (2: For End of Multi-Kit Connection 8: For Unit Piping Connection)
Closing Pipe	(For Low Pressure Gas Line)  Qty: 6	(For High/Low Pressure Gas Line)  Qty: 6	(For Liquid Line)  Qty: 6

Unit: inch, ID: Inner Diameter, OD: Outer Diameter

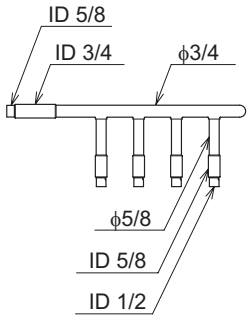
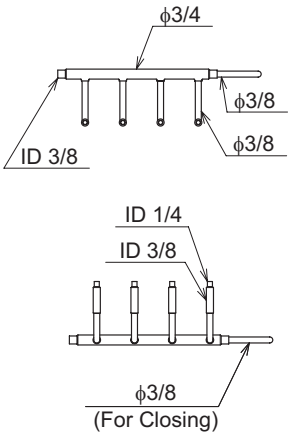
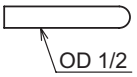
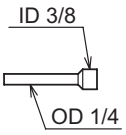
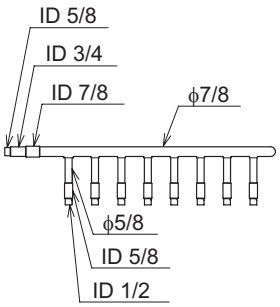
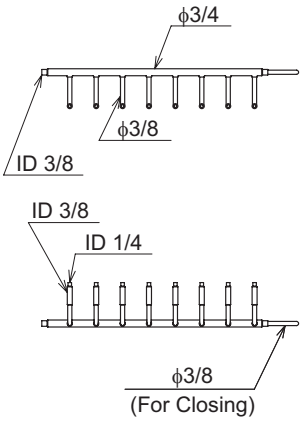
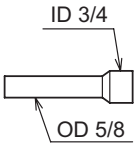
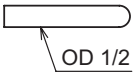
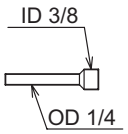
NOTE:

Refer to the “Installation Manual for Multi-Kit” for more details.

4.2.4 Multi-Kit (Header Branch) for Heat Pump System and Heat Recovery System (2-Pipes Connection)
MH-NP224A and MH-NP288A

Piping Connection Size

The ends of the multi-kits are finished as shown in the following figures. Cut the end of the pipe to get the right pipe size.

<table>
<tr><th>Models</th><th>Gas Line</th><th>Liquid Line</th><th>Expander</th><th>Closing Pipe</th></tr>
<tr><td rowspan="2">MH-NP224A</td><td rowspan="2"> 
</td><td rowspan="2"> 
</td><td></td><td>(For Gas Line)
 
Qty.: 2</td></tr>
<tr><td>(For Liquid Line)
 
Qty.: 4</td><td>(For Liquid Line)
 
Qty.: 2</td></tr>
<tr><td>MH-NP288A</td><td> 
</td><td> 
</td><td>(For Gas Line)
 
Qty.: 2</td><td>(For Gas Line)
 
Qty.: 6</td></tr>
<tr><td></td><td></td><td>(For Liquid Line)
 
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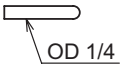
 
Qty.: 6</td></tr>
</table>

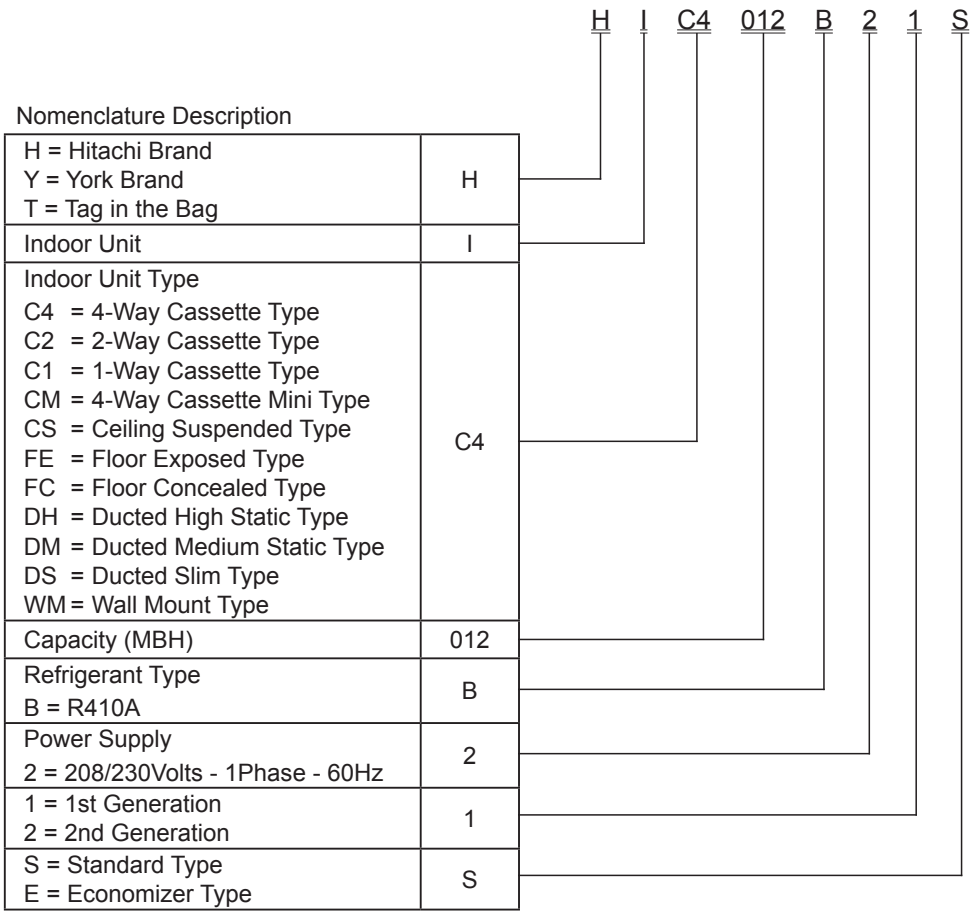
Unit: inch, ID: Inner Diameter, OD: Outer Diameter

NOTE:
Refer to the “Installation Manual for Multi-Kit” for more details.

5. Selection Data

5.1 Selection Guide

(1) Key for Terms Used for Indoor Units



Nomenclature Description

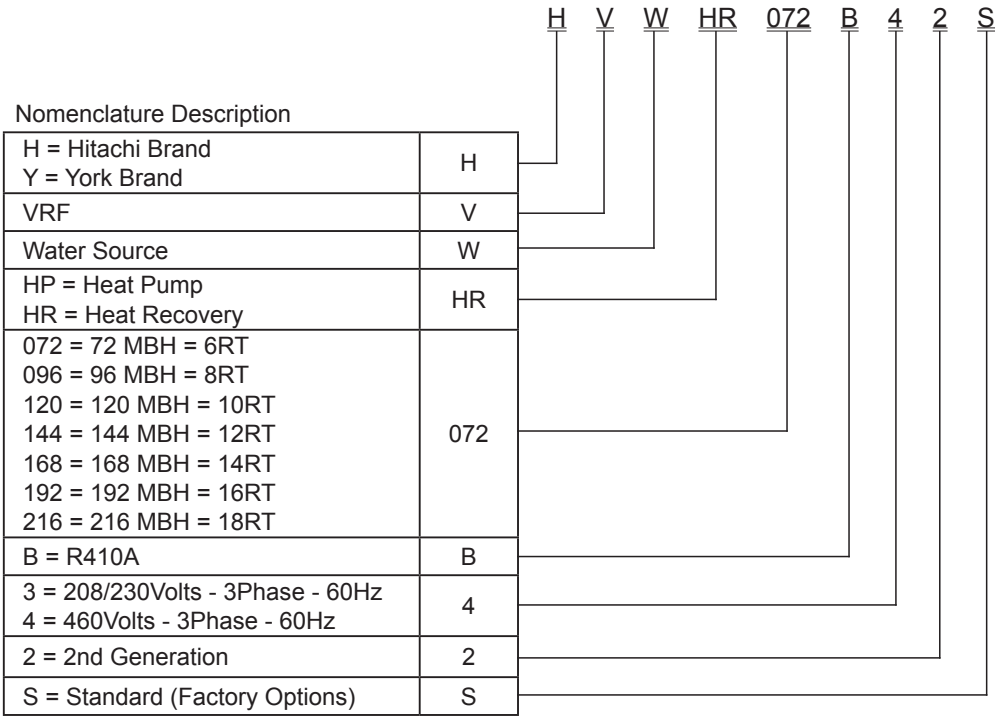
H = Hitachi Brand Y = York Brand T = Tag in the Bag	H
Indoor Unit	I
Indoor Unit Type C4 = 4-Way Cassette Type C2 = 2-Way Cassette Type C1 = 1-Way Cassette Type CM = 4-Way Cassette Mini Type CS = Ceiling Suspended Type FE = Floor Exposed Type FC = Floor Concealed Type DH = Ducted High Static Type DM = Ducted Medium Static Type DS = Ducted Slim Type WM = Wall Mount Type	C4
Capacity (MBH)	012
Refrigerant Type B = R410A	B
Power Supply 2 = 208/230Volts - 1Phase - 60Hz	2
1 = 1st Generation 2 = 2nd Generation	1
S = Standard Type E = Economizer Type	S

(2) Nominal Capacity of Indoor Units

Capacity		006	008	012	015	018	024	027
Nominal Cooling Capacity	Btu/h	6,000	8,000	12,000	15,000	18,000	24,000	27,000
	(kW)	(1.8)	(2.3)	(3.5)	(4.4)	(5.3)	(7.0)	(8.0)
Nominal Heating Capacity	Btu/h	6,700	9,000	13,500	17,000	20,000	27,000	30,000
	(kW)	(2.0)	(2.6)	(4.0)	(5.0)	(5.9)	(8.0)	(8.8)

Capacity		030	036	048	054	060	072	096
Nominal Cooling Capacity	Btu/h	30,000	36,000	48,000	54,000	60,000	72,000	96,000
	(kW)	(8.8)	(10.5)	(14.1)	(15.8)	(17.6)	(21.1)	(28.2)
Nominal Heating Capacity	Btu/h	34,000	40,000	54,000	60,000	64,000	81,000	108,000
	(kW)	(10.0)	(11.7)	(15.8)	(17.6)	(18.8)	(23.8)	(31.7)

(3) Key for Terms Used for Water Source Unit



Nomenclature Description

H = Hitachi Brand Y = York Brand	H
VRF	V
Water Source	W
HP = Heat Pump HR = Heat Recovery	HR
072 = 72 MBH = 6RT 096 = 96 MBH = 8RT 120 = 120 MBH = 10RT 144 = 144 MBH = 12RT 168 = 168 MBH = 14RT 192 = 192 MBH = 16RT 216 = 216 MBH = 18RT	072
B = R410A	B
3 = 208/230Volts - 3Phase - 60Hz 4 = 460Volts - 3Phase - 60Hz	4
2 = 2nd Generation	2
S = Standard (Factory Options)	S

(4) Nominal Capacity of Water Source Unit

Capacity		072	096	120	144
Nominal Cooling Capacity	Btu/h	72,000	96,000	120,000	144,000
	(kW)	(21.1)	(28.1)	(35.2)	(42.2)
Nominal Heating Capacity	Btu/h	81,000	108,000	135,000	162,000
	(kW)	(23.7)	(31.7)	(39.6)	(47.5)

Capacity		168	192	216
Nominal Cooling Capacity	Btu/h	168,000	192,000	216,000
	(kW)	(49.2)	(56.3)	(63.3)
Nominal Heating Capacity	Btu/h	189,000	216,000	243,000
	(kW)	(55.4)	(63.3)	(71.2)

Nominal Capacity of Water Source Unit is under the condition that the total indoor unit capacity is same as water source unit capacity.

(5) Given Condition (Example)

● Estimated Load

Item		Room (1)	Room (2)	Room (3)	Room (4)
Estimated Cooling Load	Btu/h	16,000	10,000	10,000	15,500
	(kW)	(4.7)	(2.9)	(2.9)	(4.5)
Estimated Heating Load	Btu/h	16,500	11,000	11,000	16,000
	(kW)	(4.8)	(3.2)	(3.2)	(4.7)

Item		Room (5)	Room (6)	Room (7)
Estimated Cooling Load	Btu/h	27,000	5,000	9,000
	(kW)	(7.9)	(1.5)	(2.6)
Estimated Heating Load	Btu/h	28,000	5,500	10,000
	(kW)	(8.2)	(1.6)	(2.9)

● Temperature Condition

Cooling	Heating
Entering Water Temperature: 86°F (30°C) Indoor Unit Air Inlet Dry Bulb: 82°F (27.8°C) Wet Bulb: 69°F (20.6°C)	Entering Water Temperature: 50°F (10°C) Indoor Unit Air Inlet Dry Bulb: 68°F (20°C)

● Water Flow Rate Condition: 41gpm (155L/min)

● Piping Condition
Heat Pump System (2 Pipes)
Equivalent Piping Length between Indoor Units and Water Source Unit: 250 ft (76m)
Piping Lift: 50 ft (15m)
Power Supply: 60Hz

(6) Selecting Matching Indoor Units and Nominal Capacity

Select Ducted Medium Type Indoor Units (Example)

Item		Room (1)	Room (2)	Room (3)	Room (4)
Selected Model		HIDM018B22S	HIDM012B22S	HIDM012B22S	HIDM018B22S
Nominal Cooling Capacity	Btu/h	18,000	12,000	12,000	18,000
	(kW)	(5.3)	(3.5)	(3.5)	(5.3)
Nominal Heating Capacity	Btu/h	20,000	13,500	13,500	20,000
	(kW)	(5.9)	(4.0)	(4.0)	(5.9)

Item		Room (5)	Room (6)	Room (7)	Total
Selected Model		HIDM030B22S	HIDM006B22S	HIDM012B22S	(1) ~ (7)
Nominal Cooling Capacity	Btu/h	30,000	6,000	12,000	108,000
	(kW)	(8.8)	(1.8)	(3.5)	(31.7)
Nominal Heating Capacity	Btu/h	34,000	6,700	13,500	121,200
	(kW)	(10.0)	(2.0)	(4.0)	(35.5)

Item		Water Source Unit
Selected Model		HVWHP120B32S
Nominal Cooling Capacity	Btu/h	120,000
	(kW)	(35.2)
Nominal Heating Capacity	Btu/h	135,000
	(kW)	(39.6)

Connected Indoor Unit Capacity Ratio = 90%

(7) Actual Capacity

In the example, the total indoor unit capacity is 108MBH
(= 18MBH + 12MBH + 12MBH + 18MBH + 30MBH + 6MBH + 12MBH),
and water source unit capacity is 120MBH.
Therefore, the connected indoor unit capacity ratio is 90%.

a) Actual Capacity of Water Source Unit

Maximum Actual Capacity of Water Source Unit
= ① Water Source Unit Capacity According to Temperature Condition and Connected IDU Capacity Ratio
× ② Correction Factor According to Piping Length and Lift

	①	②
Cooling	115.6 MBH	0.85
Heating	116.5 MBH	0.88
Note	Section 5.2	Section 5.3

Maximum Actual Capacity of Water Source Unit
Cooling = 115,600 Btu/h × 0.85 = 98,260 Btu/h
Heating = 116,500 Btu/h × 0.88 = 102,520 Btu/h

b) Actual Capacity of Each Indoor Unit

Actual Capacity of Each Indoor Unit
= Actual Capacity of Water Source Unit × Each Indoor Unit Capacity ÷ Total Indoor Unit Capacity

If actual capacity is not enough against estimated load,
re-select indoor unit model for this room, and adjust water source unit model. (Return to step (6))

Result

Item			Room (1)	Room (2)	Room (3)	Room (4)
Selected Model			HIDM018B22S	HIDM012B22S	HIDM012B22S	HIDM018B22S
Actual Capacity	Actual Maximum Cooling Capacity	Btu/h (kW)	16,377 (4.8)	10,918 (3.2)	10,918 (3.2)	16,377 (4.8)
	Actual Maximum Heating Capacity	Btu/h (kW)	17,087 (5.0)	11,391 (3.3)	11,391 (3.3)	17,087 (5.0)
Design Load	Estimated Cooling Load	Btu/h (kW)	16,000 (4.7)	10,000 (2.9)	10,000 (2.9)	15,500 (4.5)
	Estimated Heating Load	Btu/h (kW)	16,500 (4.8)	11,000 (3.2)	11,000 (3.2)	16,000 (4.7)

Item			Room (5)	Room (6)	Room (7)	Total
Selected Model			HIDM030B22S	HIDM006B22S	HIDM012B22S	(1) ~ (7)
Actual Capacity	Actual Maximum Cooling Capacity	Btu/h (kW)	27,294 (8.0)	5,459 (1.6)	10,918 (3.2)	98,260 (28.8)
	Actual Maximum Heating Capacity	Btu/h (kW)	28,478 (8.3)	5,696 (1.7)	11,391 (3.3)	102,520 (30.0)
Design Load	Estimated Cooling Load	Btu/h (kW)	27,000 (7.9)	5,000 (1.5)	9,000 (2.6)	92,500 (27.1)
	Estimated Heating Load	Btu/h (kW)	28,000 (8.2)	5,500 (1.6)	10,000 (2.9)	98,000 (28.7)

5.2 Water Source Unit Capacity According to Temperature Condition and Connected IDU Capacity Ratio

Cooling Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	10.6	65.6	1.74	68.5	1.75	71.3	1.75	73.9	1.75	75.4	1.75	76.4	1.75	78.8	1.75	81.1	1.74	83.2	1.73
		12.8	66.0	1.73	68.9	1.74	71.7	1.74	74.3	1.74	75.9	1.74	76.9	1.74	79.3	1.74	81.6	1.73	83.7	1.72
		15.1	66.4	1.72	69.3	1.73	72.1	1.73	74.8	1.73	76.3	1.73	77.3	1.73	79.7	1.73	82.1	1.72	84.2	1.71
		23.4	67.9	1.69	70.9	1.69	73.7	1.70	76.4	1.70	78.0	1.70	79.0	1.69	81.5	1.69	83.9	1.68	86.1	1.68
		31.7	69.4	1.65	72.4	1.66	75.3	1.66	78.1	1.66	79.7	1.66	80.7	1.66	83.3	1.66	85.7	1.65	88.0	1.64
	59	10.6	65.6	2.10	68.5	2.11	71.3	2.11	73.9	2.11	75.4	2.11	76.4	2.11	78.8	2.11	81.1	2.10	83.2	2.09
		12.8	66.0	2.09	68.9	2.10	71.7	2.10	74.3	2.10	75.9	2.10	76.9	2.10	79.3	2.09	81.6	2.09	83.7	2.08
		15.1	66.4	2.07	69.3	2.08	72.1	2.09	74.8	2.09	76.3	2.09	77.3	2.09	79.7	2.08	82.1	2.07	84.2	2.06
		23.4	67.9	2.03	70.9	2.04	73.7	2.04	76.4	2.04	78.0	2.04	79.0	2.04	81.5	2.04	83.9	2.03	86.1	2.02
		31.7	69.4	1.99	72.4	2.00	75.3	2.00	78.1	2.00	79.7	2.00	80.7	2.00	83.3	2.00	85.7	1.99	88.0	1.98
	68	10.6	65.6	2.56	68.5	2.57	71.3	2.58	73.9	2.58	75.4	2.58	76.4	2.57	78.8	2.57	81.1	2.56	83.2	2.55
		12.8	66.0	2.54	68.9	2.55	71.7	2.56	74.3	2.56	75.9	2.56	76.9	2.56	79.3	2.55	81.6	2.54	83.7	2.53
		15.1	66.4	2.53	69.3	2.54	72.1	2.55	74.8	2.55	76.3	2.54	77.3	2.54	79.7	2.54	82.1	2.53	84.2	2.51
		23.4	67.9	2.48	70.9	2.49	73.7	2.49	76.4	2.49	78.0	2.49	79.0	2.49	81.5	2.48	83.9	2.47	86.1	2.46
		31.7	69.4	2.43	72.4	2.44	75.3	2.44	78.1	2.44	79.7	2.44	80.7	2.44	83.3	2.43	85.7	2.42	88.0	2.41
	77	10.6	65.6	3.15	68.5	3.17	71.3	3.17	73.9	3.18	75.4	3.17	76.4	3.17	78.8	3.16	81.1	3.15	83.2	3.14
		12.8	66.0	3.14	68.9	3.15	71.7	3.16	74.3	3.16	75.9	3.15	76.9	3.15	79.3	3.14	81.6	3.13	83.7	3.12
		15.1	66.4	3.12	69.3	3.13	72.1	3.14	74.8	3.14	76.3	3.14	77.3	3.13	79.7	3.13	82.1	3.11	84.2	3.10
		23.4	67.9	3.05	70.9	3.06	73.7	3.07	76.4	3.07	78.0	3.07	79.0	3.07	81.5	3.06	83.9	3.05	86.1	3.03
		31.7	69.4	2.99	72.4	3.00	75.3	3.01	78.1	3.01	79.7	3.01	80.7	3.01	83.3	3.00	85.7	2.99	88.0	2.97
	86	10.6	65.6	3.92	68.5	3.93	71.3	3.94	73.9	3.94	75.4	3.94	76.4	3.94	78.8	3.93	81.1	3.91	83.2	3.89
		12.8	66.0	3.89	68.9	3.91	71.7	3.92	74.3	3.92	75.9	3.92	76.9	3.91	79.3	3.90	81.6	3.89	83.7	3.87
		15.1	66.4	3.87	69.3	3.88	72.1	3.89	74.8	3.90	76.3	3.89	77.3	3.89	79.7	3.88	82.1	3.87	84.2	3.85
		23.4	67.9	3.79	70.9	3.80	73.7	3.81	76.4	3.81	78.0	3.81	79.0	3.81	81.5	3.80	83.9	3.78	86.1	3.77
		31.7	69.4	3.71	72.4	3.73	75.3	3.74	78.1	3.74	79.7	3.73	80.7	3.73	83.3	3.72	85.7	3.71	88.0	3.69
	95	10.6	62.1	3.91	64.8	3.92	67.4	3.93	69.9	3.93	71.3	3.93	72.2	3.93	74.5	3.91	76.7	3.90	78.7	3.88
		12.8	62.5	3.88	65.2	3.90	67.8	3.90	70.3	3.91	71.7	3.90	72.7	3.90	75.0	3.89	77.1	3.88	79.2	3.86
		15.1	62.8	3.86	65.6	3.87	68.2	3.88	70.7	3.88	72.2	3.88	73.1	3.88	75.4	3.87	77.6	3.85	79.7	3.83
		23.4	64.2	3.78	67.0	3.79	69.7	3.80	72.3	3.80	73.8	3.80	74.7	3.80	77.1	3.79	79.3	3.77	81.4	3.75
		31.7	65.6	3.70	68.5	3.72	71.2	3.72	73.8	3.72	75.4	3.72	76.3	3.72	78.7	3.71	81.0	3.70	83.2	3.68
	104	10.6	58.2	3.86	60.8	3.88	63.2	3.89	65.5	3.89	66.9	3.89	67.8	3.88	69.9	3.87	71.9	3.86	73.8	3.84
		12.8	58.6	3.84	61.1	3.86	63.6	3.86	65.9	3.87	67.3	3.86	68.2	3.86	70.3	3.85	72.4	3.84	74.3	3.82
		15.1	58.9	3.82	61.5	3.83	64.0	3.84	66.3	3.84	67.7	3.84	68.6	3.84	70.7	3.83	72.8	3.81	74.7	3.79
		23.4	60.2	3.74	62.9	3.75	65.4	3.76	67.8	3.76	69.2	3.76	70.1	3.76	72.3	3.75	74.4	3.73	76.4	3.71
		31.7	61.5	3.66	64.2	3.68	66.8	3.69	69.3	3.69	70.7	3.68	71.6	3.68	73.9	3.67	76.0	3.66	78.0	3.64
	113	10.6	54.4	3.82	56.8	3.83	59.0	3.84	61.2	3.84	62.5	3.84	63.3	3.84	65.3	3.83	67.2	3.81	69.0	3.79
		12.8	54.7	3.80	57.1	3.81	59.4	3.82	61.6	3.82	62.9	3.82	63.7	3.82	65.7	3.81	67.6	3.79	69.4	3.77
		15.1	55.1	3.77	57.5	3.79	59.8	3.80	62.0	3.80	63.2	3.79	64.1	3.79	66.1	3.78	68.0	3.77	69.8	3.75
		23.4	56.3	3.69	58.7	3.71	61.1	3.72	63.3	3.72	64.6	3.71	65.5	3.71	67.5	3.70	69.5	3.69	71.3	3.67
		31.7	57.5	3.62	60.0	3.63	62.4	3.64	64.7	3.64	66.0	3.64	66.9	3.64	69.0	3.63	71.0	3.61	72.9	3.60
120	50	10.6	64.4	1.74	67.2	1.74	69.9	1.75	72.5	1.75	74.0	1.75	75.0	1.75	77.3	1.74	79.5	1.73	81.7	1.73
		12.8	64.8	1.73	67.6	1.73	70.3	1.74	72.9	1.74	74.4	1.74	75.4	1.74	77.8	1.73	80.0	1.72	82.2	1.72
		15.1	65.2	1.72	68.0	1.72	70.8	1.73	73.4	1.73	74.9	1.73	75.9	1.72	78.2	1.72	80.5	1.71	82.7	1.71
		23.4	66.6	1.68	69.5	1.69	72.3	1.69	75.0	1.69	76.5	1.69	77.5	1.69	80.0	1.68	82.3	1.68	84.5	1.67
		31.7	68.1	1.65	71.0	1.65	73.9	1.66	76.6	1.66	78.2	1.66	79.2	1.65	81.7	1.65	84.1	1.64	86.3	1.64
	59	10.6	64.4	2.09	67.2	2.10	69.9	2.10	72.5	2.11	74.0	2.10	75.0	2.10	77.3	2.10	79.5	2.09	81.7	2.08
		12.8	64.8	2.08	67.6	2.09	70.3	2.09	72.9	2.09	74.4	2.09	75.4	2.09	77.8	2.09	80.0	2.08	82.2	2.07
		15.1	65.2	2.07	68.0	2.08	70.8	2.08	73.4	2.08	74.9	2.08	75.9	2.08	78.2	2.07	80.5	2.06	82.7	2.05
		23.4	66.6	2.02	69.5	2.03	72.3	2.04	75.0	2.04	76.5	2.04	77.5	2.03	80.0	2.03	82.3	2.02	84.5	2.01
		31.7	68.1	1.98	71.0	1.99	73.9	2.00	76.6	2.00	78.2	1.99	79.2	1.99	81.7	1.99	84.1	1.98	86.3	1.97
	68	10.6	64.4	2.55	67.2	2.56	69.9	2.57	72.5	2.57	74.0	2.57	75.0	2.56	77.3	2.56	79.5	2.55	81.7	2.54
		12.8	64.8	2.53	67.6	2.54	70.3	2.55	72.9	2.55	74.4	2.55	75.4	2.55	77.8	2.54	80.0	2.53	82.2	2.52
		15.1	65.2	2.52	68.0	2.53	70.8	2.54	73.4	2.54	74.9	2.54	75.9	2.53	78.2	2.53	80.5	2.52	82.7	2.50
		23.4	66.6	2.47	69.5	2.48	72.3	2.48	75.0	2.48	76.5	2.48	77.5	2.48	80.0	2.47	82.3	2.46	84.5	2.45
		31.7	68.1	2.42	71.0	2.43	73.9	2.43	76.6	2.43	78.2	2.43	79.2	2.43	81.7	2.42	84.1	2.42	86.3	2.40
	77	10.6	64.4	3.14	67.2	3.16	69.9	3.16	72.5	3.16	74.0	3.16	75.0	3.16	77.3	3.15	79.5	3.14	81.7	3.12
		12.8	64.8	3.12	67.6	3.14	70.3	3.14	72.9	3.14	74.4	3.14	75.4	3.14	77.8	3.13	80.0	3.12	82.2	3.11
		15.1	65.2	3.10	68.0	3.12	70.8	3.12	73.4	3.13	74.9	3.12	75.9	3.12	78.2	3.11	80.5	3.10	82.7	3.09
		23.4	66.6	3.04	69.5	3.05	72.3	3.06	75.0	3.06	76.5	3.06	77.5	3.06	80.0	3.05	82.3	3.04	84.5	3.02
		31.7	68.1	2.98	71.0	2.99	73.9	3.00	76.6	3.00	78.2	3.00	79.2	3.00	81.7	2.99	84.1	2.98	86.3	2.96
	86	10.6	64.4	3.90	67.2	3.92	69.9	3.93	72.5	3.93	74.0	3.93	75.0	3.92	77.3	3.91	79.5	3.90	81.7	3.88
		12.8	64.8	3.88	67.6	3.89	70.3	3.90	72.9	3.90	74.4	3.90	75.4	3.90	77.8	3.89	80.0	3.87	82.2	3.85
		15.1	65.2	3.85	68.0	3.87	70.8	3.88	73.4	3.88	74.9	3.88	75.9	3.88	78.2	3.87	80.5	3.85	82.7	3.83
		23.4	66.6	3.77	69.5	3.79	72.3	3.80	75.0	3.80	76.5	3.80	77.5	3.79	80.0	3.78	82.3	3.77	84.5	3.75
		31.7	68.1	3.70	71.0	3.71	73.9	3.72	76.6	3.72	78.2	3.72	79.2	3.72	81.7	3.71	84.1	3.69	86.3	3.68
	95	10.6	60.9	3.89	63.6	3.91	66.1	3.91	68.6	3.91	70.0	3.91	70.9	3.91	73.1	3.90	75.2	3.88	77.2	3.86
		12.8	61.3	3.87	63.9	3.88	66.5	3.89	69.0	3.89	70.4	3.89	71.3	3.89	73.5	3.88	75.7	3.86	77.7	3.84
		15.1	61.6	3.84	64.3	3.86	66.9	3.87	69.4	3.87	70.8	3.87	71.7	3.86	74.0	3.85	76.1	3.84	78.2	3.82
		23.4	63.0	3.76	65.8	3.78	68.4	3.78	70.9	3.79	72.4	3.78	73.3	3.78	75.6	3.77	77.8	3.76	79.9	3.74
		31.7	64.4	3.69	67.2	3.70	69.9	3.71	72.4	3.71	73.9	3.71	74.9	3.71	77.3	3.70	79.5	3.68	81.6	3.66
	104	10.6	57.1	3.85	59.6	3.87	62.0	3.87	64.3	3.87	65.6	3.87	66.5	3.87	68.6	3.86	70.6	3.84	72.4	3.82
		12.8	57.5	3.83	60.0	3.84	62.4	3.85	64.7	3.85	66.0	3.85	66.9	3.85	69.0	3.84	71.0	3.82	72.9	3.80
		15.1	57.8	3.80	60.3	3.82	62.8	3.83	65.1	3.83	66.4	3.83	67.3	3.82	69.4	3.81	71.4	3.80	73.3	3.78
		23.4	59.1	3.72	61.7	3.74	64.2	3.75	66.5	3.75	67.9	3.74	68.8	3.74	70.9	3.73	73.0	3.72	74.9	3.70
		31.7	60.4	3.65	63.0	3.66	65.5	3.67	68.0	3.67	69.4	3.67	70.3	3.67	72.5	3.66	74.6	3.64	76.6	3.62
	113	10.6	53.4	3.80	55.7	3.82	57.9	3.83	60.1	3.83	61.3	3.83	62.1	3.82	64.1	3.81	65.9	3.80	67.7	3.78
		12.8	53.7	3.78	56.0	3.80	58.3	3.80	60.4	3.81	61.7	3.80	62.5	3.80	64.4	3.79	66.3	3.78	68.1	3.76
		15.1	54.0	3.76	56.4	3.77	58.6	3.78	60.8	3.78	62.0	3.78	62.9	3.78	64.8	3.77	66.7	3.75	68.5	3.73
		23.4	55.2	3.68	57.6	3.69	59.9	3.70	62.1	3.70	63.4	3.70	64.3	3.70	66.3	3.69	68.2	3.67	70.0	3.65
		31.7	56.4	3.61	58.9	3.62	61.2	3.63	63.5	3.63	64.8	3.63	65.6	3.62	67.7	3.61	69.7	3.60	71.5	3.58

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation. In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions. The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	10.6	63.2	1.74	65.9	1.75	68.6	1.75	71.1	1.75	72.6	1.75	73.5	1.75	75.8	1.74	78.0	1.74	80.1	1.73
		12.8	63.6	1.73	66.3	1.74	69.0	1.74	71.5	1.74	73.0	1.74	74.0	1.74	76.3	1.73	78.5	1.73	80.6	1.72
		15.1	63.9	1.72	66.7	1.73	69.4	1.73	72.0	1.73	73.4	1.73	74.4	1.73	76.7	1.72	79.0	1.72	81.1	1.71
		23.4	65.3	1.68	68.2	1.69	70.9	1.69	73.5	1.69	75.1	1.69	76.0	1.69	78.4	1.69	80.7	1.68	82.9	1.67
		31.7	66.8	1.65	69.7	1.66	72.5	1.66	75.1	1.66	76.7	1.66	77.7	1.66	80.1	1.65	82.4	1.65	84.6	1.64
	59	10.6	63.2	2.10	65.9	2.10	68.6	2.11	71.1	2.11	72.6	2.11	73.5	2.11	75.8	2.10	78.0	2.09	80.1	2.08
		12.8	63.6	2.08	66.3	2.09	69.0	2.10	71.5	2.10	73.0	2.10	74.0	2.09	76.3	2.09	78.5	2.08	80.6	2.07
		15.1	63.9	2.07	66.7	2.08	69.4	2.08	72.0	2.08	73.4	2.08	74.4	2.08	76.7	2.08	79.0	2.07	81.1	2.06
		23.4	65.3	2.03	68.2	2.03	70.9	2.04	73.5	2.04	75.1	2.04	76.0	2.04	78.4	2.03	80.7	2.02	82.9	2.01
		31.7	66.8	1.99	69.7	1.99	72.5	2.00	75.1	2.00	76.7	2.00	77.7	2.00	80.1	1.99	82.4	1.98	84.6	1.97
	68	10.6	63.2	2.55	65.9	2.56	68.6	2.57	71.1	2.57	72.6	2.57	73.5	2.57	75.8	2.56	78.0	2.55	80.1	2.54
		12.8	63.6	2.54	66.3	2.55	69.0	2.55	71.5	2.56	73.0	2.55	74.0	2.55	76.3	2.55	78.5	2.54	80.6	2.52
		15.1	63.9	2.52	66.7	2.53	69.4	2.54	72.0	2.54	73.4	2.54	74.4	2.54	76.7	2.53	79.0	2.52	81.1	2.51
		23.4	65.3	2.47	68.2	2.48	70.9	2.49	73.5	2.49	75.1	2.49	76.0	2.48	78.4	2.48	80.7	2.47	82.9	2.46
		31.7	66.8	2.42	69.7	2.43	72.5	2.44	75.1	2.44	76.7	2.44	77.7	2.43	80.1	2.43	82.4	2.42	84.6	2.41
	77	10.6	63.2	3.15	65.9	3.16	68.6	3.17	71.1	3.17	72.6	3.17	73.5	3.17	75.8	3.16	78.0	3.15	80.1	3.13
		12.8	63.6	3.13	66.3	3.14	69.0	3.15	71.5	3.15	73.0	3.15	74.0	3.15	76.3	3.14	78.5	3.13	80.6	3.11
		15.1	63.9	3.11	66.7	3.12	69.4	3.13	72.0	3.13	73.4	3.13	74.4	3.13	76.7	3.12	79.0	3.11	81.1	3.09
		23.4	65.3	3.04	68.2	3.06	70.9	3.06	73.5	3.06	75.1	3.06	76.0	3.06	78.4	3.05	80.7	3.04	82.9	3.03
		31.7	66.8	2.98	69.7	3.00	72.5	3.00	75.1	3.00	76.7	3.00	77.7	3.00	80.1	2.99	82.4	2.98	84.6	2.97
	86	10.6	63.2	3.91	65.9	3.92	68.6	3.93	71.1	3.93	72.6	3.93	73.5	3.93	75.8	3.92	78.0	3.90	80.1	3.89
		12.8	63.6	3.88	66.3	3.90	69.0	3.91	71.5	3.91	73.0	3.91	74.0	3.91	76.3	3.90	78.5	3.88	80.6	3.86
		15.1	63.9	3.86	66.7	3.88	69.4	3.88	72.0	3.89	73.4	3.88	74.4	3.88	76.7	3.87	79.0	3.86	81.1	3.84
		23.4	65.3	3.78	68.2	3.79	70.9	3.80	73.5	3.80	75.1	3.80	76.0	3.80	78.4	3.79	80.7	3.78	82.9	3.76
		31.7	66.8	3.70	69.7	3.72	72.5	3.73	75.1	3.73	76.7	3.73	77.7	3.72	80.1	3.71	82.4	3.70	84.6	3.68
	95	10.6	59.7	3.90	62.3	3.91	64.8	3.92	67.2	3.92	68.6	3.92	69.5	3.92	71.7	3.91	73.8	3.89	75.7	3.87
		12.8	60.1	3.87	62.7	3.89	65.2	3.90	67.6	3.90	69.0	3.90	69.9	3.89	72.1	3.88	74.2	3.87	76.2	3.85
		15.1	60.5	3.85	63.1	3.87	65.6	3.87	68.0	3.87	69.4	3.87	70.4	3.87	72.6	3.86	74.7	3.84	76.7	3.82
		23.4	61.8	3.77	64.5	3.78	67.1	3.79	69.5	3.79	71.0	3.79	71.9	3.79	74.2	3.78	76.3	3.76	78.3	3.74
		31.7	63.1	3.69	65.9	3.71	68.5	3.72	71.1	3.72	72.5	3.71	73.5	3.71	75.8	3.70	78.0	3.69	80.0	3.67
	104	10.6	56.0	3.86	58.5	3.87	60.8	3.88	63.1	3.88	64.4	3.88	65.2	3.88	67.3	3.87	69.2	3.85	71.1	3.83
		12.8	56.4	3.83	58.8	3.85	61.2	3.86	63.5	3.86	64.8	3.85	65.6	3.85	67.7	3.84	69.6	3.83	71.5	3.81
		15.1	56.7	3.81	59.2	3.82	61.6	3.83	63.8	3.83	65.1	3.83	66.0	3.83	68.1	3.82	70.0	3.80	71.9	3.78
		23.4	58.0	3.73	60.5	3.74	62.9	3.75	65.2	3.75	66.6	3.75	67.5	3.75	69.6	3.74	71.6	3.72	73.5	3.70
		31.7	59.2	3.65	61.8	3.67	64.3	3.68	66.7	3.68	68.0	3.68	68.9	3.67	71.1	3.66	73.1	3.65	75.1	3.63
	113	10.6	52.3	3.81	54.6	3.83	56.8	3.83	58.9	3.84	60.1	3.83	60.9	3.83	62.8	3.82	64.6	3.81	66.4	3.79
		12.8	52.7	3.79	55.0	3.80	57.2	3.81	59.3	3.81	60.5	3.81	61.3	3.81	63.2	3.80	65.0	3.78	66.8	3.76
		15.1	53.0	3.76	55.3	3.78	57.5	3.79	59.6	3.79	60.9	3.79	61.7	3.78	63.6	3.77	65.4	3.76	67.2	3.74
		23.4	54.1	3.69	56.5	3.70	58.8	3.71	60.9	3.71	62.2	3.71	63.0	3.70	65.0	3.69	66.9	3.68	68.7	3.66
		31.7	55.3	3.61	57.7	3.63	60.0	3.63	62.3	3.63	63.5	3.63	64.4	3.63	66.4	3.62	68.3	3.61	70.1	3.59
100	50	10.6	61.9	1.75	64.6	1.76	67.2	1.76	69.7	1.76	71.1	1.76	72.1	1.76	74.3	1.76	76.5	1.75	78.5	1.74
		12.8	62.3	1.74	65.0	1.75	67.6	1.75	70.1	1.75	71.6	1.75	72.5	1.75	74.8	1.75	76.9	1.74	79.0	1.73
		15.1	62.7	1.73	65.4	1.74	68.0	1.74	70.5	1.74	72.0	1.74	72.9	1.74	75.2	1.74	77.4	1.73	79.5	1.72
		23.4	64.1	1.69	66.9	1.70	69.5	1.71	72.1	1.71	73.6	1.71	74.6	1.70	76.9	1.70	79.1	1.69	81.2	1.68
		31.7	65.5	1.66	68.3	1.67	71.0	1.67	73.7	1.67	75.2	1.67	76.2	1.67	78.6	1.67	80.8	1.66	83.0	1.65
	59	10.6	61.9	2.11	64.6	2.12	67.2	2.12	69.7	2.13	71.1	2.12	72.1	2.12	74.3	2.12	76.5	2.11	78.5	2.10
		12.8	62.3	2.10	65.0	2.11	67.6	2.11	70.1	2.11	71.6	2.11	72.5	2.11	74.8	2.10	76.9	2.10	79.0	2.09
		15.1	62.7	2.09	65.4	2.09	68.0	2.10	70.5	2.10	72.0	2.10	72.9	2.10	75.2	2.09	77.4	2.08	79.5	2.07
		23.4	64.1	2.04	66.9	2.05	69.5	2.05	72.1	2.06	73.6	2.05	74.6	2.05	76.9	2.05	79.1	2.04	81.2	2.03
		31.7	65.5	2.00	68.3	2.01	71.0	2.01	73.7	2.01	75.2	2.01	76.2	2.01	78.6	2.01	80.8	2.00	83.0	1.99
	68	10.6	61.9	2.57	64.6	2.58	67.2	2.59	69.7	2.59	71.1	2.59	72.1	2.59	74.3	2.58	76.5	2.57	78.5	2.56
		12.8	62.3	2.56	65.0	2.57	67.6	2.57	70.1	2.58	71.6	2.57	72.5	2.57	74.8	2.57	76.9	2.56	79.0	2.54
		15.1	62.7	2.54	65.4	2.55	68.0	2.56	70.5	2.56	72.0	2.56	72.9	2.56	75.2	2.55	77.4	2.54	79.5	2.53
		23.4	64.1	2.49	66.9	2.50	69.5	2.50	72.1	2.51	73.6	2.50	74.6	2.50	76.9	2.50	79.1	2.49	81.2	2.47
		31.7	65.5	2.44	68.3	2.45	71.0	2.45	73.7	2.46	75.2	2.45	76.2	2.45	78.6	2.45	80.8	2.44	83.0	2.43
	77	10.6	61.9	3.17	64.6	3.18	67.2	3.19	69.7	3.19	71.1	3.19	72.1	3.19	74.3	3.18	76.5	3.17	78.5	3.15
		12.8	62.3	3.15	65.0	3.17	67.6	3.17	70.1	3.17	71.6	3.17	72.5	3.17	74.8	3.16	76.9	3.15	79.0	3.13
		15.1	62.7	3.13	65.4	3.15	68.0	3.15	70.5	3.15	72.0	3.15	72.9	3.15	75.2	3.14	77.4	3.13	79.5	3.12
		23.4	64.1	3.07	66.9	3.08	69.5	3.09	72.1	3.09	73.6	3.09	74.6	3.08	76.9	3.08	79.1	3.06	81.2	3.05
		31.7	65.5	3.01	68.3	3.02	71.0	3.02	73.7	3.03	75.2	3.02	76.2	3.02	78.6	3.02	80.8	3.00	83.0	2.99
	86	10.6	61.9	3.94	64.6	3.95	67.2	3.96	69.7	3.96	71.1	3.96	72.1	3.96	74.3	3.95	76.5	3.93	78.5	3.91
		12.8	62.3	3.91	65.0	3.93	67.6	3.94	70.1	3.94	71.6	3.94	72.5	3.94	74.8	3.93	76.9	3.91	79.0	3.89
		15.1	62.7	3.89	65.4	3.91	68.0	3.91	70.5	3.92	72.0	3.91	72.9	3.91	75.2	3.90	77.4	3.89	79.5	3.87
		23.4	64.1	3.81	66.9	3.82	69.5	3.83	72.1	3.83	73.6	3.83	74.6	3.83	76.9	3.82	79.1	3.80	81.2	3.79
		31.7	65.5	3.73	68.3	3.75	71.0	3.76	73.7	3.76	75.2	3.76	76.2	3.75	78.6	3.74	80.8	3.73	83.0	3.71
	95	10.6	58.6	3.93	61.1	3.94	63.6	3.95	65.9	3.95	67.3	3.95	68.2	3.95	70.3	3.94	72.3	3.92	74.3	3.90
		12.8	58.9	3.90	61.5	3.92	64.0	3.93	66.3	3.93	67.7	3.92	68.6	3.92	70.7	3.91	72.8	3.90	74.7	3.88
		15.1	59.3	3.88	61.9	3.89	64.3	3.90	66.7	3.90	68.1	3.90	69.0	3.90	71.1	3.89	73.2	3.87	75.1	3.85
		23.4	60.6	3.80	63.2	3.81	65.8	3.82	68.2	3.82	69.6	3.82	70.5	3.82	72.7	3.81	74.8	3.79	76.8	3.77
		31.7	61.9	3.72	64.6	3.74	67.2	3.74	69.7	3.75	71.1	3.74	72.0	3.74	74.3	3.73	76.4	3.72	78.5	3.70
	104	10.6	54.9	3.89	57.3	3.90	59.6	3.91	61.8	3.91	63.1	3.91	63.9	3.91	65.9	3.89	67.8	3.88	69.7	3.86
		12.8	55.3	3.86	57.7	3.88	60.0	3.89	62.2	3.89	63.5	3.88	64.3	3.88	66.3	3.87	68.3	3.86	70.1	3.84
		15.1	55.6	3.84	58.0	3.85	60.4	3.86	62.6	3.86	63.9	3.86	64.7	3.86	66.7	3.85	68.7	3.83	70.5	3.81
		23.4	56.8	3.76	59.3	3.77	61.7	3.78	64.0	3.78	65.3	3.78	66.1	3.78	68.2	3.77	70.2	3.75	72.1	3.73
		31.7	58.1	3.68	60.6	3.70	63.0	3.70	65.3	3.71	66.7	3.70	67.6	3.70	69.7	3.69	71.7	3.68	73.6	3.66
	113	10.6	51.3	3.84	53.6	3.86	55.7	3.86	57.8	3.86	58.9	3.86	59.7	3.86	61.6	3.85	63.4	3.83	65.1	3.81
		12.8	51.6	3.82	53.9	3.83	56.0	3.84	58.1	3.84	59.3	3.84	60.1	3.84	62.0	3.83	63.8	3.81	65.5	3.79
		15.1	51.9	3.79	54.2	3.81	56.4	3.82	58.5	3.82	59.7	3.82	60.4	3.81	62.3	3.80	64.1	3.79	65.9	3.77
		23.4	53.1	3.71	55.4	3.73	57.6	3.74	59.7	3.74	61.0	3.73	61.8	3.73	63.7	3.72	65.6	3.71	67.3	3.69
		31.7	54.2	3.64	56.6	3.65	58.9	3.66	61.0	3.66	62.3	3.66	63.1	3.66	65.1	3.65	67.0	3.63	68.8	3.62

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	10.6	55.7	1.46	58.2	1.47	60.5	1.47	62.7	1.47	64.0	1.47	64.9	1.47	66.9	1.47	68.8	1.46	70.7	1.46
		12.8	56.1	1.45	58.5	1.46	60.9	1.46	63.1	1.46	64.4	1.46	65.3	1.46	67.3	1.46	69.3	1.45	71.1	1.45
		15.1	56.4	1.45	58.9	1.45	61.2	1.45	63.5	1.46	64.8	1.45	65.7	1.45	67.7	1.45	69.7	1.44	71.5	1.44
		23.4	57.7	1.42	60.2	1.42	62.6	1.42	64.9	1.42	66.2	1.42	67.1	1.42	69.2	1.42	71.2	1.41	73.1	1.41
		31.7	58.9	1.39	61.5	1.39	63.9	1.40	66.3	1.40	67.7	1.40	68.6	1.39	70.7	1.39	72.7	1.39	74.7	1.38
	59	10.6	55.7	1.76	58.2	1.77	60.5	1.77	62.7	1.78	64.0	1.77	64.9	1.77	66.9	1.77	68.8	1.76	70.7	1.75
		12.8	56.1	1.75	58.5	1.76	60.9	1.76	63.1	1.76	64.4	1.76	65.3	1.76	67.3	1.76	69.3	1.75	71.1	1.74
		15.1	56.4	1.74	58.9	1.75	61.2	1.75	63.5	1.75	64.8	1.75	65.7	1.75	67.7	1.75	69.7	1.74	71.5	1.73
		23.4	57.7	1.71	60.2	1.71	62.6	1.72	64.9	1.72	66.2	1.72	67.1	1.71	69.2	1.71	71.2	1.70	73.1	1.70
		31.7	58.9	1.67	61.5	1.68	63.9	1.68	66.3	1.68	67.7	1.68	68.6	1.68	70.7	1.68	72.7	1.67	74.7	1.66
	68	10.6	55.7	2.15	58.2	2.16	60.5	2.16	62.7	2.16	64.0	2.16	64.9	2.16	66.9	2.16	68.8	2.15	70.7	2.14
		12.8	56.1	2.14	58.5	2.15	60.9	2.15	63.1	2.15	64.4	2.15	65.3	2.15	67.3	2.14	69.3	2.13	71.1	2.12
		15.1	56.4	2.12	58.9	2.13	61.2	2.14	63.5	2.14	64.8	2.14	65.7	2.14	67.7	2.13	69.7	2.12	71.5	2.11
		23.4	57.7	2.08	60.2	2.09	62.6	2.09	64.9	2.09	66.2	2.09	67.1	2.09	69.2	2.09	71.2	2.08	73.1	2.07
		31.7	58.9	2.04	61.5	2.05	63.9	2.05	66.3	2.05	67.7	2.05	68.6	2.05	70.7	2.04	72.7	2.04	74.7	2.03
	77	10.6	55.7	2.65	58.2	2.66	60.5	2.67	62.7	2.67	64.0	2.67	64.9	2.66	66.9	2.66	68.8	2.65	70.7	2.63
		12.8	56.1	2.63	58.5	2.64	60.9	2.65	63.1	2.65	64.4	2.65	65.3	2.65	67.3	2.64	69.3	2.63	71.1	2.62
		15.1	56.4	2.62	58.9	2.63	61.2	2.63	63.5	2.63	64.8	2.63	65.7	2.63	67.7	2.62	69.7	2.61	71.5	2.60
		23.4	57.7	2.56	60.2	2.57	62.6	2.58	64.9	2.58	66.2	2.58	67.1	2.58	69.2	2.57	71.2	2.56	73.1	2.55
		31.7	58.9	2.51	61.5	2.52	63.9	2.53	66.3	2.53	67.7	2.53	68.6	2.52	70.7	2.52	72.7	2.51	74.7	2.50
	86	10.6	55.7	3.29	58.2	3.30	60.5	3.31	62.7	3.31	64.0	3.31	64.9	3.31	66.9	3.30	68.8	3.29	70.7	3.27
		12.8	56.1	3.27	58.5	3.28	60.9	3.29	63.1	3.29	64.4	3.29	65.3	3.29	67.3	3.28	69.3	3.27	71.1	3.25
		15.1	56.4	3.25	58.9	3.26	61.2	3.27	63.5	3.27	64.8	3.27	65.7	3.27	67.7	3.26	69.7	3.25	71.5	3.23
		23.4	57.7	3.18	60.2	3.19	62.6	3.20	64.9	3.20	66.2	3.20	67.1	3.20	69.2	3.19	71.2	3.18	73.1	3.16
		31.7	58.9	3.12	61.5	3.13	63.9	3.14	66.3	3.14	67.7	3.14	68.6	3.13	70.7	3.13	72.7	3.11	74.7	3.10
	95	10.6	52.7	3.28	55.0	3.29	57.2	3.30	59.3	3.30	60.5	3.30	61.3	3.30	63.3	3.29	65.1	3.27	66.8	3.26
		12.8	53.0	3.26	55.3	3.27	57.6	3.28	59.7	3.28	60.9	3.28	61.7	3.28	63.6	3.27	65.5	3.25	67.2	3.24
		15.1	53.3	3.24	55.7	3.25	57.9	3.26	60.0	3.26	61.3	3.26	62.1	3.26	64.0	3.25	65.9	3.23	67.6	3.22
		23.4	54.5	3.17	56.9	3.18	59.2	3.19	61.4	3.19	62.6	3.19	63.5	3.19	65.4	3.18	67.3	3.17	69.1	3.15
		31.7	55.7	3.11	58.1	3.12	60.5	3.13	62.7	3.13	64.0	3.13	64.8	3.12	66.9	3.12	68.8	3.10	70.6	3.09
	104	10.6	49.4	3.25	51.6	3.26	53.7	3.26	55.7	3.27	56.8	3.26	57.5	3.26	59.3	3.25	61.1	3.24	62.7	3.22
		12.8	49.7	3.23	51.9	3.24	54.0	3.24	56.0	3.25	57.1	3.24	57.9	3.24	59.7	3.23	61.4	3.22	63.1	3.20
		15.1	50.0	3.21	52.2	3.22	54.3	3.23	56.3	3.23	57.5	3.22	58.2	3.22	60.1	3.21	61.8	3.20	63.4	3.18
		23.4	51.1	3.14	53.4	3.15	55.5	3.16	57.6	3.16	58.8	3.16	59.5	3.15	61.4	3.15	63.2	3.13	64.9	3.12
		31.7	52.3	3.08	54.5	3.09	56.7	3.09	58.8	3.10	60.0	3.09	60.8	3.09	62.7	3.08	64.5	3.07	66.3	3.06
	113	10.6	46.2	3.21	48.2	3.22	50.1	3.23	52.0	3.23	53.1	3.23	53.7	3.22	55.4	3.21	57.0	3.20	58.6	3.19
		12.8	46.5	3.19	48.5	3.20	50.4	3.21	52.3	3.21	53.4	3.21	54.1	3.20	55.8	3.20	57.4	3.18	58.9	3.17
		15.1	46.7	3.17	48.8	3.18	50.7	3.19	52.6	3.19	53.7	3.19	54.4	3.18	56.1	3.18	57.7	3.16	59.3	3.15
		23.4	47.8	3.10	49.9	3.11	51.9	3.12	53.8	3.12	54.9	3.12	55.6	3.12	57.3	3.11	59.0	3.10	60.6	3.08
		31.7	48.8	3.04	50.9	3.05	53.0	3.06	54.9	3.06	56.1	3.06	56.8	3.06	58.6	3.05	60.3	3.04	61.9	3.02
80	50	10.6	49.5	1.40	51.7	1.41	53.8	1.41	55.8	1.41	56.9	1.41	57.7	1.41	59.5	1.41	61.2	1.40	62.8	1.40
		12.8	49.8	1.40	52.0	1.40	54.1	1.40	56.1	1.40	57.3	1.40	58.0	1.40	59.8	1.40	61.6	1.39	63.2	1.39
		15.1	50.1	1.39	52.3	1.39	54.4	1.40	56.4	1.40	57.6	1.40	58.4	1.39	60.2	1.39	61.9	1.39	63.6	1.38
		23.4	51.3	1.36	53.5	1.36	55.6	1.37	57.7	1.37	58.9	1.37	59.6	1.37	61.5	1.36	63.3	1.36	65.0	1.35
		31.7	52.4	1.33	54.6	1.34	56.8	1.34	58.9	1.34	60.1	1.34	60.9	1.34	62.8	1.33	64.7	1.33	66.4	1.32
	59	10.6	49.5	1.69	51.7	1.70	53.8	1.70	55.8	1.70	56.9	1.70	57.7	1.70	59.5	1.70	61.2	1.69	62.8	1.68
		12.8	49.8	1.68	52.0	1.69	54.1	1.69	56.1	1.69	57.3	1.69	58.0	1.69	59.8	1.69	61.6	1.68	63.2	1.67
		15.1	50.1	1.67	52.3	1.68	54.4	1.68	56.4	1.68	57.6	1.68	58.4	1.68	60.2	1.68	61.9	1.67	63.6	1.66
		23.4	51.3	1.64	53.5	1.64	55.6	1.65	57.7	1.65	58.9	1.65	59.6	1.65	61.5	1.64	63.3	1.63	65.0	1.63
		31.7	52.4	1.60	54.6	1.61	56.8	1.61	58.9	1.61	60.1	1.61	60.9	1.61	62.8	1.61	64.7	1.60	66.4	1.59
	68	10.6	49.5	2.06	51.7	2.07	53.8	2.08	55.8	2.08	56.9	2.08	57.7	2.07	59.5	2.07	61.2	2.06	62.8	2.05
		12.8	49.8	2.05	52.0	2.06	54.1	2.06	56.1	2.06	57.3	2.06	58.0	2.06	59.8	2.06	61.6	2.05	63.2	2.04
		15.1	50.1	2.04	52.3	2.05	54.4	2.05	56.4	2.05	57.6	2.05	58.4	2.05	60.2	2.04	61.9	2.04	63.6	2.03
		23.4	51.3	1.99	53.5	2.00	55.6	2.01	57.7	2.01	58.9	2.01	59.6	2.01	61.5	2.00	63.3	1.99	65.0	1.98
		31.7	52.4	1.95	54.6	1.96	56.8	1.97	58.9	1.97	60.1	1.97	60.9	1.97	62.8	1.96	64.7	1.95	66.4	1.94
	77	10.6	49.5	2.54	51.7	2.55	53.8	2.56	55.8	2.56	56.9	2.56	57.7	2.56	59.5	2.55	61.2	2.54	62.8	2.53
		12.8	49.8	2.53	52.0	2.54	54.1	2.54	56.1	2.54	57.3	2.54	58.0	2.54	59.8	2.53	61.6	2.52	63.2	2.51
		15.1	50.1	2.51	52.3	2.52	54.4	2.53	56.4	2.53	57.6	2.53	58.4	2.52	60.2	2.52	61.9	2.51	63.6	2.50
		23.4	51.3	2.46	53.5	2.47	55.6	2.47	57.7	2.47	58.9	2.47	59.6	2.47	61.5	2.47	63.3	2.46	65.0	2.44
		31.7	52.4	2.41	54.6	2.42	56.8	2.42	58.9	2.42	60.1	2.42	60.9	2.42	62.8	2.42	64.7	2.41	66.4	2.39
	86	10.6	49.5	3.15	51.7	3.17	53.8	3.17	55.8	3.18	56.9	3.17	57.7	3.17	59.5	3.16	61.2	3.15	62.8	3.14
		12.8	49.8	3.14	52.0	3.15	54.1	3.16	56.1	3.16	57.3	3.16	58.0	3.15	59.8	3.15	61.6	3.13	63.2	3.12
		15.1	50.1	3.12	52.3	3.13	54.4	3.14	56.4	3.14	57.6	3.14	58.4	3.13	60.2	3.13	61.9	3.11	63.6	3.10
		23.4	51.3	3.05	53.5	3.06	55.6	3.07	57.7	3.07	58.9	3.07	59.6	3.07	61.5	3.06	63.3	3.05	65.0	3.03
		31.7	52.4	2.99	54.6	3.00	56.8	3.01	58.9	3.01	60.1	3.01	60.9	3.01	62.8	3.00	64.7	2.99	66.4	2.97
	95	10.6	46.9	3.15	48.9	3.16	50.9	3.17	52.7	3.17	53.8	3.16	54.5	3.16	56.2	3.15	57.9	3.14	59.4	3.13
		12.8	47.1	3.13	49.2	3.14	51.2	3.15	53.0	3.15	54.1	3.14	54.9	3.14	56.6	3.13	58.2	3.12	59.8	3.11
		15.1	47.4	3.11	49.5	3.12	51.5	3.13	53.4	3.13	54.5	3.13	55.2	3.12	56.9	3.12	58.6	3.10	60.1	3.09
		23.4	48.5	3.04	50.6	3.05	52.6	3.06	54.5	3.06	55.7	3.06	56.4	3.06	58.2	3.05	59.9	3.04	61.4	3.02
		31.7	49.5	2.98	51.7	2.99	53.7	3.00	55.7	3.00	56.9	3.00	57.6	3.00	59.4	2.99	61.1	2.98	62.8	2.96
	104	10.6	44.0	3.11	45.9	3.13	47.7	3.13	49.5	3.13	50.5	3.13	51.2	3.13	52.8	3.12	54.3	3.11	55.7	3.09
		12.8	44.2	3.09	46.1	3.11	48.0	3.11	49.8	3.11	50.8	3.11	51.5	3.11	53.1	3.10	54.6	3.09	56.1	3.07
		15.1	44.5	3.08	46.4	3.09	48.3	3.09	50.1	3.10	51.1	3.09	51.8	3.09	53.4	3.08	54.9	3.07	56.4	3.06
		23.4	45.5	3.01	47.4	3.02	49.4	3.03	51.2	3.03	52.2	3.03	52.9	3.03	54.6	3.02	56.1	3.01	57.6	2.99
		31.7	46.4	2.95	48.5	2.96	50.4	2.97	52.3	2.97	53.4	2.97	54.1	2.97	55.8	2.96	57.4	2.95	58.9	2.93
	113	10.6	41.1	3.08	42.8	3.09	44.6	3.10	46.2	3.10	47.2	3.09	47.8	3.09	49.3	3.08	50.7	3.07	52.1	3.06
		12.8	41.3	3.06	43.1	3.07	44.8	3.08	46.5	3.08	47.4	3.08	48.1	3.07	49.6	3.07	51.0	3.05	52.4	3.04
		15.1	41.5	3.04	43.4	3.05	45.1	3.06	46.8	3.06	47.7	3.06	48.4	3.06	49.9	3.05	51.3	3.04	52.7	3.02
		23.4	42.5	2.98	44.3	2.99	46.1	2.99	47.8	2.99	48.8	2.99	49.4	2.99	51.0	2.98	52.4	2.97	53.8	2.96
		31.7	43.4	2.92	45.3	2.93	47.1	2.93	48.8	2.93	49.8	2.93	50.5	2.93	52.1	2.92	53.6	2.91	55.0	2.90

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	10.6	43.4	1.14	45.2	1.14	47.1	1.15	48.8	1.15	49.8	1.15	50.5	1.14	52.0	1.14	53.5	1.14	55.0	1.13
		12.8	43.6	1.13	45.5	1.14	47.3	1.14	49.1	1.14	50.1	1.14	50.8	1.14	52.3	1.13	53.9	1.13	55.3	1.12
		15.1	43.9	1.12	45.8	1.13	47.6	1.13	49.4	1.13	50.4	1.13	51.1	1.13	52.7	1.13	54.2	1.12	55.6	1.12
		23.4	44.8	1.10	46.8	1.11	48.7	1.11	50.5	1.11	51.5	1.11	52.2	1.11	53.8	1.10	55.4	1.10	56.9	1.09
		31.7	45.8	1.08	47.8	1.08	49.7	1.09	51.6	1.09	52.6	1.09	53.3	1.08	55.0	1.08	56.6	1.08	58.1	1.07
	59	10.6	43.4	1.37	45.2	1.38	47.1	1.38	48.8	1.38	49.8	1.38	50.5	1.38	52.0	1.38	53.5	1.37	55.0	1.36
		12.8	43.6	1.36	45.5	1.37	47.3	1.37	49.1	1.37	50.1	1.37	50.8	1.37	52.3	1.37	53.9	1.36	55.3	1.36
		15.1	43.9	1.35	45.8	1.36	47.6	1.36	49.4	1.36	50.4	1.36	51.1	1.36	52.7	1.36	54.2	1.35	55.6	1.35
		23.4	44.8	1.33	46.8	1.33	48.7	1.33	50.5	1.34	51.5	1.33	52.2	1.33	53.8	1.33	55.4	1.33	56.9	1.32
		31.7	45.8	1.30	47.8	1.31	49.7	1.31	51.6	1.31	52.6	1.31	53.3	1.31	55.0	1.30	56.6	1.30	58.1	1.29
	68	10.6	43.4	1.67	45.2	1.68	47.1	1.68	48.8	1.68	49.8	1.68	50.5	1.68	52.0	1.68	53.5	1.67	55.0	1.66
		12.8	43.6	1.66	45.5	1.67	47.3	1.67	49.1	1.67	50.1	1.67	50.8	1.67	52.3	1.67	53.9	1.66	55.3	1.65
		15.1	43.9	1.65	45.8	1.66	47.6	1.66	49.4	1.66	50.4	1.66	51.1	1.66	52.7	1.66	54.2	1.65	55.6	1.64
		23.4	44.8	1.62	46.8	1.62	48.7	1.63	50.5	1.63	51.5	1.63	52.2	1.63	53.8	1.62	55.4	1.62	56.9	1.61
		31.7	45.8	1.58	47.8	1.59	49.7	1.59	51.6	1.60	52.6	1.59	53.3	1.59	55.0	1.59	56.6	1.58	58.1	1.58
	77	10.6	43.4	2.06	45.2	2.07	47.1	2.07	48.8	2.07	49.8	2.07	50.5	2.07	52.0	2.07	53.5	2.06	55.0	2.05
		12.8	43.6	2.05	45.5	2.06	47.3	2.06	49.1	2.06	50.1	2.06	50.8	2.06	52.3	2.05	53.9	2.05	55.3	2.04
		15.1	43.9	2.04	45.8	2.04	47.6	2.05	49.4	2.05	50.4	2.05	51.1	2.05	52.7	2.04	54.2	2.03	55.6	2.02
		23.4	44.8	1.99	46.8	2.00	48.7	2.00	50.5	2.01	51.5	2.00	52.2	2.00	53.8	2.00	55.4	1.99	56.9	1.98
		31.7	45.8	1.95	47.8	1.96	49.7	1.96	51.6	1.97	52.6	1.96	53.3	1.96	55.0	1.96	56.6	1.95	58.1	1.94
	86	10.6	43.4	2.56	45.2	2.57	47.1	2.57	48.8	2.57	49.8	2.57	50.5	2.57	52.0	2.57	53.5	2.56	55.0	2.54
		12.8	43.6	2.54	45.5	2.55	47.3	2.56	49.1	2.56	50.1	2.56	50.8	2.56	52.3	2.55	53.9	2.54	55.3	2.53
		15.1	43.9	2.53	45.8	2.54	47.6	2.54	49.4	2.54	50.4	2.54	51.1	2.54	52.7	2.53	54.2	2.52	55.6	2.51
		23.4	44.8	2.47	46.8	2.48	48.7	2.49	50.5	2.49	51.5	2.49	52.2	2.49	53.8	2.48	55.4	2.47	56.9	2.46
		31.7	45.8	2.42	47.8	2.43	49.7	2.44	51.6	2.44	52.6	2.44	53.3	2.44	55.0	2.43	56.6	2.42	58.1	2.41
	95	10.6	41.0	2.55	42.8	2.56	44.5	2.57	46.1	2.57	47.1	2.57	47.7	2.56	49.2	2.56	50.6	2.55	52.0	2.53
		12.8	41.2	2.53	43.0	2.55	44.8	2.55	46.4	2.55	47.4	2.55	48.0	2.55	49.5	2.54	50.9	2.53	52.3	2.52
		15.1	41.5	2.52	43.3	2.53	45.0	2.54	46.7	2.54	47.7	2.53	48.3	2.53	49.8	2.53	51.2	2.52	52.6	2.50
		23.4	42.4	2.47	44.3	2.48	46.0	2.48	47.7	2.48	48.7	2.48	49.4	2.48	50.9	2.47	52.4	2.46	53.8	2.45
		31.7	43.3	2.42	45.2	2.43	47.0	2.43	48.8	2.43	49.8	2.43	50.4	2.43	52.0	2.42	53.5	2.41	54.9	2.40
	104	10.6	38.5	2.52	40.1	2.53	41.7	2.54	43.3	2.54	44.2	2.54	44.8	2.54	46.2	2.53	47.5	2.52	48.8	2.51
		12.8	38.7	2.51	40.4	2.52	42.0	2.52	43.5	2.52	44.4	2.52	45.0	2.52	46.4	2.51	47.8	2.50	49.1	2.49
		15.1	38.9	2.49	40.6	2.50	42.2	2.51	43.8	2.51	44.7	2.51	45.3	2.51	46.7	2.50	48.1	2.49	49.3	2.48
		23.4	39.8	2.44	41.5	2.45	43.2	2.46	44.8	2.46	45.7	2.45	46.3	2.45	47.8	2.45	49.1	2.44	50.4	2.42
		31.7	40.6	2.39	42.4	2.40	44.1	2.41	45.7	2.41	46.7	2.41	47.3	2.40	48.8	2.40	50.2	2.39	51.5	2.38
	113	10.6	35.9	2.49	37.5	2.50	39.0	2.51	40.4	2.51	41.3	2.51	41.8	2.51	43.1	2.50	44.4	2.49	45.5	2.48
		12.8	36.1	2.48	37.7	2.49	39.2	2.49	40.7	2.49	41.5	2.49	42.1	2.49	43.4	2.49	44.6	2.48	45.8	2.46
		15.1	36.4	2.46	37.9	2.47	39.5	2.48	40.9	2.48	41.8	2.48	42.3	2.48	43.6	2.47	44.9	2.46	46.1	2.45
		23.4	37.2	2.41	38.8	2.42	40.3	2.43	41.8	2.43	42.7	2.43	43.2	2.42	44.6	2.42	45.9	2.41	47.1	2.40
		31.7	38.0	2.36	39.6	2.37	41.2	2.38	42.7	2.38	43.6	2.38	44.2	2.38	45.6	2.37	46.9	2.36	48.1	2.35
60	50	10.6	37.2	0.91	38.8	0.92	40.3	0.92	41.8	0.92	42.7	0.92	43.2	0.92	44.6	0.92	45.9	0.91	47.1	0.91
		12.8	37.4	0.91	39.0	0.91	40.6	0.91	42.1	0.92	42.9	0.91	43.5	0.91	44.9	0.91	46.2	0.91	47.4	0.90
		15.1	37.6	0.90	39.2	0.91	40.8	0.91	42.3	0.91	43.2	0.91	43.8	0.91	45.1	0.91	46.4	0.90	47.7	0.90
		23.4	38.4	0.88	40.1	0.89	41.7	0.89	43.3	0.89	44.2	0.89	44.7	0.89	46.1	0.89	47.5	0.88	48.7	0.88
		31.7	39.3	0.87	41.0	0.87	42.6	0.87	44.2	0.87	45.1	0.87	45.7	0.87	47.1	0.87	48.5	0.87	49.8	0.86
	59	10.6	37.2	1.10	38.8	1.11	40.3	1.11	41.8	1.11	42.7	1.11	43.2	1.11	44.6	1.11	45.9	1.10	47.1	1.10
		12.8	37.4	1.10	39.0	1.10	40.6	1.10	42.1	1.10	42.9	1.10	43.5	1.10	44.9	1.10	46.2	1.09	47.4	1.09
		15.1	37.6	1.09	39.2	1.09	40.8	1.10	42.3	1.10	43.2	1.10	43.8	1.10	45.1	1.09	46.4	1.09	47.7	1.08
		23.4	38.4	1.07	40.1	1.07	41.7	1.07	43.3	1.07	44.2	1.07	44.7	1.07	46.1	1.07	47.5	1.07	48.7	1.06
		31.7	39.3	1.04	41.0	1.05	42.6	1.05	44.2	1.05	45.1	1.05	45.7	1.05	47.1	1.05	48.5	1.04	49.8	1.04
	68	10.6	37.2	1.34	38.8	1.35	40.3	1.35	41.8	1.35	42.7	1.35	43.2	1.35	44.6	1.35	45.9	1.34	47.1	1.34
		12.8	37.4	1.34	39.0	1.34	40.6	1.34	42.1	1.34	42.9	1.34	43.5	1.34	44.9	1.34	46.2	1.33	47.4	1.33
		15.1	37.6	1.33	39.2	1.33	40.8	1.34	42.3	1.34	43.2	1.34	43.8	1.33	45.1	1.33	46.4	1.33	47.7	1.32
		23.4	38.4	1.30	40.1	1.30	41.7	1.31	43.3	1.31	44.2	1.31	44.7	1.31	46.1	1.30	47.5	1.30	48.7	1.29
		31.7	39.3	1.27	41.0	1.28	42.6	1.28	44.2	1.28	45.1	1.28	45.7	1.28	47.1	1.28	48.5	1.27	49.8	1.27
	77	10.6	37.2	1.66	38.8	1.66	40.3	1.67	41.8	1.67	42.7	1.67	43.2	1.67	44.6	1.66	45.9	1.65	47.1	1.65
		12.8	37.4	1.65	39.0	1.65	40.6	1.66	42.1	1.66	42.9	1.66	43.5	1.65	44.9	1.65	46.2	1.64	47.4	1.64
		15.1	37.6	1.64	39.2	1.64	40.8	1.65	42.3	1.65	43.2	1.65	43.8	1.64	45.1	1.64	46.4	1.63	47.7	1.63
		23.4	38.4	1.60	40.1	1.61	41.7	1.61	43.3	1.61	44.2	1.61	44.7	1.61	46.1	1.61	47.5	1.60	48.7	1.59
		31.7	39.3	1.57	41.0	1.58	42.6	1.58	44.2	1.58	45.1	1.58	45.7	1.58	47.1	1.57	48.5	1.57	49.8	1.56
	86	10.6	37.2	2.06	38.8	2.06	40.3	2.07	41.8	2.07	42.7	2.07	43.2	2.07	44.6	2.06	45.9	2.05	47.1	2.04
		12.8	37.4	2.04	39.0	2.05	40.6	2.06	42.1	2.06	42.9	2.06	43.5	2.05	44.9	2.05	46.2	2.04	47.4	2.03
		15.1	37.6	2.03	39.2	2.04	40.8	2.04	42.3	2.04	43.2	2.04	43.8	2.04	45.1	2.04	46.4	2.03	47.7	2.02
		23.4	38.4	1.99	40.1	2.00	41.7	2.00	43.3	2.00	44.2	2.00	44.7	2.00	46.1	1.99	47.5	1.99	48.7	1.98
		31.7	39.3	1.95	41.0	1.96	42.6	1.96	44.2	1.96	45.1	1.96	45.7	1.96	47.1	1.95	48.5	1.95	49.8	1.94
	95	10.6	35.1	2.05	36.7	2.06	38.1	2.06	39.5	2.06	40.4	2.06	40.9	2.06	42.2	2.05	43.4	2.05	44.6	2.04
		12.8	35.3	2.04	36.9	2.05	38.4	2.05	39.8	2.05	40.6	2.05	41.1	2.05	42.4	2.04	43.7	2.03	44.8	2.02
		15.1	35.6	2.03	37.1	2.03	38.6	2.04	40.0	2.04	40.8	2.04	41.4	2.04	42.7	2.03	43.9	2.02	45.1	2.01
		23.4	36.3	1.98	37.9	1.99	39.5	1.99	40.9	1.99	41.8	1.99	42.3	1.99	43.6	1.99	44.9	1.98	46.1	1.97
		31.7	37.1	1.94	38.8	1.95	40.3	1.95	41.8	1.96	42.7	1.95	43.2	1.95	44.6	1.95	45.9	1.94	47.1	1.93
	104	10.6	33.0	2.03	34.4	2.04	35.8	2.04	37.1	2.04	37.9	2.04	38.4	2.04	39.6	2.03	40.7	2.03	41.8	2.02
		12.8	33.2	2.02	34.6	2.02	36.0	2.03	37.3	2.03	38.1	2.03	38.6	2.03	39.8	2.02	41.0	2.01	42.0	2.00
		15.1	33.4	2.00	34.8	2.01	36.2	2.02	37.5	2.02	38.3	2.02	38.8	2.01	40.0	2.01	41.2	2.00	42.3	1.99
		23.4	34.1	1.96	35.6	1.97	37.0	1.97	38.4	1.97	39.2	1.97	39.7	1.97	40.9	1.97	42.1	1.96	43.2	1.95
		31.7	34.8	1.92	36.4	1.93	37.8	1.93	39.2	1.93	40.0	1.93	40.5	1.93	41.8	1.93	43.0	1.92	44.2	1.91
	113	10.6	30.8	2.00	32.1	2.01	33.4	2.02	34.7	2.02	35.4	2.02	35.8	2.01	37.0	2.01	38.0	2.00	39.0	1.99
		12.8	31.0	1.99	32.3	2.00	33.6	2.00	34.9	2.01	35.6	2.00	36.0	2.00	37.2	2.00	38.3	1.99	39.3	1.98
		15.1	31.2	1.98	32.5	1.99	33.8	1.99	35.1	1.99	35.8	1.99	36.3	1.99	37.4	1.99	38.5	1.98	39.5	1.97
		23.4	31.9	1.94	33.2	1.95	34.6	1.95	35.8	1.95	36.6	1.95	37.1	1.95	38.2	1.94	39.3	1.94	40.4	1.93
		31.7	32.5	1.90	34.0	1.91	35.3	1.91	36.6	1.91	37.4	1.91	37.9	1.91	39.1	1.90	40.2	1.90	41.3	1.89

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	10.6	31.0	0.72	32.3	0.72	33.6	0.73	34.9	0.73	35.6	0.73	36.0	0.73	37.2	0.72	38.2	0.72	39.3	0.72
		12.8	31.2	0.72	32.5	0.72	33.8	0.72	35.1	0.72	35.8	0.72	36.3	0.72	37.4	0.72	38.5	0.72	39.5	0.71
		15.1	31.3	0.71	32.7	0.72	34.0	0.72	35.3	0.72	36.0	0.72	36.5	0.72	37.6	0.72	38.7	0.71	39.7	0.71
		23.4	32.0	0.70	33.4	0.70	34.8	0.70	36.1	0.70	36.8	0.70	37.3	0.70	38.4	0.70	39.6	0.70	40.6	0.69
		31.7	32.7	0.68	34.2	0.69	35.5	0.69	36.8	0.69	37.6	0.69	38.1	0.69	39.3	0.69	40.4	0.68	41.5	0.68
	59	10.6	31.0	0.87	32.3	0.87	33.6	0.88	34.9	0.88	35.6	0.88	36.0	0.87	37.2	0.87	38.2	0.87	39.3	0.86
		12.8	31.2	0.86	32.5	0.87	33.8	0.87	35.1	0.87	35.8	0.87	36.3	0.87	37.4	0.87	38.5	0.86	39.5	0.86
		15.1	31.3	0.86	32.7	0.86	34.0	0.86	35.3	0.87	36.0	0.86	36.5	0.86	37.6	0.86	38.7	0.86	39.7	0.85
		23.4	32.0	0.84	33.4	0.84	34.8	0.85	36.1	0.85	36.8	0.85	37.3	0.85	38.4	0.84	39.6	0.84	40.6	0.84
		31.7	32.7	0.82	34.2	0.83	35.5	0.83	36.8	0.83	37.6	0.83	38.1	0.83	39.3	0.83	40.4	0.82	41.5	0.82
	68	10.6	31.0	1.06	32.3	1.06	33.6	1.07	34.9	1.07	35.6	1.07	36.0	1.07	37.2	1.06	38.2	1.06	39.3	1.05
		12.8	31.2	1.05	32.5	1.06	33.8	1.06	35.1	1.06	35.8	1.06	36.3	1.06	37.4	1.06	38.5	1.05	39.5	1.05
		15.1	31.3	1.05	32.7	1.05	34.0	1.05	35.3	1.05	36.0	1.05	36.5	1.05	37.6	1.05	38.7	1.05	39.7	1.04
		23.4	32.0	1.03	33.4	1.03	34.8	1.03	36.1	1.03	36.8	1.03	37.3	1.03	38.4	1.03	39.6	1.02	40.6	1.02
		31.7	32.7	1.01	34.2	1.01	35.5	1.01	36.8	1.01	37.6	1.01	38.1	1.01	39.3	1.01	40.4	1.00	41.5	1.00
	77	10.6	31.0	1.31	32.3	1.31	33.6	1.32	34.9	1.32	35.6	1.31	36.0	1.31	37.2	1.31	38.2	1.31	39.3	1.30
		12.8	31.2	1.30	32.5	1.30	33.8	1.31	35.1	1.31	35.8	1.31	36.3	1.31	37.4	1.30	38.5	1.30	39.5	1.29
		15.1	31.3	1.29	32.7	1.30	34.0	1.30	35.3	1.30	36.0	1.30	36.5	1.30	37.6	1.29	38.7	1.29	39.7	1.28
		23.4	32.0	1.26	33.4	1.27	34.8	1.27	36.1	1.27	36.8	1.27	37.3	1.27	38.4	1.27	39.6	1.26	40.6	1.26
		31.7	32.7	1.24	34.2	1.24	35.5	1.25	36.8	1.25	37.6	1.25	38.1	1.25	39.3	1.24	40.4	1.24	41.5	1.23
	86	10.6	31.0	1.62	32.3	1.63	33.6	1.63	34.9	1.63	35.6	1.63	36.0	1.63	37.2	1.63	38.2	1.62	39.3	1.61
		12.8	31.2	1.61	32.5	1.62	33.8	1.62	35.1	1.62	35.8	1.62	36.3	1.62	37.4	1.62	38.5	1.61	39.5	1.60
		15.1	31.3	1.60	32.7	1.61	34.0	1.61	35.3	1.61	36.0	1.61	36.5	1.61	37.6	1.61	38.7	1.60	39.7	1.59
		23.4	32.0	1.57	33.4	1.58	34.8	1.58	36.1	1.58	36.8	1.58	37.3	1.58	38.4	1.57	39.6	1.57	40.6	1.56
		31.7	32.7	1.54	34.2	1.54	35.5	1.55	36.8	1.55	37.6	1.55	38.1	1.55	39.3	1.54	40.4	1.54	41.5	1.53
	95	10.6	29.3	1.62	30.6	1.62	31.8	1.63	33.0	1.63	33.6	1.63	34.1	1.63	35.1	1.62	36.2	1.62	37.1	1.61
		12.8	29.5	1.61	30.7	1.61	32.0	1.62	33.2	1.62	33.8	1.62	34.3	1.62	35.4	1.61	36.4	1.61	37.4	1.60
		15.1	29.6	1.60	30.9	1.60	32.2	1.61	33.4	1.61	34.0	1.61	34.5	1.61	35.6	1.60	36.6	1.60	37.6	1.59
		23.4	30.3	1.56	31.6	1.57	32.9	1.57	34.1	1.57	34.8	1.57	35.3	1.57	36.4	1.57	37.4	1.56	38.4	1.55
		31.7	30.9	1.53	32.3	1.54	33.6	1.54	34.8	1.54	35.5	1.54	36.0	1.54	37.1	1.54	38.2	1.53	39.2	1.52
	104	10.6	27.5	1.60	28.7	1.61	29.8	1.61	30.9	1.61	31.6	1.61	32.0	1.61	33.0	1.60	33.9	1.60	34.8	1.59
		12.8	27.6	1.59	28.8	1.60	30.0	1.60	31.1	1.60	31.7	1.60	32.2	1.60	33.2	1.60	34.1	1.59	35.0	1.58
		15.1	27.8	1.58	29.0	1.59	30.2	1.59	31.3	1.59	31.9	1.59	32.4	1.59	33.4	1.59	34.3	1.58	35.2	1.57
		23.4	28.4	1.55	29.7	1.55	30.8	1.56	32.0	1.56	32.6	1.56	33.1	1.56	34.1	1.55	35.1	1.55	36.0	1.54
		31.7	29.0	1.52	30.3	1.52	31.5	1.53	32.7	1.53	33.3	1.53	33.8	1.53	34.8	1.52	35.9	1.52	36.8	1.51
	113	10.6	25.7	1.58	26.8	1.59	27.9	1.59	28.9	1.59	29.5	1.59	29.9	1.59	30.8	1.59	31.7	1.58	32.5	1.57
		12.8	25.8	1.57	26.9	1.58	28.0	1.58	29.1	1.58	29.7	1.58	30.0	1.58	31.0	1.58	31.9	1.57	32.7	1.56
		15.1	26.0	1.56	27.1	1.57	28.2	1.57	29.2	1.57	29.8	1.57	30.2	1.57	31.2	1.57	32.1	1.56	32.9	1.55
		23.4	26.5	1.53	27.7	1.54	28.8	1.54	29.9	1.54	30.5	1.54	30.9	1.54	31.9	1.53	32.8	1.53	33.7	1.52
		31.7	27.1	1.50	28.3	1.51	29.4	1.51	30.5	1.51	31.1	1.51	31.6	1.51	32.5	1.50	33.5	1.50	34.4	1.49

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	13.2	87.3	2.87	91.2	2.89	94.8	2.89	98.3	2.89	100.3	2.89	101.7	2.89	104.8	2.88	107.9	2.87	110.7	2.86
		16.8	88.0	2.85	91.8	2.86	95.5	2.87	99.0	2.87	101.0	2.87	102.4	2.87	105.6	2.86	108.6	2.85	111.5	2.84
		20.3	88.6	2.83	92.5	2.84	96.2	2.85	99.7	2.85	101.8	2.85	103.1	2.85	106.3	2.84	109.4	2.83	112.3	2.82
		30.0	90.3	2.78	94.2	2.79	98.0	2.80	101.6	2.80	103.7	2.80	105.1	2.80	108.3	2.79	111.5	2.78	114.4	2.77
		39.6	91.9	2.73	96.0	2.74	99.8	2.75	103.5	2.75	105.6	2.75	107.0	2.75	110.4	2.74	113.6	2.73	116.6	2.72
	59	13.2	87.3	3.46	91.2	3.48	94.8	3.48	98.3	3.49	100.3	3.48	101.7	3.48	104.8	3.47	107.9	3.46	110.7	3.44
		16.8	88.0	3.44	91.8	3.45	95.5	3.46	99.0	3.46	101.0	3.46	102.4	3.46	105.6	3.45	108.6	3.43	111.5	3.42
		20.3	88.6	3.41	92.5	3.43	96.2	3.43	99.7	3.44	101.8	3.43	103.1	3.43	106.3	3.42	109.4	3.41	112.3	3.39
		30.0	90.3	3.35	94.2	3.36	98.0	3.37	101.6	3.37	103.7	3.37	105.1	3.37	108.3	3.36	111.5	3.35	114.4	3.33
		39.6	91.9	3.29	96.0	3.31	99.8	3.31	103.5	3.32	105.6	3.31	107.0	3.31	110.4	3.30	113.6	3.29	116.6	3.27
	68	13.2	87.3	4.22	91.2	4.24	94.8	4.25	98.3	4.25	100.3	4.25	101.7	4.24	104.8	4.23	107.9	4.22	110.7	4.20
		16.8	88.0	4.19	91.8	4.21	95.5	4.22	99.0	4.22	101.0	4.22	102.4	4.21	105.6	4.20	108.6	4.19	111.5	4.17
		20.3	88.6	4.16	92.5	4.18	96.2	4.19	99.7	4.19	101.8	4.19	103.1	4.18	106.3	4.17	109.4	4.16	112.3	4.14
		30.0	90.3	4.08	94.2	4.10	98.0	4.11	101.6	4.11	103.7	4.11	105.1	4.11	108.3	4.10	111.5	4.08	114.4	4.06
		39.6	91.9	4.01	96.0	4.03	99.8	4.04	103.5	4.04	105.6	4.04	107.0	4.04	110.4	4.03	113.6	4.01	116.6	3.99
	77	13.2	87.3	5.20	91.2	5.22	94.8	5.23	98.3	5.24	100.3	5.23	101.7	5.23	104.8	5.22	107.9	5.20	110.7	5.17
		16.8	88.0	5.16	91.8	5.19	95.5	5.20	99.0	5.20	101.0	5.20	102.4	5.19	105.6	5.18	108.6	5.16	111.5	5.13
		20.3	88.6	5.13	92.5	5.15	96.2	5.16	99.7	5.16	101.8	5.16	103.1	5.16	106.3	5.14	109.4	5.12	112.3	5.10
		30.0	90.3	5.03	94.2	5.05	98.0	5.07	101.6	5.07	103.7	5.07	105.1	5.06	108.3	5.05	111.5	5.03	114.4	5.00
		39.6	91.9	4.95	96.0	4.97	99.8	4.98	103.5	4.98	105.6	4.98	107.0	4.97	110.4	4.96	113.6	4.94	116.6	4.92
	86	13.2	87.3	6.46	91.2	6.48	94.8	6.50	98.3	6.50	100.3	6.50	101.7	6.49	104.8	6.48	107.9	6.45	110.7	6.42
		16.8	88.0	6.41	91.8	6.44	95.5	6.45	99.0	6.45	101.0	6.45	102.4	6.45	105.6	6.43	108.6	6.41	111.5	6.37
		20.3	88.6	6.37	92.5	6.39	96.2	6.41	99.7	6.41	101.8	6.41	103.1	6.40	106.3	6.38	109.4	6.36	112.3	6.33
		30.0	90.3	6.25	94.2	6.27	98.0	6.29	101.6	6.29	103.7	6.29	105.1	6.28	108.3	6.27	111.5	6.24	114.4	6.21
		39.6	91.9	6.14	96.0	6.17	99.8	6.18	103.5	6.18	105.6	6.18	107.0	6.18	110.4	6.16	113.6	6.14	116.6	6.11
	95	13.2	80.8	6.30	84.4	6.33	87.7	6.34	91.0	6.34	92.8	6.34	94.1	6.33	97.0	6.32	99.8	6.29	102.5	6.26
		16.8	81.4	6.26	85.0	6.28	88.4	6.29	91.6	6.30	93.5	6.29	94.7	6.29	97.7	6.27	100.5	6.25	103.2	6.22
		20.3	82.0	6.21	85.6	6.24	89.0	6.25	92.3	6.25	94.2	6.25	95.4	6.24	98.4	6.23	101.2	6.20	103.9	6.17
		30.0	83.5	6.10	87.2	6.12	90.7	6.14	94.0	6.14	96.0	6.13	97.2	6.13	100.3	6.11	103.2	6.09	105.9	6.06
		39.6	85.1	5.99	88.8	6.02	92.4	6.03	95.8	6.03	97.7	6.03	99.0	6.02	102.1	6.01	105.1	5.98	107.9	5.95
	104	13.2	74.1	6.10	77.4	6.12	80.5	6.13	83.5	6.14	85.2	6.13	86.3	6.13	89.0	6.11	91.6	6.09	94.0	6.06
		16.8	74.7	6.05	77.9	6.08	81.1	6.09	84.0	6.09	85.8	6.09	86.9	6.08	89.6	6.07	92.2	6.04	94.7	6.01
		20.3	75.2	6.01	78.5	6.04	81.6	6.05	84.6	6.05	86.4	6.05	87.5	6.04	90.3	6.03	92.9	6.00	95.3	5.97
		30.0	76.6	5.90	80.0	5.92	83.2	5.94	86.2	5.94	88.0	5.94	89.2	5.93	92.0	5.92	94.6	5.89	97.2	5.86
		39.6	78.1	5.80	81.5	5.82	84.7	5.83	87.9	5.84	89.7	5.83	90.8	5.83	93.7	5.81	96.4	5.79	99.0	5.76
	113	13.2	67.5	5.87	70.4	5.89	73.2	5.91	75.9	5.91	77.5	5.90	78.5	5.90	81.0	5.88	83.3	5.86	85.5	5.83
		16.8	67.9	5.83	70.9	5.85	73.8	5.86	76.5	5.86	78.0	5.86	79.1	5.86	81.6	5.84	83.9	5.82	86.1	5.79
		20.3	68.4	5.79	71.4	5.81	74.3	5.82	77.0	5.82	78.6	5.82	79.6	5.82	82.1	5.80	84.5	5.78	86.8	5.75
		30.0	69.7	5.68	72.8	5.70	75.7	5.72	78.5	5.72	80.1	5.71	81.1	5.71	83.7	5.69	86.1	5.67	88.4	5.64
		39.6	71.0	5.58	74.1	5.61	77.1	5.62	79.9	5.62	81.6	5.61	82.7	5.61	85.2	5.60	87.7	5.57	90.0	5.55
120	50	13.2	85.7	2.86	89.4	2.87	93.0	2.88	96.5	2.88	98.4	2.88	99.7	2.88	102.9	2.87	105.8	2.86	108.7	2.85
		16.8	86.3	2.84	90.1	2.85	93.7	2.86	97.1	2.86	99.1	2.86	100.4	2.86	103.6	2.85	106.6	2.84	109.4	2.83
		20.3	86.9	2.82	90.7	2.83	94.3	2.84	97.8	2.84	99.8	2.84	101.2	2.84	104.3	2.83	107.3	2.82	110.2	2.81
		30.0	88.6	2.77	92.4	2.78	96.1	2.79	99.7	2.79	101.7	2.79	103.1	2.79	106.3	2.78	109.4	2.77	112.3	2.75
		39.6	90.2	2.72	94.1	2.73	97.9	2.74	101.5	2.74	103.6	2.74	105.0	2.74	108.3	2.73	111.4	2.72	114.4	2.71
	59	13.2	85.7	3.45	89.4	3.46	93.0	3.47	96.5	3.47	98.4	3.47	99.7	3.47	102.9	3.46	105.8	3.45	108.7	3.43
		16.8	86.3	3.42	90.1	3.44	93.7	3.45	97.1	3.45	99.1	3.45	100.4	3.44	103.6	3.43	106.6	3.42	109.4	3.40
		20.3	86.9	3.40	90.7	3.41	94.3	3.42	97.8	3.42	99.8	3.42	101.2	3.42	104.3	3.41	107.3	3.40	110.2	3.38
		30.0	88.6	3.34	92.4	3.35	96.1	3.36	99.7	3.36	101.7	3.36	103.1	3.36	106.3	3.35	109.4	3.34	112.3	3.32
		39.6	90.2	3.28	94.1	3.29	97.9	3.30	101.5	3.30	103.6	3.30	105.0	3.30	108.3	3.29	111.4	3.28	114.4	3.26
	68	13.2	85.7	4.20	89.4	4.22	93.0	4.23	96.5	4.23	98.4	4.23	99.7	4.23	102.9	4.22	105.8	4.20	108.7	4.18
		16.8	86.3	4.17	90.1	4.19	93.7	4.20	97.1	4.20	99.1	4.20	100.4	4.20	103.6	4.19	106.6	4.17	109.4	4.15
		20.3	86.9	4.14	90.7	4.16	94.3	4.17	97.8	4.17	99.8	4.17	101.2	4.17	104.3	4.16	107.3	4.14	110.2	4.12
		30.0	88.6	4.07	92.4	4.09	96.1	4.09	99.7	4.10	101.7	4.09	103.1	4.09	106.3	4.08	109.4	4.07	112.3	4.05
		39.6	90.2	4.00	94.1	4.02	97.9	4.02	101.5	4.03	103.6	4.02	105.0	4.02	108.3	4.01	111.4	4.00	114.4	3.98
	77	13.2	85.7	5.18	89.4	5.20	93.0	5.21	96.5	5.22	98.4	5.21	99.7	5.21	102.9	5.20	105.8	5.18	108.7	5.15
		16.8	86.3	5.14	90.1	5.16	93.7	5.18	97.1	5.18	99.1	5.18	100.4	5.17	103.6	5.16	106.6	5.14	109.4	5.11
		20.3	86.9	5.11	90.7	5.13	94.3	5.14	97.8	5.14	99.8	5.14	101.2	5.14	104.3	5.12	107.3	5.10	110.2	5.08
		30.0	88.6	5.01	92.4	5.03	96.1	5.05	99.7	5.05	101.7	5.05	103.1	5.04	106.3	5.03	109.4	5.01	112.3	4.99
		39.6	90.2	4.93	94.1	4.95	97.9	4.96	101.5	4.96	103.6	4.96	105.0	4.96	108.3	4.94	111.4	4.92	114.4	4.90
	86	13.2	85.7	6.43	89.4	6.46	93.0	6.47	96.5	6.48	98.4	6.47	99.7	6.47	102.9	6.45	105.8	6.43	108.7	6.40
		16.8	86.3	6.39	90.1	6.41	93.7	6.43	97.1	6.43	99.1	6.43	100.4	6.42	103.6	6.41	106.6	6.38	109.4	6.35
		20.3	86.9	6.34	90.7	6.37	94.3	6.38	97.8	6.38	99.8	6.38	101.2	6.38	104.3	6.36	107.3	6.34	110.2	6.30
		30.0	88.6	6.22	92.4	6.25	96.1	6.26	99.7	6.27	101.7	6.26	103.1	6.26	106.3	6.24	109.4	6.22	112.3	6.19
		39.6	90.2	6.12	94.1	6.14	97.9	6.16	101.5	6.16	103.6	6.16	105.0	6.15	108.3	6.14	111.4	6.11	114.4	6.08
	95	13.2	79.3	6.28	82.8	6.30	86.1	6.32	89.3	6.32	91.1	6.31	92.3	6.31	95.2	6.29	97.9	6.27	100.5	6.24
		16.8	79.9	6.23	83.4	6.26	86.7	6.27	89.9	6.27	91.7	6.27	92.9	6.26	95.9	6.25	98.6	6.22	101.3	6.19
		20.3	80.4	6.19	83.9	6.21	87.3	6.23	90.5	6.23	92.4	6.22	93.6	6.22	96.5	6.20	99.3	6.18	102.0	6.15
		30.0	82.0	6.07	85.5	6.10	89.0	6.11	92.2	6.11	94.1	6.11	95.4	6.11	98.4	6.09	101.2	6.07	103.9	6.03
		39.6	83.5	5.97	87.1	5.99	90.6	6.01	94.0	6.01	95.9	6.00	97.2	6.00	100.2	5.98	103.1	5.96	105.8	5.93
	104	13.2	72.7	6.07	75.9	6.10	79.0	6.11	81.9	6.11	83.6	6.11	84.7	6.11	87.3	6.09	89.8	6.07	92.2	6.03
		16.8	73.3	6.03	76.5	6.05	79.5	6.07	82.5	6.07	84.2	6.07	85.3	6.06	87.9	6.05	90.5	6.02	92.9	5.99
		20.3	73.8	5.99	77.0	6.01	80.1	6.02	83.0	6.03	84.8	6.02	85.9	6.02	88.6	6.00	91.1	5.98	93.5	5.95
		30.0	75.2	5.88	78.5	5.90	81.6	5.91	84.6	5.92	86.4	5.91	87.5	5.91	90.2	5.89	92.8	5.87	95.3	5.84
		39.6	76.6	5.78	79.9	5.80	83.1	5.81	86.2	5.81	88.0	5.81	89.1	5.81	91.9	5.79	94.6	5.77	97.1	5.74
	113	13.2	66.2	5.85	69.1	5.87	71.8	5.88	74.5	5.88	76.0	5.88	77.0	5.88	79.4	5.86	81.7	5.84	83.9	5.81
		16.8	66.7	5.81	69.6	5.83	72.4	5.84	75.0	5.84	76.6	5.84	77.6	5.83	80.0	5.82	82.3	5.80	84.5	5.77
		20.3	67.1	5.76	70.1	5.79	72.9	5.80	75.6	5.80	77.1	5.80	78.1	5.79	80.6	5.78	82.9	5.76	85.1	5.73
		30.0	68.4	5.66	71.4	5.68	74.3	5.69	77.0	5.69	78.6	5.69	79.6	5.69	82.1	5.67	84.5	5.65	86.7	5.62
		39.6	69.7	5.56	72.7	5.58	75.6	5.59	78.4	5.60	80.0	5.59	81.1	5.59	83.6	5.57	86.1	5.55	88.3	5.52

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	13.2	84.0	2.87	87.7	2.88	91.2	2.89	94.6	2.89	96.5	2.89	97.8	2.88	100.9	2.88	103.8	2.87	106.6	2.85
		16.8	84.6	2.85	88.3	2.86	91.9	2.86	95.3	2.87	97.2	2.86	98.5	2.86	101.6	2.86	104.5	2.84	107.3	2.83
		20.3	85.2	2.83	89.0	2.84	92.5	2.84	95.9	2.85	97.9	2.84	99.2	2.84	102.3	2.84	105.3	2.82	108.1	2.81
		30.0	86.9	2.77	90.6	2.79	94.3	2.79	97.8	2.79	99.8	2.79	101.1	2.79	104.3	2.78	107.3	2.77	110.1	2.76
		39.6	88.5	2.73	92.3	2.74	96.0	2.74	99.6	2.75	101.6	2.74	103.0	2.74	106.2	2.74	109.3	2.72	112.2	2.71
	59	13.2	84.0	3.45	87.7	3.47	91.2	3.48	94.6	3.48	96.5	3.48	97.8	3.47	100.9	3.47	103.8	3.45	106.6	3.43
		16.8	84.6	3.43	88.3	3.44	91.9	3.45	95.3	3.45	97.2	3.45	98.5	3.45	101.6	3.44	104.5	3.43	107.3	3.41
		20.3	85.2	3.41	89.0	3.42	92.5	3.43	95.9	3.43	97.9	3.43	99.2	3.42	102.3	3.42	105.3	3.40	108.1	3.39
		30.0	86.9	3.34	90.6	3.36	94.3	3.36	97.8	3.37	99.8	3.36	101.1	3.36	104.3	3.35	107.3	3.34	110.1	3.32
		39.6	88.5	3.29	92.3	3.30	96.0	3.31	99.6	3.31	101.6	3.31	103.0	3.30	106.2	3.30	109.3	3.28	112.2	3.27
	68	13.2	84.0	4.21	87.7	4.23	91.2	4.24	94.6	4.24	96.5	4.24	97.8	4.24	100.9	4.22	103.8	4.21	106.6	4.19
		16.8	84.6	4.18	88.3	4.20	91.9	4.21	95.3	4.21	97.2	4.21	98.5	4.20	101.6	4.19	104.5	4.18	107.3	4.16
		20.3	85.2	4.15	89.0	4.17	92.5	4.18	95.9	4.18	97.9	4.18	99.2	4.18	102.3	4.16	105.3	4.15	108.1	4.13
		30.0	86.9	4.08	90.6	4.09	94.3	4.10	97.8	4.10	99.8	4.10	101.1	4.10	104.3	4.09	107.3	4.07	110.1	4.05
		39.6	88.5	4.01	92.3	4.02	96.0	4.03	99.6	4.03	101.6	4.03	103.0	4.03	106.2	4.02	109.3	4.00	112.2	3.98
	77	13.2	84.0	5.19	87.7	5.21	91.2	5.22	94.6	5.22	96.5	5.22	97.8	5.22	100.9	5.21	103.8	5.19	106.6	5.16
		16.8	84.6	5.15	88.3	5.17	91.9	5.18	95.3	5.19	97.2	5.18	98.5	5.18	101.6	5.17	104.5	5.15	107.3	5.12
		20.3	85.2	5.12	89.0	5.14	92.5	5.15	95.9	5.15	97.9	5.15	99.2	5.14	102.3	5.13	105.3	5.11	108.1	5.09
		30.0	86.9	5.02	90.6	5.04	94.3	5.05	97.8	5.06	99.8	5.05	101.1	5.05	104.3	5.04	107.3	5.02	110.1	4.99
		39.6	88.5	4.94	92.3	4.96	96.0	4.97	99.6	4.97	101.6	4.97	103.0	4.96	106.2	4.95	109.3	4.93	112.2	4.91
	86	13.2	84.0	6.44	87.7	6.47	91.2	6.48	94.6	6.49	96.5	6.48	97.8	6.48	100.9	6.46	103.8	6.44	106.6	6.41
		16.8	84.6	6.40	88.3	6.42	91.9	6.44	95.3	6.44	97.2	6.44	98.5	6.43	101.6	6.42	104.5	6.39	107.3	6.36
		20.3	85.2	6.35	89.0	6.38	92.5	6.39	95.9	6.39	97.9	6.39	99.2	6.39	102.3	6.37	105.3	6.35	108.1	6.31
		30.0	86.9	6.23	90.6	6.26	94.3	6.27	97.8	6.28	99.8	6.27	101.1	6.27	104.3	6.25	107.3	6.23	110.1	6.20
		39.6	88.5	6.13	92.3	6.15	96.0	6.17	99.6	6.17	101.6	6.17	103.0	6.16	106.2	6.15	109.3	6.12	112.2	6.09
	95	13.2	77.8	6.29	81.2	6.31	84.4	6.33	87.5	6.33	89.3	6.32	90.5	6.32	93.4	6.30	96.1	6.28	98.6	6.25
		16.8	78.3	6.24	81.7	6.27	85.0	6.28	88.2	6.28	90.0	6.28	91.2	6.27	94.0	6.26	96.7	6.23	99.3	6.20
		20.3	78.9	6.20	82.3	6.22	85.6	6.24	88.8	6.24	90.6	6.23	91.8	6.23	94.7	6.21	97.4	6.19	100.0	6.16
		30.0	80.4	6.09	83.9	6.11	87.3	6.12	90.5	6.12	92.3	6.12	93.5	6.12	96.5	6.10	99.3	6.08	101.9	6.05
		39.6	81.9	5.98	85.4	6.00	88.9	6.02	92.2	6.02	94.1	6.01	95.3	6.01	98.3	5.99	101.1	5.97	103.8	5.94
	104	13.2	71.3	6.08	74.5	6.11	77.4	6.12	80.3	6.12	82.0	6.12	83.0	6.12	85.6	6.10	88.1	6.08	90.5	6.04
		16.8	71.9	6.04	75.0	6.06	78.0	6.08	80.9	6.08	82.5	6.08	83.6	6.07	86.2	6.06	88.7	6.03	91.1	6.00
		20.3	72.4	6.00	75.5	6.02	78.5	6.03	81.4	6.04	83.1	6.03	84.2	6.03	86.9	6.01	89.4	5.99	91.8	5.96
		30.0	73.7	5.89	77.0	5.91	80.0	5.92	83.0	5.93	84.7	5.92	85.8	5.92	88.5	5.90	91.1	5.88	93.5	5.85
		39.6	75.1	5.79	78.4	5.81	81.5	5.82	84.5	5.82	86.3	5.82	87.4	5.82	90.2	5.80	92.8	5.78	95.2	5.75
	113	13.2	64.9	5.86	67.8	5.88	70.5	5.89	73.1	5.89	74.6	5.89	75.6	5.89	77.9	5.87	80.2	5.85	82.3	5.82
		16.8	65.4	5.82	68.2	5.84	71.0	5.85	73.6	5.85	75.1	5.85	76.1	5.84	78.5	5.83	80.7	5.81	82.9	5.78
		20.3	65.8	5.77	68.7	5.80	71.5	5.81	74.1	5.81	75.6	5.81	76.6	5.80	79.0	5.79	81.3	5.77	83.5	5.74
		30.0	67.1	5.67	70.0	5.69	72.8	5.70	75.5	5.70	77.1	5.70	78.1	5.70	80.5	5.68	82.9	5.66	85.1	5.63
		39.6	68.3	5.57	71.3	5.59	74.2	5.60	76.9	5.61	78.5	5.60	79.5	5.60	82.0	5.58	84.4	5.56	86.6	5.53
100	50	13.2	82.4	2.89	86.0	2.90	89.4	2.91	92.7	2.91	94.7	2.91	95.9	2.91	98.9	2.90	101.8	2.89	104.5	2.87
		16.8	83.0	2.87	86.6	2.88	90.1	2.89	93.4	2.89	95.3	2.89	96.6	2.88	99.6	2.88	102.5	2.87	105.2	2.85
		20.3	83.6	2.85	87.2	2.86	90.7	2.87	94.1	2.87	96.0	2.87	97.3	2.86	100.3	2.86	103.2	2.85	106.0	2.83
		30.0	85.2	2.80	88.9	2.81	92.4	2.81	95.8	2.81	97.8	2.81	99.1	2.81	102.2	2.80	105.2	2.79	108.0	2.78
		39.6	86.7	2.75	90.5	2.76	94.2	2.77	97.6	2.77	99.6	2.76	100.9	2.76	104.1	2.76	107.1	2.75	110.0	2.73
	59	13.2	82.4	3.48	86.0	3.50	89.4	3.50	92.7	3.50	94.7	3.50	95.9	3.50	98.9	3.49	101.8	3.48	104.5	3.46
		16.8	83.0	3.46	86.6	3.47	90.1	3.48	93.4	3.48	95.3	3.48	96.6	3.48	99.6	3.47	102.5	3.45	105.2	3.44
		20.3	83.6	3.43	87.2	3.45	90.7	3.45	94.1	3.45	96.0	3.45	97.3	3.45	100.3	3.44	103.2	3.43	106.0	3.41
		30.0	85.2	3.37	88.9	3.38	92.4	3.39	95.8	3.39	97.8	3.39	99.1	3.39	102.2	3.38	105.2	3.37	108.0	3.35
		39.6	86.7	3.31	90.5	3.32	94.2	3.33	97.6	3.33	99.6	3.33	100.9	3.33	104.1	3.32	107.1	3.31	110.0	3.29
	68	13.2	82.4	4.24	86.0	4.26	89.4	4.27	92.7	4.27	94.7	4.27	95.9	4.27	98.9	4.26	101.8	4.24	104.5	4.22
		16.8	83.0	4.21	86.6	4.23	90.1	4.24	93.4	4.24	95.3	4.24	96.6	4.24	99.6	4.23	102.5	4.21	105.2	4.19
		20.3	83.6	4.18	87.2	4.20	90.7	4.21	94.1	4.21	96.0	4.21	97.3	4.21	100.3	4.20	103.2	4.18	106.0	4.16
		30.0	85.2	4.11	88.9	4.12	92.4	4.13	95.8	4.13	97.8	4.13	99.1	4.13	102.2	4.12	105.2	4.10	108.0	4.08
		39.6	86.7	4.04	90.5	4.05	94.2	4.06	97.6	4.06	99.6	4.06	100.9	4.06	104.1	4.05	107.1	4.03	110.0	4.01
	77	13.2	82.4	5.23	86.0	5.25	89.4	5.26	92.7	5.26	94.7	5.26	95.9	5.26	98.9	5.25	101.8	5.23	104.5	5.20
		16.8	83.0	5.19	86.6	5.21	90.1	5.22	93.4	5.23	95.3	5.22	96.6	5.22	99.6	5.21	102.5	5.19	105.2	5.16
		20.3	83.6	5.15	87.2	5.18	90.7	5.19	94.1	5.19	96.0	5.19	97.3	5.18	100.3	5.17	103.2	5.15	106.0	5.13
		30.0	85.2	5.06	88.9	5.08	92.4	5.09	95.8	5.09	97.8	5.09	99.1	5.09	102.2	5.08	105.2	5.06	108.0	5.03
		39.6	86.7	4.97	90.5	4.99	94.2	5.00	97.6	5.01	99.6	5.00	100.9	5.00	104.1	4.99	107.1	4.97	110.0	4.94
	86	13.2	82.4	6.49	86.0	6.52	89.4	6.53	92.7	6.54	94.7	6.53	95.9	6.53	98.9	6.51	101.8	6.49	104.5	6.45
		16.8	83.0	6.44	86.6	6.47	90.1	6.49	93.4	6.49	95.3	6.49	96.6	6.48	99.6	6.46	102.5	6.44	105.2	6.41
		20.3	83.6	6.40	87.2	6.43	90.7	6.44	94.1	6.44	96.0	6.44	97.3	6.44	100.3	6.42	103.2	6.39	106.0	6.36
		30.0	85.2	6.28	88.9	6.31	92.4	6.32	95.8	6.33	97.8	6.32	99.1	6.32	102.2	6.30	105.2	6.28	108.0	6.25
		39.6	86.7	6.17	90.5	6.20	94.2	6.21	97.6	6.22	99.6	6.21	100.9	6.21	104.1	6.19	107.1	6.17	110.0	6.14
	95	13.2	76.3	6.34	79.6	6.36	82.8	6.37	85.8	6.38	87.6	6.37	88.7	6.37	91.5	6.35	94.2	6.33	96.7	6.29
		16.8	76.8	6.29	80.1	6.32	83.4	6.33	86.4	6.33	88.2	6.33	89.4	6.32	92.2	6.31	94.8	6.28	97.4	6.25
		20.3	77.3	6.25	80.7	6.27	83.9	6.28	87.0	6.29	88.8	6.28	90.0	6.28	92.8	6.26	95.5	6.24	98.1	6.20
		30.0	78.8	6.13	82.2	6.16	85.5	6.17	88.7	6.17	90.5	6.17	91.7	6.16	94.6	6.15	97.3	6.12	99.9	6.09
		39.6	80.3	6.03	83.8	6.05	87.1	6.06	90.3	6.06	92.2	6.06	93.4	6.06	96.3	6.04	99.1	6.02	101.8	5.99
	104	13.2	69.9	6.13	73.0	6.16	75.9	6.17	78.7	6.17	80.4	6.17	81.4	6.16	84.0	6.15	86.4	6.12	88.7	6.09
		16.8	70.4	6.09	73.5	6.11	76.5	6.12	79.3	6.13	80.9	6.12	82.0	6.12	84.6	6.10	87.0	6.08	89.3	6.05
		20.3	70.9	6.04	74.0	6.07	77.0	6.08	79.9	6.08	81.5	6.08	82.6	6.07	85.2	6.06	87.6	6.03	90.0	6.00
		30.0	72.3	5.93	75.4	5.96	78.5	5.97	81.4	5.97	83.0	5.97	84.1	5.96	86.8	5.95	89.3	5.92	91.7	5.89
		39.6	73.6	5.83	76.8	5.85	79.9	5.87	82.9	5.87	84.6	5.86	85.7	5.86	88.4	5.84	90.9	5.82	93.4	5.79
	113	13.2	63.6	5.90	66.4	5.93	69.1	5.94	71.6	5.94	73.1	5.94	74.1	5.93	76.4	5.92	78.6	5.89	80.7	5.86
		16.8	64.1	5.86	66.9	5.88	69.6	5.89	72.1	5.90	73.6	5.89	74.6	5.89	76.9	5.87	79.2	5.85	81.3	5.82
		20.3	64.6	5.82	67.4	5.84	70.1	5.85	72.7	5.85	74.2	5.85	75.1	5.85	77.5	5.83	79.7	5.81	81.8	5.78
		30.0	65.8	5.71	68.6	5.73	71.4	5.75	74.0	5.75	75.6	5.74	76.5	5.74	78.9	5.73	81.2	5.70	83.4	5.67
		39.6	67.0	5.61	69.9	5.64	72.7	5.65	75.4	5.65	77.0	5.65	78.0	5.64	80.4	5.63	82.7	5.60	84.9	5.58

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	13.2	74.2	2.41	77.4	2.42	80.5	2.43	83.5	2.43	85.2	2.43	86.3	2.43	89.0	2.42	91.6	2.41	94.0	2.40
		16.8	74.7	2.40	77.9	2.41	81.1	2.41	84.1	2.41	85.8	2.41	86.9	2.41	89.6	2.40	92.2	2.39	94.7	2.38
		20.3	75.2	2.38	78.5	2.39	81.6	2.39	84.7	2.39	86.4	2.39	87.5	2.39	90.3	2.39	92.9	2.38	95.4	2.37
		30.0	76.6	2.34	80.0	2.34	83.2	2.35	86.3	2.35	88.0	2.35	89.2	2.35	92.0	2.34	94.7	2.33	97.2	2.32
		39.6	78.1	2.29	81.5	2.30	84.7	2.31	87.9	2.31	89.7	2.31	90.9	2.31	93.7	2.30	96.4	2.29	99.0	2.28
	59	13.2	74.2	2.91	77.4	2.92	80.5	2.93	83.5	2.93	85.2	2.93	86.3	2.92	89.0	2.92	91.6	2.91	94.0	2.89
		16.8	74.7	2.89	77.9	2.90	81.1	2.90	84.1	2.91	85.8	2.90	86.9	2.90	89.6	2.90	92.2	2.88	94.7	2.87
		20.3	75.2	2.87	78.5	2.88	81.6	2.88	84.7	2.89	86.4	2.88	87.5	2.88	90.3	2.87	92.9	2.86	95.4	2.85
		30.0	76.6	2.81	80.0	2.83	83.2	2.83	86.3	2.83	88.0	2.83	89.2	2.83	92.0	2.82	94.7	2.81	97.2	2.80
		39.6	78.1	2.76	81.5	2.78	84.7	2.78	87.9	2.78	89.7	2.78	90.9	2.78	93.7	2.77	96.4	2.76	99.0	2.75
	68	13.2	74.2	3.54	77.4	3.56	80.5	3.57	83.5	3.57	85.2	3.57	86.3	3.56	89.0	3.56	91.6	3.54	94.0	3.52
		16.8	74.7	3.52	77.9	3.53	81.1	3.54	84.1	3.54	85.8	3.54	86.9	3.54	89.6	3.53	92.2	3.52	94.7	3.50
		20.3	75.2	3.49	78.5	3.51	81.6	3.52	84.7	3.52	86.4	3.52	87.5	3.51	90.3	3.50	92.9	3.49	95.4	3.47
		30.0	76.6	3.43	80.0	3.44	83.2	3.45	86.3	3.45	88.0	3.45	89.2	3.45	92.0	3.44	94.7	3.43	97.2	3.41
		39.6	78.1	3.37	81.5	3.38	84.7	3.39	87.9	3.39	89.7	3.39	90.9	3.39	93.7	3.38	96.4	3.37	99.0	3.35
	77	13.2	74.2	4.37	77.4	4.39	80.5	4.40	83.5	4.40	85.2	4.39	86.3	4.39	89.0	4.38	91.6	4.36	94.0	4.34
		16.8	74.7	4.34	77.9	4.35	81.1	4.36	84.1	4.37	85.8	4.36	86.9	4.36	89.6	4.35	92.2	4.33	94.7	4.31
		20.3	75.2	4.31	78.5	4.32	81.6	4.33	84.7	4.33	86.4	4.33	87.5	4.33	90.3	4.32	92.9	4.30	95.4	4.28
		30.0	76.6	4.23	80.0	4.24	83.2	4.25	86.3	4.26	88.0	4.25	89.2	4.25	92.0	4.24	94.7	4.22	97.2	4.20
		39.6	78.1	4.15	81.5	4.17	84.7	4.18	87.9	4.18	89.7	4.18	90.9	4.18	93.7	4.17	96.4	4.15	99.0	4.13
	86	13.2	74.2	5.42	77.4	5.44	80.5	5.46	83.5	5.46	85.2	5.46	86.3	5.45	89.0	5.44	91.6	5.42	94.0	5.39
		16.8	74.7	5.38	77.9	5.41	81.1	5.42	84.1	5.42	85.8	5.42	86.9	5.41	89.6	5.40	92.2	5.38	94.7	5.35
		20.3	75.2	5.34	78.5	5.37	81.6	5.38	84.7	5.38	86.4	5.38	87.5	5.37	90.3	5.36	92.9	5.34	95.4	5.31
		30.0	76.6	5.25	80.0	5.27	83.2	5.28	86.3	5.28	88.0	5.28	89.2	5.28	92.0	5.26	94.7	5.24	97.2	5.22
		39.6	78.1	5.16	81.5	5.18	84.7	5.19	87.9	5.19	89.7	5.19	90.9	5.19	93.7	5.17	96.4	5.15	99.0	5.13
	95	13.2	68.6	5.29	71.6	5.31	74.5	5.32	77.2	5.33	78.8	5.32	79.9	5.32	82.4	5.30	84.8	5.28	87.0	5.26
		16.8	69.1	5.25	72.1	5.27	75.0	5.29	77.8	5.29	79.4	5.28	80.4	5.28	83.0	5.27	85.4	5.25	87.6	5.22
		20.3	69.6	5.22	72.6	5.24	75.6	5.25	78.3	5.25	80.0	5.25	81.0	5.24	83.5	5.23	86.0	5.21	88.3	5.18
		30.0	70.9	5.12	74.0	5.14	77.0	5.15	79.8	5.15	81.5	5.15	82.5	5.15	85.1	5.13	87.6	5.11	89.9	5.09
		39.6	72.2	5.03	75.4	5.05	78.4	5.06	81.3	5.06	83.0	5.06	84.1	5.06	86.7	5.04	89.2	5.02	91.6	5.00
	104	13.2	63.0	5.12	65.7	5.14	68.3	5.15	70.9	5.15	72.3	5.15	73.3	5.15	75.6	5.13	77.7	5.11	79.8	5.09
		16.8	63.4	5.08	66.2	5.10	68.8	5.11	71.4	5.12	72.8	5.11	73.8	5.11	76.1	5.10	78.3	5.08	80.4	5.05
		20.3	63.9	5.05	66.6	5.07	69.3	5.08	71.9	5.08	73.3	5.08	74.3	5.07	76.6	5.06	78.9	5.04	81.0	5.01
		30.0	65.1	4.96	67.9	4.98	70.6	4.99	73.2	4.99	74.7	4.98	75.7	4.98	78.1	4.97	80.3	4.95	82.5	4.92
		39.6	66.3	4.87	69.2	4.89	71.9	4.90	74.6	4.90	76.1	4.90	77.1	4.89	79.5	4.88	81.8	4.86	84.0	4.84
	113	13.2	57.3	4.93	59.8	4.95	62.2	4.96	64.5	4.96	65.8	4.96	66.7	4.95	68.8	4.94	70.7	4.92	72.6	4.90
		16.8	57.7	4.89	60.2	4.91	62.6	4.92	64.9	4.92	66.3	4.92	67.1	4.92	69.2	4.91	71.2	4.89	73.1	4.86
		20.3	58.1	4.86	60.6	4.88	63.1	4.89	65.4	4.89	66.7	4.89	67.6	4.88	69.7	4.87	71.7	4.85	73.7	4.83
		30.0	59.2	4.77	61.8	4.79	64.3	4.80	66.6	4.80	68.0	4.80	68.9	4.79	71.1	4.78	73.1	4.76	75.1	4.74
		39.6	60.3	4.69	62.9	4.71	65.5	4.72	67.9	4.72	69.3	4.71	70.2	4.71	72.4	4.70	74.5	4.68	76.5	4.66
80	50	13.2	65.9	2.31	68.8	2.32	71.6	2.33	74.2	2.33	75.7	2.33	76.7	2.33	79.1	2.32	81.4	2.31	83.6	2.30
		16.8	66.4	2.30	69.3	2.31	72.1	2.31	74.7	2.31	76.3	2.31	77.3	2.31	79.7	2.31	82.0	2.30	84.2	2.29
		20.3	66.9	2.28	69.8	2.29	72.6	2.30	75.3	2.30	76.8	2.30	77.8	2.29	80.2	2.29	82.6	2.28	84.8	2.27
		30.0	68.1	2.24	71.1	2.25	73.9	2.25	76.7	2.26	78.3	2.25	79.3	2.25	81.8	2.25	84.1	2.24	86.4	2.23
		39.6	69.4	2.20	72.4	2.21	75.3	2.22	78.1	2.22	79.7	2.22	80.8	2.21	83.3	2.21	85.7	2.20	88.0	2.19
	59	13.2	65.9	2.79	68.8	2.80	71.6	2.81	74.2	2.81	75.7	2.81	76.7	2.80	79.1	2.80	81.4	2.79	83.6	2.77
		16.8	66.4	2.77	69.3	2.78	72.1	2.79	74.7	2.79	76.3	2.79	77.3	2.78	79.7	2.78	82.0	2.77	84.2	2.75
		20.3	66.9	2.75	69.8	2.76	72.6	2.77	75.3	2.77	76.8	2.77	77.8	2.77	80.2	2.76	82.6	2.75	84.8	2.73
		30.0	68.1	2.70	71.1	2.71	73.9	2.72	76.7	2.72	78.3	2.72	79.3	2.71	81.8	2.71	84.1	2.70	86.4	2.68
		39.6	69.4	2.65	72.4	2.66	75.3	2.67	78.1	2.67	79.7	2.67	80.8	2.67	83.3	2.66	85.7	2.65	88.0	2.64
	68	13.2	65.9	3.40	68.8	3.41	71.6	3.42	74.2	3.42	75.7	3.42	76.7	3.42	79.1	3.41	81.4	3.40	83.6	3.38
		16.8	66.4	3.38	69.3	3.39	72.1	3.40	74.7	3.40	76.3	3.40	77.3	3.39	79.7	3.39	82.0	3.37	84.2	3.36
		20.3	66.9	3.35	69.8	3.37	72.6	3.37	75.3	3.37	76.8	3.37	77.8	3.37	80.2	3.36	82.6	3.35	84.8	3.33
		30.0	68.1	3.29	71.1	3.30	73.9	3.31	76.7	3.31	78.3	3.31	79.3	3.31	81.8	3.30	84.1	3.29	86.4	3.27
		39.6	69.4	3.23	72.4	3.25	75.3	3.25	78.1	3.26	79.7	3.25	80.8	3.25	83.3	3.24	85.7	3.23	88.0	3.22
	77	13.2	65.9	4.19	68.8	4.21	71.6	4.22	74.2	4.22	75.7	4.22	76.7	4.21	79.1	4.20	81.4	4.19	83.6	4.17
		16.8	66.4	4.16	69.3	4.18	72.1	4.19	74.7	4.19	76.3	4.19	77.3	4.18	79.7	4.17	82.0	4.16	84.2	4.14
		20.3	66.9	4.13	69.8	4.15	72.6	4.16	75.3	4.16	76.8	4.16	77.8	4.15	80.2	4.14	82.6	4.13	84.8	4.11
		30.0	68.1	4.05	71.1	4.07	73.9	4.08	76.7	4.08	78.3	4.08	79.3	4.08	81.8	4.07	84.1	4.05	86.4	4.03
		39.6	69.4	3.98	72.4	4.00	75.3	4.01	78.1	4.01	79.7	4.01	80.8	4.01	83.3	4.00	85.7	3.98	88.0	3.96
	86	13.2	65.9	5.20	68.8	5.22	71.6	5.23	74.2	5.24	75.7	5.23	76.7	5.23	79.1	5.22	81.4	5.20	83.6	5.17
		16.8	66.4	5.16	69.3	5.19	72.1	5.20	74.7	5.20	76.3	5.20	77.3	5.19	79.7	5.18	82.0	5.16	84.2	5.13
		20.3	66.9	5.13	69.8	5.15	72.6	5.16	75.3	5.16	76.8	5.16	77.8	5.16	80.2	5.14	82.6	5.12	84.8	5.10
		30.0	68.1	5.03	71.1	5.05	73.9	5.07	76.7	5.07	78.3	5.07	79.3	5.06	81.8	5.05	84.1	5.03	86.4	5.01
		39.6	69.4	4.95	72.4	4.97	75.3	4.98	78.1	4.98	79.7	4.98	80.8	4.97	83.3	4.96	85.7	4.94	88.0	4.92
	95	13.2	61.0	5.08	63.7	5.10	66.2	5.11	68.7	5.11	70.1	5.11	71.0	5.10	73.2	5.09	75.3	5.07	77.3	5.04
		16.8	61.4	5.04	64.1	5.06	66.7	5.07	69.1	5.07	70.6	5.07	71.5	5.07	73.7	5.05	75.9	5.03	77.9	5.01
		20.3	61.9	5.00	64.6	5.02	67.2	5.03	69.6	5.04	71.1	5.03	72.0	5.03	74.3	5.02	76.4	5.00	78.4	4.97
		30.0	63.0	4.91	65.8	4.93	68.4	4.94	71.0	4.94	72.4	4.94	73.4	4.94	75.7	4.92	77.9	4.91	79.9	4.88
		39.6	64.2	4.83	67.0	4.85	69.7	4.86	72.3	4.86	73.8	4.86	74.7	4.85	77.1	4.84	79.3	4.82	81.4	4.80
	104	13.2	56.0	4.91	58.4	4.93	60.7	4.94	63.0	4.94	64.3	4.94	65.1	4.94	67.2	4.92	69.1	4.91	71.0	4.88
		16.8	56.4	4.88	58.8	4.90	61.2	4.91	63.4	4.91	64.7	4.91	65.6	4.90	67.6	4.89	69.6	4.87	71.5	4.84
		20.3	56.8	4.84	59.2	4.86	61.6	4.87	63.9	4.87	65.2	4.87	66.1	4.87	68.1	4.85	70.1	4.84	72.0	4.81
		30.0	57.8	4.75	60.4	4.77	62.8	4.78	65.1	4.78	66.4	4.78	67.3	4.78	69.4	4.77	71.4	4.75	73.3	4.72
		39.6	58.9	4.67	61.5	4.69	63.9	4.70	66.3	4.70	67.7	4.70	68.6	4.70	70.7	4.68	72.8	4.66	74.7	4.64
	113	13.2	50.9	4.73	53.1	4.75	55.3	4.76	57.3	4.76	58.5	4.76	59.3	4.75	61.1	4.74	62.9	4.72	64.6	4.70
		16.8	51.3	4.69	53.5	4.71	55.7	4.72	57.7	4.72	58.9	4.72	59.7	4.72	61.5	4.71	63.3	4.69	65.0	4.66
		20.3	51.6	4.66	53.9	4.68	56.1	4.69	58.1	4.69	59.3	4.69	60.1	4.69	62.0	4.67	63.8	4.65	65.5	4.63
		30.0	52.6	4.58	54.9	4.59	57.1	4.60	59.2	4.61	60.4	4.60	61.2	4.60	63.2	4.59	65.0	4.57	66.7	4.55
		39.6	53.6	4.50	55.9	4.52	58.2	4.52	60.3	4.53	61.6	4.52	62.4	4.52	64.3	4.51	66.2	4.49	68.0	4.47

