CLIVET

GUIDE ***2025***

PRODUCTS AND SYSTEMS

VRF

2025

CLIVET

OFFICIAL AIR CONDITIONING & AIR QUALITY PARTNER

This document is dedicated to those looking for VRF solutions for heating, air conditioning, air renewal and air purification.

Solutions able to increase the comfort level in the places where we live, work and spend our free time.

Complete year round systems, focused on substantial energy savings and less dependency on the fossil fuels used by traditional HVAC solutions, such as natural gas or oil.

INSPIRING SOLUTIONS

This Guide is printed every year and presents all Clivet's products with the aim of providing a basis for decisions and evaluations.

More detailed information, updated regularly, is available in the “SYSTEMS AND PRODUCTS” area at www.clivet.com and on Clivet Apps, where they can be downloaded free of charge.

To keep up to date with Clivet news, follow us on our social networks:

CLIVET. INSPIRING SOLUTIONS

OUTDOOR UNITS

INDOOR UNITS

AIR RENEWAL

CONTROL SYSTEMS

BRANCH JOINTS

NATURAL COMFORT

REASONS TO BELIEVE IN A MORE COMFORTABLE FUTURE, THANKS TO CLIVET.

Over 35 years of expertise in heat pumps.

Clivet has been leading the way in heat pump innovation since 1989. We were among the first to recognise the technology's potential for efficient and sustainable comfort — and our dedication to innovation hasn't wavered since.

Purpose-built solutions.

Clivet engineer its solutions from the ground up to offer specialised systems designed for a diverse range of applications and environments. Boasting the widest range of heat-pump solutions, our flexible, adaptable approach ensures a perfect fit for your specific requirements.

Crafted in Europe.

As a European company from the start, we understand the unique needs and demands of this market. Our heat pump solutions are designed with your comfort in mind, considering everything from climate variations to specific building requirements.

A simplified product experience.

Clivet systems streamline every step, from simplified design and installation to effortless operation and control. Engineered for efficiency from the ground up, Clivet delivers unparalleled ease of use, lower operating costs, and a lasting commitment to sustainability.

COMFORT FOR THE PLANET & PEOPLE

OUR NUMBERS

36
AGENCIES IN ITALY

53.500 m²
OF PLANTS IN FELTRE - BELLUNO VERONA (UTA PRODUCTION)

100
COUNTRIES WE EXPORT TO

1000
EMPLOYEES IN ITALY AND ABROAD

290
WHOLESALERS WITH CONTRACT

8 BRANCHES:
GREAT BRITAIN, GERMANY, INDIA, RUSSIA, UAE, CHINA, BALKANS AND FRANCE

185
SERVICE CENTRES

2023
THE FIRST SUSTAINABILITY REPORT

2016
STRATEGIC ALLIANCE WITH MIDEA GROUP

2024
MIDEA GROUP **277** FORTUNE GLOBAL 500

48.5 BN €
OF MIDEA TURNOVER

Why choose the VRF system

HIGH EFFICIENCY

Thanks to a full DC inverter range (compressors, fans) and electronic controls that allow only the power actually required by the individual zones to be supplied, the VRF system offers high efficiency and energy savings.

SYSTEM FLEXIBILITY AND MODULARITY

The VRF system is able to meet the demands of air conditioning from small to large buildings, thanks to a wide range of units and extended cooling lengths. The system architecture is designed to be totally modular, combining units and controls according to specific needs. The automatic unit addressing function, available as standard, greatly simplifies and speeds up the installation phase.

WIDE OPERATING RANGE AND HIGH RELIABILITY

The correct functioning of the system is ensured up to -30 ° C in heating and from -15 ° C to 55 ° C in cooling. Reliability is guaranteed by rigorous tests in the production phase and by multiple functions, including the rotation of the compressors for balancing the operating time and the backup in case of emergency in multi-module systems.

LOCAL OR REMOTE MULTI-ZONE CONTROL

The wide range of control systems makes it possible to take full advantage of the total independence of the terminals located in the different areas of the building, based on the specific requests. Commands are available for local management (individual units or centralized), or remotely (via cloud from a smartphone, tablet or PC).

OUTDOOR UNITS

WIDE RANGE

✓ Capacity from 7 to 33,5 kW for Mini VRF and from 25 to 270 kW for VRF, in order to cover the maximum number of applications

HIGH SEASONAL EFFICIENCIES

✓ Maximum efficiencies at most frequent load conditions

WIDE OPERATING RANGE

✓ With special attention to cooling and heating guaranteed at low temperatures, thanks to the full DC inverter range

INTELLIGENT DEFROSTING

✓ Saves energy by adjusting duration and frequency

ACOUSTIC COMFORT

✓ Several silent modes increase quietness and internal comfort

ROTATION AND BACKUP FUNCTION

✓ In systems with multiple outdoor models, the different units are used to balance the hours of operation, extending the lifecycle of the entire system. All the elements, modules, fans, compressors and even the sensors can be activated to compensate for a similar device anomaly.

AUTO ADDRESSING

✓ The outdoor unit is designed to assign addresses to system units automatically, simplifying installation

SIMPLIFIED INSTALLATION

✓ Thanks to the new EasyCom technology, it is now possible to save on bus communication between units

INDOOR UNITS

IDEAL FOR ANY ENVIRONMENT:

✓ Offices, Restaurants, Residential, Hotels, Commercial areas

COMPATIBLE WITH R32 AND R410A

✓ The new V8 range units can operate with both types of refrigerant.

COMFORT AND SAVINGS

✓ New functions increase environmental well-being and reduce energy consumption

SILENT OPERATION

✓ The compact design of the mechanical components ensures silent operation of the units

INTEGRATED ELECTRONIC EXPANSION VALVE

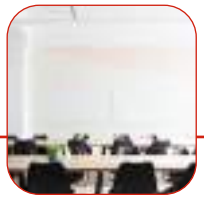
✓ Precise regulation of refrigerant in the heat exchanger

WIDE RANGE

✓ Over 100 models in 14 different types ranging from 1.5 to 56 kW

7 FAN SPEEDS AVAILABLE

✓ All series are adjustable through 7 fan speeds to ensure maximum comfort



AIR RENEWAL

WIDE RANGE AND MAXIMUM EFFICIENCY

✓ Several series of units complete the range to combine air conditioning with air renewal, in order to guarantee maximum healthiness of the environment with particular attention to energy efficiency

COMPLETE INTEGRATION

✓ All the units are fully integrated in the range of control systems, for maximum immediacy in managing the system

CONTROL SYSTEMS

LOCAL OR REMOTE CONTROLS

✓ A wide range of commands allows to manage different zones locally or remotely depending on the specific needs

A CONTROL FOR EVERY APPLICATION

✓ Multiple solutions are available: wireless and wired remote controls, centralised touchscreen controls, interfaces for cloud control from smartphones, tablets or PCs, supervision systems for centralised management of multiple systems in different locations and BMS interfaces for integration of the VRF system with third party equipment

CLIVET-MIDEA PARTNERSHIP, THE WORLD'S BEST TECHNOLOGY

Thanks to the alliance with **Midea**, Clivet works closely with the world's **second largest producer of VRF** and the world's number one exporter of air conditioning units, which can boast:

- ✓ **Over 20 years** of evolution of the VRF System;
- ✓ **8 generations** of product technology;
- ✓ More than **500 patents related to** VRF;
- ✓ More than **570.000 outdoor units sold** in 2024;
- ✓ World’s No.1 China-based VRF exporter for 10 consecutive years

Clivet can therefore offer the widest **range of capacities on the market** (from 7 kW/2.5 HP to 270 kW/96 HP) with Full DC inverter technology for energy saving and maximum flexibility of application thanks to the extended connectable piping (up to a maximum of 1000 m). These features provide significant benefits:

- ✓ **Reduction of time and costs**. Thanks to the simplified installation compared to traditional VRF systems, extra costs such as outdoor unit modules, additional piping, larger welds and longer installation times are eliminated;
- ✓ **Space saving**. The considerable capacity range reduces the overall dimensions by up to 25%.

Certifications and safety

They optimise the solution based on the needs of the **various applications** and integrate it in specialised products and in complete dedicated systems:

With the aim of providing Customer satisfaction, Clivet S.p.A. has supplemented and certified its Quality, Environment and Safety Management Systems, in accordance with the ISO 9001, ISO 14001 and ISO 45001 International Standards.

Clivet is committed in promoting the green building principles and has become a member of GBC Italia. This organization collaborates with **GBC Italia**,, the U.S. nonprofit organization that promotes worldwide the **LEED**® system of independent certification.

In 2015, Clivet became a partner of **CasaClima**, as a result, Clivet is now part of a network of companies renowned for their technical expertise and constant focus on sustainable home management.
Where applicable.
https://www.agenziacasaclima.it/en

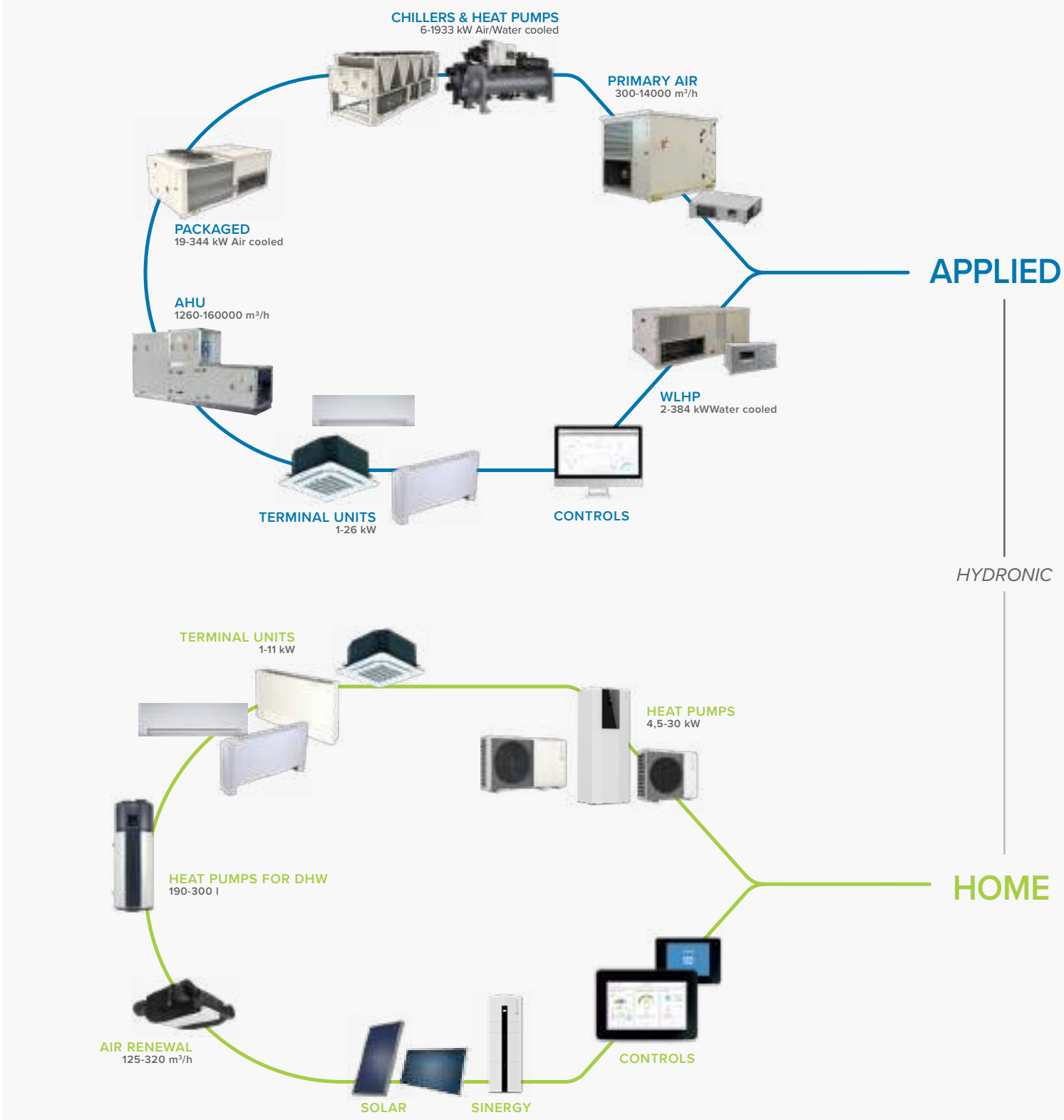
KEYMARK is a mark recognized in many European countries for the provision of incentives for the installation of heat pumps for room heating and the production of domestic hot water.
The countries that recognize the mark and the Certified Products are available on https://keymark.eu/en/products/heatpumps/heat-pumps. Where applicable.

Clivet participates in the EUROVENT "Liquid Chilling Packages and Heat Pumps", "Rooftops", "Air Handling Units" and "VRF" Certification programmes. The products concerned feature in the EUROVENT guide to certified products and on the website www.eurovent-certification.com. The programmes cover water chillers and heat pumps up to the limits set by the purpose of each programme.
Where applicable.
Check the validity of the current certificate: www.eurovent-certification.com

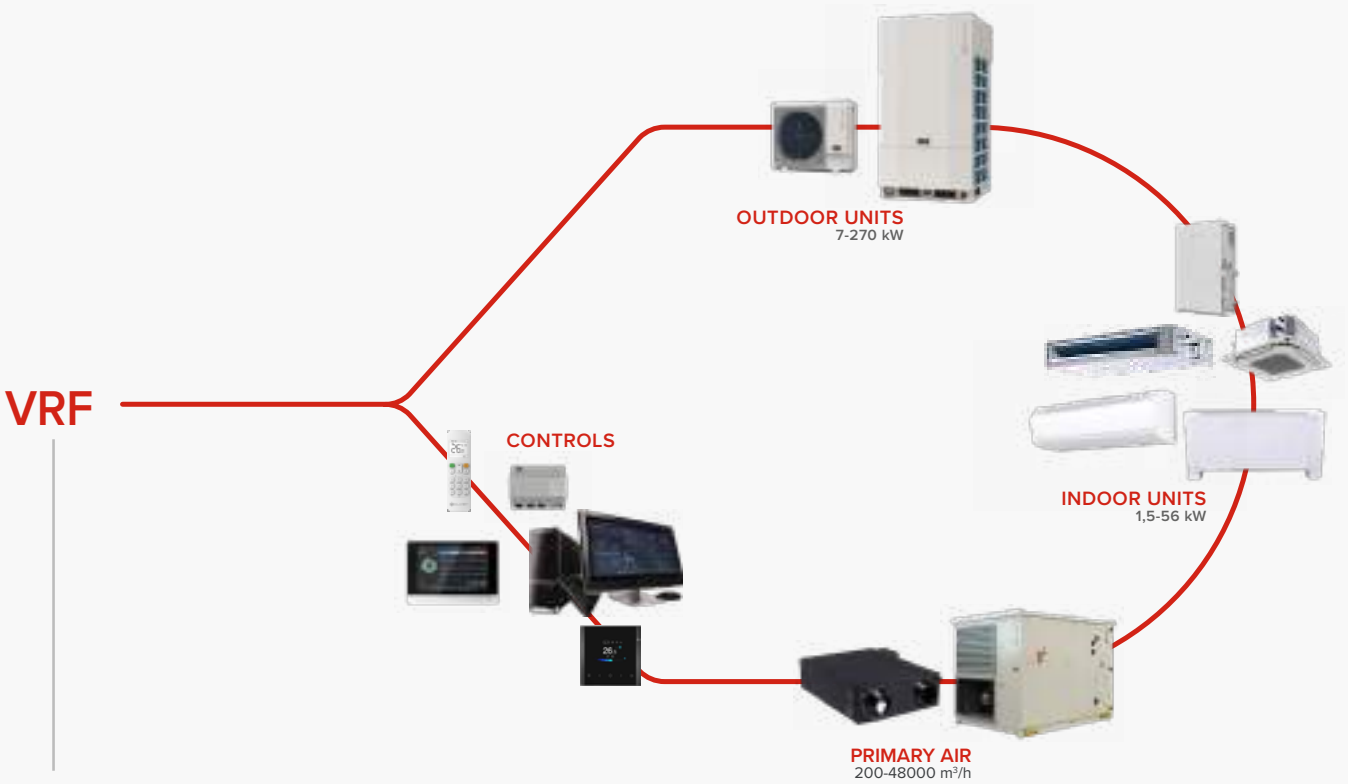
The wide range of Clivet products and complete systems comply with the requirements of the implementing measures for ErP (Energy related Products) Directives 2009/125/EC (Eco-design) and 2010/30/EU (Energy labelling), whose purpose is to reduce the energy consumption of products for heating, cooling, ventilation and hot water production, encouraging the user towards energy-efficient choices.
Directives 2009/125/EC and 2010/30/EU include the following Regulations: (EU) 206/2012, (EU) 626/2011; (EU) 811/2013, (EU) 812/2013, (EU) 813/2013, (EU) 814/2013; (EU) 1253/2014, (EU) 1254/2014; (EU) 2016/2281.

Clivet is involved in the OLTRE IL GREEN project to promote sustainability and the circular economy together with the other members of SAFE, the system of consortia for the circular economy that works to raise awareness on environmental issues, waste management and recovery, education and training on environmental protection, and research on environmental protection.

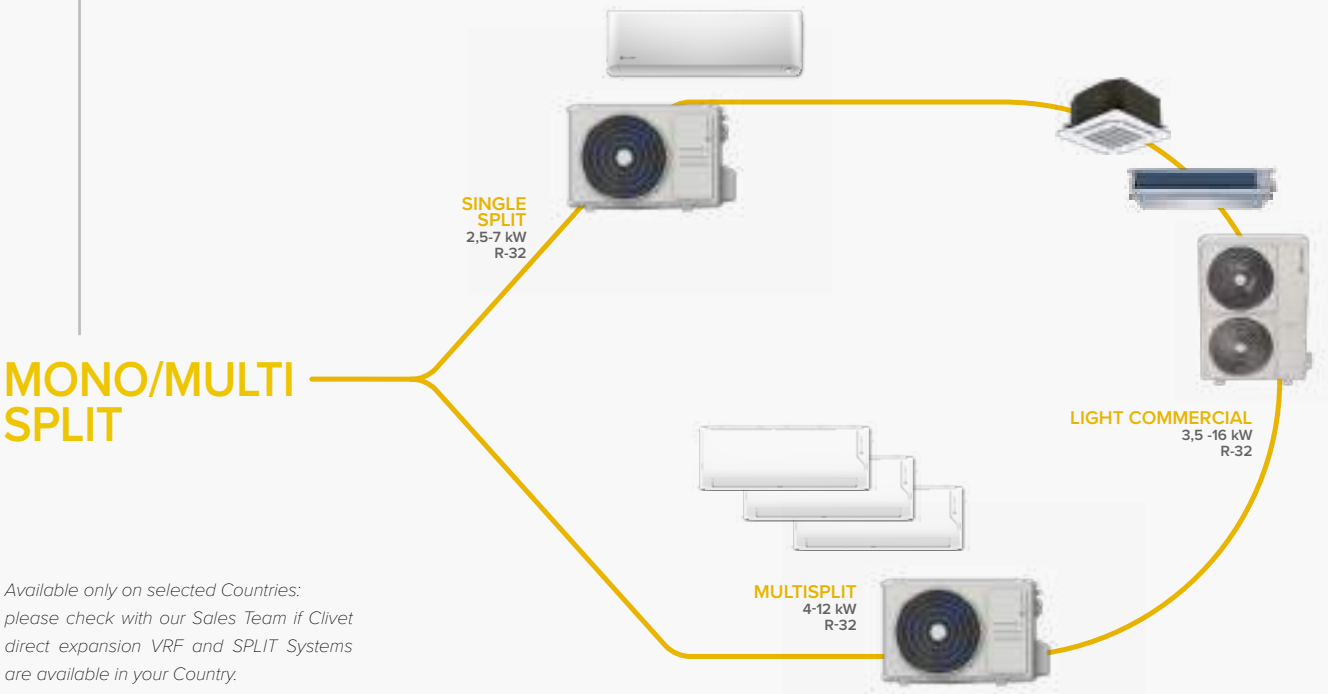
ALL TECHNOLOGIES FOR A COMPLETE PROPOSAL



Heating, cooling, air renewal and domestic hot water production



DIRECT EXPANSION



Available only on selected Countries: please check with our Sales Team if Clivet direct expansion VRF and SPLIT Systems are available in your Country.

VRF

OUTDOOR Units - Product Lineup

Operation		Series	Platform	Refrig.	Supply	Combin	HP 3	4	4,5	5	6	6,5	7	8	9	10	12	14	16	18	20	22	24
Heat pump		Mini VRF MSAN8-Y	ODU V8	R-32	Single-phase (230/1~/50)	1	● 80M	● 100M	● 120M	● 140M	● 160M	● 180M											
					Three-phase (400/3~/50+N)	1			● 120T	● 140T	● 160T	● 180T											
		Mini VRF MSAN8-X	ODU V8	R-410A	Single-phase (230/1~/50)	1	● 80M	● 100M	● 120M	● 140M	● 160M												
					Three-phase (400/3~/50+N)	1			● 120T	● 140T	● 160T												
		Mini VRF MSAN6	ODU V6	R-410A	Three-phase (400/3~/50+N)	1							● 200T	● 224T	● 260T	● 280T	● 335T						
Heat pump		VRF MSAN8	ODU V8	R-410A	Three-phase (400/3~/50+N)	1								● 252T		● 280T	● 335T	● 400T	● 450T	● 500T	● 560T	● 615T	
						2÷4																	● ● 670T
Heat pump		VRF CVT8	ODU V8	R-410A	Three-phase (400/3~/50+N)	1								● 252T		● 280T	● 335T	● 400T	● 450T	● 500T	● 560T	● 615T	● 670T
						2÷3																	
Heat recovery		VRF MV6R	ODU V6	R-410A	Three-phase (400/3~/50+N)	1								● 252T		● 280T	● 335T	● 400T	● 450T	● 500T			
						2÷3															● ● 560T	● ● 615T	● ● 680T

26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96
735T	800T	850T	900T	950T	1000T	1065T	1115T	1175T	1230T	1300T	1350T	1400T	1450T	1500T	1565T	1615T	1670T	1730T	1790T	1845T	1900T	1960T	2000T	2060T	2115T	2175T	2230T	2290T	2345T	2405T	2460T				
730T	785T	850T	900T																																
				960T	1010T	1070T	1120T	1170T	1230T	1285T	1340T	1400T	1460T	1515T	1570T	1630T	1685T	1750T	1800T	1860T	1915T	1965T	2020T	2070T	2130T	2185T	2245T	2300T	2360T	2415T	2470T	2530T	2585T	2650T	2700T
735T	785T	835T	900T	950T	1000T	1070T	1120T	1185T	1235T	1300T	1350T	1400T	1450T	1500T																					

OUTDOOR Units - Functions overview

		Mini VRF		
		MSAN8-Y	MSAN8-X	MSAN6
				
Source			AIR Air	
Type			Heat pump	
Refrigerant		R-32	R-410A	R-410A
Configuration and operation	Combination of multiple modules	-	-	-
	Simultaneous heating and cooling operation	-	-	-
Efficiency and technology	Bus EasyCom	✓	✓	-
	EVI compressor (enhanced vapor injection)	-	-	-
	Minimum ambient temperature heating	-20	-20	-20
	Maximum ambient temperature cooling	52	52	48
	Minimum ambient temperature cooling	-15	-15	-5
	Energy management system	✓ EMS2	✓ EMS2	-
	Maximum capacity limitation due to power output constraints	✓ 40-100%, step 1%	✓ 40-100%, step 1%	-
Comfort	Silent mode	5 levels	5 levels	-
	Intelligent defrosting	✓	✓	✓
	Continuos heating operation (alternating defrosting)	-	-	-
Reliabilty	Rotation between modules	-	-	-
	Backup operation in case of failure	-	-	-
	Refrigerant Cooling PCB	✓	✓	✓
	Refrigerant leak detection funcion	✓	-	-
	SafeBox	-	-	-
	MultiSensor	✓	✓	-
Installation and maintenance	Auto addressing	✓	✓	✓
	Adjustable ESP fan motor	✓ 0Pa-35Pa	✓ 0Pa-35Pa	-
	Input/output contacts on outdoor unit	✓ I: mode change, emergency off O: alarm/operation status	✓ I: mode change, emergency off O: alarm/operation status	-
	Automatic refrigerant charging	-	-	-
	Auto snow-blowing and dust-clean function	-	-	-

1. in combination with single MS box MS01
2. in multiple modules configuration

VRF

MSAN8	CVT8	MV6R
		
AIR Air	AIR Air	AIR Air
Heat pump	Heat pump	HR Heat recovery
R-410A	R-410A	R-410A
✓	✓	✓
-	-	✓
✓	✓	-
✓	✓	✓
-30	-30	-25
55	55	52
-15	-15	-15[1]
✓ EMS2	✓ EMS2	✓ EMS
✓ 40-100%, step 1%	✓ 40-100%, step 1%	✓ 40-100%, step 10%
15 levels	15 levels	8 levels + 4 night silent mode
✓	✓	✓
-	-	✓[2]
✓	✓	✓
✓	✓	✓
✓	✓	✓
-	-	✓[1]
-	✓	-
✓	✓	-
✓	✓	✓
-	✓ 0Pa-120Pa	✓ 0Pa-80Pa
✓ I: mode change, emergency off O: alarm/operation status	✓ I: mode change, emergency off O: alarm/operation status	✓ I: off emergency O: alarm
-	✓	✓
-	✓	✓

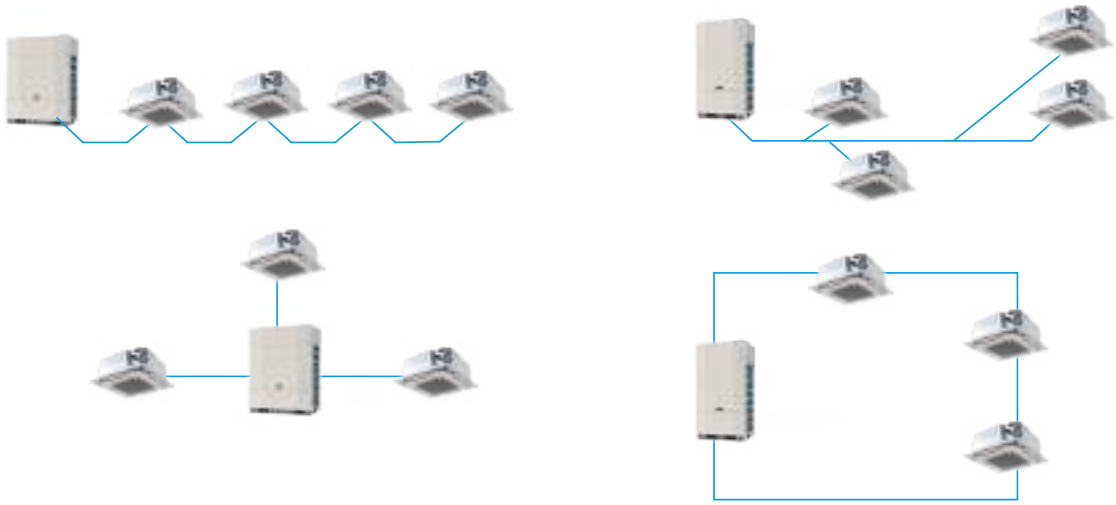
EXCLUSIVE MODES V8 PLATFORM

EASYCOM

The self-designed original communication bus technology greatly simplifies installation and saves installation costs.
EasyCom communication technology supports any wiring pattern rather than just daisy chain connection, reducing installation costs and the possibility of an incorrect connection. It has stronger anti-interference ability, achieving a communication distance of up to 2000 m.

ARBITRARY TOPOLOGY COMMUNICATION

In addition to the traditional daisy chain connection, the communication wire supports tree connection, star connection, ring connection and so on. The wring is flexible, which greatly reduces installation costs and has no possibility of wrong connection on site.



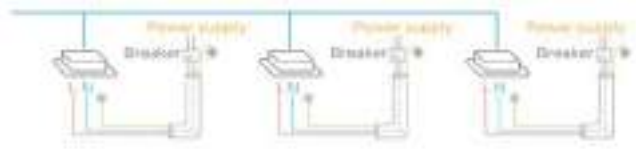
SUPER ANTI-INTERFERENCE CAPABILITY

Special waveform restoration technology enhances anti-interference performance for more stable communication.

Anti-interference of radio | Anti-interference of high voltage | Anti-interference of equipment

FLEXIBLE POWER SUPPLY FOR INDOOR UNIT

EasyCom communication technology enables the indoor units* to be powered not only by a uniform power supply, but also by individual power outputs. This makes the management of individual units in multi-tenant systems extremely easy, as everyone can switch their indoor units on and off independently.



