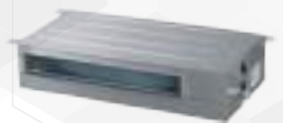


Commercial & Applied HVAC

Indoor | Outdoor | Freestanding | MRV



MRV Brochure 2021/22



The complete solution...



For large commercial HVAC applications

Haier's MRV range of VRF systems offers large-scale HVAC systems performing at high efficiency and capacity. VRF technology has the unmatched ability to connect multiple indoor units operating on the same outdoor unit. Explore this incredibly flexible technology and discover how Haier's range of MRV VRF systems can be ideal for multiple building applications.

Our MRV range has undergone robust R&D measures to enable us to provide solutions that are specifically designed for an extensive range of applications,

climate comfort and system controls for all building requirements, helping you to address flexible building requirements.

Commercial buildings are increasingly facing challenges to ensure a range of objectives are met, such as climate comfort, energy consumption & sustainability. At Haier we are aware of these challenges and we are continuously striving to deliver solutions that reduces environmental impact, and delivers sustainable and energy efficient solutions which caters for all applications.

Our Range

MRV5 DC INVERTER

Full DC 2-pipe inverter heat pump VRF system



MRV5-H DC INVERTER

2-pipe Heat pump VRF – continuous heating system



MRV5-RC DC INVERTER

Full DC 3-pipe heat recovery system



MRV S^{II} MRV W MRV AHU MRV EASY

DC Inverter Unit with Front Discharge



Heat pump system full DC inverter water cooled



Air Handling Application



MS valves for connecting residential and commercial units



Let Haier take a load off your mind

Haier are proud to offer 6-year warranty across the entire MRV range. At Haier, as well as providing innovative solutions to enhance climate comfort, we take pride in the quality and durability of our products. We also know that reliability and peace of mind matters to our customers, that's why we've introduced a new exclusive 6 Year Warranty across our complete range of air conditioning products.

Why choose Haier's MRV, VRF systems?



Performance

System performance is significantly enhanced because of the heat transfer properties of refrigerant over other mediums.

A single VRF outdoor unit serves multiple indoor units. VRF systems enable zone temperature control delivering ideal comfort. The zones within the building will very often need to operate at differing temperatures throughout the day. Typically, changes in outdoor temperature, solar gains, varying occupancy, office equipment and lighting mean that some areas of the building require cooling, while simultaneously, other areas will require heating, to maintain a constant and comfortable internal environment.

Efficiency

Variable Refrigerant Flow (VRF) technology, used in commercial buildings, achieves extremely high efficiencies by varying the flow of refrigerant to the indoor units based on the exact demands of the individual areas. A well-designed VRF system will redistribute excess heat from areas that require cooling to those that require heating. These heat recovery VRF systems deliver the ultimate in energy efficiencies, achieving a SCOP/SEER in excess of 5.0.

Flexibility

Haier's range of MRV systems offers designers the ability to offer maximise comfort to a wide variety of applications, whether it be in a new building or retrofit. The range also offers a complete package of energy savings, compact design and flexible control options including Zigbee.



Applications

Transport



Education



Retail



Hotels



Offices



Health

Haier's MRV range has been designed even for the most complex applications. Our system range covers flexible building, application or project specifications, including Hotel, Retail, Health & Leisure and Transport.

We specialise in developing and providing high performance HVAC systems and comprehensive building applications that prioritise sustainability, comfort, energy efficiency, and indoor air quality for a wide variety of applications. Our mission is to work closely with designers to make the buildings we live and work in energy efficient, comfortable, and sustainable.