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	13.2	57.7	1.88	60.2	1.88	62.6	1.89	64.9	1.89	66.3	1.89	67.1	1.89	69.2	1.88	71.2	1.88	73.1	1.87
		16.8	58.1	1.86	60.6	1.87	63.1	1.88	65.4	1.88	66.7	1.87	67.6	1.87	69.7	1.87	71.7	1.86	73.7	1.85
		20.3	58.5	1.85	61.1	1.86	63.5	1.86	65.8	1.86	67.2	1.86	68.1	1.86	70.2	1.86	72.2	1.85	74.2	1.84
		30.0	59.6	1.82	62.2	1.82	64.7	1.83	67.1	1.83	68.5	1.83	69.4	1.83	71.5	1.82	73.6	1.81	75.6	1.81
		39.6	60.7	1.78	63.4	1.79	65.9	1.80	68.3	1.80	69.7	1.80	70.7	1.79	72.9	1.79	75.0	1.78	77.0	1.77
	59	13.2	57.7	2.26	60.2	2.27	62.6	2.28	64.9	2.28	66.3	2.28	67.1	2.27	69.2	2.27	71.2	2.26	73.1	2.25
		16.8	58.1	2.24	60.6	2.25	63.1	2.26	65.4	2.26	66.7	2.26	67.6	2.26	69.7	2.25	71.7	2.24	73.7	2.23
		20.3	58.5	2.23	61.1	2.24	63.5	2.24	65.8	2.24	67.2	2.24	68.1	2.24	70.2	2.24	72.2	2.23	74.2	2.22
		30.0	59.6	2.19	62.2	2.20	64.7	2.20	67.1	2.20	68.5	2.20	69.4	2.20	71.5	2.20	73.6	2.19	75.6	2.18
		39.6	60.7	2.15	63.4	2.16	65.9	2.16	68.3	2.17	69.7	2.16	70.7	2.16	72.9	2.16	75.0	2.15	77.0	2.14
	68	13.2	57.7	2.76	60.2	2.77	62.6	2.77	64.9	2.78	66.3	2.77	67.1	2.77	69.2	2.77	71.2	2.75	73.1	2.74
		16.8	58.1	2.74	60.6	2.75	63.1	2.75	65.4	2.76	66.7	2.75	67.6	2.75	69.7	2.75	71.7	2.73	73.7	2.72
		20.3	58.5	2.72	61.1	2.73	63.5	2.73	65.8	2.74	67.2	2.73	68.1	2.73	70.2	2.73	72.2	2.72	74.2	2.70
		30.0	59.6	2.67	62.2	2.68	64.7	2.68	67.1	2.69	68.5	2.68	69.4	2.68	71.5	2.68	73.6	2.67	75.6	2.65
		39.6	60.7	2.62	63.4	2.63	65.9	2.64	68.3	2.64	69.7	2.64	70.7	2.64	72.9	2.63	75.0	2.62	77.0	2.61
	77	13.2	57.7	3.40	60.2	3.41	62.6	3.42	64.9	3.42	66.3	3.42	67.1	3.42	69.2	3.41	71.2	3.39	73.1	3.38
		16.8	58.1	3.37	60.6	3.39	63.1	3.39	65.4	3.40	66.7	3.39	67.6	3.39	69.7	3.38	71.7	3.37	73.7	3.35
		20.3	58.5	3.35	61.1	3.36	63.5	3.37	65.8	3.37	67.2	3.37	68.1	3.37	70.2	3.36	72.2	3.35	74.2	3.33
		30.0	59.6	3.29	62.2	3.30	64.7	3.31	67.1	3.31	68.5	3.31	69.4	3.31	71.5	3.30	73.6	3.29	75.6	3.27
		39.6	60.7	3.23	63.4	3.24	65.9	3.25	68.3	3.25	69.7	3.25	70.7	3.25	72.9	3.24	75.0	3.23	77.0	3.21
	86	13.2	57.7	4.22	60.2	4.23	62.6	4.24	64.9	4.25	66.3	4.24	67.1	4.24	69.2	4.23	71.2	4.21	73.1	4.19
		16.8	58.1	4.19	60.6	4.20	63.1	4.21	65.4	4.22	66.7	4.21	67.6	4.21	69.7	4.20	71.7	4.18	73.7	4.16
		20.3	58.5	4.16	61.1	4.17	63.5	4.18	65.8	4.19	67.2	4.18	68.1	4.18	70.2	4.17	72.2	4.15	74.2	4.13
		30.0	59.6	4.08	62.2	4.10	64.7	4.11	67.1	4.11	68.5	4.11	69.4	4.10	71.5	4.09	73.6	4.08	75.6	4.06
		39.6	60.7	4.01	63.4	4.03	65.9	4.04	68.3	4.04	69.7	4.04	70.7	4.03	72.9	4.02	75.0	4.01	77.0	3.99
	95	13.2	53.4	4.12	55.7	4.13	57.9	4.14	60.1	4.14	61.3	4.14	62.1	4.14	64.1	4.13	65.9	4.11	67.7	4.09
		16.8	53.8	4.09	56.1	4.10	58.4	4.11	60.5	4.11	61.8	4.11	62.6	4.11	64.5	4.10	66.4	4.08	68.2	4.06
		20.3	54.1	4.06	56.5	4.07	58.8	4.08	60.9	4.08	62.2	4.08	63.0	4.08	65.0	4.07	66.9	4.05	68.6	4.03
		30.0	55.2	3.98	57.6	4.00	59.9	4.01	62.1	4.01	63.4	4.01	64.2	4.00	66.2	3.99	68.1	3.98	69.9	3.96
		39.6	56.2	3.91	58.6	3.93	61.0	3.94	63.2	3.94	64.5	3.94	65.4	3.93	67.4	3.92	69.4	3.91	71.2	3.89
	104	13.2	49.0	3.98	51.1	4.00	53.1	4.01	55.1	4.01	56.2	4.01	57.0	4.00	58.8	3.99	60.5	3.98	62.1	3.96
		16.8	49.3	3.95	51.5	3.97	53.5	3.98	55.5	3.98	56.6	3.98	57.4	3.97	59.2	3.96	60.9	3.95	62.5	3.93
		20.3	49.7	3.93	51.8	3.94	53.9	3.95	55.9	3.95	57.0	3.95	57.8	3.95	59.6	3.94	61.3	3.92	63.0	3.90
		30.0	50.6	3.85	52.8	3.87	54.9	3.88	57.0	3.88	58.1	3.88	58.9	3.87	60.7	3.86	62.5	3.85	64.2	3.83
		39.6	51.5	3.79	53.8	3.80	55.9	3.81	58.0	3.81	59.2	3.81	60.0	3.81	61.9	3.80	63.7	3.78	65.4	3.76
	113	13.2	44.6	3.83	46.5	3.85	48.4	3.86	50.1	3.86	51.2	3.86	51.8	3.85	53.5	3.84	55.0	3.83	56.5	3.81
		16.8	44.9	3.81	46.8	3.82	48.7	3.83	50.5	3.83	51.5	3.83	52.2	3.83	53.9	3.82	55.4	3.80	56.9	3.78
		20.3	45.2	3.78	47.2	3.79	49.0	3.80	50.9	3.80	51.9	3.80	52.6	3.80	54.2	3.79	55.8	3.77	57.3	3.75
		30.0	46.0	3.71	48.1	3.73	50.0	3.73	51.8	3.73	52.9	3.73	53.6	3.73	55.3	3.72	56.9	3.70	58.4	3.69
		39.6	46.9	3.65	48.9	3.66	50.9	3.67	52.8	3.67	53.9	3.67	54.6	3.66	56.3	3.65	57.9	3.64	59.5	3.62
60	50	13.2	49.4	1.51	51.6	1.51	53.7	1.52	55.6	1.52	56.8	1.52	57.5	1.52	59.3	1.51	61.1	1.51	62.7	1.50
		16.8	49.8	1.50	52.0	1.50	54.0	1.51	56.0	1.51	57.2	1.51	57.9	1.51	59.8	1.50	61.5	1.50	63.1	1.49
		20.3	50.1	1.49	52.3	1.49	54.4	1.50	56.4	1.50	57.6	1.50	58.4	1.50	60.2	1.49	61.9	1.49	63.6	1.48
		30.0	51.1	1.46	53.3	1.47	55.5	1.47	57.5	1.47	58.7	1.47	59.5	1.47	61.3	1.46	63.1	1.46	64.8	1.45
		39.6	52.0	1.43	54.3	1.44	56.5	1.44	58.6	1.44	59.8	1.44	60.6	1.44	62.5	1.44	64.3	1.43	66.0	1.43
	59	13.2	49.4	1.82	51.6	1.82	53.7	1.83	55.6	1.83	56.8	1.83	57.5	1.83	59.3	1.82	61.1	1.82	62.7	1.81
		16.8	49.8	1.80	52.0	1.81	54.0	1.82	56.0	1.82	57.2	1.82	57.9	1.81	59.8	1.81	61.5	1.80	63.1	1.79
		20.3	50.1	1.79	52.3	1.80	54.4	1.80	56.4	1.80	57.6	1.80	58.4	1.80	60.2	1.80	61.9	1.79	63.6	1.78
		30.0	51.1	1.76	53.3	1.77	55.5	1.77	57.5	1.77	58.7	1.77	59.5	1.77	61.3	1.76	63.1	1.76	64.8	1.75
		39.6	52.0	1.73	54.3	1.74	56.5	1.74	58.6	1.74	59.8	1.74	60.6	1.74	62.5	1.73	64.3	1.73	66.0	1.72
	68	13.2	49.4	2.22	51.6	2.22	53.7	2.23	55.6	2.23	56.8	2.23	57.5	2.23	59.3	2.22	61.1	2.21	62.7	2.20
		16.8	49.8	2.20	52.0	2.21	54.0	2.21	56.0	2.21	57.2	2.21	57.9	2.21	59.8	2.21	61.5	2.20	63.1	2.19
		20.3	50.1	2.18	52.3	2.19	54.4	2.20	56.4	2.20	57.6	2.20	58.4	2.20	60.2	2.19	61.9	2.18	63.6	2.17
		30.0	51.1	2.14	53.3	2.15	55.5	2.16	57.5	2.16	58.7	2.16	59.5	2.16	61.3	2.15	63.1	2.14	64.8	2.13
		39.6	52.0	2.11	54.3	2.12	56.5	2.12	58.6	2.12	59.8	2.12	60.6	2.12	62.5	2.11	64.3	2.11	66.0	2.09
	77	13.2	49.4	2.73	51.6	2.74	53.7	2.75	55.6	2.75	56.8	2.75	57.5	2.75	59.3	2.74	61.1	2.73	62.7	2.71
		16.8	49.8	2.71	52.0	2.72	54.0	2.73	56.0	2.73	57.2	2.73	57.9	2.73	59.8	2.72	61.5	2.71	63.1	2.69
		20.3	50.1	2.69	52.3	2.70	54.4	2.71	56.4	2.71	57.6	2.71	58.4	2.71	60.2	2.70	61.9	2.69	63.6	2.68
		30.0	51.1	2.64	53.3	2.65	55.5	2.66	57.5	2.66	58.7	2.66	59.5	2.66	61.3	2.65	63.1	2.64	64.8	2.63
		39.6	52.0	2.60	54.3	2.61	56.5	2.61	58.6	2.61	59.8	2.61	60.6	2.61	62.5	2.60	64.3	2.59	66.0	2.58
	86	13.2	49.4	3.39	51.6	3.40	53.7	3.41	55.6	3.41	56.8	3.41	57.5	3.41	59.3	3.40	61.1	3.39	62.7	3.37
		16.8	49.8	3.36	52.0	3.38	54.0	3.39	56.0	3.39	57.2	3.39	57.9	3.38	59.8	3.38	61.5	3.36	63.1	3.35
		20.3	50.1	3.34	52.3	3.35	54.4	3.36	56.4	3.36	57.6	3.36	58.4	3.36	60.2	3.35	61.9	3.34	63.6	3.32
		30.0	51.1	3.28	53.3	3.29	55.5	3.30	57.5	3.30	58.7	3.30	59.5	3.30	61.3	3.29	63.1	3.28	64.8	3.26
		39.6	52.0	3.22	54.3	3.24	56.5	3.24	58.6	3.24	59.8	3.24	60.6	3.24	62.5	3.23	64.3	3.22	66.0	3.20
	95	13.2	45.8	3.31	47.7	3.32	49.7	3.33	51.5	3.33	52.6	3.33	53.2	3.32	54.9	3.32	56.5	3.30	58.0	3.29
		16.8	46.1	3.28	48.1	3.30	50.0	3.30	51.9	3.30	52.9	3.30	53.6	3.30	55.3	3.29	56.9	3.28	58.4	3.26
		20.3	46.4	3.26	48.4	3.27	50.4	3.28	52.2	3.28	53.3	3.28	54.0	3.28	55.7	3.27	57.3	3.26	58.8	3.24
		30.0	47.3	3.20	49.3	3.21	51.3	3.22	53.2	3.22	54.3	3.22	55.0	3.22	56.8	3.21	58.4	3.20	60.0	3.18
		39.6	48.2	3.15	50.3	3.16	52.3	3.16	54.2	3.17	55.3	3.16	56.1	3.16	57.8	3.15	59.5	3.14	61.1	3.12
	104	13.2	42.0	3.20	43.8	3.21	45.6	3.22	47.2	3.22	48.2	3.22	48.8	3.22	50.4	3.21	51.8	3.20	53.2	3.18
		16.8	42.3	3.18	44.1	3.19	45.9	3.20	47.6	3.20	48.6	3.20	49.2	3.19	50.7	3.19	52.2	3.17	53.6	3.16
		20.3	42.6	3.16	44.4	3.17	46.2	3.17	47.9	3.18	48.9	3.17	49.5	3.17	51.1	3.16	52.6	3.15	54.0	3.13
		30.0	43.4	3.10	45.3	3.11	47.1	3.12	48.8	3.12	49.8	3.12	50.5	3.11	52.1	3.10	53.6	3.09	55.0	3.08
		39.6	44.2	3.04	46.1	3.06	48.0	3.06	49.7	3.06	50.8	3.06	51.4	3.06	53.0	3.05	54.6	3.04	56.0	3.02
	113	13.2	38.2	3.08	39.9	3.09	41.5	3.10	43.0	3.10	43.9	3.10	44.4	3.10	45.8	3.09	47.2	3.08	48.4	3.06
		16.8	38.5	3.06	40.1	3.07	41.7	3.08	43.3	3.08	44.2	3.08	44.8	3.07	46.2	3.07	47.5	3.05	48.8	3.04
		20.3	38.7	3.04	40.4	3.05	42.0	3.06	43.6	3.06	44.5	3.05	45.1	3.05	46.5	3.04	47.8	3.03	49.1	3.02
		30.0	39.5	2.98	41.2	2.99	42.8	3.00	44.4	3.00	45.3	3.00	45.9	3.00	47.4	2.99	48.7	2.98	50.0	2.96
		39.6	40.2	2.93	42.0	2.94	43.6	2.95	45.2	2.95	46.2	2.95	46.8	2.95	48.3	2.94	49.6	2.93	51.0	2.91

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	13.2	41.2	1.19	43.0	1.20	44.7	1.20	46.4	1.20	47.3	1.20	47.9	1.20	49.5	1.19	50.9	1.19	52.2	1.18
		16.8	41.5	1.18	43.3	1.19	45.0	1.19	46.7	1.19	47.7	1.19	48.3	1.19	49.8	1.19	51.2	1.18	52.6	1.18
		20.3	41.8	1.17	43.6	1.18	45.4	1.18	47.0	1.18	48.0	1.18	48.6	1.18	50.2	1.18	51.6	1.17	53.0	1.17
		30.0	42.6	1.15	44.4	1.16	46.2	1.16	47.9	1.16	48.9	1.16	49.6	1.16	51.1	1.16	52.6	1.15	54.0	1.15
		39.6	43.4	1.13	45.3	1.14	47.1	1.14	48.8	1.14	49.8	1.14	50.5	1.14	52.1	1.14	53.6	1.13	55.0	1.13
	59	13.2	41.2	1.43	43.0	1.44	44.7	1.44	46.4	1.44	47.3	1.44	47.9	1.44	49.5	1.44	50.9	1.43	52.2	1.43
		16.8	41.5	1.42	43.3	1.43	45.0	1.43	46.7	1.43	47.7	1.43	48.3	1.43	49.8	1.43	51.2	1.42	52.6	1.42
		20.3	41.8	1.41	43.6	1.42	45.4	1.42	47.0	1.42	48.0	1.42	48.6	1.42	50.2	1.42	51.6	1.41	53.0	1.41
		30.0	42.6	1.39	44.4	1.39	46.2	1.40	47.9	1.40	48.9	1.40	49.6	1.40	51.1	1.39	52.6	1.39	54.0	1.38
		39.6	43.4	1.36	45.3	1.37	47.1	1.37	48.8	1.37	49.8	1.37	50.5	1.37	52.1	1.37	53.6	1.36	55.0	1.36
	68	13.2	41.2	1.75	43.0	1.76	44.7	1.76	46.4	1.76	47.3	1.76	47.9	1.76	49.5	1.75	50.9	1.75	52.2	1.74
		16.8	41.5	1.74	43.3	1.74	45.0	1.75	46.7	1.75	47.7	1.75	48.3	1.75	49.8	1.74	51.2	1.73	52.6	1.73
		20.3	41.8	1.72	43.6	1.73	45.4	1.73	47.0	1.74	48.0	1.73	48.6	1.73	50.2	1.73	51.6	1.72	53.0	1.71
		30.0	42.6	1.69	44.4	1.70	46.2	1.70	47.9	1.70	48.9	1.70	49.6	1.70	51.1	1.70	52.6	1.69	54.0	1.68
		39.6	43.4	1.66	45.3	1.67	47.1	1.67	48.8	1.67	49.8	1.67	50.5	1.67	52.1	1.67	53.6	1.66	55.0	1.65
	77	13.2	41.2	2.15	43.0	2.16	44.7	2.17	46.4	2.17	47.3	2.17	47.9	2.17	49.5	2.16	50.9	2.15	52.2	2.14
		16.8	41.5	2.14	43.3	2.15	45.0	2.15	46.7	2.15	47.7	2.15	48.3	2.15	49.8	2.15	51.2	2.14	52.6	2.13
		20.3	41.8	2.12	43.6	2.13	45.4	2.14	47.0	2.14	48.0	2.14	48.6	2.14	50.2	2.13	51.6	2.12	53.0	2.11
		30.0	42.6	2.09	44.4	2.09	46.2	2.10	47.9	2.10	48.9	2.10	49.6	2.10	51.1	2.09	52.6	2.08	54.0	2.07
		39.6	43.4	2.05	45.3	2.06	47.1	2.06	48.8	2.06	49.8	2.06	50.5	2.06	52.1	2.06	53.6	2.05	55.0	2.04
	86	13.2	41.2	2.67	43.0	2.69	44.7	2.69	46.4	2.69	47.3	2.69	47.9	2.69	49.5	2.68	50.9	2.67	52.2	2.66
		16.8	41.5	2.66	43.3	2.67	45.0	2.67	46.7	2.67	47.7	2.67	48.3	2.67	49.8	2.66	51.2	2.65	52.6	2.64
		20.3	41.8	2.64	43.6	2.65	45.4	2.65	47.0	2.65	48.0	2.65	48.6	2.65	50.2	2.64	51.6	2.63	53.0	2.62
		30.0	42.6	2.59	44.4	2.60	46.2	2.60	47.9	2.61	48.9	2.60	49.6	2.60	51.1	2.60	52.6	2.59	54.0	2.57
		39.6	43.4	2.54	45.3	2.55	47.1	2.56	48.8	2.56	49.8	2.56	50.5	2.56	52.1	2.55	53.6	2.54	55.0	2.53
	95	13.2	38.1	2.61	39.8	2.62	41.4	2.63	42.9	2.63	43.8	2.63	44.4	2.62	45.8	2.62	47.1	2.61	48.3	2.59
		16.8	38.4	2.59	40.1	2.60	41.7	2.61	43.2	2.61	44.1	2.61	44.7	2.60	46.1	2.60	47.4	2.59	48.7	2.57
		20.3	38.7	2.57	40.4	2.58	42.0	2.59	43.5	2.59	44.4	2.59	45.0	2.59	46.4	2.58	47.8	2.57	49.0	2.56
		30.0	39.4	2.53	41.1	2.54	42.8	2.54	44.3	2.54	45.3	2.54	45.9	2.54	47.3	2.53	48.7	2.52	50.0	2.51
		39.6	40.1	2.48	41.9	2.49	43.6	2.50	45.2	2.50	46.1	2.50	46.7	2.50	48.2	2.49	49.6	2.48	50.9	2.47
	104	13.2	35.0	2.53	36.5	2.54	38.0	2.54	39.4	2.54	40.2	2.54	40.7	2.54	42.0	2.53	43.2	2.52	44.3	2.51
		16.8	35.2	2.51	36.8	2.52	38.2	2.52	39.6	2.52	40.5	2.52	41.0	2.52	42.3	2.51	43.5	2.50	44.7	2.49
		20.3	35.5	2.49	37.0	2.50	38.5	2.51	39.9	2.51	40.7	2.50	41.3	2.50	42.6	2.50	43.8	2.49	45.0	2.47
		30.0	36.1	2.44	37.7	2.45	39.2	2.46	40.7	2.46	41.5	2.46	42.1	2.46	43.4	2.45	44.6	2.44	45.8	2.43
		39.6	36.8	2.40	38.4	2.41	40.0	2.42	41.4	2.42	42.3	2.42	42.8	2.41	44.2	2.41	45.5	2.40	46.7	2.39
	113	13.2	31.8	2.43	33.2	2.44	34.5	2.45	35.8	2.45	36.6	2.45	37.0	2.44	38.2	2.44	39.3	2.43	40.3	2.42
		16.8	32.0	2.41	33.4	2.42	34.8	2.43	36.1	2.43	36.8	2.43	37.3	2.43	38.5	2.42	39.6	2.41	40.6	2.40
		20.3	32.3	2.40	33.7	2.41	35.0	2.41	36.3	2.41	37.1	2.41	37.6	2.41	38.7	2.40	39.9	2.39	40.9	2.38
		30.0	32.9	2.35	34.3	2.36	35.7	2.37	37.0	2.37	37.8	2.37	38.3	2.37	39.5	2.36	40.6	2.35	41.7	2.34
		39.6	33.5	2.31	35.0	2.32	36.4	2.33	37.7	2.33	38.5	2.33	39.0	2.32	40.2	2.32	41.4	2.31	42.5	2.30

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	19.0	109.6	3.34	114.4	3.36	119.0	3.37	123.4	3.37	125.9	3.36	127.6	3.36	131.6	3.35	135.4	3.34	139.0	3.32
		22.2	110.2	3.33	115.0	3.34	119.6	3.35	124.0	3.35	126.6	3.35	128.2	3.35	132.2	3.34	136.1	3.32	139.7	3.31
		25.4	110.7	3.31	115.6	3.32	120.2	3.33	124.6	3.33	127.2	3.33	128.9	3.33	132.9	3.32	136.8	3.31	140.4	3.29
		41.0	113.5	3.23	118.4	3.25	123.2	3.25	127.7	3.25	130.3	3.25	132.0	3.25	136.2	3.24	140.1	3.23	143.9	3.21
		56.5	116.2	3.16	121.2	3.17	126.1	3.18	130.8	3.18	133.5	3.18	135.2	3.18	139.4	3.17	143.5	3.16	147.3	3.14
	59	19.0	109.6	4.03	114.4	4.05	119.0	4.05	123.4	4.06	125.9	4.05	127.6	4.05	131.6	4.04	135.4	4.03	139.0	4.01
		22.2	110.2	4.01	115.0	4.02	119.6	4.03	124.0	4.04	126.6	4.03	128.2	4.03	132.2	4.02	136.1	4.01	139.7	3.99
		25.4	110.7	3.99	115.6	4.00	120.2	4.01	124.6	4.02	127.2	4.01	128.9	4.01	132.9	4.00	136.8	3.99	140.4	3.97
		41.0	113.5	3.89	118.4	3.91	123.2	3.92	127.7	3.92	130.3	3.92	132.0	3.92	136.2	3.91	140.1	3.89	143.9	3.87
		56.5	116.2	3.81	121.2	3.83	126.1	3.83	130.8	3.84	133.5	3.83	135.2	3.83	139.4	3.82	143.5	3.81	147.3	3.79
	68	19.0	109.6	4.91	114.4	4.93	119.0	4.94	123.4	4.94	125.9	4.94	127.6	4.94	131.6	4.93	135.4	4.91	139.0	4.88
		22.2	110.2	4.89	115.0	4.91	119.6	4.92	124.0	4.92	126.6	4.92	128.2	4.91	132.2	4.90	136.1	4.88	139.7	4.86
		25.4	110.7	4.86	115.6	4.88	120.2	4.89	124.6	4.89	127.2	4.89	128.9	4.89	132.9	4.88	136.8	4.86	140.4	4.83
		41.0	113.5	4.75	118.4	4.77	123.2	4.78	127.7	4.78	130.3	4.78	132.0	4.77	136.2	4.76	140.1	4.74	143.9	4.72
		56.5	116.2	4.64	121.2	4.66	126.1	4.67	130.8	4.68	133.5	4.67	135.2	4.67	139.4	4.66	143.5	4.64	147.3	4.62
	77	19.0	109.6	6.05	114.4	6.08	119.0	6.09	123.4	6.09	125.9	6.09	127.6	6.09	131.6	6.07	135.4	6.05	139.0	6.02
		22.2	110.2	6.02	115.0	6.05	119.6	6.06	124.0	6.06	126.6	6.06	128.2	6.06	132.2	6.04	136.1	6.02	139.7	5.99
		25.4	110.7	5.99	115.6	6.02	120.2	6.03	124.6	6.03	127.2	6.03	128.9	6.02	132.9	6.01	136.8	5.99	140.4	5.96
		41.0	113.5	5.85	118.4	5.87	123.2	5.89	127.7	5.89	130.3	5.89	132.0	5.88	136.2	5.87	140.1	5.85	143.9	5.82
		56.5	116.2	5.72	121.2	5.75	126.1	5.76	130.8	5.76	133.5	5.76	135.2	5.76	139.4	5.74	143.5	5.72	147.3	5.69
	86	19.0	109.6	7.51	114.4	7.54	119.0	7.56	123.4	7.56	125.9	7.56	127.6	7.56	131.6	7.54	135.4	7.51	139.0	7.47
		22.2	110.2	7.48	115.0	7.51	119.6	7.52	124.0	7.53	126.6	7.52	128.2	7.52	132.2	7.50	136.1	7.47	139.7	7.43
		25.4	110.7	7.44	115.6	7.47	120.2	7.48	124.6	7.49	127.2	7.48	128.9	7.48	132.9	7.46	136.8	7.43	140.4	7.40
		41.0	113.5	7.26	118.4	7.29	123.2	7.31	127.7	7.31	130.3	7.31	132.0	7.30	136.2	7.29	140.1	7.26	143.9	7.22
		56.5	116.2	7.10	121.2	7.13	126.1	7.15	130.8	7.15	133.5	7.15	135.2	7.14	139.4	7.13	143.5	7.10	147.3	7.06
	95	19.0	100.1	7.24	104.5	7.27	108.7	7.28	112.7	7.28	115.0	7.28	116.5	7.27	120.2	7.25	123.6	7.23	126.9	7.19
		22.2	100.6	7.20	105.0	7.23	109.2	7.24	113.3	7.25	115.6	7.24	117.1	7.24	120.8	7.22	124.3	7.19	127.6	7.15
		25.4	101.1	7.16	105.5	7.19	109.8	7.21	113.8	7.21	116.2	7.21	117.7	7.20	121.4	7.18	124.9	7.15	128.2	7.12
		41.0	103.6	7.00	108.1	7.02	112.5	7.04	116.6	7.04	119.0	7.04	120.6	7.03	124.4	7.01	128.0	6.99	131.4	6.95
		56.5	106.1	6.84	110.7	6.87	115.2	6.88	119.4	6.89	121.9	6.88	123.5	6.88	127.4	6.86	131.0	6.83	134.5	6.80
	104	19.0	90.6	6.90	94.5	6.93	98.3	6.95	101.9	6.95	104.0	6.94	105.4	6.94	108.7	6.92	111.8	6.89	114.8	6.86
		22.2	91.0	6.87	95.0	6.90	98.8	6.91	102.4	6.91	104.5	6.91	105.9	6.90	109.2	6.89	112.4	6.86	115.4	6.82
		25.4	91.5	6.83	95.5	6.86	99.3	6.88	102.9	6.88	105.1	6.87	106.4	6.87	109.8	6.85	113.0	6.82	116.0	6.79
		41.0	93.7	6.67	97.8	6.70	101.7	6.71	105.5	6.72	107.7	6.71	109.1	6.71	112.5	6.69	115.7	6.66	118.8	6.63
		56.5	96.0	6.53	100.1	6.55	104.2	6.57	108.0	6.57	110.2	6.57	111.7	6.56	115.2	6.54	118.5	6.52	121.7	6.49
	113	19.0	81.0	6.53	84.5	6.56	87.9	6.57	91.1	6.57	93.0	6.57	94.2	6.57	97.2	6.55	100.0	6.52	102.7	6.49
		22.2	81.4	6.50	84.9	6.53	88.3	6.54	91.6	6.54	93.5	6.54	94.7	6.53	97.7	6.52	100.5	6.49	103.2	6.46
		25.4	81.8	6.47	85.4	6.49	88.8	6.51	92.1	6.51	94.0	6.50	95.2	6.50	98.2	6.48	101.0	6.46	103.7	6.42
		41.0	83.8	6.32	87.5	6.34	91.0	6.35	94.3	6.36	96.3	6.35	97.5	6.35	100.6	6.33	103.5	6.31	106.3	6.27
		56.5	85.8	6.18	89.6	6.20	93.2	6.21	96.6	6.22	98.6	6.21	99.9	6.21	103.0	6.19	106.0	6.17	108.8	6.14
120	50	19.0	107.6	3.33	112.3	3.34	116.8	3.35	121.1	3.35	123.6	3.35	125.2	3.35	129.1	3.34	132.8	3.33	136.4	3.31
		22.2	108.1	3.31	112.8	3.33	117.3	3.33	121.7	3.34	124.2	3.33	125.8	3.33	129.8	3.32	133.5	3.31	137.1	3.29
		25.4	108.6	3.30	113.4	3.31	117.9	3.32	122.3	3.32	124.8	3.32	126.4	3.32	130.4	3.31	134.2	3.29	137.8	3.28
		41.0	111.3	3.22	116.2	3.23	120.8	3.24	125.3	3.24	127.9	3.24	129.5	3.24	133.6	3.23	137.5	3.22	141.1	3.20
		56.5	114.0	3.15	119.0	3.16	123.7	3.17	128.3	3.17	130.9	3.17	132.7	3.17	136.8	3.16	140.8	3.15	144.5	3.13
	59	19.0	107.6	4.01	112.3	4.03	116.8	4.04	121.1	4.04	123.6	4.04	125.2	4.04	129.1	4.03	132.8	4.01	136.4	3.99
		22.2	108.1	3.99	112.8	4.01	117.3	4.02	121.7	4.02	124.2	4.02	125.8	4.02	129.8	4.01	133.5	3.99	137.1	3.97
		25.4	108.6	3.97	113.4	3.99	117.9	4.00	122.3	4.00	124.8	4.00	126.4	4.00	130.4	3.99	134.2	3.97	137.8	3.95
		41.0	111.3	3.88	116.2	3.90	120.8	3.90	125.3	3.91	127.9	3.90	129.5	3.90	133.6	3.89	137.5	3.88	141.1	3.86
		56.5	114.0	3.79	119.0	3.81	123.7	3.82	128.3	3.82	130.9	3.82	132.7	3.82	136.8	3.81	140.8	3.79	144.5	3.77
	68	19.0	107.6	4.89	112.3	4.91	116.8	4.92	121.1	4.93	123.6	4.92	125.2	4.92	129.1	4.91	132.8	4.89	136.4	4.86
		22.2	108.1	4.87	112.8	4.89	117.3	4.90	121.7	4.90	124.2	4.90	125.8	4.90	129.8	4.88	133.5	4.86	137.1	4.84
		25.4	108.6	4.84	113.4	4.86	117.9	4.87	122.3	4.88	124.8	4.87	126.4	4.87	130.4	4.86	134.2	4.84	137.8	4.82
		41.0	111.3	4.73	116.2	4.75	120.8	4.76	125.3	4.76	127.9	4.76	129.5	4.76	133.6	4.74	137.5	4.73	141.1	4.70
		56.5	114.0	4.63	119.0	4.65	123.7	4.66	128.3	4.66	130.9	4.66	132.7	4.65	136.8	4.64	140.8	4.62	144.5	4.60
	77	19.0	107.6	6.03	112.3	6.05	116.8	6.07	121.1	6.07	123.6	6.07	125.2	6.06	129.1	6.05	132.8	6.02	136.4	5.99
		22.2	108.1	6.00	112.8	6.02	117.3	6.04	121.7	6.04	124.2	6.04	125.8	6.03	129.8	6.02	133.5	5.99	137.1	5.96
		25.4	108.6	5.97	113.4	5.99	117.9	6.01	122.3	6.01	124.8	6.01	126.4	6.00	130.4	5.99	134.2	5.96	137.8	5.93
		41.0	111.3	5.83	116.2	5.85	120.8	5.86	125.3	5.87	127.9	5.86	129.5	5.86	133.6	5.85	137.5	5.82	141.1	5.79
		56.5	114.0	5.70	119.0	5.72	123.7	5.74	128.3	5.74	130.9	5.74	132.7	5.73	136.8	5.72	140.8	5.70	144.5	5.67
	86	19.0	107.6	7.48	112.3	7.52	116.8	7.53	121.1	7.54	123.6	7.53	125.2	7.53	129.1	7.51	132.8	7.48	136.4	7.44
		22.2	108.1	7.45	112.8	7.48	117.3	7.49	121.7	7.50	124.2	7.49	125.8	7.49	129.8	7.47	133.5	7.44	137.1	7.40
		25.4	108.6	7.41	113.4	7.44	117.9	7.46	122.3	7.46	124.8	7.46	126.4	7.45	130.4	7.43	134.2	7.40	137.8	7.37
		41.0	111.3	7.24	116.2	7.27	120.8	7.28	125.3	7.28	127.9	7.28	129.5	7.28	133.6	7.26	137.5	7.23	141.1	7.19
		56.5	114.0	7.08	119.0	7.11	123.7	7.12	128.3	7.13	130.9	7.12	132.7	7.12	136.8	7.10	140.8	7.07	144.5	7.04
	95	19.0	98.2	7.21	102.5	7.24	106.6	7.25	110.6	7.25	112.8	7.25	114.3	7.25	117.9	7.23	121.3	7.20	124.5	7.16
		22.2	98.7	7.17	103.0	7.20	107.2	7.22	111.1	7.22	113.4	7.21	114.9	7.21	118.5	7.19	121.9	7.16	125.2	7.12
		25.4	99.2	7.14	103.6	7.16	107.7	7.18	111.7	7.18	114.0	7.18	115.5	7.17	119.1	7.15	122.5	7.13	125.8	7.09
		41.0	101.7	6.97	106.1	7.00	110.4	7.01	114.4	7.01	116.8	7.01	118.3	7.00	122.0	6.99	125.6	6.96	128.9	6.92
		56.5	104.1	6.82	108.6	6.84	113.0	6.86	117.2	6.86	119.6	6.86	121.2	6.85	125.0	6.83	128.6	6.81	132.0	6.77
	104	19.0	88.8	6.88	92.7	6.90	96.4	6.92	100.0	6.92	102.1	6.92	103.4	6.91	106.6	6.89	109.7	6.87	112.6	6.83
		22.2	89.3	6.84	93.2	6.87	96.9	6.88	100.5	6.89	102.6	6.88	103.9	6.88	107.2	6.86	110.3	6.83	113.2	6.80
		25.4	89.7	6.81	93.7	6.84	97.4	6.85	101.0	6.85	103.1	6.85	104.4	6.84	107.7	6.82	110.8	6.80	113.8	6.76
		41.0	91.9	6.65	96.0	6.67	99.8	6.69	103.5	6.69	105.6	6.69	107.0	6.68	110.4	6.66	113.6	6.64	116.6	6.60
		56.5	94.2	6.50	98.3	6.53	102.2	6.54	106.0	6.54	108.2	6.54	109.6	6.54	113.0	6.52	116.3	6.49	119.4	6.46
	113	19.0	79.5	6.51	82.9	6.53	86.2	6.55	89.4	6.55	91.3	6.54	92.5	6.54	95.4	6.52	98.1	6.50	100.7	6.46
		22.2	79.9	6.47	83.3	6.50	86.7	6.51	89.9	6.52	91.7	6.51	92.9	6.51	95.8	6.49	98.6	6.46	101.2	6.43
		25.4	80.3	6.44	83.8	6.47	87.1	6.48	90.3	6.48	92.2	6.48	93.4	6.47	96.3	6.46	99.1	6.43	101.8	6.40
		41.0	82.2	6.29	85.8	6.32	89.3	6.33	92.6	6.33	94.5	6.33	95.7	6.32	98.7	6.31	101.6	6.28	104.3	6.25
		56.5	84.2	6.15	87.9	6.18	91.4	6.19	94.8	6.19	96.7	6.19	98.0	6.18	101.1	6.17	104.0	6.14	106.8	6.11

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	19.0	105.5	3.34	110.1	3.35	114.5	3.36	118.7	3.36	121.2	3.36	122.8	3.36	126.6	3.35	130.3	3.33	133.8	3.32
		22.2	106.0	3.32	110.6	3.33	115.1	3.34	119.3	3.34	121.8	3.34	123.4	3.34	127.3	3.33	130.9	3.32	134.4	3.30
		25.4	106.6	3.30	111.2	3.32	115.7	3.32	119.9	3.33	122.4	3.32	124.0	3.32	127.9	3.31	131.6	3.30	135.1	3.28
		41.0	109.2	3.23	113.9	3.24	118.5	3.25	122.9	3.25	125.4	3.25	127.1	3.24	131.0	3.24	134.8	3.22	138.4	3.21
		56.5	111.8	3.15	116.7	3.17	121.3	3.17	125.8	3.18	128.4	3.17	130.1	3.17	134.2	3.16	138.1	3.15	141.7	3.14
	59	19.0	105.5	4.02	110.1	4.04	114.5	4.05	118.7	4.05	121.2	4.05	122.8	4.04	126.6	4.03	130.3	4.02	133.8	4.00
		22.2	106.0	4.00	110.6	4.02	115.1	4.02	119.3	4.03	121.8	4.02	123.4	4.02	127.3	4.01	130.9	4.00	134.4	3.98
		25.4	106.6	3.98	111.2	4.00	115.7	4.00	119.9	4.01	122.4	4.00	124.0	4.00	127.9	3.99	131.6	3.98	135.1	3.96
		41.0	109.2	3.89	113.9	3.90	118.5	3.91	122.9	3.91	125.4	3.91	127.1	3.91	131.0	3.90	134.8	3.88	138.4	3.86
		56.5	111.8	3.80	116.7	3.82	121.3	3.83	125.8	3.83	128.4	3.83	130.1	3.82	134.2	3.81	138.1	3.80	141.7	3.78
	68	19.0	105.5	4.90	110.1	4.92	114.5	4.93	118.7	4.93	121.2	4.93	122.8	4.93	126.6	4.92	130.3	4.90	133.8	4.87
		22.2	106.0	4.88	110.6	4.90	115.1	4.91	119.3	4.91	121.8	4.91	123.4	4.90	127.3	4.89	130.9	4.87	134.4	4.85
		25.4	106.6	4.85	111.2	4.87	115.7	4.88	119.9	4.88	122.4	4.88	124.0	4.88	127.9	4.87	131.6	4.85	135.1	4.82
		41.0	109.2	4.74	113.9	4.76	118.5	4.77	122.9	4.77	125.4	4.77	127.1	4.76	131.0	4.75	134.8	4.73	138.4	4.71
		56.5	111.8	4.63	116.7	4.65	121.3	4.66	125.8	4.67	128.4	4.66	130.1	4.66	134.2	4.65	138.1	4.63	141.7	4.61
	77	19.0	105.5	6.04	110.1	6.06	114.5	6.08	118.7	6.08	121.2	6.08	122.8	6.07	126.6	6.06	130.3	6.03	133.8	6.00
		22.2	106.0	6.01	110.6	6.03	115.1	6.05	119.3	6.05	121.8	6.05	123.4	6.04	127.3	6.03	130.9	6.00	134.4	5.97
		25.4	106.6	5.98	111.2	6.00	115.7	6.02	119.9	6.02	122.4	6.02	124.0	6.01	127.9	6.00	131.6	5.97	135.1	5.94
		41.0	109.2	5.84	113.9	5.86	118.5	5.87	122.9	5.88	125.4	5.87	127.1	5.87	131.0	5.86	134.8	5.83	138.4	5.80
		56.5	111.8	5.71	116.7	5.73	121.3	5.75	125.8	5.75	128.4	5.75	130.1	5.74	134.2	5.73	138.1	5.71	141.7	5.68
	86	19.0	105.5	7.50	110.1	7.53	114.5	7.54	118.7	7.55	121.2	7.54	122.8	7.54	126.6	7.52	130.3	7.49	133.8	7.45
		22.2	106.0	7.46	110.6	7.49	115.1	7.51	119.3	7.51	121.8	7.51	123.4	7.50	127.3	7.48	130.9	7.45	134.4	7.42
		25.4	106.6	7.42	111.2	7.45	115.7	7.47	119.9	7.47	122.4	7.47	124.0	7.46	127.9	7.44	131.6	7.42	135.1	7.38
		41.0	109.2	7.25	113.9	7.28	118.5	7.29	122.9	7.30	125.4	7.29	127.1	7.29	131.0	7.27	134.8	7.24	138.4	7.21
		56.5	111.8	7.09	116.7	7.12	121.3	7.13	125.8	7.14	128.4	7.13	130.1	7.13	134.2	7.11	138.1	7.08	141.7	7.05
	95	19.0	96.3	7.22	100.5	7.25	104.6	7.26	108.4	7.27	110.7	7.26	112.1	7.26	115.6	7.24	119.0	7.21	122.2	7.17
		22.2	96.8	7.18	101.1	7.21	105.1	7.23	109.0	7.23	111.2	7.23	112.7	7.22	116.2	7.20	119.6	7.17	122.8	7.14
		25.4	97.3	7.15	101.6	7.18	105.6	7.19	109.5	7.19	111.8	7.19	113.3	7.18	116.8	7.17	120.2	7.14	123.4	7.10
		41.0	99.7	6.98	104.1	7.01	108.2	7.02	112.2	7.02	114.5	7.02	116.0	7.02	119.7	7.00	123.1	6.97	126.4	6.93
		56.5	102.1	6.83	106.6	6.86	110.8	6.87	114.9	6.87	117.3	6.87	118.8	6.86	122.6	6.84	126.1	6.82	129.5	6.78
	104	19.0	87.1	6.89	90.9	6.92	94.6	6.93	98.1	6.93	100.1	6.93	101.4	6.92	104.6	6.91	107.6	6.88	110.5	6.84
		22.2	87.6	6.85	91.4	6.88	95.1	6.90	98.6	6.90	100.6	6.89	101.9	6.89	105.1	6.87	108.2	6.84	111.0	6.81
		25.4	88.0	6.82	91.9	6.85	95.5	6.86	99.1	6.86	101.1	6.86	102.4	6.85	105.6	6.84	108.7	6.81	111.6	6.77
		41.0	90.2	6.66	94.1	6.69	97.9	6.70	101.5	6.70	103.6	6.70	104.9	6.69	108.2	6.68	111.4	6.65	114.3	6.62
		56.5	92.3	6.51	96.4	6.54	100.2	6.55	103.9	6.56	106.1	6.55	107.5	6.55	110.8	6.53	114.0	6.50	117.1	6.47
	113	19.0	77.9	6.52	81.3	6.54	84.6	6.56	87.7	6.56	89.5	6.56	90.7	6.55	93.5	6.53	96.2	6.51	98.8	6.48
		22.2	78.3	6.49	81.7	6.51	85.0	6.52	88.1	6.53	90.0	6.52	91.1	6.52	94.0	6.50	96.7	6.48	99.3	6.44
		25.4	78.7	6.45	82.1	6.48	85.4	6.49	88.6	6.49	90.4	6.49	91.6	6.49	94.5	6.47	97.2	6.44	99.8	6.41
		41.0	80.6	6.30	84.2	6.33	87.5	6.34	90.8	6.34	92.6	6.34	93.9	6.33	96.8	6.32	99.6	6.29	102.3	6.26
		56.5	82.6	6.16	86.2	6.19	89.6	6.20	92.9	6.20	94.9	6.20	96.1	6.20	99.1	6.18	102.0	6.15	104.7	6.12
100	50	19.0	103.4	3.36	107.9	3.38	112.3	3.38	116.4	3.38	118.8	3.38	120.4	3.38	124.1	3.37	127.7	3.36	131.1	3.34
		22.2	103.9	3.34	108.5	3.36	112.8	3.37	117.0	3.37	119.4	3.37	121.0	3.36	124.8	3.36	128.4	3.34	131.8	3.33
		25.4	104.5	3.33	109.0	3.34	113.4	3.35	117.6	3.35	120.0	3.35	121.6	3.35	125.4	3.34	129.0	3.33	132.5	3.31
		41.0	107.0	3.25	111.7	3.26	116.2	3.27	120.5	3.27	122.9	3.27	124.6	3.27	128.5	3.26	132.2	3.25	135.7	3.23
		56.5	109.6	3.18	114.4	3.19	119.0	3.20	123.4	3.20	125.9	3.20	127.6	3.20	131.6	3.19	135.4	3.18	139.0	3.16
	59	19.0	103.4	4.05	107.9	4.07	112.3	4.08	116.4	4.08	118.8	4.08	120.4	4.07	124.1	4.06	127.7	4.05	131.1	4.03
		22.2	103.9	4.03	108.5	4.05	112.8	4.06	117.0	4.06	119.4	4.06	121.0	4.05	124.8	4.04	128.4	4.03	131.8	4.01
		25.4	104.5	4.01	109.0	4.03	113.4	4.04	117.6	4.04	120.0	4.03	121.6	4.03	125.4	4.02	129.0	4.01	132.5	3.99
		41.0	107.0	3.92	111.7	3.93	116.2	3.94	120.5	3.94	122.9	3.94	124.6	3.94	128.5	3.93	132.2	3.91	135.7	3.89
		56.5	109.6	3.83	114.4	3.85	119.0	3.85	123.4	3.86	125.9	3.85	127.6	3.85	131.6	3.84	135.4	3.83	139.0	3.81
	68	19.0	103.4	4.94	107.9	4.96	112.3	4.97	116.4	4.97	118.8	4.97	120.4	4.97	124.1	4.95	127.7	4.93	131.1	4.91
		22.2	103.9	4.91	108.5	4.93	112.8	4.94	117.0	4.95	119.4	4.94	121.0	4.94	124.8	4.93	128.4	4.91	131.8	4.88
		25.4	104.5	4.89	109.0	4.91	113.4	4.92	117.6	4.92	120.0	4.92	121.6	4.92	125.4	4.90	129.0	4.88	132.5	4.86
		41.0	107.0	4.77	111.7	4.79	116.2	4.80	120.5	4.81	122.9	4.80	124.6	4.80	128.5	4.79	132.2	4.77	135.7	4.75
		56.5	109.6	4.67	114.4	4.69	119.0	4.70	123.4	4.70	125.9	4.70	127.6	4.70	131.6	4.68	135.4	4.67	139.0	4.64
	77	19.0	103.4	6.08	107.9	6.11	112.3	6.12	116.4	6.13	118.8	6.12	120.4	6.12	124.1	6.10	127.7	6.08	131.1	6.05
		22.2	103.9	6.05	108.5	6.08	112.8	6.09	117.0	6.09	119.4	6.09	121.0	6.09	124.8	6.07	128.4	6.05	131.8	6.02
		25.4	104.5	6.02	109.0	6.05	113.4	6.06	117.6	6.06	120.0	6.06	121.6	6.06	125.4	6.04	129.0	6.02	132.5	5.99
		41.0	107.0	5.88	111.7	5.91	116.2	5.92	120.5	5.92	122.9	5.92	124.6	5.92	128.5	5.90	132.2	5.88	135.7	5.85
		56.5	109.6	5.75	114.4	5.78	119.0	5.79	123.4	5.79	125.9	5.79	127.6	5.79	131.6	5.77	135.4	5.75	139.0	5.72
	86	19.0	103.4	7.55	107.9	7.59	112.3	7.60	116.4	7.61	118.8	7.60	120.4	7.60	124.1	7.58	127.7	7.55	131.1	7.51
		22.2	103.9	7.52	108.5	7.55	112.8	7.56	117.0	7.57	119.4	7.56	121.0	7.56	124.8	7.54	128.4	7.51	131.8	7.47
		25.4	104.5	7.48	109.0	7.51	113.4	7.53	117.6	7.53	120.0	7.52	121.6	7.52	125.4	7.50	129.0	7.47	132.5	7.43
		41.0	107.0	7.30	111.7	7.33	116.2	7.35	120.5	7.35	122.9	7.35	124.6	7.34	128.5	7.33	132.2	7.30	135.7	7.26
		56.5	109.6	7.14	114.4	7.17	119.0	7.19	123.4	7.19	125.9	7.19	127.6	7.18	131.6	7.17	135.4	7.14	139.0	7.10
	95	19.0	94.5	7.28	98.6	7.31	102.5	7.32	106.3	7.32	108.5	7.32	109.9	7.31	113.4	7.29	116.7	7.27	119.8	7.23
		22.2	94.9	7.24	99.1	7.27	103.0	7.28	106.8	7.28	109.0	7.28	110.5	7.28	113.9	7.26	117.2	7.23	120.4	7.19
		25.4	95.4	7.20	99.6	7.23	103.6	7.25	107.4	7.25	109.6	7.24	111.0	7.24	114.5	7.22	117.8	7.19	121.0	7.16
		41.0	97.8	7.03	102.0	7.06	106.1	7.08	110.0	7.08	112.3	7.07	113.8	7.07	117.3	7.05	120.7	7.02	123.9	6.99
		56.5	100.1	6.88	104.5	6.91	108.7	6.92	112.7	6.92	115.0	6.92	116.5	6.92	120.1	6.90	123.6	6.87	126.9	6.83
	104	19.0	85.4	6.94	89.2	6.97	92.7	6.98	96.1	6.99	98.1	6.98	99.4	6.98	102.5	6.96	105.5	6.93	108.3	6.90
		22.2	85.9	6.91	89.6	6.93	93.2	6.95	96.6	6.95	98.6	6.95	99.9	6.94	103.1	6.92	106.0	6.90	108.9	6.86
		25.4	86.3	6.87	90.1	6.90	93.7	6.91	97.1	6.91	99.1	6.91	100.4	6.91	103.6	6.89	106.6	6.86	109.4	6.83
		41.0	88.4	6.71	92.3	6.74	96.0	6.75	99.5	6.75	101.6	6.75	102.9	6.74	106.1	6.73	109.2	6.70	112.1	6.67
		56.5	90.5	6.56	94.5	6.59	98.3	6.60	101.9	6.61	104.0	6.60	105.4	6.60	108.7	6.58	111.8	6.55	114.8	6.52
	113	19.0	76.4	6.57	79.7	6.59	82.9	6.61	86.0	6.61	87.8	6.61	88.9	6.60	91.7	6.58	94.3	6.56	96.9	6.52
		22.2	76.8	6.53	80.1	6.56	83.3	6.57	86.4	6.58	88.2	6.57	89.4	6.57	92.2	6.55	94.8	6.52	97.4	6.49
		25.4	77.2	6.50	80.5	6.53	83.8	6.54	86.9	6.54	88.6	6.54	89.8	6.53	92.6	6.52	95.3	6.49	97.8	6.46
		41.0	79.1	6.35	82.5	6.37	85.8	6.39	89.0	6.39	90.8	6.39	92.0	6.38	94.9	6.36	97.6	6.34	100.2	6.31
		56.5	81.0	6.21	84.5	6.24	87.9	6.25	91.1	6.25	93.0	6.25	94.2	6.24	97.2	6.23	100.0	6.20	102.7	6.17

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	19.0	93.1	2.81	97.1	2.82	101.0	2.83	104.8	2.83	106.9	2.83	108.3	2.82	111.7	2.82	115.0	2.81	118.0	2.79
		22.2	93.5	2.79	97.6	2.81	101.5	2.81	105.3	2.81	107.5	2.81	108.9	2.81	112.3	2.80	115.5	2.79	118.6	2.78
		25.4	94.0	2.78	98.1	2.79	102.1	2.80	105.8	2.80	108.0	2.80	109.4	2.80	112.8	2.79	116.1	2.78	119.2	2.76
		41.0	96.3	2.71	100.5	2.73	104.6	2.73	108.4	2.73	110.7	2.73	112.1	2.73	115.6	2.72	119.0	2.71	122.1	2.70
		56.5	98.6	2.65	102.9	2.67	107.1	2.67	111.0	2.67	113.3	2.67	114.8	2.67	118.4	2.66	121.8	2.65	125.1	2.64
	59	19.0	93.1	3.38	97.1	3.40	101.0	3.40	104.8	3.41	106.9	3.40	108.3	3.40	111.7	3.39	115.0	3.38	118.0	3.36
		22.2	93.5	3.37	97.6	3.38	101.5	3.39	105.3	3.39	107.5	3.39	108.9	3.38	112.3	3.38	115.5	3.36	118.6	3.35
		25.4	94.0	3.35	98.1	3.36	102.1	3.37	105.8	3.37	108.0	3.37	109.4	3.37	112.8	3.36	116.1	3.35	119.2	3.33
		41.0	96.3	3.27	100.5	3.28	104.6	3.29	108.4	3.29	110.7	3.29	112.1	3.29	115.6	3.28	119.0	3.27	122.1	3.25
		56.5	98.6	3.20	102.9	3.21	107.1	3.22	111.0	3.22	113.3	3.22	114.8	3.22	118.4	3.21	121.8	3.20	125.1	3.18
	68	19.0	93.1	4.12	97.1	4.14	101.0	4.15	104.8	4.15	106.9	4.15	108.3	4.15	111.7	4.14	115.0	4.12	118.0	4.10
		22.2	93.5	4.10	97.6	4.12	101.5	4.13	105.3	4.13	107.5	4.13	108.9	4.13	112.3	4.12	115.5	4.10	118.6	4.08
		25.4	94.0	4.08	98.1	4.10	102.1	4.11	105.8	4.11	108.0	4.11	109.4	4.11	112.8	4.10	116.1	4.08	119.2	4.06
		41.0	96.3	3.99	100.5	4.00	104.6	4.01	108.4	4.01	110.7	4.01	112.1	4.01	115.6	4.00	119.0	3.98	122.1	3.96
		56.5	98.6	3.90	102.9	3.92	107.1	3.92	111.0	3.93	113.3	3.92	114.8	3.92	118.4	3.91	121.8	3.90	125.1	3.88
	77	19.0	93.1	5.08	97.1	5.10	101.0	5.11	104.8	5.12	106.9	5.11	108.3	5.11	111.7	5.10	115.0	5.08	118.0	5.05
		22.2	93.5	5.06	97.6	5.08	101.5	5.09	105.3	5.09	107.5	5.09	108.9	5.08	112.3	5.07	115.5	5.05	118.6	5.03
		25.4	94.0	5.03	98.1	5.05	102.1	5.06	105.8	5.06	108.0	5.06	109.4	5.06	112.8	5.05	116.1	5.03	119.2	5.00
		41.0	96.3	4.91	100.5	4.93	104.6	4.94	108.4	4.95	110.7	4.94	112.1	4.94	115.6	4.93	119.0	4.91	122.1	4.88
		56.5	98.6	4.81	102.9	4.83	107.1	4.84	111.0	4.84	113.3	4.84	114.8	4.83	118.4	4.82	121.8	4.80	125.1	4.78
	86	19.0	93.1	6.31	97.1	6.34	101.0	6.35	104.8	6.35	106.9	6.35	108.3	6.34	111.7	6.33	115.0	6.30	118.0	6.27
		22.2	93.5	6.28	97.6	6.30	101.5	6.32	105.3	6.32	107.5	6.32	108.9	6.31	112.3	6.30	115.5	6.27	118.6	6.24
		25.4	94.0	6.25	98.1	6.27	102.1	6.28	105.8	6.29	108.0	6.28	109.4	6.28	112.8	6.26	116.1	6.24	119.2	6.21
		41.0	96.3	6.10	100.5	6.12	104.6	6.14	108.4	6.14	110.7	6.14	112.1	6.13	115.6	6.12	119.0	6.09	122.1	6.06
		56.5	98.6	5.97	102.9	5.99	107.1	6.00	111.0	6.01	113.3	6.00	114.8	6.00	118.4	5.98	121.8	5.96	125.1	5.93
	95	19.0	85.0	6.08	88.7	6.10	92.3	6.11	95.7	6.12	97.7	6.11	98.9	6.11	102.0	6.09	105.0	6.07	107.8	6.04
		22.2	85.4	6.05	89.2	6.07	92.7	6.08	96.2	6.08	98.1	6.08	99.4	6.08	102.6	6.06	105.5	6.04	108.3	6.01
		25.4	85.9	6.02	89.6	6.04	93.2	6.05	96.6	6.05	98.6	6.05	99.9	6.05	103.1	6.03	106.0	6.01	108.9	5.98
		41.0	88.0	5.87	91.8	5.90	95.5	5.91	99.0	5.91	101.1	5.91	102.4	5.90	105.6	5.89	108.7	5.87	111.5	5.84
		56.5	90.1	5.75	94.0	5.77	97.8	5.78	101.4	5.78	103.5	5.78	104.8	5.78	108.1	5.76	111.3	5.74	114.2	5.71
	104	19.0	76.9	5.80	80.2	5.82	83.5	5.83	86.5	5.83	88.3	5.83	89.5	5.83	92.3	5.81	94.9	5.79	97.5	5.76
		22.2	77.3	5.77	80.6	5.79	83.9	5.80	87.0	5.80	88.8	5.80	89.9	5.80	92.7	5.78	95.4	5.76	98.0	5.73
		25.4	77.7	5.74	81.0	5.76	84.3	5.77	87.4	5.78	89.2	5.77	90.4	5.77	93.2	5.75	95.9	5.73	98.5	5.70
		41.0	79.6	5.60	83.0	5.63	86.4	5.64	89.6	5.64	91.4	5.64	92.6	5.63	95.5	5.62	98.3	5.60	100.9	5.57
		56.5	81.5	5.48	85.0	5.50	88.4	5.52	91.7	5.52	93.6	5.51	94.8	5.51	97.8	5.50	100.6	5.47	103.3	5.45
	113	19.0	68.8	5.49	71.8	5.51	74.6	5.52	77.4	5.52	79.0	5.52	80.0	5.51	82.5	5.50	84.9	5.48	87.2	5.45
		22.2	69.1	5.46	72.1	5.48	75.0	5.49	77.8	5.49	79.4	5.49	80.4	5.49	82.9	5.47	85.3	5.45	87.6	5.42
		25.4	69.5	5.43	72.5	5.45	75.4	5.46	78.2	5.46	79.8	5.46	80.8	5.46	83.4	5.44	85.8	5.42	88.1	5.39
		41.0	71.2	5.30	74.3	5.32	77.2	5.33	80.1	5.34	81.7	5.33	82.8	5.33	85.4	5.32	87.9	5.29	90.2	5.27
		56.5	72.9	5.19	76.0	5.21	79.1	5.22	82.0	5.22	83.7	5.22	84.8	5.21	87.5	5.20	90.0	5.18	92.4	5.15
80	50	19.0	82.7	2.69	86.3	2.70	89.8	2.71	93.1	2.71	95.0	2.71	96.3	2.71	99.3	2.70	102.2	2.69	104.9	2.68
		22.2	83.2	2.68	86.8	2.69	90.3	2.70	93.6	2.70	95.5	2.70	96.8	2.70	99.8	2.69	102.7	2.68	105.4	2.66
		25.4	83.6	2.67	87.2	2.68	90.7	2.68	94.1	2.68	96.0	2.68	97.3	2.68	100.3	2.67	103.2	2.66	106.0	2.65
		41.0	85.6	2.60	89.4	2.61	92.9	2.62	96.4	2.62	98.4	2.62	99.7	2.62	102.8	2.61	105.7	2.60	108.6	2.59
		56.5	87.7	2.55	91.5	2.56	95.2	2.56	98.7	2.56	100.7	2.56	102.0	2.56	105.2	2.56	108.3	2.55	111.2	2.53
	59	19.0	82.7	3.25	86.3	3.26	89.8	3.27	93.1	3.27	95.0	3.27	96.3	3.26	99.3	3.26	102.2	3.24	104.9	3.23
		22.2	83.2	3.23	86.8	3.24	90.3	3.25	93.6	3.25	95.5	3.25	96.8	3.25	99.8	3.24	102.7	3.23	105.4	3.21
		25.4	83.6	3.21	87.2	3.23	90.7	3.23	94.1	3.23	96.0	3.23	97.3	3.23	100.3	3.22	103.2	3.21	106.0	3.19
		41.0	85.6	3.14	89.4	3.15	92.9	3.16	96.4	3.16	98.4	3.16	99.7	3.16	102.8	3.15	105.7	3.14	108.6	3.12
		56.5	87.7	3.07	91.5	3.08	95.2	3.09	98.7	3.09	100.7	3.09	102.0	3.09	105.2	3.08	108.3	3.07	111.2	3.05
	68	19.0	82.7	3.96	86.3	3.97	89.8	3.98	93.1	3.98	95.0	3.98	96.3	3.98	99.3	3.97	102.2	3.95	104.9	3.93
		22.2	83.2	3.94	86.8	3.95	90.3	3.96	93.6	3.96	95.5	3.96	96.8	3.96	99.8	3.95	102.7	3.93	105.4	3.91
		25.4	83.6	3.92	87.2	3.93	90.7	3.94	94.1	3.94	96.0	3.94	97.3	3.94	100.3	3.93	103.2	3.91	106.0	3.89
		41.0	85.6	3.82	89.4	3.84	92.9	3.85	96.4	3.85	98.4	3.85	99.7	3.85	102.8	3.84	105.7	3.82	108.6	3.80
		56.5	87.7	3.74	91.5	3.76	95.2	3.77	98.7	3.77	100.7	3.76	102.0	3.76	105.2	3.75	108.3	3.74	111.2	3.72
	77	19.0	82.7	4.88	86.3	4.90	89.8	4.91	93.1	4.91	95.0	4.91	96.3	4.90	99.3	4.89	102.2	4.87	104.9	4.85
		22.2	83.2	4.85	86.8	4.87	90.3	4.88	93.6	4.88	95.5	4.88	96.8	4.88	99.8	4.87	102.7	4.85	105.4	4.82
		25.4	83.6	4.83	87.2	4.85	90.7	4.86	94.1	4.86	96.0	4.86	97.3	4.85	100.3	4.84	103.2	4.82	106.0	4.80
		41.0	85.6	4.71	89.4	4.73	92.9	4.74	96.4	4.75	98.4	4.74	99.7	4.74	102.8	4.73	105.7	4.71	108.6	4.69
		56.5	87.7	4.61	91.5	4.63	95.2	4.64	98.7	4.64	100.7	4.64	102.0	4.64	105.2	4.62	108.3	4.61	111.2	4.58
	86	19.0	82.7	6.05	86.3	6.08	89.8	6.09	93.1	6.09	95.0	6.09	96.3	6.09	99.3	6.07	102.2	6.05	104.9	6.02
		22.2	83.2	6.02	86.8	6.05	90.3	6.06	93.6	6.06	95.5	6.06	96.8	6.06	99.8	6.04	102.7	6.02	105.4	5.99
		25.4	83.6	5.99	87.2	6.02	90.7	6.03	94.1	6.03	96.0	6.03	97.3	6.03	100.3	6.01	103.2	5.99	106.0	5.96
		41.0	85.6	5.85	89.4	5.88	92.9	5.89	96.4	5.89	98.4	5.89	99.7	5.88	102.8	5.87	105.7	5.85	108.6	5.82
		56.5	87.7	5.72	91.5	5.75	95.2	5.76	98.7	5.76	100.7	5.76	102.0	5.76	105.2	5.74	108.3	5.72	111.2	5.69
	95	19.0	75.6	5.83	78.9	5.85	82.0	5.87	85.0	5.87	86.8	5.86	87.9	5.86	90.7	5.84	93.3	5.82	95.8	5.79
		22.2	75.9	5.80	79.3	5.82	82.4	5.84	85.5	5.84	87.2	5.83	88.4	5.83	91.2	5.81	93.8	5.79	96.3	5.76
		25.4	76.3	5.77	79.7	5.79	82.9	5.81	85.9	5.81	87.7	5.80	88.8	5.80	91.6	5.79	94.3	5.76	96.8	5.73
		41.0	78.2	5.64	81.6	5.66	84.9	5.67	88.0	5.67	89.8	5.67	91.0	5.66	93.9	5.65	96.6	5.63	99.2	5.60
		56.5	80.1	5.51	83.6	5.53	86.9	5.55	90.1	5.55	92.0	5.54	93.2	5.54	96.1	5.53	98.9	5.50	101.5	5.48
	104	19.0	68.3	5.56	71.3	5.58	74.2	5.60	76.9	5.60	78.5	5.59	79.5	5.59	82.0	5.58	84.4	5.55	86.6	5.53
		22.2	68.7	5.53	71.7	5.56	74.6	5.57	77.3	5.57	78.9	5.57	79.9	5.56	82.4	5.55	84.8	5.53	87.1	5.50
		25.4	69.0	5.51	72.0	5.53	74.9	5.54	77.7	5.54	79.3	5.54	80.3	5.53	82.9	5.52	85.3	5.50	87.5	5.47
		41.0	70.7	5.38	73.8	5.40	76.8	5.41	79.6	5.41	81.2	5.41	82.3	5.40	84.9	5.39	87.3	5.37	89.7	5.34
		56.5	72.4	5.26	75.6	5.28	78.6	5.29	81.5	5.29	83.2	5.29	84.3	5.29	86.9	5.27	89.4	5.25	91.8	5.22
	113	19.0	61.1	5.26	63.8	5.28	66.3	5.29	68.8	5.30	70.2	5.29	71.1	5.29	73.4	5.28	75.5	5.25	77.5	5.23
		22.2	61.4	5.24	64.1	5.26	66.7	5.27	69.1	5.27	70.6	5.27	71.5	5.26	73.7	5.25	75.9	5.23	77.9	5.20
		25.4	61.7	5.21	64.4	5.23	67.0	5.24	69.5	5.24	70.9	5.24	71.8	5.24	74.1	5.22	76.2	5.20	78.3	5.18
		41.0	63.3	5.09	66.0	5.11	68.7	5.12	71.2	5.12	72.7	5.12	73.6	5.11	75.9	5.10	78.1	5.08	80.2	5.05
		56.5	64.8	4.98	67.6	5.00	70.3	5.01	72.9	5.01	74.4	5.01	75.4	5.00	77.7	4.99	80.0	4.97	82.1	4.94

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	19.0	72.4	2.18	75.6	2.19	78.6	2.20	81.5	2.20	83.2	2.20	84.3	2.20	86.9	2.19	89.4	2.18	91.8	2.17
		22.2	72.8	2.17	75.9	2.18	79.0	2.19	81.9	2.19	83.6	2.19	84.7	2.18	87.3	2.18	89.9	2.17	92.3	2.16
		25.4	73.1	2.16	76.3	2.17	79.4	2.18	82.3	2.18	84.0	2.18	85.1	2.17	87.8	2.17	90.3	2.16	92.7	2.15
		41.0	74.9	2.11	78.2	2.12	81.3	2.12	84.3	2.13	86.1	2.12	87.2	2.12	89.9	2.12	92.5	2.11	95.0	2.10
		56.5	76.7	2.06	80.1	2.07	83.3	2.08	86.4	2.08	88.1	2.08	89.3	2.08	92.1	2.07	94.7	2.06	97.3	2.05
	59	19.0	72.4	2.63	75.6	2.64	78.6	2.65	81.5	2.65	83.2	2.65	84.3	2.65	86.9	2.64	89.4	2.63	91.8	2.62
		22.2	72.8	2.62	75.9	2.63	79.0	2.63	81.9	2.64	83.6	2.63	84.7	2.63	87.3	2.63	89.9	2.62	92.3	2.60
		25.4	73.1	2.60	76.3	2.62	79.4	2.62	82.3	2.62	84.0	2.62	85.1	2.62	87.8	2.61	90.3	2.60	92.7	2.59
		41.0	74.9	2.54	78.2	2.55	81.3	2.56	84.3	2.56	86.1	2.56	87.2	2.56	89.9	2.55	92.5	2.54	95.0	2.53
		56.5	76.7	2.49	80.1	2.50	83.3	2.50	86.4	2.50	88.1	2.50	89.3	2.50	92.1	2.50	94.7	2.49	97.3	2.47
	68	19.0	72.4	3.21	75.6	3.22	78.6	3.23	81.5	3.23	83.2	3.23	84.3	3.23	86.9	3.22	89.4	3.21	91.8	3.19
		22.2	72.8	3.19	75.9	3.20	79.0	3.21	81.9	3.21	83.6	3.21	84.7	3.21	87.3	3.20	89.9	3.19	92.3	3.17
		25.4	73.1	3.18	76.3	3.19	79.4	3.20	82.3	3.20	84.0	3.20	85.1	3.19	87.8	3.19	90.3	3.17	92.7	3.16
		41.0	74.9	3.10	78.2	3.11	81.3	3.12	84.3	3.12	86.1	3.12	87.2	3.12	89.9	3.11	92.5	3.10	95.0	3.08
		56.5	76.7	3.03	80.1	3.05	83.3	3.05	86.4	3.05	88.1	3.05	89.3	3.05	92.1	3.04	94.7	3.03	97.3	3.02
	77	19.0	72.4	3.95	75.6	3.97	78.6	3.98	81.5	3.98	83.2	3.98	84.3	3.98	86.9	3.96	89.4	3.95	91.8	3.93
		22.2	72.8	3.93	75.9	3.95	79.0	3.96	81.9	3.96	83.6	3.96	84.7	3.95	87.3	3.94	89.9	3.93	92.3	3.91
		25.4	73.1	3.91	76.3	3.93	79.4	3.94	82.3	3.94	84.0	3.94	85.1	3.93	87.8	3.92	90.3	3.91	92.7	3.89
		41.0	74.9	3.82	78.2	3.84	81.3	3.85	84.3	3.85	86.1	3.85	87.2	3.84	89.9	3.83	92.5	3.82	95.0	3.80
		56.5	76.7	3.74	80.1	3.75	83.3	3.76	86.4	3.76	88.1	3.76	89.3	3.76	92.1	3.75	94.7	3.73	97.3	3.72
	86	19.0	72.4	4.91	75.6	4.93	78.6	4.94	81.5	4.94	83.2	4.94	84.3	4.93	86.9	4.92	89.4	4.90	91.8	4.88
		22.2	72.8	4.88	75.9	4.90	79.0	4.91	81.9	4.92	83.6	4.91	84.7	4.91	87.3	4.90	89.9	4.88	92.3	4.85
		25.4	73.1	4.86	76.3	4.88	79.4	4.89	82.3	4.89	84.0	4.89	85.1	4.88	87.8	4.87	90.3	4.85	92.7	4.83
		41.0	74.9	4.74	78.2	4.76	81.3	4.77	84.3	4.78	86.1	4.77	87.2	4.77	89.9	4.76	92.5	4.74	95.0	4.72
		56.5	76.7	4.64	80.1	4.66	83.3	4.67	86.4	4.67	88.1	4.67	89.3	4.67	92.1	4.65	94.7	4.64	97.3	4.61
	95	19.0	66.1	4.73	69.0	4.75	71.8	4.76	74.4	4.76	76.0	4.75	76.9	4.75	79.4	4.74	81.7	4.72	83.8	4.70
		22.2	66.5	4.70	69.4	4.72	72.1	4.73	74.8	4.73	76.3	4.73	77.3	4.73	79.8	4.71	82.1	4.70	84.3	4.67
		25.4	66.8	4.68	69.7	4.70	72.5	4.71	75.2	4.71	76.7	4.71	77.7	4.70	80.2	4.69	82.5	4.67	84.7	4.65
		41.0	68.4	4.57	71.4	4.59	74.3	4.60	77.0	4.60	78.6	4.60	79.6	4.59	82.1	4.58	84.5	4.56	86.8	4.54
		56.5	70.1	4.47	73.1	4.49	76.1	4.50	78.9	4.50	80.5	4.50	81.5	4.49	84.1	4.48	86.5	4.46	88.8	4.44
	104	19.0	59.8	4.51	62.4	4.53	64.9	4.54	67.3	4.54	68.7	4.54	69.6	4.53	71.8	4.52	73.8	4.50	75.8	4.48
		22.2	60.1	4.49	62.7	4.50	65.2	4.51	67.6	4.51	69.0	4.51	69.9	4.51	72.1	4.50	74.2	4.48	76.2	4.46
		25.4	60.4	4.46	63.0	4.48	65.6	4.49	68.0	4.49	69.4	4.49	70.3	4.49	72.5	4.47	74.6	4.46	76.6	4.43
		41.0	61.9	4.36	64.6	4.38	67.2	4.39	69.7	4.39	71.1	4.38	72.0	4.38	74.3	4.37	76.4	4.35	78.5	4.33
		56.5	63.4	4.26	66.1	4.28	68.8	4.29	71.3	4.29	72.8	4.29	73.8	4.29	76.1	4.27	78.3	4.26	80.3	4.24
	113	19.0	53.5	4.27	55.8	4.28	58.0	4.29	60.2	4.29	61.4	4.29	62.2	4.29	64.2	4.28	66.0	4.26	67.8	4.24
		22.2	53.7	4.24	56.1	4.26	58.3	4.27	60.5	4.27	61.7	4.27	62.6	4.27	64.5	4.26	66.4	4.24	68.1	4.22
		25.4	54.0	4.22	56.4	4.24	58.6	4.25	60.8	4.25	62.1	4.25	62.9	4.24	64.8	4.23	66.7	4.22	68.5	4.20
		41.0	55.3	4.12	57.8	4.14	60.1	4.15	62.3	4.15	63.6	4.15	64.4	4.15	66.4	4.13	68.4	4.12	70.2	4.10
		56.5	56.7	4.03	59.1	4.05	61.5	4.06	63.8	4.06	65.1	4.06	66.0	4.05	68.0	4.04	70.0	4.03	71.9	4.01
60	50	19.0	62.1	1.76	64.8	1.76	67.4	1.77	69.8	1.77	71.3	1.77	72.2	1.77	74.5	1.76	76.6	1.75	78.7	1.75
		22.2	62.4	1.75	65.1	1.75	67.7	1.76	70.2	1.76	71.6	1.76	72.6	1.76	74.9	1.75	77.0	1.74	79.1	1.74
		25.4	62.7	1.74	65.4	1.74	68.0	1.75	70.5	1.75	72.0	1.75	72.9	1.75	75.2	1.74	77.4	1.74	79.5	1.73
		41.0	64.2	1.70	67.0	1.70	69.7	1.71	72.3	1.71	73.8	1.71	74.7	1.71	77.1	1.70	79.3	1.70	81.4	1.69
		56.5	65.8	1.66	68.6	1.67	71.4	1.67	74.0	1.67	75.5	1.67	76.5	1.67	78.9	1.66	81.2	1.66	83.4	1.65
	59	19.0	62.1	2.11	64.8	2.12	67.4	2.13	69.8	2.13	71.3	2.13	72.2	2.13	74.5	2.12	76.6	2.11	78.7	2.10
		22.2	62.4	2.10	65.1	2.11	67.7	2.12	70.2	2.12	71.6	2.12	72.6	2.12	74.9	2.11	77.0	2.10	79.1	2.09
		25.4	62.7	2.09	65.4	2.10	68.0	2.11	70.5	2.11	72.0	2.11	72.9	2.11	75.2	2.10	77.4	2.09	79.5	2.08
		41.0	64.2	2.04	67.0	2.05	69.7	2.06	72.3	2.06	73.8	2.06	74.7	2.06	77.1	2.05	79.3	2.04	81.4	2.03
		56.5	65.8	2.00	68.6	2.01	71.4	2.01	74.0	2.01	75.5	2.01	76.5	2.01	78.9	2.01	81.2	2.00	83.4	1.99
	68	19.0	62.1	2.58	64.8	2.59	67.4	2.59	69.8	2.60	71.3	2.59	72.2	2.59	74.5	2.59	76.6	2.58	78.7	2.56
		22.2	62.4	2.56	65.1	2.58	67.7	2.58	70.2	2.58	71.6	2.58	72.6	2.58	74.9	2.57	77.0	2.56	79.1	2.55
		25.4	62.7	2.55	65.4	2.56	68.0	2.57	70.5	2.57	72.0	2.57	72.9	2.57	75.2	2.56	77.4	2.55	79.5	2.54
		41.0	64.2	2.49	67.0	2.50	69.7	2.51	72.3	2.51	73.8	2.51	74.7	2.51	77.1	2.50	79.3	2.49	81.4	2.48
		56.5	65.8	2.44	68.6	2.45	71.4	2.45	74.0	2.45	75.5	2.45	76.5	2.45	78.9	2.45	81.2	2.44	83.4	2.42
	77	19.0	62.1	3.18	64.8	3.19	67.4	3.20	69.8	3.20	71.3	3.20	72.2	3.19	74.5	3.19	76.6	3.17	78.7	3.16
		22.2	62.4	3.16	65.1	3.17	67.7	3.18	70.2	3.18	71.6	3.18	72.6	3.18	74.9	3.17	77.0	3.16	79.1	3.14
		25.4	62.7	3.14	65.4	3.16	68.0	3.16	70.5	3.17	72.0	3.16	72.9	3.16	75.2	3.15	77.4	3.14	79.5	3.13
		41.0	64.2	3.07	67.0	3.08	69.7	3.09	72.3	3.09	73.8	3.09	74.7	3.09	77.1	3.08	79.3	3.07	81.4	3.05
		56.5	65.8	3.00	68.6	3.02	71.4	3.02	74.0	3.02	75.5	3.02	76.5	3.02	78.9	3.01	81.2	3.00	83.4	2.99
	86	19.0	62.1	3.94	64.8	3.96	67.4	3.97	69.8	3.97	71.3	3.97	72.2	3.97	74.5	3.96	76.6	3.94	78.7	3.92
		22.2	62.4	3.92	65.1	3.94	67.7	3.95	70.2	3.95	71.6	3.95	72.6	3.95	74.9	3.94	77.0	3.92	79.1	3.90
		25.4	62.7	3.90	65.4	3.92	68.0	3.93	70.5	3.93	72.0	3.93	72.9	3.93	75.2	3.92	77.4	3.90	79.5	3.88
		41.0	64.2	3.81	67.0	3.83	69.7	3.84	72.3	3.84	73.8	3.84	74.7	3.83	77.1	3.82	79.3	3.81	81.4	3.79
		56.5	65.8	3.73	68.6	3.74	71.4	3.75	74.0	3.75	75.5	3.75	76.5	3.75	78.9	3.74	81.2	3.73	83.4	3.71
	95	19.0	56.7	3.80	59.1	3.81	61.5	3.82	63.8	3.82	65.1	3.82	66.0	3.82	68.0	3.81	70.0	3.79	71.9	3.77
		22.2	57.0	3.78	59.4	3.79	61.8	3.80	64.1	3.80	65.4	3.80	66.3	3.80	68.4	3.79	70.3	3.77	72.2	3.75
		25.4	57.2	3.76	59.7	3.78	62.1	3.78	64.4	3.78	65.8	3.78	66.6	3.78	68.7	3.77	70.7	3.75	72.6	3.74
		41.0	58.7	3.67	61.2	3.69	63.7	3.69	66.0	3.70	67.4	3.69	68.3	3.69	70.4	3.68	72.4	3.67	74.4	3.65
		56.5	60.1	3.59	62.7	3.61	65.2	3.61	67.6	3.61	69.0	3.61	69.9	3.61	72.1	3.60	74.2	3.59	76.2	3.57
	104	19.0	51.3	3.62	53.5	3.64	55.6	3.65	57.7	3.65	58.9	3.64	59.7	3.64	61.5	3.63	63.3	3.62	65.0	3.60
		22.2	51.5	3.61	53.8	3.62	55.9	3.63	58.0	3.63	59.2	3.63	60.0	3.62	61.8	3.61	63.6	3.60	65.3	3.58
		25.4	51.8	3.59	54.0	3.60	56.2	3.61	58.3	3.61	59.5	3.61	60.3	3.61	62.1	3.60	63.9	3.58	65.6	3.56
		41.0	53.0	3.50	55.4	3.52	57.6	3.52	59.7	3.53	60.9	3.52	61.7	3.52	63.7	3.51	65.5	3.50	67.3	3.48
		56.5	54.3	3.43	56.7	3.44	59.0	3.45	61.1	3.45	62.4	3.45	63.2	3.44	65.2	3.43	67.1	3.42	68.9	3.40
	113	19.0	45.8	3.43	47.8	3.44	49.8	3.45	51.6	3.45	52.7	3.45	53.3	3.45	55.0	3.44	56.6	3.42	58.1	3.41
		22.2	46.1	3.41	48.1	3.42	50.0	3.43	51.9	3.43	52.9	3.43	53.6	3.43	55.3	3.42	56.9	3.41	58.4	3.39
		25.4	46.3	3.39	48.3	3.41	50.3	3.41	52.1	3.42	53.2	3.41	53.9	3.41	55.6	3.40	57.2	3.39	58.7	3.37
		41.0	47.4	3.31	49.5	3.33	51.5	3.33	53.4	3.34	54.5	3.33	55.2	3.33	56.9	3.32	58.6	3.31	60.1	3.29
		56.5	48.6	3.24	50.7	3.26	52.7	3.26	54.7	3.26	55.8	3.26	56.5	3.26	58.3	3.25	60.0	3.24	61.6	3.22

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	19.0	51.7	1.39	54.0	1.39	56.1	1.39	58.2	1.39	59.4	1.39	60.2	1.39	62.1	1.39	63.9	1.38	65.6	1.38
		22.2	52.0	1.38	54.2	1.38	56.4	1.39	58.5	1.39	59.7	1.39	60.5	1.39	62.4	1.38	64.2	1.38	65.9	1.37
		25.4	52.2	1.37	54.5	1.38	56.7	1.38	58.8	1.38	60.0	1.38	60.8	1.38	62.7	1.38	64.5	1.37	66.2	1.36
		41.0	53.5	1.34	55.9	1.34	58.1	1.35	60.2	1.35	61.5	1.35	62.3	1.35	64.2	1.34	66.1	1.34	67.9	1.33
		56.5	54.8	1.31	57.2	1.32	59.5	1.32	61.7	1.32	62.9	1.32	63.8	1.32	65.8	1.31	67.7	1.31	69.5	1.30
	59	19.0	51.7	1.67	54.0	1.68	56.1	1.68	58.2	1.68	59.4	1.68	60.2	1.68	62.1	1.67	63.9	1.67	65.6	1.66
		22.2	52.0	1.66	54.2	1.67	56.4	1.67	58.5	1.67	59.7	1.67	60.5	1.67	62.4	1.67	64.2	1.66	65.9	1.65
		25.4	52.2	1.65	54.5	1.66	56.7	1.66	58.8	1.66	60.0	1.66	60.8	1.66	62.7	1.66	64.5	1.65	66.2	1.64
		41.0	53.5	1.61	55.9	1.62	58.1	1.62	60.2	1.62	61.5	1.62	62.3	1.62	64.2	1.62	66.1	1.61	67.9	1.60
		56.5	54.8	1.58	57.2	1.58	59.5	1.59	61.7	1.59	62.9	1.59	63.8	1.59	65.8	1.58	67.7	1.58	69.5	1.57
	68	19.0	51.7	2.03	54.0	2.04	56.1	2.05	58.2	2.05	59.4	2.05	60.2	2.05	62.1	2.04	63.9	2.03	65.6	2.02
		22.2	52.0	2.02	54.2	2.03	56.4	2.04	58.5	2.04	59.7	2.04	60.5	2.04	62.4	2.03	64.2	2.02	65.9	2.01
		25.4	52.2	2.01	54.5	2.02	56.7	2.03	58.8	2.03	60.0	2.03	60.8	2.03	62.7	2.02	64.5	2.01	66.2	2.00
		41.0	53.5	1.97	55.9	1.98	58.1	1.98	60.2	1.98	61.5	1.98	62.3	1.98	64.2	1.97	66.1	1.97	67.9	1.96
		56.5	54.8	1.92	57.2	1.93	59.5	1.94	61.7	1.94	62.9	1.94	63.8	1.93	65.8	1.93	67.7	1.92	69.5	1.91
	77	19.0	51.7	2.51	54.0	2.52	56.1	2.52	58.2	2.52	59.4	2.52	60.2	2.52	62.1	2.51	63.9	2.51	65.6	2.49
		22.2	52.0	2.49	54.2	2.50	56.4	2.51	58.5	2.51	59.7	2.51	60.5	2.51	62.4	2.50	64.2	2.49	65.9	2.48
		25.4	52.2	2.48	54.5	2.49	56.7	2.50	58.8	2.50	60.0	2.50	60.8	2.50	62.7	2.49	64.5	2.48	66.2	2.47
		41.0	53.5	2.42	55.9	2.43	58.1	2.44	60.2	2.44	61.5	2.44	62.3	2.44	64.2	2.43	66.1	2.42	67.9	2.41
		56.5	54.8	2.37	57.2	2.38	59.5	2.39	61.7	2.39	62.9	2.39	63.8	2.38	65.8	2.38	67.7	2.37	69.5	2.36
	86	19.0	51.7	3.11	54.0	3.13	56.1	3.13	58.2	3.13	59.4	3.13	60.2	3.13	62.1	3.12	63.9	3.11	65.6	3.09
		22.2	52.0	3.10	54.2	3.11	56.4	3.12	58.5	3.12	59.7	3.12	60.5	3.11	62.4	3.11	64.2	3.09	65.9	3.08
		25.4	52.2	3.08	54.5	3.09	56.7	3.10	58.8	3.10	60.0	3.10	60.8	3.10	62.7	3.09	64.5	3.08	66.2	3.06
		41.0	53.5	3.01	55.9	3.02	58.1	3.03	60.2	3.03	61.5	3.03	62.3	3.03	64.2	3.02	66.1	3.01	67.9	2.99
		56.5	54.8	2.94	57.2	2.96	59.5	2.96	61.7	2.96	62.9	2.96	63.8	2.96	65.8	2.95	67.7	2.94	69.5	2.93
	95	19.0	47.2	3.00	49.3	3.01	51.3	3.02	53.2	3.02	54.3	3.02	55.0	3.01	56.7	3.01	58.3	2.99	59.9	2.98
		22.2	47.5	2.98	49.5	2.99	51.5	3.00	53.4	3.00	54.5	3.00	55.2	3.00	57.0	2.99	58.6	2.98	60.2	2.96
		25.4	47.7	2.97	49.8	2.98	51.8	2.99	53.7	2.99	54.8	2.98	55.5	2.98	57.3	2.97	58.9	2.96	60.5	2.95
		41.0	48.9	2.90	51.0	2.91	53.1	2.92	55.0	2.92	56.1	2.91	56.9	2.91	58.7	2.91	60.4	2.89	62.0	2.88
		56.5	50.0	2.83	52.2	2.85	54.3	2.85	56.3	2.85	57.5	2.85	58.2	2.85	60.1	2.84	61.8	2.83	63.5	2.82
	104	19.0	42.7	2.86	44.6	2.87	46.4	2.88	48.1	2.88	49.1	2.88	49.7	2.87	51.3	2.87	52.7	2.86	54.2	2.84
		22.2	42.9	2.85	44.8	2.86	46.6	2.86	48.3	2.86	49.3	2.86	50.0	2.86	51.5	2.85	53.0	2.84	54.4	2.83
		25.4	43.1	2.83	45.0	2.84	46.8	2.85	48.6	2.85	49.6	2.85	50.2	2.85	51.8	2.84	53.3	2.83	54.7	2.81
		41.0	44.2	2.76	46.1	2.78	48.0	2.78	49.8	2.78	50.8	2.78	51.4	2.78	53.1	2.77	54.6	2.76	56.0	2.75
		56.5	45.3	2.70	47.2	2.72	49.1	2.72	50.9	2.72	52.0	2.72	52.7	2.72	54.3	2.71	55.9	2.70	57.4	2.69
	113	19.0	38.2	2.71	39.9	2.72	41.5	2.72	43.0	2.72	43.9	2.72	44.5	2.72	45.8	2.71	47.2	2.70	48.4	2.69
		22.2	38.4	2.69	40.1	2.70	41.7	2.71	43.2	2.71	44.1	2.71	44.7	2.71	46.1	2.70	47.4	2.69	48.7	2.67
		25.4	38.6	2.68	40.3	2.69	41.9	2.70	43.4	2.70	44.3	2.69	44.9	2.69	46.3	2.69	47.7	2.67	48.9	2.66
		41.0	39.5	2.62	41.3	2.63	42.9	2.63	44.5	2.63	45.4	2.63	46.0	2.63	47.5	2.62	48.8	2.61	50.1	2.60
		56.5	40.5	2.56	42.2	2.57	43.9	2.57	45.6	2.58	46.5	2.57	47.1	2.57	48.6	2.57	50.0	2.56	51.3	2.54

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	21.4	130.7	3.87	136.4	3.88	141.9	3.89	147.1	3.89	150.1	3.89	152.1	3.89	156.9	3.88	161.4	3.87	165.7	3.85
		28.9	131.8	3.83	137.5	3.85	143.0	3.86	148.3	3.86	151.4	3.86	153.4	3.86	158.2	3.85	162.8	3.83	167.1	3.81
		36.5	132.9	3.80	138.7	3.82	144.2	3.83	149.6	3.83	152.6	3.83	154.6	3.82	159.5	3.81	164.1	3.80	168.5	3.78
		50.1	134.9	3.75	140.7	3.76	146.4	3.77	151.8	3.77	154.9	3.77	157.0	3.77	161.9	3.76	166.6	3.75	171.0	3.73
		63.7	136.8	3.70	142.8	3.71	148.5	3.72	154.0	3.72	157.2	3.72	159.3	3.72	164.3	3.71	169.0	3.69	173.5	3.67
	59	21.4	130.7	4.66	136.4	4.68	141.9	4.69	147.1	4.69	150.1	4.69	152.1	4.69	156.9	4.67	161.4	4.66	165.7	4.63
		28.9	131.8	4.62	137.5	4.64	143.0	4.65	148.3	4.65	151.4	4.65	153.4	4.65	158.2	4.64	162.8	4.62	167.1	4.59
		36.5	132.9	4.58	138.7	4.60	144.2	4.61	149.6	4.61	152.6	4.61	154.6	4.61	159.5	4.60	164.1	4.58	168.5	4.56
		50.1	134.9	4.52	140.7	4.53	146.4	4.54	151.8	4.55	154.9	4.54	157.0	4.54	161.9	4.53	166.6	4.51	171.0	4.49
		63.7	136.8	4.45	142.8	4.47	148.5	4.48	154.0	4.48	157.2	4.48	159.3	4.48	164.3	4.47	169.0	4.45	173.5	4.43
	68	21.4	130.7	5.68	136.4	5.71	141.9	5.72	147.1	5.72	150.1	5.72	152.1	5.71	156.9	5.70	161.4	5.68	165.7	5.65
		28.9	131.8	5.63	137.5	5.66	143.0	5.67	148.3	5.67	151.4	5.67	153.4	5.66	158.2	5.65	162.8	5.63	167.1	5.60
		36.5	132.9	5.59	138.7	5.61	144.2	5.62	149.6	5.62	152.6	5.62	154.6	5.62	159.5	5.60	164.1	5.58	168.5	5.55
		50.1	134.9	5.51	140.7	5.53	146.4	5.54	151.8	5.54	154.9	5.54	157.0	5.54	161.9	5.52	166.6	5.50	171.0	5.47
		63.7	136.8	5.43	142.8	5.45	148.5	5.46	154.0	5.47	157.2	5.46	159.3	5.46	164.3	5.45	169.0	5.42	173.5	5.40
	77	21.4	130.7	7.00	136.4	7.03	141.9	7.05	147.1	7.05	150.1	7.05	152.1	7.04	156.9	7.02	161.4	7.00	165.7	6.96
		28.9	131.8	6.94	137.5	6.97	143.0	6.99	148.3	6.99	151.4	6.98	153.4	6.98	158.2	6.96	162.8	6.94	167.1	6.90
		36.5	132.9	6.88	138.7	6.91	144.2	6.93	149.6	6.93	152.6	6.93	154.6	6.92	159.5	6.90	164.1	6.88	168.5	6.84
		50.1	134.9	6.78	140.7	6.81	146.4	6.83	151.8	6.83	154.9	6.83	157.0	6.82	161.9	6.80	166.6	6.78	171.0	6.74
		63.7	136.8	6.69	142.8	6.72	148.5	6.73	154.0	6.73	157.2	6.73	159.3	6.73	164.3	6.71	169.0	6.68	173.5	6.65
	86	21.4	130.7	8.69	136.4	8.73	141.9	8.75	147.1	8.75	150.1	8.75	152.1	8.74	156.9	8.72	161.4	8.69	165.7	8.64
		28.9	131.8	8.62	137.5	8.65	143.0	8.67	148.3	8.68	151.4	8.67	153.4	8.67	158.2	8.64	162.8	8.61	167.1	8.57
		36.5	132.9	8.55	138.7	8.58	144.2	8.60	149.6	8.60	152.6	8.60	154.6	8.59	159.5	8.57	164.1	8.54	168.5	8.50
		50.1	134.9	8.42	140.7	8.46	146.4	8.47	151.8	8.48	154.9	8.47	157.0	8.47	161.9	8.45	166.6	8.42	171.0	8.37
		63.7	136.8	8.30	142.8	8.34	148.5	8.36	154.0	8.36	157.2	8.36	159.3	8.35	164.3	8.33	169.0	8.30	173.5	8.26
	95	21.4	118.3	8.30	123.5	8.33	128.4	8.35	133.2	8.35	135.9	8.35	137.7	8.34	142.0	8.32	146.1	8.29	150.0	8.24
		28.9	119.3	8.23	124.5	8.26	129.5	8.28	134.3	8.28	137.0	8.27	138.8	8.27	143.2	8.25	147.3	8.22	151.3	8.17
		36.5	120.3	8.16	125.5	8.19	130.6	8.21	135.4	8.21	138.2	8.21	140.0	8.20	144.4	8.18	148.6	8.15	152.5	8.11
		50.1	122.1	8.04	127.4	8.07	132.5	8.09	137.4	8.09	140.2	8.09	142.1	8.08	146.5	8.06	150.8	8.03	154.8	7.99
		63.7	123.9	7.93	129.3	7.96	134.5	7.98	139.4	7.98	142.3	7.97	144.2	7.97	148.7	7.95	153.0	7.92	157.1	7.88
	104	21.4	106.0	7.84	110.6	7.87	115.0	7.89	119.3	7.89	121.7	7.88	123.3	7.88	127.2	7.86	130.9	7.83	134.3	7.79
		28.9	106.8	7.77	111.5	7.80	116.0	7.82	120.3	7.82	122.7	7.82	124.4	7.81	128.2	7.79	132.0	7.76	135.5	7.72
		36.5	107.7	7.71	112.4	7.74	116.9	7.75	121.3	7.76	123.8	7.75	125.4	7.75	129.3	7.73	133.1	7.70	136.6	7.66
		50.1	109.3	7.60	114.1	7.63	118.7	7.64	123.1	7.64	125.6	7.64	127.3	7.63	131.2	7.61	135.0	7.58	138.6	7.55
		63.7	111.0	7.49	115.8	7.52	120.4	7.54	124.9	7.54	127.5	7.53	129.1	7.53	133.2	7.51	137.0	7.48	140.7	7.44
	113	21.4	93.6	7.33	97.7	7.36	101.6	7.37	105.4	7.37	107.5	7.37	108.9	7.37	112.4	7.35	115.6	7.32	118.7	7.28
		28.9	94.4	7.27	98.5	7.29	102.5	7.31	106.2	7.31	108.4	7.31	109.9	7.30	113.3	7.28	116.6	7.25	119.7	7.22
		36.5	95.2	7.20	99.3	7.23	103.3	7.25	107.1	7.25	109.3	7.25	110.8	7.24	114.2	7.22	117.5	7.19	120.7	7.16
		50.1	96.6	7.10	100.8	7.13	104.9	7.14	108.7	7.15	111.0	7.14	112.4	7.14	116.0	7.12	119.3	7.09	122.5	7.05
		63.7	98.0	7.00	102.3	7.03	106.4	7.04	110.3	7.05	112.6	7.04	114.1	7.04	117.7	7.02	121.1	6.99	124.3	6.96
120	50	21.4	128.2	3.85	133.8	3.87	139.2	3.88	144.3	3.88	147.3	3.88	149.2	3.87	153.9	3.87	158.3	3.85	162.6	3.83
		28.9	129.3	3.82	134.9	3.84	140.3	3.84	145.5	3.85	148.5	3.84	150.5	3.84	155.2	3.83	159.7	3.82	163.9	3.80
		36.5	130.4	3.79	136.1	3.80	141.5	3.81	146.7	3.81	149.8	3.81	151.7	3.81	156.5	3.80	161.0	3.79	165.3	3.77
		50.1	132.3	3.73	138.1	3.75	143.6	3.76	148.9	3.76	152.0	3.76	154.0	3.75	158.8	3.75	163.4	3.73	167.8	3.71
		63.7	134.3	3.68	140.1	3.70	145.7	3.70	151.1	3.71	154.2	3.70	156.3	3.70	161.2	3.69	165.8	3.68	170.2	3.66
	59	21.4	128.2	4.64	133.8	4.66	139.2	4.67	144.3	4.67	147.3	4.67	149.2	4.67	153.9	4.66	158.3	4.64	162.6	4.62
		28.9	129.3	4.60	134.9	4.62	140.3	4.63	145.5	4.63	148.5	4.63	150.5	4.63	155.2	4.62	159.7	4.60	163.9	4.58
		36.5	130.4	4.56	136.1	4.58	141.5	4.59	146.7	4.60	149.8	4.59	151.7	4.59	156.5	4.58	161.0	4.56	165.3	4.54
		50.1	132.3	4.50	138.1	4.52	143.6	4.53	148.9	4.53	152.0	4.53	154.0	4.52	158.8	4.51	163.4	4.50	167.8	4.47
		63.7	134.3	4.44	140.1	4.45	145.7	4.46	151.1	4.47	154.2	4.46	156.3	4.46	161.2	4.45	165.8	4.43	170.2	4.41
	68	21.4	128.2	5.66	133.8	5.68	139.2	5.70	144.3	5.70	147.3	5.70	149.2	5.69	153.9	5.68	158.3	5.66	162.6	5.63
		28.9	129.3	5.61	134.9	5.63	140.3	5.65	145.5	5.65	148.5	5.65	150.5	5.64	155.2	5.63	159.7	5.61	163.9	5.58
		36.5	130.4	5.56	136.1	5.59	141.5	5.60	146.7	5.60	149.8	5.60	151.7	5.60	156.5	5.58	161.0	5.56	165.3	5.53
		50.1	132.3	5.48	138.1	5.51	143.6	5.52	148.9	5.52	152.0	5.52	154.0	5.51	158.8	5.50	163.4	5.48	167.8	5.45
		63.7	134.3	5.41	140.1	5.43	145.7	5.44	151.1	5.44	154.2	5.44	156.3	5.44	161.2	5.42	165.8	5.40	170.2	5.38
	77	21.4	128.2	6.97	133.8	7.00	139.2	7.02	144.3	7.02	147.3	7.02	149.2	7.01	153.9	7.00	158.3	6.97	162.6	6.93
		28.9	129.3	6.91	134.9	6.94	140.3	6.96	145.5	6.96	148.5	6.96	150.5	6.95	155.2	6.94	159.7	6.91	163.9	6.87
		36.5	130.4	6.86	136.1	6.89	141.5	6.90	146.7	6.90	149.8	6.90	151.7	6.90	156.5	6.88	161.0	6.85	165.3	6.82
		50.1	132.3	6.76	138.1	6.79	143.6	6.80	148.9	6.80	152.0	6.80	154.0	6.80	158.8	6.78	163.4	6.75	167.8	6.72
		63.7	134.3	6.66	140.1	6.69	145.7	6.71	151.1	6.71	154.2	6.71	156.3	6.70	161.2	6.68	165.8	6.66	170.2	6.63
	86	21.4	128.2	8.66	133.8	8.69	139.2	8.71	144.3	8.72	147.3	8.71	149.2	8.71	153.9	8.68	158.3	8.65	162.6	8.61
		28.9	129.3	8.58	134.9	8.62	140.3	8.64	145.5	8.64	148.5	8.64	150.5	8.63	155.2	8.61	159.7	8.58	163.9	8.53
		36.5	130.4	8.51	136.1	8.55	141.5	8.57	146.7	8.57	149.8	8.57	151.7	8.56	156.5	8.54	161.0	8.51	165.3	8.46
		50.1	132.3	8.39	138.1	8.42	143.6	8.44	148.9	8.45	152.0	8.44	154.0	8.44	158.8	8.41	163.4	8.38	167.8	8.34
		63.7	134.3	8.27	140.1	8.31	145.7	8.32	151.1	8.33	154.2	8.32	156.3	8.32	161.2	8.30	165.8	8.27	170.2	8.23
	95	21.4	116.1	8.27	121.1	8.30	126.0	8.32	130.6	8.32	133.3	8.31	135.1	8.31	139.3	8.29	143.4	8.25	147.2	8.21
		28.9	117.1	8.20	122.2	8.23	127.1	8.24	131.7	8.25	134.5	8.24	136.2	8.24	140.5	8.22	144.6	8.18	148.4	8.14
		36.5	118.0	8.13	123.2	8.16	128.1	8.18	132.8	8.18	135.6	8.17	137.4	8.17	141.7	8.15	145.8	8.12	149.6	8.07
		50.1	119.8	8.01	125.0	8.04	130.0	8.06	134.8	8.06	137.6	8.06	139.4	8.05	143.8	8.03	147.9	8.00	151.9	7.96
		63.7	121.6	7.90	126.9	7.93	131.9	7.95	136.8	7.95	139.6	7.94	141.5	7.94	145.9	7.92	150.1	7.89	154.1	7.85
	104	21.4	104.0	7.81	108.5	7.84	112.8	7.86	117.0	7.86	119.4	7.85	121.0	7.85	124.8	7.83	128.4	7.80	131.8	7.76
		28.9	104.8	7.74	109.4	7.77	113.8	7.79	118.0	7.79	120.4	7.79	122.0	7.78	125.8	7.76	129.5	7.73	132.9	7.69
		36.5	105.7	7.68	110.3	7.71	114.7	7.72	119.0	7.73	121.4	7.72	123.0	7.72	126.9	7.70	130.5	7.67	134.0	7.63
		50.1	107.3	7.57	112.0	7.60	116.5	7.61	120.8	7.61	123.2	7.61	124.9	7.61	128.8	7.59	132.5	7.56	136.0	7.52
		63.7	108.9	7.46	113.6	7.49	118.2	7.51	122.5	7.51	125.1	7.50	126.7	7.50	130.7	7.48	134.4	7.45	138.0	7.41
	113	21.4	91.8	7.30	95.9	7.33	99.7	7.34	103.4	7.35	105.5	7.34	106.9	7.34	110.2	7.32	113.4	7.29	116.4	7.25
		28.9	92.6	7.24	96.7	7.27	100.5	7.28	104.2	7.28	106.4	7.28	107.8	7.27	111.2	7.25	114.4	7.23	117.4	7.19
		36.5	93.4	7.18	97.5	7.21	101.4	7.22	105.1	7.22	107.3	7.22	108.7	7.21	112.1	7.19	115.3	7.17	118.4	7.13
		50.1	94.8	7.07	98.9	7.10	102.9	7.12	106.7	7.12	108.9	7.11	110.3	7.11	113.8	7.09	117.1	7.06	120.2	7.03
		63.7	96.2	6.97	100.4	7.00	104.4	7.02	108.2	7.02	110.5	7.01	111.9	7.01	115.4	6.99	118.8	6.96	121.9	6.93

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	21.4	125.8	3.86	131.2	3.88	136.5	3.88	141.5	3.89	144.5	3.88	146.4	3.88	150.9	3.87	155.3	3.86	159.4	3.84
		28.9	126.8	3.83	132.3	3.84	137.6	3.85	142.7	3.85	145.7	3.85	147.6	3.85	152.2	3.84	156.6	3.82	160.8	3.80
		36.5	127.9	3.79	133.4	3.81	138.8	3.82	143.9	3.82	146.9	3.82	148.8	3.82	153.5	3.81	157.9	3.79	162.1	3.77
		50.1	129.8	3.74	135.4	3.76	140.9	3.76	146.1	3.77	149.1	3.76	151.0	3.76	155.8	3.75	160.3	3.74	164.5	3.72
		63.7	131.7	3.69	137.4	3.70	142.9	3.71	148.2	3.71	151.3	3.71	153.3	3.71	158.1	3.70	162.6	3.69	167.0	3.67
	59	21.4	125.8	4.65	131.2	4.67	136.5	4.68	141.5	4.68	144.5	4.68	146.4	4.68	150.9	4.66	155.3	4.65	159.4	4.62
		28.9	126.8	4.61	132.3	4.63	137.6	4.64	142.7	4.64	145.7	4.64	147.6	4.64	152.2	4.62	156.6	4.61	160.8	4.58
		36.5	127.9	4.57	133.4	4.59	138.8	4.60	143.9	4.60	146.9	4.60	148.8	4.60	153.5	4.59	157.9	4.57	162.1	4.55
		50.1	129.8	4.51	135.4	4.52	140.9	4.53	146.1	4.54	149.1	4.53	151.0	4.53	155.8	4.52	160.3	4.50	164.5	4.48
		63.7	131.7	4.44	137.4	4.46	142.9	4.47	148.2	4.47	151.3	4.47	153.3	4.47	158.1	4.46	162.6	4.44	167.0	4.42
	68	21.4	125.8	5.67	131.2	5.69	136.5	5.70	141.5	5.71	144.5	5.70	146.4	5.70	150.9	5.69	155.3	5.66	159.4	5.64
		28.9	126.8	5.62	132.3	5.64	137.6	5.66	142.7	5.66	145.7	5.66	147.6	5.65	152.2	5.64	156.6	5.62	160.8	5.59
		36.5	127.9	5.57	133.4	5.60	138.8	5.61	143.9	5.61	146.9	5.61	148.8	5.61	153.5	5.59	157.9	5.57	162.1	5.54
		50.1	129.8	5.49	135.4	5.52	140.9	5.53	146.1	5.53	149.1	5.53	151.0	5.52	155.8	5.51	160.3	5.49	164.5	5.46
		63.7	131.7	5.42	137.4	5.44	142.9	5.45	148.2	5.45	151.3	5.45	153.3	5.45	158.1	5.43	162.6	5.41	167.0	5.39
	77	21.4	125.8	6.99	131.2	7.01	136.5	7.03	141.5	7.03	144.5	7.03	146.4	7.03	150.9	7.01	155.3	6.98	159.4	6.95
		28.9	126.8	6.93	132.3	6.95	137.6	6.97	142.7	6.97	145.7	6.97	147.6	6.97	152.2	6.95	156.6	6.92	160.8	6.89
		36.5	127.9	6.87	133.4	6.90	138.8	6.91	143.9	6.91	146.9	6.91	148.8	6.91	153.5	6.89	157.9	6.86	162.1	6.83
		50.1	129.8	6.77	135.4	6.80	140.9	6.81	146.1	6.81	149.1	6.81	151.0	6.81	155.8	6.79	160.3	6.76	164.5	6.73
		63.7	131.7	6.67	137.4	6.70	142.9	6.72	148.2	6.72	151.3	6.72	153.3	6.71	158.1	6.70	162.6	6.67	167.0	6.64
	86	21.4	125.8	8.67	131.2	8.71	136.5	8.73	141.5	8.73	144.5	8.73	146.4	8.72	150.9	8.70	155.3	8.67	159.4	8.62
		28.9	126.8	8.60	132.3	8.63	137.6	8.65	142.7	8.66	145.7	8.65	147.6	8.65	152.2	8.62	156.6	8.59	160.8	8.55
		36.5	127.9	8.53	133.4	8.56	138.8	8.58	143.9	8.58	146.9	8.58	148.8	8.57	153.5	8.55	157.9	8.52	162.1	8.48
		50.1	129.8	8.40	135.4	8.44	140.9	8.46	146.1	8.46	149.1	8.46	151.0	8.45	155.8	8.43	160.3	8.40	164.5	8.35
		63.7	131.7	8.29	137.4	8.32	142.9	8.34	148.2	8.34	151.3	8.34	153.3	8.33	158.1	8.31	162.6	8.28	167.0	8.24
	95	21.4	113.8	8.28	118.8	8.31	123.6	8.33	128.1	8.33	130.8	8.33	132.5	8.32	136.6	8.30	140.6	8.27	144.3	8.23
		28.9	114.8	8.21	119.8	8.24	124.6	8.26	129.2	8.26	131.9	8.26	133.6	8.25	137.8	8.23	141.8	8.20	145.6	8.16
		36.5	115.8	8.14	120.8	8.17	125.7	8.19	130.3	8.19	133.0	8.19	134.7	8.18	138.9	8.16	143.0	8.13	146.8	8.09
		50.1	117.5	8.02	122.6	8.05	127.5	8.07	132.2	8.07	135.0	8.07	136.7	8.06	141.0	8.04	145.1	8.01	149.0	7.97
		63.7	119.2	7.91	124.4	7.94	129.4	7.96	134.2	7.96	136.9	7.96	138.7	7.95	143.1	7.93	147.2	7.90	151.2	7.86
	104	21.4	102.0	7.82	106.4	7.85	110.7	7.87	114.8	7.87	117.1	7.87	118.7	7.86	122.4	7.84	125.9	7.81	129.3	7.77
		28.9	102.8	7.76	107.3	7.79	111.6	7.80	115.7	7.80	118.1	7.80	119.7	7.80	123.4	7.77	127.0	7.74	130.4	7.70
		36.5	103.7	7.69	108.2	7.72	112.5	7.74	116.7	7.74	119.1	7.74	120.7	7.73	124.4	7.71	128.0	7.68	131.4	7.64
		50.1	105.2	7.58	109.8	7.61	114.2	7.63	118.4	7.63	120.9	7.62	122.5	7.62	126.3	7.60	129.9	7.57	133.4	7.53
		63.7	106.8	7.47	111.4	7.50	115.9	7.52	120.2	7.52	122.6	7.52	124.3	7.51	128.2	7.49	131.9	7.46	135.4	7.42
	113	21.4	90.1	7.31	94.0	7.34	97.8	7.36	101.4	7.36	103.5	7.35	104.8	7.35	108.1	7.33	111.2	7.30	114.2	7.26
		28.9	90.8	7.25	94.8	7.28	98.6	7.29	102.2	7.30	104.3	7.29	105.7	7.29	109.0	7.27	112.2	7.24	115.2	7.20
		36.5	91.6	7.19	95.6	7.22	99.4	7.23	103.1	7.23	105.2	7.23	106.6	7.23	109.9	7.21	113.1	7.18	116.1	7.14
		50.1	93.0	7.08	97.0	7.11	100.9	7.13	104.6	7.13	106.8	7.13	108.2	7.12	111.6	7.10	114.8	7.07	117.9	7.04
		63.7	94.3	6.99	98.4	7.01	102.4	7.03	106.2	7.03	108.4	7.03	109.8	7.02	113.2	7.00	116.5	6.98	119.6	6.94
100	50	21.4	123.3	3.89	128.7	3.91	133.8	3.91	138.8	3.92	141.6	3.91	143.5	3.91	148.0	3.90	152.3	3.89	156.3	3.87
		28.9	124.3	3.86	129.7	3.87	134.9	3.88	139.9	3.88	142.8	3.88	144.7	3.88	149.2	3.87	153.5	3.85	157.6	3.83
		36.5	125.4	3.82	130.8	3.84	136.1	3.85	141.1	3.85	144.0	3.85	145.9	3.85	150.5	3.84	154.8	3.82	158.9	3.80
		50.1	127.2	3.77	132.8	3.78	138.1	3.79	143.2	3.79	146.1	3.79	148.1	3.79	152.7	3.78	157.1	3.77	161.3	3.75
		63.7	129.1	3.72	134.7	3.73	140.1	3.74	145.3	3.74	148.3	3.74	150.2	3.74	155.0	3.73	159.4	3.71	163.7	3.69
	59	21.4	123.3	4.69	128.7	4.71	133.8	4.72	138.8	4.72	141.6	4.72	143.5	4.71	148.0	4.70	152.3	4.68	156.3	4.66
		28.9	124.3	4.65	129.7	4.66	134.9	4.68	139.9	4.68	142.8	4.67	144.7	4.67	149.2	4.66	153.5	4.64	157.6	4.62
		36.5	125.4	4.61	130.8	4.63	136.1	4.64	141.1	4.64	144.0	4.64	145.9	4.63	150.5	4.62	154.8	4.60	158.9	4.58
		50.1	127.2	4.54	132.8	4.56	138.1	4.57	143.2	4.57	146.1	4.57	148.1	4.57	152.7	4.55	157.1	4.54	161.3	4.51
		63.7	129.1	4.48	134.7	4.50	140.1	4.51	145.3	4.51	148.3	4.51	150.2	4.50	155.0	4.49	159.4	4.47	163.7	4.45
	68	21.4	123.3	5.71	128.7	5.74	133.8	5.75	138.8	5.75	141.6	5.75	143.5	5.74	148.0	5.73	152.3	5.71	156.3	5.68
		28.9	124.3	5.66	129.7	5.69	134.9	5.70	139.9	5.70	142.8	5.70	144.7	5.70	149.2	5.68	153.5	5.66	157.6	5.63
		36.5	125.4	5.62	130.8	5.64	136.1	5.65	141.1	5.65	144.0	5.65	145.9	5.65	150.5	5.63	154.8	5.61	158.9	5.58
		50.1	127.2	5.53	132.8	5.56	138.1	5.57	143.2	5.57	146.1	5.57	148.1	5.57	152.7	5.55	157.1	5.53	161.3	5.50
		63.7	129.1	5.46	134.7	5.48	140.1	5.49	145.3	5.50	148.3	5.49	150.2	5.49	155.0	5.47	159.4	5.45	163.7	5.43
	77	21.4	123.3	7.04	128.7	7.07	133.8	7.08	138.8	7.09	141.6	7.08	143.5	7.08	148.0	7.06	152.3	7.03	156.3	7.00
		28.9	124.3	6.98	129.7	7.01	134.9	7.02	139.9	7.03	142.8	7.02	144.7	7.02	149.2	7.00	153.5	6.97	157.6	6.94
		36.5	125.4	6.92	130.8	6.95	136.1	6.96	141.1	6.97	144.0	6.96	145.9	6.96	150.5	6.94	154.8	6.92	158.9	6.88
		50.1	127.2	6.82	132.8	6.85	138.1	6.86	143.2	6.87	146.1	6.86	148.1	6.86	152.7	6.84	157.1	6.82	161.3	6.78
		63.7	129.1	6.73	134.7	6.75	140.1	6.77	145.3	6.77	148.3	6.77	150.2	6.76	155.0	6.75	159.4	6.72	163.7	6.69
	86	21.4	123.3	8.74	128.7	8.77	133.8	8.79	138.8	8.80	141.6	8.79	143.5	8.79	148.0	8.77	152.3	8.73	156.3	8.69
		28.9	124.3	8.66	129.7	8.70	134.9	8.72	139.9	8.72	142.8	8.72	144.7	8.71	149.2	8.69	153.5	8.66	157.6	8.61
		36.5	125.4	8.59	130.8	8.63	136.1	8.65	141.1	8.65	144.0	8.65	145.9	8.64	150.5	8.62	154.8	8.59	158.9	8.54
		50.1	127.2	8.47	132.8	8.50	138.1	8.52	143.2	8.52	146.1	8.52	148.1	8.51	152.7	8.49	157.1	8.46	161.3	8.42
		63.7	129.1	8.35	134.7	8.38	140.1	8.40	145.3	8.41	148.3	8.40	150.2	8.40	155.0	8.38	159.4	8.34	163.7	8.30
	95	21.4	111.6	8.34	116.5	8.38	121.2	8.39	125.6	8.40	128.2	8.39	129.9	8.39	134.0	8.36	137.8	8.33	141.5	8.29
		28.9	112.5	8.27	117.5	8.30	122.2	8.32	126.7	8.32	129.3	8.32	131.0	8.31	135.1	8.29	139.0	8.26	142.7	8.22
		36.5	113.5	8.20	118.4	8.24	123.2	8.25	127.7	8.25	130.4	8.25	132.1	8.24	136.2	8.22	140.2	8.19	143.9	8.15
		50.1	115.2	8.08	120.2	8.12	125.0	8.13	129.6	8.14	132.3	8.13	134.0	8.13	138.3	8.10	142.2	8.07	146.0	8.03
		63.7	116.9	7.97	122.0	8.00	126.9	8.02	131.5	8.02	134.3	8.02	136.0	8.01	140.3	7.99	144.3	7.96	148.2	7.92
	104	21.4	100.0	7.88	104.3	7.91	108.5	7.93	112.5	7.93	114.8	7.93	116.3	7.92	120.0	7.90	123.5	7.87	126.7	7.83
		28.9	100.8	7.81	105.2	7.85	109.4	7.86	113.5	7.86	115.8	7.86	117.3	7.85	121.0	7.83	124.5	7.80	127.8	7.76
		36.5	101.6	7.75	106.1	7.78	110.3	7.80	114.4	7.80	116.8	7.79	118.3	7.79	122.0	7.77	125.5	7.74	128.9	7.70
		50.1	103.2	7.64	107.7	7.67	112.0	7.68	116.1	7.69	118.5	7.68	120.1	7.68	123.8	7.66	127.4	7.63	130.8	7.59
		63.7	104.7	7.53	109.2	7.56	113.6	7.58	117.8	7.58	120.2	7.57	121.8	7.57	125.6	7.55	129.3	7.52	132.7	7.48
	113	21.4	88.3	7.37	92.2	7.40	95.9	7.41	99.4	7.41	101.4	7.41	102.8	7.40	106.0	7.39	109.1	7.36	112.0	7.32
		28.9	89.1	7.30	92.9	7.33	96.7	7.35	100.2	7.35	102.3	7.35	103.6	7.34	106.9	7.32	110.0	7.29	112.9	7.26
		36.5	89.8	7.24	93.7	7.27	97.5	7.29	101.1	7.29	103.1	7.29	104.5	7.28	107.8	7.26	110.9	7.23	113.9	7.20
		50.1	91.1	7.14	95.1	7.17	98.9	7.18	102.6	7.18	104.7	7.18	106.1	7.17	109.4	7.16	112.6	7.13	115.6	7.09
		63.7	92.5	7.04	96.5	7.07	100.4	7.08	104.1	7.08	106.2	7.08	107.6	7.08	111.0	7.06	114.2	7.03	117.3	6.99