*Max. 30 indoor units

MULTISENSOR

Depending on the model, up to 19 sensors are distributed throughout the refrigerant system, and the status of the refrigerant can be determined throughout the process, ensuring stable operation. At the same time, combined with the digital twin technology of the refrigerant system, a virtual sensor can be created in the event of a physical sensor failure, so that the system does not shut down in the event of a sensor failure, ensuring comfort.

MULTIPLE SENSORS

The V8 Series VRF features the industry's most comprehensive range multiple condition sensors with built-in data models for compressors, heat exchangers, throttling components and more.
The system analyses the measured data in real time and can detect the condition of the refrigerant at any point in the circuit.

REFRIGERANT AMOUNT DIAGNOSIS

Thanks to the complete sensor range, the refrigerant running state is clearly visible, in order to accurately diagnose the amount of refrigerant.

VIRTUAL BACKUP SENSOR

In the event of a sensor failure, other sensors can automatically simulate a virtual backup sensor, so that the VRF system can continue to operate without stopping.

EMS2

EMS is the abbreviation of Energy Management System, a built-in professional operation and maintenance algorithm, already present in V6 generations and now further upgraded to the EMS2 technology to maximize ENERGY SAVING. The algorithm manages the thermal conditions, refrigerant flow and indoor airflow in three steps:

Refrigerant analysis and regulation	**STEP 1 – Analysis of thermal loads and regulation of refrigerant flow** Automatic recognition of the required thermal load based on the speed variation of the room temperature to regulate the refrigerant flow	
Variable refrigernat temperature	**STEP 2 – Refrigerant temperature calculation** Automatic adjustment of the evaporating/condensing temperature based on the room loads to maximize comfort	
Variable indoor airflow	**STEP 3 – Airflow regulation** Automatic regulation of the airflow for a precise control of the rooms temperature	

MINI VRF MSAN8-Y

MSAN8-Y 80M÷180T

R-32 | ODU V8 | AIR

DC INVERTER

Clivet participates in the ECP Programme for "VRF".
Check ongoing validity of certificate on www.eurovent-certification.com"

Compact design heat pump outdoor units

Ecology and safety

R32 REFRIGERANT

The use of low GWP R-32 refrigerant reduces environmental impact of VRF systems, and ensures excellent performances and efficiency.
Optional safety devices are also available to reduce installation limits related to the room dimensions, increase safety and comply with regulations.

GWP = 675

SHUT-OFF VALVE

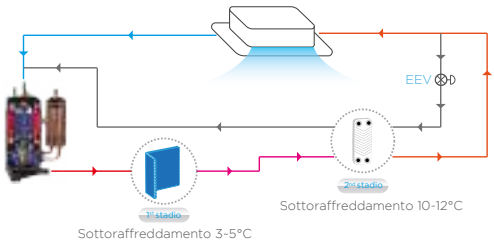
The shut-off valve is installed next to the outdoor unit and in case of a leak stops the refrigerant flow, which is recovered and stored in a safe manner in the outdoor units.

R32 LEAKAGE DETECTOR

The sensor is capable of detect anomalous presence of R32 refrigerant in the ambient and automatically start the appropriate safety measures

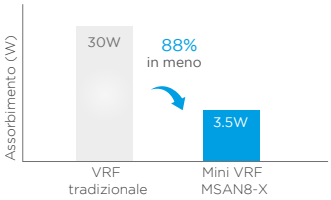
PHE (PLATE HEAT EXCAHNGER) SUBCOOLING

Plate Heat Exchanger as a secondary intercooler can boosts refrigerant subcooling up to 15°C and improves heat transfer efficiency and sound.



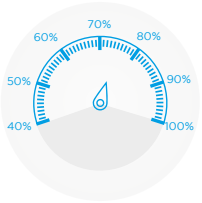
LOW STANDBY POWER CONSUPTION

Thanks to the optimized conltrol scheme, the power consumption in standby mode is reduced as low as 3.5 W.



60 STEPS CAPACITY LIMITATION

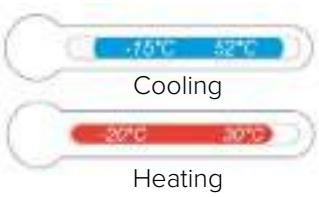
In projects with limited elecricity supply, capacity can be set to output from 40 to 100% with 1% discretization steps avoiding tripping and mantaining the system in operation.



Wide application range

WIDE OPERATING RANGE

Functioning is ensured in a wide ambient temperature range. Units can operate stabily from -15°C up to 52°C in cooling mode and from -20°C to 30°C in heating mode.



LONG PIPING LENGTH

Total piping length is extended up to 300 m and maximum height difference between outdoor and indoor unts up to 50 m. The heigth difference between indoor units can be up to 15 m. These generous allowances facilitate an extensive array of system designs.

Allowed values				80M	100M	120M/T	140M/T	160M/T	180M/T
Piping length	Total piping length	Actual	m	150	150	300	300	300	300
	1. Longest piping	Actual	m	50	50	100	100	100	100
		Equivalent	m	60	60	120	120	120	120
	2. Longest length after first branch Y		m	30	30	40	40	40	40
Difference in height	3. Height difference between indoor and outdoor units	Outdoor unit up	m	30	30	50	50	50	50
		Outdoor unit down	m	20	20	40	40	40	40
	4. Height difference between indoor units		m	15	15	15	15	15	15

Enhanced comfort

MULTIPLE PRIORITY MODES

Operating mode priority can be set among 10 different modes to satisfy every specific user's need. Setting can be performed easily on field.


Cooling only / Heating only


Cooling priotrity / Heating priority


Quantity / Capacity vote priority

VIP priority

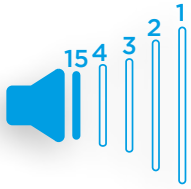

Autopriority


Changeover


First priority

MULTIPLE SILENT MODES

Multiple modes for sound power attenuation are available depending on specific needs in the event that discrete operation of the unit is required.



High Reliability

HEAVY ANTI CORROSION TREATMENT

Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anticorrosion treatment on main components for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend overall useful life. The integrity of the anti-corrosion treatment is ensured by subjecting major components and parts to salt mist testing, moisture and heating testing and light aging testing.

Please contact your local dealer for further information about customization price and availability.

- Fan motor
- Painted sheet metal
- Screws / Bolts / Gaskets
- Heat exchanger aluminum foil
- Heat exchanger copper pipe
- Electric Control Box Case

REFRIGERANT COOLING PCB

Refrigerant cooling technology is used to cool the electric control box. It decreases the average temperature of electrical control components by about 8 degrees, guaranteeing the stable and safe running of the control system even at very high outdoor temperatures.

Easy Installation and Service

FAN ESP UP TO 35 PA

Fan motor can be set to provide an external static pressure up to 35 Pa, facilitating the installation of the unit in technical rooms or in areas where the proper airflow cannot be ensured, by installing ducts and directing the air towards the outside.

35 Pa

AUTOMATIC REFRIGERANT RECYCLING

Thanks to a specific setting, automatic refrigerant recycling allows to recover and store the refrigerant inside the outdoor unit or on indoor units side automatically when required before repairing, strongly simplifying the technical intervention.

Refrigerant stored in ODU

Refrigerant stored in IDU

AUTO ADDRESSING

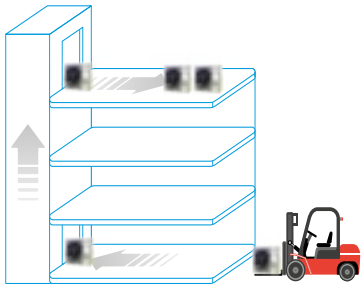
Outdoor unit can distribute addresses to indoor units automatically. Remote and wired controllers can be used to query or modify each indoor unit's address.

SMART INPUT / OUTPUT CONTACT

Convenient connectors are available as standard on unit PCB, to realize some convenient operations on field with other building appliances depending on users' needs.
Input: Two contacts available including Cooling/Heating only mode and Force stop.
Outputs: One contact available including runnig status and alarm signal.

COMPACT AND EASY TO TRANSPORT AND INSTALL

The compactness and lightness of the units allow to minimize the overall footprint, reducing the weight loaded on the surfaces and making transport easier. They can also be trasported by lifts or forklifts reducing installation time.
This makes the system particularly suitable for applications where it is necessary to limit the visual impact on the architecture, such as historic or prestigious buildings.



technical data

MSAN8-Y 80M÷180T

Mini VRF

Size		MSAN8-Y	80M*	100M*	120 M/T	140 M/T	160 M/T	180 M/T
Capacity		HP	3	4	4,5	5	6	6,5
Cooling (1)	Capacity	kW	7,2	9,0	12,3	14,0	15,5	17,5
	SEER	-	5,80	5,70	7,80	7,40	7,35	7,10
	ηs,c	%	229	225	309	293	291	281
	Operating temperature range (DB)	°C	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52
Heating (2)	Capacity (Nominal/Max)	kW	7,2/9,0	9,0/10,8	12,3/14,0	14,0/16,0	15,5/17,5	17,5/19,5
	SCOP	-	3,80	3,80	4,90	4,80	4,80	4,80
	ηs,h	%	149	149	193	189	189	189
	Operating temperature range (DB)	°C	-20 ~ 30	-20 ~ 30	-20 ~ 30	-20 ~ 30	-20 ~ 30	-20 ~ 30
Connectable Indoor Units	Total Capacity Index (3)	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	5	6	8	10	11	12
Compressor	Type (4)	-	ROT	ROT	ROT	ROT	ROT	ROT
	Quantity	-	1	1	1	1	1	1
Refrigerant	Factory charge	kg	2	2	2.85	2,85	2,85	2,85
	CO_2 equivalence	tonne	1,35	1,35	1,92	1,92	1,92	1,92
Pipe connections	Liquid	mm	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52
	Gas	mm	Ø15.9	Ø15.9	Ø15.9	Ø15.9	Ø15.9	Ø15.9
Dimensions (Width x Height x Depth)		mm	1038 x 864 x 523	1038 x 864 x 523	1038 x 864 x 523	1038 x 864 x 523	1038 x 864 x 523	1038 x 864 x 523
Weight		kg	77	77	M:94 / T:110	M:94 / T:110	M:94 / T:110	M:94 / T:110
Fan number		-	1	1	1	1	1	1
Air flow rate		m^3/h	5200	5200	5000	5000	5000	5500
Sound power level (5)		dB(A)	68	69	70	71	72	73
Power supply		V/Ph/Hz	230/1~/50	230/1~/50	M: 230/1~/50 - T:400/3~/50+N			

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) N.No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

(1) Indoor air temperature 27°C DB/19°C WB; Outdoor air temperature 35°C DB/24°C WB. Equivalent piping length 5m with zero level difference.

(2) Indoor air temperature 20°C DB/15°C WB; Outdoor air temperature 7°C DB/6°C WB. Equivalent piping length 5m with zero level difference.

(3) Total capacity index = total capacity of indoor units/capacity of outdoor units. 50~160% under specific conditions, refer to the technical documentation for more details

(4) ROT = rotary compressor

(5) Sound values are measured in a semi-anechoic room, at a position 1 m in front of the unit and 1 m above the floor.

* Data MSAN8-Y 80M declared in combination with 2x CNT2-3-XY D15 + 2x CNT2-3-XY D22, Data MSAN8-Y 100M declared in combination with 3x CNT2-3-XY D22+1x CNT2-3-XY D28

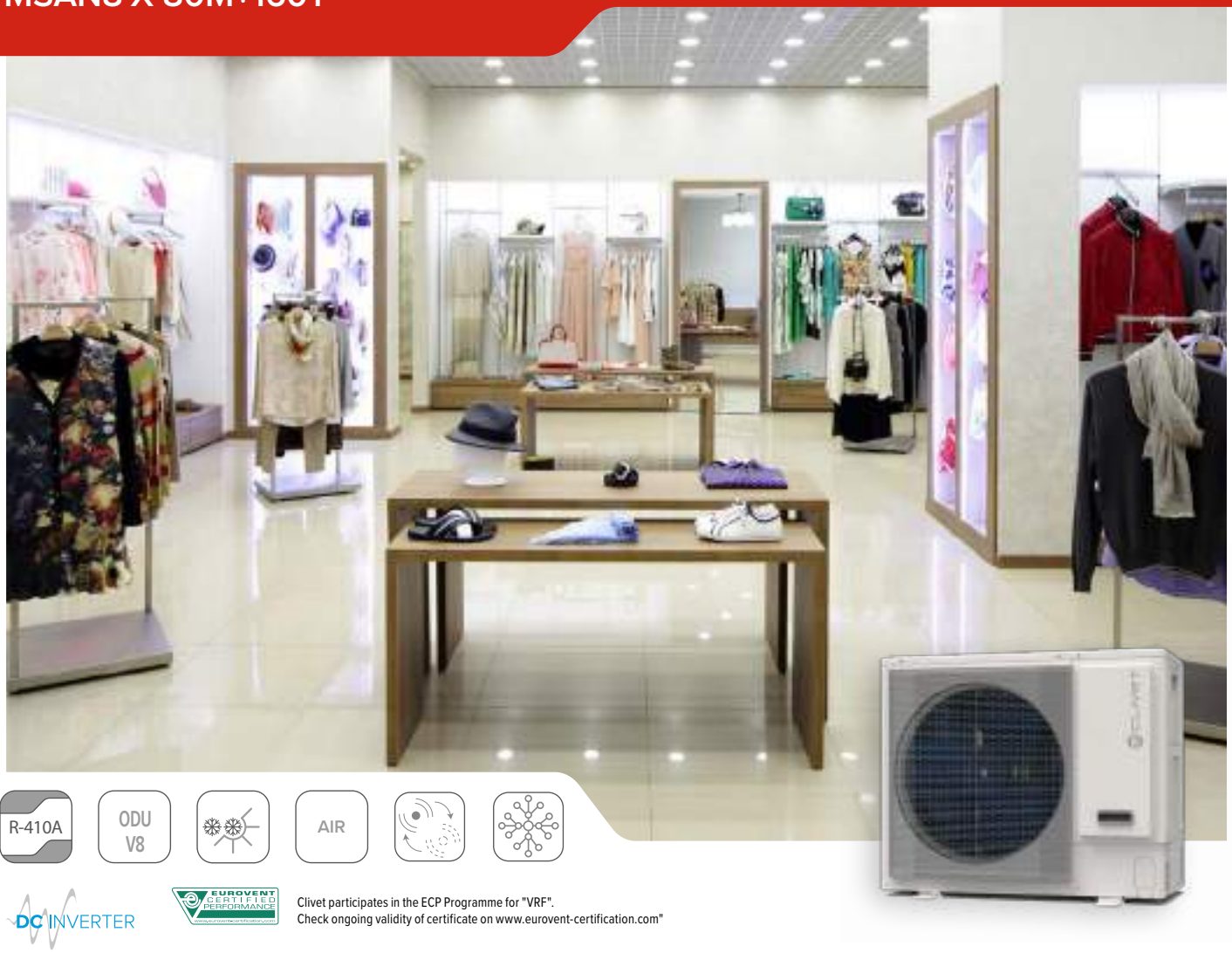
Optional Accessories

N8SV-01 Shut-off valve
N8RS-01 Refrigerant Leakage Sensor

MIA-SM Expansion board for connecting the sensor to the indoor unit

MINI VRF MSAN8-X

MSAN8-X 80M÷160T



R-410A | ODU V8 | AIR

DC INVERTER

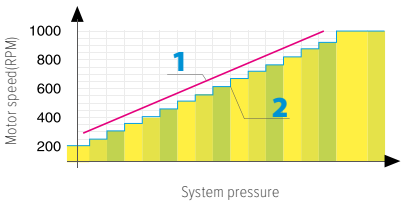
Clivet participates in the ECP Programme for "VRF".
Check ongoing validity of certificate on www.eurovent-certification.com"

Compact design heat pump outdoor units

High efficiency

FULL INVERTER DC TECHNOLOGY

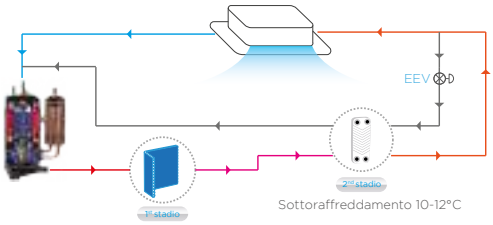
DC inverter technology is adopted both for compressor and fan motor allowing to always operate accordingly to the system pressure and system load and ensuring efficiency, consistence and less noise.



1. DC inverter stepless adjustment
2. AC inverter multistep adjustment

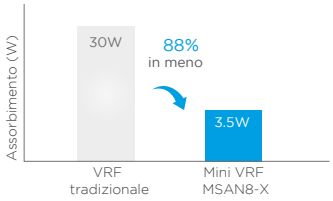
PHE (PLATE HEAT EXCAHNGER) SUBCOOLING

Plate Heat Exchanger as a secondary intercooler can boosts refrigerant subcooling up to 15°C and improves heat transfer efficiency and sound.



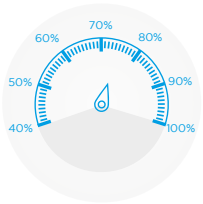
LOW STANDBY POWER CONSUPTION

Thanks to the optimized conltrol scheme, the power consumption in standby mode is reduced as low as 3.5 W.



60 STEPS CAPACITY LIMITATION

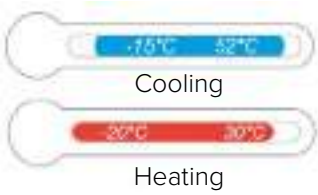
In projects with limited elecricity supply, capacity can be set to output from 40 to 100% with 1% discretization steps avoiding tripping and mantaining the system in operation.



Wide application range

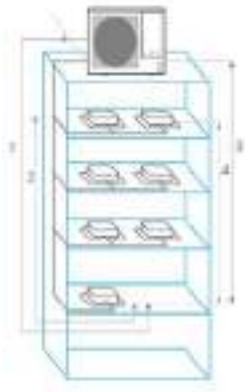
WIDE OPERATING RANGE

Functioning is ensured in a wide ambient temperature range. Units can operate stably from -15°C up to 52°C in cooling mode and from -20°C to 30°C in heating mode.



LONG PIPING LENGTH

Total piping length is extended up to 300 m and maximum height difference between outdoor and indoor unts up to 50 m. The heigth difference between indoor units can be up to 15 m. These generous allowances facilitate an extensive array of system designs.



Allowed values				80M	100M	120M/T	140M/T	160M/T
Piping length	Total piping length	Actual	m	150	150	300	300	300
	1. Longest piping	Actual	m	50	50	100	100	100
		Equivalent	m	60	60	120	120	120
	2. Longest length after first branch Y		m	30	30	40	40	40
Difference in height	3. Height difference between indoor and outdoor units	Outdoor unit up	m	30	30	50	50	50
		Outdoor unit down	m	20	20	40	40	40
	4. Height difference between indoor units		m	15	15	15	15	15

Enhanced comfort

MULTIPLE PRIORITY MODES

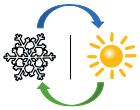
Operating mode priority can be set among 10 different modes to satisfy every specific user's need. Setting can be performed easily on field.

Cooling only / Heating only

Cooling priotrity / Heating priority

Quantity / Capacity vote priority

VIP priority



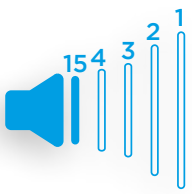
Autopriority

Changeover

First priority

MULTIPLE SILENT MODES

Multiple modes for sound power attenuation are available depending on specific needs in the event that discrete operation of the unit is required.



High Reliability

HEAVY ANTI CORROSION TREATMENT

Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anticorrosion treatment on main components for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend overall useful life. The integrity of the anti-corrosion treatment is ensured by subjecting major components and parts to salt mist testing, moisture and heating testing and light aging testing.

Please contact your local dealer for further information about customization price and availability.

- Fan motor
- Painted sheet metal
- Screws / Bolts / Gaskets
- Heat exchanger aluminum foil
- Heat exchanger copper pipe
- Electric Control Box Case

REFRIGERANT COOLING PCB

Refrigerant cooling technology is used to cool the electric control box. It decreases the average temperature of electrical control components by about 8 degrees, guaranteeing the stable and safe running of the control system even at very high outdoor temperatures.

Easy Installation and Service

FAN ESP UP TO 35 PA

Fan motor can be set to provide an external static pressure up to 35 Pa, facilitating the installation of the unit in technical rooms or in areas where the proper airflow cannot be ensured, by installing ducts and directing the air towards the outside.

35 Pa

AUTOMATIC REFRIGERANT RECYCLING

Thanks to a specific setting, automatic refrigerant recycling allows to recover and store the refrigerant inside the outdoor unit or on indoor units side automatically when required before repairing, strongly simplifying the technical intervention.

Refrigerant stored in ODU

Refrigerant stored in IDU

AUTO ADDRESSING

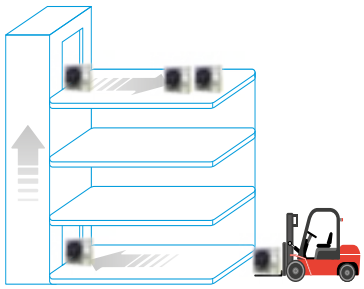
Outdoor unit can distribute addresses to indoor units automatically. Remote and wired controllers can be used to query or modify each indoor unit's address.

SMART INPUT / OUTPUT CONTACT

Convenient connectors are available as standard on unit PCB, to realize some convenient operations on field with other building appliances depending on users' needs.
Input: Two contacts available including Cooling/Heating only mode and Force stop.
Outputs: One contact available including runnig status and alarm signal.

COMPACT AND EASY TO TRANSPORT AND INSTALL

The compactness and lightness of the units allow to minimize the overall footprint, reducing the weight loaded on the surfaces and making transport easier. They can also be trasported by lifts or forklifts reducing installation time.
This makes the system particularly suitable for applications where it is necessary to limit the visual impact on the architecture, such as historic or prestigious buildings.



technical data

MSAN8-X 80M÷160T

Mini VRF

Size		MSAN8-X	80M*	100M*	120 M/T	140 M/T	160 M/T
Capacity		HP	3	4	4,5	5	6
Cooling (1)	Capacity	kW	7,2	9,0	12,3	14,0	15,5
	SEER	-	5,40	5,40	7,20	7,00	6,80
	ηs,c	%	-	-	285	277	269
	Operating temperature range (DB)	°C	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52
Heating (2)	Capacity (Nominal/Max)	kW	7,2/9,0	9,0/10,8	12,3/14,0	14,0/16,0	15,5/17,5
	SCOP	-	3,80	3,80	4,90	4,80	4,80
	ηs,h	%	-	-	193	189	189
	Operating temperature range (DB)	°C	-20 ~ 30	-20 ~ 30	-20 ~ 30	-20 ~ 30	-20 ~ 30
Connectable Indoor Units	Total Capacity Index (3)	-	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	5	6	8	10	11
Compressor	Type (4)	-	ROT	ROT	ROT	ROT	ROT
	Quantity	-	1	1	1	1	1
Refrigerant	Factory charge	kg	3,1	3,1	4,1	4,1	4,1
	CO_2 equivalence	tonne	6,47	6,47	8,56	8,56	8,56
Pipe connections	Liquid	mm	Ø9.52	Ø9.52	Ø9.52	Ø9.52	Ø9.52
	Gas	mm	Ø15.9	Ø15.9	Ø15.9	Ø15.9	Ø15.9
Dimensions (Width x Height x Depth)		mm	1038 x 864 x 523	1038 x 864 x 523	1038 x 864 x 523	1038 x 864 x 523	1038 x 864 x 523
Weight		kg	80	80	M:94 / T:109	M:94 / T:109	M:94 / T:109
Fan number		-	1	1	1	1	1
Air flow rate		m^3/h	5200	5200	5000	5000	5000
Sound power level (5)		dB(A)	70	72	72	73	74
Power supply		V/Ph/Hz	230/1~/50	230/1~/50	M: 230/1~/50 - T:400/3~/50+N		

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) N.No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

(1) Indoor air temperature 27°C DB/19°C WB; Outdoor air temperature 35°C DB/24°C WB. Equivalent piping length 5m with zero level difference.

(2) Indoor air temperature 20°C DB/15°C WB; Outdoor air temperature 7°C DB/6°C WB. Equivalent piping length 5m with zero level difference.

(3) Total capacity index = total capacity of indoor units/capacity of outdoor units. 50~160% under specific conditions, refer to the technical documentation for more details

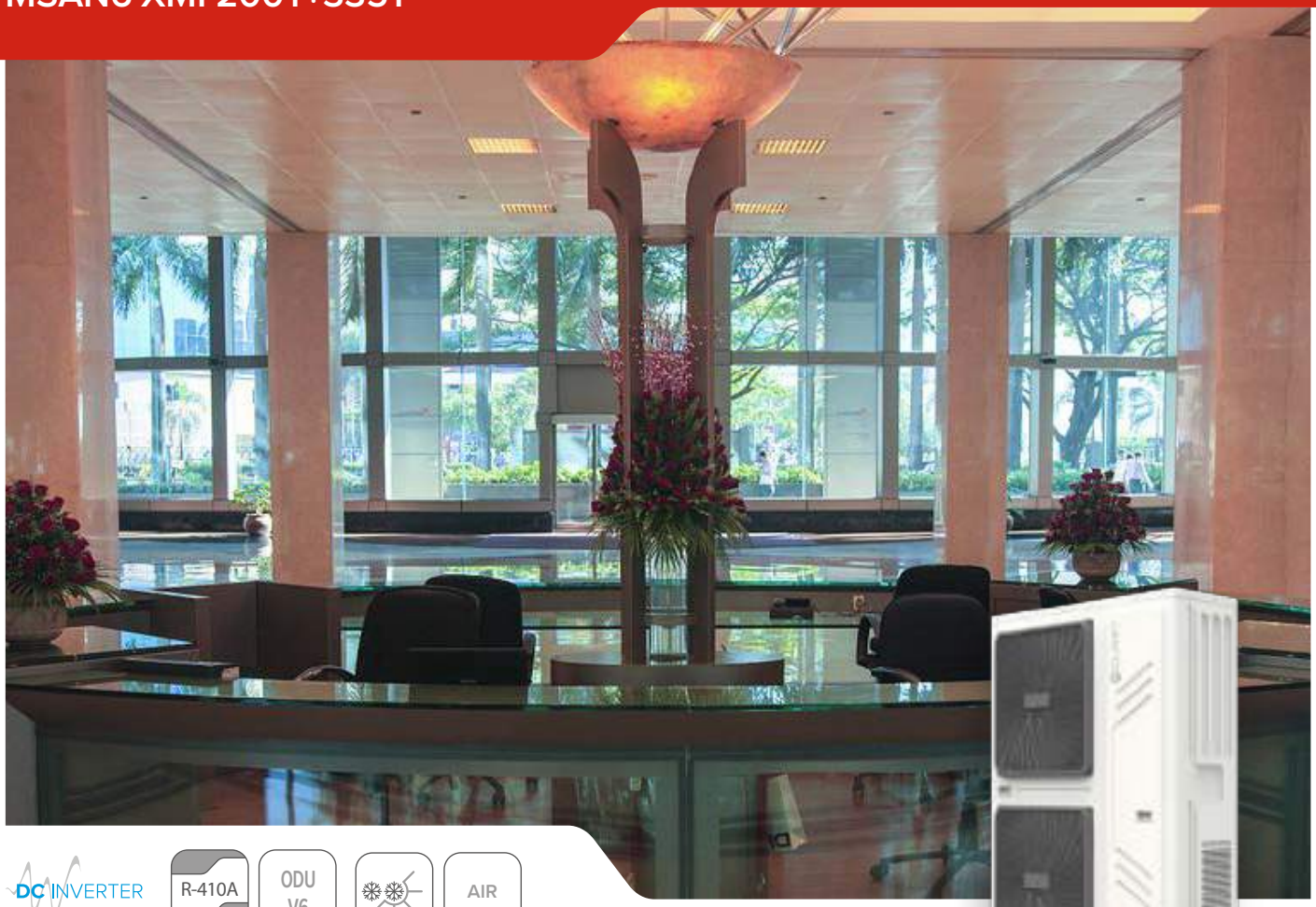
(4) ROT = rotary compressor

(5) Sound values are measured in a semi-anechoic room, at a position 1 m in front of the unit and 1 m above the floor.

*MSAN8-X 80M data declared in combination with 2x CNT2-3-XY D15 + 2x CNT2-3-XY D22, MSAN8-X 100M data declared in combination with 3x CNT2-3-XY D22+1x CNT2-3-XY D28

MINI VRF MSAN6

MSAN6-XMI 200T÷335T



DC INVERTER | R-410A | ODU V6 | AIR

Clivet participates in the ECP Programme for "VRF".
Check ongoing validity of certificate on www.eurovent-certification.com"

Compact design heat pump outdoor units

High efficiency

ALL DC INVERTER COMPRESSORS

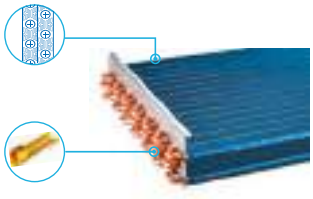
The DC inverter compressor adopts innovative design and numerous high performance key parts which can reduce power consumption by 25%.

