

Haier

MRV Brochure



 **MRV-5H**
SERIES

 **MRV-5**
SERIES

 **MRV-S**
SERIES



GE APPLIANCES
a Haier company

AIR&WATER
SOLUTIONS

Haier

The Haier Difference

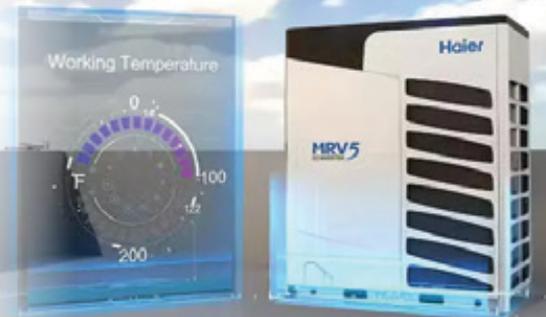
High Efficiency

An Enhanced Vapor Injection (EVI) compressor, speedless inverter DC motor, and a sturdy one-piece four-sided heat exchanger provide exceptional efficiency, ensuring peak performance built to withstand the test of time.



Superior Comfort

Delivering precise temperature control within 1°F of its set point, enjoy comfortable heating in frigid conditions as low as -22°F and cooling up to 122°F.



Advanced Technology

Say goodbye to the hassle of intricate wiring and experience a streamlined and efficient solution. Our industry-leading MRV-Link communication network was engineered to replace the labor intensive conventional wired daisy chain network, eliminating the need for communication wires between indoor units.



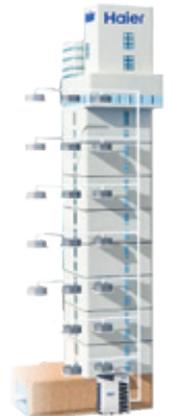
Flexible Installation

Auto-addressing indoor units save time on the initial startup while the 0.4 in. w.g. external static pressure design offers unparalleled flexibility, allowing for the installation of outdoor units in the desired location, even indoors in some applications.

A versatile piping connection design and flexible piping limits allow the installer to route pipe according to the job site needs.



- 3,280'** Max total piping length
- 726'** Maximum longest run for Heat Pump systems
- 541'** Maximum longest run for Heat Recovery systems
- 295'** Maximum run after 1st branch
- 98'** From branch to indoor unit
- 295'** Vertical separation - when ODU is below
- 360'** Vertical separation - when ODU is above
- 98'** Vertical separation –between indoor units



Easy to Service

All MRV-5 outdoor units feature a swing-out electronic control box design that conserves interior volume within the unit, allowing maintenance personnel to easily access system parts and components without disassembling or removing the control box.



NEW IN 2024!



MRV-5H SERIES

High Efficiency

A highly efficient full DC Inverter EVI compressor and fan motor along with a 21" serrated-edge fan blade allows for higher air movement with a nighttime quiet operation.

Easy to Install

Dual heat pump/heat recovery single chassis models up to 20 tons designed with built in handles and skid for easy handling and rigging. Easy integration with BMS and extended piping limits for flexible design.

Optimized Comfort

Premium heating performance for low ambient applications with an extended operating range from -22°F to 122°F with a full line of indoor units and controls available for both residential and commercial applications.

Energy Saving

Tested to the latest DOE and AHRI standards and regulations, the optimized design features intelligent controls to prevent scroll gas leakage, reducing the scroll clearance volume.



Tonnage	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Dual Heat Pump/ Heat Recovery																

Outdoor Units

MRV-5 SERIES

Inverter DC-motor fans with **17% improved efficiency**. High static operation supports **up to 0.4" of ESP** when indoor installation is required.

Service friendly features include **hinged doors** and a **swing-out ebox** designed to allow service personnel to quickly access components.

Operating range from **-13°F to 122°F**.



Four-sided heat exchanger features **30% improved heat transfer efficiency**.

Standard black fin coating rated for **1000-hour salt spray** (ASTM B117) for corrosion resistance.

High efficiency, all-inverter compressors designed for maximum reliability.

Oil temperature sensors and discharge temperature sensors provide dynamic feedback control of the refrigerant system.

Tonnage	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36
Heat Pump																
Heat Recovery																

MRV-S SERIES

Two stage subcooling process improves heat exchange efficiency and allows for long refrigerant line lengths.

High efficiency DC fan motor and aerodynamic fan design results in **38% reduction of fan power** input previous generation.



Improved PCB design reduces standby energy consumption by 20%.

High efficiency, DC inverter twin rotary compressor designed for maximum reliability and small footprint.