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	21.4	111.0	3.25	115.8	3.26	120.4	3.27	124.9	3.27	127.5	3.27	129.1	3.27	133.2	3.26	137.0	3.25	140.7	3.23
		28.9	111.9	3.22	116.8	3.23	121.5	3.24	125.9	3.24	128.5	3.24	130.2	3.24	134.3	3.23	138.2	3.22	141.9	3.20
		36.5	112.8	3.19	117.7	3.21	122.5	3.21	127.0	3.22	129.6	3.21	131.3	3.21	135.4	3.20	139.3	3.19	143.0	3.18
		50.1	114.5	3.15	119.5	3.16	124.3	3.17	128.9	3.17	131.5	3.17	133.3	3.16	137.4	3.16	141.4	3.14	145.2	3.13
		63.7	116.2	3.10	121.3	3.12	126.1	3.12	130.8	3.12	133.5	3.12	135.2	3.12	139.5	3.11	143.5	3.10	147.3	3.09
	59	21.4	111.0	3.91	115.8	3.93	120.4	3.94	124.9	3.94	127.5	3.94	129.1	3.94	133.2	3.93	137.0	3.91	140.7	3.89
		28.9	111.9	3.88	116.8	3.90	121.5	3.90	125.9	3.91	128.5	3.90	130.2	3.90	134.3	3.89	138.2	3.88	141.9	3.86
		36.5	112.8	3.85	117.7	3.86	122.5	3.87	127.0	3.87	129.6	3.87	131.3	3.87	135.4	3.86	139.3	3.84	143.0	3.83
		50.1	114.5	3.79	119.5	3.81	124.3	3.82	128.9	3.82	131.5	3.82	133.3	3.81	137.4	3.80	141.4	3.79	145.2	3.77
		63.7	116.2	3.74	121.3	3.75	126.1	3.76	130.8	3.76	133.5	3.76	135.2	3.76	139.5	3.75	143.5	3.74	147.3	3.72
	68	21.4	111.0	4.77	115.8	4.79	120.4	4.80	124.9	4.80	127.5	4.80	129.1	4.80	133.2	4.79	137.0	4.77	140.7	4.74
		28.9	111.9	4.73	116.8	4.75	121.5	4.76	125.9	4.76	128.5	4.76	130.2	4.76	134.3	4.74	138.2	4.73	141.9	4.70
		36.5	112.8	4.69	117.7	4.71	122.5	4.72	127.0	4.72	129.6	4.72	131.3	4.72	135.4	4.71	139.3	4.69	143.0	4.66
		50.1	114.5	4.62	119.5	4.64	124.3	4.65	128.9	4.65	131.5	4.65	133.3	4.65	137.4	4.64	141.4	4.62	145.2	4.60
		63.7	116.2	4.56	121.3	4.58	126.1	4.59	130.8	4.59	133.5	4.59	135.2	4.58	139.5	4.57	143.5	4.56	147.3	4.53
	77	21.4	111.0	5.88	115.8	5.90	120.4	5.92	124.9	5.92	127.5	5.92	129.1	5.91	133.2	5.90	137.0	5.87	140.7	5.85
		28.9	111.9	5.83	116.8	5.85	121.5	5.87	125.9	5.87	128.5	5.87	130.2	5.86	134.3	5.85	138.2	5.82	141.9	5.80
		36.5	112.8	5.78	117.7	5.80	122.5	5.82	127.0	5.82	129.6	5.82	131.3	5.81	135.4	5.80	139.3	5.78	143.0	5.75
		50.1	114.5	5.70	119.5	5.72	124.3	5.73	128.9	5.73	131.5	5.73	133.3	5.73	137.4	5.71	141.4	5.69	145.2	5.66
		63.7	116.2	5.62	121.3	5.64	126.1	5.65	130.8	5.66	133.5	5.65	135.2	5.65	139.5	5.63	143.5	5.61	147.3	5.59
	86	21.4	111.0	7.30	115.8	7.33	120.4	7.34	124.9	7.35	127.5	7.34	129.1	7.34	133.2	7.32	137.0	7.29	140.7	7.26
		28.9	111.9	7.24	116.8	7.27	121.5	7.28	125.9	7.28	128.5	7.28	130.2	7.28	134.3	7.26	138.2	7.23	141.9	7.19
		36.5	112.8	7.18	117.7	7.21	122.5	7.22	127.0	7.22	129.6	7.22	131.3	7.22	135.4	7.20	139.3	7.17	143.0	7.13
		50.1	114.5	7.07	119.5	7.10	124.3	7.12	128.9	7.12	131.5	7.12	133.3	7.11	137.4	7.09	141.4	7.07	145.2	7.03
		63.7	116.2	6.97	121.3	7.00	126.1	7.02	130.8	7.02	133.5	7.02	135.2	7.01	139.5	7.00	143.5	6.97	147.3	6.93
	95	21.4	100.5	6.97	104.8	7.00	109.0	7.01	113.1	7.01	115.4	7.01	116.9	7.00	120.6	6.98	124.1	6.96	127.4	6.92
		28.9	101.3	6.91	105.7	6.94	110.0	6.95	114.0	6.95	116.4	6.95	117.9	6.94	121.6	6.93	125.1	6.90	128.4	6.86
		36.5	102.1	6.85	106.6	6.88	110.9	6.89	115.0	6.89	117.3	6.89	118.9	6.89	122.6	6.87	126.1	6.84	129.5	6.81
		50.1	103.7	6.75	108.2	6.78	112.5	6.79	116.7	6.79	119.1	6.79	120.6	6.79	124.4	6.77	128.0	6.74	131.4	6.71
		63.7	105.2	6.66	109.8	6.68	114.2	6.70	118.4	6.70	120.8	6.70	122.4	6.69	126.3	6.67	129.9	6.65	133.4	6.61
	104	21.4	90.0	6.58	93.9	6.61	97.7	6.62	101.3	6.62	103.3	6.62	104.7	6.62	108.0	6.60	111.1	6.57	114.1	6.54
		28.9	90.7	6.53	94.7	6.55	98.5	6.57	102.1	6.57	104.2	6.56	105.6	6.56	108.9	6.54	112.0	6.52	115.0	6.48
		36.5	91.5	6.47	95.5	6.50	99.3	6.51	103.0	6.51	105.1	6.51	106.5	6.51	109.8	6.49	113.0	6.46	116.0	6.43
		50.1	92.8	6.38	96.9	6.40	100.8	6.42	104.5	6.42	106.6	6.42	108.0	6.41	111.4	6.39	114.7	6.37	117.7	6.34
		63.7	94.2	6.29	98.3	6.32	102.3	6.33	106.0	6.33	108.2	6.33	109.6	6.32	113.1	6.31	116.3	6.28	119.4	6.25
	113	21.4	79.5	6.15	82.9	6.18	86.3	6.19	89.5	6.19	91.3	6.19	92.5	6.18	95.4	6.17	98.2	6.14	100.8	6.11
		28.9	80.1	6.10	83.6	6.12	87.0	6.14	90.2	6.14	92.1	6.14	93.3	6.13	96.2	6.12	99.0	6.09	101.6	6.06
		36.5	80.8	6.05	84.3	6.07	87.7	6.09	91.0	6.09	92.8	6.08	94.1	6.08	97.0	6.06	99.8	6.04	102.5	6.01
		50.1	82.0	5.96	85.6	5.99	89.0	6.00	92.3	6.00	94.2	6.00	95.5	5.99	98.4	5.98	101.3	5.95	104.0	5.92
		63.7	83.2	5.88	86.9	5.90	90.3	5.91	93.7	5.92	95.6	5.91	96.9	5.91	99.9	5.89	102.8	5.87	105.5	5.84
80	50	21.4	98.6	3.12	102.9	3.13	107.1	3.14	111.0	3.14	113.3	3.14	114.8	3.13	118.4	3.13	121.8	3.11	125.1	3.10
		28.9	99.5	3.09	103.8	3.10	108.0	3.11	111.9	3.11	114.2	3.11	115.7	3.11	119.4	3.10	122.8	3.09	126.1	3.07
		36.5	100.3	3.06	104.7	3.08	108.9	3.08	112.9	3.08	115.2	3.08	116.7	3.08	120.4	3.07	123.9	3.06	127.2	3.05
		50.1	101.8	3.02	106.2	3.03	110.5	3.04	114.6	3.04	116.9	3.04	118.5	3.04	122.2	3.03	125.7	3.02	129.1	3.00
		63.7	103.3	2.98	107.8	2.99	112.1	3.00	116.2	3.00	118.6	3.00	120.2	2.99	124.0	2.99	127.6	2.98	131.0	2.96
	59	21.4	98.6	3.75	102.9	3.77	107.1	3.78	111.0	3.78	113.3	3.78	114.8	3.78	118.4	3.77	121.8	3.75	125.1	3.73
		28.9	99.5	3.72	103.8	3.74	108.0	3.75	111.9	3.75	114.2	3.75	115.7	3.74	119.4	3.73	122.8	3.72	126.1	3.70
		36.5	100.3	3.69	104.7	3.71	108.9	3.71	112.9	3.72	115.2	3.71	116.7	3.71	120.4	3.70	123.9	3.69	127.2	3.67
		50.1	101.8	3.64	106.2	3.65	110.5	3.66	114.6	3.66	116.9	3.66	118.5	3.66	122.2	3.65	125.7	3.64	129.1	3.62
		63.7	103.3	3.59	107.8	3.60	112.1	3.61	116.2	3.61	118.6	3.61	120.2	3.61	124.0	3.60	127.6	3.58	131.0	3.57
	68	21.4	98.6	4.58	102.9	4.60	107.1	4.61	111.0	4.61	113.3	4.61	114.8	4.60	118.4	4.59	121.8	4.57	125.1	4.55
		28.9	99.5	4.54	103.8	4.56	108.0	4.57	111.9	4.57	114.2	4.57	115.7	4.56	119.4	4.55	122.8	4.53	126.1	4.51
		36.5	100.3	4.50	104.7	4.52	108.9	4.53	112.9	4.53	115.2	4.53	116.7	4.53	120.4	4.51	123.9	4.50	127.2	4.47
		50.1	101.8	4.43	106.2	4.45	110.5	4.46	114.6	4.46	116.9	4.46	118.5	4.46	122.2	4.45	125.7	4.43	129.1	4.41
		63.7	103.3	4.37	107.8	4.39	112.1	4.40	116.2	4.40	118.6	4.40	120.2	4.40	124.0	4.39	127.6	4.37	131.0	4.35
	77	21.4	98.6	5.64	102.9	5.66	107.1	5.68	111.0	5.68	113.3	5.68	114.8	5.67	118.4	5.66	121.8	5.64	125.1	5.61
		28.9	99.5	5.59	103.8	5.61	108.0	5.63	111.9	5.63	114.2	5.63	115.7	5.62	119.4	5.61	122.8	5.59	126.1	5.56
		36.5	100.3	5.55	104.7	5.57	108.9	5.58	112.9	5.58	115.2	5.58	116.7	5.58	120.4	5.56	123.9	5.54	127.2	5.51
		50.1	101.8	5.46	106.2	5.49	110.5	5.50	114.6	5.50	116.9	5.50	118.5	5.50	122.2	5.48	125.7	5.46	129.1	5.43
		63.7	103.3	5.39	107.8	5.41	112.1	5.42	116.2	5.43	118.6	5.42	120.2	5.42	124.0	5.41	127.6	5.39	131.0	5.36
	86	21.4	98.6	7.00	102.9	7.03	107.1	7.05	111.0	7.05	113.3	7.05	114.8	7.04	118.4	7.02	121.8	7.00	125.1	6.96
		28.9	99.5	6.94	103.8	6.97	108.0	6.99	111.9	6.99	114.2	6.99	115.7	6.98	119.4	6.96	122.8	6.94	126.1	6.90
		36.5	100.3	6.88	104.7	6.91	108.9	6.93	112.9	6.93	115.2	6.93	116.7	6.92	120.4	6.91	123.9	6.88	127.2	6.84
		50.1	101.8	6.78	106.2	6.81	110.5	6.83	114.6	6.83	116.9	6.83	118.5	6.82	122.2	6.81	125.7	6.78	129.1	6.75
		63.7	103.3	6.69	107.8	6.72	112.1	6.73	116.2	6.74	118.6	6.73	120.2	6.73	124.0	6.71	127.6	6.69	131.0	6.65
	95	21.4	89.3	6.68	93.2	6.71	96.9	6.73	100.5	6.73	102.6	6.72	103.9	6.72	107.2	6.70	110.3	6.67	113.2	6.64
		28.9	90.0	6.63	94.0	6.65	97.7	6.67	101.3	6.67	103.4	6.67	104.8	6.66	108.1	6.64	111.2	6.62	114.2	6.58
		36.5	90.8	6.57	94.8	6.60	98.5	6.61	102.2	6.61	104.3	6.61	105.7	6.61	109.0	6.59	112.1	6.56	115.1	6.53
		50.1	92.1	6.48	96.2	6.50	100.0	6.52	103.7	6.52	105.8	6.51	107.2	6.51	110.6	6.49	113.8	6.47	116.8	6.43
		63.7	93.5	6.39	97.6	6.41	101.5	6.43	105.2	6.43	107.4	6.42	108.8	6.42	112.2	6.40	115.5	6.38	118.5	6.35
	104	21.4	80.0	6.32	83.5	6.34	86.8	6.35	90.0	6.36	91.9	6.35	93.1	6.35	96.0	6.33	98.8	6.31	101.4	6.27
		28.9	80.6	6.26	84.2	6.29	87.5	6.30	90.8	6.30	92.6	6.30	93.8	6.29	96.8	6.28	99.6	6.25	102.2	6.22
		36.5	81.3	6.21	84.9	6.23	88.3	6.25	91.5	6.25	93.4	6.25	94.6	6.24	97.6	6.22	100.4	6.20	103.1	6.17
		50.1	82.5	6.12	86.1	6.14	89.6	6.16	92.9	6.16	94.8	6.15	96.0	6.15	99.1	6.13	101.9	6.11	104.6	6.08
		63.7	83.7	6.03	87.4	6.06	90.9	6.07	94.3	6.07	96.2	6.07	97.5	6.07	100.5	6.05	103.4	6.03	106.2	5.99
	113	21.4	70.6	5.90	73.7	5.93	76.7	5.94	79.5	5.94	81.2	5.94	82.2	5.93	84.8	5.92	87.3	5.89	89.6	5.86
		28.9	71.2	5.85	74.4	5.88	77.3	5.89	80.2	5.89	81.8	5.89	82.9	5.88	85.5	5.87	88.0	5.84	90.3	5.81
		36.5	71.8	5.80	75.0	5.83	78.0	5.84	80.9	5.84	82.5	5.84	83.6	5.83	86.2	5.82	88.7	5.80	91.1	5.77
		50.1	72.9	5.72	76.1	5.74	79.1	5.75	82.1	5.76	83.7	5.75	84.9	5.75	87.5	5.73	90.0	5.71	92.4	5.68
		63.7	74.0	5.64	77.2	5.66	80.3	5.67	83.3	5.68	85.0	5.67	86.1	5.67	88.8	5.65	91.4	5.63	93.8	5.60

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	21.4	86.3	2.53	90.1	2.54	93.7	2.54	97.1	2.54	99.1	2.54	100.4	2.54	103.6	2.53	106.6	2.52	109.4	2.51
		28.9	87.0	2.50	90.8	2.52	94.5	2.52	98.0	2.52	100.0	2.52	101.3	2.52	104.5	2.51	107.5	2.50	110.3	2.49
		36.5	87.8	2.48	91.6	2.49	95.3	2.50	98.8	2.50	100.8	2.50	102.1	2.50	105.3	2.49	108.4	2.48	111.3	2.47
		50.1	89.1	2.45	92.9	2.46	96.7	2.46	100.2	2.46	102.3	2.46	103.6	2.46	106.9	2.46	110.0	2.45	112.9	2.43
		63.7	90.4	2.41	94.3	2.42	98.1	2.43	101.7	2.43	103.8	2.43	105.2	2.43	108.5	2.42	111.6	2.41	114.6	2.40
	59	21.4	86.3	3.04	90.1	3.06	93.7	3.06	97.1	3.06	99.1	3.06	100.4	3.06	103.6	3.05	106.6	3.04	109.4	3.03
		28.9	87.0	3.02	90.8	3.03	94.5	3.04	98.0	3.04	100.0	3.04	101.3	3.03	104.5	3.03	107.5	3.02	110.3	3.00
		36.5	87.8	2.99	91.6	3.00	95.3	3.01	98.8	3.01	100.8	3.01	102.1	3.01	105.3	3.00	108.4	2.99	111.3	2.98
		50.1	89.1	2.95	92.9	2.96	96.7	2.97	100.2	2.97	102.3	2.97	103.6	2.97	106.9	2.96	110.0	2.95	112.9	2.93
		63.7	90.4	2.91	94.3	2.92	98.1	2.93	101.7	2.93	103.8	2.93	105.2	2.92	108.5	2.92	111.6	2.91	114.6	2.89
	68	21.4	86.3	3.71	90.1	3.73	93.7	3.73	97.1	3.74	99.1	3.73	100.4	3.73	103.6	3.72	106.6	3.71	109.4	3.69
		28.9	87.0	3.68	90.8	3.69	94.5	3.70	98.0	3.70	100.0	3.70	101.3	3.70	104.5	3.69	107.5	3.68	110.3	3.66
		36.5	87.8	3.65	91.6	3.66	95.3	3.67	98.8	3.67	100.8	3.67	102.1	3.67	105.3	3.66	108.4	3.65	111.3	3.63
		50.1	89.1	3.60	92.9	3.61	96.7	3.62	100.2	3.62	102.3	3.62	103.6	3.62	106.9	3.61	110.0	3.59	112.9	3.57
		63.7	90.4	3.55	94.3	3.56	98.1	3.57	101.7	3.57	103.8	3.57	105.2	3.57	108.5	3.56	111.6	3.54	114.6	3.53
	77	21.4	86.3	4.57	90.1	4.59	93.7	4.60	97.1	4.60	99.1	4.60	100.4	4.60	103.6	4.59	106.6	4.57	109.4	4.55
		28.9	87.0	4.53	90.8	4.55	94.5	4.56	98.0	4.56	100.0	4.56	101.3	4.56	104.5	4.55	107.5	4.53	110.3	4.51
		36.5	87.8	4.50	91.6	4.51	95.3	4.52	98.8	4.53	100.8	4.52	102.1	4.52	105.3	4.51	108.4	4.49	111.3	4.47
		50.1	89.1	4.43	92.9	4.45	96.7	4.46	100.2	4.46	102.3	4.46	103.6	4.46	106.9	4.44	110.0	4.43	112.9	4.41
		63.7	90.4	4.37	94.3	4.39	98.1	4.40	101.7	4.40	103.8	4.40	105.2	4.39	108.5	4.38	111.6	4.37	114.6	4.34
	86	21.4	86.3	5.68	90.1	5.70	93.7	5.71	97.1	5.71	99.1	5.71	100.4	5.71	103.6	5.69	106.6	5.67	109.4	5.64
		28.9	87.0	5.63	90.8	5.65	94.5	5.66	98.0	5.67	100.0	5.66	101.3	5.66	104.5	5.65	107.5	5.62	110.3	5.60
		36.5	87.8	5.58	91.6	5.60	95.3	5.62	98.8	5.62	100.8	5.62	102.1	5.61	105.3	5.60	108.4	5.58	111.3	5.55
		50.1	89.1	5.50	92.9	5.52	96.7	5.53	100.2	5.54	102.3	5.53	103.6	5.53	106.9	5.52	110.0	5.50	112.9	5.47
		63.7	90.4	5.42	94.3	5.45	98.1	5.46	101.7	5.46	103.8	5.46	105.2	5.45	108.5	5.44	111.6	5.42	114.6	5.39
	95	21.4	78.1	5.42	81.5	5.44	84.8	5.45	87.9	5.45	89.7	5.45	90.9	5.45	93.8	5.43	96.5	5.41	99.1	5.38
		28.9	78.8	5.37	82.2	5.39	85.5	5.41	88.7	5.41	90.5	5.40	91.7	5.40	94.6	5.39	97.3	5.37	99.9	5.34
		36.5	79.4	5.33	82.9	5.35	86.2	5.36	89.4	5.36	91.3	5.36	92.5	5.36	95.4	5.34	98.1	5.32	100.7	5.29
		50.1	80.6	5.25	84.1	5.27	87.5	5.28	90.7	5.28	92.6	5.28	93.8	5.28	96.8	5.26	99.6	5.24	102.2	5.22
		63.7	81.8	5.18	85.4	5.20	88.8	5.21	92.1	5.21	94.0	5.21	95.2	5.20	98.2	5.19	101.0	5.17	103.7	5.14
	104	21.4	70.0	5.12	73.0	5.14	76.0	5.15	78.8	5.15	80.4	5.15	81.4	5.15	84.0	5.13	86.4	5.11	88.7	5.09
		28.9	70.6	5.08	73.6	5.10	76.6	5.11	79.4	5.11	81.1	5.11	82.1	5.10	84.7	5.09	87.1	5.07	89.5	5.04
		36.5	71.1	5.03	74.3	5.05	77.2	5.06	80.1	5.07	81.7	5.06	82.8	5.06	85.4	5.05	87.9	5.03	90.2	5.00
		50.1	72.2	4.96	75.4	4.98	78.4	4.99	81.3	4.99	82.9	4.99	84.0	4.99	86.7	4.97	89.2	4.95	91.6	4.93
		63.7	73.3	4.89	76.5	4.91	79.5	4.92	82.5	4.92	84.2	4.92	85.3	4.92	87.9	4.90	90.5	4.88	92.9	4.86
	113	21.4	61.8	4.79	64.5	4.80	67.1	4.81	69.6	4.82	71.0	4.81	71.9	4.81	74.2	4.80	76.3	4.78	78.4	4.75
		28.9	62.3	4.74	65.1	4.76	67.7	4.77	70.2	4.77	71.6	4.77	72.5	4.77	74.8	4.76	77.0	4.74	79.0	4.71
		36.5	62.9	4.71	65.6	4.72	68.2	4.73	70.7	4.74	72.2	4.73	73.2	4.73	75.4	4.72	77.6	4.70	79.7	4.67
		50.1	63.8	4.64	66.6	4.66	69.2	4.67	71.8	4.67	73.3	4.66	74.2	4.66	76.6	4.65	78.8	4.63	80.9	4.61
		63.7	64.7	4.57	67.6	4.59	70.3	4.60	72.9	4.60	74.4	4.60	75.3	4.60	77.7	4.58	79.9	4.57	82.1	4.54
60	50	21.4	74.0	2.03	77.2	2.04	80.3	2.04	83.3	2.04	85.0	2.04	86.1	2.04	88.8	2.04	91.4	2.03	93.8	2.02
		28.9	74.6	2.01	77.8	2.02	81.0	2.03	84.0	2.03	85.7	2.03	86.8	2.02	89.5	2.02	92.1	2.01	94.6	2.00
		36.5	75.2	2.00	78.5	2.00	81.6	2.01	84.7	2.01	86.4	2.01	87.5	2.01	90.3	2.00	92.9	1.99	95.4	1.98
		50.1	76.3	1.97	79.7	1.98	82.9	1.98	85.9	1.98	87.7	1.98	88.8	1.98	91.6	1.97	94.3	1.97	96.8	1.96
		63.7	77.5	1.94	80.8	1.95	84.1	1.95	87.2	1.95	89.0	1.95	90.1	1.95	93.0	1.95	95.7	1.94	98.2	1.93
	59	21.4	74.0	2.45	77.2	2.46	80.3	2.46	83.3	2.46	85.0	2.46	86.1	2.46	88.8	2.45	91.4	2.44	93.8	2.43
		28.9	74.6	2.43	77.8	2.44	81.0	2.44	84.0	2.44	85.7	2.44	86.8	2.44	89.5	2.43	92.1	2.42	94.6	2.41
		36.5	75.2	2.41	78.5	2.42	81.6	2.42	84.7	2.42	86.4	2.42	87.5	2.42	90.3	2.41	92.9	2.40	95.4	2.39
		50.1	76.3	2.37	79.7	2.38	82.9	2.39	85.9	2.39	87.7	2.39	88.8	2.38	91.6	2.38	94.3	2.37	96.8	2.36
		63.7	77.5	2.34	80.8	2.35	84.1	2.35	87.2	2.35	89.0	2.35	90.1	2.35	93.0	2.34	95.7	2.34	98.2	2.32
	68	21.4	74.0	2.98	77.2	2.99	80.3	3.00	83.3	3.00	85.0	3.00	86.1	3.00	88.8	2.99	91.4	2.98	93.8	2.97
		28.9	74.6	2.96	77.8	2.97	81.0	2.98	84.0	2.98	85.7	2.98	86.8	2.97	89.5	2.97	92.1	2.95	94.6	2.94
		36.5	75.2	2.93	78.5	2.94	81.6	2.95	84.7	2.95	86.4	2.95	87.5	2.95	90.3	2.94	92.9	2.93	95.4	2.92
		50.1	76.3	2.89	79.7	2.90	82.9	2.91	85.9	2.91	87.7	2.91	88.8	2.91	91.6	2.90	94.3	2.89	96.8	2.87
		63.7	77.5	2.85	80.8	2.86	84.1	2.87	87.2	2.87	89.0	2.87	90.1	2.87	93.0	2.86	95.7	2.85	98.2	2.83
	77	21.4	74.0	3.67	77.2	3.69	80.3	3.70	83.3	3.70	85.0	3.70	86.1	3.70	88.8	3.69	91.4	3.67	93.8	3.65
		28.9	74.6	3.64	77.8	3.66	81.0	3.67	84.0	3.67	85.7	3.67	86.8	3.66	89.5	3.65	92.1	3.64	94.6	3.62
		36.5	75.2	3.61	78.5	3.63	81.6	3.64	84.7	3.64	86.4	3.64	87.5	3.63	90.3	3.62	92.9	3.61	95.4	3.59
		50.1	76.3	3.56	79.7	3.58	82.9	3.58	85.9	3.58	87.7	3.58	88.8	3.58	91.6	3.57	94.3	3.56	96.8	3.54
		63.7	77.5	3.51	80.8	3.53	84.1	3.53	87.2	3.53	89.0	3.53	90.1	3.53	93.0	3.52	95.7	3.51	98.2	3.49
	86	21.4	74.0	4.56	77.2	4.58	80.3	4.59	83.3	4.59	85.0	4.59	86.1	4.59	88.8	4.58	91.4	4.56	93.8	4.54
		28.9	74.6	4.52	77.8	4.54	81.0	4.55	84.0	4.55	85.7	4.55	86.8	4.55	89.5	4.54	92.1	4.52	94.6	4.50
		36.5	75.2	4.49	78.5	4.50	81.6	4.51	84.7	4.52	86.4	4.51	87.5	4.51	90.3	4.50	92.9	4.48	95.4	4.46
		50.1	76.3	4.42	79.7	4.44	82.9	4.45	85.9	4.45	87.7	4.45	88.8	4.45	91.6	4.43	94.3	4.42	96.8	4.40
		63.7	77.5	4.36	80.8	4.38	84.1	4.39	87.2	4.39	89.0	4.39	90.1	4.38	93.0	4.37	95.7	4.36	98.2	4.33
	95	21.4	67.0	4.36	69.9	4.37	72.7	4.38	75.4	4.38	76.9	4.38	77.9	4.38	80.4	4.37	82.7	4.35	84.9	4.33
		28.9	67.5	4.32	70.5	4.34	73.3	4.34	76.0	4.35	77.6	4.34	78.6	4.34	81.1	4.33	83.4	4.31	85.6	4.29
		36.5	68.1	4.28	71.1	4.30	73.9	4.31	76.6	4.31	78.2	4.31	79.2	4.30	81.7	4.29	84.1	4.28	86.3	4.25
		50.1	69.1	4.22	72.1	4.24	75.0	4.25	77.8	4.25	79.4	4.24	80.4	4.24	83.0	4.23	85.3	4.21	87.6	4.19
		63.7	70.1	4.16	73.2	4.18	76.1	4.19	78.9	4.19	80.6	4.19	81.6	4.18	84.2	4.17	86.6	4.16	88.9	4.13
	104	21.4	60.0	4.11	62.6	4.13	65.1	4.14	67.5	4.14	68.9	4.14	69.8	4.14	72.0	4.12	74.1	4.11	76.0	4.09
		28.9	60.5	4.08	63.1	4.10	65.6	4.10	68.1	4.11	69.5	4.10	70.4	4.10	72.6	4.09	74.7	4.07	76.7	4.05
		36.5	61.0	4.05	63.6	4.06	66.2	4.07	68.6	4.07	70.1	4.07	71.0	4.07	73.2	4.06	75.3	4.04	77.3	4.02
		50.1	61.9	3.99	64.6	4.00	67.2	4.01	69.7	4.01	71.1	4.01	72.0	4.01	74.3	4.00	76.4	3.98	78.5	3.96
		63.7	62.8	3.93	65.5	3.95	68.2	3.96	70.7	3.96	72.1	3.95	73.1	3.95	75.4	3.94	77.6	3.93	79.6	3.91
	113	21.4	53.0	3.85	55.3	3.86	57.5	3.87	59.6	3.87	60.9	3.87	61.7	3.87	63.6	3.86	65.4	3.84	67.2	3.82
		28.9	53.4	3.81	55.8	3.83	58.0	3.84	60.1	3.84	61.4	3.84	62.2	3.83	64.1	3.82	66.0	3.81	67.7	3.79
		36.5	53.9	3.78	56.2	3.80	58.5	3.80	60.6	3.81	61.9	3.80	62.7	3.80	64.7	3.79	66.5	3.78	68.3	3.76
		50.1	54.7	3.73	57.1	3.74	59.4	3.75	61.5	3.75	62.8	3.75	63.6	3.75	65.6	3.74	67.5	3.72	69.3	3.70
		63.7	55.5	3.67	57.9	3.69	60.2	3.70	62.4	3.70	63.7	3.70	64.6	3.69	66.6	3.68	68.5	3.67	70.4	3.65

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	21.4	61.6	1.60	64.3	1.61	66.9	1.61	69.4	1.61	70.8	1.61	71.7	1.61	74.0	1.61	76.1	1.60	78.2	1.59
		28.9	62.2	1.59	64.9	1.60	67.5	1.60	70.0	1.60	71.4	1.60	72.3	1.60	74.6	1.59	76.8	1.59	78.8	1.58
		36.5	62.7	1.58	65.4	1.58	68.0	1.59	70.5	1.59	72.0	1.59	72.9	1.58	75.2	1.58	77.4	1.57	79.5	1.57
		50.1	63.6	1.55	66.4	1.56	69.1	1.56	71.6	1.56	73.1	1.56	74.0	1.56	76.4	1.56	78.6	1.55	80.7	1.54
		63.7	64.6	1.53	67.4	1.54	70.1	1.54	72.7	1.54	74.1	1.54	75.1	1.54	77.5	1.54	79.7	1.53	81.8	1.52
	59	21.4	61.6	1.93	64.3	1.94	66.9	1.94	69.4	1.94	70.8	1.94	71.7	1.94	74.0	1.94	76.1	1.93	78.2	1.92
		28.9	62.2	1.91	64.9	1.92	67.5	1.93	70.0	1.93	71.4	1.93	72.3	1.92	74.6	1.92	76.8	1.91	78.8	1.90
		36.5	62.7	1.90	65.4	1.91	68.0	1.91	70.5	1.91	72.0	1.91	72.9	1.91	75.2	1.90	77.4	1.90	79.5	1.89
		50.1	63.6	1.87	66.4	1.88	69.1	1.88	71.6	1.88	73.1	1.88	74.0	1.88	76.4	1.88	78.6	1.87	80.7	1.86
		63.7	64.6	1.84	67.4	1.85	70.1	1.86	72.7	1.86	74.1	1.86	75.1	1.86	77.5	1.85	79.7	1.84	81.8	1.83
	68	21.4	61.6	2.35	64.3	2.36	66.9	2.37	69.4	2.37	70.8	2.37	71.7	2.37	74.0	2.36	76.1	2.35	78.2	2.34
		28.9	62.2	2.33	64.9	2.34	67.5	2.35	70.0	2.35	71.4	2.35	72.3	2.35	74.6	2.34	76.8	2.33	78.8	2.32
		36.5	62.7	2.31	65.4	2.32	68.0	2.33	70.5	2.33	72.0	2.33	72.9	2.33	75.2	2.32	77.4	2.31	79.5	2.30
		50.1	63.6	2.28	66.4	2.29	69.1	2.29	71.6	2.30	73.1	2.29	74.0	2.29	76.4	2.29	78.6	2.28	80.7	2.27
		63.7	64.6	2.25	67.4	2.26	70.1	2.26	72.7	2.26	74.1	2.26	75.1	2.26	77.5	2.26	79.7	2.25	81.8	2.24
	77	21.4	61.6	2.90	64.3	2.91	66.9	2.92	69.4	2.92	70.8	2.92	71.7	2.92	74.0	2.91	76.1	2.90	78.2	2.88
		28.9	62.2	2.88	64.9	2.89	67.5	2.89	70.0	2.89	71.4	2.89	72.3	2.89	74.6	2.88	76.8	2.87	78.8	2.86
		36.5	62.7	2.85	65.4	2.86	68.0	2.87	70.5	2.87	72.0	2.87	72.9	2.87	75.2	2.86	77.4	2.85	79.5	2.84
		50.1	63.6	2.81	66.4	2.82	69.1	2.83	71.6	2.83	73.1	2.83	74.0	2.83	76.4	2.82	78.6	2.81	80.7	2.79
		63.7	64.6	2.77	67.4	2.78	70.1	2.79	72.7	2.79	74.1	2.79	75.1	2.79	77.5	2.78	79.7	2.77	81.8	2.76
	86	21.4	61.6	3.60	64.3	3.62	66.9	3.62	69.4	3.62	70.8	3.62	71.7	3.62	74.0	3.61	76.1	3.60	78.2	3.58
		28.9	62.2	3.57	64.9	3.58	67.5	3.59	70.0	3.59	71.4	3.59	72.3	3.59	74.6	3.58	76.8	3.57	78.8	3.55
		36.5	62.7	3.54	65.4	3.55	68.0	3.56	70.5	3.56	72.0	3.56	72.9	3.56	75.2	3.55	77.4	3.54	79.5	3.52
		50.1	63.6	3.49	66.4	3.50	69.1	3.51	71.6	3.51	73.1	3.51	74.0	3.51	76.4	3.50	78.6	3.49	80.7	3.47
		63.7	64.6	3.44	67.4	3.45	70.1	3.46	72.7	3.46	74.1	3.46	75.1	3.46	77.5	3.45	79.7	3.44	81.8	3.42
	95	21.4	55.8	3.44	58.2	3.45	60.6	3.46	62.8	3.46	64.1	3.46	64.9	3.46	67.0	3.45	68.9	3.43	70.8	3.41
		28.9	56.3	3.41	58.7	3.42	61.1	3.43	63.3	3.43	64.6	3.43	65.5	3.43	67.5	3.42	69.5	3.40	71.4	3.39
		36.5	56.7	3.38	59.2	3.39	61.6	3.40	63.9	3.40	65.2	3.40	66.0	3.40	68.1	3.39	70.1	3.37	71.9	3.36
		50.1	57.6	3.33	60.1	3.34	62.5	3.35	64.8	3.35	66.2	3.35	67.0	3.35	69.1	3.34	71.1	3.33	73.0	3.31
		63.7	58.4	3.28	61.0	3.30	63.4	3.30	65.8	3.31	67.1	3.30	68.0	3.30	70.1	3.29	72.2	3.28	74.1	3.26
	104	21.4	50.0	3.25	52.2	3.26	54.3	3.27	56.3	3.27	57.4	3.27	58.2	3.26	60.0	3.26	61.7	3.24	63.4	3.23
		28.9	50.4	3.22	52.6	3.23	54.7	3.24	56.7	3.24	57.9	3.24	58.7	3.24	60.5	3.23	62.2	3.21	63.9	3.20
		36.5	50.8	3.19	53.0	3.21	55.2	3.21	57.2	3.21	58.4	3.21	59.1	3.21	61.0	3.20	62.8	3.19	64.4	3.17
		50.1	51.6	3.15	53.8	3.16	56.0	3.17	58.1	3.17	59.2	3.16	60.0	3.16	61.9	3.15	63.7	3.14	65.4	3.13
		63.7	52.3	3.10	54.6	3.12	56.8	3.12	58.9	3.12	60.1	3.12	60.9	3.12	62.8	3.11	64.6	3.10	66.4	3.08
	113	21.4	44.2	3.04	46.1	3.05	47.9	3.05	49.7	3.05	50.7	3.05	51.4	3.05	53.0	3.04	54.5	3.03	56.0	3.02
		28.9	44.5	3.01	46.5	3.02	48.3	3.03	50.1	3.03	51.1	3.03	51.8	3.02	53.4	3.02	55.0	3.01	56.5	2.99
		36.5	44.9	2.98	46.9	3.00	48.7	3.00	50.5	3.00	51.6	3.00	52.3	3.00	53.9	2.99	55.4	2.98	56.9	2.96
		50.1	45.6	2.94	47.6	2.95	49.5	2.96	51.3	2.96	52.3	2.96	53.0	2.96	54.7	2.95	56.3	2.94	57.8	2.92
		63.7	46.2	2.90	48.3	2.91	50.2	2.92	52.0	2.92	53.1	2.92	53.8	2.92	55.5	2.91	57.1	2.90	58.6	2.88

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	23.8	152.2	4.86	158.8	4.88	165.2	4.89	171.3	4.89	174.8	4.89	177.1	4.89	182.6	4.87	187.9	4.85	192.9	4.83
		33.9	153.6	4.81	160.3	4.83	166.7	4.84	172.9	4.84	176.4	4.84	178.8	4.84	184.4	4.83	189.7	4.81	194.7	4.78
		44.1	155.0	4.77	161.8	4.79	168.3	4.80	174.5	4.80	178.1	4.80	180.4	4.79	186.1	4.78	191.5	4.76	196.6	4.74
		57.5	156.9	4.71	163.7	4.73	170.3	4.74	176.6	4.74	180.2	4.74	182.6	4.74	188.3	4.72	193.8	4.71	198.9	4.68
		70.8	158.8	4.66	165.7	4.68	172.3	4.69	178.7	4.69	182.4	4.69	184.8	4.68	190.6	4.67	196.1	4.65	201.3	4.63
	59	23.8	152.2	5.85	158.8	5.88	165.2	5.89	171.3	5.89	174.8	5.89	177.1	5.89	182.6	5.87	187.9	5.85	192.9	5.82
		33.9	153.6	5.80	160.3	5.82	166.7	5.83	172.9	5.84	176.4	5.83	178.8	5.83	184.4	5.82	189.7	5.79	194.7	5.76
		44.1	155.0	5.74	161.8	5.77	168.3	5.78	174.5	5.78	178.1	5.78	180.4	5.78	186.1	5.76	191.5	5.74	196.6	5.71
		57.5	156.9	5.68	163.7	5.70	170.3	5.71	176.6	5.71	180.2	5.71	182.6	5.71	188.3	5.69	193.8	5.67	198.9	5.64
		70.8	158.8	5.61	165.7	5.63	172.3	5.65	178.7	5.65	182.4	5.65	184.8	5.64	190.6	5.63	196.1	5.61	201.3	5.58
	68	23.8	152.2	7.14	158.8	7.17	165.2	7.18	171.3	7.18	174.8	7.18	177.1	7.18	182.6	7.16	187.9	7.13	192.9	7.09
		33.9	153.6	7.07	160.3	7.10	166.7	7.11	172.9	7.12	176.4	7.11	178.8	7.11	184.4	7.09	189.7	7.06	194.7	7.03
		44.1	155.0	7.00	161.8	7.03	168.3	7.05	174.5	7.05	178.1	7.05	180.4	7.04	186.1	7.02	191.5	7.00	196.6	6.96
		57.5	156.9	6.92	163.7	6.95	170.3	6.96	176.6	6.97	180.2	6.96	182.6	6.96	188.3	6.94	193.8	6.91	198.9	6.88
		70.8	158.8	6.84	165.7	6.87	172.3	6.88	178.7	6.89	182.4	6.88	184.8	6.88	190.6	6.86	196.1	6.83	201.3	6.80
	77	23.8	152.2	8.79	158.8	8.83	165.2	8.85	171.3	8.85	174.8	8.85	177.1	8.84	182.6	8.82	187.9	8.79	192.9	8.74
		33.9	153.6	8.71	160.3	8.74	166.7	8.76	172.9	8.77	176.4	8.76	178.8	8.76	184.4	8.74	189.7	8.70	194.7	8.66
		44.1	155.0	8.63	161.8	8.66	168.3	8.68	174.5	8.69	178.1	8.68	180.4	8.68	186.1	8.65	191.5	8.62	196.6	8.58
		57.5	156.9	8.53	163.7	8.56	170.3	8.58	176.6	8.58	180.2	8.58	182.6	8.57	188.3	8.55	193.8	8.52	198.9	8.48
		70.8	158.8	8.43	165.7	8.46	172.3	8.48	178.7	8.49	182.4	8.48	184.8	8.48	190.6	8.45	196.1	8.42	201.3	8.38
	86	23.8	152.2	10.92	158.8	10.96	165.2	10.98	171.3	10.99	174.8	10.98	177.1	10.98	182.6	10.95	187.9	10.91	192.9	10.85
		33.9	153.6	10.81	160.3	10.86	166.7	10.88	172.9	10.88	176.4	10.88	178.8	10.87	184.4	10.84	189.7	10.80	194.7	10.75
		44.1	155.0	10.71	161.8	10.75	168.3	10.78	174.5	10.78	178.1	10.78	180.4	10.77	186.1	10.74	191.5	10.70	196.6	10.65
		57.5	156.9	10.58	163.7	10.63	170.3	10.65	176.6	10.66	180.2	10.65	182.6	10.64	188.3	10.62	193.8	10.58	198.9	10.52
		70.8	158.8	10.46	165.7	10.51	172.3	10.53	178.7	10.53	182.4	10.53	184.8	10.52	190.6	10.50	196.1	10.46	201.3	10.40
	95	23.8	136.5	10.32	142.4	10.37	148.1	10.39	153.6	10.39	156.8	10.38	158.8	10.38	163.8	10.35	168.5	10.31	173.0	10.26
		33.9	137.7	10.23	143.8	10.27	149.5	10.29	155.0	10.29	158.2	10.28	160.3	10.28	165.3	10.25	170.1	10.21	174.6	10.16
		44.1	139.0	10.13	145.1	10.17	150.9	10.19	156.5	10.19	159.7	10.19	161.8	10.18	166.9	10.15	171.7	10.11	176.3	10.06
		57.5	140.7	10.01	146.8	10.05	152.7	10.07	158.4	10.07	161.6	10.07	163.8	10.06	168.9	10.03	173.8	10.00	178.4	9.94
		70.8	142.4	9.90	148.6	9.94	154.6	9.96	160.3	9.96	163.6	9.95	165.7	9.95	170.9	9.92	175.9	9.88	180.5	9.83
	104	23.8	121.3	9.68	126.6	9.72	131.6	9.74	136.5	9.74	139.3	9.73	141.1	9.73	145.5	9.70	149.8	9.66	153.7	9.61
		33.9	122.4	9.58	127.7	9.62	132.9	9.64	137.8	9.65	140.6	9.64	142.5	9.63	146.9	9.61	151.2	9.57	155.2	9.52
		44.1	123.5	9.50	128.9	9.53	134.1	9.55	139.0	9.56	141.9	9.55	143.8	9.54	148.3	9.52	152.6	9.48	156.6	9.43
		57.5	125.0	9.38	130.5	9.42	135.7	9.44	140.7	9.44	143.6	9.44	145.5	9.43	150.1	9.41	154.4	9.37	158.5	9.32
		70.8	126.5	9.28	132.0	9.31	137.3	9.33	142.4	9.33	145.3	9.33	147.3	9.32	151.9	9.30	156.3	9.26	160.4	9.21
	113	23.8	106.1	8.95	110.7	8.99	115.1	9.01	119.4	9.01	121.8	9.01	123.4	9.00	127.3	8.98	131.0	8.94	134.5	8.90
		33.9	107.1	8.87	111.7	8.90	116.2	8.92	120.5	8.93	123.0	8.92	124.6	8.91	128.5	8.89	132.2	8.86	135.7	8.81
		44.1	108.1	8.79	112.8	8.82	117.3	8.84	121.6	8.84	124.1	8.84	125.8	8.83	129.7	8.81	133.4	8.77	137.0	8.73
		57.5	109.4	8.68	114.1	8.72	118.7	8.74	123.1	8.74	125.6	8.73	127.3	8.73	131.3	8.70	135.1	8.67	138.7	8.63
		70.8	110.7	8.58	115.5	8.62	120.1	8.64	124.6	8.64	127.1	8.63	128.8	8.63	132.8	8.60	136.7	8.57	140.3	8.53
120	50	23.8	149.3	4.84	155.8	4.86	162.1	4.87	168.0	4.87	171.5	4.87	173.8	4.87	179.2	4.85	184.4	4.84	189.3	4.81
		33.9	150.7	4.79	157.3	4.81	163.6	4.82	169.6	4.83	173.1	4.82	175.4	4.82	180.9	4.81	186.1	4.79	191.1	4.77
		44.1	152.1	4.75	158.7	4.77	165.1	4.78	171.2	4.78	174.7	4.78	177.0	4.78	182.6	4.76	187.8	4.74	192.9	4.72
		57.5	153.9	4.69	160.7	4.71	167.1	4.72	173.3	4.72	176.8	4.72	179.2	4.72	184.8	4.71	190.1	4.69	195.2	4.67
		70.8	155.8	4.64	162.6	4.66	169.1	4.67	175.3	4.67	178.9	4.67	181.3	4.66	187.0	4.65	192.4	4.64	197.5	4.61
	59	23.8	149.3	5.83	155.8	5.85	162.1	5.87	168.0	5.87	171.5	5.87	173.8	5.86	179.2	5.85	184.4	5.83	189.3	5.80
		33.9	150.7	5.77	157.3	5.80	163.6	5.81	169.6	5.81	173.1	5.81	175.4	5.81	180.9	5.79	186.1	5.77	191.1	5.74
		44.1	152.1	5.72	158.7	5.74	165.1	5.76	171.2	5.76	174.7	5.76	177.0	5.75	182.6	5.74	187.8	5.72	192.9	5.69
		57.5	153.9	5.65	160.7	5.68	167.1	5.69	173.3	5.69	176.8	5.69	179.2	5.69	184.8	5.67	190.1	5.65	195.2	5.62
		70.8	155.8	5.59	162.6	5.61	169.1	5.62	175.3	5.63	178.9	5.62	181.3	5.62	187.0	5.61	192.4	5.58	197.5	5.56
	68	23.8	149.3	7.11	155.8	7.14	162.1	7.15	168.0	7.16	171.5	7.15	173.8	7.15	179.2	7.13	184.4	7.10	189.3	7.07
		33.9	150.7	7.04	157.3	7.07	163.6	7.08	169.6	7.09	173.1	7.08	175.4	7.08	180.9	7.06	186.1	7.03	191.1	7.00
		44.1	152.1	6.97	158.7	7.00	165.1	7.02	171.2	7.02	174.7	7.02	177.0	7.01	182.6	7.00	187.8	6.97	192.9	6.93
		57.5	153.9	6.89	160.7	6.92	167.1	6.94	173.3	6.94	176.8	6.94	179.2	6.93	184.8	6.91	190.1	6.89	195.2	6.85
		70.8	155.8	6.81	162.6	6.84	169.1	6.86	175.3	6.86	178.9	6.86	181.3	6.85	187.0	6.83	192.4	6.81	197.5	6.77
	77	23.8	149.3	8.76	155.8	8.79	162.1	8.81	168.0	8.82	171.5	8.81	173.8	8.81	179.2	8.79	184.4	8.75	189.3	8.71
		33.9	150.7	8.67	157.3	8.71	163.6	8.73	169.6	8.73	173.1	8.73	175.4	8.72	180.9	8.70	186.1	8.67	191.1	8.63
		44.1	152.1	8.59	158.7	8.63	165.1	8.65	171.2	8.65	174.7	8.65	177.0	8.64	182.6	8.62	187.8	8.59	192.9	8.54
		57.5	153.9	8.49	160.7	8.53	167.1	8.55	173.3	8.55	176.8	8.55	179.2	8.54	184.8	8.52	190.1	8.49	195.2	8.44
		70.8	155.8	8.40	162.6	8.43	169.1	8.45	175.3	8.45	178.9	8.45	181.3	8.44	187.0	8.42	192.4	8.39	197.5	8.35
	86	23.8	149.3	10.87	155.8	10.92	162.1	10.94	168.0	10.95	171.5	10.94	173.8	10.93	179.2	10.91	184.4	10.87	189.3	10.81
		33.9	150.7	10.77	157.3	10.81	163.6	10.84	169.6	10.84	173.1	10.84	175.4	10.83	180.9	10.80	186.1	10.76	191.1	10.71
		44.1	152.1	10.67	158.7	10.71	165.1	10.74	171.2	10.74	174.7	10.74	177.0	10.73	182.6	10.70	187.8	10.66	192.9	10.61
		57.5	153.9	10.54	160.7	10.59	167.1	10.61	173.3	10.61	176.8	10.61	179.2	10.60	184.8	10.58	190.1	10.54	195.2	10.48
		70.8	155.8	10.42	162.6	10.47	169.1	10.49	175.3	10.49	178.9	10.49	181.3	10.48	187.0	10.46	192.4	10.42	197.5	10.36
	95	23.8	133.9	10.28	139.7	10.33	145.3	10.35	150.7	10.35	153.8	10.34	155.8	10.34	160.7	10.31	165.4	10.27	169.8	10.22
		33.9	135.1	10.19	141.0	10.23	146.7	10.25	152.1	10.25	155.2	10.24	157.3	10.24	162.2	10.21	166.9	10.17	171.4	10.12
		44.1	136.4	10.09	142.4	10.13	148.1	10.15	153.5	10.15	156.7	10.15	158.7	10.14	163.7	10.12	168.5	10.08	172.9	10.02
		57.5	138.1	9.97	144.1	10.01	149.9	10.03	155.4	10.03	158.6	10.03	160.7	10.02	165.7	10.00	170.5	9.96	175.0	9.91
		70.8	139.7	9.86	145.8	9.90	151.6	9.92	157.2	9.92	160.5	9.91	162.6	9.91	167.7	9.88	172.5	9.84	177.1	9.79
	104	23.8	119.0	9.64	124.2	9.68	129.1	9.70	133.9	9.70	136.7	9.70	138.5	9.69	142.8	9.66	146.9	9.63	150.8	9.58
		33.9	120.1	9.55	125.3	9.59	130.4	9.60	135.2	9.61	138.0	9.60	139.8	9.60	144.1	9.57	148.3	9.53	152.3	9.48
		44.1	121.2	9.46	126.5	9.50	131.6	9.52	136.4	9.52	139.2	9.51	141.1	9.51	145.5	9.48	149.7	9.44	153.7	9.40
		57.5	122.7	9.35	128.0	9.38	133.2	9.40	138.1	9.41	140.9	9.40	142.8	9.39	147.2	9.37	151.5	9.33	155.5	9.29
		70.8	124.1	9.24	129.6	9.28	134.8	9.30	139.7	9.30	142.6	9.29	144.5	9.29	149.0	9.26	153.3	9.23	157.4	9.18
	113	23.8	104.1	8.92	108.6	8.96	113.0	8.97	117.1	8.98	119.5	8.97	121.1	8.97	124.9	8.94	128.5	8.91	131.9	8.86
		33.9	105.0	8.83	109.6	8.87	114.0	8.89	118.2	8.89	120.7	8.89	122.2	8.88	126.1	8.86	129.7	8.82	133.2	8.78
		44.1	106.0	8.75	110.6	8.79	115.1	8.81	119.3	8.81	121.8	8.80	123.4	8.80	127.2	8.77	130.9	8.74	134.4	8.70
		57.5	107.3	8.65	112.0	8.68	116.5	8.70	120.8	8.70	123.3	8.70	124.9	8.69	128.8	8.67	132.5	8.64	136.0	8.59
		70.8	108.6	8.55	113.3	8.58	117.9	8.60	122.2	8.61	124.7	8.60	126.4	8.59	130.3	8.57	134.1	8.54	137.7	8.49

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	23.8	146.4	4.85	152.8	4.87	158.9	4.88	164.8	4.88	168.2	4.88	170.4	4.87	175.8	4.86	180.8	4.84	185.7	4.82
		33.9	147.8	4.80	154.2	4.82	160.4	4.83	166.4	4.83	169.8	4.83	172.0	4.83	177.4	4.82	182.5	4.80	187.4	4.77
		44.1	149.2	4.76	155.7	4.78	161.9	4.79	167.9	4.79	171.4	4.79	173.6	4.78	179.1	4.77	184.2	4.75	189.1	4.73
		57.5	151.0	4.70	157.6	4.72	163.9	4.73	169.9	4.73	173.4	4.73	175.7	4.73	181.2	4.71	186.5	4.70	191.4	4.67
		70.8	152.8	4.65	159.5	4.67	165.8	4.68	172.0	4.68	175.5	4.68	177.8	4.67	183.4	4.66	188.7	4.64	193.7	4.62
	59	23.8	146.4	5.84	152.8	5.86	158.9	5.88	164.8	5.88	168.2	5.88	170.4	5.87	175.8	5.86	180.8	5.84	185.7	5.81
		33.9	147.8	5.78	154.2	5.81	160.4	5.82	166.4	5.82	169.8	5.82	172.0	5.82	177.4	5.80	182.5	5.78	187.4	5.75
		44.1	149.2	5.73	155.7	5.75	161.9	5.77	167.9	5.77	171.4	5.77	173.6	5.76	179.1	5.75	184.2	5.73	189.1	5.70
		57.5	151.0	5.66	157.6	5.69	163.9	5.70	169.9	5.70	173.4	5.70	175.7	5.69	181.2	5.68	186.5	5.66	191.4	5.63
		70.8	152.8	5.60	159.5	5.62	165.8	5.63	172.0	5.64	175.5	5.63	177.8	5.63	183.4	5.62	188.7	5.59	193.7	5.57
	68	23.8	146.4	7.12	152.8	7.15	158.9	7.16	164.8	7.17	168.2	7.16	170.4	7.16	175.8	7.14	180.8	7.11	185.7	7.08
		33.9	147.8	7.05	154.2	7.08	160.4	7.10	166.4	7.10	169.8	7.10	172.0	7.09	177.4	7.07	182.5	7.05	187.4	7.01
		44.1	149.2	6.99	155.7	7.01	161.9	7.03	167.9	7.03	171.4	7.03	173.6	7.03	179.1	7.01	184.2	6.98	189.1	6.95
		57.5	151.0	6.90	157.6	6.93	163.9	6.95	169.9	6.95	173.4	6.95	175.7	6.94	181.2	6.92	186.5	6.90	191.4	6.86
		70.8	152.8	6.82	159.5	6.85	165.8	6.87	172.0	6.87	175.5	6.87	177.8	6.86	183.4	6.85	188.7	6.82	193.7	6.79
	77	23.8	146.4	8.77	152.8	8.81	158.9	8.83	164.8	8.83	168.2	8.83	170.4	8.82	175.8	8.80	180.8	8.77	185.7	8.72
		33.9	147.8	8.69	154.2	8.73	160.4	8.74	166.4	8.75	169.8	8.74	172.0	8.74	177.4	8.72	182.5	8.68	187.4	8.64
		44.1	149.2	8.61	155.7	8.64	161.9	8.66	167.9	8.67	171.4	8.66	173.6	8.66	179.1	8.64	184.2	8.60	189.1	8.56
		57.5	151.0	8.51	157.6	8.54	163.9	8.56	169.9	8.56	173.4	8.56	175.7	8.55	181.2	8.53	186.5	8.50	191.4	8.46
		70.8	152.8	8.41	159.5	8.44	165.8	8.46	172.0	8.47	175.5	8.46	177.8	8.46	183.4	8.44	188.7	8.40	193.7	8.36
	86	23.8	146.4	10.89	152.8	10.94	158.9	10.96	164.8	10.97	168.2	10.96	170.4	10.95	175.8	10.93	180.8	10.88	185.7	10.83
		33.9	147.8	10.79	154.2	10.83	160.4	10.86	166.4	10.86	169.8	10.86	172.0	10.85	177.4	10.82	182.5	10.78	187.4	10.73
		44.1	149.2	10.69	155.7	10.73	161.9	10.75	167.9	10.76	171.4	10.75	173.6	10.75	179.1	10.72	184.2	10.68	189.1	10.63
		57.5	151.0	10.56	157.6	10.60	163.9	10.63	169.9	10.63	173.4	10.63	175.7	10.62	181.2	10.59	186.5	10.55	191.4	10.50
		70.8	152.8	10.44	159.5	10.48	165.8	10.51	172.0	10.51	175.5	10.51	177.8	10.50	183.4	10.47	188.7	10.43	193.7	10.38
	95	23.8	131.3	10.30	137.0	10.34	142.5	10.36	147.8	10.37	150.8	10.36	152.8	10.35	157.6	10.33	162.2	10.29	166.5	10.23
		33.9	132.5	10.20	138.3	10.24	143.9	10.26	149.2	10.27	152.3	10.26	154.3	10.25	159.1	10.23	163.7	10.19	168.1	10.14
		44.1	133.8	10.11	139.6	10.15	145.2	10.17	150.6	10.17	153.7	10.17	155.7	10.16	160.6	10.13	165.2	10.09	169.6	10.04
		57.5	135.4	9.99	141.3	10.03	147.0	10.05	152.4	10.05	155.5	10.05	157.6	10.04	162.5	10.01	167.2	9.97	171.7	9.92
		70.8	137.0	9.87	143.0	9.91	148.7	9.93	154.2	9.94	157.4	9.93	159.5	9.92	164.5	9.90	169.2	9.86	173.7	9.81
	104	23.8	116.7	9.66	121.8	9.69	126.7	9.71	131.3	9.72	134.0	9.71	135.8	9.70	140.1	9.68	144.1	9.64	147.9	9.59
		33.9	117.8	9.56	122.9	9.60	127.8	9.62	132.6	9.62	135.3	9.62	137.1	9.61	141.4	9.59	145.5	9.55	149.3	9.50
		44.1	118.9	9.47	124.1	9.51	129.0	9.53	133.8	9.53	136.6	9.53	138.4	9.52	142.7	9.50	146.8	9.46	150.7	9.41
		57.5	120.3	9.36	125.6	9.40	130.6	9.42	135.4	9.42	138.2	9.42	140.0	9.41	144.4	9.39	148.6	9.35	152.6	9.30
		70.8	121.8	9.26	127.1	9.29	132.2	9.31	137.0	9.31	139.9	9.31	141.7	9.30	146.1	9.28	150.4	9.24	154.4	9.19
	113	23.8	102.1	8.94	106.5	8.97	110.8	8.99	114.9	8.99	117.2	8.99	118.8	8.98	122.5	8.96	126.0	8.92	129.4	8.88
		33.9	103.0	8.85	107.5	8.89	111.8	8.90	115.9	8.91	118.3	8.90	119.9	8.89	123.7	8.87	127.2	8.84	130.6	8.79
		44.1	104.0	8.77	108.5	8.80	112.9	8.82	117.0	8.82	119.4	8.82	121.0	8.81	124.8	8.79	128.4	8.75	131.8	8.71
		57.5	105.2	8.66	109.8	8.70	114.2	8.72	118.4	8.72	120.9	8.71	122.5	8.71	126.3	8.68	130.0	8.65	133.4	8.61
		70.8	106.5	8.57	111.1	8.60	115.6	8.62	119.9	8.62	122.3	8.61	123.9	8.61	127.8	8.59	131.5	8.55	135.0	8.51
100	50	23.8	143.6	4.88	149.8	4.90	155.8	4.92	161.6	4.92	164.9	4.91	167.1	4.91	172.3	4.90	177.3	4.88	182.0	4.86
		33.9	144.9	4.84	151.2	4.86	157.3	4.87	163.1	4.87	166.5	4.87	168.6	4.86	173.9	4.85	179.0	4.83	183.7	4.81
		44.1	146.3	4.79	152.6	4.81	158.8	4.82	164.6	4.82	168.0	4.82	170.2	4.82	175.5	4.81	180.6	4.79	185.4	4.76
		57.5	148.0	4.74	154.5	4.76	160.7	4.77	166.6	4.77	170.0	4.77	172.3	4.76	177.7	4.75	182.8	4.73	187.7	4.71
		70.8	149.8	4.68	156.3	4.70	162.6	4.71	168.6	4.71	172.1	4.71	174.3	4.71	179.8	4.70	185.0	4.68	189.9	4.66
	59	23.8	143.6	5.88	149.8	5.91	155.8	5.92	161.6	5.92	164.9	5.92	167.1	5.92	172.3	5.90	177.3	5.88	182.0	5.85
		33.9	144.9	5.83	151.2	5.85	157.3	5.87	163.1	5.87	166.5	5.86	168.6	5.86	173.9	5.85	179.0	5.82	183.7	5.80
		44.1	146.3	5.77	152.6	5.80	158.8	5.81	164.6	5.81	168.0	5.81	170.2	5.81	175.5	5.79	180.6	5.77	185.4	5.74
		57.5	148.0	5.71	154.5	5.73	160.7	5.74	166.6	5.74	170.0	5.74	172.3	5.74	177.7	5.72	182.8	5.70	187.7	5.67
		70.8	149.8	5.64	156.3	5.66	162.6	5.68	168.6	5.68	172.1	5.68	174.3	5.67	179.8	5.66	185.0	5.64	189.9	5.61
	68	23.8	143.6	7.17	149.8	7.20	155.8	7.22	161.6	7.22	164.9	7.22	167.1	7.21	172.3	7.20	177.3	7.17	182.0	7.13
		33.9	144.9	7.11	151.2	7.13	157.3	7.15	163.1	7.15	166.5	7.15	168.6	7.15	173.9	7.13	179.0	7.10	183.7	7.06
		44.1	146.3	7.04	152.6	7.07	158.8	7.08	164.6	7.09	168.0	7.08	170.2	7.08	175.5	7.06	180.6	7.03	185.4	7.00
		57.5	148.0	6.96	154.5	6.98	160.7	7.00	166.6	7.00	170.0	7.00	172.3	7.00	177.7	6.98	182.8	6.95	187.7	6.92
		70.8	149.8	6.88	156.3	6.91	162.6	6.92	168.6	6.92	172.1	6.92	174.3	6.92	179.8	6.90	185.0	6.87	189.9	6.84
	77	23.8	143.6	8.84	149.8	8.88	155.8	8.90	161.6	8.90	164.9	8.90	167.1	8.89	172.3	8.87	177.3	8.83	182.0	8.79
		33.9	144.9	8.76	151.2	8.79	157.3	8.81	163.1	8.81	166.5	8.81	168.6	8.80	173.9	8.78	179.0	8.75	183.7	8.71
		44.1	146.3	8.67	152.6	8.71	158.8	8.73	164.6	8.73	168.0	8.73	170.2	8.72	175.5	8.70	180.6	8.67	185.4	8.62
		57.5	148.0	8.57	154.5	8.61	160.7	8.63	166.6	8.63	170.0	8.63	172.3	8.62	177.7	8.60	182.8	8.57	187.7	8.52
		70.8	149.8	8.47	156.3	8.51	162.6	8.53	168.6	8.53	172.1	8.53	174.3	8.52	179.8	8.50	185.0	8.47	189.9	8.43
	86	23.8	143.6	10.97	149.8	11.02	155.8	11.04	161.6	11.05	164.9	11.04	167.1	11.04	172.3	11.01	177.3	10.97	182.0	10.91
		33.9	144.9	10.87	151.2	10.91	157.3	10.94	163.1	10.94	166.5	10.94	168.6	10.93	173.9	10.90	179.0	10.86	183.7	10.81
		44.1	146.3	10.77	152.6	10.81	158.8	10.84	164.6	10.84	168.0	10.84	170.2	10.83	175.5	10.80	180.6	10.76	185.4	10.71
		57.5	148.0	10.64	154.5	10.69	160.7	10.71	166.6	10.71	170.0	10.71	172.3	10.70	177.7	10.67	182.8	10.63	187.7	10.58
		70.8	149.8	10.52	156.3	10.56	162.6	10.59	168.6	10.59	172.1	10.59	174.3	10.58	179.8	10.55	185.0	10.51	189.9	10.46
	95	23.8	128.7	10.38	134.4	10.42	139.7	10.44	144.9	10.45	147.9	10.44	149.8	10.43	154.5	10.40	159.0	10.36	163.2	10.31
		33.9	129.9	10.28	135.6	10.32	141.1	10.34	146.3	10.35	149.3	10.34	151.2	10.33	156.0	10.31	160.5	10.26	164.8	10.21
		44.1	131.2	10.18	136.9	10.23	142.4	10.25	147.6	10.25	150.7	10.24	152.6	10.24	157.4	10.21	162.0	10.17	166.3	10.12
		57.5	132.7	10.06	138.5	10.10	144.1	10.13	149.4	10.13	152.5	10.12	154.5	10.12	159.3	10.09	163.9	10.05	168.3	10.00
		70.8	134.3	9.95	140.2	9.99	145.8	10.01	151.2	10.01	154.3	10.01	156.3	10.00	161.2	9.97	165.9	9.93	170.3	9.88
	104	23.8	114.4	9.73	119.4	9.77	124.2	9.79	128.8	9.79	131.4	9.79	133.1	9.78	137.3	9.75	141.3	9.71	145.0	9.67
		33.9	115.5	9.64	120.5	9.67	125.3	9.69	130.0	9.70	132.6	9.69	134.4	9.69	138.6	9.66	142.6	9.62	146.4	9.57
		44.1	116.5	9.55	121.6	9.58	126.5	9.60	131.2	9.61	133.9	9.60	135.6	9.60	139.9	9.57	143.9	9.53	147.8	9.48
		57.5	118.0	9.43	123.1	9.47	128.0	9.49	132.8	9.49	135.5	9.49	137.3	9.48	141.6	9.46	145.7	9.42	149.6	9.37
		70.8	119.4	9.33	124.6	9.36	129.6	9.38	134.4	9.39	137.1	9.38	138.9	9.37	143.3	9.35	147.4	9.31	151.3	9.26
	113	23.8	100.1	9.00	104.4	9.04	108.6	9.06	112.6	9.06	114.9	9.06	116.4	9.05	120.1	9.03	123.6	8.99	126.9	8.94
		33.9	101.0	8.92	105.4	8.95	109.6	8.97	113.7	8.97	116.0	8.97	117.5	8.96	121.2	8.94	124.7	8.90	128.1	8.86
		44.1	101.9	8.83	106.4	8.87	110.6	8.89	114.7	8.89	117.1	8.89	118.6	8.88	122.4	8.86	125.9	8.82	129.2	8.78
		57.5	103.2	8.73	107.7	8.76	112.0	8.78	116.1	8.79	118.5	8.78	120.1	8.77	123.8	8.75	127.4	8.72	130.8	8.67
		70.8	104.4	8.63	109.0	8.66	113.3	8.68	117.5	8.69	119.9	8.68	121.5	8.67	125.3	8.65	128.9	8.62	132.4	8.57

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	23.8	129.2	4.08	134.8	4.10	140.2	4.11	145.4	4.11	148.4	4.10	150.4	4.10	155.1	4.09	159.6	4.08	163.8	4.06
		33.9	130.4	4.04	136.1	4.06	141.6	4.07	146.8	4.07	149.8	4.07	151.8	4.06	156.5	4.05	161.1	4.04	165.4	4.02
		44.1	131.6	4.00	137.4	4.02	142.9	4.03	148.1	4.03	151.2	4.03	153.2	4.03	158.0	4.01	162.6	4.00	166.9	3.98
		57.5	133.2	3.96	139.0	3.97	144.6	3.98	149.9	3.98	153.0	3.98	155.0	3.98	159.9	3.97	164.5	3.95	168.9	3.93
		70.8	134.8	3.91	140.7	3.93	146.3	3.93	151.7	3.94	154.9	3.93	156.9	3.93	161.8	3.92	166.5	3.91	170.9	3.89
	59	23.8	129.2	4.91	134.8	4.94	140.2	4.95	145.4	4.95	148.4	4.95	150.4	4.94	155.1	4.93	159.6	4.91	163.8	4.89
		33.9	130.4	4.87	136.1	4.89	141.6	4.90	146.8	4.90	149.8	4.90	151.8	4.90	156.5	4.88	161.1	4.86	165.4	4.84
		44.1	131.6	4.82	137.4	4.84	142.9	4.85	148.1	4.86	151.2	4.85	153.2	4.85	158.0	4.84	162.6	4.82	166.9	4.79
		57.5	133.2	4.77	139.0	4.79	144.6	4.80	149.9	4.80	153.0	4.80	155.0	4.79	159.9	4.78	164.5	4.76	168.9	4.74
		70.8	134.8	4.71	140.7	4.73	146.3	4.74	151.7	4.74	154.9	4.74	156.9	4.74	161.8	4.73	166.5	4.71	170.9	4.68
	68	23.8	129.2	5.99	134.8	6.02	140.2	6.03	145.4	6.03	148.4	6.03	150.4	6.03	155.1	6.01	159.6	5.99	163.8	5.96
		33.9	130.4	5.93	136.1	5.96	141.6	5.97	146.8	5.97	149.8	5.97	151.8	5.97	156.5	5.95	161.1	5.93	165.4	5.90
		44.1	131.6	5.88	137.4	5.90	142.9	5.92	148.1	5.92	151.2	5.92	153.2	5.91	158.0	5.90	162.6	5.87	166.9	5.85
		57.5	133.2	5.81	139.0	5.83	144.6	5.85	149.9	5.85	153.0	5.85	155.0	5.84	159.9	5.83	164.5	5.81	168.9	5.78
		70.8	134.8	5.74	140.7	5.77	146.3	5.78	151.7	5.78	154.9	5.78	156.9	5.78	161.8	5.76	166.5	5.74	170.9	5.71
	77	23.8	129.2	7.38	134.8	7.41	140.2	7.43	145.4	7.43	148.4	7.43	150.4	7.42	155.1	7.41	159.6	7.38	163.8	7.34
		33.9	130.4	7.31	136.1	7.34	141.6	7.36	146.8	7.36	149.8	7.36	151.8	7.35	156.5	7.34	161.1	7.31	165.4	7.27
		44.1	131.6	7.24	137.4	7.27	142.9	7.29	148.1	7.29	151.2	7.29	153.2	7.29	158.0	7.27	162.6	7.24	166.9	7.20
		57.5	133.2	7.16	139.0	7.19	144.6	7.20	149.9	7.21	153.0	7.20	155.0	7.20	159.9	7.18	164.5	7.15	168.9	7.12
		70.8	134.8	7.08	140.7	7.11	146.3	7.12	151.7	7.13	154.9	7.12	156.9	7.12	161.8	7.10	166.5	7.07	170.9	7.04
	86	23.8	129.2	9.17	134.8	9.20	140.2	9.22	145.4	9.23	148.4	9.22	150.4	9.22	155.1	9.19	159.6	9.16	163.8	9.11
		33.9	130.4	9.08	136.1	9.12	141.6	9.14	146.8	9.14	149.8	9.14	151.8	9.13	156.5	9.11	161.1	9.07	165.4	9.03
		44.1	131.6	8.99	137.4	9.03	142.9	9.05	148.1	9.05	151.2	9.05	153.2	9.04	158.0	9.02	162.6	8.99	166.9	8.94
		57.5	133.2	8.89	139.0	8.92	144.6	8.94	149.9	8.95	153.0	8.94	155.0	8.94	159.9	8.91	164.5	8.88	168.9	8.84
		70.8	134.8	8.79	140.7	8.82	146.3	8.84	151.7	8.85	154.9	8.84	156.9	8.84	161.8	8.81	166.5	8.78	170.9	8.74
	95	23.8	115.9	8.67	120.9	8.70	125.8	8.72	130.4	8.72	133.1	8.72	134.8	8.71	139.1	8.69	143.1	8.66	146.9	8.61
		33.9	117.0	8.59	122.1	8.62	127.0	8.64	131.6	8.64	134.3	8.64	136.1	8.63	140.4	8.61	144.4	8.57	148.3	8.53
		44.1	118.0	8.51	123.2	8.54	128.1	8.56	132.9	8.56	135.6	8.56	137.4	8.55	141.7	8.53	145.8	8.49	149.7	8.45
		57.5	119.5	8.41	124.7	8.44	129.7	8.46	134.5	8.46	137.2	8.45	139.0	8.45	143.4	8.43	147.5	8.39	151.5	8.35
		70.8	120.9	8.31	126.2	8.34	131.2	8.36	136.1	8.36	138.9	8.36	140.7	8.35	145.1	8.33	149.3	8.30	153.3	8.26
	104	23.8	103.0	8.13	107.5	8.16	111.8	8.17	115.9	8.18	118.3	8.17	119.8	8.17	123.6	8.15	127.2	8.11	130.5	8.07
		33.9	103.9	8.05	108.5	8.08	112.8	8.10	117.0	8.10	119.4	8.09	120.9	8.09	124.7	8.07	128.3	8.04	131.8	7.99
		44.1	104.9	7.97	109.5	8.00	113.9	8.02	118.1	8.02	120.5	8.02	122.1	8.01	125.9	7.99	129.5	7.96	133.0	7.92
		57.5	106.2	7.88	110.8	7.91	115.2	7.93	119.5	7.93	121.9	7.92	123.6	7.92	127.4	7.90	131.1	7.87	134.6	7.83
		70.8	107.4	7.79	112.1	7.82	116.6	7.84	120.9	7.84	123.4	7.83	125.0	7.83	128.9	7.81	132.7	7.78	136.2	7.74
	113	23.8	90.1	7.52	94.0	7.55	97.7	7.56	101.4	7.57	103.4	7.56	104.8	7.56	108.1	7.54	111.2	7.51	114.2	7.47
		33.9	90.9	7.45	94.9	7.48	98.7	7.49	102.3	7.49	104.4	7.49	105.8	7.49	109.1	7.47	112.3	7.44	115.3	7.40
		44.1	91.7	7.38	95.7	7.41	99.6	7.42	103.3	7.43	105.4	7.42	106.8	7.42	110.1	7.40	113.3	7.37	116.3	7.33
		57.5	92.9	7.29	96.9	7.32	100.8	7.34	104.5	7.34	106.7	7.33	108.1	7.33	111.5	7.31	114.7	7.28	117.7	7.24
		70.8	94.0	7.21	98.1	7.24	102.0	7.25	105.8	7.25	107.9	7.25	109.4	7.24	112.8	7.23	116.0	7.20	119.1	7.16
80	50	23.8	114.8	3.91	119.9	3.93	124.7	3.94	129.3	3.94	131.9	3.94	133.7	3.94	137.8	3.93	141.8	3.91	145.6	3.89
		33.9	115.9	3.88	121.0	3.89	125.8	3.90	130.5	3.90	133.2	3.90	134.9	3.90	139.1	3.89	143.2	3.87	147.0	3.85
		44.1	117.0	3.84	122.1	3.86	127.0	3.86	131.7	3.87	134.4	3.86	136.2	3.86	140.4	3.85	144.5	3.84	148.3	3.82
		57.5	118.4	3.79	123.6	3.81	128.5	3.82	133.3	3.82	136.0	3.82	137.8	3.82	142.1	3.81	146.2	3.79	150.1	3.77
		70.8	119.8	3.75	125.1	3.77	130.1	3.78	134.9	3.78	137.7	3.77	139.5	3.77	143.8	3.76	148.0	3.75	151.9	3.73
	59	23.8	114.8	4.72	119.9	4.73	124.7	4.75	129.3	4.75	131.9	4.74	133.7	4.74	137.8	4.73	141.8	4.71	145.6	4.69
		33.9	115.9	4.67	121.0	4.69	125.8	4.70	130.5	4.70	133.2	4.70	134.9	4.70	139.1	4.68	143.2	4.67	147.0	4.64
		44.1	117.0	4.63	122.1	4.65	127.0	4.66	131.7	4.66	134.4	4.66	136.2	4.65	140.4	4.64	144.5	4.62	148.3	4.60
		57.5	118.4	4.57	123.6	4.59	128.5	4.60	133.3	4.60	136.0	4.60	137.8	4.60	142.1	4.59	146.2	4.57	150.1	4.55
		70.8	119.8	4.52	125.1	4.54	130.1	4.55	134.9	4.55	137.7	4.55	139.5	4.55	143.8	4.53	148.0	4.52	151.9	4.49
	68	23.8	114.8	5.75	119.9	5.77	124.7	5.78	129.3	5.79	131.9	5.78	133.7	5.78	137.8	5.77	141.8	5.74	145.6	5.72
		33.9	115.9	5.69	121.0	5.72	125.8	5.73	130.5	5.73	133.2	5.73	134.9	5.73	139.1	5.71	143.2	5.69	147.0	5.66
		44.1	117.0	5.64	122.1	5.66	127.0	5.68	131.7	5.68	134.4	5.68	136.2	5.67	140.4	5.66	144.5	5.64	148.3	5.61
		57.5	118.4	5.57	123.6	5.60	128.5	5.61	133.3	5.61	136.0	5.61	137.8	5.61	142.1	5.59	146.2	5.57	150.1	5.54
		70.8	119.8	5.51	125.1	5.53	130.1	5.55	134.9	5.55	137.7	5.54	139.5	5.54	143.8	5.53	148.0	5.51	151.9	5.48
	77	23.8	114.8	7.08	119.9	7.11	124.7	7.13	129.3	7.13	131.9	7.13	133.7	7.12	137.8	7.11	141.8	7.08	145.6	7.04
		33.9	115.9	7.02	121.0	7.04	125.8	7.06	130.5	7.06	133.2	7.06	134.9	7.06	139.1	7.04	143.2	7.01	147.0	6.98
		44.1	117.0	6.95	122.1	6.98	127.0	6.99	131.7	7.00	134.4	6.99	136.2	6.99	140.4	6.97	144.5	6.95	148.3	6.91
		57.5	118.4	6.87	123.6	6.90	128.5	6.91	133.3	6.91	136.0	6.91	137.8	6.91	142.1	6.89	146.2	6.86	150.1	6.83
		70.8	119.8	6.79	125.1	6.82	130.1	6.83	134.9	6.84	137.7	6.83	139.5	6.83	143.8	6.81	148.0	6.78	151.9	6.75
	86	23.8	114.8	8.79	119.9	8.83	124.7	8.85	129.3	8.85	131.9	8.85	133.7	8.84	137.8	8.82	141.8	8.79	145.6	8.74
		33.9	115.9	8.71	121.0	8.75	125.8	8.76	130.5	8.77	133.2	8.76	134.9	8.76	139.1	8.74	143.2	8.70	147.0	8.66
		44.1	117.0	8.63	122.1	8.66	127.0	8.68	131.7	8.69	134.4	8.68	136.2	8.68	140.4	8.66	144.5	8.62	148.3	8.58
		57.5	118.4	8.53	123.6	8.56	128.5	8.58	133.3	8.58	136.0	8.58	137.8	8.57	142.1	8.55	146.2	8.52	150.1	8.48
		70.8	119.8	8.43	125.1	8.46	130.1	8.48	134.9	8.49	137.7	8.48	139.5	8.48	143.8	8.46	148.0	8.42	151.9	8.38
	95	23.8	103.0	8.32	107.5	8.35	111.8	8.37	115.9	8.37	118.3	8.36	119.9	8.36	123.6	8.34	127.2	8.30	130.6	8.26
		33.9	104.0	8.24	108.5	8.27	112.8	8.29	117.0	8.29	119.4	8.28	121.0	8.28	124.8	8.26	128.4	8.22	131.8	8.18
		44.1	104.9	8.16	109.5	8.19	113.9	8.21	118.1	8.21	120.5	8.21	122.1	8.20	125.9	8.18	129.6	8.15	133.0	8.11
		57.5	106.2	8.06	110.8	8.10	115.3	8.11	119.5	8.12	122.0	8.11	123.6	8.11	127.5	8.08	131.2	8.05	134.6	8.01
		70.8	107.5	7.97	112.2	8.00	116.7	8.02	121.0	8.02	123.4	8.02	125.1	8.01	129.0	7.99	132.7	7.96	136.3	7.92
	104	23.8	91.5	7.80	95.5	7.83	99.3	7.84	103.0	7.85	105.1	7.84	106.5	7.84	109.8	7.81	113.0	7.78	116.0	7.74
		33.9	92.4	7.72	96.4	7.75	100.3	7.77	104.0	7.77	106.1	7.77	107.5	7.76	110.9	7.74	114.1	7.71	117.1	7.67
		44.1	93.2	7.65	97.3	7.68	101.2	7.70	104.9	7.70	107.1	7.69	108.5	7.69	111.9	7.67	115.1	7.64	118.2	7.60
		57.5	94.4	7.56	98.5	7.59	102.4	7.60	106.2	7.61	108.4	7.60	109.8	7.60	113.3	7.58	116.5	7.55	119.6	7.51
		70.8	95.5	7.47	99.7	7.50	103.7	7.52	107.5	7.52	109.7	7.52	111.1	7.51	114.6	7.49	117.9	7.46	121.1	7.42
	113	23.8	80.0	7.21	83.5	7.24	86.9	7.26	90.1	7.26	91.9	7.26	93.2	7.25	96.1	7.23	98.9	7.20	101.5	7.17
		33.9	80.8	7.15	84.3	7.17	87.7	7.19	90.9	7.19	92.8	7.19	94.0	7.18	97.0	7.16	99.8	7.13	102.4	7.10
		44.1	81.6	7.08	85.1	7.11	88.5	7.12	91.8	7.12	93.7	7.12	94.9	7.11	97.9	7.10	100.7	7.07	103.4	7.03
		57.5	82.5	6.99	86.1	7.02	89.6	7.04	92.9	7.04	94.8	7.04	96.1	7.03	99.1	7.01	101.9	6.98	104.6	6.95
		70.8	83.5	6.92	87.2	6.94	90.7	6.96	94.0	6.96	95.9	6.96	97.2	6.95	100.3	6.93	103.1	6.90	105.9	6.87

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	23.8	100.5	3.17	104.9	3.19	109.1	3.19	113.1	3.19	115.4	3.19	116.9	3.19	120.6	3.18	124.1	3.17	127.4	3.15
		33.9	101.4	3.14	105.9	3.16	110.1	3.16	114.2	3.16	116.5	3.16	118.0	3.16	121.7	3.15	125.3	3.14	128.6	3.12
		44.1	102.4	3.11	106.8	3.13	111.1	3.13	115.2	3.13	117.6	3.13	119.1	3.13	122.9	3.12	126.4	3.11	129.8	3.10
		57.5	103.6	3.08	108.1	3.09	112.5	3.10	116.6	3.10	119.0	3.10	120.6	3.09	124.4	3.09	128.0	3.07	131.4	3.06
		70.8	104.9	3.04	109.4	3.05	113.8	3.06	118.0	3.06	120.4	3.06	122.0	3.06	125.9	3.05	129.5	3.04	132.9	3.02
	59	23.8	100.5	3.82	104.9	3.84	109.1	3.85	113.1	3.85	115.4	3.85	116.9	3.84	120.6	3.83	124.1	3.82	127.4	3.80
		33.9	101.4	3.79	105.9	3.80	110.1	3.81	114.2	3.81	116.5	3.81	118.0	3.81	121.7	3.80	125.3	3.78	128.6	3.76
		44.1	102.4	3.75	106.8	3.77	111.1	3.77	115.2	3.78	117.6	3.77	119.1	3.77	122.9	3.76	126.4	3.75	129.8	3.73
		57.5	103.6	3.71	108.1	3.72	112.5	3.73	116.6	3.73	119.0	3.73	120.6	3.73	124.4	3.72	128.0	3.70	131.4	3.69
		70.8	104.9	3.66	109.4	3.68	113.8	3.69	118.0	3.69	120.4	3.69	122.0	3.68	125.9	3.68	129.5	3.66	132.9	3.64
	68	23.8	100.5	4.66	104.9	4.68	109.1	4.69	113.1	4.69	115.4	4.69	116.9	4.69	120.6	4.67	124.1	4.66	127.4	4.63
		33.9	101.4	4.62	105.9	4.63	110.1	4.64	114.2	4.65	116.5	4.64	118.0	4.64	121.7	4.63	125.3	4.61	128.6	4.59
		44.1	102.4	4.57	106.8	4.59	111.1	4.60	115.2	4.60	117.6	4.60	119.1	4.60	122.9	4.59	126.4	4.57	129.8	4.55
		57.5	103.6	4.52	108.1	4.54	112.5	4.55	116.6	4.55	119.0	4.55	120.6	4.54	124.4	4.53	128.0	4.52	131.4	4.49
		70.8	104.9	4.47	109.4	4.49	113.8	4.50	118.0	4.50	120.4	4.50	122.0	4.49	125.9	4.48	129.5	4.46	132.9	4.44
	77	23.8	100.5	5.74	104.9	5.77	109.1	5.78	113.1	5.78	115.4	5.78	116.9	5.77	120.6	5.76	124.1	5.74	127.4	5.71
		33.9	101.4	5.69	105.9	5.71	110.1	5.72	114.2	5.73	116.5	5.72	118.0	5.72	121.7	5.71	125.3	5.68	128.6	5.66
		44.1	102.4	5.63	106.8	5.66	111.1	5.67	115.2	5.67	117.6	5.67	119.1	5.67	122.9	5.65	126.4	5.63	129.8	5.60
		57.5	103.6	5.57	108.1	5.59	112.5	5.60	116.6	5.61	119.0	5.60	120.6	5.60	124.4	5.59	128.0	5.56	131.4	5.54
		70.8	104.9	5.50	109.4	5.53	113.8	5.54	118.0	5.54	120.4	5.54	122.0	5.54	125.9	5.52	129.5	5.50	132.9	5.47
	86	23.8	100.5	7.13	104.9	7.16	109.1	7.17	113.1	7.18	115.4	7.17	116.9	7.17	120.6	7.15	124.1	7.12	127.4	7.09
		33.9	101.4	7.06	105.9	7.09	110.1	7.11	114.2	7.11	116.5	7.11	118.0	7.10	121.7	7.08	125.3	7.06	128.6	7.02
		44.1	102.4	6.99	106.8	7.02	111.1	7.04	115.2	7.04	117.6	7.04	119.1	7.03	122.9	7.02	126.4	6.99	129.8	6.96
		57.5	103.6	6.91	108.1	6.94	112.5	6.96	116.6	6.96	119.0	6.96	120.6	6.95	124.4	6.93	128.0	6.91	131.4	6.87
		70.8	104.9	6.83	109.4	6.86	113.8	6.88	118.0	6.88	120.4	6.88	122.0	6.87	125.9	6.85	129.5	6.83	132.9	6.79
	95	23.8	90.1	6.74	94.0	6.77	97.8	6.78	101.4	6.79	103.5	6.78	104.9	6.78	108.2	6.76	111.3	6.73	114.3	6.70
		33.9	91.0	6.68	94.9	6.70	98.7	6.72	102.4	6.72	104.5	6.72	105.9	6.71	109.2	6.69	112.3	6.67	115.3	6.63
		44.1	91.8	6.62	95.8	6.64	99.7	6.66	103.3	6.66	105.5	6.65	106.8	6.65	110.2	6.63	113.4	6.61	116.4	6.57
		57.5	92.9	6.54	97.0	6.56	100.9	6.58	104.6	6.58	106.7	6.58	108.1	6.57	111.5	6.55	114.8	6.53	117.8	6.49
		70.8	94.0	6.46	98.1	6.49	102.1	6.50	105.8	6.50	108.0	6.50	109.4	6.50	112.9	6.48	116.1	6.45	119.2	6.42
	104	23.8	80.1	6.32	83.6	6.35	86.9	6.36	90.1	6.36	92.0	6.36	93.2	6.35	96.1	6.34	98.9	6.31	101.5	6.28
		33.9	80.8	6.26	84.4	6.28	87.7	6.30	91.0	6.30	92.9	6.30	94.1	6.29	97.0	6.27	99.8	6.25	102.5	6.22
		44.1	81.6	6.20	85.1	6.23	88.6	6.24	91.8	6.24	93.7	6.24	94.9	6.23	97.9	6.22	100.8	6.19	103.4	6.16
		57.5	82.6	6.13	86.2	6.15	89.6	6.17	92.9	6.17	94.8	6.16	96.1	6.16	99.1	6.14	102.0	6.12	104.7	6.09
		70.8	83.6	6.06	87.2	6.08	90.7	6.09	94.0	6.10	96.0	6.09	97.2	6.09	100.3	6.07	103.2	6.05	105.9	6.02
	113	23.8	70.0	5.85	73.1	5.87	76.0	5.88	78.8	5.89	80.5	5.88	81.5	5.88	84.1	5.86	86.5	5.84	88.8	5.81
		33.9	70.7	5.79	73.8	5.82	76.7	5.83	79.6	5.83	81.2	5.83	82.3	5.82	84.9	5.81	87.3	5.78	89.6	5.75
		44.1	71.4	5.74	74.5	5.76	77.5	5.77	80.3	5.78	82.0	5.77	83.0	5.77	85.6	5.75	88.1	5.73	90.5	5.70
		57.5	72.2	5.67	75.4	5.69	78.4	5.71	81.3	5.71	83.0	5.70	84.0	5.70	86.7	5.68	89.2	5.66	91.6	5.63
		70.8	73.1	5.61	76.3	5.63	79.3	5.64	82.3	5.64	84.0	5.64	85.1	5.63	87.7	5.62	90.3	5.60	92.7	5.57
60	50	23.8	86.1	2.55	89.9	2.56	93.5	2.57	96.9	2.57	98.9	2.57	100.2	2.56	103.4	2.56	106.4	2.55	109.2	2.54
		33.9	86.9	2.53	90.7	2.54	94.4	2.54	97.9	2.54	99.9	2.54	101.2	2.54	104.4	2.53	107.4	2.52	110.2	2.51
		44.1	87.8	2.50	91.6	2.51	95.3	2.52	98.8	2.52	100.8	2.52	102.1	2.52	105.3	2.51	108.4	2.50	111.3	2.49
		57.5	88.8	2.47	92.7	2.48	96.4	2.49	100.0	2.49	102.0	2.49	103.4	2.49	106.6	2.48	109.7	2.47	112.6	2.46
		70.8	89.9	2.44	93.8	2.45	97.6	2.46	101.2	2.46	103.2	2.46	104.6	2.46	107.9	2.45	111.0	2.44	114.0	2.43
	59	23.8	86.1	3.07	89.9	3.08	93.5	3.09	96.9	3.09	98.9	3.09	100.2	3.09	103.4	3.08	106.4	3.07	109.2	3.05
		33.9	86.9	3.04	90.7	3.06	94.4	3.06	97.9	3.06	99.9	3.06	101.2	3.06	104.4	3.05	107.4	3.04	110.2	3.03
		44.1	87.8	3.01	91.6	3.03	95.3	3.03	98.8	3.03	100.8	3.03	102.1	3.03	105.3	3.02	108.4	3.01	111.3	3.00
		57.5	88.8	2.98	92.7	2.99	96.4	3.00	100.0	3.00	102.0	3.00	103.4	3.00	106.6	2.99	109.7	2.98	112.6	2.96
		70.8	89.9	2.94	93.8	2.96	97.6	2.96	101.2	2.96	103.2	2.96	104.6	2.96	107.9	2.95	111.0	2.94	114.0	2.93
	68	23.8	86.1	3.75	89.9	3.76	93.5	3.77	96.9	3.77	98.9	3.77	100.2	3.77	103.4	3.76	106.4	3.74	109.2	3.72
		33.9	86.9	3.71	90.7	3.72	94.4	3.73	97.9	3.73	99.9	3.73	101.2	3.73	104.4	3.72	107.4	3.71	110.2	3.69
		44.1	87.8	3.67	91.6	3.69	95.3	3.70	98.8	3.70	100.8	3.70	102.1	3.70	105.3	3.69	108.4	3.67	111.3	3.65
		57.5	88.8	3.63	92.7	3.65	96.4	3.65	100.0	3.66	102.0	3.65	103.4	3.65	106.6	3.64	109.7	3.63	112.6	3.61
		70.8	89.9	3.59	93.8	3.60	97.6	3.61	101.2	3.61	103.2	3.61	104.6	3.61	107.9	3.60	111.0	3.59	114.0	3.57
	77	23.8	86.1	4.62	89.9	4.63	93.5	4.64	96.9	4.65	98.9	4.64	100.2	4.64	103.4	4.63	106.4	4.61	109.2	4.59
		33.9	86.9	4.57	90.7	4.59	94.4	4.60	97.9	4.60	99.9	4.60	101.2	4.60	104.4	4.59	107.4	4.57	110.2	4.54
		44.1	87.8	4.53	91.6	4.55	95.3	4.56	98.8	4.56	100.8	4.56	102.1	4.55	105.3	4.54	108.4	4.53	111.3	4.50
		57.5	88.8	4.47	92.7	4.49	96.4	4.50	100.0	4.51	102.0	4.50	103.4	4.50	106.6	4.49	109.7	4.47	112.6	4.45
		70.8	89.9	4.42	93.8	4.44	97.6	4.45	101.2	4.45	103.2	4.45	104.6	4.45	107.9	4.44	111.0	4.42	114.0	4.40
	86	23.8	86.1	5.73	89.9	5.75	93.5	5.77	96.9	5.77	98.9	5.77	100.2	5.76	103.4	5.75	106.4	5.73	109.2	5.70
		33.9	86.9	5.67	90.7	5.70	94.4	5.71	97.9	5.71	99.9	5.71	101.2	5.71	104.4	5.69	107.4	5.67	110.2	5.64
		44.1	87.8	5.62	91.6	5.64	95.3	5.66	98.8	5.66	100.8	5.66	102.1	5.65	105.3	5.64	108.4	5.62	111.3	5.59
		57.5	88.8	5.56	92.7	5.58	96.4	5.59	100.0	5.59	102.0	5.59	103.4	5.59	106.6	5.57	109.7	5.55	112.6	5.52
		70.8	89.9	5.49	93.8	5.51	97.6	5.53	101.2	5.53	103.2	5.53	104.6	5.52	107.9	5.51	111.0	5.49	114.0	5.46
	95	23.8	77.2	5.42	80.6	5.44	83.8	5.45	86.9	5.45	88.7	5.45	89.9	5.45	92.7	5.43	95.4	5.41	97.9	5.38
		33.9	78.0	5.37	81.4	5.39	84.6	5.40	87.8	5.40	89.6	5.40	90.7	5.39	93.6	5.38	96.3	5.36	98.9	5.33
		44.1	78.7	5.32	82.1	5.34	85.4	5.35	88.6	5.35	90.4	5.35	91.6	5.34	94.5	5.33	97.2	5.31	99.8	5.28
		57.5	79.6	5.25	83.1	5.28	86.5	5.29	89.6	5.29	91.5	5.28	92.7	5.28	95.6	5.27	98.4	5.25	101.0	5.22
		70.8	80.6	5.19	84.1	5.22	87.5	5.23	90.7	5.23	92.6	5.22	93.8	5.22	96.7	5.21	99.5	5.19	102.2	5.16
	104	23.8	68.6	5.08	71.6	5.10	74.5	5.11	77.3	5.11	78.8	5.11	79.9	5.11	82.4	5.09	84.8	5.07	87.0	5.05
		33.9	69.3	5.03	72.3	5.05	75.2	5.06	78.0	5.06	79.6	5.06	80.6	5.06	83.2	5.04	85.6	5.02	87.8	5.00
		44.1	69.9	4.98	73.0	5.00	75.9	5.01	78.7	5.02	80.3	5.01	81.4	5.01	83.9	5.00	86.4	4.98	88.7	4.95
		57.5	70.8	4.92	73.9	4.94	76.8	4.95	79.7	4.96	81.3	4.95	82.4	4.95	84.9	4.94	87.4	4.92	89.7	4.89
		70.8	71.6	4.87	74.7	4.89	77.7	4.90	80.6	4.90	82.3	4.90	83.4	4.89	86.0	4.88	88.5	4.86	90.8	4.84
	113	23.8	60.0	4.70	62.7	4.72	65.2	4.73	67.6	4.73	69.0	4.73	69.9	4.72	72.1	4.71	74.1	4.69	76.1	4.67
		33.9	60.6	4.66	63.2	4.67	65.8	4.68	68.2	4.68	69.6	4.68	70.5	4.68	72.7	4.67	74.8	4.65	76.8	4.62
		44.1	61.2	4.61	63.8	4.63	66.4	4.64	68.8	4.64	70.3	4.64	71.2	4.64	73.4	4.62	75.5	4.61	77.5	4.58
		57.5	61.9	4.56	64.6	4.58	67.2	4.59	69.7	4.59	71.1	4.58	72.0	4.58	74.3	4.57	76.4	4.55	78.5	4.53
		70.8	62.6	4.51	65.4	4.52	68.0	4.53	70.5	4.53	72.0	4.53	72.9	4.53	75.2	4.52	77.4	4.50	79.4	4.48

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	23.8	71.8	2.01	74.9	2.02	77.9	2.03	80.8	2.03	82.5	2.03	83.5	2.02	86.2	2.02	88.6	2.01	91.0	2.00
		33.9	72.5	1.99	75.6	2.00	78.6	2.01	81.5	2.01	83.2	2.01	84.3	2.00	87.0	2.00	89.5	1.99	91.9	1.98
		44.1	73.1	1.97	76.3	1.98	79.4	1.99	82.3	1.99	84.0	1.99	85.1	1.99	87.8	1.98	90.3	1.97	92.7	1.96
		57.5	74.0	1.95	77.2	1.96	80.3	1.96	83.3	1.96	85.0	1.96	86.1	1.96	88.8	1.96	91.4	1.95	93.8	1.94
		70.8	74.9	1.93	78.2	1.94	81.3	1.94	84.3	1.94	86.0	1.94	87.2	1.94	89.9	1.94	92.5	1.93	95.0	1.92
	59	23.8	71.8	2.42	74.9	2.43	77.9	2.44	80.8	2.44	82.5	2.44	83.5	2.44	86.2	2.43	88.6	2.42	91.0	2.41
		33.9	72.5	2.40	75.6	2.41	78.6	2.42	81.5	2.42	83.2	2.42	84.3	2.42	87.0	2.41	89.5	2.40	91.9	2.39
		44.1	73.1	2.38	76.3	2.39	79.4	2.39	82.3	2.40	84.0	2.39	85.1	2.39	87.8	2.39	90.3	2.38	92.7	2.37
		57.5	74.0	2.35	77.2	2.36	80.3	2.37	83.3	2.37	85.0	2.37	86.1	2.36	88.8	2.36	91.4	2.35	93.8	2.34
		70.8	74.9	2.32	78.2	2.33	81.3	2.34	84.3	2.34	86.0	2.34	87.2	2.34	89.9	2.33	92.5	2.32	95.0	2.31
	68	23.8	71.8	2.96	74.9	2.97	77.9	2.97	80.8	2.98	82.5	2.97	83.5	2.97	86.2	2.97	88.6	2.95	91.0	2.94
		33.9	72.5	2.93	75.6	2.94	78.6	2.95	81.5	2.95	83.2	2.95	84.3	2.94	87.0	2.94	89.5	2.93	91.9	2.91
		44.1	73.1	2.90	76.3	2.91	79.4	2.92	82.3	2.92	84.0	2.92	85.1	2.92	87.8	2.91	90.3	2.90	92.7	2.88
		57.5	74.0	2.87	77.2	2.88	80.3	2.88	83.3	2.89	85.0	2.88	86.1	2.88	88.8	2.88	91.4	2.86	93.8	2.85
		70.8	74.9	2.83	78.2	2.85	81.3	2.85	84.3	2.85	86.0	2.85	87.2	2.85	89.9	2.84	92.5	2.83	95.0	2.82
	77	23.8	71.8	3.64	74.9	3.66	77.9	3.67	80.8	3.67	82.5	3.67	83.5	3.66	86.2	3.65	88.6	3.64	91.0	3.62
		33.9	72.5	3.61	75.6	3.62	78.6	3.63	81.5	3.63	83.2	3.63	84.3	3.63	87.0	3.62	89.5	3.60	91.9	3.59
		44.1	73.1	3.57	76.3	3.59	79.4	3.60	82.3	3.60	84.0	3.60	85.1	3.59	87.8	3.59	90.3	3.57	92.7	3.55
		57.5	74.0	3.53	77.2	3.55	80.3	3.55	83.3	3.56	85.0	3.55	86.1	3.55	88.8	3.54	91.4	3.53	93.8	3.51
		70.8	74.9	3.49	78.2	3.51	81.3	3.51	84.3	3.52	86.0	3.51	87.2	3.51	89.9	3.50	92.5	3.49	95.0	3.47
	86	23.8	71.8	4.52	74.9	4.54	77.9	4.55	80.8	4.55	82.5	4.55	83.5	4.55	86.2	4.54	88.6	4.52	91.0	4.50
		33.9	72.5	4.48	75.6	4.50	78.6	4.51	81.5	4.51	83.2	4.51	84.3	4.50	87.0	4.49	89.5	4.48	91.9	4.45
		44.1	73.1	4.44	76.3	4.46	79.4	4.46	82.3	4.47	84.0	4.46	85.1	4.46	87.8	4.45	90.3	4.43	92.7	4.41
		57.5	74.0	4.38	77.2	4.40	80.3	4.41	83.3	4.41	85.0	4.41	86.1	4.41	88.8	4.40	91.4	4.38	93.8	4.36
		70.8	74.9	4.33	78.2	4.35	81.3	4.36	84.3	4.36	86.0	4.36	87.2	4.36	89.9	4.35	92.5	4.33	95.0	4.31
	95	23.8	64.4	4.28	67.2	4.29	69.9	4.30	72.4	4.30	73.9	4.30	74.9	4.30	77.3	4.29	79.5	4.27	81.6	4.25
		33.9	65.0	4.24	67.8	4.25	70.5	4.26	73.1	4.26	74.6	4.26	75.6	4.26	78.0	4.25	80.2	4.23	82.4	4.21
		44.1	65.6	4.20	68.4	4.21	71.2	4.22	73.8	4.22	75.3	4.22	76.3	4.22	78.7	4.21	81.0	4.19	83.1	4.17
		57.5	66.4	4.15	69.3	4.16	72.0	4.17	74.7	4.17	76.2	4.17	77.2	4.17	79.7	4.16	82.0	4.14	84.2	4.12
		70.8	67.2	4.10	70.1	4.12	72.9	4.12	75.6	4.13	77.2	4.12	78.2	4.12	80.6	4.11	82.9	4.09	85.2	4.07
	104	23.8	57.2	4.01	59.7	4.02	62.1	4.03	64.4	4.03	65.7	4.03	66.6	4.03	68.7	4.02	70.6	4.00	72.5	3.98
		33.9	57.7	3.97	60.3	3.99	62.7	3.99	65.0	4.00	66.3	3.99	67.2	3.99	69.3	3.98	71.3	3.96	73.2	3.94
		44.1	58.3	3.93	60.8	3.95	63.3	3.96	65.6	3.96	66.9	3.96	67.8	3.95	69.9	3.94	72.0	3.93	73.9	3.91
		57.5	59.0	3.89	61.6	3.90	64.0	3.91	66.4	3.91	67.7	3.91	68.6	3.91	70.8	3.90	72.8	3.88	74.8	3.86
		70.8	59.7	3.84	62.3	3.86	64.8	3.87	67.2	3.87	68.6	3.86	69.5	3.86	71.6	3.85	73.7	3.84	75.7	3.82
	113	23.8	50.0	3.71	52.2	3.72	54.3	3.73	56.3	3.73	57.5	3.73	58.2	3.73	60.0	3.72	61.8	3.70	63.4	3.69
		33.9	50.5	3.67	52.7	3.69	54.8	3.70	56.8	3.70	58.0	3.70	58.8	3.69	60.6	3.68	62.4	3.67	64.0	3.65
		44.1	51.0	3.64	53.2	3.65	55.3	3.66	57.4	3.66	58.5	3.66	59.3	3.66	61.2	3.65	62.9	3.63	64.6	3.62
		57.5	51.6	3.60	53.8	3.61	56.0	3.62	58.1	3.62	59.3	3.62	60.0	3.62	61.9	3.61	63.7	3.59	65.4	3.57
		70.8	52.2	3.56	54.5	3.57	56.7	3.58	58.8	3.58	60.0	3.58	60.8	3.57	62.7	3.56	64.5	3.55	66.2	3.53

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	26.7	173.8	6.04	181.4	6.06	188.6	6.07	195.6	6.08	199.6	6.07	202.3	6.07	208.6	6.06	214.6	6.03	220.4	6.00
		38.8	175.5	5.98	183.1	6.00	190.5	6.01	197.5	6.02	201.6	6.01	204.2	6.01	210.6	6.00	216.7	5.97	222.5	5.94
		51.0	177.2	5.92	184.9	5.94	192.3	5.96	199.4	5.96	203.5	5.96	206.2	5.95	212.7	5.94	218.8	5.91	224.6	5.89
		65.3	179.2	5.85	187.0	5.88	194.5	5.89	201.6	5.89	205.8	5.89	208.5	5.89	215.0	5.87	221.3	5.85	227.2	5.82
		79.5	181.1	5.79	189.0	5.82	196.6	5.83	203.9	5.83	208.1	5.83	210.8	5.83	217.4	5.81	223.7	5.79	229.7	5.76
	59	26.7	173.8	7.27	181.4	7.30	188.6	7.32	195.6	7.32	199.6	7.32	202.3	7.31	208.6	7.30	214.6	7.27	220.4	7.23
		38.8	175.5	7.20	183.1	7.23	190.5	7.25	197.5	7.25	201.6	7.25	204.2	7.24	210.6	7.22	216.7	7.20	222.5	7.16
		51.0	177.2	7.13	184.9	7.16	192.3	7.18	199.4	7.18	203.5	7.18	206.2	7.17	212.7	7.15	218.8	7.13	224.6	7.09
		65.3	179.2	7.05	187.0	7.08	194.5	7.10	201.6	7.10	205.8	7.10	208.5	7.09	215.0	7.08	221.3	7.05	227.2	7.01
		79.5	181.1	6.98	189.0	7.01	196.6	7.02	203.9	7.03	208.1	7.02	210.8	7.02	217.4	7.00	223.7	6.97	229.7	6.94
	68	26.7	173.8	8.87	181.4	8.90	188.6	8.92	195.6	8.93	199.6	8.92	202.3	8.92	208.6	8.89	214.6	8.86	220.4	8.82
		38.8	175.5	8.78	183.1	8.82	190.5	8.83	197.5	8.84	201.6	8.83	204.2	8.83	210.6	8.81	216.7	8.77	222.5	8.73
		51.0	177.2	8.69	184.9	8.73	192.3	8.75	199.4	8.75	203.5	8.75	206.2	8.74	212.7	8.72	218.8	8.69	224.6	8.64
		65.3	179.2	8.60	187.0	8.63	194.5	8.65	201.6	8.66	205.8	8.65	208.5	8.65	215.0	8.63	221.3	8.59	227.2	8.55
		79.5	181.1	8.51	189.0	8.54	196.6	8.56	203.9	8.57	208.1	8.56	210.8	8.56	217.4	8.53	223.7	8.50	229.7	8.46
	77	26.7	173.8	10.93	181.4	10.97	188.6	11.00	195.6	11.00	199.6	10.99	202.3	10.99	208.6	10.96	214.6	10.92	220.4	10.86
		38.8	175.5	10.82	183.1	10.86	190.5	10.89	197.5	10.89	201.6	10.89	204.2	10.88	210.6	10.85	216.7	10.81	222.5	10.76
		51.0	177.2	10.71	184.9	10.76	192.3	10.78	199.4	10.79	203.5	10.78	206.2	10.77	212.7	10.75	218.8	10.71	224.6	10.65
		65.3	179.2	10.60	187.0	10.64	194.5	10.66	201.6	10.67	205.8	10.66	208.5	10.66	215.0	10.63	221.3	10.59	227.2	10.54
		79.5	181.1	10.48	189.0	10.53	196.6	10.55	203.9	10.56	208.1	10.55	210.8	10.54	217.4	10.52	223.7	10.48	229.7	10.42
	86	26.7	173.8	13.56	181.4	13.62	188.6	13.65	195.6	13.66	199.6	13.65	202.3	13.64	208.6	13.61	214.6	13.55	220.4	13.49
		38.8	175.5	13.43	183.1	13.49	190.5	13.51	197.5	13.52	201.6	13.51	204.2	13.51	210.6	13.47	216.7	13.42	222.5	13.35
		51.0	177.2	13.30	184.9	13.36	192.3	13.38	199.4	13.39	203.5	13.38	206.2	13.38	212.7	13.34	218.8	13.29	224.6	13.22
		65.3	179.2	13.15	187.0	13.21	194.5	13.24	201.6	13.24	205.8	13.24	208.5	13.23	215.0	13.20	221.3	13.15	227.2	13.08
		79.5	181.1	13.02	189.0	13.07	196.6	13.10	203.9	13.10	208.1	13.10	210.8	13.09	217.4	13.06	223.7	13.01	229.7	12.94
	95	26.7	155.6	12.81	162.4	12.86	168.9	12.88	175.1	12.89	178.7	12.88	181.1	12.87	186.7	12.84	192.1	12.79	197.3	12.72
		38.8	157.1	12.68	163.9	12.73	170.5	12.76	176.8	12.76	180.5	12.75	182.8	12.74	188.6	12.71	194.0	12.66	199.2	12.60
		51.0	158.6	12.56	165.5	12.61	172.2	12.63	178.5	12.64	182.2	12.63	184.6	12.62	190.4	12.59	195.9	12.54	201.1	12.47
		65.3	160.4	12.42	167.4	12.47	174.1	12.49	180.5	12.50	184.2	12.49	186.7	12.48	192.5	12.45	198.1	12.40	203.3	12.34
		79.5	162.2	12.29	169.2	12.34	176.0	12.36	182.5	12.37	186.3	12.36	188.7	12.35	194.6	12.32	200.3	12.27	205.6	12.21
	104	26.7	137.6	11.95	143.6	11.99	149.4	12.02	154.9	12.02	158.1	12.02	160.1	12.01	165.2	11.98	169.9	11.93	174.5	11.87
		38.8	138.9	11.83	145.0	11.88	150.8	11.90	156.4	11.90	159.6	11.90	161.7	11.89	166.8	11.86	171.6	11.81	176.2	11.75
		51.0	140.3	11.71	146.4	11.76	152.3	11.78	157.9	11.79	161.1	11.78	163.2	11.77	168.4	11.74	173.2	11.70	177.8	11.64
		65.3	141.8	11.59	148.0	11.63	154.0	11.66	159.6	11.66	162.9	11.65	165.1	11.64	170.2	11.61	175.2	11.57	179.8	11.51
		79.5	143.4	11.46	149.7	11.51	155.7	11.53	161.4	11.54	164.7	11.53	166.9	11.52	172.1	11.49	177.1	11.45	181.8	11.39
	113	26.7	119.6	10.99	124.8	11.03	129.8	11.05	134.6	11.06	137.4	11.05	139.2	11.04	143.6	11.01	147.7	10.97	151.6	10.91
		38.8	120.8	10.88	126.0	10.92	131.1	10.94	135.9	10.95	138.7	10.94	140.6	10.93	145.0	10.90	149.1	10.86	153.1	10.81
		51.0	121.9	10.77	127.3	10.82	132.4	10.84	137.2	10.84	140.1	10.84	141.9	10.83	146.4	10.80	150.6	10.76	154.6	10.70
		65.3	123.3	10.66	128.7	10.70	133.8	10.72	138.8	10.72	141.6	10.72	143.5	10.71	148.0	10.68	152.3	10.64	156.3	10.59
		79.5	124.7	10.54	130.1	10.58	135.3	10.61	140.3	10.61	143.2	10.60	145.1	10.60	149.6	10.57	154.0	10.53	158.1	10.47
120	50	26.7	170.5	6.01	178.0	6.04	185.1	6.05	191.9	6.05	195.9	6.05	198.4	6.05	204.7	6.03	210.6	6.01	216.2	5.98
		38.8	172.2	5.95	179.7	5.98	186.9	5.99	193.8	5.99	197.8	5.99	200.4	5.99	206.7	5.97	212.6	5.95	218.3	5.92
		51.0	173.8	5.90	181.4	5.92	188.7	5.93	195.7	5.94	199.7	5.93	202.3	5.93	208.6	5.91	214.7	5.89	220.4	5.86
		65.3	175.8	5.83	183.4	5.86	190.8	5.87	197.8	5.87	201.9	5.87	204.6	5.86	211.0	5.85	217.1	5.83	222.9	5.80
		79.5	177.7	5.77	185.5	5.79	192.9	5.81	200.0	5.81	204.1	5.81	206.8	5.80	213.3	5.79	219.5	5.77	225.3	5.74
	59	26.7	170.5	7.24	178.0	7.28	185.1	7.29	191.9	7.29	195.9	7.29	198.4	7.29	204.7	7.27	210.6	7.24	216.2	7.20
		38.8	172.2	7.17	179.7	7.20	186.9	7.22	193.8	7.22	197.8	7.22	200.4	7.21	206.7	7.20	212.6	7.17	218.3	7.13
		51.0	173.8	7.10	181.4	7.13	188.7	7.15	195.7	7.15	199.7	7.15	202.3	7.14	208.6	7.13	214.7	7.10	220.4	7.06
		65.3	175.8	7.03	183.4	7.06	190.8	7.07	197.8	7.07	201.9	7.07	204.6	7.07	211.0	7.05	217.1	7.02	222.9	6.99
		79.5	177.7	6.95	185.5	6.98	192.9	7.00	200.0	7.00	204.1	7.00	206.8	6.99	213.3	6.97	219.5	6.95	225.3	6.91
	68	26.7	170.5	8.83	178.0	8.87	185.1	8.89	191.9	8.89	195.9	8.89	198.4	8.88	204.7	8.86	210.6	8.83	216.2	8.78
		38.8	172.2	8.74	179.7	8.78	186.9	8.80	193.8	8.80	197.8	8.80	200.4	8.79	206.7	8.77	212.6	8.74	218.3	8.69
		51.0	173.8	8.66	181.4	8.70	188.7	8.72	195.7	8.72	199.7	8.72	202.3	8.71	208.6	8.69	214.7	8.65	220.4	8.61
		65.3	175.8	8.57	183.4	8.60	190.8	8.62	197.8	8.62	201.9	8.62	204.6	8.61	211.0	8.59	217.1	8.56	222.9	8.52
		79.5	177.7	8.48	185.5	8.51	192.9	8.53	200.0	8.53	204.1	8.53	206.8	8.52	213.3	8.50	219.5	8.47	225.3	8.43
	77	26.7	170.5	10.88	178.0	10.93	185.1	10.95	191.9	10.96	195.9	10.95	198.4	10.95	204.7	10.92	210.6	10.88	216.2	10.82
		38.8	172.2	10.78	179.7	10.82	186.9	10.84	193.8	10.85	197.8	10.84	200.4	10.84	206.7	10.81	212.6	10.77	218.3	10.71
		51.0	173.8	10.67	181.4	10.72	188.7	10.74	195.7	10.74	199.7	10.74	202.3	10.73	208.6	10.71	214.7	10.66	220.4	10.61
		65.3	175.8	10.56	183.4	10.60	190.8	10.62	197.8	10.63	201.9	10.62	204.6	10.61	211.0	10.59	217.1	10.55	222.9	10.49
		79.5	177.7	10.44	185.5	10.49	192.9	10.51	200.0	10.51	204.1	10.51	206.8	10.50	213.3	10.48	219.5	10.44	225.3	10.38
	86	26.7	170.5	13.51	178.0	13.57	185.1	13.60	191.9	13.60	195.9	13.60	198.4	13.59	204.7	13.55	210.6	13.50	216.2	13.43
		38.8	172.2	13.38	179.7	13.43	186.9	13.46	193.8	13.47	197.8	13.46	200.4	13.45	206.7	13.42	212.6	13.37	218.3	13.30
		51.0	173.8	13.25	181.4	13.30	188.7	13.33	195.7	13.34	199.7	13.33	202.3	13.32	208.6	13.29	214.7	13.24	220.4	13.17
		65.3	175.8	13.10	183.4	13.16	190.8	13.19	197.8	13.19	201.9	13.19	204.6	13.18	211.0	13.14	217.1	13.09	222.9	13.03
		79.5	177.7	12.96	185.5	13.02	192.9	13.05	200.0	13.05	204.1	13.05	206.8	13.04	213.3	13.01	219.5	12.96	225.3	12.89
	95	26.7	152.6	12.76	159.3	12.81	165.7	12.83	171.8	12.84	175.3	12.83	177.6	12.82	183.2	12.79	188.5	12.74	193.5	12.67
		38.8	154.1	12.63	160.9	12.68	167.3	12.71	173.5	12.71	177.0	12.70	179.4	12.69	185.0	12.66	190.3	12.61	195.4	12.55
		51.0	155.6	12.51	162.4	12.56	168.9	12.58	175.1	12.59	178.8	12.58	181.1	12.57	186.8	12.54	192.2	12.49	197.3	12.43
		65.3	157.4	12.37	164.2	12.42	170.8	12.45	177.1	12.45	180.8	12.44	183.1	12.43	188.9	12.40	194.3	12.35	199.5	12.29
		79.5	159.1	12.24	166.0	12.29	172.7	12.31	179.1	12.32	182.8	12.31	185.2	12.30	191.0	12.27	196.5	12.22	201.7	12.16
	104	26.7	135.0	11.90	140.9	11.95	146.5	11.97	151.9	11.98	155.1	11.97	157.1	11.96	162.0	11.93	166.7	11.88	171.2	11.82
		38.8	136.3	11.78	142.3	11.83	148.0	11.85	153.4	11.86	156.6	11.85	158.6	11.84	163.6	11.81	168.3	11.76	172.8	11.70
		51.0	137.6	11.67	143.6	11.72	149.4	11.74	154.9	11.74	158.1	11.74	160.2	11.73	165.2	11.70	170.0	11.65	174.5	11.59
		65.3	139.2	11.54	145.2	11.59	151.1	11.61	156.6	11.61	159.9	11.61	162.0	11.60	167.0	11.57	171.9	11.52	176.4	11.47
		79.5	140.7	11.42	146.8	11.46	152.7	11.49	158.4	11.49	161.6	11.48	163.7	11.48	168.9	11.45	173.8	11.40	178.4	11.34
	113	26.7	117.3	10.94	122.5	10.99	127.4	11.01	132.1	11.01	134.8	11.01	136.6	11.00	140.9	10.97	144.9	10.93	148.8	10.87
		38.8	118.5	10.84	123.7	10.88	128.6	10.90	133.4	10.90	136.1	10.90	137.9	10.89	142.2	10.86	146.3	10.82	150.2	10.76
		51.0	119.6	10.73	124.8	10.77	129.9	10.80	134.6	10.80	137.4	10.79	139.2	10.79	143.6	10.76	147.7	10.72	151.7	10.66
		65.3	121.0	10.61	126.2	10.66	131.3	10.68	136.2	10.68	139.0	10.68	140.8	10.67	145.2	10.64	149.4	10.60	153.4	10.54
		79.5	122.3	10.50	127.6	10.54	132.8	10.57	137.7	10.57	140.5	10.56	142.3	10.56	146.8	10.53	151.0	10.49	155.1	10.43