Benefits

Exceptional flexibility

- Compact design, perfect for limited space applications, including single and twin fan options
- Outdoor unit up to 110 Pa external static pressure
- Serves high-rise buildings up to 110m
- Flexible piping layout
- Zigbee – smart link Wi-Fi communication – exclusive to Haier

Wide range of system options

- Single module from 4 to 26HP
- 4 modules combination, up to 104HP
- Continuous heating options with MRV5-H
- Full range of indoor units for every scenario
- Up to 64 indoor units per outdoor system
- User friendly control solutions

Large operating range

- Comfort solutions for any indoor space, anytime of the year
- MRV5-H solutions' PCB is refrigerated, improving the reliability and operating range under extreme conditions

Reliability & efficiency

- Full DC inverter compressor
- Intelligent triple backup operation technology
- Fast defrost technology
- Auto addressing of indoor units for ultimate convenience

Enhanced system performance

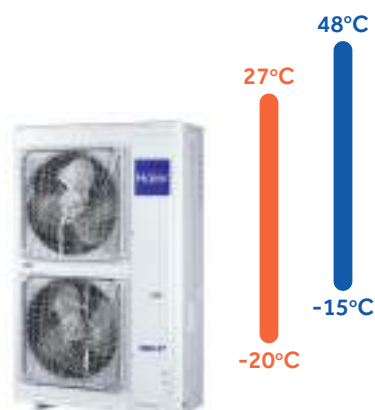
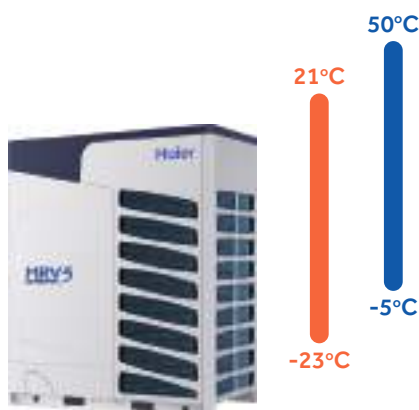
- Improved refrigerant distribution balance thanks to the centrifugal oil separator
- Smooth supply of lubricant with 10-stage oil return technology which protects the compressor and the system

Flexible control options

- Full range of flexible control options including Individual, centralised and BMS controls
- Partitioned user consumption for multi-user buildings

Easy maintenance

- The design of the outdoor is optimised to open to 120°, allowing complete access to internal system components for easy maintenance.
- Rotary electric control box design requires no removal for quick maintenance



Value for the professional

Modern construction techniques are innovating through the transformation of architecture to a connected ecosystem. A complete end to end solution, from the design of a project, through to service and maintenance works, data management and integration of systems, all of which are essential for specifiers, engineers and installers. Haier provides support and tools so that this process becomes streamlined, improving the quality and efficiency of the any project.

BIM system

We support our partners with a complete database of BIM objects available directly from our website. With this system we will facilitate project design, data and documentation management reaching more efficient ways of working and obtaining better results.



Project configurators

At Haier we collaborate with local project generation software suppliers which enables you to evaluate our solutions and respond to customer quotation in a quick and efficient way.



BMS Integration

One differentiating aspect of our devices is the capability to be integrated into a wide array of BMS systems. This will allow your project to be controlled from a single point and increase the efficiency of both performance and maintenance. Furthermore, our solutions use standard ModBus protocol so no additional interface is needed when integrating with such BMS. Additional BMS protocols we support include: KNX, LonWorks and BacNet



MRV Ventilation Systems

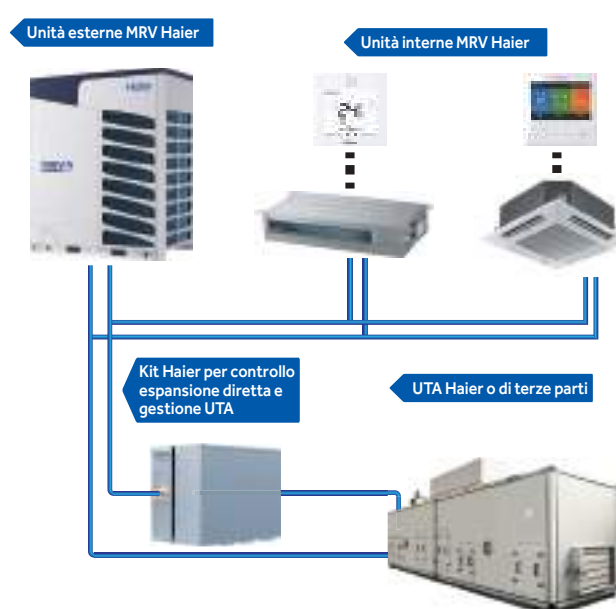
Our wide range of MRV solutions expands to accommodate building ventilation, with the objective of covering all essential building necessities for any application. With the integration capabilities of our systems and accessories, the MRV solutions is the core to providing climate comfort and air quality management.