Tonnage	3	4	5
Heat Pump			

Series	Model	Tonnage														
		5	7	9	12	15	18	24	30	36	42	48	54	60	72	96
Highwall 	MVAW_MV2AA		✓	✓	✓			✓	✓	✓						
One-Way Cassette 	MVAO_ME2AA	✓	✓	✓	✓											
Compact Cassette 	MVAB_MV2AA	✓	✓	✓	✓			✓								
Large Cassette 	MVAL_ME2AA		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
Slim Duct 	MVAD_MV2AA		✓	✓	✓			✓	✓							
Medium Static Ducted 	MVAM_ME2AA		✓	✓	✓	✓	✓	✓		✓		✓	✓			
High Static Ducted 	MVAH_ME2AA														✓	✓
Air Handling Unit 	MVAX_ME2AA			✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	

Series	Model	Tonnage				
		2	4	8	16	20
DX AHU Connection Kits 	AH1-070B	✓				
	AH1-140B		✓			
	AH1-280B			✓		
	AH1-560B				✓	
	AH1-730B					✓

Series	Model	Max IDU Quantity
Heat Recovery Box (Single) 	VP1-112B	5
	VP1-180B	8
	VP1-280B	8
Heat Recovery Box (Multi) 	VP4-450B	5 per port (20 total)

Indoor Units

Highwall

Compactly designed, with small chassis models up to 1-ton **less than 8 inches deep.**

Sleek, modern panel design is easy to clean, and features an operational display and auditory feedback.

Designed for low noise operation, with **sound levels as low as 29 dB(A).**

Independently controlled horizontal and vertical discharge louvers provide a high degree of air distribution control for maximum occupant comfort.

6 Models
07-30 MBH

One-Way Cassette

Low profile design allows for easier coordination, requiring only about 8 inches of space above the ceiling.

Integral condensate lift pump capability of more than **17" of lift**, measured from the drain pump outlet.

Service friendly design allows all service and maintenance to be performed from below the unit.

No access above the ceiling is required.

Independently controlled horizontal and vertical discharge louvers provide a high degree of air distribution control for maximum occupant comfort.

4 Models
05-12 MBH

Compact Cassette

True 2x2 grille designed to fit within even a narrow-T ceiling grid without overlapping adjacent tiles.

Simplifies coordination with lighting and other ceiling mounted devices.

Auto-swing air outlet louvers provide a high degree of air distribution control for maximum occupant comfort.



Integral condensate lift pump capability of **14" of lift**, measured from the drain pump outlet.

High efficiency BLDC fan motor powers a Turbo fan blade designed for low noise operation, with **sound levels below NC-30**.

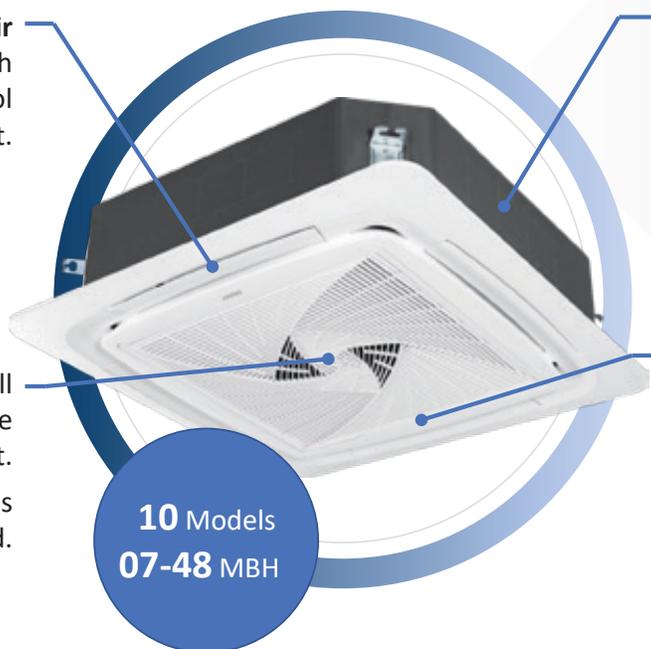
5 Models
05-18 MBH

Large Cassette

Independently controlled air outlet louvers provide a high degree of air distribution control for maximum occupant comfort.

Service friendly design allows all service and maintenance to be performed from below the unit.

No access above the ceiling is required.