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	26.7	167.2	6.02	174.5	6.05	181.5	6.06	188.2	6.06	192.1	6.06	194.6	6.06	200.7	6.04	206.5	6.02	212.0	5.99
		38.8	168.9	5.96	176.2	5.99	183.3	6.00	190.1	6.00	194.0	6.00	196.5	6.00	202.7	5.98	208.5	5.96	214.1	5.93
		51.0	170.5	5.91	177.9	5.93	185.1	5.94	191.9	5.95	195.8	5.94	198.4	5.94	204.6	5.92	210.6	5.90	216.2	5.87
		65.3	172.4	5.84	179.9	5.87	187.1	5.88	194.0	5.88	198.0	5.88	200.6	5.87	206.9	5.86	212.9	5.84	218.6	5.81
		79.5	174.3	5.78	181.9	5.80	189.2	5.82	196.2	5.82	200.2	5.82	202.9	5.81	209.2	5.80	215.3	5.78	221.0	5.75
	59	26.7	167.2	7.26	174.5	7.29	181.5	7.30	188.2	7.31	192.1	7.30	194.6	7.30	200.7	7.28	206.5	7.25	212.0	7.22
		38.8	168.9	7.19	176.2	7.21	183.3	7.23	190.1	7.23	194.0	7.23	196.5	7.23	202.7	7.21	208.5	7.18	214.1	7.14
		51.0	170.5	7.12	177.9	7.15	185.1	7.16	191.9	7.16	195.8	7.16	198.4	7.16	204.6	7.14	210.6	7.11	216.2	7.08
		65.3	172.4	7.04	179.9	7.07	187.1	7.08	194.0	7.09	198.0	7.08	200.6	7.08	206.9	7.06	212.9	7.03	218.6	7.00
		79.5	174.3	6.96	181.9	6.99	189.2	7.01	196.2	7.01	200.2	7.01	202.9	7.00	209.2	6.99	215.3	6.96	221.0	6.92
	68	26.7	167.2	8.85	174.5	8.88	181.5	8.90	188.2	8.91	192.1	8.90	194.6	8.90	200.7	8.87	206.5	8.84	212.0	8.80
		38.8	168.9	8.76	176.2	8.80	183.3	8.82	190.1	8.82	194.0	8.81	196.5	8.81	202.7	8.79	208.5	8.75	214.1	8.71
		51.0	170.5	8.68	177.9	8.71	185.1	8.73	191.9	8.73	195.8	8.73	198.4	8.72	204.6	8.70	210.6	8.67	216.2	8.63
		65.3	172.4	8.58	179.9	8.62	187.1	8.63	194.0	8.64	198.0	8.63	200.6	8.63	206.9	8.61	212.9	8.57	218.6	8.53
		79.5	174.3	8.49	181.9	8.52	189.2	8.54	196.2	8.55	200.2	8.54	202.9	8.54	209.2	8.52	215.3	8.48	221.0	8.44
	77	26.7	167.2	10.90	174.5	10.95	181.5	10.97	188.2	10.98	192.1	10.97	194.6	10.96	200.7	10.94	206.5	10.89	212.0	10.84
		38.8	168.9	10.79	176.2	10.84	183.3	10.86	190.1	10.87	194.0	10.86	196.5	10.85	202.7	10.83	208.5	10.79	214.1	10.73
		51.0	170.5	10.69	177.9	10.73	185.1	10.76	191.9	10.76	195.8	10.76	198.4	10.75	204.6	10.72	210.6	10.68	216.2	10.63
		65.3	172.4	10.57	179.9	10.62	187.1	10.64	194.0	10.64	198.0	10.64	200.6	10.63	206.9	10.61	212.9	10.57	218.6	10.51
		79.5	174.3	10.46	181.9	10.50	189.2	10.53	196.2	10.53	200.2	10.53	202.9	10.52	209.2	10.49	215.3	10.45	221.0	10.40
	86	26.7	167.2	13.53	174.5	13.59	181.5	13.62	188.2	13.63	192.1	13.62	194.6	13.61	200.7	13.58	206.5	13.52	212.0	13.46
		38.8	168.9	13.40	176.2	13.46	183.3	13.48	190.1	13.49	194.0	13.48	196.5	13.48	202.7	13.44	208.5	13.39	214.1	13.32
		51.0	170.5	13.27	177.9	13.33	185.1	13.36	191.9	13.36	195.8	13.35	198.4	13.35	204.6	13.31	210.6	13.26	216.2	13.20
		65.3	172.4	13.13	179.9	13.18	187.1	13.21	194.0	13.21	198.0	13.21	200.6	13.20	206.9	13.17	212.9	13.12	218.6	13.05
		79.5	174.3	12.99	181.9	13.04	189.2	13.07	196.2	13.07	200.2	13.07	202.9	13.06	209.2	13.03	215.3	12.98	221.0	12.91
	95	26.7	149.7	12.78	156.2	12.83	162.5	12.85	168.5	12.86	172.0	12.85	174.2	12.84	179.7	12.81	184.9	12.76	189.8	12.69
		38.8	151.2	12.65	157.8	12.70	164.1	12.73	170.1	12.73	173.6	12.72	175.9	12.72	181.4	12.68	186.7	12.63	191.7	12.57
		51.0	152.6	12.53	159.3	12.58	165.7	12.60	171.8	12.61	175.3	12.60	177.6	12.59	183.2	12.56	188.5	12.51	193.5	12.45
		65.3	154.3	12.39	161.1	12.44	167.5	12.47	173.7	12.47	177.3	12.46	179.6	12.46	185.2	12.42	190.6	12.37	195.7	12.31
		79.5	156.0	12.26	162.8	12.31	169.4	12.33	175.6	12.34	179.2	12.33	181.6	12.32	187.3	12.29	192.7	12.24	197.8	12.18
	104	26.7	132.4	11.92	138.2	11.97	143.7	11.99	149.0	12.00	152.1	11.99	154.1	11.98	158.9	11.95	163.5	11.90	167.9	11.84
		38.8	133.7	11.80	139.5	11.85	145.1	11.87	150.5	11.88	153.6	11.87	155.6	11.86	160.5	11.83	165.1	11.78	169.5	11.72
		51.0	135.0	11.69	140.9	11.73	146.5	11.76	151.9	11.76	155.0	11.76	157.1	11.75	162.0	11.72	166.7	11.67	171.1	11.61
		65.3	136.5	11.56	142.4	11.61	148.2	11.63	153.6	11.63	156.8	11.63	158.8	11.62	163.8	11.59	168.6	11.54	173.1	11.48
		79.5	138.0	11.44	144.0	11.48	149.8	11.51	155.3	11.51	158.5	11.50	160.6	11.50	165.6	11.47	170.4	11.42	175.0	11.36
	113	26.7	115.1	10.96	120.1	11.01	124.9	11.03	129.5	11.03	132.2	11.03	133.9	11.02	138.1	10.99	142.1	10.95	145.9	10.89
		38.8	116.2	10.85	121.3	10.90	126.1	10.92	130.8	10.92	133.5	10.92	135.2	10.91	139.5	10.88	143.5	10.84	147.3	10.78
		51.0	117.3	10.75	122.4	10.79	127.4	10.81	132.1	10.82	134.8	10.81	136.5	10.80	140.8	10.78	144.9	10.73	148.8	10.68
		65.3	118.6	10.63	123.8	10.67	128.8	10.70	133.5	10.70	136.3	10.69	138.1	10.69	142.4	10.66	146.5	10.62	150.4	10.56
		79.5	120.0	10.52	125.2	10.56	130.2	10.58	135.0	10.59	137.8	10.58	139.6	10.57	144.0	10.55	148.1	10.50	152.1	10.45
100	50	26.7	164.0	6.07	171.1	6.09	178.0	6.11	184.5	6.11	188.3	6.11	190.8	6.10	196.8	6.09	202.5	6.06	207.9	6.03
		38.8	165.6	6.01	172.8	6.03	179.7	6.05	186.3	6.05	190.2	6.05	192.7	6.04	198.7	6.03	204.5	6.00	209.9	5.97
		51.0	167.1	5.95	174.4	5.98	181.4	5.99	188.1	5.99	192.0	5.99	194.5	5.98	200.6	5.97	206.4	5.95	211.9	5.92
		65.3	169.0	5.89	176.4	5.91	183.5	5.92	190.2	5.93	194.1	5.92	196.7	5.92	202.9	5.90	208.7	5.88	214.3	5.85
		79.5	170.9	5.82	178.3	5.85	185.5	5.86	192.3	5.86	196.3	5.86	198.9	5.86	205.1	5.84	211.0	5.82	216.7	5.79
	59	26.7	164.0	7.31	171.1	7.34	178.0	7.36	184.5	7.36	188.3	7.36	190.8	7.35	196.8	7.34	202.5	7.31	207.9	7.27
		38.8	165.6	7.24	172.8	7.27	179.7	7.29	186.3	7.29	190.2	7.29	192.7	7.28	198.7	7.26	204.5	7.23	209.9	7.20
		51.0	167.1	7.17	174.4	7.20	181.4	7.22	188.1	7.22	192.0	7.22	194.5	7.21	200.6	7.19	206.4	7.17	211.9	7.13
		65.3	169.0	7.09	176.4	7.12	183.5	7.14	190.2	7.14	194.1	7.14	196.7	7.13	202.9	7.11	208.7	7.09	214.3	7.05
		79.5	170.9	7.02	178.3	7.05	185.5	7.06	192.3	7.06	196.3	7.06	198.9	7.06	205.1	7.04	211.0	7.01	216.7	6.98
	68	26.7	164.0	8.91	171.1	8.95	178.0	8.97	184.5	8.98	188.3	8.97	190.8	8.96	196.8	8.94	202.5	8.91	207.9	8.86
		38.8	165.6	8.83	172.8	8.86	179.7	8.88	186.3	8.89	190.2	8.88	192.7	8.88	198.7	8.85	204.5	8.82	209.9	8.78
		51.0	167.1	8.74	174.4	8.78	181.4	8.80	188.1	8.80	192.0	8.80	194.5	8.79	200.6	8.77	206.4	8.74	211.9	8.69
		65.3	169.0	8.65	176.4	8.68	183.5	8.70	190.2	8.70	194.1	8.70	196.7	8.69	202.9	8.67	208.7	8.64	214.3	8.60
		79.5	170.9	8.55	178.3	8.59	185.5	8.61	192.3	8.61	196.3	8.61	198.9	8.60	205.1	8.58	211.0	8.55	216.7	8.51
	77	26.7	164.0	10.98	171.1	11.03	178.0	11.05	184.5	11.06	188.3	11.05	190.8	11.05	196.8	11.02	202.5	10.98	207.9	10.92
		38.8	165.6	10.88	172.8	10.92	179.7	10.94	186.3	10.95	190.2	10.94	192.7	10.94	198.7	10.91	204.5	10.87	209.9	10.81
		51.0	167.1	10.77	174.4	10.82	181.4	10.84	188.1	10.84	192.0	10.84	194.5	10.83	200.6	10.80	206.4	10.76	211.9	10.71
		65.3	169.0	10.65	176.4	10.70	183.5	10.72	190.2	10.73	194.1	10.72	196.7	10.71	202.9	10.69	208.7	10.65	214.3	10.59
		79.5	170.9	10.54	178.3	10.58	185.5	10.61	192.3	10.61	196.3	10.61	198.9	10.60	205.1	10.57	211.0	10.53	216.7	10.48
	86	26.7	164.0	13.64	171.1	13.69	178.0	13.72	184.5	13.73	188.3	13.72	190.8	13.71	196.8	13.68	202.5	13.63	207.9	13.56
		38.8	165.6	13.50	172.8	13.56	179.7	13.59	186.3	13.59	190.2	13.59	192.7	13.58	198.7	13.54	204.5	13.49	209.9	13.42
		51.0	167.1	13.37	174.4	13.43	181.4	13.46	188.1	13.46	192.0	13.46	194.5	13.45	200.6	13.41	206.4	13.36	211.9	13.30
		65.3	169.0	13.23	176.4	13.28	183.5	13.31	190.2	13.32	194.1	13.31	196.7	13.30	202.9	13.27	208.7	13.22	214.3	13.15
		79.5	170.9	13.09	178.3	13.14	185.5	13.17	192.3	13.17	196.3	13.17	198.9	13.16	205.1	13.13	211.0	13.08	216.7	13.01
	95	26.7	146.8	12.87	153.2	12.93	159.3	12.95	165.2	12.96	168.6	12.95	170.8	12.94	176.2	12.91	181.3	12.86	186.1	12.79
		38.8	148.2	12.75	154.7	12.80	160.9	12.82	166.8	12.83	170.2	12.82	172.5	12.81	177.9	12.78	183.0	12.73	187.9	12.66
		51.0	149.6	12.62	156.2	12.68	162.4	12.70	168.4	12.70	171.9	12.70	174.1	12.69	179.6	12.66	184.8	12.61	189.7	12.54
		65.3	151.3	12.49	157.9	12.54	164.2	12.56	170.3	12.57	173.8	12.56	176.1	12.55	181.6	12.52	186.9	12.47	191.8	12.40
		79.5	153.0	12.35	159.7	12.40	166.1	12.43	172.2	12.43	175.7	12.43	178.0	12.42	183.6	12.38	188.9	12.34	194.0	12.27
	104	26.7	129.8	12.01	135.5	12.06	140.9	12.08	146.1	12.09	149.1	12.08	151.1	12.07	155.8	12.04	160.3	11.99	164.6	11.93
		38.8	131.1	11.89	136.8	11.94	142.3	11.96	147.5	11.97	150.6	11.96	152.5	11.95	157.3	11.92	161.9	11.87	166.2	11.81
		51.0	132.3	11.78	138.1	11.82	143.6	11.85	148.9	11.85	152.0	11.85	154.0	11.84	158.8	11.81	163.4	11.76	167.8	11.70
		65.3	133.8	11.65	139.6	11.69	145.2	11.72	150.6	11.72	153.7	11.72	155.7	11.71	160.6	11.68	165.3	11.63	169.7	11.57
		79.5	135.3	11.52	141.2	11.57	146.9	11.59	152.3	11.60	155.4	11.59	157.5	11.58	162.4	11.55	167.1	11.51	171.5	11.45
	113	26.7	112.8	11.05	117.8	11.09	122.5	11.11	127.0	11.12	129.6	11.11	131.3	11.10	135.4	11.07	139.4	11.03	143.1	10.97
		38.8	113.9	10.94	118.9	10.98	123.7	11.00	128.2	11.01	130.9	11.00	132.6	10.99	136.8	10.96	140.7	10.92	144.5	10.86
		51.0	115.0	10.83	120.0	10.87	124.9	10.90	129.5	10.90	132.1	10.89	133.9	10.89	138.1	10.86	142.1	10.82	145.8	10.76
		65.3	116.3	10.71	121.4	10.76	126.3	10.78	130.9	10.78	133.6	10.78	135.4	10.77	139.6	10.74	143.6	10.70	147.5	10.64
		79.5	117.6	10.60	122.7	10.64	127.7	10.66	132.4	10.67	135.1	10.66	136.9	10.65	141.2	10.63	145.2	10.58	149.1	10.53

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	26.7	147.6	5.07	154.0	5.09	160.2	5.10	166.1	5.10	169.5	5.10	171.7	5.10	177.1	5.08	182.2	5.07	187.1	5.04
		38.8	149.0	5.02	155.5	5.04	161.7	5.05	167.7	5.05	171.2	5.05	173.4	5.05	178.8	5.03	184.0	5.02	188.9	4.99
		51.0	150.4	4.97	157.0	4.99	163.3	5.00	169.3	5.00	172.8	5.00	175.1	5.00	180.6	4.99	185.8	4.97	190.7	4.94
		65.3	152.1	4.92	158.8	4.94	165.1	4.95	171.2	4.95	174.7	4.95	177.0	4.94	182.6	4.93	187.9	4.91	192.9	4.89
		79.5	153.8	4.86	160.5	4.88	166.9	4.89	173.1	4.90	176.7	4.89	179.0	4.89	184.6	4.88	189.9	4.86	195.0	4.84
	59	26.7	147.6	6.11	154.0	6.13	160.2	6.15	166.1	6.15	169.5	6.15	171.7	6.14	177.1	6.13	182.2	6.10	187.1	6.07
		38.8	149.0	6.05	155.5	6.07	161.7	6.09	167.7	6.09	171.2	6.08	173.4	6.08	178.8	6.07	184.0	6.04	188.9	6.01
		51.0	150.4	5.99	157.0	6.01	163.3	6.03	169.3	6.03	172.8	6.03	175.1	6.02	180.6	6.01	185.8	5.98	190.7	5.95
		65.3	152.1	5.92	158.8	5.95	165.1	5.96	171.2	5.96	174.7	5.96	177.0	5.96	182.6	5.94	187.9	5.92	192.9	5.89
		79.5	153.8	5.86	160.5	5.88	166.9	5.90	173.1	5.90	176.7	5.90	179.0	5.89	184.6	5.88	189.9	5.86	195.0	5.83
	68	26.7	147.6	7.45	154.0	7.48	160.2	7.49	166.1	7.50	169.5	7.49	171.7	7.49	177.1	7.47	182.2	7.44	187.1	7.40
		38.8	149.0	7.37	155.5	7.40	161.7	7.42	167.7	7.42	171.2	7.42	173.4	7.41	178.8	7.39	184.0	7.37	188.9	7.33
		51.0	150.4	7.30	157.0	7.33	163.3	7.35	169.3	7.35	172.8	7.35	175.1	7.34	180.6	7.32	185.8	7.30	190.7	7.26
		65.3	152.1	7.22	158.8	7.25	165.1	7.27	171.2	7.27	174.7	7.27	177.0	7.26	182.6	7.24	187.9	7.22	192.9	7.18
		79.5	153.8	7.14	160.5	7.17	166.9	7.19	173.1	7.19	176.7	7.19	179.0	7.18	184.6	7.17	189.9	7.14	195.0	7.10
	77	26.7	147.6	9.17	154.0	9.21	160.2	9.23	166.1	9.24	169.5	9.23	171.7	9.23	177.1	9.20	182.2	9.17	187.1	9.12
		38.8	149.0	9.08	155.5	9.12	161.7	9.14	167.7	9.15	171.2	9.14	173.4	9.13	178.8	9.11	184.0	9.08	188.9	9.03
		51.0	150.4	9.00	157.0	9.03	163.3	9.05	169.3	9.06	172.8	9.05	175.1	9.05	180.6	9.02	185.8	8.99	190.7	8.94
		65.3	152.1	8.90	158.8	8.93	165.1	8.95	171.2	8.96	174.7	8.95	177.0	8.95	182.6	8.93	187.9	8.89	192.9	8.85
		79.5	153.8	8.80	160.5	8.84	166.9	8.86	173.1	8.86	176.7	8.86	179.0	8.85	184.6	8.83	189.9	8.80	195.0	8.75
	86	26.7	147.6	11.39	154.0	11.44	160.2	11.46	166.1	11.47	169.5	11.46	171.7	11.45	177.1	11.43	182.2	11.38	187.1	11.32
		38.8	149.0	11.28	155.5	11.32	161.7	11.35	167.7	11.35	171.2	11.35	173.4	11.34	178.8	11.31	184.0	11.27	188.9	11.21
		51.0	150.4	11.17	157.0	11.21	163.3	11.24	169.3	11.24	172.8	11.24	175.1	11.23	180.6	11.20	185.8	11.16	190.7	11.10
		65.3	152.1	11.05	158.8	11.09	165.1	11.12	171.2	11.12	174.7	11.12	177.0	11.11	182.6	11.08	187.9	11.04	192.9	10.98
		79.5	153.8	10.93	160.5	10.97	166.9	11.00	173.1	11.00	176.7	11.00	179.0	10.99	184.6	10.96	189.9	10.92	195.0	10.87
	95	26.7	132.1	10.75	137.9	10.80	143.4	10.82	148.7	10.82	151.7	10.82	153.7	10.81	158.6	10.78	163.1	10.74	167.5	10.68
		38.8	133.4	10.65	139.2	10.69	144.8	10.71	150.1	10.71	153.2	10.71	155.2	10.70	160.1	10.67	164.7	10.63	169.1	10.58
		51.0	134.7	10.54	140.5	10.59	146.2	10.61	151.6	10.61	154.7	10.60	156.7	10.60	161.6	10.57	166.3	10.53	170.7	10.47
		65.3	136.2	10.43	142.1	10.47	147.8	10.49	153.3	10.49	156.4	10.49	158.5	10.48	163.4	10.45	168.2	10.41	172.7	10.36
		79.5	137.7	10.32	143.7	10.36	149.4	10.38	155.0	10.38	158.2	10.38	160.2	10.37	165.3	10.34	170.0	10.30	174.6	10.25
	104	26.7	116.8	10.03	121.9	10.07	126.8	10.09	131.5	10.10	134.2	10.09	136.0	10.08	140.2	10.06	144.3	10.02	148.1	9.97
		38.8	118.0	9.93	123.1	9.97	128.0	9.99	132.8	10.00	135.5	9.99	137.3	9.98	141.6	9.96	145.7	9.92	149.6	9.87
		51.0	119.1	9.84	124.3	9.88	129.3	9.90	134.0	9.90	136.8	9.89	138.6	9.89	142.9	9.86	147.1	9.82	151.0	9.77
		65.3	120.4	9.73	125.7	9.77	130.7	9.79	135.5	9.79	138.3	9.78	140.2	9.78	144.5	9.75	148.7	9.71	152.7	9.66
		79.5	121.8	9.63	127.1	9.66	132.2	9.68	137.0	9.69	139.9	9.68	141.7	9.67	146.1	9.65	150.4	9.61	154.4	9.56
	113	26.7	101.6	9.23	106.0	9.26	110.2	9.28	114.3	9.28	116.7	9.28	118.2	9.27	121.9	9.25	125.4	9.21	128.8	9.17
		38.8	102.5	9.13	107.0	9.17	111.3	9.19	115.4	9.19	117.8	9.19	119.3	9.18	123.1	9.16	126.6	9.12	130.0	9.07
		51.0	103.5	9.05	108.0	9.08	112.4	9.10	116.5	9.10	118.9	9.10	120.5	9.09	124.3	9.07	127.9	9.03	131.3	8.99
		65.3	104.7	8.95	109.3	8.98	113.6	9.00	117.8	9.00	120.3	9.00	121.8	8.99	125.7	8.97	129.3	8.93	132.7	8.89
		79.5	105.8	8.85	110.5	8.89	114.9	8.91	119.1	8.91	121.6	8.90	123.2	8.90	127.0	8.87	130.7	8.84	134.2	8.79
80	50	26.7	131.2	4.86	136.9	4.88	142.4	4.89	147.6	4.90	150.7	4.89	152.7	4.89	157.4	4.88	162.0	4.86	166.3	4.84
		38.8	132.4	4.81	138.2	4.83	143.8	4.85	149.1	4.85	152.1	4.85	154.1	4.84	159.0	4.83	163.6	4.81	167.9	4.79
		51.0	133.7	4.77	139.5	4.79	145.1	4.80	150.5	4.80	153.6	4.80	155.6	4.80	160.5	4.78	165.1	4.77	169.5	4.74
		65.3	135.2	4.72	141.1	4.74	146.8	4.75	152.2	4.75	155.3	4.75	157.4	4.74	162.3	4.73	167.0	4.71	171.4	4.69
		79.5	136.7	4.67	142.7	4.69	148.4	4.70	153.9	4.70	157.0	4.70	159.1	4.69	164.1	4.68	168.8	4.66	173.3	4.64
	59	26.7	131.2	5.86	136.9	5.88	142.4	5.90	147.6	5.90	150.7	5.90	152.7	5.89	157.4	5.88	162.0	5.85	166.3	5.83
		38.8	132.4	5.80	138.2	5.83	143.8	5.84	149.1	5.84	152.1	5.84	154.1	5.83	159.0	5.82	163.6	5.80	167.9	5.77
		51.0	133.7	5.75	139.5	5.77	145.1	5.78	150.5	5.78	153.6	5.78	155.6	5.78	160.5	5.76	165.1	5.74	169.5	5.71
		65.3	135.2	5.68	141.1	5.71	146.8	5.72	152.2	5.72	155.3	5.72	157.4	5.71	162.3	5.70	167.0	5.68	171.4	5.65
		79.5	136.7	5.62	142.7	5.65	148.4	5.66	153.9	5.66	157.0	5.66	159.1	5.65	164.1	5.64	168.8	5.62	173.3	5.59
	68	26.7	131.2	7.14	136.9	7.17	142.4	7.19	147.6	7.19	150.7	7.19	152.7	7.18	157.4	7.17	162.0	7.14	166.3	7.10
		38.8	132.4	7.07	138.2	7.10	143.8	7.12	149.1	7.12	152.1	7.12	154.1	7.11	159.0	7.09	163.6	7.07	167.9	7.03
		51.0	133.7	7.00	139.5	7.03	145.1	7.05	150.5	7.05	153.6	7.05	155.6	7.04	160.5	7.03	165.1	7.00	169.5	6.96
		65.3	135.2	6.93	141.1	6.96	146.8	6.97	152.2	6.97	155.3	6.97	157.4	6.97	162.3	6.95	167.0	6.92	171.4	6.89
		79.5	136.7	6.85	142.7	6.88	148.4	6.90	153.9	6.90	157.0	6.90	159.1	6.89	164.1	6.88	168.8	6.85	173.3	6.81
	77	26.7	131.2	8.80	136.9	8.84	142.4	8.86	147.6	8.86	150.7	8.86	152.7	8.85	157.4	8.83	162.0	8.80	166.3	8.75
		38.8	132.4	8.71	138.2	8.75	143.8	8.77	149.1	8.77	152.1	8.77	154.1	8.76	159.0	8.74	163.6	8.71	167.9	8.66
		51.0	133.7	8.63	139.5	8.67	145.1	8.69	150.5	8.69	153.6	8.68	155.6	8.68	160.5	8.66	165.1	8.62	169.5	8.58
		65.3	135.2	8.54	141.1	8.57	146.8	8.59	152.2	8.59	155.3	8.59	157.4	8.58	162.3	8.56	167.0	8.53	171.4	8.49
		79.5	136.7	8.45	142.7	8.48	148.4	8.50	153.9	8.50	157.0	8.50	159.1	8.49	164.1	8.47	168.8	8.44	173.3	8.40
	86	26.7	131.2	10.93	136.9	10.97	142.4	11.00	147.6	11.00	150.7	11.00	152.7	10.99	157.4	10.96	162.0	10.92	166.3	10.86
		38.8	132.4	10.82	138.2	10.86	143.8	10.89	149.1	10.89	152.1	10.89	154.1	10.88	159.0	10.85	163.6	10.81	167.9	10.76
		51.0	133.7	10.71	139.5	10.76	145.1	10.78	150.5	10.79	153.6	10.78	155.6	10.78	160.5	10.75	165.1	10.71	169.5	10.65
		65.3	135.2	10.60	141.1	10.64	146.8	10.66	152.2	10.67	155.3	10.66	157.4	10.66	162.3	10.63	167.0	10.59	171.4	10.54
		79.5	136.7	10.48	142.7	10.53	148.4	10.55	153.9	10.56	157.0	10.55	159.1	10.54	164.1	10.52	168.8	10.48	173.3	10.43
	95	26.7	117.4	10.32	122.5	10.36	127.5	10.38	132.2	10.38	134.9	10.38	136.7	10.37	140.9	10.34	145.0	10.30	148.9	10.25
		38.8	118.6	10.21	123.7	10.25	128.7	10.28	133.4	10.28	136.2	10.27	138.0	10.27	142.3	10.24	146.4	10.20	150.3	10.15
		51.0	119.7	10.12	124.9	10.16	129.9	10.18	134.7	10.18	137.5	10.17	139.3	10.17	143.7	10.14	147.8	10.10	151.8	10.05
		65.3	121.0	10.01	126.3	10.04	131.4	10.07	136.2	10.07	139.0	10.06	140.9	10.06	145.3	10.03	149.5	9.99	153.5	9.94
		79.5	122.4	9.90	127.7	9.94	132.8	9.96	137.7	9.96	140.6	9.96	142.4	9.95	146.9	9.92	151.1	9.88	155.2	9.83
	104	26.7	103.8	9.62	108.4	9.66	112.7	9.68	116.9	9.69	119.3	9.68	120.9	9.67	124.6	9.65	128.2	9.61	131.7	9.56
		38.8	104.9	9.53	109.4	9.57	113.8	9.59	118.0	9.59	120.4	9.58	122.0	9.58	125.9	9.55	129.5	9.51	132.9	9.47
		51.0	105.9	9.44	110.5	9.47	114.9	9.49	119.2	9.50	121.6	9.49	123.2	9.48	127.1	9.46	130.7	9.42	134.2	9.37
		65.3	107.0	9.33	111.7	9.37	116.2	9.39	120.5	9.39	123.0	9.39	124.6	9.38	128.5	9.36	132.2	9.32	135.7	9.27
		79.5	108.2	9.23	113.0	9.27	117.5	9.29	121.8	9.29	124.3	9.29	126.0	9.28	129.9	9.26	133.7	9.22	137.2	9.17
	113	26.7	90.3	8.85	94.2	8.89	98.0	8.90	101.6	8.91	103.7	8.90	105.1	8.90	108.3	8.87	111.5	8.84	114.5	8.79
		38.8	91.1	8.76	95.1	8.80	98.9	8.82	102.6	8.82	104.7	8.81	106.1	8.81	109.4	8.78	112.6	8.75	115.6	8.71
		51.0	92.0	8.68	96.0	8.71	99.9	8.73	103.6	8.73	105.7	8.73	107.1	8.72	110.5	8.70	113.6	8.67	116.7	8.62
		65.3	93.1	8.58	97.1	8.62	101.0	8.64	104.7	8.64	106.9	8.63	108.3	8.63	111.7	8.61	114.9	8.57	118.0	8.53
		79.5	94.1	8.49	98.2	8.53	102.1	8.54	105.9	8.55	108.1	8.54	109.5	8.54	112.9	8.51	116.2	8.48	119.3	8.44

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	26.7	114.8	3.94	119.8	3.96	124.6	3.97	129.2	3.97	131.8	3.97	133.6	3.96	137.8	3.95	141.7	3.94	145.5	3.92
		38.8	115.9	3.90	120.9	3.92	125.8	3.93	130.4	3.93	133.1	3.93	134.9	3.93	139.1	3.92	143.1	3.90	146.9	3.88
		51.0	117.0	3.87	122.1	3.88	127.0	3.89	131.7	3.89	134.4	3.89	136.2	3.89	140.4	3.88	144.5	3.86	148.3	3.84
		65.3	118.3	3.82	123.5	3.84	128.4	3.85	133.2	3.85	135.9	3.85	137.7	3.85	142.0	3.84	146.1	3.82	150.0	3.80
		79.5	119.6	3.78	124.8	3.80	129.8	3.81	134.6	3.81	137.4	3.81	139.2	3.80	143.6	3.79	147.7	3.78	151.7	3.76
	59	26.7	114.8	4.75	119.8	4.77	124.6	4.78	129.2	4.78	131.8	4.78	133.6	4.78	137.8	4.76	141.7	4.75	145.5	4.72
		38.8	115.9	4.70	120.9	4.72	125.8	4.73	130.4	4.73	133.1	4.73	134.9	4.73	139.1	4.72	143.1	4.70	146.9	4.68
		51.0	117.0	4.66	122.1	4.68	127.0	4.69	131.7	4.69	134.4	4.69	136.2	4.68	140.4	4.67	144.5	4.65	148.3	4.63
		65.3	118.3	4.61	123.5	4.63	128.4	4.64	133.2	4.64	135.9	4.64	137.7	4.63	142.0	4.62	146.1	4.60	150.0	4.58
		79.5	119.6	4.56	124.8	4.58	129.8	4.59	134.6	4.59	137.4	4.59	139.2	4.58	143.6	4.57	147.7	4.55	151.7	4.53
	68	26.7	114.8	5.79	119.8	5.81	124.6	5.83	129.2	5.83	131.8	5.83	133.6	5.82	137.8	5.81	141.7	5.79	145.5	5.76
		38.8	115.9	5.73	120.9	5.76	125.8	5.77	130.4	5.77	133.1	5.77	134.9	5.77	139.1	5.75	143.1	5.73	146.9	5.70
		51.0	117.0	5.68	122.1	5.70	127.0	5.71	131.7	5.72	134.4	5.71	136.2	5.71	140.4	5.70	144.5	5.67	148.3	5.65
		65.3	118.3	5.62	123.5	5.64	128.4	5.65	133.2	5.65	135.9	5.65	137.7	5.65	142.0	5.63	146.1	5.61	150.0	5.58
		79.5	119.6	5.56	124.8	5.58	129.8	5.59	134.6	5.59	137.4	5.59	139.2	5.59	143.6	5.57	147.7	5.55	151.7	5.52
	77	26.7	114.8	7.14	119.8	7.17	124.6	7.18	129.2	7.18	131.8	7.18	133.6	7.18	137.8	7.16	141.7	7.13	145.5	7.09
		38.8	115.9	7.06	120.9	7.09	125.8	7.11	130.4	7.11	133.1	7.11	134.9	7.10	139.1	7.09	143.1	7.06	146.9	7.02
		51.0	117.0	7.00	122.1	7.03	127.0	7.04	131.7	7.04	134.4	7.04	136.2	7.04	140.4	7.02	144.5	6.99	148.3	6.96
		65.3	118.3	6.92	123.5	6.95	128.4	6.96	133.2	6.97	135.9	6.96	137.7	6.96	142.0	6.94	146.1	6.92	150.0	6.88
		79.5	119.6	6.85	124.8	6.88	129.8	6.89	134.6	6.89	137.4	6.89	139.2	6.89	143.6	6.87	147.7	6.84	151.7	6.81
	86	26.7	114.8	8.86	119.8	8.90	124.6	8.91	129.2	8.92	131.8	8.91	133.6	8.91	137.8	8.89	141.7	8.85	145.5	8.81
		38.8	115.9	8.77	120.9	8.81	125.8	8.83	130.4	8.83	133.1	8.83	134.9	8.82	139.1	8.80	143.1	8.76	146.9	8.72
		51.0	117.0	8.69	122.1	8.72	127.0	8.74	131.7	8.75	134.4	8.74	136.2	8.74	140.4	8.71	144.5	8.68	148.3	8.64
		65.3	118.3	8.59	123.5	8.63	128.4	8.65	133.2	8.65	135.9	8.65	137.7	8.64	142.0	8.62	146.1	8.59	150.0	8.54
		79.5	119.6	8.50	124.8	8.54	129.8	8.55	134.6	8.56	137.4	8.55	139.2	8.55	143.6	8.53	147.7	8.49	151.7	8.45
	95	26.7	102.7	8.36	107.2	8.40	111.5	8.41	115.6	8.42	118.0	8.41	119.6	8.41	123.3	8.38	126.9	8.35	130.3	8.31
		38.8	103.7	8.28	108.3	8.31	112.6	8.33	116.8	8.33	119.2	8.33	120.7	8.32	124.5	8.30	128.1	8.27	131.5	8.23
		51.0	104.7	8.20	109.3	8.23	113.7	8.25	117.9	8.25	120.3	8.25	121.9	8.24	125.7	8.22	129.4	8.19	132.8	8.15
		65.3	105.9	8.11	110.5	8.14	115.0	8.16	119.2	8.16	121.7	8.16	123.3	8.15	127.1	8.13	130.8	8.10	134.3	8.06
		79.5	107.1	8.03	111.8	8.06	116.2	8.07	120.5	8.08	123.0	8.07	124.6	8.07	128.5	8.04	132.2	8.01	135.8	7.97
	104	26.7	90.9	7.80	94.8	7.83	98.6	7.85	102.3	7.85	104.4	7.85	105.7	7.84	109.1	7.82	112.2	7.79	115.2	7.75
		38.8	91.7	7.72	95.7	7.76	99.6	7.77	103.3	7.77	105.4	7.77	106.8	7.76	110.1	7.74	113.3	7.71	116.3	7.67
		51.0	92.6	7.65	96.7	7.68	100.5	7.70	104.3	7.70	106.4	7.69	107.8	7.69	111.2	7.67	114.4	7.64	117.4	7.60
		65.3	93.7	7.57	97.8	7.60	101.7	7.61	105.4	7.61	107.6	7.61	109.0	7.61	112.4	7.59	115.7	7.56	118.8	7.52
		79.5	94.7	7.49	98.8	7.52	102.8	7.53	106.6	7.53	108.8	7.53	110.2	7.52	113.7	7.50	117.0	7.48	120.1	7.44
	113	26.7	79.0	7.18	82.4	7.20	85.7	7.22	88.9	7.22	90.7	7.22	91.9	7.21	94.8	7.19	97.5	7.16	100.1	7.13
		38.8	79.8	7.10	83.2	7.13	86.6	7.15	89.8	7.15	91.6	7.15	92.8	7.14	95.7	7.12	98.5	7.09	101.1	7.06
		51.0	80.5	7.04	84.0	7.06	87.4	7.08	90.6	7.08	92.5	7.08	93.7	7.07	96.6	7.05	99.4	7.03	102.1	6.99
		65.3	81.4	6.96	85.0	6.99	88.4	7.00	91.6	7.00	93.5	7.00	94.8	6.99	97.7	6.98	100.6	6.95	103.2	6.91
		79.5	82.3	6.89	85.9	6.91	89.4	6.93	92.7	6.93	94.6	6.93	95.8	6.92	98.8	6.90	101.7	6.88	104.4	6.84
60	50	26.7	98.4	3.17	102.7	3.18	106.8	3.19	110.7	3.19	113.0	3.19	114.5	3.19	118.1	3.18	121.5	3.17	124.7	3.15
		38.8	99.3	3.14	103.7	3.15	107.8	3.16	111.8	3.16	114.1	3.16	115.6	3.15	119.2	3.15	122.7	3.13	125.9	3.12
		51.0	100.3	3.11	104.7	3.12	108.9	3.13	112.9	3.13	115.2	3.13	116.7	3.12	120.4	3.12	123.9	3.10	127.2	3.09
		65.3	101.4	3.07	105.8	3.09	110.1	3.09	114.1	3.09	116.5	3.09	118.0	3.09	121.7	3.08	125.2	3.07	128.6	3.06
		79.5	102.5	3.04	107.0	3.05	111.3	3.06	115.4	3.06	117.8	3.06	119.3	3.06	123.1	3.05	126.6	3.04	130.0	3.02
	59	26.7	98.4	3.82	102.7	3.83	106.8	3.84	110.7	3.84	113.0	3.84	114.5	3.84	118.1	3.83	121.5	3.81	124.7	3.80
		38.8	99.3	3.78	103.7	3.80	107.8	3.80	111.8	3.81	114.1	3.80	115.6	3.80	119.2	3.79	122.7	3.78	125.9	3.76
		51.0	100.3	3.74	104.7	3.76	108.9	3.77	112.9	3.77	115.2	3.77	116.7	3.76	120.4	3.75	123.9	3.74	127.2	3.72
		65.3	101.4	3.70	105.8	3.72	110.1	3.73	114.1	3.73	116.5	3.73	118.0	3.72	121.7	3.71	125.2	3.70	128.6	3.68
		79.5	102.5	3.66	107.0	3.68	111.3	3.69	115.4	3.69	117.8	3.69	119.3	3.68	123.1	3.67	126.6	3.66	130.0	3.64
	68	26.7	98.4	4.65	102.7	4.67	106.8	4.68	110.7	4.69	113.0	4.68	114.5	4.68	118.1	4.67	121.5	4.65	124.7	4.63
		38.8	99.3	4.61	103.7	4.63	107.8	4.64	111.8	4.64	114.1	4.64	115.6	4.63	119.2	4.62	122.7	4.60	125.9	4.58
		51.0	100.3	4.56	104.7	4.58	108.9	4.59	112.9	4.59	115.2	4.59	116.7	4.59	120.4	4.58	123.9	4.56	127.2	4.54
		65.3	101.4	4.51	105.8	4.53	110.1	4.54	114.1	4.54	116.5	4.54	118.0	4.54	121.7	4.53	125.2	4.51	128.6	4.49
		79.5	102.5	4.47	107.0	4.48	111.3	4.49	115.4	4.50	117.8	4.49	119.3	4.49	123.1	4.48	126.6	4.46	130.0	4.44
	77	26.7	98.4	5.73	102.7	5.76	106.8	5.77	110.7	5.77	113.0	5.77	114.5	5.77	118.1	5.75	121.5	5.73	124.7	5.70
		38.8	99.3	5.68	103.7	5.70	107.8	5.71	111.8	5.72	114.1	5.71	115.6	5.71	119.2	5.70	122.7	5.67	125.9	5.65
		51.0	100.3	5.62	104.7	5.65	108.9	5.66	112.9	5.66	115.2	5.66	116.7	5.66	120.4	5.64	123.9	5.62	127.2	5.59
		65.3	101.4	5.56	105.8	5.58	110.1	5.60	114.1	5.60	116.5	5.60	118.0	5.59	121.7	5.58	125.2	5.56	128.6	5.53
		79.5	102.5	5.50	107.0	5.53	111.3	5.54	115.4	5.54	117.8	5.54	119.3	5.53	123.1	5.52	126.6	5.50	130.0	5.47
	86	26.7	98.4	7.12	102.7	7.15	106.8	7.16	110.7	7.17	113.0	7.16	114.5	7.16	118.1	7.14	121.5	7.11	124.7	7.08
		38.8	99.3	7.05	103.7	7.08	107.8	7.09	111.8	7.10	114.1	7.09	115.6	7.09	119.2	7.07	122.7	7.04	125.9	7.01
		51.0	100.3	6.98	104.7	7.01	108.9	7.03	112.9	7.03	115.2	7.02	116.7	7.02	120.4	7.00	123.9	6.98	127.2	6.94
		65.3	101.4	6.90	105.8	6.93	110.1	6.95	114.1	6.95	116.5	6.95	118.0	6.94	121.7	6.93	125.2	6.90	128.6	6.87
		79.5	102.5	6.83	107.0	6.86	111.3	6.87	115.4	6.88	117.8	6.87	119.3	6.87	123.1	6.85	126.6	6.83	130.0	6.79
	95	26.7	88.1	6.72	91.9	6.75	95.6	6.76	99.1	6.76	101.2	6.76	102.5	6.76	105.7	6.74	108.8	6.71	111.7	6.68
		38.8	88.9	6.65	92.8	6.68	96.5	6.70	100.1	6.70	102.1	6.69	103.5	6.69	106.7	6.67	109.8	6.64	112.7	6.61
		51.0	89.8	6.59	93.7	6.62	97.5	6.63	101.0	6.63	103.1	6.63	104.5	6.62	107.8	6.61	110.9	6.58	113.8	6.55
		65.3	90.8	6.52	94.7	6.54	98.5	6.56	102.2	6.56	104.3	6.56	105.7	6.55	109.0	6.53	112.1	6.51	115.1	6.48
		79.5	91.8	6.45	95.8	6.48	99.6	6.49	103.3	6.49	105.4	6.49	106.8	6.48	110.2	6.47	113.4	6.44	116.4	6.41
	104	26.7	77.9	6.27	81.3	6.30	84.5	6.31	87.7	6.31	89.5	6.31	90.6	6.30	93.5	6.29	96.2	6.26	98.7	6.23
		38.8	78.6	6.21	82.1	6.23	85.4	6.25	88.5	6.25	90.3	6.24	91.5	6.24	94.4	6.22	97.1	6.20	99.7	6.17
		51.0	79.4	6.15	82.9	6.17	86.2	6.19	89.4	6.19	91.2	6.18	92.4	6.18	95.3	6.16	98.1	6.14	100.7	6.11
		65.3	80.3	6.08	83.8	6.11	87.1	6.12	90.4	6.12	92.2	6.12	93.4	6.11	96.4	6.10	99.2	6.07	101.8	6.04
		79.5	81.2	6.02	84.7	6.04	88.1	6.05	91.4	6.05	93.2	6.05	94.5	6.05	97.4	6.03	100.2	6.01	102.9	5.98
	113	26.7	67.7	5.77	70.7	5.79	73.5	5.80	76.2	5.80	77.8	5.80	78.8	5.80	81.3	5.78	83.6	5.76	85.8	5.73
		38.8	68.4	5.71	71.3	5.73	74.2	5.74	76.9	5.75	78.5	5.74	79.6	5.74	82.1	5.72	84.4	5.70	86.7	5.67
		51.0	69.0	5.65	72.0	5.68	74.9	5.69	77.7	5.69	79.3	5.69	80.3	5.68	82.8	5.67	85.2	5.65	87.5	5.62
		65.3	69.8	5.59	72.8	5.62	75.8	5.63	78.6	5.63	80.2	5.63	81.2	5.62	83.8	5.61	86.2	5.58	88.5	5.56
		79.5	70.6	5.53	73.6	5.56	76.6	5.57	79.4	5.57	81.1	5.57	82.1	5.56	84.7	5.55	87.1	5.53	89.5	5.50

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	26.7	82.0	2.50	85.6	2.51	89.0	2.52	92.3	2.52	94.2	2.52	95.4	2.51	98.4	2.51	101.2	2.50	103.9	2.49
		38.8	82.8	2.48	86.4	2.49	89.9	2.49	93.2	2.49	95.1	2.49	96.3	2.49	99.4	2.48	102.2	2.47	105.0	2.46
		51.0	83.6	2.45	87.2	2.46	90.7	2.47	94.1	2.47	96.0	2.47	97.3	2.47	100.3	2.46	103.2	2.45	106.0	2.44
		65.3	84.5	2.43	88.2	2.44	91.7	2.44	95.1	2.44	97.1	2.44	98.4	2.44	101.4	2.43	104.4	2.42	107.1	2.41
		79.5	85.4	2.40	89.2	2.41	92.7	2.41	96.2	2.42	98.1	2.41	99.4	2.41	102.6	2.41	105.5	2.40	108.3	2.39
	59	26.7	82.0	3.01	85.6	3.03	89.0	3.03	92.3	3.03	94.2	3.03	95.4	3.03	98.4	3.02	101.2	3.01	103.9	3.00
		38.8	82.8	2.98	86.4	3.00	89.9	3.00	93.2	3.00	95.1	3.00	96.3	3.00	99.4	2.99	102.2	2.98	105.0	2.97
		51.0	83.6	2.95	87.2	2.97	90.7	2.97	94.1	2.97	96.0	2.97	97.3	2.97	100.3	2.96	103.2	2.95	106.0	2.94
		65.3	84.5	2.92	88.2	2.93	91.7	2.94	95.1	2.94	97.1	2.94	98.4	2.94	101.4	2.93	104.4	2.92	107.1	2.91
		79.5	85.4	2.89	89.2	2.90	92.7	2.91	96.2	2.91	98.1	2.91	99.4	2.91	102.6	2.90	105.5	2.89	108.3	2.87
	68	26.7	82.0	3.67	85.6	3.69	89.0	3.70	92.3	3.70	94.2	3.70	95.4	3.69	98.4	3.68	101.2	3.67	103.9	3.65
		38.8	82.8	3.64	86.4	3.65	89.9	3.66	93.2	3.66	95.1	3.66	96.3	3.66	99.4	3.65	102.2	3.63	105.0	3.62
		51.0	83.6	3.60	87.2	3.62	90.7	3.62	94.1	3.63	96.0	3.62	97.3	3.62	100.3	3.61	103.2	3.60	106.0	3.58
		65.3	84.5	3.56	88.2	3.58	91.7	3.58	95.1	3.59	97.1	3.58	98.4	3.58	101.4	3.57	104.4	3.56	107.1	3.54
		79.5	85.4	3.52	89.2	3.54	92.7	3.55	96.2	3.55	98.1	3.55	99.4	3.54	102.6	3.54	105.5	3.52	108.3	3.50
	77	26.7	82.0	4.53	85.6	4.54	89.0	4.55	92.3	4.56	94.2	4.55	95.4	4.55	98.4	4.54	101.2	4.52	103.9	4.50
		38.8	82.8	4.48	86.4	4.50	89.9	4.51	93.2	4.51	95.1	4.51	96.3	4.51	99.4	4.50	102.2	4.48	105.0	4.46
		51.0	83.6	4.44	87.2	4.46	90.7	4.47	94.1	4.47	96.0	4.47	97.3	4.46	100.3	4.45	103.2	4.43	106.0	4.41
		65.3	84.5	4.39	88.2	4.41	91.7	4.42	95.1	4.42	97.1	4.42	98.4	4.41	101.4	4.40	104.4	4.39	107.1	4.36
		79.5	85.4	4.34	89.2	4.36	92.7	4.37	96.2	4.37	98.1	4.37	99.4	4.37	102.6	4.36	105.5	4.34	108.3	4.32
	86	26.7	82.0	5.62	85.6	5.64	89.0	5.65	92.3	5.66	94.2	5.65	95.4	5.65	98.4	5.64	101.2	5.61	103.9	5.59
		38.8	82.8	5.56	86.4	5.59	89.9	5.60	93.2	5.60	95.1	5.60	96.3	5.59	99.4	5.58	102.2	5.56	105.0	5.53
		51.0	83.6	5.51	87.2	5.53	90.7	5.54	94.1	5.55	96.0	5.54	97.3	5.54	100.3	5.53	103.2	5.51	106.0	5.48
		65.3	84.5	5.45	88.2	5.47	91.7	5.48	95.1	5.49	97.1	5.48	98.4	5.48	101.4	5.47	104.4	5.45	107.1	5.42
		79.5	85.4	5.39	89.2	5.41	92.7	5.43	96.2	5.43	98.1	5.43	99.4	5.42	102.6	5.41	105.5	5.39	108.3	5.36
	95	26.7	73.4	5.30	76.6	5.33	79.7	5.34	82.6	5.34	84.3	5.34	85.4	5.33	88.1	5.32	90.6	5.30	93.0	5.27
		38.8	74.1	5.25	77.3	5.27	80.4	5.28	83.4	5.29	85.1	5.28	86.2	5.28	88.9	5.27	91.5	5.24	94.0	5.22
		51.0	74.8	5.20	78.1	5.22	81.2	5.23	84.2	5.23	85.9	5.23	87.1	5.23	89.8	5.21	92.4	5.19	94.9	5.17
		65.3	75.7	5.14	79.0	5.17	82.1	5.18	85.1	5.18	86.9	5.17	88.0	5.17	90.8	5.16	93.4	5.14	95.9	5.11
		79.5	76.5	5.09	79.8	5.11	83.0	5.12	86.1	5.12	87.9	5.12	89.0	5.12	91.8	5.10	94.5	5.08	97.0	5.06
	104	26.7	64.9	4.95	67.7	4.97	70.4	4.98	73.0	4.98	74.6	4.98	75.5	4.97	77.9	4.96	80.2	4.94	82.3	4.92
		38.8	65.5	4.90	68.4	4.92	71.1	4.93	73.8	4.93	75.3	4.93	76.3	4.92	78.7	4.91	80.9	4.89	83.1	4.87
		51.0	66.2	4.85	69.1	4.87	71.8	4.88	74.5	4.88	76.0	4.88	77.0	4.88	79.4	4.86	81.7	4.85	83.9	4.82
		65.3	66.9	4.80	69.8	4.82	72.6	4.83	75.3	4.83	76.9	4.83	77.9	4.82	80.3	4.81	82.6	4.79	84.8	4.77
		79.5	67.6	4.75	70.6	4.77	73.4	4.78	76.1	4.78	77.7	4.78	78.7	4.77	81.2	4.76	83.5	4.74	85.8	4.72
	113	26.7	56.4	4.55	58.9	4.57	61.2	4.58	63.5	4.58	64.8	4.58	65.7	4.57	67.7	4.56	69.7	4.54	71.5	4.52
		38.8	57.0	4.51	59.5	4.52	61.8	4.53	64.1	4.53	65.4	4.53	66.3	4.53	68.4	4.52	70.4	4.50	72.2	4.48
		51.0	57.5	4.46	60.0	4.48	62.4	4.49	64.7	4.49	66.1	4.49	66.9	4.49	69.0	4.47	71.0	4.46	72.9	4.43
		65.3	58.2	4.41	60.7	4.43	63.1	4.44	65.5	4.44	66.8	4.44	67.7	4.44	69.8	4.42	71.8	4.41	73.7	4.39
		79.5	58.8	4.37	61.4	4.38	63.8	4.39	66.2	4.40	67.5	4.39	68.4	4.39	70.6	4.38	72.6	4.36	74.6	4.34

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	26.7	195.1	7.80	203.7	7.83	211.8	7.85	219.6	7.85	224.2	7.85	227.1	7.84	234.2	7.82	241.0	7.79	247.4	7.76
		41.3	197.2	7.71	205.8	7.75	214.1	7.76	222.0	7.77	226.6	7.76	229.5	7.76	236.7	7.74	243.6	7.71	250.1	7.67
		56.0	199.3	7.63	208.0	7.66	216.4	7.68	224.3	7.68	229.0	7.68	232.0	7.68	239.2	7.66	246.2	7.63	252.7	7.59
		67.8	201.0	7.57	209.8	7.60	218.2	7.62	226.2	7.62	230.9	7.62	233.9	7.61	241.3	7.59	248.2	7.56	254.8	7.53
		79.5	202.7	7.51	211.5	7.54	220.0	7.56	228.1	7.56	232.8	7.56	235.9	7.55	243.3	7.53	250.3	7.50	257.0	7.47
	59	26.7	195.1	9.40	203.7	9.44	211.8	9.46	219.6	9.46	224.2	9.46	227.1	9.45	234.2	9.43	241.0	9.39	247.4	9.34
		41.3	197.2	9.29	205.8	9.33	214.1	9.35	222.0	9.36	226.6	9.35	229.5	9.35	236.7	9.32	243.6	9.29	250.1	9.24
		56.0	199.3	9.20	208.0	9.23	216.4	9.25	224.3	9.26	229.0	9.25	232.0	9.25	239.2	9.22	246.2	9.19	252.7	9.14
		67.8	201.0	9.12	209.8	9.16	218.2	9.18	226.2	9.18	230.9	9.18	233.9	9.17	241.3	9.15	248.2	9.11	254.8	9.07
		79.5	202.7	9.05	211.5	9.08	220.0	9.10	228.1	9.11	232.8	9.10	235.9	9.10	243.3	9.08	250.3	9.04	257.0	9.00
	68	26.7	195.1	11.46	203.7	11.50	211.8	11.53	219.6	11.53	224.2	11.53	227.1	11.52	234.2	11.49	241.0	11.45	247.4	11.39
		41.3	197.2	11.33	205.8	11.38	214.1	11.40	222.0	11.41	226.6	11.40	229.5	11.40	236.7	11.37	243.6	11.32	250.1	11.27
		56.0	199.3	11.21	208.0	11.26	216.4	11.28	224.3	11.29	229.0	11.28	232.0	11.27	239.2	11.25	246.2	11.20	252.7	11.15
		67.8	201.0	11.12	209.8	11.16	218.2	11.19	226.2	11.19	230.9	11.19	233.9	11.18	241.3	11.15	248.2	11.11	254.8	11.06
		79.5	202.7	11.03	211.5	11.07	220.0	11.10	228.1	11.10	232.8	11.10	235.9	11.09	243.3	11.06	250.3	11.02	257.0	10.97
	77	26.7	195.1	14.12	203.7	14.18	211.8	14.21	219.6	14.21	224.2	14.21	227.1	14.20	234.2	14.16	241.0	14.11	247.4	14.04
		41.3	197.2	13.96	205.8	14.02	214.1	14.05	222.0	14.06	226.6	14.05	229.5	14.04	236.7	14.01	243.6	13.95	250.1	13.88
		56.0	199.3	13.81	208.0	13.87	216.4	13.90	224.3	13.91	229.0	13.90	232.0	13.89	239.2	13.86	246.2	13.80	252.7	13.74
		67.8	201.0	13.70	209.8	13.76	218.2	13.79	226.2	13.79	230.9	13.79	233.9	13.78	241.3	13.74	248.2	13.69	254.8	13.62
		79.5	202.7	13.59	211.5	13.65	220.0	13.68	228.1	13.68	232.8	13.68	235.9	13.67	243.3	13.63	250.3	13.58	257.0	13.51
	86	26.7	195.1	17.53	203.7	17.60	211.8	17.64	219.6	17.64	224.2	17.64	227.1	17.62	234.2	17.58	241.0	17.51	247.4	17.43
		41.3	197.2	17.33	205.8	17.41	214.1	17.44	222.0	17.45	226.6	17.44	229.5	17.43	236.7	17.39	243.6	17.32	250.1	17.23
		56.0	199.3	17.15	208.0	17.22	216.4	17.26	224.3	17.27	229.0	17.26	232.0	17.25	239.2	17.20	246.2	17.14	252.7	17.05
		67.8	201.0	17.01	209.8	17.08	218.2	17.12	226.2	17.12	230.9	17.12	233.9	17.11	241.3	17.06	248.2	17.00	254.8	16.91
		79.5	202.7	16.87	211.5	16.94	220.0	16.98	228.1	16.99	232.8	16.98	235.9	16.97	243.3	16.92	250.3	16.86	257.0	16.78
	95	26.7	174.7	16.54	182.3	16.61	189.6	16.64	196.6	16.65	200.6	16.64	203.3	16.63	209.6	16.58	215.7	16.52	221.4	16.43
		41.3	176.5	16.36	184.2	16.43	191.6	16.46	198.7	16.47	202.8	16.46	205.4	16.44	211.9	16.40	218.0	16.34	223.8	16.25
		56.0	178.4	16.19	186.2	16.25	193.6	16.29	200.8	16.29	204.9	16.28	207.6	16.27	214.1	16.23	220.3	16.16	226.2	16.08
		67.8	179.9	16.05	187.7	16.12	195.3	16.15	202.5	16.16	206.6	16.15	209.4	16.14	215.9	16.09	222.2	16.03	228.1	15.95
		79.5	181.4	15.93	189.3	15.99	196.9	16.02	204.2	16.03	208.4	16.02	211.1	16.01	217.7	15.96	224.0	15.90	230.0	15.82
	104	26.7	153.9	15.38	160.6	15.44	167.1	15.47	173.3	15.48	176.8	15.47	179.1	15.46	184.8	15.42	190.1	15.36	195.2	15.28
		41.3	155.6	15.21	162.4	15.27	168.9	15.30	175.1	15.31	178.7	15.30	181.1	15.29	186.7	15.25	192.1	15.19	197.3	15.11
		56.0	157.2	15.05	164.1	15.11	170.7	15.14	177.0	15.15	180.6	15.14	183.0	15.13	188.7	15.09	194.2	15.03	199.3	14.95
		67.8	158.5	14.93	165.5	14.99	172.1	15.02	178.4	15.02	182.1	15.01	184.5	15.00	190.3	14.96	195.8	14.90	201.0	14.83
		79.5	159.9	14.81	166.8	14.86	173.5	14.89	179.9	14.90	183.6	14.89	186.0	14.88	191.9	14.84	197.4	14.78	202.7	14.71
	113	26.7	133.2	14.08	139.0	14.14	144.6	14.17	149.9	14.17	153.0	14.16	155.0	14.15	159.9	14.11	164.5	14.06	168.9	13.99
		41.3	134.6	13.93	140.5	13.98	146.1	14.01	151.5	14.02	154.7	14.01	156.7	14.00	161.6	13.96	166.3	13.91	170.7	13.83
		56.0	136.1	13.78	142.0	13.83	147.7	13.86	153.1	13.87	156.3	13.86	158.3	13.85	163.3	13.81	168.0	13.76	172.5	13.69
		67.8	137.2	13.67	143.2	13.72	148.9	13.75	154.4	13.75	157.6	13.74	159.7	13.74	164.7	13.70	169.4	13.65	174.0	13.58
		79.5	138.3	13.56	144.4	13.61	150.2	13.64	155.7	13.64	158.9	13.63	161.0	13.62	166.0	13.59	170.8	13.54	175.4	13.47
120	50	26.7	191.5	7.77	199.8	7.80	207.8	7.82	215.5	7.82	219.9	7.82	222.8	7.81	229.8	7.79	236.5	7.76	242.8	7.73
		41.3	193.5	7.68	202.0	7.72	210.1	7.73	217.8	7.74	222.3	7.73	225.2	7.73	232.3	7.71	239.0	7.68	245.4	7.64
		56.0	195.6	7.60	204.1	7.63	212.3	7.65	220.1	7.65	224.6	7.65	227.6	7.65	234.7	7.63	241.5	7.60	248.0	7.56
		67.8	197.2	7.54	205.8	7.57	214.1	7.59	222.0	7.59	226.5	7.59	229.5	7.58	236.7	7.56	243.5	7.53	250.0	7.50
		79.5	198.8	7.48	207.5	7.51	215.8	7.53	223.8	7.53	228.4	7.53	231.4	7.52	238.7	7.50	245.6	7.47	252.1	7.44
	59	26.7	191.5	9.36	199.8	9.40	207.8	9.42	215.5	9.42	219.9	9.42	222.8	9.41	229.8	9.39	236.5	9.35	242.8	9.31
		41.3	193.5	9.26	202.0	9.30	210.1	9.32	217.8	9.32	222.3	9.32	225.2	9.31	232.3	9.29	239.0	9.25	245.4	9.21
		56.0	195.6	9.16	204.1	9.20	212.3	9.22	220.1	9.22	224.6	9.22	227.6	9.21	234.7	9.19	241.5	9.15	248.0	9.11
		67.8	197.2	9.08	205.8	9.12	214.1	9.14	222.0	9.15	226.5	9.14	229.5	9.14	236.7	9.11	243.5	9.08	250.0	9.03
		79.5	198.8	9.01	207.5	9.05	215.8	9.07	223.8	9.07	228.4	9.07	231.4	9.06	238.7	9.04	245.6	9.01	252.1	8.96
	68	26.7	191.5	11.41	199.8	11.46	207.8	11.48	215.5	11.49	219.9	11.48	222.8	11.48	229.8	11.45	236.5	11.40	242.8	11.35
		41.3	193.5	11.29	202.0	11.33	210.1	11.36	217.8	11.36	222.3	11.36	225.2	11.35	232.3	11.32	239.0	11.28	245.4	11.22
		56.0	195.6	11.17	204.1	11.21	212.3	11.24	220.1	11.24	224.6	11.24	227.6	11.23	234.7	11.20	241.5	11.16	248.0	11.10
		67.8	197.2	11.08	205.8	11.12	214.1	11.15	222.0	11.15	226.5	11.15	229.5	11.14	236.7	11.11	243.5	11.07	250.0	11.01
		79.5	198.8	10.99	207.5	11.03	215.8	11.06	223.8	11.06	228.4	11.06	231.4	11.05	238.7	11.02	245.6	10.98	252.1	10.92
	77	26.7	191.5	14.06	199.8	14.12	207.8	14.15	215.5	14.16	219.9	14.15	222.8	14.14	229.8	14.11	236.5	14.05	242.8	13.98
		41.3	193.5	13.91	202.0	13.97	210.1	14.00	217.8	14.00	222.3	14.00	225.2	13.99	232.3	13.95	239.0	13.90	245.4	13.83
		56.0	195.6	13.76	204.1	13.82	212.3	13.85	220.1	13.85	224.6	13.85	227.6	13.84	234.7	13.80	241.5	13.75	248.0	13.68
		67.8	197.2	13.65	205.8	13.70	214.1	13.73	222.0	13.74	226.5	13.73	229.5	13.72	236.7	13.69	243.5	13.64	250.0	13.57
		79.5	198.8	13.54	207.5	13.59	215.8	13.62	223.8	13.63	228.4	13.62	231.4	13.61	238.7	13.58	245.6	13.53	252.1	13.46
	86	26.7	191.5	17.46	199.8	17.53	207.8	17.57	215.5	17.58	219.9	17.57	222.8	17.56	229.8	17.51	236.5	17.44	242.8	17.36
		41.3	193.5	17.27	202.0	17.34	210.1	17.38	217.8	17.38	222.3	17.38	225.2	17.36	232.3	17.32	239.0	17.25	245.4	17.17
		56.0	195.6	17.08	204.1	17.15	212.3	17.19	220.1	17.20	224.6	17.19	227.6	17.18	234.7	17.14	241.5	17.07	248.0	16.99
		67.8	197.2	16.94	205.8	17.01	214.1	17.05	222.0	17.06	226.5	17.05	229.5	17.04	236.7	17.00	243.5	16.93	250.0	16.85
		79.5	198.8	16.81	207.5	16.88	215.8	16.91	223.8	16.92	228.4	16.91	231.4	16.90	238.7	16.86	245.6	16.79	252.1	16.71
	95	26.7	171.4	16.48	178.8	16.54	186.0	16.58	192.9	16.58	196.8	16.57	199.4	16.56	205.7	16.52	211.6	16.45	217.3	16.37
		41.3	173.2	16.30	180.7	16.36	188.0	16.40	194.9	16.40	198.9	16.39	201.6	16.38	207.9	16.34	213.9	16.27	219.6	16.19
		56.0	175.0	16.13	182.7	16.19	190.0	16.22	197.0	16.23	201.1	16.22	203.7	16.21	210.1	16.16	216.2	16.10	221.9	16.02
		67.8	176.5	15.99	184.2	16.06	191.6	16.09	198.7	16.09	202.7	16.08	205.4	16.07	211.8	16.03	218.0	15.97	223.8	15.89
		79.5	178.0	15.86	185.7	15.93	193.2	15.96	200.3	15.96	204.4	15.96	207.1	15.94	213.6	15.90	219.8	15.84	225.6	15.76
	104	26.7	151.0	15.32	157.6	15.38	163.9	15.41	170.0	15.42	173.5	15.41	175.8	15.40	181.3	15.36	186.5	15.30	191.5	15.22
		41.3	152.6	15.15	159.3	15.21	165.7	15.24	171.8	15.25	175.3	15.24	177.6	15.23	183.2	15.19	188.5	15.13	193.5	15.05
		56.0	154.3	14.99	161.0	15.05	167.4	15.08	173.6	15.09	177.2	15.08	179.5	15.07	185.2	15.03	190.5	14.97	195.6	14.89
		67.8	155.6	14.87	162.3	14.93	168.8	14.96	175.1	14.96	178.7	14.95	181.0	14.94	186.7	14.90	192.1	14.85	197.2	14.77
		79.5	156.8	14.75	163.7	14.81	170.3	14.84	176.5	14.84	180.2	14.83	182.5	14.82	188.3	14.78	193.7	14.73	198.9	14.65
	113	26.7	130.7	14.03	136.4	14.08	141.9	14.11	147.1	14.12	150.1	14.11	152.1	14.10	156.9	14.06	161.4	14.00	165.7	13.93
		41.3	132.1	13.87	137.9	13.93	143.4	13.96	148.7	13.96	151.7	13.95	153.7	13.94	158.5	13.91	163.1	13.85	167.5	13.78
		56.0	133.5	13.73	139.3	13.78	144.9	13.81	150.2	13.81	153.3	13.81	155.4	13.80	160.2	13.76	164.9	13.71	169.3	13.64
		67.8	134.6	13.61	140.5	13.67	146.1	13.69	151.5	13.70	154.6	13.69	156.7	13.68	161.6	13.65	166.2	13.59	170.7	13.52
		79.5	135.7	13.50	141.7	13.56	147.3	13.58	152.8	13.59	155.9	13.58	158.0	13.57	162.9	13.54	167.6	13.48	172.1	13.41

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	26.7	187.8	7.78	196.0	7.81	203.8	7.83	211.4	7.84	215.7	7.83	218.5	7.83	225.4	7.81	231.9	7.78	238.1	7.74
		41.3	189.8	7.70	198.1	7.73	206.0	7.75	213.6	7.75	218.0	7.75	220.9	7.74	227.8	7.72	234.4	7.69	240.6	7.65
		56.0	191.8	7.62	200.2	7.65	208.2	7.66	215.9	7.67	220.3	7.66	223.2	7.66	230.2	7.64	236.9	7.61	243.2	7.57
		67.8	193.4	7.55	201.8	7.58	209.9	7.60	217.7	7.60	222.2	7.60	225.1	7.60	232.1	7.58	238.9	7.55	245.2	7.51
		79.5	195.0	7.49	203.5	7.52	211.7	7.54	219.5	7.54	224.0	7.54	227.0	7.53	234.1	7.52	240.8	7.49	247.3	7.45
	59	26.7	187.8	9.38	196.0	9.42	203.8	9.44	211.4	9.44	215.7	9.44	218.5	9.43	225.4	9.41	231.9	9.37	238.1	9.32
		41.3	189.8	9.27	198.1	9.31	206.0	9.33	213.6	9.34	218.0	9.33	220.9	9.33	227.8	9.30	234.4	9.27	240.6	9.22
		56.0	191.8	9.18	200.2	9.21	208.2	9.23	215.9	9.24	220.3	9.23	223.2	9.23	230.2	9.20	236.9	9.17	243.2	9.12
		67.8	193.4	9.10	201.8	9.14	209.9	9.16	217.7	9.16	222.2	9.16	225.1	9.15	232.1	9.13	238.9	9.09	245.2	9.05
		79.5	195.0	9.03	203.5	9.06	211.7	9.08	219.5	9.09	224.0	9.08	227.0	9.08	234.1	9.06	240.8	9.02	247.3	8.98
	68	26.7	187.8	11.43	196.0	11.48	203.8	11.50	211.4	11.51	215.7	11.50	218.5	11.50	225.4	11.47	231.9	11.42	238.1	11.37
		41.3	189.8	11.31	198.1	11.35	206.0	11.38	213.6	11.38	218.0	11.38	220.9	11.37	227.8	11.34	234.4	11.30	240.6	11.24
		56.0	191.8	11.19	200.2	11.23	208.2	11.26	215.9	11.26	220.3	11.26	223.2	11.25	230.2	11.22	236.9	11.18	243.2	11.12
		67.8	193.4	11.09	201.8	11.14	209.9	11.16	217.7	11.17	222.2	11.16	225.1	11.16	232.1	11.13	238.9	11.09	245.2	11.03
		79.5	195.0	11.00	203.5	11.05	211.7	11.07	219.5	11.08	224.0	11.07	227.0	11.07	234.1	11.04	240.8	11.00	247.3	10.94
	77	26.7	187.8	14.09	196.0	14.14	203.8	14.18	211.4	14.18	215.7	14.17	218.5	14.17	225.4	14.13	231.9	14.08	238.1	14.01
		41.3	189.8	13.93	198.1	13.99	206.0	14.02	213.6	14.03	218.0	14.02	220.9	14.01	227.8	13.98	234.4	13.92	240.6	13.85
		56.0	191.8	13.78	200.2	13.84	208.2	13.87	215.9	13.88	220.3	13.87	223.2	13.86	230.2	13.83	236.9	13.77	243.2	13.71
		67.8	193.4	13.67	201.8	13.73	209.9	13.76	217.7	13.76	222.2	13.76	225.1	13.75	232.1	13.71	238.9	13.66	245.2	13.59
		79.5	195.0	13.56	203.5	13.62	211.7	13.65	219.5	13.65	224.0	13.65	227.0	13.64	234.1	13.60	240.8	13.55	247.3	13.48
	86	26.7	187.8	17.49	196.0	17.56	203.8	17.60	211.4	17.61	215.7	17.60	218.5	17.59	225.4	17.54	231.9	17.47	238.1	17.39
		41.3	189.8	17.30	198.1	17.37	206.0	17.41	213.6	17.41	218.0	17.40	220.9	17.39	227.8	17.35	234.4	17.28	240.6	17.20
		56.0	191.8	17.11	200.2	17.18	208.2	17.22	215.9	17.23	220.3	17.22	223.2	17.21	230.2	17.17	236.9	17.10	243.2	17.01
		67.8	193.4	16.97	201.8	17.04	209.9	17.08	217.7	17.09	222.2	17.08	225.1	17.07	232.1	17.02	238.9	16.96	245.2	16.87
		79.5	195.0	16.83	203.5	16.90	211.7	16.94	219.5	16.95	224.0	16.94	227.0	16.93	234.1	16.89	240.8	16.82	247.3	16.74
	95	26.7	168.1	16.51	175.4	16.57	182.4	16.61	189.2	16.61	193.1	16.60	195.6	16.59	201.7	16.55	207.6	16.48	213.1	16.40
		41.3	169.9	16.33	177.3	16.39	184.4	16.42	191.2	16.43	195.1	16.42	197.7	16.41	203.9	16.37	209.8	16.30	215.4	16.22
		56.0	171.7	16.15	179.1	16.22	186.3	16.25	193.2	16.26	197.2	16.25	199.8	16.23	206.0	16.19	212.0	16.13	217.6	16.05
		67.8	173.1	16.02	180.7	16.08	187.9	16.12	194.8	16.12	198.8	16.11	201.5	16.10	207.8	16.06	213.8	16.00	219.5	15.91
		79.5	174.5	15.89	182.2	15.95	189.5	15.99	196.5	15.99	200.5	15.98	203.1	15.97	209.5	15.93	215.6	15.87	221.3	15.79
	104	26.7	148.1	15.34	154.6	15.41	160.8	15.44	166.7	15.44	170.1	15.43	172.4	15.42	177.8	15.38	182.9	15.32	187.8	15.24
		41.3	149.7	15.18	156.2	15.24	162.5	15.27	168.5	15.27	172.0	15.26	174.2	15.25	179.7	15.21	184.9	15.15	189.8	15.08
		56.0	151.3	15.02	157.9	15.08	164.2	15.11	170.3	15.11	173.8	15.10	176.1	15.09	181.6	15.05	186.8	14.99	191.8	14.92
		67.8	152.6	14.89	159.2	14.95	165.6	14.98	171.7	14.99	175.2	14.98	177.6	14.97	183.1	14.93	188.4	14.87	193.4	14.79
		79.5	153.8	14.77	160.5	14.83	167.0	14.86	173.1	14.87	176.7	14.86	179.0	14.85	184.6	14.81	190.0	14.75	195.0	14.68
	113	26.7	128.2	14.05	133.8	14.11	139.1	14.13	144.3	14.14	147.2	14.13	149.2	14.12	153.9	14.08	158.3	14.03	162.5	13.96
		41.3	129.6	13.90	135.2	13.95	140.6	13.98	145.8	13.98	148.8	13.98	150.8	13.97	155.5	13.93	160.0	13.88	164.3	13.80
		56.0	130.9	13.75	136.6	13.80	142.1	13.83	147.4	13.84	150.4	13.83	152.4	13.82	157.1	13.78	161.7	13.73	166.0	13.66
		67.8	132.0	13.64	137.8	13.69	143.3	13.72	148.6	13.72	151.7	13.71	153.6	13.70	158.5	13.67	163.0	13.61	167.4	13.55
		79.5	133.1	13.53	138.9	13.58	144.5	13.61	149.8	13.61	152.9	13.60	154.9	13.59	159.8	13.56	164.4	13.51	168.8	13.44
100	50	26.7	184.1	7.84	192.1	7.87	199.8	7.89	207.2	7.89	211.5	7.89	214.3	7.89	221.0	7.87	227.4	7.84	233.4	7.80
		41.3	186.1	7.76	194.2	7.79	202.0	7.81	209.4	7.81	213.7	7.80	216.5	7.80	223.3	7.78	229.8	7.75	235.9	7.71
		56.0	188.0	7.67	196.2	7.71	204.1	7.72	211.6	7.73	216.0	7.72	218.8	7.72	225.7	7.70	232.2	7.67	238.4	7.63
		67.8	189.6	7.61	197.9	7.64	205.8	7.66	213.4	7.66	217.8	7.66	220.7	7.65	227.6	7.63	234.2	7.61	240.4	7.57
		79.5	191.2	7.55	199.5	7.58	207.5	7.60	215.2	7.60	219.6	7.60	222.5	7.59	229.5	7.57	236.1	7.54	242.4	7.51
	59	26.7	184.1	9.45	192.1	9.49	199.8	9.51	207.2	9.51	211.5	9.51	214.3	9.50	221.0	9.48	227.4	9.44	233.4	9.39
		41.3	186.1	9.34	194.2	9.38	202.0	9.40	209.4	9.41	213.7	9.40	216.5	9.40	223.3	9.37	229.8	9.34	235.9	9.29
		56.0	188.0	9.25	196.2	9.28	204.1	9.30	211.6	9.31	216.0	9.30	218.8	9.30	225.7	9.27	232.2	9.24	238.4	9.19
		67.8	189.6	9.17	197.9	9.21	205.8	9.23	213.4	9.23	217.8	9.23	220.7	9.22	227.6	9.20	234.2	9.16	240.4	9.12
		79.5	191.2	9.10	199.5	9.13	207.5	9.15	215.2	9.16	219.6	9.15	222.5	9.15	229.5	9.12	236.1	9.09	242.4	9.04
	68	26.7	184.1	11.52	192.1	11.57	199.8	11.59	207.2	11.60	211.5	11.59	214.3	11.58	221.0	11.55	227.4	11.51	233.4	11.45
		41.3	186.1	11.39	194.2	11.44	202.0	11.46	209.4	11.47	213.7	11.46	216.5	11.46	223.3	11.43	229.8	11.38	235.9	11.33
		56.0	188.0	11.27	196.2	11.32	204.1	11.34	211.6	11.35	216.0	11.34	218.8	11.34	225.7	11.31	232.2	11.26	238.4	11.21
		67.8	189.6	11.18	197.9	11.22	205.8	11.25	213.4	11.25	217.8	11.25	220.7	11.24	227.6	11.21	234.2	11.17	240.4	11.11
		79.5	191.2	11.09	199.5	11.13	207.5	11.16	215.2	11.16	219.6	11.16	222.5	11.15	229.5	11.12	236.1	11.08	242.4	11.03
	77	26.7	184.1	14.19	192.1	14.25	199.8	14.28	207.2	14.29	211.5	14.28	214.3	14.27	221.0	14.24	227.4	14.18	233.4	14.11
		41.3	186.1	14.04	194.2	14.10	202.0	14.13	209.4	14.13	213.7	14.13	216.5	14.12	223.3	14.08	229.8	14.03	235.9	13.96
		56.0	188.0	13.89	196.2	13.95	204.1	13.98	211.6	13.98	216.0	13.98	218.8	13.97	225.7	13.93	232.2	13.88	238.4	13.81
		67.8	189.6	13.77	197.9	13.83	205.8	13.86	213.4	13.87	217.8	13.86	220.7	13.85	227.6	13.82	234.2	13.76	240.4	13.70
		79.5	191.2	13.66	199.5	13.72	207.5	13.75	215.2	13.76	219.6	13.75	222.5	13.74	229.5	13.71	236.1	13.65	242.4	13.59
	86	26.7	184.1	17.62	192.1	17.69	199.8	17.73	207.2	17.74	211.5	17.73	214.3	17.72	221.0	17.67	227.4	17.61	233.4	17.52
		41.3	186.1	17.43	194.2	17.50	202.0	17.54	209.4	17.55	213.7	17.54	216.5	17.53	223.3	17.48	229.8	17.41	235.9	17.33
		56.0	188.0	17.24	196.2	17.31	204.1	17.35	211.6	17.36	216.0	17.35	218.8	17.34	225.7	17.30	232.2	17.23	238.4	17.14
		67.8	189.6	17.10	197.9	17.17	205.8	17.21	213.4	17.22	217.8	17.21	220.7	17.20	227.6	17.15	234.2	17.09	240.4	17.00
		79.5	191.2	16.96	199.5	17.03	207.5	17.07	215.2	17.08	219.6	17.07	222.5	17.06	229.5	17.02	236.1	16.95	242.4	16.87
	95	26.7	164.8	16.63	172.0	16.70	178.9	16.73	185.5	16.74	189.3	16.73	191.8	16.72	197.8	16.67	203.5	16.61	208.9	16.52
		41.3	166.5	16.45	173.8	16.52	180.8	16.55	187.4	16.55	191.3	16.54	193.8	16.53	199.9	16.49	205.7	16.43	211.1	16.34
		56.0	168.3	16.28	175.6	16.34	182.7	16.37	189.4	16.38	193.3	16.37	195.9	16.36	202.0	16.32	207.8	16.25	213.4	16.17
		67.8	169.7	16.14	177.1	16.21	184.2	16.24	191.0	16.24	194.9	16.23	197.5	16.22	203.7	16.18	209.6	16.12	215.2	16.03
		79.5	171.1	16.01	178.6	16.08	185.7	16.11	192.6	16.11	196.6	16.10	199.1	16.09	205.4	16.05	211.3	15.99	217.0	15.91
	104	26.7	145.2	15.46	151.6	15.52	157.6	15.56	163.4	15.56	166.8	15.55	169.0	15.54	174.3	15.50	179.3	15.44	184.1	15.36
		41.3	146.8	15.29	153.2	15.35	159.3	15.39	165.2	15.39	168.6	15.38	170.8	15.37	176.2	15.33	181.3	15.27	186.1	15.19
		56.0	148.3	15.13	154.8	15.19	161.0	15.22	166.9	15.23	170.4	15.22	172.6	15.21	178.0	15.17	183.2	15.11	188.1	15.03
		67.8	149.6	15.01	156.1	15.07	162.4	15.10	168.3	15.10	171.8	15.09	174.1	15.08	179.5	15.04	184.7	14.98	189.6	14.91
		79.5	150.8	14.89	157.4	14.94	163.7	14.98	169.7	14.98	173.2	14.97	175.5	14.96	181.0	14.92	186.3	14.86	191.2	14.79
	113	26.7	125.7	14.16	131.1	14.21	136.4	14.24	141.4	14.25	144.4	14.24	146.3	14.23	150.8	14.19	155.2	14.14	159.3	14.06
		41.3	127.0	14.00	132.6	14.06	137.9	14.09	143.0	14.09	145.9	14.08	147.8	14.07	152.4	14.04	156.9	13.98	161.0	13.91
		56.0	128.4	13.85	134.0	13.91	139.3	13.94	144.5	13.94	147.4	13.93	149.4	13.92	154.1	13.89	158.5	13.83	162.7	13.76
		67.8	129.4	13.74	135.1	13.79	140.5	13.82	145.7	13.83	148.7	13.82	150.6	13.81	155.4	13.77	159.8	13.72	164.1	13.65
		79.5	130.5	13.63	136.2	13.68	141.7	13.71	146.9	13.72	149.9	13.71	151.9	13.70	156.6	13.66	161.2	13.61	165.5	13.54

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	26.7	165.7	6.55	172.9	6.58	179.9	6.59	186.5	6.59	190.3	6.59	192.8	6.59	198.9	6.57	204.6	6.54	210.1	6.51
		41.3	167.5	6.48	174.8	6.50	181.8	6.52	188.5	6.52	192.4	6.52	194.9	6.51	201.0	6.50	206.8	6.47	212.3	6.44
		56.0	169.2	6.41	176.6	6.44	183.7	6.45	190.5	6.45	194.4	6.45	197.0	6.45	203.1	6.43	209.0	6.40	214.6	6.37
		67.8	170.7	6.36	178.1	6.38	185.2	6.40	192.1	6.40	196.0	6.40	198.6	6.39	204.8	6.38	210.8	6.35	216.4	6.32
		79.5	172.1	6.31	179.6	6.33	186.8	6.35	193.7	6.35	197.7	6.34	200.3	6.34	206.5	6.32	212.5	6.30	218.2	6.27
	59	26.7	165.7	7.89	172.9	7.92	179.9	7.94	186.5	7.94	190.3	7.94	192.8	7.94	198.9	7.92	204.6	7.89	210.1	7.85
		41.3	167.5	7.80	174.8	7.84	181.8	7.85	188.5	7.86	192.4	7.85	194.9	7.85	201.0	7.83	206.8	7.80	212.3	7.76
		56.0	169.2	7.72	176.6	7.75	183.7	7.77	190.5	7.77	194.4	7.77	197.0	7.77	203.1	7.75	209.0	7.72	214.6	7.68
		67.8	170.7	7.66	178.1	7.69	185.2	7.71	192.1	7.71	196.0	7.71	198.6	7.70	204.8	7.68	210.8	7.65	216.4	7.61
		79.5	172.1	7.60	179.6	7.63	186.8	7.64	193.7	7.65	197.7	7.64	200.3	7.64	206.5	7.62	212.5	7.59	218.2	7.55
	68	26.7	165.7	9.62	172.9	9.66	179.9	9.68	186.5	9.69	190.3	9.68	192.8	9.67	198.9	9.65	204.6	9.61	210.1	9.56
		41.3	167.5	9.51	174.8	9.55	181.8	9.58	188.5	9.58	192.4	9.57	194.9	9.57	201.0	9.54	206.8	9.51	212.3	9.46
		56.0	169.2	9.41	176.6	9.45	183.7	9.47	190.5	9.48	194.4	9.47	197.0	9.47	203.1	9.44	209.0	9.41	214.6	9.36
		67.8	170.7	9.34	178.1	9.38	185.2	9.40	192.1	9.40	196.0	9.40	198.6	9.39	204.8	9.37	210.8	9.33	216.4	9.28
		79.5	172.1	9.26	179.6	9.30	186.8	9.32	193.7	9.32	197.7	9.32	200.3	9.31	206.5	9.29	212.5	9.25	218.2	9.21
	77	26.7	165.7	11.85	172.9	11.90	179.9	11.93	186.5	11.93	190.3	11.93	192.8	11.92	198.9	11.89	204.6	11.85	210.1	11.79
		41.3	167.5	11.72	174.8	11.77	181.8	11.80	188.5	11.80	192.4	11.80	194.9	11.79	201.0	11.76	206.8	11.72	212.3	11.66
		56.0	169.2	11.60	176.6	11.65	183.7	11.67	190.5	11.68	194.4	11.67	197.0	11.67	203.1	11.64	209.0	11.59	214.6	11.53
		67.8	170.7	11.50	178.1	11.55	185.2	11.58	192.1	11.58	196.0	11.58	198.6	11.57	204.8	11.54	210.8	11.50	216.4	11.44
		79.5	172.1	11.41	179.6	11.46	186.8	11.48	193.7	11.49	197.7	11.48	200.3	11.48	206.5	11.45	212.5	11.40	218.2	11.35
	86	26.7	165.7	14.72	172.9	14.78	179.9	14.81	186.5	14.82	190.3	14.81	192.8	14.80	198.9	14.76	204.6	14.71	210.1	14.63
		41.3	167.5	14.56	174.8	14.62	181.8	14.65	188.5	14.65	192.4	14.65	194.9	14.64	201.0	14.60	206.8	14.54	212.3	14.47
		56.0	169.2	14.40	176.6	14.46	183.7	14.49	190.5	14.50	194.4	14.49	197.0	14.48	203.1	14.45	209.0	14.39	214.6	14.32
		67.8	170.7	14.28	178.1	14.34	185.2	14.37	192.1	14.38	196.0	14.37	198.6	14.36	204.8	14.33	210.8	14.27	216.4	14.20
		79.5	172.1	14.17	179.6	14.23	186.8	14.26	193.7	14.26	197.7	14.26	200.3	14.25	206.5	14.21	212.5	14.16	218.2	14.09
	95	26.7	148.3	13.89	154.8	13.95	161.0	13.97	166.9	13.98	170.3	13.97	172.6	13.96	178.0	13.92	183.1	13.87	188.0	13.80
		41.3	149.9	13.74	156.4	13.79	162.7	13.82	168.7	13.83	172.2	13.82	174.4	13.81	179.9	13.77	185.1	13.72	190.0	13.65
		56.0	151.5	13.59	158.1	13.65	164.4	13.68	170.5	13.68	174.0	13.67	176.3	13.66	181.8	13.63	187.1	13.57	192.0	13.50
		67.8	152.7	13.48	159.4	13.53	165.8	13.56	171.9	13.57	175.4	13.56	177.8	13.55	183.3	13.51	188.6	13.46	193.7	13.39
		79.5	154.0	13.37	160.7	13.43	167.2	13.45	173.3	13.46	176.9	13.45	179.2	13.44	184.9	13.41	190.2	13.35	195.3	13.28
	104	26.7	130.7	12.91	136.4	12.97	141.9	12.99	147.1	13.00	150.1	12.99	152.1	12.98	156.9	12.95	161.4	12.89	165.7	12.83
		41.3	132.1	12.77	137.9	12.82	143.4	12.85	148.7	12.85	151.7	12.85	153.7	12.84	158.6	12.80	163.1	12.75	167.5	12.69
		56.0	133.5	12.64	139.3	12.69	144.9	12.71	150.2	12.72	153.3	12.71	155.4	12.70	160.2	12.67	164.9	12.62	169.3	12.55
		67.8	134.6	12.53	140.5	12.58	146.1	12.61	151.5	12.61	154.6	12.61	156.7	12.60	161.6	12.56	166.2	12.51	170.7	12.45
		79.5	135.7	12.43	141.7	12.48	147.3	12.51	152.8	12.51	155.9	12.50	158.0	12.50	162.9	12.46	167.6	12.41	172.1	12.35
	113	26.7	113.1	11.82	118.0	11.87	122.8	11.89	127.3	11.90	129.9	11.89	131.6	11.88	135.8	11.85	139.7	11.81	143.4	11.75
		41.3	114.3	11.69	119.3	11.74	124.1	11.76	128.7	11.77	131.3	11.76	133.0	11.75	137.2	11.72	141.2	11.68	144.9	11.62
		56.0	115.5	11.57	120.6	11.62	125.4	11.64	130.0	11.64	132.7	11.64	134.4	11.63	138.7	11.60	142.7	11.55	146.5	11.49
		67.8	116.5	11.47	121.6	11.52	126.4	11.54	131.1	11.55	133.8	11.54	135.6	11.53	139.8	11.50	143.9	11.46	147.7	11.40
		79.5	117.5	11.38	122.6	11.43	127.5	11.45	132.2	11.45	134.9	11.45	136.7	11.44	141.0	11.41	145.1	11.37	148.9	11.31
80	50	26.7	147.3	6.28	153.7	6.31	159.9	6.32	165.8	6.33	169.2	6.32	171.4	6.32	176.8	6.30	181.9	6.28	186.7	6.25
		41.3	148.9	6.21	155.3	6.24	161.6	6.25	167.5	6.26	171.0	6.25	173.2	6.25	178.7	6.23	183.8	6.21	188.7	6.18
		56.0	150.4	6.15	157.0	6.17	163.3	6.19	169.3	6.19	172.8	6.19	175.1	6.18	180.6	6.17	185.8	6.14	190.7	6.11
		67.8	151.7	6.10	158.3	6.12	164.7	6.14	170.7	6.14	174.3	6.14	176.5	6.13	182.1	6.12	187.3	6.09	192.3	6.06
		79.5	153.0	6.05	159.6	6.07	166.0	6.09	172.2	6.09	175.7	6.09	178.0	6.08	183.6	6.07	188.9	6.04	193.9	6.01
	59	26.7	147.3	7.57	153.7	7.60	159.9	7.62	165.8	7.62	169.2	7.62	171.4	7.61	176.8	7.59	181.9	7.56	186.7	7.53
		41.3	148.9	7.49	155.3	7.52	161.6	7.54	167.5	7.54	171.0	7.53	173.2	7.53	178.7	7.51	183.8	7.48	188.7	7.44
		56.0	150.4	7.41	157.0	7.44	163.3	7.46	169.3	7.46	172.8	7.46	175.1	7.45	180.6	7.43	185.8	7.40	190.7	7.37
		67.8	151.7	7.35	158.3	7.38	164.7	7.39	170.7	7.40	174.3	7.39	176.5	7.39	182.1	7.37	187.3	7.34	192.3	7.31
		79.5	153.0	7.29	159.6	7.32	166.0	7.33	172.2	7.34	175.7	7.33	178.0	7.33	183.6	7.31	188.9	7.28	193.9	7.25
	68	26.7	147.3	9.23	153.7	9.27	159.9	9.29	165.8	9.29	169.2	9.29	171.4	9.28	176.8	9.26	181.9	9.22	186.7	9.18
		41.3	148.9	9.13	155.3	9.17	161.6	9.19	167.5	9.19	171.0	9.19	173.2	9.18	178.7	9.16	183.8	9.12	188.7	9.08
		56.0	150.4	9.03	157.0	9.07	163.3	9.09	169.3	9.09	172.8	9.09	175.1	9.08	180.6	9.06	185.8	9.03	190.7	8.98
		67.8	151.7	8.96	158.3	8.99	164.7	9.01	170.7	9.02	174.3	9.01	176.5	9.01	182.1	8.98	187.3	8.95	192.3	8.91
		79.5	153.0	8.88	159.6	8.92	166.0	8.94	172.2	8.95	175.7	8.94	178.0	8.94	183.6	8.91	188.9	8.88	193.9	8.83
	77	26.7	147.3	11.37	153.7	11.42	159.9	11.44	165.8	11.45	169.2	11.44	171.4	11.44	176.8	11.41	181.9	11.36	186.7	11.31
		41.3	148.9	11.25	155.3	11.29	161.6	11.32	167.5	11.32	171.0	11.32	173.2	11.31	178.7	11.28	183.8	11.24	188.7	11.18
		56.0	150.4	11.13	157.0	11.18	163.3	11.20	169.3	11.20	172.8	11.20	175.1	11.19	180.6	11.16	185.8	11.12	190.7	11.07
		67.8	151.7	11.04	158.3	11.08	164.7	11.11	170.7	11.11	174.3	11.11	176.5	11.10	182.1	11.07	187.3	11.03	192.3	10.97
		79.5	153.0	10.95	159.6	10.99	166.0	11.02	172.2	11.02	175.7	11.02	178.0	11.01	183.6	10.98	188.9	10.94	193.9	10.89
	86	26.7	147.3	14.12	153.7	14.18	159.9	14.21	165.8	14.21	169.2	14.21	171.4	14.20	176.8	14.16	181.9	14.11	186.7	14.04
		41.3	148.9	13.96	155.3	14.02	161.6	14.05	167.5	14.06	171.0	14.05	173.2	14.04	178.7	14.01	183.8	13.95	188.7	13.88
		56.0	150.4	13.82	157.0	13.87	163.3	13.90	169.3	13.91	172.8	13.90	175.1	13.89	180.6	13.86	185.8	13.81	190.7	13.74
		67.8	151.7	13.70	158.3	13.76	164.7	13.79	170.7	13.80	174.3	13.79	176.5	13.78	182.1	13.74	187.3	13.69	192.3	13.62
		79.5	153.0	13.59	159.6	13.65	166.0	13.68	172.2	13.68	175.7	13.68	178.0	13.67	183.6	13.63	188.9	13.58	193.9	13.51
	95	26.7	131.8	13.33	137.6	13.38	143.1	13.41	148.4	13.41	151.4	13.40	153.4	13.39	158.2	13.36	162.8	13.31	167.1	13.24
		41.3	133.2	13.18	139.0	13.23	144.6	13.26	149.9	13.26	153.0	13.26	155.0	13.25	159.9	13.21	164.5	13.16	168.9	13.09
		56.0	134.6	13.04	140.5	13.09	146.1	13.12	151.5	13.12	154.7	13.12	156.7	13.11	161.6	13.07	166.3	13.02	170.7	12.96
		67.8	135.8	12.93	141.7	12.99	147.4	13.01	152.8	13.02	156.0	13.01	158.0	13.00	163.0	12.97	167.7	12.91	172.1	12.85
		79.5	136.9	12.83	142.9	12.88	148.6	12.91	154.1	12.91	157.3	12.90	159.3	12.89	164.3	12.86	169.1	12.81	173.6	12.74
	104	26.7	116.2	12.39	121.2	12.44	126.1	12.46	130.8	12.47	133.4	12.46	135.2	12.45	139.4	12.42	143.5	12.37	147.3	12.31
		41.3	117.4	12.25	122.5	12.30	127.5	12.33	132.2	12.33	134.9	12.32	136.6	12.32	140.9	12.28	145.0	12.24	148.9	12.17
		56.0	118.7	12.12	123.8	12.17	128.8	12.20	133.6	12.20	136.3	12.19	138.1	12.19	142.4	12.15	146.5	12.11	150.4	12.04
		67.8	119.7	12.02	124.9	12.07	129.9	12.10	134.7	12.10	137.4	12.09	139.3	12.09	143.6	12.05	147.8	12.01	151.7	11.94
		79.5	120.7	11.93	125.9	11.97	131.0	12.00	135.8	12.00	138.6	12.00	140.4	11.99	144.8	11.96	149.0	11.91	153.0	11.85
	113	26.7	100.5	11.34	104.9	11.39	109.1	11.41	113.2	11.42	115.5	11.41	117.0	11.40	120.7	11.37	124.2	11.33	127.5	11.27
		41.3	101.6	11.22	106.0	11.26	110.3	11.29	114.4	11.29	116.7	11.28	118.3	11.28	122.0	11.25	125.5	11.20	128.8	11.15
		56.0	102.7	11.10	107.2	11.14	111.5	11.17	115.6	11.17	118.0	11.16	119.5	11.16	123.2	11.13	126.8	11.08	130.2	11.03
		67.8	103.5	11.01	108.1	11.05	112.4	11.08	116.5	11.08	118.9	11.07	120.5	11.06	124.3	11.04	127.9	10.99	131.3	10.94
		79.5	104.4	10.92	109.0	10.96	113.3	10.99	117.5	10.99	119.9	10.98	121.5	10.98	125.3	10.95	128.9	10.90	132.4	10.85

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	26.7	128.9	5.09	134.5	5.12	139.9	5.13	145.0	5.13	148.0	5.13	150.0	5.12	154.7	5.11	159.2	5.09	163.4	5.06
		41.3	130.2	5.04	135.9	5.06	141.4	5.07	146.6	5.07	149.6	5.07	151.6	5.07	156.3	5.05	160.9	5.03	165.1	5.01
		56.0	131.6	4.98	137.4	5.01	142.9	5.02	148.1	5.02	151.2	5.02	153.2	5.01	158.0	5.00	162.6	4.98	166.9	4.96
		67.8	132.7	4.94	138.5	4.96	144.1	4.98	149.4	4.98	152.5	4.97	154.5	4.97	159.3	4.96	163.9	4.94	168.3	4.92
		79.5	133.8	4.90	139.7	4.92	145.3	4.94	150.6	4.94	153.7	4.93	155.8	4.93	160.6	4.92	165.3	4.90	169.7	4.88
	59	26.7	128.9	6.14	134.5	6.16	139.9	6.18	145.0	6.18	148.0	6.18	150.0	6.17	154.7	6.16	159.2	6.13	163.4	6.10
		41.3	130.2	6.07	135.9	6.10	141.4	6.11	146.6	6.11	149.6	6.11	151.6	6.10	156.3	6.09	160.9	6.07	165.1	6.04
		56.0	131.6	6.01	137.4	6.03	142.9	6.04	148.1	6.05	151.2	6.04	153.2	6.04	158.0	6.02	162.6	6.00	166.9	5.97
		67.8	132.7	5.96	138.5	5.98	144.1	5.99	149.4	6.00	152.5	5.99	154.5	5.99	159.3	5.98	163.9	5.95	168.3	5.92
		79.5	133.8	5.91	139.7	5.93	145.3	5.95	150.6	5.95	153.7	5.95	155.8	5.94	160.6	5.93	165.3	5.90	169.7	5.87
	68	26.7	128.9	7.48	134.5	7.51	139.9	7.53	145.0	7.53	148.0	7.53	150.0	7.52	154.7	7.51	159.2	7.48	163.4	7.44
		41.3	130.2	7.40	135.9	7.43	141.4	7.45	146.6	7.45	149.6	7.45	151.6	7.44	156.3	7.42	160.9	7.40	165.1	7.36
		56.0	131.6	7.32	137.4	7.35	142.9	7.37	148.1	7.37	151.2	7.37	153.2	7.36	158.0	7.34	162.6	7.32	166.9	7.28
		67.8	132.7	7.26	138.5	7.29	144.1	7.31	149.4	7.31	152.5	7.31	154.5	7.30	159.3	7.28	163.9	7.26	168.3	7.22
		79.5	133.8	7.20	139.7	7.23	145.3	7.25	150.6	7.25	153.7	7.25	155.8	7.24	160.6	7.23	165.3	7.20	169.7	7.16
	77	26.7	128.9	9.22	134.5	9.26	139.9	9.28	145.0	9.28	148.0	9.28	150.0	9.27	154.7	9.25	159.2	9.21	163.4	9.17
		41.3	130.2	9.12	135.9	9.16	141.4	9.18	146.6	9.18	149.6	9.18	151.6	9.17	156.3	9.15	160.9	9.11	165.1	9.07
		56.0	131.6	9.02	137.4	9.06	142.9	9.08	148.1	9.08	151.2	9.08	153.2	9.07	158.0	9.05	162.6	9.02	166.9	8.97
		67.8	132.7	8.95	138.5	8.99	144.1	9.00	149.4	9.01	152.5	9.00	154.5	9.00	159.3	8.98	163.9	8.94	168.3	8.90
		79.5	133.8	8.88	139.7	8.91	145.3	8.93	150.6	8.94	153.7	8.93	155.8	8.93	160.6	8.90	165.3	8.87	169.7	8.83
	86	26.7	128.9	11.45	134.5	11.49	139.9	11.52	145.0	11.52	148.0	11.52	150.0	11.51	154.7	11.48	159.2	11.44	163.4	11.38
		41.3	130.2	11.32	135.9	11.37	141.4	11.39	146.6	11.40	149.6	11.39	151.6	11.38	156.3	11.36	160.9	11.31	165.1	11.26
		56.0	131.6	11.20	137.4	11.25	142.9	11.27	148.1	11.28	151.2	11.27	153.2	11.26	158.0	11.24	162.6	11.19	166.9	11.14
		67.8	132.7	11.11	138.5	11.15	144.1	11.18	149.4	11.18	152.5	11.18	154.5	11.17	159.3	11.14	163.9	11.10	168.3	11.05
		79.5	133.8	11.02	139.7	11.06	145.3	11.09	150.6	11.09	153.7	11.09	155.8	11.08	160.6	11.05	165.3	11.01	169.7	10.96
	95	26.7	115.3	10.80	120.4	10.85	125.2	10.87	129.8	10.87	132.5	10.87	134.2	10.86	138.4	10.83	142.4	10.79	146.2	10.73
		41.3	116.6	10.69	121.7	10.73	126.5	10.75	131.2	10.75	133.9	10.75	135.7	10.74	139.9	10.71	144.0	10.67	147.8	10.62
		56.0	117.8	10.57	122.9	10.61	127.9	10.64	132.6	10.64	135.3	10.63	137.1	10.63	141.4	10.60	145.5	10.56	149.4	10.50
		67.8	118.8	10.49	124.0	10.53	128.9	10.55	133.7	10.55	136.5	10.55	138.3	10.54	142.6	10.51	146.7	10.47	150.6	10.42
		79.5	119.8	10.40	125.0	10.44	130.0	10.46	134.8	10.47	137.6	10.46	139.4	10.45	143.8	10.43	147.9	10.39	151.9	10.33
	104	26.7	101.7	10.04	106.1	10.08	110.3	10.10	114.4	10.11	116.8	10.10	118.3	10.10	122.0	10.07	125.5	10.03	128.9	9.98
		41.3	102.7	9.93	107.2	9.97	111.5	9.99	115.6	10.00	118.0	9.99	119.6	9.98	123.3	9.96	126.9	9.92	130.3	9.87
		56.0	103.8	9.83	108.4	9.87	112.7	9.89	116.9	9.89	119.3	9.89	120.8	9.88	124.6	9.85	128.2	9.81	131.6	9.76
		67.8	104.7	9.75	109.3	9.79	113.6	9.81	117.8	9.81	120.3	9.80	121.8	9.80	125.7	9.77	129.3	9.73	132.7	9.68
		79.5	105.6	9.67	110.2	9.71	114.6	9.73	118.8	9.73	121.3	9.73	122.9	9.72	126.7	9.69	130.4	9.65	133.9	9.61
	113	26.7	88.0	9.20	91.8	9.23	95.5	9.25	99.0	9.25	101.0	9.25	102.4	9.24	105.6	9.22	108.6	9.18	111.5	9.14
		41.3	88.9	9.10	92.8	9.13	96.5	9.15	100.1	9.15	102.1	9.15	103.5	9.14	106.7	9.12	109.8	9.08	112.7	9.04
		56.0	89.8	9.00	93.8	9.04	97.5	9.05	101.1	9.06	103.2	9.05	104.6	9.05	107.8	9.02	111.0	8.99	113.9	8.94
		67.8	90.6	8.92	94.6	8.96	98.3	8.98	102.0	8.98	104.1	8.98	105.4	8.97	108.7	8.95	111.9	8.91	114.9	8.87
		79.5	91.4	8.85	95.3	8.89	99.2	8.91	102.8	8.91	104.9	8.90	106.3	8.90	109.7	8.87	112.8	8.84	115.8	8.79
60	50	26.7	110.5	4.09	115.3	4.11	119.9	4.12	124.3	4.12	126.9	4.12	128.6	4.12	132.6	4.11	136.4	4.09	140.1	4.07
		41.3	111.6	4.05	116.5	4.07	121.2	4.07	125.7	4.08	128.2	4.07	129.9	4.07	134.0	4.06	137.9	4.05	141.6	4.03
		56.0	112.8	4.01	117.7	4.02	122.5	4.03	127.0	4.03	129.6	4.03	131.3	4.03	135.4	4.02	139.3	4.00	143.0	3.98
		67.8	113.8	3.97	118.7	3.99	123.5	4.00	128.1	4.00	130.7	4.00	132.4	4.00	136.6	3.99	140.5	3.97	144.3	3.95
		79.5	114.7	3.94	119.7	3.96	124.5	3.97	129.1	3.97	131.8	3.97	133.5	3.96	137.7	3.95	141.7	3.94	145.5	3.92
	59	26.7	110.5	4.93	115.3	4.95	119.9	4.96	124.3	4.97	126.9	4.96	128.6	4.96	132.6	4.95	136.4	4.93	140.1	4.90
		41.3	111.6	4.88	116.5	4.90	121.2	4.91	125.7	4.91	128.2	4.91	129.9	4.91	134.0	4.89	137.9	4.88	141.6	4.85
		56.0	112.8	4.83	117.7	4.85	122.5	4.86	127.0	4.86	129.6	4.86	131.3	4.85	135.4	4.84	139.3	4.82	143.0	4.80
		67.8	113.8	4.79	118.7	4.81	123.5	4.82	128.1	4.82	130.7	4.82	132.4	4.81	136.6	4.80	140.5	4.78	144.3	4.76
		79.5	114.7	4.75	119.7	4.77	124.5	4.78	129.1	4.78	131.8	4.78	133.5	4.78	137.7	4.76	141.7	4.75	145.5	4.72
	68	26.7	110.5	6.01	115.3	6.04	119.9	6.05	124.3	6.05	126.9	6.05	128.6	6.05	132.6	6.03	136.4	6.01	140.1	5.98
		41.3	111.6	5.95	116.5	5.97	121.2	5.99	125.7	5.99	128.2	5.98	129.9	5.98	134.0	5.97	137.9	5.94	141.6	5.91
		56.0	112.8	5.88	117.7	5.91	122.5	5.92	127.0	5.92	129.6	5.92	131.3	5.92	135.4	5.90	139.3	5.88	143.0	5.85
		67.8	113.8	5.84	118.7	5.86	123.5	5.87	128.1	5.88	130.7	5.87	132.4	5.87	136.6	5.85	140.5	5.83	144.3	5.80
		79.5	114.7	5.79	119.7	5.81	124.5	5.83	129.1	5.83	131.8	5.83	133.5	5.82	137.7	5.81	141.7	5.78	145.5	5.76
	77	26.7	110.5	7.41	115.3	7.44	119.9	7.46	124.3	7.46	126.9	7.46	128.6	7.45	132.6	7.43	136.4	7.40	140.1	7.37
		41.3	111.6	7.33	116.5	7.36	121.2	7.38	125.7	7.38	128.2	7.37	129.9	7.37	134.0	7.35	137.9	7.32	141.6	7.29
		56.0	112.8	7.25	117.7	7.28	122.5	7.30	127.0	7.30	129.6	7.30	131.3	7.29	135.4	7.27	139.3	7.25	143.0	7.21
		67.8	113.8	7.19	118.7	7.22	123.5	7.24	128.1	7.24	130.7	7.24	132.4	7.23	136.6	7.21	140.5	7.19	144.3	7.15
		79.5	114.7	7.13	119.7	7.16	124.5	7.18	129.1	7.18	131.8	7.18	133.5	7.17	137.7	7.16	141.7	7.13	145.5	7.09
	86	26.7	110.5	9.20	115.3	9.24	119.9	9.26	124.3	9.26	126.9	9.26	128.6	9.25	132.6	9.23	136.4	9.19	140.1	9.15
		41.3	111.6	9.10	116.5	9.14	121.2	9.16	125.7	9.16	128.2	9.16	129.9	9.15	134.0	9.13	137.9	9.09	141.6	9.05
		56.0	112.8	9.00	117.7	9.04	122.5	9.06	127.0	9.06	129.6	9.06	131.3	9.05	135.4	9.03	139.3	9.00	143.0	8.95
		67.8	113.8	8.93	118.7	8.96	123.5	8.98	128.1	8.99	130.7	8.98	132.4	8.98	136.6	8.96	140.5	8.92	144.3	8.88
		79.5	114.7	8.86	119.7	8.89	124.5	8.91	129.1	8.92	131.8	8.91	133.5	8.91	137.7	8.88	141.7	8.85	145.5	8.81
	95	26.7	98.9	8.68	103.2	8.72	107.3	8.74	111.3	8.74	113.6	8.73	115.1	8.73	118.7	8.70	122.1	8.67	125.3	8.63
		41.3	99.9	8.59	104.3	8.62	108.5	8.64	112.5	8.64	114.8	8.64	116.3	8.63	119.9	8.61	123.4	8.57	126.7	8.53
		56.0	101.0	8.50	105.4	8.53	109.6	8.55	113.7	8.55	116.0	8.55	117.5	8.54	121.2	8.52	124.7	8.48	128.0	8.44
		67.8	101.8	8.43	106.3	8.46	110.5	8.48	114.6	8.48	117.0	8.48	118.5	8.47	122.2	8.45	125.8	8.41	129.1	8.37
		79.5	102.7	8.36	107.2	8.39	111.4	8.41	115.6	8.41	117.9	8.41	119.5	8.40	123.2	8.38	126.8	8.35	130.2	8.30
	104	26.7	87.1	8.07	90.9	8.10	94.6	8.12	98.1	8.12	100.1	8.12	101.4	8.11	104.6	8.09	107.6	8.06	110.5	8.02
		41.3	88.1	7.98	91.9	8.02	95.6	8.03	99.1	8.03	101.2	8.03	102.5	8.02	105.7	8.00	108.8	7.97	111.7	7.93
		56.0	89.0	7.90	92.9	7.93	96.6	7.95	100.2	7.95	102.2	7.94	103.6	7.94	106.8	7.92	109.9	7.89	112.8	7.85
		67.8	89.7	7.83	93.7	7.87	97.4	7.88	101.0	7.88	103.1	7.88	104.4	7.87	107.7	7.85	110.8	7.82	113.8	7.78
		79.5	90.5	7.77	94.4	7.80	98.2	7.82	101.8	7.82	103.9	7.82	105.3	7.81	108.6	7.79	111.8	7.76	114.7	7.72
	113	26.7	75.4	7.39	78.7	7.42	81.8	7.44	84.9	7.44	86.6	7.43	87.8	7.43	90.5	7.41	93.1	7.38	95.6	7.34
		41.3	76.2	7.31	79.5	7.34	82.7	7.35	85.8	7.36	87.5	7.35	88.7	7.35	91.5	7.33	94.1	7.30	96.6	7.26
		56.0	77.0	7.23	80.4	7.26	83.6	7.28	86.7	7.28	88.5	7.27	89.6	7.27	92.4	7.25	95.1	7.22	97.6	7.18
		67.8	77.7	7.17	81.0	7.20	84.3	7.22	87.4	7.22	89.2	7.21	90.4	7.21	93.2	7.19	95.9	7.16	98.5	7.13
		79.5	78.3	7.11	81.7	7.14	85.0	7.16	88.1	7.16	90.0	7.16	91.1	7.15	94.0	7.13	96.7	7.10	99.3	7.07

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Cooling Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F WB)																	
			59		61		63		65		66.2		67		69		71		73	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	26.7	92.1	3.23	96.1	3.24	99.9	3.25	103.6	3.25	105.7	3.25	107.1	3.25	110.5	3.24	113.7	3.23	116.7	3.21
		41.3	93.0	3.20	97.1	3.21	101.0	3.22	104.7	3.22	106.9	3.22	108.3	3.21	111.7	3.21	114.9	3.19	118.0	3.18
		56.0	94.0	3.16	98.1	3.17	102.1	3.18	105.8	3.18	108.0	3.18	109.4	3.18	112.8	3.17	116.1	3.16	119.2	3.14
		67.8	94.8	3.14	98.9	3.15	102.9	3.16	106.7	3.16	108.9	3.16	110.3	3.15	113.8	3.15	117.1	3.13	120.2	3.12
		79.5	95.6	3.11	99.8	3.12	103.8	3.13	107.6	3.13	109.8	3.13	111.3	3.13	114.7	3.12	118.1	3.11	121.2	3.09
	59	26.7	92.1	3.89	96.1	3.91	99.9	3.92	103.6	3.92	105.7	3.92	107.1	3.91	110.5	3.90	113.7	3.89	116.7	3.87
		41.3	93.0	3.85	97.1	3.87	101.0	3.87	104.7	3.88	106.9	3.87	108.3	3.87	111.7	3.86	114.9	3.85	118.0	3.83
		56.0	94.0	3.81	98.1	3.83	102.1	3.83	105.8	3.84	108.0	3.83	109.4	3.83	112.8	3.82	116.1	3.81	119.2	3.79
		67.8	94.8	3.78	98.9	3.79	102.9	3.80	106.7	3.80	108.9	3.80	110.3	3.80	113.8	3.79	117.1	3.78	120.2	3.76
		79.5	95.6	3.75	99.8	3.76	103.8	3.77	107.6	3.77	109.8	3.77	111.3	3.77	114.7	3.76	118.1	3.75	121.2	3.73
	68	26.7	92.1	4.75	96.1	4.77	99.9	4.78	103.6	4.78	105.7	4.78	107.1	4.77	110.5	4.76	113.7	4.74	116.7	4.72
		41.3	93.0	4.69	97.1	4.71	101.0	4.72	104.7	4.73	106.9	4.72	108.3	4.72	111.7	4.71	114.9	4.69	118.0	4.67
		56.0	94.0	4.64	98.1	4.66	102.1	4.67	105.8	4.68	108.0	4.67	109.4	4.67	112.8	4.66	116.1	4.64	119.2	4.62
		67.8	94.8	4.61	98.9	4.63	102.9	4.64	106.7	4.64	108.9	4.63	110.3	4.63	113.8	4.62	117.1	4.60	120.2	4.58
		79.5	95.6	4.57	99.8	4.59	103.8	4.60	107.6	4.60	109.8	4.60	111.3	4.59	114.7	4.58	118.1	4.57	121.2	4.54
	77	26.7	92.1	5.85	96.1	5.87	99.9	5.89	103.6	5.89	105.7	5.88	107.1	5.88	110.5	5.87	113.7	5.84	116.7	5.81
		41.3	93.0	5.78	97.1	5.81	101.0	5.82	104.7	5.82	106.9	5.82	108.3	5.82	111.7	5.80	114.9	5.78	118.0	5.75
		56.0	94.0	5.72	98.1	5.75	102.1	5.76	105.8	5.76	108.0	5.76	109.4	5.76	112.8	5.74	116.1	5.72	119.2	5.69
		67.8	94.8	5.68	98.9	5.70	102.9	5.71	106.7	5.71	108.9	5.71	110.3	5.71	113.8	5.69	117.1	5.67	120.2	5.64
		79.5	95.6	5.63	99.8	5.65	103.8	5.67	107.6	5.67	109.8	5.67	111.3	5.66	114.7	5.65	118.1	5.63	121.2	5.60
	86	26.7	92.1	7.26	96.1	7.29	99.9	7.31	103.6	7.31	105.7	7.31	107.1	7.30	110.5	7.28	113.7	7.25	116.7	7.22
		41.3	93.0	7.18	97.1	7.21	101.0	7.23	104.7	7.23	106.9	7.23	108.3	7.22	111.7	7.20	114.9	7.18	118.0	7.14
		56.0	94.0	7.10	98.1	7.13	102.1	7.15	105.8	7.15	108.0	7.15	109.4	7.14	112.8	7.13	116.1	7.10	119.2	7.06
		67.8	94.8	7.05	98.9	7.08	102.9	7.09	106.7	7.09	108.9	7.09	110.3	7.09	113.8	7.07	117.1	7.04	120.2	7.01
		79.5	95.6	6.99	99.8	7.02	103.8	7.03	107.6	7.04	109.8	7.03	111.3	7.03	114.7	7.01	118.1	6.98	121.2	6.95
	95	26.7	82.4	6.85	86.0	6.88	89.4	6.89	92.7	6.90	94.6	6.89	95.9	6.89	98.9	6.87	101.7	6.84	104.5	6.81
		41.3	83.3	6.78	86.9	6.80	90.4	6.82	93.7	6.82	95.6	6.82	96.9	6.81	99.9	6.79	102.8	6.77	105.6	6.73
		56.0	84.1	6.71	87.8	6.73	91.3	6.75	94.7	6.75	96.7	6.74	97.9	6.74	101.0	6.72	103.9	6.70	106.7	6.66
		67.8	84.9	6.65	88.6	6.68	92.1	6.69	95.5	6.69	97.5	6.69	98.8	6.68	101.8	6.67	104.8	6.64	107.6	6.61
		79.5	85.6	6.60	89.3	6.62	92.9	6.64	96.3	6.64	98.3	6.64	99.6	6.63	102.7	6.61	105.7	6.59	108.5	6.55
	104	26.7	72.6	6.37	75.8	6.40	78.8	6.41	81.7	6.41	83.4	6.41	84.5	6.40	87.2	6.39	89.7	6.36	92.1	6.33
		41.3	73.4	6.30	76.6	6.33	79.7	6.34	82.6	6.34	84.3	6.34	85.4	6.33	88.1	6.32	90.6	6.29	93.0	6.26
		56.0	74.2	6.23	77.4	6.26	80.5	6.27	83.5	6.27	85.2	6.27	86.3	6.27	89.0	6.25	91.6	6.23	94.0	6.19
		67.8	74.8	6.18	78.0	6.21	81.2	6.22	84.2	6.22	85.9	6.22	87.0	6.21	89.8	6.20	92.4	6.17	94.8	6.14
		79.5	75.4	6.13	78.7	6.16	81.9	6.17	84.9	6.17	86.6	6.17	87.8	6.16	90.5	6.15	93.1	6.12	95.6	6.09
	113	26.7	62.8	5.83	65.6	5.86	68.2	5.87	70.7	5.87	72.2	5.87	73.1	5.86	75.4	5.85	77.6	5.82	79.7	5.79
		41.3	63.5	5.77	66.3	5.79	68.9	5.80	71.5	5.81	72.9	5.80	73.9	5.80	76.2	5.78	78.4	5.76	80.5	5.73
		56.0	64.2	5.71	67.0	5.73	69.7	5.74	72.2	5.74	73.7	5.74	74.7	5.74	77.0	5.72	79.3	5.70	81.4	5.67
		67.8	64.7	5.66	67.5	5.68	70.2	5.70	72.8	5.70	74.3	5.69	75.3	5.69	77.7	5.67	79.9	5.65	82.1	5.62
		79.5	65.3	5.62	68.1	5.64	70.8	5.65	73.4	5.65	75.0	5.65	75.9	5.64	78.3	5.63	80.6	5.61	82.7	5.58

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a cooling operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
3. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in cooling mode.

