



OUTDOOR UNITS 'HIDEN' MVH Series

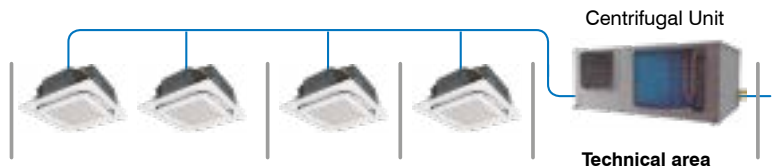
HIDEN Protocol



VERSATILITY

Outdoor centrifugal unit

The variable refrigerant flow (VRF) system that comes with the 90 Pa static pressure centrifugal exterior unit, provides an ideal solution for all exterior unit installations that can't be performed outside.



Less than 3,600 m³/h

The 14 kW model expels less than 3,600 m³/h ⁽¹⁾, thus complying with the autonomous communities regulations that determine this value as the maximum flow permitted to be discharged into the outside environment.

⁽¹⁾In silent mode.

Possibility to rotate the air outlet side ⁽²⁾

The air outlet can be oriented outside (the fan must be rotated).

⁽²⁾ Except for the 22 kW model.



Connection of up to 13 indoor units

Connection from only one indoor unit to a maximum of 13 indoor units, depending on the capacity of each unit.



HIGH EFFICIENCY

DC Inverter Technology

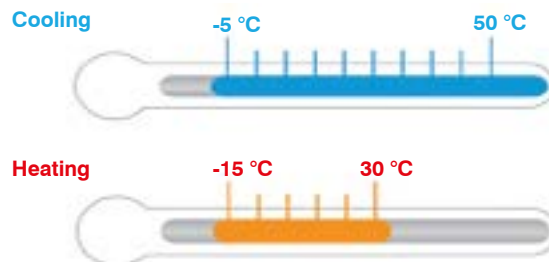
All compressors and fan motors are DC Inverter, this way the performance is improved in medium frequencies and it ensures a more sensitive and effective control.



COMFORT

Wide Operating Temperature Range

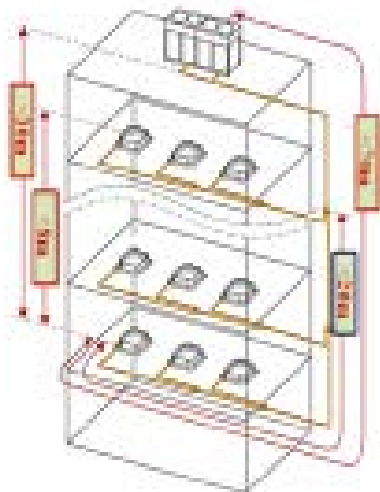
The "HIDEN" series can stably operate in heating mode between $-15 \sim 30^{\circ}\text{C}$ and in cooling between $-5 \sim 50^{\circ}\text{C}$.



EASIER INSTALLATION

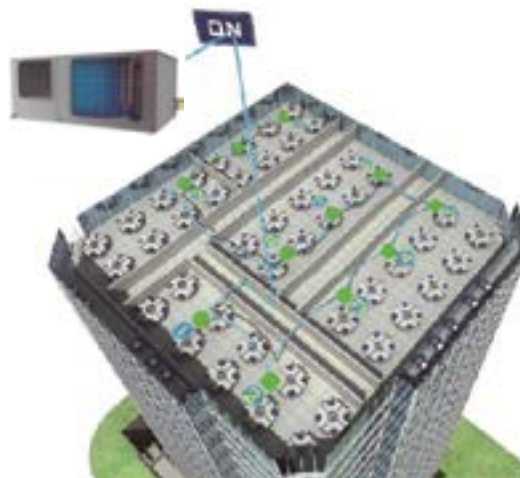
Up to 100 m of pipe

- Total piping length: **100 m**
- Real piping length of the furthest indoor unit (equivalent): **60 m (70 m)**
- Piping length between the first distributor and the furthest indoor unit: **20 m**
- Height difference between indoor and outdoor units (Highest outdoor unit): **20 m (30 m)**
- Height difference between indoor units: **8 m**



Automatic addressing

By default, the first time the entire system is powered on, the outdoor unit automatically assigns an address to each indoor unit. The address of each indoor unit can be checked and changed later with the wireless controller.



