DAIKIN

# VRV IV

## ENERGY-INTELLIGENT™ HEATING AND COOLING SYSTEMS

### VRV IV Air-Cooled Heat Recovery

Daikin's VRV IV systems integrate advanced technology to provide comfort control with maximum energy efficiency and reliability. VRV IV provides a heating and cooling solution for multi-family residential to large commercial applications. Daikin VRV IV is the first variable refrigerant flow (VRF) system to be assembled in North America.

#### Main Features and Benefits:

- Total comfort solution for heating, cooling, ventilation and controls
- All inverter compressors and inverter fan motors optimize part load efficiency.
- Redesigned and optimized for low total Life Cycle Cost (LCC)
- New single/multiple port branch selector boxes provide compact dimensions and a wide range of product offerings (single, 4, 6, 8, 10 and 12 port options)
- Reduced install cost and increased flexibility as compared to VRV III with larger capacity single modules up to 14 Tons and system capacity up to 38 Tons
- Efficiency improved over VRV III by an average of 21% with IEER Values now up to 29.3
- Improved seasonal efficiency as compared to VRV III with automatic and customizable Variable Refrigerant Temperature (VRT) climate tuning
- Best-In-class warranty* with 10 year compressor and parts limited warranty as standard
- Reduced commissioning time vs. VRV III with VRV configurator software and Graphical User Interface (GUI)
- Design flexibility with long piping lengths up to 3,280 ft. total and up to 100 ft. vertical separation between indoor units
- Take advantage of Daikin's unique zone and centralized controls that are optimized for the specific needs of North America

Additional information

Before purchasing this appliance, read important information about its estimated annual energy consumption, yearly operating cost, or energy efficiency rating that is available from your retailer.

## FIND OUT MORE ABOUT DAIKIN VRV.

* Complete warranty details available from your local distributor or manufacturer's representative.

COMMERCIAL ▪ RENOVATION ▪ NEW CONSTRUCTION

# VRV IV | AIR COOLED HEAT RECOVERY

## VRV IV Operation

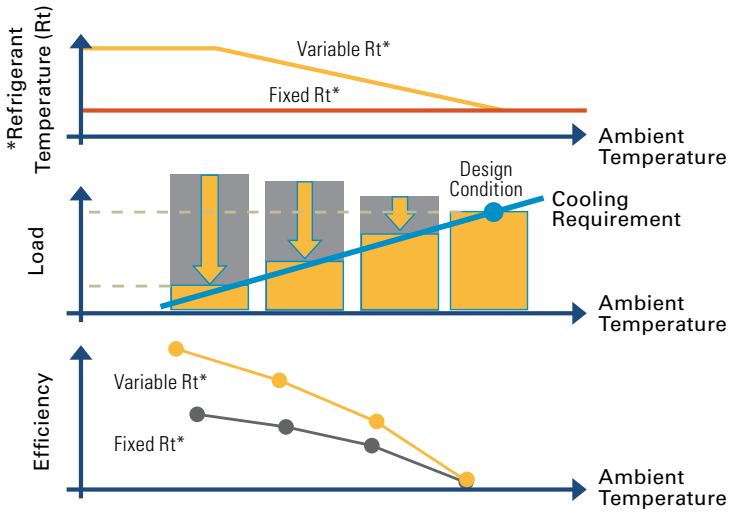
Lower capacity is required to cool and heat a building during mid season
Adapting to required heat load by variable refrigerant volume

A VRV system adapts to the required changes in capacity by varying the refrigerant volume. This results in an increase in efficiency at part load operation

The efficiency of VRV IV is further increased by adjusting the refrigerant temperature dependant on the space load and weather conditions