Compressor (Twin Rotary) structure

1. Highly Efficient DC Motor:
   - Creative motor core design
   - High density neodymium magnet
   - Concentrated type stator
   - Wider operating frequency range
2. Better balance and Extremely Low Vibration:
   - Twin eccentric cams
   - 2 balance weights
3. Highly Stable Moving Parts:
   - Optimal material matching rollers and vanes
   - Optimize compressor drive technology
   - Highly robust bearings
   - Compact structure

HIGH EFFICIENCY HEAT EXCHANGER

Newly designed window type fins enlarge the heat exchange area and decrease air resistance, enhance heat exchange performance and save more energy.
Hydrophilic fins and internally threaded copper pipes optimize heat exchange efficiency.
The electronic expansion valve ensures precise regulation of the refrigerant in the heat exchanger.



NEW GRILL DESIGN

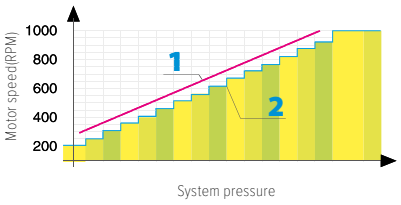
Optimally designed fan shape and newly designed grill ensure both safety and air volume.

Newly designed grill

Powerful Large Propeller

ALL DC FAN MOTORS

Fan speed is controlled according to the system pressure and system load, minimizing energy consumption.



1. DC inverter stepless adjustment
2. AC inverter multistep adjustment

Wide application range

WIDE CAPACITY RANGE

The outdoor units are ideal for air conditioning of commercial and residential spaces such as small offices, shops, open spaces, villas and residential units.

20/22.4/26/28.5/33.5 kW
MSAN6-XMi

WIDE RANGE OF INDOOR UNITS

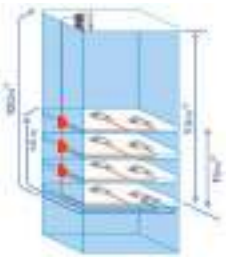
Clivet provides 14 types and more than 100 models of VRF indoor units to meet varied customer requirements in a wide range of locations including shopping malls, hospitals, office buildings, hotels and airports.

WIDE OPERATING TEMPERATURE RANGE

Mini VRF Series operates stably under extreme conditions, ranging from -20°C to +48°C

LONG REFRIGERANT GAS PIPING LENGTH

Total piping length is up to 150 m and maximum height difference between outdoor and indoor unts up to 50 m. The heigth difference between indoor units can be up to 15 m. These generous allowances facilitate an extensive array of system designs.



1. Longest actual piping length
2. Height difference between indoor and outdoor units units
3. Level difference between indoor units

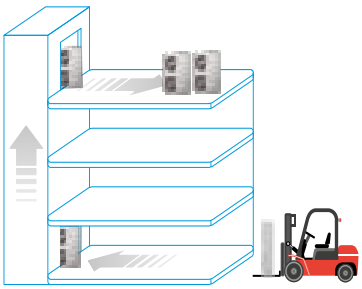
Allowed values				200T	224T	260T	280T	335T
Piping length	Total piping length	Actual	m	150	150	150	150	150
	Longest piping	Actual	m	100	100	100	100	100
		Equivalent	m	110	110	110	110	110
	Longest length after first branch		m	40	40	40	40	40
Difference in height	Height difference between indoor and outdoor units	Outdoor unit up	m	50	50	50	50	50
		Outdoor unit down	m	40	40	40	40	40
	Level difference between indoor units		m	15	15	15	15	15

Easy Installation

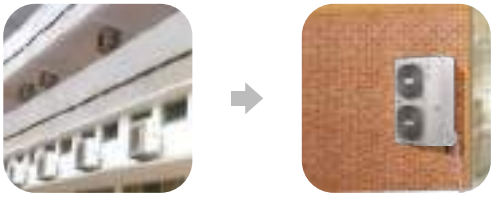
EASY TRANSPORTATION

The compactness and light weight of the units minimise the footprint, reducing the weight loaded on the surfaces and making transport easier. For some projects, the units can even be transported using lifts or forklifts, reducing access problems to workplaces.

The outdoor and indoor units of the MiniVRF system are as easy to install as domestic air conditioners, making them ideal for small offices and shops.



SPACE SAVING DESIGN



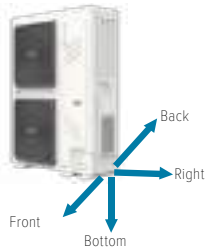
The MSAN6 units are slimmer and more compact, resulting in significant savings in installation space.

This makes the system particularly suitable for applications where it is necessary to limit the visual impact on the architecture, such as on historic or prestigious buildings.

AUTO ADDRESSING

Outdoor unit can distribute addresses for indoor units automatically.
Wireless and wired controllers can query and modify each indoor unit's address.

FOUR-WAY PIPING CONNECTION



A four-direction space is available for connecting pipes and wiring in various installation sites.

REFRIGERANT COOLING PCB

The MSAN6 series uses refrigerant cooling technology to cool the electric control box. It decreases the average temperature of electrical control components by about 8 degrees, guaranteeing the stable and safe running of the control system even at very high outdoor temperatures.

MSAN6-XMI 200T÷335T

Mini VRF

Size		MSAN6-XMi	200T	224T	260T	280T	335T
Capacity		HP	7	8	9	10	12
Cooling [1]	Capacity	kW	20	22,4	26	28,5	33,5
	SEER	-	7,11	6,83	6,55	6,35	6,42
	ηs,c	%	281,4	270,2	259	251	253,8
	Operating temperature range (DB)	°C	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48	-5 ~ 48
Heating [2]	Capacity (Nominal/Max)	kW	20/22,5	22,4/25	26/28,5	28,5/31,5	33,5/37,5
	SCOP	-	3,95	4,26	4,53	4,56	3,96
	ηs,c	%	155	167,4	178,2	179,4	155,4
	Operating temperature range (DB)	°C	-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24	-20 ~ 24
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	11	13	15	16	20
Compressor	Type [4]	-	ROT	ROT	ROT	ROT	ROT
	Quantity	-	1	1	1	1	1
Refrigerant	Factory charge	kg	6,5	6,5	6,5	6,5	8
	CO_2 equivalence	tonne	13,57	13,57	13,57	13,57	16,70
Pipe connections	Liquid	mm	Ø 12.7	Ø 12.7	Ø 12.7	Ø 12.7	Ø 12.7
	Gas	mm	Ø 19.1	Ø 19.1	Ø 22.2	Ø 22.2	Ø 25.4
Dimensions (Width x Height x Depth)		mm	1120x1558x528	1120x1558x528	1120x1558x528	1120x1558x528	1120x1558x528
Weight		kg	143	143	144	144	157
Fan number		-	2	2	2	2	2
Air flow rate		m^3/h	9 000	9 000	10 000	11 000	11 300
Sound power level [5]		dB(A)	78	78	78	78	81
Power supply		V/Ph/Hz	400/3~/50+N				

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

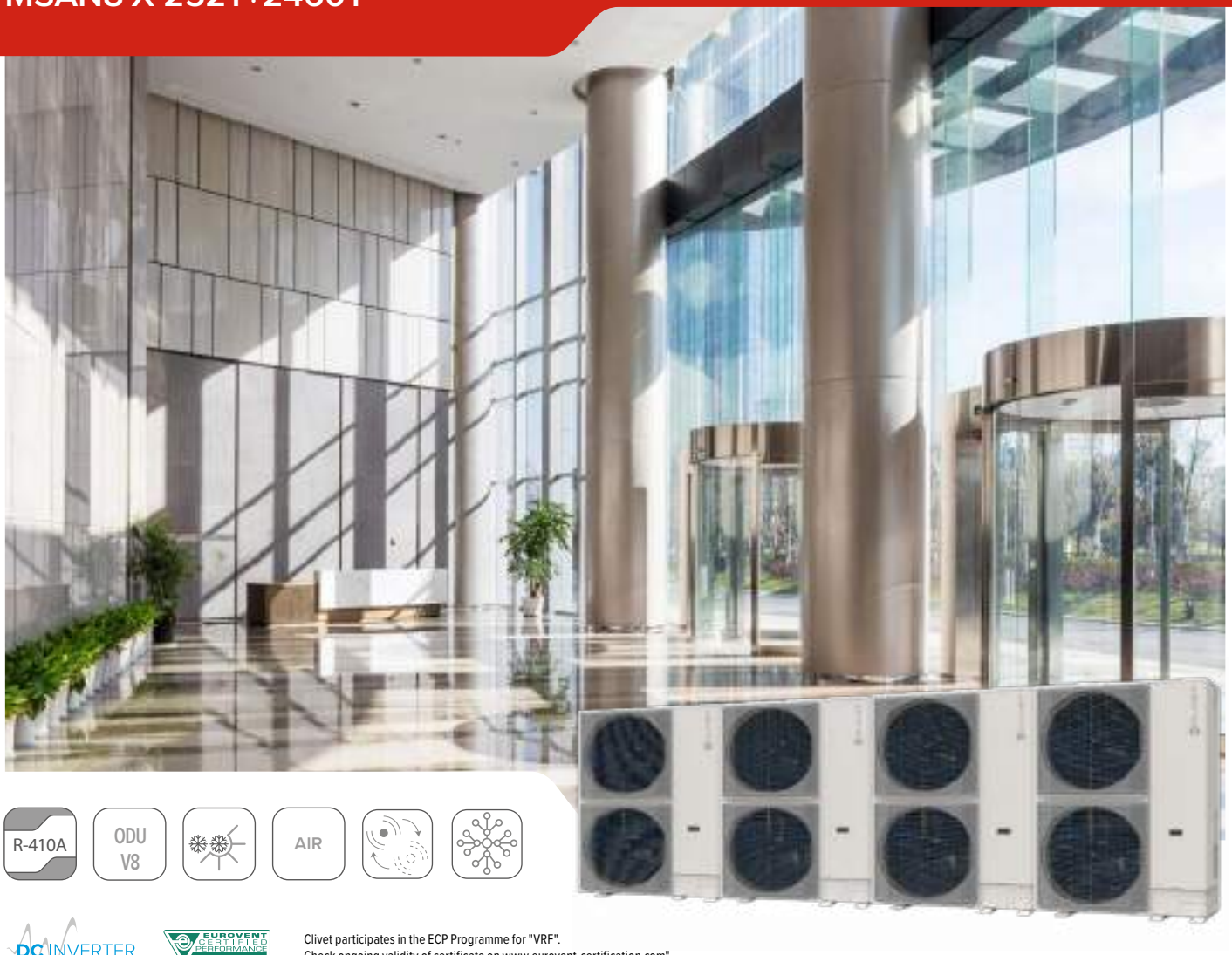
(3) Total Capacity Index = indoor unit total capacity/outdoor unit capacity

(4) ROT = rotary compressor

(5) Sound values are measured in a semi-anechoic room, at a position 1 m in front of the unit and 1 m above the floor.

VRF MSAN8

MSAN8-X 252T÷2460T



R-410A | ODU V8 | AIR

DC INVERTER

Clivet participates in the ECP Programme for "VRF".
Check ongoing validity of certificate on www.eurovent-certification.com"

High efficiency compact heat pump outdoor units

Unique features

LARGE CAPACITIES IN SMALL SPACES

The MSAN8 VRF range is the only one that offers such extensive modularity. Large capacity units (up to 246 kW) can be created using compact modules, thus reducing the space required for installation and also making it easier to transport the units. Installations with an external unit on the floor can be realised for easier maintenance, improved performance and reduced amount of refrigerant.

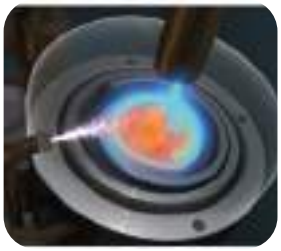
MULTISENSOR CONTROL TECHNOLOGY

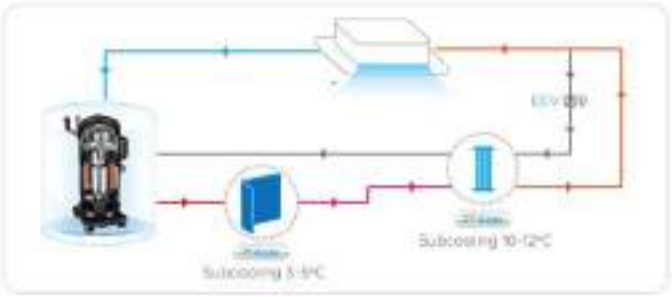
The refrigerant system is constantly monitored in every component, ensuring a high level of reliability and comfort, thanks to 18 sensors distributed throughout the refrigerant circuit.
At the same time, and in combination with digital twin technology, a virtual copy of a physical sensor can be created in the event of a failure, so that the system does not stop, thus ensuring comfort while waiting for maintenance to be carried out.
The function is only available with indoor units and V8 platform controls.

High efficiency

COMPRESSOR EVI (ENHANCED VAPOR INJECTION)

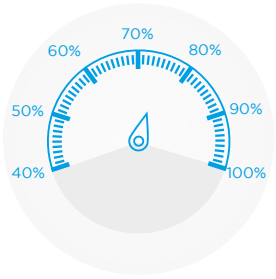
Thanks to the vapour injection DC inverter compressor and a secondary microchannel exchanger, the MSAN8 range can operate smoothly in temperatures down to -30°C, while also ensuring significantly higher heating capacities especially in colder outdoor temperatures. The compressor is designed to modulate at a minimum of 7%, vastly increasing the efficiency of the entire system as partial loads.





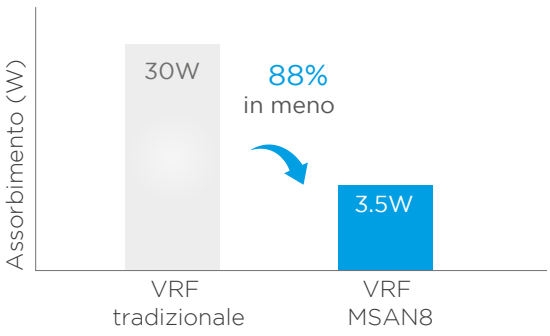
60 STEPS CAPACITY LIMITATION

In projects with limited elecricity supply, capacity can be set to output from 40 to 100% with 1% discretization steps avoiding tripping and mantaining the system in operation.



LOW STANDBY POWER CONSUPTION

Thanks to the optimized conltrol scheme, the power consumption in standby mode is reduced as low as 3.5 W.



Wide application range

WIDE CAPACITY RANGE

The entire MSAN8 VRF range offers 8HP to 88HP, with an increase of 2HP, boasting the world's largest capacity as a single compact cooling system, up to 88HP.

8/10/12/14 HP

16/18/20/22 HP

24/44 HP

46/66HP

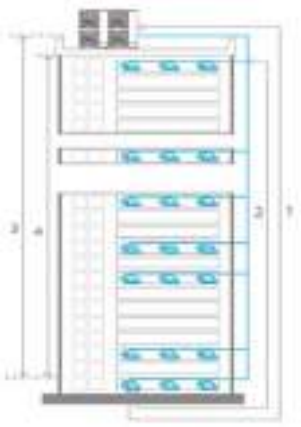
68/88 HP

LONG REFRIGERANT GAS PIPING LENGTH

Allowed values

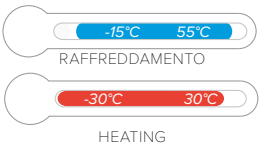
Piping length	Total piping length	Actual	m	560
	Longest piping	Actual	m	150
		Equivalent	m	175
	Longest length after first branch		m	40/90
Difference in height	Height difference between indoor and outdoor units	Outdoor unit up	m	50
		Outdoor unit down	m	40
	Level difference between indoor units		m	30

* The maximum standard pipe length is 40m, but it can be up to 90 m long. Refer to the manual for more information.



WIDE OPERATING TEMPERATURE RANGE

MSAN8 VRF provides a guaranteed operating range.
They can operate stably at outdoor temperatures between -15°C and 55°C in cooling mode and between -30°C and 30°C in heating mode.



High Reliability

BACKUP OPERATION

In a unit with two compressors or fans, if one of the components goes into alarm, the other can act as its backup in order to maintain a temporary capacity for up to 4 days, leaving time for maintenance or repair, and ensure uninterrupted comfort.

In one unit with two compressors, if one compressor is failed, the other compressor can be backup instead of the failed one to maintain up to 4 days interim capacity, allowing time for maintenance or repair while comfort remains guaranteed.

BALANCING THE OPERATING TIMES

In a multi-unit system, if one module fails, the other modules provide backup so that the system can continue operating.

ANTI-CORROSION PROTECTION

Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anticorrosion treatment on main components for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend overall useful life. The integrity of the anti-corrosion treatment is ensured by subjecting major components and parts to salt mist testing, moisture and heating testing and light aging testing.

Please contact your local dealer for further information about customization price and availability.

- Fan motor
- Screws / Bolts / Gaskets
- Heat exchanger aluminum foil
- Painted sheet metal
- Heat exchanger copper pipe
- Electric Control Box Case

Enhanced comfort

MULTIPLE PRIORITY MODES

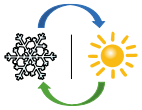
Operating mode priority can be set among 10 different modes to satisfy every specific user's need. Setting can be performed easily on field.


Cooling / heating only


Cooling priotrity / Heating priority


Quantity / Capacity vote priority

VIP priority

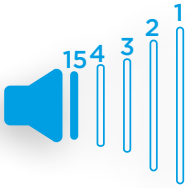

Autopriority


Changeover


First priority

MULTIPLE SILENT MODES

There are 15 silent modes available to fulfil any specific requirement.



Easy Installation and Service

AUTO ADDRESSING

The outdoor unit can assign the addresses of the indoor and outdoor master/slave units automatically.
Remote and wired controllers can be used to query or modify each indoor unit's address.

FLEXIBLE PLACEMENT

The direction of the main cooling backbone can be set in four different directions, thereby simplifying installation and location of the outdoor unit.

AUTOMATIC REFRIGERANT RECYCLING

Thanks to a specific setting, the recovery and storage of refrigerant can be set in the outdoor unit or in the indoor units, thereby facilitating technical intervention and reducing maintenance times.

Refrigerant stored in ODU

Refrigerant stored in IDU

MAINTENANCE MODE

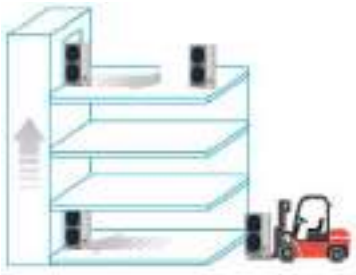
If the power supply has to be cut off to some of the units during a technical intervention, maintenance mode can be activated and the rest of the system kept active.

SMART INPUT / OUTPUT CONTACT

Convenient connectors are available as standard on unit PCB, to realize some convenient operations on field with other building appliances depending on users' needs.
Input: Two contacts available including Cooling/Heating only mode and Force stop.
Outputs: One contact available including runnig status and alarm signal.

COMPACT AND EASY TO TRANSPORT AND INSTALL

The compactness and lightness of the units allow to minimize the overall footprint, reducing the weight loaded on the surfaces and making transport easier. They can also be trasported by lifts or forklifts reducing installation time.
This makes the system particularly suitable for applications where it is necessary to limit the visual impact on the architecture, such as historic or prestigious buildings.



VRF MSAN8

Size		MSAN8-X	252T	280T	335T	400T	450T	500T	560T	615T
Capacity		HP	8	10	12	14	16	18	20	22
Cooling [1]	Capacity	kW	25,2	28,0	33,5	40,0	45,0	50,0	56,0	61,5
	SEER	-	7,25	7,05	6,91	6,65	6,77	6,47	6,30	6,15
	ηs,c	%	287,0	279,0	273,4	263,0	267,8	255,8	249,0	243,0
	Operating temperature range (DB)	°C	-15~55	-15~55	-15°~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating [2]	Capacity (Nominal/Max)	kW	25,2/27,0	28,0/31,5	33,5/37,5	40,0/45,0	45,0/50,0	50,0/56,5	56,0/63,0	61,5/69,0
	SCOP		4,15	4,11	4,11	4,15	4,23	4,17	4,07	4,00
	ηs,h	%	163,0	161,4	161,4	163,0	166,2	163,8	159,8	157,0
	Operating temperature range (DB)	°C	-30 ~30	-30 ~30	-30 ~30	-30 ~30	-30 ~30	-30 ~30	-30 ~30	-30 ~30
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	13	16	19	22	26	29	32	35
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	1	1	1	1	1	1	1	1
Refrigerant	Factory charge	kg	6,1	6,1	6,4	7,4	8,0	8,0	8,5	8,5
	CO_2 equivalence	tonne	12,74	12,74	13,36	15,45	16,71	16,71	17,75	17,75
Pipe connections	Liquid	mm	Φ12,7	Φ12,7	Φ12,7	Φ12,7	Φ15,9	Φ15,9	Φ15,9	Φ15,9
	Gas	mm	Φ25,4	Φ25,4	Φ25,4	Φ25,4	Φ28,6	Φ28,6	Φ28,6	Φ28,6
Fan motor	Quantity	-	2	2	2	2	2	2	2	2
	Static pressure	Pa	0-35	0-35	0-35	0-35	0-35	0-35	0-35	0-35
Dimensions (Length x Height x Depth)		mm	1130×1760 ×580	1130×1760 ×580	1130×1760 ×580	1130×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
Weight		kg	177	177	180	182	208	208	228	228
Air flow rate		m^3/h	11800	12500	12500	12500	18500	20000	18500	19000
Sound power level [4]		dB(A)	76	79	81	82	86	88	89	89
Power supply		V/Ph/Hz	380-415/3~/50+N							

VRF MSAN8

Size		MSAN8-X	670T	735T	800T	850T	900T	950T	1000T	1065T
Capacity		HP	24	26	28	30	32	34	36	38
Combinations		HP	12+12	12+14	14+14	14+16	14+18	16+18	18+18	16+22
Cooling [1]	Capacity	kW	67,0	73,5	80,0	85,0	90,0	95,0	100,0	106,5
	SEER	-	6,95	6,81	6,67	6,73	6,57	6,63	6,49	6,41
	ηs,c	%	275	269,4	263,8	266,2	259,8	262,2	256,6	253,4
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating [2]	Capacity (Nominal/Max)	kW	67,0/75,0	73,5/82,5	80,0/90,0	85,0/95,0	90,0/101,5	95,0/106,5	100,0/113,0	106,5/119,0
	SCOP		4,11	4,13	4,15	4,19	4,19	4,23	4,17	4,08
	ηs,h	%	161,4	162,2	163,0	164,6	164,6	166,2	163,8	160,2
	Operating temperature range (DB)	°C	-30 ~30	-30 ~30	-30 ~30	-30 ~30	-30 ~30	-30 ~30	-30 ~30	-30 ~30
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	39	43	46	50	53	56	59	63
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	2	2	2	2	2	2	2	2
Refrigerant	Factory charge	kg	6,4+6,4	6,4+7,4	7,4+7,4	7,4+8	7,4+8	8+8	8+8	8+8,5
	CO_2 equivalence	tonne	26,73	28,82	30,91	32,16	32,16	33,41	33,41	34,45
Pipe connections	Liquid	mm	Φ15,9	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1
	Gas	mm	Φ28,6	Φ31,8	Φ31,8	Φ31,8	Φ31,8	Φ31,8	Φ38,1	Φ38,1
Fan motor	Quantity	-	4	4	4	4	4	4	4	4
	Static pressure	Pa	0-35	0-35	0-35	0-35	0-35	0-35	0-35	0-35
Dimensions (Length x Height x Depth)	Unit1	mm	1130×1760 ×580	1130×1760 ×580	1130×1760 ×580	1130×1760 ×580	1130×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
	Unit2	mm	1130×1760 ×580	1130×1760 ×580	1130×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
Weight		kg	180+180	180+182	182+182	182+208	182+208	208+208	208+208	208+228
Air flow rate		m^3/h	25000	25000	25000	31000	32500	38500	40000	37500
Sound power level [4]		dB(A)	84	85	85	8	89	90	91	91
Power supply		V/Ph/Hz	380-415/3~/50+N							

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) N.No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

Outdoor units in modular combination are exluded from the scope of Eurovent certification program.

(1) Indoor air temperature 27°C DB/19°C WB; Outdoor air temperature 35°C DB/24°C WB. Equivalent piping length 5m with zero level difference.

(2) Indoor air temperature 20°C DB/15°C WB; Outdoor air temperature 7°C DB/6°C WB. Equivalent piping length 5m with zero level difference.

(3) Total capacity index = total capacity of indoor units/capacity of outdoor units. 50~200% under specific conditions, refer to the technical documentation for more details

(4) Sound levels are measured in a semi-anechoic chamber, 1 m in front of the unit and 1.3 m off the floor



VRF MSAN8

Size		MSAN8-X	1115T	1175T	1230T	1300T	1350T	1400T	1450T	1500T
Capacity		HP	40	42	44	46	48	50	52	54
Combinations		HP	18+22	20+22	22+22	14+14+18	14+16+18	14+18+18	16+18+18	18+18+18
Cooling [1]	Capacity	kW	111,5	117,5	123,0	130,0	135,0	140,0	145,0	150,0
	SEER	-	6,3	6,24	6,16	6,6	6,64	6,54	6,58	6,49
	ηs,c	%	249,0	246,6	243,4	261,0	262,6	258,6	260,2	256,6
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating [2]	Capacity (Nominal/Max)	kW	111,5	117,5	123,0	130,0	135,0	140,0	145,0	150,0
	SCOP		4,10	4,03	4,00	4,17	4,20	4,20	4,22	4,17
	ηs,h	%	161,0	158,2	157,0	163,8	165,0	165,0	165,8	163,8
	Operating temperature range (DB)	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	64	64	64	64	64	64	64	64
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	2	2	2	3	3	3	3	3
Refrigerant	Factory charge	kg	8+8,5	8,5+8,5	8,5+8,5	7,4+7,4+8	7,4+8+8	7,4+8+8	8+8+8	8+8+8
	CO_2 equivalence	tonne	34,45	39,68	30,91	32,16	48,86	48,86	50,12	50,12
Pipe connections	Liquid	mm	Φ15,9	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1
	Gas	mm	Φ28,6	Φ31,8	Φ31,8	Φ31,8	Φ31,8	Φ31,8	Φ38,1	Φ38,1
Fan motor	Quantity	-	4	4	4	6	6	6	6	6
	Static pressure	Pa	0-35	0-35	0-35	0-35	0-35	0-35	0-35	0-35
Dimensions (Length x Height x Depth)	Unit1	mm	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1130×1760 ×580	1130×1760 ×580	1130×1760 ×580	1250×1760 ×580	1250×1760 ×580
	Unit2	mm	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1130×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
	Unit3	mm	-	-	-	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
Weight		kg	208+228	228+228	228+228	182+182+208	182+208+208	182+208+208	208+208+208	208+208+208
Air flow rate		m^3/h	39000	37500	38000	45000	51000	52500	58500	60000
Sound power level [4]		dB(A)	91	92	92	90	91	92	92	93
Power supply		V/Ph/Hz	380-415/3~/50+N							


VRF MSAN8

Size		MSAN8-X	1565T	1615T	1675T	1730T	1790T	1845T	1900T	1960T
Capacity		HP	56	58	60	62	64	66	68	70
Combinations		HP	16+18+22	18+18+22	18+20+22	18+22+22	20+22+22	22+22+22	14+18+18+18	14+18+18+20
Cooling [1]	Capacity	kW	156,5	161,5	167,5	173,0	179,0	184,5	190	196,0
	SEER	-	6,44	6,36	6,32	6,25	6,22	6,16	6,53	6,49
	ηs,c	%	254,6	251,4	249,8	247,0	245,8	243,4	258,2	256,6
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating [2]	Capacity (Nominal/Max)	kW	175,5	161,5/182,0	167,5/188,5	173,0/194,5	179,0/201,0	184,5/207,0	190,0/214,5	196,0/221,0
	SCOP		4,13	4,14	4,09	4,06	4,02	4,00	4,21	4,16
	ηs,h	%	162,2	162,6	160,6	159,4	157,8	157,0	165,4	163,4
	Operating temperature range (DB)	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	3	3	3	3	3	3	4	4
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	64	64	64	64	64	64	64	64
Refrigerant	Factory charge	kg	8+8+8,5	8+8+8,5	8+8,5+8,5	8+8,5+8,5	8,5+8,5+8,5	8,5+8,5+8,5	7,4+8+8+8	7,4+8+8+8,5
	CO_2 equivalence	tonne	51,16	51,16	52,20	52,20	53,25	53,25	65,57	66,61
Pipe connections	Liquid	mm	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ22,2	Φ22,2
	Gas	mm	Φ41,3	Φ41,3	Φ41,3	Φ41,3	Φ41,3	Φ41,3	Φ44,5	Φ44,5
Fan motor	Quantity	-	6	6	6	6	6	6	8	8
	Static pressure	Pa	0-35	0-35	0-35	0-35	0-35	0-35	0-35	0-35
Dimensions (Length x Height x Depth)	Unit1	mm	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1130×1760 ×580	1130×1760 ×580
	Unit2	mm	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
	Unit3	mm	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
	Unità4	mm	-	-	-	-	-	-	1250×1760×580	1250×1760×580
Weight		kg	208+208+228	208+208+228	208+228+228	208+228+228	228+228+228	228+228+228	182+208+208 +208	182+208+208 +228
Air flow rate		m^3/h	57500	59000	57500	58000	56500	57000	72500	71000
Sound power level [4]		dB(A)	93	93	94	94	94	94	93	94
Power supply		V/Ph/Hz	380-415/3~/50+N							

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) N.No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

Outdoor units in modular combination are exluded from the scope of Eurovent certification program.

