



Variable Refrigerant Volume

Air-Cooled DX
Multizone System

- 460V Three phase power supply
- Advanced zoning capabilities
- Can operate up to 41 indoor fan coil units
- **Excellent part load performance**
- Autocharging function
- Refrigerant charge check function
- Continuous heating during defrost operation
- Longest pipe lengths in product class



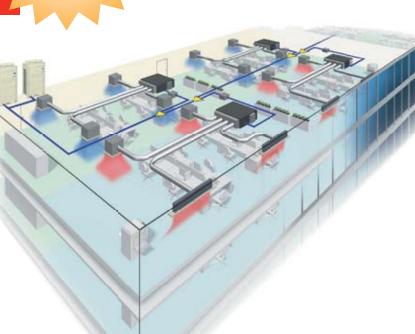














absolute comfort

VRV III - one step further into the revolution

Daikin's new VRV III system is the 7th generation of the original Daikin VRV® launched in 1982. Completely re-engineered to realize opportunities for VRV in taller / larger buildings, it utilizes the latest advances in refrigeration and air-conditioning technology. The totally new Daikin Inverter compressor system delivers improved efficiency and performance, while ensuring satisfaction of demands throughout connected zones across the complete operation cycle. With a choice of

460V/3Ph/60Hz or 208-230V/3Ph/60Hz (available June 2008), the Heat Pump or Heat Recovery configurations power up to 20-Ton capacity from a single piping network. The system also allows up to 41 indoor fan coil units, a 200% connection index, and integrated controls, with BMS options and piping limitations never before seen with a DX system. The new Daikin VRV III pushes the limits to deliver advanced solutions and even more flexibility for your engineered and design-build projects.

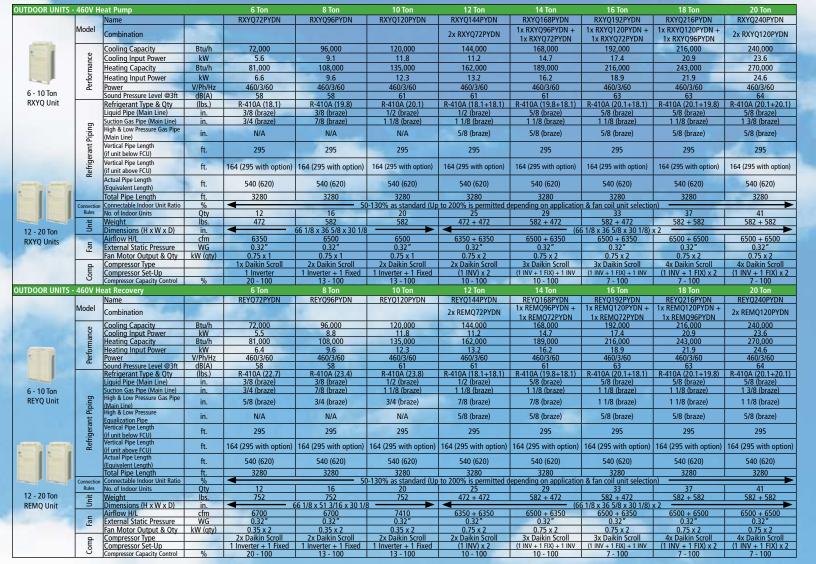


- 1 Newly improved fans and grilles
- Newly optimized heat exchanger increases efficiency
- New improved high efficiency scroll compressor
- 4 Heat transfer circuit
- 5 Compact aero box
- 6 Smooth sine wave DC (Digitally Commutated) Inverter
- DC inverter fan motor

	Specification	VRV	VRV-III	Improvement	Benefit	
	Largest single module	8-Ton	12-Ton	50%	Space saving, improved competitiveness	
	Largest single system	16-Ton	20-Ton	25%	Minimizing total number of systems Match the requirements of the building	
	Power supply	208-230V	208-230V & 460V	Choice		
	Electrical safety	60+60A MFA	50A (25A or 25A) MFA	58%	Reduction of electrical installation requirements	
	Combination ratio	Up to 130%	Up to 200%	54%	Greater application flexibility	
	Maximum number of indoor units	Up to 24	Up to 41	167%	Greater application flexibility	
	Refrigerant charge (8-Ton heat pump)	25.1 lbs	19.8 lbs	-21%	Reduction of environmental impact	
	Actual pipe length	492 ft	540 ft	10%	Greater application flexibility	
	Total pipe length	1000 ft	3280 ft	328%	Greater application flexibility	
	From the first REFNET to furthest indoor unit	130 ft	295 ft	127%	Greater application flexibility	
	Height separation	164 ft	295 ft	80%	Coverage of taller, larger building	
	Outdoor unit fan (ESP)	0.24	0.32		Easier integration for plant room solutions, less chance of discharge air short circuiting	
	Unit footprint (8-Ton heat pump)	10.22sq ft	7.66sq ft	25%	Space savings for easier location of condensing unit	
	Unit footprint (16-Ton heat recovery)	20.45sq ft	15.32sq ft	25%	Space savings for easier location of condensing unit	
	Weight (8-Ton heat pump)	666 lbs	582 lbs	13%	Easy transportation, reduced shipping costs	
	VRV III Features 8	k Benefi	ts			
jle	cabinet /12, 14, 16, 18 and 20-Ton ma	nifolded cabine	t condensing units ava	ilable for comm	ercial applications.	
	2-Ton single cabinet & 14, 16, 18 and 2		-			

