

SINCE 1894...



DB ✓ IV

DC Inverter VRF System

DUNHAM-BUSH PRODUCT



R410A

INTRODUCTION



Dunham-Bush Profile

Dunham-Bush, one of the world's top commercial air conditioning manufacturers, has long been committed to offering creative solutions for the customer's requirements over its 120 years history in the HVAC/R. Dunham-Bush offers a complete range of HVAC/R products such as large chillers, VRF, unitary, airside system and thermal energy storages for residences, commercial buildings and industrial facilities. Dunham-Bush is striving to be the leader in the commercialization of green technologies. Today, by utilizing our global network of sales and service offices, Dunham-Bush is offering our value-added products and solutions to all corners of the world.



CHINA

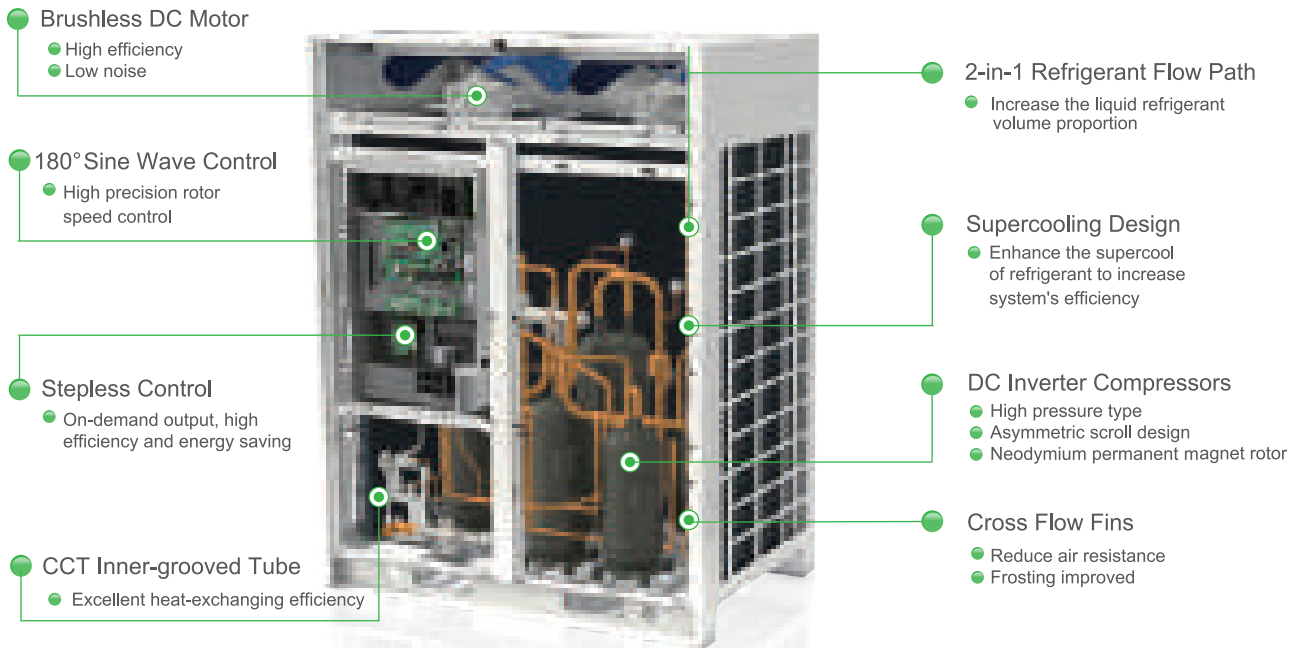


MALAYSIA



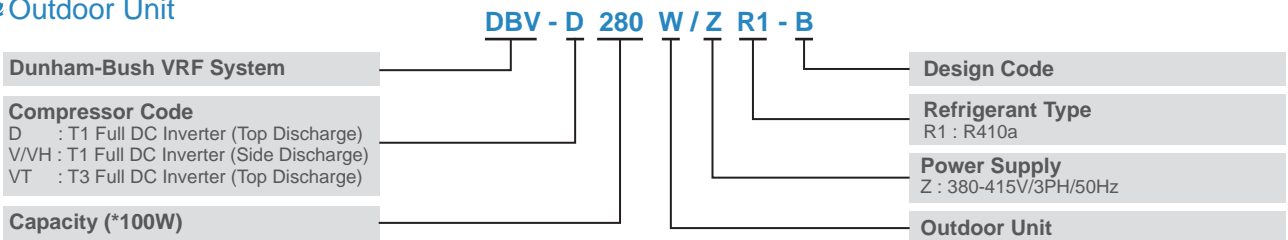
For DBV central air conditioning DC intelligent inverter system, the capacity could be up to 88HP, offering flexible combination from 8~22HP with 2 HP increment. User friendly design, meeting all requirements for different environment, and it's widely used in today's intelligent buildings, such as offices, shopping malls, schools, hospitals, commercial buildings etc.

High efficiency DC inverter scroll compressor with large capacity, combined with the latest 180° sine wave DC inverter technology, stepless vector variable frequency drive technology, R410A environmental refrigerant, makes DBV to be energy-saving and environmentally friendly, long performance life, with ease of maintenance.

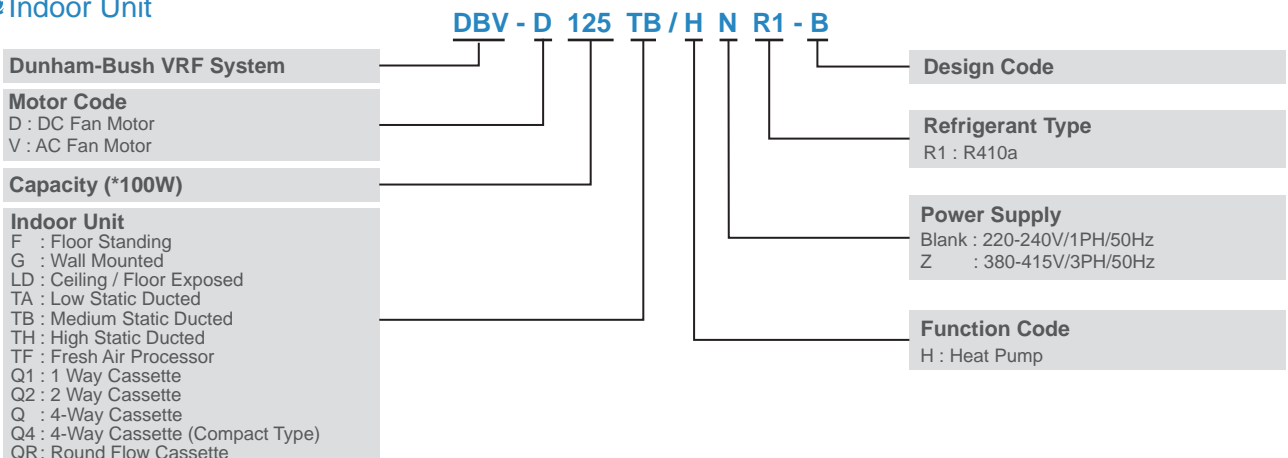


Nomenclature

Outdoor Unit



Indoor Unit



PRODUCT FEATURES



Significantly Improved Efficiency

Dunham-Bush DC inverter intelligent multi variable frequency air conditioning system adopts; well - known international brand DC inverter compressor; new generation high efficiency patented heat exchanger; high efficiency DC motor; high-precision EXV; high-end components; DC inverter technology; Significantly greater energy efficiency is realized by the use of advanced technology.

DBV-D : T1 Full DC Inverter (Top Discharge)



8/10HP



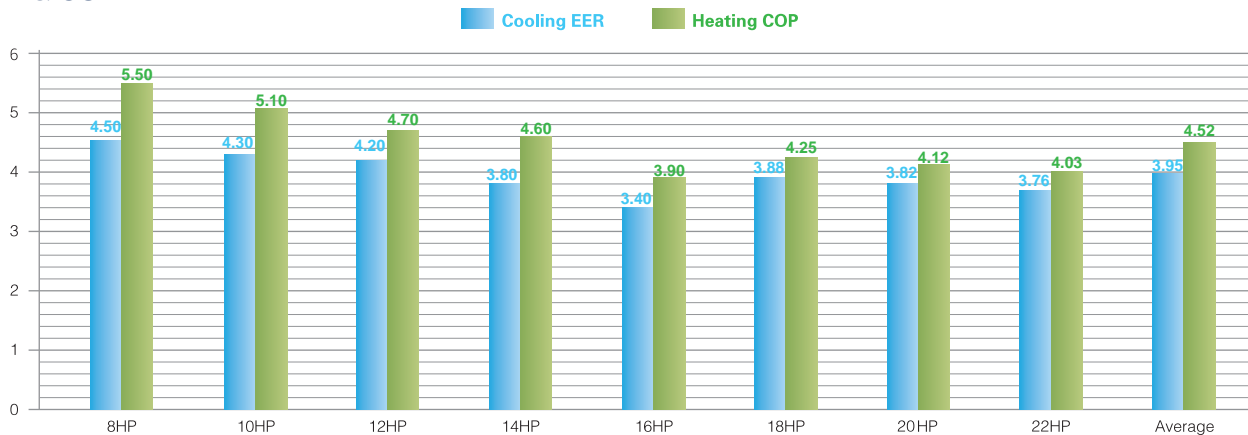
12/14/16HP



18/20/22HP

Capacity	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP
		25.2kW	28kW	33.5kW	40kW	45kW	50kW	56kW
Compressor	DC	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC
Fan motor	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC

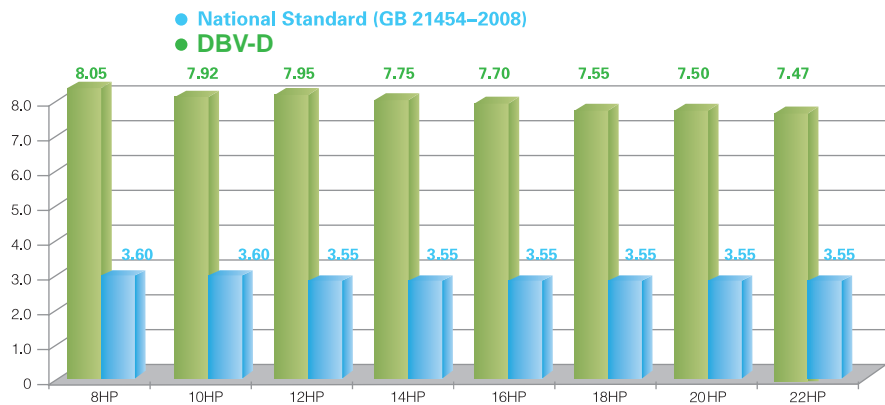
EER & COP



IPLV (C)

IPLV: Integrated Part Load Value (ARI 550/590)
(C): Cooling condition

The Integrated Part Load Value (IPLV) is a performance characteristic developed by the Air-Conditioning, Heating and Refrigeration Institute (AHRI). It is most commonly used to describe the performance of a AC system capable of capacity modulation. Unlike an EER (Energy Efficiency Ratio) or COP (coefficient of performance), which describes the efficiency at full load conditions, the IPLV is derived from the equipment efficiency while operating at various capacities. Since a VRF system does not always run at 100% capacity, the EER or COP is not an ideal representation of the typical equipment performance. The IPLV is a very important value to consider since it can affect energy usage and operating costs throughout the lifetime of the equipment.





PRODUCT FEATURES

DBV-VT : T3 Full DC Inverter (Top Discharge)



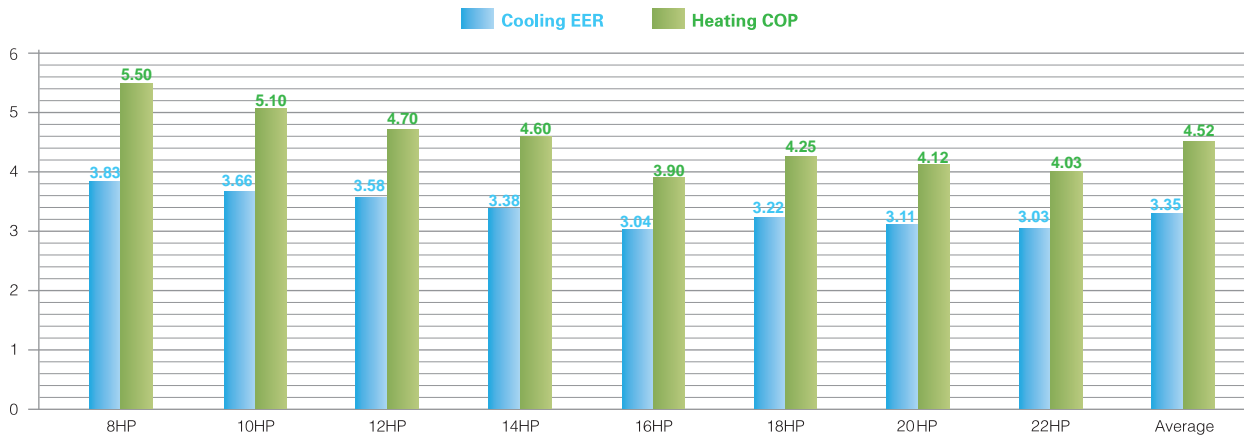
8/10HP



12/14/16/18/20/22HP

Capacity	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP
		25.2kW	28kW	33.5kW	40kW	45kW	50kW	56kW
Compressor	DC	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC
Fan motor	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC

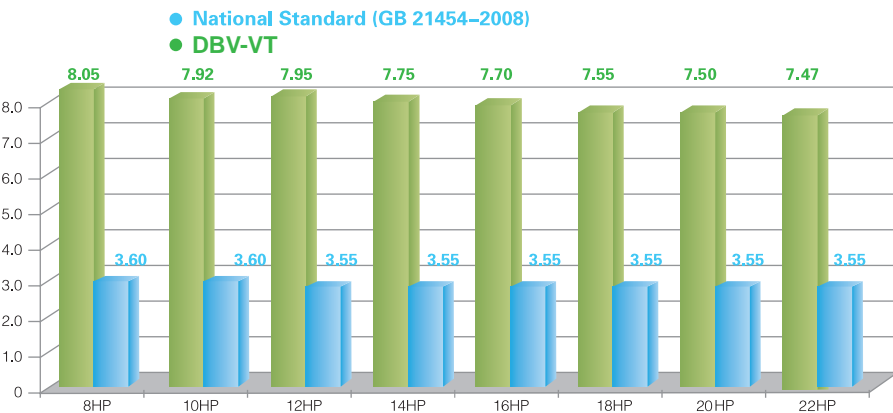
EER & COP : T3 Condition



IPLV (C)

IPLV: Integrated Part Load Value (ARI 550/590)
(C): Cooling condition

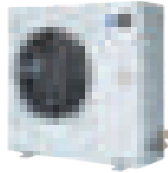
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PRODUCT FEATURES



DBV-VVH : T1 Full DC Inverter (Side Discharge)



8/10kW



12.5/14/16/18kW

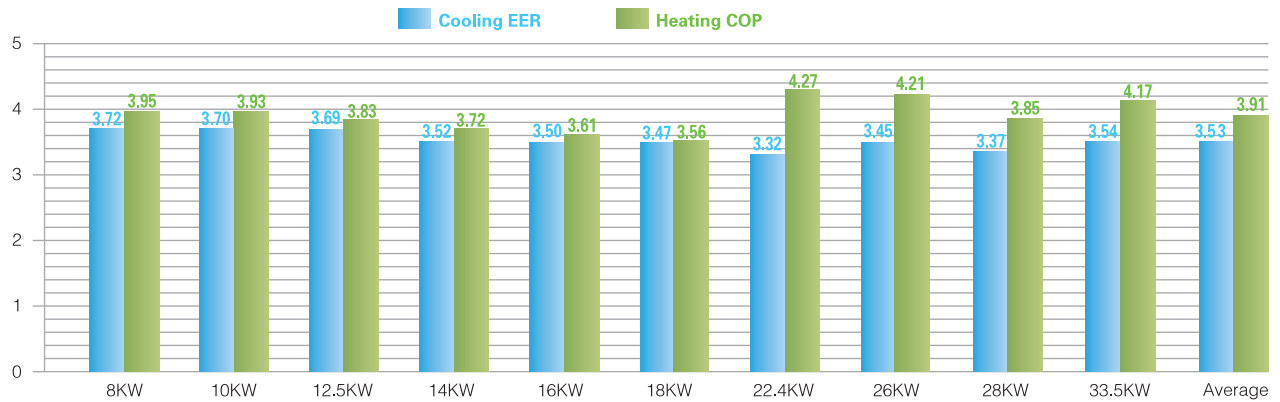


22.4/26/28/33.5kW

Capacity	8kW	10kW	12.5kW	14kW	16kW	18kW	22.4kW	26kW	28kW	33.5kW
Compressor	DC	DC	DC	DC	DC	DC	DC	DC	DC	DC
Fan motor	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC

Power type		208-230V	380-415V
50HZ	1 phase	8/10/12.5/14/16kW	
	3 phase		12.5/14/16/18/22.4/26/28/33.5kW

EER & COP



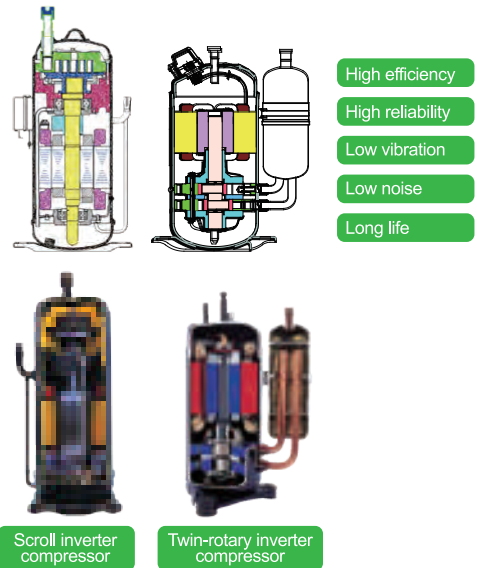
High Efficiency DC Inverter Compressor

- Twin-rotary DC inverter compressor (for 8-26kw model)/Hermetic scroll inverter compressor (for 28-33.5kw model)
 - Use high efficiency and reliability compressor
 - Has very good efficiency in part load condition
- High Efficiency, Low Noise:

Optimized efficiency and noise during operation with the latest technology.
- Environmental Protection:

Compressor with environmentally friendly refrigerant.
- Low Vibration:

Reduced vibration during compressor start and during operation.