Heating Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	10.6	77.9	3.23	76.3	3.24	74.8	3.25	73.4	3.27	72.5	3.28	71.6	3.30	70.3	3.33	69.2	3.37	68.4	3.40
		12.8	80.1	3.27	78.4	3.28	76.9	3.29	75.4	3.31	74.4	3.33	73.5	3.34	72.3	3.37	71.1	3.41	70.3	3.44
		15.1	81.9	3.30	80.2	3.31	78.6	3.32	77.1	3.34	76.1	3.36	75.2	3.38	73.9	3.41	72.7	3.44	71.9	3.47
		23.4	85.9	3.36	84.1	3.37	82.4	3.39	80.8	3.40	79.8	3.42	78.9	3.44	77.5	3.47	76.2	3.51	75.4	3.54
		31.7	85.5	3.33	83.8	3.35	82.1	3.36	80.5	3.38	79.5	3.40	78.6	3.41	77.2	3.45	75.9	3.48	75.1	3.51
	59	10.6	84.4	3.36	82.6	3.37	81.0	3.39	79.4	3.41	78.4	3.42	77.5	3.44	76.1	3.47	74.9	3.51	74.1	3.54
		12.8	86.7	3.40	84.9	3.41	83.2	3.43	81.6	3.45	80.6	3.47	79.6	3.48	78.2	3.52	76.9	3.55	76.1	3.58
		15.1	88.6	3.44	86.8	3.45	85.1	3.46	83.4	3.48	82.4	3.50	81.4	3.52	80.0	3.55	78.6	3.59	77.8	3.62
		23.4	92.9	3.50	91.0	3.51	89.2	3.53	87.5	3.55	86.4	3.57	85.4	3.58	83.9	3.62	82.5	3.66	81.6	3.69
		31.7	92.6	3.48	90.7	3.49	88.9	3.50	87.2	3.52	86.1	3.54	85.0	3.56	83.6	3.59	82.2	3.63	81.3	3.66
	68	10.6	84.4	3.11	82.6	3.12	81.0	3.13	79.4	3.15	78.4	3.16	77.5	3.18	76.1	3.21	74.9	3.24	74.1	3.27
		12.8	86.7	3.15	84.9	3.16	83.2	3.17	81.6	3.19	80.6	3.20	79.6	3.22	78.2	3.25	76.9	3.29	76.1	3.31
		15.1	88.6	3.18	86.8	3.19	85.1	3.20	83.4	3.22	82.4	3.23	81.4	3.25	80.0	3.28	78.6	3.32	77.8	3.34
		23.4	92.9	3.24	91.0	3.25	89.2	3.26	87.5	3.28	86.4	3.29	85.4	3.31	83.9	3.34	82.5	3.38	81.6	3.41
		31.7	92.6	3.21	90.7	3.22	88.9	3.24	87.2	3.26	86.1	3.27	85.0	3.29	83.6	3.32	82.2	3.35	81.3	3.38
	77	10.6	84.4	2.78	82.6	2.79	81.0	2.80	79.4	2.82	78.4	2.83	77.5	2.85	76.1	2.87	74.9	2.90	74.1	2.93
		12.8	86.7	2.81	84.9	2.82	83.2	2.84	81.6	2.85	80.6	2.87	79.6	2.88	78.2	2.91	76.9	2.94	76.1	2.96
		15.1	88.6	2.84	86.8	2.85	85.1	2.86	83.4	2.88	82.4	2.89	81.4	2.91	80.0	2.94	78.6	2.97	77.8	2.99
		23.4	92.9	2.90	91.0	2.90	89.2	2.92	87.5	2.93	86.4	2.95	85.4	2.96	83.9	2.99	82.5	3.02	81.6	3.05
		31.7	92.6	2.87	90.7	2.88	88.9	2.90	87.2	2.91	86.1	2.93	85.0	2.94	83.6	2.97	82.2	3.00	81.3	3.03
	86	10.6	84.4	2.43	82.6	2.44	81.0	2.45	79.4	2.47	78.4	2.48	77.5	2.49	76.1	2.51	74.9	2.54	74.1	2.56
		12.8	86.7	2.46	84.9	2.47	83.2	2.48	81.6	2.50	80.6	2.51	79.6	2.52	78.2	2.54	76.9	2.57	76.1	2.59
		15.1	88.6	2.49	86.8	2.50	85.1	2.51	83.4	2.52	82.4	2.53	81.4	2.55	80.0	2.57	78.6	2.60	77.8	2.62
		23.4	92.9	2.53	91.0	2.54	89.2	2.55	87.5	2.57	86.4	2.58	85.4	2.59	83.9	2.62	82.5	2.65	81.6	2.67
		31.7	92.6	2.52	90.7	2.52	88.9	2.53	87.2	2.55	86.1	2.56	85.0	2.57	83.6	2.60	82.2	2.63	81.3	2.65
	95	10.6	84.4	2.26	82.6	2.27	81.0	2.28	79.4	2.30	78.4	2.31	77.5	2.32	76.1	2.34	74.9	2.37	74.1	2.38
		12.8	86.7	2.29	84.9	2.30	83.2	2.31	81.6	2.32	80.6	2.33	79.6	2.35	78.2	2.37	76.9	2.39	76.1	2.41
		15.1	88.6	2.32	86.8	2.32	85.1	2.33	83.4	2.35	82.4	2.36	81.4	2.37	80.0	2.39	78.6	2.42	77.8	2.44
		23.4	92.9	2.36	91.0	2.37	89.2	2.38	87.5	2.39	86.4	2.40	85.4	2.41	83.9	2.44	82.5	2.46	81.6	2.48
		31.7	92.6	2.34	90.7	2.35	88.9	2.36	87.2	2.37	86.1	2.38	85.0	2.40	83.6	2.42	82.2	2.45	81.3	2.47
	104	10.6	84.4	2.18	82.6	2.19	81.0	2.20	79.4	2.21	78.4	2.22	77.5	2.24	76.1	2.26	74.9	2.28	74.1	2.30
		12.8	86.7	2.21	84.9	2.22	83.2	2.23	81.6	2.24	80.6	2.25	79.6	2.26	78.2	2.29	76.9	2.31	76.1	2.33
		15.1	88.6	2.23	86.8	2.24	85.1	2.25	83.4	2.26	82.4	2.27	81.4	2.29	80.0	2.31	78.6	2.33	77.8	2.35
		23.4	92.9	2.28	91.0	2.28	89.2	2.29	87.5	2.31	86.4	2.32	85.4	2.33	83.9	2.35	82.5	2.38	81.6	2.40
		31.7	92.6	2.26	90.7	2.27	88.9	2.28	87.2	2.29	86.1	2.30	85.0	2.31	83.6	2.33	82.2	2.36	81.3	2.38
	113	10.6	84.4	2.18	82.6	2.18	81.0	2.19	79.4	2.21	78.4	2.22	77.5	2.23	76.1	2.25	74.9	2.27	74.1	2.29
		12.8	86.7	2.20	84.9	2.21	83.2	2.22	81.6	2.23	80.6	2.24	79.6	2.26	78.2	2.28	76.9	2.30	76.1	2.32
		15.1	88.6	2.23	86.8	2.23	85.1	2.24	83.4	2.26	82.4	2.27	81.4	2.28	80.0	2.30	78.6	2.32	77.8	2.34
		23.4	92.9	2.27	91.0	2.27	89.2	2.28	87.5	2.30	86.4	2.31	85.4	2.32	83.9	2.34	82.5	2.37	81.6	2.39
		31.7	92.6	2.25	90.7	2.26	88.9	2.27	87.2	2.28	86.1	2.29	85.0	2.30	83.6	2.32	82.2	2.35	81.3	2.37
120	50	10.6	77.2	3.29	75.6	3.30	74.1	3.31	72.7	3.33	71.8	3.35	70.9	3.37	69.7	3.40	68.5	3.43	67.8	3.46
		12.8	79.3	3.33	77.7	3.34	76.1	3.35	74.6	3.37	73.7	3.39	72.8	3.41	71.6	3.44	70.4	3.48	69.6	3.51
		15.1	81.1	3.36	79.4	3.37	77.8	3.39	76.3	3.41	75.4	3.42	74.5	3.44	73.2	3.47	72.0	3.51	71.2	3.54
		23.4	85.0	3.42	83.3	3.44	81.6	3.45	80.1	3.47	79.1	3.49	78.1	3.51	76.7	3.54	75.5	3.58	74.7	3.61
		31.7	84.7	3.40	83.0	3.41	81.3	3.43	79.8	3.45	78.8	3.46	77.8	3.48	76.5	3.51	75.2	3.55	74.4	3.58
	59	10.6	83.5	3.43	81.8	3.44	80.2	3.45	78.6	3.47	77.7	3.49	76.7	3.51	75.4	3.54	74.1	3.58	73.4	3.61
		12.8	85.8	3.47	84.1	3.48	82.4	3.50	80.8	3.52	79.8	3.53	78.8	3.55	77.4	3.59	76.2	3.62	75.4	3.65
		15.1	87.8	3.50	86.0	3.52	84.2	3.53	82.6	3.55	81.6	3.57	80.6	3.59	79.2	3.62	77.9	3.66	77.1	3.69
		23.4	92.0	3.57	90.1	3.58	88.3	3.60	86.6	3.62	85.6	3.63	84.5	3.65	83.1	3.69	81.7	3.73	80.8	3.76
		31.7	91.7	3.54	89.8	3.55	88.0	3.57	86.3	3.59	85.2	3.61	84.2	3.63	82.7	3.66	81.4	3.70	80.5	3.73
	68	10.6	83.5	3.17	81.8	3.18	80.2	3.19	78.6	3.21	77.7	3.23	76.7	3.24	75.4	3.27	74.1	3.31	73.4	3.34
		12.8	85.8	3.21	84.1	3.22	82.4	3.23	80.8	3.25	79.8	3.27	78.8	3.28	77.4	3.31	76.2	3.35	75.4	3.38
		15.1	87.8	3.24	86.0	3.25	84.2	3.26	82.6	3.28	81.6	3.30	80.6	3.32	79.2	3.35	77.9	3.38	77.1	3.41
		23.4	92.0	3.30	90.1	3.31	88.3	3.32	86.6	3.34	85.6	3.36	84.5	3.38	83.1	3.41	81.7	3.45	80.8	3.47
		31.7	91.7	3.27	89.8	3.29	88.0	3.30	86.3	3.32	85.2	3.33	84.2	3.35	82.7	3.38	81.4	3.42	80.5	3.45
	77	10.6	83.5	2.83	81.8	2.84	80.2	2.86	78.6	2.87	77.7	2.89	76.7	2.90	75.4	2.93	74.1	2.96	73.4	2.98
		12.8	85.8	2.87	84.1	2.88	82.4	2.89	80.8	2.91	79.8	2.92	78.8	2.94	77.4	2.96	76.2	3.00	75.4	3.02
		15.1	87.8	2.90	86.0	2.91	84.2	2.92	82.6	2.94	81.6	2.95	80.6	2.97	79.2	2.99	77.9	3.03	77.1	3.05
		23.4	92.0	2.95	90.1	2.96	88.3	2.97	86.6	2.99	85.6	3.01	84.5	3.02	83.1	3.05	81.7	3.08	80.8	3.11
		31.7	91.7	2.93	89.8	2.94	88.0	2.95	86.3	2.97	85.2	2.98	84.2	3.00	82.7	3.03	81.4	3.06	80.5	3.09
	86	10.6	83.5	2.48	81.8	2.49	80.2	2.50	78.6	2.51	77.7	2.53	76.7	2.54	75.4	2.56	74.1	2.59	73.4	2.61
		12.8	85.8	2.51	84.1	2.52	82.4	2.53	80.8	2.55	79.8	2.56	78.8	2.57	77.4	2.59	76.2	2.62	75.4	2.64
		15.1	87.8	2.54	86.0	2.54	84.2	2.56	82.6	2.57	81.6	2.58	80.6	2.60	79.2	2.62	77.9	2.65	77.1	2.67
		23.4	92.0	2.58	90.1	2.59	88.3	2.60	86.6	2.62	85.6	2.63	84.5	2.64	83.1	2.67	81.7	2.70	80.8	2.72
		31.7	91.7	2.56	89.8	2.57	88.0	2.58	86.3	2.60	85.2	2.61	84.2	2.63	82.7	2.65	81.4	2.68	80.5	2.70
	95	10.6	83.5	2.31	81.8	2.32	80.2	2.33	78.6	2.34	77.7	2.35	76.7	2.36	75.4	2.39	74.1	2.41	73.4	2.43
		12.8	85.8	2.34	84.1	2.35	82.4	2.36	80.8	2.37	79.8	2.38	78.8	2.39	77.4	2.42	76.2	2.44	75.4	2.46
		15.1	87.8	2.36	86.0	2.37	84.2	2.38	82.6	2.39	81.6	2.40	80.6	2.42	79.2	2.44	77.9	2.47	77.1	2.49
		23.4	92.0	2.40	90.1	2.41	88.3	2.42	86.6	2.44	85.6	2.45	84.5	2.46	83.1	2.48	81.7	2.51	80.8	2.53
		31.7	91.7	2.39	89.8	2.39	88.0	2.41	86.3	2.42	85.2	2.43	84.2	2.44	82.7	2.47	81.4	2.49	80.5	2.51
	104	10.6	83.5	2.23	81.8	2.23	80.2	2.24	78.6	2.26	77.7	2.27	76.7	2.28	75.4	2.30	74.1	2.33	73.4	2.35
		12.8	85.8	2.26	84.1	2.26	82.4	2.27	80.8	2.29	79.8	2.30	78.8	2.31	77.4	2.33	76.2	2.36	75.4	2.37
		15.1	87.8	2.28	86.0	2.28	84.2	2.30	82.6	2.31	81.6	2.32	80.6	2.33	79.2	2.35	77.9	2.38	77.1	2.40
		23.4	92.0	2.32	90.1	2.33	88.3	2.34	86.6	2.35	85.6	2.36	84.5	2.37	83.1	2.40	81.7	2.42	80.8	2.44
		31.7	91.7	2.30	89.8	2.31	88.0	2.32	86.3	2.33	85.2	2.34	84.2	2.36	82.7	2.38	81.4	2.41	80.5	2.42
	113	10.6	83.5	2.22	81.8	2.23	80.2	2.24	78.6	2.25	77.7	2.26	76.7	2.27	75.4	2.29	74.1	2.32	73.4	2.34
		12.8	85.8	2.25	84.1	2.25	82.4	2.26	80.8	2.28	79.8	2.29	78.8	2.30	77.4	2.32	76.2	2.35	75.4	2.37
		15.1	87.8	2.27	86.0	2.28	84.2	2.29	82.6	2.30	81.6	2.31	80.6	2.32	79.2	2.34	77.9	2.37	77.1	2.39
		23.4	92.0	2.31	90.1	2.32	88.3	2.33	86.6	2.34	85.6	2.35	84.5	2.37	83.1	2.39	81.7	2.41	80.8	2.43
		31.7	91.7	2.29	89.8	2.30	88.0	2.31	86.3	2.33	85.2	2.34	84.2	2.35	82.7	2.37	81.4	2.40	80.5	2.42

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	10.6	76.4	3.38	74.9	3.39	73.4	3.41	72.0	3.43	71.1	3.44	70.2	3.46	69.0	3.49	67.8	3.53	67.1	3.56
		12.8	78.5	3.42	76.9	3.43	75.4	3.45	73.9	3.47	73.0	3.48	72.1	3.50	70.9	3.54	69.7	3.57	68.9	3.60
		15.1	80.3	3.46	78.6	3.47	77.1	3.48	75.6	3.50	74.7	3.52	73.7	3.54	72.5	3.57	71.3	3.61	70.5	3.64
		23.4	84.2	3.52	82.5	3.53	80.8	3.55	79.3	3.57	78.3	3.58	77.3	3.60	76.0	3.64	74.7	3.68	73.9	3.71
		31.7	83.9	3.49	82.2	3.51	80.5	3.52	79.0	3.54	78.0	3.56	77.0	3.58	75.7	3.61	74.4	3.65	73.7	3.68
	59	10.6	82.7	3.52	81.0	3.53	79.4	3.55	77.9	3.57	76.9	3.59	76.0	3.61	74.6	3.64	73.4	3.68	72.6	3.71
		12.8	85.0	3.57	83.2	3.58	81.6	3.59	80.0	3.62	79.0	3.63	78.0	3.65	76.7	3.69	75.4	3.73	74.6	3.76
		15.1	86.9	3.60	85.1	3.61	83.4	3.63	81.8	3.65	80.8	3.67	79.8	3.69	78.4	3.72	77.1	3.76	76.3	3.79
		23.4	91.1	3.67	89.3	3.68	87.5	3.70	85.8	3.72	84.7	3.74	83.7	3.76	82.2	3.79	80.9	3.83	80.0	3.86
		31.7	90.8	3.64	88.9	3.65	87.1	3.67	85.5	3.69	84.4	3.71	83.4	3.73	81.9	3.76	80.6	3.80	79.7	3.84
	68	10.6	82.7	3.26	81.0	3.27	79.4	3.28	77.9	3.30	76.9	3.32	76.0	3.33	74.6	3.36	73.4	3.40	72.6	3.43
		12.8	85.0	3.30	83.2	3.31	81.6	3.32	80.0	3.34	79.0	3.36	78.0	3.37	76.7	3.41	75.4	3.44	74.6	3.47
		15.1	86.9	3.33	85.1	3.34	83.4	3.35	81.8	3.38	80.8	3.39	79.8	3.41	78.4	3.44	77.1	3.48	76.3	3.51
		23.4	91.1	3.39	89.3	3.40	87.5	3.42	85.8	3.44	84.7	3.45	83.7	3.47	82.2	3.50	80.9	3.54	80.0	3.57
		31.7	90.8	3.37	88.9	3.38	87.1	3.39	85.5	3.41	84.4	3.43	83.4	3.45	81.9	3.48	80.6	3.52	79.7	3.54
	77	10.6	82.7	2.91	81.0	2.92	79.4	2.94	77.9	2.95	76.9	2.97	76.0	2.98	74.6	3.01	73.4	3.04	72.6	3.07
		12.8	85.0	2.95	83.2	2.96	81.6	2.97	80.0	2.99	79.0	3.00	78.0	3.02	76.7	3.05	75.4	3.08	74.6	3.11
		15.1	86.9	2.98	85.1	2.99	83.4	3.00	81.8	3.02	80.8	3.03	79.8	3.05	78.4	3.08	77.1	3.11	76.3	3.14
		23.4	91.1	3.03	89.3	3.04	87.5	3.06	85.8	3.08	84.7	3.09	83.7	3.11	82.2	3.13	80.9	3.17	80.0	3.19
		31.7	90.8	3.01	88.9	3.02	87.1	3.04	85.5	3.05	84.4	3.07	83.4	3.08	81.9	3.11	80.6	3.15	79.7	3.17
	86	10.6	82.7	2.55	81.0	2.56	79.4	2.57	77.9	2.58	76.9	2.60	76.0	2.61	74.6	2.63	73.4	2.66	72.6	2.68
		12.8	85.0	2.58	83.2	2.59	81.6	2.60	80.0	2.62	79.0	2.63	78.0	2.64	76.7	2.67	75.4	2.70	74.6	2.72
		15.1	86.9	2.61	85.1	2.62	83.4	2.63	81.8	2.64	80.8	2.65	79.8	2.67	78.4	2.69	77.1	2.72	76.3	2.75
		23.4	91.1	2.66	89.3	2.66	87.5	2.68	85.8	2.69	84.7	2.70	83.7	2.72	82.2	2.74	80.9	2.77	80.0	2.80
		31.7	90.8	2.64	88.9	2.64	87.1	2.66	85.5	2.67	84.4	2.68	83.4	2.70	81.9	2.72	80.6	2.75	79.7	2.78
	95	10.6	82.7	2.37	81.0	2.38	79.4	2.39	77.9	2.41	76.9	2.42	76.0	2.43	74.6	2.45	73.4	2.48	72.6	2.50
		12.8	85.0	2.40	83.2	2.41	81.6	2.42	80.0	2.44	79.0	2.45	78.0	2.46	76.7	2.48	75.4	2.51	74.6	2.53
		15.1	86.9	2.43	85.1	2.43	83.4	2.45	81.8	2.46	80.8	2.47	79.8	2.48	78.4	2.51	77.1	2.53	76.3	2.56
		23.4	91.1	2.47	89.3	2.48	87.5	2.49	85.8	2.51	84.7	2.52	83.7	2.53	82.2	2.55	80.9	2.58	80.0	2.60
		31.7	90.8	2.45	88.9	2.46	87.1	2.47	85.5	2.49	84.4	2.50	83.4	2.51	81.9	2.54	80.6	2.56	79.7	2.58
	104	10.6	82.7	2.29	81.0	2.30	79.4	2.31	77.9	2.32	76.9	2.33	76.0	2.34	74.6	2.37	73.4	2.39	72.6	2.41
		12.8	85.0	2.32	83.2	2.33	81.6	2.34	80.0	2.35	79.0	2.36	78.0	2.37	76.7	2.39	75.4	2.42	74.6	2.44
		15.1	86.9	2.34	85.1	2.35	83.4	2.36	81.8	2.37	80.8	2.38	79.8	2.40	78.4	2.42	77.1	2.45	76.3	2.47
		23.4	91.1	2.38	89.3	2.39	87.5	2.40	85.8	2.42	84.7	2.43	83.7	2.44	82.2	2.46	80.9	2.49	80.0	2.51
		31.7	90.8	2.37	88.9	2.37	87.1	2.39	85.5	2.40	84.4	2.41	83.4	2.42	81.9	2.45	80.6	2.47	79.7	2.49
	113	10.6	82.7	2.28	81.0	2.29	79.4	2.30	77.9	2.31	76.9	2.32	76.0	2.34	74.6	2.36	73.4	2.38	72.6	2.40
		12.8	85.0	2.31	83.2	2.32	81.6	2.33	80.0	2.34	79.0	2.35	78.0	2.36	76.7	2.39	75.4	2.41	74.6	2.43
		15.1	86.9	2.33	85.1	2.34	83.4	2.35	81.8	2.36	80.8	2.37	79.8	2.39	78.4	2.41	77.1	2.44	76.3	2.46
		23.4	91.1	2.38	89.3	2.38	87.5	2.39	85.8	2.41	84.7	2.42	83.7	2.43	82.2	2.45	80.9	2.48	80.0	2.50
		31.7	90.8	2.36	88.9	2.37	87.1	2.38	85.5	2.39	84.4	2.40	83.4	2.41	81.9	2.44	80.6	2.46	79.7	2.48
100	50	10.6	75.7	3.51	74.1	3.52	72.6	3.53	71.2	3.55	70.4	3.57	69.5	3.59	68.3	3.62	67.2	3.66	66.4	3.69
		12.8	77.7	3.55	76.1	3.56	74.6	3.58	73.2	3.60	72.3	3.61	71.4	3.63	70.2	3.67	69.0	3.71	68.3	3.74
		15.1	79.5	3.58	77.9	3.60	76.3	3.61	74.8	3.63	73.9	3.65	73.0	3.67	71.7	3.70	70.6	3.74	69.8	3.77
		23.4	83.4	3.65	81.7	3.66	80.0	3.68	78.5	3.70	77.5	3.72	76.6	3.74	75.2	3.77	74.0	3.81	73.2	3.84
		31.7	83.1	3.62	81.3	3.64	79.7	3.65	78.2	3.67	77.2	3.69	76.3	3.71	75.0	3.74	73.7	3.79	72.9	3.82
	59	10.6	81.9	3.65	80.2	3.67	78.6	3.68	77.1	3.70	76.1	3.72	75.2	3.74	73.9	3.78	72.7	3.82	71.9	3.85
		12.8	84.1	3.70	82.4	3.71	80.8	3.73	79.2	3.75	78.2	3.77	77.3	3.79	75.9	3.82	74.7	3.86	73.9	3.90
		15.1	86.0	3.74	84.3	3.75	82.6	3.77	81.0	3.79	80.0	3.80	79.0	3.82	77.6	3.86	76.4	3.90	75.5	3.93
		23.4	90.2	3.81	88.4	3.82	86.6	3.84	84.9	3.86	83.9	3.88	82.9	3.90	81.4	3.93	80.1	3.97	79.2	4.01
		31.7	89.9	3.78	88.0	3.79	86.3	3.81	84.6	3.83	83.6	3.85	82.6	3.87	81.1	3.90	79.8	3.95	78.9	3.98
	68	10.6	81.9	3.38	80.2	3.39	78.6	3.40	77.1	3.42	76.1	3.44	75.2	3.46	73.9	3.49	72.7	3.53	71.9	3.56
		12.8	84.1	3.42	82.4	3.43	80.8	3.45	79.2	3.47	78.2	3.48	77.3	3.50	75.9	3.53	74.7	3.57	73.9	3.60
		15.1	86.0	3.45	84.3	3.46	82.6	3.48	81.0	3.50	80.0	3.52	79.0	3.53	77.6	3.57	76.4	3.61	75.5	3.64
		23.4	90.2	3.52	88.4	3.53	86.6	3.54	84.9	3.56	83.9	3.58	82.9	3.60	81.4	3.63	80.1	3.67	79.2	3.70
		31.7	89.9	3.49	88.0	3.50	86.3	3.52	84.6	3.54	83.6	3.56	82.6	3.57	81.1	3.61	79.8	3.65	78.9	3.68
	77	10.6	81.9	3.02	80.2	3.03	78.6	3.04	77.1	3.06	76.1	3.08	75.2	3.09	73.9	3.12	72.7	3.16	71.9	3.18
		12.8	84.1	3.06	82.4	3.07	80.8	3.08	79.2	3.10	78.2	3.12	77.3	3.13	75.9	3.16	74.7	3.20	73.9	3.22
		15.1	86.0	3.09	84.3	3.10	82.6	3.11	81.0	3.13	80.0	3.15	79.0	3.16	77.6	3.19	76.4	3.23	75.5	3.25
		23.4	90.2	3.15	88.4	3.16	86.6	3.17	84.9	3.19	83.9	3.20	82.9	3.22	81.4	3.25	80.1	3.29	79.2	3.31
		31.7	89.9	3.12	88.0	3.13	86.3	3.15	84.6	3.17	83.6	3.18	82.6	3.20	81.1	3.23	79.8	3.26	78.9	3.29
	86	10.6	81.9	2.64	80.2	2.65	78.6	2.66	77.1	2.68	76.1	2.69	75.2	2.71	73.9	2.73	72.7	2.76	71.9	2.78
		12.8	84.1	2.68	82.4	2.69	80.8	2.70	79.2	2.71	78.2	2.73	77.3	2.74	75.9	2.77	74.7	2.80	73.9	2.82
		15.1	86.0	2.70	84.3	2.71	82.6	2.72	81.0	2.74	80.0	2.75	79.0	2.77	77.6	2.79	76.4	2.82	75.5	2.85
		23.4	90.2	2.75	88.4	2.76	86.6	2.78	84.9	2.79	83.9	2.80	82.9	2.82	81.4	2.85	80.1	2.88	79.2	2.90
		31.7	89.9	2.73	88.0	2.74	86.3	2.76	84.6	2.77	83.6	2.78	82.6	2.80	81.1	2.82	79.8	2.86	78.9	2.88
	95	10.6	81.9	2.46	80.2	2.47	78.6	2.48	77.1	2.49	76.1	2.51	75.2	2.52	73.9	2.54	72.7	2.57	71.9	2.59
		12.8	84.1	2.49	82.4	2.50	80.8	2.51	79.2	2.53	78.2	2.54	77.3	2.55	75.9	2.57	74.7	2.60	73.9	2.62
		15.1	86.0	2.52	84.3	2.52	82.6	2.54	81.0	2.55	80.0	2.56	79.0	2.58	77.6	2.60	76.4	2.63	75.5	2.65
		23.4	90.2	2.56	88.4	2.57	86.6	2.58	84.9	2.60	83.9	2.61	82.9	2.62	81.4	2.65	80.1	2.68	79.2	2.70
		31.7	89.9	2.54	88.0	2.55	86.3	2.56	84.6	2.58	83.6	2.59	82.6	2.61	81.1	2.63	79.8	2.66	78.9	2.68
	104	10.6	81.9	2.37	80.2	2.38	78.6	2.39	77.1	2.41	76.1	2.42	75.2	2.43	73.9	2.45	72.7	2.48	71.9	2.50
		12.8	84.1	2.40	82.4	2.41	80.8	2.42	79.2	2.44	78.2	2.45	77.3	2.46	75.9	2.48	74.7	2.51	73.9	2.53
		15.1	86.0	2.43	84.3	2.44	82.6	2.45	81.0	2.46	80.0	2.47	79.0	2.49	77.6	2.51	76.4	2.54	75.5	2.56
		23.4	90.2	2.47	88.4	2.48	86.6	2.49	84.9	2.51	83.9	2.52	82.9	2.53	81.4	2.56	80.1	2.58	79.2	2.60
		31.7	89.9	2.46	88.0	2.46	86.3	2.47	84.6	2.49	83.6	2.50	82.6	2.51	81.1	2.54	79.8	2.56	78.9	2.59
	113	10.6	81.9	2.37	80.2	2.37	78.6	2.38	77.1	2.40	76.1	2.41	75.2	2.42	73.9	2.44	72.7	2.47	71.9	2.49
		12.8	84.1	2.40	82.4	2.40	80.8	2.41	79.2	2.43	78.2	2.44	77.3	2.45	75.9	2.47	74.7	2.50	73.9	2.52
		15.1	86.0	2.42	84.3	2.43	82.6	2.44	81.0	2.45	80.0	2.46	79.0	2.48	77.6	2.50	76.4	2.53	75.5	2.55
		23.4	90.2	2.46	88.4	2.47	86.6	2.48	84.9	2.50	83.9	2.51	82.9	2.52	81.4	2.55	80.1	2.57	79.2	2.59
		31.7	89.9	2.45	88.0	2.45	86.3	2.46	84.6	2.48	83.6	2.49	82.6	2.50	81.1	2.53	79.8	2.55	78.9	2.58

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	10.6	68.1	3.04	66.7	3.05	65.4	3.06	64.1	3.08	63.3	3.10	62.6	3.11	61.5	3.14	60.4	3.17	59.8	3.20
		12.8	70.0	3.08	68.5	3.09	67.2	3.10	65.9	3.12	65.0	3.13	64.3	3.15	63.1	3.18	62.1	3.21	61.4	3.24
		15.1	71.6	3.11	70.1	3.12	68.7	3.13	67.4	3.15	66.5	3.16	65.7	3.18	64.6	3.21	63.5	3.25	62.8	3.27
		23.4	75.0	3.17	73.5	3.18	72.0	3.19	70.6	3.21	69.8	3.22	68.9	3.24	67.7	3.27	66.6	3.31	65.9	3.33
		31.7	74.8	3.14	73.2	3.15	71.8	3.17	70.4	3.19	69.5	3.20	68.7	3.22	67.5	3.25	66.3	3.28	65.6	3.31
	59	10.6	73.7	3.17	72.2	3.18	70.8	3.19	69.4	3.21	68.5	3.23	67.7	3.24	66.5	3.27	65.4	3.31	64.7	3.34
		12.8	75.7	3.21	74.2	3.22	72.7	3.23	71.3	3.25	70.4	3.27	69.5	3.28	68.3	3.31	67.2	3.35	66.5	3.38
		15.1	77.4	3.24	75.8	3.25	74.3	3.26	72.9	3.28	72.0	3.30	71.1	3.32	69.9	3.35	68.7	3.38	68.0	3.41
		23.4	81.2	3.30	79.5	3.31	77.9	3.32	76.4	3.34	75.5	3.36	74.6	3.38	73.3	3.41	72.1	3.45	71.3	3.47
		31.7	80.9	3.28	79.2	3.29	77.7	3.30	76.2	3.32	75.2	3.34	74.3	3.35	73.0	3.38	71.8	3.42	71.0	3.45
	68	10.6	73.7	2.93	72.2	2.94	70.8	2.95	69.4	2.97	68.5	2.98	67.7	3.00	66.5	3.02	65.4	3.06	64.7	3.08
		12.8	75.7	2.96	74.2	2.97	72.7	2.99	71.3	3.00	70.4	3.02	69.5	3.03	68.3	3.06	67.2	3.10	66.5	3.12
		15.1	77.4	2.99	75.8	3.00	74.3	3.02	72.9	3.04	72.0	3.05	71.1	3.06	69.9	3.09	68.7	3.13	68.0	3.15
		23.4	81.2	3.05	79.5	3.06	77.9	3.07	76.4	3.09	75.5	3.10	74.6	3.12	73.3	3.15	72.1	3.18	71.3	3.21
		31.7	80.9	3.03	79.2	3.04	77.7	3.05	76.2	3.07	75.2	3.08	74.3	3.10	73.0	3.13	71.8	3.16	71.0	3.19
	77	10.6	73.7	2.62	72.2	2.63	70.8	2.64	69.4	2.66	68.5	2.67	67.7	2.68	66.5	2.71	65.4	2.74	64.7	2.76
		12.8	75.7	2.65	74.2	2.66	72.7	2.67	71.3	2.69	70.4	2.70	69.5	2.72	68.3	2.74	67.2	2.77	66.5	2.79
		15.1	77.4	2.68	75.8	2.69	74.3	2.70	72.9	2.71	72.0	2.73	71.1	2.74	69.9	2.77	68.7	2.80	68.0	2.82
		23.4	81.2	2.73	79.5	2.74	77.9	2.75	76.4	2.77	75.5	2.78	74.6	2.79	73.3	2.82	72.1	2.85	71.3	2.87
		31.7	80.9	2.71	79.2	2.72	77.7	2.73	76.2	2.75	75.2	2.76	74.3	2.77	73.0	2.80	71.8	2.83	71.0	2.85
	86	10.6	73.7	2.29	72.2	2.30	70.8	2.31	69.4	2.32	68.5	2.33	67.7	2.35	66.5	2.37	65.4	2.39	64.7	2.41
		12.8	75.7	2.32	74.2	2.33	72.7	2.34	71.3	2.35	70.4	2.36	69.5	2.38	68.3	2.40	67.2	2.42	66.5	2.44
		15.1	77.4	2.34	75.8	2.35	74.3	2.36	72.9	2.38	72.0	2.39	71.1	2.40	69.9	2.42	68.7	2.45	68.0	2.47
		23.4	81.2	2.39	79.5	2.40	77.9	2.41	76.4	2.42	75.5	2.43	74.6	2.44	73.3	2.47	72.1	2.49	71.3	2.51
		31.7	80.9	2.37	79.2	2.38	77.7	2.39	76.2	2.40	75.2	2.41	74.3	2.43	73.0	2.45	71.8	2.48	71.0	2.50
	95	10.6	73.7	2.13	72.2	2.14	70.8	2.15	69.4	2.16	68.5	2.17	67.7	2.18	66.5	2.20	65.4	2.23	64.7	2.25
		12.8	75.7	2.16	74.2	2.17	72.7	2.18	71.3	2.19	70.4	2.20	69.5	2.21	68.3	2.23	67.2	2.26	66.5	2.28
		15.1	77.4	2.18	75.8	2.19	74.3	2.20	72.9	2.21	72.0	2.22	71.1	2.23	69.9	2.25	68.7	2.28	68.0	2.30
		23.4	81.2	2.22	79.5	2.23	77.9	2.24	76.4	2.25	75.5	2.26	74.6	2.28	73.3	2.30	72.1	2.32	71.3	2.34
		31.7	80.9	2.21	79.2	2.21	77.7	2.22	76.2	2.24	75.2	2.25	74.3	2.26	73.0	2.28	71.8	2.30	71.0	2.32
	104	10.6	73.7	2.06	72.2	2.07	70.8	2.07	69.4	2.09	68.5	2.10	67.7	2.11	66.5	2.13	65.4	2.15	64.7	2.17
		12.8	75.7	2.08	74.2	2.09	72.7	2.10	71.3	2.11	70.4	2.12	69.5	2.13	68.3	2.15	67.2	2.18	66.5	2.19
		15.1	77.4	2.11	75.8	2.11	74.3	2.12	72.9	2.13	72.0	2.14	71.1	2.16	69.9	2.17	68.7	2.20	68.0	2.22
		23.4	81.2	2.14	79.5	2.15	77.9	2.16	76.4	2.17	75.5	2.18	74.6	2.20	73.3	2.22	72.1	2.24	71.3	2.26
		31.7	80.9	2.13	79.2	2.14	77.7	2.14	76.2	2.16	75.2	2.17	74.3	2.18	73.0	2.20	71.8	2.22	71.0	2.24
	113	10.6	73.7	2.05	72.2	2.06	70.8	2.07	69.4	2.08	68.5	2.09	67.7	2.10	66.5	2.12	65.4	2.14	64.7	2.16
		12.8	75.7	2.08	74.2	2.08	72.7	2.09	71.3	2.10	70.4	2.11	69.5	2.13	68.3	2.15	67.2	2.17	66.5	2.19
		15.1	77.4	2.10	75.8	2.10	74.3	2.11	72.9	2.13	72.0	2.14	71.1	2.15	69.9	2.17	68.7	2.19	68.0	2.21
		23.4	81.2	2.14	79.5	2.14	77.9	2.15	76.4	2.17	75.5	2.18	74.6	2.19	73.3	2.21	72.1	2.23	71.3	2.25
		31.7	80.9	2.12	79.2	2.13	77.7	2.14	76.2	2.15	75.2	2.16	74.3	2.17	73.0	2.19	71.8	2.21	71.0	2.23
80	50	10.6	60.5	2.48	59.3	2.49	58.1	2.50	57.0	2.52	56.3	2.53	55.6	2.54	54.6	2.57	53.7	2.59	53.2	2.61
		12.8	62.2	2.51	60.9	2.52	59.7	2.53	58.5	2.55	57.8	2.56	57.1	2.57	56.1	2.60	55.2	2.63	54.6	2.65
		15.1	63.6	2.54	62.3	2.55	61.1	2.56	59.9	2.57	59.1	2.58	58.4	2.60	57.4	2.62	56.4	2.65	55.8	2.67
		23.4	66.7	2.59	65.3	2.59	64.0	2.61	62.8	2.62	62.0	2.63	61.3	2.65	60.2	2.67	59.2	2.70	58.6	2.72
		31.7	66.4	2.57	65.1	2.57	63.8	2.59	62.6	2.60	61.8	2.61	61.0	2.63	60.0	2.65	59.0	2.68	58.3	2.70
	59	10.6	65.5	2.59	64.2	2.60	62.9	2.61	61.7	2.62	60.9	2.63	60.2	2.65	59.1	2.67	58.1	2.70	57.5	2.72
		12.8	67.3	2.62	65.9	2.63	64.6	2.64	63.4	2.66	62.6	2.67	61.8	2.68	60.7	2.71	59.7	2.74	59.1	2.76
		15.1	68.8	2.65	67.4	2.65	66.1	2.67	64.8	2.68	64.0	2.69	63.2	2.71	62.1	2.73	61.1	2.76	60.4	2.79
		23.4	72.2	2.69	70.7	2.70	69.3	2.72	68.0	2.73	67.1	2.74	66.3	2.76	65.1	2.78	64.1	2.81	63.4	2.84
		31.7	71.9	2.68	70.4	2.68	69.0	2.70	67.7	2.71	66.9	2.72	66.0	2.74	64.9	2.76	63.8	2.79	63.1	2.82
	68	10.6	65.5	2.39	64.2	2.40	62.9	2.41	61.7	2.42	60.9	2.44	60.2	2.45	59.1	2.47	58.1	2.50	57.5	2.52
		12.8	67.3	2.42	65.9	2.43	64.6	2.44	63.4	2.45	62.6	2.47	61.8	2.48	60.7	2.50	59.7	2.53	59.1	2.55
		15.1	68.8	2.44	67.4	2.45	66.1	2.46	64.8	2.48	64.0	2.49	63.2	2.50	62.1	2.53	61.1	2.55	60.4	2.57
		23.4	72.2	2.49	70.7	2.50	69.3	2.51	68.0	2.52	67.1	2.54	66.3	2.55	65.1	2.57	64.1	2.60	63.4	2.62
		31.7	71.9	2.47	70.4	2.48	69.0	2.49	67.7	2.51	66.9	2.52	66.0	2.53	64.9	2.55	63.8	2.58	63.1	2.60
	77	10.6	65.5	2.14	64.2	2.15	62.9	2.16	61.7	2.17	60.9	2.18	60.2	2.19	59.1	2.21	58.1	2.23	57.5	2.25
		12.8	67.3	2.17	65.9	2.17	64.6	2.18	63.4	2.20	62.6	2.21	61.8	2.22	60.7	2.24	59.7	2.26	59.1	2.28
		15.1	68.8	2.19	67.4	2.19	66.1	2.20	64.8	2.22	64.0	2.23	63.2	2.24	62.1	2.26	61.1	2.29	60.4	2.30
		23.4	72.2	2.23	70.7	2.24	69.3	2.25	68.0	2.26	67.1	2.27	66.3	2.28	65.1	2.30	64.1	2.33	63.4	2.35
		31.7	71.9	2.21	70.4	2.22	69.0	2.23	67.7	2.24	66.9	2.25	66.0	2.26	64.9	2.29	63.8	2.31	63.1	2.33
	86	10.6	65.5	1.87	64.2	1.88	62.9	1.89	61.7	1.90	60.9	1.91	60.2	1.92	59.1	1.93	58.1	1.96	57.5	1.97
		12.8	67.3	1.90	65.9	1.90	64.6	1.91	63.4	1.92	62.6	1.93	61.8	1.94	60.7	1.96	59.7	1.98	59.1	2.00
		15.1	68.8	1.91	67.4	1.92	66.1	1.93	64.8	1.94	64.0	1.95	63.2	1.96	62.1	1.98	61.1	2.00	60.4	2.02
		23.4	72.2	1.95	70.7	1.96	69.3	1.97	68.0	1.98	67.1	1.99	66.3	2.00	65.1	2.02	64.1	2.04	63.4	2.05
		31.7	71.9	1.94	70.4	1.94	69.0	1.95	67.7	1.96	66.9	1.97	66.0	1.98	64.9	2.00	63.8	2.02	63.1	2.04
	95	10.6	65.5	1.74	64.2	1.75	62.9	1.76	61.7	1.77	60.9	1.77	60.2	1.78	59.1	1.80	58.1	1.82	57.5	1.84
		12.8	67.3	1.76	65.9	1.77	64.6	1.78	63.4	1.79	62.6	1.80	61.8	1.81	60.7	1.82	59.7	1.84	59.1	1.86
		15.1	68.8	1.78	67.4	1.79	66.1	1.80	64.8	1.81	64.0	1.81	63.2	1.82	62.1	1.84	61.1	1.86	60.4	1.88
		23.4	72.2	1.82	70.7	1.82	69.3	1.83	68.0	1.84	67.1	1.85	66.3	1.86	65.1	1.88	64.1	1.90	63.4	1.91
		31.7	71.9	1.80	70.4	1.81	69.0	1.82	67.7	1.83	66.9	1.84	66.0	1.84	64.9	1.86	63.8	1.88	63.1	1.90
	104	10.6	65.5	1.68	64.2	1.69	62.9	1.69	61.7	1.70	60.9	1.71	60.2	1.72	59.1	1.74	58.1	1.76	57.5	1.77
		12.8	67.3	1.70	65.9	1.71	64.6	1.72	63.4	1.73	62.6	1.73	61.8	1.74	60.7	1.76	59.7	1.78	59.1	1.79
		15.1	68.8	1.72	67.4	1.72	66.1	1.73	64.8	1.74	64.0	1.75	63.2	1.76	62.1	1.78	61.1	1.80	60.4	1.81
		23.4	72.2	1.75	70.7	1.76	69.3	1.76	68.0	1.78	67.1	1.78	66.3	1.79	65.1	1.81	64.1	1.83	63.4	1.84
		31.7	71.9	1.74	70.4	1.74	69.0	1.75	67.7	1.76	66.9	1.77	66.0	1.78	64.9	1.80	63.8	1.82	63.1	1.83
	113	10.6	65.5	1.68	64.2	1.68	62.9	1.69	61.7	1.70	60.9	1.71	60.2	1.72	59.1	1.73	58.1	1.75	57.5	1.76
		12.8	67.3	1.70	65.9	1.70	64.6	1.71	63.4	1.72	62.6	1.73	61.8	1.74	60.7	1.75	59.7	1.77	59.1	1.79
		15.1	68.8	1.71	67.4	1.72	66.1	1.73	64.8	1.74	64.0	1.74	63.2	1.75	62.1	1.77	61.1	1.79	60.4	1.80
		23.4	72.2	1.74	70.7	1.75	69.3	1.76	68.0	1.77	67.1	1.78	66.3	1.79	65.1	1.80	64.1	1.82	63.4	1.84
		31.7	71.9	1.73	70.4	1.74	69.0	1.75	67.7	1.76	66.9	1.76	66.0	1.77	64.9	1.79	63.8	1.81	63.1	1.82

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	10.6	53.0	1.92	51.9	1.92	50.8	1.93	49.9	1.94	49.2	1.95	48.7	1.96	47.8	1.98	47.0	2.00	46.5	2.02
		12.8	54.4	1.94	53.3	1.95	52.2	1.96	51.2	1.97	50.6	1.98	50.0	1.99	49.1	2.01	48.3	2.03	47.8	2.05
		15.1	55.7	1.96	54.5	1.97	53.4	1.98	52.4	1.99	51.7	2.00	51.1	2.01	50.2	2.03	49.4	2.05	48.9	2.07
		23.4	58.4	2.00	57.2	2.00	56.0	2.01	54.9	2.03	54.3	2.03	53.6	2.05	52.7	2.06	51.8	2.09	51.2	2.10
		31.7	58.1	1.98	56.9	1.99	55.8	2.00	54.7	2.01	54.1	2.02	53.4	2.03	52.5	2.05	51.6	2.07	51.1	2.09
	59	10.6	57.3	2.00	56.1	2.01	55.0	2.02	54.0	2.03	53.3	2.04	52.7	2.05	51.7	2.07	50.9	2.09	50.3	2.11
		12.8	58.9	2.02	57.7	2.03	56.5	2.04	55.4	2.05	54.8	2.06	54.1	2.07	53.1	2.09	52.3	2.11	51.7	2.13
		15.1	60.2	2.04	59.0	2.05	57.8	2.06	56.7	2.07	56.0	2.08	55.3	2.09	54.4	2.11	53.4	2.14	52.9	2.15
		23.4	63.2	2.08	61.9	2.09	60.6	2.10	59.5	2.11	58.7	2.12	58.0	2.13	57.0	2.15	56.1	2.18	55.5	2.19
		31.7	62.9	2.07	61.6	2.07	60.4	2.08	59.2	2.10	58.5	2.11	57.8	2.12	56.8	2.14	55.8	2.16	55.3	2.18
	68	10.6	57.3	1.85	56.1	1.85	55.0	1.86	54.0	1.87	53.3	1.88	52.7	1.89	51.7	1.91	50.9	1.93	50.3	1.95
		12.8	58.9	1.87	57.7	1.88	56.5	1.89	55.4	1.90	54.8	1.91	54.1	1.92	53.1	1.93	52.3	1.95	51.7	1.97
		15.1	60.2	1.89	59.0	1.90	57.8	1.90	56.7	1.92	56.0	1.92	55.3	1.93	54.4	1.95	53.4	1.97	52.9	1.99
		23.4	63.2	1.92	61.9	1.93	60.6	1.94	59.5	1.95	58.7	1.96	58.0	1.97	57.0	1.99	56.1	2.01	55.5	2.03
		31.7	62.9	1.91	61.6	1.92	60.4	1.93	59.2	1.94	58.5	1.95	57.8	1.96	56.8	1.97	55.8	2.00	55.3	2.01
	77	10.6	57.3	1.65	56.1	1.66	55.0	1.67	54.0	1.68	53.3	1.68	52.7	1.69	51.7	1.71	50.9	1.73	50.3	1.74
		12.8	58.9	1.67	57.7	1.68	56.5	1.69	55.4	1.70	54.8	1.70	54.1	1.71	53.1	1.73	52.3	1.75	51.7	1.76
		15.1	60.2	1.69	59.0	1.70	57.8	1.70	56.7	1.71	56.0	1.72	55.3	1.73	54.4	1.75	53.4	1.77	52.9	1.78
		23.4	63.2	1.72	61.9	1.73	60.6	1.74	59.5	1.75	58.7	1.75	58.0	1.76	57.0	1.78	56.1	1.80	55.5	1.81
		31.7	62.9	1.71	61.6	1.72	60.4	1.72	59.2	1.73	58.5	1.74	57.8	1.75	56.8	1.77	55.8	1.79	55.3	1.80
	86	10.6	57.3	1.45	56.1	1.45	55.0	1.46	54.0	1.47	53.3	1.47	52.7	1.48	51.7	1.50	50.9	1.51	50.3	1.52
		12.8	58.9	1.47	57.7	1.47	56.5	1.48	55.4	1.49	54.8	1.49	54.1	1.50	53.1	1.51	52.3	1.53	51.7	1.54
		15.1	60.2	1.48	59.0	1.48	57.8	1.49	56.7	1.50	56.0	1.51	55.3	1.51	54.4	1.53	53.4	1.55	52.9	1.56
		23.4	63.2	1.51	61.9	1.51	60.6	1.52	59.5	1.53	58.7	1.53	58.0	1.54	57.0	1.56	56.1	1.57	55.5	1.59
		31.7	62.9	1.50	61.6	1.50	60.4	1.51	59.2	1.52	58.5	1.52	57.8	1.53	56.8	1.55	55.8	1.56	55.3	1.58
	95	10.6	57.3	1.35	56.1	1.35	55.0	1.36	54.0	1.37	53.3	1.37	52.7	1.38	51.7	1.39	50.9	1.41	50.3	1.42
		12.8	58.9	1.36	57.7	1.37	56.5	1.37	55.4	1.38	54.8	1.39	54.1	1.40	53.1	1.41	52.3	1.42	51.7	1.44
		15.1	60.2	1.38	59.0	1.38	57.8	1.39	56.7	1.40	56.0	1.40	55.3	1.41	54.4	1.42	53.4	1.44	52.9	1.45
		23.4	63.2	1.40	61.9	1.41	60.6	1.41	59.5	1.42	58.7	1.43	58.0	1.44	57.0	1.45	56.1	1.47	55.5	1.48
		31.7	62.9	1.39	61.6	1.40	60.4	1.40	59.2	1.41	58.5	1.42	57.8	1.43	56.8	1.44	55.8	1.45	55.3	1.47
	104	10.6	57.3	1.30	56.1	1.30	55.0	1.31	54.0	1.32	53.3	1.32	52.7	1.33	51.7	1.34	50.9	1.36	50.3	1.37
		12.8	58.9	1.32	57.7	1.32	56.5	1.33	55.4	1.33	54.8	1.34	54.1	1.35	53.1	1.36	52.3	1.37	51.7	1.39
		15.1	60.2	1.33	59.0	1.33	57.8	1.34	56.7	1.35	56.0	1.35	55.3	1.36	54.4	1.37	53.4	1.39	52.9	1.40
		23.4	63.2	1.35	61.9	1.36	60.6	1.36	59.5	1.37	58.7	1.38	58.0	1.39	57.0	1.40	56.1	1.41	55.5	1.43
		31.7	62.9	1.34	61.6	1.35	60.4	1.35	59.2	1.36	58.5	1.37	57.8	1.38	56.8	1.39	55.8	1.40	55.3	1.41
	113	10.6	57.3	1.29	56.1	1.30	55.0	1.30	54.0	1.31	53.3	1.32	52.7	1.33	51.7	1.34	50.9	1.35	50.3	1.36
		12.8	58.9	1.31	57.7	1.32	56.5	1.32	55.4	1.33	54.8	1.33	54.1	1.34	53.1	1.35	52.3	1.37	51.7	1.38
		15.1	60.2	1.32	59.0	1.33	57.8	1.33	56.7	1.34	56.0	1.35	55.3	1.36	54.4	1.37	53.4	1.38	52.9	1.39
		23.4	63.2	1.35	61.9	1.35	60.6	1.36	59.5	1.37	58.7	1.37	58.0	1.38	57.0	1.39	56.1	1.41	55.5	1.42
		31.7	62.9	1.34	61.6	1.34	60.4	1.35	59.2	1.36	58.5	1.36	57.8	1.37	56.8	1.38	55.8	1.40	55.3	1.41
60	50	10.6	45.4	1.43	44.5	1.44	43.6	1.44	42.7	1.45	42.2	1.46	41.7	1.46	41.0	1.48	40.3	1.49	39.9	1.51
		12.8	46.6	1.45	45.7	1.45	44.8	1.46	43.9	1.47	43.4	1.48	42.8	1.48	42.1	1.50	41.4	1.51	41.0	1.53
		15.1	47.7	1.46	46.7	1.47	45.8	1.47	44.9	1.48	44.3	1.49	43.8	1.50	43.0	1.51	42.3	1.53	41.9	1.54
		23.4	50.0	1.49	49.0	1.49	48.0	1.50	47.1	1.51	46.5	1.52	45.9	1.53	45.1	1.54	44.4	1.56	43.9	1.57
		31.7	49.8	1.48	48.8	1.48	47.8	1.49	46.9	1.50	46.3	1.51	45.8	1.51	45.0	1.53	44.2	1.54	43.8	1.56
	59	10.6	49.1	1.49	48.1	1.50	47.2	1.50	46.3	1.51	45.7	1.52	45.1	1.53	44.3	1.54	43.6	1.56	43.1	1.57
		12.8	50.5	1.51	49.4	1.51	48.5	1.52	47.5	1.53	46.9	1.54	46.4	1.55	45.6	1.56	44.8	1.58	44.3	1.59
		15.1	51.6	1.52	50.6	1.53	49.6	1.54	48.6	1.55	48.0	1.55	47.4	1.56	46.6	1.58	45.8	1.59	45.3	1.61
		23.4	54.1	1.55	53.0	1.56	52.0	1.57	51.0	1.57	50.3	1.58	49.7	1.59	48.9	1.60	48.0	1.62	47.5	1.64
		31.7	53.9	1.54	52.8	1.55	51.8	1.55	50.8	1.56	50.1	1.57	49.5	1.58	48.7	1.59	47.9	1.61	47.4	1.62
	68	10.6	49.1	1.38	48.1	1.38	47.2	1.39	46.3	1.40	45.7	1.40	45.1	1.41	44.3	1.42	43.6	1.44	43.1	1.45
		12.8	50.5	1.40	49.4	1.40	48.5	1.41	47.5	1.41	46.9	1.42	46.4	1.43	45.6	1.44	44.8	1.46	44.3	1.47
		15.1	51.6	1.41	50.6	1.41	49.6	1.42	48.6	1.43	48.0	1.43	47.4	1.44	46.6	1.46	45.8	1.47	45.3	1.48
		23.4	54.1	1.44	53.0	1.44	52.0	1.45	51.0	1.45	50.3	1.46	49.7	1.47	48.9	1.48	48.0	1.50	47.5	1.51
		31.7	53.9	1.42	52.8	1.43	51.8	1.44	50.8	1.44	50.1	1.45	49.5	1.46	48.7	1.47	47.9	1.49	47.4	1.50
	77	10.6	49.1	1.23	48.1	1.24	47.2	1.24	46.3	1.25	45.7	1.26	45.1	1.26	44.3	1.27	43.6	1.29	43.1	1.30
		12.8	50.5	1.25	49.4	1.25	48.5	1.26	47.5	1.27	46.9	1.27	46.4	1.28	45.6	1.29	44.8	1.30	44.3	1.31
		15.1	51.6	1.26	50.6	1.26	49.6	1.27	48.6	1.28	48.0	1.28	47.4	1.29	46.6	1.30	45.8	1.32	45.3	1.33
		23.4	54.1	1.28	53.0	1.29	52.0	1.29	51.0	1.30	50.3	1.31	49.7	1.31	48.9	1.33	48.0	1.34	47.5	1.35
		31.7	53.9	1.27	52.8	1.28	51.8	1.28	50.8	1.29	50.1	1.30	49.5	1.31	48.7	1.32	47.9	1.33	47.4	1.34
	86	10.6	49.1	1.08	48.1	1.08	47.2	1.09	46.3	1.09	45.7	1.10	45.1	1.10	44.3	1.12	43.6	1.13	43.1	1.14
		12.8	50.5	1.09	49.4	1.10	48.5	1.10	47.5	1.11	46.9	1.11	46.4	1.12	45.6	1.13	44.8	1.14	44.3	1.15
		15.1	51.6	1.10	50.6	1.11	49.6	1.11	48.6	1.12	48.0	1.12	47.4	1.13	46.6	1.14	45.8	1.15	45.3	1.16
		23.4	54.1	1.12	53.0	1.13	52.0	1.13	51.0	1.14	50.3	1.14	49.7	1.15	48.9	1.16	48.0	1.17	47.5	1.18
		31.7	53.9	1.12	52.8	1.12	51.8	1.12	50.8	1.13	50.1	1.14	49.5	1.14	48.7	1.15	47.9	1.17	47.4	1.17
	95	10.6	49.1	1.00	48.1	1.01	47.2	1.01	46.3	1.02	45.7	1.02	45.1	1.03	44.3	1.04	43.6	1.05	43.1	1.06
		12.8	50.5	1.02	49.4	1.02	48.5	1.02	47.5	1.03	46.9	1.04	46.4	1.04	45.6	1.05	44.8	1.06	44.3	1.07
		15.1	51.6	1.03	50.6	1.03	49.6	1.04	48.6	1.04	48.0	1.05	47.4	1.05	46.6	1.06	45.8	1.07	45.3	1.08
		23.4	54.1	1.05	53.0	1.05	52.0	1.05	51.0	1.06	50.3	1.07	49.7	1.07	48.9	1.08	48.0	1.09	47.5	1.10
		31.7	53.9	1.04	52.8	1.04	51.8	1.05	50.8	1.05	50.1	1.06	49.5	1.06	48.7	1.07	47.9	1.08	47.4	1.09
	104	10.6	49.1	0.97	48.1	0.97	47.2	0.98	46.3	0.98	45.7	0.99	45.1	0.99	44.3	1.00	43.6	1.01	43.1	1.02
		12.8	50.5	0.98	49.4	0.98	48.5	0.99	47.5	0.99	46.9	1.00	46.4	1.00	45.6	1.01	44.8	1.02	44.3	1.03
		15.1	51.6	0.99	50.6	0.99	49.6	1.00	48.6	1.00	48.0	1.01	47.4	1.01	46.6	1.02	45.8	1.03	45.3	1.04
		23.4	54.1	1.01	53.0	1.01	52.0	1.02	51.0	1.02	50.3	1.03	49.7	1.03	48.9	1.04	48.0	1.05	47.5	1.06
		31.7	53.9	1.00	52.8	1.01	51.8	1.01	50.8	1.02	50.1	1.02	49.5	1.03	48.7	1.04	47.9	1.05	47.4	1.06
	113	10.6	49.1	0.97	48.1	0.97	47.2	0.97	46.3	0.98	45.7	0.98	45.1	0.99	44.3	1.00	43.6	1.01	43.1	1.02
		12.8	50.5	0.98	49.4	0.98	48.5	0.99	47.5	0.99	46.9	1.00	46.4	1.00	45.6	1.01	44.8	1.02	44.3	1.03
		15.1	51.6	0.99	50.6	0.99	49.6	0.99	48.6	1.00	48.0	1.01	47.4	1.01	46.6	1.02	45.8	1.03	45.3	1.04
		23.4	54.1	1.01	53.0	1.01	52.0	1.01	51.0	1.02	50.3	1.02	49.7	1.03	48.9	1.04	48.0	1.05	47.5	1.06
		31.7	53.9	1.00	52.8	1.00	51.8	1.01	50.8	1.01	50.1	1.02	49.5	1.02	48.7	1.03	47.9	1.04	47.4	1.05

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)072B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	10.6	37.8	1.07	37.1	1.07	36.3	1.07	35.6	1.08	35.2	1.08	34.8	1.09	34.1	1.10	33.6	1.11	33.2	1.12
		12.8	38.9	1.08	38.1	1.08	37.3	1.09	36.6	1.09	36.1	1.10	35.7	1.10	35.1	1.11	34.5	1.13	34.1	1.14
		15.1	39.8	1.09	38.9	1.09	38.2	1.10	37.4	1.10	37.0	1.11	36.5	1.12	35.9	1.13	35.3	1.14	34.9	1.15
		23.4	41.7	1.11	40.8	1.11	40.0	1.12	39.2	1.12	38.8	1.13	38.3	1.14	37.6	1.15	37.0	1.16	36.6	1.17
		31.7	41.5	1.10	40.7	1.11	39.9	1.11	39.1	1.12	38.6	1.12	38.1	1.13	37.5	1.14	36.9	1.15	36.5	1.16
	59	10.6	40.9	1.11	40.1	1.11	39.3	1.12	38.6	1.13	38.1	1.13	37.6	1.14	37.0	1.15	36.3	1.16	36.0	1.17
		12.8	42.1	1.12	41.2	1.13	40.4	1.13	39.6	1.14	39.1	1.14	38.6	1.15	38.0	1.16	37.3	1.17	36.9	1.18
		15.1	43.0	1.14	42.1	1.14	41.3	1.14	40.5	1.15	40.0	1.16	39.5	1.16	38.8	1.17	38.2	1.19	37.8	1.20
		23.4	45.1	1.16	44.2	1.16	43.3	1.17	42.5	1.17	41.9	1.18	41.4	1.18	40.7	1.20	40.0	1.21	39.6	1.22
		31.7	44.9	1.15	44.0	1.15	43.1	1.16	42.3	1.16	41.8	1.17	41.3	1.18	40.6	1.19	39.9	1.20	39.5	1.21
	68	10.6	40.9	1.03	40.1	1.03	39.3	1.03	38.6	1.04	38.1	1.05	37.6	1.05	37.0	1.06	36.3	1.07	36.0	1.08
		12.8	42.1	1.04	41.2	1.04	40.4	1.05	39.6	1.05	39.1	1.06	38.6	1.06	38.0	1.07	37.3	1.09	36.9	1.09
		15.1	43.0	1.05	42.1	1.05	41.3	1.06	40.5	1.06	40.0	1.07	39.5	1.07	38.8	1.08	38.2	1.10	37.8	1.10
		23.4	45.1	1.07	44.2	1.07	43.3	1.08	42.5	1.08	41.9	1.09	41.4	1.09	40.7	1.10	40.0	1.12	39.6	1.13
		31.7	44.9	1.06	44.0	1.06	43.1	1.07	42.3	1.08	41.8	1.08	41.3	1.09	40.6	1.10	39.9	1.11	39.5	1.12
	77	10.6	40.9	0.92	40.1	0.92	39.3	0.93	38.6	0.93	38.1	0.94	37.6	0.94	37.0	0.95	36.3	0.96	36.0	0.97
		12.8	42.1	0.93	41.2	0.93	40.4	0.94	39.6	0.94	39.1	0.95	38.6	0.95	38.0	0.96	37.3	0.97	36.9	0.98
		15.1	43.0	0.94	42.1	0.94	41.3	0.95	40.5	0.95	40.0	0.96	39.5	0.96	38.8	0.97	38.2	0.98	37.8	0.99
		23.4	45.1	0.96	44.2	0.96	43.3	0.96	42.5	0.97	41.9	0.97	41.4	0.98	40.7	0.99	40.0	1.00	39.6	1.01
		31.7	44.9	0.95	44.0	0.95	43.1	0.96	42.3	0.96	41.8	0.97	41.3	0.97	40.6	0.98	39.9	0.99	39.5	1.00
	86	10.6	40.9	0.80	40.1	0.81	39.3	0.81	38.6	0.81	38.1	0.82	37.6	0.82	37.0	0.83	36.3	0.84	36.0	0.85
		12.8	42.1	0.81	41.2	0.82	40.4	0.82	39.6	0.82	39.1	0.83	38.6	0.83	38.0	0.84	37.3	0.85	36.9	0.86
		15.1	43.0	0.82	42.1	0.82	41.3	0.83	40.5	0.83	40.0	0.84	39.5	0.84	38.8	0.85	38.2	0.86	37.8	0.87
		23.4	45.1	0.84	44.2	0.84	43.3	0.84	42.5	0.85	41.9	0.85	41.4	0.86	40.7	0.86	40.0	0.87	39.6	0.88
		31.7	44.9	0.83	44.0	0.83	43.1	0.84	42.3	0.84	41.8	0.85	41.3	0.85	40.6	0.86	39.9	0.87	39.5	0.87
	95	10.6	40.9	0.75	40.1	0.75	39.3	0.75	38.6	0.76	38.1	0.76	37.6	0.77	37.0	0.77	36.3	0.78	36.0	0.79
		12.8	42.1	0.76	41.2	0.76	40.4	0.76	39.6	0.77	39.1	0.77	38.6	0.78	38.0	0.78	37.3	0.79	36.9	0.80
		15.1	43.0	0.76	42.1	0.77	41.3	0.77	40.5	0.78	40.0	0.78	39.5	0.78	38.8	0.79	38.2	0.80	37.8	0.81
		23.4	45.1	0.78	44.2	0.78	43.3	0.79	42.5	0.79	41.9	0.79	41.4	0.80	40.7	0.80	40.0	0.81	39.6	0.82
		31.7	44.9	0.77	44.0	0.78	43.1	0.78	42.3	0.78	41.8	0.79	41.3	0.79	40.6	0.80	39.9	0.81	39.5	0.81
	104	10.6	40.9	0.72	40.1	0.72	39.3	0.73	38.6	0.73	38.1	0.73	37.6	0.74	37.0	0.75	36.3	0.75	36.0	0.76
		12.8	42.1	0.73	41.2	0.73	40.4	0.74	39.6	0.74	39.1	0.74	38.6	0.75	38.0	0.75	37.3	0.76	36.9	0.77
		15.1	43.0	0.74	42.1	0.74	41.3	0.74	40.5	0.75	40.0	0.75	39.5	0.76	38.8	0.76	38.2	0.77	37.8	0.78
		23.4	45.1	0.75	44.2	0.75	43.3	0.76	42.5	0.76	41.9	0.77	41.4	0.77	40.7	0.78	40.0	0.79	39.6	0.79
		31.7	44.9	0.75	44.0	0.75	43.1	0.75	42.3	0.76	41.8	0.76	41.3	0.76	40.6	0.77	39.9	0.78	39.5	0.79
	113	10.6	40.9	0.72	40.1	0.72	39.3	0.72	38.6	0.73	38.1	0.73	37.6	0.74	37.0	0.74	36.3	0.75	36.0	0.76
		12.8	42.1	0.73	41.2	0.73	40.4	0.73	39.6	0.74	39.1	0.74	38.6	0.75	38.0	0.75	37.3	0.76	36.9	0.77
		15.1	43.0	0.74	42.1	0.74	41.3	0.74	40.5	0.75	40.0	0.75	39.5	0.75	38.8	0.76	38.2	0.77	37.8	0.77
		23.4	45.1	0.75	44.2	0.75	43.3	0.75	42.5	0.76	41.9	0.76	41.4	0.77	40.7	0.77	40.0	0.78	39.6	0.79
		31.7	44.9	0.74	44.0	0.75	43.1	0.75	42.3	0.75	41.8	0.76	41.3	0.76	40.6	0.77	39.9	0.78	39.5	0.78

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	13.2	92.7	4.83	90.8	4.84	89.0	4.86	87.3	4.89	86.2	4.92	85.1	4.94	83.7	4.99	82.3	5.04	81.4	5.08
		16.8	95.8	4.90	93.9	4.92	92.0	4.94	90.2	4.97	89.1	4.99	88.0	5.02	86.5	5.06	85.0	5.12	84.1	5.16
		20.3	98.4	4.96	96.4	4.98	94.5	5.00	92.7	5.03	91.5	5.05	90.4	5.08	88.8	5.13	87.4	5.18	86.4	5.22
		30.0	102.9	5.05	100.7	5.06	98.7	5.09	96.8	5.12	95.6	5.14	94.5	5.17	92.8	5.22	91.3	5.27	90.3	5.32
		39.6	103.5	5.04	101.3	5.06	99.3	5.08	97.4	5.11	96.2	5.13	95.0	5.16	93.4	5.21	91.8	5.26	90.9	5.31
	59	13.2	111.3	5.58	109.0	5.60	106.8	5.62	104.8	5.66	103.5	5.68	102.2	5.71	100.4	5.77	98.8	5.83	97.7	5.88
		16.8	115.0	5.67	112.7	5.69	110.4	5.71	108.3	5.74	106.9	5.77	105.7	5.80	103.8	5.86	102.1	5.92	101.0	5.97
		20.3	118.2	5.73	115.7	5.75	113.4	5.78	111.2	5.81	109.9	5.84	108.5	5.87	106.6	5.93	104.9	5.99	103.8	6.04
		30.0	123.5	5.84	120.9	5.85	118.5	5.88	116.2	5.91	114.8	5.94	113.4	5.97	111.4	6.03	109.6	6.10	108.4	6.15
		39.6	124.2	5.83	121.7	5.84	119.2	5.87	116.9	5.90	115.5	5.93	114.1	5.96	112.1	6.02	110.2	6.08	109.1	6.13
	68	13.2	111.3	5.16	109.0	5.17	106.8	5.20	104.8	5.23	103.5	5.25	102.2	5.28	100.4	5.33	98.8	5.39	97.7	5.43
		16.8	115.0	5.24	112.7	5.25	110.4	5.28	108.3	5.31	106.9	5.33	105.7	5.36	103.8	5.41	102.1	5.47	101.0	5.51
		20.3	118.2	5.30	115.7	5.32	113.4	5.34	111.2	5.37	109.9	5.40	108.5	5.43	106.6	5.48	104.9	5.54	103.8	5.58
		30.0	123.5	5.39	120.9	5.41	118.5	5.43	116.2	5.47	114.8	5.49	113.4	5.52	111.4	5.57	109.6	5.63	108.4	5.68
		39.6	124.2	5.38	121.7	5.40	119.2	5.43	116.9	5.46	115.5	5.48	114.1	5.51	112.1	5.56	110.2	5.62	109.1	5.67
	77	13.2	111.3	4.61	109.0	4.63	106.8	4.65	104.8	4.68	103.5	4.70	102.2	4.72	100.4	4.77	98.8	4.82	97.7	4.86
		16.8	115.0	4.69	112.7	4.70	110.4	4.72	108.3	4.75	106.9	4.77	105.7	4.80	103.8	4.84	102.1	4.89	101.0	4.93
		20.3	118.2	4.74	115.7	4.76	113.4	4.78	111.2	4.81	109.9	4.83	108.5	4.85	106.6	4.90	104.9	4.95	103.8	4.99
		30.0	123.5	4.83	120.9	4.84	118.5	4.86	116.2	4.89	114.8	4.91	113.4	4.94	111.4	4.99	109.6	5.04	108.4	5.08
		39.6	124.2	4.82	121.7	4.83	119.2	4.85	116.9	4.88	115.5	4.91	114.1	4.93	112.1	4.98	110.2	5.03	109.1	5.07
	86	13.2	111.3	4.04	109.0	4.05	106.8	4.07	104.8	4.09	103.5	4.11	102.2	4.13	100.4	4.17	98.8	4.22	97.7	4.25
		16.8	115.0	4.10	112.7	4.11	110.4	4.13	108.3	4.16	106.9	4.18	105.7	4.20	103.8	4.24	102.1	4.28	101.0	4.32
		20.3	118.2	4.15	115.7	4.16	113.4	4.18	111.2	4.21	109.9	4.23	108.5	4.25	106.6	4.29	104.9	4.34	103.8	4.37
		30.0	123.5	4.22	120.9	4.24	118.5	4.26	116.2	4.28	114.8	4.30	113.4	4.32	111.4	4.36	109.6	4.41	108.4	4.45
		39.6	124.2	4.22	121.7	4.23	119.2	4.25	116.9	4.27	115.5	4.29	114.1	4.32	112.1	4.36	110.2	4.40	109.1	4.44
	95	13.2	111.3	3.76	109.0	3.77	106.8	3.79	104.8	3.81	103.5	3.83	102.2	3.85	100.4	3.88	98.8	3.93	97.7	3.96
		16.8	115.0	3.82	112.7	3.83	110.4	3.85	108.3	3.87	106.9	3.89	105.7	3.91	103.8	3.94	102.1	3.99	101.0	4.02
		20.3	118.2	3.86	115.7	3.88	113.4	3.89	111.2	3.92	109.9	3.93	108.5	3.95	106.6	3.99	104.9	4.03	103.8	4.07
		30.0	123.5	3.93	120.9	3.94	118.5	3.96	116.2	3.98	114.8	4.00	113.4	4.02	111.4	4.06	109.6	4.11	108.4	4.14
		39.6	124.2	3.92	121.7	3.94	119.2	3.95	116.9	3.98	115.5	4.00	114.1	4.02	112.1	4.05	110.2	4.10	109.1	4.13
	104	13.2	111.3	3.63	109.0	3.64	106.8	3.65	104.8	3.68	103.5	3.69	102.2	3.71	100.4	3.75	98.8	3.79	97.7	3.82
		16.8	115.0	3.68	112.7	3.69	110.4	3.71	108.3	3.73	106.9	3.75	105.7	3.77	103.8	3.81	102.1	3.85	101.0	3.88
		20.3	118.2	3.73	115.7	3.74	113.4	3.76	111.2	3.78	109.9	3.80	108.5	3.82	106.6	3.85	104.9	3.89	103.8	3.92
		30.0	123.5	3.79	120.9	3.80	118.5	3.82	116.2	3.84	114.8	3.86	113.4	3.88	111.4	3.92	109.6	3.96	108.4	3.99
		39.6	124.2	3.79	121.7	3.80	119.2	3.82	116.9	3.84	115.5	3.86	114.1	3.88	112.1	3.91	110.2	3.95	109.1	3.99
	113	13.2	111.3	3.61	109.0	3.63	106.8	3.64	104.8	3.66	103.5	3.68	102.2	3.70	100.4	3.73	98.8	3.77	97.7	3.81
		16.8	115.0	3.67	112.7	3.68	110.4	3.70	108.3	3.72	106.9	3.74	105.7	3.76	103.8	3.79	102.1	3.83	101.0	3.86
		20.3	118.2	3.71	115.7	3.73	113.4	3.74	111.2	3.76	109.9	3.78	108.5	3.80	106.6	3.84	104.9	3.88	103.8	3.91
		30.0	123.5	3.78	120.9	3.79	118.5	3.81	116.2	3.83	114.8	3.85	113.4	3.87	111.4	3.90	109.6	3.95	108.4	3.98
		39.6	124.2	3.77	121.7	3.78	119.2	3.80	116.9	3.82	115.5	3.84	114.1	3.86	112.1	3.90	110.2	3.94	109.1	3.97
120	50	13.2	91.8	4.92	89.9	4.94	88.1	4.96	86.4	4.99	85.3	5.01	84.3	5.04	82.8	5.09	81.5	5.14	80.6	5.18
		16.8	94.9	5.00	92.9	5.01	91.1	5.04	89.3	5.07	88.2	5.09	87.2	5.12	85.6	5.16	84.2	5.22	83.3	5.26
		20.3	97.5	5.06	95.5	5.07	93.6	5.10	91.8	5.13	90.6	5.15	89.5	5.18	88.0	5.23	86.5	5.28	85.6	5.33
		30.0	101.9	5.15	99.8	5.16	97.8	5.19	95.9	5.22	94.7	5.24	93.5	5.27	91.9	5.32	90.4	5.38	89.4	5.42
		39.6	102.5	5.14	100.4	5.15	98.4	5.18	96.5	5.21	95.3	5.23	94.1	5.26	92.5	5.31	90.9	5.37	90.0	5.41
	59	13.2	110.2	5.69	107.9	5.71	105.8	5.73	103.8	5.77	102.5	5.79	101.2	5.83	99.5	5.88	97.8	5.94	96.8	5.99
		16.8	113.9	5.78	111.6	5.80	109.4	5.82	107.2	5.86	105.9	5.88	104.6	5.92	102.8	5.97	101.1	6.03	100.0	6.08
		20.3	117.0	5.85	114.6	5.87	112.3	5.89	110.2	5.93	108.8	5.95	107.5	5.99	105.6	6.04	103.8	6.11	102.7	6.16
		30.0	122.3	5.95	119.8	5.97	117.4	6.00	115.1	6.03	113.7	6.06	112.3	6.09	110.3	6.15	108.5	6.21	107.4	6.27
		39.6	123.0	5.94	120.5	5.96	118.1	5.99	115.8	6.02	114.4	6.05	113.0	6.08	111.0	6.14	109.2	6.20	108.0	6.25
	68	13.2	110.2	5.26	107.9	5.28	105.8	5.30	103.8	5.33	102.5	5.35	101.2	5.38	99.5	5.43	97.8	5.49	96.8	5.54
		16.8	113.9	5.34	111.6	5.36	109.4	5.38	107.2	5.41	105.9	5.44	104.6	5.47	102.8	5.52	101.1	5.58	100.0	5.62
		20.3	117.0	5.40	114.6	5.42	112.3	5.45	110.2	5.48	108.8	5.50	107.5	5.53	105.6	5.58	103.8	5.64	102.7	5.69
		30.0	122.3	5.50	119.8	5.52	117.4	5.54	115.1	5.57	113.7	5.60	112.3	5.63	110.3	5.68	108.5	5.74	107.4	5.79
		39.6	123.0	5.49	120.5	5.51	118.1	5.53	115.8	5.56	114.4	5.59	113.0	5.62	111.0	5.67	109.2	5.73	108.0	5.78
	77	13.2	110.2	4.71	107.9	4.72	105.8	4.74	103.8	4.77	102.5	4.79	101.2	4.82	99.5	4.86	97.8	4.91	96.8	4.95
		16.8	113.9	4.78	111.6	4.79	109.4	4.81	107.2	4.84	105.9	4.87	104.6	4.89	102.8	4.94	101.1	4.99	100.0	5.03
		20.3	117.0	4.83	114.6	4.85	112.3	4.87	110.2	4.90	108.8	4.92	107.5	4.95	105.6	5.00	103.8	5.05	102.7	5.09
		30.0	122.3	4.92	119.8	4.94	117.4	4.96	115.1	4.99	113.7	5.01	112.3	5.04	110.3	5.08	108.5	5.14	107.4	5.18
		39.6	123.0	4.91	120.5	4.93	118.1	4.95	115.8	4.98	114.4	5.00	113.0	5.03	111.0	5.07	109.2	5.13	108.0	5.17
	86	13.2	110.2	4.12	107.9	4.13	105.8	4.15	103.8	4.17	102.5	4.19	101.2	4.22	99.5	4.25	97.8	4.30	96.8	4.34
		16.8	113.9	4.18	111.6	4.20	109.4	4.21	107.2	4.24	105.9	4.26	104.6	4.28	102.8	4.32	101.1	4.37	100.0	4.40
		20.3	117.0	4.23	114.6	4.25	112.3	4.26	110.2	4.29	108.8	4.31	107.5	4.33	105.6	4.37	103.8	4.42	102.7	4.46
		30.0	122.3	4.31	119.8	4.32	117.4	4.34	115.1	4.36	113.7	4.38	112.3	4.41	110.3	4.45	108.5	4.50	107.4	4.53
		39.6	123.0	4.30	120.5	4.31	118.1	4.33	115.8	4.36	114.4	4.38	113.0	4.40	111.0	4.44	109.2	4.49	108.0	4.53
	95	13.2	110.2	3.83	107.9	3.85	105.8	3.86	103.8	3.89	102.5	3.90	101.2	3.92	99.5	3.96	97.8	4.00	96.8	4.04
		16.8	113.9	3.89	111.6	3.90	109.4	3.92	107.2	3.95	105.9	3.96	104.6	3.98	102.8	4.02	101.1	4.07	100.0	4.10
		20.3	117.0	3.94	114.6	3.95	112.3	3.97	110.2	3.99	108.8	4.01	107.5	4.03	105.6	4.07	103.8	4.11	102.7	4.15
		30.0	122.3	4.01	119.8	4.02	117.4	4.04	115.1	4.06	113.7	4.08	112.3	4.10	110.3	4.14	108.5	4.19	107.4	4.22
		39.6	123.0	4.00	120.5	4.01	118.1	4.03	115.8	4.06	114.4	4.07	113.0	4.10	111.0	4.13	109.2	4.18	108.0	4.21
	104	13.2	110.2	3.70	107.9	3.71	105.8	3.73	103.8	3.75	102.5	3.77	101.2	3.79	99.5	3.82	97.8	3.86	96.8	3.89
		16.8	113.9	3.76	111.6	3.77	109.4	3.78	107.2	3.81	105.9	3.82	104.6	3.84	102.8	3.88	101.1	3.92	100.0	3.95
		20.3	117.0	3.80	114.6	3.81	112.3	3.83	110.2	3.85	108.8	3.87	107.5	3.89	105.6	3.93	103.8	3.97	102.7	4.00
		30.0	122.3	3.87	119.8	3.88	117.4	3.90	115.1	3.92	113.7	3.94	112.3	3.96	110.3	4.00	108.5	4.04	107.4	4.07
		39.6	123.0	3.86	120.5	3.87	118.1	3.89	115.8	3.91	114.4	3.93	113.0	3.95	111.0	3.99	109.2	4.03	108.0	4.06
	113	13.2	110.2	3.68	107.9	3.70	105.8	3.71	103.8	3.73	102.5	3.75	101.2	3.77	99.5	3.81	97.8	3.85	96.8	3.88
		16.8	113.9	3.74	111.6	3.75	109.4	3.77	107.2	3.79	105.9	3.81	104.6	3.83	102.8	3.87	101.1	3.91	100.0	3.94
		20.3	117.0	3.79	114.6	3.80	112.3	3.81	110.2	3.84	108.8	3.85	107.5	3.88	105.6	3.91	103.8	3.95	102.7	3.99
		30.0	122.3	3.85	119.8	3.86	117.4	3.88	115.1	3.90	113.7	3.92	112.3	3.94	110.3	3.98	108.5	4.02	107.4	4.06
		39.6	123.0	3.85	120.5	3.86	118.1	3.88	115.8	3.90	114.4	3.92	113.0	3.94	111.0	3.97	109.2	4.02	108.0	4.05

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	13.2	90.9	5.06	89.0	5.08	87.3	5.10	85.6	5.13	84.5	5.15	83.5	5.18	82.0	5.23	80.7	5.28	79.8	5.33
		16.8	94.0	5.14	92.0	5.15	90.2	5.18	88.5	5.21	87.4	5.23	86.3	5.26	84.8	5.31	83.4	5.37	82.5	5.41
		20.3	96.5	5.20	94.5	5.22	92.6	5.24	90.9	5.27	89.7	5.29	88.6	5.32	87.1	5.37	85.7	5.43	84.7	5.47
		30.0	100.9	5.29	98.8	5.31	96.8	5.33	94.9	5.36	93.8	5.39	92.6	5.42	91.0	5.47	89.5	5.53	88.6	5.57
		39.6	101.5	5.28	99.4	5.30	97.4	5.32	95.5	5.35	94.3	5.38	93.2	5.41	91.6	5.46	90.0	5.52	89.1	5.56
	59	13.2	109.1	5.85	106.9	5.87	104.8	5.89	102.7	5.93	101.5	5.96	100.2	5.99	98.5	6.04	96.8	6.11	95.8	6.16
		16.8	112.8	5.94	110.5	5.96	108.3	5.98	106.2	6.02	104.9	6.05	103.6	6.08	101.8	6.14	100.1	6.20	99.0	6.25
		20.3	115.9	6.01	113.5	6.03	111.2	6.06	109.1	6.09	107.7	6.12	106.4	6.15	104.6	6.21	102.8	6.28	101.7	6.33
		30.0	121.1	6.12	118.6	6.14	116.2	6.16	114.0	6.20	112.6	6.23	111.2	6.26	109.3	6.32	107.4	6.39	106.3	6.44
		39.6	121.8	6.11	119.3	6.12	116.9	6.15	114.7	6.19	113.2	6.22	111.9	6.25	109.9	6.31	108.1	6.38	106.9	6.43
	68	13.2	109.1	5.41	106.9	5.42	104.8	5.45	102.7	5.48	101.5	5.50	100.2	5.53	98.5	5.58	96.8	5.65	95.8	5.69
		16.8	112.8	5.49	110.5	5.51	108.3	5.53	106.2	5.56	104.9	5.59	103.6	5.62	101.8	5.67	100.1	5.73	99.0	5.78
		20.3	115.9	5.55	113.5	5.57	111.2	5.60	109.1	5.63	107.7	5.66	106.4	5.69	104.6	5.74	102.8	5.80	101.7	5.85
		30.0	121.1	5.65	118.6	5.67	116.2	5.70	114.0	5.73	112.6	5.76	111.2	5.79	109.3	5.84	107.4	5.90	106.3	5.95
		39.6	121.8	5.64	119.3	5.66	116.9	5.69	114.7	5.72	113.2	5.75	111.9	5.78	109.9	5.83	108.1	5.89	106.9	5.94
	77	13.2	109.1	4.84	106.9	4.85	104.8	4.87	102.7	4.90	101.5	4.92	100.2	4.95	98.5	5.00	96.8	5.05	95.8	5.09
		16.8	112.8	4.91	110.5	4.93	108.3	4.95	106.2	4.98	104.9	5.00	103.6	5.03	101.8	5.07	100.1	5.13	99.0	5.17
		20.3	115.9	4.97	113.5	4.99	111.2	5.01	109.1	5.04	107.7	5.06	106.4	5.09	104.6	5.13	102.8	5.19	101.7	5.23
		30.0	121.1	5.06	118.6	5.07	116.2	5.10	114.0	5.13	112.6	5.15	111.2	5.18	109.3	5.23	107.4	5.28	106.3	5.33
		39.6	121.8	5.05	119.3	5.06	116.9	5.09	114.7	5.12	113.2	5.14	111.9	5.17	109.9	5.22	108.1	5.27	106.9	5.32
	86	13.2	109.1	4.23	106.9	4.25	104.8	4.27	102.7	4.29	101.5	4.31	100.2	4.33	98.5	4.37	96.8	4.42	95.8	4.46
		16.8	112.8	4.30	110.5	4.31	108.3	4.33	106.2	4.36	104.9	4.38	103.6	4.40	101.8	4.44	100.1	4.49	99.0	4.53
		20.3	115.9	4.35	113.5	4.36	111.2	4.38	109.1	4.41	107.7	4.43	106.4	4.45	104.6	4.49	102.8	4.54	101.7	4.58
		30.0	121.1	4.43	118.6	4.44	116.2	4.46	114.0	4.49	112.6	4.51	111.2	4.53	109.3	4.57	107.4	4.62	106.3	4.66
		39.6	121.8	4.42	119.3	4.43	116.9	4.45	114.7	4.48	113.2	4.50	111.9	4.52	109.9	4.57	108.1	4.62	106.9	4.65
	95	13.2	109.1	3.94	106.9	3.95	104.8	3.97	102.7	3.99	101.5	4.01	100.2	4.03	98.5	4.07	96.8	4.12	95.8	4.15
		16.8	112.8	4.00	110.5	4.01	108.3	4.03	106.2	4.06	104.9	4.07	103.6	4.10	101.8	4.13	100.1	4.18	99.0	4.21
		20.3	115.9	4.05	113.5	4.06	111.2	4.08	109.1	4.10	107.7	4.12	106.4	4.14	104.6	4.18	102.8	4.23	101.7	4.26
		30.0	121.1	4.12	118.6	4.13	116.2	4.15	114.0	4.18	112.6	4.20	111.2	4.22	109.3	4.26	107.4	4.30	106.3	4.34
		39.6	121.8	4.11	119.3	4.13	116.9	4.14	114.7	4.17	113.2	4.19	111.9	4.21	109.9	4.25	108.1	4.30	106.9	4.33
	104	13.2	109.1	3.80	106.9	3.81	104.8	3.83	102.7	3.85	101.5	3.87	100.2	3.89	98.5	3.93	96.8	3.97	95.8	4.00
		16.8	112.8	3.86	110.5	3.87	108.3	3.89	106.2	3.91	104.9	3.93	103.6	3.95	101.8	3.99	100.1	4.03	99.0	4.06
		20.3	115.9	3.91	113.5	3.92	111.2	3.94	109.1	3.96	107.7	3.98	106.4	4.00	104.6	4.04	102.8	4.08	101.7	4.11
		30.0	121.1	3.97	118.6	3.99	116.2	4.01	114.0	4.03	112.6	4.05	111.2	4.07	109.3	4.11	107.4	4.15	106.3	4.19
		39.6	121.8	3.97	119.3	3.98	116.9	4.00	114.7	4.02	113.2	4.04	111.9	4.06	109.9	4.10	108.1	4.14	106.9	4.18
	113	13.2	109.1	3.79	106.9	3.80	104.8	3.82	102.7	3.84	101.5	3.86	100.2	3.88	98.5	3.91	96.8	3.96	95.8	3.99
		16.8	112.8	3.85	110.5	3.86	108.3	3.88	106.2	3.90	104.9	3.92	103.6	3.94	101.8	3.97	100.1	4.02	99.0	4.05
		20.3	115.9	3.89	113.5	3.90	111.2	3.92	109.1	3.94	107.7	3.96	106.4	3.98	104.6	4.02	102.8	4.06	101.7	4.10
		30.0	121.1	3.96	118.6	3.97	116.2	3.99	114.0	4.01	112.6	4.03	111.2	4.05	109.3	4.09	107.4	4.14	106.3	4.17
		39.6	121.8	3.95	119.3	3.97	116.9	3.98	114.7	4.01	113.2	4.03	111.9	4.05	109.9	4.08	108.1	4.13	106.9	4.16
100	50	13.2	90.0	5.25	88.2	5.26	86.4	5.29	84.7	5.32	83.7	5.34	82.7	5.37	81.2	5.42	79.9	5.48	79.0	5.53
		16.8	93.0	5.33	91.1	5.35	89.3	5.37	87.6	5.40	86.5	5.43	85.4	5.45	84.0	5.51	82.6	5.57	81.7	5.61
		20.3	95.6	5.39	93.6	5.41	91.7	5.43	90.0	5.47	88.8	5.49	87.8	5.52	86.2	5.57	84.8	5.63	83.9	5.68
		30.0	99.9	5.49	97.8	5.50	95.9	5.53	94.0	5.56	92.8	5.59	91.7	5.62	90.1	5.67	88.6	5.73	87.7	5.78
		39.6	100.5	5.48	98.4	5.49	96.4	5.52	94.6	5.55	93.4	5.58	92.3	5.61	90.7	5.66	89.1	5.72	88.2	5.77
	59	13.2	108.0	6.07	105.8	6.09	103.7	6.11	101.7	6.15	100.5	6.18	99.2	6.21	97.5	6.27	95.9	6.34	94.9	6.39
		16.8	111.7	6.16	109.4	6.18	107.2	6.21	105.1	6.24	103.8	6.27	102.6	6.31	100.8	6.36	99.1	6.43	98.1	6.49
		20.3	114.7	6.23	112.4	6.25	110.1	6.28	108.0	6.32	106.7	6.35	105.4	6.38	103.5	6.44	101.8	6.51	100.7	6.56
		30.0	119.9	6.34	117.4	6.36	115.1	6.39	112.9	6.43	111.4	6.46	110.1	6.49	108.2	6.55	106.4	6.63	105.3	6.68
		39.6	120.6	6.33	118.1	6.35	115.8	6.38	113.5	6.42	112.1	6.45	110.8	6.48	108.8	6.54	107.0	6.61	105.9	6.67
	68	13.2	108.0	5.61	105.8	5.62	103.7	5.65	101.7	5.68	100.5	5.71	99.2	5.74	97.5	5.79	95.9	5.86	94.9	5.90
		16.8	111.7	5.69	109.4	5.71	107.2	5.74	105.1	5.77	103.8	5.80	102.6	5.83	100.8	5.88	99.1	5.95	98.1	5.99
		20.3	114.7	5.76	112.4	5.78	110.1	5.81	108.0	5.84	106.7	5.87	105.4	5.90	103.5	5.95	101.8	6.02	100.7	6.07
		30.0	119.9	5.86	117.4	5.88	115.1	5.91	112.9	5.94	111.4	5.97	110.1	6.00	108.2	6.06	106.4	6.12	105.3	6.17
		39.6	120.6	5.85	118.1	5.87	115.8	5.90	113.5	5.93	112.1	5.96	110.8	5.99	108.8	6.05	107.0	6.11	105.9	6.16
	77	13.2	108.0	5.02	105.8	5.03	103.7	5.06	101.7	5.08	100.5	5.11	99.2	5.14	97.5	5.18	95.9	5.24	94.9	5.28
		16.8	111.7	5.09	109.4	5.11	107.2	5.13	105.1	5.16	103.8	5.19	102.6	5.21	100.8	5.26	99.1	5.32	98.1	5.36
		20.3	114.7	5.15	112.4	5.17	110.1	5.19	108.0	5.22	106.7	5.25	105.4	5.28	103.5	5.33	101.8	5.38	100.7	5.43
		30.0	119.9	5.25	117.4	5.26	115.1	5.29	112.9	5.32	111.4	5.34	110.1	5.37	108.2	5.42	106.4	5.48	105.3	5.52
		39.6	120.6	5.24	118.1	5.25	115.8	5.28	113.5	5.31	112.1	5.33	110.8	5.36	108.8	5.41	107.0	5.47	105.9	5.51
	86	13.2	108.0	4.39	105.8	4.40	103.7	4.42	101.7	4.45	100.5	4.47	99.2	4.49	97.5	4.54	95.9	4.59	94.9	4.62
		16.8	111.7	4.46	109.4	4.47	107.2	4.49	105.1	4.52	103.8	4.54	102.6	4.56	100.8	4.61	99.1	4.66	98.1	4.69
		20.3	114.7	4.51	112.4	4.53	110.1	4.55	108.0	4.57	106.7	4.59	105.4	4.62	103.5	4.66	101.8	4.71	100.7	4.75
		30.0	119.9	4.59	117.4	4.61	115.1	4.63	112.9	4.65	111.4	4.67	110.1	4.70	108.2	4.74	106.4	4.79	105.3	4.83
		39.6	120.6	4.58	118.1	4.60	115.8	4.62	113.5	4.65	112.1	4.67	110.8	4.69	108.8	4.74	107.0	4.79	105.9	4.83
	95	13.2	108.0	4.09	105.8	4.10	103.7	4.12	101.7	4.14	100.5	4.16	99.2	4.18	97.5	4.22	95.9	4.27	94.9	4.30
		16.8	111.7	4.15	109.4	4.16	107.2	4.18	105.1	4.21	103.8	4.23	102.6	4.25	100.8	4.29	99.1	4.33	98.1	4.37
		20.3	114.7	4.20	112.4	4.21	110.1	4.23	108.0	4.26	106.7	4.28	105.4	4.30	103.5	4.34	101.8	4.39	100.7	4.42
		30.0	119.9	4.27	117.4	4.29	115.1	4.31	112.9	4.33	111.4	4.35	110.1	4.37	108.2	4.41	106.4	4.46	105.3	4.50
		39.6	120.6	4.27	118.1	4.28	115.8	4.30	113.5	4.32	112.1	4.34	110.8	4.37	108.8	4.41	107.0	4.46	105.9	4.49
	104	13.2	108.0	3.94	105.8	3.96	103.7	3.97	101.7	4.00	100.5	4.01	99.2	4.04	97.5	4.07	95.9	4.12	94.9	4.15
		16.8	111.7	4.00	109.4	4.02	107.2	4.03	105.1	4.06	103.8	4.08	102.6	4.10	100.8	4.14	99.1	4.18	98.1	4.22
		20.3	114.7	4.05	112.4	4.06	110.1	4.08	108.0	4.11	106.7	4.13	105.4	4.15	103.5	4.19	101.8	4.23	100.7	4.27
		30.0	119.9	4.12	117.4	4.14	115.1	4.15	112.9	4.18	111.4	4.20	110.1	4.22	108.2	4.26	106.4	4.31	105.3	4.34
		39.6	120.6	4.12	118.1	4.13	115.8	4.15	113.5	4.17	112.1	4.19	110.8	4.21	108.8	4.25	107.0	4.30	105.9	4.33
	113	13.2	108.0	3.93	105.8	3.94	103.7	3.96	101.7	3.98	100.5	4.00	99.2	4.02	97.5	4.06	95.9	4.10	94.9	4.14
		16.8	111.7	3.99	109.4	4.00	107.2	4.02	105.1	4.04	103.8	4.06	102.6	4.08	100.8	4.12	99.1	4.17	98.1	4.20
		20.3	114.7	4.04	112.4	4.05	110.1	4.07	108.0	4.09	106.7	4.11	105.4	4.13	103.5	4.17	101.8	4.22	100.7	4.25
		30.0	119.9	4.11	117.4	4.12	115.1	4.14	112.9	4.16	111.4	4.18	110.1	4.20	108.2	4.24	106.4	4.29	105.3	4.32
		39.6	120.6	4.10	118.1	4.11	115.8	4.13	113.5	4.16	112.1	4.18	110.8	4.20	108.8	4.24	107.0	4.28	105.9	4.32

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	13.2	81.0	4.55	79.3	4.56	77.8	4.58	76.3	4.61	75.3	4.63	74.4	4.66	73.1	4.70	71.9	4.75	71.1	4.79
		16.8	83.7	4.62	82.0	4.63	80.4	4.66	78.8	4.68	77.8	4.70	76.9	4.73	75.6	4.77	74.3	4.82	73.5	4.86
		20.3	86.0	4.67	84.2	4.69	82.6	4.71	81.0	4.74	80.0	4.76	79.0	4.79	77.6	4.83	76.3	4.88	75.5	4.92
		30.0	89.9	4.76	88.0	4.77	86.3	4.79	84.6	4.82	83.6	4.84	82.5	4.87	81.1	4.91	79.8	4.97	78.9	5.01
		39.6	90.4	4.75	88.5	4.76	86.8	4.79	85.1	4.81	84.1	4.84	83.0	4.86	81.6	4.91	80.2	4.96	79.4	5.00
	59	13.2	97.2	5.26	95.2	5.28	93.3	5.30	91.5	5.33	90.4	5.36	89.3	5.38	87.8	5.43	86.3	5.49	85.4	5.54
		16.8	100.5	5.34	98.4	5.36	96.5	5.38	94.6	5.41	93.5	5.44	92.3	5.47	90.7	5.52	89.2	5.58	88.3	5.62
		20.3	103.2	5.40	101.1	5.42	99.1	5.45	97.2	5.48	96.0	5.50	94.8	5.53	93.2	5.58	91.6	5.64	90.7	5.69
		30.0	107.9	5.50	105.7	5.52	103.6	5.54	101.6	5.57	100.3	5.60	99.1	5.63	97.4	5.68	95.7	5.74	94.7	5.79
		39.6	108.5	5.49	106.3	5.51	104.2	5.53	102.2	5.56	100.9	5.59	99.7	5.62	97.9	5.67	96.3	5.73	95.3	5.78
	68	13.2	97.2	4.86	95.2	4.88	93.3	4.90	91.5	4.93	90.4	4.95	89.3	4.98	87.8	5.02	86.3	5.08	85.4	5.12
		16.8	100.5	4.94	98.4	4.95	96.5	4.97	94.6	5.00	93.5	5.03	92.3	5.05	90.7	5.10	89.2	5.15	88.3	5.20
		20.3	103.2	4.99	101.1	5.01	99.1	5.03	97.2	5.07	96.0	5.09	94.8	5.11	93.2	5.16	91.6	5.22	90.7	5.26
		30.0	107.9	5.08	105.7	5.10	103.6	5.12	101.6	5.15	100.3	5.18	99.1	5.20	97.4	5.25	95.7	5.31	94.7	5.35
		39.6	108.5	5.07	106.3	5.09	104.2	5.11	102.2	5.14	100.9	5.17	99.7	5.19	97.9	5.24	96.3	5.30	95.3	5.34
	77	13.2	97.2	4.35	95.2	4.36	93.3	4.38	91.5	4.41	90.4	4.43	89.3	4.45	87.8	4.49	86.3	4.54	85.4	4.58
		16.8	100.5	4.42	98.4	4.43	96.5	4.45	94.6	4.48	93.5	4.50	92.3	4.52	90.7	4.56	89.2	4.61	88.3	4.65
		20.3	103.2	4.47	101.1	4.48	99.1	4.50	97.2	4.53	96.0	4.55	94.8	4.57	93.2	4.62	91.6	4.67	90.7	4.71
		30.0	107.9	4.55	105.7	4.56	103.6	4.58	101.6	4.61	100.3	4.63	99.1	4.66	97.4	4.70	95.7	4.75	94.7	4.79
		39.6	108.5	4.54	106.3	4.55	104.2	4.57	102.2	4.60	100.9	4.62	99.7	4.65	97.9	4.69	96.3	4.74	95.3	4.78
	86	13.2	97.2	3.81	95.2	3.82	93.3	3.84	91.5	3.86	90.4	3.88	89.3	3.90	87.8	3.93	86.3	3.98	85.4	4.01
		16.8	100.5	3.87	98.4	3.88	96.5	3.90	94.6	3.92	93.5	3.94	92.3	3.96	90.7	3.99	89.2	4.04	88.3	4.07
		20.3	103.2	3.91	101.1	3.92	99.1	3.94	97.2	3.96	96.0	3.98	94.8	4.00	93.2	4.04	91.6	4.09	90.7	4.12
		30.0	107.9	3.98	105.7	3.99	103.6	4.01	101.6	4.03	100.3	4.05	99.1	4.07	97.4	4.11	95.7	4.16	94.7	4.19
		39.6	108.5	3.97	106.3	3.99	104.2	4.00	102.2	4.03	100.9	4.05	99.7	4.07	97.9	4.11	96.3	4.15	95.3	4.18
	95	13.2	97.2	3.54	95.2	3.55	93.3	3.57	91.5	3.59	90.4	3.61	89.3	3.63	87.8	3.66	86.3	3.70	85.4	3.73
		16.8	100.5	3.60	98.4	3.61	96.5	3.63	94.6	3.65	93.5	3.66	92.3	3.68	90.7	3.72	89.2	3.76	88.3	3.79
		20.3	103.2	3.64	101.1	3.65	99.1	3.67	97.2	3.69	96.0	3.71	94.8	3.73	93.2	3.76	91.6	3.80	90.7	3.83
		30.0	107.9	3.70	105.7	3.72	103.6	3.73	101.6	3.75	100.3	3.77	99.1	3.79	97.4	3.83	95.7	3.87	94.7	3.90
		39.6	108.5	3.70	106.3	3.71	104.2	3.73	102.2	3.75	100.9	3.77	99.7	3.79	97.9	3.82	96.3	3.86	95.3	3.89
	104	13.2	97.2	3.42	95.2	3.43	93.3	3.44	91.5	3.46	90.4	3.48	89.3	3.50	87.8	3.53	86.3	3.57	85.4	3.60
		16.8	100.5	3.47	98.4	3.48	96.5	3.50	94.6	3.52	93.5	3.53	92.3	3.55	90.7	3.59	89.2	3.63	88.3	3.65
		20.3	103.2	3.51	101.1	3.52	99.1	3.54	97.2	3.56	96.0	3.58	94.8	3.60	93.2	3.63	91.6	3.67	90.7	3.70
		30.0	107.9	3.57	105.7	3.59	103.6	3.60	101.6	3.62	100.3	3.64	99.1	3.66	97.4	3.69	95.7	3.73	94.7	3.76
		39.6	108.5	3.57	106.3	3.58	104.2	3.60	102.2	3.62	100.9	3.63	99.7	3.65	97.9	3.69	96.3	3.73	95.3	3.76
	113	13.2	97.2	3.41	95.2	3.42	93.3	3.43	91.5	3.45	90.4	3.47	89.3	3.49	87.8	3.52	86.3	3.56	85.4	3.59
		16.8	100.5	3.46	98.4	3.47	96.5	3.48	94.6	3.50	93.5	3.52	92.3	3.54	90.7	3.57	89.2	3.61	88.3	3.64
		20.3	103.2	3.50	101.1	3.51	99.1	3.53	97.2	3.55	96.0	3.56	94.8	3.58	93.2	3.62	91.6	3.65	90.7	3.68
		30.0	107.9	3.56	105.7	3.57	103.6	3.59	101.6	3.61	100.3	3.63	99.1	3.65	97.4	3.68	95.7	3.72	94.7	3.75
		39.6	108.5	3.55	106.3	3.57	104.2	3.58	102.2	3.60	100.9	3.62	99.7	3.64	97.9	3.67	96.3	3.71	95.3	3.74
80	50	13.2	72.0	3.72	70.5	3.73	69.1	3.74	67.8	3.77	66.9	3.78	66.1	3.80	65.0	3.84	63.9	3.88	63.2	3.91
		16.8	74.4	3.77	72.9	3.79	71.4	3.80	70.1	3.82	69.2	3.84	68.4	3.86	67.2	3.90	66.1	3.94	65.4	3.97
		20.3	76.5	3.82	74.9	3.83	73.4	3.85	72.0	3.87	71.1	3.89	70.2	3.91	69.0	3.94	67.8	3.99	67.1	4.02
		30.0	79.9	3.89	78.2	3.90	76.7	3.92	75.2	3.94	74.3	3.96	73.4	3.98	72.1	4.01	70.9	4.06	70.1	4.09
		39.6	80.4	3.88	78.7	3.89	77.1	3.91	75.7	3.93	74.7	3.95	73.8	3.97	72.5	4.01	71.3	4.05	70.6	4.08
	59	13.2	86.4	4.30	84.7	4.31	83.0	4.33	81.4	4.35	80.4	4.37	79.4	4.40	78.0	4.44	76.7	4.49	75.9	4.52
		16.8	89.4	4.36	87.5	4.38	85.8	4.40	84.1	4.42	83.1	4.44	82.1	4.47	80.6	4.51	79.3	4.56	78.5	4.59
		20.3	91.8	4.41	89.9	4.43	88.1	4.45	86.4	4.47	85.3	4.50	84.3	4.52	82.8	4.56	81.4	4.61	80.6	4.65
		30.0	95.9	4.49	93.9	4.51	92.1	4.53	90.3	4.55	89.2	4.57	88.1	4.60	86.5	4.64	85.1	4.69	84.2	4.73
		39.6	96.5	4.48	94.5	4.50	92.6	4.52	90.8	4.55	89.7	4.57	88.6	4.59	87.1	4.63	85.6	4.68	84.7	4.72
	68	13.2	86.4	3.97	84.7	3.98	83.0	4.00	81.4	4.02	80.4	4.04	79.4	4.06	78.0	4.10	76.7	4.15	75.9	4.18
		16.8	89.4	4.03	87.5	4.04	85.8	4.06	84.1	4.09	83.1	4.11	82.1	4.13	80.6	4.17	79.3	4.21	78.5	4.25
		20.3	91.8	4.08	89.9	4.09	88.1	4.11	86.4	4.14	85.3	4.15	84.3	4.18	82.8	4.21	81.4	4.26	80.6	4.30
		30.0	95.9	4.15	93.9	4.16	92.1	4.18	90.3	4.21	89.2	4.23	88.1	4.25	86.5	4.29	85.1	4.34	84.2	4.37
		39.6	96.5	4.14	94.5	4.16	92.6	4.18	90.8	4.20	89.7	4.22	88.6	4.24	87.1	4.28	85.6	4.33	84.7	4.36
	77	13.2	86.4	3.55	84.7	3.56	83.0	3.58	81.4	3.60	80.4	3.62	79.4	3.64	78.0	3.67	76.7	3.71	75.9	3.74
		16.8	89.4	3.61	87.5	3.62	85.8	3.63	84.1	3.66	83.1	3.67	82.1	3.69	80.6	3.73	79.3	3.77	78.5	3.80
		20.3	91.8	3.65	89.9	3.66	88.1	3.68	86.4	3.70	85.3	3.72	84.3	3.74	82.8	3.77	81.4	3.81	80.6	3.84
		30.0	95.9	3.71	93.9	3.73	92.1	3.74	90.3	3.76	89.2	3.78	88.1	3.80	86.5	3.84	85.1	3.88	84.2	3.91
		39.6	96.5	3.71	94.5	3.72	92.6	3.74	90.8	3.76	89.7	3.78	88.6	3.80	87.1	3.83	85.6	3.87	84.7	3.90
	86	13.2	86.4	3.11	84.7	3.12	83.0	3.13	81.4	3.15	80.4	3.17	79.4	3.18	78.0	3.21	76.7	3.25	75.9	3.27
		16.8	89.4	3.16	87.5	3.17	85.8	3.18	84.1	3.20	83.1	3.21	82.1	3.23	80.6	3.26	79.3	3.30	78.5	3.32
		20.3	91.8	3.19	89.9	3.21	88.1	3.22	86.4	3.24	85.3	3.25	84.3	3.27	82.8	3.30	81.4	3.34	80.6	3.36
		30.0	95.9	3.25	93.9	3.26	92.1	3.28	90.3	3.30	89.2	3.31	88.1	3.33	86.5	3.36	85.1	3.40	84.2	3.42
		39.6	96.5	3.25	94.5	3.26	92.6	3.27	90.8	3.29	89.7	3.30	88.6	3.32	87.1	3.35	85.6	3.39	84.7	3.42
	95	13.2	86.4	2.89	84.7	2.90	83.0	2.92	81.4	2.93	80.4	2.95	79.4	2.96	78.0	2.99	76.7	3.02	75.9	3.05
		16.8	89.4	2.94	87.5	2.95	85.8	2.96	84.1	2.98	83.1	2.99	82.1	3.01	80.6	3.04	79.3	3.07	78.5	3.09
		20.3	91.8	2.97	89.9	2.98	88.1	3.00	86.4	3.01	85.3	3.03	84.3	3.04	82.8	3.07	81.4	3.11	80.6	3.13
		30.0	95.9	3.03	93.9	3.04	92.1	3.05	90.3	3.07	89.2	3.08	88.1	3.10	86.5	3.13	85.1	3.16	84.2	3.19
		39.6	96.5	3.02	94.5	3.03	92.6	3.04	90.8	3.06	89.7	3.08	88.6	3.09	87.1	3.12	85.6	3.16	84.7	3.18
	104	13.2	86.4	2.79	84.7	2.80	83.0	2.81	81.4	2.83	80.4	2.84	79.4	2.86	78.0	2.88	76.7	2.92	75.9	2.94
		16.8	89.4	2.83	87.5	2.84	85.8	2.86	84.1	2.87	83.1	2.89	82.1	2.90	80.6	2.93	79.3	2.96	78.5	2.99
		20.3	91.8	2.87	89.9	2.88	88.1	2.89	86.4	2.91	85.3	2.92	84.3	2.94	82.8	2.96	81.4	3.00	80.6	3.02
		30.0	95.9	2.92	93.9	2.93	92.1	2.94	90.3	2.96	89.2	2.97	88.1	2.99	86.5	3.02	85.1	3.05	84.2	3.07
		39.6	96.5	2.91	94.5	2.92	92.6	2.94	90.8	2.95	89.7	2.97	88.6	2.98	87.1	3.01	85.6	3.04	84.7	3.07
	113	13.2	86.4	2.78	84.7	2.79	83.0	2.80	81.4	2.82	80.4	2.83	79.4	2.85	78.0	2.87	76.7	2.91	75.9	2.93
		16.8	89.4	2.82	87.5	2.83	85.8	2.85	84.1	2.86	83.1	2.88	82.1	2.89	80.6	2.92	79.3	2.95	78.5	2.97
		20.3	91.8	2.86	89.9	2.87	88.1	2.88	86.4	2.90	85.3	2.91	84.3	2.93	82.8	2.95	81.4	2.99	80.6	3.01
		30.0	95.9	2.91	93.9	2.92	92.1	2.93	90.3	2.95	89.2	2.96	88.1	2.98	86.5	3.00	85.1	3.04	84.2	3.06
		39.6	96.5	2.90	94.5	2.91	92.6	2.93	90.8	2.94	89.7	2.96	88.6	2.97	87.1	3.00	85.6	3.03	84.7	3.06

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	13.2	63.0	2.87	61.7	2.88	60.5	2.89	59.3	2.91	58.6	2.92	57.9	2.94	56.9	2.97	55.9	3.00	55.3	3.02
		16.8	65.1	2.92	63.8	2.93	62.5	2.94	61.3	2.96	60.5	2.97	59.8	2.98	58.8	3.01	57.8	3.05	57.2	3.07
		20.3	66.9	2.95	65.5	2.96	64.2	2.97	63.0	2.99	62.2	3.00	61.4	3.02	60.4	3.05	59.4	3.08	58.7	3.11
		30.0	69.9	3.00	68.5	3.01	67.1	3.03	65.8	3.04	65.0	3.06	64.2	3.07	63.1	3.10	62.0	3.14	61.4	3.16
		39.6	70.3	3.00	68.9	3.01	67.5	3.02	66.2	3.04	65.4	3.05	64.6	3.07	63.5	3.10	62.4	3.13	61.7	3.16
	59	13.2	75.6	3.32	74.1	3.33	72.6	3.35	71.2	3.36	70.3	3.38	69.5	3.40	68.3	3.43	67.1	3.47	66.4	3.50
		16.8	78.2	3.37	76.6	3.38	75.0	3.40	73.6	3.42	72.7	3.43	71.8	3.45	70.6	3.48	69.4	3.52	68.6	3.55
		20.3	80.3	3.41	78.7	3.42	77.1	3.44	75.6	3.46	74.7	3.47	73.8	3.49	72.5	3.52	71.3	3.56	70.5	3.59
		30.0	83.9	3.47	82.2	3.48	80.5	3.50	79.0	3.52	78.0	3.53	77.1	3.55	75.7	3.59	74.5	3.63	73.7	3.66
		39.6	84.4	3.47	82.7	3.48	81.0	3.49	79.5	3.51	78.5	3.53	77.5	3.55	76.2	3.58	74.9	3.62	74.1	3.65
	68	13.2	75.6	3.07	74.1	3.08	72.6	3.09	71.2	3.11	70.3	3.12	69.5	3.14	68.3	3.17	67.1	3.20	66.4	3.23
		16.8	78.2	3.12	76.6	3.13	75.0	3.14	73.6	3.16	72.7	3.17	71.8	3.19	70.6	3.22	69.4	3.25	68.6	3.28
		20.3	80.3	3.15	78.7	3.16	77.1	3.18	75.6	3.20	74.7	3.21	73.8	3.23	72.5	3.26	71.3	3.29	70.5	3.32
		30.0	83.9	3.21	82.2	3.22	80.5	3.23	79.0	3.25	78.0	3.27	77.1	3.28	75.7	3.31	74.5	3.35	73.7	3.38
		39.6	84.4	3.20	82.7	3.21	81.0	3.23	79.5	3.25	78.5	3.26	77.5	3.28	76.2	3.31	74.9	3.34	74.1	3.37
	77	13.2	75.6	2.75	74.1	2.75	72.6	2.77	71.2	2.78	70.3	2.80	69.5	2.81	68.3	2.84	67.1	2.87	66.4	2.89
		16.8	78.2	2.79	76.6	2.80	75.0	2.81	73.6	2.83	72.7	2.84	71.8	2.85	70.6	2.88	69.4	2.91	68.6	2.94
		20.3	80.3	2.82	78.7	2.83	77.1	2.84	75.6	2.86	74.7	2.87	73.8	2.89	72.5	2.91	71.3	2.95	70.5	2.97
		30.0	83.9	2.87	82.2	2.88	80.5	2.89	79.0	2.91	78.0	2.92	77.1	2.94	75.7	2.97	74.5	3.00	73.7	3.02
		39.6	84.4	2.87	82.7	2.87	81.0	2.89	79.5	2.90	78.5	2.92	77.5	2.93	76.2	2.96	74.9	2.99	74.1	3.02
	86	13.2	75.6	2.40	74.1	2.41	72.6	2.42	71.2	2.44	70.3	2.45	69.5	2.46	68.3	2.48	67.1	2.51	66.4	2.53
		16.8	78.2	2.44	76.6	2.45	75.0	2.46	73.6	2.47	72.7	2.48	71.8	2.50	70.6	2.52	69.4	2.55	68.6	2.57
		20.3	80.3	2.47	78.7	2.48	77.1	2.49	75.6	2.50	74.7	2.51	73.8	2.53	72.5	2.55	71.3	2.58	70.5	2.60
		30.0	83.9	2.51	82.2	2.52	80.5	2.53	79.0	2.55	78.0	2.56	77.1	2.57	75.7	2.60	74.5	2.62	73.7	2.65
		39.6	84.4	2.51	82.7	2.52	81.0	2.53	79.5	2.54	78.5	2.55	77.5	2.57	76.2	2.59	74.9	2.62	74.1	2.64
	95	13.2	75.6	2.24	74.1	2.24	72.6	2.25	71.2	2.27	70.3	2.28	69.5	2.29	68.3	2.31	67.1	2.34	66.4	2.35
		16.8	78.2	2.27	76.6	2.28	75.0	2.29	73.6	2.30	72.7	2.31	71.8	2.32	70.6	2.35	69.4	2.37	68.6	2.39
		20.3	80.3	2.30	78.7	2.31	77.1	2.32	75.6	2.33	74.7	2.34	73.8	2.35	72.5	2.37	71.3	2.40	70.5	2.42
		30.0	83.9	2.34	82.2	2.35	80.5	2.36	79.0	2.37	78.0	2.38	77.1	2.39	75.7	2.42	74.5	2.44	73.7	2.46
		39.6	84.4	2.33	82.7	2.34	81.0	2.35	79.5	2.37	78.5	2.38	77.5	2.39	76.2	2.41	74.9	2.44	74.1	2.46
	104	13.2	75.6	2.16	74.1	2.16	72.6	2.17	71.2	2.19	70.3	2.20	69.5	2.21	68.3	2.23	67.1	2.25	66.4	2.27
		16.8	78.2	2.19	76.6	2.20	75.0	2.21	73.6	2.22	72.7	2.23	71.8	2.24	70.6	2.26	69.4	2.29	68.6	2.31
		20.3	80.3	2.22	78.7	2.22	77.1	2.23	75.6	2.25	74.7	2.26	73.8	2.27	72.5	2.29	71.3	2.32	70.5	2.33
		30.0	83.9	2.26	82.2	2.26	80.5	2.27	79.0	2.29	78.0	2.30	77.1	2.31	75.7	2.33	74.5	2.36	73.7	2.38
		39.6	84.4	2.25	82.7	2.26	81.0	2.27	79.5	2.28	78.5	2.29	77.5	2.31	76.2	2.33	74.9	2.35	74.1	2.37
	113	13.2	75.6	2.15	74.1	2.16	72.6	2.17	71.2	2.18	70.3	2.19	69.5	2.20	68.3	2.22	67.1	2.24	66.4	2.26
		16.8	78.2	2.18	76.6	2.19	75.0	2.20	73.6	2.21	72.7	2.22	71.8	2.23	70.6	2.26	69.4	2.28	68.6	2.30
		20.3	80.3	2.21	78.7	2.22	77.1	2.23	75.6	2.24	74.7	2.25	73.8	2.26	72.5	2.28	71.3	2.31	70.5	2.33
		30.0	83.9	2.25	82.2	2.25	80.5	2.26	79.0	2.28	78.0	2.29	77.1	2.30	75.7	2.32	74.5	2.35	73.7	2.37
		39.6	84.4	2.24	82.7	2.25	81.0	2.26	79.5	2.27	78.5	2.28	77.5	2.30	76.2	2.32	74.9	2.34	74.1	2.36
60	50	13.2	54.0	2.14	52.9	2.15	51.8	2.16	50.8	2.17	50.2	2.18	49.6	2.19	48.7	2.21	47.9	2.24	47.4	2.25
		16.8	55.8	2.17	54.7	2.18	53.6	2.19	52.6	2.20	51.9	2.21	51.3	2.23	50.4	2.25	49.5	2.27	49.0	2.29
		20.3	57.3	2.20	56.2	2.21	55.0	2.22	54.0	2.23	53.3	2.24	52.7	2.25	51.7	2.27	50.9	2.30	50.3	2.32
		30.0	59.9	2.24	58.7	2.25	57.5	2.26	56.4	2.27	55.7	2.28	55.0	2.29	54.1	2.31	53.2	2.34	52.6	2.36
		39.6	60.3	2.24	59.0	2.24	57.9	2.25	56.7	2.27	56.0	2.28	55.4	2.29	54.4	2.31	53.5	2.33	52.9	2.35
	59	13.2	64.8	2.48	63.5	2.48	62.2	2.49	61.0	2.51	60.3	2.52	59.5	2.53	58.5	2.56	57.5	2.59	56.9	2.61
		16.8	67.0	2.51	65.6	2.52	64.3	2.53	63.1	2.55	62.3	2.56	61.5	2.57	60.5	2.60	59.5	2.63	58.8	2.65
		20.3	68.8	2.54	67.4	2.55	66.1	2.56	64.8	2.58	64.0	2.59	63.2	2.60	62.1	2.63	61.1	2.66	60.4	2.68
		30.0	71.9	2.59	70.4	2.60	69.0	2.61	67.7	2.62	66.9	2.64	66.1	2.65	64.9	2.67	63.8	2.70	63.2	2.73
		39.6	72.4	2.58	70.9	2.59	69.5	2.60	68.1	2.62	67.3	2.63	66.5	2.65	65.3	2.67	64.2	2.70	63.5	2.72
	68	13.2	64.8	2.29	63.5	2.30	62.2	2.31	61.0	2.32	60.3	2.33	59.5	2.34	58.5	2.36	57.5	2.39	56.9	2.41
		16.8	67.0	2.32	65.6	2.33	64.3	2.34	63.1	2.35	62.3	2.37	61.5	2.38	60.5	2.40	59.5	2.43	58.8	2.45
		20.3	68.8	2.35	67.4	2.36	66.1	2.37	64.8	2.38	64.0	2.39	63.2	2.41	62.1	2.43	61.1	2.46	60.4	2.48
		30.0	71.9	2.39	70.4	2.40	69.0	2.41	67.7	2.42	66.9	2.44	66.1	2.45	64.9	2.47	63.8	2.50	63.2	2.52
		39.6	72.4	2.39	70.9	2.40	69.5	2.41	68.1	2.42	67.3	2.43	66.5	2.44	65.3	2.47	64.2	2.49	63.5	2.51
	77	13.2	64.8	2.05	63.5	2.05	62.2	2.06	61.0	2.08	60.3	2.08	59.5	2.10	58.5	2.12	57.5	2.14	56.9	2.16
		16.8	67.0	2.08	65.6	2.09	64.3	2.09	63.1	2.11	62.3	2.12	61.5	2.13	60.5	2.15	59.5	2.17	58.8	2.19
		20.3	68.8	2.10	67.4	2.11	66.1	2.12	64.8	2.13	64.0	2.14	63.2	2.15	62.1	2.17	61.1	2.20	60.4	2.22
		30.0	71.9	2.14	70.4	2.15	69.0	2.16	67.7	2.17	66.9	2.18	66.1	2.19	64.9	2.21	63.8	2.24	63.2	2.25
		39.6	72.4	2.14	70.9	2.14	69.5	2.15	68.1	2.17	67.3	2.18	66.5	2.19	65.3	2.21	64.2	2.23	63.5	2.25
	86	13.2	64.8	1.79	63.5	1.80	62.2	1.81	61.0	1.82	60.3	1.82	59.5	1.83	58.5	1.85	57.5	1.87	56.9	1.89
		16.8	67.0	1.82	65.6	1.83	64.3	1.83	63.1	1.84	62.3	1.85	61.5	1.86	60.5	1.88	59.5	1.90	58.8	1.92
		20.3	68.8	1.84	67.4	1.85	66.1	1.86	64.8	1.87	64.0	1.87	63.2	1.88	62.1	1.90	61.1	1.92	60.4	1.94
		30.0	71.9	1.87	70.4	1.88	69.0	1.89	67.7	1.90	66.9	1.91	66.1	1.92	64.9	1.94	63.8	1.96	63.2	1.97
		39.6	72.4	1.87	70.9	1.88	69.5	1.88	68.1	1.90	67.3	1.90	66.5	1.91	65.3	1.93	64.2	1.95	63.5	1.97
	95	13.2	64.8	1.67	63.5	1.67	62.2	1.68	61.0	1.69	60.3	1.70	59.5	1.71	58.5	1.72	57.5	1.74	56.9	1.76
		16.8	67.0	1.69	65.6	1.70	64.3	1.71	63.1	1.72	62.3	1.72	61.5	1.73	60.5	1.75	59.5	1.77	58.8	1.78
		20.3	68.8	1.71	67.4	1.72	66.1	1.73	64.8	1.74	64.0	1.75	63.2	1.75	62.1	1.77	61.1	1.79	60.4	1.80
		30.0	71.9	1.74	70.4	1.75	69.0	1.76	67.7	1.77	66.9	1.78	66.1	1.79	64.9	1.80	63.8	1.82	63.2	1.84
		39.6	72.4	1.74	70.9	1.75	69.5	1.75	68.1	1.76	67.3	1.77	66.5	1.78	65.3	1.80	64.2	1.82	63.5	1.83
	104	13.2	64.8	1.61	63.5	1.61	62.2	1.62	61.0	1.63	60.3	1.64	59.5	1.65	58.5	1.66	57.5	1.68	56.9	1.69
		16.8	67.0	1.63	65.6	1.64	64.3	1.65	63.1	1.66	62.3	1.66	61.5	1.67	60.5	1.69	59.5	1.71	58.8	1.72
		20.3	68.8	1.65	67.4	1.66	66.1	1.67	64.8	1.68	64.0	1.68	63.2	1.69	62.1	1.71	61.1	1.73	60.4	1.74
		30.0	71.9	1.68	70.4	1.69	69.0	1.70	67.7	1.71	66.9	1.71	66.1	1.72	64.9	1.74	63.8	1.76	63.2	1.77
		39.6	72.4	1.68	70.9	1.68	69.5	1.69	68.1	1.70	67.3	1.71	66.5	1.72	65.3	1.74	64.2	1.75	63.5	1.77
	113	13.2	64.8	1.60	63.5	1.61	62.2	1.62	61.0	1.62	60.3	1.63	59.5	1.64	58.5	1.66	57.5	1.67	56.9	1.69
		16.8	67.0	1.63	65.6	1.63	64.3	1.64	63.1	1.65	62.3	1.66	61.5	1.67	60.5	1.68	59.5	1.70	58.8	1.71
		20.3	68.8	1.65	67.4	1.65	66.1	1.66	64.8	1.67	64.0	1.68	63.2	1.69	62.1	1.70	61.1	1.72	60.4	1.73
		30.0	71.9	1.68	70.4	1.68	69.0	1.69	67.7	1.70	66.9	1.71	66.1	1.72	64.9	1.73	63.8	1.75	63.2	1.76
		39.6	72.4	1.67	70.9	1.68	69.5	1.69	68.1	1.70	67.3	1.70	66.5	1.71	65.3	1.73	64.2	1.75	63.5	1.76