TECHNICAL FEATURES

Model			MVH-H100C/DN1	MVH-H100C/DN1A	MVH-H140C/DGN1A	MVH-H160C/DGN1A	MVH-H224C/DGN1	
Code			CL23809	CL23808	CL23800	CL23801	CL23802	
Power supply		Ph / V / Hz	1 N- / 230 V / 50 Hz	1 N- / 230 V / 50 Hz	3 N- / 400 V / 50 Hz	3 N- / 400 V / 50 Hz	3 N- / 400 V / 50 Hz	
Cooling ⁽¹⁾	Capacity	kW	10.00	10.00	14.00	16.00	22.40	
	Power consumption	kW	4.30	4.30	5.00	6.00	6.40	
	EER / SEER ⁽⁸⁾		2.32 / 6.52	2.32 / 6.52	2.8 / 6.27	2.66 / 5.92	3.5 / 5.14	
Heating ⁽²⁾	Capacity	kW	11.20	11.20	14.00	16.00	22.40	
	Power consumption	kW	4.10	4.10	4.60	5.30	5.14	
	COP / SCOP ⁽⁸⁾		2.73 / 4.20	2.73 / 4.20	3.04 / 3.81	3.01 / 3.70	4.35 / 3.47	
Nominal / max. current		A	18.6 / 30	18.6 / 30	7.7 / 20	9.2 / 20	20 / 40	
Max. consumption		kW	4.70	4.70	6.80	7.30	14.00	
Connectivity	Connectable capacity	%	50 - 130	50 - 130	50 - 130	50 - 130	50 - 130	
	Max. unit quantity Indoor Units		5	5	6	7	13	
Compressor	Brand		GMCC	GMCC	GMCC	GMCC	MGC	
	Type		DC Inverter - Twin Rotary	DC Inverter - Twin Rotary	DC Inverter - Twin Rotary	DC Inverter - Twin Rotary	DC Inverter - Twin Rotary	
	Quantity		1	1	1	1	1	
	Model		ATM240D57UMT	ATM240D57UMT	ATQ420D2UMT	ATQ420D2UMT	LMB53FMKMC-L	
Fan	Type		Centrifugal DC	Centrifugal DC	Centrifugal DC	Centrifugal DC	Centrifugal DC	
	Quantity		1	1	1	1	1	
	Flow rate ⁽³⁾		m³/h	3,600	3,600	3,590	5,000	7,000
	Static pressure	Standard	Pa	0	0	0	0	0
		Configurable	Pa	0 / 50 / 90	0 / 50 / 90	0 / 50 / 90	0 / 50 / 90	0 / 50 / 90
Sound pressure ⁽⁴⁾		dB(A)	65	65	68	68	68	
Dimensions (Width x Height x Depth)		mm	1520 x 584 x 927	1520 x 584 x 927	1520 x 584 x 973	1520 x 584 x 973	2001 x 675 x 1656	
Weight		kg	141	141	173	173	300	
Refrigerant	Type / GWP		R410A / 2088	R410A / 2088	R410A / 2088	R410A / 2088	R410A / 2088	
	Quantity	kg/TCO ₂ eq	2.6 / 5.420	3 / 6.264	3.5 / 7.308	3.5 / 7.308	7.5 / 15.66	
Pipe lengths ⁽⁵⁾	Max. vertical	m	30	30	30	30	30	
	Total	m	100	100	100	100	100	
Connection pipes ⁽⁶⁾	Liquid Line	mm (inches)	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	9.52 (3/8")	
	Gas line	mm (inches)	15.88 (5/8")	15.88 (5/8")	15.88 (5/8")	15.88 (5/8")	19.05 (3/4")	
Electrical connections ⁽⁷⁾	Power wiring / ICP	mm² / A	3 x 6 + T / 40	3 x 6 + T / 40	4 x 4 + T / 25	4 x 4 + T / 25	5 x 6 + T / 35	
	Signal wiring	mm²	3 x 0.75 (shielded)	3 x 0.75 (shielded)	3 x 0.75 (shielded)	3 x 0.75 (shielded)	3 x 0.75 (shielded)	
Operating temperatures range	Cooling	°C	-5 to 50	-5 to 50	-5 to 50	-5 to 50	-5 to 50	
	Heating	°C	-15 to 30	-15 to 30	-15 to 30	-15 to 30	-15 to 30	