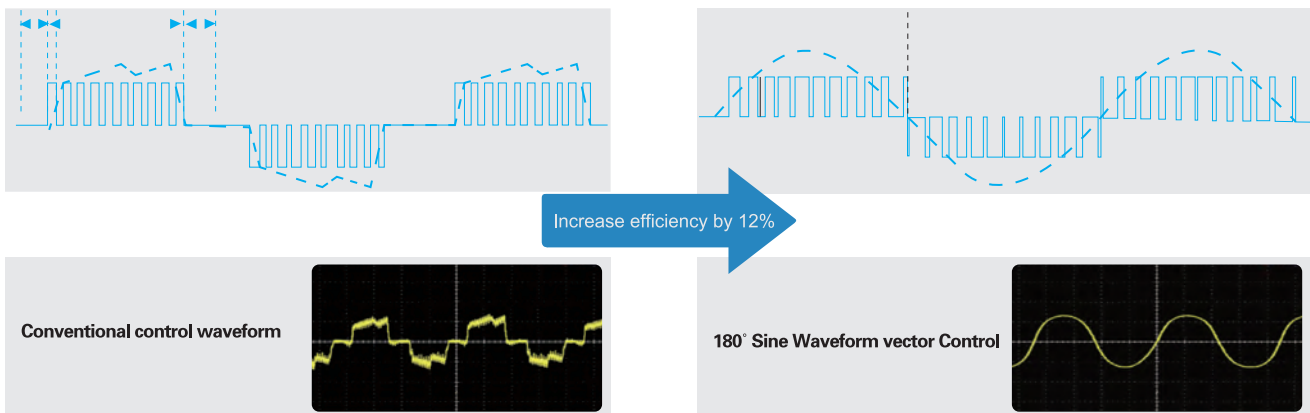
High Efficiency DC Motor

- High efficiency DC fan motor
- Low noise and high efficiency because of high-density wire winding engineering
- Brushless with built-in sensor



180° Sine Wave Control

The perfect combination of 180° Sine wave rotor frequency drive control technology and excellent IPM inverters, reduces the reactive loss of motor-driven, increases motor efficiency by 12%.

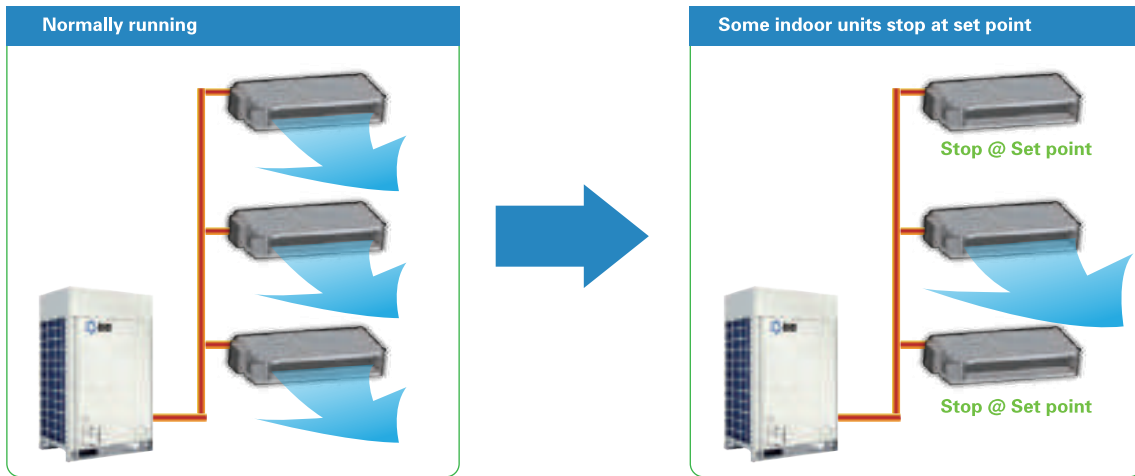


PRODUCT FEATURES



Fast Cooling And Heating

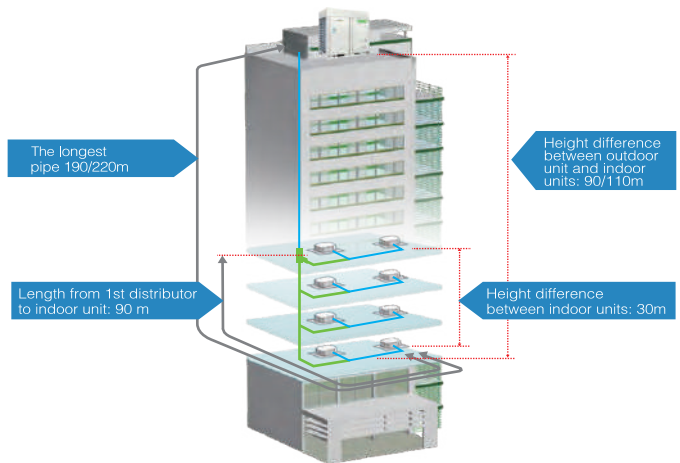
Every room meet set point most quickly and comfortably by optimized refrigerant control.



Super Long Refrigerant Piping, Flexible Design-Build

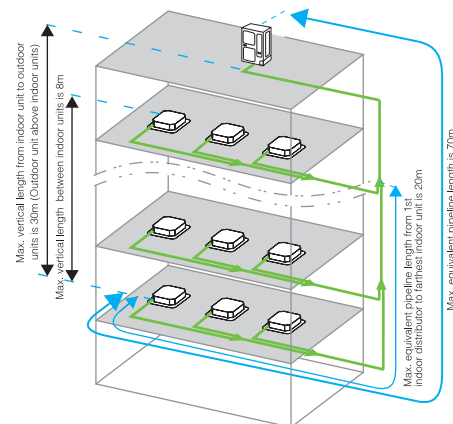
DBV-D/VT

Item	Permitted value		
Piping length	Total pipe length*(Actual)		
	Maximum piping(L)	Actual length	1000m
		Equivalent length	190m
Level difference	Equivalent piping length from the farthest IDU to the first indoor branch joint		90m
	Level difference between IDU-ODU	Outdoor unit up	90m
		Outdoor unit down	110m
	Level difference between IDU-IDU		30m



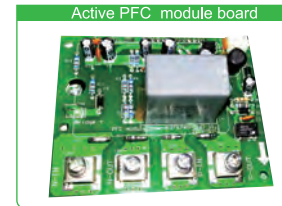
DBV-V/VH

Item	Permitted value		
Piping length	Total pipe length*(Actual)		120m
	Maximum piping(L)	Actual length	60m
		Equivalent length	70m
Level difference	Equivalent piping length from the farthest IDU to the first indoor branch joint		20m
	Level difference between IDU-ODU	Outdoor unit up	30m
		Outdoor unit down	20m
	Level difference between IDU-IDU		8m



Active PFC Module

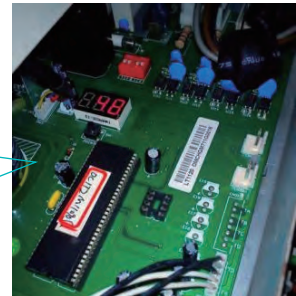
- PFC: Power Factor Corrector
- There will be a power loss because of the different phases between the voltage and current.
- With the PFC module, the power utilization rate is higher, power factor can be up to 98%. System will be more efficient.



- **Power factor** refers to the relationship between effective power and total power consumption, power factor is effective power divided by total power consumption.
- **Power factor** can measure power utilization rate, the bigger the power factor, the higher the power utilization rate.

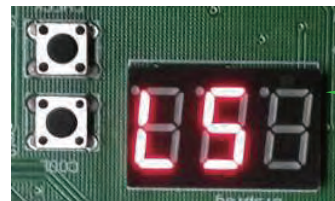
Automatic Addressing

- Automatically addressing: system will distribute address to indoor unit automatically
- Automatic addressing will reduce artificial faults and manual works.



LED Display On PCB

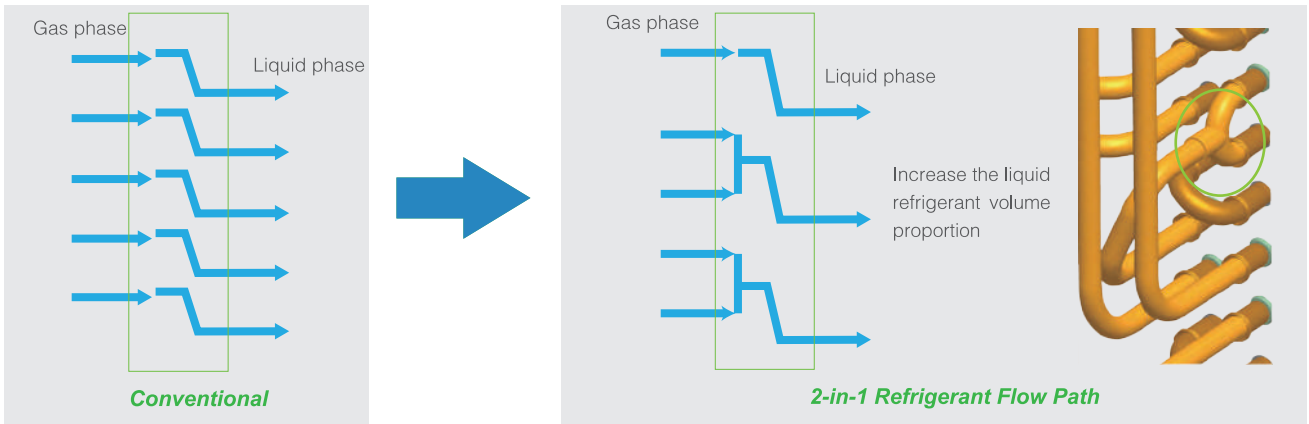
- LED display on the PCB, it can show system's operation status and error codes.



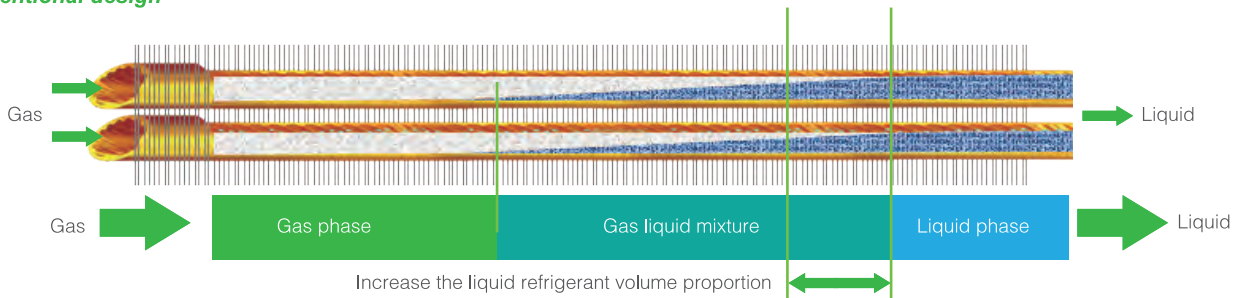
LED Display



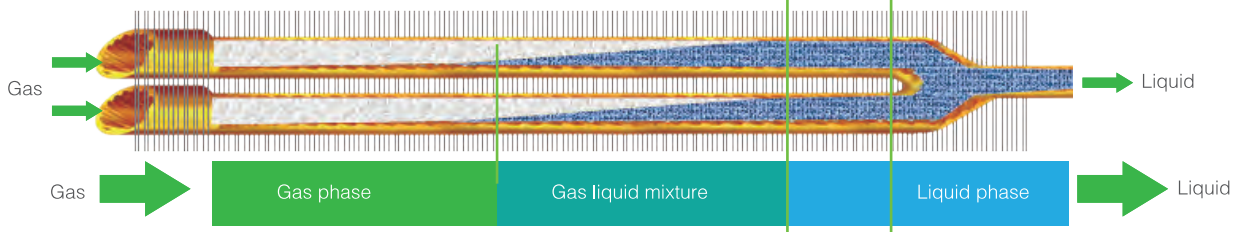
2-in-1 Refrigerant Flow Path Design



Conventional design



2-in-1 Refrigerant Flow Path Design

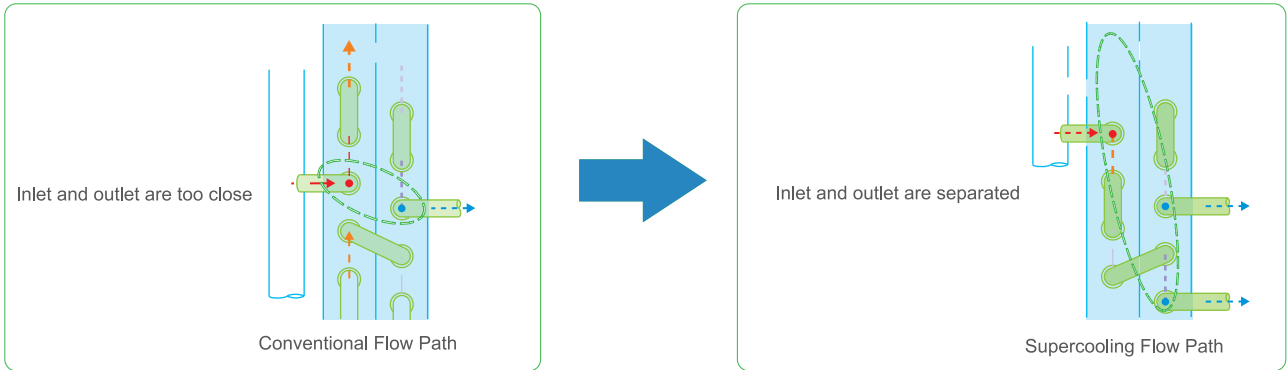




PRODUCT FEATURES

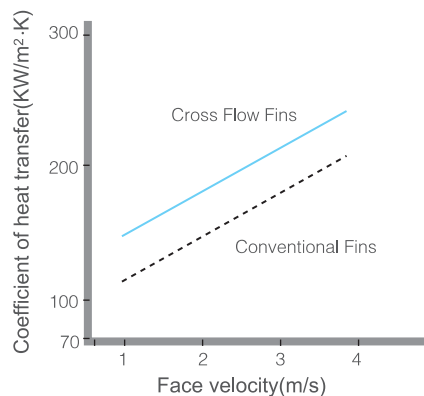
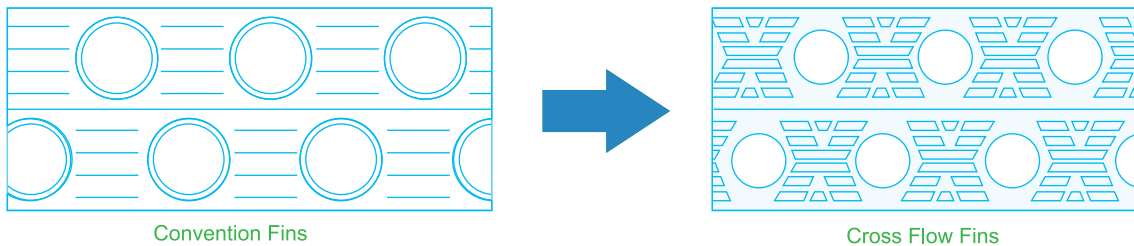
Supercooling Flow Path Design

Supercooling flow path design, separates the refrigerant inlet and outlet, increase the supercooling degree, reduce the effect of high temperature inlet gas refrigerant to low temperature outlet liquid refrigerant, therefore, the system efficiency will be greatly increased.



Cross Flow Fins

- Has low air resistance and great heat transfer coefficient.
- Frosting improved, frost on the heat-exchanger will be well-distributed, easy for defrosting.

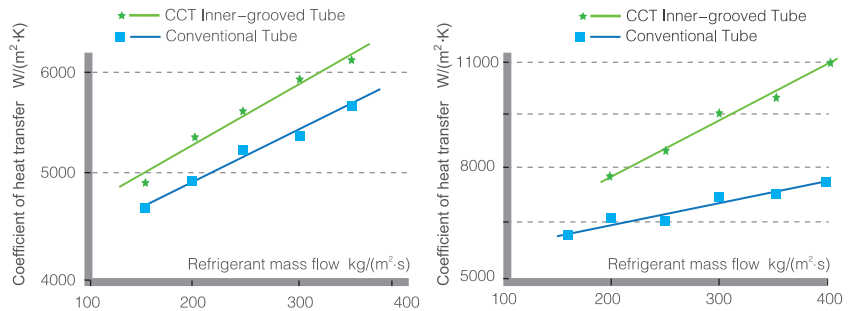
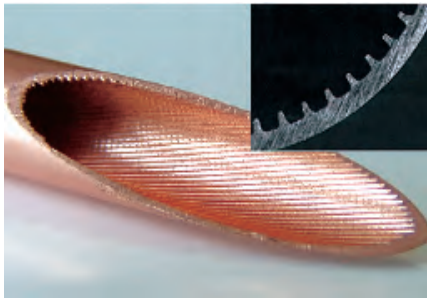


PRODUCT FEATURES



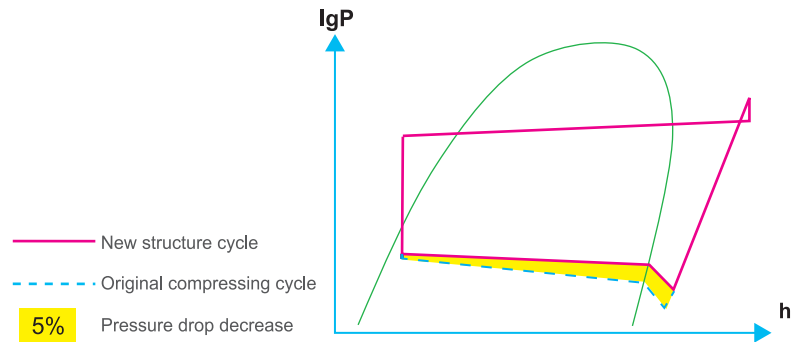
CCT Inner-Grooved Tube

CCT(Continuous Cooling Transformation) inner-grooved copper tube has high thermometric conductivity. This inner-grooved fins break the refrigerant flow boundary layer to enhance refrigerant disturbance to increase heat-exchanging efficiency.



Low Resistance Internal Piping

- Thanks to the optimization pipeline design, 5% pressure drop are reduced.
- EER and COP increase, because of evaporating temperature increase and compressor work decrease.



Excellent In EER & COP

Thanks to DC devices(compressor and motor), piping optimization design and new refrigerant control logic, system's EER and COP are significantly increase.

	8HP		10HP		12HP		14HP		16HP		18HP		20HP		22HP	
	EER	COP	EER	COP	EER	COP	EER	COP	EER	COP	EER	COP	EER	COP	EER	COP
DBV-D	4.50	5.50	4.30	5.10	4.20	4.70	3.80	4.60	3.40	3.90	3.88	4.25	3.82	4.12	3.76	4.03
DBV-VT	3.83	5.50	3.66	5.10	3.58	4.70	3.38	4.60	3.04	3.90	3.22	4.25	3.11	4.12	3.03	4.03

The PHE Economizer

- PHE Economizer technology provide a additional sub cooling .
- Improved heat exchanger + PHE economizer + Optimized control logic
- Heating performance highly increased



PHE Economizer

The PHE economizer need customization.