	VRV III Features & Benefits
Voltage Platform & Operation Choice	 460V 3-phase 6, 8, 10-Ton, single cabinet /12, 14, 16, 18 and 20-Ton manifolded cabinet condensing units available for commercial applications. 208-230V 3-phase 6, 8, 10, and 12-Ton single cabinet & 14, 16, 18 and 20-Ton manifolded cabinet condensing units available for commercial and light commercial applications (available June 2008). Heat pump and heat recovery systems providing simultaneous heating and cooling are available with both voltage platforms.
Advanced Zoning	➤ Individual zones can be provided for up to 64 zones on a single VRV III system.
Independent Control	Each fan coil unit uses a dedicated electronic expansion valve for superior room temperature control, meaning individual control in all necessary zones.
Absolute Reliability	The latest G-Type Daikin designed & manufactured inverter scroll compressor delivers excellent performance and reliability.
VFD Inverter Capacity Control	 At the heart of the condensing unit is a high efficiency variable speed "inverter" compressor coupled with inverter fan motors for superior system part load performance. Compressor capacity is modulated automatically to maintain a constant suction pressure, while varying the refrigerant volume to the deliver precisely the needs of the cooling or heating loads. Indoor fan coil units use P.I.D. control to control superheat and maintain the temperature in the occupied space as close as +/- 1°F of the setpoint temperature.
Optimized R-410A Design	This 7th generation VRV system has been completely overhauled and redesigned for use with R-410A & the very latest refrigeration, fan, motor and compressor technology.
Flexible Design	The longest refrigerant lines in the industry - up to 540ft (620ft equivalent) linear piping between condensing unit and furthest located fan coil unit. The longest refrigerant lines in the industry - up to 3280ft total "one-way" piping in the complete piping netwok. The largest vertical (height) separation in the industry - up to 295ft between the condensing unit and the fan coil units is permitted. Connection diversity can be applied up to 200% of the indoor fan coil unit capacity to outdoor condensing unit nominal capacity. Modular condensing units can be installed, phase by phase or floor by floor all around the building perimeter offering a decentralized alternative to traditional centralized plant equipment. Plant room installation condensing units supported with fan / fan motor ESP up to 0.32" WG as standard allowing connection of discharge ductwork and preventing discharge air short circuiting. Continuous operation at 0°F DB (-4°F WB) ~ 64°F DB (60°F WB) in heating mode and 23°F DB ~ 110°F DB in cooling mode.
Indoor Units	 A full array of ducted and duct-free style fan coil units, including the FXOQ vertical air handler & NEW FXZQ 2x2 multi flow ceiling cassette are available to meet the demands of any application. Capacity range covers 0.6 (7.5MBH) to 4 (48MBH) Ton in 0.5 Ton increments to ensure the optimum selection for the zone load conditions.
Simple Wiring	➤ Daisy chain control wiring, 2 wire, multi stranded, non-shielded and non polarized for simple error free installations.
Energy Efficiency	Excellent part load system performance delivering maximum comfort for minimal power consumption on the complete application temperature range. Equivalent or better performance than levels associated with high efficiency air cooled & water cooled chiller systems.
Outside Air	Outside air capability with ducted fan coils and duct-free cassette units.
Space Saving	➤ With a condensing unit module footprint as small as 3' 5/8" x 2' 6/18" (7.66sq ft) location and installation of VRV III is simple to realize.
Advanced Diagnostics	The advanced, self-diagnostic, auto-check function will detect a malfunction and immediately display the type and location so it can be resolved quickly and effectively.
Advanced Controls	 Zone LCD remote controller for up to 16 zones which provides a host of operational functions, including 7-day programmability. Connects to the full suite of advanced Daikin control solutions including i-Touch Controller and I-Manager. Can be integrated to open protocol building management systems via the Daikin BACnet and LONworks Gateways.
Low Sound Levels	Indoor and outdoor units offer quiet operation. FXZQ indoor unit has a sound pressure level as low as 25dB(A).