Air Handling Applications

Considering the ventilation of buildings is essential in all projects, VRF systems allow the combination of regular ventilation with thermal treatment of the air, achieving the maximum efficiency for said ventilation. The MRV AHU Connection Kit allows a perfect connection between MRV systems and external AHU units. This allows for an easy installation and a wide range of capacities, from 5 HP to 20 HP.

Benefits:

- Kit Includes: EEV, Control PCB, Temperature sensors and touchscreen controller.
- From 3.5kW to 73kW capacity.
- Compatible with mini-MRV and MRV5 Haier systems.
- Allows the installation of 4 AHU Kits configured to the same outdoor unit.
- Allows combination with MRV indoor units.
- Individual or centralized control of the connected AHU.
- Compatible with external controllers with 0-10V DC signal to adapt the MRV capacity to the actual demand.
- Compatible with external controllers with 0-10V DC signal to adapt the temperature to the actual demand.



Air Curtains

An air curtain is a fan-powered device that creates an invisible air barrier over the doorway to separate efficiently two different environments, without limiting the access of people or vehicles. The energy saving air screen reduces heating and cooling costs by up to 80% while protecting the internal climate and increasing people comfort. It keeps the atmosphere clean from pest and insects, dust, airborne, pollution, smells, odors and stops draughts and cold or hot air entrance. The functioning of an air curtain is based on a high velocity jet of air that covers all openings. Heated air curtains creates comfort by the jet of air on people as they cross the air screen and helps to maintain the temperature on the entrance.

MRV solutions can combine with a wide range of air curtains in the market, helping with the heat efficiency of this device by thermally treating the air that serves as a separator between indoor and outdoor zones.



ZigBee

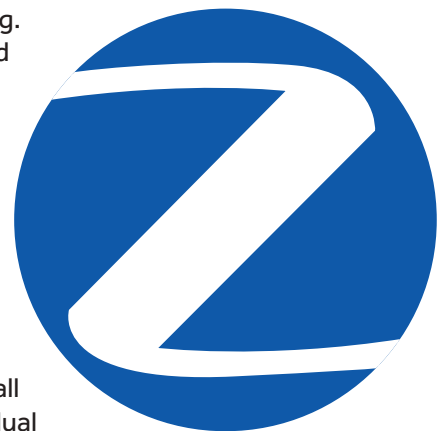
'Smartlink' Wi-Fi Features



Smart building solutions are a top priority for a variety of commercial industries including office, hospitality, medical, education, retail, and manufacturing. Zigbee is a standard wireless communication protocol which can be used for communication between devices without needing a physical wire connection similar to the Wi-Fi or Bluetooth technology.

The use of the 'Smartlink' system is useful where it is impossible to reach all the units with a cable. This time saving as well as economically beneficial solution is offered exclusively by Haier in the market place. (optional)

As an alternative to the classic digital communication cable, which is required to make all indoor units talk to their outdoor units, you can install these wireless radio accessories with ZigBee technology on each individual outdoor unit which allows communication between the indoor and outdoor unit.



Wide range of solutions



Control options

Individual controller

Our individual control system options have a variety of wired and wireless controllers which enables easy and intelligent control of the air conditioning system which best suits your air conditioning management.



YR-HBS01



YR-HD



YR-E17A



YR-E16B



HW-BA101ABT



HW-BA116ABK



HI-WA164DBI
Central Control WIFI Module



RE-02

Centralised Controller

Haier's centralised control system offers you a smart and convenient experience while managing your air conditioner individually by groups or by zones. A variety of controllers can be used to for flexible air conditioning management.