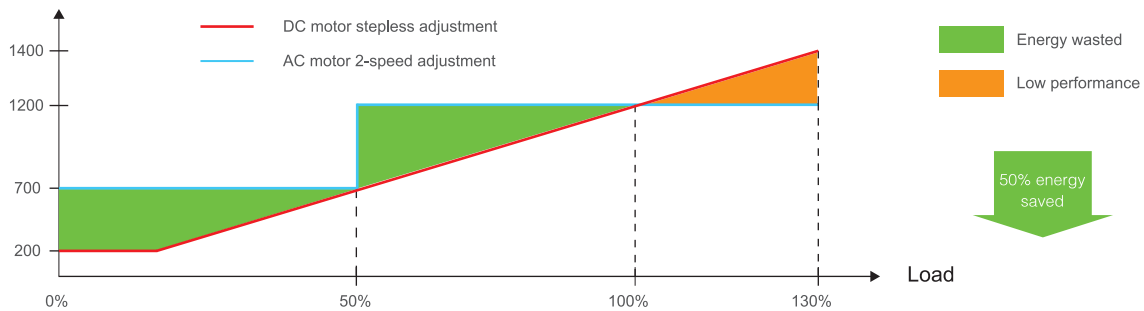


PRODUCT FEATURES

Stepless Control

DC fan motor can be stepless controlled by outdoor PCB according to system's operating pressure. And it is able to reduce the energy consumption and maintain the system in the best performance.

Load-Revolution curve



High Efficiency DC Inverter Compressor

- Well Known inverter compressor manufacture.
- R410a ECO friendly refrigerant.
- Small torque fluctuation, low vibration and quiet operation.
- High efficiency due to its patent internal structure design.
- Internal oil circulation structure.
- High Reliability.
- Wide rotation speed range.

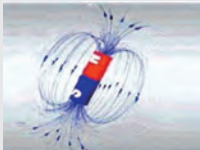


- High pressure chamber
 - Has small suction superheat and high refrigerant volume efficiency
 - Has large refrigerant discharge buffer volume, Low vibration and noise
-

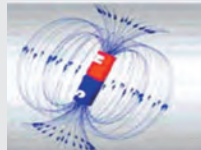
- Neodymium permanent magnet rotor, has powerful magnetic force, large torque and high efficiency.
- Concentrated winding, improving low frequency efficiency.

Neodymium permanent magnet rotor

Powerful magnetic force, large force moment and high efficiency.



Ferrite magnet



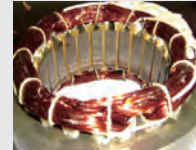
Neodymium permanent magnet

Concentrated winding

Magnetic efficiency is 12% higher than distributed winding



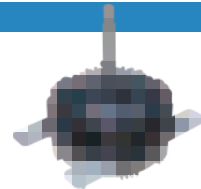
Concentrated winding



Distributed winding

High Efficiency DC Motor

- High efficiency DC fan motor is from well-known brand.
- Low noise and high efficiency because of high-density wire winding engineering.
- Brushless with built-in sensor.



PRODUCT FEATURES



3 Stage Backup Function

- Module back up function.
- When some modules are failure, the others can keep running.



- Compressor back up function
- When one compressor fail, the other compressor will keep running.

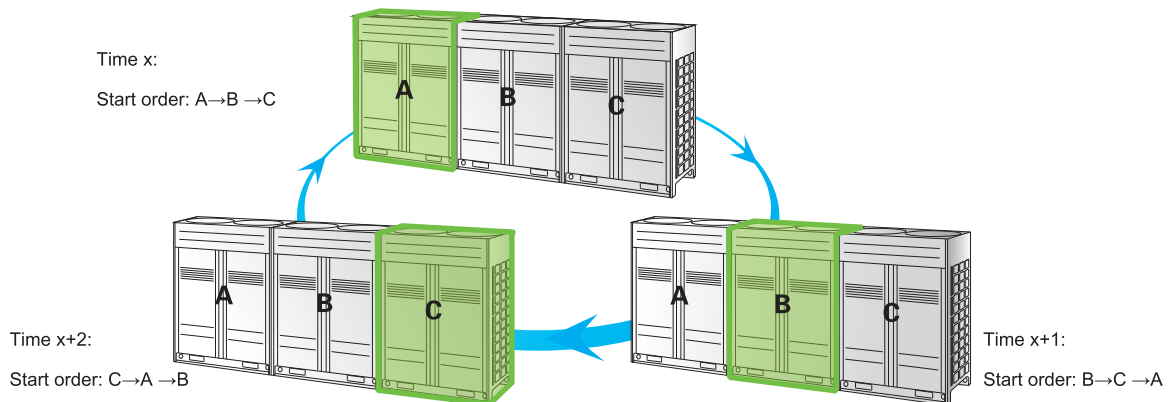


- Fan motor back up function.
- When one fan motor fail, the other motor will keep running.



All Outdoor Units Cycle Operation

- In one combination system, any outdoor unit can run as master unit.
- Balance the lifespan among outdoor units in one system.





PRODUCT FEATURES

DBV DC inverter VRF system is designed with flexible modular combination concept, we keep optimizing the module size, reduce equipment on space occupied to meet the demand of designer and installer. Some unique technologies are used for our installers to reduce their working load, installation is becoming easier and easier!

4 Units Combination, Capacity Up to 88HP

Max. outdoor units can be combined into a bigger system, capacity can be up to 88HP.



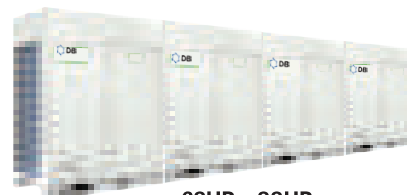
8HP ~ 22HP



24HP ~ 44HP



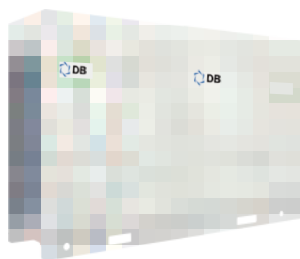
46HP ~ 66HP



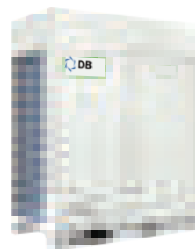
68HP ~ 88HP

Individual Type, Saving Installation Work

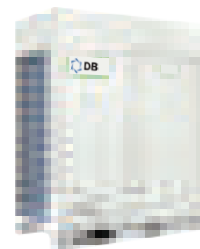
Individual type outdoor unit is already combined in factory, installer can save outdoor unit combination work.



32HP



16HP



16HP

PRODUCT FEATURES



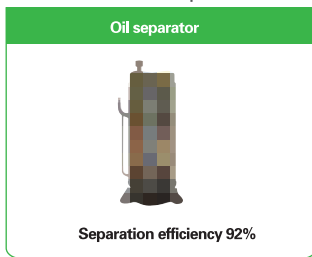
Convenience Internal Structure

- All key components are designed to close to outside, it is convenient for repair and replacement.
- Thanks to the new balance technology, gas balance pipe does no longer exist, brazing points and leaking risk are reduced.



6-Stage Oil Control

1st stage: Compressor internal oil separation



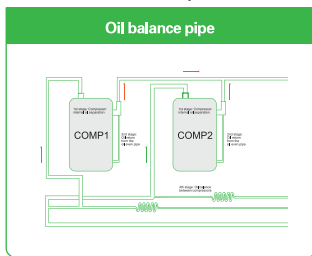
2nd stage: Oil return from the oil even pipe



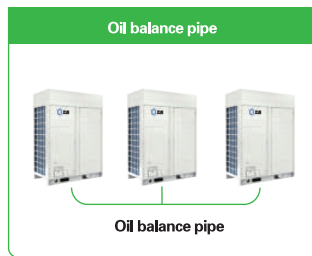
3rd stage: Oil return from the system oil separator



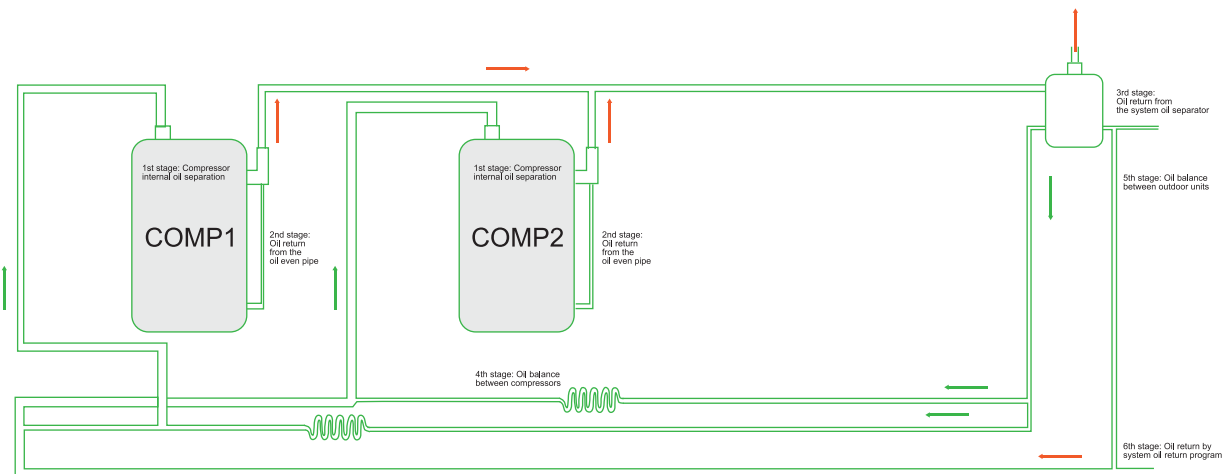
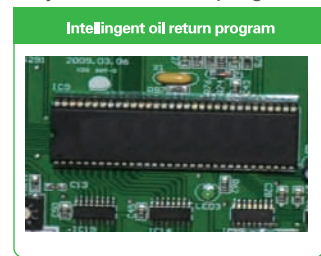
4th stage: Oil balance between compressors



5th stage: Oil balance between outdoor units



6th stage: Oil return by system oil return program

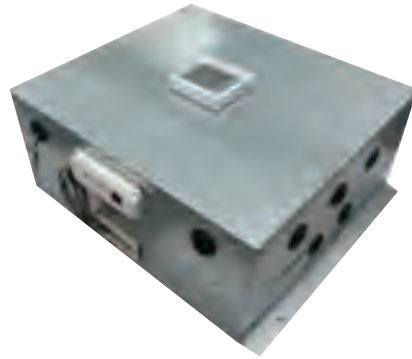




PRODUCT FEATURES

AHU Connection Kit

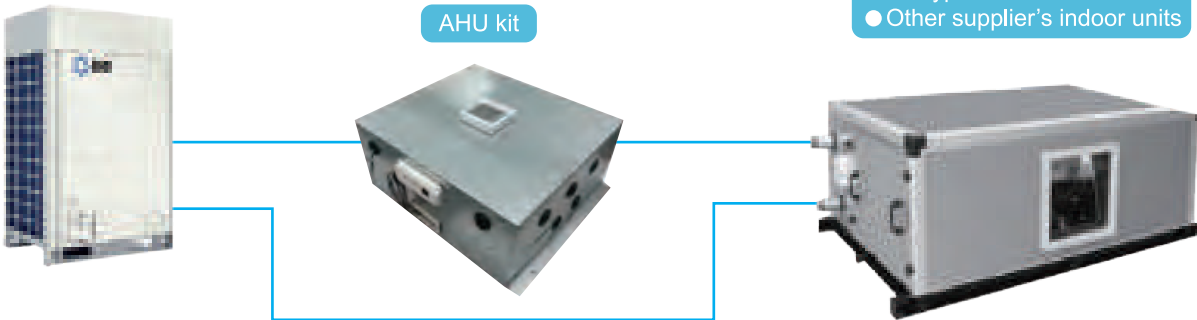
- Dunham-Bush AHU connection kit is an interface to allow AHU connecting to the outdoor units.
- 4 basic modules: 5HP/10HP/20HP/30HP
- Can be combined into bigger capacity.



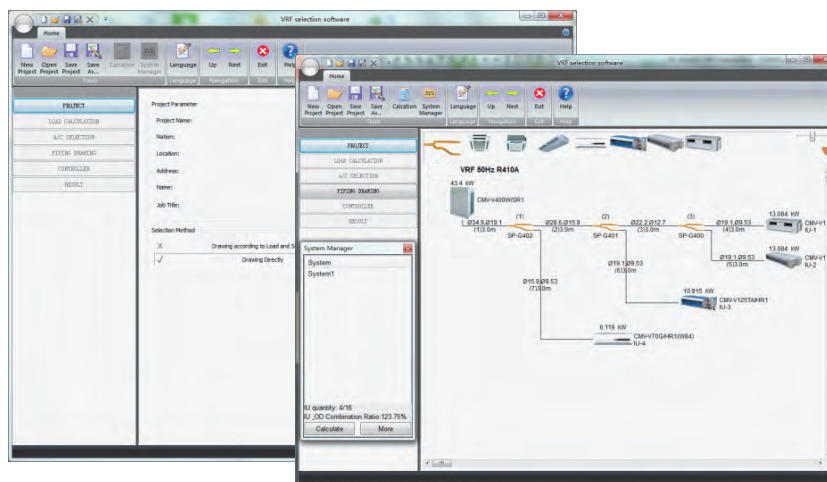
DBV outdoor unit

AHU kit

- DX type AHU
- Other supplier's indoor units



VRF Selection Software Pro

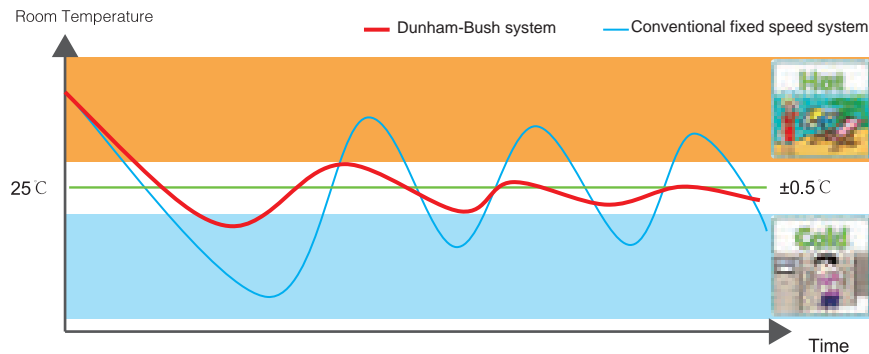


COMFORTABLE



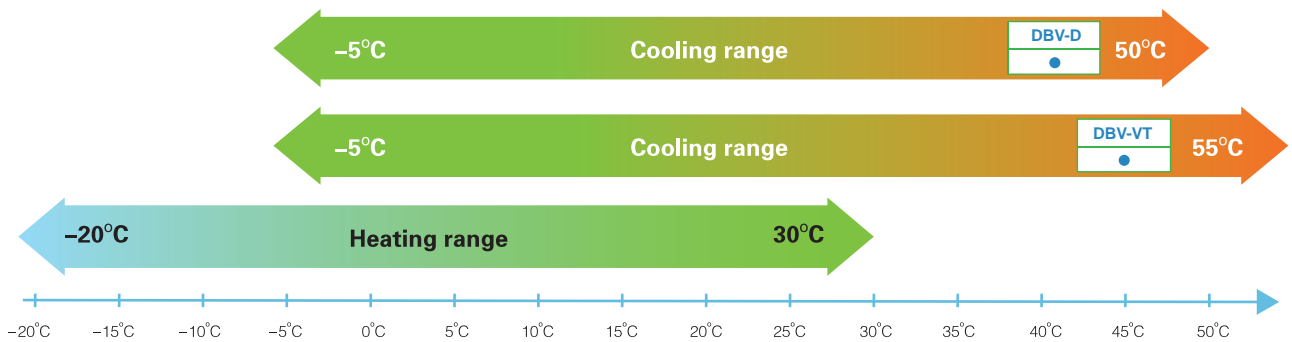
Outstanding Comfort Ability

- Dunham-Bush DBV system have excellent cooling & heating performance, thanks to the high efficiency DC fan motor, DC compressor and optimized refrigerant flow control logic.
- Precisely room temperature control by adopting 2000 pulse EXV. Indoor temperature fluctuation can be maintain within 0.5 °C, offers outstanding comfort ability.



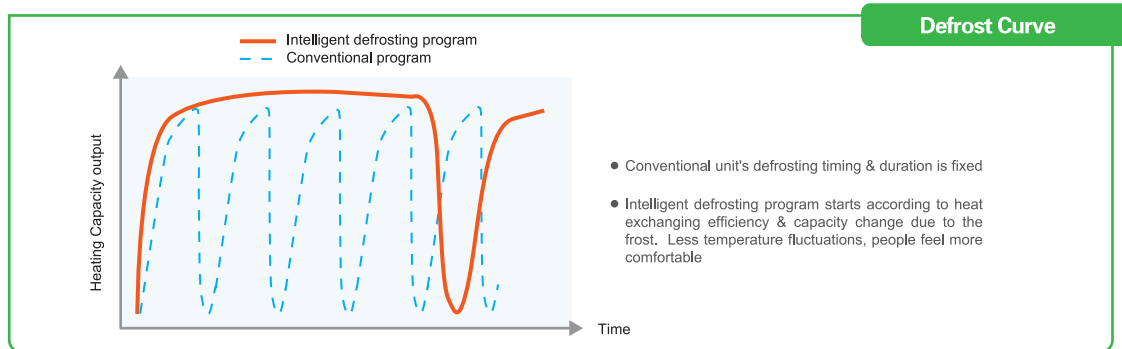
Wide Operation Range

- Cooling operating temperature is up to 50°C, suitable for the hot region. For T3 VRF units, the cooling operating temperature is up to 55°C.
- Heating operating temperature is down to -20°C. In the cold winter, DBV system can stably produce heat.



Intelligent Defrosting Program

Program starts only when unit needs to. Whereas conventional unit's defrosting timing & duration is fixed, causing fluctuations in temperature and personal comfort.





COMFORTABLE

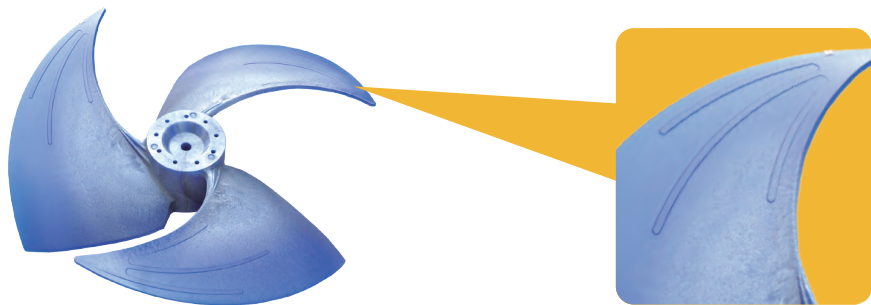
7 Improvements To Reduce Noise

Maximum 10dB(A) of operating sound decrease.