(1) Indoor air temperature 27°C DB/19°C WB; Outdoor air temperature 35°C DB/24°C WB. Equivalent piping length 5m with zero level difference.

(2) Indoor air temperature 20°C DB/15°C WB; Outdoor air temperature 7°C DB/6°C WB. Equivalent piping length 5m with zero level difference.

(3) Total Capacity Index = indoor unit total capacity/outdoor unit capacity

(4) Sound levels are measured in a semi-anechoic chamber, 1 m in front of the unit and 1.3 m off the floor

VRF MSAN8

Size		MSAN8-X	2000T	2060T	2115T	2175T	2230T	2290T	2345T	2405T	2460T
Capacity		HP	72	74	76	78	80	82	84	86	86
Combinations		HP	18+18+18+18	18+18+18+20	18+18+18+22	18+18+20+22	18+18+22+22	18+20+22+22	18+22+22+22	20+22+22+22	22+22+22+22
Cooling [1]	Capacity	kW	200,0	206,0	211,5	217,5	223,0	229,0	234,5	240,5	246,0
	SEER	-	6,50	6,46	6,39	6,36	6,31	6,28	6,23	6,2	6,16
	ηs,c	%	257,0	255,4	252,6	251,4	249,4	248,2	246,2	245,0	243,4
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating [2]	Capacity (Nominal/Max)	kW	200,0/226,0	206,0/232,5	211,5/238,5	217,5/245,0	223,0/251,0	229,0/257,5	234,5/263,5	240,5/270,0	246,0/276,0
	SCOP		4,17	4,13	4,16	4,12	4,10	4,06	4,05	4,02	4,00
	ηs,h	%	163,8	162,2	163,4	161,8	161,0	159,4	159,0	157,8	157,
	Operating temperature range (DB)	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	4	4	4	4	4	4	4	4	4
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	64	64	64	64	64	64	64	64	64
Refrigerant	Factory charge	kg	8+8+8+8	8+8+8+8,5	8+8+8+8,5	8+8+8,5+8,5	8+8+8,5+8,5	8+8,5+8,5 +8,5	8+8,5+8,5 +8,5	8,5+8,5+8,5 +8,5	8,5+8,5+8,5 +8,5
	CO_2 equivalence	tonne	66,82	67,87	67,87	68,91	68,91	69,95	69,95	71,00	71,00
Pipe connections	Liquid	mm	Φ22,2	Φ22,2	Φ22,2	Φ22,2	Φ22,2	Φ22,2	Φ22,2	Φ22,2	Φ22,2
	Gas	mm	Φ44,5	Φ44,5	Φ44,5	Φ44,5	Φ44,5	Φ44,5	Φ50,8	Φ50,8	Φ50,8
Fan motor	Quantity	-	8	8	8	8	8	8	8	8	8
	Static pressure	Pa	0-35	0-35	0-35	0-35	0-35	0-35	0-35	0-35	0-35
Dimensions (Length x Height x Depth)	Unit1	mm	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
	Unit2	mm	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
	Unit3	mm	1250×1760× 580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
	Unità4	mm	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580	1250×1760 ×580
Weight		kg	208+208 +208+208	208+208 +208+228	208+208 +208+228	208+208 +228+228	208+208 +228+228	208+228 +228+228	208+228 +228+228	228+228+228 +228	228+228+228 +228
Air flow rate		m^3/h	80000	78500	79000	77500	78000	76500	77000	75500	76000
Sound power level [4]		dB(A)	94	94	94	95	95	95	95	95	95
Power supply		V/Ph/Hz	380-415/3~/50+N								

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) N.No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

Outdoor units in modular combination are exluded from the scope of Eurovent certification program.

(1) Indoor air temperature 27°C DB/19°C WB; Outdoor air temperature 35°C DB/24°C WB. Equivalent piping length 5m with zero level difference.

(2) Indoor air temperature 20°C DB/15°C WB; Outdoor air temperature 7°C DB/6°C WB. Equivalent piping length 5m with zero level difference.

(3) Total Capacity Index = indoor unit total capacity/outdoor unit capacity

(4) Sound levels are measured in a semi-anechoic chamber, 1 m in front of the unit and 1.3 m off the floor

VRF CVT8

CVT8-X 252T÷2700T

R-410A | ODU V8 | AIR

DC INVERTER

Clivet participates in the ECP Programme for "VRF".
Check ongoing validity of certificate on www.eurovent-certification.com"

Very high efficiency heat pump outdoor units

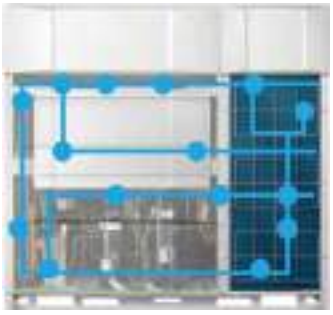
3 Unique Innovations

ELECTRONIC COMPONENTS PROTECTED BY SAFEBOX

The electronic components are isolated from the outdoor environment, to protect them from adverse conditions such as corrosion, sand and humidity, in the special SafeBox that provides full IP55 protection.
Cooling is by refrigerant with a microchannel circuit to ensure the best operating temperature at up to 55°C outside.
Furthermore, the innovative heating system maintains correct operation at down to -30°C outside.

MULTISENSOR CONTROL TECHNOLOGY

The refrigerant system is constantly monitored in every component, ensuring a high level of reliability and comfort, thanks to 19 sensors distributed throughout the refrigerant circuit. At the same time, and in combination with digital twin technology, a virtual copy of a physical sensor can be created in the event of a failure, so that the system does not stop, thus ensuring comfort while waiting for maintenance to be carried out.
The function is only available with indoor units and V8 platform controls.



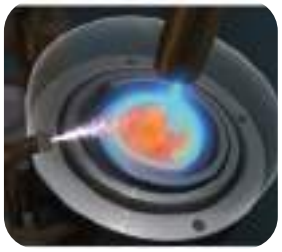
MR.DOCTOR 2.0

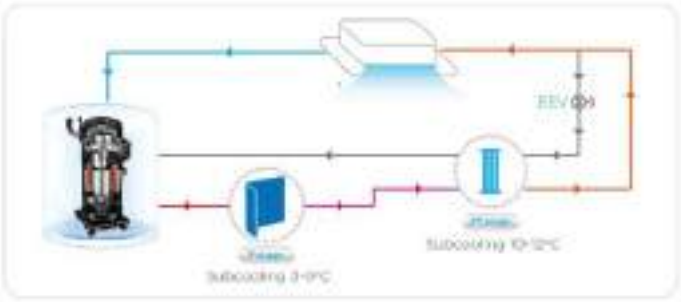
Units in the CVT8 range are fitted as standard with a special Bluetooth module to control all the unit's parameters, which become accessible and manageable from the dedicated App, without having to open panels, thereby simplifying start-up and maintenance operations.

High efficiency

COMPRESSOR EVI (ENHANCED VAPOR INJECTION)

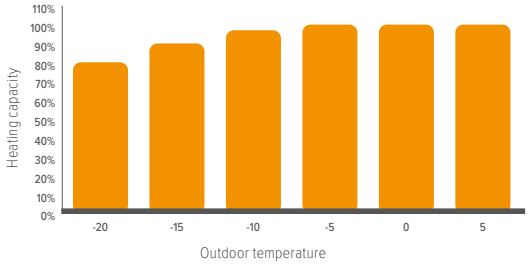
Thanks to the vapor injection DC inverter compressor, the CVT8 series can run heating mode stably down to -30°C, furthermore strongly increasing the heating capacity especially at low ambient temperature. Compressor is designed to run at 7% modulation minimum, highly improving system efficiency at part load operation.





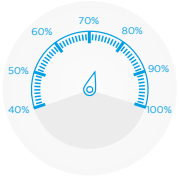
ENHANCED HEATING CAPACITY

Thanks to the vapour injection DC inverter compressor, the heating capacity is maintained at nominal when the room temperature drops to -5°C.



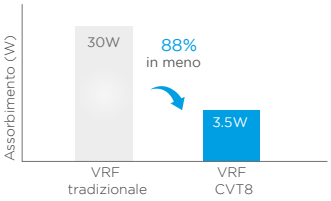
60 STEPS CAPACITY LIMITATION

In projects with limited elecricity supply, capacity can be set to output from 40 to 100% with 1% discretization steps avoiding tripping and mantaining the system in operation.



LOW STANDBY POWER CONSUPTION

The optimised control system reduces power consumption during standby mode by up to 3.5 W.



Wide application range

WIDE CAPACITY RANGE

The entire CVT8 VRF range offers 8HP to 96HP, with an increase of 2HP, boasting the world's largest capacity as a single cooling system, up to 96HP.

8/10/12/14/16 HP
(with single fan)

18/20/22/24 HP
(with dual fans)

26/28/30/32 HP
(with dual fans)

34/64 HP

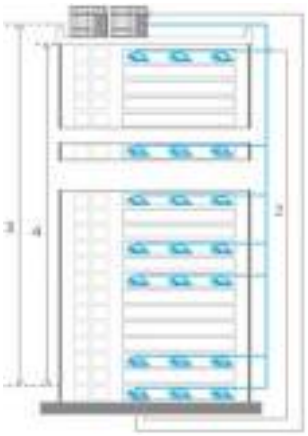
66/96 HP

LONG REFRIGERANT GAS PIPING LENGTH

Allowed values

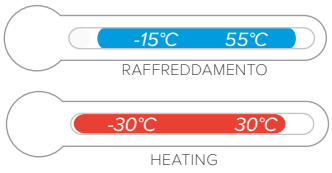
Piping length	Total piping length	Actual	m	1100
	Longest piping	Actual	m	220
		Equivalent	m	260
	Longest length after first branch		m	40/120*
Difference in height	Height difference between indoor and outdoor units	Outdoor unit up	m	110
		Outdoor unit down	m	110
	Level difference between indoor units		m	40

*The longest length after first branch is 40m as standard but can be extended to up to 120m under certain conditions. Please refer to technical manual for further information.



WIDE OPERATING TEMPERATURE RANGE

CVT8 VRF provides a guaranteed operating range.
They can operate stably at outdoor temperatures between -15°C and 55°C in cooling mode
and between -30°C and 30°C in heating mode.



High Reliability

BACKUP OPERATION

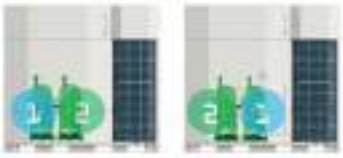
In one unit with two compressors, if one compressor is failed, the other compressor can be backup instead of the failed one to maintain up to 4 days interim capacity, allowing time for maintenance or repair while comfort remains guaranteed.

In a unit with two compressors or fans, if one of the components goes into alarm, the other can act as its backup in order to maintain a temporary capacity for up to 4 days, leaving time for maintenance or repair, and ensure uninterrupted comfort.

BALANCING THE OPERATING TIMES

In a multi-unit system, if one module fails, the other modules provide backup so that the system can continue operating.

If a unit consists of two compressors, they are switched on in sequence to balance their operating times.



ANTI-CORROSION PROTECTION

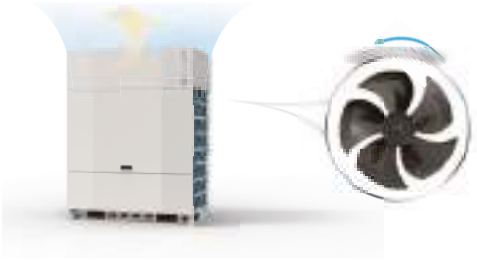
Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anticorrosion treatment on main components for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend overall useful life. The integrity of the anti-corrosion treatment is ensured by subjecting major components and parts to salt mist testing, moisture and heating testing and light aging testing.

Please contact your local dealer for further information about customization price and availability.

- Fan motor
- Screws / Bolts / Gaskets
- Heat exchanger aluminum foil
- Painted sheet metal
- Heat exchanger copper pipe
- Electric Control Box Case

AUTO SNOW-BLOWING FUNCTION

The innovatively designed auto snow-blowing function enables the outdoor unit to prevent the accumulation of snow by using ari jet,



SELF CLEAN FUNCTION

The innovatively designed dust-clean function enables the outdoor unit to prevent the dust by itself.

Enhanced comfort

MULTIPLE PRIORITY MODES

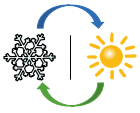
Operating mode priority can be set among 10 different modes to satisfy every specific user's need. Setting can be performed easily on field.

Cooling only / Heating only

Cooling priotrity / Heating priority

Quantity / Capacity vote priority

VIP priority



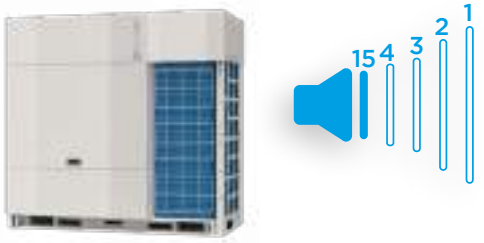
Autopriority

Changeover

First priority

MULTIPLE SILENT MODES

There are 15 silent modes available to fulfil any specific requirement.



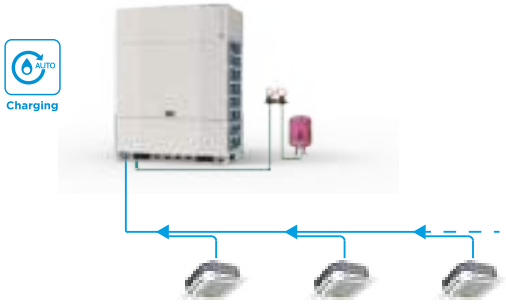
Easy Installation and Service

AUTO ADDRESSING

The outdoor unit can assign the addresses of the indoor and outdoor master/slave units automatically.
Remote and wired controllers can be used to query or modify each indoor unit's address.

AUTOMATIC REFRIGERANT CHARGING FUNCTION

Automatic refrigerant charging function make the installation and service easier and more efficient, automatically collecting refrigerant from the tank and stopping the operation when exact refrigerant charge is done.



AUTOMATIC REFRIGERANT RECYCLING

Thanks to a specific setting, the recovery and storage of refrigerant can be set in the outdoor unit or in the indoor units, thereby facilitating technical intervention and reducing maintenance times.

Refrigerant stored in ODU

Refrigerant stored in IDU

MAINTENANCE MODE

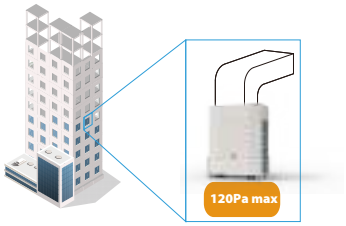
If the power supply has to be cut off to some of the units during a technical intervention, maintenance mode can be activated and the rest of the system kept active.

SMART INPUT / OUTPUT CONTACT

Convenient connectors are available as standard on unit PCB, to realize some convenient operations on field with other building appliances depending on users' needs.
Input: Two contacts available including Cooling/Heating only mode and Force stop.
Outputs: One contact available including runnig status and alarm signal.

FAN ESP UP TO 120 PA

The fan can be set to ensure up to 120 Pa of available pressure. In this way, the outdoor unit can be installed in technical rooms or in areas where the correct natural air flow cannot be ensured, ducting the air exhaust from the unit to the outside.



VRF CVT8

Size		CVT8-X	252T	280T	335T	400T	450T	500T	560T
Capacity		HP	8	10	12	14	16	18	20
Cooling (1)	Capacity	kW	25,2	28,0	33,5	40,0	45,0	50,0	56,0
	SEER	-	7,55	7,45	7,31	7,35	7,00	7,10	6,80
	ηs,c	%	299,0	295,0	289,4	291,0	277	281,0	269,0
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating (2)	Capacity (Nominal/Max)	kW	25,2/27,0	28/31,5	33,5/37,5	40/45	45/50	50/56	56/63
	SCOP	-	4,46	4,40	4,42	4,39	4,40	4,45	4,30
	ηs,h	%	175,4	173,0	173,8	172,6	173,0	175	169,0
	Operating temperature range (DB)	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
Connectable Indoor Units	Total Capacity Index (3)	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	13	16	19	23	26	29	33
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	1	1	1	1	1	1	1
Refrigerant	Factory charge	kg	7,0	7,0	7,0	8,0	8,0	9,3	9,3
	CO_2 equivalence	tonne	14,62	14,62	14,62	16,71	16,71	19,42	19,42
Pipe connections	Liquid	mm	Φ12,7	Φ12,7	Φ12,7	Φ15,9	Φ15,9	Φ15,9	Φ15,9
	Gas	mm	Φ25,4	Φ25,4	Φ25,4	Φ28,6	Φ28,6	Φ28,6	Φ28,6
Fan motor	Quantity	-	1	1	1	1	1	2	2
	Static pressure	Pa	20-120	20-120	20-120	20-120	20-120	20-120	20-120
Dimensions (Length x Height x Depth)		mm	940×1760×825	940×1760×825	940×1760×825	940×1760×825	940×1760×825	1340×1760×825	1340×1760×825
Weight		kg	195	195	195	218	218	277	277
Air flow rate		m^3/h	12600	12600	13500	15600	15600	22000	22000
Sound power level (4)		dB(A)	83	84	85	86	86	88	88
Power supply		V/Ph/Hz	380-415/3~/50+N						

VRF CVT8

Size		CVT8-X	615T	670T	730T	785T	850T	900T
Capacity		HP	22	24	26	28	30	32
Cooling (1)	Capacity	kW	61,5	67,0	73,0	78,5	85,0	90,0
	SEER	-	6,70	6,30	5,80	6,40	6,25	6,11
	ηs,c	%	265,0	249,0	229,0	253,0	247,0	241,4
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating (2)	Capacity (Nominal/Max)	kW	61,5/69,0	67,0/75	73,0/81,5	78,5/87,5	85,0/95	90,0/100
	SCOP	-	4,45	4,40	4,32	4,32	4,25	4,25
	ηs,h	%	175,0	173,0	169,8	169,8	167,0	167,0
	Operating temperature range (DB)	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
Connectable Indoor Units	Total Capacity Index (3)	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	36	39	43	46	50	53
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	1	1	2	2	2	2
Refrigerant	Factory charge	kg	11,96	11,96	11,96	11,96	11,96	11,96
	CO_2 equivalence	tonne	24,97	24,97	24,97	24,97	24,97	24,97
Pipe connections	Liquid	mm	Φ15,9	Φ15,9	Φ22,2	Φ22,2	Φ22,2	Φ22,2
	Gas	mm	Φ28,6	Φ28,6	Φ31,8	Φ34,9	Φ34,9	Φ34,9
Fan motor	Quantity	-	2	2	2	2	2	2
	Static pressure	Pa	20-120	20-120	20-120	20-120	20-120	20-120
Dimensions (Length x Height x Depth)		mm	1340×1760×825	1340×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825
Weight		kg	297	297	373	410	410	410
Air flow rate		m^3/h	21500	21500	29000	28000	28000	28000
Sound power level (4)		dB(A)	89	92	93	93	93	93
Power supply		V/Ph/Hz	380-415/3~/50+N					

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) N.No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

(1) Indoor air temperature 27°C DB/19°C WB; Outdoor air temperature 35°C DB/24°C WB. Equivalent piping length 5m with zero level difference.

(2) Indoor air temperature 20°C DB/15°C WB; Outdoor air temperature 7°C DB/6°C WB. Equivalent piping length 5m with zero level difference.

(3) Total capacity index = total capacity of indoor units/capacity of outdoor units. 50~200% under specific conditions, refer to the technical documentation for more details

(4) Sound levels are measured in a semi-anechoic chamber, 1 m in front of the unit and 1.3 m off the floor

VRF CVT8

Size		CVT8-X	960T	1010T	1070T	1120T	1170T	1230T	1285T	1340T
Capacity		HP	34	36	38	40	42	44	46	48
Combinations		HP	14+20	16+20	14+24	16+24	18+24	22+22	22+24	24+24
Cooling [1]	Capacity	kW	96,0	101,0	107,0	112,0	117,0	123,0	128,5	134,0
	SEER	-	7,02	6,89	6,66	6,56	6,62	6,70	6,49	6,30
	ηs,c	%	277,8	272,5	263,2	259,6	261,8	265,0	256,4	249,0
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating [2]	Capacity (Nominal/Max)	kW	96,0/108	101,0/113	107,0/120	112,0/125	117,0/131,0	123,0/138,0	128,5/144,0	134,0/150,0
	SCOP	-	4,34	4,34	4,40	4,40	4,42	4,45	4,42	4,40
	ηs,h	%	170,5	170,8	172,9	173,0	173,9	175	173,9	173,0
	Operating temperature range (DB)	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	56	59	62	64	64	64	64	64
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	2	2	2	2	2	2	2	2
Refrigerant	Factory charge	kg	8+9,3	8+9,3	8+11,96	8+11,96	9,3+11,96	11,96+11,96	11,96+11,96	11,96+11,96
	CO_2 equivalence	tonne	36,13	36,13	41,68	41,68	44,39	49,95	49,95	49,95
Pipe connections	Liquid	mm	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1
	Gas	mm	Φ31,8	Φ38,1	Φ38,1	Φ38,1	Φ38,1	Φ38,1	Φ38,1	Φ38,1
Fan motor	Quantity	-	3	3	3	3	4	4	4	4
	Static pressure	Pa	20-120	20-120	20-120	20-120	20-120	20-120	20-120	20-120
Dimensions (Length x Height x Depth)	Unit1	mm	940×1760 ×825	940×1760 ×825	940×1760 ×825	940×1760 ×825	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825
	Unit2	mm	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825
Weight		kg	218+277	218+277	218+297	218+297	277+297	297+297	297+297	297+297
Air flow rate		m^3/h	37600	37600	37100	37100	43500	43000	43000	43000
Sound power level [4]		dB(A)	91	91	93	93	93	92	94	95
Power supply		V/Ph/Hz	380-415/3~/50+N							

VRF CVT8

Size		CVT8-X	1400T	1460T	1515T	1570T	1630T	1685T	1750T	1800T
Capacity		HP	50	52	54	56	58	60	62	64
Combinations		HP	18+32	20+32	22+32	24+32	26+32	28+32	30+32	32+32
Cooling [1]	Capacity	kW	140,0	146,0	151,5	157,0	163,0	168,5	175,0	180,0
	SEER	-	6,43	6,36	6,34	6,19	5,97	6,24	6,18	6,11
	ηs,c	%	254,2	251,3	250,5	244,59	235,7	246,7	244,1	241,40
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating [2]	Capacity (Nominal/Max)	kW	140,0/156	146,0/163	151,5/169	157,0/175,0	163,0/181,5	168,5/187,5	175,0/195	180,0/200
	SCOP	-	4,32	4,27	4,33	4,31	4,28	4,28	4,25	4,25
	ηs,h	%	169,8	167,8	170,2	169,5	168,2	168,3	167,0	167,0
	Operating temperature range (DB)	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	64	64	64	64	64	64	64	64
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	3	3	3	3	4	4	4	4
Refrigerant	Factory charge	kg	9,3+11,96	9,3+11,96	11,96+11,96	11,96+11,96	11,96+11,96	11,96+11,96	11,96+11,96	11,96+11,96
	CO_2 equivalence	tonne	44,39	44,39	49,95	49,95	49,95	49,95	49,95	49,95
Pipe connections	Liquid	mm	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1	Φ19,1
	Gas	mm	Φ31,8	Φ21,96	Φ38,1	Φ41,3	Φ41,3	Φ41,3	Φ41,3	Φ41,3
Fan motor	Quantity	-	4	4	4	4	4	4	4	4
	Static pressure	Pa	20-120	20-120	20-120	20-120	20-120	20-120	20-120	20-120
Dimensions (Length x Height x Depth)	Unit1	mm	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825	1340×1760 ×825	1880×1760 ×825	1880×1760 ×825	1880×1760 ×825	1880×1760 ×825
	Unit2	mm	1880×1760 ×825	1880×1760 ×825	1880×1760 ×825	1880×1760 ×825	1880×1760 ×825	1880×1760 ×825	1880×1760 ×825	1880×1760 ×825
Weight		kg	277+410	277+410	297+410	297+410	373+410	410+410	410+410	410+410
Air flow rate		m^3/h	50000	50000	49500	49500	57000	56000	56000	56000
Sound power level [4]		dB(A)	94	94	94	96	96	96	96	96
Power supply		V/Ph/Hz	380-415/3~/50+N							

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) N.No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

Outdoor units in modular combination are exluded from the scope of Eurovent certification program.

(1) Indoor air temperature 27°C DB/19°C WB; Outdoor air temperature 35°C DB/24°C WB. Equivalent piping length 5m with zero level difference.

(2) Indoor air temperature 20°C DB/15°C WB; Outdoor air temperature 7°C DB/6°C WB. Equivalent piping length 5m with zero level difference.

(3) Total Capacity Index = indoor unit total capacity/outdoor unit capacity

(4) Sound levels are measured in a semi-anechoic chamber, 1 m in front of the unit and 1.3 m off the floor

VRF CVT8

Size		CVT8-X	1860T	1950T	1970T	2020T	2070T	2130T	2185T	2240T
Capacity		HP	66	68	70	72	74	76	78	80
Combinations		HP	14+20+32	16+20+32	14+24+32	16+24+32	18+24+32	22+22+32	22+24+32	24+24+32
Cooling [1]	Capacity	kW	186,0	191,0	197,0	202,0	207,0	213,0	218,5	224,0
	SEER	-	6,55	6,50	6,39	6,35	6,39	6,44	6,33	6,22
	ηs,c	%	258,90	256,82	252,79	251,14	252,50	254,49	250,01	245,89
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating [2]	Capacity (Nominal/Max)	kW	186,0/208	191,0/213	197,0/220	202,0/225	207,0/231	213,0/238	218,5/244	224,0/250
	SCOP	-	4,29	4,30	4,33	4,33	4,35	4,36	4,35	4,34
	ηs,h	%	168,78	168,97	170,13	70,28	170,80	171,53	171,02	170,54
	Operating temperature range (DB)	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	64	64	64	64	64	64	64	64
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	4	4	4	4	4	4	4	4
Refrigerant	Factory charge	kg	8+9,3+11,96	8+9,3+11,96	8+11,6+11,96	8+11,6+11,96	9,3+2x11,96	3x11,96	3x11,96	3x11,96
	CO_2 equivalence	tonne	61,40	61,40	66,65	66,65	69,37	74,92	74,92	74,92
Pipe connections	Liquid	mm	Φ19,1	Φ22,2	Φ22,2	Φ22,2	Φ22,2	Φ22,2	Φ22,2	Φ22,2
	Gas	mm	Φ41,3	Φ44,5	Φ44,5	Φ44,5	Φ44,5	Φ44,5	Φ44,5	Φ44,5
Fan motor	Quantity	-	5	5	5	5	6	6	6	6
	Static pressure	Pa	20-120	20-120	20-120	20-120	20-120	20-120	20-120	20-120
Dimensions (Length x Height x Depth)	Unit1	mm	940×1760×825	940×1760×825	940×1760×825	940×1760×825	1340×1760×825	1340×1760×825	1340×1760×825	1340×1760×825
	Unit2	mm	1340×1760×825	1340×1760×825	1340×1760×825	1340×1760×825	1340×1760×825	1340×1760×825	1340×1760×825	1340×1760×825
	Unit3	mm	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825
Weight		kg	218+277+410	218+277+410	218+297+410	218+297+410	277+297+410	297+297+410	297+297+410	297+297+410
Air flow rate		m^3/h	65600	65600	65100	65100	71500	71000	71000	71000
Sound power level [4]		dB(A)	95	95	96	96	96	96	96	97
Power supply		V/Ph/Hz	380-415/3~/50+N							

VRF CVT8

Size		CVT8-X	2300T	2360T	2415T	2470T	2530T	2585T	2650T	2700T
Capacity		HP	82	84	86	88	90	92	94	96
Combinations		HP	18+32+32	20+32+32	22+32+32	24+32+32	26+32+32	28+32+32	30+32+32	32+32+32
Cooling [1]	Capacity	kW	230,0	236,0	241,5	247,0	253,0	258,5	265,0	270,0
	SEER	-	6,30	6,26	6,25	6,16	6,02	6,20	6,15	6,11
	ηs,c	%	249,04	247,43	247,01	243,42	232,69	244,81	243,17	241,40
	Operating temperature range (DB)	°C	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55	-15~55
Heating [2]	Capacity (Nominal/Max)	kW	230,0/256	236,0/263	241,5/269	247,0/275	253,0/281,5	258,5/287,5	265,0/295	270,0/300
	SCOP	-	4,29	4,26	4,30	4,29	4,27	4,27	4,25	4,25
	ηs,h	%	168,68	167,47	168,97	168,59	167,80	167,84	167,00	167,00
	Operating temperature range (DB)	°C	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30	-30~30
Connectable Indoor Units	Total Capacity Index [3]	-	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%	50~130%
	Max quantity	-	64	64	64	64	64	64	64	64
Compressor	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	6	6	6	6	6	6	6	6
Refrigerant	Factory charge	kg	9,3+2x11,96	9,3+2x11,96	3x11,96	3x11,96	3x11,96	3x11,96	3x11,96	3x11,96
	CO_2 equivalence	tonne	69,37	69,37	74,92	74,92	74,92	74,92	74,92	74,92
Pipe connections	Liquid	mm	Φ22,2	Φ25,4	Φ25,5	Φ25,6	Φ25,7	Φ25,8	Φ25,9	Φ25,10
	Gas	mm	Φ44,5	Φ50,8	Φ50,9	Φ50,10	Φ50,11	Φ50,12	Φ50,13	Φ50,14
Fan motor	Quantity	-	6	6	6	6	6	6	6	6
	Static pressure	Pa	20-120	20-120	20-120	20-120	20-120	20-120	20-120	20-120
Dimensions (Length x Height x Depth)	Unit1	mm	1340×1760×825	1340×1760×825	1340×1760×825	1340×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825
	Unit2	mm	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825
	Unit3	mm	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825	1880×1760×825
Weight		kg	277+410+410	277+410+410	297+410+410	297+410+410	373+410+410	410+410+410	410+410+410	410+410+410
Air flow rate		m^3/h	78000	78000	77500	77500	85000	84000	84000	84000
Sound power level [4]		dB(A)	97	97	97	97	98	98	98	98
Power supply		V/Ph/Hz	380-415/3~/50+N							

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) N.No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

Outdoor units in modular combination are exluded from the scope of Eurovent certification program.