A wide variety of ducted and duct-free indoor fan coil units 0.6 Ton 0.75 Ton 1.0 Ton 1.5 Ton 3.0 Ton 4.0 Ton Model FXSQ09MVJU FXSQ18MVJU FXSQ36MVJU FXSQ48MVJU Cooling Capacity Btu/h 12,000 18,000 24,000 30,000 36,000 48,000 Btu/h 13,500 20,000 27,000 34,000 40,000 54,000 Heating Capacity dB(A) Contact Daikin for 41/35 44/38 44/38 45/39 45/39 ¹ 48/43 Airflow H/L cfm further details 340/230 530/390 740/490 950/720 990/740 1300/950 lbs. 95 119 119 122 Weight 73 Dimensions (H x W x D) 11 7/8 x 55 1/8 x 31 1/2 in. Model FXMQ30MVJU FXMQ36MVJU FXMQ48MVJU Cooling Capacity Btu/h 36,000 48,000 Btu/h 34,000 40,000 54,000 eating Capacity Sound Pressure Level H/L dB(A) 45/41² 45/41 ² 48/45 ² Airflow H/L 690/565 1020/810 1270/1020 cfm Weight lbs. 99 139 144 Dimensions (H x W x D) in. 15 3/8 x 28 3/8 x 27 1/8 - 15 3/8 x 43 3/4 x 27 1/8 -Model FXDQ18MVJU FXDQ24MVJU Btu/h 9,500 24,000 Cooling Capacity 7,500 12,000 Btu/h 8,500 10,500 13,500 20,000 27,000 eating Capacity dB(A) 33/29 ² 33/29² 33/29 ² 35/31 ² 36/32 ² Airflow H/L cfm 280/226 280/226 280/226 440/350 580/460 Weight lbs. 49 49 49 68 75 Dimensions (H x W x D) in. 7 7/8 x 27 9/16 x 24 7/16 7 7/8 x 35 7/16 x 24 7/16 7 7/8 x 43 5/16 x 24 7/16 Model FXOQ12MVJU FXOQ18MVJU FXOQ24MVJU FXOQ30MVJU FXOQ36MVJU FXOQ48MVJU Cooling Capacity Btu/h 18,000 24,000 48,000 Btu/h 12,000 18,000 24,000 30,000 40,000 54,000 Heating Capacity Sound Pressure Level H/L dB(A) N/A N/A N/A N/A N/A N/A Airflow H/L 400 600 800 1000 1200 1600 cfm lbs. 120 120 120 140 210 210 Dimensions (H x W x D) 44 x 22 x 15 44 x 22 x 15 44 x 22 x 15 48 x 22 x 18.5 49 x 26 x 20 49 x 26 x 20 in. BEQ box model BEQ12MVJLR1 BEQ18MVJLR1 BEQ24MVJLR1 BEQ30MVJLR1 BEQ36MVJLR1 BEQ48MVJLR1 Model FXFQ07MVJU FXFQ09MVJU FXFQ12MVJU FXFQ18MVJU FXFQ24MVJU FXFQ30MVJU FXFQ36MVJU Cooling Capacity Btu/h 12,000 18,000 24,000 30,000 36,000 Btu/h 13,500 20,000 27,000 34,000 40,000 Heating Capacity dB(A) 31/28 ² 33/28 ² 34/29 ² 38/32 ² 40/33 ² Sound Pressure Level H/I Contact Daikin for Contact Daikin for 670/490 990/710 Airflow H/L cfm 460/350 570/390 990/740 further details further details lbs. 55 (11) 55 (11) Neight (panel weight) 55 (11) 66 (11) 66 (11) 9 1/8 x 33 1/8 x 33 1/8 11 3/8 x 33 1/8 x 33 1/8 Unit Dimensions (H x W x D) in. anel Dimensions (H x W x D) in. 1 5/8 x 37 3/8 x 37 3/8 Model FXZQ07M7VJU FXZQ09M7VJU FXZQ12M7VJU FXZQ18M7VJU Btu/h 7,500 9,500 12,000 18,000 Cooling Capacity Btu/h 8,500 10,500 13,500 20,000 Heating Capacity Sound Pressure Level H/L dB(A) 30/25 ² 30/25 ² 32/26 ² 41/33 ² 320/247 320/247 Airflow H/L cfm 335/265 495/353 lbs 41.9 Dimensions (H x W x D) 11 1/4 x 22 5/8 x 22 5/8 in. anel Dimensions (H x W x D) in. 2 5/32 x 27 9/16 x 27 9/16 Model FXHQ12MVJU FXHQ24MVJU FXHQ36MVJU Cooling Capacity Btu/h 12,000 24,000 36,000 Btu/h 13,500 27,000 40,000 Heating Capacity Sound Pressure Level H/L 38/33 ³ 44/36 ³ 46/41 ³ dB(A) 710/600 Airflow H/L cfm 410/340 830/670 Weight lbs 55 80 90 Dimensions (H x W x D) 7 11/16 x 37 13/16 x 26 3/4 7 11/16 x 55 1/8 x 26 3/4 7 11/16 x 62 5/8 x 26 3/4 in. Model FXAQ07MVJU FXAQ09MVJU FXAQ12MVJU FXAQ18MVJU FXAQ24MVJU Cooling Capacity Btu/h 7,500 9,500 12,000 18,000 24,000 Btu/h 8,500 10,500 13,500 20,000 27,000 Heating Capacity 43/37 ³ 47/40 Sound Pressure Level H/I dB(A) 36/31 ³ 37/31 ³ 38/31 ³ 265/160 300/180 500/400 635/470 cfm 285/175 Weight lbs. 25 25 31 31 Dimensions (H x W x D) 11 3/8 x 31 1/4 x 9 in. Model FXLQ12MVJU FXLQ18MVJU FXLQ24MVJU Cooling Capacity Btu/h 12,000 18,000 24,000 13,500 20,000 27.000 Heating Capacity Btu/h Sound Pressure Level H/L dB(A) 36/33 4 40/35 4 41/36 4 Airflow H/L cfm 280/210 490/380 560/420 lbs. Weight 66 80 80 Dimensions (H x W x D) 23 5/8 x 44 7/8 x 8 3/4 in. FXNQ12MVJU FXNQ18MVJU FXNQ24MVJU Cooling Capacity Btu/h 12,000 18,000 24,000 Btu/h 13,500 20,000 27,000 Heating Capacity Sound Pressure Level H/L dB(A) 36/33 4 40/35 4 41/36 4 280/210 490/380 560/420 Airflow H/L cfm Weight lbs. 59 Dimensions (H x W x D) 24 x 42 1/8 x 8 5/8 with RXYQ Model BSVQ36PVJU BSVQ60PVJU Power Supply 1 phase 208-230V 60Hz Dimensions (H x W x D) in. 8 3/16 x 15 5/16 x 12 7/8 lbs. Liquid in 3/8 (braze) 3/8 (braze) Indoor Unit Gas in. 5/8 (braze) 5/8 (braze) Piping Liquid in. 3/8 (braze) 3/8 (braze) Outdoor 5/8 (braze) Unit 1/2 (braze) HP/LP Gas in. 1/2 (braze) Notes: 1 at 5 ft below bottom suction grill of unit 2 at 5 ft below the unit 3 at 3.3 ft below and from the unit4 measured at 5 ft away, 5 ft high