**Up to 28% Improved Seasonal Cooling Efficiency vs. VRV III**

Variable Refrigerant Temperature

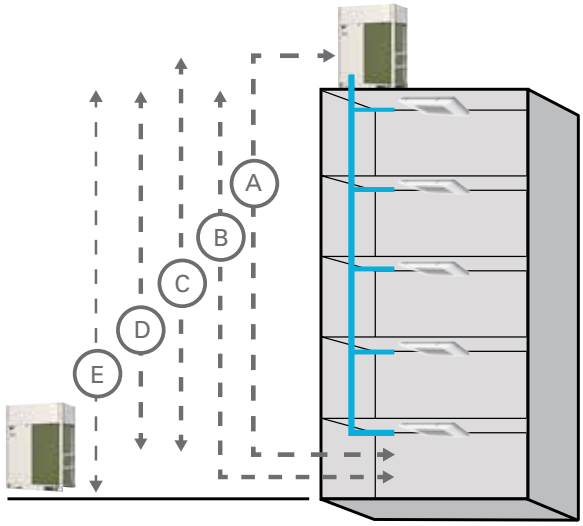



The above graphs are intended only to depict how advantages of the new Daikin VRV IV system combine to achieve the stated increase in seasonal efficiency. The graphs do not reflect test results, are not to scale and therefore do not quantify the effect of any such advantage.

## *PIPING FLEXIBILITY:*

The VRV IV provides very flexible piping possibilities. These generous allowances outlined in the figure facilitate an extensive variety of system designs.

- 100 ft maximum vertical difference between indoor units provides greater flexibility for riser type piping layouts.
- Allows for up to 12 floors to be served from a single VRV System
- Ideal for mid to high rise chiller or WSHP replacement projects




## Daikin VRV IV Piping

| | | |
|---|---|---|
| Maximum total one-way piping length | | 3282 ft. |
| Maximum piping length between outdoor unit and indoor unit - A | | 541 ft. |
| Maximum piping length between 1st branch connection and indoor unit *(with application rules)* - B | | 131 ft. *(295 ft.)* |
| Maximum piping length between indoor unit and closest branch connection | | 131 ft. |
| Maximum vertical difference between outdoor unit and indoor unit *(with application rules)* | OU above IUs - C | 164 ft. *(295 ft.)* |
| | OU below IUs - E | 131 ft. *(195 ft.)* |
| Maximum vertical difference between indoor units - D | | 100 ft. |

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## DAIKIN VRV IV BRANCH SELECTOR BOXES:

BSQ36TVJ, BSQ60TVJ, & BSQ96TVJ Single Port

BS4Q54TVJ

BS6Q54TVJ

BS10Q54TVJ

Providing flexibility and minimizing mechanical and electrical installation costs, Daikin's branch selector boxes are ideal for spaces that require individual heating and cooling control.

- Extended range of product offerings with 4, 6, 8, 10 and 12 port options
- No drain or condensate consideration required
- Unlimited number of unused ports per box or system
- Reduced electrical and mechanical installation costs
- Ultimate flexibility – Choose multi-port or single-port styles to customize your design
- Up to 72% reduction in footprint, as compared to previous generation models
- Up to 17% lower sound levels compared to current VRV III models
- Up to 65% reduction in weight, as compared to previous generation models

### Technical data for single-port branch selector boxes

| Model | BSQ36TVJ | BSQ60TVJ | BSQ96TVJ |
|---|---|---|---|
| Power supply | 1 phase, 208/230V, 60Hz | | |
| Number of branches | 1 | 1 | 1 |
| Maximum capacity index | 36 | 60 | 96 |
| Maximum connectable indoor units | 4 | 8 | 8 |
| Mass (Weight) lbs. | 27 | 27 | 33 |
| Dimensions (HxWxD) in. | 8-1/8 x 15-1/4 x 12-13/16 | | |

