



HITACHI **SMARTFLEX™**

VRF GEN II

FLEXIBILITY, PERFORMANCE AND CONTROL



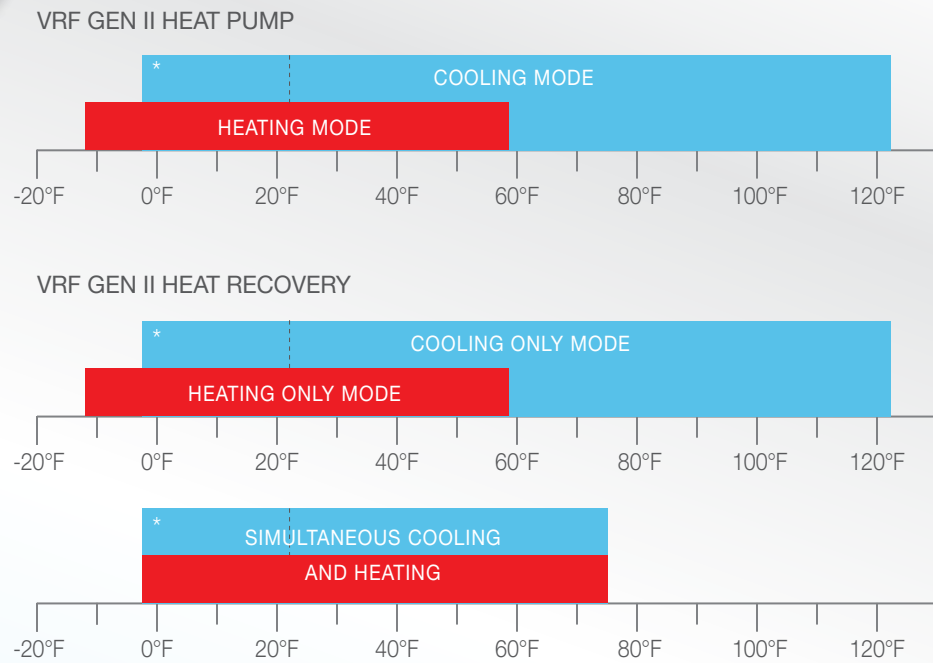
Expanding the possibilities

STATE-OF-THE-ART DESIGN TAKES PERFORMANCE TO NEW LEVELS

Our re-engineered Outdoor Units boast an extended operating range, providing exceptional heating and cooling performance even under extreme conditions. Advanced technology enables cooling when the ambient outdoor temperature is as low as -4°F or as high as

122°F — and heating when the ambient outdoor temperature is -13°F to 59°F. This extended operating range makes Hitachi **SmartFlex™** VRF systems an excellent option for projects in demanding environments, expanding your business opportunities.

Extended
operating
ranges



*With low-ambient kit installed, the cooling operating range extends as low as -4°F.

Extended outdoor ambient temperature operating ranges make Hitachi **SmartFlex™** VRF Gen II an excellent choice even in extreme climates.

REVOLUTIONARY TECHNOLOGY FOR TRULY SIMPLE INTEGRATION

The new **Johnson Controls VRF Smart Gateway** makes for fast and easy integration of Hitachi **SmartFlex™** VRF technology with BACnet™ Building Automation Systems (BAS) such as our *Facility Explorer®* BAS. The VRF Smart Gateway works over Ethernet to discover all point data from Hitachi **SmartFlex** VRF Indoor and Outdoor Units and makes the data available through the BAS. System

data is quickly integrated, organized, and automatically formatted to conform to BAS conventions, saving time and expense. For the first time, the entire system – including all Hitachi **SmartFlex** VRF components – is accessible and controllable through the BAS interface. And all detailed data is available for every component across the entire system, providing 24/7 control from a laptop, tablet or smartphone.



As a global leader in the engineering, development, and manufacture of building controls products, Johnson Controls now offers the exclusive VRF Smart Gateway.

Integration
on an
elite level

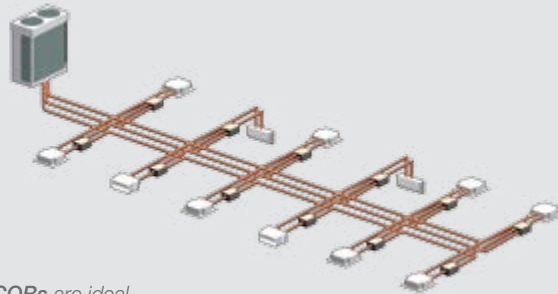
The VRF Smart Gateway provides complete data integration for absolute control of Hitachi SmartFlex VRF systems through a BACnet BAS.

MORE OPTIONS, SUPERIOR CAPABILITIES AND GREATER DESIGN FREEDOM

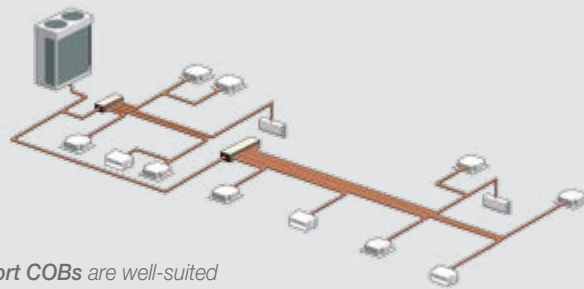
New Multi-Port Change-Over Boxes give you freedom when designing Heat Recovery systems. We now offer a full line of change-over box options: Single-Port Change-Over Boxes in two capacities and Multi-Port Change-Over Boxes with 4, 8 and 12 ports.

