Harness the *power* of Braemar

By SEELEY INTERNATIONAL™

comprehensive heating & cooling

- Flexible indoor configurations and units
- VRF heat pump
- VRF heat recovery
- VRF mini

100%

comfort in all conditions

100% Australian owned!

VRF Air Conditioning Systems - Residential & Commercial 2024

World leading climate control *solutions*

AIRA By SEELEY INTERNATIONAL
Commercial air conditioners, heaters & HCV

The Climate Wizard By SEELEY INTERNATIONAL
Hyper-efficient indirect evaporative air conditioners

Braemar By SEELEY INTERNATIONAL
Refrigerated air conditioning range including VRF (heat pump and heat recovery), industrial and commercial evaporative air conditioners

The VRF product range is sourced from the world's largest and most experienced manufacturer of refrigerated systems – Gree.

It is backed up by world class Australian manufacturer, Seeley International, offering local service and support.

"Seeley International never stops striving to innovate and build the world's most energy efficient heaters and air conditioners. It is this commitment to excellence that's at the heart of everything we do."

Frank Seeley

AM, DUniv *Flin*, FAICD
Founder and Executive Chairman

SEELEY INTERNATIONAL

The *ultimate* choice for comfort in all conditions

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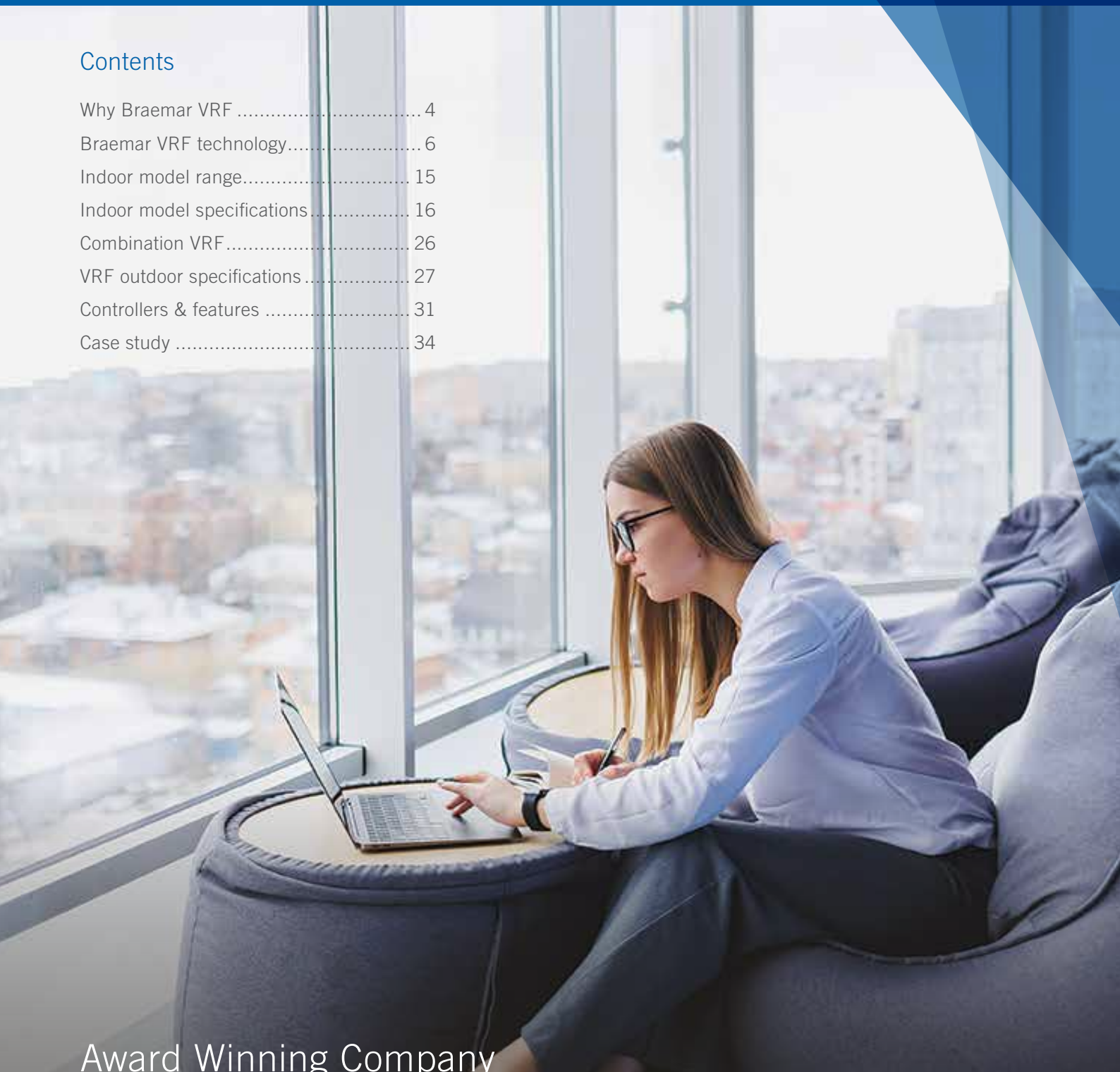


Award Winning Company

Seeley International consistently wins awards for new product design, innovation and environmental friendliness.

These awards include:

GOOD DESIGN Award

THE AUSTRALIAN BUSINESS AWARDS ABA|QO NEW PRODUCT INNOVATION WINNER 2016

melbourne design awards

FBA Family Business Australia Distinguished Family Business of the Year 2019

HALF A CENTURY OF Exporting Excellence 2018 BUSINESS SA EXPORT AWARDS WINNER

sydney design awards

THE AUSTRALIAN BUSINESS AWARDS ABA|QO NEW PRODUCT INNOVATION WINNER 2017

Why Braemar VRF?

Braemar offers the latest generation in VRF technology with a number of clever features that provide outstanding energy savings, excellent efficiency, airflow and performance in combination with smart control management and reliable operation.

Comprehensive lineup, featuring the latest generation in VRF technology

- MCMX mini single phase VRF outdoor units ranging from 8kW to 16kW.
- MCSX slim 3 phase VRF outdoor units in 22kW and 28kW.
- Large capacity heat pump and heat recovery VRF ranging from 22kW to 180kW.
- 10 types of indoor units.
- Range of matching controllers.

Inverter Technology (DC) provides excellent efficiency, airflow and performance

DC Inverter technology incorporated into indoor and outdoor fan motors and compressor.

Outstanding energy savings

All DC inverter technology, including compressors, fan motors along with advanced and intelligent software controlling the entire system.

- Energy-saving mode.

Comfortable operation

- Wider operating range.
- Low noise control technology, customisable to users' needs.
- Filter clean reminder.

High stability system

- Designed without a liquid receiver.
- Outstanding oil circulating control technology.
- High-efficiency sub-cooling technology.
- Reduced refrigerant charge.

Simple wiring

Powerful and intelligent commissioning software.

Flexible design

- Up to 1,000m total pipe length.
- High ESP outdoor fan.
- Up to 1,500m total communication wire.
- Up to 100 indoor units on one system.

Safe operation

- Basic module operation in emergency
- Compressor operation in emergency

Smart management

Central control of several indoor units with common WRC (wired remote control).

Intelligent network

CAN+ communication technology allows for system response speed to be faster and for communication to be more reliable.

- Flexible linkage control.
- More visualised operation platform.

DRED Enabled Devices

With the introduction of smart power meters, the electrical supply authority can limit the amount of power to the property at certain times during extreme weather conditions, when the power supply is at peak demand, using DRED (Demand Response Enabling Device). Select Braemar models are DRED enabled.

Black Fin

Black Fin coating improves the heating efficiency and accelerates defrosting. The anti-corrosive black coating on the aluminium aids in withstanding the effects of sea spray, rain and other corrosive environments.
The top hydrophilic layer allows contaminated water on the coil to run off quickly, thus reducing the corrosion buildup on the heat exchange coil.

Comprehensive lineup

Flexible VRF options

Mini VRF MCMX outdoor units are available in sizes ranging from **8kW** to **16kW** single phase.

The new Mini Slim VRF MCSX outdoor units are available in **22kW** and **28kW** capacities and can connect up to 17 indoor units of equal or varying capacities. These models also features Black Fin anti-corrosive coating and are DRED enabled.

8kW / 10kW / 12kW / 14 kW

16kW

22kW / 28kW

Large capacity VRF - 180kW

MCHX heat pump and MCRX heat recovery

The maximum capacity of a single outdoor unit can reach **45kW**.

Groups of individual units can also be combined reaching **180kW** capacity.

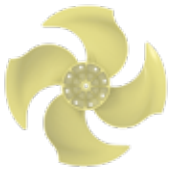
22.4kW / 28kW

33.5kW / 40kW / 45kW

Multiple noise reduction technologies

Large air volume and low noise fan blade

Reverse S-shape tail design and aircraft winglet 4-blade design to achieve large air volume and low noise.



Intelligent noise reduction converter

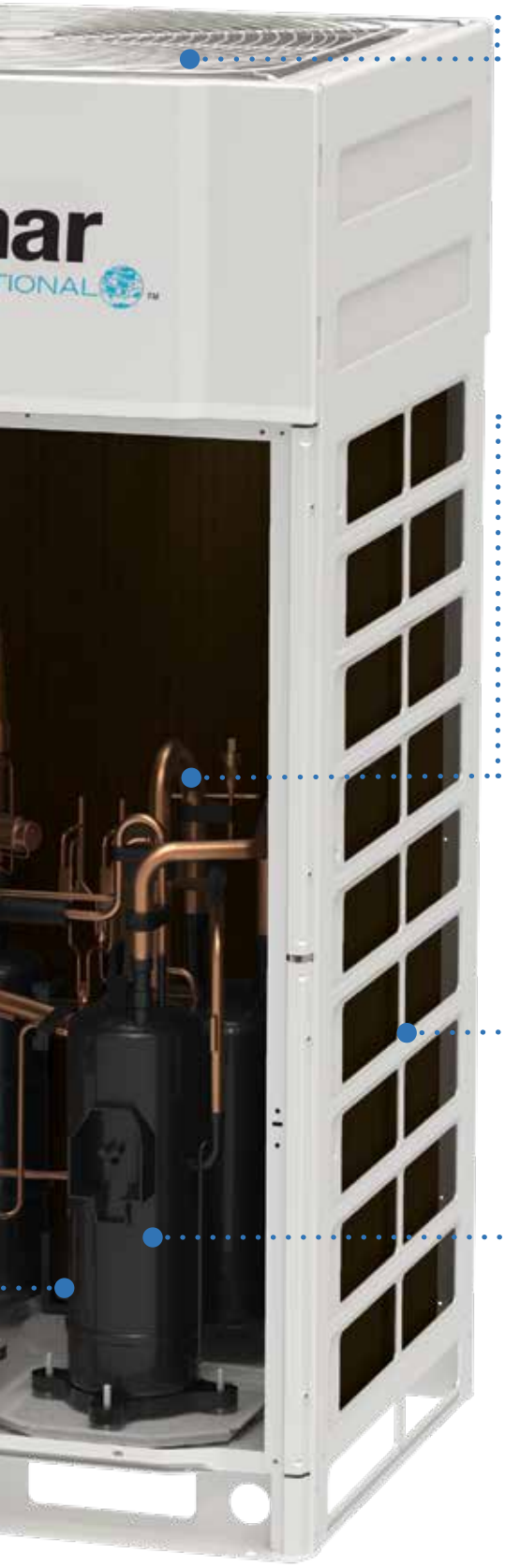
Intelligent noise reduction converter uses voltage and control carrier frequency switching technology to actively reduce electromagnetic noise.