### Technical data for multi-port branch selector boxes

| Model | BS4Q54TVJ | BS6Q54TVJ | BS8Q54TVJ | BS10Q54TVJ | BS12Q54TVJ |
|---|---|---|---|---|---|
| Power supply | 1 phase, 208/230V, 60Hz | | | | |
| Number of branches | 4 | 6 | 8 | 10 | 12 |
| Maximum capacity index per branch | 54 | | | | |
| Maximum total capacity index | 144 | 216 | 290 | | |
| Maximum connectable indoor units per branch | 5 | | | | |
| Mass (Weight) lbs. | 49 | 68 | 73 | 101 | 106 |
| Dimensions (HxWxD) in. | 11-3/4 x 14-9/16 x 18-15/16 | 11-3/4 x 22-13/16 x 18-15/16 | | 11-3/4 x 32-5/16 x 18-15/16 | |

# Technical Data for VRV IV Heat Recovery Outdoor Units

| | | | 6 Ton | 8 Ton | 10 Ton | 12 Ton | 14 Ton |
|---|---|---|---|---|---|---|---|
| Model | 208-230V/3Ph/60Hz | | REYQ72TTJU | REYQ96TTJU | REYQ120TTJU | REYQ144TTJU | REYQ168TTJU |
| | 460V/3Ph/60Hz | | REYQ72TYDN | REYQ96TYDN | REYQ120TYDN | REYQ144TYDN | REYQ168TYDN |
| Performance | Rated Cooling Capacity | BTU/h | 69,000 | 92,000 | 114,000 | 138,000 | 160,000 |
| | Rated Heating Capacity | BTU/h | 77,000 | 103,000 | 129,000 | 154,000 | 180,000 |
| | Sound Pressure | dB(A) | 58 | 61 | | 65 | |
| | IEER (Ducted / Non-Ducted) | | 20.8 / 26.2 | 21.0 / 29.3 | 20.7 / 25.4 | 20.7 / 24.2 | 19.5 / 22.0 |
| | Airflow | CFM | 5,544 | 5,827 | 6,286 | 8,228 | 8,228 |
| Unit | Weight (REYQ_TT / REYQ_TY) | lbs | 507 / 527 | 703 / 717 | 780 / 717 | 780 / 794 | |
| | Dimensions (H x W x D) | in. | 66-11/16 x 36-11/16 x 30-3/16 | 66-11/16 x 48-7/8 x 30-3/16 | | | |

| | | | 16 Ton | 18 Ton | 20 Ton | 22 Ton | 24 Ton |
|---|---|---|---|---|---|---|---|
| Model | 208-230V/3Ph/60Hz | | REYQ192TTJU | REYQ216TTJU | REYQ240TTJU | REYQ264TTJU | REYQ288TTJU |
| | 460V/3Ph/60Hz | | REYQ192TYDN | REYQ216TYDN | REYQ240TYDN | REYQ264TYDN | REYQ288TYDN |
| | Combination | | 1 x REYQ120T<br>1 x REYQ72T | 1 x REYQ120T<br>1 x REYQ96T | 1 x REYQ144T<br>1 x REYQ96T | 1 x REYQ144T<br>1 x REYQ120T | 2 x REYQ144T |
| Performance | Rated Cooling Capacity | BTU/h | 184,000 | 206,000 | 228,000 | 251,000 | 274,000 |
| | Rated Heating Capacity | BTU/h | 206,000 | 231,000 | 257,000 | 283,000 | 308,000 |
| | Sound Pressure | dB(A) | 63 | 64 | 66 | | 68 |
| | IEER (Ducted / Non-Ducted) | | 20.4 / 22.9 | 20.2 / 22.9 | 19.2 / 21.9 | 18.1 / 21.6 | 18.2 / 21.4 |
| | Airflow | CFM | 5,544 + 6,286 | 5,827 + 6,286 | 5,827 + 8,228 | 6,286 + 8,228 | 8,228 + 8,228 |
| Unit | Weight (REYQ_TT / REYQ_TY) | lbs | 507 + 703 / 527 + 717 | 703+ 703 / 717 + 717 | 703+ 780 / 717 + 794 | | 780+780 / 794+794 |
| | Dimensions (H x W x D) | in. | (66-11/16 x 48-7/8 x 30-3/16) + (66-11/16 x 36-11/16 x 30-3/16) | (66-11/16 x 48 - 7/8 x 30-3/16) + (66-11/16 x 48-7/8 x 30-3/16) | | | |