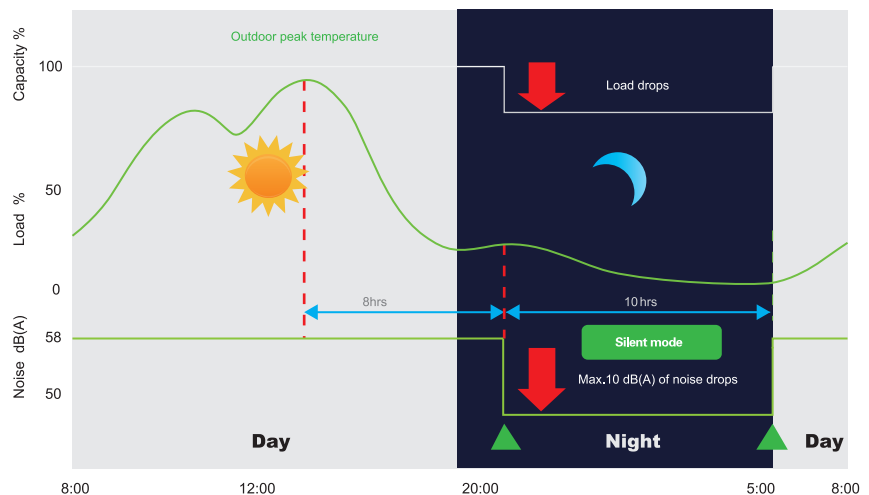
Low Noise Fan Blade

- Anti-vibration forward fan blade.
- Special design to reduce the air vibration and disturbance.



Silent Mode, Night Time Noise Control

- Compressor and fan motor rotating speed can be reduced to lower the noise at night.
- Maximum 10dB(A) decrease.

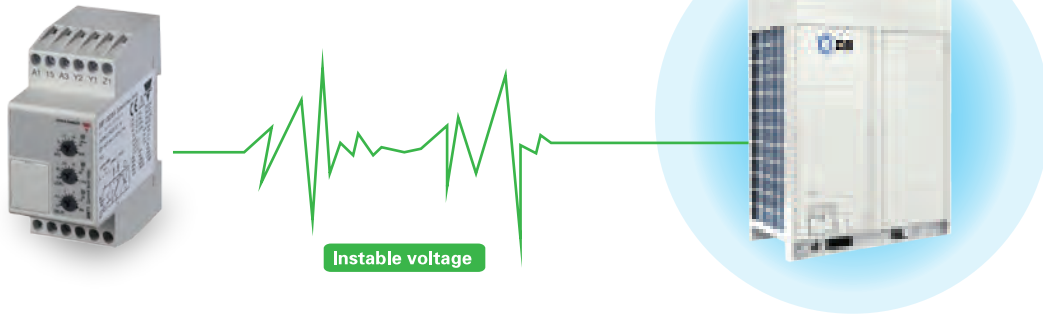


CONVENIENT



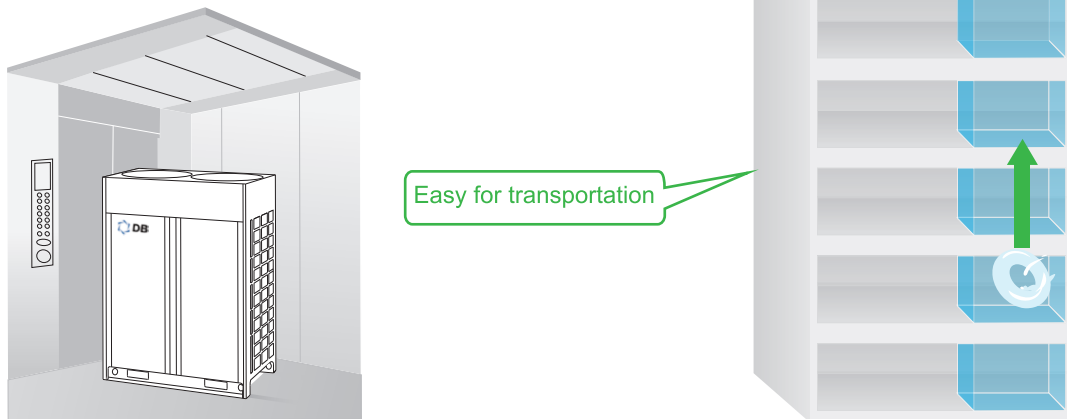
3-Phase Power Protector (Optional)

Protect the outdoor unit from instable voltage.



Easy Installation

- Easy for the outdoor unit to transport to roof floor by elevator due to its compact size.
- Communication wire length can be up to 1000m.



Use 2-Core Shielded Wire As Single Wire

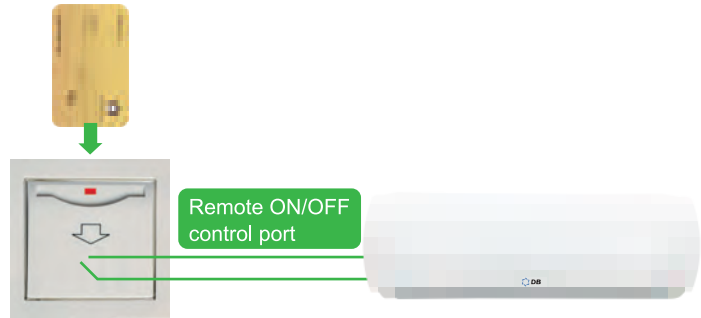
- Save installation cost.
- Reduce manual works.





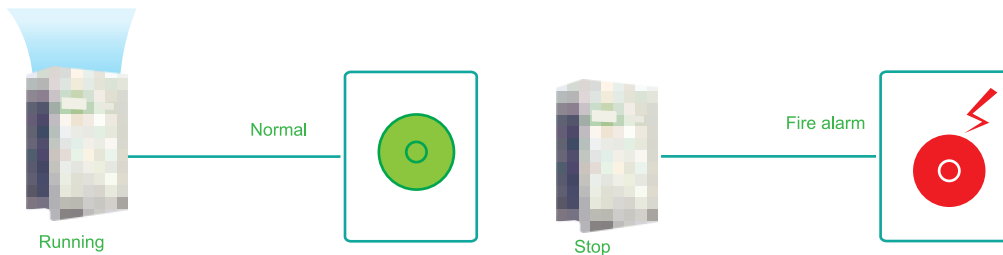
Remote ON/OFF Control Function

- Indoor units standard build in with ON/OFF control port.
- It can be used for hotel card control and also can be used for long distance remote ON/OFF control. And no need additional hotel VRF indoor unit control module.
- When contactor is open (card pulled out), indoor unit will be off can not be controlled, current running parameters will be saved in indoor PCB.
- When contactor is close (card insert), indoor unit will recover previous running state.



Emergency Stop Operation Function

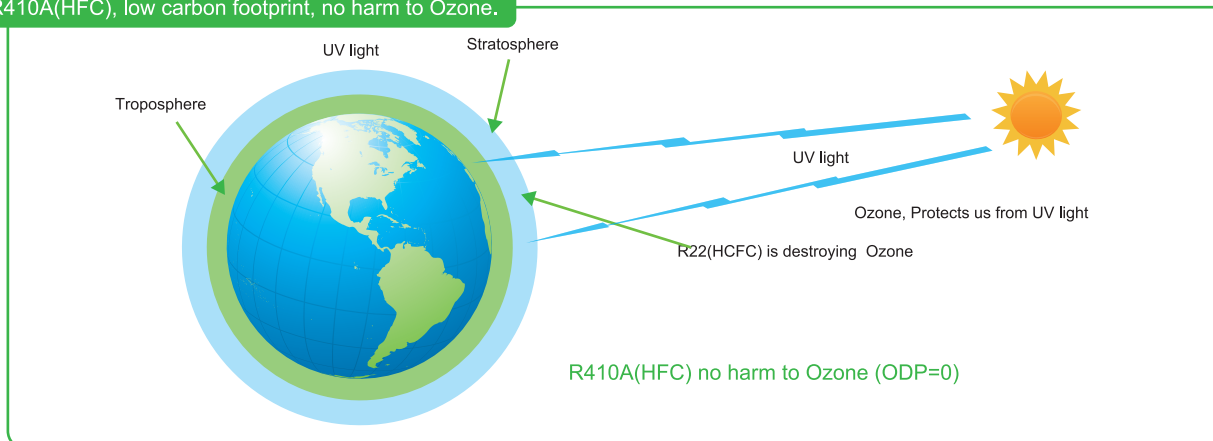
Outdoor unit have a fire alarm linkage signal control function. When emergency situation can stop the whole AC system.



Environment Friendly

Refrigerant R410A(HFC), low carbon footprint, no harm to Ozone.

R410A(HFC), low carbon footprint, no harm to Ozone.





Adjustable Outdoor Fan Static Pressure

- Thanks to DC fan motor, the external static pressure of outdoor fan is adjustable.
- Outdoor units can be installed in the service floor or facility room.
- Maximum ESP 85Pa.



New Wired Controller

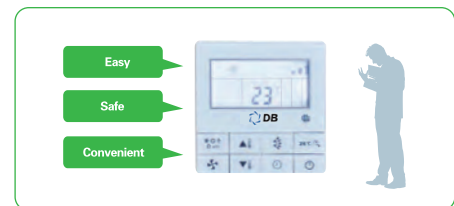
- Bidirectional communication. Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller.
- Compact design.
- Timer function.



Indoor unit operation state
Indoor unit control order

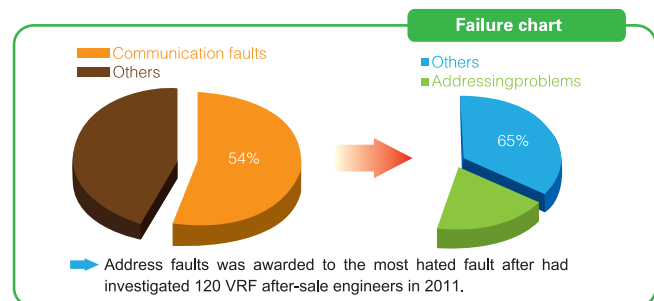


User can check the error code and inquiry unit status very easy, safe and convenient.



Automatic Addressing

- Automatic addressing will reduce artificial faults by 35% and 5% manual works.
 - 54% system failure were caused by communication faults.
 - 65% communication faults were caused by address problems.
 - Most of the address problems were: address setting forgotten, wrong settings, address repeat.



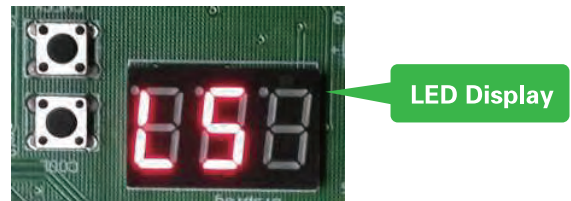
Addressing Methods

- 2 addressing methods:
 - Automatically addressing: system will distribute address to indoor unit automatically.
 - Manually setting by wireless remote controller.
- Addressing method can be selected easily by adjusting the switch on outdoor PCB.



LED Display On The PCB

LED display on the PCB, it can show system's operation status and error codes.



Refrigerant Recycle Program

- Press the forced cooling button, after the unit running for a few minutes, close the high pressure stop valve.
- After the digital tube display "dh" and the low pressure value, close the low pressure stop valve and cut off the power.



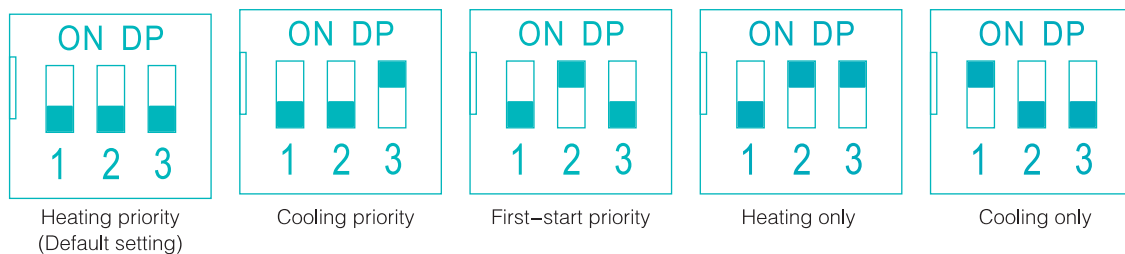
Service Window

Thanks to the service window, checking outdoor unit's status and setting is now easy, no need to remove the electric control box cover.



Mode Restriction

- 5 kinds of mode restriction



- Mode restriction function can be selected on the outdoor PCB.



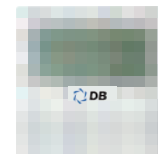
Wireless Remote Controllers

- Indoor unit address inquiry
- Indoor unit address setting
- Temperature setting
- Operation mode setting
- Fan speed setting
- Timer function



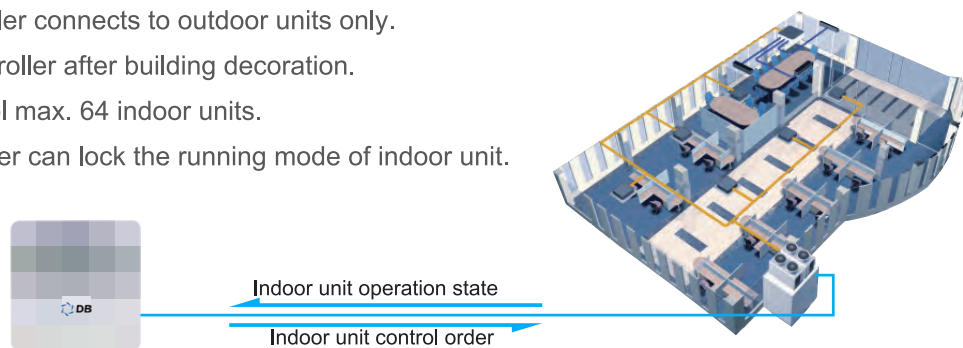
Wired Controllers

- Bidirectional communication. Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller.
- Compact design
- Timer function



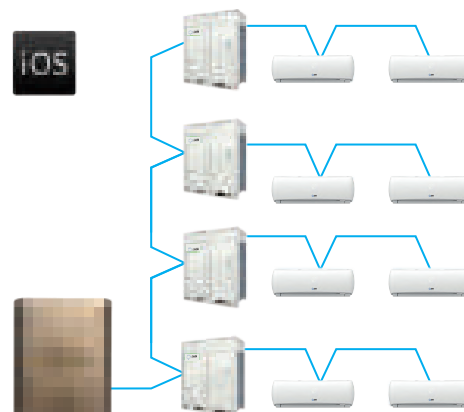
Simple Centralized Controller

- Easy to install. Controller connects to outdoor units only.
- Able to install this controller after building decoration.
- 1 Controller can control max. 64 indoor units.
- Mode lock function, user can lock the running mode of indoor unit.



DBV-SMART (Smart Centralized Control App)

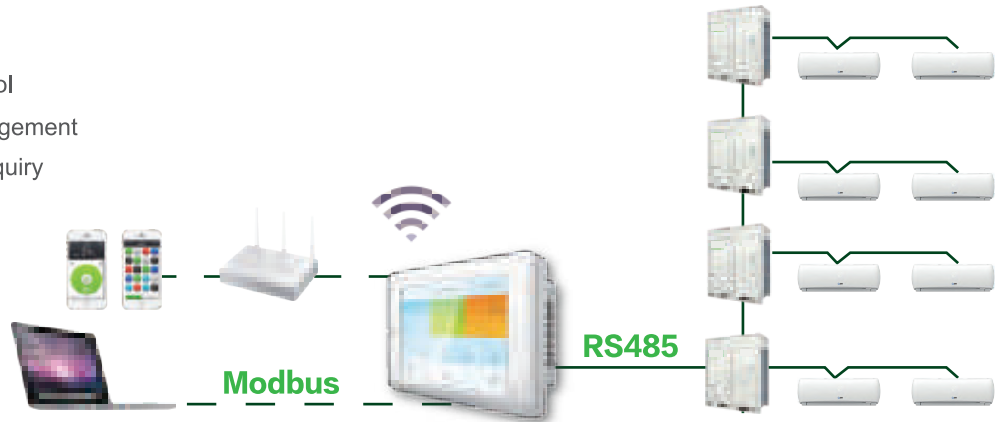
- Available on iOS and Android
- Single unit controller or group control
- Weekly schedule management
- 64 indoor unit can be controlled
- Operation parameter enquiry
- Remote control via cloud server





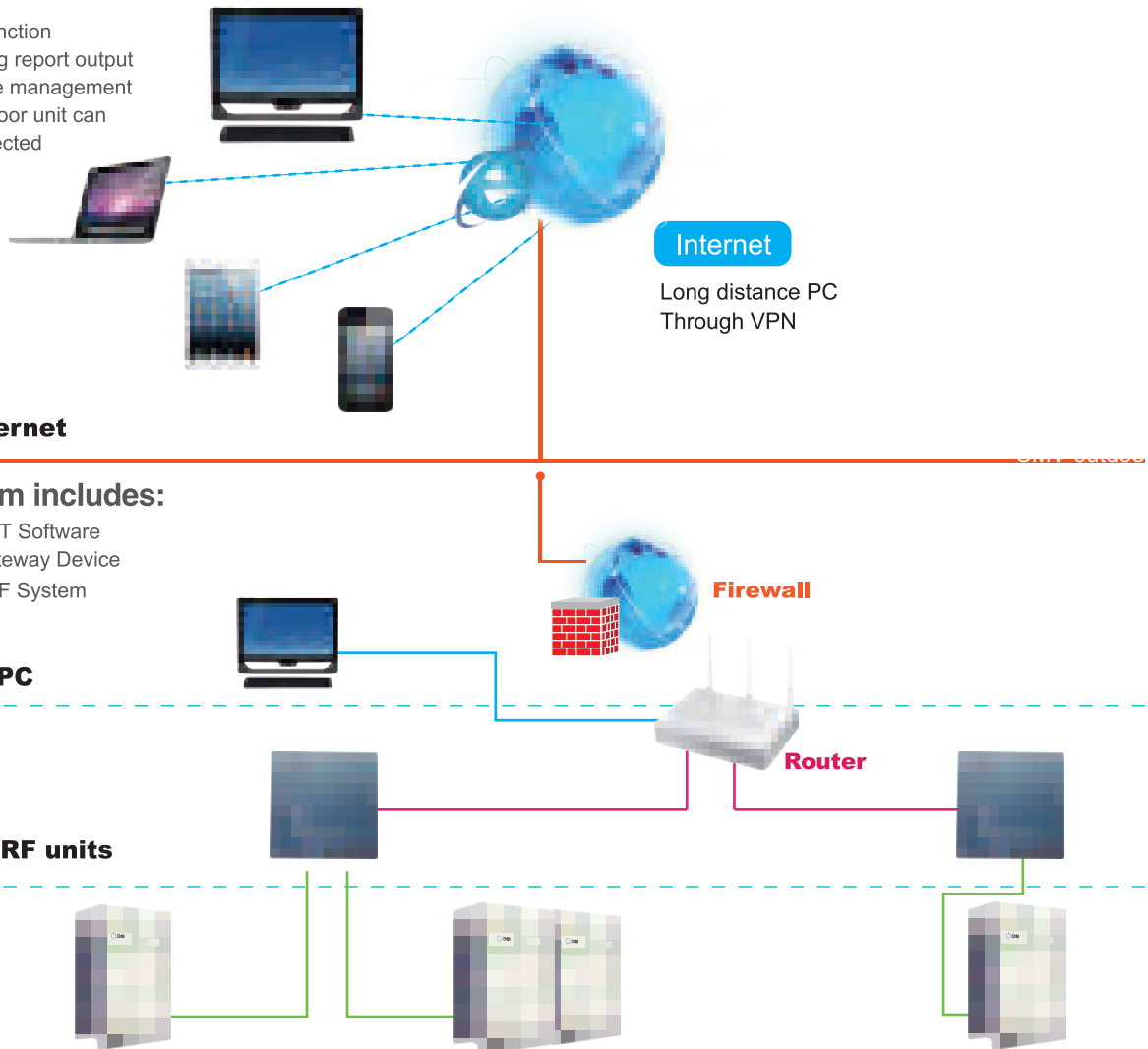
Touch Screen Centralized Controller

- Build in WIFI modular
- Build in Modbus protocol
- Weekly schedule management
- Operation parameter enquiry
- User friendly UI design