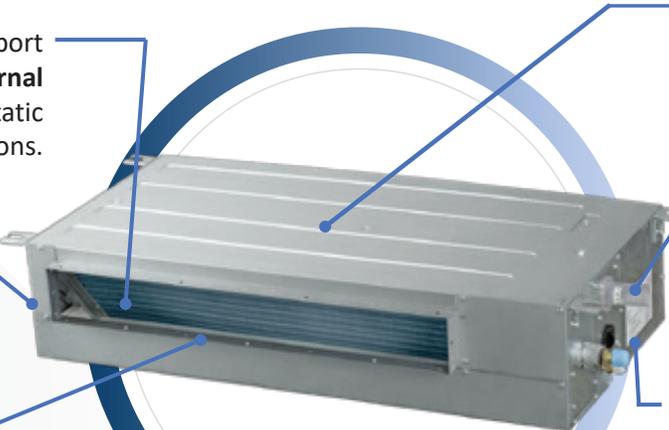
Integral condensate lift pump capability of **14" of lift**, measured from the drain pump outlet.

High efficiency BLDC fan motor powers a Turbo fan blade designed for low noise operation, with **sound levels below NC-30** for most models.

10 Models
07-48 MBH

Indoor Units

Slim Duct



Efficient BLDC fan support provides **up to 0.12" external static**, ideal for low static applications.

Compact design requires **only ~8 inches of vertical space** above the ceiling.

Optional **Supply Grille** and **Return Grille** simplifies ductwork design and installation.

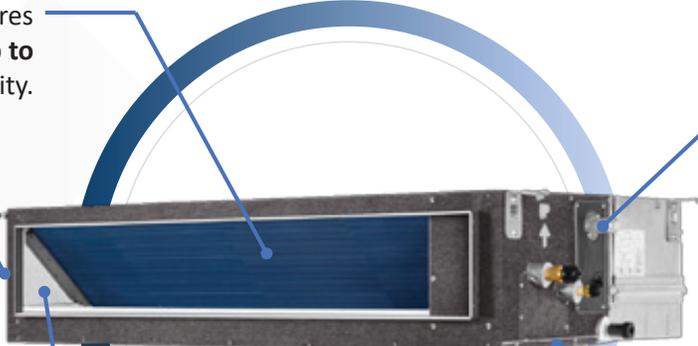
Designed for low sound levels, with **noise levels as low as 22 dB(A)**.

Integral condensate lift pump capability of **more than 17" of lift**, measured from the drain pump outlet.

Factory rear return, optional bottom air return, allows the unit configuration to suit the ductwork design limitations.

5 Models
07-24 MBH

Medium Static Ducted



Powerful BLDC fan motor features 12 fan curve ESP settings for **up to 0.6" external static** capability.

Compact design requires **only ~10 inches of vertical space** above the ceiling.

Larger capacity models increase in width, but not height or depth.

Five fan speeds, in combination with **Auto fan speed control**, maximize occupant comfort and minimize energy use.

Integral condensate lift pump capability of **20" of lift**, measured from the drain pump outlet.

Factory rear return, optional bottom air return, allows the unit configuration to suit the ductwork design limitations.

9 Models
07-54 MBH

High Static Ducted

Powerful BLDC fan motor features 11 fan curve ESP settings for **up to 1" external static** capability.

Five fan speeds, in combination with **Auto fan speed control**, maximize occupant comfort and minimize energy use.

2 Models
72-96 MBH

On-board auxiliary heat output allows for direct integration and control of 3rd party heater sources as a secondary source of heat.

Factory rear return, optional bottom air return, allows the unit configuration to suit the ductwork design limitations.

NEW

Multi-Position Air Handling Unit

Compatible with MRV-Link and SmartHQ.

Vertical and horizontal compatible.

10 Models
9-60 MBH

High efficiency DC inverter delivers nominal airflow up to 0.90" in W.G. external static pressure.

Two stage 5/8/10/15/20 KW Auxiliary Heater available.

Indoor Units

AHU Connection Kit

An **integral EEV** controls refrigerant flow to the 3rd party air handling unit, providing the same advantages and degree-of-control as an MRV indoor unit.

AHU Connection Kit compatible with all MRV outdoor units for those who would like to use a third-party air handler.

Installation friendly **flared piping connections** for all models.

5 Models
2-20 Tons

An integral control board offers **four standard control schemes** to control the EEV & AHU to best suit the application.

Can be used in conjunction with **other indoor units** on the same system.

Heavy duty galvanized steel construction.

AHU Kit capacity can range from 10 BTU/H - 249 BTU/H in one kit.

Heat Recovery Box

Four "ports" allow for independent cooling or heating operation in a single, compact footprint.

Four port box shown; single valve boxes also available.

A bi-directional design allows either side of the heat recovery box to serve as the piping inlet to the box.

Pass-thru "series" design allows the main refrigerant piping network to continue thru the heat recovery box.