Note:

⁽¹⁾ Rated cooling conditions: indoor 27 °C DB, 19 °C WB and outdoor 35 °C DB, for a pipe length of 5 m and no height difference.

⁽²⁾ Rated heating conditions: indoor 20 °C DB, 15 °C WB and outdoor 7 °C DB, for a pipe length of 5 m and no height difference.

⁽³⁾ Air flow rate in model 140 measured in silent mode and in model 160 with static pressure of 50 Pa.

⁽⁴⁾ Sound pressure level measured in a semi-anechoic chamber at 1 m frontal distance and 1 m high.

⁽⁵⁾ Piping lengths when the outdoor unit is installed higher than the indoor units, otherwise it's 20 m.

⁽⁶⁾ The specified diameters are for the service valves, this does not mean that the pipe must have the same diameter.

⁽⁷⁾ Recommended power wiring for L < 20 m. For longer distances, it should be recalculated.

⁽⁸⁾ Data measured under EUROVENT EN 14825 conditions.

* Data and specifications can be changed without previous notice.

Features Description



WEEKLY TIMER
Sets the weekly operation of the unit.



FOLLOW ME FUNCTION (IFEEL)
The remote control incorporates an ambient temperature sensor.



AUTOMATIC RESTART
Recovery of the parameters before the electrical cut.



EMERGENCY OPERATION
Possibility of manually operating the unit with the button in case of any alarms sounding.



COLD AIR PRECAUTION
When heating, the initial fan speed is adjusted according to the battery temperature.



TURBO OPERATION
Maximum reduction of the cooling/heating time.



LOW SOUND LEVEL
Thanks to the Silence mode and its new design, the sound level is reduced to the minimum.



TEMPERATURE COMPENSATION
The remote control allows you to adjust the compensation temperature for the heating and cooling mode.



FRESH AIR (ION)
The equipment incorporates an ionizer to generate OH(-) and thus purify the air by deactivating bacteria, viruses and other contaminants in the environment, providing a very pleasant feeling of freshness.



BREEZE AWAY
Function that allows the air flow to be diverted to another place to prevent the equipment from blowing directly on people.



QUIETER OUTDOOR UNIT
Optimized design of air outlet grille with noise reduction of 3.3 dB(A) compared to previous models.



WIDE WORKING RANGE
Cooling operation until 50 °C and -15 °C in heating.



NIGHT MODE
Makes the unit operate according to the preset nighttime temperature curve, which creates an ideal nighttime environment and improves sleep quality.



DAILY TIMER
The timer can be set to start and stop at any point in a 24-hour period.



360° DESIGN
Thanks to the 360° panel design, the air is more evenly distributed.



HORIZONTAL AND VERTICAL FLAP ROTATION
Better air distribution thanks to the flap's horizontal and vertical automatic swing.



GEAR
Allows to set the equipment capacity to 50 %, 75 % or 100 % (default).



COLD CATALYST FILTER
The equipment features a purifying filter that can absorb formaldehyde without needing ultra-violet light.



SPRINT START
Like a sprinter, this function allows the compressor to reach 65 Hz in just 6 s.



HUMIDITY CONTROL
In dehumidification mode, the relative humidity control can be set between 35 % and 85 %.



VENTILATION FUNCTION
Allows operation with only ventilation.



THERMOSTAT
It automatically maintains the set temperature.



DEHUMIDIFICATION
Humidity reduction helps restore an optimum temperature in wet areas.



MULTI-SPEED INDOOR FAN
The fan has up to 12 different speeds that are automatically adjusted if the automatic ventilation is activated.