Note: 208-230V / 3-Phase VRV III will be available from June 2008. VRV 208-230V / 3-Phase is also available.

Indi	vidual Zone Contro	llers	Multi-Zone	Time Clock Controllers	
7-Day Programmable Wired R/C BRC1D71	Simplified Wired R/C BRC2A71	Wireless R/C BRC7C812 BRC7E83 BRC4C82 BRC7E818	Unified On/Off R/C DSC301C71	Centralized R/C DSC302C71	Schedule DST301B61
					File

LonWorks® NETWORKS COMPATIBLE GATEWAY

- Interface for connection to LonWorks[®] networks
- Communication via LON[®] protocol (twisted pair wire)
- 64 units connectable per DMS-IF
- Unlimited site size
- Quick, easy installation











Daikin's products are subject to continuous improvements. Daikin reserves the right to modify product design, specifications and information in this brochure without notice and without incurring any obligations.

INTEGRATED CONTROL SYSTEM CONNECTING VRV SYSTEM WITH BMS SYSTEM

- Interface for BMS system
- Communication via BACnet[®] protocol (connection via ethernet)
- 256 units connectable per BACnet[®] gateway with optional expander board
- Unlimited site size
- · Quick, easy installation



- 200 groups (1,024 groups) connectable
- Management of AC units, facilities, and ancillary equipment
- Operation on 1 master PC and 1 sub PC
- Remote monitoring via the web





- 64 groups (128 indoor units) connectable
- Management of AC units, facilities, and ancillary equipment
- Touch screen display
- Built-in Ethernet port, Web enabled (optional)



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