Internal refrigerant control is managed by EEVs, resulting in lower sound levels and improved management of pressure equalization during mode changeover.

Controllers

Haier controls allow the user to take command of their environment. With convenient user-friendly button layouts and clear graphic displays, the system can be easily set to meet and maintain all comfort needs.



ZONE CONTROLLERS

Simple controllers for effortless comfort. Control up to (16) indoor units with our straightforward digital interface and remote control options.



CENTRALIZED CONTROLLERS

Robust capability for up to 928 indoor units (800 IDU + 128 DFS IDU) including floor layout views, easy to use touchscreen, webserver function, alarm tracking/history, ODU monitoring, and weekly/daily schedules.



BMS SOLUTION

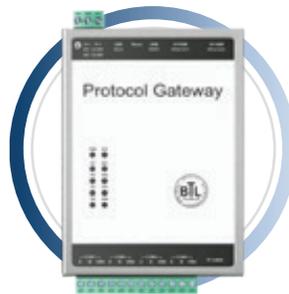
Designed to meet the ever-growing demand for integrated, full building control. Capable of a max of (250) indoor units with multi-user management and history logs.

Controller Accessories



MODBUS GATEWAY

Featuring energy monitoring and support for up to (32) indoor units per gateway; multiple gateways can be connected for large projects.



BACNET GATEWAY

Used to integrate 3rd party BMS Systems for control and monitoring of MRV5 systems with a maximum of (4) systems and (128) indoor units.



DFS TO VRF GATEWAY

Controller adapter that allows ductless mini-splits to connect to a central controller or building automation system.

MRV-Link Wireless Communication Network

Upgrade your MRV system with a wireless communication solution. Utilizing Zigbee wireless communication protocol, MRV-Link simplifies the typical two-wire daisy chain communication network reducing installation labor.

Main Wireless Module (IGU09)

Required primary communication module for HP systems and VP boxes.

Sub Wireless Module (IGU10)

Required sub modules are connected to indoor units and paired to a main module.

Wireless Repeater (IGU11)

Optional to strengthen the wireless mesh network over long distances or through multiple walls.



Wind Baffles

The wind baffle is fabricated from durable 20 gauge G90 galvanized steel. Color-matched and powder coated to blend beautifully with Haier outdoor units, the wind baffle is engineered to provide optimal performance when operating in cold, harsh climates.



Outdoor Model #	Wind Baffle Model # (requires 2)
MVHP036MV2AA	QAWB38A
MVHP048MV2AA	QAWB38A
MVHP056MV2AA	QAWB38A

Panels

Indoor panels must be ordered separately with the purchase of the indoor unit.

Panel for MRV Compact Cassette



PB-620KB

Fits compact cassette models:

MVAB005MV2AA
MVAB007MV2AA
MVAB009MV2AA
MVAB012MV2AA
MVAB018MV2AA

Panel for MRV Large Cassette



PB-950KB

Fits large cassette models:

MVAL007MV2AA MVAL024MV2AA
MVAL009MV2AA MVAL030MV2AA
MVAL012MV2AA MVAL036MV2AA
MVAL015MV2AA MVAL042MV2AA
MVAL018MV2AA MVAL048MV2AA

Panel for MRV One-Way Cassette



P1B-1050IB

Fits one-way cassette models:

MVA005ME2AA
MVA007ME2AA
MVA009ME2AA
MVA012ME2AA

Grilles

Optional return and supply air grilles for Slim Duct models. Return air grilles include filter.



1 Return Air Grilles

PAD0890RA

Fits Slim Duct models:

MVAD007MV2AA
MVAD009MV2AA
MVAD012MV2AA

PAD1210RA

Fits Slim Duct models:

MVAD018MV2AA
MVAD024MV2AA

2 Supply Air Grilles

PAD0890SA

Fits Slim Duct models:

MVAD007MV2AA
MVAD009MV2AA
MVAD012MV2AA

PAD1210SA

Fits Slim Duct models:

MVAD018MV2AA
MVAD024MV2AA

Piping Kits

For refrigerant branch piping.



Indoor

Heat Pump Branch Pipe Kits:

FQG-B335A
FQG-B506A
FQG-B730A
FQG-B1350A

Heat Recovery Branch Pipe Kits:

FQG-R335A
FQG-R506A
FQG-R730A
FQG-R1350A

Outdoor

Heat Pump Gather Pipe Kits:

HZG-R20A
HZG-30A

Heat Recovery Gather Pipe Kits:

HZG-R20A
HZG-R30A

Haier Selection Software

Experience the intuitive Haier Selection Software System, an invaluable tool empowering our customers to effortlessly design a myriad of VRF system applications. Craft comprehensive designs featuring refrigerant, electrical, control, and component data drawings to gain quality insight into your desired system.