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)096B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	13.2	45.0	1.59	44.1	1.60	43.2	1.61	42.4	1.62	41.8	1.62	41.3	1.63	40.6	1.65	39.9	1.67	39.5	1.68
		16.8	46.5	1.62	45.6	1.62	44.7	1.63	43.8	1.64	43.2	1.65	42.7	1.66	42.0	1.67	41.3	1.69	40.8	1.71
		20.3	47.8	1.64	46.8	1.64	45.9	1.65	45.0	1.66	44.4	1.67	43.9	1.68	43.1	1.69	42.4	1.71	42.0	1.73
		30.0	49.9	1.67	48.9	1.67	47.9	1.68	47.0	1.69	46.4	1.70	45.9	1.71	45.1	1.72	44.3	1.74	43.8	1.76
		39.6	50.2	1.66	49.2	1.67	48.2	1.68	47.3	1.69	46.7	1.70	46.1	1.70	45.3	1.72	44.6	1.74	44.1	1.75
	59	13.2	54.0	1.84	52.9	1.85	51.9	1.86	50.9	1.87	50.2	1.88	49.6	1.89	48.8	1.90	47.9	1.93	47.4	1.94
		16.8	55.8	1.87	54.7	1.88	53.6	1.89	52.6	1.90	51.9	1.91	51.3	1.92	50.4	1.93	49.6	1.96	49.0	1.97
		20.3	57.4	1.89	56.2	1.90	55.1	1.91	54.0	1.92	53.3	1.93	52.7	1.94	51.8	1.96	50.9	1.98	50.4	1.99
		30.0	59.9	1.93	58.7	1.93	57.5	1.94	56.4	1.95	55.7	1.96	55.0	1.97	54.1	1.99	53.2	2.01	52.6	2.03
		39.6	60.3	1.92	59.1	1.93	57.9	1.94	56.8	1.95	56.1	1.96	55.4	1.97	54.4	1.99	53.5	2.01	52.9	2.03
	68	13.2	54.0	1.70	52.9	1.71	51.9	1.72	50.9	1.73	50.2	1.73	49.6	1.74	48.8	1.76	47.9	1.78	47.4	1.79
		16.8	55.8	1.73	54.7	1.74	53.6	1.74	52.6	1.75	51.9	1.76	51.3	1.77	50.4	1.79	49.6	1.81	49.0	1.82
		20.3	57.4	1.75	56.2	1.76	55.1	1.76	54.0	1.78	53.3	1.78	52.7	1.79	51.8	1.81	50.9	1.83	50.4	1.84
		30.0	59.9	1.78	58.7	1.79	57.5	1.80	56.4	1.81	55.7	1.81	55.0	1.82	54.1	1.84	53.2	1.86	52.6	1.88
		39.6	60.3	1.78	59.1	1.78	57.9	1.79	56.8	1.80	56.1	1.81	55.4	1.82	54.4	1.84	53.5	1.86	52.9	1.87
	77	13.2	54.0	1.52	52.9	1.53	51.9	1.54	50.9	1.55	50.2	1.55	49.6	1.56	48.8	1.58	47.9	1.59	47.4	1.61
		16.8	55.8	1.55	54.7	1.55	53.6	1.56	52.6	1.57	51.9	1.58	51.3	1.58	50.4	1.60	49.6	1.62	49.0	1.63
		20.3	57.4	1.57	56.2	1.57	55.1	1.58	54.0	1.59	53.3	1.60	52.7	1.60	51.8	1.62	50.9	1.64	50.4	1.65
		30.0	59.9	1.59	58.7	1.60	57.5	1.61	56.4	1.62	55.7	1.62	55.0	1.63	54.1	1.65	53.2	1.67	52.6	1.68
		39.6	60.3	1.59	59.1	1.60	57.9	1.60	56.8	1.61	56.1	1.62	55.4	1.63	54.4	1.64	53.5	1.66	52.9	1.68
	86	13.2	54.0	1.33	52.9	1.34	51.9	1.34	50.9	1.35	50.2	1.36	49.6	1.37	48.8	1.38	47.9	1.39	47.4	1.41
		16.8	55.8	1.35	54.7	1.36	53.6	1.37	52.6	1.37	51.9	1.38	51.3	1.39	50.4	1.40	49.6	1.42	49.0	1.43
		20.3	57.4	1.37	56.2	1.38	55.1	1.38	54.0	1.39	53.3	1.40	52.7	1.40	51.8	1.42	50.9	1.43	50.4	1.44
		30.0	59.9	1.40	58.7	1.40	57.5	1.41	56.4	1.41	55.7	1.42	55.0	1.43	54.1	1.44	53.2	1.46	52.6	1.47
		39.6	60.3	1.39	59.1	1.40	57.9	1.40	56.8	1.41	56.1	1.42	55.4	1.43	54.4	1.44	53.5	1.45	52.9	1.47
	95	13.2	54.0	1.24	52.9	1.25	51.9	1.25	50.9	1.26	50.2	1.26	49.6	1.27	48.8	1.28	47.9	1.30	47.4	1.31
		16.8	55.8	1.26	54.7	1.27	53.6	1.27	52.6	1.28	51.9	1.28	51.3	1.29	50.4	1.30	49.6	1.32	49.0	1.33
		20.3	57.4	1.28	56.2	1.28	55.1	1.29	54.0	1.29	53.3	1.30	52.7	1.31	51.8	1.32	50.9	1.33	50.4	1.34
		30.0	59.9	1.30	58.7	1.30	57.5	1.31	56.4	1.32	55.7	1.32	55.0	1.33	54.1	1.34	53.2	1.36	52.6	1.37
		39.6	60.3	1.30	59.1	1.30	57.9	1.31	56.8	1.31	56.1	1.32	55.4	1.33	54.4	1.34	53.5	1.35	52.9	1.37
	104	13.2	54.0	1.20	52.9	1.20	51.9	1.21	50.9	1.21	50.2	1.22	49.6	1.23	48.8	1.24	47.9	1.25	47.4	1.26
		16.8	55.8	1.22	54.7	1.22	53.6	1.23	52.6	1.23	51.9	1.24	51.3	1.25	50.4	1.26	49.6	1.27	49.0	1.28
		20.3	57.4	1.23	56.2	1.24	55.1	1.24	54.0	1.25	53.3	1.25	52.7	1.26	51.8	1.27	50.9	1.29	50.4	1.30
		30.0	59.9	1.25	58.7	1.26	57.5	1.26	56.4	1.27	55.7	1.28	55.0	1.28	54.1	1.29	53.2	1.31	52.6	1.32
		39.6	60.3	1.25	59.1	1.25	57.9	1.26	56.8	1.27	56.1	1.27	55.4	1.28	54.4	1.29	53.5	1.31	52.9	1.32
	113	13.2	54.0	1.19	52.9	1.20	51.9	1.20	50.9	1.21	50.2	1.22	49.6	1.22	48.8	1.23	47.9	1.25	47.4	1.26
		16.8	55.8	1.21	54.7	1.22	53.6	1.22	52.6	1.23	51.9	1.23	51.3	1.24	50.4	1.25	49.6	1.27	49.0	1.28
		20.3	57.4	1.23	56.2	1.23	55.1	1.24	54.0	1.24	53.3	1.25	52.7	1.26	51.8	1.27	50.9	1.28	50.4	1.29
		30.0	59.9	1.25	58.7	1.25	57.5	1.26	56.4	1.27	55.7	1.27	55.0	1.28	54.1	1.29	53.2	1.30	52.6	1.31
		39.6	60.3	1.25	59.1	1.25	57.9	1.26	56.8	1.26	56.1	1.27	55.4	1.28	54.4	1.29	53.5	1.30	52.9	1.31

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	19.0	131.1	6.78	128.4	6.80	125.9	6.83	123.4	6.87	121.9	6.91	120.4	6.94	118.3	7.01	116.4	7.08	115.1	7.14
		22.2	134.0	6.85	131.2	6.87	128.6	6.90	126.1	6.94	124.6	6.97	123.0	7.01	120.9	7.08	118.9	7.15	117.6	7.21
		25.4	136.5	6.90	133.7	6.93	131.0	6.96	128.5	7.00	126.9	7.03	125.3	7.07	123.2	7.13	121.1	7.21	119.8	7.27
		41.0	143.4	7.04	140.5	7.06	137.7	7.09	135.0	7.13	133.3	7.16	131.7	7.20	129.4	7.27	127.3	7.35	125.9	7.41
		56.5	141.5	6.95	138.6	6.97	135.8	7.00	133.2	7.04	131.5	7.07	129.9	7.11	127.7	7.18	125.6	7.25	124.2	7.31
	59	19.0	141.9	7.07	139.0	7.09	136.2	7.12	133.6	7.16	131.9	7.20	130.3	7.24	128.0	7.30	125.9	7.38	124.6	7.44
		22.2	145.0	7.14	142.0	7.16	139.2	7.19	136.5	7.24	134.8	7.27	133.2	7.31	130.8	7.38	128.7	7.46	127.3	7.52
		25.4	147.7	7.20	144.7	7.22	141.8	7.25	139.1	7.29	137.3	7.33	135.7	7.37	133.3	7.44	131.1	7.52	129.7	7.58
		41.0	155.2	7.33	152.0	7.36	149.0	7.39	146.1	7.43	144.3	7.47	142.6	7.51	140.1	7.58	137.7	7.66	136.3	7.72
		56.5	153.1	7.24	150.0	7.26	147.0	7.29	144.1	7.34	142.3	7.37	140.6	7.41	138.2	7.48	135.9	7.56	134.4	7.62
	68	19.0	141.9	6.53	139.0	6.55	136.2	6.58	133.6	6.62	131.9	6.65	130.3	6.69	128.0	6.75	125.9	6.82	124.6	6.88
		22.2	145.0	6.60	142.0	6.62	139.2	6.65	136.5	6.69	134.8	6.72	133.2	6.75	130.8	6.82	128.7	6.89	127.3	6.95
		25.4	147.7	6.65	144.7	6.67	141.8	6.70	139.1	6.74	137.3	6.77	135.7	6.81	133.3	6.87	131.1	6.95	129.7	7.00
		41.0	155.2	6.78	152.0	6.80	149.0	6.83	146.1	6.87	144.3	6.90	142.6	6.94	140.1	7.00	137.7	7.08	136.3	7.14
		56.5	153.1	6.69	150.0	6.71	147.0	6.74	144.1	6.78	142.3	6.81	140.6	6.85	138.2	6.91	135.9	6.99	134.4	7.04
	77	19.0	141.9	5.84	139.0	5.86	136.2	5.89	133.6	5.92	131.9	5.95	130.3	5.98	128.0	6.04	125.9	6.10	124.6	6.15
		22.2	145.0	5.90	142.0	5.92	139.2	5.95	136.5	5.98	134.8	6.01	133.2	6.04	130.8	6.10	128.7	6.16	127.3	6.22
		25.4	147.7	5.95	144.7	5.97	141.8	6.00	139.1	6.03	137.3	6.06	135.7	6.09	133.3	6.15	131.1	6.22	129.7	6.27
		41.0	155.2	6.06	152.0	6.08	149.0	6.11	146.1	6.15	144.3	6.17	142.6	6.21	140.1	6.27	137.7	6.33	136.3	6.39
		56.5	153.1	5.99	150.0	6.01	147.0	6.03	144.1	6.07	142.3	6.10	140.6	6.13	138.2	6.18	135.9	6.25	134.4	6.30
	86	19.0	141.9	5.12	139.0	5.13	136.2	5.15	133.6	5.18	131.9	5.21	130.3	5.24	128.0	5.29	125.9	5.34	124.6	5.39
		22.2	145.0	5.17	142.0	5.18	139.2	5.21	136.5	5.24	134.8	5.26	133.2	5.29	130.8	5.34	128.7	5.40	127.3	5.44
		25.4	147.7	5.21	144.7	5.22	141.8	5.25	139.1	5.28	137.3	5.30	135.7	5.33	133.3	5.38	131.1	5.44	129.7	5.48
		41.0	155.2	5.31	152.0	5.32	149.0	5.35	146.1	5.38	144.3	5.40	142.6	5.43	140.1	5.48	137.7	5.54	136.3	5.59
		56.5	153.1	5.24	150.0	5.26	147.0	5.28	144.1	5.31	142.3	5.33	140.6	5.36	138.2	5.41	135.9	5.47	134.4	5.52
	95	19.0	141.9	4.76	139.0	4.78	136.2	4.80	133.6	4.83	131.9	4.85	130.3	4.87	128.0	4.92	125.9	4.97	124.6	5.01
		22.2	145.0	4.81	142.0	4.82	139.2	4.85	136.5	4.87	134.8	4.90	133.2	4.92	130.8	4.97	128.7	5.02	127.3	5.06
		25.4	147.7	4.85	144.7	4.86	141.8	4.89	139.1	4.91	137.3	4.94	135.7	4.96	133.3	5.01	131.1	5.06	129.7	5.10
		41.0	155.2	4.94	152.0	4.96	149.0	4.98	146.1	5.01	144.3	5.03	142.6	5.06	140.1	5.10	137.7	5.16	136.3	5.20
		56.5	153.1	4.88	150.0	4.89	147.0	4.91	144.1	4.94	142.3	4.97	140.6	4.99	138.2	5.04	135.9	5.09	134.4	5.14
	104	19.0	141.9	4.59	139.0	4.61	136.2	4.63	133.6	4.66	131.9	4.68	130.3	4.70	128.0	4.75	125.9	4.80	124.6	4.84
		22.2	145.0	4.64	142.0	4.65	139.2	4.67	136.5	4.70	134.8	4.72	133.2	4.75	130.8	4.79	128.7	4.85	127.3	4.88
		25.4	147.7	4.68	144.7	4.69	141.8	4.71	139.1	4.74	137.3	4.76	135.7	4.79	133.3	4.83	131.1	4.88	129.7	4.92
		41.0	155.2	4.77	152.0	4.78	149.0	4.80	146.1	4.83	144.3	4.85	142.6	4.88	140.1	4.92	137.7	4.98	136.3	5.02
		56.5	153.1	4.70	150.0	4.72	147.0	4.74	144.1	4.77	142.3	4.79	140.6	4.82	138.2	4.86	135.9	4.91	134.4	4.95
	113	19.0	141.9	4.58	139.0	4.59	136.2	4.61	133.6	4.64	131.9	4.66	130.3	4.68	128.0	4.73	125.9	4.78	124.6	4.82
		22.2	145.0	4.62	142.0	4.64	139.2	4.66	136.5	4.68	134.8	4.71	133.2	4.73	130.8	4.78	128.7	4.83	127.3	4.87
		25.4	147.7	4.66	144.7	4.67	141.8	4.70	139.1	4.72	137.3	4.74	135.7	4.77	133.3	4.81	131.1	4.87	129.7	4.91
		41.0	155.2	4.75	152.0	4.76	149.0	4.78	146.1	4.81	144.3	4.83	142.6	4.86	140.1	4.91	137.7	4.96	136.3	5.00
		56.5	153.1	4.69	150.0	4.70	147.0	4.72	144.1	4.75	142.3	4.77	140.6	4.80	138.2	4.84	135.9	4.90	134.4	4.94
120	50	19.0	129.8	6.91	127.2	6.94	124.6	6.97	122.2	7.01	120.7	7.04	119.2	7.08	117.2	7.14	115.2	7.22	114.0	7.28
		22.2	132.7	6.98	129.9	7.01	127.4	7.04	124.9	7.08	123.3	7.11	121.9	7.15	119.7	7.21	117.7	7.29	116.5	7.35
		25.4	135.2	7.04	132.4	7.06	129.7	7.09	127.2	7.14	125.6	7.17	124.1	7.21	122.0	7.27	119.9	7.35	118.7	7.41
		41.0	142.0	7.17	139.1	7.20	136.3	7.23	133.7	7.27	132.0	7.30	130.4	7.34	128.2	7.41	126.0	7.49	124.7	7.55
		56.5	140.1	7.08	137.2	7.10	134.5	7.14	131.9	7.18	130.3	7.21	128.7	7.25	126.4	7.32	124.3	7.40	123.0	7.46
	59	19.0	140.5	7.21	137.6	7.23	134.9	7.26	132.3	7.30	130.6	7.34	129.1	7.38	126.8	7.45	124.7	7.53	123.4	7.59
		22.2	143.6	7.28	140.6	7.30	137.8	7.33	135.2	7.38	133.5	7.41	131.9	7.45	129.6	7.52	127.4	7.60	126.1	7.66
		25.4	146.3	7.34	143.3	7.36	140.4	7.39	137.7	7.44	136.0	7.47	134.3	7.51	132.0	7.58	129.8	7.66	128.4	7.73
		41.0	153.7	7.48	150.5	7.50	147.5	7.53	144.7	7.58	142.9	7.61	141.2	7.65	138.7	7.72	136.4	7.81	135.0	7.87
		56.5	151.6	7.38	148.5	7.40	145.5	7.44	142.7	7.48	141.0	7.52	139.3	7.56	136.8	7.63	134.6	7.71	133.1	7.77
	68	19.0	140.5	6.66	137.6	6.68	134.9	6.71	132.3	6.75	130.6	6.78	129.1	6.82	126.8	6.88	124.7	6.96	123.4	7.01
		22.2	143.6	6.73	140.6	6.75	137.8	6.78	135.2	6.82	133.5	6.85	131.9	6.89	129.6	6.95	127.4	7.02	126.1	7.08
		25.4	146.3	6.78	143.3	6.80	140.4	6.83	137.7	6.88	136.0	6.90	134.3	6.94	132.0	7.01	129.8	7.08	128.4	7.14
		41.0	153.7	6.91	150.5	6.93	147.5	6.96	144.7	7.00	142.9	7.04	141.2	7.07	138.7	7.14	136.4	7.22	135.0	7.28
		56.5	151.6	6.82	148.5	6.84	145.5	6.87	142.7	6.91	141.0	6.95	139.3	6.98	136.8	7.05	134.6	7.12	133.1	7.18
	77	19.0	140.5	5.96	137.6	5.98	134.9	6.01	132.3	6.04	130.6	6.07	129.1	6.10	126.8	6.16	124.7	6.22	123.4	6.28
		22.2	143.6	6.02	140.6	6.04	137.8	6.06	135.2	6.10	133.5	6.13	131.9	6.16	129.6	6.22	127.4	6.29	126.1	6.34
		25.4	146.3	6.07	143.3	6.09	140.4	6.11	137.7	6.15	136.0	6.18	134.3	6.21	132.0	6.27	129.8	6.34	128.4	6.39
		41.0	153.7	6.18	150.5	6.20	147.5	6.23	144.7	6.27	142.9	6.30	141.2	6.33	138.7	6.39	136.4	6.46	135.0	6.51
		56.5	151.6	6.10	148.5	6.12	145.5	6.15	142.7	6.19	141.0	6.21	139.3	6.25	136.8	6.31	134.6	6.37	133.1	6.43
	86	19.0	140.5	5.22	137.6	5.23	134.9	5.26	132.3	5.29	130.6	5.31	129.1	5.34	126.8	5.39	124.7	5.45	123.4	5.49
		22.2	143.6	5.27	140.6	5.28	137.8	5.31	135.2	5.34	133.5	5.36	131.9	5.39	129.6	5.44	127.4	5.50	126.1	5.55
		25.4	146.3	5.31	143.3	5.33	140.4	5.35	137.7	5.38	136.0	5.41	134.3	5.44	132.0	5.49	129.8	5.55	128.4	5.59
		41.0	153.7	5.41	150.5	5.43	147.5	5.45	144.7	5.48	142.9	5.51	141.2	5.54	138.7	5.59	136.4	5.65	135.0	5.70
		56.5	151.6	5.34	148.5	5.36	145.5	5.38	142.7	5.41	141.0	5.44	139.3	5.47	136.8	5.52	134.6	5.58	133.1	5.62
	95	19.0	140.5	4.85	137.6	4.87	134.9	4.89	132.3	4.92	130.6	4.94	129.1	4.97	126.8	5.02	124.7	5.07	123.4	5.11
		22.2	143.6	4.90	140.6	4.92	137.8	4.94	135.2	4.97	133.5	4.99	131.9	5.02	129.6	5.07	127.4	5.12	126.1	5.16
		25.4	146.3	4.94	143.3	4.96	140.4	4.98	137.7	5.01	136.0	5.03	134.3	5.06	132.0	5.11	129.8	5.16	128.4	5.20
		41.0	153.7	5.04	150.5	5.05	147.5	5.08	144.7	5.10	142.9	5.13	141.2	5.16	138.7	5.20	136.4	5.26	135.0	5.30
		56.5	151.6	4.97	148.5	4.99	145.5	5.01	142.7	5.04	141.0	5.06	139.3	5.09	136.8	5.14	134.6	5.19	133.1	5.24
	104	19.0	140.5	4.68	137.6	4.70	134.9	4.72	132.3	4.75	130.6	4.77	129.1	4.79	126.8	4.84	124.7	4.89	123.4	4.93
		22.2	143.6	4.73	140.6	4.74	137.8	4.77	135.2	4.79	133.5	4.82	131.9	4.84	129.6	4.89	127.4	4.94	126.1	4.98
		25.4	146.3	4.77	143.3	4.78	140.4	4.81	137.7	4.83	136.0	4.86	134.3	4.88	132.0	4.93	129.8	4.98	128.4	5.02
		41.0	153.7	4.86	150.5	4.87	147.5	4.90	144.7	4.92	142.9	4.95	141.2	4.97	138.7	5.02	136.4	5.07	135.0	5.12
		56.5	151.6	4.80	148.5	4.81	145.5	4.83	142.7	4.86	141.0	4.88	139.3	4.91	136.8	4.96	134.6	5.01	133.1	5.05
	113	19.0	140.5	4.67	137.6	4.68	134.9	4.70	132.3	4.73	130.6	4.75	129.1	4.78	126.8	4.82	124.7	4.87	123.4	4.91
		22.2	143.6	4.71	140.6	4.73	137.8	4.75	135.2	4.78	133.5	4.80	131.9	4.82	129.6	4.87	127.4	4.92	126.1	4.96
		25.4	146.3	4.75	143.3	4.77	140.4	4.79	137.7	4.81	136.0	4.84	134.3	4.86	132.0	4.91	129.8	4.96	128.4	5.00
		41.0	153.7	4.84	150.5	4.86	147.5	4.88	144.7	4.91	142.9	4.93	141.2	4.96	138.7	5.00	136.4	5.06	135.0	5.10
		56.5	151.6	4.78	148.5	4.79	145.5	4.82	142.7	4.84	141.0	4.87	139.3	4.89	136.8	4.94	134.6	4.99	133.1	5.03

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	19.0	128.6	7.11	125.9	7.13	123.4	7.16	121.0	7.20	119.5	7.24	118.1	7.28	116.0	7.34	114.1	7.42	112.9	7.48
		22.2	131.4	7.18	128.7	7.20	126.1	7.23	123.7	7.27	122.1	7.31	120.7	7.35	118.6	7.42	116.6	7.50	115.4	7.56
		25.4	133.8	7.24	131.1	7.26	128.5	7.29	126.0	7.33	124.4	7.37	122.9	7.41	120.8	7.48	118.8	7.56	117.5	7.62
		41.0	140.6	7.37	137.7	7.40	135.0	7.43	132.4	7.47	130.7	7.51	129.2	7.55	126.9	7.62	124.8	7.70	123.5	7.76
		56.5	138.7	7.28	135.9	7.30	133.2	7.33	130.6	7.38	129.0	7.41	127.4	7.45	125.2	7.52	123.1	7.60	121.8	7.66
	59	19.0	139.1	7.41	136.3	7.43	133.6	7.46	131.0	7.51	129.4	7.54	127.8	7.58	125.6	7.65	123.5	7.74	122.2	7.80
		22.2	142.2	7.48	139.3	7.50	136.5	7.54	133.9	7.58	132.2	7.62	130.6	7.66	128.3	7.73	126.2	7.81	124.8	7.88
		25.4	144.8	7.54	141.9	7.57	139.0	7.60	136.4	7.64	134.7	7.68	133.0	7.72	130.7	7.79	128.5	7.88	127.2	7.94
		41.0	152.2	7.69	149.1	7.71	146.1	7.74	143.3	7.79	141.5	7.83	139.8	7.87	137.3	7.94	135.1	8.03	133.6	8.09
		56.5	150.1	7.59	147.0	7.61	144.1	7.64	141.3	7.69	139.6	7.73	137.9	7.77	135.5	7.84	133.2	7.92	131.8	7.99
	68	19.0	139.1	6.85	136.3	6.87	133.6	6.90	131.0	6.94	129.4	6.97	127.8	7.01	125.6	7.07	123.5	7.15	122.2	7.21
		22.2	142.2	6.91	139.3	6.94	136.5	6.97	133.9	7.01	132.2	7.04	130.6	7.08	128.3	7.14	126.2	7.22	124.8	7.28
		25.4	144.8	6.97	141.9	6.99	139.0	7.02	136.4	7.07	134.7	7.10	133.0	7.13	130.7	7.20	128.5	7.28	127.2	7.34
		41.0	152.2	7.10	149.1	7.12	146.1	7.16	143.3	7.20	141.5	7.23	139.8	7.27	137.3	7.34	135.1	7.42	133.6	7.48
		56.5	150.1	7.01	147.0	7.03	144.1	7.06	141.3	7.11	139.6	7.14	137.9	7.18	135.5	7.24	133.2	7.32	131.8	7.38
	77	19.0	139.1	6.13	136.3	6.14	133.6	6.17	131.0	6.21	129.4	6.24	127.8	6.27	125.6	6.33	123.5	6.40	122.2	6.45
		22.2	142.2	6.19	139.3	6.21	136.5	6.23	133.9	6.27	132.2	6.30	130.6	6.33	128.3	6.39	126.2	6.46	124.8	6.51
		25.4	144.8	6.24	141.9	6.26	139.0	6.28	136.4	6.32	134.7	6.35	133.0	6.38	130.7	6.44	128.5	6.51	127.2	6.57
		41.0	152.2	6.35	149.1	6.38	146.1	6.40	143.3	6.44	141.5	6.47	139.8	6.51	137.3	6.57	135.1	6.64	133.6	6.69
		56.5	150.1	6.27	147.0	6.29	144.1	6.32	141.3	6.36	139.6	6.39	137.9	6.42	135.5	6.48	133.2	6.55	131.8	6.61
	86	19.0	139.1	5.36	136.3	5.38	133.6	5.40	131.0	5.43	129.4	5.46	127.8	5.49	125.6	5.54	123.5	5.60	122.2	5.65
		22.2	142.2	5.41	139.3	5.43	136.5	5.46	133.9	5.49	132.2	5.51	130.6	5.54	128.3	5.59	126.2	5.65	124.8	5.70
		25.4	144.8	5.46	141.9	5.48	139.0	5.50	136.4	5.53	134.7	5.56	133.0	5.59	130.7	5.64	128.5	5.70	127.2	5.75
		41.0	152.2	5.56	149.1	5.58	146.1	5.60	143.3	5.64	141.5	5.66	139.8	5.69	137.3	5.75	135.1	5.81	133.6	5.86
		56.5	150.1	5.49	147.0	5.51	144.1	5.53	141.3	5.57	139.6	5.59	137.9	5.62	135.5	5.67	133.2	5.73	131.8	5.78
	95	19.0	139.1	4.99	136.3	5.01	133.6	5.03	131.0	5.06	129.4	5.08	127.8	5.11	125.6	5.16	123.5	5.21	122.2	5.25
		22.2	142.2	5.04	139.3	5.06	136.5	5.08	133.9	5.11	132.2	5.13	130.6	5.16	128.3	5.21	126.2	5.26	124.8	5.31
		25.4	144.8	5.08	141.9	5.10	139.0	5.12	136.4	5.15	134.7	5.17	133.0	5.20	130.7	5.25	128.5	5.31	127.2	5.35
		41.0	152.2	5.18	149.1	5.19	146.1	5.22	143.3	5.25	141.5	5.27	139.8	5.30	137.3	5.35	135.1	5.41	133.6	5.45
		56.5	150.1	5.11	147.0	5.13	144.1	5.15	141.3	5.18	139.6	5.20	137.9	5.23	135.5	5.28	133.2	5.34	131.8	5.38
	104	19.0	139.1	4.81	136.3	4.83	133.6	4.85	131.0	4.88	129.4	4.90	127.8	4.93	125.6	4.97	123.5	5.03	122.2	5.07
		22.2	142.2	4.86	139.3	4.88	136.5	4.90	133.9	4.93	132.2	4.95	130.6	4.98	128.3	5.02	126.2	5.08	124.8	5.12
		25.4	144.8	4.90	141.9	4.92	139.0	4.94	136.4	4.97	134.7	4.99	133.0	5.02	130.7	5.06	128.5	5.12	127.2	5.16
		41.0	152.2	4.99	149.1	5.01	146.1	5.03	143.3	5.06	141.5	5.09	139.8	5.11	137.3	5.16	135.1	5.22	133.6	5.26
		56.5	150.1	4.93	147.0	4.95	144.1	4.97	141.3	5.00	139.6	5.02	137.9	5.05	135.5	5.09	133.2	5.15	131.8	5.19
	113	19.0	139.1	4.80	136.3	4.81	133.6	4.83	131.0	4.86	129.4	4.88	127.8	4.91	125.6	4.96	123.5	5.01	122.2	5.05
		22.2	142.2	4.84	139.3	4.86	136.5	4.88	133.9	4.91	132.2	4.93	130.6	4.96	128.3	5.00	126.2	5.06	124.8	5.10
		25.4	144.8	4.88	141.9	4.90	139.0	4.92	136.4	4.95	134.7	4.97	133.0	5.00	130.7	5.04	128.5	5.10	127.2	5.14
		41.0	152.2	4.98	149.1	4.99	146.1	5.01	143.3	5.04	141.5	5.07	139.8	5.09	137.3	5.14	135.1	5.20	133.6	5.24
		56.5	150.1	4.91	147.0	4.93	144.1	4.95	141.3	4.98	139.6	5.00	137.9	5.03	135.5	5.07	133.2	5.13	131.8	5.17
100	50	19.0	127.3	7.37	124.7	7.40	122.2	7.43	119.8	7.47	118.3	7.51	116.9	7.55	114.9	7.62	113.0	7.70	111.8	7.76
		22.2	130.1	7.44	127.4	7.47	124.9	7.50	122.5	7.55	120.9	7.58	119.5	7.62	117.4	7.69	115.4	7.78	114.2	7.84
		25.4	132.5	7.50	129.8	7.53	127.2	7.56	124.7	7.61	123.2	7.64	121.7	7.68	119.6	7.75	117.6	7.84	116.3	7.90
		41.0	139.2	7.65	136.4	7.67	133.7	7.71	131.1	7.75	129.4	7.79	127.9	7.83	125.7	7.90	123.6	7.99	122.3	8.05
		56.5	137.4	7.55	134.5	7.57	131.8	7.61	129.3	7.65	127.7	7.69	126.2	7.73	124.0	7.80	121.9	7.89	120.6	7.95
	59	19.0	137.8	7.68	134.9	7.71	132.2	7.74	129.7	7.79	128.1	7.82	126.5	7.87	124.3	7.94	122.3	8.02	121.0	8.09
		22.2	140.8	7.76	137.9	7.78	135.1	7.82	132.5	7.86	130.9	7.90	129.3	7.94	127.0	8.02	124.9	8.10	123.6	8.17
		25.4	143.4	7.82	140.4	7.85	137.6	7.88	135.0	7.93	133.3	7.97	131.7	8.01	129.4	8.08	127.3	8.17	125.9	8.24
		41.0	150.7	7.97	147.6	8.00	144.6	8.03	141.9	8.08	140.1	8.12	138.4	8.16	136.0	8.24	133.7	8.33	132.3	8.39
		56.5	148.7	7.87	145.6	7.89	142.7	7.93	139.9	7.98	138.2	8.01	136.5	8.06	134.1	8.13	131.9	8.22	130.5	8.29
	68	19.0	137.8	7.10	134.9	7.12	132.2	7.16	129.7	7.20	128.1	7.23	126.5	7.27	124.3	7.34	122.3	7.42	121.0	7.48
		22.2	140.8	7.17	137.9	7.19	135.1	7.23	132.5	7.27	130.9	7.30	129.3	7.34	127.0	7.41	124.9	7.49	123.6	7.55
		25.4	143.4	7.23	140.4	7.25	137.6	7.28	135.0	7.33	133.3	7.36	131.7	7.40	129.4	7.47	127.3	7.55	125.9	7.61
		41.0	150.7	7.37	147.6	7.39	144.6	7.42	141.9	7.47	140.1	7.50	138.4	7.54	136.0	7.61	133.7	7.69	132.3	7.76
		56.5	148.7	7.27	145.6	7.30	142.7	7.33	139.9	7.37	138.2	7.40	136.5	7.44	134.1	7.51	131.9	7.60	130.5	7.66
	77	19.0	137.8	6.35	134.9	6.37	132.2	6.40	129.7	6.44	128.1	6.47	126.5	6.50	124.3	6.56	122.3	6.64	121.0	6.69
		22.2	140.8	6.42	137.9	6.44	135.1	6.47	132.5	6.50	130.9	6.53	129.3	6.57	127.0	6.63	124.9	6.70	123.6	6.76
		25.4	143.4	6.47	140.4	6.49	137.6	6.52	135.0	6.56	133.3	6.59	131.7	6.62	129.4	6.68	127.3	6.76	125.9	6.81
		41.0	150.7	6.59	147.6	6.61	144.6	6.64	141.9	6.68	140.1	6.71	138.4	6.75	136.0	6.81	133.7	6.88	132.3	6.94
		56.5	148.7	6.51	145.6	6.53	142.7	6.56	139.9	6.59	138.2	6.63	136.5	6.66	134.1	6.72	131.9	6.80	130.5	6.85
	86	19.0	137.8	5.56	134.9	5.58	132.2	5.60	129.7	5.64	128.1	5.66	126.5	5.69	124.3	5.75	122.3	5.81	121.0	5.86
		22.2	140.8	5.62	137.9	5.63	135.1	5.66	132.5	5.69	130.9	5.72	129.3	5.75	127.0	5.80	124.9	5.87	123.6	5.91
		25.4	143.4	5.66	140.4	5.68	137.6	5.70	135.0	5.74	133.3	5.76	131.7	5.80	129.4	5.85	127.3	5.91	125.9	5.96
		41.0	150.7	5.77	147.6	5.79	144.6	5.81	141.9	5.85	140.1	5.87	138.4	5.91	136.0	5.96	133.7	6.03	132.3	6.07
		56.5	148.7	5.69	145.6	5.71	142.7	5.74	139.9	5.77	138.2	5.80	136.5	5.83	134.1	5.88	131.9	5.95	130.5	6.00
	95	19.0	137.8	5.18	134.9	5.19	132.2	5.22	129.7	5.25	128.1	5.27	126.5	5.30	124.3	5.35	122.3	5.41	121.0	5.45
		22.2	140.8	5.23	137.9	5.24	135.1	5.27	132.5	5.30	130.9	5.32	129.3	5.35	127.0	5.40	124.9	5.46	123.6	5.50
		25.4	143.4	5.27	140.4	5.29	137.6	5.31	135.0	5.34	133.3	5.37	131.7	5.39	129.4	5.44	127.3	5.50	125.9	5.55
		41.0	150.7	5.37	147.6	5.39	144.6	5.41	141.9	5.44	140.1	5.47	138.4	5.50	136.0	5.55	133.7	5.61	132.3	5.65
		56.5	148.7	5.30	145.6	5.32	142.7	5.34	139.9	5.37	138.2	5.40	136.5	5.43	134.1	5.48	131.9	5.54	130.5	5.58
	104	19.0	137.8	4.99	134.9	5.01	132.2	5.03	129.7	5.06	128.1	5.08	126.5	5.11	124.3	5.16	122.3	5.22	121.0	5.26
		22.2	140.8	5.04	137.9	5.06	135.1	5.08	132.5	5.11	130.9	5.13	129.3	5.16	127.0	5.21	124.9	5.27	123.6	5.31
		25.4	143.4	5.08	140.4	5.10	137.6	5.12	135.0	5.15	133.3	5.18	131.7	5.20	129.4	5.25	127.3	5.31	125.9	5.35
		41.0	150.7	5.18	147.6	5.20	144.6	5.22	141.9	5.25	140.1	5.28	138.4	5.30	136.0	5.35	133.7	5.41	132.3	5.45
		56.5	148.7	5.11	145.6	5.13	142.7	5.15	139.9	5.18	138.2	5.21	136.5	5.23	134.1	5.28	131.9	5.34	130.5	5.38
	113	19.0	137.8	4.97	134.9	4.99	132.2	5.01	129.7	5.04	128.1	5.07	126.5	5.09	124.3	5.14	122.3	5.20	121.0	5.24
		22.2	140.8	5.02	137.9	5.04	135.1	5.06	132.5	5.09	130.9	5.12	129.3	5.14	127.0	5.19	124.9	5.25	123.6	5.29
		25.4	143.4	5.06	140.4	5.08	137.6	5.10	135.0	5.13	133.3	5.16	131.7	5.18	129.4	5.23	127.3	5.29	125.9	5.33
		41.0	150.7	5.16	147.6	5.18	144.6	5.20	141.9	5.23	140.1	5.26	138.4	5.28	136.0	5.33	133.7	5.39	132.3	5.43
		56.5	148.7	5.09	145.6	5.11	142.7	5.13	139.9	5.16	138.2	5.19	136.5	5.22	134.1	5.26	131.9	5.32	130.5	5.36

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	19.0	114.6	6.39	112.2	6.41	110.0	6.44	107.9	6.48	106.5	6.51	105.2	6.54	103.4	6.60	101.7	6.68	100.6	6.73
		22.2	117.1	6.45	114.7	6.47	112.4	6.50	110.2	6.54	108.8	6.57	107.5	6.61	105.6	6.67	103.9	6.74	102.8	6.80
		25.4	119.3	6.51	116.8	6.53	114.5	6.56	112.3	6.60	110.9	6.63	109.5	6.66	107.6	6.72	105.8	6.80	104.7	6.85
		41.0	125.3	6.63	122.7	6.65	120.3	6.68	118.0	6.72	116.5	6.75	115.1	6.79	113.1	6.85	111.2	6.93	110.0	6.98
		56.5	123.6	6.55	121.1	6.57	118.7	6.60	116.4	6.63	114.9	6.67	113.5	6.70	111.6	6.76	109.7	6.84	108.5	6.89
	59	19.0	124.0	6.66	121.4	6.68	119.0	6.71	116.7	6.75	115.3	6.78	113.9	6.82	111.9	6.88	110.0	6.96	108.9	7.01
		22.2	126.7	6.73	124.1	6.75	121.6	6.78	119.3	6.82	117.8	6.85	116.4	6.89	114.3	6.95	112.4	7.03	111.2	7.08
		25.4	129.1	6.78	126.4	6.80	123.9	6.83	121.5	6.87	120.0	6.91	118.5	6.94	116.5	7.01	114.5	7.08	113.3	7.14
		41.0	135.6	6.91	132.8	6.93	130.2	6.96	127.7	7.00	126.1	7.04	124.6	7.07	122.4	7.14	120.4	7.22	119.1	7.28
		56.5	133.8	6.82	131.0	6.84	128.4	6.87	126.0	6.91	124.4	6.95	122.9	6.98	120.7	7.05	118.7	7.13	117.5	7.18
	68	19.0	124.0	6.16	121.4	6.18	119.0	6.20	116.7	6.24	115.3	6.27	113.9	6.30	111.9	6.36	110.0	6.43	108.9	6.48
		22.2	126.7	6.22	124.1	6.24	121.6	6.26	119.3	6.30	117.8	6.33	116.4	6.36	114.3	6.42	112.4	6.49	111.2	6.55
		25.4	129.1	6.27	126.4	6.29	123.9	6.32	121.5	6.36	120.0	6.38	118.5	6.42	116.5	6.48	114.5	6.55	113.3	6.60
		41.0	135.6	6.39	132.8	6.41	130.2	6.44	127.7	6.47	126.1	6.50	124.6	6.54	122.4	6.60	120.4	6.67	119.1	6.73
		56.5	133.8	6.30	131.0	6.32	128.4	6.35	126.0	6.39	124.4	6.42	122.9	6.45	120.7	6.51	118.7	6.58	117.5	6.64
	77	19.0	124.0	5.51	121.4	5.53	119.0	5.55	116.7	5.58	115.3	5.61	113.9	5.64	111.9	5.69	110.0	5.75	108.9	5.80
		22.2	126.7	5.56	124.1	5.58	121.6	5.61	119.3	5.64	117.8	5.66	116.4	5.69	114.3	5.75	112.4	5.81	111.2	5.86
		25.4	129.1	5.61	126.4	5.63	123.9	5.65	121.5	5.68	120.0	5.71	118.5	5.74	116.5	5.79	114.5	5.86	113.3	5.91
		41.0	135.6	5.71	132.8	5.73	130.2	5.76	127.7	5.79	126.1	5.82	124.6	5.85	122.4	5.90	120.4	5.97	119.1	6.02
		56.5	133.8	5.64	131.0	5.66	128.4	5.68	126.0	5.72	124.4	5.74	122.9	5.77	120.7	5.83	118.7	5.89	117.5	5.94
	86	19.0	124.0	4.82	121.4	4.84	119.0	4.86	116.7	4.89	115.3	4.91	113.9	4.94	111.9	4.98	110.0	5.04	108.9	5.08
		22.2	126.7	4.87	124.1	4.88	121.6	4.91	119.3	4.93	117.8	4.96	116.4	4.98	114.3	5.03	112.4	5.08	111.2	5.13
		25.4	129.1	4.91	126.4	4.92	123.9	4.95	121.5	4.97	120.0	5.00	118.5	5.02	116.5	5.07	114.5	5.13	113.3	5.17
		41.0	135.6	5.00	132.8	5.02	130.2	5.04	127.7	5.07	126.1	5.09	124.6	5.12	122.4	5.17	120.4	5.22	119.1	5.27
		56.5	133.8	4.94	131.0	4.95	128.4	4.98	126.0	5.00	124.4	5.03	122.9	5.05	120.7	5.10	118.7	5.16	117.5	5.20
	95	19.0	124.0	4.49	121.4	4.50	119.0	4.52	116.7	4.55	115.3	4.57	113.9	4.59	111.9	4.64	110.0	4.69	108.9	4.73
		22.2	126.7	4.53	124.1	4.55	121.6	4.57	119.3	4.59	117.8	4.61	116.4	4.64	114.3	4.68	112.4	4.73	111.2	4.77
		25.4	129.1	4.57	126.4	4.58	123.9	4.60	121.5	4.63	120.0	4.65	118.5	4.68	116.5	4.72	114.5	4.77	113.3	4.81
		41.0	135.6	4.66	132.8	4.67	130.2	4.69	127.7	4.72	126.1	4.74	124.6	4.77	122.4	4.81	120.4	4.86	119.1	4.90
		56.5	133.8	4.60	131.0	4.61	128.4	4.63	126.0	4.66	124.4	4.68	122.9	4.70	120.7	4.75	118.7	4.80	117.5	4.84
	104	19.0	124.0	4.33	121.4	4.34	119.0	4.36	116.7	4.39	115.3	4.41	113.9	4.43	111.9	4.47	110.0	4.52	108.9	4.56
		22.2	126.7	4.37	124.1	4.39	121.6	4.41	119.3	4.43	117.8	4.45	116.4	4.48	114.3	4.52	112.4	4.57	111.2	4.60
		25.4	129.1	4.41	126.4	4.42	123.9	4.44	121.5	4.47	120.0	4.49	118.5	4.51	116.5	4.55	114.5	4.60	113.3	4.64
		41.0	135.6	4.49	132.8	4.51	130.2	4.53	127.7	4.55	126.1	4.57	124.6	4.60	122.4	4.64	120.4	4.69	119.1	4.73
		56.5	133.8	4.43	131.0	4.45	128.4	4.47	126.0	4.49	124.4	4.51	122.9	4.54	120.7	4.58	118.7	4.63	117.5	4.67
	113	19.0	124.0	4.31	121.4	4.33	119.0	4.35	116.7	4.37	115.3	4.39	113.9	4.41	111.9	4.46	110.0	4.50	108.9	4.54
		22.2	126.7	4.36	124.1	4.37	121.6	4.39	119.3	4.41	117.8	4.44	116.4	4.46	114.3	4.50	112.4	4.55	111.2	4.59
		25.4	129.1	4.39	126.4	4.40	123.9	4.42	121.5	4.45	120.0	4.47	118.5	4.49	116.5	4.54	114.5	4.59	113.3	4.62
		41.0	135.6	4.47	132.8	4.49	130.2	4.51	127.7	4.54	126.1	4.56	124.6	4.58	122.4	4.62	120.4	4.67	119.1	4.71
		56.5	133.8	4.42	131.0	4.43	128.4	4.45	126.0	4.48	124.4	4.50	122.9	4.52	120.7	4.56	118.7	4.61	117.5	4.65
80	50	19.0	101.8	5.22	99.7	5.24	97.8	5.26	95.9	5.29	94.7	5.32	93.5	5.34	91.9	5.39	90.4	5.45	89.4	5.50
		22.2	104.1	5.27	101.9	5.29	99.9	5.31	98.0	5.34	96.7	5.37	95.6	5.40	93.9	5.45	92.3	5.51	91.4	5.55
		25.4	106.0	5.31	103.8	5.33	101.8	5.36	99.8	5.39	98.5	5.41	97.4	5.44	95.7	5.49	94.1	5.55	93.1	5.60
		41.0	111.4	5.42	109.1	5.43	106.9	5.46	104.9	5.49	103.6	5.51	102.3	5.54	100.5	5.60	98.9	5.66	97.8	5.70
		56.5	109.9	5.35	107.6	5.36	105.5	5.39	103.4	5.42	102.2	5.44	100.9	5.47	99.2	5.52	97.5	5.58	96.5	5.63
	59	19.0	110.2	5.44	107.9	5.46	105.8	5.48	103.8	5.51	102.5	5.54	101.2	5.57	99.5	5.62	97.8	5.68	96.8	5.73
		22.2	112.6	5.49	110.3	5.51	108.1	5.54	106.0	5.57	104.7	5.59	103.4	5.62	101.6	5.68	99.9	5.74	98.9	5.79
		25.4	114.7	5.54	112.4	5.56	110.1	5.58	108.0	5.61	106.7	5.64	105.4	5.67	103.5	5.72	101.8	5.79	100.7	5.83
		41.0	120.6	5.64	118.1	5.66	115.7	5.69	113.5	5.72	112.1	5.75	110.7	5.78	108.8	5.83	107.0	5.90	105.9	5.94
		56.5	118.9	5.57	116.5	5.59	114.2	5.62	112.0	5.65	110.6	5.67	109.2	5.70	107.3	5.76	105.5	5.82	104.4	5.87
	68	19.0	110.2	5.03	107.9	5.04	105.8	5.07	103.8	5.10	102.5	5.12	101.2	5.15	99.5	5.19	97.8	5.25	96.8	5.29
		22.2	112.6	5.08	110.3	5.09	108.1	5.12	106.0	5.15	104.7	5.17	103.4	5.20	101.6	5.25	99.9	5.30	98.9	5.35
		25.4	114.7	5.12	112.4	5.14	110.1	5.16	108.0	5.19	106.7	5.21	105.4	5.24	103.5	5.29	101.8	5.35	100.7	5.39
		41.0	120.6	5.22	118.1	5.23	115.7	5.26	113.5	5.29	112.1	5.31	110.7	5.34	108.8	5.39	107.0	5.45	105.9	5.49
		56.5	118.9	5.15	116.5	5.17	114.2	5.19	112.0	5.22	110.6	5.24	109.2	5.27	107.3	5.32	105.5	5.38	104.4	5.42
	77	19.0	110.2	4.50	107.9	4.51	105.8	4.53	103.8	4.56	102.5	4.58	101.2	4.61	99.5	4.65	97.8	4.70	96.8	4.74
		22.2	112.6	4.54	110.3	4.56	108.1	4.58	106.0	4.61	104.7	4.63	103.4	4.65	101.6	4.69	99.9	4.75	98.9	4.78
		25.4	114.7	4.58	112.4	4.60	110.1	4.62	108.0	4.64	106.7	4.66	105.4	4.69	103.5	4.73	101.8	4.78	100.7	4.82
		41.0	120.6	4.67	118.1	4.68	115.7	4.70	113.5	4.73	112.1	4.75	110.7	4.78	108.8	4.82	107.0	4.88	105.9	4.91
		56.5	118.9	4.61	116.5	4.62	114.2	4.64	112.0	4.67	110.6	4.69	109.2	4.72	107.3	4.76	105.5	4.81	104.4	4.85
	86	19.0	110.2	3.94	107.9	3.95	105.8	3.97	103.8	3.99	102.5	4.01	101.2	4.03	99.5	4.07	97.8	4.11	96.8	4.15
		22.2	112.6	3.98	110.3	3.99	108.1	4.01	106.0	4.03	104.7	4.05	103.4	4.07	101.6	4.11	99.9	4.15	98.9	4.19
		25.4	114.7	4.01	112.4	4.02	110.1	4.04	108.0	4.06	106.7	4.08	105.4	4.10	103.5	4.14	101.8	4.19	100.7	4.22
		41.0	120.6	4.09	118.1	4.10	115.7	4.12	113.5	4.14	112.1	4.16	110.7	4.18	108.8	4.22	107.0	4.27	105.9	4.30
		56.5	118.9	4.03	116.5	4.05	114.2	4.06	112.0	4.09	110.6	4.11	109.2	4.13	107.3	4.17	105.5	4.21	104.4	4.25
	95	19.0	110.2	3.66	107.9	3.68	105.8	3.69	103.8	3.71	102.5	3.73	101.2	3.75	99.5	3.79	97.8	3.83	96.8	3.86
		22.2	112.6	3.70	110.3	3.71	108.1	3.73	106.0	3.75	104.7	3.77	103.4	3.79	101.6	3.82	99.9	3.87	98.9	3.90
		25.4	114.7	3.73	112.4	3.74	110.1	3.76	108.0	3.78	106.7	3.80	105.4	3.82	103.5	3.86	101.8	3.90	100.7	3.93
		41.0	120.6	3.80	118.1	3.81	115.7	3.83	113.5	3.85	112.1	3.87	110.7	3.89	108.8	3.93	107.0	3.97	105.9	4.00
		56.5	118.9	3.75	116.5	3.77	114.2	3.78	112.0	3.80	110.6	3.82	109.2	3.84	107.3	3.88	105.5	3.92	104.4	3.95
	104	19.0	110.2	3.54	107.9	3.55	105.8	3.56	103.8	3.58	102.5	3.60	101.2	3.62	99.5	3.65	97.8	3.69	96.8	3.72
		22.2	112.6	3.57	110.3	3.58	108.1	3.60	106.0	3.62	104.7	3.64	103.4	3.66	101.6	3.69	99.9	3.73	98.9	3.76
		25.4	114.7	3.60	112.4	3.61	110.1	3.63	108.0	3.65	106.7	3.67	105.4	3.69	103.5	3.72	101.8	3.76	100.7	3.79
		41.0	120.6	3.67	118.1	3.68	115.7	3.70	113.5	3.72	112.1	3.74	110.7	3.76	108.8	3.79	107.0	3.83	105.9	3.86
		56.5	118.9	3.62	116.5	3.63	114.2	3.65	112.0	3.67	110.6	3.69	109.2	3.71	107.3	3.74	105.5	3.78	104.4	3.81
	113	19.0	110.2	3.52	107.9	3.53	105.8	3.55	103.8	3.57	102.5	3.59	101.2	3.61	99.5	3.64	97.8	3.68	96.8	3.71
		22.2	112.6	3.56	110.3	3.57	108.1	3.58	106.0	3.61	104.7	3.62	103.4	3.64	101.6	3.68	99.9	3.72	98.9	3.75
		25.4	114.7	3.59	112.4	3.60	110.1	3.61	108.0	3.64	106.7	3.65	105.4	3.67	103.5	3.71	101.8	3.75	100.7	3.78
		41.0	120.6	3.65	118.1	3.67	115.7	3.68	113.5	3.70	112.1	3.72	110.7	3.74	108.8	3.78	107.0	3.82	105.9	3.85
		56.5	118.9	3.61	116.5	3.62	114.2	3.64	112.0	3.66	110.6	3.67	109.2	3.69	107.3	3.73	105.5	3.77	104.4	3.80

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	19.0	89.1	4.03	87.3	4.05	85.5	4.07	83.9	4.09	82.8	4.11	81.8	4.13	80.4	4.17	79.1	4.21	78.2	4.25
		22.2	91.1	4.07	89.2	4.09	87.4	4.11	85.7	4.13	84.7	4.15	83.6	4.17	82.2	4.21	80.8	4.25	80.0	4.29
		25.4	92.8	4.11	90.8	4.12	89.0	4.14	87.3	4.16	86.2	4.18	85.2	4.20	83.7	4.24	82.3	4.29	81.4	4.32
		41.0	97.5	4.19	95.5	4.20	93.6	4.22	91.8	4.24	90.6	4.26	89.5	4.28	88.0	4.32	86.5	4.37	85.6	4.41
		56.5	96.1	4.13	94.2	4.14	92.3	4.16	90.5	4.19	89.4	4.21	88.3	4.23	86.8	4.27	85.3	4.32	84.4	4.35
	59	19.0	96.4	4.20	94.5	4.22	92.6	4.24	90.8	4.26	89.7	4.28	88.6	4.30	87.0	4.34	85.6	4.39	84.7	4.43
		22.2	98.5	4.25	96.5	4.26	94.6	4.28	92.8	4.30	91.6	4.32	90.5	4.35	88.9	4.39	87.5	4.43	86.5	4.47
		25.4	100.4	4.28	98.3	4.29	96.4	4.31	94.5	4.34	93.3	4.36	92.2	4.38	90.6	4.42	89.1	4.47	88.1	4.51
		41.0	105.5	4.36	103.3	4.38	101.3	4.40	99.3	4.42	98.1	4.44	96.9	4.47	95.2	4.51	93.6	4.56	92.6	4.59
		56.5	104.1	4.31	101.9	4.32	99.9	4.34	98.0	4.36	96.7	4.38	95.6	4.41	93.9	4.45	92.3	4.50	91.4	4.53
	68	19.0	96.4	3.89	94.5	3.90	92.6	3.92	90.8	3.94	89.7	3.96	88.6	3.98	87.0	4.01	85.6	4.06	84.7	4.09
		22.2	98.5	3.92	96.5	3.94	94.6	3.95	92.8	3.98	91.6	4.00	90.5	4.02	88.9	4.05	87.5	4.10	86.5	4.13
		25.4	100.4	3.96	98.3	3.97	96.4	3.99	94.5	4.01	93.3	4.03	92.2	4.05	90.6	4.09	89.1	4.13	88.1	4.17
		41.0	105.5	4.03	103.3	4.04	101.3	4.06	99.3	4.09	98.1	4.10	96.9	4.13	95.2	4.17	93.6	4.21	92.6	4.24
		56.5	104.1	3.98	101.9	3.99	99.9	4.01	98.0	4.03	96.7	4.05	95.6	4.07	93.9	4.11	92.3	4.16	91.4	4.19
	77	19.0	96.4	3.48	94.5	3.49	92.6	3.50	90.8	3.52	89.7	3.54	88.6	3.56	87.0	3.59	85.6	3.63	84.7	3.66
		22.2	98.5	3.51	96.5	3.52	94.6	3.54	92.8	3.56	91.6	3.58	90.5	3.59	88.9	3.63	87.5	3.67	86.5	3.70
		25.4	100.4	3.54	98.3	3.55	96.4	3.57	94.5	3.59	93.3	3.60	92.2	3.62	90.6	3.66	89.1	3.70	88.1	3.73
		41.0	105.5	3.61	103.3	3.62	101.3	3.63	99.3	3.66	98.1	3.67	96.9	3.69	95.2	3.73	93.6	3.77	92.6	3.80
		56.5	104.1	3.56	101.9	3.57	99.9	3.59	98.0	3.61	96.7	3.63	95.6	3.65	93.9	3.68	92.3	3.72	91.4	3.75
	86	19.0	96.4	3.04	94.5	3.05	92.6	3.07	90.8	3.08	89.7	3.10	88.6	3.12	87.0	3.14	85.6	3.18	84.7	3.20
		22.2	98.5	3.07	96.5	3.08	94.6	3.10	92.8	3.11	91.6	3.13	90.5	3.15	88.9	3.18	87.5	3.21	86.5	3.24
		25.4	100.4	3.10	98.3	3.11	96.4	3.12	94.5	3.14	93.3	3.15	92.2	3.17	90.6	3.20	89.1	3.24	88.1	3.26
		41.0	105.5	3.16	103.3	3.17	101.3	3.18	99.3	3.20	98.1	3.21	96.9	3.23	95.2	3.26	93.6	3.30	92.6	3.32
		56.5	104.1	3.12	101.9	3.13	99.9	3.14	98.0	3.16	96.7	3.17	95.6	3.19	93.9	3.22	92.3	3.26	91.4	3.28
	95	19.0	96.4	2.83	94.5	2.84	92.6	2.85	90.8	2.87	89.7	2.88	88.6	2.90	87.0	2.93	85.6	2.96	84.7	2.98
		22.2	98.5	2.86	96.5	2.87	94.6	2.88	92.8	2.90	91.6	2.91	90.5	2.93	88.9	2.96	87.5	2.99	86.5	3.01
		25.4	100.4	2.88	98.3	2.89	96.4	2.91	94.5	2.92	93.3	2.94	92.2	2.95	90.6	2.98	89.1	3.01	88.1	3.04
		41.0	105.5	2.94	103.3	2.95	101.3	2.96	99.3	2.98	98.1	2.99	96.9	3.01	95.2	3.04	93.6	3.07	92.6	3.09
		56.5	104.1	2.90	101.9	2.91	99.9	2.92	98.0	2.94	96.7	2.95	95.6	2.97	93.9	3.00	92.3	3.03	91.4	3.05
	104	19.0	96.4	2.73	94.5	2.74	92.6	2.75	90.8	2.77	89.7	2.78	88.6	2.80	87.0	2.82	85.6	2.85	84.7	2.88
		22.2	98.5	2.76	96.5	2.77	94.6	2.78	92.8	2.80	91.6	2.81	90.5	2.82	88.9	2.85	87.5	2.88	86.5	2.91
		25.4	100.4	2.78	98.3	2.79	96.4	2.80	94.5	2.82	93.3	2.83	92.2	2.85	90.6	2.87	89.1	2.91	88.1	2.93
		41.0	105.5	2.83	103.3	2.84	101.3	2.86	99.3	2.87	98.1	2.89	96.9	2.90	95.2	2.93	93.6	2.96	92.6	2.99
		56.5	104.1	2.80	101.9	2.81	99.9	2.82	98.0	2.84	96.7	2.85	95.6	2.86	93.9	2.89	92.3	2.92	91.4	2.95
	113	19.0	96.4	2.72	94.5	2.73	92.6	2.74	90.8	2.76	89.7	2.77	88.6	2.79	87.0	2.81	85.6	2.84	84.7	2.87
		22.2	98.5	2.75	96.5	2.76	94.6	2.77	92.8	2.79	91.6	2.80	90.5	2.81	88.9	2.84	87.5	2.87	86.5	2.89
		25.4	100.4	2.77	98.3	2.78	96.4	2.79	94.5	2.81	93.3	2.82	92.2	2.84	90.6	2.86	89.1	2.89	88.1	2.92
		41.0	105.5	2.82	103.3	2.83	101.3	2.85	99.3	2.86	98.1	2.88	96.9	2.89	95.2	2.92	93.6	2.95	92.6	2.97
		56.5	104.1	2.79	101.9	2.80	99.9	2.81	98.0	2.83	96.7	2.84	95.6	2.85	93.9	2.88	92.3	2.91	91.4	2.94
60	50	19.0	76.4	3.01	74.8	3.02	73.3	3.03	71.9	3.05	71.0	3.06	70.1	3.08	68.9	3.11	67.8	3.14	67.1	3.17
		22.2	78.0	3.04	76.4	3.05	74.9	3.06	73.5	3.08	72.6	3.09	71.7	3.11	70.4	3.14	69.3	3.17	68.5	3.20
		25.4	79.5	3.06	77.9	3.07	76.3	3.09	74.8	3.10	73.9	3.12	73.0	3.14	71.7	3.16	70.6	3.20	69.8	3.23
		41.0	83.5	3.12	81.8	3.13	80.2	3.15	78.6	3.16	77.7	3.18	76.7	3.20	75.4	3.22	74.1	3.26	73.4	3.29
		56.5	82.4	3.08	80.7	3.09	79.1	3.10	77.6	3.12	76.6	3.14	75.7	3.15	74.4	3.18	73.1	3.22	72.4	3.24
	59	19.0	82.7	3.14	81.0	3.15	79.3	3.16	77.8	3.18	76.8	3.19	75.9	3.21	74.6	3.24	73.4	3.27	72.6	3.30
		22.2	84.5	3.17	82.7	3.18	81.1	3.19	79.5	3.21	78.5	3.22	77.6	3.24	76.2	3.27	75.0	3.31	74.2	3.33
		25.4	86.0	3.19	84.3	3.20	82.6	3.22	81.0	3.24	80.0	3.25	79.0	3.27	77.6	3.30	76.4	3.33	75.5	3.36
		41.0	90.4	3.25	88.6	3.26	86.8	3.28	85.1	3.30	84.1	3.31	83.0	3.33	81.6	3.36	80.2	3.40	79.4	3.43
		56.5	89.2	3.21	87.4	3.22	85.6	3.24	84.0	3.25	82.9	3.27	81.9	3.29	80.5	3.32	79.2	3.35	78.3	3.38
	68	19.0	82.7	2.90	81.0	2.91	79.3	2.92	77.8	2.94	76.8	2.95	75.9	2.97	74.6	2.99	73.4	3.03	72.6	3.05
		22.2	84.5	2.93	82.7	2.94	81.1	2.95	79.5	2.97	78.5	2.98	77.6	3.00	76.2	3.02	75.0	3.06	74.2	3.08
		25.4	86.0	2.95	84.3	2.96	82.6	2.97	81.0	2.99	80.0	3.00	79.0	3.02	77.6	3.05	76.4	3.08	75.5	3.11
		41.0	90.4	3.01	88.6	3.02	86.8	3.03	85.1	3.05	84.1	3.06	83.0	3.08	81.6	3.11	80.2	3.14	79.4	3.17
		56.5	89.2	2.97	87.4	2.98	85.6	2.99	84.0	3.01	82.9	3.02	81.9	3.04	80.5	3.07	79.2	3.10	78.3	3.13
	77	19.0	82.7	2.59	81.0	2.60	79.3	2.61	77.8	2.63	76.8	2.64	75.9	2.65	74.6	2.68	73.4	2.71	72.6	2.73
		22.2	84.5	2.62	82.7	2.63	81.1	2.64	79.5	2.65	78.5	2.67	77.6	2.68	76.2	2.71	75.0	2.73	74.2	2.76
		25.4	86.0	2.64	84.3	2.65	82.6	2.66	81.0	2.68	80.0	2.69	79.0	2.70	77.6	2.73	76.4	2.76	75.5	2.78
		41.0	90.4	2.69	88.6	2.70	86.8	2.71	85.1	2.73	84.1	2.74	83.0	2.75	81.6	2.78	80.2	2.81	79.4	2.83
		56.5	89.2	2.66	87.4	2.66	85.6	2.68	84.0	2.69	82.9	2.70	81.9	2.72	80.5	2.74	79.2	2.77	78.3	2.80
	86	19.0	82.7	2.27	81.0	2.28	79.3	2.29	77.8	2.30	76.8	2.31	75.9	2.32	74.6	2.34	73.4	2.37	72.6	2.39
		22.2	84.5	2.29	82.7	2.30	81.1	2.31	79.5	2.32	78.5	2.33	77.6	2.35	76.2	2.37	75.0	2.39	74.2	2.41
		25.4	86.0	2.31	84.3	2.32	82.6	2.33	81.0	2.34	80.0	2.35	79.0	2.37	77.6	2.39	76.4	2.41	75.5	2.43
		41.0	90.4	2.35	88.6	2.36	86.8	2.37	85.1	2.39	84.1	2.40	83.0	2.41	81.6	2.43	80.2	2.46	79.4	2.48
		56.5	89.2	2.32	87.4	2.33	85.6	2.34	84.0	2.36	82.9	2.37	81.9	2.38	80.5	2.40	79.2	2.43	78.3	2.45
	95	19.0	82.7	2.11	81.0	2.12	79.3	2.13	77.8	2.14	76.8	2.15	75.9	2.16	74.6	2.18	73.4	2.21	72.6	2.22
		22.2	84.5	2.13	82.7	2.14	81.1	2.15	79.5	2.16	78.5	2.17	77.6	2.18	76.2	2.20	75.0	2.23	74.2	2.25
		25.4	86.0	2.15	84.3	2.16	82.6	2.17	81.0	2.18	80.0	2.19	79.0	2.20	77.6	2.22	76.4	2.25	75.5	2.26
		41.0	90.4	2.19	88.6	2.20	86.8	2.21	85.1	2.22	84.1	2.23	83.0	2.24	81.6	2.26	80.2	2.29	79.4	2.31
		56.5	89.2	2.16	87.4	2.17	85.6	2.18	84.0	2.19	82.9	2.20	81.9	2.21	80.5	2.24	79.2	2.26	78.3	2.28
	104	19.0	82.7	2.04	81.0	2.04	79.3	2.05	77.8	2.07	76.8	2.08	75.9	2.09	74.6	2.11	73.4	2.13	72.6	2.15
		22.2	84.5	2.06	82.7	2.06	81.1	2.07	79.5	2.09	78.5	2.10	77.6	2.11	76.2	2.13	75.0	2.15	74.2	2.17
		25.4	86.0	2.07	84.3	2.08	82.6	2.09	81.0	2.10	80.0	2.11	79.0	2.12	77.6	2.14	76.4	2.17	75.5	2.18
		41.0	90.4	2.11	88.6	2.12	86.8	2.13	85.1	2.14	84.1	2.15	83.0	2.16	81.6	2.18	80.2	2.21	79.4	2.23
		56.5	89.2	2.09	87.4	2.09	85.6	2.10	84.0	2.12	82.9	2.13	81.9	2.14	80.5	2.16	79.2	2.18	78.3	2.20
	113	19.0	82.7	2.03	81.0	2.04	79.3	2.05	77.8	2.06	76.8	2.07	75.9	2.08	74.6	2.10	73.4	2.12	72.6	2.14
		22.2	84.5	2.05	82.7	2.06	81.1	2.07	79.5	2.08	78.5	2.09	77.6	2.10	76.2	2.12	75.0	2.14	74.2	2.16
		25.4	86.0	2.07	84.3	2.07	82.6	2.08	81.0	2.09	80.0	2.10	79.0	2.12	77.6	2.14	76.4	2.16	75.5	2.18
		41.0	90.4	2.11	88.6	2.11	86.8	2.12	85.1	2.13	84.1	2.14	83.0	2.16	81.6	2.18	80.2	2.20	79.4	2.22
		56.5	89.2	2.08	87.4	2.09	85.6	2.10	84.0	2.11	82.9	2.12	81.9	2.13	80.5	2.15	79.2	2.17	78.3	2.19

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)120B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	19.0	63.6	2.24	62.3	2.25	61.1	2.26	59.9	2.27	59.2	2.28	58.5	2.29	57.4	2.31	56.5	2.34	55.9	2.36
		22.2	65.0	2.26	63.7	2.27	62.4	2.28	61.2	2.29	60.5	2.30	59.7	2.32	58.7	2.34	57.7	2.36	57.1	2.38
		25.4	66.3	2.28	64.9	2.29	63.6	2.30	62.4	2.31	61.6	2.32	60.8	2.33	59.8	2.36	58.8	2.38	58.2	2.40
		41.0	69.6	2.32	68.2	2.33	66.8	2.34	65.5	2.36	64.7	2.37	63.9	2.38	62.8	2.40	61.8	2.43	61.1	2.45
		56.5	68.7	2.29	67.3	2.30	65.9	2.31	64.7	2.33	63.8	2.34	63.1	2.35	62.0	2.37	60.9	2.40	60.3	2.42
	59	19.0	68.9	2.33	67.5	2.34	66.1	2.35	64.8	2.37	64.0	2.38	63.3	2.39	62.2	2.41	61.1	2.44	60.5	2.46
		22.2	70.4	2.36	68.9	2.37	67.6	2.38	66.3	2.39	65.4	2.40	64.6	2.41	63.5	2.44	62.5	2.46	61.8	2.48
		25.4	71.7	2.38	70.2	2.38	68.8	2.40	67.5	2.41	66.7	2.42	65.9	2.43	64.7	2.46	63.6	2.48	63.0	2.50
		41.0	75.3	2.42	73.8	2.43	72.3	2.44	70.9	2.46	70.0	2.47	69.2	2.48	68.0	2.50	66.9	2.53	66.2	2.55
		56.5	74.3	2.39	72.8	2.40	71.3	2.41	70.0	2.42	69.1	2.44	68.3	2.45	67.1	2.47	66.0	2.50	65.3	2.52
	68	19.0	68.9	2.16	67.5	2.16	66.1	2.17	64.8	2.19	64.0	2.20	63.3	2.21	62.2	2.23	61.1	2.25	60.5	2.27
		22.2	70.4	2.18	68.9	2.19	67.6	2.20	66.3	2.21	65.4	2.22	64.6	2.23	63.5	2.25	62.5	2.28	61.8	2.29
		25.4	71.7	2.20	70.2	2.20	68.8	2.21	67.5	2.23	66.7	2.24	65.9	2.25	64.7	2.27	63.6	2.29	63.0	2.31
		41.0	75.3	2.24	73.8	2.25	72.3	2.26	70.9	2.27	70.0	2.28	69.2	2.29	68.0	2.31	66.9	2.34	66.2	2.36
		56.5	74.3	2.21	72.8	2.22	71.3	2.23	70.0	2.24	69.1	2.25	68.3	2.26	67.1	2.28	66.0	2.31	65.3	2.33
	77	19.0	68.9	1.93	67.5	1.94	66.1	1.95	64.8	1.96	64.0	1.97	63.3	1.98	62.2	1.99	61.1	2.02	60.5	2.03
		22.2	70.4	1.95	68.9	1.96	67.6	1.96	66.3	1.98	65.4	1.99	64.6	2.00	63.5	2.01	62.5	2.04	61.8	2.05
		25.4	71.7	1.97	70.2	1.97	68.8	1.98	67.5	1.99	66.7	2.00	65.9	2.01	64.7	2.03	63.6	2.05	63.0	2.07
		41.0	75.3	2.00	73.8	2.01	72.3	2.02	70.9	2.03	70.0	2.04	69.2	2.05	68.0	2.07	66.9	2.09	66.2	2.11
		56.5	74.3	1.98	72.8	1.98	71.3	1.99	70.0	2.00	69.1	2.01	68.3	2.02	67.1	2.04	66.0	2.07	65.3	2.08
	86	19.0	68.9	1.69	67.5	1.70	66.1	1.70	64.8	1.71	64.0	1.72	63.3	1.73	62.2	1.75	61.1	1.77	60.5	1.78
		22.2	70.4	1.71	68.9	1.71	67.6	1.72	66.3	1.73	65.4	1.74	64.6	1.75	63.5	1.76	62.5	1.78	61.8	1.80
		25.4	71.7	1.72	70.2	1.73	68.8	1.73	67.5	1.74	66.7	1.75	65.9	1.76	64.7	1.78	63.6	1.80	63.0	1.81
		41.0	75.3	1.75	73.8	1.76	72.3	1.77	70.9	1.78	70.0	1.79	69.2	1.79	68.0	1.81	66.9	1.83	66.2	1.85
		56.5	74.3	1.73	72.8	1.74	71.3	1.74	70.0	1.75	69.1	1.76	68.3	1.77	67.1	1.79	66.0	1.81	65.3	1.82
	95	19.0	68.9	1.57	67.5	1.58	66.1	1.59	64.8	1.59	64.0	1.60	63.3	1.61	62.2	1.63	61.1	1.64	60.5	1.66
		22.2	70.4	1.59	68.9	1.59	67.6	1.60	66.3	1.61	65.4	1.62	64.6	1.63	63.5	1.64	62.5	1.66	61.8	1.67
		25.4	71.7	1.60	70.2	1.61	68.8	1.61	67.5	1.62	66.7	1.63	65.9	1.64	64.7	1.65	63.6	1.67	63.0	1.69
		41.0	75.3	1.63	73.8	1.64	72.3	1.64	70.9	1.65	70.0	1.66	69.2	1.67	68.0	1.69	66.9	1.70	66.2	1.72
		56.5	74.3	1.61	72.8	1.62	71.3	1.62	70.0	1.63	69.1	1.64	68.3	1.65	67.1	1.66	66.0	1.68	65.3	1.70
	104	19.0	68.9	1.52	67.5	1.52	66.1	1.53	64.8	1.54	64.0	1.55	63.3	1.55	62.2	1.57	61.1	1.58	60.5	1.60
		22.2	70.4	1.53	68.9	1.54	67.6	1.54	66.3	1.55	65.4	1.56	64.6	1.57	63.5	1.58	62.5	1.60	61.8	1.61
		25.4	71.7	1.54	70.2	1.55	68.8	1.56	67.5	1.57	66.7	1.57	65.9	1.58	64.7	1.60	63.6	1.61	63.0	1.63
		41.0	75.3	1.57	73.8	1.58	72.3	1.59	70.9	1.60	70.0	1.60	69.2	1.61	68.0	1.63	66.9	1.64	66.2	1.66
		56.5	74.3	1.55	72.8	1.56	71.3	1.57	70.0	1.58	69.1	1.58	68.3	1.59	67.1	1.61	66.0	1.62	65.3	1.64
	113	19.0	68.9	1.51	67.5	1.52	66.1	1.52	64.8	1.53	64.0	1.54	63.3	1.55	62.2	1.56	61.1	1.58	60.5	1.59
		22.2	70.4	1.53	68.9	1.53	67.6	1.54	66.3	1.55	65.4	1.55	64.6	1.56	63.5	1.58	62.5	1.59	61.8	1.61
		25.4	71.7	1.54	70.2	1.54	68.8	1.55	67.5	1.56	66.7	1.57	65.9	1.58	64.7	1.59	63.6	1.61	63.0	1.62
		41.0	75.3	1.57	73.8	1.57	72.3	1.58	70.9	1.59	70.0	1.60	69.2	1.61	68.0	1.62	66.9	1.64	66.2	1.65
		56.5	74.3	1.55	72.8	1.55	71.3	1.56	70.0	1.57	69.1	1.58	68.3	1.59	67.1	1.60	66.0	1.62	65.3	1.63

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	21.4	152.2	7.23	149.1	7.25	146.1	7.28	143.3	7.33	141.5	7.36	139.8	7.40	137.3	7.47	135.1	7.55	133.6	7.61
		28.9	158.6	7.37	155.3	7.39	152.2	7.42	149.3	7.47	147.4	7.50	145.6	7.54	143.1	7.61	140.7	7.70	139.2	7.76
		36.5	163.8	7.47	160.4	7.50	157.2	7.53	154.2	7.58	152.3	7.61	150.4	7.65	147.8	7.72	145.3	7.81	143.8	7.87
		50.1	170.1	7.59	166.6	7.61	163.3	7.65	160.1	7.69	158.1	7.73	156.2	7.77	153.5	7.84	151.0	7.93	149.4	7.99
		63.7	172.5	7.61	168.9	7.64	165.6	7.67	162.4	7.72	160.4	7.75	158.4	7.80	155.7	7.87	153.1	7.95	151.5	8.02
	59	21.4	164.7	7.53	161.3	7.56	158.1	7.59	155.1	7.63	153.1	7.67	151.3	7.71	148.6	7.78	146.2	7.87	144.6	7.93
		28.9	171.6	7.68	168.1	7.70	164.7	7.74	161.6	7.78	159.6	7.82	157.6	7.86	154.9	7.93	152.3	8.02	150.7	8.09
		36.5	177.2	7.79	173.6	7.81	170.1	7.85	166.9	7.90	164.8	7.93	162.8	7.97	159.9	8.05	157.3	8.14	155.6	8.20
		50.1	184.1	7.91	180.3	7.94	176.7	7.97	173.3	8.02	171.1	8.06	169.1	8.10	166.1	8.17	163.4	8.26	161.6	8.33
		63.7	186.7	7.94	182.8	7.96	179.2	8.00	175.7	8.04	173.6	8.08	171.5	8.13	168.5	8.20	165.7	8.29	163.9	8.36
	68	21.4	164.7	6.96	161.3	6.98	158.1	7.01	155.1	7.06	153.1	7.09	151.3	7.13	148.6	7.19	146.2	7.27	144.6	7.33
		28.9	171.6	7.10	168.1	7.12	164.7	7.15	161.6	7.19	159.6	7.23	157.6	7.26	154.9	7.33	152.3	7.41	150.7	7.47
		36.5	177.2	7.20	173.6	7.22	170.1	7.25	166.9	7.30	164.8	7.33	162.8	7.37	159.9	7.44	157.3	7.52	155.6	7.58
		50.1	184.1	7.31	180.3	7.33	176.7	7.37	173.3	7.41	171.1	7.44	169.1	7.48	166.1	7.55	163.4	7.64	161.6	7.70
		63.7	186.7	7.33	182.8	7.36	179.2	7.39	175.7	7.43	173.6	7.47	171.5	7.51	168.5	7.58	165.7	7.66	163.9	7.72
	77	21.4	164.7	6.23	161.3	6.25	158.1	6.28	155.1	6.31	153.1	6.34	151.3	6.38	148.6	6.44	146.2	6.51	144.6	6.56
		28.9	171.6	6.35	168.1	6.37	164.7	6.40	161.6	6.44	159.6	6.47	157.6	6.50	154.9	6.56	152.3	6.63	150.7	6.69
		36.5	177.2	6.44	173.6	6.46	170.1	6.49	166.9	6.53	164.8	6.56	162.8	6.59	159.9	6.66	157.3	6.73	155.6	6.78
		50.1	184.1	6.54	180.3	6.56	176.7	6.59	173.3	6.63	171.1	6.66	169.1	6.70	166.1	6.76	163.4	6.83	161.6	6.89
		63.7	186.7	6.56	182.8	6.58	179.2	6.61	175.7	6.65	173.6	6.68	171.5	6.72	168.5	6.78	165.7	6.85	163.9	6.91
	86	21.4	164.7	5.45	161.3	5.47	158.1	5.49	155.1	5.53	153.1	5.55	151.3	5.58	148.6	5.63	146.2	5.69	144.6	5.74
		28.9	171.6	5.56	168.1	5.58	164.7	5.60	161.6	5.63	159.6	5.66	157.6	5.69	154.9	5.74	152.3	5.80	150.7	5.85
		36.5	177.2	5.64	173.6	5.66	170.1	5.68	166.9	5.71	164.8	5.74	162.8	5.77	159.9	5.82	157.3	5.89	155.6	5.94
		50.1	184.1	5.73	180.3	5.74	176.7	5.77	173.3	5.80	171.1	5.83	169.1	5.86	166.1	5.92	163.4	5.98	161.6	6.03
		63.7	186.7	5.74	182.8	5.76	179.2	5.79	175.7	5.82	173.6	5.85	171.5	5.88	168.5	5.93	165.7	6.00	163.9	6.05
	95	21.4	164.7	5.07	161.3	5.09	158.1	5.11	155.1	5.14	153.1	5.17	151.3	5.19	148.6	5.24	146.2	5.30	144.6	5.34
		28.9	171.6	5.17	168.1	5.19	164.7	5.21	161.6	5.24	159.6	5.27	157.6	5.30	154.9	5.34	152.3	5.40	150.7	5.45
		36.5	177.2	5.25	173.6	5.26	170.1	5.29	166.9	5.32	164.8	5.34	162.8	5.37	159.9	5.42	157.3	5.48	155.6	5.53
		50.1	184.1	5.33	180.3	5.35	176.7	5.37	173.3	5.40	171.1	5.43	169.1	5.46	166.1	5.51	163.4	5.57	161.6	5.61
		63.7	186.7	5.35	182.8	5.36	179.2	5.39	175.7	5.42	173.6	5.44	171.5	5.47	168.5	5.52	165.7	5.58	163.9	5.63
	104	21.4	164.7	4.90	161.3	4.91	158.1	4.93	155.1	4.96	153.1	4.98	151.3	5.01	148.6	5.06	146.2	5.11	144.6	5.15
		28.9	171.6	4.99	168.1	5.01	164.7	5.03	161.6	5.06	159.6	5.08	157.6	5.11	154.9	5.16	152.3	5.21	150.7	5.26
		36.5	177.2	5.06	173.6	5.08	170.1	5.10	166.9	5.13	164.8	5.16	162.8	5.18	159.9	5.23	157.3	5.29	155.6	5.33
		50.1	184.1	5.14	180.3	5.16	176.7	5.18	173.3	5.21	171.1	5.24	169.1	5.26	166.1	5.31	163.4	5.37	161.6	5.41
		63.7	186.7	5.16	182.8	5.17	179.2	5.20	175.7	5.23	173.6	5.25	171.5	5.28	168.5	5.33	165.7	5.39	163.9	5.43
	113	21.4	164.7	4.88	161.3	4.89	158.1	4.91	155.1	4.94	153.1	4.97	151.3	4.99	148.6	5.04	146.2	5.09	144.6	5.14
		28.9	171.6	4.97	168.1	4.99	164.7	5.01	161.6	5.04	159.6	5.06	157.6	5.09	154.9	5.14	152.3	5.19	150.7	5.24
		36.5	177.2	5.04	173.6	5.06	170.1	5.08	166.9	5.11	164.8	5.14	162.8	5.16	159.9	5.21	157.3	5.27	155.6	5.31
		50.1	184.1	5.12	180.3	5.14	176.7	5.16	173.3	5.19	171.1	5.22	169.1	5.24	166.1	5.29	163.4	5.35	161.6	5.39
		63.7	186.7	5.14	182.8	5.16	179.2	5.18	175.7	5.21	173.6	5.23	171.5	5.26	168.5	5.31	165.7	5.37	163.9	5.41
120	50	21.4	150.7	7.37	147.6	7.39	144.7	7.43	141.9	7.47	140.1	7.50	138.4	7.54	136.0	7.61	133.7	7.70	132.3	7.76
		28.9	157.0	7.51	153.8	7.54	150.7	7.57	147.8	7.61	146.0	7.65	144.2	7.69	141.7	7.76	139.4	7.85	137.9	7.91
		36.5	162.2	7.62	158.8	7.64	155.7	7.68	152.7	7.72	150.8	7.76	149.0	7.80	146.4	7.87	143.9	7.96	142.4	8.02
		50.1	168.4	7.74	165.0	7.76	161.7	7.80	158.6	7.84	156.6	7.88	154.7	7.92	152.0	8.00	149.5	8.08	147.9	8.15
		63.7	170.8	7.76	167.3	7.79	164.0	7.82	160.8	7.87	158.8	7.91	156.9	7.95	154.2	8.02	151.6	8.11	150.0	8.18
	59	21.4	163.1	7.68	159.7	7.70	156.6	7.74	153.6	7.78	151.6	7.82	149.8	7.86	147.2	7.93	144.7	8.02	143.2	8.09
		28.9	170.0	7.83	166.5	7.85	163.1	7.89	160.0	7.94	158.0	7.97	156.1	8.01	153.4	8.09	150.8	8.18	149.2	8.24
		36.5	175.5	7.94	171.9	7.97	168.5	8.00	165.2	8.05	163.2	8.09	161.2	8.13	158.4	8.21	155.8	8.30	154.1	8.36
		50.1	182.3	8.07	178.6	8.09	175.0	8.13	171.6	8.18	169.5	8.21	167.4	8.26	164.5	8.33	161.8	8.42	160.1	8.49
		63.7	184.9	8.09	181.1	8.12	177.5	8.15	174.0	8.20	171.9	8.24	169.8	8.28	166.8	8.36	164.1	8.45	162.3	8.52
	68	21.4	163.1	7.10	159.7	7.12	156.6	7.15	153.6	7.19	151.6	7.23	149.8	7.27	147.2	7.33	144.7	7.41	143.2	7.47
		28.9	170.0	7.24	166.5	7.26	163.1	7.29	160.0	7.33	158.0	7.37	156.1	7.41	153.4	7.48	150.8	7.56	149.2	7.62
		36.5	175.5	7.34	171.9	7.36	168.5	7.40	165.2	7.44	163.2	7.47	161.2	7.51	158.4	7.58	155.8	7.67	154.1	7.73
		50.1	182.3	7.45	178.6	7.48	175.0	7.51	171.6	7.55	169.5	7.59	167.4	7.63	164.5	7.70	161.8	7.79	160.1	7.85
		63.7	184.9	7.48	181.1	7.50	177.5	7.54	174.0	7.58	171.9	7.62	169.8	7.66	166.8	7.73	164.1	7.81	162.3	7.87
	77	21.4	163.1	6.35	159.7	6.37	156.6	6.40	153.6	6.44	151.6	6.47	149.8	6.50	147.2	6.56	144.7	6.63	143.2	6.69
		28.9	170.0	6.47	166.5	6.49	163.1	6.52	160.0	6.56	158.0	6.59	156.1	6.63	153.4	6.69	150.8	6.76	149.2	6.82
		36.5	175.5	6.57	171.9	6.59	168.5	6.62	165.2	6.66	163.2	6.69	161.2	6.72	158.4	6.79	155.8	6.86	154.1	6.92
		50.1	182.3	6.67	178.6	6.69	175.0	6.72	171.6	6.76	169.5	6.79	167.4	6.83	164.5	6.89	161.8	6.97	160.1	7.02
		63.7	184.9	6.69	181.1	6.71	177.5	6.74	174.0	6.78	171.9	6.81	169.8	6.85	166.8	6.91	164.1	6.99	162.3	7.05
	86	21.4	163.1	5.56	159.7	5.58	156.6	5.60	153.6	5.63	151.6	5.66	149.8	5.69	147.2	5.74	144.7	5.81	143.2	5.85
		28.9	170.0	5.67	166.5	5.68	163.1	5.71	160.0	5.74	158.0	5.77	156.1	5.80	153.4	5.85	150.8	5.92	149.2	5.97
		36.5	175.5	5.75	171.9	5.77	168.5	5.79	165.2	5.83	163.2	5.85	161.2	5.88	158.4	5.94	155.8	6.00	154.1	6.05
		50.1	182.3	5.84	178.6	5.86	175.0	5.88	171.6	5.92	169.5	5.94	167.4	5.98	164.5	6.03	161.8	6.10	160.1	6.15
		63.7	184.9	5.86	181.1	5.88	177.5	5.90	174.0	5.94	171.9	5.96	169.8	6.00	166.8	6.05	164.1	6.12	162.3	6.17
	95	21.4	163.1	5.17	159.7	5.19	156.6	5.21	153.6	5.24	151.6	5.27	149.8	5.30	147.2	5.35	144.7	5.40	143.2	5.45
		28.9	170.0	5.27	166.5	5.29	163.1	5.31	160.0	5.35	158.0	5.37	156.1	5.40	153.4	5.45	150.8	5.51	149.2	5.55
		36.5	175.5	5.35	171.9	5.37	168.5	5.39	165.2	5.42	163.2	5.45	161.2	5.48	158.4	5.53	155.8	5.59	154.1	5.63
		50.1	182.3	5.43	178.6	5.45	175.0	5.48	171.6	5.51	169.5	5.53	167.4	5.56	164.5	5.61	161.8	5.67	160.1	5.72
		63.7	184.9	5.45	181.1	5.47	177.5	5.49	174.0	5.53	171.9	5.55	169.8	5.58	166.8	5.63	164.1	5.69	162.3	5.74
	104	21.4	163.1	4.99	159.7	5.01	156.6	5.03	153.6	5.06	151.6	5.08	149.8	5.11	147.2	5.16	144.7	5.21	143.2	5.26
		28.9	170.0	5.09	166.5	5.10	163.1	5.13	160.0	5.16	158.0	5.18	156.1	5.21	153.4	5.26	150.8	5.31	149.2	5.36
		36.5	175.5	5.16	171.9	5.18	168.5	5.20	165.2	5.23	163.2	5.26	161.2	5.28	158.4	5.33	155.8	5.39	154.1	5.44
		50.1	182.3	5.24	178.6	5.26	175.0	5.28	171.6	5.31	169.5	5.34	167.4	5.37	164.5	5.42	161.8	5.47	160.1	5.52
		63.7	184.9	5.26	181.1	5.28	177.5	5.30	174.0	5.33	171.9	5.36	169.8	5.38	166.8	5.43	164.1	5.49	162.3	5.54
	113	21.4	163.1	4.97	159.7	4.99	156.6	5.01	153.6	5.04	151.6	5.06	149.8	5.09	147.2	5.14	144.7	5.19	143.2	5.24
		28.9	170.0	5.07	166.5	5.09	163.1	5.11	160.0	5.14	158.0	5.16	156.1	5.19	153.4	5.24	150.8	5.29	149.2	5.34
		36.5	175.5	5.14	171.9	5.16	168.5	5.18	165.2	5.21	163.2	5.24	161.2	5.26	158.4	5.31	155.8	5.37	154.1	5.41
		50.1	182.3	5.22	178.6	5.24	175.0	5.26	171.6	5.29	169.5	5.32	167.4	5.35	164.5	5.40	161.8	5.45	160.1	5.50
		63.7	184.9	5.24	181.1	5.26	177.5	5.28	174.0	5.31	171.9	5.34	169.8	5.36	166.8	5.41	164.1	5.47	162.3	5.52

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	21.4	149.2	7.57	146.2	7.60	143.2	7.63	140.5	7.68	138.7	7.71	137.1	7.75	134.7	7.83	132.4	7.91	131.0	7.98
		28.9	155.5	7.72	152.3	7.75	149.3	7.78	146.4	7.83	144.6	7.86	142.8	7.90	140.3	7.98	138.0	8.06	136.5	8.13
		36.5	160.6	7.83	157.3	7.86	154.2	7.89	151.2	7.94	149.3	7.98	147.5	8.02	144.9	8.09	142.5	8.18	141.0	8.25
		50.1	166.8	7.95	163.4	7.98	160.1	8.02	157.0	8.06	155.1	8.10	153.2	8.14	150.5	8.22	148.0	8.31	146.5	8.38
		63.7	169.1	7.98	165.7	8.01	162.4	8.04	159.2	8.09	157.3	8.13	155.3	8.17	152.6	8.25	150.1	8.34	148.5	8.40
	59	21.4	161.5	7.89	158.2	7.92	155.0	7.96	152.0	8.00	150.2	8.04	148.3	8.08	145.7	8.16	143.3	8.25	141.8	8.31
		28.9	168.3	8.05	164.8	8.07	161.5	8.11	158.4	8.16	156.5	8.19	154.6	8.24	151.9	8.31	149.4	8.41	147.8	8.47
		36.5	173.8	8.16	170.2	8.19	166.8	8.23	163.6	8.27	161.6	8.31	159.6	8.36	156.8	8.43	154.2	8.53	152.6	8.60
		50.1	180.5	8.29	176.8	8.32	173.3	8.35	169.9	8.40	167.8	8.44	165.8	8.49	162.9	8.57	160.2	8.66	158.5	8.73
		63.7	183.1	8.32	179.3	8.34	175.7	8.38	172.3	8.43	170.2	8.47	168.1	8.51	165.2	8.59	162.5	8.69	160.7	8.76
	68	21.4	161.5	7.30	158.2	7.32	155.0	7.35	152.0	7.39	150.2	7.43	148.3	7.47	145.7	7.54	143.3	7.62	141.8	7.68
		28.9	168.3	7.44	164.8	7.46	161.5	7.49	158.4	7.54	156.5	7.57	154.6	7.61	151.9	7.68	149.4	7.77	147.8	7.83
		36.5	173.8	7.54	170.2	7.57	166.8	7.60	163.6	7.65	161.6	7.68	159.6	7.72	156.8	7.79	154.2	7.88	152.6	7.94
		50.1	180.5	7.66	176.8	7.69	173.3	7.72	169.9	7.77	167.8	7.80	165.8	7.84	162.9	7.92	160.2	8.00	158.5	8.07
		63.7	183.1	7.69	179.3	7.71	175.7	7.75	172.3	7.79	170.2	7.83	168.1	7.87	165.2	7.94	162.5	8.03	160.7	8.09
	77	21.4	161.5	6.53	158.2	6.55	155.0	6.58	152.0	6.62	150.2	6.65	148.3	6.68	145.7	6.74	143.3	6.82	141.8	6.87
		28.9	168.3	6.65	164.8	6.68	161.5	6.71	158.4	6.74	156.5	6.78	154.6	6.81	151.9	6.88	149.4	6.95	147.8	7.01
		36.5	173.8	6.75	170.2	6.77	166.8	6.80	163.6	6.84	161.6	6.87	159.6	6.91	156.8	6.97	154.2	7.05	152.6	7.11
		50.1	180.5	6.86	176.8	6.88	173.3	6.91	169.9	6.95	167.8	6.98	165.8	7.02	162.9	7.08	160.2	7.16	158.5	7.22
		63.7	183.1	6.88	179.3	6.90	175.7	6.93	172.3	6.97	170.2	7.00	168.1	7.04	165.2	7.11	162.5	7.18	160.7	7.24
	86	21.4	161.5	5.71	158.2	5.73	155.0	5.76	152.0	5.79	150.2	5.82	148.3	5.85	145.7	5.90	143.3	5.97	141.8	6.02
		28.9	168.3	5.82	164.8	5.84	161.5	5.87	158.4	5.90	156.5	5.93	154.6	5.96	151.9	6.02	149.4	6.08	147.8	6.13
		36.5	173.8	5.91	170.2	5.93	166.8	5.95	163.6	5.99	161.6	6.02	159.6	6.05	156.8	6.10	154.2	6.17	152.6	6.22
		50.1	180.5	6.00	176.8	6.02	173.3	6.05	169.9	6.08	167.8	6.11	165.8	6.14	162.9	6.20	160.2	6.27	158.5	6.32
		63.7	183.1	6.02	179.3	6.04	175.7	6.07	172.3	6.10	170.2	6.13	168.1	6.16	165.2	6.22	162.5	6.29	160.7	6.34
	95	21.4	161.5	5.32	158.2	5.33	155.0	5.36	152.0	5.39	150.2	5.42	148.3	5.44	145.7	5.49	143.3	5.55	141.8	5.60
		28.9	168.3	5.42	164.8	5.44	161.5	5.46	158.4	5.49	156.5	5.52	154.6	5.55	151.9	5.60	149.4	5.66	147.8	5.71
		36.5	173.8	5.50	170.2	5.52	166.8	5.54	163.6	5.57	161.6	5.60	159.6	5.63	156.8	5.68	154.2	5.74	152.6	5.79
		50.1	180.5	5.58	176.8	5.60	173.3	5.63	169.9	5.66	167.8	5.69	165.8	5.72	162.9	5.77	160.2	5.83	158.5	5.88
		63.7	183.1	5.60	179.3	5.62	175.7	5.65	172.3	5.68	170.2	5.71	168.1	5.74	165.2	5.79	162.5	5.85	160.7	5.90
	104	21.4	161.5	5.13	158.2	5.15	155.0	5.17	152.0	5.20	150.2	5.22	148.3	5.25	145.7	5.30	143.3	5.36	141.8	5.40
		28.9	168.3	5.23	164.8	5.25	161.5	5.27	158.4	5.30	156.5	5.33	154.6	5.35	151.9	5.40	149.4	5.46	147.8	5.51
		36.5	173.8	5.31	170.2	5.32	166.8	5.35	163.6	5.38	161.6	5.40	159.6	5.43	156.8	5.48	154.2	5.54	152.6	5.59
		50.1	180.5	5.39	176.8	5.41	173.3	5.43	169.9	5.46	167.8	5.49	165.8	5.52	162.9	5.57	160.2	5.63	158.5	5.67
		63.7	183.1	5.41	179.3	5.42	175.7	5.45	172.3	5.48	170.2	5.50	168.1	5.53	165.2	5.59	162.5	5.65	160.7	5.69
	113	21.4	161.5	5.11	158.2	5.13	155.0	5.15	152.0	5.18	150.2	5.20	148.3	5.23	145.7	5.28	143.3	5.34	141.8	5.38
		28.9	168.3	5.21	164.8	5.23	161.5	5.25	158.4	5.28	156.5	5.31	154.6	5.33	151.9	5.38	149.4	5.44	147.8	5.49
		36.5	173.8	5.29	170.2	5.30	166.8	5.33	163.6	5.36	161.6	5.38	159.6	5.41	156.8	5.46	154.2	5.52	152.6	5.57
		50.1	180.5	5.37	176.8	5.38	173.3	5.41	169.9	5.44	167.8	5.47	165.8	5.49	162.9	5.55	160.2	5.61	158.5	5.65
		63.7	183.1	5.39	179.3	5.40	175.7	5.43	172.3	5.46	170.2	5.48	168.1	5.51	165.2	5.56	162.5	5.62	160.7	5.67
100	50	21.4	147.8	7.86	144.7	7.88	141.8	7.92	139.1	7.96	137.4	8.00	135.7	8.04	133.3	8.12	131.1	8.21	129.7	8.27
		28.9	154.0	8.01	150.8	8.03	147.8	8.07	144.9	8.12	143.1	8.15	141.4	8.20	138.9	8.27	136.6	8.36	135.2	8.43
		36.5	159.0	8.12	155.7	8.15	152.6	8.19	149.7	8.23	147.8	8.27	146.0	8.32	143.5	8.39	141.1	8.49	139.6	8.55
		50.1	165.1	8.25	161.7	8.28	158.5	8.31	155.5	8.36	153.5	8.40	151.7	8.45	149.0	8.52	146.6	8.62	145.0	8.69
		63.7	167.5	8.28	164.0	8.30	160.8	8.34	157.7	8.39	155.7	8.43	153.8	8.47	151.1	8.55	148.6	8.65	147.1	8.72
	59	21.4	159.9	8.19	156.6	8.21	153.5	8.25	150.5	8.30	148.7	8.34	146.9	8.38	144.3	8.46	141.9	8.55	140.4	8.62
		28.9	166.6	8.35	163.2	8.37	159.9	8.41	156.9	8.46	154.9	8.50	153.0	8.54	150.4	8.62	147.9	8.72	146.3	8.79
		36.5	172.1	8.47	168.5	8.49	165.2	8.53	162.0	8.58	160.0	8.62	158.0	8.67	155.3	8.75	152.7	8.84	151.1	8.92
		50.1	178.7	8.60	175.0	8.63	171.6	8.67	168.3	8.72	166.2	8.76	164.1	8.80	161.3	8.88	158.6	8.98	156.9	9.05
		63.7	181.2	8.63	177.5	8.66	174.0	8.69	170.6	8.74	168.5	8.79	166.5	8.83	163.6	8.91	160.8	9.01	159.1	9.08
	68	21.4	159.9	7.57	156.6	7.59	153.5	7.63	150.5	7.67	148.7	7.71	146.9	7.75	144.3	7.82	141.9	7.90	140.4	7.97
		28.9	166.6	7.71	163.2	7.74	159.9	7.77	156.9	7.82	154.9	7.85	153.0	7.90	150.4	7.97	147.9	8.06	146.3	8.12
		36.5	172.1	7.82	168.5	7.85	165.2	7.89	162.0	7.94	160.0	7.97	158.0	8.01	155.3	8.08	152.7	8.17	151.1	8.24
		50.1	178.7	7.95	175.0	7.97	171.6	8.01	168.3	8.05	166.2	8.09	164.1	8.13	161.3	8.21	158.6	8.30	156.9	8.37
		63.7	181.2	7.97	177.5	8.00	174.0	8.03	170.6	8.08	168.5	8.12	166.5	8.16	163.6	8.24	160.8	8.33	159.1	8.40
	77	21.4	159.9	6.77	156.6	6.79	153.5	6.82	150.5	6.86	148.7	6.89	146.9	6.93	144.3	7.00	141.9	7.07	140.4	7.13
		28.9	166.6	6.90	163.2	6.92	159.9	6.96	156.9	7.00	154.9	7.03	153.0	7.07	150.4	7.13	147.9	7.21	146.3	7.27
		36.5	172.1	7.00	168.5	7.02	165.2	7.06	162.0	7.10	160.0	7.13	158.0	7.17	155.3	7.23	152.7	7.31	151.1	7.37
		50.1	178.7	7.11	175.0	7.13	171.6	7.17	168.3	7.21	166.2	7.24	164.1	7.28	161.3	7.35	158.6	7.43	156.9	7.49
		63.7	181.2	7.13	177.5	7.16	174.0	7.19	170.6	7.23	168.5	7.26	166.5	7.30	163.6	7.37	160.8	7.45	159.1	7.51
	86	21.4	159.9	5.93	156.6	5.94	153.5	5.97	150.5	6.01	148.7	6.03	146.9	6.07	144.3	6.12	141.9	6.19	140.4	6.24
		28.9	166.6	6.04	163.2	6.06	159.9	6.09	156.9	6.12	154.9	6.15	153.0	6.18	150.4	6.24	147.9	6.31	146.3	6.36
		36.5	172.1	6.13	168.5	6.15	165.2	6.18	162.0	6.21	160.0	6.24	158.0	6.27	155.3	6.33	152.7	6.40	151.1	6.45
		50.1	178.7	6.22	175.0	6.24	171.6	6.27	168.3	6.31	166.2	6.34	164.1	6.37	161.3	6.43	158.6	6.50	156.9	6.55
		63.7	181.2	6.24	177.5	6.26	174.0	6.29	170.6	6.33	168.5	6.36	166.5	6.39	163.6	6.45	160.8	6.52	159.1	6.57
	95	21.4	159.9	5.52	156.6	5.53	153.5	5.56	150.5	5.59	148.7	5.62	146.9	5.65	144.3	5.70	141.9	5.76	140.4	5.81
		28.9	166.6	5.62	163.2	5.64	159.9	5.67	156.9	5.70	154.9	5.73	153.0	5.76	150.4	5.81	147.9	5.87	146.3	5.92
		36.5	172.1	5.70	168.5	5.72	165.2	5.75	162.0	5.78	160.0	5.81	158.0	5.84	155.3	5.89	152.7	5.96	151.1	6.01
		50.1	178.7	5.79	175.0	5.81	171.6	5.84	168.3	5.87	166.2	5.90	164.1	5.93	161.3	5.98	158.6	6.05	156.9	6.10
		63.7	181.2	5.81	177.5	5.83	174.0	5.86	170.6	5.89	168.5	5.92	166.5	5.95	163.6	6.00	160.8	6.07	159.1	6.12
	104	21.4	159.9	5.32	156.6	5.34	153.5	5.36	150.5	5.39	148.7	5.42	146.9	5.45	144.3	5.50	141.9	5.56	140.4	5.60
		28.9	166.6	5.42	163.2	5.44	159.9	5.47	156.9	5.50	154.9	5.52	153.0	5.55	150.4	5.60	147.9	5.67	146.3	5.71
		36.5	172.1	5.50	168.5	5.52	165.2	5.55	162.0	5.58	160.0	5.60	158.0	5.63	155.3	5.69	152.7	5.75	151.1	5.79
		50.1	178.7	5.59	175.0	5.61	171.6	5.63	168.3	5.66	166.2	5.69	164.1	5.72	161.3	5.77	158.6	5.84	156.9	5.88
		63.7	181.2	5.61	177.5	5.62	174.0	5.65	170.6	5.68	168.5	5.71	166.5	5.74	163.6	5.79	160.8	5.86	159.1	5.90
	113	21.4	159.9	5.30	156.6	5.32	153.5	5.34	150.5	5.37	148.7	5.40	146.9	5.43	144.3	5.48	141.9	5.54	140.4	5.58
		28.9	166.6	5.40	163.2	5.42	159.9	5.45	156.9	5.48	154.9	5.50	153.0	5.53	150.4	5.58	147.9	5.64	146.3	5.69
		36.5	172.1	5.48	168.5	5.50	165.2	5.52	162.0	5.56	160.0	5.58	158.0	5.61	155.3	5.66	152.7	5.73	151.1	5.77
		50.1	178.7	5.57	175.0	5.59	171.6	5.61	168.3	5.64	166.2	5.67	164.1	5.70	161.3	5.75	158.6	5.81	156.9	5.86
		63.7	181.2	5.59	177.5	5.60	174.0	5.63	170.6	5.66	168.5	5.69	166.5	5.72	163.6	5.77	160.8	5.83	159.1	5.88

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	21.4	133.0	6.81	130.2	6.83	127.6	6.86	125.2	6.90	123.6	6.94	122.1	6.97	120.0	7.04	118.0	7.11	116.8	7.17
		28.9	138.6	6.94	135.7	6.97	133.0	7.00	130.4	7.04	128.8	7.07	127.3	7.11	125.0	7.17	123.0	7.25	121.7	7.31
		36.5	143.1	7.04	140.2	7.07	137.4	7.10	134.7	7.14	133.0	7.17	131.4	7.21	129.1	7.28	127.0	7.36	125.7	7.42
		50.1	148.6	7.15	145.6	7.18	142.7	7.21	139.9	7.25	138.2	7.28	136.5	7.32	134.1	7.39	131.9	7.47	130.5	7.53
		63.7	150.7	7.18	147.6	7.20	144.7	7.23	141.9	7.27	140.1	7.31	138.4	7.35	136.0	7.41	133.8	7.50	132.3	7.56
	59	21.4	143.9	7.10	141.0	7.12	138.1	7.15	135.5	7.20	133.8	7.23	132.2	7.27	129.9	7.33	127.7	7.41	126.4	7.48
		28.9	150.0	7.24	146.9	7.26	143.9	7.29	141.2	7.33	139.4	7.37	137.7	7.41	135.3	7.48	133.1	7.56	131.7	7.62
		36.5	154.9	7.34	151.7	7.36	148.7	7.40	145.8	7.44	144.0	7.48	142.2	7.52	139.8	7.58	137.4	7.67	136.0	7.73
		50.1	160.9	7.45	157.5	7.48	154.4	7.51	151.4	7.56	149.5	7.59	147.7	7.63	145.2	7.70	142.8	7.79	141.2	7.85
		63.7	163.1	7.48	159.8	7.50	156.6	7.54	153.6	7.58	151.7	7.62	149.8	7.66	147.2	7.73	144.8	7.81	143.2	7.88
	68	21.4	143.9	6.56	141.0	6.58	138.1	6.61	135.5	6.65	133.8	6.68	132.2	6.72	129.9	6.78	127.7	6.85	126.4	6.91
		28.9	150.0	6.69	146.9	6.71	143.9	6.74	141.2	6.78	139.4	6.81	137.7	6.85	135.3	6.91	133.1	6.98	131.7	7.04
		36.5	154.9	6.78	151.7	6.81	148.7	6.84	145.8	6.88	144.0	6.91	142.2	6.95	139.8	7.01	137.4	7.09	136.0	7.14
		50.1	160.9	6.89	157.5	6.91	154.4	6.94	151.4	6.98	149.5	7.02	147.7	7.05	145.2	7.12	142.8	7.20	141.2	7.25
		63.7	163.1	6.91	159.8	6.93	156.6	6.97	153.6	7.01	151.7	7.04	149.8	7.08	147.2	7.14	144.8	7.22	143.2	7.28
	77	21.4	143.9	5.87	141.0	5.89	138.1	5.92	135.5	5.95	133.8	5.98	132.2	6.01	129.9	6.06	127.7	6.13	126.4	6.18
		28.9	150.0	5.98	146.9	6.00	143.9	6.03	141.2	6.07	139.4	6.09	137.7	6.13	135.3	6.18	133.1	6.25	131.7	6.30
		36.5	154.9	6.07	151.7	6.09	148.7	6.12	145.8	6.15	144.0	6.18	142.2	6.21	139.8	6.27	137.4	6.34	136.0	6.39
		50.1	160.9	6.16	157.5	6.18	154.4	6.21	151.4	6.25	149.5	6.28	147.7	6.31	145.2	6.37	142.8	6.44	141.2	6.49
		63.7	163.1	6.18	159.8	6.20	156.6	6.23	153.6	6.27	151.7	6.30	149.8	6.33	147.2	6.39	144.8	6.46	143.2	6.51
	86	21.4	143.9	5.14	141.0	5.15	138.1	5.18	135.5	5.21	133.8	5.23	132.2	5.26	129.9	5.31	127.7	5.37	126.4	5.41
		28.9	150.0	5.24	146.9	5.25	143.9	5.28	141.2	5.31	139.4	5.33	137.7	5.36	135.3	5.41	133.1	5.47	131.7	5.52
		36.5	154.9	5.31	151.7	5.33	148.7	5.35	145.8	5.39	144.0	5.41	142.2	5.44	139.8	5.49	137.4	5.55	136.0	5.59
		50.1	160.9	5.40	157.5	5.41	154.4	5.44	151.4	5.47	149.5	5.49	147.7	5.52	145.2	5.57	142.8	5.64	141.2	5.68
		63.7	163.1	5.41	159.8	5.43	156.6	5.46	153.6	5.49	151.7	5.51	149.8	5.54	147.2	5.59	144.8	5.65	143.2	5.70
	95	21.4	143.9	4.78	141.0	4.80	138.1	4.82	135.5	4.85	133.8	4.87	132.2	4.90	129.9	4.94	127.7	4.99	126.4	5.04
		28.9	150.0	4.87	146.9	4.89	143.9	4.91	141.2	4.94	139.4	4.96	137.7	4.99	135.3	5.04	133.1	5.09	131.7	5.13
		36.5	154.9	4.95	151.7	4.96	148.7	4.98	145.8	5.01	144.0	5.04	142.2	5.06	139.8	5.11	137.4	5.17	136.0	5.21
		50.1	160.9	5.02	157.5	5.04	154.4	5.06	151.4	5.09	149.5	5.11	147.7	5.14	145.2	5.19	142.8	5.25	141.2	5.29
		63.7	163.1	5.04	159.8	5.05	156.6	5.08	153.6	5.11	151.7	5.13	149.8	5.16	147.2	5.21	144.8	5.26	143.2	5.31
	104	21.4	143.9	4.61	141.0	4.63	138.1	4.65	135.5	4.68	133.8	4.70	132.2	4.72	129.9	4.77	127.7	4.82	126.4	4.86
		28.9	150.0	4.70	146.9	4.72	143.9	4.74	141.2	4.77	139.4	4.79	137.7	4.81	135.3	4.86	133.1	4.91	131.7	4.95
		36.5	154.9	4.77	151.7	4.79	148.7	4.81	145.8	4.84	144.0	4.86	142.2	4.88	139.8	4.93	137.4	4.98	136.0	5.02
		50.1	160.9	4.84	157.5	4.86	154.4	4.88	151.4	4.91	149.5	4.93	147.7	4.96	145.2	5.01	142.8	5.06	141.2	5.10
		63.7	163.1	4.86	159.8	4.88	156.6	4.90	153.6	4.93	151.7	4.95	149.8	4.98	147.2	5.02	144.8	5.08	143.2	5.12
	113	21.4	143.9	4.60	141.0	4.61	138.1	4.63	135.5	4.66	133.8	4.68	132.2	4.71	129.9	4.75	127.7	4.80	126.4	4.84
		28.9	150.0	4.69	146.9	4.70	143.9	4.72	141.2	4.75	139.4	4.77	137.7	4.80	135.3	4.84	133.1	4.89	131.7	4.93
		36.5	154.9	4.75	151.7	4.77	148.7	4.79	145.8	4.82	144.0	4.84	142.2	4.87	139.8	4.91	137.4	4.96	136.0	5.01
		50.1	160.9	4.83	157.5	4.84	154.4	4.86	151.4	4.89	149.5	4.92	147.7	4.94	145.2	4.99	142.8	5.04	141.2	5.08
		63.7	163.1	4.84	159.8	4.86	156.6	4.88	153.6	4.91	151.7	4.93	149.8	4.96	147.2	5.00	144.8	5.06	143.2	5.10
80	50	21.4	118.2	5.56	115.8	5.58	113.5	5.61	111.3	5.64	109.9	5.66	108.6	5.69	106.7	5.75	104.9	5.81	103.8	5.86
		28.9	123.2	5.67	120.6	5.69	118.2	5.71	116.0	5.75	114.5	5.77	113.1	5.81	111.2	5.86	109.3	5.92	108.2	5.97
		36.5	127.2	5.75	124.6	5.77	122.1	5.80	119.8	5.83	118.3	5.86	116.8	5.89	114.8	5.94	112.9	6.01	111.7	6.06
		50.1	132.1	5.84	129.4	5.86	126.8	5.89	124.4	5.92	122.8	5.95	121.3	5.98	119.2	6.04	117.2	6.10	116.0	6.15
		63.7	134.0	5.86	131.2	5.88	128.6	5.91	126.1	5.94	124.6	5.97	123.0	6.00	120.9	6.06	118.9	6.12	117.6	6.17
	59	21.4	127.9	5.80	125.3	5.82	122.8	5.84	120.4	5.88	118.9	5.90	117.5	5.94	115.4	5.99	113.5	6.06	112.3	6.11
		28.9	133.3	5.91	130.6	5.93	128.0	5.96	125.5	5.99	123.9	6.02	122.4	6.05	120.3	6.11	118.3	6.17	117.0	6.22
		36.5	137.7	6.00	134.8	6.02	132.1	6.04	129.6	6.08	128.0	6.11	126.4	6.14	124.2	6.20	122.2	6.26	120.9	6.31
		50.1	143.0	6.09	140.0	6.11	137.2	6.14	134.6	6.17	132.9	6.20	131.3	6.23	129.0	6.29	126.9	6.36	125.5	6.41
		63.7	145.0	6.11	142.0	6.13	139.2	6.16	136.5	6.19	134.8	6.22	133.2	6.25	130.8	6.31	128.7	6.38	127.3	6.43
	68	21.4	127.9	5.36	125.3	5.38	122.8	5.40	120.4	5.43	118.9	5.46	117.5	5.49	115.4	5.54	113.5	5.60	112.3	5.64
		28.9	133.3	5.46	130.6	5.48	128.0	5.50	125.5	5.54	123.9	5.56	122.4	5.59	120.3	5.64	118.3	5.71	117.0	5.75
		36.5	137.7	5.54	134.8	5.56	132.1	5.58	129.6	5.62	128.0	5.64	126.4	5.67	124.2	5.73	122.2	5.79	120.9	5.83
		50.1	143.0	5.63	140.0	5.65	137.2	5.67	134.6	5.70	132.9	5.73	131.3	5.76	129.0	5.81	126.9	5.88	125.5	5.93
		63.7	145.0	5.65	142.0	5.66	139.2	5.69	136.5	5.72	134.8	5.75	133.2	5.78	130.8	5.83	128.7	5.90	127.3	5.95
	77	21.4	127.9	4.79	125.3	4.81	122.8	4.83	120.4	4.86	118.9	4.88	117.5	4.91	115.4	4.95	113.5	5.01	112.3	5.05
		28.9	133.3	4.89	130.6	4.90	128.0	4.93	125.5	4.95	123.9	4.98	122.4	5.00	120.3	5.05	118.3	5.10	117.0	5.15
		36.5	137.7	4.96	134.8	4.97	132.1	5.00	129.6	5.03	128.0	5.05	126.4	5.08	124.2	5.12	122.2	5.18	120.9	5.22
		50.1	143.0	5.04	140.0	5.05	137.2	5.07	134.6	5.10	132.9	5.13	131.3	5.15	129.0	5.20	126.9	5.26	125.5	5.30
		63.7	145.0	5.05	142.0	5.07	139.2	5.09	136.5	5.12	134.8	5.14	133.2	5.17	130.8	5.22	128.7	5.28	127.3	5.32
	86	21.4	127.9	4.20	125.3	4.21	122.8	4.23	120.4	4.25	118.9	4.27	117.5	4.30	115.4	4.34	113.5	4.38	112.3	4.42
		28.9	133.3	4.28	130.6	4.29	128.0	4.31	125.5	4.34	123.9	4.36	122.4	4.38	120.3	4.42	118.3	4.47	117.0	4.50
		36.5	137.7	4.34	134.8	4.35	132.1	4.37	129.6	4.40	128.0	4.42	126.4	4.44	124.2	4.48	122.2	4.53	120.9	4.57
		50.1	143.0	4.41	140.0	4.42	137.2	4.44	134.6	4.47	132.9	4.49	131.3	4.51	129.0	4.55	126.9	4.60	125.5	4.64
		63.7	145.0	4.42	142.0	4.44	139.2	4.46	136.5	4.48	134.8	4.50	133.2	4.53	130.8	4.57	128.7	4.62	127.3	4.66
	95	21.4	127.9	3.91	125.3	3.92	122.8	3.94	120.4	3.96	118.9	3.98	117.5	4.00	115.4	4.04	113.5	4.08	112.3	4.11
		28.9	133.3	3.98	130.6	3.99	128.0	4.01	125.5	4.04	123.9	4.05	122.4	4.08	120.3	4.11	118.3	4.16	117.0	4.19
		36.5	137.7	4.04	134.8	4.05	132.1	4.07	129.6	4.09	128.0	4.11	126.4	4.13	124.2	4.17	122.2	4.22	120.9	4.25
		50.1	143.0	4.10	140.0	4.12	137.2	4.13	134.6	4.16	132.9	4.18	131.3	4.20	129.0	4.24	126.9	4.28	125.5	4.32
		63.7	145.0	4.12	142.0	4.13	139.2	4.15	136.5	4.17	134.8	4.19	133.2	4.21	130.8	4.25	128.7	4.30	127.3	4.33
	104	21.4	127.9	3.77	125.3	3.78	122.8	3.80	120.4	3.82	118.9	3.84	117.5	3.86	115.4	3.89	113.5	3.94	112.3	3.97
		28.9	133.3	3.84	130.6	3.85	128.0	3.87	125.5	3.89	123.9	3.91	122.4	3.93	120.3	3.97	118.3	4.01	117.0	4.04
		36.5	137.7	3.90	134.8	3.91	132.1	3.93	129.6	3.95	128.0	3.97	126.4	3.99	124.2	4.03	122.2	4.07	120.9	4.10
		50.1	143.0	3.96	140.0	3.97	137.2	3.99	134.6	4.01	132.9	4.03	131.3	4.05	129.0	4.09	126.9	4.13	125.5	4.17
		63.7	145.0	3.97	142.0	3.98	139.2	4.00	136.5	4.02	134.8	4.04	133.2	4.06	130.8	4.10	128.7	4.15	127.3	4.18
	113	21.4	127.9	3.75	125.3	3.77	122.8	3.78	120.4	3.80	118.9	3.82	117.5	3.84	115.4	3.88	113.5	3.92	112.3	3.95
		28.9	133.3	3.83	130.6	3.84	128.0	3.86	125.5	3.88	123.9	3.90	122.4	3.92	120.3	3.95	118.3	4.00	117.0	4.03
		36.5	137.7	3.88	134.8	3.89	132.1	3.91	129.6	3.93	128.0	3.95	126.4	3.97	124.2	4.01	122.2	4.05	120.9	4.09
		50.1	143.0	3.94	140.0	3.96	137.2	3.97	134.6	4.00	132.9	4.01	131.3	4.04	129.0	4.07	126.9	4.12	125.5	4.15
		63.7	145.0	3.96	142.0	3.97	139.2	3.99	136.5	4.01	134.8	4.03	133.2	4.05	130.8	4.09	128.7	4.13	127.3	4.17