Quiet throttling component

The quiet expansion valve with special structural design meets the needs of pressure reducing flow distribution and can minimise the throttle noise.

Enthalpy-adding pulsation noise reduction

Uses a special buffer to reduce the impact noise of refrigerant pulsation on the pipeline when spraying enthalpy by 90%.



New streamline grill and immersed layout air duct

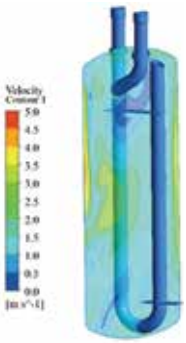
The general air duct system of the unit goes down to form an immersed layout, which can effectively reduce the fan noise.

Pipeline simulation shock absorption design

Pipeline is designed based on ANSYS to effectively reduce the vibration of pipes.

Quiet gas-liquid separator

It is a special low-noise and large-capacity gas liquid separator. The shape and angle of the gas-in and gas-out tubes are specially designed to reduce noise.



Sound absorption and sound insulation design of compressor

Uses a compound material with high sound absorption and insulation effect to reduce the noise of compressor effectively.

Sound absorption material

Metal sound insulation cover

Multiple prevention technologies

Multiple prevention technologies to protect the unit from corrosion dust, wind, lightning and snow to prolong the service life of the unit to suit different environmental conditions.

The sheet metal of the casing is coated with high weather resistance powder for corrosion prevention. Neutral salt spray time is up to 1000 hours.

The external part uses fasteners made of zinc-nickel alloy for better anti-corrosive performance.

The grille is treated with phosphate and electrophoresis, and is coated with high weather resistance powder to prevent corrosion.

The anti-corrosion motor has a stainless steel shaft, and electrophoresis for the outer case, with IP55 protection level.

The surface of the controller is coated with special protection material, which has damp-proof, mildew-proof and anti-corrosive performance.

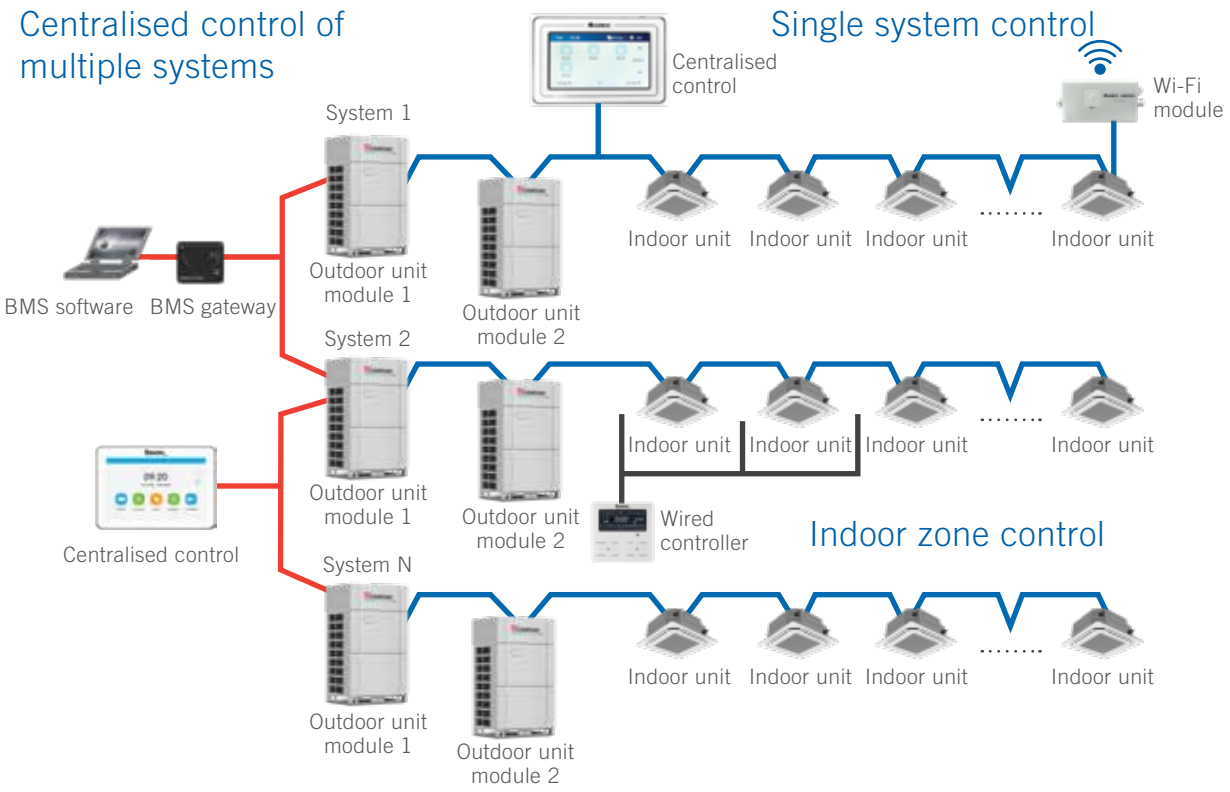
The heat exchanger has acid-proof and highly anti-corrosive black aluminium fins. Neutral salt spray time is up to 2000 hours.

The surface of the pressure vessel is coated with high weather resistance powder-coating to prevent corrosion.

CAN+ communication technology

Innovative stratification CAN+ structure with multiple master networks

Considering that the application of an air conditioning system requires multiple nodes, multistep control and intelligent expansions, we originally developed the stratification CAN+ structure with multiple master networks, which makes it possible for the number of nodes in a single system to be increased relatively by 56% and the response time for centralised control to be shortened by hundreds of times.



First formulated CAN+ communication protocol

It is the first time to formulate and standardise CAN+ communication protocol: two-stage network universal design, data can be directly transferred; functional code, network address, data field and related core concepts are developed, realising grading, classification and real-time transfer of communication data, satisfying the demand of intelligent expansion.

Innovative stratification CAN+ structure with multiple master networks

CAN+ self-adaptive networking technology includes single chip automatic nonpolarity technology and all network automatic address distribution technology, which can realise automatic networking for hundreds of nodes of large multi VRF units within 10 seconds. The newly increased nodes can be activated instantly once it is inserted, greatly improving the networking speed and expansion capability.

Multiple energy-saving modes

With the deepening of energy conservation, emission reduction, and the increasing requirements for urban electricity consumption (especially during the peak season in summer) many cities will issue corresponding electricity curtailment measures. GEN6 has a variety of operating modes for users to choose to meet their city's peak power consumption and power limit requirements.

Capacity priority mode

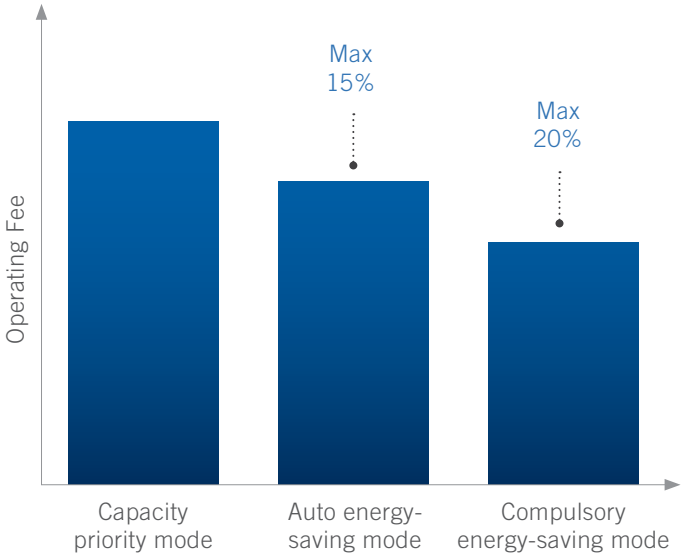
When the power supply is sufficient, it will satisfy the using capacity demand in priority. This mode is default mode.

Auto energy-saving mode

When this mode is activated, the system will automatically adjust the control parameters according to operating status, and automatically balance the capacity and energy consumption to realise the minimisation of bilateral impact.

Compulsory energy-saving mode

Limit the output of the outdoor unit to satisfy the using capacity demand is priority. 80% - 90% capacity proportion can be selected to limit the output according to the power consumption of unit and user demand.