Multi-Port Change-Over Boxes easily accommodate future expansion.

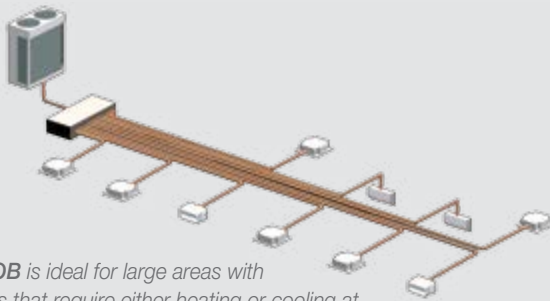
More options provide greater flexibility for your projects.



Single Port COBs are ideal for single zones that require individual heating and cooling control.



4 and 8 Port COBs are well-suited to medium-sized areas that require either heating or cooling at various temperature settings. The 4 and 8 Port COBs provide flexibility and minimize mechanical and electrical installation costs.



A 12 Port COB is ideal for large areas with multiple zones that require either heating or cooling at various temperature settings. The 12 Port COB has a maximum total capacity of 22.7 tons. It provides flexibility and minimizes mechanical and electrical installation costs.



Single Port Change-Over Box



4 Port Change-Over Box



8 Port Change-Over Box



12 Port Change-Over Box

Hitachi SmartFlex™ VRF Heat Recovery systems utilize 3-pipe technology. The above drawings are for illustrative purposes only.

MORE OUTDOOR UNITS FOR PRECISELY SIZED SYSTEMS

Hitachi **SmartFlex™** VRF Gen II takes performance, design flexibility and system control to a whole new level. With technical enhancements, groundbreaking integration capabilities and a greater selection of products, Hitachi **SmartFlex** VRF Gen II makes VRF technology a smarter, easier choice than ever before.

Redesigned Outdoor Units in new capacities increase layout options and enable the design of more economical configurations. With the new additions, fewer modules are needed to achieve up to a 36-ton capacity in a Heat Pump or Heat Recovery system.

The reduced weight and smaller footprint of our Outdoor Units give you more placement options and allow you to work within even more restrictive parameters than in the past.



The new Outdoor Unit line features single modules in 6, 8, 10, 12, 14 and 16 ton capacities. New modules expand design options to meet diverse project needs.

Rated Capacity (Ton)	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Number of Modules	1						2						3			
Capacity of Module(s)	6	8	10	12	14	16	12 6	10 10	12 10	12 12	14 12	16 12	16 14	12 10 10	12 12 10	12 12 12

UNPARALLELED SERVICE FROM RECOGNIZED INDUSTRY EXPERTS

Comprehensive, ongoing support completes the package. When you purchase a Hitachi **SmartFlex™** VRF Gen II system, you can expect exceptional support from a dedicated staff that includes VRF experts with decades of field experience.

From initial design to installation and maintenance, you can call upon our technical support team to answer questions and provide guidance. Whatever your needs, we will connect you with experts who can address them quickly and completely. We also offer an extensive line of training classes to ensure you have the knowledge and

skills to effectively and efficiently design and install Hitachi **SmartFlex** VRF systems.

With Johnson Controls as your partner, you will receive unequalled customer support from an impressive team of experts that starts at your local level and extends to our global team. Add a world-class training center with multiple working systems and expert instructors along with a commitment to ongoing product innovation, and the choice is simple. Johnson Controls is the smart partner for VRF technology solutions.

Dedicated
staff and VRF
experts



ADVANCED TECHNOLOGY FOR ENHANCED PERFORMANCE

Hitachi **SmartFlex™** VRF Gen II takes VRF technology to the next level with both superior performance and an extended product line:

- 14 different types of Indoor Units increase flexibility and savings:
 - A multitude of sizes means more design options
 - Up to 25% improvement in static pressure in medium- and high-static Indoor Units means more design flexibility
 - 4-way cassette, wall-mount and ducted medium- and high-static units are available in additional capacities for more options
- The re-engineered inverter compressor provides peak performance and boosts energy efficiency:
 - Smooth drive control modulates in smaller increments resulting in approximately 30% less power draw at 30% system load
 - Dual inverter compressors are standard in the 8, 10, 12, 14, and 16 ton Outdoor Units for increased efficiency
- Redesigned Outdoor Units provide exceptional performance:
 - New dual fan design increases air flow up to 23% while lowering sound levels
 - Extended connection ratios are some of the best in the industry — up to 150% for all Outdoor Unit capacities
- Vertical piping distance limits extend to 360 feet for greater layout flexibility

Greater
energy
efficiency



IMPRESSIVE AHRI CERTIFIED EFFICIENCY RATINGS

IEER up to 26.5
EER up to 14.9
COP up to 4.25
SCHE up to 32.2



For more details on terms, conditions, and limitations, please refer to the warranty certificate.

Contact your sales person or visit our warranty support center at BE-VRFWarranty@jci.com for specific eligibility requirements.



INDUSTRY CERTIFIED

Hitachi SmartFlex™ VRF systems are Intertek ETL Listed (Canada & USA), signifying that they comply with the standard of Heating and Cooling Equipment (ANSI/UL 1995 and CAN/CSA C22.2 No. 236-11, 4th Edition, October 14, 2011). The systems are also certified by the Air Conditioning, Heating & Refrigeration Institute.

SMARTFLEX-HVAC.COM

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