DBV-Net Control Software

- Billing function
- Operating report output
- Schedule management
- 1024 indoor unit can be connected



IP/Ethernet

System includes:

- DBV-NET Software
- NCC Gateway Device
- DBV VRF System
- Softdog

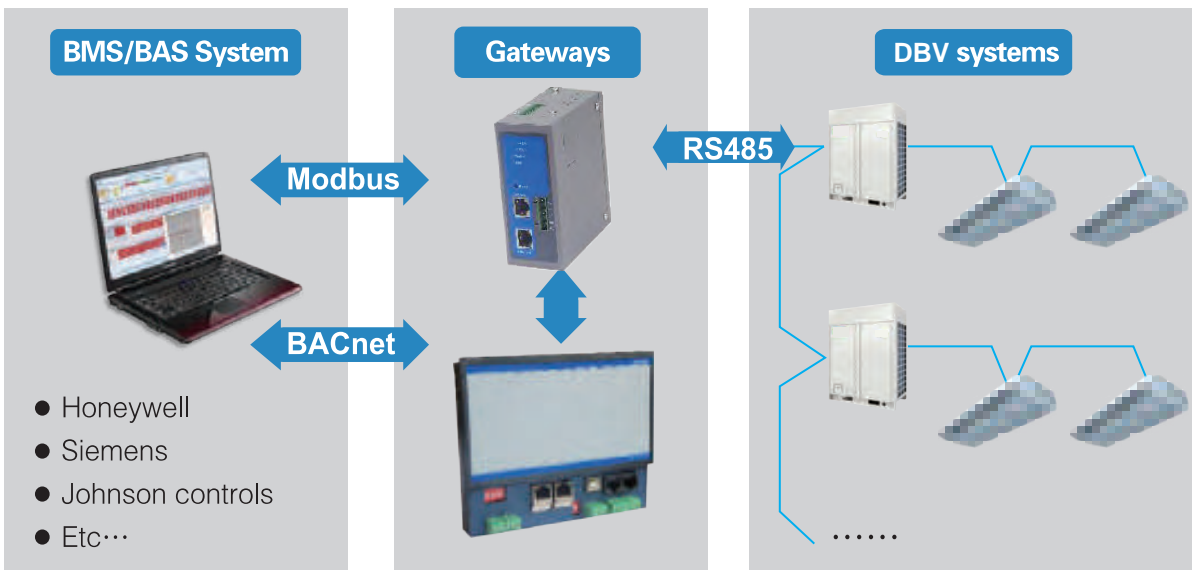
Local PC

DBV VRF units



BMS Gateway

- BACnet gateway
Verified by BACnet International, fully compatible with all BACnet protocol product
- Modbus gateway
Outdoor unit built in with Modbus gateway can be customized



Doctor Kit Pro

- Operating status, error codes inquiry.
- Compressors, sensors, valves operating parameter.
- Real-time monitored and display.
- Commissioning results can be reported.
- Built-in with troubleshooting instruction.





UNITS

Combination Table (DBV-D & DBV-VT)

Cooling Capacity										
HP	Cooling Capacity(KW)	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	Max. Connected Indoor Unit Quantity
8	25.2	●								13
10	28		●							16
12	33.5			●						16
14	40				●					20
16	45					●				20
18	50						●			20
20	56							●		24
22	61.5								●	24
24	67			●●						28
26	73		●			●				28
28	78		●				●			28
30	84		●					●		32
32	89.5		●						●	32
34	95			●					●	36
36	101					●		●		36
38	106.5					●			●	36
40	112							●●		42
42	117.5							●	●	42
44	123								●●	42
46	129		●			●		●		48
48	134.5		●			●			●	48
50	140		●					●●		54
52	145.5		●					●		54
54	151		●						●●	54
56	156.5			●					●●	58
58	162.5					●		●	●	58
60	168					●			●●	58
62	173						●		●●	64
64	179							●	●●	64
66	184.5								●●●	64
68	190.5		●			●		●	●	64
70	196		●			●			●●	64
72	201.5		●					●●	●	64
74	207		●					●	●●	64
76	212.5		●						●●●	64
78	218			●					●●●	64
80	224					●		●	●●	64
82	229.5					●			●●●	64
84	234.5						●		●●●	64
86	240.5							●	●●●	64
88	246								●●●●	64

SPECIFICATIONS



DBV-D (T1 Full DC Inverter) 380V-415V/50Hz

HP			Basic modules							
HP			08	10	12	14	16	18	20	22
Model Name	380~415V/3PH/50Hz		DBV-D252W/ZR1	DBV-D280W/ZR1	DBV-D335W/ZR1	DBV-D400W/ZR1	DBV-D450W/ZR1	DBV-D500W/ZR1	DBV-D560W/ZR1	DBV-D615W/ZR1
Max. Connected indoor units quantity			13	16	16	20	20	20	24	24
Performance data										
Cooling	Capacity	KW	25.2	28.0	33.5	40.0	45.0	50.0	56.0	61.5
		Btu/h	85000	95000	114000	136000	153000	170000	191000	209000
	Power input	RT	7.1	7.9	9.5	11.3	12.7	14.2	15.9	17.4
		EER	W/W	4.50	4.30	4.20	3.80	3.40	3.88	3.82
Heating	Capacity	KW	27.4	31.5	37.5	45.0	50.0	56.0	63.0	69.0
		Btu/h	93000	107000	127000	153000	170000	191000	214000	235000
	Power input	kW	4.98	6.18	7.98	9.78	12.82	13.18	15.29	17.12
		COP	W/W	5.50	5.10	4.70	4.60	3.90	4.25	4.12
Physical data										
Compressor	Quantity		1DC				2DC		2DC	
	Type		Hermatic scroll							
Refrigerant	Type		R410A							
	Throttle type		EXV							
	Volume	Kg	10	12	14	16	16.5	17		
Motor	Type		DC motor							
	Quantity		2DC				2DC		2DC	
	ESP	Pa	85							
Dimension (WxDxH)	Net	mm	970x765x1620				1260x765x1620		1349x765x1620	
	Packing	mm	1030x825x1750				1315x825x1750		1405x825x1780	
Net weight	Kg	208				242	286	295	312	323
Sound pressure level	dB(A)	58				60	60	60	63	
Piping data										
Total equivalent pipeline length < 90m	Liquid	mm	Ø9.52	Ø12.7	Ø15.88	Ø15.88				
	Gas	mm	Ø22.2	Ø25.4	Ø28.6	Ø31.80				
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø12.7	Ø15.88	Ø19.05					
	Gas	mm	Ø25.4	Ø28.6	Ø31.8					
Oil balance pipe	mm	/								

HP			2 modules combination										
HP			24	26	28	30	32	34	36	38	40	42	44
Model Name	380~415V/3PH/50Hz		DBV-D670W/ZR1	DBV-D730W/ZR1	DBV-D780W/ZR1	DBV-D840W/ZR1	DBV-D895W/ZR1	DBV-D950W/ZR1	DBV-D1010W/ZR1	DBV-D1065W/ZR1	DBV-D1120W/ZR1	DBV-D1175W/ZR1	DBV-D1230W/ZR1
Max. Connected indoor units quantity			28	28	28	32	32	36	36	36	42	42	42
Performance data													
Cooling	Capacity	KW	67.0	73.0	78.0	84.0	89.5	95.0	101.0	106.5	112.0	117.5	123.0
		Btu/h	228000	249000	266000	286000	305000	324000	344000	363000	382000	400000	419000
	Power input	RT	19.0	20.7	22.1	23.8	25.4	27.0	28.7	30.2	31.8	33.4	34.9
		EER	W/W	4.20	3.70	4.03	4.00	3.90	3.89	3.64	3.59	3.86	3.80
Heating	Capacity	KW	75.0	81.5	87.5	94.5	100.5	106.5	113.0	119.0	126.0	132.0	138.0
		Btu/h	255000	278000	298000	322000	342000	363000	385000	406000	429000	450000	470000
	Power input	kW	15.96	19.00	19.35	21.47	23.30	25.10	28.11	29.94	30.58	32.41	34.24
		COP	W/W	4.70	4.29	4.52	4.40	4.31	4.24	4.02	3.97	4.12	4.07
Physical data													
Compressor	Quantity		1DC+2DC					2DC+2DC					
	Type		Hermatic scroll										
Refrigerant	Type		R410A										
	Throttle type		EXV										
	Volume	Kg	-										
Motor	Type		DC motor										
	Quantity		2DC+2DC	1DC+2DC				2DC+2DC					
	ESP	Pa	85										
Dimension (WxDxH)	Net	mm	-										
	Packing	mm	-										
Net weight	Kg	-											
Sound pressure level	dB(A)	-											
Piping data													
Total equivalent pipeline length < 90m	Liquid	mm	Ø15.88	Ø19.05									
	Gas	mm	Ø31.80	Ø34.90				Ø38.10					
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø19.05	Ø22.20				Ø22.20					
	Gas	mm	Ø34.90	Ø38.10				Ø41.30					
Oil balance pipe	mm	Ø6.35											

- Notes: 1. Cooling operating temperature range is from -5°C to 50°C. Heating operating temperature range is from -20°C to 30°C
 2. The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB
 3. The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB
 4. Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 5. The above data may be changed without notice for future improvement on quality and performance.



SPECIFICATIONS



DBV-D (T1 Full DC Inverter) 380V-415V/50Hz

HP		3 modules combination											
HP		46	48	50	52	54	56	58	60	62	64	66	
Model Name	380-415V/3PH/50Hz	DBV-D1290W/ZR1	DBV-D1345W/ZR1	DBV-D1400W/ZR1	DBV-D1455W/ZR1	DBV-D1510W/ZR1	DBV-D1565W/ZR1	DBV-D1625W/ZR1	DBV-D1680W/ZR1	DBV-D1730W/ZR1	DBV-D1790W/ZR1	DBV-D1845W/ZR1	
Max. Connected indoor units quantity		48	48	54	54	54	58	58	58	64	64	64	
Performance data													
Cooling	Capacity	KW	129.0	134.5	140.0	145.5	151.0	156.5	162.5	168.0	173.0	179.0	184.5
		Btu/h	440000	458000	477000	496000	515000	533000	554000	573000	590000	610000	629000
	Power input	RT	36.6	38.2	39.8	41.3	42.9	44.4	46.2	47.7	49.1	50.8	52.4
		W/W	3.77	3.72	3.94	3.88	3.83	3.83	3.68	3.64	3.78	3.78	3.74
Heating	Capacity	KW	144.5	150.5	157.5	163.5	169.5	175.5	182.0	188.0	194.0	201.0	207.0
		Btu/h	493000	513000	537000	557000	578000	598000	620000	641000	661000	685000	706000
	Power input	kW	34.29	36.12	36.76	38.59	40.42	42.22	45.23	47.06	47.42	49.53	51.36
		COP	4.21	4.17	4.28	4.24	4.19	4.16	4.02	3.99	4.09	4.06	4.03
Physical data													
Compressor	Quantity	1DC+2DC+2DC						2DC+2DC+2DC					
	Type	Hermetic scroll											
Refrigerant	Type	R410A											
	Throttle type	EXV											
	Volume	-											
Motor	Type	DC motor											
	Quantity	1DC+2DC+2DC						2DC+2DC+2DC					
	ESP	Pa	85										
Dimension (W×D×H)	Net	mm											
	Packing	mm											
Net weight	Kg	-											
Sound pressure level	dB(A)	-											
Piping data													
Total equivalent pipeline length < 90m	Liquid	mm	Ø19.05						Ø22.2				
	Gas	mm	Ø38.10						Ø44.5				
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø22.20						Ø25.4				
	Gas	mm	Ø41.30						Ø44.5				
Oil balance pipe	mm	Ø6.35											

HP		4 modules combination											
HP		68	70	72	74	76	78	80	82	84	86	88	
Model Name	380-415V/3PH/50Hz	DBV-D1905W/ZR1	DBV-D1960W/ZR1	DBV-D2015W/ZR1	DBV-D2070W/ZR1	DBV-D2125W/ZR1	DBV-D2180W/ZR1	DBV-D2240W/ZR1	DBV-D2295W/ZR1	DBV-D2345W/ZR1	DBV-D2405W/ZR1	DBV-D2460W/ZR1	
Max. Connected indoor units quantity		64	64	64	64	64	64	64	64	64	64	64	
Performance data													
Cooling	Capacity	KW	190.5	196.0	201.5	207.0	212.5	218.0	224.0	229.5	234.5	240.5	246.0
		Btu/h	649000	668000	687000	706000	725000	743000	764000	783000	800000	820000	839000
	Power input	RT	54.1	55.7	57.2	58.8	60.4	61.9	63.6	65.2	66.6	68.3	69.9
		W/W	3.76	3.72	3.88	3.84	3.81	3.80	3.69	3.67	3.77	3.77	3.74
Heating	Capacity	KW	213.5	218.0	226.5	232.5	238.5	244.5	251.0	257.0	263.0	270.0	276.0
		Btu/h	728000	743000	772000	793000	813000	834000	856000	876000	897000	921000	941000
	Power input	kW	51.41	53.24	53.88	55.71	57.54	59.34	62.35	64.19	64.54	66.66	68.49
		COP	4.15	4.09	4.20	4.17	4.14	4.12	4.03	4.00	4.07	4.05	4.03
Physical data													
Compressor	Quantity	1DC+2DC+2DC+2DC						2DC+2DC+2DC+2DC					
	Type	Hermetic scroll											
Refrigerant	Type	R410A											
	Throttle type	EXV											
	Volume	Kg											
Motor	Type	DC motor											
	Quantity	1DC+2DC+2DC+2DC						2DC+2DC+2DC+2DC					
	ESP	Pa	85										
Dimension (W×D×H)	Net	mm											
	Packing	mm											
Net weight	Kg	-											
Sound pressure level	dB(A)	-											
Piping data													
Total equivalent pipeline length < 90m	Liquid	mm	Ø25.4						Ø25.4				
	Gas	mm	Ø44.5						Ø54.0				
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø25.4						Ø22.20				
	Gas	mm	Ø54.0						Ø41.30				
Oil balance pipe	mm	Ø6.35											

- Notes: 1. Cooling operating temperature range is from -5°C to 50°C. Heating operating temperature range is from -20°C to 30°C
 2. The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB
 3. The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB
 4. Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 5. The above data may be changed without notice for future improvement on quality and performance.

SPECIFICATIONS



DBV-VT (T3 Full DC Inverter) 380V-415V/50Hz

HP			Basic modules							
HP			08	10	12	14	16	18	20	22
Model Name	380-415V/3PH/50Hz		DBV-VT252W/ZR1	DBV-VT280W/ZR1	DBV-VT335W/ZR1	DBV-VT400W/ZR1	DBV-VT450W/ZR1	DBV-VT500W/ZR1	DBV-VT560W/ZR1	DBV-VT615W/ZR1
Max. Connected indoor units quantity			13	16	16	20	20	20	24	24
Performance data										
Cooling	Capacity	KW	22.9	25.4	30.35	36.3	40.85	45.4	50.85	55.75
		Btu/h	78000	86400	103200	123400	138900	154900	173500	190200
		RT	6.5	7.21	8.62	10.3	11.6	12.9	14.5	15.9
	Power input	KW	5.98	6.94	8.48	10.74	13.44	14.1	16.35	18.4
		W/W	3.83	3.66	3.58	3.58	3.04	3.22	3.11	3.03
Heating	Capacity	KW	27.4	31.5	37.5	45.0	50.0	56.0	63.0	69.0
		Btu/h	93000	107000	127000	153000	170000	191000	214000	235000
	Power input	KW	4.98	6.18	7.98	9.78	12.82	13.97	15.95	17.88
		W/W	5.50	5.10	4.70	4.60	3.90	4.01	3.95	3.86
	COP	W/W	5.50	5.10	4.70	4.60	3.90	4.01	3.95	3.86
Physical data										
Compressor	Quantity		1DC				2DC			
	Type		Hermetic scroll							
Refrigerant	Type		R410A							
	Throttle type		EXV							
	Volume	Kg	10	12	14	16	16.5	17		
Motor	Type		DC motor							
	Quantity		2DC							
	ESP	Pa	85							
Dimension (W×D×H)	Net	mm	970×765×1620				1349×765×1620			
	Packing	mm	1030×825×1750				1405×825×1780			
	Net weight	Kg	208	242	286	295	312	323		
Sound pressure level	dB(A)	58		60		63				
Piping data										
Total equivalent pipeline length < 90m	Liquid	mm	Ø9.52	Ø12.7	Ø15.88					
	Gas	mm	Ø22.2	Ø25.4	Ø28.6	Ø31.80				
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø12.7		Ø15.88	Ø19.05				
	Gas	mm	Ø25.4		Ø28.6	Ø31.80				
Oil balance pipe	mm	/								