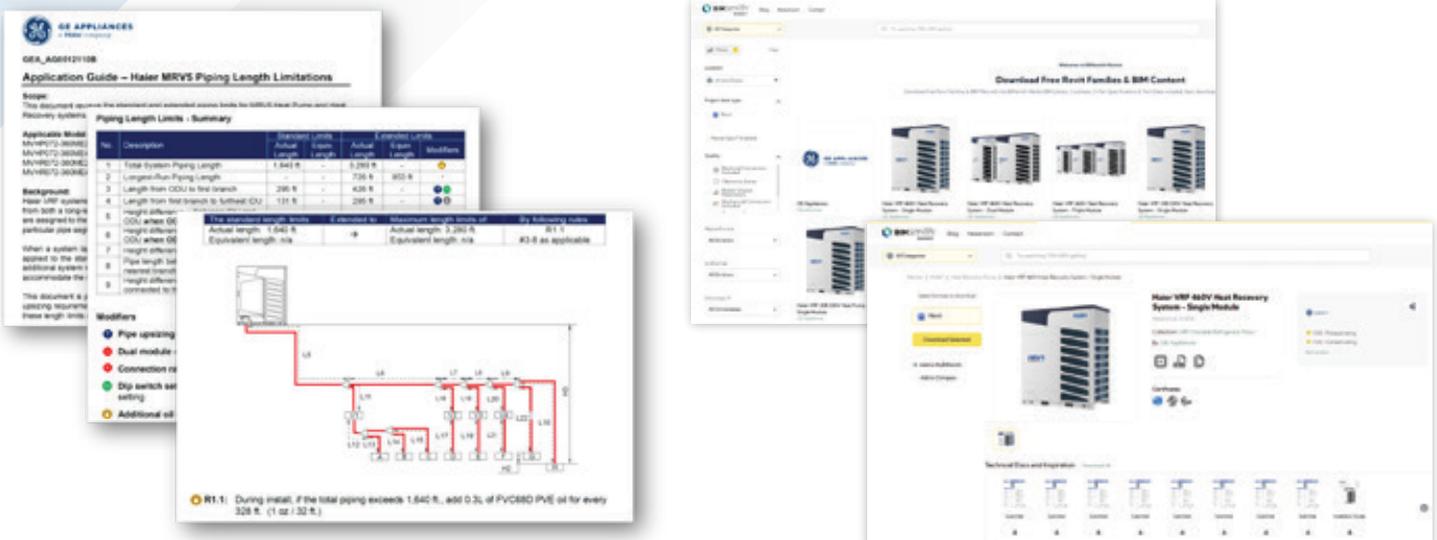
The Selection Software System will be able to:

- Seamlessly match indoor and outdoor units for customized solutions.
- Automatically calculate capacity data based on location design conditions.
- Ensure system integrity by monitoring component configurations and identifying any parameter breaches.
- Compile a comprehensive accessory list for both indoor and outdoor units.
- Simplify your workflow by exporting data for pricing and report creation.



Engineering Support

Count on our dedicated team to guide and assist you at every stage of the process, ensuring a smooth journey from conception to installation. Explore a wealth of resources on our website, providing the supporting documentation for the available product lines. Obtain the Revit file support you need by accessing the public BIMsmith Marketplace including all indoor and outdoor units, controls, accessories, and logos.



Your customers turn to you for great results, so offer them the performance and support you can only get from Haier!

Limited Warranty

At Haier we take pride in our workmanship, which is why we offer a 10 year parts and compressor warranty on equipment with factory certified startups including, but not limited to:

- Complete the installation and commissioning per Haier's instructions.
- All pipe-work including brazing was performed per Haier's instructions.
- Correct refrigerant charge was weighed and calculated at the time of commissioning.
- The warranty will not be continued if the equipment is removed from the original installation site.

All installation and service must be performed by a licensed technician. Failure to use a licensed technician for installation of the product voids all warranty.

For full warranty details and requirements, please see product installation manuals on our website: <https://www.geappliancesairandwater.com/air-products/vrf/>.



Training

We're with you every step of the way, from theory to application. Through the Air & Water Solutions Learning Academy, we teach everything from service to installation to sales. For those who prefer to learn in the field, our Regional Training Program matches professionals with experienced trainers.

Support

You can always rely on Haier to guide you through warranty processing, parts ordering, product installation, technical documentation and more.

For more info visit us:



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