| | | | 26 Ton | 28 Ton | 30 Ton | 32 Ton | 34 Ton |
|---|---|---|---|---|---|---|---|
| Model | 208-230V/3Ph/60Hz | | REYQ312TTJU | REYQ336TTJU | REYQ360TTJU | REYQ384TTJU | REYQ408TTJU |
| | 460V/3Ph/60Hz | | REYQ312TYDN | REYQ336TYDN | REYQ360TYDN | REYQ384TYDN | REYQ408TYDN |
| | Combination | | 1 x REYQ168T<br>1 x REYQ144T | 2 x REYQ168T | 3 x REYQ120T | 1 x REYQ168T<br>1 x REYQ120T<br>1 x REYQ96T | 1 x REYQ168T<br>1 x REYQ144T<br>1 x REYQ96T |
| Performance | Rated Cooling Capacity | BTU/h | 297,000 | 320,000 | 342,000 | 365,000 | 388,000 |
| | Rated Heating Capacity | BTU/h | 334,000 | 360,000 | 385,000 | 411,000 | 427,000 |
| | Sound Pressure | dB(A) | 68 | | 66 | 68 | 69 |
| | IEER (Ducted / Non-Ducted) | | 17.8 / 20.2 | 17.0 / 19.0 | 17.9 / 19.6 | 16.6 / 18.3 | 16.5 / 17.2 |
| | Airflow | CFM | 8,228 + 8,228 | | 6,286 + 6,286 + 6,286 | 5,827 + 6,286 + 8,228 | 5,827 + 8,228 + 8,228 |
| Unit | Weight (REYQ_TT / REYQ_TY) | lbs | 780 + 780 / 794 + 794 | | 703 + 703 + 703 / 717 + 717 + 717 | 703 + 703 + 780 / 717 + 717 + 794 | 780 + 780 + 780 / 717 + 794 + 794 |
| | Dimensions (H x W x D) | in. | (66-11/16 X 48-7/8 X 30-3/16) + (66-11/16 X 48-7/8 X 30-3/16) | | (66-11/16 x 48-7/8 x 30-3/16) + (66-11/16 x 48-7/8 x 30-3/16) + (66-11/16 x 48-7/8 x 30-3/16) | | |

| | | | 36 Ton | 38 Ton |
|---|---|---|---|---|
| Model | 208-230V/3Ph/60Hz | | REYQ432TTJU | REYQ456TTJU |
| | 460V/3Ph/60Hz | | REYQ432TYDN | REYQ456TYDN |
| | Combination | | 3 x REYQ144T | 1 x REYQ168T<br>2 x REYQ144T |
| Performance | Rated Cooling Capacity | BTU/h | 411,000 | 424,000 |
| | Rated Heating Capacity | BTU/h | 434,000 | 447,000 |
| | Sound Pressure | dB(A) | 70 | |
| | IEER (Ducted / Non-Ducted) | | 16.5 / 16.2 | 15.9 / 16.2 |
| | Airflow | CFM | 8,228 + 8,228 + 8,228 | |
| Unit | Weight (REYQ_TT / REYQ_TY) | lbs | 780 + 780 + 780 / 794 + 794+794 | |
| | Dimensions (H x W x D) | in. | (66-11/16 x 48-7/8 x 30-3/16) + (66-11/16 x 48-7/8 x 30-3/16) + (66-11/16 x 48-7/8 x 30-3/16) | |

**Operation range for all VRV IV Heat Recovery Outdoor Units**

| | |
|---|---|
| Cooling °F DB | 23 - 122 |
| Heating °F WB | -13 - 60 |

For additional technical information and all equipment installation and application limitations please refer to the specific Engineering Data Books.