(1) Indoor air temperature 27°C DB/19°C WB; Outdoor air temperature 35°C DB/24°C WB. Equivalent piping length 5m with zero level difference.

(2) Indoor air temperature 20°C DB/15°C WB; Outdoor air temperature 7°C DB/6°C WB. Equivalent piping length 5m with zero level difference.

(3) Total Capacity Index = indoor unit total capacity/outdoor unit capacity

(4) Sound levels are measured in a semi-anechoic chamber, 1 m in front of the unit and 1.3 m off the floor

VRF MV6R

MV6R-XMi 252T÷1500T

DC INVERTER | R-410A | ODU V6 | HR | AIR

Clivet participates in the ECP Programme for "VRF".
Check ongoing validity of certificate on www.eurovent-certification.com"

Heat recovery outdoor units

High efficiency

HEAT RECOVERY TECHNOLOGY

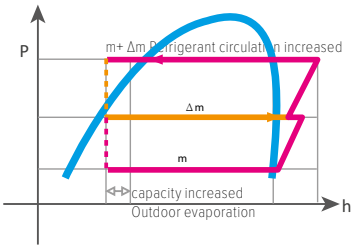
MV6R heat recovery outdoor units can perform both cooling and heating operation simultaneously and independently within the same system, ensuring the maximum operating flexibility for the users. Heat recovery is achieved by diverting exhaust heat from indoor units in cooling mode to areas requiring heating, minimizing the heat exchange with outside environment. As a result, power input and electricity costs are minimized, ensuring the best energy efficiency. In addition, inverter technology allows to adapt precisely to variable capacity loads.

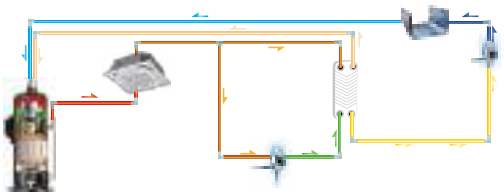
EER in simultaneous cooling and heating mode are based on the following condition:
Outdoor temperature 7°C DB/6°C WB, indoor temperature 27°C DB/19°C WB for cooling, indoor temperature 20°C DB for heating.

EVI (ENHANCED VAPOR INJECTION) COMPRESSOR

Thanks to the vapor injection DC inverter compressor, the MV6R series can run heating mode stably down to -25°C, furthermore strongly increasing the heating capacity especially at low ambient temperature. Compressor is designed to run at 7% modulation minimum, highly improving system efficiency at part load operation.

Vapor injection
DC inverter compressor





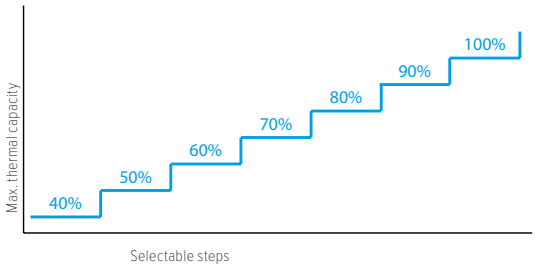
EMS (ENERGY MANAGEMENT SYSTEM)

Floating refrigerant temperature for balancing comfort and efficiency

The evaporating temperature (in cooling) and condensing temperature (in heating) are automatically adjusted according to both indoor and outdoor temperature to maximize the comfort and energy efficiency, increasing the seasonal efficiency by 30%.

Capacity output limitation for shortage of electricity

With the integration of EMS, for projects with limited electricity supply, MV6R can be set to output 40-100% capacity.



MR. DOCTOR

Force cooling /heating commissioning: force cooling or force heating operation can check the system comprehensively and quickly.

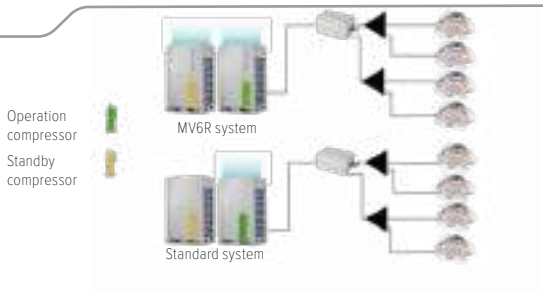
Self-diagnosys: all new diagnosis software to monitor all operating parameters and detailed information.

Automatic data backup: automatic data backup of last 30 minute's operation record.

Auxiliary PCB for quick access: placed on side column of the unit, it provides easy access to LED display and main settings without removing the front panel.

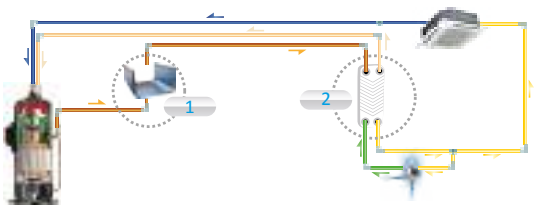
INDEPENDENT CONTROL OF HEAT EXCHANGERS AND COMPRESSORS

Both in cooling and heating mode, the outdoor heat exchanger and compressor are independently controlled to improve performances. So, in a multiple-unit system, when the compressor of an outdoor unit does not operate due to a lower thermal load, its heat exchanger is kept active to maximize heat exchange surface and efficiency.



PHE (PLATE HEAT EXCHANGER) SUBCOOLING

Plate Heat Exchanger as a secondary intercooler boosts up refrigerant subcooling and improves 10% energy efficiency.



Wide application range

WIDE CAPACITY RANGE

VRF MV6R series capacity is up to 18HP with a single unit and up to a maximum of 54HP for a single system with a combination of 3 modules, covering all possible applications and building dimensions.

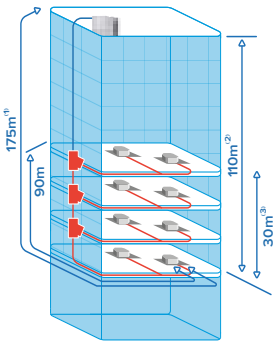
8/10/12 HP
(with single fan)

14/16/18 HP
(with dual fan)

20-36 HP

38-54 HP

LONG REFRIGERANT GAS PIPING LENGTH



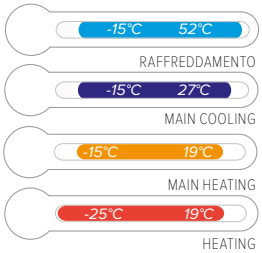
Piping length	Value
Total piping length	1 000 m
Longest length between outdoor and indoor units - actual (equivalent)	175 m (200 m)
Longest length after first branch	40/90 m*
Longest length between MS box and IDU	40 m
Largest height difference between indoor and outdoor units - ODU up (down)	110 m (110 m)
Largest height difference between indoor units	30 m

*The longest length after first branch is 40m as standard but can be extended to up to 90m under certain conditions. Please refer to technical manual for further information.

(1) Maximum single line length
(2) Level difference between indoor units and outdoor units
(3) Level difference between indoor units

WIDE OPERATING TEMPERATURE RANGE

VRF MV6R can operate in a wide ambient temperature range.
It can operate stably from -15°C up to 52°C in cooling mode and from -25°C to 19°C in heating mode.
Simultaneous heating and cooling operation is guaranteed from -15°C to 27°C in main cooling and from -15°C to 19°C in main heating.*



*Cooling mode down to -15°C available in combination with single MS box MS01.
Wet-bulb temperatures in cooling mode, dry-bulb in heating mode.

High Reliability

DUTY CYCLING

Duty cycling equalizes the running time of the outdoor units in a multiple-unit system and of the compressors in each unit, significantly extending compressor lifespan.

1st cycle

2nd cycle

3rd cycle

PRECISE OIL CONTROL TECHNOLOGY

Three stages of oil control technology ensure all outdoor compressor oil is always kept at a safe level, eliminating any compressor oil shortage problems.

(1) Compressor internal oil separation.

(2) High-efficiency centrifugal oil separator (with separation efficiency of up to 99%) ensures that oil is separated from the discharge gas and returned to the compressors in a timely fashion.

(3) Auto oil return program monitors the running time and system status to ensure reliable oil return.


Compressor internal oil separation


High-efficiency centrifugal oil separator


Auto oil return program

BACKUP OPERATION

Compressor backup

In a multiple-unit system, if one module fails, the other modules provide backup so that the system can continue operating, maintaining up to 4 days interim capacity and allowing time for maintenance or repair while comfort remains guaranteed.

ANTI-CORROSION PROTECTION

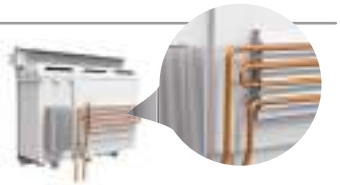
Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anticorrosion treatment on main components for surface protection against corrosive air, acid rain and saline air (for installations in coastal regions) to extend overall useful life. The integrity of the anti-corrosion treatment is ensured by subjecting major components and parts to salt mist testing, moisture and heating testing and light aging testing.

Please contact your local dealer for further information about customization price and availability.

- Fan motor
- Painted sheet metal
- Screws / Bolts / Gaskets
- Heat exchanger aluminum foil
- Heat exchanger copper pipe
- Electric Control Box Case

REFRIGERANT COOLING PCB

The MV6R series uses refrigerant cooling technology to cool the electric control box. It decreases the average temperature of electrical control components by about 8 degrees, guaranteeing the stable and safe running of the control system.



AUTO SNOW-BLOWING FUNCTION

The innovatively designed auto snow-blowing function enables the outdoor unit to prevent the accumulation of snow by using ari jet,

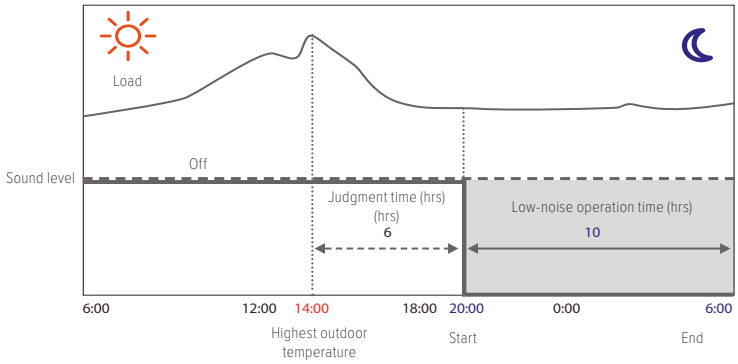
SELF CLEAN FUNCTION

The innovatively designed self-clean function enables the outdoor unit to prevent dirt (such as dust or pollutants) on the outdoor coil.

Enhanced Comfort

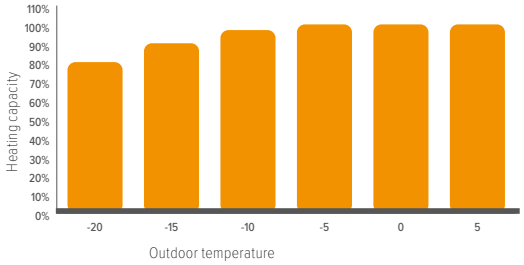
SILENT MODE

Multiple silent modes can be used to reduce noise levels when low noise operation is required: only during night hours or continuously, and with different noise reductions levels limiting only maximum fan speed or compressor speed also.



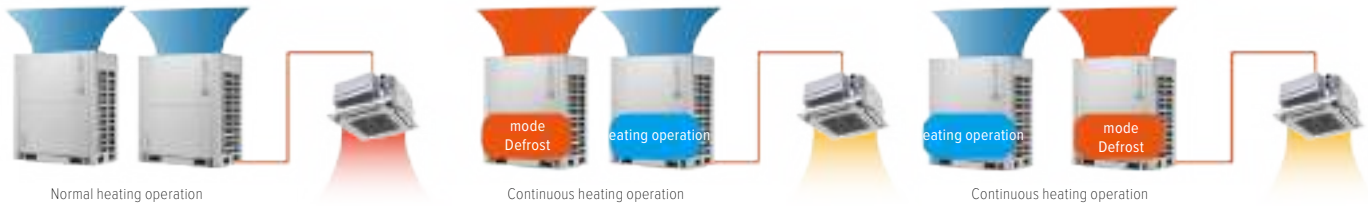
ENHANCED HEATING CAPACITY

Thanks to the vapour injection DC Inverter compressor, heating capacity can achieve 100% output when the ambient temperature is down to -5°C and 90% output when ambient temperature is down to -15°C.



CONTINUOUS HEATING DURING DEFROST

As an alternative to the traditional defrost technology performed reverting the refrigerant cycle, in a multiple-units MV6R system it is possible to keep heating by defrosting alternatively and independently the heat exchangers of different units. Thus, it is possible to supply continuously heating without stopping for defrost operations.



Normal heating operation

Continuous heating operation

Continuous heating operation

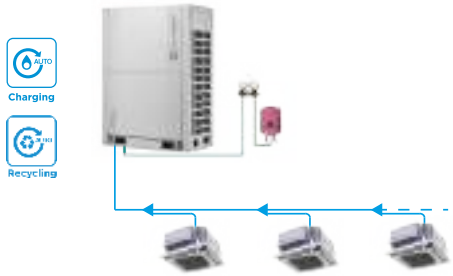
Easy Installation and Service

AUTO ADDRESSING

Outdoor unit can distribute addresses to indoor units automatically.
Remote and wired controllers can be used to query or modify each indoor unit's address.

AUTOMATIC REFRIGERANT CHARGING AND RECYCLING FUNCTION

Automatic refrigerant charging function make the installation and service easier and more efficient, automatically collecting refrigerant from the tank and stopping the operation when exact refrigerant charge is done.
The automatic refrigerant recovery function, on the other hand, allows the refrigerant to be recovered and stored in the outdoor unit or on the line in full autonomy if required before fixing, facilitating technical intervention.

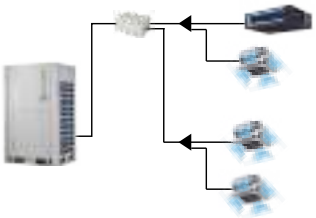


Suitable for any application

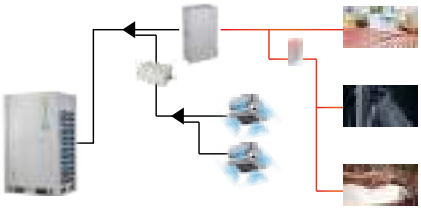
MAXIMUM APPLICATION FLEXIBILITY

In addition to simultaneously heating and cooling different spaces via different indoor units belonging to the same system, MV6R series can manage fresh air processing units (A), beside high temperature hydronic modules to supply hot water up to 80°C (B), or air handling units through specific kits (C). According to the different combinations of units connected, the system can manage up to 200% of outdoor units' capacity.*

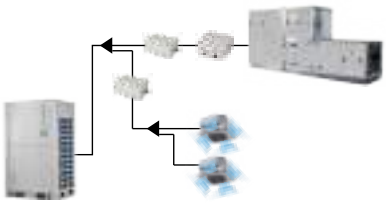
TO



B



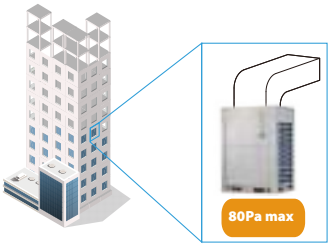
C



*Please refer to technical manual for further information about total capacity index as function of specific units connected.

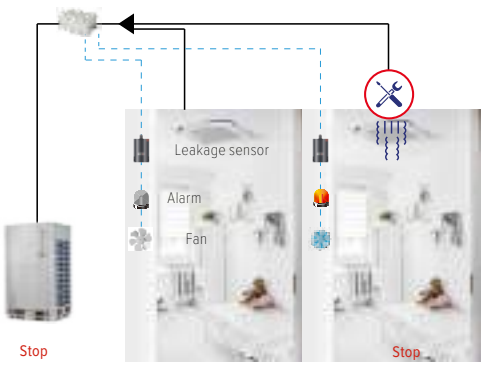
FAN ESP UP TO 80 PA

Fan motor can be set to provide an external static pressure up to 80 Pa, facilitating the installation of the unit in technical rooms or in areas where the proper airflow cannot be ensured, by installing ducts and directing the air towards the outside.



REFRIGERANT LEAK DETECTION FUNCTION

Refrigerant leakage detectors can be managed through specific input/output contacts to automatically stop the system operation and to display the malfunction on remote controllers or via possible luminous signal and activating also specific exhaust fans if needed.*



*Function available in combination with single MS box MS01. Refrigerant leakage detectors and possible alarm lights or exhaust fans to be supplied by 3rd party

VRF MV6R

Size		MV6R-XMi	252T	280T	335T	400T	450T	500T
Capacity		HP	8	10	12	14	16	18
Cooling [1]	Capacity (Nominal/Max)	kW	22,4	28,0	33,5	40,0	45,0	50,0
	SEER	-	7,26	6,60	6,80	6,65	6,44	6,22
	ηs,c	%	287,3	261,2	269,1	263,2	254,7	245,7
	Operating temperature range (DB) [5]	°C	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52
Heating [2]	Capacity (Nominal/Max)	kW	22,4/25,0	28,0/31,5	33,5/37,5	40,0/45,0	45,0/50,0	50,0/56,0
	SCOP	-	4,29	4,39	4,59	4,27	4,33	4,35
	ηs,c	%	168,5	172,7	180,8	168,0	170,2	170,9
	Operating temperature range (DB)	°C	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27
	Operating temperature range DHW (DB) [6]	°C	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43
Connectable Indoor Units	Total Capacity Index [3]	-	50~200 %	50~200 %	50~200 %	50~200 %	50~200 %	50~200 %
	Max quantity	-	64	64	64	64	64	64
Compressor	Type	-	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	1	1	1	1	1	1
Refrigerant	Factory charge	kg	8	8	8	10	10	10
	CO_2 equivalence	tonne	16,70	16,70	16,70	20,88	20,88	20,88
Pipe connections	Liquid	mm	Ø 12,7	Ø 12,7	Ø 12,7	Ø 15,9	Ø 15,9	Ø 15,9
	Low pressure gas pipe	mm	Ø 25,4	Ø 25,4	Ø 25,4	Ø 28,6	Ø 28,6	Ø 28,6
	High pressure gas pipe	mm	Ø 19,1	Ø 19,1	Ø 19,1	Ø 22,2	Ø 22,2	Ø 22,2
Fan motor	Quantity	-	1	1	1	2	2	2
	Static pressure	Pa	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80
Dimensions (Width x Height x Depth)		mm	990×1635×790	990×1635×790	990×1635×790	1340×1635×825	1340×1635×825	1340×1635×825
Weight		kg	232	232	232	300	300	300
Air flow rate		m^3/h	9 000	9 500	10 000	14 000	14 900	15 800
Sound power level [4]		dB(A)	78	82	83	84	88	88
Power supply		V/Ph/Hz	380-415/3~/50+N					

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(3) Total Capacity Index = indoor unit total capacity/outdoor unit capacity. Please refer to technical manual for further information about total capacity index as function of specific units connected.

(4) Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1,3 m above the floor.

(5) -15 °C to -5 °C operation available in combination with MS box MS01

(6) ODHW available in combination with high temperature hydro module HWM-2-XMi 14



VRF MV6R

Size		MV6R-XMi	560T	615T	680T	735T	785T	835T	900T	950T	1000T
Capacity		HP	20	22	24	26	28	30	32	34	36
Combinations		HP	10x2	10+12	10+14	12+14	12+16	12+18	16x2	16+18	18x2
Cooling [1]	Capacity	kW	56,0	61,5	68,0	73,5	78,5	83,5	90,0	95,0	100,0
	SEER	-	6,57	6,68	6,60	6,69	6,58	6,43	6,42	6,30	6,20
	ηs,c	%	259,8	264,2	261	264,6	260,2	254,2	253,8	249,0	245,0
	Operating temperature range (DB) [5]	°C	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52
Heating [2]	Capacity (Nominal/Max)	kW	56,0/63,0	61,5/69,0	68,0/76,5	73,5/82,5	78,5/87,5	83,5/93,5	90,0/100,0	95,0/106,0	100,0/126,0
	SCOP	-	4,39	4,49	4,32	4,40	4,43	4,44	4,33	4,33	4,35
	ηs,c	%	172,6	176,6	169,8	173,0	174,2	174,6	170,2	170,2	171,0
	Operating temperature range (DB)	°C	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27
	Operating temperature range DHW (DB) [6]	°C	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43
Connectable Indoor Units	Total Capacity Index [3]	-	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %
	Max quantity	-	64	64	64	64	64	64	64	64	64
Compressor	Type	-	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	2	2	2	2	2	2	2	2	2
Refrigerant	Factory charge	kg	16	16	18	18	18	18	20	20	20
	CO_2 equivalence	tonne	33,41	33,41	37,58	37,58	37,58	37,58	41,76	41,76	41,76
Pipe connections	Liquid	mm	Ø 15,9	Ø 15,9	Ø 15,9	Ø 19,1	Ø 19,1	Ø 19,1	Ø 19,1	Ø 19,1	Ø 19,1
	Low pressure gas pipe	mm	Ø 28,6	Ø 28,6	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9
	High pressure gas pipe	mm	Ø 28,6	Ø 28,6	Ø 28,6	Ø 28,6	Ø 28,6	Ø 28,6	Ø 28,6	Ø 28,6	Ø 28,6
Fan motor	Quantity	-	2	2	3	3	3	3	4	4	4
	Static pressure	Pa	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80
Dimensions (Width x Height x Depth)	Unit 1	mm	990×1635 ×790	990×1635 ×790	990×1635 ×790	990×1635× 790	990×1635 ×790	990×1635 ×790	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825
	Unit 2	mm	990×1635 ×790	990×1635 ×790	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825
Weight		kg	464	464	532	532	532	532	600	600	600
Air flow rate		m^3/h	19 000	19 500	23 500	24 000	24 900	25 800	29 800	30 700	31 600
Sound power level [4]		dB(A)	84	84	88	89	89	89	91	91	91
Power supply		V/Ph/Hz	380-415/3~/50+N								

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

Outdoor units in modular combination are exluded from the scope of Eurovent certification program.

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(3) Total Capacity Index = indoor unit total capacity/outdoor unit capacity. Please refer to technical manual for further information about total capacity index as function of specific units connected.

(4) Sound values are measured in a semi-anechoic room, at a position 1 m in front of the unit and 1,3 m above the floor.

(5) -15 °C to -5 °C operation available in combination with MS box MS01

(6) 0DHW available in combination with high temperature hydro module HWM-2-XMi 14



VRF MV6R

Size		MV6R-XMi	1070T	1120T	1185T	1235T	1300T	1350T	1400T	1450T	1500T
Capacity		HP	38	40	42	44	46	48	50	52	54
Combinations		HP	12x2+14	12x2+16	12+14+16	12+16x2	14+16x2	16x3	16x2+18	16+18x2	18x3
Cooling [1]	Capacity	kW	107,0	112,0	118,5	123,5	130,0	135,0	140,0	145,0	150,0
	SEER	-	6,71	6,62	6,58	6,52	6,47	6,42	6,34	6,27	6,20
	ηs,c	%	265,4	261,8	260,2	257,8	255,8	253,8	250,6	247,8	245,0
	Operating temperature range (DB) [5]	°C	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52	-15 ~ 52
Heating [2]	Capacity (Nominal/Max)	kW	107,0/120,0	112,0/125,0	118,5/132,5	123,5/137,5	130,0/145,0	135,0/150,0	140,0/156,0	145,0/162,0	150,0/168,0
	SCOP	-	4,45	4,47	4,37	4,39	4,31	4,33	4,33	4,35	4,35
	ηs,c	%	175,0	175,8	171,8	172,6	169,4	170,2	170,2	171,0	171,0
	Operating temperature range (DB)	°C	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27	-25 ~ 27
	Operating temperature range DHW (DB) [6]	°C	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43	-20 ~ 43
Connectable Indoor Units	Total Capacity Index [3]	-	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %	50 ~ 200 %
	Max quantity	-	64	64	64	64	64	64	64	64	64
Compressor	Type	-	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	3	3	3	3	3	3	3	3	3
Refrigerant	Factory charge	kg	26	26	28	28	30	30	30	30	30
	CO_2 equivalence	tonne	54,29	54,29	58,46	58,46	62,64	62,64	62,64	62,64	62,64
Pipe connections	Liquid	mm	Ø 19,1	Ø 19,1	Ø 19,1	Ø 19,1	Ø 19,1	Ø 19,1	Ø 19,1	Ø 19,1	Ø 19,1
	Low pressure gas pipe	mm	Ø 41,3	Ø 41,3	Ø 41,3	Ø 41,3	Ø 41,3	Ø 41,3	Ø 41,3	Ø 41,3	Ø 41,3
	High pressure gas pipe	mm	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9	Ø 34,9
Fan motor	Quantity	-	4	4	5	5	6	6	6	6	6
	Static pressure	Pa	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80	0 ~ 80
Dimensions (Width x Height x Depth)	Unit 1	mm	990×1635 ×790	990×1635 ×790	990×1635 ×790	990×1635 ×790	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825
	Unit 2	mm	990×1635 ×790	990×1635 ×790	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825
	Unit 3	mm	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825	1340×1635 ×825
Weight		kg	764	764	832	832	900	900	900	900	900
Air flow rate		m^3/h	34 000	34 900	38 900	39 800	43 800	44 700	45 600	46 500	47 400
Sound power level [4]		dB(A)	89	89	89	91	91	93	93	93	93
Power supply		V/Ph/Hz	380-415/3~/50+N								

The Product is compliant with the Erp (Energy Related Products) European Directive. It includes the Commission delegated Regulation (EU) No 2016/2281, also known as Ecodesign Lot21.

SEER and SCOP according EN14825 regulation

Outdoor units in modular combination are exluded from the scope of Eurovent certification program.

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(3) Total Capacity Index = indoor unit total capacity/outdoor unit capacity. Please refer to technical manual for further information about total capacity index as function of specific units connected.

(4) Sound values are measured in a semi-anechoic room, at a position 1 m in front of the unit and 1,3 m above the floor.

(5) -15 °C to -5 °C operation available in combination with MS box MS01

(6) ODHW available in combination with high temperature hydro module HWM-2-XMi 14

MS box for VRF MV6R

Heat recovery and simultaneous heating and cooling within the same system are possible thanks to specific MS box located between outdoor units and indoor units, which separate gas-phase and liquid-phase refrigerant diverting it towards different spaces requiring heating or cooling.
MS box are available in various versions, with single branch or multiple branches.