HP			2 modules combination										
HP			24	26	28	30	32	34	36	38	40	42	44
Model Name	380-415V/3PH/50Hz		DBV-VT670W/ZR1	DBV-VT730W/ZR1	DBV-VT780W/ZR1	DBV-VT840W/ZR1	DBV-VT895W/ZR1	DBV-VT950W/ZR1	DBV-VT1010W/ZR1	DBV-VT1065W/ZR1	DBV-VT1120W/ZR1	DBV-VT1175W/ZR1	DBV-VT1230W/ZR1
Max. Connected indoor units quantity			28	28	28	32	32	36	36	36	42	42	42
Performance data													
Cooling	Capacity	KW	60.7	66.25	70.8	76.25	81.15	86.1	91.7	96.6	101.7	106.6	111.5
		Btu/h	206400	225300	241300	259900	276600	293400	312400	329100	347000	363700	380400
		RT	17.24	18.81	20.11	21.71	23.11	24.52	26.1	27.5	29	30.4	31.8
	Power input	KW	16.96	20.38	21.04	23.29	25.34	26.88	29.79	31.84	32.7	34.75	36.8
		EER	W/W	3.58	3.25	3.37	3.27	3.20	3.20	3.08	3.03	3.11	3.07
Heating	Capacity	KW	75.0	81.5	87.5	94.5	100.5	106.5	113.0	119.0	126.0	132.0	138.0
		Btu/h	255000	278000	298000	322000	342000	363000	385000	406000	429000	450000	470000
	Power input	KW	15.96	19.00	20.14	22.13	24.05	25.85	28.77	30.70	31.90	33.83	35.75
		COP	W/W	4.70	4.29	4.34	4.27	4.18	4.12	3.93	3.88	3.95	3.90
	COP	W/W	4.70	4.29	4.34	4.27	4.18	4.12	3.93	3.88	3.95	3.90	3.86
Physical data													
Compressor	Quantity		1DC+2DC										
	Type		Hermetic scroll										
Refrigerant	Type		R410A										
	Throttle type		EXV										
	Volume	Kg	-										
Motor	Type		DC motor										
	Quantity		2DC+2DC	1DC+2DC	2DC+2DC	2DC+2DC	2DC+2DC	2DC+2DC	2DC+2DC	2DC+2DC	2DC+2DC	2DC+2DC	2DC+2DC
	ESP	Pa	85										
Dimension (W×D×H)	Net	mm	-										
	Packing	mm	-										
	Net weight	Kg	-										
Sound pressure level	dB(A)	-											
Piping data													
Total equivalent pipeline length < 90m	Liquid	mm	Ø15.88	Ø19.05		Ø19.05							
	Gas	mm	Ø31.80	Ø34.90		Ø38.10							
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø19.05	Ø22.20		Ø22.20							
	Gas	mm	Ø34.90	Ø38.10		Ø41.30							
Oil balance pipe	mm	Ø6.35											

Notes: 1. Cooling operating temperature range is from -5°C to 55°C. Heating operating temperature range is from -20°C to 30°C

2. The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 46°C(114.8°F) DB

3. The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB

4. Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

5. The above data may be changed without notice for future improvement on quality and performance.



SPECIFICATIONS



DBV-VT (T3 Full DC Inverter) 380V-415V/50Hz

HP			3 modules combination										
HP			46	48	50	52	54	56	58	60	62	64	66
Model Name	380-415V/3PH/50Hz		DBV-VT1290W/ZR1	DBV-VT1345W/ZR1	DBV-VT1400W/ZR1	DBV-VT1455W/ZR1	DBV-VT1510W/ZR1	DBV-VT1565W/ZR1	DBV-VT1625W/ZR1	DBV-VT1680W/ZR1	DBV-VT1730W/ZR1	DBV-VT1790W/ZR1	DBV-VT1845W/ZR1
Max. Connected indoor units quantity			48	48	54	54	54	58	58	58	64	64	64
Performance data													
Cooling	Capacity	KW	117.1	122	127.1	132	136.9	141.85	147.45	152.35	156.9	162.35	167.25
		Btu/h	398800	415500	433400	450100	466800	483600	502600	519300	535300	553900	570600
	Power input	RT	33.31	34.71	36.21	37.61	39.01	40.42	42	43.4	44.7	46.3	47.7
		W/W	36.73	38.78	39.64	41.69	43.74	45.28	48.19	50.24	50.9	53.15	55.2
Heating	Capacity	KW	144.5	150.5	157.5	163.5	169.5	175.5	182.0	188.0	194.0	201.0	207.0
		Btu/h	493000	513000	537000	557000	578000	598000	620000	641000	661000	685000	706000
	Power input	kW	34.95	36.87	38.08	40.00	41.93	43.73	46.65	48.57	49.72	51.70	53.63
		COP	W/W	4.13	4.08	4.14	4.09	4.04	4.01	3.90	3.87	3.90	3.89
Physical data													
Compressor	Quantity		1DC+2DC+2DC					2DC+2DC+2DC					
	Type		Hermetic scroll										
Refrigerant	Type		R410A										
	Throttle type		EXV										
	Volume	Kg	-										
Motor	Type		DC motor										
	Quantity		1DC+2DC+2DC					2DC+2DC+2DC					
	ESP	Pa	85										
Dimension (W×D×H)	Net	mm	-										
	Packing	mm	-										
	Net weight	Kg	-										
Sound pressure level	dB(A)	-											
Piping data													
Total equivalent pipeline length < 90m	Liquid	mm	Ø19.05					Ø22.2					
	Gas	mm	Ø38.10					Ø44.5					
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø22.20					Ø25.4					
	Gas	mm	Ø41.30					Ø44.5					
Oil balance pipe	mm	Ø6.35											

HP			4 modules combination										
HP			68	70	72	74	76	78	80	82	84	86	88
Model Name	380-415V/3PH/50Hz		DBV-VT1905W/ZR1	DBV-VT1960W/ZR1	DBV-VT2015W/ZR1	DBV-VT2070W/ZR1	DBV-VT2125W/ZR1	DBV-VT2180W/ZR1	DBV-VT2240W/ZR1	DBV-VT2295W/ZR1	DBV-VT2345W/ZR1	DBV-VT2405W/ZR1	DBV-VT2460W/ZR1
Max. Connected indoor units quantity			64	64	64	64	64	64	64	64	64	64	
Performance data													
Cooling	Capacity	KW	172.85	177.75	182.85	187.75	192.65	197.6	203.55	208.1	212.65	218.1	223
		Btu/h	589000	605700	623600	640300	657000	673800	694000	709500	725500	744100	760800
	Power input	RT	49.21	50.61	52.11	53.51	54.91	56.32	58	59.3	60.6	62.2	63.6
		W/W	55.13	57.18	58.04	60.09	62.14	63.68	65.94	68.64	69.3	71.55	73.6
Heating	Capacity	KW	213.5	218.0	226.5	232.5	238.5	244.5	251.0	257.0	263.0	270.0	276.0
		Btu/h	728000	743000	772000	793000	813000	834000	856000	876000	897000	921000	941000
	Power input	kW	52.82	54.75	55.95	57.88	59.80	61.61	64.52	66.45	67.59	69.58	71.50
		COP	W/W	4.04	3.98	4.05	4.02	3.99	3.97	3.89	3.87	3.89	3.88
Physical data													
Compressor	Quantity		1DC+2DC+2DC+2DC					2DC+2DC+2DC+2DC					
	Type		Hermetic scroll										
Refrigerant	Type		R410A										
	Throttle type		EXV										
	Volume	Kg	-										
Motor	Type		DC motor										
	Quantity		1DC+2DC+2DC+2DC					2DC+2DC+2DC+2DC					
	ESP	Pa	85										
Dimension (W×D×H)	Net	mm	-										
	Packing	mm	-										
	Net weight	Kg	-										
Sound pressure level	dB(A)	-											
Piping data													
Total equivalent pipeline length < 90m	Liquid	mm	Ø25.4					Ø25.4					
	Gas	mm	Ø44.5					Ø54.0					
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø25.4					Ø22.20					
	Gas	mm	Ø54.0					Ø41.30					
Oil balance pipe	mm	Ø6.35											

- Notes: 1. Cooling operating temperature range is from -5°C to 55°C. Heating operating temperature range is from -20°C to 30°C
 2. The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 46°C(114.8°F) DB
 3. The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB
 4. Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 5. The above data may be changed without notice for future improvement on quality and performance.

SPECIFICATIONS



DBV-V/VH (T1 Full DC Inverter) 220-240/1ph/50Hz, 380-415/3ph/50Hz

Model name	Power type	Cooling				Heating				Compressor		Motor		Refrigerant		Sound pressure Level dB(A)	Sound power Level dB(A)	Dimension(W×H×D)		Weight		Connecting		Max. Connected indoor units quantity				
		Capacity kW	Power input Btu/h	Current A	EER	Capacity kW	Power input Btu/h	Current A	COP	Type	Quantity	Type	Quantity	Type	Volume kg			Packing mm	Body mm	Net kg	Gross kg	Gas mm	Liquid mm					
DBV-V080WR1	220-240V-1ph-50Hz	8	27300	2.15	5.70	3.72	9	30700	2.28	6.04	3.95	DC/Twin-rolary	1	DC/fan motor	2	R410a	3	45-56	52-63	1145×1120×475	1054×994×399	80	92	Φ15.9	Φ9.53	4		
DBV-V100WR1	220-240V-1ph-50Hz	10	34000	2.68	7.10	3.70	11.5	39000	2.90	7.69	3.93						3	45-56	52-63	1145×1120×475	1054×994×399	80	92			5		
DBV-V125WR1	220-240V-1ph-50Hz	12.5	42000	3.38	8.96	3.69	14	47000	3.65	9.68	3.83						3.1	45-56	52-63	1145×1120×475	1054×994×399	89	100			6		
DBV-V125WZR1	380-415V-3ph-50Hz	12.5	42000	3.38	5.24	3.69	14	47000	3.66	5.67	3.83						3.1	45-56	52-63	1145×1120×475	1054×994×399	93	104			6		
DBV-V140WR1	220-240V-1ph-50Hz	14	47000	3.96	10.50	3.52	16	54000	4.3	11.40	3.72						3.45	45-56	52-63	1145×1120×475	1054×994×399	89	100			7		
DBV-V140WZR1	380-415V-3ph-50Hz	14	47000	3.96	6.17	3.52	16	54000	4.3	6.67	3.72						3.45	45-58	52-65	964×1445×402	900×1328×400	93	104			7		
DBV-V160WR1	220-240V-1ph-50Hz	16	54000	4.57	12.11	3.50	18	61000	5.13	13.60	3.61						4.2	45-58	52-65	964×1445×402	900×1328×400	96	107			8		
DBV-V160WZR1	380-415V-3ph-50Hz	16	54000	4.58	7.10	3.50	18	61000	5.13	7.95	3.61						4.2	45-58	52-65	964×1445×402	900×1328×400	100	111			8		
DBV-V180WZR1	380-415V-3ph-50Hz	18	61000	5.19	8.05	3.47	20	63000	5.62	8.71	3.56						4.2	45-58	52-65	964×1445×402	900×1328×400	100	111			Φ19.1	Φ9.53	9
DBV-VH224WZR1	380-415V-3ph-50Hz	22.4	76500	6.74	10.5	3.32	25	85300	5.85	9.9	4.27						6.1	45-58	52-65	1278×1696×560	1120×1549×400	145	165			Φ22.2	Φ9.53	10
DBV-VH260WZR1	380-415V-3ph-50Hz	26	88700	7.54	12.1	3.45	28.5	97300	6.77	11.1	4.21						6.1	46-60	55-66	1278×1696×560	1120×1549×400	145	165			Φ22.2	Φ9.53	12
DBV-VH280WZR1	380-415V-3ph-50Hz	28	95500	8.32	13.6	3.37	30.5	104000	7.93	12.9	3.85						8	47-60	56-66	1278×1696×560	1120×1549×400	176	196			Φ25.4	Φ12.7	15
DBV-VH335WZR1	380-415V-3ph-50Hz	33.5	114200	9.45	14.9	3.54	37.5	127900	9	14.2	4.17						8	48-62	57-68	1278×1696×560	1120×1549×400	176	196			Φ25.4	Φ12.7	18

Notes:



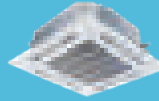



1. The cooling conditions: indoor temp.: 27°C DB (80.6°F), 19°C WB (60°F) outdoor temp.: 35°C DB (95°F) equivalent pipe length: 5m drop length: 0m.
2. The heating conditions: indoor temp.: 20°C DB (68°F), 15°C WB (44.6°F) outdoor temp.: 7°C DB (42.8°F) equivalent pipe length: 5m drop length: 0m.
3. Sound level: Anechoic chamber conversion value, measured at a point 1 m in front of the unit at a height of 1.2 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.









SPECIFICATIONS



Indoor Units Line Up

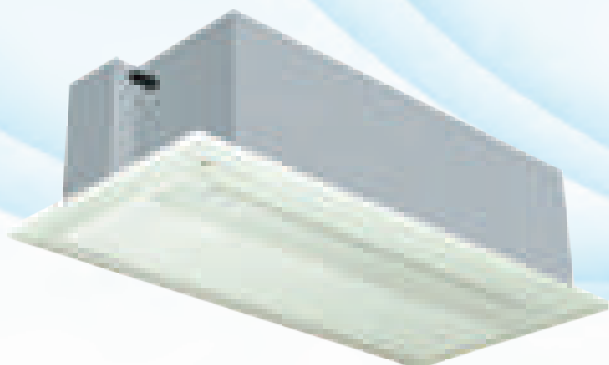
Capacity (KW)	1-way cassette	2-way cassette	4-way cassette	Round-flow cassette	4-way cassette (compact type)	Floor standing
						
2.2	●				●	
2.8	●		●	●	●	
3.6	●		●	●	●	
4.5	●	●	●	●	●	●
5.6	●	●	●	●		●
7.1	●	●	●	●		●
8.0		●	●	●		●
9.0		●	●	●		●
10.0		●	●	●		●
11.2		●	●	●		●
12.0						●
12.5		●	●	●		●
14.0		●	●	●		●
15.0						●
16.0			●	●		●




Capacity (KW)	Wall-mounted	Ceiling / floor exposed	Low static ducted	Medium static ducted	High static ducted	Fresh air processor
						
2.2	●		●			
2.8	●		●			
3.6	●		●			
4.5	●	●	●			
5.6	●	●	●			
7.1	●	●	●	●	●	
8.0		●		●	●	
9.0		●		●	●	
10.0				●	●	
11.2		●				
12.0				●	●	
14.0		●				●
15.0				●	●	
16.0		●				
20.0					●	
22.4						●
25.0					●	
28.0					●	●
45.0					●	●
56.0					●	●

SPECIFICATIONS



1-Way Cassette



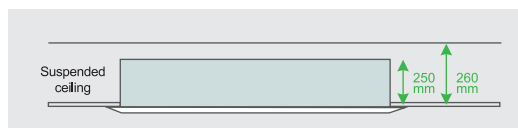
Controller		
Standard	Optional	
Wireless	Wired	Centralized
		

Accessories

Air filter	EXV	Drain pump	AC Motor
Standard	Standard (built-in)	Standard (built-in)	Standard

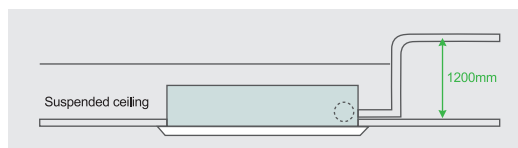
Slim Body, Easy To Install

Has slim body with 250mm height, it is specially suitable for low suspended ceiling rooms.



Built-In With Drainage Pump

Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



Specification

Model name	Power type	Capacity				Motor input kW	Air flow		Sound level dB(A)	Dimension (W×H×D)				Body Weight		Connecting pipe			Standard controller
		Cooling kW	Cooling kBtu/h	Heating kW	Heating kBtu/h		m ³ /h	CFM		Packing mm	Body mm	Packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm	
DBV-V22Q1/HR1-B	50Hz	2.2	7.5	2.5	8.5	0.04	520	306	32~36	1160×275×655	994×250×532	1090×65×540	1070×50×520	24/3.6	30/5.0	Φ9.53	Φ6.35	OD Φ25	Remote controller
DBV-V28Q1/HR1-B	50Hz	2.8	9.5	3.2	10.9														
DBV-V36Q1/HR1-B	50Hz	3.6	12.2	4.0	13.6														
DBV-V45Q1/HR1-B	50Hz	4.5	15.3	5.0	17.0	0.05	610	360	36~41	1160×315×655	994×290×532	1090×65×540	1070×50×520	26/3.6	32/5.0	Φ12.7	Φ15.9	Φ9.53	Remote controller
DBV-V56Q1/HR1-B	50Hz	5.6	19.1	6.3	21.4	0.07	750	440	35~41	1470×305×690	1304×290×572	1390×70×560	1380×50×520	34/3.6	39/5.0				
DBV-V71Q1/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.09	950	550	38~45										

Notes:




1. Power supply: 220~240V/1PH for 50Hz;
2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB, Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.



SPECIFICATIONS

2-Way Cassette



Controller		
Standard	Optional	
Wireless	Wired	Centralized
		

Accessories

Air filter	EXV	Drain pump	AC Motor
Standard	Standard (built-in)	Standard (built-in)	Standard

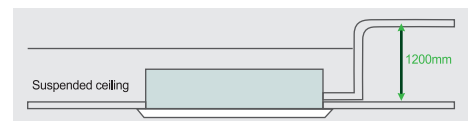
2 Way Air Direction

Two direction air flow, flexibly install in various rooms or hallway



Built-In With Drainage Pump

Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



Specification

Model name	Power type	Capacity				Motor input	Air flow	Sound Level	Dimension (W×H×D)				Body Weight		Connecting pipe			Standard controller	
		Cooling		Heating					Packing mm	Body mm	Packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm		
		kW	kBtu/h	kW	kBtu/h														
DBV-V45Q2/HR1-B	50Hz	4.5	15.3	5.0	17	0.07	800	470	36~42	1215×365×630	1068×310×517	1235×70×655	1205×50×630	33/6.5	36/8.5	Φ12.7	Φ6.35		
DBV-V56Q2/HR1-B	50Hz	5.6	19.1	6.3	21.4														
DBV-V71Q2/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.10	1120	650	40~46	1455×365×630	1308×310×517	1475×70×655	1445×50×630	40/7.5	47/10.0				
DBV-V80Q2/HR1-B	50Hz	8.0	27.2	9.0	30.7														
DBV-V90Q2/HR1-B	50Hz	9.0	30.7	10.0	34.1	0.14	1550	910	40~46	1935×365×630	1788×310×517	1955×70×655	1925×50×630	53.5/12	61/14.0	Φ15.9	Φ9.53	OD Φ25	Remote controller
DBV-V100Q2/HR1-B	50Hz	10.0	34.1	11.0	37.5														
DBV-V112Q2/HR1-B	50Hz	11.2	38.2	12.5	42.6	0.16	1650	970	43~48	1935×365×630	1788×310×517	1955×70×655	1925×50×630	56/12.0	63/14.0				
DBV-V125Q2/HR1-B	50Hz	12.5	42.6	14.0	47.7														
DBV-V140Q2/HR1-B	50Hz	14.0	47.7	15.0	51.1														

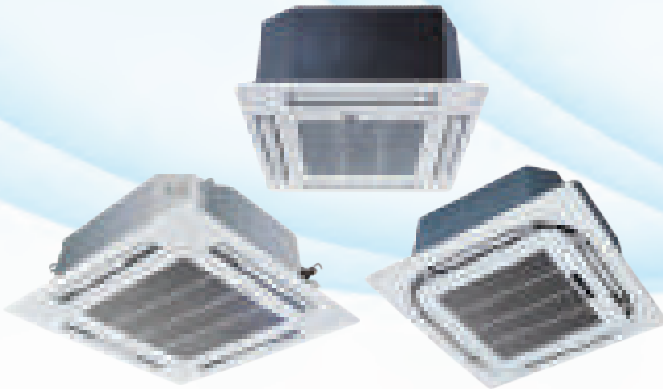
Notes:

1. Power supply: 220-240V/1PH for 50Hz;
2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB, Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.