HC-SA164DBT



YCZ-A004



HC-LA1CDBT

BMS Solution

The building management modules seamlessly integrate air conditioners into the building management system, providing an excellent solution for large commercial areas.



HCM-01A







HCM-03A






HCM-05/HCM-05A

Outdoor Units

MRV 5 & MRV 5 - H Full DC Inverter 2-pipe Heat Pump

SERIES	8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP	22 HP	24 HP	26 HP	28 HP	30 HP	32 HP	34 HP
														
MRV 5 Model	AV08	AV10	AV12	AV14	AV16	AV18	AV20	AV22	AV24	AV26	AV28	AV30	AV32	AV34IMVEVA
	IMVEVA					IMVEVA					IMVEVA			
MRV 5 - H Model	AV08	AV10	AV12	AV14	AV16	AV18	AV20	AV22	AV24	AV26	AV28	AV30	AV32	AV34NMVETA
	NMVETA					NMVETA					NMVETA			





SERIES	36 HP	38 HP	40 HP	42 HP	44 HP	46 HP	48 HP	50 HP	52 HP	54 HP	56 HP	58 HP	60 HP	62 HP	64 HP	66 HP	68 HP	70 HP	72 HP	74 HP	76 HP	78 HP
																						
MRV 5 Model	AV36	AV38	AV40	AV42	AV44	AV46	AV48	AV50	AV52	AV54	AV56	AV58	AV60	AV62	AV64	AV66	AV68	AV70	AV72	AV74	AV76	AV78
	IMVEVA										IMVEVA											
MRV 5 - H Model	AV36	AV38	AV40	AV42	AV44	AV46	AV48	AV50	AV52	AV54	AV56	AV58	AV60	AV62	AV64	AV66	AV68	AV70	AV72	AV74	AV76	AV78
	NMVETA										NMVETA											

SERIES	80 HP	82 HP	84 HP	86 HP	88 HP	90 HP	92 HP	94 HP	96 HP	98 HP	100 HP	102 HP	104 HP
													
MRV 5 Model	AV80	AV82	AV84	AV86	AV88	AV90	AV92	AV94	AV96	AV98	AV100	AV102	AV104
	IMVEVA												
MRV 5 - H Model	AV80	AV82	AV84	AV86	AV88	AV90	AV92	AV94	AV96	AV98	AV100	AV102	AV104
	NMVETA												

MRV S II Outdoor Units

SERIES	4-5 HP	4 HP	5 HP	6 HP	8 HP	10 HP	12 HP
MRV S II							
Model	AU042FNERA AU052FNERA	AU042FPERA AU041FPERA	AU052FPERA AU051FPERA	AU062FPERA AU061FPERA	AU08NFKERA	AU10NFKERA	AU12NFKERA



MRV 5-RC Full DC Inverter 3-Pipe Heat Recovery

SERIES	8 HP	10 HP	12 HP	14 HP	16 HP	18 HP	20 HP	22 HP	24 HP	26 HP	28 HP	30 HP
MRV 5-RC												
Model	AV08	AV10	AV12	AV14	AV16	AV18	AV20	AV22	AV24	AV26	AV28	AV30IMVURA
	IMVURA				IMVURA				IMVURA			



SERIES	32 HP	34 HP	36 HP	38 HP	40 HP	42 HP	44 HP	46 HP	48 HP	50 HP	52 HP	54 HP	56 HP	58 HP	60 HP	62 HP	64 HP	66 HP
MRV 5-RC																		
Model	AV32	AV34	AV36	AV38	AV40	AV42	AV44	AV46IMVURA	AV48	AV50	AV52	AV54	AV56	AV58	AV60	AV62	AV64	AV66
	IMVURA								IMVURA									

SERIES	68 HP	70 HP	72 HP	74 HP	76 HP	78 HP	80 HP	82 HP	84 HP	86 HP	88 HP
MRV 5-RC											
Model	AV68	AV70	AV72	AV74	AV76	AV78	AV80	AV82	AV84	AV86	AV88
	IMVURA										