SINGLE MS BOX

- Cooling mode operation extended down to -15 °C
- 3rd party refrigerant leakage sensors management and possible leakage insulation through specific shut-off valve
- Up to 8 indoor units connectable with a total capacity up to 32 kW (running in the same operating mode)
- Compact and light to install
- No drain piping needed
- Extreme control precision through a 3200 step electronic expansion valve
- Quiet Operation


MS01N1-D

MULTIPLE MS BOX

- 4, 6, 8, 10 and 12 branches versions available
- Up to 5 indoor units connectable for each branch (running in the same operating mode), for a total of 47 indoor units maximum per MS box for the 12 branches version
- Up to 16 kW for each branch, or 28 kW by connecting 2 branches


MS04N1-D


MS06N1-D


MS08N1-D


MS10N1-D


MS12N1-D

technical data

MS box for VRF MV6R






MS BOX

Size			MS	01N1-D	04N1-D	06N1-D	08N1-D	10N1-D	12N1-D
Number of branches			-	1	4	6	8	10	12
Max. number of indoor units per branch (1)			-	8	5	5	5	5	5
Max. total number of indoor units per MS box (1)			-	8	20	30	40	47	47
Max. capacity per branch (2)			kW	32	16	16	16	16	16
Max. total capacity of indoor units per MS box			kW	32	49	63	85	85	85
Pipe connections	Connections to outdoor units	Liquid	mm	Ø 9,53 / Ø 12,7	Ø 9,53 /Ø 12,7 / Ø 15,9 / Ø 19,1	Ø 9,53 /Ø 12,7 / Ø 15,9 / Ø 19,1	Ø 12,7 /Ø 15,9 / Ø 19,1 / Ø 22,2	Ø 12,7 /Ø 15,9 / Ø 19,1 / Ø 22,2	Ø 12,7 /Ø 15,9 / Ø 19,1 / Ø 22,2
		High pressure gas pipe	mm	Ø 15,9 / Ø 19,1 / Ø 22,2	Ø 19,1 / Ø 22,2 / Ø 28,6	Ø 19,1 / Ø 22,2 / Ø 28,6	Ø 22,2 / Ø 28,6 / Ø 34,9	Ø 22,2 / Ø 28,6 / Ø 34,9	Ø 22,2 / Ø 28,6 / Ø 34,9
		Low pressure gas pipe	mm	Ø 12,7 / Ø 15,9 / Ø 19,1	Ø 15,9 / Ø 19,1 / Ø 22,2 / Ø 28,6	Ø 15,9 / Ø 19,1 / Ø 22,2 / Ø 28,6	Ø 19,1 / Ø 22,2 / Ø 28,6	Ø 19,1 / Ø 22,2 / Ø 28,6	Ø 19,1 / Ø 22,2 / Ø 28,6
	Connections to indoor units	Liquid	mm	Ø 6,35 / Ø 9,53	Ø 6,35 / Ø 9,53	Ø 6,35 / Ø 9,53	Ø 6,35 / Ø 9,53	Ø 6,35 / Ø 9,53	Ø 6,35 / Ø 9,53
		Gas	mm	Ø 12,7 / Ø 15,9	Ø 12,7 / Ø 15,9	Ø 12,7 / Ø 15,9	Ø 12,7 / Ø 15,9	Ø 12,7 / Ø 15,9	Ø 12,7 / Ø 15,9
Dimensions (Width x Height x Depth)			mm	440×195×296	668×250×574	668×250×574	974×250×574	974×250×574	974×250×574
Weight			kg	10,5	33	36	48	51	54
Sound pressure level (3)			dB(A)	40	44	45	47	47	47
Sound power level 3)			dB(A)	60	63	65	65	65	65
Power supply			V/Ph/Hz	220-240/1~/50					

(1) All indoor units connected to the same branch of MS box should run in the same operating mode.

(2) For 4 to 12 branches MS box models, 16 kW to 28 kW capacity indoor units can be connected by merging two branches to one through FQZHN-09A connection kit.

(3) Sound values are measured in a semi-anechoic room, at a position 1m below the MS box in mode switch condition.

It is recommended to avoid the installation of MS box in locations with low-noise requirements.

INDOOR Units - Product Lineup

	Name		Serie	Platform	kW 1,5/1,8	2,2	2,8	3,6	4,5	5,6	6,3 / 7,1
Cassette	1-way cassette		Q1DN-3-XY	IDU V8	D18	D22	D28	D36	D45	D56	D71
	2-way cassette		Q2DN-3-XY	IDU V8		D22	D28	D36	D45	D56	D71
	Compact 4-way cassette		Q4AN-3-XY	IDU V8	D15	D22	D28	D36	D45	D56	D63
	4-way cassette		Q4DN-3-XY	IDU V8			D28	D36	D45	D56	D71
Duct	Low static pressure slim duct		CNT3-3-XY	IDU V8	D15	D22	D28	D36	D45	D56	D71
	Medium Static Pressure Duct		CNT2-3-XY	IDU V8	D15	D22	D28	D36	D45	D56	D71
	High Static Pressure Duct		CN-3-XY	IDU V8						D56	D71
	NEW Fresh air processing unit		CNFA-3-XY	IDU V8							
Wall-mounted			GWMN-3-XY	IDU V8	D15	D22	D28	D36	D45	D56	D71
Floor standing			DZGF3B-3-XY	IDU V8		D22	D28	D36	D45	D56	D71
			DZDF4-3-XY	IDU V8		D22	D28	D36	D45	D56	D71
			DZDF5-3-XY	IDU V8		D22	D28	D36	D45	D56	D71
Ceiling & Floor	NEW		DDLC-3-XY	IDU V8				D36	D45	D56	D71
High Temperature Hydro module			HWM-2-XMi	IDU V6							

DC Unit

High Temperature Hydro module

The high temperature Hydro module is only available for the VRF MV6R range.

	8,0	9,0	10,0	11,2	12,5	14,0	16,0	18,0	20,0	22,4	25,2	28	33,5	40,0	45,0	56,0
	D80	D90	D100	D112		D140	D160	D180								
	D80	D90		D112												
	D80	D90		D112	D125	D140	D160									
	D80	D90		D112	D125	D140	D160		D200	D224	D252	D280	D335	D400	D450	D560
		D90				D140	D160									
	D80															
	D80															
	D80															
	D80															
	D80	D90	D100	D112	D125	D140										

140

INDOOR Units - Functions at a glance

	Name		Serie	Platform	Refrigerant	Auto restart function	Auto addressing	Air renewal	Occupancy sensor
Cassette	1-way cassette		Q1DN-3-XY	IDU V8	✓	✓	✓	-	-
	2-way cassette		Q2DN-3-XY	IDU V8	✓	✓	✓	✓	-
	Compact 4-way cassette		Q4AN-3-XY	IDU V8	✓	✓	✓	✓	✓
	4-way cassette		Q4DN-3-XY	IDU V8	✓	✓	✓	✓	✓
Duct	Low static pressure slim duct		CNT3-3-XY	IDU V8	✓	✓	✓	✓	-
	Medium Static Pressure Duct		CNT2-3-XY	IDU V8	✓	✓	✓	✓	-
	High Static Pressure Duct		CN-3-XY	IDU V8	✓	✓	✓	✓	-
	Fresh air processing unit		CNFA-3-XY	IDU V8	✓	✓	✓	✓	-
Wall-mounted			GWMN-3-XY	IDU V8	✓	✓	✓	-	✓
Floor standing			DZGF3B-3-XY	IDU V8	✓	✓	✓	-	-
			DZDF4-3-XY	IDU V8	✓	✓	✓	-	-
			DZDF5-3-XY	IDU V8	✓	✓	✓	-	-
Ceiling & Floor			DDLC-3-XY	IDU V8	✓	✓	✓	-	-

										
Indipendent louvers	Panel easy to clean	Follow Me	Function anti cold air	Integrated drain pump	Display LED	Constant Air Flow and filter blockage visualization	Independent Dehumidification	7 fan speeds	5 vertical flap positions + Auto Swing	Input on/off Output alarm
-	✓	✓	✓	✓	✓	-	✓	✓	✓	✓
-	✓	✓	✓	✓	✓	-	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓
✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓
-	-	✓	✓	✓	✓ (optional)	✓	✓	✓	-	✓
-	-	✓	✓	✓	✓ (optional)	✓	✓	✓	-	✓
-	-	✓	✓	✓	✓ (optional)	✓	✓	✓	-	✓
-	-	✓	✓	✓	✓ (optional)	✓	✓	✓	-	✓
-	✓	✓	✓	✓	✓	-	✓	✓	✓	✓
-	-	✓	✓	-	✓ (optional)	-	✓	✓	-	✓
-	✓	✓	✓	-	✓ (optional)	-	✓	✓	-	✓
-	✓	✓	✓	-	✓ (optional)	-	✓	✓	-	✓
-	✓	✓	✓	-	✓	-	✓	✓	✓	✓

DC INDOOR UNITS

DC INVERTER

VRF indoor unit

Wide application range

WIDE RANGE OF INDOOR UNITS

With 14 types and more than 100 models, Clivet VRF indoor units meet varied customer requirements in a wide range of locations including shopping malls, hospitals, office buildings, hotels and airports.

Peculiar features of V8 units

MULTIREFRIGERANT

The new V8 series indoor units are compatible with both R410A and R32 refrigerant. This allows to standardize the design of the environments regardless of the type of technology adopted.

R-32

R-410A

PRESENCE SENSOR

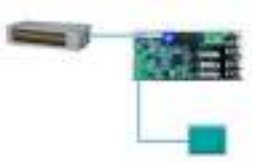
A built-in sensor in 4-way cassettes and wall-mounted units automatically manages the unit depending on the presence of people. It is possible to choose whether to turn the unit on/off or adjust the set point. Sensor intervention times are also settable.

SINGLE LOUVER CONTROL

In the new 4-way cassette panel, each louver can be adjusted separately, to direct the airflow where it is actually needed.

ADDITIONAL CONTROL BOARD

Thanks to the use of optional electronic boards, it is possible to extend the functionality of the internal units, adding input and output contacts for connection to third-party systems.



AUTOMATIC CLEANING OF THE HEAT EXCHANGER

In combination with a MINI VRF V8 system, it is possible to activate a special deep cleaning cycle of the exchanger which completely removes dirt in three steps.

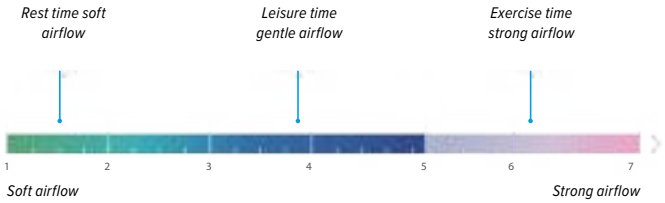
EEV AUTOMATIC ADJUSTMENT

When in heating standby mode, the indoor unit automatically adjusts the opening of the Electronic Expansion Valve according to the load to overcome the noise produced by the refrigerant flow.

Comfort and Efficiency

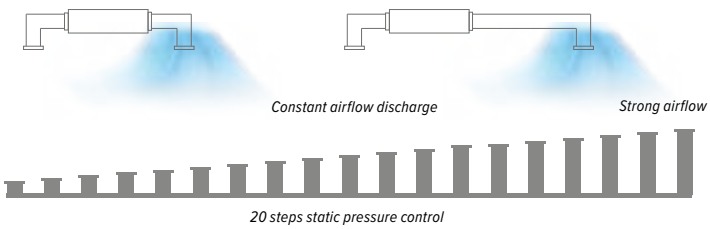
7-SPEED FAN CONTROL

7 fan speeds of the indoor units provide control flexibility to meet the needs of different indoor conditions.



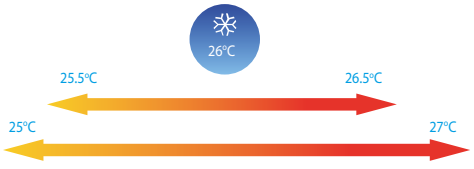
STATIC PRESSURE 20 STEPS CONTROL (DUCT UNIT)

Depending on the installation environment, static pressure of duct units can be precisely set up to 20 steps for high static pressure duct via wired remote controller, providing comfortable environment suitable for any application.



0,5 °C TEMPERATURE SETTING

Target temperature can be adjusted in 0.5°C or 1°C steps, increasing environmental comfort in combination with new generation controls.



SMART INPUT/OUTPUT CONTACTS

Smart connectors are available as standard in all indoor units, to realize some convenient operations on field with other building appliances depending on users' needs.
Available contacts are on/off as input to indoor units and alarm as output.

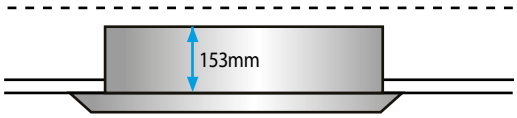
1-WAY CASSETTE

Q1DN-3-XY D18÷D71

DC INVERTER

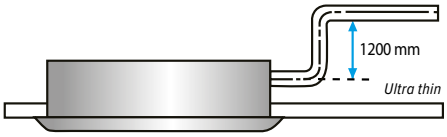
ONLY 153 mm HIGH

The slim, compact design make the 1-way Cassette ideal for interiorswith limited ceiling space. Models 18 to 36 are just 153 mm high whilst models 45 to 71 are 189 mm high.



HIGH-LIFT DRAIN PUMP

The condensate pump with digital control is included and can overcome a head of up to 1200 mm water column.



SILENT OPERATION

Thanks to the optimised design of the fan motor and heat exchanger, the new cassette operates with minimal noise, creating a quieter and more comfortable environment.

INDOOR UNITS

technical data

Q1DN-3-XY D18÷D71

1-WAY CASSETTE

Size		Q1DN-3-XY	D18	D22	D28	D36	D45	D56	D71
Cooling (1)	Capacity	kW	1.8	2.2	2.8	3.6	4.5	5.6	7.1
	Power input	W	25	25	30	30	40	48	60
Heating (2)	Capacity	kW	2.2	2.6	3.2	4.0	5.0	6.3	8.0
	Power input	W	25	25	30	30	40	48	60
Pipe connections	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Ø9,53
	Gas	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Ø15,9
	Drain pipe	mm	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25
Main body	Dimensions Dimensions (Width x Height x Depth) (5)	mm	1054×153×428	1054×153×428	1054×153×428	1054×153×428	1275×189×452	1275×189×452	1275×189×452
	Weight	kg	11.5	11.5	11.8	11.8	15.8	15.8	16.9
Panel	Dimensions Dimensions (Width x Height x Depth)	mm	1180×25×465	1180×25×465	1180×25×465	1180×25×465	1350×25×505	1350×25×505	1350×25×505
	Weight	kg	3.5	3.5	3.5	3.5	4	4	4
Portata aria (3)		m^3/h	380/355/330 /300/286 /263/240	380/355/330 /300/286 /263/240	460/440/410 /380/355 /330/300	460/440/410 /380/355 /330/300	693/662/638 /600/556 /510/476	792/763/728 /688/643 /589/549	933/873/815 /749/689 /637/592
Sound pressure level (3) (4)		dB(A)	30/28/27 /26/25/24/22	30/28/27 /26/25/24/22	37/36/35 /34/32/31/30	38/37/35 /34/32/31/30	39/37/36 /35/34/32/31	41/39/38 /37/36/35/33	43/41/40 /39/37/36/35
Sound power level (3)(4)		dB(A)	44/42/41 /40/39/38/36	44/42/41/40 /39/38/36	51/50/49/ 48/46/45/44	52/51/49 /48/46/45/44	53/51/50 /49/48/46/45	55/53/52 /51/50/49/47	57/55/54 /53/51/50/49
Power supply		V/Ph/Hz				220-240/1~/50			

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,4 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12F1	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller
T-MBQ1-02E	Panel 1-way (sizes D18÷D36)
T-MBQ1-01E	Panel 1-way (sizes D45÷D71)

2-WAY CASSETTE

Q2DN-3-XY D22÷D71

DC INVERTER R-32 R-410A

LOW SOUND LEVEL

The 2-way Cassette optimized, low resistance air outlets reduce noise levels to as low as 24 dB(A).

HIGH AIRFLOW

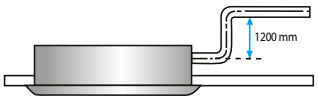
A high airflow rate ensures even airflow and temperature throughout the room, even in high ceiling installations.

EXTERNAL AIR INTAKE

A reserved outside air intake port allows outdoor air to be introduced directly into the unit, negating the need for a separate ventilation system.

HIGH-LIFT DRAIN PUMP

The condensate pump with digital control is included and can overcome a head of up to 1200 mm water column.



technical data

Q2DN-3-XY D22÷D71

CASSETTE 2-VIE

Size		Q2DN-3-XY	D22	D28	D36	D45	D56	D71
Cooling (1)	Capacity	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Power input	W	35	40	40	50	69	98
Heating (2)	Capacity	kW	2.6	3.2	4.0	5.0	6.3	8.0
	Power input	W	35	40	40	50	69	98
Pipe connections	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Ø9,53
	Gas	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Ø15,9
	Drain pipe	mm	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32	ODΦ32
Main body	Dimensions (Width x Height x Depth)(5)	mm	1172×299×591	1172×299×591	1172×299×591	1172×299×591	1172×299×591	1172×299×591
	Weight	kg	29.7	29.7	29.7	31.6	31.6	31.6
Panel	Dimensions (Width x Height x Depth)	mm	1430×53×680	1430×53×680	1430×53×680	1430×53×680	1430×53×680	1430×53×680
	Weight	kg	11	11	11	11	11	11
Portata aria (3)		m^3/h	654/612/571 /530/488 /449/410	654/612/571 /530/488 /449/410	725/679/641 /591/554 /509/458	850/792/731 /670/631 /592/550	980/925/855 /800/755 /702/670	1200/1115/1068 /1000/921 /808/770
Sound pressure level (3) (4)		dB(A)	33/31/30 /29/27/25/24	33/31/30 /29/27/25/24	35/33/32 /30/29/27/25	37/36/35 /34/32/31/30	39/37/36 /35/33/31/30	44/42/41 /40/38/36/34
Sound power level (3)(4)		dB(A)	49/47/46 /45/43/41/40	49/47/46 /45/43/41/40	51/49/48 /46/45/43/41	53/52/51 /50/48/47/46	55/53/52 /51/49/47/46	60/58/57 /56/54/52/50
Power supply		V/Ph/Hz	220-240/1~/50					

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,4 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12F1	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller
T-MBQ2-01A	Panel 2-way

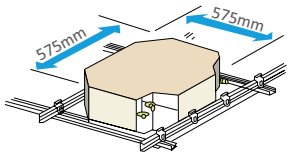
COMPACT 4-WAY CASSETTE

Q4AN-3-XY D15÷D63

DC INVERTER R-32 R-410A

COMPACT DESIGN, EASY INSTALLATION

The extremely compact frame fits easily in the lowest false ceilings, thanks to the unit's body height of only 235 mm. Installation is easier because it is lighter than the previous model.

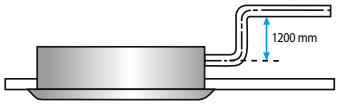


NEW PANEL

The new panel design provides wider air outlets for a more uniform airflow and temperature. Furthermore, it is possible to control all four louvers independently.

HIGH-LIFT DRAIN PUMP

A drain pump with a 1200 mm pump head is fitted as standard, simplifying installation of the drain piping.



FRESH AIR INTAKE

A reserved outside air intake port allows outdoor air to be introduced directly into the unit, negating the need for a separate ventilation system.

PRESENCE SENSOR

The embedded occupancy sensor automatically manages the unit depending on the presence of people in the room. It is possible to choose whether to turn the unit on/off or adjust the set point

INDOOR UNITS

technical data

Q4AN-3-XY D15÷D63

CASSETTE COMPATTE 4-VIE

Size		Q4AN-3-XY	D15	D22	D28	D36	D45	D56	D63
Cooling (1)	Capacity	kW	1.5	2.2	2.8	3.6	4.5	5.6	6.3
	Power input	W	14	14	16	18	25	35	50
Heating (2)	Capacity	kW	1.8	2.4	3.2	4.0	5.0	6.3	7.1
	Power input	W	14	14	16	18	25	35	50
Pipe connections	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Ø9,53
	Gas	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Ø15,9
	Drain pipe	mm	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25
Main body	Dimensions Dimensions (Width x Height x Depth) (5)	mm	575×235×638	575×235×638	575×235×638	575×235×638	575×235×638	575×235×638	575×235×638
	Weight	kg	13	13	13	14	14	15	15
Panel	Dimensions Dimensions (Width x Height x Depth)	mm	620×65×620	620×65×620	620×65×620	620×65×620	620×65×620	620×65×620	620×65×620
	Weight	kg	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Portata aria (3)		m^3/h	450/425/400 /370/345 /320/295	450/425/400 /370/345 /320/295	510/480/455 /425/395 /370/340	530/500/470 /440/405 /375/345	640/605/570 /530/495 /460/425	810/765/720 /670/625 /580/535	905/855/805 /755/705 /655/605
Sound pressure level (3) (4)		dB(A)	29/28/27 /27/26 /26/25	29/28/27 /27/26 /26/25	30/29/28 /27/26 /26/25	31/30/29 /28/27 /26/25.5	36.5/35/33 /31/29 /28/26.5	39/38/37 /36/35 /34/32	43/42/40 /38/36 /35/33.5
Sound power level (3)(4)		dB(A)	40/39/39 /39/38 /38/38	40/39/39 /39/38 /38/38	42/41/40 /39/39 /38/38	42/40/39 /38/38 /38/38	44/44/43 /42/41 /41/41	48/46/45 /43/42 /42/41	51/50/48 /46/45 /44/42
Power supply		V/Ph/Hz	220-240/1~/50						

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,4 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12F1	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller
T-MBQ4-03EA	Panel 4-way compact

4-WAY CASSETTE

Q4DN-3-XY D28÷D180

DC INVERTER R-32 R-410A

EASY TROUBLESHOOTING

The display on the panel allows to detect easily possible system malfunctions,

SUB DUCT

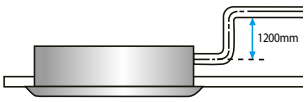
Connecting a sub-duct enables an indoor unit to be used to also cool a smaller nearby space.

NEW PANEL WITH ADJUSTABLE LOUVERS

The panel design provide strong airflow circulation to cool or heat every corner of a room and evenly control temperature. In addition, the delivery flaps are now individually adjustable.

HIGH-LIFT DRAIN PUMP

A drain pump with a 1200 mm pump head is fitted as standard, simplifying installation of the drain piping.



FRESH AIR INTAKE

A reserved outside air intake port allows outdoor air to be introduced directly into the unit, negating the need for a separate ventilation system.

PRESENCE SENSOR

The integrated sensor automatically adjusts the unit depending on whether or not there are people in the room. You can choose to switch the unit on/off or adjust its setpoint.

technical data

Q4DN-3-XY D28÷D180

4-WAY CASSETTE

Size		Q4DN-3-XY	D28	D36	D45	D56	D71	D80	D90	D100	D112	D140	D160	D180
Cooling (1)	Capacity	kW	2.8	3.6	4.5	5.6	7.1	8	9	10	11.2	14	16	18
	Power input	W	17	17	23	23	31	41	43	54	61	89	110	145
Heating (2)	Capacity	kW	3.2	4.0	5.0	6.3	8.0	9.0	10.0	11.2	12.5	16.0	18	20
	Power input	W	17	17	23	23	31	41	43	54	61	89	110	145
Pipe connections	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Ø9,53	Ø9,53	Ø9,53	Ø9,53	Ø9,53	Ø9,53	Ø9,53	Ø9,53
	Gas	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Ø15,9	Ø15,9	Ø15,9	Ø15,9	Ø15,9	Ø15,9	Ø15,9	Ø19,1
	Drain pipe	mm	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25	ODΦ25
Main body	Dimensions (Width x Height x Depth) (5)	mm	840×204×840	840×204×840	840×204×840	840×204×840	840×246×840	840×246×840	840×246×840	840×288×840	840×288×840	840×288×840	950×300×950	950×300×950
	Weight	kg	18	18	19.5	19.5	22	22	22	24	24	26,5	32.6	32.7
Panel	Dimensions (Width x Height x Depth)	mm	950×53×950	950×53×950	950×53×950	950×53×950	950×53×950	950×53×950	950×53×950	950×53×950	950×53×950	950×53×950	1050×55×1050	1050×55×1050
	Weight	kg	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	7.4	7.4
Portata aria (3)		m^3/h	790/740/691/641/591/542/492	790/740/691/641/591/542/492	840/787/733/680/626/573/519	840/791/741/692/642/593/543	1000/943/886/829/772/715/658	1330/1239/1148/1057/965/874/783	1330/1239/1148/1057/965/874/783	1445/1363/1282/1200/118/1037/955	1600/1497/1393/1290/1186/1083/979	1730/1624/1518/1412/1306/1200/1094	2100/1900/1760/1630/1500/1380/1270	2300/2140/1960/1770/1600/1430/1270
Sound pressure level (3) (4)		dB(A)	30/29/28/27.5/27/26/25	30/29/28/27.5/27/26/25	33/32/31/30/29/28/27	33/32/31/30/29/28/27	37/36/34/33/32/30/29	38/37/35/34/32/31/29	38/37/35/34/32/31/29	39/38/37/36/35/34/33	41/40/38/37/36/34/33	43/42/40/39/37/36/34	48/46/44/43/41/39/37	52/49/47/45/42/39/38
Sound power level (3)(4)		dB(A)	43/42/41/41/40/39/39	44/43/42/42/41/40/39	49/48/47/46/45/44/43	49/48/48/47/46/45/44	51/50/49/48/47/46/46	53/52/51/50/49/48/47	54/53/52/51/50/49/48	54/53/52/51/50/50/49	57/56/55/54/53/52/51	58/57/56/55/54/53/52	56/53/51/49/47/46/45	59/56/54/51/49/46/45
Power supply		V/Ph/Hz	220-240/1~/50											

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,5 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12F1	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller
T-MBQ4-01E1A	Panel 4-way D28-D140
T-MBQ4-02E1A	Panel 4-way D160-D180

LOW STATIC PRESSURE DUCT

CNT3-3-XY D15÷D112

DC INVERTER R-32 R-410A

COMPACT DESIGN

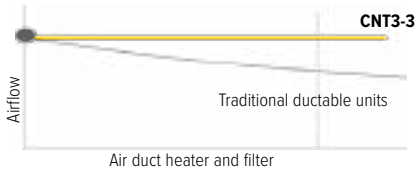
All models in the series are 199 mm high and 450 mm deep, requiring minimal installation space.

HIGH HEAD DRAINAGE PUMP

The condensate drain pump is included and can overcome a head of up to 1200 mm water column.

CONSTANT AIR FLOW

Thanks to the use of a digitally controlled fan, the air flow rate can be kept constant. Furthermore, it is possible to have an estimate of the percentage of clogging of the filters on the wired controls.



ADJUSTABLE STATIC PRESSURE

To adapt to installation conditions, the head of the unit can be precisely set between 10 and 50 or 80Pa depending on the size.

HIGH-EFFICIENCY EXCHANGER

Thanks to the exchanger's C-shaped design, a large heat exchange area can be achieved with a small footprint.

C-shaped gold-plated heat exchanger.

technical data

CNT3-3-XY D15÷D112

LOW STATIC PRESSURE DUCT

Size		CNT3-3-XY	D15	D22	D28	D36	D45	D56	D71	D80	D90	D112
Cooling [1]	Capacity	kW	1.5	2.2	2.8	3.6	4.5	5.6	7.1	8	9	11.2
	Power input	W	21	22	28	31	43	58	65	108	108	128
Heating [2]	Capacity	kW	1.8	2.5	3.2	4	5	6.3	8	9	10	12,5
	Power input	W	21	22	28	31	43	58	65	108	108	128
Pipe connections	Liquid	mm	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain pipe	mm	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25
Dimensions (Width x Height x Depth) [5]		mm	630×199 ×450	630×199 ×450	630×199 ×450	780x199 x450	980×199 ×450	980×199 ×450	1180×199 ×450	1680×199 ×450	1680×199 ×450	1680×199 ×450
Weight		kg	11.5	11.5	11.5	13	16,5	16,5	20	28	28	28
External static pressure		Pa	10 (10-50)	10 (10-50)	10 (10-50)	10 (10-50)	10 (10-50)	10 (10-50)	10 (10-50)	20(10-80)	20(10-80)	20(10-80)
Portata aria [3]		m^3/h	340/335/329 /320/307 /298/290	370/347/339 /322/314 /306/295	460/431/413 /380/351 /323/300	605/557/508 /453 /414 /365/320	800/770/701 /629/557 /506/435	900/800/761 /682/603 /549/470	1145/1033/957 /860/763 /671/580	1400/1327/1249 /1175 /1095 /1026/960	1400/1327/1249 /1175 /1095 /1026/960	1620/1522/1433 /1343/1254 /1170/1080
Sound pressure level [3] [4]		dB(A)	27/26/25.5 /24.5/23.5 /22.5/22	28/27.5/26.5 /25.5/24.5 /23.5/22	30/29.5/28.5 /27.5/26 /24.5/22	30/29.5/28.5 /27.5/26.5 /25.5/25	33/32.5/32 /30.5/29 /27.5/26	36/34.5/33.5 /32.5 /31 /29/27	37/35/34 /32.5/31 /30/29	36.5/35.5/34 /33/32 /31.5 /30.5	36.5/35.5/34 /33/32 /31.5 /30.5	39.5/38/36.5 /35/34 /32.5/31.5
Sound power level [3][4]		dB(A)	43.5/43/42.5 /42/41.5 /41 /40	46/45/44/43 /42/41/40	50.5/49/47 /45.5/43.5 /42/40	50.5/49.5/48 /47/45.5 /44.5/43	52/50.5/49 /47.5 /46 /44.5/43	56/54/52 /50/48 /46/44	57/55.5/54 /52/50.5 /49/47	57/56/54.5 /53.5/52 /51 /49.5	57/56/54.5 /53.5/52 /51 /49.5	60.5/59/57.5 /55.5/54 /52.5/50.5
Power supply		V/Ph/Hz	220-240/1~/50									

Data measured at standard external static pressure.