SPECIFICATIONS



4-Way Cassette/ Round-Flow Cassette



Controller		
Standard	Optional	
Wireless	Wired	Centralized

Accessories

Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Standard (built-in)	Standard (built-in)	Standard	Optional

4 Ways Air Delivering

Air flow is soft and smooth, air can be delivered to every corner without dead angle, it makes the room temperature distribution more balance.



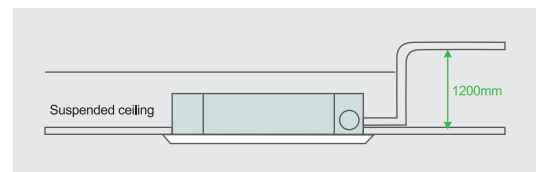
360° Round Panel Is Optional



Built-In With Drainage Pump

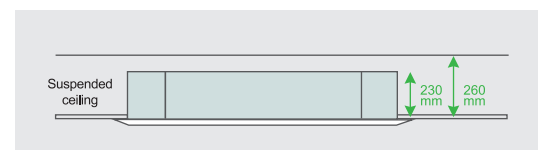
Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.

Note: The pumping head of 4-way cassette unit (compact type) is 700mm.



Slim Body, Easy To Install

Has slim body with 230mm height, it is specially suitable for low suspended ceiling rooms.



DC Fan Motor Is Optional



SPECIFICATIONS

Specification

4-Way Cassette

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	Dimension (W×H×D)				Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m³/h	CFM		Packing	Body	Packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	kW	m³/h	CFM	dB(A)	mm	mm	mm	mm	kg	kg	mm	mm	mm	
DBV-V28Q/HR1-C	50Hz	2.8	9.5	3.2	10.9	0.043	650	382	32-36	920×265×985	833×232×900	1030×105×1030	950×50×950	22	27	Φ9.53	Φ6.35	OD 25	Remote controller
DBV-V36Q/HR1-C	50Hz	3.6	12.2	4.0	13.6	0.054	810	470	35-39					24	29				
DBV-V45Q/HR1-C	50Hz	4.5	15.3	5.0	17									0.093	1200				
DBV-V56Q/HR1-C	50Hz	5.6	19.1	6.3	21.4	0.16	1600	940	37-41										
DBV-V71Q/HR1-C	50Hz	7.1	24.2	8.0	27.2									0.16	1600				
DBV-V80Q/HR1-C	50Hz	8	27.2	8.8	30	0.16	1600	940	37-41										
DBV-V90Q/HR1-C	50Hz	9	30.7	10.0	34.1									0.16	1600				
DBV-V100Q/HR1-C	50Hz	10	34.1	11.0	37.5	0.16	1600	940	37-41										
DBV-V112Q/HR1-C	50Hz	11.2	38.2	12.5	42.6									0.16	1600				
DBV-V125Q/HR1-C	50Hz	12.5	42.6	14.0	47.7	0.16	1600	940	37-41										
DBV-V140Q/HR1-C	50Hz	14.0	47.7	15.0	51.1					0.16	1600	940	37-41	28.5	35				
DBV-V160Q/HR1-C	50Hz	16.0	54.5	17.0	58	0.16	1600	940	37-41					28.5	35				

4-Way Cassette (Compact Type)

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	Dimension (W×H×D)				Body Weight		Connecting pipe			Standard controller	
		Cooling		Heating			m³/h	CFM		Packing	Body	Packing	Panel	Net	Gross	Gas	Liquid	Drain		
		kW	kBtu/h	kW	kBtu/h	kW	m³/h	CFM	dB(A)	mm	mm	mm	mm	kg	kg	mm	mm	mm		
DBV-V22Q4/HR1-C	50Hz	2.2	7.5	2.5	8.5	0.06	447	263	22-34	745×375×675	653×265×585	750×95×750	650×30×650	17.5	25	Φ9.53	Φ6.35	OD 25	Remote controller	
DBV-V28Q4/HR1-C	50Hz	2.8	9.5	3.2	10.9	0.06	447	263	22-34					17.5	25					
DBV-V36Q4/HR1-C	50Hz	3.6	12.2	4.0	13.6	0.06	515	303	27-38					17.5	25					Φ12.7
DBV-V45Q4/HR1-C	50Hz	4.5	15.3	5.0	17	0.06	515	303	27-38											

Round-Flow Cassette

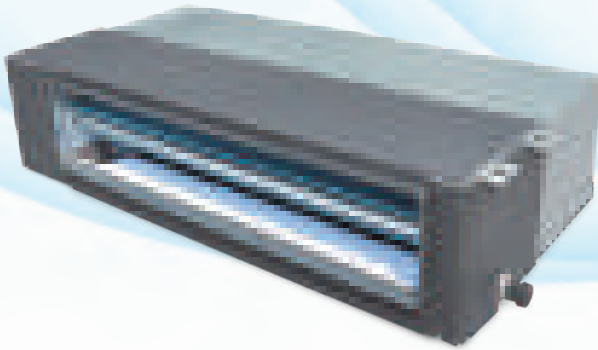
Model name	Power type	Capacity				Motor input	Air flow		Sound Level	Dimension (W×H×D)				Body Weight		Connecting pipe			Standard controller			
		Cooling		Heating			m³/h	CFM		Packing	Body	Packing	Panel	Net	Gross	Gas	Liquid	Drain				
		kW	kBtu/h	kW	kBtu/h	kW	m³/h	CFM	dB(A)	mm	mm	mm	mm	kg	kg	mm	mm	mm				
DBV-V56QR/HR1	50Hz	5.6	19.1	6.3	21.4	0.18	860	500	32-39	920×265×985	833×232×900	1030×105×1030	950×50×950	24	30	Ø12.7	Ø6.5	Ø25	Remote controller			
DBV-V71QR/HR1	50Hz	7.1	24.2	8.0	27.2									1200	700					35-39	24	30
DBV-V80QR/HR1	50Hz	8.0	27.2	8.8	30																1400	820
DBV-V90QR/HR1	50Hz	9.0	30.7	10	34.1									1400	820					37-41		
DBV-V100QR/HR1	50Hz	10	34.1	11	37.5																1800	1050
DBV-V112QR/HR1	50Hz	11.2	38.2	12.5	42.6		1800	1050	38-42	28.5	35											
DBV-V125QR/HR1	50Hz	12.5	42.6	14	47.7					1800	1050	38-42	28.5	35								
DBV-V140QR/HR1	50Hz	14	47.7	15	51.1		1800	1050	38-42				28.5	35								
DBV-V160QR/HR1	50Hz	16	54.5	17	58					1800	1050	38-42	28.5	35								

- Notes: 1. Power supply: 220~240V/1PH/50Hz;
 2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB;
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions;
 4. The above data may be changed without notice for future improvement on quality and performance.

SPECIFICATIONS



Low Static Ducted



Controller		
Standard	Optional	
Wired	Wireless	Centralized

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Optional	Standard (built-in)	Optional	Standard	Optional

Slim Body, Easy To Install

Has slim body, minimum 700mm width, it is specially suitable for installation location in entrance ceiling of hotel room. Low noise and light Weight.

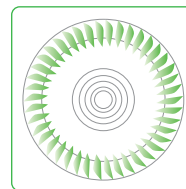
Drain Pump Is Optional

Pumping head is 750mm.

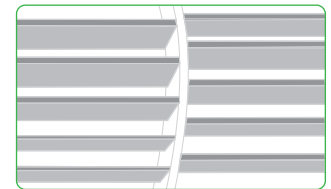
Dc Fan Motor Optional

Big Air Flow Low Noise Centrifugal Fan Wheel

Big air flow low noise centrifugal fan blade with special air tunnel system, and the unique shock absorption measures, making this series ducted units' running noise is as low as 24 dB(A), let users to enjoy the comfort, sleep without any disturbance.



- Special resin material fan wheel.



- All vanes are dislocation distribution to offset sound wave, so that the noise can be reduced.

20 dB(A)

30 dB(A)



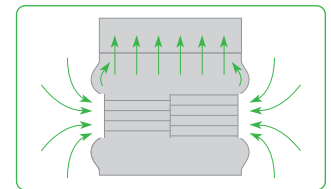
Rustled leaves



Silent reading room



- High efficiency low noise motor, motor and support frame with rubber ring isolation, can absorb vibration and reduce noise.



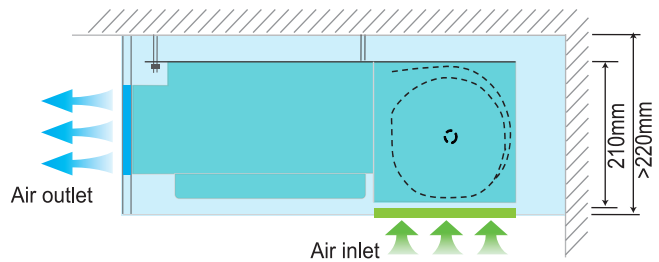
- Air inlet of fan wheel casing is arch curved design; it can reduce air flow's disturbance, make it flow smoother to reduce noise.



SPECIFICATIONS

Slim Body, Easy To Install

Has slim body with 210mm height, it is specially suitable for low suspended ceiling rooms.



Standard Height And Depth

The whole series units have same height and depth, easy for design and installation, When more units are installed in the same room, they will meet the decoration perfectly.



Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (W×H×D)		Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m³/h	CFM			Packing	Body	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h													
DBV-V22TA/HR1-C	50Hz	2.2	7.5	2.5	8.5	0.05	450	260	24~29	30	910×240×510	814×210×467	16	18.5	Φ9.53	OD Φ25	Wired controller	
DBV-V28TA/HR1-C	50Hz	2.8	9.5	3.2	10.9								16	18.5				
DBV-V36TA/HR1-C	50Hz	3.6	12.2	4	13.6	0.07	550	324	25~32				16	19	Φ6.35			
DBV-V45TA/HR1-C	50Hz	4.5	15.3	5	17	0.08	620	360	32~37		16	19	Φ12.7					
DBV-V56TA/HR1-C	50Hz	5.6	19.1	6.3	21.4	0.09	800	520	28~38		1110×240×510	1010×210×467		21	24			Φ15.9
DBV-V71TA/HR1-C	50Hz	7.1	24.2	8	27.2	0.11	1000	640	30~39		1310×240×510	1214×210×467	25.5	28.5				

Notes: 1. Power supply: 220~240V/1PH for 50Hz.

2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB.

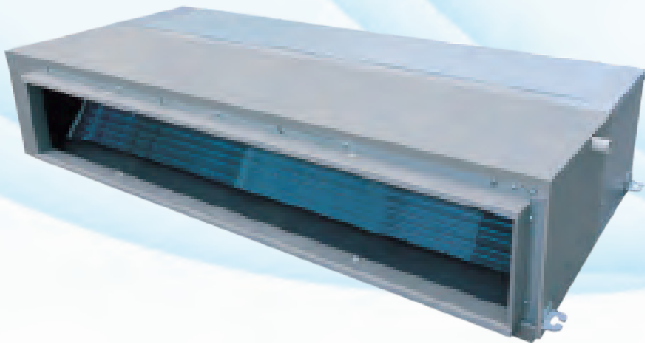
3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.




4. The above data may be changed without notice for future improvement on quality and performance.

SPECIFICATIONS



Medium & High Static Ducted

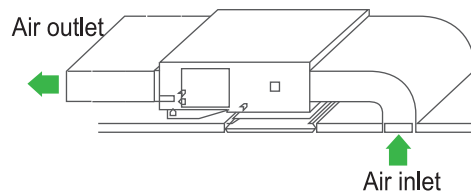


Controller		
Standard	Optional	
Wired	Wireless	Centralized
		

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Standard	Standard (built-in)	Optional	Standard	Optional

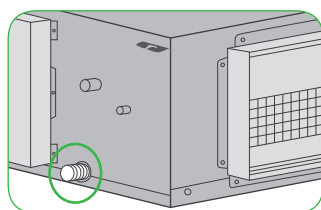
Up To 200Pa Static Pressure



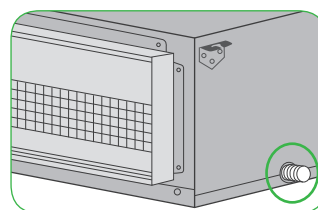
200Pa ESP, suitable for long distance air supply

Convenient In Drainage Pipe Installation

Reserved drainage pipe outlet holes on left side and right side, installer can choose the outlet holes on site as per actual conditions, flexible for drainage pipe installation.



Left drainage hole



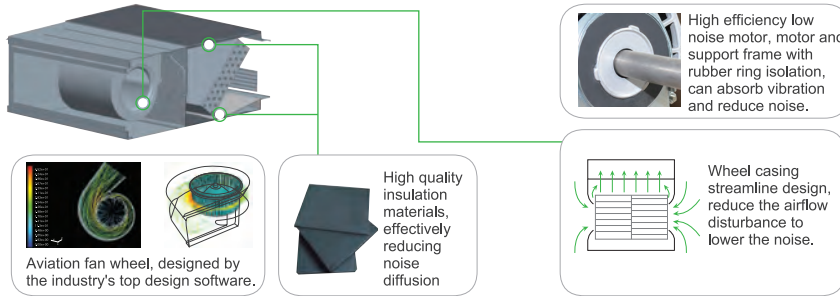
Right drainage hole



SPECIFICATIONS

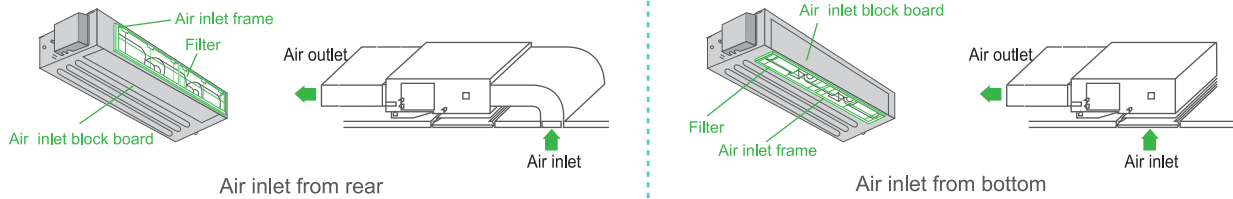
Whole Unit Low Noise Design, Silent Operation

Using multiple noise reduction technology, including the design of high efficiency low noise motor, aviation fan wheel, low vibration wheel casing, unique design, the inner wall configuration with high quality insulation materials, and so on, to make the units running in a low noise condition.



Two Air Return Installation Methods

Air return from rear or bottom is easy to change on site, convenient for installation.



Specification

Medium Static Ducted

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (W×H×D)		Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m3/h	CFM			Packing	Body	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h													
DBVA-71TB/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.30	1220	710	36-41	70	1255x325x720	1209x260x680	33	37	Φ15.9	Φ9.53	OD Φ25	Wired controller
DBVA-80TB/HR1-B	50Hz	8.0	27.2	9.0	30.7								33	37				
DBVA-90TB/HR1-B	50Hz	9.0	30.7	10.0	34.1								46	50				
DBVA-100TB/HR1-B	50Hz	10.0	34.1	11.0	37.5	0.34	2000	1170	40-44	70	1490x325x720	1445x260x680	46	50	Φ15.9	Φ9.53	OD Φ25	Wired controller
DBVA-120TB/HR1-B	50Hz	12.0	40.9	13.0	44.3								46	50				
DBVA-150TB/HR1-B	50Hz	15.0	51.1	17.0	58								46	50				

High Static Ducted

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (W×H×D)		Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m3/h	CFM			Packing	Body	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h													
DBV-V71TH/HR1-B	50Hz	7.1	24.2	8.0	27.3	0.26	1443	849	44-48	150	1090x440x768	952x420x690	45	50	Φ15.9	Φ9.53	OD Φ32	Wired controller
DBV-V80TH/HR1-B	50Hz	8.0	27.3	9.0	30.7	0.26	1416	883	45-48	150	1090x440x768	952x420x690	45	50				
DBV-V90TH/HR1-B	50Hz	9.0	30.7	10.0	34.1	0.42	1951	1148	47-52	150	1090x440x768	952x420x690	46.5	52.4				
DBV-V100TH/HR1-B	50Hz	10.0	34.1	12.5	42.7	0.52	2116	1246	47-52	150	1090x440x768	952x420x690	50.6	56				
DBV-V120TH/HR1-B	50Hz	12.0	40.9	16.0	54.6	0.72	3000	1766	48-53	150	1436x450x768	1300x420x691	68	70				
DBV-V150TH/HR1-B	50Hz	15.0	51.2	17.0	58.0	0.94	3620	2131	50-54	150	1436x450x768	1300x420x691	70	77.5				
DBV-V200TH/HR1-B	50Hz	20.0	68.2	22.5	76.8	1.52	3840	2260	52-59	150	1509x550x990	1443x470x810	115	129				
DBV-V250TH/HR1-B	50Hz	25.0	85.3	26.0	88.7	1.52	3840	2260	52-59	150	1509x550x990	1443x470x810	115	129				
DBV-V280TH/HR1-B	50Hz	28.0	95.5	31.5	107.5	1.52	3840	2260	52-59	150	1509x550x990	1443x470x810	115	129				
DBV-V450TH/HR1-B	50Hz	45.0	153.5	50.0	170.6	2.71	7472	4398	56-61	200	2095x800x964	1970x668x902.5	232	245				
DBV-V560TH/HR1-B	50Hz	56.0	191.1	63.0	215.0	3.40	9550	5621	57-63	200	2095x800x964	1970x668x902.5	232	245	Φ28.6	Φ15.9		




Notes: 1. Power supply: 220~240V/1PH for 50Hz
 2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 4. The above data may be changed without notice for future improvement on quality and performance.

SPECIFICATIONS



Fresh Air Processor



Controller		
Standard	Optional	
Wired	Wireless	Centralized
		

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor
Standard	Optional	Standard (built-in)	Optional	Standard

Healthy And Comfortable

Fresh air is introduced, provides a healthy and comfortable living environment.

100% Fresh Air Processing Unit

Both fresh air filtration and heating/cooling can be achieved in a single system. Indoor units and fresh air processing unit can be connected to the same refrigerant system, increase design flexibility and greatly reduce total system costs.