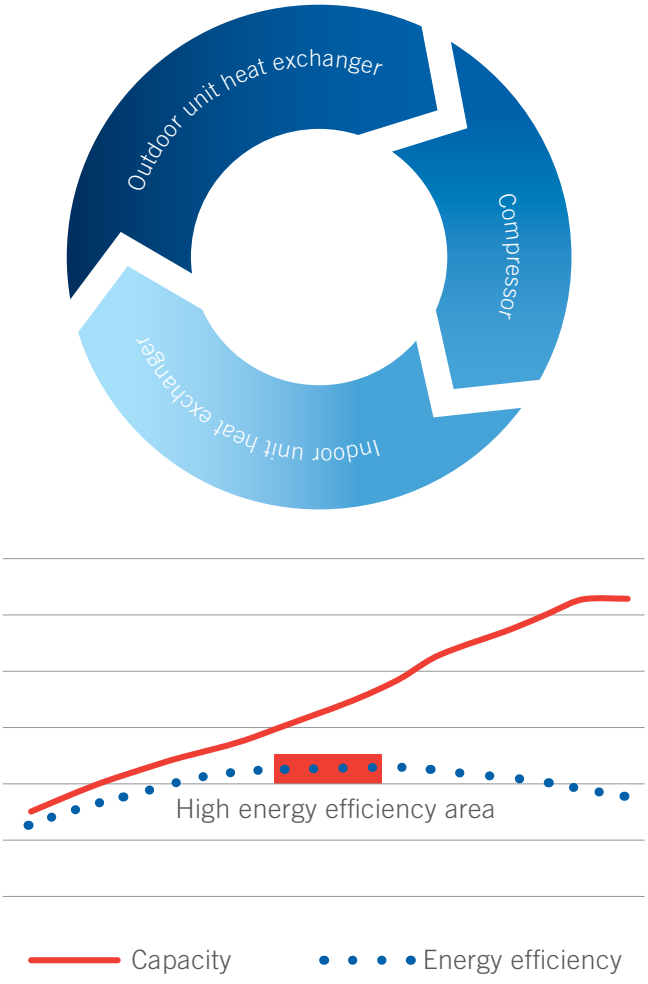


HPAC high-efficiency alternate control

GEN6 adopts a high-efficiency alternate control method to intelligently adjust the distributing method according to the demand of indoor load, which has ensured the service life of the integrated module, and improved the overall operating energy efficiency at the same time.

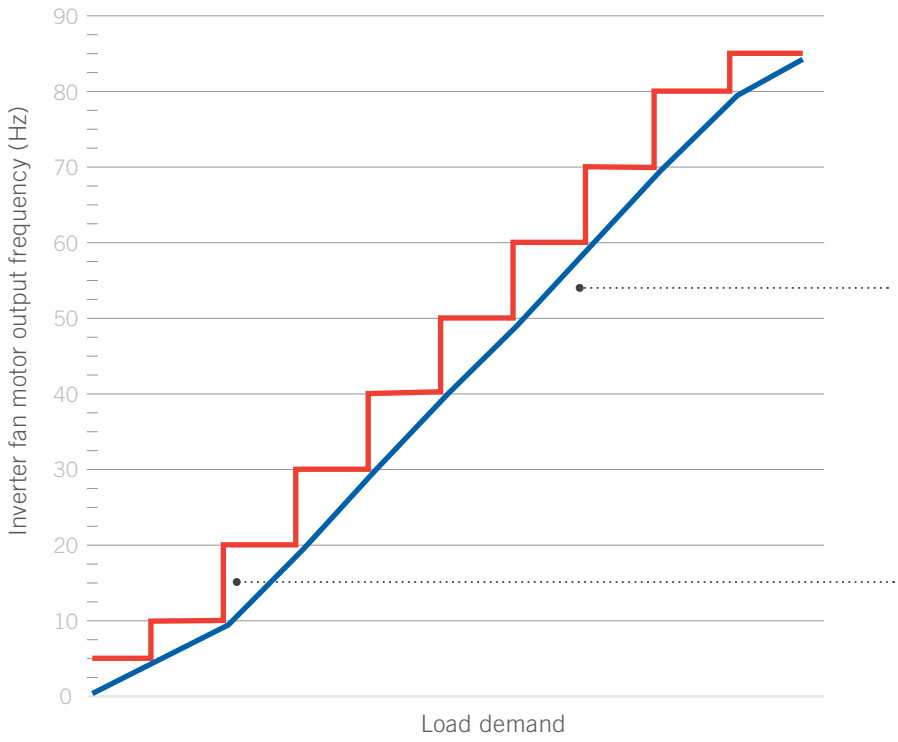
The best matching features exist among the compressor, indoor heat exchanger, and outdoor heat exchanger. It can automatically match the capacity of indoor and outdoor heat exchangers, and adjust in real time according to operating situation.

GEN5 GEN6-HPAC control



Sensorless DC inverter fan motor

Adopt the DC inverter motor with high back electromotive force to realise stepless speed adjustment within 5-85Hz, the precision is 1Hz, with low operating current, low motor input power, and high efficiency.



Braemar stepless regulation

High efficiency

Low noise

Good stability

Step regulation

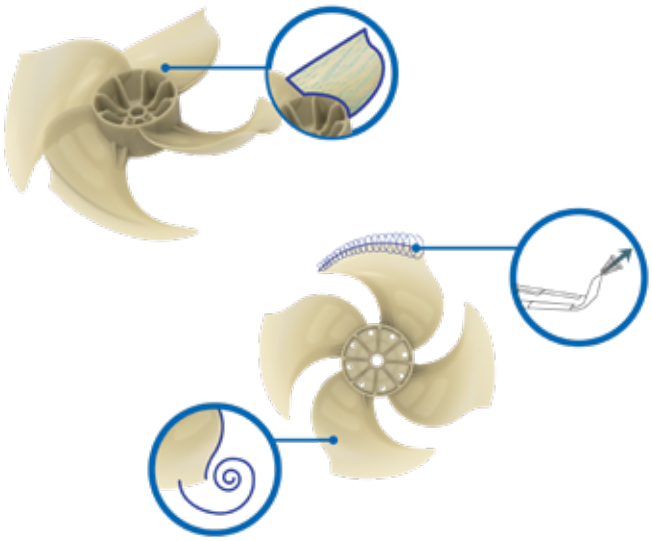
Low efficiency

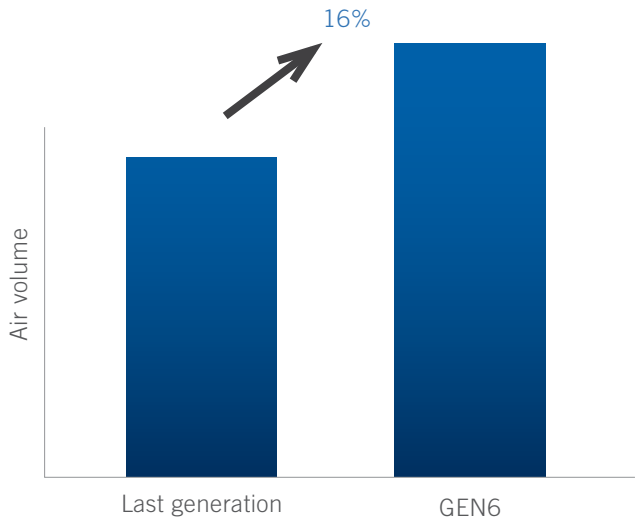
High noise

Poor stability

Large air volume and low noise

"Reverse-S shape" tail design can effectively increase the working area of the fan blade, greatly improving the air volume. The blade tail adopts winglet design of the aircraft to effectively suppress the blade tip vortex caused by the pressure difference of wing tip and reduce the noise.



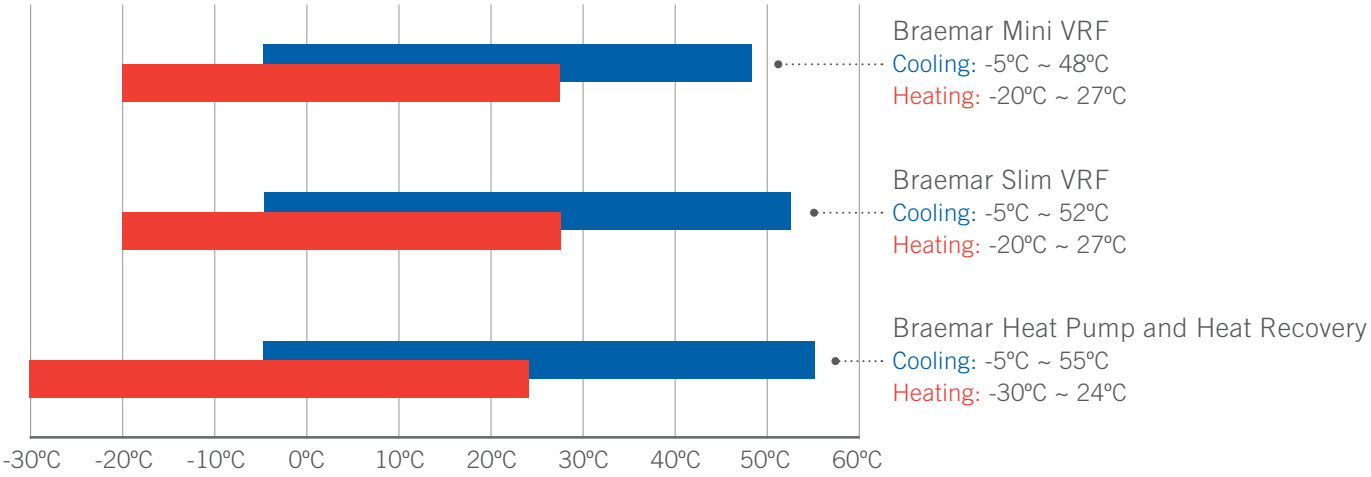


The above data is measured under rated conditions of unit.

Comfortable operation

Wide operating range

-20ºC - 55ºC stable operation to provide users with comfortable environment in both cold and hot weather, operating ambient temperature for cooling can be as low as -15ºC.



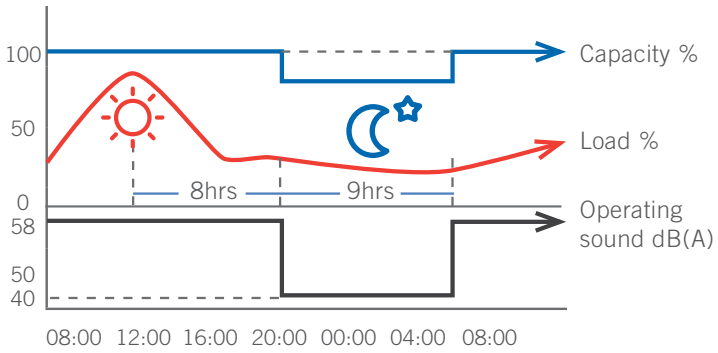
Note:

1. The maximum operating temperature in cooling is 55ºC while the minimum operating temperature in heating is -20ºC. Different series have different operating ranges, please refer to the corresponding technical information on pages 27-30.
2. Cooling at -15 to 5ºC is conditional. Generally the lowest operating temperature for cooling is -5ºC.