SILENCE
This function allows you to select the ultra-quiet speed, so that the sound level of the equipment is very low.



CONTROL PANEL
A control panel is added to run the machine without any wireless remote control.



DUAL AIR FLOW
Top and bottom air outlet. In cooling mode only the upper outlet works, and in heating mode both outlets work, thus heating from ground level.



CORE GENIUS
The frequency of traditional Inverter equipment has a fluctuation of ± 1 °C of the ambient temperature during operation. However, with the new "CORE GENIUS" Inverter technology that adjusts 0.6 Hz for each step, the frequency variation of the Inverter is so smooth that the ± 0.5 °C fluctuation of the ambient temperature is not noticeable.



INDIVIDUAL FLAP CONTROL
Possibility to adjust the angle of the 4 flaps independently.



120°
The upper slat allows an adjustment at 120°.



BACKLIT WALL CONTROL
The new KJR-120N wired wall controller features a backlit screen for easy reading.



HEATING 8 °C
The unit automatically switches to heating mode when the ambient temperature is below 8 °C, thus preventing the room temperature from being too low when we are not at home.



WIFI
Possibility for the unit to be controlled via WIFI, through an APP.



CENTRALIZED CONTROLLER
Possibility of controlling several units with the same controller.



DOMOTICS
Possibility of connection with the main manufacturers of home automation systems (Consult).



ENERGY LABELLING FOR COOLING A+++



ENERGY LABELLING FOR HEATING A+++



ENERGY LABELLING FOR COOLING A++



ENERGY LABELLING FOR HEATING A++



ENERGY LABELLING FOR COOLING A+



ENERGY LABELLING FOR HEATING A+



ENERGY LABELLING FOR COOLING A



ENERGY LABELLING FOR HEATING A



STANDBY FUNCTION (ONLY 1W IN STANDBY)
The outdoor unit is automatically disconnected from the power supply when the unit is in standby, that way the consumption in standby mode is only 1W.



PRESENCE SENSOR
Detects inactivity (30 min) in the room to reduce the operating frequency and thus save energy.



R410A
Equipment using refrigerant R410A with a GWP of 2088.



R32
Equipment using the most environmentally friendly refrigerant R32 with a GWP of 675. In order to install equipment with R32 refrigerant gas, you must review the current legislation.



R290
Equipment using the new refrigerant R290 which has a GWP of only 3.



REMOVABLE FILTERS

New filter fastening system with tabs to ensure correct fastening without vibrations.



OUTSIDE AIR INLET

Possibility of supplying outdoor air directly on the indoor unit.



DRAINAGE PUMP

Incorporates drainage pump to facilitate the drainage of the indoor unit.



REMINDER OF FILTER'S CLEANING

The equipment tells us when to clean and/or replace the air filter of the indoor unit.



PIPE COMPATIBILITY

Possibility of increasing one size over the standard diameter in the gas or liquid pipe or both.



DIGITAL LED DISPLAY

Equipment with a digital display showing the set temperature during normal operation or the ambient temperature in ventilation mode.



LESS SCREWS

Both the indoor unit and the outdoor unit have less screws, to make the disassembly easier.



REFRIGERANT LEAK DETECTION

The unit automatically detects the existence of possible leaks of refrigerant in the circuit.



SELF-CLEANING

This function performs a self cleaning on the indoor unit. When the "SELF-CLEANING" function is activated (SelfClean or iClean buttons), the unit initially operates in cooling mode with the fan at low speed, during this period the condensation water drags the dust from the battery. The unit then switches to heating mode with the fan at low speed, to dry the battery and the inside of the unit. Finally the unit changes to ventilation mode to finish drying completely.



ULTRA-REINFORCED MOUNTING PLATE

Reinforced mounting plate with measuring range and spirit level included.



POWER SUPPLY ONLY TO OUTDOOR UNIT

The indoor unit is powered by the same interconnection cable with the outdoor unit.



SINGLE-FAN OUTDOOR UNITS

Optimize outdoor space thanks to outdoor units with lower height.