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,5 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12D	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller
DB01	Display Board (with IR receiver for remote controller)

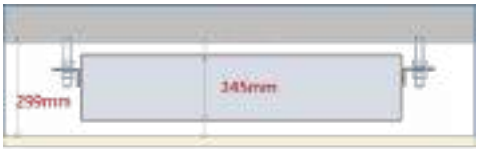
MEDIUM STATIC PRESSURE DUCT

CNT2-3-XY D15÷D160

DC INVERTER R-32 R-410A

COMPACT DESIGN

All models are now 245 mm high, making them easy to position in the ceiling.



HIGH-LIFT DRAIN PUMP

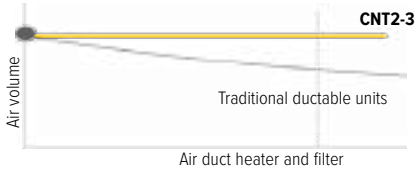
A drain pump with a 1200 mm pump head is fitted as standard, simplifying installation of the drain piping.

HIGH FLEXIBILITY

To provide the flexibility to adapt to differing installation situations, the air inlet may be positioned either on the underside or the rear of the unit.

CONSTANT AIR FLOW RATE

Thanks to the use of a digitally controlled fan, the air flow rate can be kept constant. In addition, an estimate of the filter clogging percentage is indicated on the controls.



STATIC PRESSURE WITH 20 STEPS CONTROL

Depending on the installation conditions, the head of the unit can be precisely set between 10 and 160Pa, choosing from 20 different combinations

technical data

CNT2-3-XY D15÷D56

MEDIUM STATIC PRESSURE DUCT

Size			CNT2-3-XY	D15	D22	D28	D36	D45	D56
Cooling (1)	Capacity	kW		1.5	2.2	2.8	3.6	4.5	5.6
	Power input	W		33	36	40	50	70	70
Heating (2)	Capacity	kW		1.8	2.5	3.2	4	5	6.3
	Power input	W		33	36	40	50	70	70
Pipe connections	Liquid	mm		Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35
	Gas	mm		Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ12.7
	Drain pipe	mm		OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25
Dimensions (Width x Height x Depth) (5)		mm		680×245×750	680×245×750	680×245×750	680×245×750	680×245×750	880×245×750
Weight		kg		18,5	18,5	18,5	18,5	19,5	24
External static pressure		Pa		30 (10-160)	30 (10-160)	30 (10-160)	30 (10-160)	30 (10-160)	30 (10-160)
Portata aria (3)		m^3/h		470/438/407 /375/343 /312/280	500/467/433 /400/367 /333/300	540/503/467 /430/393 /357/320	575/535/495 /455/415 /375/335	665/623/580 /538/495 /453/410	970/904/838 /773/707 /641/575
Sound pressure level (3) (4)		dB(A)		26.5/26/25 /24/23 /22.5/22	26.5/26/25 /24/23 /22.5/22	26.5/26/25 /24/23 /22.5/22	29/28/27 /26/25 /23/22	33/32/29.5 /28/26.5 /25/24	33/32/31 /30/27.5 /26/25
Sound power level (3)(4)		dB(A)		46/44.5/43 /41.5/40 /38.5/37	47/45.5/44 /42.5/41 /39.5/38	47/45.5/44 /42.5/41 /39.5/38	50/48.5/47 /45/43 /41/39	53/51/49 /47/45 /43/41	55/53/51 /49/47 /45/43
Power supply		V/Ph/Hz		220-240/1~/50					

Data measured at standard external static pressure.

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,5 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

MEDIUM STATIC PRESSURE DUCT

Size		CNT2-3-XY	D71	D80	D90	D112	D125	D140	D160
Cooling [1]	Capacity	kW	7.1	8	9	11.2	12.5	14	16
	Power input	W	96	102	110	138	172	172	210
Heating [2]	Capacity	kW	8	9	10	12.5	14	16	18
	Power input	W	96	102	110	138	172	172	210
Pipe connections	Liquid	mm	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain pipe	mm	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25
Dimensions (Width x Height x Depth)[5]		mm	880×245×750	1130×245×750	1130×245×750	1480×245×750	1480×245×750	1480×245×750	1480×245×750
Weight		kg	25	30	31	37	39	39	39
External static pressure		Pa	30 (10-160)	40 (10-160)	40 (10-160)	40 (10-160)	50 (10-160)	50 (10-160)	50 (10-160)
Portata aria [3]		m^3/h	1150/1068/986 /904/822 /740/660	1355/1263/1172 /1080/988 /897/805	1420/1323/1225 /1128/1030 /933/835	1950/1817/1683 /1550/1417 /1283/1150	2105/1971/183 7/1703/1568 /1434/1300	2105/1971/1837 /1703/1568 /1434/1300	2350/2160/2015 /1871/1776 /1533/1400
Sound pressure level [3] [4]		dB(A)	35/33.5/32 /30.5/29 /27.5/26	37/35.5/34 /32.5/31 /29.5/28	37/35.5/34 /32.5/31 /29.5/28	39/37/35 /33/31/ 29/28	40/38/36 /34/32 /30/29	40/38/36 /34/32 /30/29	42/40/38 /36/34 /33/31
Sound power level [3][4]		dB(A)	58/56/54 /51.5/48 /47/45	59/57/55 /53/51 /49/47	59/57/55 /53/50.5 /48/46	60/58/56.5 /55/53.5 /52/50	64/62/61.5 /59.5/57.5 /55/53	64/62/61.5 /59.5/57.5 /55/53	65/63/61 /58.5/56.5 /54/52
Power supply		V/Ph/Hz	220-240/1~/50						

Data measured at standard external static pressure.

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,5 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12F1	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller
DB01	Display Board (with IR receiver for remote controller)

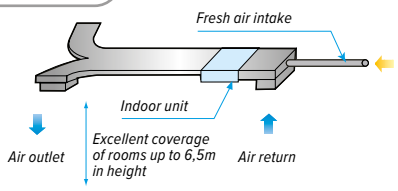
HIGH STATIC PRESSURE DUCT

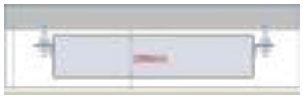
CN-3-XY D56÷D560

DC INVERTER R-32 R-410A

FLEXIBLE DUCT DESIGN

The High Static Pressure Duct indoor unit offers external static pressures of up to 400 Pa, allowing the use of long ducts. With a height of just 299 mm (units D56 to D160), can be used in most installation situations.





CONSTANT AIR FLOW RATE

Thanks to the use of a digitally controlled fan, the air flow rate can be kept constant. In addition, an estimate of the filter clogging percentage is indicated on the controls.

HIGH HEAD DRAINAGE PUMP

The condensate drain pump is included and can overcome a head of up to 1200 mm water column.

STATIC PRESSURE WITH 20 STEPS CONTROL

Depending on the installation environment, units can be precisely set up to 20 steps of static pressure/airflow rate combinations via wired remote controller, providing comfortable environment suitable for any application.

20 steps static pressure control

INDOOR UNITS

technical data

CN-3-XY D56÷D160

HIGH STATIC PRESSURE DUCT

Size		CN-3-XY	D56	D71	D80	D90	D112	D125	D140	D160
Cooling [1]	Capacity	kW	5.6	7.1	8	9	11.2	12.5	14	16
	Power input	W	159	159	159	196	248	252	284	339
Heating [2]	Capacity	kW	6.3	8	9	10	12.5	14	16	18
	Power input	W	159	159	159	196	248	252	284	339
Pipe connections	Liquid	mm	Φ6.35	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ12.7	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9	Φ15.9
	Drain pipe	mm	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25	OD Φ25
Dimensions (Width x Height x Depth) [5]		mm	1130×299×750	1130×299×750	1130×299×750	1130×299×750	1480×299×750	1480×299×750	1480×299×750	1480×299×750
Weight		kg	35	35	35	35	44.5	46.5	46.5	46.5
External static pressure		Pa	80 (0-250)	80 (0-250)	80 (0-250)	80 (0-250)	80 (0-250)	100 (0-250)	100 (0-250)	100 (0-250)
Portata aria [3]		m^3/h	1360/1281/1201 / 1122/1043 /963/884	1360/1281/1201 /1122/1043 /963/884	1360/1281/1201 /1122/1043 /963/884	1500/1413/1325 /1238/1150 /1063/975	2140/2015/1890 /1766/1641 /1516/1391	2150/2025/1899 /1774/1649 /1523/1398	2400/2260/2120 /1980/1840 /1700/1560	2600/2448/2297 /2145/1993 /1842/1690
Sound pressure level [3] [4]		dB(A)	39/38 /36/35 /33/32/30	39/38/ 36/35 /33/32/30	39/38 /36/35 /33/32/30	40/39/37 /36/34 /33/31	41/40/38 /37/35 /34/32	41/40/39 /37/36 /35/33	43/42/40 /39/37 /36/34	44/43/41 /40/38 /37/35
Sound power level [3][4]		dB(A)	59/56/54 /53/51/49/47	59/56/54 /53/51/49/47	59/56/54 /53/51/49/47	63/60/58 /56/54/52/50	63/61/59 /57/56/54/52	66/64/62 /60/58 /56/54	67/64/62 /60/58 /57/55	68/66/64 /62/60 /59/57
Power supply		V/Ph/Hz	220-240/1~/50							

Data measured at standard external static pressure.

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,4 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

HIGH STATIC PRESSURE DUCT

Size		CN-3-XY	D200	D224	D252	D280	D335	D400	D450	D560
Cooling [1]	Capacity	kW	20	22.4	25.2	28	33.5	40	45	56
	Power input	W	780	780	780	780	810	1850	1850	2030
Heating [2]	Capacity	kW	22.5	25.0	26.0	31.5	38	45	56	63
	Power input	W	780	780	780	780	810	1850	1850	2030
Pipe connections	Liquid	mm	Φ9.52	Φ9.52	Φ12.7	Φ12.7	Φ12.7	Φ12.7	Φ15.9	Φ15.9
	Gas	mm	Φ19.1	Φ19.1	Φ22.2	Φ22.2	Φ25.4	Φ25.4	Φ28.6	Φ28.6
	Drain pipe	mm	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32	OD Φ32
Dimensions (Width x Height x Depth) [5]		mm	1300×580×1050	1300×580×1050	1300×580×1050	1300×580×1050	1300×580×1050	1850×580×1050	1850×580×1050	1850×580×1050
Weight		kg	125	125	125	125	128	166	166	170
External static pressure		Pa	200(0-400)	200(0-400)	200(0-400)	200(0-400)	200(0-400)	300(0-400)	300(0-400)	300(0-400)
Portata aria [3]		m^3/h	4700/4387/4073 /3760/3447 /3133/2820	4700/4387/4073 /3760/3447 /3133/2820	4700/4387/4073 /3760/3447 /3133/2820	4700/4387/4073 /3760/3447 /3133/2820	4700/4387/4073 /3760/3447 /3133/2820	7500/7000/6500 /6000/5500 /5000/4500	7500/7000/6500 /6000/5500 /5000/4500	8400/7840/7280 /6720/6160 /5600/5040
Sound pressure level [3] [4]		dB(A)	51/50/48 /46/44 /43/42	51/50/48 /46/44 /43/42	51/50/48 /46/44 /43/42	51/50/48 /46/44 /43/42	52/51/49 /48/46 /44/43	58/56/54 /52/50 /49/48	58/56/54 /52/50 /49/48	59/58/56 /54/53 /51/49
Sound power level [3][4]		dB(A)	74/72/70 /68/66 /64/62	74/72/70 /68/66 /64/62	74/72/70 /68/66 /64/62	74/72/70 /68/66 /64/62	74/72/70 /68/66 /63/61	79/78/76 /74/72 /70/67	79/78/76 /74/72 /70/67	81/80/77 /75/73 /71/69
Power supply		V/Ph/Hz								

Data measured at standard external static pressure.

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,4 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12F1	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller
DB01	Display Board (with IR receiver for remote controller)

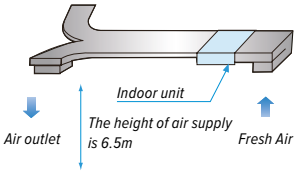
FRESH AIR PROCESSING UNIT

CNFA-3-XY D90÷D160

DC INVERTER R-32 R-410A

100% FRESH AIR PROCESSING UNIT

Both fresh air filtration and heating/cooling can be achieved in a single system.
Indoor units and the Fresh Air Processing Unit can be connected to the same refrigerant system, increasing design flexibility and greatly reducing total system costs.



FLEXIBLE DUCTING DESIGN

Thanks to the maximum available static pressure of 300 Pa, full outdoor air units can also be combined with long ducts and ensure the required flow-rate even with high pressure drops

COMPACT DESIGN

Thanks to a height of only 310 mm, all sizes can also be installed in limited ceilings.

STATIC PRESSURE WITH 20 STEPS CONTROL

Depending on the installation environment, units can be precisely set up to 20 steps of static pressure/airflow rate combinations via wired remote controller, providing comfortable environment suitable for any application.


20 steps static pressure control

FLEXIBLE TEMPERATURE CONTROL

Full outdoor air units can control both the supply airflow setpoint and the ambient air temperature, thereby adapting to any design requirement.

technical data

CNFA-3-XY D90÷D160

CANALIZZABILI A TUTT'ARIA ESTERNA

Size		CNFA-3-XY		D90	D140	D160
Cooling [1]	Capacity	kW		9,0	14,0	16,0
	Power input	W		80	165	185
	Operating temperature range (DB)	°C		20 ~ 52	20 ~ 52	20 ~ 52
Heating [2]	Capacity	kW		8,1	12,5	14,0
	Power input	W		80	165	185
	Operating temperature range (DB)	°C		-10 ~ 16	-10 ~ 16	-10 ~ 16
Pipe connections	Liquid	mm		Ø 9.53	Ø 9.53	Ø 9.53
	Gas	mm		Ø 15.9	Ø 15.9	Ø 15.9
	Drain pipe	mm		OD Ø 25	OD Ø 25	OD Ø 25
Dimensions (Width x Height x Depth) [5] [5]		mm		1135x310x773	1135x310x773	1135x310x773
Weight		kg		37	40	40
Portata aria [3]		m^3/h		690/633/575/518 /460/403/345	1100/1008/917/825 /733/642/550	"1230/1128/1025/923 /820/718/615"
External static pressure		Pa		100 (0~300)	150 (0~300)	150 (0~300)
Sound pressure level [3] [4]		dB(A)		39/37.5/36/34 /32.5/30.5/29	44.5/42.5/40/37 /35/33/32	44.5/43/41/38 /36/34/32.5
Sound power level [3] [4]		dB(A)		61/59/56/53 /51/48/45	66/64/61/57 /55/53/51	67/65/62/58 /56/54/52
Power supply		V/Ph/Hz			220-240/1~/50	

Data measured at standard external static pressure.

(1) Outdoor temperature 33°C DB/28°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero

(2) Outdoor temperature 0°C DB/-2,9°C WB. Piping length between outdoor and indoor units is 7,5 m, height difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1,4 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

The Fresh Air Processing Unit can be used either independently or in conjunction with other types of indoor unit. If used independently, the total capacity of the Fresh Air Processing Units must be between 50% and 100% of that of the outdoor units. If used in conjunction with other types of indoor unit, the total capacity of the Fresh Air Processing Units must not exceed 30% of that of the outdoor units and the total capacity of indoor units + Fresh Air Processing Units must be between 50% and 100% of that of the outdoor units .

accessories

RM12F1	Infrared remote control	**WDC-120T**	Wired controller
WDC-86S	Simplified wired controller	**DB01**	Display Board (with IR receiver for remote controller)
WDC-86T	Compact wired controller		

NEW

INDOOR UNITS

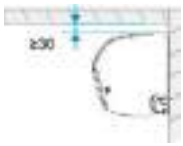
WALL-MOUNTED

GWMN-3-XY D15÷D80

DC INVERTER R-32 R-410A

NEW DESIGN

The new design of the air intake allows installing the units close to the ceiling, at a minimum distance of 30 mm.



OCCUPANCY SENSOR INCLUDED

The integrated sensor automatically adjusts the unit depending on whether or not there are people in the room. You can choose to switch the unit on/off or adjust its setpoint.

HIGH EFFICIENCY AND SILENCE

Advanced brushless DC fan motor operates smoothly and highly efficiently. All throttling parts and drain pumps adopt closed design, reducing noise during the usage.

FLEXIBILITY

Installation is easy and flexible thanks to the possibility of connecting the pipes from multiple directions.

OPTIMISED HEAT EXCHANGER

Thanks to the unique C-shaped design,a homogeneous and silent airflow and a large exchange area can be achieved with a minimal size of the exchanger.

Heat exchanger golden C-shaped.

HIGH-LIFT DRAIN PUMP

A drain pump with a 1200 mm pump head is fitted as standard, simplifying installation of the drain piping.

technical data

GWMN-3-XY D15÷D80

WALL-MOUNTED

Size			GWMN-3-XY	D15	D22	D28	D36	D45	D56	D71	D80
Cooling [1]	Capacity	kW		1,5	2,2	2,8	3,6	4,5	5,6	7,1	8
	Power input	W		18	21	24	27	30	40	50	65
Heating [2]	Capacity	kW		1,7	2,4	3,2	4	5	6,3	8	9
	Power input	W		18	21	24	27	30	40	50	65
Pipe connections	Liquid	mm		Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ6.35	Φ9,52	Φ9,52
	Gas	mm		Φ12,7	Φ12,7	Φ12,7	Φ12,7	Φ12,7	Φ12,7	Φ15,9	Φ15,9
	Drain pipe	mm		OD Φ16	OD Φ16	OD Φ16	OD Φ16	OD Φ16	OD Φ16	OD Φ16	OD Φ16
Dimensions (Width x Height x Depth) [5]		mm		750×295×265	750×295×265	750×295×265	750×295×265	950×295×265	950×295×265	1200×295×265	1200×295×265
Weight		kg		9	9	10	10	11,5	11,5	15	15
Portata aria [3]		m^3/h		460/440/420/400 /380/360/340	500/470/440/410 /390/370/340	540/510/470/430 /400/370/340	580/540/500/460 /420/380/340	720/670/620/560 /510/460/410	860/780/700/620 /550/480/410	1220/1120/1030/ 940/850/750/660	1380/1260/1140/ 1020/900/780/660
Sound pressure level [3] [4]		dB(A)		32/31/30/30 /29/28/27	33/32/31/30 /29/28/27	35/34/33/32 /31/30/28	37/36/34/ 33/31/30/28	37/35/33/32 /31/30/29	41/39/37/35 /33/31/29	44/42/40/38 /36/34/32	45/43/41/39 /37/35/32
Sound power level [3] [4]		dB(A)		45/44/43/43 /42/41/40	46/45/44/43 /42/41/40	50/49/48/47 /46/44/42	54/53/51/50/ 48/46/44	54/52/50/49 /48/46/44	56/54/52/50/ 48/46/44	58/56/54/52 /50/48/46	60/57/55/53 /50/48/46
Power supply		V/Ph/Hz		220-240/1~/50							

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1m in front and 0,8 m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12F1	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller

FLOOR STANDING

DZGF3B-3-XY D22÷D80 - DZDF4-3-XY D22÷D80 - DZDF5-3-XY D22÷D80

DC INVERTER R-32 R-410A

HIGH FLEXIBILITY

The Floor Standing indoor units are meant to suit multiple applications: they can be installed on the floor, hung up on the wall for easier floor cleaning or hidden in the wall as a built in cabinet. The streamlined appearance complements any room's decor.

INSTALLATION OPTIONS

The advantageous weight and the compactness make the units easy to carry and to place. The depth of just 200 mm grants a high installation's flexibility. This feature results extremely impacting on the concealed unit (DZGF3B-3-XY) that can be positioned around the perimeter of a room hidden in the skirting board, producing also low noise thanks to technical adjustments. The other two casing options include the frontal air inlet version (DZDF4-3-XY), or from the bottom (DZDF5-3-XY).

DZGF3B-3-XY (concealed)

DZDF4-3-XY (front air intake)

DZDF5-3-XY (underside air intake)

STYLISH DESIGN

The innovative design paired with polished profiles and light lines allow the units to be perfectly integrated into any kind of environment and use.

STATIC PRESSURE 7 STEPS CONTROL

Depending on where the concealed unit is installed (DZGF3B-3-XY), it can be accurately set with 7 different combinations of static pressure and airflow, providing the correct airflow for a wide variety of duct's lengths.

technical data

DZGF3B-3-XY D22÷D80

FLOOR STANDING

Size		DZGF3B-3-XY	D22	D28	D36	D45	D56	D71	D80
Cooling (1)	Capacity	kW	2,2	2,8	3,6	4,5	5,6	7,1	8
	Power input	W	35	35	40	44	45	53	62
Heating (2)	Capacity	kW	2,4	3,2	4	5	6,3	8	9
	Power input	W	35	35	41	46	47	57	64
Pipe connections	Liquid	mm	Ø6,35	Ø6,35	Ø6,35	Ø6,35	Ø6,35	Ø9,53	Ø9,53
	Gas	mm	Ø12,7	Ø12,7	Ø12,7	Ø12,7	Ø12,7	Ø15,9	Ø15,9
	Drain pipe	mm	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5
Dimensions (Width x Height x Depth) (5)		mm	915x470x200	915x470x200	915x470x200	1133x470x200	1253x566x200	1253x566x200	1253x566x200
Weight		kg	16.3	16.3	16.9	20	24.3	26.1	26,1
External static pressure		Pa	0~60	0~60	0~60	0~60	0~60	0~60	0~60
Portata aria (3)		m³/h	473/464/454 /449/439 /431/426	473/464/454 /449/439 /431/426	524/503/488 /471/450/ 427/408	636/611/584 /557/533 /507/483	781/756/738 /717/683 /651/624	928/893/865 /834/803 /770/739	928/893/865 /834/803 /770/739
Sound pressure level (3) (4)		dB(A)	34.5/34/33.5 /32.5/32 /31/30.5	34.5/34/33.5 /32.5/32 /31/30.5	36.5/35.5/34.5 /34/33 /32/31	37/36/35 /34/33 /32/30	36.5/36/35 /34/33.5 /32.5/31.5	40.5/39.5 /38.5/37.5 /36.5/36/34.5	40.5/39.5/38.5 /37.5/36.5 /36/34.5
Sound power level (3)(4)		dB(A)	49/48/48 /47/47/46/46	49/48/48 /48/47/47/46	51/50/49 /48/48/47/46	52/51/50 /49/48/47/46	51/51/50 /49/48/48/47	55/54/53 /52/52/51/50	55/54/53 /52/52/51/50
Power supply		V/Ph/Hz	220-240/1~/50						

Data are measured with standard external static pressure

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1 m in front of the unit and 1,5 m above the floor.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

technical data

DZDF4-3-XY D22÷D80

FLOOR STANDING

Size		DZDF4-3-XY	D22	D28	D36	D45	D56	D71	D80
Cooling [1]	Capacity	kW	2,2	2,8	3,6	4,5	5,6	7,1	8
	Power input	W	35	35	40	44	45	53	62
Heating [2]	Capacity	kW	2,4	3,2	4	5	6,3	8	9
	Power input	W	35	35	41	46	47	57	64
Pipe connections	Liquid	mm	Ø6,35	Ø6,35	Ø6,35	Ø6,35	Ø6,35	Ø9,53	Ø9,53
	Gas	mm	Ø12,7	Ø12,7	Ø12,7	Ø12,7	Ø12,7	Ø15,9	Ø15,9
	Drain pipe	mm	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5
Dimensions (Width x Height x Depth) [5]		mm	1020x495x200	1020x495x200	1020x495x200	1240x495x200	1360x591x200	1360x591x200	1360x591x200
Weight		kg	21,1	21,1	21,9	26,3	32,1	33,3	33,3
Portata aria [3]		m^3/h	507/490/482 /466/449 /450/435	507/490/482 /466/449 /450/435	532/512/501 /483/466/ 435/414	689/663/639 /608/575 /560/526	934/904/888 /860/821 /786/764	1054/1011/992 /955/924 /889/841	1054/1011/992 /955/924 /889/841
Sound pressure level [3] [4]		dB(A)	36/35/34.5 /34/33/32.5/32	36/35/34.5 /34/33/32.5/32	38/37/36 /35/34/33/32	43/42/41 /40/39/38/37	41.5/41/40 /39/38/37/36	46/45.5/45 /44/43/42/41	46/45.5/45 /44/43/42/41
Sound power level [3][4]		dB(A)	52/51/51/ 50/50/49/49	52/51/51/50 /50/49/49	52/52/51/50 /49/48/47	55/54/54/53 /52/51/51	53/52/52 /52/51/51/50	57/56/55 /54/53/53/52	57/56/55 /54/53/53/52
Power supply		V/Ph/Hz	220-240/1~/50						

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1 m in front and 1,5 m above the floor

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

technical data

DZDF5-3-XY D22÷D80

FLOOR STANDING

Size		DZDF5-3-XY	D22	D28	D36	D45	D56	D71	D80
Cooling [1]	Capacity	kW	2,2	2,8	3,6	4,5	5,6	7,1	8
	Power input	W	35	35	40	44	45	53	62
Heating [2]	Capacity	kW	2,4	3,2	4	5	6,3	8	9
	Power input	W	35	35	41	46	47	57	64
Pipe connections	Liquid	mm	Ø6,35	Ø6,35	Ø6,35	Ø6,35	Ø6,35	Ø9,53	Ø9,53
	Gas	mm	Ø12,7	Ø12,7	Ø12,7	Ø12,7	Ø12,7	Ø15,9	Ø15,9
	Drain pipe	mm	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5	OD Ø 18,5
Dimensions (Width x Height x Depth) [5]		mm	1020x585x200	1020x585x200	1020x585x200	1240x585x200	1360x681x200	1360x681x200	1360x681x200
Weight		kg	21,1	21,1	21,9	26,3	32,1	33,3	33,3
Portata aria [3]		m^3/h	498/486/475 /464/453 /441/430	498/486/475 /464/453 /441/430	508/491/474 /458/441 /424/407	692/665/637 /610/582 /555/528	811/785/759 /732/706 /680/653	930/895/860 /825/790 /755/721	930/895/860 /825/790 /755/721
Sound pressure level [3] [4]		dB(A)	32.5/32/31.5 /31/30.5/30/29	32.5/32/31.5 /31/30.5/30/29	35/34/33 /32/31/30/29	38/37/36/35 /34/32.5/31.5	35/34.5/34 /33/32.5/32/31	39.5/39/38 /37/36/35/34	39.5/39/38 /37/36/35/34
Sound power level [3][4]		dB(A)	51/50/49 /49/48/48/48	51/50/49/49 /48/48/48	51/50/49 /48/47/47/46	53/53/52/51 /50/49/48	51/50/50/ 50/49/49/48	54/53/52 /51/50/50/49	54/53/52 /51/50/50/49
Power supply		V/Ph/Hz	220-240/1~/50						

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) Sound values are measured in a semi-anechoic room, at a position 1 m in front and 1,5 m above the floor

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12F1	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller
KPDX	Mounting feet kit (for DZDF5-3-XY)
DB01	Display Board (with IR receiver for remote controller, cannot be integrated in the unit)

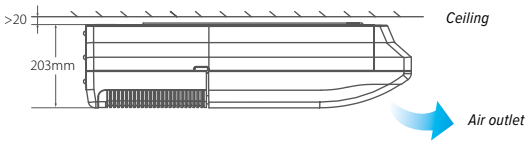
CEILING & FLOOR

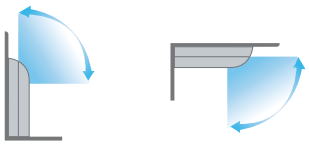
DDLC-3-XY D36÷D140

DC INVERTER R-32 R-410A

FLEXIBLE INSTALLATION

The slim design is perfect for both ceiling and floor installation, matching a wide range of furnishings.