Quiet technology

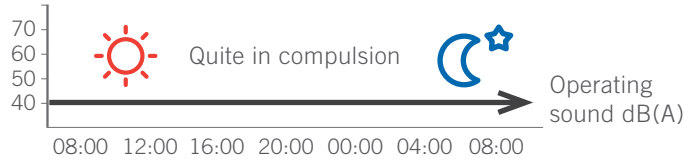
Quiet at night

At night, the system will automatically turn to quiet mode. There are 9 quiet modes which can be set according to actual needs. For example, the unit can automatically enter night mode after working for 8 hours, and resume to normal operating mode after 9 hours.



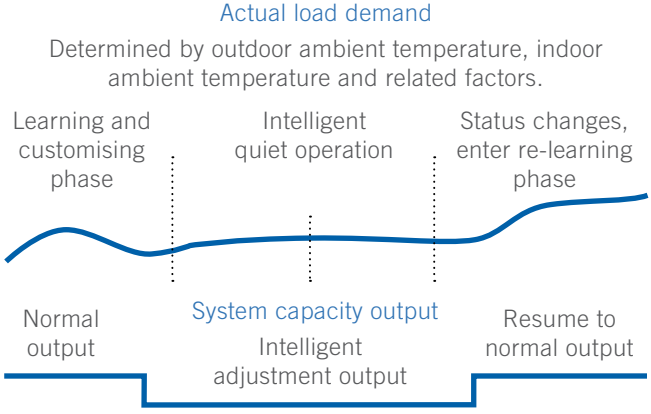
Quiet in compulsion

When the unit is installed in an environment with high noise requirements, it needs to operate silently during the day or night. There are three mandatory settings of quiet modes to ensure that the unit operates in low noise mode at any time, and the noise value can be as low as 40dB(A).



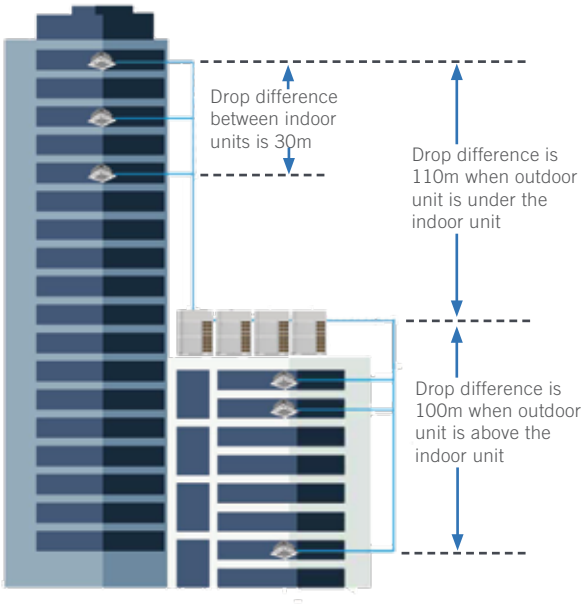
Intelligent quiet

The unit can learn, customise and memorise the characteristics of user's habits. According to the user's habit and actual load, it can automatically determine the output capacity of the system in the next 24 hours to achieve automatic quiet operation.



Super long refrigerant pipe design

GEN6 combines high drop pressure control technology, indoor unit drop identification technology, intermediate pressure adjustment technology, tube length self-correction technology, and deep sub-cooling technology to increase the length of piping and improve the air conditioning effect.



- The maximum actual single pipe length is 200m, the maximum equivalent single pipe length is 240m, and the maximum piping length is 1,000m.
- The maximum length after the first branch pipe is 120m.
- The maximum drop of indoor and outdoor units is 110m (100m when the outdoor unit is in the upper position).
- The maximum drop between indoor units is 30m.

High static pressure design

- The new diversion cover is effectively coupled with the fan blades, making the flow distribution more uniform.
- High external static pressure design facilitates engineering application and mechanical floor design.
- The air-out grille with vortex streamline distribution = less wind resistance.
- High-efficiency motor, powerful output and high static pressure up to 110Pa (ex-factory standard).

Intelligent commissioning

Quick installation

- The system automatically allocates addresses to the indoor units, no DIP switch is required for commissioning.
- Pipes can be lead out from five sides (front, left and right sides, back and lower sides) which is suitable for various installation occasions.
- Advanced oil balancing control with no need to connect external oil balancing pipe, for fast and convenient installation and higher efficiency.
- GEN6 and GEN5 are universal for indoor and outdoor mounting holes, universal for supporting terminal controllers, and universal for commissioning.

Efficient multiple commissioning methods

Diversified commissioning methods to meet different needs of projects for higher commissioning efficiency.

- One button commissioning.
- No other operations, simple and fast.

- GMV commissioning system.
- Clear interface, detailed data, and more professional analysis.

- Multi-functional debugger.
- Quick connection, no special PC required; automatic data storage (4GB), no external storage required.

Debugging before installing wired controller

Before the completion of the project, in order to avoid damage to the wired controller during the construction process, the system can be debugged without installing the wired controller. After the entire project construction is completed, the wired controller can be installed and put in use, which can reduce unnecessary engineering loss.

Indoor model range

Type of indoor unit	Specification	15	18	22	25	28	32	36	40	45	50	56	63	71	80	90	100	112	125	140	160	180	224	280
High static pressure, low profile duct type indoor unit	 MDHX..DBA			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
High static pressure duct type indoor unit	 MDHX..D1H																						●	●
Low profile duct type indoor unit	 MDHX..DBC		●	●	●	●	●	●	●	●	●	●	●	●	●									
8-way cassette ceiling mounted	 MBHX..D8N			●		●		●		●	●	●	●	●	●	●	●	●	●	●	●			
Compact 8-way cassette ceiling mounted	 MBHX..D8C	●	●	●		●		●		●	●	●												
2-way cassette ceiling mounted	 MBHX..DB2					●		●		●	●	●	●	●	●									
1-way cassette ceiling mounted	 MBHX..D11			●		●		●		●	●													
Wall-mounted inverter split system	 MSHX..D1L			●		●		●		●	●	●	●	●	●	●	●							
Floor ceiling type unit	 MUHX..D1B					●		●			●	●	●	●		●		●	●	●	●			

Indoor units specifications

High static low profile duct type

Model		MDHX022DBA	MDHX025DBA	MDHX028DBA	MDHX032DBA	MDHX036DBA
Capacity	Cooling (kW)	2.2	2.5	2.8	3.2	3.6
	Heating (kW)	2.5	2.8	3.2	3.6	4.0
Power supply	V/Ph/Hz	220-240/1/50				
Power consumption	kW	0.05			0.06	
Airflow	(H/M/L) l/s	150/135/110			165/140/115	
ESP	Pa	60/150/0~150				
Sound pressure level	(H/M/L) dB(A)	33/30/28			33/31/29	
Connection pipe diameter	Liquid (mm)	Ø6.35				
	Gas (mm)	Ø9.52			Ø12.70	
Drain pipe	Dia./thick. (mm)	Ø25/2.5				
Built in drain pump		Yes				
Dimensions (WxDxH)	Outline (mm)	700x700x300				
	Package (mm)	897x808x362				
Weight (net/gross)	kg	32/38				
Flange sizes (HxWxD)	Supply Air Outlet	25x195x451				
	Return Air Outlet	29x264x660				

Model		MDHX040DBA	MDHX045DBA	MDHX050DBA	MDHX056DBA	MDHX063DBA
Capacity	Cooling (kW)	4.0	4.5	5.0	5.6	6.3
	Heating (kW)	4.5	5.0	5.6	6.3	7.1
Power supply	V/Ph/Hz	220-240/1/50				
Power consumption	kW	0.08			0.09	
Airflow	(H/M/L) l/s	235/195/165			280/220/195	
ESP	Pa	60/150/0~150			90/200/0~200	
Sound pressure level	(H/M/L) dB(A)	36/34/32			37/35/33	
Connection pipe diameter	Liquid (mm)	Ø6.35			Ø9.52	
	Gas (mm)	Ø12.70			Ø15.90	
Drain pipe	Dia./thick. (mm)	Ø25/2.5				
Built in drain pump		Yes				
Dimensions (WxDxH)	Outline (mm)	700x700x300			1000x700x300	
	Package (mm)	897x808x362			1205x813x360	
Weight (net/gross)	kg	34/40			43/49	
Flange sizes (HxWxD)	Supply Air Outlet	25x195x451			25x195x751	
	Return Air Outlet	29x264x660			29x264x960	

Model		MDHX071DBA	MDHX080DBA	MDHX090DBA	MDHX100DBA	MDHX112DBA
Capacity	Cooling (kW)	7.1	8.0	9.0	10.0	11.2
	Heating (kW)	8.0	9.0	10.0	11.2	12.5
Power supply	V/Ph/Hz	220-240/1/50				
Power consumption	kW	0.10		0.14		0.16
Airflow	(H/M/L) l/s	345/290/265		500/405/345		555/445/390
ESP	Pa	90/200/0~200				
Sound pressure level	(H/M/L) dB(A)	38/36/34		40/37/35		40/38/36
Connection pipe diameter	Liquid (mm)	Ø9.52				
	Gas (mm)	Ø15.90				
Drain pipe	Dia. / thick. (mm)	Ø25/2.5				
Built in drain pump		Yes				
Dimensions (WxDxH)	Outline (mm)	1000x700x300		1400x700x300		
	Package (mm)	1205x813x360		1601x813x360		
Weight (net/gross)	kg	43/49		57/64		
Flange sizes (HxWxD)	Supply Air Outlet	25x195x751		25x195x1151		
	Return Air Outlet	29x264x960		29x264x1360		

High static low profile duct type

Model		MDHX125DBA	MDHX140DBA	MDHX160DBA	MDHX180DBA
Capacity	Cooling (kW)	12.5	14.0	16.0	18.0
	Heating (kW)	14.0	16.0	18.0	20.0
Power supply	V/Ph/Hz	220-240/1/50			
Power consumption	kW	0.16	0.22	0.23	0.35
Airflow	(H/M/L) l/s	555/445/390	655/530/460	695/555/485	835/720/555
ESP	Pa	90/200/0~200			
Sound pressure level	(H/M/L) dB(A)	40/38/36	42/39/37	44/41/38	49/47/44
Connection pipe diameter	Liquid (mm)	Ø9.52			
	Gas (mm)	Ø15.90		Ø19.05	
Drain pipe	Dia./thick. (mm)	Ø25/2.5			
Built in drain pump		Yes			
Dimensions (WxDxH)	Outline (mm)	1400x700x300			
	Package (mm)	1601x813x360	1678x808x360		
Weight (net/gross)	kg	57/64	58/67		
Flange sizes (HxWxD)	Supply Air Outlet	25x195x1151			
	Return Air Outlet	29x264x1360			