HIGH STATIC PRESSURE

Wide static pressure range.



SET TEMPERATURES RANGE ADJUSTMENT

The remote control is able to adjust: minimum cooling from 16 °C up to 24 °C; maximum heating from 30 °C down to 25 °C.



LEG IN U FORM

Thanks to the new back leg in the outdoor unit, the installation is easier.



LOW VOLTAGE START

The equipment can start up and operate normally up to a supply voltage lower than the nominal voltage.



PROBLEM SOLVING

Error codes are displayed on the indoor panel, on the wall control or on the outdoor PCB.



REMOTE SIGNALS (CP)

The indoor unit has an ON/OFF input.



CONFIGURABLE STATIC PRESSURE

From the PCB (or any model with the wireless or wired remote control) the static pressure of the fan can be adjusted, so that the machine can be adapted to each installation.



CONFIGURABLE RETURN

The air intake can be set up either at the rear or at the bottom of the unit. By default, it is set up at the rear.



TWIN FUNCTION (2x1)

Two indoor units can be connected to the same outdoor unit. Both indoor units will function identically as if they were one single unit. It is perfect for open rooms.



REVERSE ROTATION

When the unit is stopped, the outdoor unit fan rotates backwards to remove leaves or other external elements from the coil.



ROTATION & BACK UP

This function allows redundant operation in installations with 2 units connected to the same KJR-120N wired controller, in the event that one machine does not reach the set temperature, the two machines will automatically start operating together at 24 °C in the selected mode. At the same time a rotation in the operation of the 2 machines is carried out so that both machines operate for the same amount of time.



AUTO ROUTING

The outdoor unit can assign addresses to the indoor units automatically.



ENGINEERING MODE

Function adjustment and operating parameters query using the control.



EXTRA FLAT DUCT

Indoor unit height between 200 and 300 mm.



DELIVERY OUTLET TO ADJACENT ROOM

The unit has pre-drilled outlets for connecting a small duct to climatize an adjacent room.



AIR DISCHARGE TUBE TO THE OUTSIDE

Easy and quick to install, it allows the use of the air conditioner immediately.



CONDENSATE REMOVAL

Removes condensate water so it is not necessary to connect the air conditioner to a drain. In dehumidification mode and in very humid environments, it is recommended to connect the equipment to a drain.



PANEL OF COMPACT SIZE

The grid panel of the cassette type unit measures 600x600 mm.



GOLDEN FIN

Heat exchanger with special treatment, which protects the equipment against atmospheric phenomena and the effects of aggressive environments. It also prevents the proliferation of bacteria and mold.



BLUE FIN

Heat exchanger with treatment that protects the equipment against corrosion and the growth of bacteria and mold.



AUTOMATIC REFRIGERANT REFILL

Allows the system to be refilled with refrigerant gas without having to do any additional calculation.



HORIZONTAL / VERTICAL

Equipment that can be installed in both horizontal and vertical position.



META FUNCTION

Advanced air conditioning technology that optimizes temperature, refrigerant and air flow to save energy and maximize the comfort.

Technology



SUPER DC

Equipment that has both, DC Inverter compressor and DC fan motors.



COOLING AT LOW TEMPERATURES

Cooling operation down to -15 °C outside.



HEATING AT LOW TEMPERATURES

Heating operation down to -25 °C outside.



CONSTANT AIR FLOW CONTROL

The indoor fan adjusts to the required static pressure to ensure a constant air supply at all times.



DC

Unit with DC fan motor, low noise and low-energy consumption.



EVI COMPRESSOR

High efficiency asymmetric scroll compressor with steam injection technology.



0-10V INPUT

Unit with DC fan motor with 0-10V regulation.



0-10V OUTPUT

Equipment with 0-10V output for the control of an auxiliary valve.



7 SPEED FAN

Unit with DC fan motor with 7 speeds.



EXTERNAL FAN DIFFERENT SPEEDS

Accurate adjustment of fan speed thanks to the DC motor.



EXV

Equipment with an electronic expansion valve that adjusts the capacity of the equipment in a more stable way.