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	21.4	103.4	4.30	101.3	4.31	99.3	4.33	97.4	4.36	96.2	4.38	95.0	4.40	93.3	4.44	91.8	4.49	90.8	4.53
		28.9	107.8	4.38	105.6	4.40	103.5	4.42	101.5	4.44	100.2	4.46	99.0	4.49	97.3	4.53	95.6	4.58	94.6	4.61
		36.5	111.3	4.45	109.0	4.46	106.8	4.48	104.8	4.51	103.5	4.53	102.2	4.55	100.4	4.59	98.8	4.64	97.7	4.68
		50.1	115.6	4.51	113.2	4.53	111.0	4.55	108.8	4.58	107.5	4.60	106.2	4.62	104.3	4.66	102.6	4.72	101.5	4.75
		63.7	117.2	4.53	114.8	4.54	112.5	4.56	110.4	4.59	109.0	4.61	107.7	4.64	105.8	4.68	104.0	4.73	102.9	4.77
	59	21.4	111.9	4.48	109.6	4.50	107.4	4.52	105.4	4.54	104.1	4.56	102.8	4.59	101.0	4.63	99.3	4.68	98.3	4.72
		28.9	116.6	4.57	114.2	4.58	112.0	4.60	109.8	4.63	108.4	4.65	107.1	4.68	105.3	4.72	103.5	4.77	102.4	4.81
		36.5	120.5	4.63	118.0	4.65	115.6	4.67	113.4	4.70	112.0	4.72	110.6	4.74	108.7	4.79	106.9	4.84	105.8	4.88
		50.1	125.1	4.71	122.5	4.72	120.1	4.74	117.8	4.77	116.3	4.79	114.9	4.82	112.9	4.86	111.0	4.91	109.9	4.96
		63.7	126.9	4.72	124.3	4.74	121.8	4.76	119.4	4.79	118.0	4.81	116.5	4.83	114.5	4.88	112.6	4.93	111.4	4.97
	68	21.4	111.9	4.14	109.6	4.15	107.4	4.17	105.4	4.20	104.1	4.22	102.8	4.24	101.0	4.28	99.3	4.32	98.3	4.36
		28.9	116.6	4.22	114.2	4.23	112.0	4.25	109.8	4.28	108.4	4.30	107.1	4.32	105.3	4.36	103.5	4.41	102.4	4.45
		36.5	120.5	4.28	118.0	4.30	115.6	4.32	113.4	4.34	112.0	4.36	110.6	4.38	108.7	4.42	106.9	4.47	105.8	4.51
		50.1	125.1	4.35	122.5	4.36	120.1	4.38	117.8	4.41	116.3	4.43	114.9	4.45	112.9	4.49	111.0	4.54	109.9	4.58
		63.7	126.9	4.36	124.3	4.38	121.8	4.40	119.4	4.42	118.0	4.44	116.5	4.47	114.5	4.51	112.6	4.56	111.4	4.59
	77	21.4	111.9	3.71	109.6	3.72	107.4	3.73	105.4	3.76	104.1	3.77	102.8	3.79	101.0	3.83	99.3	3.87	98.3	3.90
		28.9	116.6	3.78	114.2	3.79	112.0	3.81	109.8	3.83	108.4	3.85	107.1	3.87	105.3	3.90	103.5	3.95	102.4	3.98
		36.5	120.5	3.83	118.0	3.84	115.6	3.86	113.4	3.88	112.0	3.90	110.6	3.92	108.7	3.96	106.9	4.00	105.8	4.03
		50.1	125.1	3.89	122.5	3.90	120.1	3.92	117.8	3.94	116.3	3.96	114.9	3.98	112.9	4.02	111.0	4.06	109.9	4.10
		63.7	126.9	3.90	124.3	3.92	121.8	3.93	119.4	3.96	118.0	3.98	116.5	4.00	114.5	4.03	112.6	4.08	111.4	4.11
	86	21.4	111.9	3.24	109.6	3.25	107.4	3.27	105.4	3.29	104.1	3.30	102.8	3.32	101.0	3.35	99.3	3.39	98.3	3.41
		28.9	116.6	3.31	114.2	3.32	112.0	3.33	109.8	3.35	108.4	3.37	107.1	3.38	105.3	3.42	103.5	3.45	102.4	3.48
		36.5	120.5	3.35	118.0	3.36	115.6	3.38	113.4	3.40	112.0	3.41	110.6	3.43	108.7	3.46	106.9	3.50	105.8	3.53
		50.1	125.1	3.41	122.5	3.42	120.1	3.43	117.8	3.45	116.3	3.47	114.9	3.49	112.9	3.52	111.0	3.56	109.9	3.59
		63.7	126.9	3.42	124.3	3.43	121.8	3.44	119.4	3.46	118.0	3.48	116.5	3.50	114.5	3.53	112.6	3.57	111.4	3.60
	95	21.4	111.9	3.02	109.6	3.03	107.4	3.04	105.4	3.06	104.1	3.07	102.8	3.09	101.0	3.12	99.3	3.15	98.3	3.18
		28.9	116.6	3.08	114.2	3.09	112.0	3.10	109.8	3.12	108.4	3.13	107.1	3.15	105.3	3.18	103.5	3.21	102.4	3.24
		36.5	120.5	3.12	118.0	3.13	115.6	3.15	113.4	3.16	112.0	3.18	110.6	3.20	108.7	3.23	106.9	3.26	105.8	3.29
		50.1	125.1	3.17	122.5	3.18	120.1	3.19	117.8	3.21	116.3	3.23	114.9	3.25	112.9	3.28	111.0	3.31	109.9	3.34
		63.7	126.9	3.18	124.3	3.19	121.8	3.20	119.4	3.22	118.0	3.24	116.5	3.26	114.5	3.29	112.6	3.32	111.4	3.35
	104	21.4	111.9	2.91	109.6	2.92	107.4	2.93	105.4	2.95	104.1	2.97	102.8	2.98	101.0	3.01	99.3	3.04	98.3	3.07
		28.9	116.6	2.97	114.2	2.98	112.0	2.99	109.8	3.01	108.4	3.02	107.1	3.04	105.3	3.07	103.5	3.10	102.4	3.13
		36.5	120.5	3.01	118.0	3.02	115.6	3.03	113.4	3.05	112.0	3.07	110.6	3.08	108.7	3.11	106.9	3.15	105.8	3.17
		50.1	125.1	3.06	122.5	3.07	120.1	3.08	117.8	3.10	116.3	3.11	114.9	3.13	112.9	3.16	111.0	3.19	109.9	3.22
		63.7	126.9	3.07	124.3	3.08	121.8	3.09	119.4	3.11	118.0	3.12	116.5	3.14	114.5	3.17	112.6	3.20	111.4	3.23
	113	21.4	111.9	2.90	109.6	2.91	107.4	2.92	105.4	2.94	104.1	2.95	102.8	2.97	101.0	3.00	99.3	3.03	98.3	3.05
		28.9	116.6	2.96	114.2	2.97	112.0	2.98	109.8	3.00	108.4	3.01	107.1	3.03	105.3	3.06	103.5	3.09	102.4	3.11
		36.5	120.5	3.00	118.0	3.01	115.6	3.02	113.4	3.04	112.0	3.06	110.6	3.07	108.7	3.10	106.9	3.13	105.8	3.16
		50.1	125.1	3.05	122.5	3.06	120.1	3.07	117.8	3.09	116.3	3.10	114.9	3.12	112.9	3.15	111.0	3.18	109.9	3.21
		63.7	126.9	3.06	124.3	3.07	121.8	3.08	119.4	3.10	118.0	3.11	116.5	3.13	114.5	3.16	112.6	3.19	111.4	3.22
60	50	21.4	88.7	3.21	86.8	3.22	85.1	3.23	83.5	3.25	82.4	3.26	81.4	3.28	80.0	3.31	78.7	3.35	77.8	3.38
		28.9	92.4	3.27	90.5	3.28	88.7	3.29	87.0	3.31	85.9	3.33	84.8	3.35	83.4	3.38	82.0	3.41	81.1	3.44
		36.5	95.4	3.32	93.4	3.33	91.6	3.34	89.8	3.36	88.7	3.38	87.6	3.39	86.1	3.43	84.7	3.46	83.8	3.49
		50.1	99.1	3.37	97.0	3.38	95.1	3.39	93.3	3.41	92.1	3.43	91.0	3.45	89.4	3.48	87.9	3.52	87.0	3.55
		63.7	100.5	3.38	98.4	3.39	96.5	3.40	94.6	3.42	93.4	3.44	92.3	3.46	90.7	3.49	89.2	3.53	88.2	3.56
	59	21.4	95.9	3.34	94.0	3.35	92.1	3.37	90.3	3.39	89.2	3.40	88.1	3.42	86.6	3.45	85.1	3.49	84.2	3.52
		28.9	100.0	3.41	97.9	3.42	96.0	3.43	94.1	3.45	92.9	3.47	91.8	3.49	90.2	3.52	88.7	3.56	87.8	3.59
		36.5	103.2	3.46	101.1	3.47	99.1	3.48	97.2	3.50	96.0	3.52	94.8	3.54	93.2	3.57	91.6	3.61	90.7	3.64
		50.1	107.2	3.51	105.0	3.52	102.9	3.54	101.0	3.56	99.7	3.57	98.5	3.59	96.8	3.63	95.2	3.67	94.2	3.70
		63.7	108.7	3.52	106.5	3.53	104.4	3.55	102.4	3.57	101.1	3.59	99.9	3.60	98.1	3.64	96.5	3.68	95.5	3.71
	68	21.4	95.9	3.09	94.0	3.10	92.1	3.11	90.3	3.13	89.2	3.14	88.1	3.16	86.6	3.19	85.1	3.23	84.2	3.25
		28.9	100.0	3.15	97.9	3.16	96.0	3.17	94.1	3.19	92.9	3.21	91.8	3.22	90.2	3.25	88.7	3.29	87.8	3.31
		36.5	103.2	3.19	101.1	3.20	99.1	3.22	97.2	3.24	96.0	3.25	94.8	3.27	93.2	3.30	91.6	3.34	90.7	3.36
		50.1	107.2	3.24	105.0	3.25	102.9	3.27	101.0	3.29	99.7	3.30	98.5	3.32	96.8	3.35	95.2	3.39	94.2	3.42
		63.7	108.7	3.25	106.5	3.26	104.4	3.28	102.4	3.30	101.1	3.31	99.9	3.33	98.1	3.36	96.5	3.40	95.5	3.43
	77	21.4	95.9	2.76	94.0	2.77	92.1	2.78	90.3	2.80	89.2	2.81	88.1	2.83	86.6	2.85	85.1	2.89	84.2	2.91
		28.9	100.0	2.82	97.9	2.83	96.0	2.84	94.1	2.86	92.9	2.87	91.8	2.88	90.2	2.91	88.7	2.94	87.8	2.97
		36.5	103.2	2.86	101.1	2.87	99.1	2.88	97.2	2.90	96.0	2.91	94.8	2.93	93.2	2.95	91.6	2.98	90.7	3.01
		50.1	107.2	2.90	105.0	2.91	102.9	2.92	101.0	2.94	99.7	2.95	98.5	2.97	96.8	3.00	95.2	3.03	94.2	3.06
		63.7	108.7	2.91	106.5	2.92	104.4	2.93	102.4	2.95	101.1	2.96	99.9	2.98	98.1	3.01	96.5	3.04	95.5	3.07
	86	21.4	95.9	2.42	94.0	2.43	92.1	2.44	90.3	2.45	89.2	2.46	88.1	2.48	86.6	2.50	85.1	2.53	84.2	2.55
		28.9	100.0	2.47	97.9	2.47	96.0	2.48	94.1	2.50	92.9	2.51	91.8	2.52	90.2	2.55	88.7	2.57	87.8	2.60
		36.5	103.2	2.50	101.1	2.51	99.1	2.52	97.2	2.53	96.0	2.55	94.8	2.56	93.2	2.58	91.6	2.61	90.7	2.63
		50.1	107.2	2.54	105.0	2.55	102.9	2.56	101.0	2.57	99.7	2.59	98.5	2.60	96.8	2.62	95.2	2.65	94.2	2.67
		63.7	108.7	2.55	106.5	2.56	104.4	2.57	102.4	2.58	101.1	2.59	99.9	2.61	98.1	2.63	96.5	2.66	95.5	2.68
	95	21.4	95.9	2.25	94.0	2.26	92.1	2.27	90.3	2.28	89.2	2.29	88.1	2.30	86.6	2.33	85.1	2.35	84.2	2.37
		28.9	100.0	2.29	97.9	2.30	96.0	2.31	94.1	2.33	92.9	2.34	91.8	2.35	90.2	2.37	88.7	2.40	87.8	2.42
		36.5	103.2	2.33	101.1	2.34	99.1	2.35	97.2	2.36	96.0	2.37	94.8	2.38	93.2	2.41	91.6	2.43	90.7	2.45
		50.1	107.2	2.36	105.0	2.37	102.9	2.38	101.0	2.40	99.7	2.41	98.5	2.42	96.8	2.44	95.2	2.47	94.2	2.49
		63.7	108.7	2.37	106.5	2.38	104.4	2.39	102.4	2.40	101.1	2.42	99.9	2.43	98.1	2.45	96.5	2.48	95.5	2.50
	104	21.4	95.9	2.17	94.0	2.18	92.1	2.19	90.3	2.20	89.2	2.21	88.1	2.22	86.6	2.24	85.1	2.27	84.2	2.29
		28.9	100.0	2.21	97.9	2.22	96.0	2.23	94.1	2.24	92.9	2.25	91.8	2.27	90.2	2.29	88.7	2.31	87.8	2.33
		36.5	103.2	2.25	101.1	2.25	99.1	2.26	97.2	2.28	96.0	2.29	94.8	2.30	93.2	2.32	91.6	2.35	90.7	2.36
		50.1	107.2	2.28	105.0	2.29	102.9	2.30	101.0	2.31	99.7	2.32	98.5	2.33	96.8	2.36	95.2	2.38	94.2	2.40
		63.7	108.7	2.29	106.5	2.30	104.4	2.31	102.4	2.32	101.1	2.33	99.9	2.34	98.1	2.36	96.5	2.39	95.5	2.41
	113	21.4	95.9	2.16	94.0	2.17	92.1	2.18	90.3	2.19	89.2	2.20	88.1	2.21	86.6	2.24	85.1	2.26	84.2	2.28
		28.9	100.0	2.21	97.9	2.21	96.0	2.22	94.1	2.24	92.9	2.25	91.8	2.26	90.2	2.28	88.7	2.30	87.8	2.32
		36.5	103.2	2.24	101.1	2.24	99.1	2.25	97.2	2.27	96.0	2.28	94.8	2.29	93.2	2.31	91.6	2.34	90.7	2.36
		50.1	107.2	2.27	105.0	2.28	102.9	2.29	101.0	2.30	99.7	2.31	98.5	2.33	96.8	2.35	95.2	2.37	94.2	2.39
		63.7	108.7	2.28	106.5	2.29	104.4	2.30	102.4	2.31	101.1	2.32	99.9	2.33	98.1	2.36	96.5	2.38	95.5	2.40

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)144B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	21.4	73.9	2.39	72.4	2.40	70.9	2.41	69.5	2.42	68.7	2.43	67.9	2.44	66.7	2.47	65.6	2.49	64.9	2.51
		28.9	77.0	2.43	75.4	2.44	73.9	2.45	72.5	2.47	71.6	2.48	70.7	2.49	69.5	2.51	68.3	2.54	67.6	2.56
		36.5	79.5	2.47	77.9	2.48	76.3	2.49	74.8	2.50	73.9	2.51	73.0	2.53	71.7	2.55	70.6	2.58	69.8	2.60
		50.1	82.6	2.51	80.9	2.52	79.3	2.53	77.7	2.54	76.8	2.55	75.8	2.57	74.5	2.59	73.3	2.62	72.5	2.64
		63.7	83.7	2.52	82.0	2.52	80.4	2.54	78.8	2.55	77.8	2.56	76.9	2.58	75.6	2.60	74.3	2.63	73.5	2.65
	59	21.4	80.0	2.49	78.3	2.50	76.7	2.51	75.3	2.52	74.3	2.53	73.4	2.55	72.2	2.57	71.0	2.60	70.2	2.62
		28.9	83.3	2.54	81.6	2.54	80.0	2.56	78.4	2.57	77.5	2.58	76.5	2.60	75.2	2.62	73.9	2.65	73.2	2.67
		36.5	86.0	2.57	84.3	2.58	82.6	2.59	81.0	2.61	80.0	2.62	79.0	2.63	77.6	2.66	76.4	2.69	75.5	2.71
		50.1	89.4	2.61	87.5	2.62	85.8	2.63	84.1	2.65	83.1	2.66	82.1	2.68	80.6	2.70	79.3	2.73	78.5	2.75
		63.7	90.6	2.62	88.8	2.63	87.0	2.64	85.3	2.66	84.3	2.67	83.2	2.68	81.8	2.71	80.4	2.74	79.6	2.76
	68	21.4	80.0	2.30	78.3	2.31	76.7	2.32	75.3	2.33	74.3	2.34	73.4	2.35	72.2	2.38	71.0	2.40	70.2	2.42
		28.9	83.3	2.34	81.6	2.35	80.0	2.36	78.4	2.38	77.5	2.39	76.5	2.40	75.2	2.42	73.9	2.45	73.2	2.47
		36.5	86.0	2.38	84.3	2.39	82.6	2.40	81.0	2.41	80.0	2.42	79.0	2.43	77.6	2.46	76.4	2.48	75.5	2.50
		50.1	89.4	2.42	87.5	2.42	85.8	2.43	84.1	2.45	83.1	2.46	82.1	2.47	80.6	2.50	79.3	2.52	78.5	2.54
		63.7	90.6	2.42	88.8	2.43	87.0	2.44	85.3	2.46	84.3	2.47	83.2	2.48	81.8	2.50	80.4	2.53	79.6	2.55
	77	21.4	80.0	2.06	78.3	2.06	76.7	2.07	75.3	2.09	74.3	2.10	73.4	2.11	72.2	2.13	71.0	2.15	70.2	2.17
		28.9	83.3	2.10	81.6	2.10	80.0	2.11	78.4	2.13	77.5	2.14	76.5	2.15	75.2	2.17	73.9	2.19	73.2	2.21
		36.5	86.0	2.13	84.3	2.13	82.6	2.14	81.0	2.16	80.0	2.17	79.0	2.18	77.6	2.20	76.4	2.22	75.5	2.24
		50.1	89.4	2.16	87.5	2.17	85.8	2.18	84.1	2.19	83.1	2.20	82.1	2.21	80.6	2.23	79.3	2.26	78.5	2.28
		63.7	90.6	2.17	88.8	2.18	87.0	2.18	85.3	2.20	84.3	2.21	83.2	2.22	81.8	2.24	80.4	2.26	79.6	2.28
	86	21.4	80.0	1.80	78.3	1.81	76.7	1.81	75.3	1.83	74.3	1.83	73.4	1.84	72.2	1.86	71.0	1.88	70.2	1.90
		28.9	83.3	1.84	81.6	1.84	80.0	1.85	78.4	1.86	77.5	1.87	76.5	1.88	75.2	1.90	73.9	1.92	73.2	1.93
		36.5	86.0	1.86	84.3	1.87	82.6	1.88	81.0	1.89	80.0	1.90	79.0	1.91	77.6	1.92	76.4	1.95	75.5	1.96
		50.1	89.4	1.89	87.5	1.90	85.8	1.91	84.1	1.92	83.1	1.93	82.1	1.94	80.6	1.95	79.3	1.98	78.5	1.99
		63.7	90.6	1.90	88.8	1.90	87.0	1.91	85.3	1.92	84.3	1.93	83.2	1.94	81.8	1.96	80.4	1.98	79.6	2.00
	95	21.4	80.0	1.68	78.3	1.68	76.7	1.69	75.3	1.70	74.3	1.71	73.4	1.72	72.2	1.73	71.0	1.75	70.2	1.77
		28.9	83.3	1.71	81.6	1.71	80.0	1.72	78.4	1.73	77.5	1.74	76.5	1.75	75.2	1.77	73.9	1.78	73.2	1.80
		36.5	86.0	1.73	84.3	1.74	82.6	1.75	81.0	1.76	80.0	1.77	79.0	1.77	77.6	1.79	76.4	1.81	75.5	1.83
		50.1	89.4	1.76	87.5	1.77	85.8	1.77	84.1	1.78	83.1	1.79	82.1	1.80	80.6	1.82	79.3	1.84	78.5	1.85
		63.7	90.6	1.77	88.8	1.77	87.0	1.78	85.3	1.79	84.3	1.80	83.2	1.81	81.8	1.82	80.4	1.84	79.6	1.86
	104	21.4	80.0	1.62	78.3	1.62	76.7	1.63	75.3	1.64	74.3	1.65	73.4	1.66	72.2	1.67	71.0	1.69	70.2	1.70
		28.9	83.3	1.65	81.6	1.65	80.0	1.66	78.4	1.67	77.5	1.68	76.5	1.69	75.2	1.70	73.9	1.72	73.2	1.74
		36.5	86.0	1.67	84.3	1.68	82.6	1.69	81.0	1.70	80.0	1.70	79.0	1.71	77.6	1.73	76.4	1.75	75.5	1.76
		50.1	89.4	1.70	87.5	1.70	85.8	1.71	84.1	1.72	83.1	1.73	82.1	1.74	80.6	1.75	79.3	1.77	78.5	1.79
		63.7	90.6	1.70	88.8	1.71	87.0	1.72	85.3	1.73	84.3	1.74	83.2	1.74	81.8	1.76	80.4	1.78	79.6	1.79
	113	21.4	80.0	1.61	78.3	1.62	76.7	1.62	75.3	1.63	74.3	1.64	73.4	1.65	72.2	1.66	71.0	1.68	70.2	1.70
		28.9	83.3	1.64	81.6	1.65	80.0	1.66	78.4	1.66	77.5	1.67	76.5	1.68	75.2	1.70	73.9	1.72	73.2	1.73
		36.5	86.0	1.67	84.3	1.67	82.6	1.68	81.0	1.69	80.0	1.70	79.0	1.71	77.6	1.72	76.4	1.74	75.5	1.75
		50.1	89.4	1.69	87.5	1.70	85.8	1.71	84.1	1.71	83.1	1.72	82.1	1.73	80.6	1.75	79.3	1.77	78.5	1.78
		63.7	90.6	1.70	88.8	1.70	87.0	1.71	85.3	1.72	84.3	1.73	83.2	1.74	81.8	1.75	80.4	1.77	79.6	1.79

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	23.8	167.4	8.19	164.0	8.21	160.7	8.25	157.6	8.30	155.7	8.34	153.8	8.38	151.1	8.46	148.6	8.55	147.0	8.62
		33.9	175.6	8.37	172.0	8.40	168.6	8.44	165.4	8.49	163.3	8.53	161.3	8.57	158.5	8.65	155.9	8.74	154.2	8.82
		44.1	182.2	8.51	178.4	8.54	174.9	8.58	171.5	8.63	169.4	8.67	167.3	8.71	164.4	8.79	161.7	8.89	160.0	8.96
		57.5	188.2	8.63	184.3	8.65	180.7	8.69	177.2	8.74	175.0	8.78	172.9	8.83	169.8	8.91	167.0	9.01	165.3	9.08
		70.8	191.4	8.67	187.4	8.70	183.7	8.74	180.2	8.79	177.9	8.83	175.8	8.88	172.7	8.96	169.8	9.06	168.0	9.13
	59	23.8	190.1	8.95	186.1	8.98	182.4	9.02	178.9	9.07	176.7	9.11	174.6	9.16	171.5	9.25	168.7	9.35	166.9	9.42
		33.9	199.4	9.15	195.3	9.18	191.4	9.22	187.7	9.28	185.3	9.32	183.1	9.37	179.9	9.46	176.9	9.56	175.1	9.64
		44.1	206.8	9.30	202.5	9.33	198.5	9.37	194.7	9.43	192.2	9.47	189.9	9.52	186.6	9.61	183.5	9.72	181.6	9.80
		57.5	213.6	9.43	209.2	9.46	205.1	9.50	201.1	9.56	198.6	9.60	196.2	9.65	192.8	9.74	189.6	9.85	187.6	9.93
		70.8	217.2	9.48	212.8	9.51	208.5	9.55	204.5	9.61	202.0	9.65	199.5	9.70	196.0	9.79	192.8	9.90	190.7	9.98
	68	23.8	190.1	8.27	186.1	8.30	182.4	8.33	178.9	8.38	176.7	8.42	174.6	8.47	171.5	8.54	168.7	8.64	166.9	8.71
		33.9	199.4	8.46	195.3	8.49	191.4	8.52	187.7	8.57	185.3	8.61	183.1	8.66	179.9	8.74	176.9	8.83	175.1	8.91
		44.1	206.8	8.60	202.5	8.62	198.5	8.66	194.7	8.72	192.2	8.75	189.9	8.80	186.6	8.88	183.5	8.98	181.6	9.05
		57.5	213.6	8.71	209.2	8.74	205.1	8.78	201.1	8.83	198.6	8.87	196.2	8.92	192.8	9.00	189.6	9.10	187.6	9.18
		70.8	217.2	8.76	212.8	8.79	208.5	8.83	204.5	8.88	202.0	8.92	199.5	8.97	196.0	9.05	192.8	9.15	190.7	9.22
	77	23.8	190.1	7.40	186.1	7.42	182.4	7.46	178.9	7.50	176.7	7.54	174.6	7.58	171.5	7.65	168.7	7.73	166.9	7.79
		33.9	199.4	7.57	195.3	7.59	191.4	7.63	187.7	7.67	185.3	7.71	183.1	7.75	179.9	7.82	176.9	7.90	175.1	7.97
		44.1	206.8	7.69	202.5	7.72	198.5	7.75	194.7	7.80	192.2	7.83	189.9	7.87	186.6	7.95	183.5	8.03	181.6	8.10
		57.5	213.6	7.80	209.2	7.82	205.1	7.86	201.1	7.90	198.6	7.94	196.2	7.98	192.8	8.06	189.6	8.14	187.6	8.21
		70.8	217.2	7.84	212.8	7.86	208.5	7.90	204.5	7.94	202.0	7.98	199.5	8.02	196.0	8.10	192.8	8.19	190.7	8.25
	86	23.8	190.1	6.48	186.1	6.50	182.4	6.53	178.9	6.56	176.7	6.59	174.6	6.63	171.5	6.69	168.7	6.76	166.9	6.82
		33.9	199.4	6.62	195.3	6.65	191.4	6.67	187.7	6.71	185.3	6.75	183.1	6.78	179.9	6.84	176.9	6.92	175.1	6.98
		44.1	206.8	6.73	202.5	6.75	198.5	6.78	194.7	6.82	192.2	6.86	189.9	6.89	186.6	6.96	183.5	7.03	181.6	7.09
		57.5	213.6	6.82	209.2	6.85	205.1	6.88	201.1	6.92	198.6	6.95	196.2	6.99	192.8	7.05	189.6	7.13	187.6	7.19
		70.8	217.2	6.86	212.8	6.88	208.5	6.91	204.5	6.95	202.0	6.99	199.5	7.02	196.0	7.09	192.8	7.17	190.7	7.22
	95	23.8	190.1	6.03	186.1	6.05	182.4	6.07	178.9	6.11	176.7	6.14	174.6	6.17	171.5	6.23	168.7	6.30	166.9	6.35
		33.9	199.4	6.17	195.3	6.19	191.4	6.21	187.7	6.25	185.3	6.28	183.1	6.31	179.9	6.37	176.9	6.44	175.1	6.49
		44.1	206.8	6.27	202.5	6.29	198.5	6.32	194.7	6.35	192.2	6.38	189.9	6.42	186.6	6.47	183.5	6.55	181.6	6.60
		57.5	213.6	6.35	209.2	6.37	205.1	6.40	201.1	6.44	198.6	6.47	196.2	6.50	192.8	6.56	189.6	6.63	187.6	6.69
		70.8	217.2	6.39	212.8	6.41	208.5	6.43	204.5	6.47	202.0	6.50	199.5	6.54	196.0	6.60	192.8	6.67	190.7	6.72
	104	23.8	190.1	5.82	186.1	5.83	182.4	5.86	178.9	5.89	176.7	5.92	174.6	5.95	171.5	6.01	168.7	6.07	166.9	6.12
		33.9	199.4	5.95	195.3	5.97	191.4	5.99	187.7	6.03	185.3	6.06	183.1	6.09	179.9	6.15	176.9	6.21	175.1	6.26
		44.1	206.8	6.05	202.5	6.07	198.5	6.09	194.7	6.13	192.2	6.16	189.9	6.19	186.6	6.25	183.5	6.31	181.6	6.37
		57.5	213.6	6.13	209.2	6.15	205.1	6.17	201.1	6.21	198.6	6.24	196.2	6.27	192.8	6.33	189.6	6.40	187.6	6.45
		70.8	217.2	6.16	212.8	6.18	208.5	6.21	204.5	6.24	202.0	6.27	199.5	6.31	196.0	6.37	192.8	6.43	190.7	6.49
	113	23.8	190.1	5.79	186.1	5.81	182.4	5.84	178.9	5.87	176.7	5.90	174.6	5.93	171.5	5.99	168.7	6.05	166.9	6.10
		33.9	199.4	5.93	195.3	5.94	191.4	5.97	187.7	6.01	185.3	6.03	183.1	6.07	179.9	6.12	176.9	6.19	175.1	6.24
		44.1	206.8	6.02	202.5	6.04	198.5	6.07	194.7	6.10	192.2	6.13	189.9	6.17	186.6	6.22	183.5	6.29	181.6	6.34
		57.5	213.6	6.10	209.2	6.12	205.1	6.15	201.1	6.19	198.6	6.22	196.2	6.25	192.8	6.31	189.6	6.38	187.6	6.43
		70.8	217.2	6.14	212.8	6.16	208.5	6.18	204.5	6.22	202.0	6.25	199.5	6.28	196.0	6.34	192.8	6.41	190.7	6.46
120	50	23.8	165.8	8.35	162.4	8.37	159.2	8.41	156.1	8.46	154.2	8.50	152.3	8.54	149.6	8.62	147.2	8.72	145.6	8.79
		33.9	173.9	8.54	170.4	8.56	167.0	8.60	163.7	8.65	161.7	8.69	159.7	8.74	157.0	8.82	154.4	8.92	152.7	8.99
		44.1	180.4	8.68	176.7	8.70	173.2	8.74	169.8	8.79	167.7	8.84	165.7	8.88	162.8	8.96	160.1	9.06	158.4	9.14
		57.5	186.4	8.79	182.6	8.82	178.9	8.86	175.5	8.91	173.3	8.96	171.2	9.00	168.2	9.09	165.4	9.19	163.7	9.26
		70.8	189.5	8.84	185.6	8.87	181.9	8.91	178.4	8.96	176.2	9.00	174.1	9.05	171.0	9.13	168.2	9.23	166.4	9.31
	59	23.8	188.2	9.12	184.3	9.15	180.7	9.19	177.2	9.25	175.0	9.29	172.9	9.34	169.8	9.43	167.0	9.53	165.3	9.61
		33.9	197.4	9.33	193.4	9.36	189.5	9.40	185.9	9.46	183.6	9.50	181.3	9.55	178.2	9.64	175.2	9.75	173.4	9.83
		44.1	204.8	9.48	200.6	9.52	196.6	9.56	192.8	9.61	190.4	9.66	188.1	9.71	184.8	9.80	181.7	9.91	179.8	9.99
		57.5	211.6	9.61	207.2	9.64	203.1	9.69	199.2	9.74	196.7	9.79	194.3	9.84	190.9	9.93	187.8	10.04	185.8	10.12
		70.8	215.1	9.66	210.7	9.70	206.5	9.74	202.5	9.80	200.0	9.84	197.6	9.89	194.1	9.99	190.9	10.09	188.9	10.18
	68	23.8	188.2	8.43	184.3	8.46	180.7	8.50	177.2	8.55	175.0	8.59	172.9	8.63	169.8	8.71	167.0	8.81	165.3	8.88
		33.9	197.4	8.62	193.4	8.65	189.5	8.69	185.9	8.74	183.6	8.78	181.3	8.83	178.2	8.91	175.2	9.01	173.4	9.08
		44.1	204.8	8.77	200.6	8.79	196.6	8.83	192.8	8.89	190.4	8.93	188.1	8.97	184.8	9.06	181.7	9.16	179.8	9.23
		57.5	211.6	8.88	207.2	8.91	203.1	8.95	199.2	9.00	196.7	9.05	194.3	9.09	190.9	9.18	187.8	9.28	185.8	9.36
		70.8	215.1	8.93	210.7	8.96	206.5	9.00	202.5	9.05	200.0	9.10	197.6	9.14	194.1	9.23	190.9	9.33	188.9	9.41
	77	23.8	188.2	7.54	184.3	7.57	180.7	7.60	177.2	7.65	175.0	7.68	172.9	7.72	169.8	7.79	167.0	7.88	165.3	7.94
		33.9	197.4	7.72	193.4	7.74	189.5	7.78	185.9	7.82	183.6	7.86	181.3	7.90	178.2	7.97	175.2	8.06	173.4	8.13
		44.1	204.8	7.84	200.6	7.87	196.6	7.90	192.8	7.95	190.4	7.99	188.1	8.03	184.8	8.10	181.7	8.19	179.8	8.26
		57.5	211.6	7.95	207.2	7.97	203.1	8.01	199.2	8.06	196.7	8.09	194.3	8.14	190.9	8.21	187.8	8.30	185.8	8.37
		70.8	215.1	7.99	210.7	8.02	206.5	8.05	202.5	8.10	200.0	8.14	197.6	8.18	194.1	8.26	190.9	8.35	188.9	8.42
	86	23.8	188.2	6.60	184.3	6.62	180.7	6.65	177.2	6.69	175.0	6.72	172.9	6.76	169.8	6.82	167.0	6.90	165.3	6.95
		33.9	197.4	6.75	193.4	6.78	189.5	6.81	185.9	6.85	183.6	6.88	181.3	6.91	178.2	6.98	175.2	7.05	173.4	7.11
		44.1	204.8	6.86	200.6	6.89	196.6	6.92	192.8	6.96	190.4	6.99	188.1	7.03	184.8	7.09	181.7	7.17	179.8	7.23
		57.5	211.6	6.96	207.2	6.98	203.1	7.01	199.2	7.05	196.7	7.08	194.3	7.12	190.9	7.19	187.8	7.27	185.8	7.33
		70.8	215.1	6.99	210.7	7.02	206.5	7.05	202.5	7.09	200.0	7.12	197.6	7.16	194.1	7.23	190.9	7.31	188.9	7.37
	95	23.8	188.2	6.15	184.3	6.17	180.7	6.19	177.2	6.23	175.0	6.26	172.9	6.29	169.8	6.35	167.0	6.42	165.3	6.47
		33.9	197.4	6.29	193.4	6.31	189.5	6.33	185.9	6.37	183.6	6.40	181.3	6.44	178.2	6.49	175.2	6.57	173.4	6.62
		44.1	204.8	6.39	200.6	6.41	196.6	6.44	192.8	6.48	190.4	6.51	188.1	6.54	184.8	6.60	181.7	6.67	179.8	6.73
		57.5	211.6	6.48	207.2	6.50	203.1	6.53	199.2	6.56	196.7	6.59	194.3	6.63	190.9	6.69	187.8	6.76	185.8	6.82
		70.8	215.1	6.51	210.7	6.53	206.5	6.56	202.5	6.60	200.0	6.63	197.6	6.67	194.1	6.73	190.9	6.80	188.9	6.86
	104	23.8	188.2	5.93	184.3	5.95	180.7	5.98	177.2	6.01	175.0	6.04	172.9	6.07	169.8	6.13	167.0	6.19	165.3	6.24
		33.9	197.4	6.06	193.4	6.08	189.5	6.11	185.9	6.15	183.6	6.18	181.3	6.21	178.2	6.27	175.2	6.33	173.4	6.39
		44.1	204.8	6.16	200.6	6.18	196.6	6.21	192.8	6.25	190.4	6.28	188.1	6.31	184.8	6.37	181.7	6.44	179.8	6.49
		57.5	211.6	6.25	207.2	6.27	203.1	6.30	199.2	6.33	196.7	6.36	194.3	6.40	190.9	6.45	187.8	6.53	185.8	6.58
		70.8	215.1	6.28	210.7	6.30	206.5	6.33	202.5	6.37	200.0	6.40	197.6	6.43	194.1	6.49	190.9	6.56	188.9	6.61
	113	23.8	188.2	5.91	184.3	5.93	180.7	5.95	177.2	5.99	175.0	6.02	172.9	6.05	169.8	6.10	167.0	6.17	165.3	6.22
		33.9	197.4	6.04	193.4	6.06	189.5	6.09	185.9	6.12	183.6	6.15	181.3	6.18	178.2	6.24	175.2	6.31	173.4	6.36
		44.1	204.8	6.14	200.6	6.16	196.6	6.19	192.8	6.22	190.4	6.25	188.1	6.29	184.8	6.34	181.7	6.41	179.8	6.47
		57.5	211.6	6.22	207.2	6.24	203.1	6.27	199.2	6.31	196.7	6.34	194.3	6.37	190.9	6.43	187.8	6.50	185.8	6.55
		70.8	215.1	6.26	210.7	6.28	206.5	6.31	202.5	6.34	200.0	6.37	197.6	6.41	194.1	6.47	190.9	6.54	188.9	6.59

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	23.8	164.2	8.58	160.8	8.61	157.6	8.65	154.6	8.70	152.6	8.74	150.8	8.78	148.2	8.86	145.7	8.96	144.2	9.03
		33.9	172.2	8.77	168.7	8.80	165.3	8.84	162.1	8.89	160.1	8.93	158.2	8.98	155.4	9.07	152.8	9.16	151.2	9.24
		44.1	178.6	8.92	175.0	8.95	171.5	8.99	168.2	9.04	166.1	9.08	164.1	9.13	161.2	9.21	158.5	9.32	156.9	9.39
		57.5	184.6	9.04	180.8	9.07	177.2	9.11	173.7	9.16	171.6	9.20	169.5	9.25	166.5	9.34	163.8	9.44	162.1	9.52
		70.8	187.7	9.09	183.8	9.12	180.1	9.16	176.7	9.21	174.5	9.25	172.4	9.30	169.4	9.39	166.5	9.49	164.8	9.57
	59	23.8	186.4	9.38	182.5	9.41	178.9	9.45	175.5	9.51	173.3	9.55	171.2	9.60	168.2	9.69	165.4	9.79	163.6	9.88
		33.9	195.5	9.59	191.5	9.62	187.7	9.67	184.0	9.72	181.8	9.77	179.5	9.82	176.4	9.91	173.5	10.02	171.7	10.10
		44.1	202.8	9.75	198.6	9.78	194.6	9.82	190.9	9.88	188.5	9.93	186.2	9.98	183.0	10.07	179.9	10.18	178.0	10.27
		57.5	209.5	9.88	205.2	9.91	201.1	9.96	197.2	10.02	194.8	10.06	192.4	10.12	189.0	10.21	185.9	10.32	183.9	10.41
		70.8	213.0	9.93	208.6	9.97	204.5	10.01	200.5	10.07	198.0	10.12	195.6	10.17	192.2	10.26	189.0	10.38	187.0	10.46
	68	23.8	186.4	8.67	182.5	8.69	178.9	8.73	175.5	8.78	173.3	8.83	171.2	8.87	168.2	8.95	165.4	9.05	163.6	9.13
		33.9	195.5	8.86	191.5	8.89	187.7	8.93	184.0	8.98	181.8	9.03	179.5	9.07	176.4	9.16	173.5	9.26	171.7	9.33
		44.1	202.8	9.01	198.6	9.04	194.6	9.08	190.9	9.14	188.5	9.17	186.2	9.22	183.0	9.31	179.9	9.41	178.0	9.49
		57.5	209.5	9.13	205.2	9.16	201.1	9.20	197.2	9.26	194.8	9.30	192.4	9.35	189.0	9.43	185.9	9.54	183.9	9.62
		70.8	213.0	9.18	208.6	9.21	204.5	9.25	200.5	9.31	198.0	9.35	195.6	9.40	192.2	9.49	189.0	9.59	187.0	9.67
	77	23.8	186.4	7.75	182.5	7.78	178.9	7.81	175.5	7.86	173.3	7.90	171.2	7.94	168.2	8.01	165.4	8.10	163.6	8.17
		33.9	195.5	7.93	191.5	7.96	187.7	7.99	184.0	8.04	181.8	8.08	179.5	8.12	176.4	8.19	173.5	8.28	171.7	8.35
		44.1	202.8	8.06	198.6	8.09	194.6	8.12	190.9	8.17	188.5	8.21	186.2	8.25	183.0	8.33	179.9	8.42	178.0	8.49
		57.5	209.5	8.17	205.2	8.20	201.1	8.23	197.2	8.28	194.8	8.32	192.4	8.36	189.0	8.44	185.9	8.53	183.9	8.60
		70.8	213.0	8.21	208.6	8.24	204.5	8.28	200.5	8.33	198.0	8.37	195.6	8.41	192.2	8.49	189.0	8.58	187.0	8.65
	86	23.8	186.4	6.79	182.5	6.81	178.9	6.84	175.5	6.88	173.3	6.91	171.2	6.95	168.2	7.01	165.4	7.09	163.6	7.15
		33.9	195.5	6.94	191.5	6.96	187.7	7.00	184.0	7.04	181.8	7.07	179.5	7.11	176.4	7.17	173.5	7.25	171.7	7.31
		44.1	202.8	7.06	198.6	7.08	194.6	7.11	190.9	7.15	188.5	7.19	186.2	7.22	183.0	7.29	179.9	7.37	178.0	7.43
		57.5	209.5	7.15	205.2	7.17	201.1	7.21	197.2	7.25	194.8	7.28	192.4	7.32	189.0	7.39	185.9	7.47	183.9	7.53
		70.8	213.0	7.19	208.6	7.21	204.5	7.25	200.5	7.29	198.0	7.32	195.6	7.36	192.2	7.43	189.0	7.51	187.0	7.57
	95	23.8	186.4	6.32	182.5	6.34	178.9	6.37	175.5	6.40	173.3	6.43	171.2	6.47	168.2	6.53	165.4	6.60	163.6	6.65
		33.9	195.5	6.46	191.5	6.48	187.7	6.51	184.0	6.55	181.8	6.58	179.5	6.61	176.4	6.68	173.5	6.75	171.7	6.80
		44.1	202.8	6.57	198.6	6.59	194.6	6.62	190.9	6.66	188.5	6.69	186.2	6.72	183.0	6.79	179.9	6.86	178.0	6.92
		57.5	209.5	6.66	205.2	6.68	201.1	6.71	197.2	6.75	194.8	6.78	192.4	6.81	189.0	6.88	185.9	6.95	183.9	7.01
		70.8	213.0	6.69	208.6	6.71	204.5	6.74	200.5	6.78	198.0	6.81	195.6	6.85	192.2	6.91	189.0	6.99	187.0	7.05
	104	23.8	186.4	6.09	182.5	6.11	178.9	6.14	175.5	6.18	173.3	6.21	171.2	6.24	168.2	6.30	165.4	6.37	163.6	6.42
		33.9	195.5	6.23	191.5	6.25	187.7	6.28	184.0	6.32	181.8	6.35	179.5	6.38	176.4	6.44	173.5	6.51	171.7	6.56
		44.1	202.8	6.34	198.6	6.36	194.6	6.38	190.9	6.42	188.5	6.45	186.2	6.49	183.0	6.55	179.9	6.62	178.0	6.67
		57.5	209.5	6.42	205.2	6.44	201.1	6.47	197.2	6.51	194.8	6.54	192.4	6.57	189.0	6.63	185.9	6.71	183.9	6.76
		70.8	213.0	6.46	208.6	6.48	204.5	6.51	200.5	6.54	198.0	6.57	195.6	6.61	192.2	6.67	189.0	6.74	187.0	6.80
	113	23.8	186.4	6.07	182.5	6.09	178.9	6.12	175.5	6.15	173.3	6.18	171.2	6.22	168.2	6.27	165.4	6.34	163.6	6.39
		33.9	195.5	6.21	191.5	6.23	187.7	6.26	184.0	6.29	181.8	6.32	179.5	6.36	176.4	6.42	173.5	6.49	171.7	6.54
		44.1	202.8	6.31	198.6	6.33	194.6	6.36	190.9	6.40	188.5	6.43	186.2	6.46	183.0	6.52	179.9	6.59	178.0	6.65
		57.5	209.5	6.40	205.2	6.42	201.1	6.45	197.2	6.48	194.8	6.51	192.4	6.55	189.0	6.61	185.9	6.68	183.9	6.74
		70.8	213.0	6.43	208.6	6.45	204.5	6.48	200.5	6.52	198.0	6.55	195.6	6.58	192.2	6.65	189.0	6.72	187.0	6.77
100	50	23.8	162.6	8.90	159.2	8.93	156.0	8.97	153.0	9.02	151.1	9.06	149.3	9.11	146.7	9.19	144.3	9.29	142.7	9.37
		33.9	170.5	9.10	167.0	9.13	163.7	9.17	160.5	9.22	158.5	9.27	156.6	9.32	153.9	9.40	151.3	9.51	149.7	9.58
		44.1	176.9	9.25	173.2	9.28	169.8	9.32	166.5	9.38	164.4	9.42	162.4	9.47	159.6	9.56	157.0	9.66	155.3	9.74
		57.5	182.7	9.38	179.0	9.41	175.4	9.45	172.0	9.50	169.9	9.55	167.8	9.60	164.9	9.69	162.2	9.79	160.5	9.87
		70.8	185.8	9.43	182.0	9.46	178.4	9.50	174.9	9.55	172.7	9.60	170.7	9.65	167.7	9.74	164.9	9.85	163.2	9.93
	59	23.8	184.5	9.73	180.7	9.76	177.1	9.80	173.7	9.86	171.6	9.91	169.5	9.96	166.5	10.05	163.8	10.16	162.0	10.24
		33.9	193.6	9.95	189.6	9.98	185.8	10.03	182.2	10.08	180.0	10.13	177.8	10.18	174.7	10.28	171.8	10.39	170.0	10.48
		44.1	200.8	10.11	196.6	10.14	192.7	10.19	189.0	10.25	186.6	10.30	184.4	10.35	181.2	10.45	178.2	10.56	176.3	10.65
		57.5	207.4	10.25	203.1	10.28	199.1	10.33	195.3	10.39	192.8	10.44	190.5	10.49	187.2	10.59	184.1	10.70	182.1	10.79
		70.8	210.9	10.30	206.6	10.34	202.4	10.38	198.6	10.44	196.1	10.49	193.7	10.55	190.3	10.65	187.2	10.76	185.2	10.85
	68	23.8	184.5	8.99	180.7	9.02	177.1	9.06	173.7	9.11	171.6	9.15	169.5	9.20	166.5	9.29	163.8	9.39	162.0	9.47
		33.9	193.6	9.19	189.6	9.22	185.8	9.26	182.2	9.32	180.0	9.36	177.8	9.41	174.7	9.50	171.8	9.60	170.0	9.68
		44.1	200.8	9.34	196.6	9.38	192.7	9.42	189.0	9.48	186.6	9.52	184.4	9.57	181.2	9.66	178.2	9.76	176.3	9.84
		57.5	207.4	9.47	203.1	9.50	199.1	9.54	195.3	9.60	192.8	9.64	190.5	9.70	187.2	9.79	184.1	9.89	182.1	9.97
		70.8	210.9	9.52	206.6	9.55	202.4	9.60	198.6	9.65	196.1	9.70	193.7	9.75	190.3	9.84	187.2	9.95	185.2	10.03
	77	23.8	184.5	8.04	180.7	8.07	177.1	8.11	173.7	8.15	171.6	8.19	169.5	8.23	166.5	8.31	163.8	8.40	162.0	8.47
		33.9	193.6	8.23	189.6	8.25	185.8	8.29	182.2	8.34	180.0	8.38	177.8	8.42	174.7	8.50	171.8	8.59	170.0	8.66
		44.1	200.8	8.36	196.6	8.39	192.7	8.43	189.0	8.48	186.6	8.51	184.4	8.56	181.2	8.64	178.2	8.73	176.3	8.81
		57.5	207.4	8.47	203.1	8.50	199.1	8.54	195.3	8.59	192.8	8.63	190.5	8.68	187.2	8.76	184.1	8.85	182.1	8.92
		70.8	210.9	8.52	206.6	8.55	202.4	8.59	198.6	8.64	196.1	8.68	193.7	8.72	190.3	8.80	187.2	8.90	185.2	8.97
	86	23.8	184.5	7.04	180.7	7.06	177.1	7.09	173.7	7.14	171.6	7.17	169.5	7.21	166.5	7.27	163.8	7.35	162.0	7.41
		33.9	193.6	7.20	189.6	7.22	185.8	7.26	182.2	7.30	180.0	7.33	177.8	7.37	174.7	7.44	171.8	7.52	170.0	7.58
		44.1	200.8	7.32	196.6	7.34	192.7	7.37	189.0	7.42	186.6	7.45	184.4	7.49	181.2	7.56	178.2	7.64	176.3	7.71
		57.5	207.4	7.42	203.1	7.44	199.1	7.47	195.3	7.52	192.8	7.55	190.5	7.59	187.2	7.66	184.1	7.75	182.1	7.81
		70.8	210.9	7.46	206.6	7.48	202.4	7.51	198.6	7.56	196.1	7.59	193.7	7.63	190.3	7.70	187.2	7.79	185.2	7.85
	95	23.8	184.5	6.55	180.7	6.57	177.1	6.60	173.7	6.64	171.6	6.67	169.5	6.71	166.5	6.77	163.8	6.84	162.0	6.90
		33.9	193.6	6.70	189.6	6.72	185.8	6.75	182.2	6.79	180.0	6.82	177.8	6.86	174.7	6.92	171.8	7.00	170.0	7.06
		44.1	200.8	6.81	196.6	6.83	192.7	6.86	189.0	6.90	186.6	6.94	184.4	6.97	181.2	7.04	178.2	7.11	176.3	7.17
		57.5	207.4	6.90	203.1	6.93	199.1	6.96	195.3	7.00	192.8	7.03	190.5	7.07	187.2	7.13	184.1	7.21	182.1	7.27
		70.8	210.9	6.94	206.6	6.96	202.4	6.99	198.6	7.04	196.1	7.07	193.7	7.11	190.3	7.17	187.2	7.25	185.2	7.31
	104	23.8	184.5	6.32	180.7	6.34	177.1	6.37	173.7	6.41	171.6	6.44	169.5	6.47	166.5	6.53	163.8	6.60	162.0	6.66
		33.9	193.6	6.47	189.6	6.49	185.8	6.52	182.2	6.55	180.0	6.58	177.8	6.62	174.7	6.68	171.8	6.75	170.0	6.81
		44.1	200.8	6.57	196.6	6.59	192.7	6.62	189.0	6.66	186.6	6.69	184.4	6.73	181.2	6.79	178.2	6.86	176.3	6.92
		57.5	207.4	6.66	203.1	6.68	199.1	6.71	195.3	6.75	192.8	6.78	190.5	6.82	187.2	6.88	184.1	6.96	182.1	7.01
		70.8	210.9	6.70	206.6	6.72	202.4	6.75	198.6	6.79	196.1	6.82	193.7	6.86	190.3	6.92	187.2	6.99	185.2	7.05
	113	23.8	184.5	6.30	180.7	6.32	177.1	6.35	173.7	6.38	171.6	6.41	169.5	6.45	166.5	6.51	163.8	6.58	162.0	6.63
		33.9	193.6	6.44	189.6	6.46	185.8	6.49	182.2	6.53	180.0	6.56	177.8	6.59	174.7	6.66	171.8	6.73	170.0	6.78
		44.1	200.8	6.55	196.6	6.57	192.7	6.60	189.0	6.64	186.6	6.67	184.4	6.70	181.2	6.76	178.2	6.84	176.3	6.89
		57.5	207.4	6.64	203.1	6.66	199.1	6.69	195.3	6.73	192.8	6.76	190.5	6.79	187.2	6.86	184.1	6.93	182.1	6.99
		70.8	210.9	6.67	206.6	6.69	202.4	6.72	198.6	6.76	196.1	6.79	193.7	6.83	190.3	6.89	187.2	6.97	185.2	7.03

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	23.8	146.3	7.71	143.3	7.74	140.4	7.77	137.7	7.82	136.0	7.86	134.4	7.90	132.0	7.97	129.8	8.06	128.5	8.12
		33.9	153.5	7.89	150.3	7.92	147.3	7.95	144.5	8.00	142.7	8.03	141.0	8.08	138.5	8.15	136.2	8.24	134.8	8.31
		44.1	159.2	8.02	155.9	8.05	152.8	8.08	149.9	8.13	148.0	8.17	146.2	8.21	143.6	8.29	141.3	8.38	139.8	8.45
		57.5	164.5	8.13	161.1	8.15	157.9	8.19	154.8	8.24	152.9	8.28	151.0	8.32	148.4	8.40	146.0	8.49	144.4	8.56
		70.8	167.2	8.17	163.8	8.20	160.5	8.24	157.4	8.28	155.5	8.32	153.6	8.37	150.9	8.44	148.4	8.54	146.8	8.61
	59	23.8	166.1	8.43	162.7	8.46	159.4	8.50	156.3	8.55	154.4	8.59	152.5	8.63	149.9	8.71	147.4	8.81	145.8	8.88
		33.9	174.2	8.63	170.6	8.65	167.2	8.69	164.0	8.74	162.0	8.78	160.0	8.83	157.2	8.91	154.6	9.01	153.0	9.08
		44.1	180.7	8.77	177.0	8.80	173.4	8.83	170.1	8.89	168.0	8.93	165.9	8.97	163.1	9.06	160.3	9.16	158.7	9.23
		57.5	186.7	8.89	182.8	8.91	179.2	8.95	175.7	9.01	173.5	9.05	171.4	9.10	168.5	9.18	165.7	9.28	163.9	9.36
		70.8	189.8	8.93	185.9	8.96	182.2	9.00	178.7	9.05	176.5	9.10	174.3	9.15	171.3	9.23	168.5	9.33	166.7	9.41
	68	23.8	166.1	7.79	162.7	7.82	159.4	7.85	156.3	7.90	154.4	7.94	152.5	7.98	149.9	8.05	147.4	8.14	145.8	8.21
		33.9	174.2	7.97	170.6	8.00	167.2	8.03	164.0	8.08	162.0	8.12	160.0	8.16	157.2	8.24	154.6	8.33	153.0	8.39
		44.1	180.7	8.10	177.0	8.13	173.4	8.16	170.1	8.22	168.0	8.25	165.9	8.29	163.1	8.37	160.3	8.46	158.7	8.53
		57.5	186.7	8.21	182.8	8.24	179.2	8.27	175.7	8.32	173.5	8.36	171.4	8.41	168.5	8.48	165.7	8.58	163.9	8.65
		70.8	189.8	8.26	185.9	8.28	182.2	8.32	178.7	8.37	176.5	8.41	174.3	8.45	171.3	8.53	168.5	8.62	166.7	8.69
	77	23.8	166.1	6.97	162.7	7.00	159.4	7.03	156.3	7.07	154.4	7.10	152.5	7.14	149.9	7.20	147.4	7.28	145.8	7.34
		33.9	174.2	7.13	170.6	7.16	167.2	7.19	164.0	7.23	162.0	7.26	160.0	7.30	157.2	7.37	154.6	7.45	153.0	7.51
		44.1	180.7	7.25	177.0	7.27	173.4	7.31	170.1	7.35	168.0	7.38	165.9	7.42	163.1	7.49	160.3	7.57	158.7	7.63
		57.5	186.7	7.35	182.8	7.37	179.2	7.40	175.7	7.45	173.5	7.48	171.4	7.52	168.5	7.59	165.7	7.67	163.9	7.74
		70.8	189.8	7.39	185.9	7.41	182.2	7.44	178.7	7.49	176.5	7.52	174.3	7.56	171.3	7.63	168.5	7.72	166.7	7.78
	86	23.8	166.1	6.10	162.7	6.12	159.4	6.15	156.3	6.19	154.4	6.21	152.5	6.25	149.9	6.31	147.4	6.37	145.8	6.43
		33.9	174.2	6.24	170.6	6.26	167.2	6.29	164.0	6.33	162.0	6.36	160.0	6.39	157.2	6.45	154.6	6.52	153.0	6.57
		44.1	180.7	6.34	177.0	6.37	173.4	6.39	170.1	6.43	168.0	6.46	165.9	6.50	163.1	6.56	160.3	6.63	158.7	6.68
		57.5	186.7	6.43	182.8	6.45	179.2	6.48	175.7	6.52	173.5	6.55	171.4	6.58	168.5	6.64	165.7	6.72	163.9	6.77
		70.8	189.8	6.47	185.9	6.49	182.2	6.52	178.7	6.55	176.5	6.58	174.3	6.62	171.3	6.68	168.5	6.75	166.7	6.81
	95	23.8	166.1	5.68	162.7	5.70	159.4	5.72	156.3	5.76	154.4	5.78	152.5	5.82	149.9	5.87	147.4	5.93	145.8	5.98
		33.9	174.2	5.81	170.6	5.83	167.2	5.86	164.0	5.89	162.0	5.92	160.0	5.95	157.2	6.00	154.6	6.07	153.0	6.12
		44.1	180.7	5.91	177.0	5.92	173.4	5.95	170.1	5.99	168.0	6.01	165.9	6.05	163.1	6.10	160.3	6.17	158.7	6.22
		57.5	186.7	5.99	182.8	6.01	179.2	6.03	175.7	6.07	173.5	6.10	171.4	6.13	168.5	6.18	165.7	6.25	163.9	6.30
		70.8	189.8	6.02	185.9	6.04	182.2	6.06	178.7	6.10	176.5	6.13	174.3	6.16	171.3	6.22	168.5	6.29	166.7	6.34
	104	23.8	166.1	5.48	162.7	5.50	159.4	5.52	156.3	5.55	154.4	5.58	152.5	5.61	149.9	5.66	147.4	5.72	145.8	5.77
		33.9	174.2	5.61	170.6	5.62	167.2	5.65	164.0	5.68	162.0	5.71	160.0	5.74	157.2	5.79	154.6	5.85	153.0	5.90
		44.1	180.7	5.70	177.0	5.72	173.4	5.74	170.1	5.77	168.0	5.80	165.9	5.83	163.1	5.89	160.3	5.95	158.7	6.00
		57.5	186.7	5.77	182.8	5.79	179.2	5.82	175.7	5.85	173.5	5.88	171.4	5.91	168.5	5.97	165.7	6.03	163.9	6.08
		70.8	189.8	5.81	185.9	5.82	182.2	5.85	178.7	5.88	176.5	5.91	174.3	5.94	171.3	6.00	168.5	6.06	166.7	6.11
	113	23.8	166.1	5.46	162.7	5.48	159.4	5.50	156.3	5.53	154.4	5.56	152.5	5.59	149.9	5.64	147.4	5.70	145.8	5.75
		33.9	174.2	5.58	170.6	5.60	167.2	5.63	164.0	5.66	162.0	5.69	160.0	5.72	157.2	5.77	154.6	5.83	153.0	5.88
		44.1	180.7	5.68	177.0	5.69	173.4	5.72	170.1	5.75	168.0	5.78	165.9	5.81	163.1	5.86	160.3	5.93	158.7	5.98
		57.5	186.7	5.75	182.8	5.77	179.2	5.80	175.7	5.83	173.5	5.86	171.4	5.89	168.5	5.94	165.7	6.01	163.9	6.06
		70.8	189.8	5.78	185.9	5.80	182.2	5.83	178.7	5.86	176.5	5.89	174.3	5.92	171.3	5.98	168.5	6.04	166.7	6.09
80	50	23.8	130.1	6.30	127.4	6.32	124.8	6.35	122.4	6.39	120.9	6.42	119.4	6.45	117.4	6.51	115.4	6.58	114.2	6.64
		33.9	136.4	6.44	133.6	6.47	131.0	6.49	128.4	6.53	126.8	6.56	125.3	6.60	123.1	6.66	121.1	6.73	119.8	6.79
		44.1	141.5	6.55	138.6	6.57	135.8	6.60	133.2	6.64	131.5	6.67	130.0	6.71	127.7	6.77	125.6	6.84	124.2	6.90
		57.5	146.2	6.64	143.2	6.66	140.3	6.69	137.6	6.73	135.9	6.76	134.3	6.80	131.9	6.86	129.7	6.93	128.4	6.99
		70.8	148.6	6.67	145.6	6.70	142.7	6.73	139.9	6.77	138.2	6.80	136.5	6.83	134.1	6.90	131.9	6.97	130.5	7.03
	59	23.8	147.6	6.89	144.6	6.91	141.7	6.94	139.0	6.98	137.2	7.01	135.6	7.05	133.2	7.12	131.0	7.19	129.6	7.25
		33.9	154.8	7.04	151.7	7.07	148.6	7.10	145.8	7.14	144.0	7.17	142.2	7.21	139.7	7.28	137.4	7.36	136.0	7.42
		44.1	160.6	7.16	157.3	7.18	154.2	7.22	151.2	7.26	149.3	7.29	147.5	7.33	144.9	7.40	142.5	7.48	141.0	7.54
		57.5	165.9	7.26	162.5	7.28	159.3	7.31	156.2	7.36	154.3	7.39	152.4	7.43	149.7	7.50	147.3	7.58	145.7	7.64
		70.8	168.7	7.30	165.3	7.32	162.0	7.35	158.8	7.40	156.9	7.43	155.0	7.47	152.3	7.54	149.7	7.62	148.2	7.68
	68	23.8	147.6	6.37	144.6	6.39	141.7	6.41	139.0	6.45	137.2	6.48	135.6	6.52	133.2	6.58	131.0	6.65	129.6	6.70
		33.9	154.8	6.51	151.7	6.53	148.6	6.56	145.8	6.60	144.0	6.63	142.2	6.66	139.7	6.73	137.4	6.80	136.0	6.86
		44.1	160.6	6.62	157.3	6.64	154.2	6.67	151.2	6.71	149.3	6.74	147.5	6.77	144.9	6.84	142.5	6.91	141.0	6.97
		57.5	165.9	6.71	162.5	6.73	159.3	6.76	156.2	6.80	154.3	6.83	152.4	6.87	149.7	6.93	147.3	7.01	145.7	7.06
		70.8	168.7	6.74	165.3	6.76	162.0	6.80	158.8	6.83	156.9	6.87	155.0	6.90	152.3	6.97	149.7	7.04	148.2	7.10
	77	23.8	147.6	5.70	144.6	5.71	141.7	5.74	139.0	5.77	137.2	5.80	135.6	5.83	133.2	5.88	131.0	5.95	129.6	6.00
		33.9	154.8	5.83	151.7	5.84	148.6	5.87	145.8	5.90	144.0	5.93	142.2	5.96	139.7	6.02	137.4	6.08	136.0	6.13
		44.1	160.6	5.92	157.3	5.94	154.2	5.97	151.2	6.00	149.3	6.03	147.5	6.06	144.9	6.12	142.5	6.18	141.0	6.24
		57.5	165.9	6.00	162.5	6.02	159.3	6.05	156.2	6.08	154.3	6.11	152.4	6.14	149.7	6.20	147.3	6.27	145.7	6.32
		70.8	168.7	6.03	165.3	6.05	162.0	6.08	158.8	6.12	156.9	6.14	155.0	6.18	152.3	6.23	149.7	6.30	148.2	6.35
	86	23.8	147.6	4.99	144.6	5.00	141.7	5.02	139.0	5.05	137.2	5.08	135.6	5.10	133.2	5.15	131.0	5.21	129.6	5.25
		33.9	154.8	5.10	151.7	5.12	148.6	5.14	145.8	5.17	144.0	5.19	142.2	5.22	139.7	5.27	137.4	5.33	136.0	5.37
		44.1	160.6	5.18	157.3	5.20	154.2	5.22	151.2	5.25	149.3	5.28	147.5	5.31	144.9	5.35	142.5	5.41	141.0	5.46
		57.5	165.9	5.25	162.5	5.27	159.3	5.29	156.2	5.32	154.3	5.35	152.4	5.38	149.7	5.43	147.3	5.49	145.7	5.53
		70.8	168.7	5.28	165.3	5.30	162.0	5.32	158.8	5.35	156.9	5.38	155.0	5.41	152.3	5.46	149.7	5.52	148.2	5.56
	95	23.8	147.6	4.64	144.6	4.65	141.7	4.68	139.0	4.70	137.2	4.72	135.6	4.75	133.2	4.79	131.0	4.85	129.6	4.89
		33.9	154.8	4.75	151.7	4.76	148.6	4.78	145.8	4.81	144.0	4.83	142.2	4.86	139.7	4.90	137.4	4.96	136.0	5.00
		44.1	160.6	4.82	157.3	4.84	154.2	4.86	151.2	4.89	149.3	4.91	147.5	4.94	144.9	4.98	142.5	5.04	141.0	5.08
		57.5	165.9	4.89	162.5	4.90	159.3	4.93	156.2	4.96	154.3	4.98	152.4	5.00	149.7	5.05	147.3	5.11	145.7	5.15
		70.8	168.7	4.92	165.3	4.93	162.0	4.95	158.8	4.98	156.9	5.01	155.0	5.03	152.3	5.08	149.7	5.13	148.2	5.18
	104	23.8	147.6	4.48	144.6	4.49	141.7	4.51	139.0	4.54	137.2	4.56	135.6	4.58	133.2	4.62	131.0	4.68	129.6	4.71
		33.9	154.8	4.58	151.7	4.59	148.6	4.61	145.8	4.64	144.0	4.66	142.2	4.69	139.7	4.73	137.4	4.78	136.0	4.82
		44.1	160.6	4.65	157.3	4.67	154.2	4.69	151.2	4.72	149.3	4.74	147.5	4.76	144.9	4.81	142.5	4.86	141.0	4.90
		57.5	165.9	4.72	162.5	4.73	159.3	4.75	156.2	4.78	154.3	4.80	152.4	4.83	149.7	4.87	147.3	4.93	145.7	4.97
		70.8	168.7	4.74	165.3	4.76	162.0	4.78	158.8	4.81	156.9	4.83	155.0	4.85	152.3	4.90	149.7	4.95	148.2	4.99
	113	23.8	147.6	4.46	144.6	4.47	141.7	4.49	139.0	4.52	137.2	4.54	135.6	4.57	133.2	4.61	131.0	4.66	129.6	4.70
		33.9	154.8	4.56	151.7	4.58	148.6	4.60	145.8	4.62	144.0	4.64	142.2	4.67	139.7	4.71	137.4	4.76	136.0	4.80
		44.1	160.6	4.64	157.3	4.65	154.2	4.67	151.2	4.70	149.3	4.72	147.5	4.75	144.9	4.79	142.5	4.84	141.0	4.88
		57.5	165.9	4.70	162.5	4.71	159.3	4.74	156.2	4.76	154.3	4.79	152.4	4.81	149.7	4.86	147.3	4.91	145.7	4.95
		70.8	168.7	4.72	165.3	4.74	162.0	4.76	158.8	4.79	156.9	4.81	155.0	4.84	152.3	4.88	149.7	4.93	148.2	4.97

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	23.8	113.8	4.87	111.5	4.89	109.2	4.91	107.1	4.94	105.8	4.96	104.5	4.98	102.7	5.03	101.0	5.09	99.9	5.13
		33.9	119.4	4.98	116.9	5.00	114.6	5.02	112.4	5.05	111.0	5.07	109.6	5.10	107.7	5.15	105.9	5.20	104.8	5.24
		44.1	123.8	5.06	121.3	5.08	118.8	5.10	116.6	5.13	115.1	5.15	113.7	5.18	111.7	5.23	109.9	5.29	108.7	5.33
		57.5	127.9	5.13	125.3	5.15	122.8	5.17	120.4	5.20	118.9	5.22	117.5	5.25	115.4	5.30	113.5	5.36	112.3	5.40
		70.8	130.1	5.16	127.4	5.17	124.8	5.20	122.4	5.23	120.9	5.25	119.5	5.28	117.4	5.33	115.4	5.39	114.2	5.43
	59	23.8	129.2	5.32	126.5	5.34	124.0	5.36	121.6	5.40	120.1	5.42	118.6	5.45	116.6	5.50	114.6	5.56	113.4	5.61
		33.9	135.5	5.44	132.7	5.46	130.1	5.49	127.6	5.52	126.0	5.54	124.4	5.57	122.3	5.63	120.2	5.69	119.0	5.73
		44.1	140.5	5.53	137.6	5.55	134.9	5.58	132.3	5.61	130.7	5.64	129.1	5.66	126.8	5.72	124.7	5.78	123.4	5.83
		57.5	145.2	5.61	142.2	5.63	139.4	5.65	136.7	5.68	135.0	5.71	133.3	5.74	131.0	5.79	128.8	5.86	127.5	5.91
		70.8	147.6	5.64	144.6	5.66	141.7	5.68	139.0	5.72	137.3	5.74	135.6	5.77	133.2	5.83	131.0	5.89	129.6	5.94
	68	23.8	129.2	4.92	126.5	4.94	124.0	4.96	121.6	4.99	120.1	5.01	118.6	5.04	116.6	5.08	114.6	5.14	113.4	5.18
		33.9	135.5	5.03	132.7	5.05	130.1	5.07	127.6	5.10	126.0	5.12	124.4	5.15	122.3	5.20	120.2	5.25	119.0	5.30
		44.1	140.5	5.11	137.6	5.13	134.9	5.15	132.3	5.19	130.7	5.21	129.1	5.24	126.8	5.28	124.7	5.34	123.4	5.39
		57.5	145.2	5.18	142.2	5.20	139.4	5.22	136.7	5.25	135.0	5.28	133.3	5.31	131.0	5.36	128.8	5.41	127.5	5.46
		70.8	147.6	5.21	144.6	5.23	141.7	5.25	139.0	5.28	137.3	5.31	135.6	5.33	133.2	5.38	131.0	5.44	129.6	5.49
	77	23.8	129.2	4.40	126.5	4.42	124.0	4.44	121.6	4.46	120.1	4.48	118.6	4.51	116.6	4.55	114.6	4.60	113.4	4.64
		33.9	135.5	4.50	132.7	4.52	130.1	4.54	127.6	4.56	126.0	4.58	124.4	4.61	122.3	4.65	120.2	4.70	119.0	4.74
		44.1	140.5	4.58	137.6	4.59	134.9	4.61	132.3	4.64	130.7	4.66	129.1	4.68	126.8	4.73	124.7	4.78	123.4	4.82
		57.5	145.2	4.64	142.2	4.65	139.4	4.67	136.7	4.70	135.0	4.72	133.3	4.75	131.0	4.79	128.8	4.84	127.5	4.88
		70.8	147.6	4.66	144.6	4.68	141.7	4.70	139.0	4.73	137.3	4.75	135.6	4.77	133.2	4.82	131.0	4.87	129.6	4.91
	86	23.8	129.2	3.85	126.5	3.86	124.0	3.88	121.6	3.90	120.1	3.92	118.6	3.94	116.6	3.98	114.6	4.02	113.4	4.06
		33.9	135.5	3.94	132.7	3.95	130.1	3.97	127.6	3.99	126.0	4.01	124.4	4.03	122.3	4.07	120.2	4.12	119.0	4.15
		44.1	140.5	4.00	137.6	4.02	134.9	4.04	132.3	4.06	130.7	4.08	129.1	4.10	126.8	4.14	124.7	4.18	123.4	4.22
		57.5	145.2	4.06	142.2	4.07	139.4	4.09	136.7	4.11	135.0	4.13	133.3	4.16	131.0	4.19	128.8	4.24	127.5	4.27
		70.8	147.6	4.08	144.6	4.09	141.7	4.11	139.0	4.14	137.3	4.16	135.6	4.18	133.2	4.22	131.0	4.26	129.6	4.30
	95	23.8	129.2	3.59	126.5	3.60	124.0	3.61	121.6	3.63	120.1	3.65	118.6	3.67	116.6	3.70	114.6	3.75	113.4	3.78
		33.9	135.5	3.67	132.7	3.68	130.1	3.70	127.6	3.72	126.0	3.73	124.4	3.75	122.3	3.79	120.2	3.83	119.0	3.86
		44.1	140.5	3.73	137.6	3.74	134.9	3.76	132.3	3.78	130.7	3.80	129.1	3.82	126.8	3.85	124.7	3.89	123.4	3.93
		57.5	145.2	3.78	142.2	3.79	139.4	3.81	136.7	3.83	135.0	3.85	133.3	3.87	131.0	3.90	128.8	3.95	127.5	3.98
		70.8	147.6	3.80	144.6	3.81	141.7	3.83	139.0	3.85	137.3	3.87	135.6	3.89	133.2	3.92	131.0	3.97	129.6	4.00
	104	23.8	129.2	3.46	126.5	3.47	124.0	3.49	121.6	3.51	120.1	3.52	118.6	3.54	116.6	3.57	114.6	3.61	113.4	3.64
		33.9	135.5	3.54	132.7	3.55	130.1	3.57	127.6	3.59	126.0	3.60	124.4	3.62	122.3	3.66	120.2	3.70	119.0	3.73
		44.1	140.5	3.60	137.6	3.61	134.9	3.62	132.3	3.65	130.7	3.66	129.1	3.68	126.8	3.72	124.7	3.76	123.4	3.79
		57.5	145.2	3.64	142.2	3.66	139.4	3.67	136.7	3.69	135.0	3.71	133.3	3.73	131.0	3.77	128.8	3.81	127.5	3.84
		70.8	147.6	3.66	144.6	3.68	141.7	3.69	139.0	3.71	137.3	3.73	135.6	3.75	133.2	3.79	131.0	3.83	129.6	3.86
	113	23.8	129.2	3.45	126.5	3.46	124.0	3.47	121.6	3.49	120.1	3.51	118.6	3.53	116.6	3.56	114.6	3.60	113.4	3.63
		33.9	135.5	3.52	132.7	3.54	130.1	3.55	127.6	3.57	126.0	3.59	124.4	3.61	122.3	3.64	120.2	3.68	119.0	3.71
		44.1	140.5	3.58	137.6	3.59	134.9	3.61	132.3	3.63	130.7	3.65	129.1	3.67	126.8	3.70	124.7	3.74	123.4	3.77
		57.5	145.2	3.63	142.2	3.64	139.4	3.66	136.7	3.68	135.0	3.70	133.3	3.72	131.0	3.75	128.8	3.79	127.5	3.82
		70.8	147.6	3.65	144.6	3.66	141.7	3.68	139.0	3.70	137.3	3.72	135.6	3.74	133.2	3.77	131.0	3.81	129.6	3.84
60	50	23.8	97.5	3.63	95.5	3.64	93.6	3.66	91.8	3.68	90.7	3.70	89.6	3.72	88.0	3.75	86.6	3.79	85.6	3.82
		33.9	102.3	3.71	100.2	3.73	98.2	3.74	96.3	3.76	95.1	3.78	94.0	3.80	92.3	3.84	90.8	3.88	89.8	3.91
		44.1	106.1	3.78	103.9	3.79	101.9	3.80	99.9	3.83	98.7	3.84	97.5	3.86	95.8	3.90	94.2	3.94	93.2	3.98
		57.5	109.6	3.83	107.4	3.84	105.2	3.86	103.2	3.88	101.9	3.90	100.7	3.92	98.9	3.95	97.3	4.00	96.3	4.03
		70.8	111.5	3.85	109.2	3.86	107.0	3.88	105.0	3.90	103.6	3.92	102.4	3.94	100.6	3.97	98.9	4.02	97.9	4.05
	59	23.8	110.7	3.97	108.4	3.98	106.3	4.00	104.2	4.02	102.9	4.04	101.7	4.06	99.9	4.10	98.3	4.15	97.2	4.18
		33.9	116.1	4.06	113.7	4.07	111.5	4.09	109.3	4.12	108.0	4.13	106.7	4.16	104.8	4.19	103.1	4.24	102.0	4.28
		44.1	120.5	4.13	118.0	4.14	115.6	4.16	113.4	4.18	112.0	4.20	110.6	4.22	108.7	4.26	106.9	4.31	105.8	4.35
		57.5	124.4	4.18	121.9	4.20	119.5	4.22	117.2	4.24	115.7	4.26	114.3	4.28	112.3	4.32	110.4	4.37	109.3	4.40
		70.8	126.5	4.21	123.9	4.22	121.5	4.24	119.1	4.26	117.6	4.28	116.2	4.30	114.2	4.34	112.3	4.39	111.1	4.43
	68	23.8	110.7	3.67	108.4	3.68	106.3	3.70	104.2	3.72	102.9	3.74	101.7	3.76	99.9	3.79	98.3	3.83	97.2	3.86
		33.9	116.1	3.75	113.7	3.76	111.5	3.78	109.3	3.80	108.0	3.82	106.7	3.84	104.8	3.88	103.1	3.92	102.0	3.95
		44.1	120.5	3.81	118.0	3.83	115.6	3.84	113.4	3.87	112.0	3.88	110.6	3.90	108.7	3.94	106.9	3.98	105.8	4.02
		57.5	124.4	3.87	121.9	3.88	119.5	3.90	117.2	3.92	115.7	3.94	114.3	3.96	112.3	3.99	110.4	4.04	109.3	4.07
		70.8	126.5	3.89	123.9	3.90	121.5	3.92	119.1	3.94	117.6	3.96	116.2	3.98	114.2	4.02	112.3	4.06	111.1	4.09
	77	23.8	110.7	3.28	108.4	3.29	106.3	3.31	104.2	3.33	102.9	3.34	101.7	3.36	99.9	3.39	98.3	3.43	97.2	3.46
		33.9	116.1	3.36	113.7	3.37	111.5	3.38	109.3	3.40	108.0	3.42	106.7	3.44	104.8	3.47	103.1	3.51	102.0	3.54
		44.1	120.5	3.41	118.0	3.42	115.6	3.44	113.4	3.46	112.0	3.47	110.6	3.49	108.7	3.53	106.9	3.56	105.8	3.59
		57.5	124.4	3.46	121.9	3.47	119.5	3.49	117.2	3.51	115.7	3.52	114.3	3.54	112.3	3.57	110.4	3.61	109.3	3.64
		70.8	126.5	3.48	123.9	3.49	121.5	3.50	119.1	3.52	117.6	3.54	116.2	3.56	114.2	3.59	112.3	3.63	111.1	3.66
	86	23.8	110.7	2.87	108.4	2.88	106.3	2.90	104.2	2.91	102.9	2.93	101.7	2.94	99.9	2.97	98.3	3.00	97.2	3.03
		33.9	116.1	2.94	113.7	2.95	111.5	2.96	109.3	2.98	108.0	2.99	106.7	3.01	104.8	3.04	103.1	3.07	102.0	3.09
		44.1	120.5	2.99	118.0	3.00	115.6	3.01	113.4	3.03	112.0	3.04	110.6	3.06	108.7	3.09	106.9	3.12	105.8	3.15
		57.5	124.4	3.03	121.9	3.04	119.5	3.05	117.2	3.07	115.7	3.08	114.3	3.10	112.3	3.13	110.4	3.16	109.3	3.19
		70.8	126.5	3.04	123.9	3.05	121.5	3.07	119.1	3.08	117.6	3.10	116.2	3.12	114.2	3.14	112.3	3.18	111.1	3.20
	95	23.8	110.7	2.67	108.4	2.68	106.3	2.69	104.2	2.71	102.9	2.72	101.7	2.74	99.9	2.76	98.3	2.79	97.2	2.82
		33.9	116.1	2.74	113.7	2.74	111.5	2.76	109.3	2.77	108.0	2.79	106.7	2.80	104.8	2.83	103.1	2.86	102.0	2.88
		44.1	120.5	2.78	118.0	2.79	115.6	2.80	113.4	2.82	112.0	2.83	110.6	2.85	108.7	2.87	106.9	2.90	105.8	2.93
		57.5	124.4	2.82	121.9	2.83	119.5	2.84	117.2	2.86	115.7	2.87	114.3	2.88	112.3	2.91	110.4	2.94	109.3	2.97
		70.8	126.5	2.83	123.9	2.84	121.5	2.85	119.1	2.87	117.6	2.88	116.2	2.90	114.2	2.93	112.3	2.96	111.1	2.98
	104	23.8	110.7	2.58	108.4	2.59	106.3	2.60	104.2	2.61	102.9	2.63	101.7	2.64	99.9	2.67	98.3	2.69	97.2	2.72
		33.9	116.1	2.64	113.7	2.65	111.5	2.66	109.3	2.67	108.0	2.69	106.7	2.70	104.8	2.73	103.1	2.76	102.0	2.78
		44.1	120.5	2.68	118.0	2.69	115.6	2.70	113.4	2.72	112.0	2.73	110.6	2.75	108.7	2.77	106.9	2.80	105.8	2.82
		57.5	124.4	2.72	121.9	2.73	119.5	2.74	117.2	2.76	115.7	2.77	114.3	2.78	112.3	2.81	110.4	2.84	109.3	2.86
		70.8	126.5	2.73	123.9	2.74	121.5	2.75	119.1	2.77	117.6	2.78	116.2	2.80	114.2	2.82	112.3	2.85	111.1	2.88
	113	23.8	110.7	2.57	108.4	2.58	106.3	2.59	104.2	2.61	102.9	2.62	101.7	2.63	99.9	2.66	98.3	2.68	97.2	2.71
		33.9	116.1	2.63	113.7	2.64	111.5	2.65	109.3	2.66	108.0	2.68	106.7	2.69	104.8	2.72	103.1	2.75	102.0	2.77
		44.1	120.5	2.67	118.0	2.68	115.6	2.69	113.4	2.71	112.0	2.72	110.6	2.74	108.7	2.76	106.9	2.79	105.8	2.81
		57.5	124.4	2.71	121.9	2.72	119.5	2.73	117.2	2.74	115.7	2.76	114.3	2.77	112.3	2.80	110.4	2.83	109.3	2.85
		70.8	126.5	2.72	123.9	2.73	121.5	2.74	119.1	2.76	117.6	2.77	116.2	2.79	114.2	2.81	112.3	2.84	111.1	2.87

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)168B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	23.8	81.3	2.70	79.6	2.71	78.0	2.73	76.5	2.74	75.6	2.75	74.7	2.77	73.4	2.79	72.1	2.82	71.4	2.85
		33.9	85.3	2.77	83.5	2.77	81.8	2.79	80.3	2.80	79.3	2.82	78.3	2.83	76.9	2.86	75.7	2.89	74.9	2.91
		44.1	88.4	2.81	86.6	2.82	84.9	2.83	83.3	2.85	82.2	2.86	81.2	2.88	79.8	2.90	78.5	2.94	77.7	2.96
		57.5	91.4	2.85	89.5	2.86	87.7	2.87	86.0	2.89	84.9	2.90	83.9	2.92	82.5	2.94	81.1	2.98	80.2	3.00
		70.8	92.9	2.86	91.0	2.87	89.2	2.89	87.5	2.90	86.4	2.92	85.3	2.93	83.8	2.96	82.4	2.99	81.6	3.02
	59	23.8	92.3	2.96	90.4	2.97	88.6	2.98	86.9	3.00	85.8	3.01	84.7	3.03	83.3	3.05	81.9	3.09	81.0	3.11
		33.9	96.8	3.02	94.8	3.03	92.9	3.05	91.1	3.06	90.0	3.08	88.9	3.10	87.3	3.12	85.9	3.16	85.0	3.18
		44.1	100.4	3.07	98.3	3.08	96.4	3.10	94.5	3.11	93.3	3.13	92.2	3.15	90.6	3.18	89.1	3.21	88.1	3.24
		57.5	103.7	3.11	101.6	3.12	99.5	3.14	97.6	3.16	96.4	3.17	95.2	3.19	93.6	3.22	92.0	3.25	91.1	3.28
		70.8	105.5	3.13	103.3	3.14	101.2	3.16	99.3	3.17	98.0	3.19	96.9	3.21	95.2	3.24	93.6	3.27	92.6	3.30
	68	23.8	92.3	2.73	90.4	2.74	88.6	2.75	86.9	2.77	85.8	2.78	84.7	2.80	83.3	2.82	81.9	2.85	81.0	2.88
		33.9	96.8	2.79	94.8	2.80	92.9	2.82	91.1	2.83	90.0	2.85	88.9	2.86	87.3	2.89	85.9	2.92	85.0	2.94
		44.1	100.4	2.84	98.3	2.85	96.4	2.86	94.5	2.88	93.3	2.89	92.2	2.91	90.6	2.93	89.1	2.97	88.1	2.99
		57.5	103.7	2.88	101.6	2.89	99.5	2.90	97.6	2.92	96.4	2.93	95.2	2.95	93.6	2.97	92.0	3.01	91.1	3.03
		70.8	105.5	2.89	103.3	2.90	101.2	2.92	99.3	2.93	98.0	2.95	96.9	2.96	95.2	2.99	93.6	3.02	92.6	3.05
	77	23.8	92.3	2.44	90.4	2.45	88.6	2.46	86.9	2.48	85.8	2.49	84.7	2.50	83.3	2.53	81.9	2.55	81.0	2.57
		33.9	96.8	2.50	94.8	2.51	92.9	2.52	91.1	2.53	90.0	2.55	88.9	2.56	87.3	2.58	85.9	2.61	85.0	2.63
		44.1	100.4	2.54	98.3	2.55	96.4	2.56	94.5	2.58	93.3	2.59	92.2	2.60	90.6	2.63	89.1	2.65	88.1	2.68
		57.5	103.7	2.58	101.6	2.58	99.5	2.60	97.6	2.61	96.4	2.62	95.2	2.64	93.6	2.66	92.0	2.69	91.1	2.71
		70.8	105.5	2.59	103.3	2.60	101.2	2.61	99.3	2.62	98.0	2.64	96.9	2.65	95.2	2.68	93.6	2.70	92.6	2.73
	86	23.8	92.3	2.14	90.4	2.15	88.6	2.16	86.9	2.17	85.8	2.18	84.7	2.19	83.3	2.21	81.9	2.23	81.0	2.25
		33.9	96.8	2.19	94.8	2.20	92.9	2.21	91.1	2.22	90.0	2.23	88.9	2.24	87.3	2.26	85.9	2.29	85.0	2.30
		44.1	100.4	2.22	98.3	2.23	96.4	2.24	94.5	2.25	93.3	2.26	92.2	2.28	90.6	2.30	89.1	2.32	88.1	2.34
		57.5	103.7	2.25	101.6	2.26	99.5	2.27	97.6	2.28	96.4	2.30	95.2	2.31	93.6	2.33	92.0	2.35	91.1	2.37
		70.8	105.5	2.27	103.3	2.27	101.2	2.28	99.3	2.30	98.0	2.31	96.9	2.32	95.2	2.34	93.6	2.37	92.6	2.39
	95	23.8	92.3	1.99	90.4	2.00	88.6	2.01	86.9	2.02	85.8	2.03	84.7	2.04	83.3	2.06	81.9	2.08	81.0	2.10
		33.9	96.8	2.04	94.8	2.04	92.9	2.05	91.1	2.06	90.0	2.07	88.9	2.09	87.3	2.10	85.9	2.13	85.0	2.14
		44.1	100.4	2.07	98.3	2.08	96.4	2.09	94.5	2.10	93.3	2.11	92.2	2.12	90.6	2.14	89.1	2.16	88.1	2.18
		57.5	103.7	2.10	101.6	2.11	99.5	2.11	97.6	2.13	96.4	2.14	95.2	2.15	93.6	2.17	92.0	2.19	91.1	2.21
		70.8	105.5	2.11	103.3	2.12	101.2	2.13	99.3	2.14	98.0	2.15	96.9	2.16	95.2	2.18	93.6	2.20	92.6	2.22
	104	23.8	92.3	1.92	90.4	1.93	88.6	1.94	86.9	1.95	85.8	1.96	84.7	1.97	83.3	1.98	81.9	2.01	81.0	2.02
		33.9	96.8	1.96	94.8	1.97	92.9	1.98	91.1	1.99	90.0	2.00	88.9	2.01	87.3	2.03	85.9	2.05	85.0	2.07
		44.1	100.4	2.00	98.3	2.00	96.4	2.01	94.5	2.02	93.3	2.03	92.2	2.04	90.6	2.06	89.1	2.09	88.1	2.10
		57.5	103.7	2.02	101.6	2.03	99.5	2.04	97.6	2.05	96.4	2.06	95.2	2.07	93.6	2.09	92.0	2.11	91.1	2.13
		70.8	105.5	2.04	103.3	2.04	101.2	2.05	99.3	2.06	98.0	2.07	96.9	2.08	95.2	2.10	93.6	2.13	92.6	2.14
	113	23.8	92.3	1.91	90.4	1.92	88.6	1.93	86.9	1.94	85.8	1.95	84.7	1.96	83.3	1.98	81.9	2.00	81.0	2.02
		33.9	96.8	1.96	94.8	1.96	92.9	1.97	91.1	1.98	90.0	1.99	88.9	2.00	87.3	2.02	85.9	2.04	85.0	2.06
		44.1	100.4	1.99	98.3	2.00	96.4	2.01	94.5	2.02	93.3	2.03	92.2	2.04	90.6	2.06	89.1	2.08	88.1	2.10
		57.5	103.7	2.02	101.6	2.02	99.5	2.03	97.6	2.04	96.4	2.05	95.2	2.06	93.6	2.08	92.0	2.11	91.1	2.12
		70.8	105.5	2.03	103.3	2.03	101.2	2.04	99.3	2.06	98.0	2.06	96.9	2.08	95.2	2.09	93.6	2.12	92.6	2.14

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	26.7	183.5	9.82	179.7	9.85	176.2	9.89	172.8	9.95	170.6	10.00	168.5	10.05	165.6	10.14	162.9	10.25	161.1	10.34
		38.8	192.9	10.05	189.0	10.08	185.2	10.13	181.6	10.19	179.4	10.24	177.2	10.29	174.1	10.39	171.2	10.50	169.4	10.58
		51.0	200.4	10.22	196.3	10.26	192.4	10.30	188.7	10.36	186.3	10.41	184.1	10.47	180.8	10.56	177.8	10.68	176.0	10.77
		65.3	206.7	10.35	202.4	10.39	198.4	10.43	194.6	10.50	192.1	10.54	189.8	10.60	186.5	10.70	183.4	10.82	181.5	10.90
		79.5	210.2	10.41	205.9	10.45	201.8	10.49	197.9	10.56	195.4	10.61	193.1	10.66	189.7	10.76	186.6	10.88	184.6	10.97
	59	26.7	216.4	11.15	212.0	11.18	207.7	11.23	203.7	11.30	201.2	11.35	198.8	11.41	195.3	11.52	192.1	11.64	190.0	11.74
		38.8	227.5	11.42	222.8	11.45	218.4	11.50	214.2	11.57	211.5	11.62	209.0	11.69	205.3	11.79	201.9	11.92	199.8	12.02
		51.0	236.3	11.61	231.5	11.65	226.8	11.70	222.5	11.77	219.7	11.82	217.0	11.89	213.3	12.00	209.7	12.13	207.5	12.23
		65.3	243.7	11.76	238.7	11.80	233.9	11.85	229.4	11.92	226.6	11.97	223.8	12.04	219.9	12.15	216.3	12.28	214.0	12.38
		79.5	247.9	11.83	242.8	11.87	237.9	11.92	233.4	11.99	230.5	12.04	227.7	12.11	223.7	12.22	220.0	12.35	217.7	12.45
	68	26.7	216.4	10.30	212.0	10.34	207.7	10.38	203.7	10.44	201.2	10.49	198.8	10.55	195.3	10.65	192.1	10.76	190.0	10.85
		38.8	227.5	10.55	222.8	10.58	218.4	10.63	214.2	10.69	211.5	10.74	209.0	10.80	205.3	10.90	201.9	11.02	199.8	11.11
		51.0	236.3	10.73	231.5	10.76	226.8	10.81	222.5	10.88	219.7	10.93	217.0	10.98	213.3	11.09	209.7	11.21	207.5	11.30
		65.3	243.7	10.87	238.7	10.90	233.9	10.95	229.4	11.02	226.6	11.07	223.8	11.13	219.9	11.23	216.3	11.35	214.0	11.44
		79.5	247.9	10.93	242.8	10.97	237.9	11.01	233.4	11.08	230.5	11.13	227.7	11.19	223.7	11.29	220.0	11.42	217.7	11.51
	77	26.7	216.4	9.22	212.0	9.25	207.7	9.29	203.7	9.34	201.2	9.39	198.8	9.44	195.3	9.53	192.1	9.63	190.0	9.71
		38.8	227.5	9.44	222.8	9.47	218.4	9.51	214.2	9.57	211.5	9.61	209.0	9.66	205.3	9.75	201.9	9.86	199.8	9.94
		51.0	236.3	9.60	231.5	9.63	226.8	9.68	222.5	9.73	219.7	9.78	217.0	9.83	213.3	9.92	209.7	10.03	207.5	10.11
		65.3	243.7	9.72	238.7	9.76	233.9	9.80	229.4	9.86	226.6	9.90	223.8	9.95	219.9	10.05	216.3	10.16	214.0	10.24
		79.5	247.9	9.78	242.8	9.81	237.9	9.86	233.4	9.91	230.5	9.96	227.7	10.01	223.7	10.10	220.0	10.22	217.7	10.30
	86	26.7	216.4	8.07	212.0	8.09	207.7	8.13	203.7	8.18	201.2	8.22	198.8	8.26	195.3	8.34	192.1	8.43	190.0	8.50
		38.8	227.5	8.26	222.8	8.29	218.4	8.33	214.2	8.37	211.5	8.41	209.0	8.46	205.3	8.54	201.9	8.63	199.8	8.70
		51.0	236.3	8.40	231.5	8.43	226.8	8.47	222.5	8.52	219.7	8.56	217.0	8.60	213.3	8.68	209.7	8.78	207.5	8.85
		65.3	243.7	8.51	238.7	8.54	233.9	8.58	229.4	8.63	226.6	8.67	223.8	8.71	219.9	8.79	216.3	8.89	214.0	8.96
		79.5	247.9	8.56	242.8	8.59	237.9	8.63	233.4	8.68	230.5	8.72	227.7	8.76	223.7	8.84	220.0	8.94	217.7	9.01
	95	26.7	216.4	7.51	212.0	7.53	207.7	7.57	203.7	7.61	201.2	7.65	198.8	7.69	195.3	7.76	192.1	7.84	190.0	7.91
		38.8	227.5	7.69	222.8	7.71	218.4	7.75	214.2	7.79	211.5	7.83	209.0	7.87	205.3	7.95	201.9	8.03	199.8	8.10
		51.0	236.3	7.82	231.5	7.85	226.8	7.88	222.5	7.93	219.7	7.96	217.0	8.01	213.3	8.08	209.7	8.17	207.5	8.24
		65.3	243.7	7.92	238.7	7.95	233.9	7.98	229.4	8.03	226.6	8.07	223.8	8.11	219.9	8.18	216.3	8.27	214.0	8.34
		79.5	247.9	7.97	242.8	7.99	237.9	8.03	233.4	8.08	230.5	8.11	227.7	8.16	223.7	8.23	220.0	8.32	217.7	8.39
	104	26.7	216.4	7.25	212.0	7.27	207.7	7.30	203.7	7.34	201.2	7.38	198.8	7.42	195.3	7.49	192.1	7.57	190.0	7.63
		38.8	227.5	7.42	222.8	7.44	218.4	7.48	214.2	7.52	211.5	7.55	209.0	7.59	205.3	7.67	201.9	7.75	199.8	7.81
		51.0	236.3	7.55	231.5	7.57	226.8	7.60	222.5	7.65	219.7	7.68	217.0	7.72	213.3	7.80	209.7	7.88	207.5	7.95
		65.3	243.7	7.64	238.7	7.67	233.9	7.70	229.4	7.75	226.6	7.78	223.8	7.82	219.9	7.90	216.3	7.98	214.0	8.05
		79.5	247.9	7.69	242.8	7.71	237.9	7.75	233.4	7.79	230.5	7.83	227.7	7.87	223.7	7.94	220.0	8.03	217.7	8.09
	113	26.7	216.4	7.22	212.0	7.24	207.7	7.27	203.7	7.32	201.2	7.35	198.8	7.39	195.3	7.46	192.1	7.54	190.0	7.60
		38.8	227.5	7.39	222.8	7.41	218.4	7.45	214.2	7.49	211.5	7.53	209.0	7.57	205.3	7.64	201.9	7.72	199.8	7.78
		51.0	236.3	7.52	231.5	7.54	226.8	7.58	222.5	7.62	219.7	7.66	217.0	7.70	213.3	7.77	209.7	7.85	207.5	7.92
		65.3	243.7	7.61	238.7	7.64	233.9	7.67	229.4	7.72	226.6	7.75	223.8	7.79	219.9	7.87	216.3	7.95	214.0	8.02
		79.5	247.9	7.66	242.8	7.68	237.9	7.72	233.4	7.76	230.5	7.80	227.7	7.84	223.7	7.91	220.0	8.00	217.7	8.06
120	50	26.7	181.7	10.01	178.0	10.04	174.4	10.09	171.1	10.14	169.0	10.19	166.9	10.25	164.0	10.34	161.3	10.45	159.6	10.54
		38.8	191.1	10.25	187.1	10.28	183.4	10.33	179.9	10.39	177.6	10.44	175.5	10.49	172.4	10.59	169.6	10.70	167.8	10.79
		51.0	198.5	10.42	194.4	10.46	190.5	10.50	186.8	10.57	184.5	10.61	182.3	10.67	179.1	10.77	176.1	10.89	174.3	10.98
		65.3	204.7	10.56	200.4	10.59	196.4	10.64	192.7	10.70	190.3	10.75	188.0	10.81	184.7	10.91	181.6	11.03	179.7	11.12
		79.5	208.2	10.62	203.9	10.65	199.8	10.70	196.0	10.76	193.5	10.81	191.2	10.87	187.9	10.97	184.7	11.09	182.8	11.18
	59	26.7	214.3	11.37	209.9	11.40	205.7	11.45	201.8	11.52	199.2	11.58	196.8	11.64	193.4	11.74	190.2	11.87	188.2	11.97
		38.8	225.3	11.64	220.7	11.68	216.3	11.73	212.1	11.80	209.5	11.85	206.9	11.91	203.3	12.03	200.0	12.16	197.8	12.26
		51.0	234.0	11.84	229.2	11.88	224.6	11.93	220.3	12.00	217.6	12.05	214.9	12.12	211.2	12.23	207.7	12.36	205.5	12.47
		65.3	241.3	11.99	236.4	12.03	231.7	12.08	227.2	12.15	224.4	12.21	221.6	12.27	217.8	12.39	214.2	12.52	211.9	12.63
		79.5	245.5	12.06	240.4	12.10	235.6	12.15	231.1	12.22	228.2	12.28	225.5	12.34	221.5	12.46	217.9	12.60	215.6	12.70
	68	26.7	214.3	10.50	209.9	10.54	205.7	10.59	201.8	10.65	199.2	10.70	196.8	10.75	193.4	10.85	190.2	10.97	188.2	11.06
		38.8	225.3	10.76	220.7	10.79	216.3	10.84	212.1	10.90	209.5	10.95	206.9	11.01	203.3	11.11	200.0	11.23	197.8	11.33
		51.0	234.0	10.94	229.2	10.98	224.6	11.02	220.3	11.10	217.6	11.14	214.9	11.20	211.2	11.30	207.7	11.43	205.5	11.52
		65.3	241.3	11.08	236.4	11.12	231.7	11.17	227.2	11.23	224.4	11.28	221.6	11.34	217.8	11.45	214.2	11.57	211.9	11.67
		79.5	245.5	11.14	240.4	11.18	235.6	11.23	231.1	11.30	228.2	11.35	225.5	11.41	221.5	11.51	217.9	11.64	215.6	11.74
	77	26.7	214.3	9.40	209.9	9.43	205.7	9.47	201.8	9.53	199.2	9.57	196.8	9.62	193.4	9.71	190.2	9.82	188.2	9.90
		38.8	225.3	9.62	220.7	9.66	216.3	9.70	212.1	9.76	209.5	9.80	206.9	9.85	203.3	9.94	200.0	10.05	197.8	10.13
		51.0	234.0	9.79	229.2	9.82	224.6	9.86	220.3	9.92	217.6	9.97	214.9	10.02	211.2	10.11	207.7	10.22	205.5	10.31
		65.3	241.3	9.91	236.4	9.95	231.7	9.99	227.2	10.05	224.4	10.10	221.6	10.15	217.8	10.24	214.2	10.36	211.9	10.44
		79.5	245.5	9.97	240.4	10.00	235.6	10.05	231.1	10.11	228.2	10.15	225.5	10.21	221.5	10.30	217.9	10.41	215.6	10.50
	86	26.7	214.3	8.23	209.9	8.25	205.7	8.29	201.8	8.34	199.2	8.38	196.8	8.42	193.4	8.50	190.2	8.59	188.2	8.66
		38.8	225.3	8.42	220.7	8.45	216.3	8.49	212.1	8.54	209.5	8.58	206.9	8.62	203.3	8.70	200.0	8.80	197.8	8.87
		51.0	234.0	8.57	229.2	8.60	224.6	8.63	220.3	8.68	217.6	8.72	214.9	8.77	211.2	8.85	207.7	8.95	205.5	9.02
		65.3	241.3	8.68	236.4	8.71	231.7	8.74	227.2	8.80	224.4	8.84	221.6	8.88	217.8	8.97	214.2	9.06	211.9	9.14
		79.5	245.5	8.73	240.4	8.76	235.6	8.79	231.1	8.85	228.2	8.89	225.5	8.93	221.5	9.02	217.9	9.12	215.6	9.19
	95	26.7	214.3	7.66	209.9	7.68	205.7	7.72	201.8	7.76	199.2	7.80	196.8	7.84	193.4	7.91	190.2	8.00	188.2	8.06
		38.8	225.3	7.84	220.7	7.87	216.3	7.90	212.1	7.95	209.5	7.98	206.9	8.03	203.3	8.10	200.0	8.19	197.8	8.26
		51.0	234.0	7.97	229.2	8.00	224.6	8.04	220.3	8.08	217.6	8.12	214.9	8.16	211.2	8.24	207.7	8.33	205.5	8.40
		65.3	241.3	8.08	236.4	8.10	231.7	8.14	227.2	8.19	224.4	8.22	221.6	8.27	217.8	8.34	214.2	8.44	211.9	8.51
		79.5	245.5	8.12	240.4	8.15	235.6	8.19	231.1	8.23	228.2	8.27	225.5	8.32	221.5	8.39	217.9	8.48	215.6	8.55
	104	26.7	214.3	7.39	209.9	7.41	205.7	7.44	201.8	7.49	199.2	7.52	196.8	7.56	193.4	7.63	190.2	7.72	188.2	7.78
		38.8	225.3	7.56	220.7	7.59	216.3	7.62	212.1	7.67	209.5	7.70	206.9	7.74	203.3	7.82	200.0	7.90	197.8	7.97
		51.0	234.0	7.69	229.2	7.72	224.6	7.75	220.3	7.80	217.6	7.83	214.9	7.88	211.2	7.95	207.7	8.04	205.5	8.10
		65.3	241.3	7.79	236.4	7.82	231.7	7.85	227.2	7.90	224.4	7.93	221.6	7.98	217.8	8.05	214.2	8.14	211.9	8.21
		79.5	245.5	7.84	240.4	7.86	235.6	7.90	231.1	7.94	228.2	7.98	225.5	8.02	221.5	8.10	217.9	8.19	215.6	8.25
	113	26.7	214.3	7.36	209.9	7.38	205.7	7.42	201.8	7.46	199.2	7.49	196.8	7.53	193.4	7.60	190.2	7.69	188.2	7.75
		38.8	225.3	7.54	220.7	7.56	216.3	7.59	212.1	7.64	209.5	7.67	206.9	7.71	203.3	7.79	200.0	7.87	197.8	7.94
		51.0	234.0	7.66	229.2	7.69	224.6	7.72	220.3	7.77	217.6	7.80	214.9	7.85	211.2	7.92	207.7	8.01	205.5	8.07
		65.3	241.3	7.76	236.4	7.79	231.7	7.82	227.2	7.87	224.4	7.90	221.6	7.95	217.8	8.02	214.2	8.11	211.9	8.17
		79.5	245.5	7.81	240.4	7.83	235.6	7.87	231.1	7.91	228.2	7.95	225.5	7.99	221.5	8.07	217.9	8.15	215.6	8.22

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	26.7	180.0	10.29	176.3	10.32	172.7	10.37	169.4	10.43	167.3	10.48	165.3	10.53	162.4	10.63	159.7	10.75	158.0	10.83
		38.8	189.2	10.53	185.3	10.57	181.6	10.62	178.1	10.68	175.9	10.73	173.8	10.78	170.7	10.88	167.9	11.00	166.1	11.09
		51.0	196.5	10.71	192.5	10.75	188.6	10.80	185.0	10.86	182.7	10.91	180.5	10.97	177.3	11.07	174.4	11.19	172.6	11.28
		65.3	202.6	10.85	198.5	10.89	194.5	10.94	190.8	11.00	188.4	11.05	186.1	11.11	182.9	11.21	179.8	11.33	177.9	11.43
		79.5	206.1	10.91	201.9	10.95	197.9	11.00	194.1	11.06	191.6	11.11	189.3	11.17	186.0	11.28	182.9	11.40	181.0	11.49
	59	26.7	212.2	11.68	207.8	11.72	203.7	11.77	199.8	11.84	197.3	11.90	194.9	11.96	191.5	12.07	188.3	12.20	186.3	12.30
		38.8	223.1	11.96	218.5	12.00	214.2	12.06	210.0	12.13	207.4	12.18	204.9	12.25	201.3	12.36	198.0	12.50	195.9	12.60
		51.0	231.7	12.17	227.0	12.21	222.4	12.26	218.2	12.33	215.4	12.39	212.8	12.46	209.1	12.57	205.7	12.71	203.5	12.81
		65.3	239.0	12.32	234.0	12.36	229.4	12.42	225.0	12.49	222.2	12.55	219.5	12.62	215.6	12.73	212.1	12.87	209.8	12.98
		79.5	243.1	12.40	238.1	12.44	233.3	12.49	228.8	12.56	226.0	12.62	223.2	12.69	219.4	12.81	215.7	12.95	213.4	13.05
	68	26.7	212.2	10.80	207.8	10.83	203.7	10.88	199.8	10.94	197.3	11.00	194.9	11.05	191.5	11.16	188.3	11.28	186.3	11.37
		38.8	223.1	11.06	218.5	11.09	214.2	11.14	210.0	11.21	207.4	11.26	204.9	11.32	201.3	11.42	198.0	11.55	195.9	11.64
		51.0	231.7	11.24	227.0	11.28	222.4	11.33	218.2	11.40	215.4	11.45	212.8	11.51	209.1	11.62	205.7	11.74	203.5	11.84
		65.3	239.0	11.39	234.0	11.43	229.4	11.48	225.0	11.54	222.2	11.60	219.5	11.66	215.6	11.77	212.1	11.90	209.8	11.99
		79.5	243.1	11.45	238.1	11.49	233.3	11.54	228.8	11.61	226.0	11.66	223.2	11.73	219.4	11.84	215.7	11.96	213.4	12.06
	77	26.7	212.2	9.66	207.8	9.69	203.7	9.74	199.8	9.79	197.3	9.84	194.9	9.89	191.5	9.98	188.3	10.09	186.3	10.17
		38.8	223.1	9.89	218.5	9.92	214.2	9.97	210.0	10.03	207.4	10.07	204.9	10.13	201.3	10.22	198.0	10.33	195.9	10.42
		51.0	231.7	10.06	227.0	10.09	222.4	10.14	218.2	10.20	215.4	10.25	212.8	10.30	209.1	10.40	205.7	10.51	203.5	10.60
		65.3	239.0	10.19	234.0	10.22	229.4	10.27	225.0	10.33	222.2	10.38	219.5	10.43	215.6	10.53	212.1	10.64	209.8	10.73
		79.5	243.1	10.25	238.1	10.28	233.3	10.33	228.8	10.39	226.0	10.44	223.2	10.49	219.4	10.59	215.7	10.71	213.4	10.79
	86	26.7	212.2	8.46	207.8	8.48	203.7	8.52	199.8	8.57	197.3	8.61	194.9	8.66	191.5	8.74	188.3	8.83	186.3	8.90
		38.8	223.1	8.66	218.5	8.69	214.2	8.73	210.0	8.78	207.4	8.82	204.9	8.86	201.3	8.95	198.0	9.04	195.9	9.12
		51.0	231.7	8.81	227.0	8.83	222.4	8.87	218.2	8.93	215.4	8.97	212.8	9.02	209.1	9.10	205.7	9.20	203.5	9.27
		65.3	239.0	8.92	234.0	8.95	229.4	8.99	225.0	9.04	222.2	9.08	219.5	9.13	215.6	9.22	212.1	9.32	209.8	9.39
		79.5	243.1	8.97	238.1	9.00	233.3	9.04	228.8	9.09	226.0	9.13	223.2	9.18	219.4	9.27	215.7	9.37	213.4	9.45
	95	26.7	212.2	7.87	207.8	7.90	203.7	7.93	199.8	7.98	197.3	8.01	194.9	8.06	191.5	8.13	188.3	8.22	186.3	8.29
		38.8	223.1	8.06	218.5	8.08	214.2	8.12	210.0	8.17	207.4	8.21	204.9	8.25	201.3	8.33	198.0	8.42	195.9	8.49
		51.0	231.7	8.20	227.0	8.22	222.4	8.26	218.2	8.31	215.4	8.35	212.8	8.39	209.1	8.47	205.7	8.56	203.5	8.63
		65.3	239.0	8.30	234.0	8.33	229.4	8.37	225.0	8.41	222.2	8.45	219.5	8.50	215.6	8.58	212.1	8.67	209.8	8.74
		79.5	243.1	8.35	238.1	8.38	233.3	8.41	228.8	8.46	226.0	8.50	223.2	8.55	219.4	8.63	215.7	8.72	213.4	8.79
	104	26.7	212.2	7.59	207.8	7.62	203.7	7.65	199.8	7.70	197.3	7.73	194.9	7.77	191.5	7.85	188.3	7.93	186.3	8.00
		38.8	223.1	7.77	218.5	7.80	214.2	7.83	210.0	7.88	207.4	7.92	204.9	7.96	201.3	8.03	198.0	8.12	195.9	8.19
		51.0	231.7	7.91	227.0	7.93	222.4	7.97	218.2	8.02	215.4	8.05	212.8	8.10	209.1	8.17	205.7	8.26	203.5	8.33
		65.3	239.0	8.01	234.0	8.04	229.4	8.07	225.0	8.12	222.2	8.16	219.5	8.20	215.6	8.28	212.1	8.37	209.8	8.43
		79.5	243.1	8.06	238.1	8.08	233.3	8.12	228.8	8.16	226.0	8.20	223.2	8.25	219.4	8.32	215.7	8.41	213.4	8.48
	113	26.7	212.2	7.56	207.8	7.59	203.7	7.62	199.8	7.67	197.3	7.70	194.9	7.74	191.5	7.82	188.3	7.90	186.3	7.97
		38.8	223.1	7.75	218.5	7.77	214.2	7.81	210.0	7.85	207.4	7.89	204.9	7.93	201.3	8.00	198.0	8.09	195.9	8.16
		51.0	231.7	7.88	227.0	7.90	222.4	7.94	218.2	7.99	215.4	8.02	212.8	8.07	209.1	8.14	205.7	8.23	203.5	8.30
		65.3	239.0	7.98	234.0	8.00	229.4	8.04	225.0	8.09	222.2	8.13	219.5	8.17	215.6	8.24	212.1	8.33	209.8	8.40
		79.5	243.1	8.03	238.1	8.05	233.3	8.09	228.8	8.13	226.0	8.17	223.2	8.22	219.4	8.29	215.7	8.38	213.4	8.45
100	50	26.7	178.2	10.67	174.5	10.71	171.0	10.75	167.7	10.82	165.6	10.87	163.6	10.92	160.8	11.03	158.1	11.15	156.4	11.24
		38.8	187.3	10.93	183.5	10.96	179.8	11.01	176.3	11.07	174.2	11.13	172.0	11.19	169.0	11.29	166.2	11.41	164.5	11.51
		51.0	194.6	11.11	190.6	11.15	186.8	11.20	183.2	11.26	180.9	11.32	178.7	11.38	175.6	11.48	172.7	11.61	170.8	11.70
		65.3	200.6	11.26	196.5	11.29	192.6	11.34	188.9	11.41	186.5	11.46	184.3	11.52	181.1	11.63	178.1	11.76	176.2	11.85
		79.5	204.1	11.32	199.9	11.36	195.9	11.41	192.1	11.47	189.7	11.53	187.4	11.59	184.2	11.70	181.1	11.82	179.2	11.92
	59	26.7	210.1	12.12	205.8	12.16	201.7	12.21	197.8	12.28	195.3	12.34	193.0	12.41	189.6	12.52	186.5	12.66	184.5	12.76
		38.8	220.9	12.41	216.4	12.45	212.0	12.50	208.0	12.58	205.4	12.64	202.9	12.70	199.3	12.82	196.0	12.96	194.0	13.07
		51.0	229.4	12.62	224.7	12.66	220.2	12.72	216.0	12.79	213.3	12.85	210.7	12.92	207.1	13.04	203.6	13.18	201.5	13.29
		65.3	236.6	12.78	231.7	12.82	227.1	12.88	222.7	12.96	220.0	13.02	217.3	13.09	213.5	13.21	210.0	13.35	207.8	13.46
		79.5	240.7	12.86	235.7	12.90	231.0	12.96	226.6	13.03	223.7	13.09	221.0	13.16	217.2	13.28	213.6	13.43	211.3	13.54
	68	26.7	210.1	11.20	205.8	11.24	201.7	11.29	197.8	11.35	195.3	11.40	193.0	11.46	189.6	11.57	186.5	11.70	184.5	11.79
		38.8	220.9	11.47	216.4	11.50	212.0	11.56	208.0	11.62	205.4	11.68	202.9	11.74	199.3	11.85	196.0	11.98	194.0	12.08
		51.0	229.4	11.66	224.7	11.70	220.2	11.75	216.0	11.83	213.3	11.88	210.7	11.94	207.1	12.05	203.6	12.18	201.5	12.28
		65.3	236.6	11.81	231.7	11.85	227.1	11.90	222.7	11.97	220.0	12.03	217.3	12.09	213.5	12.21	210.0	12.34	207.8	12.44
		79.5	240.7	11.88	235.7	11.92	231.0	11.97	226.6	12.04	223.7	12.10	221.0	12.16	217.2	12.28	213.6	12.41	211.3	12.51
	77	26.7	210.1	10.02	205.8	10.05	201.7	10.10	197.8	10.16	195.3	10.20	193.0	10.26	189.6	10.35	186.5	10.47	184.5	10.55
		38.8	220.9	10.26	216.4	10.29	212.0	10.34	208.0	10.40	205.4	10.45	202.9	10.50	199.3	10.60	196.0	10.72	194.0	10.80
		51.0	229.4	10.44	224.7	10.47	220.2	10.52	216.0	10.58	213.3	10.63	210.7	10.68	207.1	10.78	203.6	10.90	201.5	10.99
		65.3	236.6	10.57	231.7	10.60	227.1	10.65	222.7	10.71	220.0	10.76	217.3	10.82	213.5	10.92	210.0	11.04	207.8	11.13
		79.5	240.7	10.63	235.7	10.67	231.0	10.71	226.6	10.78	223.7	10.83	221.0	10.88	217.2	10.98	213.6	11.10	211.3	11.19
	86	26.7	210.1	8.77	205.8	8.80	201.7	8.84	197.8	8.89	195.3	8.93	193.0	8.98	189.6	9.06	186.5	9.16	184.5	9.24
		38.8	220.9	8.98	216.4	9.01	212.0	9.05	208.0	9.10	205.4	9.14	202.9	9.19	199.3	9.28	196.0	9.38	194.0	9.46
		51.0	229.4	9.13	224.7	9.16	220.2	9.20	216.0	9.26	213.3	9.30	210.7	9.35	207.1	9.44	203.6	9.54	201.5	9.62
		65.3	236.6	9.25	231.7	9.28	227.1	9.32	222.7	9.38	220.0	9.42	217.3	9.47	213.5	9.56	210.0	9.66	207.8	9.74
		79.5	240.7	9.30	235.7	9.33	231.0	9.38	226.6	9.43	223.7	9.47	221.0	9.53	217.2	9.61	213.6	9.72	211.3	9.80
	95	26.7	210.1	8.16	205.8	8.19	201.7	8.23	197.8	8.27	195.3	8.31	193.0	8.36	189.6	8.43	186.5	8.53	184.5	8.60
		38.8	220.9	8.36	216.4	8.39	212.0	8.42	208.0	8.47	205.4	8.51	202.9	8.56	199.3	8.64	196.0	8.73	194.0	8.80
		51.0	229.4	8.50	224.7	8.53	220.2	8.57	216.0	8.62	213.3	8.66	210.7	8.70	207.1	8.78	203.6	8.88	201.5	8.95
		65.3	236.6	8.61	231.7	8.64	227.1	8.68	222.7	8.73	220.0	8.77	217.3	8.82	213.5	8.90	210.0	8.99	207.8	9.07
		79.5	240.7	8.66	235.7	8.69	231.0	8.73	226.6	8.78	223.7	8.82	221.0	8.87	217.2	8.95	213.6	9.05	211.3	9.12
	104	26.7	210.1	7.88	205.8	7.90	201.7	7.94	197.8	7.98	195.3	8.02	193.0	8.06	189.6	8.14	186.5	8.23	184.5	8.29
		38.8	220.9	8.06	216.4	8.09	212.0	8.13	208.0	8.17	205.4	8.21	202.9	8.26	199.3	8.33	196.0	8.42	194.0	8.49
		51.0	229.4	8.20	224.7	8.23	220.2	8.27	216.0	8.31	213.3	8.35	210.7	8.40	207.1	8.47	203.6	8.57	201.5	8.64
		65.3	236.6	8.31	231.7	8.33	227.1	8.37	222.7	8.42	220.0	8.46	217.3	8.50	213.5	8.58	210.0	8.68	207.8	8.75
		79.5	240.7	8.36	235.7	8.38	231.0	8.42	226.6	8.47	223.7	8.51	221.0	8.55	217.2	8.63	213.6	8.73	211.3	8.80
	113	26.7	210.1	7.85	205.8	7.87	201.7	7.91	197.8	7.95	195.3	7.99	193.0	8.03	189.6	8.11	186.5	8.20	184.5	8.26
		38.8	220.9	8.03	216.4	8.06	212.0	8.10	208.0	8.14	205.4	8.18	202.9	8.22	199.3	8.30	196.0	8.39	194.0	8.46
		51.0	229.4	8.17	224.7	8.20	220.2	8.23	216.0	8.28	213.3	8.32	210.7	8.37	207.1	8.44	203.6	8.53	201.5	8.60
		65.3	236.6	8.28	231.7	8.30	227.1	8.34	222.7	8.39	220.0	8.43	217.3	8.47	213.5	8.55	210.0	8.64	207.8	8.72
		79.5	240.7	8.32	235.7	8.35	231.0	8.39	226.6	8.44	223.7	8.48	221.0	8.52	217.2	8.60	213.6	8.69	211.3	8.77