High static pressure duct type

Model		MDHX224D1H	MDHX280D1H
Capacity	Cooling (kW)	22.4	28.0
	Heating (kW)	25.0	31.0
Power supply	V/Ph/Hz	220-240/1/50	
Power consumption	kW	0.80	0.90
Airflow	(H/M/L) l/s	1110/1000/890	1220/1110/1000
Rated current	Cooling (A)	4.1	4.6
	Heating (A)	4.1	4.6
ESP	Pa	150/50~200	150/50~200
Sound pressure level	(H/M/L) dB(A)	54/52/49	55/52/50
Connection pipe diameter	Liquid (mm)	Ø9.52	
	Gas (mm)	Ø19.05	Ø22.20
Drain pipe	Dia./thick. (mm)	Ø30/1.5	
Built in drain pump		No	
Dimensions (WxDxH)	Outline (mm)	1483x791x385	1686x870x450
	Package (mm)	1578x883x472	1788x988x580
Weight (net/gross)	kg	82/104	105/140
Flange sizes (HxWxD)	Supply Air Outlet	21x192x992	
	Return Air Outlet	21x327x1150	21x402x1350

Low profile duct type

Model		MDHX018DBC	MDHX022DBC	MDHX025DBC	MDHX028DBC	MDHX032DBC
Capacity	Cooling (kW)	1.8	2.2	2.5	2.8	3.2
	Heating (kW)	2.2	2.5	2.8	3.2	3.6
Power supply	V/Ph/Hz	220-240/1/50				
Power consumption	kW	0.08				
Airflow	(H/M/L) l/s	125/97/56				153/111/83
ESP	Pa	0~30				
Sound pressure level	(H/M/L) dB(A)	30/25/22				31/27/25
Connection pipe diameter	Liquid (mm)	Ø6.35				
	Gas (mm)	Ø9.52				Ø12.70
Drain pipe	Dia./thick. (mm)	Ø25/2.5				
Built in drain pump		Yes				
Dimensions (WxDxH)	Outline (mm)	710x462x200				
	Package (mm)	1008x568x275				
Weight (net/gross)	kg	18.5/23.5				19.0/24.0
Flange sizes (HxWxD)	Supply Air Outlet	21x122x585				
	Return Air Outlet	21x200x710				

Model		MDHX036DBC	MDHX040DBC	MDHX045DBC	MDHX050DBC	MDHX056DBC
Capacity	Cooling (kW)	3.6	4.0	4.5	5.0	5.6
	Heating (kW)	4.0	4.5	5.0	5.6	6.3
Power supply	V/Ph/Hz	220-240/1/50				
Power consumption	kW	0.08			0.12	
Airflow	(H/M/L) l/s	153/111/83	208/153/111		236/194/153	
ESP	Pa	0~30				
Sound pressure level	(H/M/L) dB(A)	31/27/25	33/29/27		35/31/29	
Connection pipe diameter	Liquid (mm)	Ø6.35				Ø9.52
	Gas (mm)	Ø12.70				Ø15.87
Drain pipe	Dia./thick. (mm)	Ø25/2.5				
Built in drain pump		Yes				
Dimensions (WxDxH)	Outline (mm)	710x462x200	1010x462x200			
	Package (mm)	1008x568x275	1308x568x275			
Weight (net/gross)	kg	19.0/24.0	25.0/31.0			
Flange sizes (HxWxD)	Supply Air Outlet	21x122x585	21x122x885			
	Return Air Outlet	21x200x710	21x200x1010			

Model		MDHX063DBC	MDHX071DBC	MDHX080DBC
Capacity	Cooling (kW)	6.3	7.1	8.0
	Heating (kW)	7.1	8.0	9.0
Power supply	V/Ph/Hz	220-240/1/50		
Power consumption	kW	0.12	0.15	
Airflow	(H/M/L) l/s	236/194/153	306/236/181	347/306/250
ESP	Pa	0~30	0~50	0~80
Sound pressure level	(H/M/L) dB(A)	35/31/29	37/32/30	37/34/31
Connection pipe diameter	Liquid (mm)	Ø9.52		
	Gas (mm)	Ø15.87		
Drain pipe	Dia./thick. (mm)	Ø25/2.5		
Built in drain pump		Yes		
Dimensions (WxDxH)	Outline (mm)	1010x462x200	1310x462x200	1200x655x260
	Package (mm)	1380x568x275	1608x568x275	1448x858x315
Weight (net/gross)	kg	25.0/31.0	31.0/37.5	39.0/48.0
Flange sizes (HxWxD)	Supply Air Outlet	21x122x885	21x122x1185	21x222x1016
	Return Air Outlet	21x200x1010	21x200x1310	21x220x1050

8-way cassette ceiling mounted

Model		MBHX022D8N	MBHX028D8N	MBHX036D8N	MBHX045D8N	MBHX050D8N
Capacity	Cooling (kW)	2.20	2.80	3.60	4.50	5.00
	Heating (kW)	2.50	3.20	4.00	5.00	5.60
Power supply	V/Ph/Hz	220-240/1/50				
Airflow	(L/M/H) l/s	167/194/222				194/222/250
Sound pressure level	(H/M/L) dB(A)	33/30/28			34/30/28	35/32/29
Connection pipe diameter	Liquid (mm)	Ø6.35				
	Gas (mm)	Ø9.52		Ø12.7		
Drain pipe	Dia./thick. (mm)	Ø25/2.5				
Built in drain pump		Yes				
Dimensions (WxDxH)	Outline (mm)	840x840x240				
	Packaged (mm)	963x963x325				
Weight (net/gross)	kg	27/35				28/36
Panel dimensions (WxDxH)	Outline (mm)	950x950x65				
	Packaged (mm)	1033x1020x110				
Panel weight (net/gross)	kg	6.0/9.5				

Model		MBHX056D8N	MBHX063D8N	MBHX071D8N	MBHX080D8N	MBHX090D8N
Capacity	Cooling (kW)	5.60	6.30	7.10	8.00	9.00
	Heating (kW)	6.30	7.10	8.00	9.00	10.00
Power supply	V/Ph/Hz	220-240/1/50				
Airflow	(L/M/H) l/s	208/236/264	236/264/319		250/278/347	
Sound pressure level	(H/M/L) dB(A)	37/33/30	37/34/31		39/37/34	
Connection pipe diameter	Liquid (mm)	Ø9.52				
	Gas (mm)	Ø15.88				
Drain pipe	Dia./thick. (mm)	Ø25/2.5				
Built in drain pump		Yes				
Dimensions (WxDxH)	Outline (mm)	840x840x240				
	Packaged (mm)	963x963x325				
Weight (net/gross)	kg	28/36			29/37	
Panel dimensions (WxDxH)	Outline (mm)	950x950x65				
	Packaged (mm)	1033x1020x110				
Panel weight (net/gross)	kg	6.0/9.5				

Model		MBHX100D8N	MBHX112D8N	MBHX125D8N	MBHX140D8N	MBHX160D8N
Capacity	Cooling (kW)	10.00	11.20	12.50	14.00	16.00
	Heating (kW)	11.20	12.50	14.00	16.00	18.00
Power supply	V/Ph/Hz	220-240 / 1 / 50				
Airflow	(L/M/H) l/s	250/278/347	306/361/458			397/500/556
Sound pressure level	(H/M/L) dB(A)	39/37/34	43/41/39			51/48/42
Connection pipe diameter	Liquid (mm)	Ø9.52				
	Gas (mm)	Ø15.88				Ø19.05
Drain pipe	Dia./thick. (mm)	Ø25/2.5				
Built in drain pump		Yes				
Dimensions (WxDxH)	Outline (mm)	840x840x240	840x840x290			
	Packaged (mm)	963x963x325	963x963x379			
Weight (net/gross)	kg	29/37	33/42			36/44
Panel dimensions (WxDxH)	Outline (mm)	950x950x65				
	Packaged (mm)	1033x1020x110				
Panel weight (net/gross)	kg	6.0/9.5				

Compact 8-way cassette ceiling mounted

Model		MBHX015D8C	MBHX018D8C	MBHX022D8C	MBHX028D8C
Capacity	Cooling (kW)	1.50	1.80	2.20	2.80
	Heating (kW)	1.80	2.20	2.50	3.20
Power supply	V/Ph/Hz	220-240 / 1 / 50			
Airflow	(L/M/H) l/s	125/116/103		139/125/103	158/133/116
Sound pressure level	(H/M/L) db(a)	33/30/25		36/31/25	36/33/28
Connection pipe diameter	Liquid (mm)	Ø6.35			
	Gas (mm)	Ø9.52			
Drain pipe	Dia./thick. (mm)	Ø25/2.5			
Built in drain pump		Yes			
Dimensions (WxDxH)	Outline (mm)	570x570x265			
	Packaged (mm)	698x653x295			
Weight (net/gross)	kg	17.5/22.5			
Panel dimensions (WxDxH)	Outline (mm)	620x620x47.5			
	Packaged (mm)	701x701x125			
Panel weight (net/gross)	kg	3.0/4.5			

Model		MBHX036D8C	MBHX045D8C	MBHX050D8C	MBHX056D8C
Capacity	Cooling (kW)	3.60	4.50	5.00	5.60
	Heating (kW)	4.00	5.00	5.60	6.30
Power supply	V/Ph/Hz	220-240 / 1 / 50			
Airflow	(L/M/H) l/s	172/153/133	203/180/155		
Sound pressure level	(H/M/L) db(a)	39/37/35	43/41/39		
Connection pipe diameter	Liquid (mm)	Ø6.35			Ø9.52
	Gas (mm)	Ø12.70			Ø15.88
Drain pipe	Dia./thick. (mm)	Ø25/2.5			
Built in drain pump		Yes			
Dimensions (WxDxH)	Outline (mm)	570x570x265			
	Packaged (mm)	698x653x295			
Weight (net/gross)	kg	17.5/22.5			
Panel dimensions (WxDxH)	Outline (mm)	620x620x47.5			
	Packaged (mm)	701x701x125			
Panel weight (net/gross)	kg	3.0/4.5			