MRV 5-RC 3-pipe connection kit

SERIES	$X \leq 11.2KW$	$11.2 < X \leq 18KW$	$18 < X \leq 28KW$	4 ways - max 11.2kW for single output.
VP - BOXES				
Model	VP1-112B	VP1-180B	VP1-280B	VP4-450B

MRV W Water Cooled Heat Pump Outdoor Units

SERIES	8 HP	10 HP	12 HP	16 HP	18 HP	20 HP	22 HP	24 HP	28 HP	30 HP	32 HP	34 HP	36 HP
MRV-W													
Model	AV08	AV10	AV12	AV16	AV18	AV20	AV22	AV24	AV28	AV30	AV32	AV34	AV36
	IMWEWA			IMWEWA					IMWEWA				

AHU kit to create direct-expansion air treatment units

SERIES	$3.5 \leq X \leq 7KW$	$7 \leq X \leq 14KW$	$14 \leq X \leq 28KW$	$28 \leq X \leq 56KW$	$56 \leq X \leq 73KW$
AHU KIT					
Model	AH1-070B		AH1-140B	AH1-280B	AH1-560B
MRV Compatibility	"S" series with front air discharge and "5" series				

Indoor Units

Haier provides a range of quiet and aesthetic indoor units, which includes cassettes, ducted, console and high wall unit with a wide range of optional controllers.

MRV Indoor Units



SERIES	Kbtu/h	5	7	9	12	16	18	24	28	30	38	48	60	72	96
	kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0	22.6	28.0
WALL		•	•	•	•	•	•	•	•	•					
CONSOLE		•	•	•	•	•	•								
CASSETTE 1 WAY		•	•	•	•										
CASSETTE 2 WAY			•	•	•	•	•								
CASSETTE 4 WAY 90x90 AC							•	•	•	•	•	•			
CASSETTE 4 WAY 60x60 AC		•	•	•	•	•	•								
CASSETTE SMART FLOW 4 WAY DC			•	•	•	•	•	•	•	•	•	•	•		
CASSETTE 4 WAY 60x60 DC		•	•	•	•	•	•								
CEILING / FLOOR CONVERTIBLE				•	•	•	•	•	•	•	•	•			
SLIM DUCT LOW PRESSURE DC		•	•	•	•	•	•	•							
DUCTED MEDIUM PRESSURE		•	•	•	•	•	•	•	•	•	•	•			
DUCTED HIGH PRESSURE							•	•	•	•	•	•		•	•
DUCTED CONSTANT AIR FLOW			•	•	•	•	•	•	•	•	•	•	•		
FLOOR CONSOLE, DBILT-IN			•	•	•	•	•	•							
FLOOR CONSOLE, EXPOSED			•	•	•	•	•	•							
DUCTED FRESH AIR ALL OUTDOOR AIR												•		•	•

EASY MRV

Residential and Commercial Supermatch Indoor Units - Connectable to MRV Systems with MS Valves

SERIES	Kbtu/h	7	9	12	18	24	28	30	38	48	60
	kW	2.0	2.8	3.6	5.6	7.1	8.0	9.0	11.2	14.0	16.0
FLEXIS (MW)		•	•	•	•	•					
FLEXIS (MB)		•	•	•	•	•					
PEARL			•	•	•						
FLOOR CONSOLE, EXPOSED TYPE, 2 WAY AIR FLOW			•	•	•						
CASSETTE			•	•	•	•	•				
CEILING FLOOR CONVERTIBLE				•	•	•	•				
SLIM DUCT LOW PRESSURE			•	•	•	•					
DUCTED MEDIUM PRESSURE				•	•	•	•				
TOWER										•	•

EASY MRV MS Valves for Residential and Commercial Units

SERIES	11.2 kW	11.2 to 18 kW	Max 33.6 kW (max 11.2 kW per single output)
EASY MRV			
Model	MS1-036A	MS1-060A	MS3-036A
Combination with Number of IU	1:1	1:1	1:3
MRV Compatibility	"S" series with front air discharge and "5" series		

Haier



Haier HVAC European HQ

Via Marconi, 96. 31020 Revine Lago (TV) - Italy
haierhvac.eu