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	26.7	160.4	9.25	157.1	9.28	153.9	9.32	151.0	9.38	149.1	9.42	147.3	9.47	144.7	9.56	142.3	9.66	140.8	9.74
		38.8	168.6	9.47	165.1	9.50	161.8	9.55	158.7	9.60	156.7	9.65	154.8	9.70	152.1	9.79	149.6	9.89	148.0	9.97
		51.0	175.1	9.63	171.5	9.67	168.1	9.71	164.9	9.77	162.8	9.81	160.8	9.86	158.0	9.95	155.4	10.06	153.8	10.15
		65.3	180.6	9.76	176.9	9.79	173.3	9.83	170.0	9.89	167.9	9.94	165.8	9.99	163.0	10.08	160.3	10.19	158.6	10.28
		79.5	183.7	9.81	179.9	9.85	176.3	9.89	172.9	9.95	170.8	9.99	168.7	10.05	165.8	10.14	163.0	10.25	161.3	10.33
	59	26.7	189.1	10.51	185.2	10.54	181.5	10.59	178.0	10.65	175.8	10.70	173.7	10.76	170.6	10.86	167.8	10.97	166.0	11.06
		38.8	198.8	10.76	194.7	10.79	190.8	10.84	187.2	10.90	184.8	10.95	182.6	11.01	179.4	11.12	176.4	11.24	174.6	11.33
		51.0	206.5	10.94	202.2	10.98	198.2	11.03	194.4	11.09	192.0	11.14	189.7	11.20	186.3	11.31	183.3	11.43	181.3	11.52
		65.3	212.9	11.08	208.6	11.12	204.4	11.17	200.5	11.23	198.0	11.29	195.6	11.35	192.2	11.45	189.0	11.58	187.0	11.67
		79.5	216.6	11.15	212.1	11.18	207.9	11.23	203.9	11.30	201.4	11.35	198.9	11.41	195.5	11.52	192.2	11.64	190.2	11.74
	68	26.7	189.1	9.71	185.2	9.74	181.5	9.78	178.0	9.84	175.8	9.89	173.7	9.94	170.6	10.03	167.8	10.14	166.0	10.22
		38.8	198.8	9.94	194.7	9.97	190.8	10.02	187.2	10.08	184.8	10.12	182.6	10.18	179.4	10.27	176.4	10.38	174.6	10.47
		51.0	206.5	10.11	202.2	10.14	198.2	10.19	194.4	10.26	192.0	10.30	189.7	10.35	186.3	10.45	183.3	10.56	181.3	10.65
		65.3	212.9	10.24	208.6	10.27	204.4	10.32	200.5	10.38	198.0	10.43	195.6	10.48	192.2	10.58	189.0	10.70	187.0	10.78
		79.5	216.6	10.30	212.1	10.33	207.9	10.38	203.9	10.44	201.4	10.49	198.9	10.54	195.5	10.64	192.2	10.76	190.2	10.85
	77	26.7	189.1	8.69	185.2	8.72	181.5	8.76	178.0	8.81	175.8	8.85	173.7	8.89	170.6	8.98	167.8	9.07	166.0	9.15
		38.8	198.8	8.90	194.7	8.92	190.8	8.96	187.2	9.02	184.8	9.06	182.6	9.11	179.4	9.19	176.4	9.29	174.6	9.37
		51.0	206.5	9.05	202.2	9.08	198.2	9.12	194.4	9.17	192.0	9.21	189.7	9.26	186.3	9.35	183.3	9.45	181.3	9.53
		65.3	212.9	9.16	208.6	9.19	204.4	9.23	200.5	9.29	198.0	9.33	195.6	9.38	192.2	9.47	189.0	9.57	187.0	9.65
		79.5	216.6	9.22	212.1	9.25	207.9	9.29	203.9	9.34	201.4	9.39	198.9	9.44	195.5	9.52	192.2	9.63	190.2	9.71
	86	26.7	189.1	7.60	185.2	7.63	181.5	7.66	178.0	7.71	175.8	7.74	173.7	7.78	170.6	7.86	167.8	7.94	166.0	8.01
		38.8	198.8	7.79	194.7	7.81	190.8	7.85	187.2	7.89	184.8	7.93	182.6	7.97	179.4	8.04	176.4	8.13	174.6	8.20
		51.0	206.5	7.92	202.2	7.94	198.2	7.98	194.4	8.03	192.0	8.06	189.7	8.11	186.3	8.18	183.3	8.27	181.3	8.34
		65.3	212.9	8.02	208.6	8.05	204.4	8.08	200.5	8.13	198.0	8.17	195.6	8.21	192.2	8.29	189.0	8.38	187.0	8.45
		79.5	216.6	8.07	212.1	8.09	207.9	8.13	203.9	8.18	201.4	8.21	198.9	8.26	195.5	8.33	192.2	8.43	190.2	8.49
	95	26.7	189.1	7.08	185.2	7.10	181.5	7.13	178.0	7.17	175.8	7.21	173.7	7.25	170.6	7.31	167.8	7.39	166.0	7.45
		38.8	198.8	7.25	194.7	7.27	190.8	7.30	187.2	7.35	184.8	7.38	182.6	7.42	179.4	7.49	176.4	7.57	174.6	7.63
		51.0	206.5	7.37	202.2	7.39	198.2	7.43	194.4	7.47	192.0	7.51	189.7	7.55	186.3	7.62	183.3	7.70	181.3	7.76
		65.3	212.9	7.47	208.6	7.49	204.4	7.52	200.5	7.57	198.0	7.60	195.6	7.64	192.2	7.71	189.0	7.80	187.0	7.86
		79.5	216.6	7.51	212.1	7.53	207.9	7.57	203.9	7.61	201.4	7.65	198.9	7.69	195.5	7.76	192.2	7.84	190.2	7.91
	104	26.7	189.1	6.83	185.2	6.85	181.5	6.88	178.0	6.92	175.8	6.95	173.7	6.99	170.6	7.05	167.8	7.13	166.0	7.19
		38.8	198.8	6.99	194.7	7.01	190.8	7.05	187.2	7.09	184.8	7.12	182.6	7.16	179.4	7.22	176.4	7.30	174.6	7.36
		51.0	206.5	7.11	202.2	7.13	198.2	7.17	194.4	7.21	192.0	7.24	189.7	7.28	186.3	7.35	183.3	7.43	181.3	7.49
		65.3	212.9	7.20	208.6	7.23	204.4	7.26	200.5	7.30	198.0	7.33	195.6	7.37	192.2	7.44	189.0	7.52	187.0	7.58
		79.5	216.6	7.24	212.1	7.27	207.9	7.30	203.9	7.34	201.4	7.38	198.9	7.42	195.5	7.48	192.2	7.57	190.2	7.63
	113	26.7	189.1	6.80	185.2	6.82	181.5	6.86	178.0	6.89	175.8	6.93	173.7	6.96	170.6	7.03	167.8	7.11	166.0	7.16
		38.8	198.8	6.97	194.7	6.99	190.8	7.02	187.2	7.06	184.8	7.09	182.6	7.13	179.4	7.20	176.4	7.27	174.6	7.33
		51.0	206.5	7.08	202.2	7.11	198.2	7.14	194.4	7.18	192.0	7.21	189.7	7.25	186.3	7.32	183.3	7.40	181.3	7.46
		65.3	212.9	7.18	208.6	7.20	204.4	7.23	200.5	7.27	198.0	7.31	195.6	7.35	192.2	7.41	189.0	7.49	187.0	7.56
		79.5	216.6	7.22	212.1	7.24	207.9	7.27	203.9	7.31	201.4	7.35	198.9	7.39	195.5	7.46	192.2	7.54	190.2	7.60
80	50	26.7	142.5	7.56	139.6	7.58	136.8	7.61	134.2	7.66	132.5	7.69	130.9	7.74	128.6	7.81	126.5	7.89	125.2	7.96
		38.8	149.9	7.74	146.8	7.76	143.8	7.80	141.1	7.84	139.3	7.88	137.6	7.92	135.2	7.99	133.0	8.08	131.6	8.15
		51.0	155.7	7.87	152.4	7.89	149.4	7.93	146.5	7.98	144.7	8.01	143.0	8.06	140.5	8.13	138.1	8.22	136.7	8.29
		65.3	160.5	7.97	157.2	8.00	154.1	8.03	151.1	8.08	149.2	8.12	147.4	8.16	144.8	8.23	142.4	8.32	140.9	8.39
		79.5	163.3	8.02	159.9	8.04	156.7	8.08	153.7	8.13	151.8	8.16	150.0	8.21	147.3	8.28	144.9	8.37	143.4	8.44
	59	26.7	168.1	8.58	164.6	8.61	161.3	8.65	158.2	8.70	156.3	8.74	154.4	8.79	151.7	8.87	149.2	8.96	147.6	9.04
		38.8	176.7	8.79	173.1	8.82	169.6	8.85	166.4	8.91	164.3	8.95	162.3	9.00	159.5	9.08	156.8	9.18	155.2	9.25
		51.0	183.6	8.94	179.8	8.97	176.2	9.01	172.8	9.06	170.6	9.10	168.6	9.15	165.6	9.23	162.9	9.33	161.2	9.41
		65.3	189.3	9.05	185.4	9.08	181.7	9.12	178.2	9.17	176.0	9.22	173.8	9.27	170.8	9.35	168.0	9.45	166.2	9.53
		79.5	192.5	9.10	188.6	9.13	184.8	9.17	181.3	9.23	179.0	9.27	176.8	9.32	173.7	9.41	170.9	9.51	169.1	9.59
	68	26.7	168.1	7.93	164.6	7.96	161.3	7.99	158.2	8.04	156.3	8.08	154.4	8.12	151.7	8.19	149.2	8.28	147.6	8.35
		38.8	176.7	8.12	173.1	8.15	169.6	8.18	166.4	8.23	164.3	8.27	162.3	8.31	159.5	8.39	156.8	8.48	155.2	8.55
		51.0	183.6	8.26	179.8	8.29	176.2	8.32	172.8	8.38	170.6	8.41	168.6	8.46	165.6	8.53	162.9	8.63	161.2	8.70
		65.3	189.3	8.37	185.4	8.39	181.7	8.43	178.2	8.48	176.0	8.52	173.8	8.56	170.8	8.64	168.0	8.74	166.2	8.81
		79.5	192.5	8.41	188.6	8.44	184.8	8.48	181.3	8.53	179.0	8.57	176.8	8.61	173.7	8.69	170.9	8.79	169.1	8.86
	77	26.7	168.1	7.10	164.6	7.12	161.3	7.15	158.2	7.19	156.3	7.23	154.4	7.26	151.7	7.33	149.2	7.41	147.6	7.47
		38.8	176.7	7.27	173.1	7.29	169.6	7.32	166.4	7.36	164.3	7.40	162.3	7.44	159.5	7.51	156.8	7.59	155.2	7.65
		51.0	183.6	7.39	179.8	7.41	176.2	7.45	172.8	7.49	170.6	7.53	168.6	7.57	165.6	7.64	162.9	7.72	161.2	7.78
		65.3	189.3	7.48	185.4	7.51	181.7	7.54	178.2	7.59	176.0	7.62	173.8	7.66	170.8	7.73	168.0	7.82	166.2	7.88
		79.5	192.5	7.53	188.6	7.55	184.8	7.59	181.3	7.63	179.0	7.67	176.8	7.71	173.7	7.78	170.9	7.86	169.1	7.93
	86	26.7	168.1	6.21	164.6	6.23	161.3	6.26	158.2	6.30	156.3	6.32	154.4	6.36	151.7	6.42	149.2	6.49	147.6	6.54
		38.8	176.7	6.36	173.1	6.38	169.6	6.41	166.4	6.45	164.3	6.48	162.3	6.51	159.5	6.57	156.8	6.64	155.2	6.70
		51.0	183.6	6.47	179.8	6.49	176.2	6.52	172.8	6.56	170.6	6.59	168.6	6.62	165.6	6.68	162.9	6.76	161.2	6.81
		65.3	189.3	6.55	185.4	6.57	181.7	6.60	178.2	6.64	176.0	6.67	173.8	6.71	170.8	6.77	168.0	6.84	166.2	6.90
		79.5	192.5	6.59	188.6	6.61	184.8	6.64	181.3	6.68	179.0	6.71	176.8	6.75	173.7	6.81	170.9	6.88	169.1	6.94
	95	26.7	168.1	5.78	164.6	5.80	161.3	5.83	158.2	5.86	156.3	5.89	154.4	5.92	151.7	5.97	149.2	6.04	147.6	6.09
		38.8	176.7	5.92	173.1	5.94	169.6	5.96	166.4	6.00	164.3	6.03	162.3	6.06	159.5	6.12	156.8	6.18	155.2	6.23
		51.0	183.6	6.02	179.8	6.04	176.2	6.07	172.8	6.10	170.6	6.13	168.6	6.16	165.6	6.22	162.9	6.29	161.2	6.34
		65.3	189.3	6.10	185.4	6.12	181.7	6.14	178.2	6.18	176.0	6.21	173.8	6.24	170.8	6.30	168.0	6.37	166.2	6.42
		79.5	192.5	6.13	188.6	6.15	184.8	6.18	181.3	6.22	179.0	6.25	176.8	6.28	173.7	6.34	170.9	6.41	169.1	6.46
	104	26.7	168.1	5.58	164.6	5.60	161.3	5.62	158.2	5.65	156.3	5.68	154.4	5.71	151.7	5.76	149.2	5.83	147.6	5.87
		38.8	176.7	5.71	173.1	5.73	169.6	5.75	166.4	5.79	164.3	5.81	162.3	5.85	159.5	5.90	156.8	5.96	155.2	6.01
		51.0	183.6	5.81	179.8	5.83	176.2	5.85	172.8	5.89	170.6	5.91	168.6	5.95	165.6	6.00	162.9	6.07	161.2	6.12
		65.3	189.3	5.88	185.4	5.90	181.7	5.93	178.2	5.96	176.0	5.99	173.8	6.02	170.8	6.08	168.0	6.14	166.2	6.19
		79.5	192.5	5.92	188.6	5.94	184.8	5.96	181.3	6.00	179.0	6.02	176.8	6.06	173.7	6.11	170.9	6.18	169.1	6.23
	113	26.7	168.1	5.56	164.6	5.57	161.3	5.60	158.2	5.63	156.3	5.66	154.4	5.69	151.7	5.74	149.2	5.80	147.6	5.85
		38.8	176.7	5.69	173.1	5.71	169.6	5.73	166.4	5.77	164.3	5.79	162.3	5.82	159.5	5.88	156.8	5.94	155.2	5.99
		51.0	183.6	5.79	179.8	5.81	176.2	5.83	172.8	5.87	170.6	5.89	168.6	5.92	165.6	5.98	162.9	6.04	161.2	6.09
		65.3	189.3	5.86	185.4	5.88	181.7	5.91	178.2	5.94	176.0	5.97	173.8	6.00	170.8	6.06	168.0	6.12	166.2	6.17
		79.5	192.5	5.89	188.6	5.91	184.8	5.94	181.3	5.97	179.0	6.00	176.8	6.03	173.7	6.09	170.9	6.16	169.1	6.21

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	26.7	124.7	5.84	122.2	5.86	119.7	5.88	117.4	5.92	116.0	5.95	114.5	5.98	112.6	6.03	110.7	6.10	109.5	6.15
		38.8	131.1	5.98	128.4	6.00	125.9	6.03	123.4	6.06	121.9	6.09	120.4	6.12	118.3	6.18	116.4	6.25	115.1	6.30
		51.0	136.2	6.08	133.4	6.10	130.7	6.13	128.2	6.16	126.6	6.19	125.1	6.23	122.9	6.28	120.9	6.35	119.6	6.40
		65.3	140.4	6.16	137.6	6.18	134.8	6.21	132.2	6.24	130.6	6.27	129.0	6.31	126.7	6.36	124.6	6.43	123.3	6.49
		79.5	142.9	6.19	139.9	6.21	137.1	6.24	134.5	6.28	132.8	6.31	131.2	6.34	128.9	6.40	126.8	6.47	125.4	6.52
	59	26.7	147.1	6.63	144.1	6.65	141.2	6.68	138.5	6.72	136.7	6.75	135.1	6.79	132.7	6.85	130.5	6.93	129.1	6.98
		38.8	154.6	6.79	151.4	6.81	148.4	6.84	145.6	6.88	143.8	6.91	142.0	6.95	139.5	7.02	137.2	7.09	135.8	7.15
		51.0	160.6	6.91	157.3	6.93	154.2	6.96	151.2	7.00	149.3	7.03	147.5	7.07	144.9	7.14	142.5	7.21	141.0	7.27
		65.3	165.6	7.00	162.2	7.02	159.0	7.05	155.9	7.09	154.0	7.12	152.1	7.16	149.5	7.23	147.0	7.31	145.4	7.37
		79.5	168.5	7.04	165.0	7.06	161.7	7.09	158.6	7.13	156.6	7.16	154.7	7.20	152.0	7.27	149.5	7.35	147.9	7.41
	68	26.7	147.1	6.13	144.1	6.15	141.2	6.18	138.5	6.21	136.7	6.24	135.1	6.27	132.7	6.33	130.5	6.40	129.1	6.45
		38.8	154.6	6.28	151.4	6.30	148.4	6.32	145.6	6.36	143.8	6.39	142.0	6.42	139.5	6.48	137.2	6.55	135.8	6.61
		51.0	160.6	6.38	157.3	6.40	154.2	6.43	151.2	6.47	149.3	6.50	147.5	6.53	144.9	6.59	142.5	6.67	141.0	6.72
		65.3	165.6	6.46	162.2	6.49	159.0	6.51	155.9	6.55	154.0	6.58	152.1	6.62	149.5	6.68	147.0	6.75	145.4	6.81
		79.5	168.5	6.50	165.0	6.52	161.7	6.55	158.6	6.59	156.6	6.62	154.7	6.66	152.0	6.72	149.5	6.79	147.9	6.85
	77	26.7	147.1	5.48	144.1	5.50	141.2	5.53	138.5	5.56	136.7	5.58	135.1	5.61	132.7	5.67	130.5	5.73	129.1	5.77
		38.8	154.6	5.62	151.4	5.63	148.4	5.66	145.6	5.69	143.8	5.72	142.0	5.75	139.5	5.80	137.2	5.86	135.8	5.91
		51.0	160.6	5.71	157.3	5.73	154.2	5.76	151.2	5.79	149.3	5.82	147.5	5.85	144.9	5.90	142.5	5.97	141.0	6.01
		65.3	165.6	5.78	162.2	5.80	159.0	5.83	155.9	5.86	154.0	5.89	152.1	5.92	149.5	5.98	147.0	6.04	145.4	6.09
		79.5	168.5	5.82	165.0	5.84	161.7	5.86	158.6	5.90	156.6	5.92	154.7	5.96	152.0	6.01	149.5	6.08	147.9	6.13
	86	26.7	147.1	4.80	144.1	4.82	141.2	4.84	138.5	4.86	136.7	4.89	135.1	4.91	132.7	4.96	130.5	5.01	129.1	5.05
		38.8	154.6	4.91	151.4	4.93	148.4	4.95	145.6	4.98	143.8	5.00	142.0	5.03	139.5	5.08	137.2	5.13	135.8	5.18
		51.0	160.6	5.00	157.3	5.01	154.2	5.04	151.2	5.07	149.3	5.09	147.5	5.12	144.9	5.16	142.5	5.22	141.0	5.26
		65.3	165.6	5.06	162.2	5.08	159.0	5.10	155.9	5.13	154.0	5.16	152.1	5.18	149.5	5.23	147.0	5.29	145.4	5.33
		79.5	168.5	5.09	165.0	5.11	161.7	5.13	158.6	5.16	156.6	5.19	154.7	5.21	152.0	5.26	149.5	5.32	147.9	5.36
	95	26.7	147.1	4.47	144.1	4.48	141.2	4.50	138.5	4.53	136.7	4.55	135.1	4.57	132.7	4.62	130.5	4.67	129.1	4.70
		38.8	154.6	4.57	151.4	4.59	148.4	4.61	145.6	4.64	143.8	4.66	142.0	4.68	139.5	4.73	137.2	4.78	135.8	4.82
		51.0	160.6	4.65	157.3	4.67	154.2	4.69	151.2	4.72	149.3	4.74	147.5	4.76	144.9	4.81	142.5	4.86	141.0	4.90
		65.3	165.6	4.71	162.2	4.73	159.0	4.75	155.9	4.78	154.0	4.80	152.1	4.82	149.5	4.87	147.0	4.92	145.4	4.96
		79.5	168.5	4.74	165.0	4.75	161.7	4.78	158.6	4.80	156.6	4.83	154.7	4.85	152.0	4.90	149.5	4.95	147.9	4.99
	104	26.7	147.1	4.31	144.1	4.32	141.2	4.34	138.5	4.37	136.7	4.39	135.1	4.41	132.7	4.45	130.5	4.50	129.1	4.54
		38.8	154.6	4.41	151.4	4.43	148.4	4.45	145.6	4.47	143.8	4.49	142.0	4.52	139.5	4.56	137.2	4.61	135.8	4.65
		51.0	160.6	4.49	157.3	4.50	154.2	4.52	151.2	4.55	149.3	4.57	147.5	4.59	144.9	4.64	142.5	4.69	141.0	4.73
		65.3	165.6	4.55	162.2	4.56	159.0	4.58	155.9	4.61	154.0	4.63	152.1	4.65	149.5	4.70	147.0	4.75	145.4	4.79
		79.5	168.5	4.57	165.0	4.59	161.7	4.61	158.6	4.63	156.6	4.66	154.7	4.68	152.0	4.72	149.5	4.78	147.9	4.81
	113	26.7	147.1	4.29	144.1	4.31	141.2	4.33	138.5	4.35	136.7	4.37	135.1	4.40	132.7	4.44	130.5	4.48	129.1	4.52
		38.8	154.6	4.40	151.4	4.41	148.4	4.43	145.6	4.46	143.8	4.48	142.0	4.50	139.5	4.54	137.2	4.59	135.8	4.63
		51.0	160.6	4.47	157.3	4.49	154.2	4.51	151.2	4.53	149.3	4.55	147.5	4.58	144.9	4.62	142.5	4.67	141.0	4.71
		65.3	165.6	4.53	162.2	4.54	159.0	4.56	155.9	4.59	154.0	4.61	152.1	4.64	149.5	4.68	147.0	4.73	145.4	4.77
		79.5	168.5	4.56	165.0	4.57	161.7	4.59	158.6	4.62	156.6	4.64	154.7	4.66	152.0	4.71	149.5	4.76	147.9	4.80
60	50	26.7	106.9	4.35	104.7	4.37	102.6	4.39	100.6	4.41	99.4	4.43	98.2	4.46	96.5	4.50	94.9	4.55	93.9	4.59
		38.8	112.4	4.46	110.1	4.47	107.9	4.49	105.8	4.52	104.5	4.54	103.2	4.56	101.4	4.61	99.7	4.66	98.7	4.70
		51.0	116.7	4.54	114.3	4.55	112.1	4.57	109.9	4.60	108.5	4.62	107.2	4.64	105.3	4.69	103.6	4.74	102.5	4.78
		65.3	120.4	4.59	117.9	4.61	115.6	4.63	113.3	4.66	111.9	4.68	110.6	4.70	108.6	4.75	106.8	4.80	105.7	4.84
		79.5	122.5	4.62	119.9	4.63	117.5	4.66	115.3	4.68	113.8	4.70	112.5	4.73	110.5	4.77	108.7	4.83	107.5	4.86
	59	26.7	126.1	4.95	123.5	4.96	121.0	4.98	118.7	5.01	117.2	5.04	115.8	5.06	113.8	5.11	111.9	5.17	110.7	5.21
		38.8	132.5	5.06	129.8	5.08	127.2	5.10	124.8	5.13	123.2	5.16	121.7	5.18	119.6	5.23	117.6	5.29	116.4	5.33
		51.0	137.7	5.15	134.8	5.17	132.1	5.19	129.6	5.22	128.0	5.24	126.4	5.27	124.2	5.32	122.2	5.38	120.9	5.42
		65.3	142.0	5.22	139.0	5.23	136.3	5.26	133.6	5.29	132.0	5.31	130.4	5.34	128.1	5.39	126.0	5.45	124.7	5.49
		79.5	144.4	5.25	141.4	5.26	138.6	5.29	135.9	5.32	134.2	5.34	132.6	5.37	130.3	5.42	128.2	5.48	126.8	5.53
	68	26.7	126.1	4.57	123.5	4.59	121.0	4.61	118.7	4.63	117.2	4.65	115.8	4.68	113.8	4.72	111.9	4.77	110.7	4.81
		38.8	132.5	4.68	129.8	4.69	127.2	4.72	124.8	4.74	123.2	4.77	121.7	4.79	119.6	4.84	117.6	4.89	116.4	4.93
		51.0	137.7	4.76	134.8	4.78	132.1	4.80	129.6	4.83	128.0	4.85	126.4	4.87	124.2	4.92	122.2	4.97	120.9	5.01
		65.3	142.0	4.82	139.0	4.84	136.3	4.86	133.6	4.89	132.0	4.91	130.4	4.94	128.1	4.98	126.0	5.04	124.7	5.08
		79.5	144.4	4.85	141.4	4.86	138.6	4.89	135.9	4.91	134.2	4.94	132.6	4.96	130.3	5.01	128.2	5.06	126.8	5.11
	77	26.7	126.1	4.09	123.5	4.10	121.0	4.12	118.7	4.15	117.2	4.16	115.8	4.19	113.8	4.23	111.9	4.27	110.7	4.31
		38.8	132.5	4.19	129.8	4.20	127.2	4.22	124.8	4.24	123.2	4.26	121.7	4.29	119.6	4.33	117.6	4.37	116.4	4.41
		51.0	137.7	4.26	134.8	4.27	132.1	4.29	129.6	4.32	128.0	4.34	126.4	4.36	124.2	4.40	122.2	4.45	120.9	4.48
		65.3	142.0	4.31	139.0	4.33	136.3	4.35	133.6	4.37	132.0	4.39	130.4	4.42	128.1	4.46	126.0	4.51	124.7	4.54
		79.5	144.4	4.34	141.4	4.35	138.6	4.37	135.9	4.40	134.2	4.42	132.6	4.44	130.3	4.48	128.2	4.53	126.8	4.57
	86	26.7	126.1	3.58	123.5	3.59	121.0	3.61	118.7	3.63	117.2	3.64	115.8	3.66	113.8	3.70	111.9	3.74	110.7	3.77
		38.8	132.5	3.66	129.8	3.68	127.2	3.69	124.8	3.71	123.2	3.73	121.7	3.75	119.6	3.79	117.6	3.83	116.4	3.86
		51.0	137.7	3.73	134.8	3.74	132.1	3.76	129.6	3.78	128.0	3.80	126.4	3.82	124.2	3.85	122.2	3.89	120.9	3.93
		65.3	142.0	3.78	139.0	3.79	136.3	3.80	133.6	3.83	132.0	3.84	130.4	3.87	128.1	3.90	126.0	3.94	124.7	3.98
		79.5	144.4	3.80	141.4	3.81	138.6	3.83	135.9	3.85	134.2	3.87	132.6	3.89	130.3	3.92	128.2	3.97	126.8	4.00
	95	26.7	126.1	3.33	123.5	3.34	121.0	3.36	118.7	3.38	117.2	3.39	115.8	3.41	113.8	3.44	111.9	3.48	110.7	3.51
		38.8	132.5	3.41	129.8	3.42	127.2	3.44	124.8	3.46	123.2	3.47	121.7	3.49	119.6	3.52	117.6	3.56	116.4	3.59
		51.0	137.7	3.47	134.8	3.48	132.1	3.50	129.6	3.52	128.0	3.53	126.4	3.55	124.2	3.58	122.2	3.62	120.9	3.65
		65.3	142.0	3.51	139.0	3.53	136.3	3.54	133.6	3.56	132.0	3.58	130.4	3.60	128.1	3.63	126.0	3.67	124.7	3.70
		79.5	144.4	3.53	141.4	3.55	138.6	3.56	135.9	3.58	134.2	3.60	132.6	3.62	130.3	3.65	128.2	3.69	126.8	3.72
	104	26.7	126.1	3.21	123.5	3.22	121.0	3.24	118.7	3.26	117.2	3.27	115.8	3.29	113.8	3.32	111.9	3.36	110.7	3.38
		38.8	132.5	3.29	129.8	3.30	127.2	3.32	124.8	3.34	123.2	3.35	121.7	3.37	119.6	3.40	117.6	3.44	116.4	3.47
		51.0	137.7	3.35	134.8	3.36	132.1	3.37	129.6	3.39	128.0	3.41	126.4	3.43	124.2	3.46	122.2	3.50	120.9	3.52
		65.3	142.0	3.39	139.0	3.40	136.3	3.42	133.6	3.44	132.0	3.45	130.4	3.47	128.1	3.50	126.0	3.54	124.7	3.57
		79.5	144.4	3.41	141.4	3.42	138.6	3.44	135.9	3.46	134.2	3.47	132.6	3.49	130.3	3.52	128.2	3.56	126.8	3.59
	113	26.7	126.1	3.20	123.5	3.21	121.0	3.23	118.7	3.25	117.2	3.26	115.8	3.28	113.8	3.31	111.9	3.34	110.7	3.37
		38.8	132.5	3.28	129.8	3.29	127.2	3.30	124.8	3.32	123.2	3.34	121.7	3.36	119.6	3.39	117.6	3.42	116.4	3.45
		51.0	137.7	3.33	134.8	3.35	132.1	3.36	129.6	3.38	128.0	3.40	126.4	3.41	124.2	3.45	122.2	3.48	120.9	3.51
		65.3	142.0	3.38	139.0	3.39	136.3	3.40	133.6	3.42	132.0	3.44	130.4	3.46	128.1	3.49	126.0	3.53	124.7	3.56
		79.5	144.4	3.40	141.4	3.41	138.6	3.42	135.9	3.44	134.2	3.46	132.6	3.48	130.3	3.51	128.2	3.55	126.8	3.58

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)192B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	26.7	89.1	3.24	87.3	3.25	85.5	3.27	83.9	3.29	82.8	3.30	81.8	3.32	80.4	3.35	79.1	3.39	78.2	3.41
		38.8	93.7	3.32	91.7	3.33	89.9	3.35	88.2	3.37	87.1	3.38	86.0	3.40	84.5	3.43	83.1	3.47	82.2	3.50
		51.0	97.3	3.38	95.3	3.39	93.4	3.40	91.6	3.42	90.4	3.44	89.3	3.46	87.8	3.49	86.3	3.53	85.4	3.56
		65.3	100.3	3.42	98.3	3.43	96.3	3.45	94.4	3.47	93.3	3.48	92.1	3.50	90.5	3.53	89.0	3.57	88.1	3.60
		79.5	102.0	3.44	99.9	3.45	98.0	3.47	96.1	3.49	94.9	3.50	93.7	3.52	92.1	3.55	90.6	3.59	89.6	3.62
	59	26.7	105.1	3.68	102.9	3.69	100.8	3.71	98.9	3.73	97.7	3.75	96.5	3.77	94.8	3.81	93.2	3.85	92.2	3.88
		38.8	110.4	3.77	108.2	3.78	106.0	3.80	104.0	3.82	102.7	3.84	101.4	3.86	99.7	3.90	98.0	3.94	97.0	3.97
		51.0	114.7	3.84	112.4	3.85	110.1	3.87	108.0	3.89	106.7	3.91	105.4	3.93	103.5	3.96	101.8	4.01	100.7	4.04
		65.3	118.3	3.88	115.9	3.90	113.6	3.91	111.4	3.94	110.0	3.96	108.7	3.98	106.8	4.01	105.0	4.06	103.9	4.09
		79.5	120.3	3.91	117.9	3.92	115.5	3.94	113.3	3.96	111.9	3.98	110.5	4.00	108.6	4.04	106.8	4.08	105.7	4.11
	68	26.7	105.1	3.40	102.9	3.41	100.8	3.43	98.9	3.45	97.7	3.47	96.5	3.48	94.8	3.52	93.2	3.55	92.2	3.58
		38.8	110.4	3.49	108.2	3.50	106.0	3.51	104.0	3.53	102.7	3.55	101.4	3.57	99.7	3.60	98.0	3.64	97.0	3.67
		51.0	114.7	3.54	112.4	3.56	110.1	3.57	108.0	3.59	106.7	3.61	105.4	3.63	103.5	3.66	101.8	3.70	100.7	3.73
		65.3	118.3	3.59	115.9	3.60	113.6	3.62	111.4	3.64	110.0	3.66	108.7	3.68	106.8	3.71	105.0	3.75	103.9	3.78
		79.5	120.3	3.61	117.9	3.62	115.5	3.64	113.3	3.66	111.9	3.68	110.5	3.70	108.6	3.73	106.8	3.77	105.7	3.80
	77	26.7	105.1	3.05	102.9	3.06	100.8	3.07	98.9	3.09	97.7	3.10	96.5	3.12	94.8	3.15	93.2	3.18	92.2	3.21
		38.8	110.4	3.12	108.2	3.13	106.0	3.14	104.0	3.16	102.7	3.18	101.4	3.19	99.7	3.22	98.0	3.26	97.0	3.28
		51.0	114.7	3.17	112.4	3.18	110.1	3.20	108.0	3.21	106.7	3.23	105.4	3.25	103.5	3.28	101.8	3.31	100.7	3.34
		65.3	118.3	3.21	115.9	3.22	113.6	3.24	111.4	3.26	110.0	3.27	108.7	3.29	106.8	3.32	105.0	3.36	103.9	3.38
		79.5	120.3	3.23	117.9	3.24	115.5	3.26	113.3	3.27	111.9	3.29	110.5	3.31	108.6	3.34	106.8	3.37	105.7	3.40
	86	26.7	105.1	2.67	102.9	2.67	100.8	2.69	98.9	2.70	97.7	2.71	96.5	2.73	94.8	2.75	93.2	2.78	92.2	2.81
		38.8	110.4	2.73	108.2	2.74	106.0	2.75	104.0	2.77	102.7	2.78	101.4	2.79	99.7	2.82	98.0	2.85	97.0	2.87
		51.0	114.7	2.78	112.4	2.78	110.1	2.80	108.0	2.81	106.7	2.83	105.4	2.84	103.5	2.87	101.8	2.90	100.7	2.92
		65.3	118.3	2.81	115.9	2.82	113.6	2.83	111.4	2.85	110.0	2.86	108.7	2.88	106.8	2.90	105.0	2.94	103.9	2.96
		79.5	120.3	2.83	117.9	2.84	115.5	2.85	113.3	2.87	111.9	2.88	110.5	2.89	108.6	2.92	106.8	2.95	105.7	2.98
	95	26.7	105.1	2.48	102.9	2.49	100.8	2.50	98.9	2.51	97.7	2.53	96.5	2.54	94.8	2.56	93.2	2.59	92.2	2.61
		38.8	110.4	2.54	108.2	2.55	106.0	2.56	104.0	2.57	102.7	2.59	101.4	2.60	99.7	2.62	98.0	2.65	97.0	2.68
		51.0	114.7	2.58	112.4	2.59	110.1	2.60	108.0	2.62	106.7	2.63	105.4	2.65	103.5	2.67	101.8	2.70	100.7	2.72
		65.3	118.3	2.62	115.9	2.63	113.6	2.64	111.4	2.65	110.0	2.66	108.7	2.68	106.8	2.70	105.0	2.73	103.9	2.76
		79.5	120.3	2.63	117.9	2.64	115.5	2.65	113.3	2.67	111.9	2.68	110.5	2.69	108.6	2.72	106.8	2.75	105.7	2.77
	104	26.7	105.1	2.39	102.9	2.40	100.8	2.41	98.9	2.43	97.7	2.44	96.5	2.45	94.8	2.47	93.2	2.50	92.2	2.52
		38.8	110.4	2.45	108.2	2.46	106.0	2.47	104.0	2.48	102.7	2.50	101.4	2.51	99.7	2.53	98.0	2.56	97.0	2.58
		51.0	114.7	2.49	112.4	2.50	110.1	2.51	108.0	2.53	106.7	2.54	105.4	2.55	103.5	2.58	101.8	2.60	100.7	2.62
		65.3	118.3	2.52	115.9	2.53	113.6	2.54	111.4	2.56	110.0	2.57	108.7	2.58	106.8	2.61	105.0	2.64	103.9	2.66
		79.5	120.3	2.54	117.9	2.55	115.5	2.56	113.3	2.57	111.9	2.59	110.5	2.60	108.6	2.62	106.8	2.65	105.7	2.67
	113	26.7	105.1	2.38	102.9	2.39	100.8	2.40	98.9	2.42	97.7	2.43	96.5	2.44	94.8	2.46	93.2	2.49	92.2	2.51
		38.8	110.4	2.44	108.2	2.45	106.0	2.46	104.0	2.47	102.7	2.49	101.4	2.50	99.7	2.52	98.0	2.55	97.0	2.57
		51.0	114.7	2.48	112.4	2.49	110.1	2.50	108.0	2.52	106.7	2.53	105.4	2.54	103.5	2.57	101.8	2.59	100.7	2.62
		65.3	118.3	2.52	115.9	2.52	113.6	2.53	111.4	2.55	110.0	2.56	108.7	2.57	106.8	2.60	105.0	2.63	103.9	2.65
		79.5	120.3	2.53	117.9	2.54	115.5	2.55	113.3	2.56	111.9	2.58	110.5	2.59	108.6	2.61	106.8	2.64	105.7	2.66

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
130	50	26.7	198.1	12.03	194.0	12.07	190.2	12.12	186.5	12.19	184.2	12.25	181.9	12.31	178.8	12.43	175.8	12.56	173.9	12.67
		41.3	209.7	12.36	205.4	12.40	201.3	12.45	197.5	12.53	195.0	12.59	192.6	12.65	189.3	12.77	186.1	12.91	184.2	13.01
		56.0	218.8	12.60	214.3	12.64	210.0	12.69	206.0	12.77	203.4	12.83	201.0	12.90	197.5	13.01	194.2	13.16	192.1	13.26
		67.8	224.2	12.73	219.6	12.77	215.2	12.82	211.1	12.90	208.4	12.96	205.9	13.03	202.3	13.15	199.0	13.29	196.9	13.40
		79.5	227.9	12.81	223.3	12.85	218.8	12.90	214.6	12.98	211.9	13.04	209.4	13.11	205.7	13.23	202.3	13.37	200.2	13.48
	59	26.7	240.7	14.08	235.7	14.12	231.0	14.18	226.6	14.27	223.8	14.33	221.1	14.41	217.2	14.54	213.6	14.70	211.4	14.82
		41.3	254.9	14.46	249.6	14.51	244.6	14.57	239.9	14.66	236.9	14.73	234.1	14.81	230.0	14.94	226.2	15.11	223.8	15.23
		56.0	265.9	14.74	260.4	14.79	255.2	14.85	250.3	14.94	247.2	15.01	244.2	15.09	239.9	15.23	235.9	15.40	233.4	15.52
		67.8	272.4	14.89	266.8	14.94	261.5	15.01	256.5	15.09	253.3	15.16	250.2	15.24	245.8	15.39	241.8	15.55	239.2	15.68
		79.5	277.0	14.98	271.3	15.03	265.9	15.10	260.7	15.19	257.5	15.26	254.4	15.34	249.9	15.48	245.8	15.65	243.2	15.78
	68	26.7	240.7	13.01	235.7	13.05	231.0	13.11	226.6	13.18	223.8	13.25	221.1	13.32	217.2	13.44	213.6	13.59	211.4	13.70
		41.3	254.9	13.37	249.6	13.41	244.6	13.47	239.9	13.55	236.9	13.61	234.1	13.68	230.0	13.81	226.2	13.96	223.8	14.07
		56.0	265.9	13.62	260.4	13.67	255.2	13.73	250.3	13.81	247.2	13.87	244.2	13.94	239.9	14.07	235.9	14.23	233.4	14.34
		67.8	272.4	13.76	266.8	13.81	261.5	13.87	256.5	13.95	253.3	14.01	250.2	14.09	245.8	14.22	241.8	14.37	239.2	14.49
		79.5	277.0	13.85	271.3	13.89	265.9	13.95	260.7	14.04	257.5	14.10	254.4	14.18	249.9	14.31	245.8	14.46	243.2	14.58
	77	26.7	240.7	11.64	235.7	11.68	231.0	11.73	226.6	11.80	223.8	11.85	221.1	11.91	217.2	12.03	213.6	12.16	211.4	12.26
		41.3	254.9	11.96	249.6	12.00	244.6	12.05	239.9	12.12	236.9	12.18	234.1	12.24	230.0	12.36	226.2	12.49	223.8	12.59
		56.0	265.9	12.19	260.4	12.23	255.2	12.28	250.3	12.35	247.2	12.41	244.2	12.48	239.9	12.59	235.9	12.73	233.4	12.83
		67.8	272.4	12.31	266.8	12.35	261.5	12.41	256.5	12.48	253.3	12.54	250.2	12.61	245.8	12.72	241.8	12.86	239.2	12.97
		79.5	277.0	12.39	271.3	12.43	265.9	12.49	260.7	12.56	257.5	12.62	254.4	12.68	249.9	12.80	245.8	12.94	243.2	13.05
	86	26.7	240.7	10.19	235.7	10.22	231.0	10.27	226.6	10.33	223.8	10.37	221.1	10.43	217.2	10.52	213.6	10.64	211.4	10.73
		41.3	254.9	10.47	249.6	10.50	244.6	10.55	239.9	10.61	236.9	10.66	234.1	10.72	230.0	10.81	226.2	10.93	223.8	11.02
		56.0	265.9	10.67	260.4	10.70	255.2	10.75	250.3	10.81	247.2	10.86	244.2	10.92	239.9	11.02	235.9	11.14	233.4	11.23
		67.8	272.4	10.78	266.8	10.81	261.5	10.86	256.5	10.92	253.3	10.97	250.2	11.03	245.8	11.14	241.8	11.26	239.2	11.35
		79.5	277.0	10.84	271.3	10.88	265.9	10.93	260.7	10.99	257.5	11.04	254.4	11.10	249.9	11.20	245.8	11.33	243.2	11.42
	95	26.7	240.7	9.48	235.7	9.51	231.0	9.55	226.6	9.61	223.8	9.66	221.1	9.71	217.2	9.80	213.6	9.90	211.4	9.98
		41.3	254.9	9.74	249.6	9.77	244.6	9.82	239.9	9.88	236.9	9.92	234.1	9.97	230.0	10.07	226.2	10.18	223.8	10.26
		56.0	265.9	9.93	260.4	9.96	255.2	10.01	250.3	10.06	247.2	10.11	244.2	10.16	239.9	10.26	235.9	10.37	233.4	10.46
		67.8	272.4	10.03	266.8	10.06	261.5	10.11	256.5	10.17	253.3	10.22	250.2	10.27	245.8	10.36	241.8	10.48	239.2	10.56
		79.5	277.0	10.09	271.3	10.13	265.9	10.17	260.7	10.23	257.5	10.28	254.4	10.33	249.9	10.43	245.8	10.54	243.2	10.63
	104	26.7	240.7	9.15	235.7	9.18	231.0	9.22	226.6	9.27	223.8	9.31	221.1	9.36	217.2	9.45	213.6	9.55	211.4	9.63
		41.3	254.9	9.40	249.6	9.43	244.6	9.47	239.9	9.53	236.9	9.57	234.1	9.62	230.0	9.71	226.2	9.82	223.8	9.90
		56.0	265.9	9.58	260.4	9.61	255.2	9.65	250.3	9.71	247.2	9.75	244.2	9.81	239.9	9.90	235.9	10.01	233.4	10.09
		67.8	272.4	9.68	266.8	9.71	261.5	9.75	256.5	9.81	253.3	9.86	250.2	9.91	245.8	10.00	241.8	10.11	239.2	10.19
		79.5	277.0	9.74	271.3	9.77	265.9	9.81	260.7	9.87	257.5	9.92	254.4	9.97	249.9	10.06	245.8	10.17	243.2	10.25
	113	26.7	240.7	9.11	235.7	9.14	231.0	9.18	226.6	9.24	223.8	9.28	221.1	9.33	217.2	9.42	213.6	9.52	211.4	9.60
		41.3	254.9	9.36	249.6	9.39	244.6	9.44	239.9	9.49	236.9	9.54	234.1	9.59	230.0	9.68	226.2	9.78	223.8	9.86
		56.0	265.9	9.54	260.4	9.57	255.2	9.62	250.3	9.67	247.2	9.72	244.2	9.77	239.9	9.86	235.9	9.97	233.4	10.05
		67.8	272.4	9.64	266.8	9.67	261.5	9.72	256.5	9.77	253.3	9.82	250.2	9.87	245.8	9.96	241.8	10.07	239.2	10.15
		79.5	277.0	9.70	271.3	9.73	265.9	9.78	260.7	9.83	257.5	9.88	254.4	9.93	249.9	10.02	245.8	10.13	243.2	10.22
120	50	26.7	196.2	12.26	192.1	12.30	188.3	12.36	184.7	12.43	182.4	12.49	180.2	12.55	177.0	12.67	174.1	12.81	172.3	12.91
		41.3	207.7	12.60	203.4	12.64	199.4	12.70	195.5	12.77	193.1	12.83	190.8	12.90	187.4	13.02	184.3	13.16	182.4	13.27
		56.0	216.7	12.84	212.2	12.88	208.0	12.94	204.0	13.02	201.4	13.08	199.0	13.15	195.5	13.27	192.3	13.41	190.3	13.52
		67.8	222.0	12.97	217.5	13.02	213.1	13.08	209.0	13.15	206.4	13.21	203.9	13.28	200.4	13.41	197.0	13.55	195.0	13.66
		79.5	225.7	13.06	221.1	13.10	216.7	13.16	212.5	13.23	209.9	13.29	207.3	13.37	203.7	13.49	200.3	13.64	198.2	13.75
	59	26.7	238.4	14.35	233.5	14.40	228.8	14.46	224.4	14.55	221.6	14.61	218.9	14.69	215.1	14.83	211.5	14.99	209.3	15.11
		41.3	252.4	14.75	247.2	14.79	242.3	14.86	237.6	14.95	234.6	15.02	231.8	15.10	227.7	15.24	224.0	15.40	221.6	15.53
		56.0	263.3	15.03	257.9	15.08	252.7	15.14	247.9	15.23	244.8	15.30	241.8	15.38	237.6	15.53	233.7	15.70	231.2	15.83
		67.8	269.8	15.18	264.2	15.23	259.0	15.30	254.0	15.39	250.8	15.46	247.8	15.54	243.5	15.69	239.4	15.86	236.9	15.99
		79.5	274.3	15.28	268.6	15.33	263.3	15.40	258.2	15.49	255.0	15.56	251.9	15.64	247.5	15.78	243.4	15.96	240.8	16.09
	68	26.7	238.4	13.26	233.5	13.30	228.8	13.36	224.4	13.44	221.6	13.50	218.9	13.58	215.1	13.70	211.5	13.85	209.3	13.97
		41.3	252.4	13.63	247.2	13.67	242.3	13.73	237.6	13.81	234.6	13.88	231.8	13.95	227.7	14.08	224.0	14.23	221.6	14.35
		56.0	263.3	13.89	257.9	13.93	252.7	14.00	247.9	14.09	244.8	14.14	241.8	14.22	237.6	14.35	233.7	14.51	231.2	14.62
		67.8	269.8	14.03	264.2	14.08	259.0	14.14	254.0	14.22	250.8	14.29	247.8	14.36	243.5	14.50	239.4	14.66	236.9	14.78
		79.5	274.3	14.12	268.6	14.16	263.3	14.23	258.2	14.31	255.0	14.38	251.9	14.45	247.5	14.59	243.4	14.75	240.8	14.87
	77	26.7	238.4	11.87	233.5	11.90	228.8	11.96	224.4	12.03	221.6	12.08	218.9	12.15	215.1	12.26	211.5	12.39	209.3	12.50
		41.3	252.4	12.19	247.2	12.23	242.3	12.29	237.6	12.36	234.6	12.42	231.8	12.48	227.7	12.60	224.0	12.74	221.6	12.84
		56.0	263.3	12.43	257.9	12.47	252.7	12.52	247.9	12.60	244.8	12.65	241.8	12.72	237.6	12.84	233.7	12.98	231.2	13.09
		67.8	269.8	12.55	264.2	12.60	259.0	12.65	254.0	12.73	250.8	12.78	247.8	12.85	243.5	12.97	239.4	13.11	236.9	13.22
		79.5	274.3	12.63	268.6	12.67	263.3	12.73	258.2	12.80	255.0	12.86	251.9	12.93	247.5	13.05	243.4	13.19	240.8	13.30
	86	26.7	238.4	10.39	233.5	10.42	228.8	10.47	224.4	10.53	221.6	10.58	218.9	10.63	215.1	10.73	211.5	10.85	209.3	10.94
		41.3	252.4	10.67	247.2	10.71	242.3	10.75	237.6	10.82	234.6	10.87	231.8	10.93	227.7	11.03	224.0	11.15	221.6	11.24
		56.0	263.3	10.88	257.9	10.91	252.7	10.96	247.9	11.02	244.8	11.08	241.8	11.13	237.6	11.24	233.7	11.36	231.2	11.45
		67.8	269.8	10.99	264.2	11.02	259.0	11.07	254.0	11.14	250.8	11.19	247.8	11.25	243.5	11.35	239.4	11.48	236.9	11.57
		79.5	274.3	11.06	268.6	11.09	263.3	11.14	258.2	11.21	255.0	11.26	251.9	11.32	247.5	11.42	243.4	11.55	240.8	11.64
	95	26.7	238.4	9.67	233.5	9.70	228.8	9.74	224.4	9.80	221.6	9.84	218.9	9.90	215.1	9.99	211.5	10.10	209.3	10.18
		41.3	252.4	9.93	247.2	9.97	242.3	10.01	237.6	10.07	234.6	10.12	231.8	10.17	227.7	10.26	224.0	10.38	221.6	10.46
		56.0	263.3	10.12	257.9	10.16	252.7	10.20	247.9	10.26	244.8	10.31	241.8	10.36	237.6	10.46	233.7	10.57	231.2	10.66
		67.8	269.8	10.23	264.2	10.26	259.0	10.31	254.0	10.37	250.8	10.42	247.8	10.47	243.5	10.57	239.4	10.68	236.9	10.77
		79.5	274.3	10.29	268.6	10.32	263.3	10.37	258.2	10.43	255.0	10.48	251.9	10.54	247.5	10.63	243.4	10.75	240.8	10.84
	104	26.7	238.4	9.33	233.5	9.36	228.8	9.40	224.4	9.45	221.6	9.50	218.9	9.55	215.1	9.64	211.5	9.74	209.3	9.82
		41.3	252.4	9.58	247.2	9.61	242.3	9.66	237.6	9.71	234.6	9.76	231.8	9.81	227.7	9.90	224.0	10.01	221.6	10.09
		56.0	263.3	9.77	257.9	9.80	252.7	9.84	247.9	9.90	244.8	9.95	241.8	10.00	237.6	10.09	233.7	10.20	231.2	10.28
		67.8	269.8	9.87	264.2	9.90	259.0	9.94	254.0	10.00	250.8	10.05	247.8	10.10	243.5	10.19	239.4	10.31	236.9	10.39
		79.5	274.3	9.93	268.6	9.96	263.3	10.01	258.2	10.06	255.0	10.11	251.9	10.16	247.5	10.26	243.4	10.37	240.8	10.46
	113	26.7	238.4	9.29	233.5	9.32	228.8	9.36	224.4	9.42	221.6	9.46	218.9	9.51	215.1	9.60	211.5	9.70	209.3	9.78
		41.3	252.4	9.55	247.2	9.58	242.3	9.62	237.6	9.68	234.6	9.72	231.8	9.77	227.7	9.86	224.0	9.97	221.6	10.05
		56.0	263.3	9.73	257.9	9.76	252.7	9.81	247.9	9.86	244.8	9.91	241.8	9.96	237.6	10.05	233.7	10.16	231.2	10.25
		67.8	269.8	9.83	264.2	9.86	259.0	9.91	254.0	9.96	250.8	10.01	247.8	10.06	243.5	10.16	239.4	10.27	236.9	10.35
		79.5	274.3	9.89	268.6	9.92	263.3	9.97	258.2	10.03	255.0	10.07	251.9	10.13	247.5	10.22	243.4	10.33	240.8	10.42

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Conne-ction ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
110	50	26.7	194.3	12.61	190.3	12.65	186.5	12.70	182.9	12.78	180.6	12.84	178.4	12.90	175.3	13.02	172.4	13.17	170.6	13.27
		41.3	205.7	12.95	201.4	12.99	197.4	13.05	193.6	13.13	191.2	13.19	188.9	13.26	185.6	13.38	182.5	13.53	180.6	13.64
		56.0	214.6	13.20	210.1	13.24	206.0	13.30	202.0	13.38	199.5	13.44	197.1	13.51	193.6	13.64	190.4	13.79	188.4	13.90
		67.8	219.9	13.34	215.3	13.38	211.0	13.44	207.0	13.52	204.4	13.58	201.9	13.65	198.4	13.78	195.1	13.93	193.0	14.04
		79.5	223.5	13.42	218.9	13.46	214.6	13.52	210.4	13.60	207.8	13.67	205.3	13.74	201.7	13.87	198.4	14.02	196.3	14.13
	59	26.7	236.0	14.75	231.2	14.80	226.6	14.86	222.2	14.95	219.4	15.02	216.8	15.10	213.0	15.24	209.5	15.41	207.2	15.53
		41.3	249.9	15.16	244.8	15.21	239.9	15.27	235.3	15.36	232.3	15.43	229.5	15.52	225.5	15.66	221.8	15.83	219.4	15.96
		56.0	260.7	15.45	255.3	15.50	250.2	15.57	245.4	15.66	242.4	15.73	239.4	15.81	235.3	15.96	231.4	16.13	228.9	16.27
		67.8	267.1	15.61	261.6	15.66	256.4	15.73	251.5	15.82	248.4	15.89	245.3	15.98	241.1	16.12	237.1	16.30	234.6	16.43
		79.5	271.6	15.70	266.0	15.75	260.7	15.82	255.7	15.92	252.5	15.99	249.4	16.08	245.1	16.22	241.0	16.40	238.5	16.54
	68	26.7	236.0	13.63	231.2	13.68	226.6	13.74	222.2	13.82	219.4	13.88	216.8	13.95	213.0	14.08	209.5	14.24	207.2	14.35
		41.3	249.9	14.01	244.8	14.05	239.9	14.12	235.3	14.20	232.3	14.26	229.5	14.34	225.5	14.47	221.8	14.63	219.4	14.75
		56.0	260.7	14.28	255.3	14.32	250.2	14.39	245.4	14.48	242.4	14.54	239.4	14.61	235.3	14.75	231.4	14.91	228.9	15.03
		67.8	267.1	14.42	261.6	14.47	256.4	14.53	251.5	14.62	248.4	14.69	245.3	14.76	241.1	14.90	237.1	15.06	234.6	15.19
		79.5	271.6	14.51	266.0	14.56	260.7	14.62	255.7	14.71	252.5	14.78	249.4	14.86	245.1	14.99	241.0	15.16	238.5	15.28
	77	26.7	236.0	12.20	231.2	12.24	226.6	12.29	222.2	12.36	219.4	12.42	216.8	12.49	213.0	12.60	209.5	12.74	207.2	12.84
		41.3	249.9	12.53	244.8	12.57	239.9	12.63	235.3	12.70	232.3	12.76	229.5	12.83	225.5	12.95	221.8	13.09	219.4	13.20
		56.0	260.7	12.77	255.3	12.81	250.2	12.87	245.4	12.95	242.4	13.01	239.4	13.08	235.3	13.20	231.4	13.34	228.9	13.45
		67.8	267.1	12.90	261.6	12.95	256.4	13.00	251.5	13.08	248.4	13.14	245.3	13.21	241.1	13.33	237.1	13.48	234.6	13.59
		79.5	271.6	12.99	266.0	13.03	260.7	13.09	255.7	13.16	252.5	13.22	249.4	13.29	245.1	13.42	241.0	13.56	238.5	13.67
	86	26.7	236.0	10.68	231.2	10.71	226.6	10.76	222.2	10.82	219.4	10.87	216.8	10.93	213.0	11.03	209.5	11.15	207.2	11.24
		41.3	249.9	10.97	244.8	11.00	239.9	11.05	235.3	11.12	232.3	11.17	229.5	11.23	225.5	11.33	221.8	11.46	219.4	11.55
		56.0	260.7	11.18	255.3	11.22	250.2	11.27	245.4	11.33	242.4	11.38	239.4	11.44	235.3	11.55	231.4	11.68	228.9	11.77
		67.8	267.1	11.29	261.6	11.33	256.4	11.38	251.5	11.45	248.4	11.50	245.3	11.56	241.1	11.67	237.1	11.80	234.6	11.89
		79.5	271.6	11.37	266.0	11.40	260.7	11.45	255.7	11.52	252.5	11.57	249.4	11.63	245.1	11.74	241.0	11.87	238.5	11.97
	95	26.7	236.0	9.94	231.2	9.97	226.6	10.01	222.2	10.07	219.4	10.12	216.8	10.17	213.0	10.27	209.5	10.38	207.2	10.46
		41.3	249.9	10.21	244.8	10.24	239.9	10.29	235.3	10.35	232.3	10.40	229.5	10.45	225.5	10.55	221.8	10.66	219.4	10.75
		56.0	260.7	10.41	255.3	10.44	250.2	10.49	245.4	10.55	242.4	10.60	239.4	10.65	235.3	10.75	231.4	10.87	228.9	10.96
		67.8	267.1	10.51	261.6	10.55	256.4	10.59	251.5	10.66	248.4	10.71	245.3	10.76	241.1	10.86	237.1	10.98	234.6	11.07
		79.5	271.6	10.58	266.0	10.61	260.7	10.66	255.7	10.72	252.5	10.77	249.4	10.83	245.1	10.93	241.0	11.05	238.5	11.14
	104	26.7	236.0	9.59	231.2	9.62	226.6	9.66	222.2	9.72	219.4	9.76	216.8	9.81	213.0	9.90	209.5	10.01	207.2	10.09
		41.3	249.9	9.85	244.8	9.88	239.9	9.93	235.3	9.98	232.3	10.03	229.5	10.08	225.5	10.18	221.8	10.29	219.4	10.37
		56.0	260.7	10.04	255.3	10.07	250.2	10.12	245.4	10.18	242.4	10.22	239.4	10.28	235.3	10.37	231.4	10.49	228.9	10.57
		67.8	267.1	10.14	261.6	10.18	256.4	10.22	251.5	10.28	248.4	10.33	245.3	10.38	241.1	10.48	237.1	10.59	234.6	10.68
		79.5	271.6	10.21	266.0	10.24	260.7	10.28	255.7	10.34	252.5	10.39	249.4	10.45	245.1	10.54	241.0	10.66	238.5	10.75
	113	26.7	236.0	9.55	231.2	9.58	226.6	9.62	222.2	9.68	219.4	9.73	216.8	9.78	213.0	9.87	209.5	9.98	207.2	10.06
		41.3	249.9	9.81	244.8	9.85	239.9	9.89	235.3	9.95	232.3	9.99	229.5	10.05	225.5	10.14	221.8	10.25	219.4	10.33
		56.0	260.7	10.00	255.3	10.03	250.2	10.08	245.4	10.14	242.4	10.18	239.4	10.24	235.3	10.33	231.4	10.45	228.9	10.53
		67.8	267.1	10.10	261.6	10.14	256.4	10.18	251.5	10.24	248.4	10.29	245.3	10.34	241.1	10.44	237.1	10.55	234.6	10.64
		79.5	271.6	10.17	266.0	10.20	260.7	10.25	255.7	10.31	252.5	10.35	249.4	10.41	245.1	10.50	241.0	10.62	238.5	10.71
100	50	26.7	192.3	13.07	188.4	13.12	184.6	13.18	181.1	13.25	178.8	13.31	176.6	13.38	173.6	13.51	170.7	13.66	168.9	13.77
		41.3	203.6	13.43	199.4	13.48	195.5	13.54	191.7	13.62	189.3	13.68	187.0	13.75	183.8	13.88	180.7	14.03	178.8	14.15
		56.0	212.4	13.69	208.1	13.74	203.9	13.80	200.0	13.88	197.5	13.94	195.1	14.02	191.7	14.15	188.5	14.30	186.5	14.42
		67.8	217.7	13.83	213.2	13.88	208.9	13.94	204.9	14.02	202.4	14.09	199.9	14.16	196.4	14.29	193.2	14.45	191.1	14.57
		79.5	221.3	13.92	216.8	13.96	212.4	14.03	208.3	14.11	205.7	14.17	203.3	14.25	199.7	14.38	196.4	14.54	194.3	14.66
	59	26.7	233.7	15.30	228.9	15.35	224.3	15.42	220.0	15.51	217.3	15.58	214.6	15.66	210.9	15.81	207.4	15.98	205.2	16.11
		41.3	247.4	15.72	242.3	15.77	237.5	15.84	232.9	15.93	230.0	16.01	227.2	16.09	223.3	16.24	219.6	16.42	217.3	16.55
		56.0	258.1	16.02	252.8	16.07	247.8	16.15	243.0	16.24	240.0	16.32	237.1	16.40	232.9	16.55	229.1	16.73	226.6	16.87
		67.8	264.5	16.19	259.0	16.24	253.9	16.31	249.0	16.41	245.9	16.48	242.9	16.57	238.7	16.72	234.7	16.91	232.2	17.05
		79.5	268.9	16.29	263.4	16.34	258.1	16.41	253.1	16.51	250.0	16.59	247.0	16.67	242.7	16.83	238.6	17.01	236.1	17.15
	68	26.7	233.7	14.14	228.9	14.18	224.3	14.25	220.0	14.33	217.3	14.40	214.6	14.47	210.9	14.61	207.4	14.77	205.2	14.89
		41.3	247.4	14.53	242.3	14.58	237.5	14.64	232.9	14.73	230.0	14.79	227.2	14.87	223.3	15.01	219.6	15.17	217.3	15.30
		56.0	258.1	14.81	252.8	14.85	247.8	14.92	243.0	15.02	240.0	15.08	237.1	15.16	232.9	15.30	229.1	15.47	226.6	15.59
		67.8	264.5	14.96	259.0	15.01	253.9	15.07	249.0	15.16	245.9	15.23	242.9	15.31	238.7	15.46	234.7	15.62	232.2	15.75
		79.5	268.9	15.05	263.4	15.10	258.1	15.17	253.1	15.26	250.0	15.33	247.0	15.41	242.7	15.55	238.6	15.72	236.1	15.85
	77	26.7	233.7	12.65	228.9	12.69	224.3	12.75	220.0	12.82	217.3	12.88	214.6	12.95	210.9	13.07	207.4	13.21	205.2	13.32
		41.3	247.4	13.00	242.3	13.04	237.5	13.10	232.9	13.18	230.0	13.24	227.2	13.31	223.3	13.43	219.6	13.58	217.3	13.69
		56.0	258.1	13.25	252.8	13.29	247.8	13.35	243.0	13.43	240.0	13.49	237.1	13.56	232.9	13.69	229.1	13.84	226.6	13.95
		67.8	264.5	13.39	259.0	13.43	253.9	13.49	249.0	13.57	245.9	13.63	242.9	13.70	238.7	13.83	234.7	13.98	232.2	14.10
		79.5	268.9	13.47	263.4	13.51	258.1	13.57	253.1	13.65	250.0	13.72	247.0	13.79	242.7	13.92	238.6	14.07	236.1	14.18
	86	26.7	233.7	11.07	228.9	11.11	224.3	11.16	220.0	11.22	217.3	11.28	214.6	11.34	210.9	11.44	207.4	11.57	205.2	11.66
		41.3	247.4	11.38	242.3	11.41	237.5	11.47	232.9	11.53	230.0	11.59	227.2	11.65	223.3	11.76	219.6	11.88	217.3	11.98
		56.0	258.1	11.60	252.8	11.63	247.8	11.69	243.0	11.75	240.0	11.81	237.1	11.87	232.9	11.98	229.1	12.11	226.6	12.21
		67.8	264.5	11.72	259.0	11.75	253.9	11.81	249.0	11.87	245.9	11.93	242.9	11.99	238.7	12.10	234.7	12.24	232.2	12.34
		79.5	268.9	11.79	263.4	11.83	258.1	11.88	253.1	11.95	250.0	12.00	247.0	12.07	242.7	12.18	238.6	12.31	236.1	12.41
	95	26.7	233.7	10.31	228.9	10.34	224.3	10.39	220.0	10.45	217.3	10.50	214.6	10.55	210.9	10.65	207.4	10.76	205.2	10.85
		41.3	247.4	10.59	242.3	10.62	237.5	10.67	232.9	10.73	230.0	10.78	227.2	10.84	223.3	10.94	219.6	11.06	217.3	11.15
		56.0	258.1	10.79	252.8	10.83	247.8	10.88	243.0	10.94	240.0	10.99	237.1	11.05	232.9	11.15	229.1	11.27	226.6	11.37
		67.8	264.5	10.90	259.0	10.94	253.9	10.99	249.0	11.05	245.9	11.10	242.9	11.16	238.7	11.27	234.7	11.39	232.2	11.48
		79.5	268.9	10.97	263.4	11.01	258.1	11.06	253.1	11.12	250.0	11.17	247.0	11.23	242.7	11.34	238.6	11.46	236.1	11.55
	104	26.7	233.7	9.94	228.9	9.97	224.3	10.02	220.0	10.08	217.3	10.12	214.6	10.18	210.9	10.27	207.4	10.39	205.2	10.47
		41.3	247.4	10.22	242.3	10.25	237.5	10.30	232.9	10.36	230.0	10.40	227.2	10.46	223.3	10.56	219.6	10.67	217.3	10.76
		56.0	258.1	10.41	252.8	10.45	247.8	10.49	243.0	10.55	240.0	10.60	237.1	10.66	232.9	10.76	229.1	10.88	226.6	10.96
		67.8	264.5	10.52	259.0	10.55	253.9	10.60	249.0	10.66	245.9	10.71	242.9	10.77	238.7	10.87	234.7	10.99	232.2	11.08
		79.5	268.9	10.59	263.4	10.62	258.1	10.67	253.1	10.73	250.0	10.78	247.0	10.84	242.7	10.94	238.6	11.06	236.1	11.15
	113	26.7	233.7	9.91	228.9	9.94	224.3	9.98	220.0	10.04	217.3	10.09	214.6	10.14	210.9	10.23	207.4	10.35	205.2	10.43
		41.3	247.4	10.18	242.3	10.21	237.5	10.26	232.9	10.32	230.0	10.36	227.2	10.42	223.3	10.52	219.6	10.63	217.3	10.72
		56.0	258.1	10.37	252.8	10.41	247.8	10.45	243.0	10.51	240.0	10.56	237.1	10.62	232.9	10.72	229.1	10.83	226.6	10.92
		67.8	264.5	10.48	259.0	10.51	253.9	10.56	249.0	10.62	245.9	10.67	242.9	10.73	238.7	10.83	234.7	10.95	232.2	11.04
		79.5	268.9	10.55	263.4	10.58	258.1	10.63	253.1	10.69	250.0	10.74	247.0	10.80	242.7	10.90	238.6	11.01	236.1	11.10

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
90	50	26.7	173.1	11.34	169.5	11.37	166.2	11.42	163.0	11.49	160.9	11.54	159.0	11.60	156.2	11.71	153.6	11.84	152.0	11.94
		41.3	183.3	11.65	179.5	11.69	175.9	11.74	172.5	11.81	170.4	11.86	168.3	11.92	165.4	12.03	162.6	12.17	160.9	12.27
		56.0	191.2	11.87	187.3	11.91	183.5	11.96	180.0	12.03	177.7	12.09	175.6	12.15	172.5	12.26	169.7	12.40	167.9	12.50
		67.8	195.9	11.99	191.9	12.03	188.1	12.09	184.4	12.16	182.1	12.21	179.9	12.28	176.8	12.39	173.9	12.53	172.0	12.63
		79.5	199.2	12.07	195.1	12.11	191.2	12.16	187.5	12.23	185.2	12.29	182.9	12.35	179.7	12.47	176.8	12.60	174.9	12.71
	59	26.7	210.3	13.26	206.0	13.31	201.9	13.37	198.0	13.44	195.5	13.51	193.2	13.58	189.8	13.70	186.6	13.85	184.7	13.97
		41.3	222.7	13.63	218.1	13.67	213.8	13.74	209.6	13.81	207.0	13.88	204.5	13.95	201.0	14.08	197.6	14.24	195.5	14.35
		56.0	232.3	13.89	227.5	13.94	223.0	14.00	218.7	14.08	216.0	14.15	213.4	14.22	209.6	14.35	206.2	14.51	204.0	14.63
		67.8	238.0	14.03	233.1	14.08	228.5	14.14	224.1	14.22	221.3	14.29	218.6	14.37	214.8	14.50	211.3	14.66	209.0	14.78
		79.5	242.0	14.12	237.0	14.17	232.3	14.23	227.8	14.31	225.0	14.38	222.3	14.46	218.4	14.59	214.8	14.75	212.5	14.87
	68	26.7	210.3	12.26	206.0	12.30	201.9	12.35	198.0	12.42	195.5	12.48	193.2	12.55	189.8	12.67	186.6	12.80	184.7	12.91
		41.3	222.7	12.60	218.1	12.64	213.8	12.69	209.6	12.77	207.0	12.83	204.5	12.89	201.0	13.01	197.6	13.16	195.5	13.26
		56.0	232.3	12.84	227.5	12.88	223.0	12.94	218.7	13.02	216.0	13.07	213.4	13.14	209.6	13.26	206.2	13.41	204.0	13.52
		67.8	238.0	12.97	233.1	13.01	228.5	13.07	224.1	13.15	221.3	13.21	218.6	13.28	214.8	13.40	211.3	13.55	209.0	13.66
		79.5	242.0	13.05	237.0	13.09	232.3	13.15	227.8	13.23	225.0	13.29	222.3	13.36	218.4	13.48	214.8	13.63	212.5	13.74
	77	26.7	210.3	10.97	206.0	11.00	201.9	11.05	198.0	11.12	195.5	11.17	193.2	11.23	189.8	11.33	186.6	11.46	184.7	11.55
		41.3	222.7	11.27	218.1	11.31	213.8	11.36	209.6	11.42	207.0	11.48	204.5	11.54	201.0	11.64	197.6	11.77	195.5	11.87
		56.0	232.3	11.49	227.5	11.52	223.0	11.58	218.7	11.64	216.0	11.70	213.4	11.76	209.6	11.87	206.2	12.00	204.0	12.10
		67.8	238.0	11.60	233.1	11.64	228.5	11.69	224.1	11.76	221.3	11.82	218.6	11.88	214.8	11.99	211.3	12.12	209.0	12.22
		79.5	242.0	11.68	237.0	11.71	232.3	11.77	227.8	11.84	225.0	11.89	222.3	11.95	218.4	12.06	214.8	12.20	212.5	12.30
	86	26.7	210.3	9.60	206.0	9.63	201.9	9.67	198.0	9.73	195.5	9.78	193.2	9.83	189.8	9.92	186.6	10.03	184.7	10.11
		41.3	222.7	9.86	218.1	9.90	213.8	9.94	209.6	10.00	207.0	10.04	204.5	10.10	201.0	10.19	197.6	10.30	195.5	10.39
		56.0	232.3	10.05	227.5	10.09	223.0	10.13	218.7	10.19	216.0	10.24	213.4	10.29	209.6	10.39	206.2	10.50	204.0	10.59
		67.8	238.0	10.16	233.1	10.19	228.5	10.24	224.1	10.29	221.3	10.34	218.6	10.40	214.8	10.49	211.3	10.61	209.0	10.70
		79.5	242.0	10.22	237.0	10.25	232.3	10.30	227.8	10.36	225.0	10.41	222.3	10.46	218.4	10.56	214.8	10.67	212.5	10.76
	95	26.7	210.3	8.94	206.0	8.96	201.9	9.00	198.0	9.06	195.5	9.10	193.2	9.15	189.8	9.23	186.6	9.33	184.7	9.41
		41.3	222.7	9.18	218.1	9.21	213.8	9.25	209.6	9.31	207.0	9.35	204.5	9.40	201.0	9.49	197.6	9.59	195.5	9.67
		56.0	232.3	9.36	227.5	9.39	223.0	9.43	218.7	9.48	216.0	9.53	213.4	9.58	209.6	9.67	206.2	9.77	204.0	9.85
		67.8	238.0	9.45	233.1	9.48	228.5	9.53	224.1	9.58	221.3	9.63	218.6	9.68	214.8	9.77	211.3	9.87	209.0	9.96
		79.5	242.0	9.51	237.0	9.54	232.3	9.59	227.8	9.64	225.0	9.69	222.3	9.74	218.4	9.83	214.8	9.94	212.5	10.02
	104	26.7	210.3	8.62	206.0	8.65	201.9	8.69	198.0	8.74	195.5	8.78	193.2	8.82	189.8	8.91	186.6	9.00	184.7	9.08
		41.3	222.7	8.86	218.1	8.89	213.8	8.93	209.6	8.98	207.0	9.02	204.5	9.07	201.0	9.15	197.6	9.25	195.5	9.33
		56.0	232.3	9.03	227.5	9.06	223.0	9.10	218.7	9.15	216.0	9.19	213.4	9.24	209.6	9.33	206.2	9.43	204.0	9.51
		67.8	238.0	9.12	233.1	9.15	228.5	9.19	224.1	9.24	221.3	9.29	218.6	9.34	214.8	9.42	211.3	9.53	209.0	9.60
		79.5	242.0	9.18	237.0	9.21	232.3	9.25	227.8	9.30	225.0	9.35	222.3	9.39	218.4	9.48	214.8	9.59	212.5	9.66
	113	26.7	210.3	8.59	206.0	8.62	201.9	8.65	198.0	8.70	195.5	8.75	193.2	8.79	189.8	8.87	186.6	8.97	184.7	9.04
		41.3	222.7	8.82	218.1	8.85	213.8	8.89	209.6	8.94	207.0	8.99	204.5	9.03	201.0	9.12	197.6	9.22	195.5	9.29
		56.0	232.3	8.99	227.5	9.02	223.0	9.06	218.7	9.12	216.0	9.16	213.4	9.21	209.6	9.29	206.2	9.39	204.0	9.47
		67.8	238.0	9.09	233.1	9.12	228.5	9.16	224.1	9.21	221.3	9.25	218.6	9.30	214.8	9.39	211.3	9.49	209.0	9.57
		79.5	242.0	9.14	237.0	9.17	232.3	9.21	227.8	9.27	225.0	9.31	222.3	9.36	218.4	9.45	214.8	9.55	212.5	9.63
80	50	26.7	153.9	9.26	150.7	9.29	147.7	9.33	144.8	9.38	143.0	9.43	141.3	9.48	138.8	9.57	136.5	9.67	135.1	9.75
		41.3	162.9	9.51	159.6	9.54	156.4	9.59	153.4	9.64	151.5	9.69	149.6	9.74	147.0	9.83	144.6	9.94	143.0	10.02
		56.0	169.9	9.70	166.4	9.73	163.1	9.77	160.0	9.83	158.0	9.87	156.1	9.93	153.4	10.02	150.8	10.13	149.2	10.21
		67.8	174.1	9.80	170.6	9.83	167.2	9.87	163.9	9.93	161.9	9.97	159.9	10.03	157.1	10.12	154.5	10.23	152.9	10.32
		79.5	177.0	9.86	173.4	9.89	169.9	9.93	166.7	9.99	164.6	10.04	162.6	10.09	159.8	10.18	157.1	10.29	155.5	10.38
	59	26.7	187.0	10.83	183.1	10.87	179.5	10.92	176.0	10.98	173.8	11.03	171.7	11.09	168.7	11.19	165.9	11.32	164.2	11.41
		41.3	197.9	11.13	193.9	11.17	190.0	11.22	186.3	11.28	184.0	11.34	181.8	11.40	178.6	11.50	175.7	11.63	173.8	11.72
		56.0	206.5	11.35	202.2	11.38	198.2	11.43	194.4	11.50	192.0	11.55	189.7	11.61	186.3	11.72	183.3	11.85	181.3	11.95
		67.8	211.6	11.46	207.2	11.50	203.1	11.55	199.2	11.62	196.7	11.67	194.3	11.73	190.9	11.84	187.8	11.97	185.8	12.07
		79.5	215.1	11.53	210.7	11.57	206.5	11.62	202.5	11.69	200.0	11.75	197.6	11.81	194.1	11.92	190.9	12.05	188.9	12.15
	68	26.7	187.0	10.01	183.1	10.04	179.5	10.09	176.0	10.15	173.8	10.20	171.7	10.25	168.7	10.34	165.9	10.46	164.2	10.54
		41.3	197.9	10.29	193.9	10.32	190.0	10.37	186.3	10.43	184.0	10.48	181.8	10.53	178.6	10.63	175.7	10.75	173.8	10.83
		56.0	206.5	10.49	202.2	10.52	198.2	10.57	194.4	10.63	192.0	10.68	189.7	10.73	186.3	10.83	183.3	10.95	181.3	11.04
		67.8	211.6	10.59	207.2	10.63	203.1	10.67	199.2	10.74	196.7	10.79	194.3	10.84	190.9	10.94	187.8	11.06	185.8	11.15
		79.5	215.1	10.66	210.7	10.69	206.5	10.74	202.5	10.80	200.0	10.85	197.6	10.91	194.1	11.01	190.9	11.13	188.9	11.22
	77	26.7	187.0	8.96	183.1	8.99	179.5	9.03	176.0	9.08	173.8	9.12	171.7	9.17	168.7	9.26	165.9	9.36	164.2	9.43
		41.3	197.9	9.21	193.9	9.24	190.0	9.28	186.3	9.33	184.0	9.37	181.8	9.42	178.6	9.51	175.7	9.61	173.8	9.69
		56.0	206.5	9.38	202.2	9.41	198.2	9.45	194.4	9.51	192.0	9.55	189.7	9.60	186.3	9.69	183.3	9.80	181.3	9.88
		67.8	211.6	9.48	207.2	9.51	203.1	9.55	199.2	9.61	196.7	9.65	194.3	9.70	190.9	9.79	187.8	9.90	185.8	9.98
		79.5	215.1	9.54	210.7	9.57	206.5	9.61	202.5	9.67	200.0	9.71	197.6	9.76	194.1	9.85	190.9	9.96	188.9	10.04
	86	26.7	187.0	7.84	183.1	7.87	179.5	7.90	176.0	7.95	173.8	7.98	171.7	8.03	168.7	8.10	165.9	8.19	164.2	8.26
		41.3	197.9	8.06	193.9	8.08	190.0	8.12	186.3	8.17	184.0	8.20	181.8	8.25	178.6	8.32	175.7	8.42	173.8	8.48
		56.0	206.5	8.21	202.2	8.24	198.2	8.27	194.4	8.32	192.0	8.36	189.7	8.41	186.3	8.48	183.3	8.58	181.3	8.65
		67.8	211.6	8.30	207.2	8.32	203.1	8.36	199.2	8.41	196.7	8.45	194.3	8.49	190.9	8.57	187.8	8.66	185.8	8.74
		79.5	215.1	8.35	210.7	8.37	206.5	8.41	202.5	8.46	200.0	8.50	197.6	8.55	194.1	8.62	190.9	8.72	188.9	8.79
	95	26.7	187.0	7.30	183.1	7.32	179.5	7.35	176.0	7.40	173.8	7.43	171.7	7.47	168.7	7.54	165.9	7.62	164.2	7.69
		41.3	197.9	7.50	193.9	7.52	190.0	7.56	186.3	7.60	184.0	7.64	181.8	7.68	178.6	7.75	175.7	7.83	173.8	7.90
		56.0	206.5	7.64	202.2	7.67	198.2	7.70	194.4	7.75	192.0	7.78	189.7	7.82	186.3	7.90	183.3	7.98	181.3	8.05
		67.8	211.6	7.72	207.2	7.75	203.1	7.78	199.2	7.83	196.7	7.86	194.3	7.90	190.9	7.98	187.8	8.06	185.8	8.13
		79.5	215.1	7.77	210.7	7.79	206.5	7.83	202.5	7.88	200.0	7.91	197.6	7.95	194.1	8.03	190.9	8.12	188.9	8.18
	104	26.7	187.0	7.04	183.1	7.06	179.5	7.10	176.0	7.14	173.8	7.17	171.7	7.21	168.7	7.27	165.9	7.35	164.2	7.41
		41.3	197.9	7.23	193.9	7.26	190.0	7.29	186.3	7.33	184.0	7.37	181.8	7.41	178.6	7.48	175.7	7.56	173.8	7.62
		56.0	206.5	7.37	202.2	7.40	198.2	7.43	194.4	7.47	192.0	7.51	189.7	7.55	186.3	7.62	183.3	7.70	181.3	7.76
		67.8	211.6	7.45	207.2	7.47	203.1	7.51	199.2	7.55	196.7	7.59	194.3	7.63	190.9	7.70	187.8	7.78	185.8	7.84
		79.5	215.1	7.50	210.7	7.52	206.5	7.55	202.5	7.60	200.0	7.63	197.6	7.67	194.1	7.74	190.9	7.83	188.9	7.89
	113	26.7	187.0	7.01	183.1	7.04	179.5	7.07	176.0	7.11	173.8	7.14	171.7	7.18	168.7	7.25	165.9	7.33	164.2	7.39
		41.3	197.9	7.21	193.9	7.23	190.0	7.26	186.3	7.31	184.0	7.34	181.8	7.38	178.6	7.45	175.7	7.53	173.8	7.59
		56.0	206.5	7.35	202.2	7.37	198.2	7.40	194.4	7.45	192.0	7.48	189.7	7.52	186.3	7.59	183.3	7.67	181.3	7.74
		67.8	211.6	7.42	207.2	7.45	203.1	7.48	199.2	7.52	196.7	7.56	194.3	7.60	190.9	7.67	187.8	7.75	185.8	7.82
		79.5	215.1	7.47	210.7	7.49	206.5	7.53	202.5	7.57	200.0	7.60	197.6	7.64	194.1	7.72	190.9	7.80	188.9	7.86

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
70	50	26.7	134.6	7.15	131.9	7.18	129.2	7.21	126.7	7.25	125.2	7.29	123.6	7.32	121.5	7.39	119.5	7.47	118.2	7.53
		41.3	142.5	7.35	139.6	7.38	136.8	7.41	134.2	7.45	132.5	7.49	130.9	7.53	128.6	7.60	126.5	7.68	125.2	7.74
		56.0	148.7	7.49	145.6	7.52	142.7	7.55	140.0	7.59	138.2	7.63	136.6	7.67	134.2	7.74	132.0	7.83	130.6	7.89
		67.8	152.4	7.57	149.2	7.59	146.3	7.63	143.4	7.67	141.7	7.71	139.9	7.75	137.5	7.82	135.2	7.91	133.8	7.97
		79.5	154.9	7.62	151.7	7.64	148.7	7.68	145.8	7.72	144.0	7.76	142.3	7.80	139.8	7.87	137.5	7.96	136.0	8.02
	59	26.7	163.6	8.37	160.2	8.40	157.0	8.44	154.0	8.49	152.1	8.53	150.2	8.57	147.6	8.65	145.2	8.74	143.6	8.82
		41.3	173.2	8.60	169.6	8.63	166.3	8.67	163.1	8.72	161.0	8.76	159.1	8.81	156.3	8.89	153.7	8.99	152.1	9.06
		56.0	180.7	8.77	177.0	8.80	173.4	8.84	170.1	8.89	168.0	8.93	165.9	8.98	163.1	9.06	160.3	9.16	158.7	9.23
		67.8	185.1	8.86	181.3	8.89	177.7	8.93	174.3	8.98	172.1	9.02	170.0	9.07	167.1	9.15	164.3	9.25	162.6	9.33
		79.5	188.2	8.91	184.4	8.94	180.7	8.98	177.2	9.03	175.0	9.08	172.9	9.12	169.9	9.21	167.0	9.31	165.3	9.39
	68	26.7	163.6	7.74	160.2	7.76	157.0	7.80	154.0	7.84	152.1	7.88	150.2	7.92	147.6	7.99	145.2	8.08	143.6	8.15
		41.3	173.2	7.95	169.6	7.98	166.3	8.01	163.1	8.06	161.0	8.10	159.1	8.14	156.3	8.21	153.7	8.30	152.1	8.37
		56.0	180.7	8.10	177.0	8.13	173.4	8.17	170.1	8.22	168.0	8.25	165.9	8.30	163.1	8.37	160.3	8.46	158.7	8.53
		67.8	185.1	8.19	181.3	8.21	177.7	8.25	174.3	8.30	172.1	8.34	170.0	8.38	167.1	8.46	164.3	8.55	162.6	8.62
		79.5	188.2	8.24	184.4	8.26	180.7	8.30	177.2	8.35	175.0	8.39	172.9	8.43	169.9	8.51	167.0	8.60	165.3	8.67
	77	26.7	163.6	6.92	160.2	6.95	157.0	6.98	154.0	7.02	152.1	7.05	150.2	7.09	147.6	7.15	145.2	7.23	143.6	7.29
		41.3	173.2	7.11	169.6	7.14	166.3	7.17	163.1	7.21	161.0	7.24	159.1	7.28	156.3	7.35	153.7	7.43	152.1	7.49
		56.0	180.7	7.25	177.0	7.27	173.4	7.31	170.1	7.35	168.0	7.38	165.9	7.42	163.1	7.49	160.3	7.57	158.7	7.63
		67.8	185.1	7.32	181.3	7.35	177.7	7.38	174.3	7.42	172.1	7.46	170.0	7.50	167.1	7.57	164.3	7.65	162.6	7.71
		79.5	188.2	7.37	184.4	7.39	180.7	7.43	177.2	7.47	175.0	7.51	172.9	7.55	169.9	7.62	167.0	7.70	165.3	7.76
	86	26.7	163.6	6.06	160.2	6.08	157.0	6.11	154.0	6.14	152.1	6.17	150.2	6.20	147.6	6.26	145.2	6.33	143.6	6.38
		41.3	173.2	6.23	169.6	6.25	166.3	6.27	163.1	6.31	161.0	6.34	159.1	6.37	156.3	6.43	153.7	6.50	152.1	6.56
		56.0	180.7	6.35	177.0	6.37	173.4	6.39	170.1	6.43	168.0	6.46	165.9	6.50	163.1	6.56	160.3	6.63	158.7	6.68
		67.8	185.1	6.41	181.3	6.43	177.7	6.46	174.3	6.50	172.1	6.53	170.0	6.56	167.1	6.62	164.3	6.70	162.6	6.75
		79.5	188.2	6.45	184.4	6.47	180.7	6.50	177.2	6.54	175.0	6.57	172.9	6.60	169.9	6.67	167.0	6.74	165.3	6.79
	95	26.7	163.6	5.64	160.2	5.66	157.0	5.68	154.0	5.72	152.1	5.74	150.2	5.77	147.6	5.83	145.2	5.89	143.6	5.94
		41.3	173.2	5.80	169.6	5.81	166.3	5.84	163.1	5.87	161.0	5.90	159.1	5.93	156.3	5.99	153.7	6.05	152.1	6.10
		56.0	180.7	5.91	177.0	5.93	173.4	5.95	170.1	5.99	168.0	6.01	165.9	6.05	163.1	6.10	160.3	6.17	158.7	6.22
		67.8	185.1	5.97	181.3	5.99	177.7	6.01	174.3	6.05	172.1	6.08	170.0	6.11	167.1	6.17	164.3	6.23	162.6	6.28
		79.5	188.2	6.00	184.4	6.02	180.7	6.05	177.2	6.09	175.0	6.11	172.9	6.15	169.9	6.20	167.0	6.27	165.3	6.32
	104	26.7	163.6	5.44	160.2	5.46	157.0	5.48	154.0	5.52	152.1	5.54	150.2	5.57	147.6	5.62	145.2	5.68	143.6	5.73
		41.3	173.2	5.59	169.6	5.61	166.3	5.63	163.1	5.67	161.0	5.69	159.1	5.72	156.3	5.78	153.7	5.84	152.1	5.89
		56.0	180.7	5.70	177.0	5.72	173.4	5.74	170.1	5.78	168.0	5.80	165.9	5.83	163.1	5.89	160.3	5.95	158.7	6.00
		67.8	185.1	5.76	181.3	5.78	177.7	5.80	174.3	5.84	172.1	5.86	170.0	5.89	167.1	5.95	164.3	6.01	162.6	6.06
		79.5	188.2	5.79	184.4	5.81	180.7	5.84	177.2	5.87	175.0	5.90	172.9	5.93	169.9	5.99	167.0	6.05	165.3	6.10
	113	26.7	163.6	5.42	160.2	5.44	157.0	5.46	154.0	5.49	152.1	5.52	150.2	5.55	147.6	5.60	145.2	5.66	143.6	5.71
		41.3	173.2	5.57	169.6	5.59	166.3	5.61	163.1	5.65	161.0	5.67	159.1	5.70	156.3	5.76	153.7	5.82	152.1	5.87
		56.0	180.7	5.68	177.0	5.70	173.4	5.72	170.1	5.75	168.0	5.78	165.9	5.81	163.1	5.87	160.3	5.93	158.7	5.98
		67.8	185.1	5.74	181.3	5.75	177.7	5.78	174.3	5.81	172.1	5.84	170.0	5.87	167.1	5.93	164.3	5.99	162.6	6.04
		79.5	188.2	5.77	184.4	5.79	180.7	5.82	177.2	5.85	175.0	5.88	172.9	5.91	169.9	5.96	167.0	6.03	165.3	6.08
60	50	26.7	115.4	5.34	113.0	5.35	110.8	5.38	108.6	5.41	107.3	5.43	106.0	5.46	104.1	5.51	102.4	5.57	101.3	5.62
		41.3	122.2	5.48	119.7	5.50	117.3	5.53	115.0	5.56	113.6	5.58	112.2	5.61	110.3	5.66	108.4	5.73	107.3	5.77
		56.0	127.5	5.59	124.8	5.61	122.3	5.63	120.0	5.66	118.5	5.69	117.1	5.72	115.0	5.77	113.1	5.84	111.9	5.88
		67.8	130.6	5.65	127.9	5.66	125.4	5.69	123.0	5.72	121.4	5.75	120.0	5.78	117.9	5.83	115.9	5.90	114.7	5.94
		79.5	132.8	5.68	130.1	5.70	127.5	5.72	125.0	5.76	123.4	5.78	122.0	5.82	119.8	5.87	117.8	5.93	116.6	5.98
	59	26.7	140.2	6.24	137.3	6.26	134.6	6.29	132.0	6.33	130.4	6.36	128.8	6.39	126.5	6.45	124.4	6.52	123.1	6.57
		41.3	148.5	6.42	145.4	6.44	142.5	6.47	139.8	6.50	138.0	6.53	136.3	6.57	134.0	6.63	131.7	6.70	130.4	6.76
		56.0	154.9	6.54	151.7	6.56	148.7	6.59	145.8	6.63	144.0	6.66	142.2	6.69	139.8	6.76	137.4	6.83	136.0	6.89
		67.8	158.7	6.61	155.4	6.63	152.3	6.66	149.4	6.70	147.5	6.73	145.7	6.76	143.2	6.83	140.8	6.90	139.3	6.96
		79.5	161.3	6.65	158.0	6.67	154.9	6.70	151.9	6.74	150.0	6.77	148.2	6.80	145.6	6.87	143.2	6.94	141.7	7.00
	68	26.7	140.2	5.77	137.3	5.79	134.6	5.81	132.0	5.85	130.4	5.88	128.8	5.91	126.5	5.96	124.4	6.03	123.1	6.08
		41.3	148.5	5.93	145.4	5.95	142.5	5.97	139.8	6.01	138.0	6.04	136.3	6.07	134.0	6.13	131.7	6.19	130.4	6.24
		56.0	154.9	6.04	151.7	6.06	148.7	6.09	145.8	6.13	144.0	6.15	142.2	6.19	139.8	6.24	137.4	6.31	136.0	6.36
		67.8	158.7	6.10	155.4	6.12	152.3	6.15	149.4	6.19	147.5	6.22	145.7	6.25	143.2	6.31	140.8	6.38	139.3	6.43
		79.5	161.3	6.14	158.0	6.16	154.9	6.19	151.9	6.23	150.0	6.26	148.2	6.29	145.6	6.35	143.2	6.42	141.7	6.47
	77	26.7	140.2	5.16	137.3	5.18	134.6	5.20	132.0	5.23	130.4	5.26	128.8	5.29	126.5	5.33	124.4	5.39	123.1	5.44
		41.3	148.5	5.31	145.4	5.32	142.5	5.35	139.8	5.38	138.0	5.40	136.3	5.43	134.0	5.48	131.7	5.54	130.4	5.59
		56.0	154.9	5.41	151.7	5.42	148.7	5.45	145.8	5.48	144.0	5.51	142.2	5.54	139.8	5.59	137.4	5.65	136.0	5.69
		67.8	158.7	5.46	155.4	5.48	152.3	5.50	149.4	5.54	147.5	5.56	145.7	5.59	143.2	5.64	140.8	5.71	139.3	5.75
		79.5	161.3	5.50	158.0	5.51	154.9	5.54	151.9	5.57	150.0	5.60	148.2	5.63	145.6	5.68	143.2	5.74	141.7	5.79
	86	26.7	140.2	4.52	137.3	4.53	134.6	4.55	132.0	4.58	130.4	4.60	128.8	4.63	126.5	4.67	124.4	4.72	123.1	4.76
		41.3	148.5	4.64	145.4	4.66	142.5	4.68	139.8	4.71	138.0	4.73	136.3	4.75	134.0	4.80	131.7	4.85	130.4	4.89
		56.0	154.9	4.73	151.7	4.75	148.7	4.77	145.8	4.80	144.0	4.82	142.2	4.84	139.8	4.89	137.4	4.94	136.0	4.98
		67.8	158.7	4.78	155.4	4.80	152.3	4.82	149.4	4.85	147.5	4.87	145.7	4.89	143.2	4.94	140.8	4.99	139.3	5.03
		79.5	161.3	4.81	158.0	4.83	154.9	4.85	151.9	4.88	150.0	4.90	148.2	4.92	145.6	4.97	143.2	5.02	141.7	5.07
	95	26.7	140.2	4.21	137.3	4.22	134.6	4.24	132.0	4.26	130.4	4.28	128.8	4.31	126.5	4.35	124.4	4.39	123.1	4.43
		41.3	148.5	4.32	145.4	4.34	142.5	4.36	139.8	4.38	138.0	4.40	136.3	4.42	134.0	4.47	131.7	4.51	130.4	4.55
		56.0	154.9	4.40	151.7	4.42	148.7	4.44	145.8	4.46	144.0	4.49	142.2	4.51	139.8	4.55	137.4	4.60	136.0	4.64
		67.8	158.7	4.45	155.4	4.46	152.3	4.48	149.4	4.51	147.5	4.53	145.7	4.56	143.2	4.60	140.8	4.65	139.3	4.69
		79.5	161.3	4.48	158.0	4.49	154.9	4.51	151.9	4.54	150.0	4.56	148.2	4.58	145.6	4.63	143.2	4.68	141.7	4.72
	104	26.7	140.2	4.06	137.3	4.07	134.6	4.09	132.0	4.11	130.4	4.13	128.8	4.15	126.5	4.19	124.4	4.24	123.1	4.27
		41.3	148.5	4.17	145.4	4.18	142.5	4.20	139.8	4.23	138.0	4.25	136.3	4.27	134.0	4.31	131.7	4.35	130.4	4.39
		56.0	154.9	4.25	151.7	4.26	148.7	4.28	145.8	4.31	144.0	4.33	142.2	4.35	139.8	4.39	137.4	4.44	136.0	4.47
		67.8	158.7	4.29	155.4	4.31	152.3	4.33	149.4	4.35	147.5	4.37	145.7	4.40	143.2	4.44	140.8	4.48	139.3	4.52
		79.5	161.3	4.32	158.0	4.33	154.9	4.35	151.9	4.38	150.0	4.40	148.2	4.42	145.6	4.46	143.2	4.51	141.7	4.55
	113	26.7	140.2	4.04	137.3	4.06	134.6	4.07	132.0	4.10	130.4	4.12	128.8	4.14	126.5	4.18	124.4	4.22	123.1	4.26
		41.3	148.5	4.15	145.4	4.17	142.5	4.19	139.8	4.21	138.0	4.23	136.3	4.25	134.0	4.29	131.7	4.34	130.4	4.37
		56.0	154.9	4.23	151.7	4.25	148.7	4.27	145.8	4.29	144.0	4.31	142.2	4.33	139.8	4.37	137.4	4.42	136.0	4.46
		67.8	158.7	4.28	155.4	4.29	152.3	4.31	149.4	4.34	147.5	4.36	145.7	4.38	143.2	4.42	140.8	4.47	139.3	4.50
		79.5	161.3	4.30	158.0	4.32	154.9	4.34	151.9	4.36	150.0	4.38	148.2	4.41	145.6	4.45	143.2	4.50	141.7	4.53

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

Heating Capacity

(H,Y)VWH(P,R)216B(3,4)2S

Connection ratio	Entering Water temp.	Water Volume	Indoor Air temp. (°F DB)																	
			59		62		65		68		70		72		75		78		80	
			TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
%	°F	gpm	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW	MBH	kW
50	50	26.7	96.2	3.97	94.2	3.99	92.3	4.00	90.5	4.03	89.4	4.05	88.3	4.07	86.8	4.11	85.3	4.15	84.4	4.18
		41.3	101.8	4.08	99.7	4.10	97.7	4.11	95.9	4.14	94.7	4.16	93.5	4.18	91.9	4.22	90.4	4.26	89.4	4.30
		56.0	106.2	4.16	104.0	4.17	102.0	4.19	100.0	4.22	98.7	4.24	97.6	4.26	95.9	4.30	94.3	4.35	93.3	4.38
		67.8	108.8	4.20	106.6	4.22	104.5	4.24	102.5	4.26	101.2	4.28	100.0	4.30	98.2	4.34	96.6	4.39	95.6	4.43
		79.5	110.7	4.23	108.4	4.24	106.2	4.26	104.2	4.29	102.9	4.31	101.6	4.33	99.9	4.37	98.2	4.42	97.2	4.45
	59	26.7	116.8	4.65	114.4	4.66	112.2	4.69	110.0	4.71	108.6	4.73	107.3	4.76	105.4	4.80	103.7	4.86	102.6	4.90
		41.3	123.7	4.78	121.2	4.79	118.8	4.81	116.5	4.84	115.0	4.87	113.6	4.89	111.6	4.94	109.8	4.99	108.6	5.03
		56.0	129.1	4.87	126.4	4.89	123.9	4.91	121.5	4.94	120.0	4.96	118.5	4.98	116.5	5.03	114.5	5.09	113.3	5.13
		67.8	132.2	4.92	129.5	4.94	126.9	4.96	124.5	4.99	122.9	5.01	121.5	5.04	119.3	5.08	117.4	5.14	116.1	5.18
		79.5	134.5	4.95	131.7	4.97	129.1	4.99	126.6	5.02	125.0	5.04	123.5	5.07	121.3	5.11	119.3	5.17	118.1	5.21
	68	26.7	116.8	4.30	114.4	4.31	112.2	4.33	110.0	4.36	108.6	4.38	107.3	4.40	105.4	4.44	103.7	4.49	102.6	4.52
		41.3	123.7	4.42	121.2	4.43	118.8	4.45	116.5	4.48	115.0	4.50	113.6	4.52	111.6	4.56	109.8	4.61	108.6	4.65
		56.0	129.1	4.50	126.4	4.51	123.9	4.53	121.5	4.56	120.0	4.58	118.5	4.61	116.5	4.65	114.5	4.70	113.3	4.74
		67.8	132.2	4.55	129.5	4.56	126.9	4.58	124.5	4.61	122.9	4.63	121.5	4.65	119.3	4.70	117.4	4.75	116.1	4.79
		79.5	134.5	4.57	131.7	4.59	129.1	4.61	126.6	4.64	125.0	4.66	123.5	4.68	121.3	4.73	119.3	4.78	118.1	4.82
	77	26.7	116.8	3.84	114.4	3.86	112.2	3.87	110.0	3.90	108.6	3.92	107.3	3.94	105.4	3.97	103.7	4.02	102.6	4.05
		41.3	123.7	3.95	121.2	3.96	118.8	3.98	116.5	4.00	115.0	4.02	113.6	4.04	111.6	4.08	109.8	4.13	108.6	4.16
		56.0	129.1	4.03	126.4	4.04	123.9	4.06	121.5	4.08	120.0	4.10	118.5	4.12	116.5	4.16	114.5	4.21	113.3	4.24
		67.8	132.2	4.07	129.5	4.08	126.9	4.10	124.5	4.12	122.9	4.14	121.5	4.16	119.3	4.20	117.4	4.25	116.1	4.28
		79.5	134.5	4.09	131.7	4.11	129.1	4.12	126.6	4.15	125.0	4.17	123.5	4.19	121.3	4.23	119.3	4.28	118.1	4.31
	86	26.7	116.8	3.37	114.4	3.38	112.2	3.39	110.0	3.41	108.6	3.43	107.3	3.44	105.4	3.48	103.7	3.51	102.6	3.54
		41.3	123.7	3.46	121.2	3.47	118.8	3.48	116.5	3.50	115.0	3.52	113.6	3.54	111.6	3.57	109.8	3.61	108.6	3.64
		56.0	129.1	3.52	126.4	3.54	123.9	3.55	121.5	3.57	120.0	3.59	118.5	3.61	116.5	3.64	114.5	3.68	113.3	3.71
		67.8	132.2	3.56	129.5	3.57	126.9	3.59	124.5	3.61	122.9	3.63	121.5	3.64	119.3	3.68	117.4	3.72	116.1	3.75
		79.5	134.5	3.58	131.7	3.59	129.1	3.61	126.6	3.63	125.0	3.65	123.5	3.67	121.3	3.70	119.3	3.74	118.1	3.77
	95	26.7	116.8	3.13	114.4	3.14	112.2	3.16	110.0	3.17	108.6	3.19	107.3	3.21	105.4	3.24	103.7	3.27	102.6	3.30
		41.3	123.7	3.22	121.2	3.23	118.8	3.24	116.5	3.26	115.0	3.28	113.6	3.29	111.6	3.33	109.8	3.36	108.6	3.39
		56.0	129.1	3.28	126.4	3.29	123.9	3.31	121.5	3.32	120.0	3.34	118.5	3.36	116.5	3.39	114.5	3.43	113.3	3.45
		67.8	132.2	3.31	129.5	3.32	126.9	3.34	124.5	3.36	122.9	3.37	121.5	3.39	119.3	3.42	117.4	3.46	116.1	3.49
		79.5	134.5	3.33	131.7	3.35	129.1	3.36	126.6	3.38	125.0	3.40	123.5	3.41	121.3	3.45	119.3	3.48	118.1	3.51
	104	26.7	116.8	3.02	114.4	3.03	112.2	3.05	110.0	3.06	108.6	3.08	107.3	3.09	105.4	3.12	103.7	3.16	102.6	3.18
		41.3	123.7	3.11	121.2	3.12	118.8	3.13	116.5	3.15	115.0	3.16	113.6	3.18	111.6	3.21	109.8	3.24	108.6	3.27
		56.0	129.1	3.16	126.4	3.17	123.9	3.19	121.5	3.21	120.0	3.22	118.5	3.24	116.5	3.27	114.5	3.31	113.3	3.33
		67.8	132.2	3.20	129.5	3.21	126.9	3.22	124.5	3.24	122.9	3.26	121.5	3.27	119.3	3.30	117.4	3.34	116.1	3.37
		79.5	134.5	3.22	131.7	3.23	129.1	3.24	126.6	3.26	125.0	3.28	123.5	3.29	121.3	3.32	119.3	3.36	118.1	3.39
	113	26.7	116.8	3.01	114.4	3.02	112.2	3.03	110.0	3.05	108.6	3.07	107.3	3.08	105.4	3.11	103.7	3.14	102.6	3.17
		41.3	123.7	3.09	121.2	3.10	118.8	3.12	116.5	3.14	115.0	3.15	113.6	3.17	111.6	3.20	109.8	3.23	108.6	3.26
		56.0	129.1	3.15	126.4	3.16	123.9	3.18	121.5	3.20	120.0	3.21	118.5	3.23	116.5	3.26	114.5	3.29	113.3	3.32
		67.8	132.2	3.19	129.5	3.20	126.9	3.21	124.5	3.23	122.9	3.24	121.5	3.26	119.3	3.29	117.4	3.33	116.1	3.35
		79.5	134.5	3.20	131.7	3.22	129.1	3.23	126.6	3.25	125.0	3.26	123.5	3.28	121.3	3.31	119.3	3.35	118.1	3.37

TC: Total Capacity
IP: Input Power

NOTES:

1. The table shows the reference value of a heating operation. This will change depends on the installation.
   In some cases, the value may change due to the compressor protection control.
2. The heating capacity on the table indicates the peak value, which does not include the capacity decrease caused by frost.
3. The value on the table shows when the system is operated under the following conditions.
   The indoor unit total capacity: 100% of water source unit capacity, The total piping length: 24.6ft (7.5m), The height difference: 0ft (0m)
4. In an instance of a heat recovery system, the value on the table indicates when all the indoor units are operated in heating mode.

5.3 Correction Factor According to Piping Length

Cooling Capacity

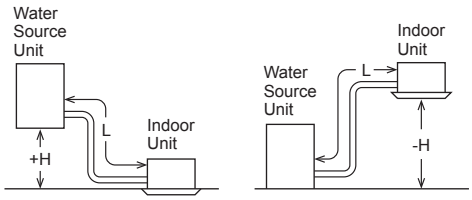
Correction Factor for Cooling Capacity According to Piping Length
The cooling capacity should be corrected according to the following formula:

CCA=CC x F

CCA: Actual Corrected Cooling Capacity
CC: Cooling Capacity in the Capacity Table
F: Correction Factor Based on the Equivalent Piping Length

The correction factors are shown in the figure.
Equivalent Piping Length for

- One 90° Elbow is 1.6ft (0.5m).
- One 180° Bend is 4.9ft (1.5m).
- One Multi-Kit is 1.6ft (0.5m).

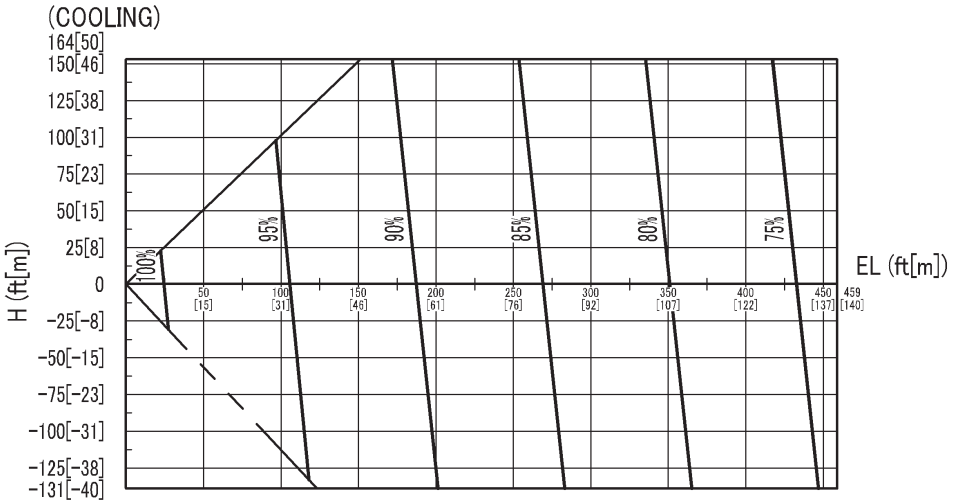


H: Height Difference Between Indoor Unit and Water Source Unit
EL: Equivalent Total Distance Between Indoor Unit and Water Source Unit (Equivalent One-Way Piping Length)
H>0: Position of Water Source Unit Higher Than Position of Indoor Unit
L: Actual One-Way Piping Length Between Indoor Unit and Water Source Unit

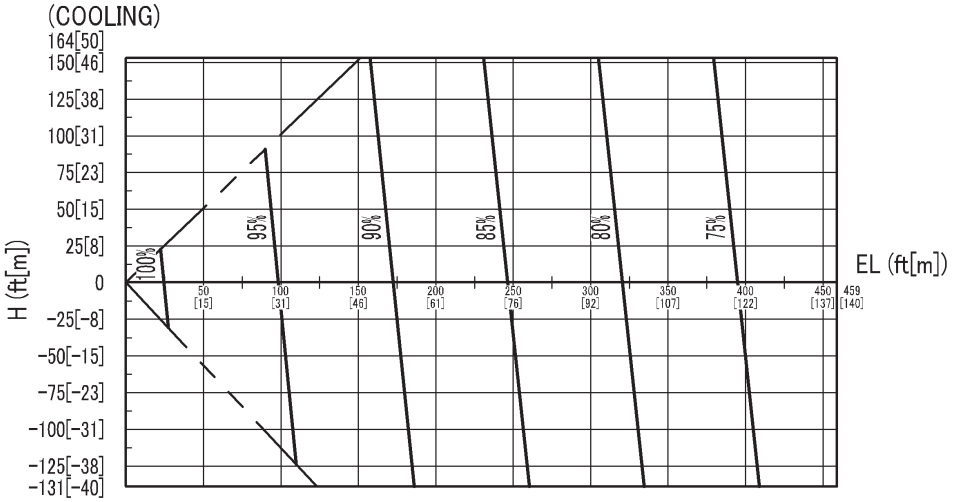
* Liquid piping size is different by Equivalent Piping Length between Water Source Unit and First Branch. Refer to Section 2.14.1 “Piping Size and Multi-Kit Selection”.

● Heat Pump System

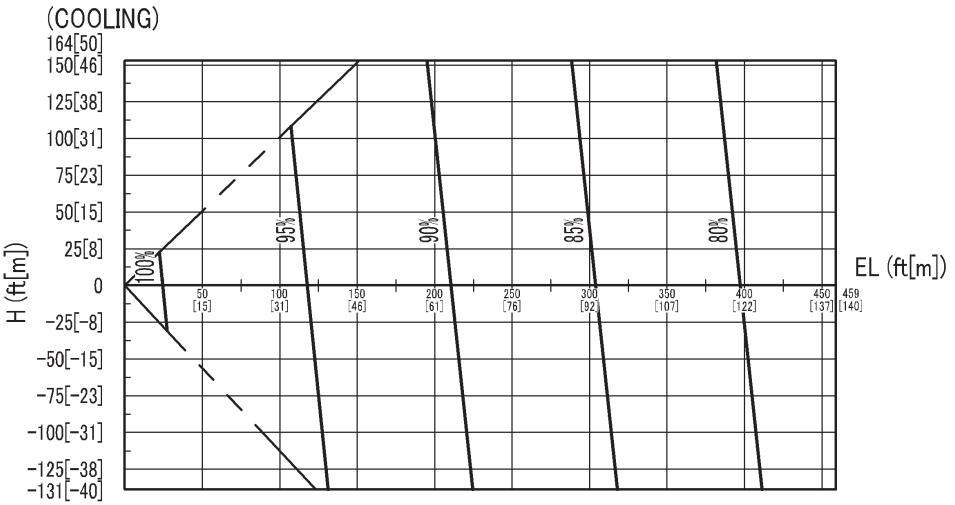
MODEL: (H,Y)VWHP072B(3,4)2S



MODELS: (H,Y)VWHP096B(3,4)2S and (H,Y)VWHP120B(3,4)2S

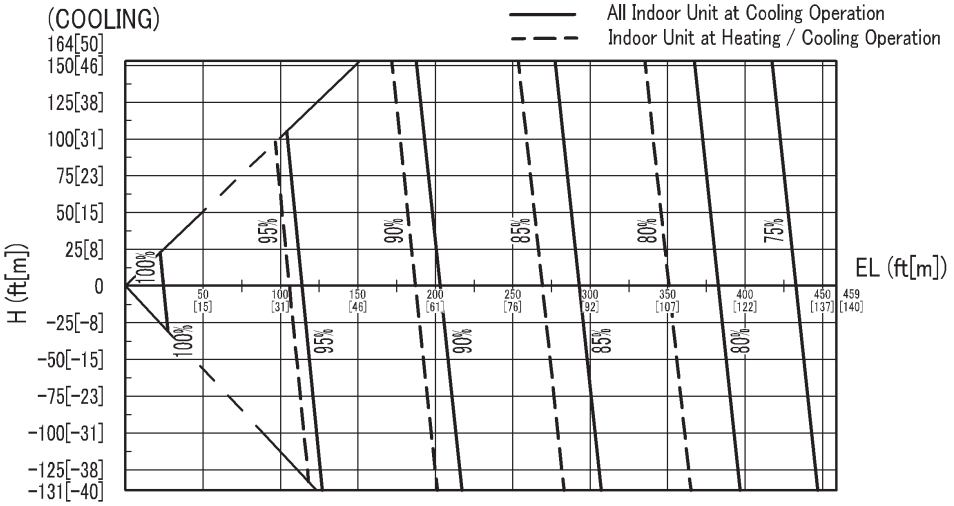


MODELS: (H,Y)VWHP144B(3,4)2S, (H,Y)VWHP168B(3,4)2S, (H,Y)VWHP192B(3,4)2S and (H,Y)VWHP216B(3,4)2S

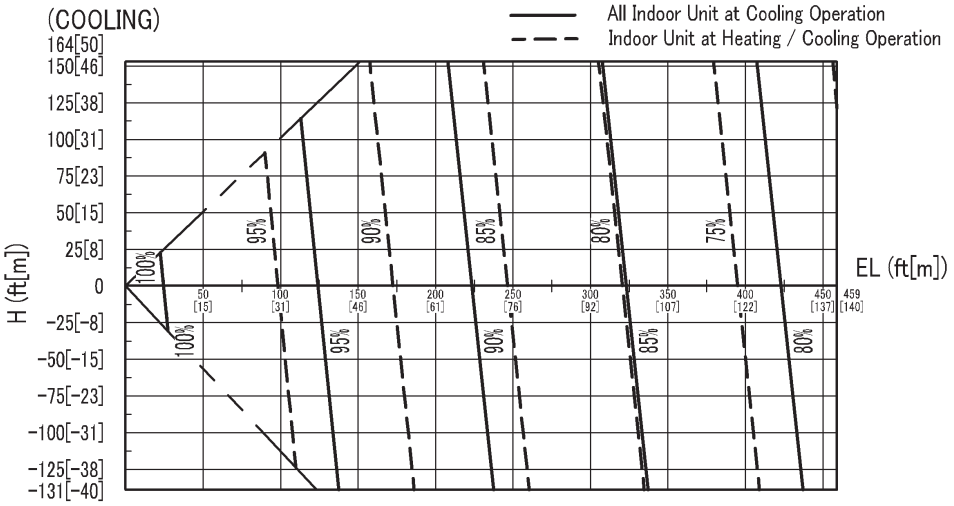


● Heat Recovery System

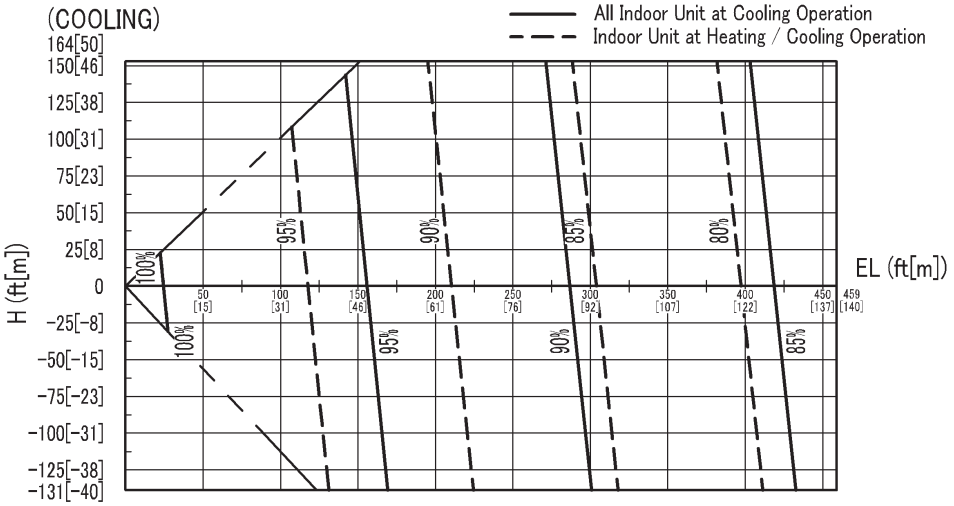
MODEL: (H,Y)VWHR072B(3,4)2S



MODELS: (H,Y)VWHR096B(3,4)2S and (H,Y)VWHR120B(3,4)2S



MODELS: (H,Y)VWHR144B(3,4)2S, (H,Y)VWHR168B(3,4)2S, (H,Y)VWHR192B(3,4)2S and (H,Y)VWHR216B(3,4)2S



Heating Capacity

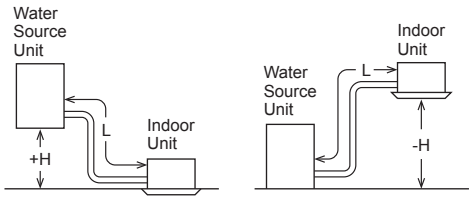
Correction Factor for Heating Capacity According to Piping Length
The heating capacity should be corrected according to the following formula:

HCA=HC x F

HCA: Actual Corrected Heating Capacity
HC: Heating Capacity in the Performance Table
F: Correction Factor Based on the Equivalent Piping Length

The correction factors are shown in the figure.
Equivalent Piping Length for

- One 90° Elbow is 1.6ft (0.5m).
- One 180° Bend is 4.9ft (1.5m).
- One Multi-Kit is 1.6ft (0.5m).

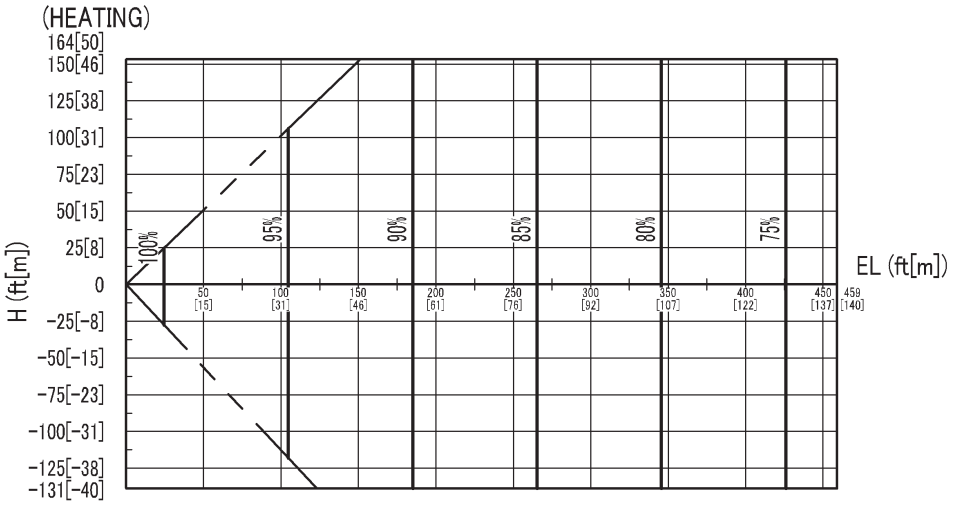


H: Height Difference Between Indoor Unit and Water Source Unit
EL: Equivalent Total Distance Between Indoor Unit and Water Source Unit (Equivalent One-Way Piping Length)
H>0: Position of Water Source Unit Higher Than Position of Indoor Unit
L: Actual One-Way Piping Length Between Indoor Unit and Water Source Unit in Meters

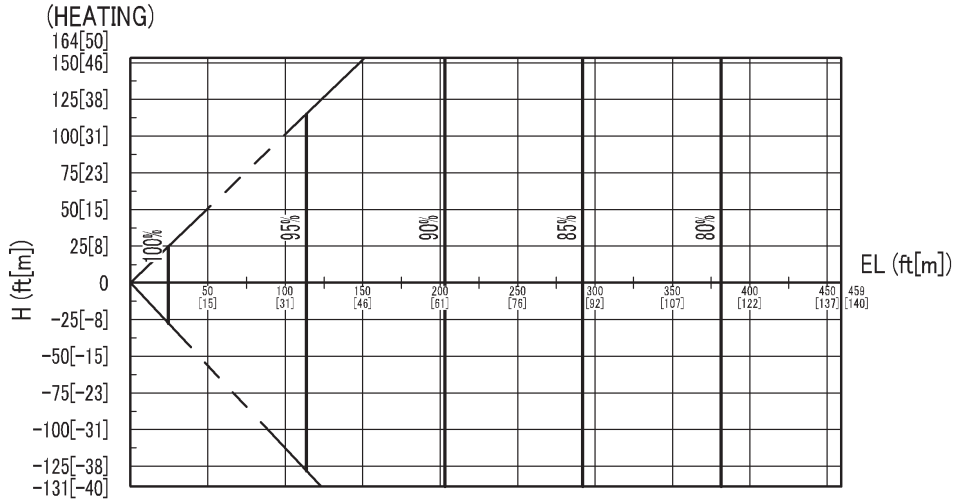
* Liquid piping size is different by Equivalent Piping Length between Water Source Unit and First Branch. Refer to Section 2.14.1 “Piping Size and Multi-Kit Selection”.

● Heat Pump System

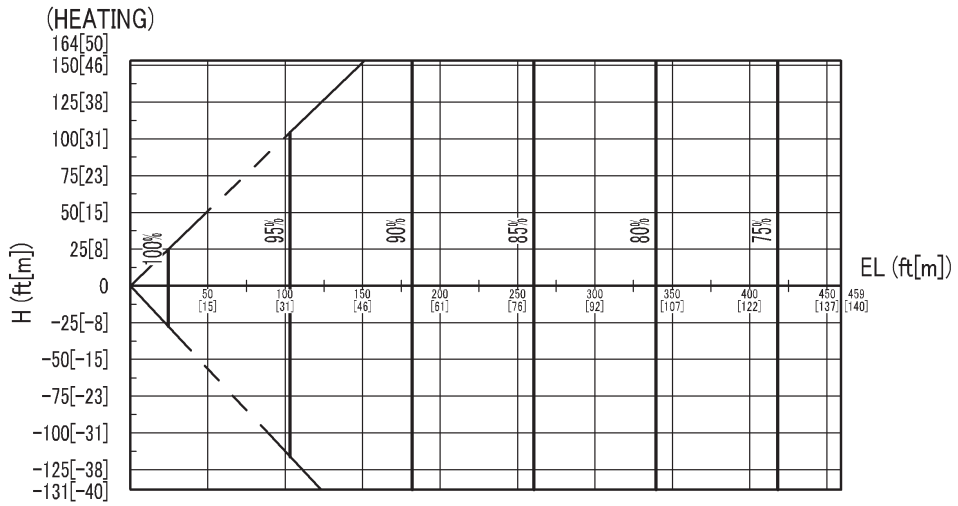
MODEL: (H,Y)VWHP072B(3,4)2S



MODELS: (H,Y)VWHP096B(3,4)2S and (H,Y)VWHP120B(3,4)2S

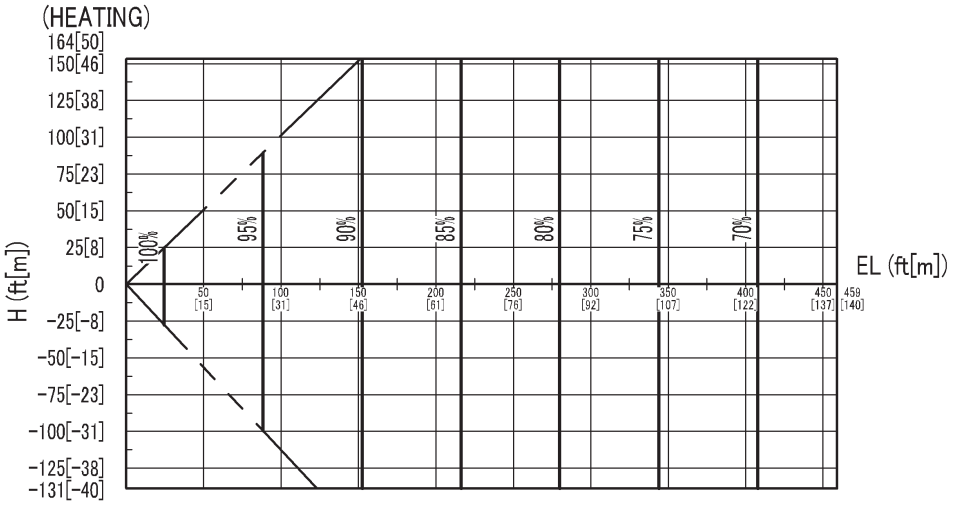


MODELS: (H,Y)VWHP144B(3,4)2S, (H,Y)VWHP168B(3,4)2S, (H,Y)VWHP192B(3,4)2S and (H,Y)VWHP216B(3,4)2S

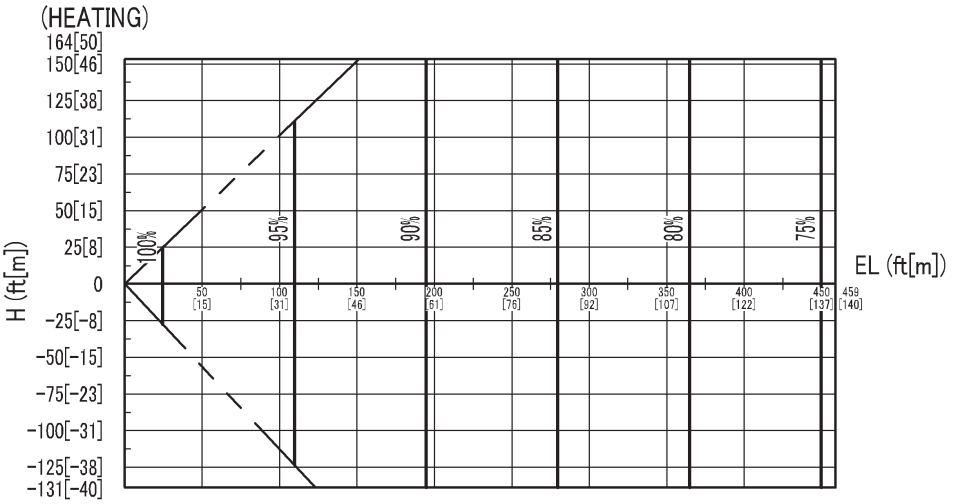


● Heat Recovery System

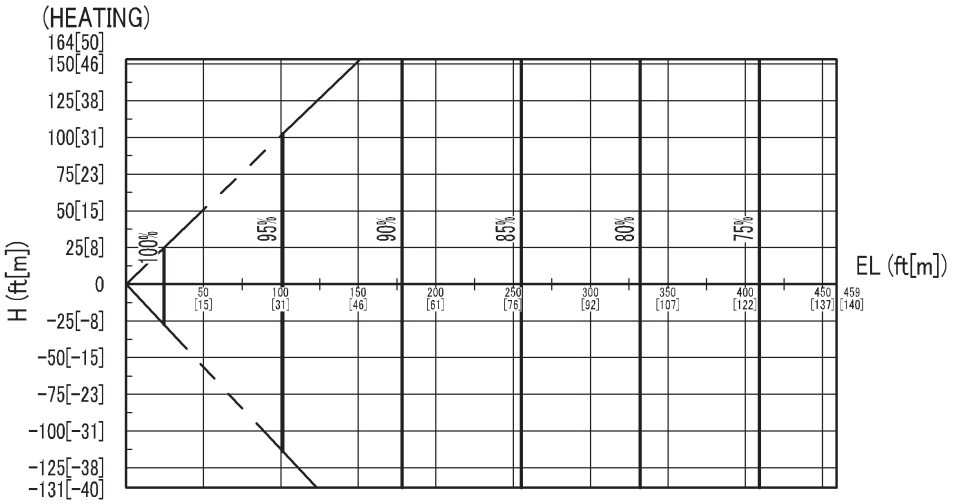
MODEL: (H,Y)VWHR072B(3,4)2S



MODELS: (H,Y)VWHR096B(3,4)2S and (H,Y)VWHR120B(3,4)2S



MODELS: (H,Y)VWHR144B(3,4)2S, (H,Y)VWHR168B(3,4)2S, (H,Y)VWHR192B(3,4)2S and (H,Y)VWHR216B(3,4)2S



TC-18006-rev.1

Code No. LIT-12013079
Revised February 2019