2-way cassette ceiling mounted

Model		MBHX028DB2	MBHX036DB2	MBHX045DB2	MBHX050DB2
Capacity	Cooling (kW)	2.80	3.60	4.50	5.00
	Heating (kW)	3.20	4.00	5.00	5.60
Power supply	V/Ph/Hz	220-240/1/50			
Power consumption	kW	0.02		0.03	
Airflow	(H/M/L) l/s	186/171/143		199/171/143	
Rated current	Cooling & Heating (A)	0.25		0.30	
Sound pressure level	(H/M/L) dB(A)	33/31/28		35/31/28	
Connection pipe diameter	Liquid (mm)	Ø6.35			
	Gas (mm)	Ø9.52	Ø12.70		
Drain pipe	Dia./thick. (mm)	Ø25/2.5			
Built in drain pump		Yes			
Dimensions (WxDxH)	Outline (mm)	790x630x280			
	Package (mm)	1230x843x130			
Weight (net/gross)	kg	25.5/33.0			
Panel dimensions (WxDxH)	Outline (mm)	1100x710x28			
	Package (mm)	1230x843x130			
Panel weight (net/gross)	kg	6.0/10.5			

Model		MBHX056DB2	MBHX063DB2	MBHX071DB2	MBHX080DB2
Capacity	Cooling (kW)	5.60	6.30	7.10	8.00
	Heating (kW)	6.30	7.10	8.00	9.00
Power supply	V/Ph/Hz	220-240/1/50			
Power consumption	kW	0.03		0.05	
Airflow	(H/M/L) l/s	212/197/188		227/207/183	
Rated current	Cooling & Heating (A)	0.30		0.49	
Sound pressure level	(H/M/L) dB(A)	37/35/32		39/37/34	
Connection pipe diameter	Liquid (mm)	Ø9.52			
	Gas (mm)	Ø15.88			
Drain pipe	Dia./thick. (mm)	Ø25/2.5			
Built in drain pump		Yes			
Dimensions (WxDxH)	Outline (mm)	790x630x280			
	Package (mm)	1033x740x365			
Weight (net/gross)	kg	26.0/33.5			
Panel dimensions (WxDxH)	Outline (mm)	1100x710x28			
	Package (mm)	1230x843x130			
Panel weight (net/gross)	kg	6.0/10.5			

1-way cassette ceiling mounted

Model		MBHX022D11	MBHX028D11	MBHX036D11	MBHX045D11	MBHX050D11
Capacity	Cooling (kW)	2.2	2.8	3.6	4.5	5.0
	Heating (kW)	2.5	3.2	4.0	5.0	5.6
Power supply	V/Ph/Hz	220-240/1/50				
Power consumption	kW	0.03			0.04	
Airflow	(H/M/L) l/s	165/140/125			230/165/140	
Rated current	Cooling & Heating (A)	0.2			0.3	
Sound pressure level	(H/M/L) dB(A)	36/32/28			40/35/30	
Connection pipe diameter	Liquid (mm)	Ø6.35				
	Gas (mm)	Ø9.52		Ø12.7		
Drain pipe	Dia./thick. (mm)	Ø25/2.5				
Built in drain pump		Yes				
Dimensions (WxDxH)	Outline (mm)	987x385x178				
	Package (mm)	1307x501x310				
Weight (net/gross)	kg	20.0/27.0			21.0/28.5	
Panel dimensions (WxDxH)	Outline (mm)	1200x460x55				
	Package (mm)	1265x536x118				
Panel weight (net / gross)	kg	4.2/6.0				

Wall-mounted inverter split system

Model		MSHX022D1L	MSHX028D1L	MSHX036D1L	MSHX045D1L
Capacity	Cooling (kW)	2.2	2.8	3.6	4.5
	Heating (kW)	2.5	3.2	4.0	5.0
Power Supply	V/Ph/Hz	220-240/1/50			
Indoor Power (Rated)	kW	0.02		0.02	0.03
Airflow	(H/M/L) l/s	139/122/83		175/128/89	236/161/139
Sound Pressure Level	(H/M/L) dB(A)	35/33/30		38/35/31	43/40/37
Connection pipe diameter	Liquid (mm)	Ø6.35			
	Gas (mm)	Ø9.52		Ø12.7	
Drain Pipe	Dia./thick. (mm)	Ø20 / 1.5			
Built In Drain Pump		No			
Dimensions (WxDxH)	Outline (mm)	845x209x289			970x224x300
	Packaged (mm)	973x278x364			1093x380x305
Weight (net/gross)	kg	10.5/12.5			12.5/15.5

Model		MSHX050D1L	MSHX056D1L	MSHX063D1L	MSHX071D1L
Capacity	Cooling (kW)	5.0	5.6	6.3	7.1
	Heating (kW)	5.6	6.3	7.1	7.5
Power Supply	V/Ph/Hz	220-240/1/50			
Indoor Power (Rated)	kW	0.03	0.05		0.06
Airflow	(H/M/L) l/s	236/161/139	305/236/180		236/161/139
Sound Pressure Level	(H/M/L) dB(A)	43/40/37	43/41/37		44/41/37
Connection pipe diameter	Liquid (mm)	Ø6.35	Ø9.52		
	Gas (mm)	Ø12.70	Ø15.88		
Drain Pipe	Dia./thick. (mm)	Ø20 / 1.5			
Built In Drain Pump		No			
Dimensions (WxDxH)	Outline (mm)	970x224x300	1078x246x325		
	Packaged (mm)	1093x380x305	1200x410x335		
Weight (net/gross)	kg	12.5/15.5	16.0/19.0		

Model		MSHX080D1L	MSHX090D1L	MSHX100D1L
Capacity	Cooling (kW)	8.0	9.0	9.5
	Heating (kW)	9.0	10.0	10.5
Power Supply	V/Ph/Hz	220-240 /1/50		
Indoor Power (Rated)	kW	0.08		0.10
Airflow	(H/M/L) l/s	430/292/222		458/305/250
Sound Pressure Level	(H/M/L) dB(A)	49/46/40		52/48/40
Connection pipe diameter	Liquid (mm)	Ø9.52		
	Gas (mm)	Ø15.88		
Drain Pipe	Dia./thick. (mm)	Ø20/1.5		
Built In Drain Pump		No		
Dimensions (WxDxH)	Outline (mm)	1350x258x326		
	Packaged (mm)	1493x418x354		
Weight (net/gross)	kg	18.5/23.5		

Floor ceiling type unit

Model		MUHX028D1B	MUHX036D1B	MUHX050D1B	MUHX056D1B
Capacity	Cooling (kW)	2.8	3.6	5.0	5.6
	Heating (kW)	3.2	4.0	5.6	6.3
Power supply	V/Ph/Hz	220-240/1/50			
Power consumption	kW	0.03		0.05	
Airflow	(H/M/L) l/s	167/139/125		208/181/167	
Rated current	Cooling & Heating (A)	0.2		0.3	
Sound pressure level	(H/M/L) dB(A)	36/32/29		42/39/36	
Connection pipe diameter	Liquid (mm)	Ø6.35			Ø9.52
	Gas (mm)	Ø9.52	Ø12.7		Ø15.88
Drain pipe	Dia./thick. (mm)	Ø17/1.75			
Built in drain pump		Yes			
Dimensions (WxDxH)	Outline (mm)	870x665x235			
	Package (mm)	973x770x300			
Weight (net/gross)	kg	24.0/29.0		25.0/30.0	

Model		MUHX063D1B	MUHX071D1B	MUHX090D1B	MUHX112D1B
Capacity	Cooling (kW)	6.3	7.1	9.0	11.2
	Heating (kW)	7.1	8.0	10.0	12.5
Power supply	V/Ph/Hz	220-240/1/50			
Power consumption	kW	0.08		0.12	
Airflow	(H/M/L) l/s	375/333/292		431/389/347	500/444/389
Rated current	Cooling & Heating (A)	0.4		0.7	
Sound pressure level	(H/M/L) dB(A)	44/41/38		47/44/41	47/44/42
Connection pipe diameter	Liquid (mm)	Ø9.52			
	Gas (mm)	Ø15.88			
Drain pipe	Dia./thick. (mm)	Ø17/1.75			
Built in drain pump		Yes			
Dimensions (WxDxH)	Outline (mm)	1200x665x235			1570x665x235
	Package (mm)	1303x770x300			1669x770x300
Weight (net/gross)	kg	32/38		33/39	41/48

Model		MUHX125D1B	MUHX140D1B	MUHX160D1B
Capacity	Cooling (kW)	12.5	14.0	16.0
	Heating (kW)	14.0	16.0	18.0
Power supply	V/Ph/Hz	220-240/1/50		
Power consumption	kW	0.12	0.15	0.17
Airflow	(H/M/L) l/s	500/444/389	556/486/444	597/514/458
Rated current	Cooling & Heating (A)	0.7	0.8	0.9
Sound pressure level	(H/M/L) dB(A)	47/44/42	49/45/43	52/48/45
Connection pipe diameter	Liquid (mm)	Ø9.52		
	Gas (mm)	Ø15.88		Ø19.05
Drain pipe	Dia./thick. (mm)	Ø17/1.75		
Built in drain pump		Yes		
Dimensions (WxDxH)	Outline (mm)	1570x665x235		
	Package (mm)	1669x770x300		
Weight (net/gross)	kg	41/48	43/50	