High External Static Pressure

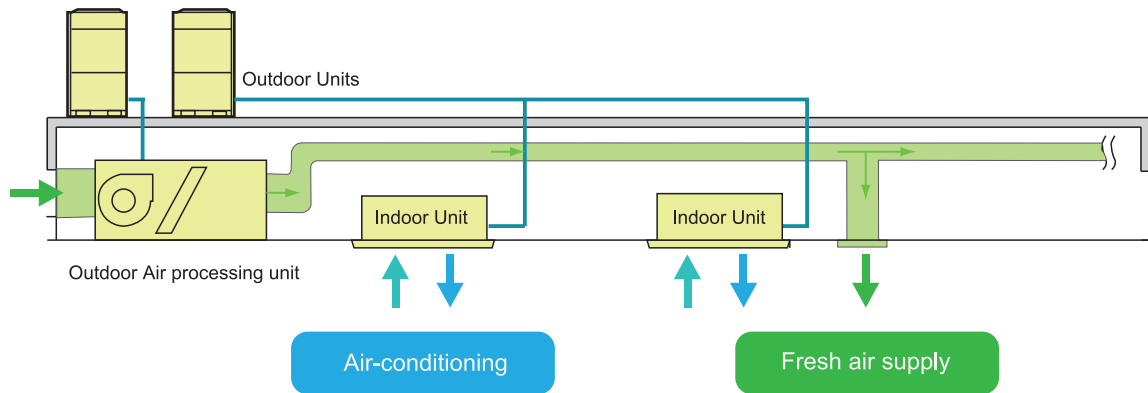
External static pressure can be up to 300Pa for more flexible duct applications. The maximum distance of air supply is about 20m and the maximum height of air supply is about 6.5m.



SPECIFICATIONS

Innovative Air Supply Technology For Excellent Room Temperature Control

Layout Example:



Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (W×H×D)		Body Weight		Connecting pipe			Standard controller
		Cooling kW	Cooling kBTu/h	Heating kW	Heating kBTu/h		m ³ /h	CFM			Packing mm	Body mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm	
DBV-V140TF/HR1-B	50Hz	14.0	47.7	9.0	30.7	0.45	1400	820	42~48	220	1245×445×655	1190×370×620	47	51	Φ15.9	Φ9.53	Wired controller	
DBV-V224TF/HR1-B	50Hz	22.4	76.4	16.0	54.5	1.2	2000	1170	45~52	220	1510×580×870	1465×448×811	100	111	Φ22.2	Φ12.7		
DBV-V280TF/HR1-B	50Hz	28.0	95.5	20.0	68.2	1.2	2800	1640	45~52	220	1510×580×870	1465×448×811	100	111				
DBV-V450TF/HZR1-B	50Hz	45.0	153.5	31.4	107.1	1.6	4000	3520	58	300	2267×840×1050	2165×676×916	222	260	Φ28.6	Φ15.9		OD Φ32
DBV-V560TF/HZR1-B	50Hz	56.0	191.0	39.0	133.0	2.5	6000	4700	62	300	2267×840×1050	2165×676×916	222	260				

- Notes: 1. 45kW & 56kW units' power supply are 380~415V/3PH for 50Hz, the others' power supply is 220~240V/1PH for 50Hz
 2. Cooling test condition: Indoor and outdoor side 33°C DB, 28°C WB. Heating test condition: Indoor and outdoor side 0°C DB, -2.9°C WB
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 4. The above data may be changed without notice for future improvement on quality and performance.



SPECIFICATIONS



Ceiling / Floor Exposed



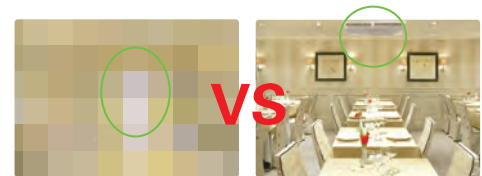
Controller		
Standard	Optional	
Wireless	Wired	Centralized

Accessories

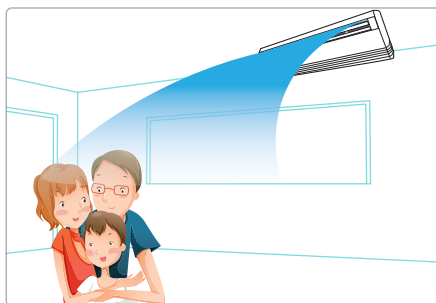
Air filter	EXV	Drain pump	AC Motor
Standard	Standard (built-in)	Optional	Standard

Suspended Installation, Saves Valuable Floor Space

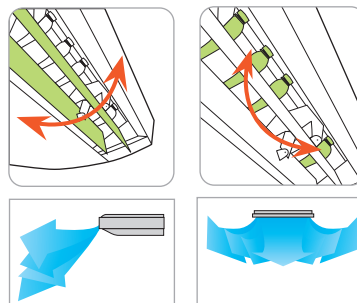
- The use of ark effect: need to take up valuable floor position.
- The use of a hanging type indoor machine effect: Due to the adoption of a suspended installation, without occupying the ground position, will be valuable floor space to save up to add a set of dining table.



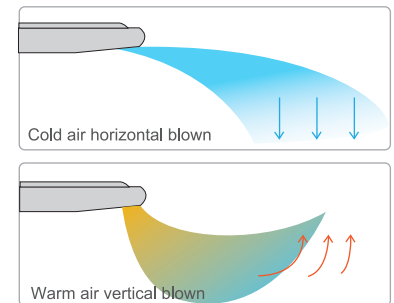
Wide Angle Air Supply



- Configured with low noise high performance centrifugal fans, has big air flow and long distance air supply.



- 3 dimensional air supply, wide air supply angle, easily supply to every corners.

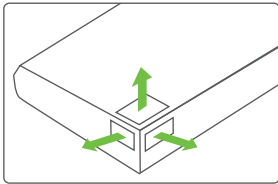


- In Cooling mode, cold air is blown from horizontal. In heating mode, warm air is blown from vertical.

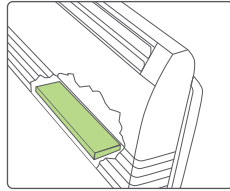


SPECIFICATIONS

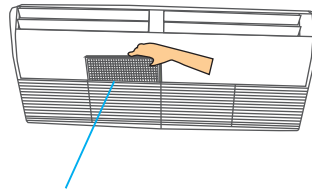
Easy For Installation



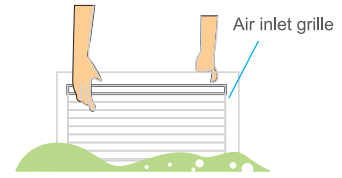
Refrigerant pipe can be connected from 3 directions.



Electrical control box is in the rear of fan wheel casing, easy to remove, convenient for maintenance.



long term filter can be remove from air inlet grille to clean



Water washable

Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	Dimension (W×H×D)		Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m³/h	CFM		Packing	Body	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h	kW					dB(A)	mm	mm	kg	kg	mm	mm
DBV-V45LD/HR1-B	50Hz	4.5	15.3	5.0	17	0.06	950	550	37~46	1325×770×330	1245×680×240	36	42	Φ12.7	Φ6.35	OD Φ20	Remote controller
DBV-V56LD/HR1-B	50Hz	5.6	19.1	6.3	21.4				37~46			36	42				
DBV-V71LD/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.15	1300	760	39~48			36	42	Φ15.9	Φ9.53	OD Φ25	
DBV-V80LD/HR1-B	50Hz	8.0	27.2	8.8	30				39~48			36	42				
DBV-V90LD/HR1-B	50Hz	9.0	30.7	10.0	34.1	0.40	1500	880	44~50			38	44				
DBV-V112LD/HR1-B	50Hz	11.2	38.2	12.5	42.6	0.26	2300	1350	45~52			51	58				
DBV-V140LD/HR1-B	50Hz	14.0	47.7	15	51.1				45~52	51	58						
DBV-V160LD/HR1-B	50Hz	16.0	54.5	17	58				45~52	51	58						

- Notes: 1. Power supply: 220~240V/1PH for 50Hz
 2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 4. The above data may be changed without notice for future improvement on quality and performance.



SPECIFICATIONS



Wall Mounted



Controller		
Standard	Optional	
Wireless	Wired	Centralized

Accessories

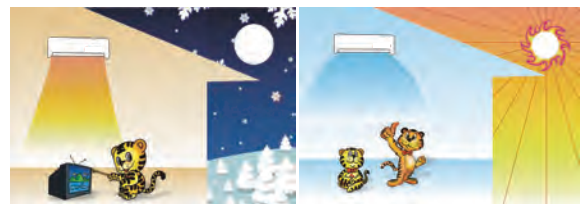
Air filter	EXV	AC Motor
Standard	Standard (built-in)	Standard

Air Supply Smoothly

Cross flow fan, In Cooling mode, cold air is blown from horizontal. In heating mode, warm air is blown from vertical.

Elegant Design, Suitable For All Kinds Of Decoration Style

Simple, elegant, stylish, design, suitable for all kinds of decoration style.

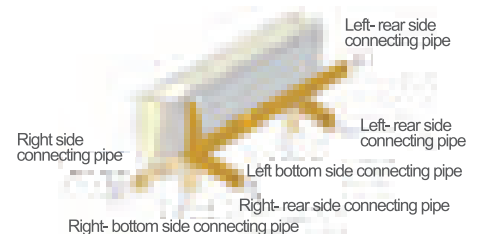


Flexible In Installation

Refrigerant pipe can be connected from 3 directions.

Wide Adjustable Angle Air Supply

65°Wide angle air supply, louver angle can be fixed or set to auto-swing by controller.





SPECIFICATIONS

Specification

Model name	Power type	Capacity				Motor input kW	Air flow		Sound Level dB(A)	Dimension (W×H×D)		Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m ³ /h	CFM		Packing mm	Body mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm	
		kW	kBtu/h	kW	kBtu/h												
DBV-V22G/HR1-B2	50Hz	2.2	7.5	2.5	8.5	0.06	540	320	24-33	983×377×300	800×281×190	12	14	Φ9.53	OD Φ20	Remote controller	
DBV-V28G/HR1-B2	50Hz	2.8	9.5	3.2	10.9	0.06	540	320	24-33	983×377×300	800×281×190	12	14				
DBV-V36G/HR1-B2	50Hz	3.6	12.2	4.0	13.6	0.06	600	360	24-33	983×377×300	800×281×190	12	14	Φ12.7			
DBV-V45G/HR1-B2	50Hz	4.5	15.3	5.0	17	0.06	600	360	33-40	983×377×300	900×296×216	12	14				
DBV-V56G/HR1-B2	50Hz	5.6	19.1	6.2	21.1	0.06	920	540	35-43	1145×392×318	900×296×216	16	18				
DBV-V71G/HR1-B2	50Hz	7.1	24.2	7.8	26.6	0.06	920	540	35-43	1145×392×318	1080×304×221	16	18	Φ15.9	Φ9.53		

- Notes: 1. Power supply: 220~240V/1PH for 50Hz
 2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 4. The above data may be changed without notice for future improvement on quality and performance.



SPECIFICATIONS



Floor Standing



Controller		
Standard	Optional	
Wireless	Wired	Centralized

Accessories

Air filter	EXV	AC Motor	DC Motor
Standard	Standard (built-in)	Standard	Optional

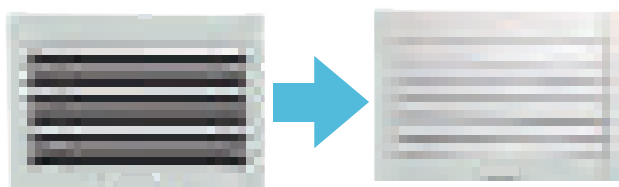
3 Dimensional Air Supply

Two step motor are built in, the air can be easily delivered to every corner



Anti-Dust Design

When unit is off, the louvers will close automatically .



Specification

Model name	Power type	Capacity				Motor input kW	Air flow m³/h	Sound Level dB(A)	Dimension (W×H×D)		Weight		Connecting pipe			Standard controller
		Cooling kW	Cooling kBTU/h	Heating kW	Heating kBTU/h				Body mm	packing mm	Body kg	packing kg	Gas mm	Liquid mm	Drain mm	
DBV-V45F/HR1	50Hz	4.5	15.3	5	17.0	0.09-0.11	690-903	39-48	528×1760×270	645×1940×380	38.5	49.5	Φ12.7	Φ6.35	Φ20	Remote controller
DBV-V56F/HR1	50Hz	5.6	19	6.3	21.4											
DBV-V71F/HR1	50Hz	7.1	24	8	27.2											
DBV-V80F/HR1	50Hz	8	27.2	9	30.6											
DBV-V90F/HR1	50Hz	9	30.7	10	34.0	0.14-0.168	1000-1200	47-53	528×1760×270	645×1940×380	39.5	50.5	Φ15.9	Φ9.53	Φ25	
DBV-V100F/HR1	50Hz	10	34.1	11	37.4											
DBV-V112F/HR1	50Hz	11.2	38	12.4	42.2	0.13-0.2	1040-1755	41-53	613×1929×379	745×2080×520	56	72.5	Φ15.9	Φ9.53	Φ25	
DBV-V125F/HR1	50Hz	12.5	42.5	13.9	47.3											
DBV-V140F/HR1	50Hz	14	47.6	15.5	52.7											
DBV-V160F/HR1	50Hz	16	54.4	17.8	60.5											

Notes: 1. Power supply: 220~240V/1PH/50Hz

2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB;

3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions;

4. The above data may be changed without notice for future improvement on quality and performance.



Heat Recovery Ventilator

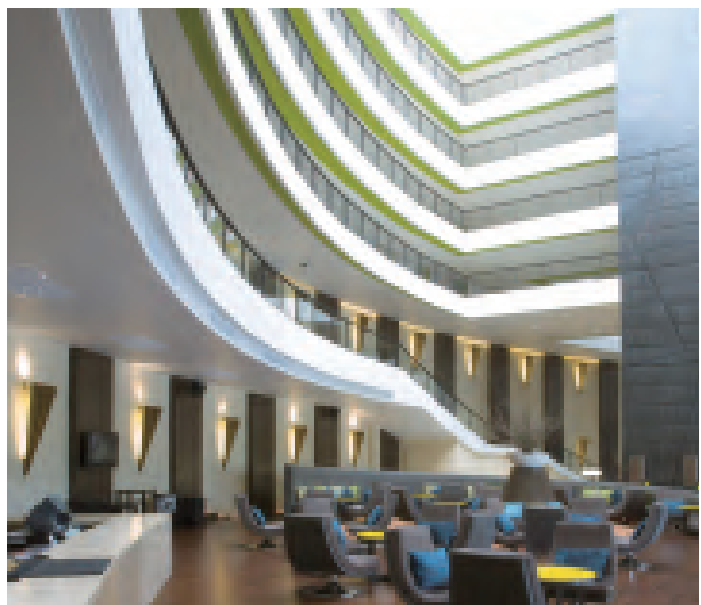
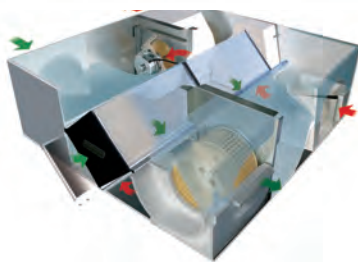
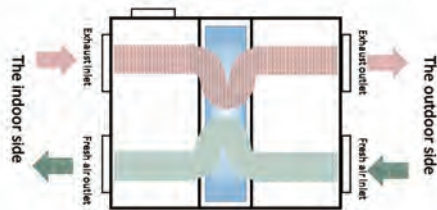


How It Work

When air flow formed by exhaust air and outdoor air through the heat exchanged core in cross way, because of temperature difference in the two sides of flat partition board, the heat transmission is occurred.

In summer, outdoor air acquire cooling from air exhaust to decrease environment temperature; In winter, outdoor air acquire heating from air exhaust to increase temperature, that is to say, it realizing the energy recovery during air exhaust process to exchange the heating in heat exchanged core to outdoor air.

Application for : business office buildings, hotels, restaurants, meeting rooms, exhibition centres, leisure centres, workshop and other places.



SPECIFICATIONS



Suspended type specification

Model	Air flow	ESP	Power input	Power supply (V)	Temperature exchanging efficiency (%)		Enthalpy exchanging efficiency (%)		Noise dB(A)	Body dimension (WxDxH) mm	Weight kg
	m ³ /h	Pa	W		Cooling	Heating	Cooling	Heating			
DBQR-X02D	200	75	65	220V/1PH/50Hz	60.0	65.0	50.0	55.0	30	666x580x264	25
DBQR-X03D	300	75	130		60.0	65.0	50.0	55.0	33	744x599x270	27
DBQR-X04D	400	80	200		60.0	65.0	50.0	55.0	35	744x804x270	30
DBQR-X05D	500	80	220		60.0	65.0	50.0	55.0	38	824x904x270	41
DBQR-X06D	600	90	242		60.0	65.0	50.0	55.0	40	824x904x270	42
DBQR-X08D	800	100	410		60.0	65.0	50.0	55.0	42	1116x884x388	68
DBQR-X10D	1000	150	510		60.0	65.0	50.0	55.0	43	1116x1134x388	82
DBQR-X13D	1300	150	530		380V/3PH/50Hz	60.0	65.0	50.0	55.0	45	1116x1134x388
DBQR-X15DS	1500	160	1000	60.0		65.0	50.0	55.0	51	1600x1200x540	200
DBQR-X20DS	2000	170	1200	60.0		65.0	50.0	55.0	53	1650x1400x540	225
DBQR-X25DS	2500	180	2000	60.0		65.0	50.0	55.0	55	1430x1610x600	240
DBQR-X30DS	3000	200	2100	60.0		65.0	50.0	55.0	57	1600x1700x640	270
DBQR-X40DS	4000	220	2400	60.0		65.0	50.0	55.0	60	1330x1725x1050	265
DBQR-X50DS	5000	240	3000	60.0		65.0	50.0	55.0	61	1660x1820x1050	280
DBQR-X60WS	6000	290	3000	60.0		65.0	50.0	55.0	70	1660x1820x1050	310
DBQR-X70WS	7000	310	4200	60.0		65.0	50.0	55.0	73	2060x1660x1168	360
DBQR-X80WS	8000	320	6000	60.0		65.0	50.0	55.0	74	2060x1660x1168	382
DBQR-X90WS	9000	340	7500	60.0		65.0	50.0	55.0	77	2310x1900x1200	500
DBQR-X100WS	10000	400	8000	60.0		65.0	50.0	55.0	78	2310x1900x1200	534

Notes: 1. Cooling test condition: indoor side 27°C DB, 19.5°C WB ; outdoor fresh air 35°C DB, 28°C;
 2. Heating test condition: indoor side 21°C DB, 13°C WB outdoor fresh air 5°C DB, 2°C;
 3. The above data may be changed without notice for future improvement on quality and performance.





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