Combination VRF

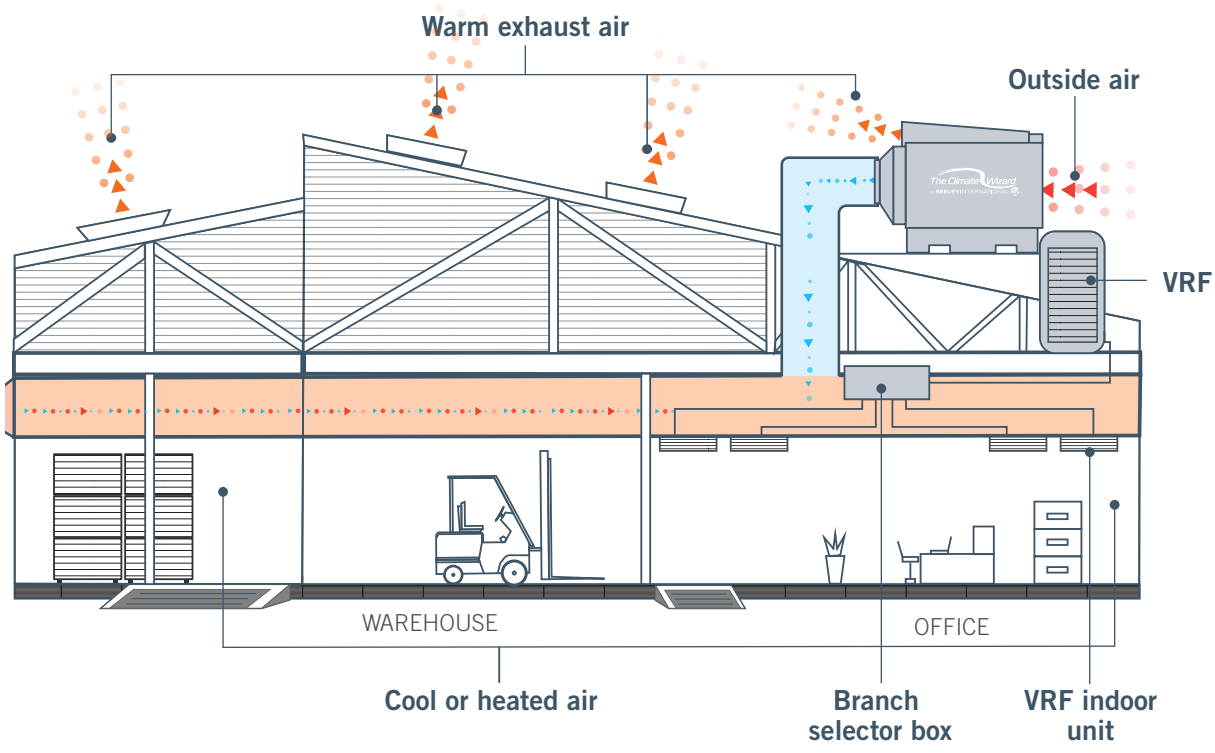
Combination VRF and Climate Wizard indirect evaporative air conditioning for commercial applications

Combining Climate Wizard with Braemar VRF will successfully resolve a variety of heat load and comfort challenges.

Features include:

- Climate Wizard's unique indirect evaporative heat exchange core provides hyper-efficient cooling of outside air and introduces fresh air into the air conditioned spaces.
- When in combination with VRF, it reduces the load on refrigerated equipment, thus extending the life of equipment and reducing the electrical kW demand.
- Combining Climate Wizard with VRF is a simple and reliable solution.

Scan for more information



Outdoor units specifications

Mini VRF
MCMX series

Model				MCMX080D104B	MCMX100D105B	MCMX120D107B	MCMX140D108B	MCMX160D109B
Rated capacities	Cooling capacity		kW	8.00	10.00	12.00	14.00	15.50
	Cooling power input		kW	2.40	3.10	3.70	4.40	4.65
	Heating capacity		kW	8.80	11.00	14.00	16.00	18.00
	Heating power input		kW	2.50	3.00	3.60	4.40	5.18
	AEER/ACOP (tested)		W/W	3.10*/3.37	3.25*/3.40	3.14/3.55	3.23*/3.43	3.18/3.28
Power Supply			V/Ph/Hz	220-240/1/50				
Electrical	Current	Cooling	A	12.2	15.7	18.7	22.3	22.5
		Heating	A	11.7	15.2	17.2	21.8	25.3
	Breaker		A	25		32	40	
	Power - outdoor		mm2	3x2.5		3x4.0	3x6.0	
Refrigerant	Base charge		R410A - kg	2.4		3.3		
	Pipe	Liquid	mm (inches)	Ø9.52 (3/8")				
		Gas	mm (inches)	Ø15.9(5/8")				Ø19.05(3/4")
Outdoor unit	Sound pressure level		db(A)	67	65		67	74
	Dimensions (WxDxH)		mm	980x360x790		940x460x820		900x340x1345
	Weight (net/gross)		kg	80/90		98/108		110/120
	Airflow volume		l/s	389	583	722	833	889
	Max set of IDU		No.	4	5	7	8	9
Ambient temp range	Cooling		°C	-5~48				
	Heating		°C	-20~27				

*Part load AEER used for MEPS compliance

Slim VRF - 3 phase
MCSX series

Model				MCSX220D312B	MCSX280D317B
Capacity			Cooling (kW)	22.4	28.0
			Heating (kW)	25.0	31.5
Power supply			V/Hz/Ph	415/50/3	
Power Input			Cooling (kW)	7.17	8.48
			Heating (kW)	6.52	7.93
Refrigerant type				R410A	
Refrigerant charge volume			kg	5.5	8.0
Electrical	Maximum power input		kW	9.6	11.5
	Maximum current		A	17.2	20.7
	Circuit breaker		A	20.0	25.0
	Comms - indoor		mm	2 x 0.75	
	Power - outdoor		mm	5 x 2.5	
	Current input		Cooling (A)	10.6	12.3
			Heating (A)	9.8	11.6
Outdoor unit	Sound pressure level		dB(A)	61	63
	Dimension (WxDxH)		Outline (mm)	940x320x1430	940x460x1615
			Package (mm)	1020x420x1460	1038x578x1765
	Weight (net/gross)		kg	133/144	177/194
	Airflow volume		l/s	8000	11000
Maximum QTY of connected IDU				13	17
Connection pipe	Valve Connection			Brazed	
	Outdoor diameter	Liquid	mm (inches)	Ø9.52 (3/8")	
		Gas	mm (inches)	Ø19.05 (3/4")	Ø22.20 (7/8")
Ambient temp range	Cooling		°C	-5~48	
	Heating		°C	-20~27	

VRF heat pump
MCHX series

Model			MCHX224D313B	MCHX280D316B	MCHX335D319B	MCHX400D323B	MCHX450D326B
Capacity	Cooling	kW	22.4	28.0	33.5	40.0	45.0
	Heating	kW	25.0	31.5	37.5	45.0	50.0
AEER (rated)	kW		4.25	3.82	3.68	3.93	3.42
ACOP (rated)	kW		4.79	4.40	3.85	4.06	3.80
Power supply	V/Hz/Ph		380-415/3/50				
Max.circuit/Fuse current	A		20	25	25	32	
Power consumption	Cooling	kW	4.60	6.70	8.00	9.00	12.00
	Heating	kW	4.90	6.85	9.40	11.20	13.90
Maximum drive IDU NO.	unit		13	16	19	23	26
Refrigerant charge volume	kg		5.5		7.5		
Sound pressure level	(H/M/L) dB(A)		56	57	59		60
Airflow volume	l/s		2708	2917	3083	3750	4278
Connection pipe diameter	Liquid	mm	Ø9.52		Ø12.7		
	Gas	mm	Ø19.05	Ø22.2	Ø25.4		Ø28.6
Dimension (WxDxH)	Outline	mm	930x775x1690			1340x775x1690	
	Package	mm	1000x830x1855			1400x830x1855	
Weight (net/gross)	kg		220/230		240/250	300/315	
Ambient temp range	Cooling	°C	-5~52				
	Heating	°C	-20~24				

VRF heat recovery
MCRX series

Model			MCRX224D313B	MCRX280D316B	MCRX335D319B	MCRX400D323B	MCRX450D326B
Capacity	Cooling	kW	22.4	28.0	33.5	40.0	45.0
	Heating	kW	25.0	31.5	37.5	45.0	50.0
AEER (rated)	kW		4.06	3.71	3.46	3.74	3.50
ACOP (rated)	kW		4.25	3.96	3.72	3.85	3.57
Power supply	V/Ph/Hz		380-415/3/50				
Max. circuit/Fuse current	A		20	25		32	
Power consumption	Cooling	kW	4.60	6.20	8.40	9.16	11.44
	Heating	kW	5.05	8.27	9.42	11.20	13.90
Maximum drive IDU no.	unit		13	16	19	23	26
Refrigerant charge volume	kg		8.2	8.5	9.6	11.1	11.6
Sound pressure level	(H/M/L) dB(A)		60	61	63	63	63
Airflow volume	l/s		2708	2917	3083	3750	4278
Connection pipe	Liquid	mm	Ø9.52			Ø12.7	
	Gas Low Pressure	mm	Ø19.05	Ø22.2	Ø25.4	Ø28.6	
	Gas High Pressure	mm	Ø15.9	Ø19.05		Ø22.2	
Dimension (WxDxH)	Outline	mm	930x775x1690			1340x775x1690	
	Package	mm	1000x830x1855			1400x830x1855	
Weight (net/gross)	kg		243/253		256/266	325/340	
Ambient temp range	Cooling	℃	-5~52				
	Heating	℃	-20~24				

Mode exchange box

Model		NCHS1D	NCHS2D	NCHS4D	NCHS8D
Max. IDU branches	unit	1	2	4	8
No. of connectable IDU of each branch	unit	8	8	8	8
Total connectable IDU	unit	8	16	32	64
Max. capacity of each branch	kW	16	16	16	16
Total capacity of connecting IDU for mode exchanger	kW	16	28	45	85
Power supply	V/Ph/Hz	220-240/1/50-60			
Power consumption	kW	0.014	0.025	0.032	0.090
Maximum drive IDU no.	unit	1	2	4	8
Outdoor unit piping connection	Liquid (mm)	Ø9.52	Ø9.52	Ø12.7	Ø15.9
	Gas high pressure (mm)	Ø19.05	Ø19.05	Ø22.20	
	Gas low pressure (mm)	Ø22.20	Ø22.20	Ø28.60	
Indoor unit piping connection	Liquid (mm)	Ø9.52			Ø6.35
	Gas (mm)	Ø15.90			Ø12.70
Dimensions	WxDxH (mm)	340x388x250		460x388x250	784x388x250

Controllers & features

YAP1F wireless controller

- 5 modes available - auto, cooling, dry, fan and heating.
- Besides turbo mode, 6 fan speeds can be set.
- Up and down swing, plus left and right swing.
- Available functions: child lock, drying, health, turbo, sleep. light, absence, I-feel and timer.
- Clock display and indoor/outdoor ambient temperature viewing functions.
- I-feel function can be set for the unit. When I-feel is turned on, the unit can monitor the temperature at the location of user (around the remote controller) at real time to adjust indoor temperature for improving the comfort.

XE70 wired controller

- Discreet, modern appearance.
- Touch buttons with back lighting LCD.
- Detect ambient temperature precisely.
- Chinese and English display can be switched.
- With project parameters viewing and setting functions.
- 7 fan speeds, up and down swing plus left and right swing.
- Applicable to multi VRF air conditioners and fresh air unit with evaporator.
- Service hotline inquiry and after-sales phone number record functions.
- Weekly timer function, multiple weekly timer can be set, under weekly timer function, mode, temperature and fan can be preset.
- Primary and secondary wired controllers can be set, simultaneous control over several IDUs is available, can simultaneously control 16 sets of IDUs at most.
- Available functions: sleep, quiet/auto quiet, light, energy saving, drying, memory, low-temperature dehumidifying, absence in heating, and filter cleaning reminder.

XK46 wired controller

- Moisture-proof design.
- LCD with black background and 24 hour timer setting for on/off.
- 7 fan speeds, up and down swing plus left and right swing.
- 8 operation modes available - auto, cooling, dry, fan, heating, floor heating, 3D heating and space heating.
- Primary and secondary wired controllers can be set; simultaneous control over several IDUs is available; can simultaneously control 16 sets of IDUs at most.
- Available functions: sleep, quiet/auto, quiet, light, energy saving, drying, memory, low-temperature dehumidifying, absence in heating, filter cleaning reminder.
- Detect ambient temperature; receive infrared remote controller signal.
- With project parameters viewing and setting functions.

Controllers & features

CE42 commissioning tool

- Built-in 4GB storage space.
- 4.3 inch colour touch screen LCD.
- Simulate indoor and outdoor unit.
- Complete unit debugging function.
- Indoor unit control and engineering setting function.
- Outdoor unit and indoor unit program upgrade.
- Unit decryption function and barcode two-dimensional code display.
- Communication data can be saved and exported by connection to PC.
- Outdoor unit and indoor unit system status viewing function.
- Single interface is compatible with CAN and RS485 communication, which can automatically identify the communication type.

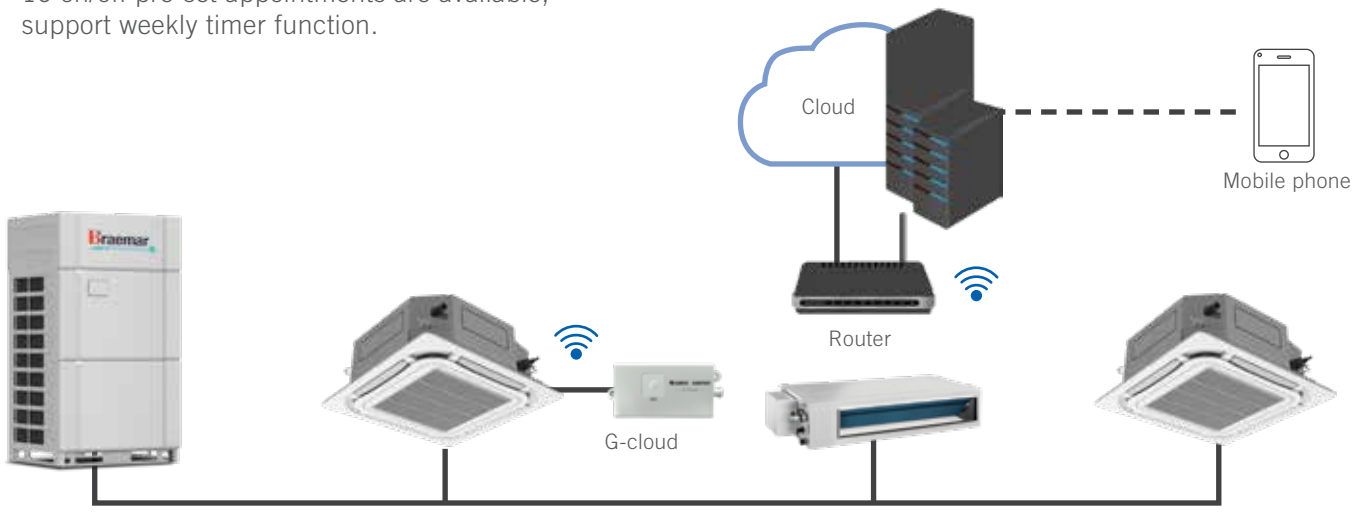
CE52 centralised controller

- Elegant and stylish appearance.
- Colour LED with fine display and true colour.
- 7 inch capacitive touch screen for easy operation.
- Up to 255 units can be centrally controlled.
- Connectable with network of indoor or outdoor units.
- Independent power supply in 100-240V wide voltage range.
- Embedded installation in wall with projecting thickness of only 11mm.
- Project setting, parameter viewing, malfunction record and access management functions.
- Shielding function of single unit, group and all IDUs (shielding on/off, mode and temp setting.) long-distance control at will, provide naming of indoor units, election of icons and personalised setting of centralised controller (setting background and backlight.).
- Various functions: centralised control (control all indoor units), group management (support DIY grouping), schedule management (setting of several schedules, support special schedule setting such as holiday) and single indoor unit control (on/off, mode, temp setting, fan speed, quiet and swing control).

G-cloud

G-cloud is a compact Wi-Fi controller which connects G-cloud to the corresponding interface of any one of the multi VRF indoor units. Use a smart phone to download the EWPE app, and after simple network configuration, the multi VRF air conditioner can be easily controlled by the mobile phone anytime and anywhere. One set of multi VRF systems only requires one G-cloud to realise the control of all indoor units under the system via smart phone.

- Easy control of on-off, mode and temperature.
- Ventilation, drying, sleep, energy saving functions can be set.
- 10 on/off pre-set appointments are available, support weekly timer function.
- 8 step fan speed control (quiet, automatic, low, medium to low, medium, medium to high, high and turbo).



one G-cloud can realise the control of up to 80 sets of indoor units in a system

Building Protocol Gateway

Modbus Gateway

	Model	ME30-24/D1 (BM)	ME30-24/E6 (M)	ME31-33/EH1 (M)
	Name	VRF Protocol Gateway	Mobus Gateway (Mini)	H2M Gateway
Key Parameters		Capacity: 255 sets of indoor units (within 16 systems) Protocol: Modbus RTU, Modbus RTU	Capacity: 128 sets of indoor units (within 16 systems) Expansion port: No Protocol: Modbus RTU	Capacity: 1-16 sets on indoor units (within 16 systems) Expansion port: No Protocol: Modbus RTU
Application		It is generally used in large buildings such as office buildings, commercial buildings, hospitals, and rail transits to connect to BAS to achieve centralised management of air conditioner.	It is generally used for small and medium-sized projects such as villas and apartment buildings, and is used for docking with BAS systems or smart home systems. Since there is no I/O interface, the capacity is small and it is a low-cost solution.	Generally, it is an intelligent solution for hotel and household environments. The indoor unit directly connects to the controller of the hotel room RCU or the residential smart home system.

Project showcase

IVY95 Residential Apartments

Braemar VRF

Delivering seamless comfort for luxurious beachside apartments on the Gold Coast.

Project Location

IVY 95 Apartment Complex
Gold Coast, Australia

HVAC Consultant

MDA Consulting Engineers

Contractor

Multicool Air Conditioning

Equipment

- 51 x VRF condenser units
- 166 x Fan coils
  - 62 x Low static pressure duct type unit
  - 104 x Bulk head ducted unit
- 51 x Braemar wired controller XK46

The construction of the 9 story IVY95 apartment complex was completed in August 2018. The accommodation offers 51 luxurious apartments with a mix of 1, 2 and 3 bedrooms, providing deluxe beachside living overlooking the stunning Gold Coast beachline.

Project Requirements

The building required a cost effective heating and cooling system for all 51 apartments over the 9 stories, the design brief set the following requirements:

- Condensers to be located on the rooftop of the 9th level
- Low operational noise
- Slim line bulkhead units for inside apartments
- Units to fit on smaller roof top
- Allowance and solution for harsh salt environment
- Ability for cables and piping to reach the height of 9 stories
- Reverse cycle air conditioning was specified.

"The Customer is extremely happy with the Braemar Mini VRF equipment and commented on how quiet the system is, they will definitely consider using Braemar on their next residential project. Also our installation team was impressed with the quality and ease of installation."

– Mulitcool Air Conditioning

multiCOOL AIR-CONDITIONING

The Braemar VRF range is ideally suited to the design, construction methods and trends now being adopted in today's luxury homes and apartments.

Challenges

The design brief stated that all condensers must be located on the 9th level rooftop, therefore the challenge was presented to find a solution that offered the ability to have extended cables and piping. Along with this, as the property is located along the coastline, the units were exposed to the sea air and vulnerable to damage by the harsh salt environment. Furthermore, the apartments required a slim line indoor unit to fit within the bulkheads and maintain the luxury feel throughout the building.

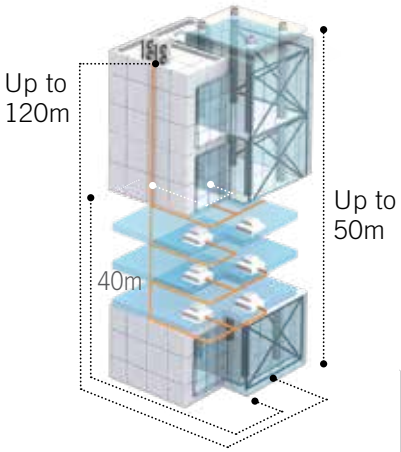
Solution

The Braemar 5th generation VRF products were approved by all key decision makers including developer, builder, and installation dealer. Combining Braemar Mini and large Heat Pump VRF enabled the installation to meet all parts of the specification.

Braemar Mini Heat Pump VRF systems were installed for each apartment in the complex which delivered a reverse cycle solution that met the key deliverables of the project.

- The slim line low static bulkhead units fitted perfectly within bulkhead size limitations. The low operating noise level and condensate pumps for selected units were also key features that suited the project.
- The gold fin coils that come as standard were treated with an acrylic resin/anti-corrosion Coating to protect the coil against the corrosive effects of VOC's and outside sea air, extending the operating life of the system.
- The extended piping lengths that the system required meant the 24m "lift" for Level 1 apartment and the maximum pipe length of approximately 50m was well within the systems limits.

Extended pipe length MCMX Series



	Braemar Gen 5 VRF 08, 10	Braemar Gen 5 VRF 12, 14, 16
Total pipe length	250m	300m
Pipe length ODU to farthest IDU	100m	120m
Pipe length 1st branch to farthest IDU	40m	40m
Height difference (ODU above IDU)	30m	50m
Height difference (ODU below IDU)	30m	40m
Height difference (IDU to IDU)	10m	15m

Braemar Mini VRF's ability to extend pipe and cable lengths, was a key design driver.

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