The unit can be installed either horizontally on the ceiling or vertically against the wall.

WIDE DISTRIBUTION ANGLE

5 levels of fin control combined with 7 available fan speeds allow the unit to adapt to any ambient and ensure full coverage of cooling and heating loads.

LOW NOISE AND ENERGY CONSUMPTION

With the DC fan motor and optimised design, energy consumption is reduced by up to -80% and the sound power level averages -5 db(A) compared to the previous generation.

technical data

DDLC-3-XY D36÷D80

CEILING & FLOOR

Size		DDLC-3-XY	D36	D45	D56	D71	D80
Cooling (1)	Capacity	kW	3,6	4,5	5,6	7,1	8
	Power input	W	16	24	40	42	56
Heating (2)	Capacity	kW	4	5	6,3	8	9
	Power input	W	16	24	40	42	56
Pipe connections	Liquid	mm	Ø 6,35	Ø 6,35	Ø 6,35	Ø 9,53	Ø 9,53
	Gas	mm	Ø 12,7	Ø 12,7	Ø 12,7	Ø 15,9	Ø 15,9
	Drain pipe	mm	OD Ø 25	OD Ø 25	OD Ø 25	OD Ø 25	OD Ø 25
Dimensions (Width x Height x Depth) (5)		mm	1069x674x234	1069x674x234	1069x674x234	1284x674x234	1284x674x234
Weight		kg	24,7	24,7	24,7	29,8	29,8
Portata aria (3)		m^3/h	564/539/514 /492/467 /445/424	712/674/637 /603/565 /531/500	927/883/840 /794/751 /707/665	1128/1062/1024 /926/860 /791/729	1300/1218/1138 /1057/982 /904/824
Sound pressure level (3) (4)		dB(A)	32/30/29 /28/27/26/25	36/35/34 /33/32/31/30	43/41/40 /38/36/34/33	43/40/39 /37/35/34/33	45/44/42 /40/38/36/34
Sound power level (3)(4)		dB(A)	43/42/40 /39/38/38/37	47/45/45 /43/42/41/40	54/53/51 /50/48/47/45	54/53/52 /51/49/48/48	55/53/51 /50/49/46/44
Power supply		V/Ph/Hz	220-240/1~/50				

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) FLOOR STANDING: Sound values are measured in a semi-anechoic room, at a position 1 m in front the unit and 1 m above the floor.
CEILING MOUNTED: Sound values are measured in a semi-anechoic room, at a position 1m in front and 1m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

DDLC-3-XY D90÷D140

CEILING & FLOOR

Size		DDLC-3-XY		D90	D100	D112	D125	D140
Cooling [1]	Capacity	kW		9	10	11,2	12,5	14
	Power input	W		75	50	65	95	140
Heating [2]	Capacity	kW		10	11,2	12,5	14	16
	Power input	W		75	50	65	95	140
Pipe connections	Liquid	mm		Ø 9,53	Ø 9,53	Ø 9,53	Ø 9,53	Ø 9,53
	Gas	mm		Ø 15,9	Ø 15,9	Ø 15,9	Ø 15,9	Ø 15,9
	Drain pipe	mm		OD Ø 25	OD Ø 25	OD Ø 25	OD Ø 25	OD Ø 25
Dimensions (Width x Height x Depth) [5]		mm		1284x674x234	1649x674x234	1649x674x234	1649x674x234	1649x674x234
Weight		kg		29,8	36,4	36,4	36,4	36,4
Portata aria [3]		m^3/h		"1480/1397/1302 /1218/1138 /1056/979"	"1497/1469/1296 /1200/1104 /1015/918"	"1648/1530/1469 /1292/1178 /1067/956"	"2012/1879/1772 /1649/1531 /1469/1285"	"2206/2070/1937 /1810/1677 /1516/1402"
Sound pressure level [3] [4]		dB(A)		"48/47/49 /44/42/40/37"	"42/40/39 /37/35/33/32"	"44/42/41 /39/37/35/33"	"49/48/46 /44/42/40/38"	"51.5/50/48 /46/44/42/40"
Sound power level [3][4]		dB(A)		"58/57/55 /54/52/50/49"	"54/53/51 /50/48/46/44"	"56/54/53 /51/49/47/45"	"60/59/58 /56/54/53/51"	"63/62/60 /58/56/54/53"
Power supply		V/Ph/Hz		220-240/1~/50				

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Piping length: Interconnecting piping length is 7,5 m, level difference is zero.

(3) Data refer to the 7 fan speeds, in descending order.

(4) FLOOR STANDING: Sound values are measured in a semi-anechoic room, at a position 1 m in front the unit and 1 m above the floor.
CEILING MOUNTED: Sound values are measured in a semi-anechoic room, at a position 1m in front and 1m below the unit.

(5) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

accessories

RM12F1	Infrared remote control
WDC3-86S	Simplified wired controller
WDC3-86T	Compact wired controller
WDC3-120T	Wired controller

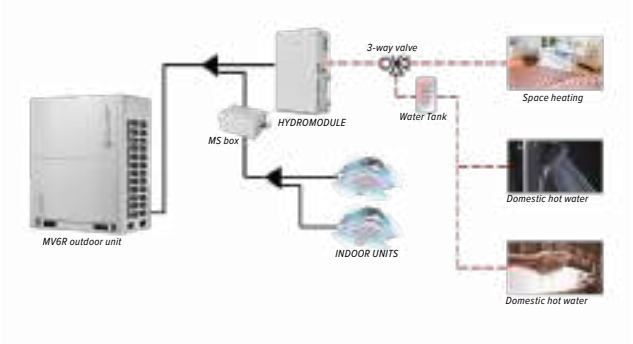
HIGH TEMPERATURE HYDRO MODULE

HWM-2-XMi 140

DC INVERTER R-134a R-410A H2O

INTEGRATED HOT WATER PRODUCTION UP TO 80 °C

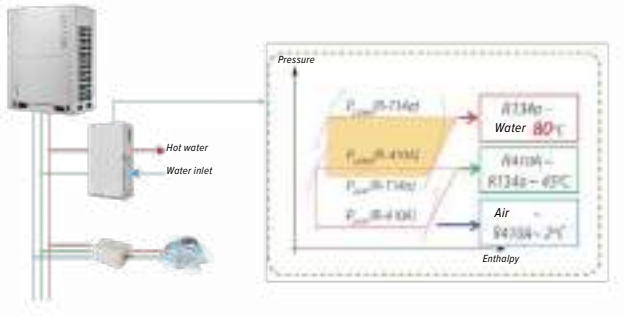
Specifically developed in combination with MV6R heat recovery series, High Temperature Hydro Module unit can produce hot water up to 80 °C to meet all possible demands: from space heating through underfloor heating, fan coils or radiators, to domestic hot water production.
Heat recovery series connection ensures all year round operation and to optimize system efficiency especially during summer season, allowing the simultaneous operation of the hydronic module producing domestic hot water and of indoor units cooling the rooms.



R134a CASCADE CIRCUIIT

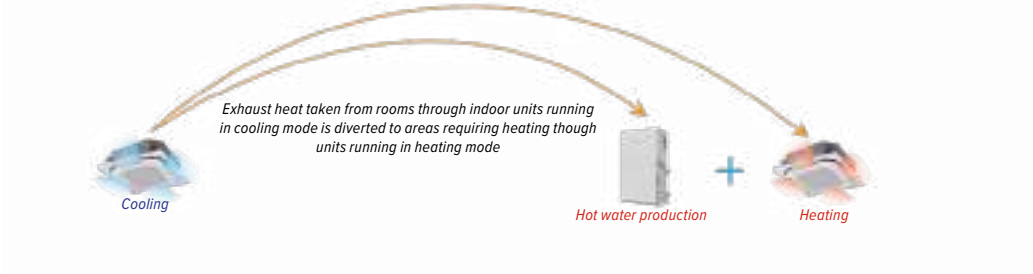
In order to raise water temperature supplied up to 80 °C, an independent R134a refrigerant circuit included in the unit is used:

- Within the main R410A refrigerant circuit common to the whole VRF system, the heat is taken from the ambient and diverted to the hydronic module through a plate heat exchanger;
- Inside the hydronic module, the heat transferred from the main circuit to the R134a cascade cycle is furtherly raised and released to the hydraulic circuit through another plate heat exchanger.



"FREE" HOT WATER PRODUCTION

Thanks to the heat recovery technology of the MV6R series, during the summer season it is possible to use the exhaust heat taken from the rooms through the indoor units operating in cooling mode and divert it to the hydro module for hot water production. Thus, it is sufficient to use the compressor included in the hydronic module to raise the thermal level and produce hot water with minimum power input.



INDOOR UNITS

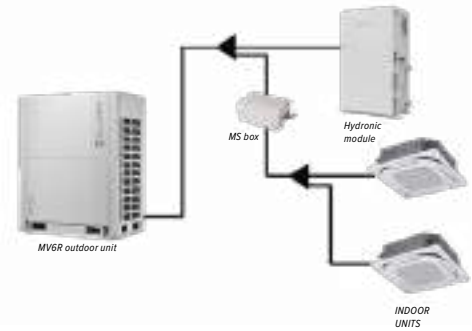
COMPACT AND LIGHT

The unit has been developed with a compact design to offer the minimum dimensions. The low weight furtherly simplifies transportation and installation.

EXTENDED CONNECTIVITY UP TO 200%

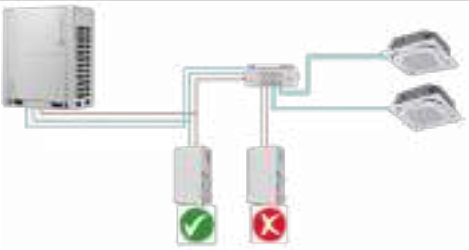
In a mixed system composed of hydronic modules and indoor units it is possible to connect up to 200% of outdoor unit capacity, in order to fully benefit from the simultaneousness of cooling and heating loads.

	MV6R system	Capacity index
Hydronic module + VRF indoor units	Total capacity index	50%~200%
	Total VRF indoor units capacity index	50%~130%
	Total hydronic modules capacity index	0%~100%



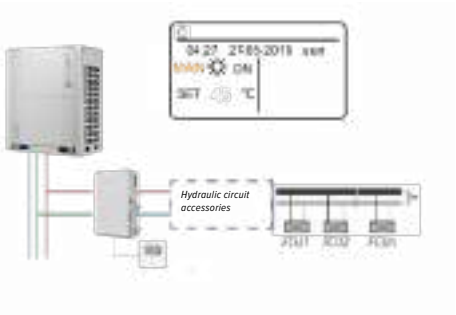
OPTIMIZED CONNECTION

Hydronic module is connected to the refrigerant circuit on the main pipe before the MS box, avoiding occupying ports and allowing the connection of more indoor units.

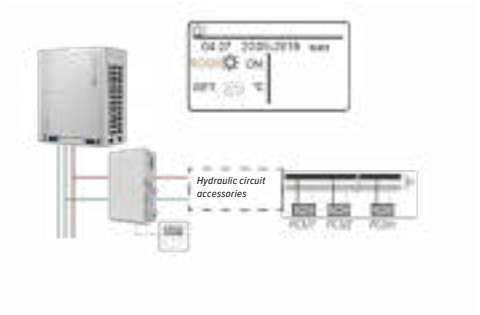


SUITABLE FOR MULTIPLE APPLICATIONS

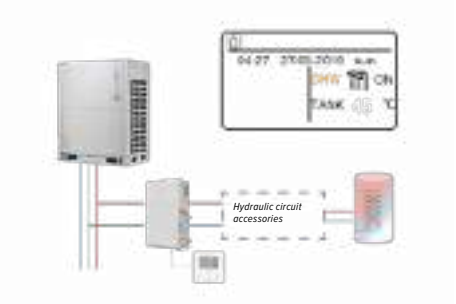
- **Scenario 1:** space heating application with supply water temperature control.



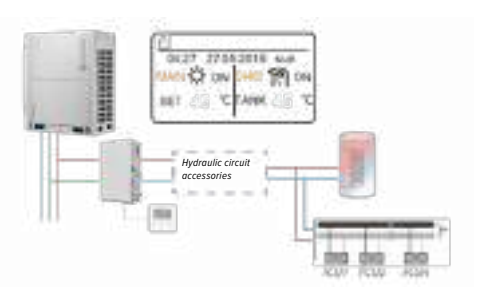
- **Scenario 2:** space heating application with room temperature control.



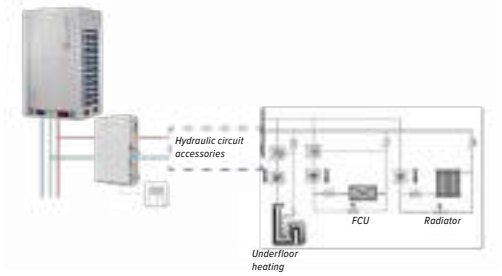
- **Scenario 3:** domestic hot water application with water tank temperature control.



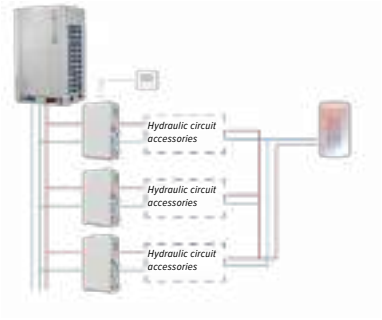
- **Scenario 4:** domestic hot water application and simultaneous space heating.



- **Scenario 5:** space heating application with multiple set point temperature for up to 3 zones management.



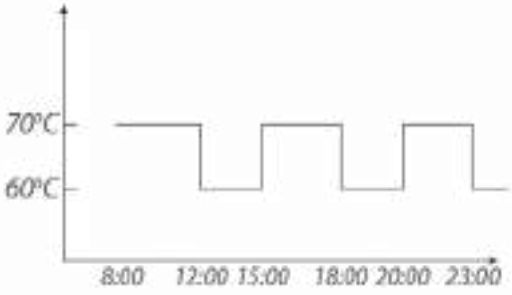
- **Scenario 6:** modular units configuration with group management and water tank temperature control.



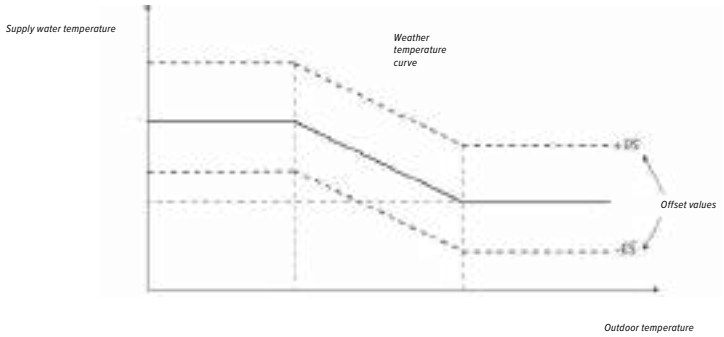
MULTIPLE ADVANCED FUNCTIONS

- **Weekly timer and variable temperature set point:**several settings (set point, operating mode) are available to be scheduled to automate operations according to user's specific needs.

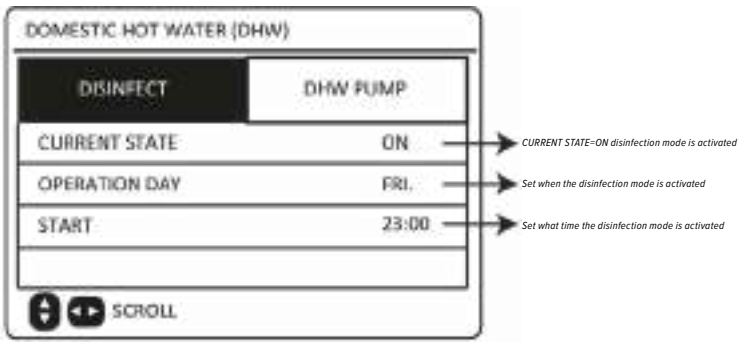
NO.	TIME	TEMP.
1	8:00	70 °C
2	12:00	60 °C
3	15:00	70 °C
4	18:00	60 °C
5	20:00	70 °C
6	23:00	60 °C



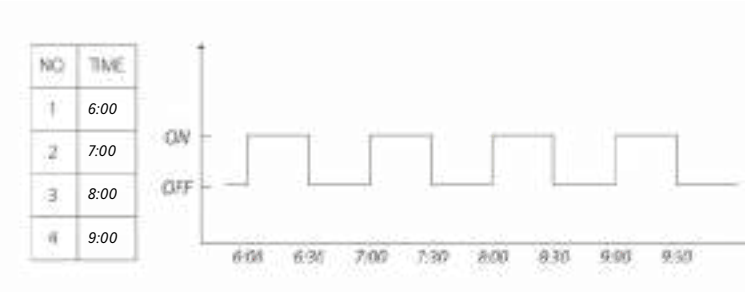
- **Weather temperature curve:** in space heating mode, supply water temperature is adjusted as function of the outdoor temperature, either when control is based on room temperature or on supply water temperature. Weather temperature curve can be modified according to user's preferences.



- **Anti-legionella mode:** to prevent the formation of legionella bacteria, a special disinfection mode can be set that can be scheduled on pre-set days and times.



- **DHW recirculating pump function:** in order to ensure the immediate supply of domestic hot water at any time, recirculating pump can be regularly activated in time periods settable by the wired controller.



- **Silent mode:** whereas silence is a crucial requirement, noise levels of the unit can be limited in specific time periods or continuously.
- **Holiday mode:** holiday mode prevents frost formation inside the water circuit, keeping also possible schedules if needed.
- **Mode setting lock** (mode on/off, temperature setpoint, maximum consumption) from remote control.
- **Parameter display and alarm log** from remote control.

technical data

HWM-2-XMi 140


HIGH TEMPERATURE HYDRO MODULE

Size			HWM-2-XMi
			140
Heating (1)	Capacity	kW	14
	Power input	kW	1,59
	Water temperature	°C	25 ~ 80
	Operating ambient temperature range heating mode	°C	-20 ~ 30
	Operating ambient temperature range DHW mode	°C	-20 ~ 43
	Installation room temperature	°C	0 ~ 40
Total capacity index (2)	HTHM / ODU	-	0 ~ 100%
	IDU / ODU	-	50 ~ 130%
	(HTHM + IDU) / ODU	-	50 ~ 200%
Compressor	Type	-	Rotary DC Inverter
	Quantity	-	1
Refrigerant	Type	-	R-134a
	Factory charge	kg	1,2
	CO_2 equivalence	ton	1,72
Refrigerant pipe connections	Liquid	mm	Ø 9,53
	Gas	mm	Ø 12,7
Water pipe connections	Inlet	mm	Ø 25,4
	Outlet	mm	Ø 25,4
Dimensions (Width x Height x Depth)		mm	450x795x300
Weight		kg	63
Water flow rate nominal (Min. ~ Max.)		m^3/h	2,4 (1,2 ~ 2,9)
Water circuit pressure		Mpa	0,1 ~ 0,3
Sound pressure level (3)		dB(A)	43
Sound power level 3)		dB(A)	54
Power supply		v/Ph/Hz	220-240/1~/50

(1) Outdoor air temperature 7°C DB/6°C WB; water inlet/outlet temperature 40°C/45°C, water flow rate 2,4 m^3/h

(2) For details of operation above 30°C, see technical documentation

(3) Sound values are measured in a semi-anechoic room, at a position 1 m in front of the unit and 1 m above the floor.

accessories

(HTHM)WDC-120G/WK Wired controller (already supplied with standard version)

AIR RENEWAL - Synoptic

Features

Name		Serie	Platform	Application	Recovery	Air Purification	Free Cooling	EC Fans	Temperature Control
NEW HRV		HRV-3	IDU V8	decentralized	passive	80%	✓	✓	-
HRV-DX/L		HRV-DX-2-XMi	IDU V6	decentralized	passive	90%	✓	✓	Return
		HRV-DXL-2-XMi	IDU V6	decentralized	passive	80/90%	✓	✓	Return
NEW FRESH LARGE EVO		CiSDN-Y EF 1 S	ODU V6	decentralized	thermodynamic	99%	✓	✓	Return
ZEPHIR[3]		CPAN-XHE3	ODU V6	centralized	thermodynamic	99%	✓	✓	Fixed point supply
AQX VRF		AQX VRF Standard	IDU V8	centralized	passive	80%	✓	✓	Return
		AQX VRF Custom	IDU V8	centralized	passive	variable	✓	✓	Return

Airflow rate (m^3/h)

200	300	400	500	800	1000	1300	1500	2000	2200	2300	3000	3100	5000	7500	10000	12500	15000	20000	62000
✓ D200	✓ D300	✓ D400	✓ D500	✓ D800	✓ D1000		✓ D1500	✓ D2000											
			✓ D500		✓ D1000														
							✓ D1500			✓ D2300		✓ D3100							
			✓ Size 1		✓ Size 2			✓ Size 3											
						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Size 1 - Size 2 - Size 3 - Size 4 - Size 5 - Size 6																			
											✓ 3000		✓ 5000	✓ 7500	✓ 10000	✓ 12500	✓ 15000	✓ 20000	
						✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
350 m^3/h ~ 61600m^3/h																			

HRV

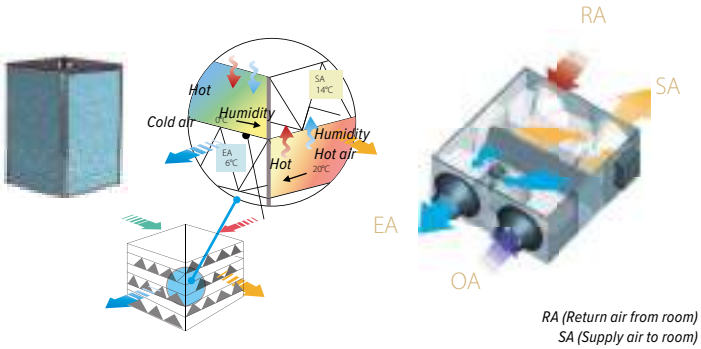
HRV-3 D200÷D2000

NEW

INDOOR UNITS

ELEVATA EFFICIENZA

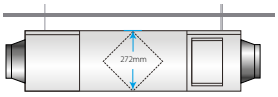
The heat recovery ventilator (HRV) can greatly reduce energy losses and room temperature fluctuations that come with the ventilation process. The HRV's strong performance is a result of the advanced technology incorporated into its design. The heat exchanger core is made of specially treated paper which gives enhanced temperature and humidity control, while improving comfort levels too.



RA (Return air from room)
SA (Supply air to room)
EA (Exhaust air to outdoors)
OA (Fresh air from outdoors)

FLEXIBILITY AND LOW NOISE

The minimum height of 272 mm and the weight of 51 kg allow the HRV to be installed even in confined spaces. Soundproofing ensures silent operation.



ECO-DESIGN

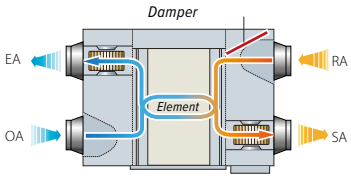
The unit complies with regulation (EU) 1253/2014 requirements for ventilation units.

ErP

MULTIPLE OPERATING MODES

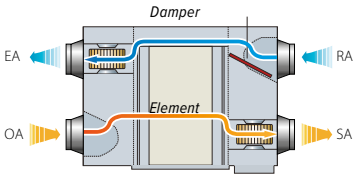
Heat exchange mode

The flows of incoming and outgoing air pass close to each other, allowing heat transfer between the two channels. During summer, incoming air is cooled by the indoor air being exhausted and in winter, incoming air is warmed.



Bypass mode

In mild climates or seasons, where temperature and humidity differences between indoors and outdoors are small, the HRV can work as a conventional ventilation fan bypassing the heat exchanger core. In standard bypass mode the supply and exhaust fans run at the same speed.



Auto Mode

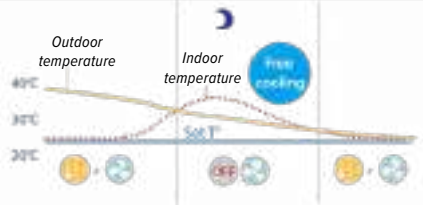
The controller chooses heat exchange mode or bypass mode according to the temperature difference between outdoors and indoors. Both fans are regulated automatically.

Positive and negative pressure modes

These modes allow to control room pressure balance. In positive pressure mode the supply fan in set to run faster than the exhaust fan, in negative pressure mode is the opposite.

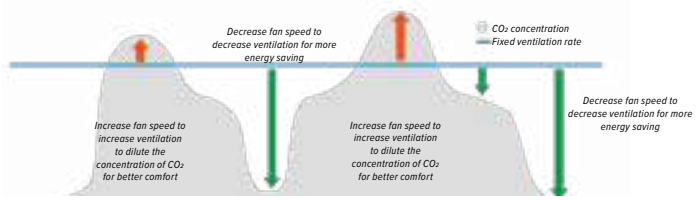
FREE COOLING MODE

During Summer, when outdoor temperature is lower than indoor temperature like at night, free cooling mode allows to cool down the rooms reducing the running costs.



INTEGRATED CO_2 SENSOR

The built-in CO_2 sensor allows to activate a specific function, which automatically manages the unit regulating the fan speed as a function of the detected indoor air quality. In this way, the proper air renewal is automatically provided depending on the actual needs.



HIGH FILTRATION GRADE

In addition to the G4 filter standard supplied in the unit, an F7 filter can also be installed on the supply line to maximise the ambient air quality.

SMART INPUT/OUTPUT CONTACTS

Practical connectors are available as standard on the electronic boards to manage the following:INPUT:
INPUT: remote on/off and forcing negative pressure operation
OUTPUT: alarm and preheating activation.

UNIFIED AND FLEXIBLE CONTROL

In addition to the independent control by its own remote controller, the unit can be managed also at a system level along with other indoor units via third generation centralized controller.

technical data

HRV-3 D200÷D2000



HRV - HEAT RECOVERY VENTILATOR

Size	HRV-3	D200	D300	D400	D500	D800	D1000	D1500	D2000
Nominal air flow	m^3/h	200	300	400	500	800	1000	1500	2000
External static pressure	Pa	100	90	100	90	140	160	180	200
Power input	W	70	100	110	150	320	380	680	950
Current	TO	0,64	0,84	0,97	1,2	2,4	2,9	3,8	5,7
Temperature exchange efficiency (1)	%	79,5	75,5	77,7	80,6	78,7	82,8	75,5	77,2
Enthalpy exchange efficiency (1)	%	75,0	72,1	73,5	74,0	72,3	76	69,4	74,7
Dimensions (Width x Height x Depth)	mm	1195x272x784	1195x272x898	1276x272x1189	1311x390x1090	1311x390x1270	1311x390x1510	1740x615x1344	1811x685x1545
Fresh Air Diameter	mm	Ø 144	Ø 144	Ø 198	Ø 244	Ø 244	Ø 244	346x326	346x326
Weight	kg	51	57	72	62	77	85	168	195
Sound pressure level (2)	dB(A)	33/29.5/25.5	36.5/33.5/30	36.5/32/28	36/30.5/24.5	42/39/34	44/39/33.5	51.5/46.5/41.5	53/48.5/42.5
Sound power level (2) (3)	dB	45	48	48	50	55	54	69	70
Operating temperature range (4)	°C	-7 ~ 43	-7 ~ 43	-7 ~ 43	-7 ~ 43	-7 ~ 43	-7 ~ 43	-7 ~ 43	-7 ~ 43
Power supply		220-240/1~/50							

For HRV-2B-Mi D200~D2000 3 fan speeds are available (Hi, Med, Low).

The parameters in the table are measured at high fan speed and with standard G4 filter, please refer to the technical manual for data at other conditions.

(1) Sizes D200: indoor air temperature 20°C DB/12°C WB; fresh air temperature 7°C DB.
Sizes D300-2000: Indoor air temperature 25°C DB/14°C WB; Fresh air temperature 5°C DB.

(2) Sound levels are measured 1,5 m below the center of the unit in an anechoic room.

(3) Data refer to the 3 fan speeds, in descending order.

(4) DB temperatures with 80% RH or less.

accessories

WDC3-86S2	Wired controller
WDC3-120T	Wired controller with weekly schedule
HRV200(B)-GLW(F7)	F7 filter (size D200)*
HRV300(B)-GLW(F7)	F7 filter (size D300)*
HRV400(B)-GLW(F7)	F7 filter (size D400)*
HRV500(B)-GLW(F7)	F7 filter (size D500)*
HRV800(B)-GLW(F7)	F7 filter (size D800)*
HRV1000(B)-GLW(F7)	F7 filter (size D1000)*
HRV1500(B)-GLW(F7)	F7 filter (size D1500)*
HRV2000(B)-GLW(F7)	F7 filter (size D2000)*

*2x F7 filters are necessary for sizes D200-D300, 4x F7 filters are necessary for sizes D400-D2000

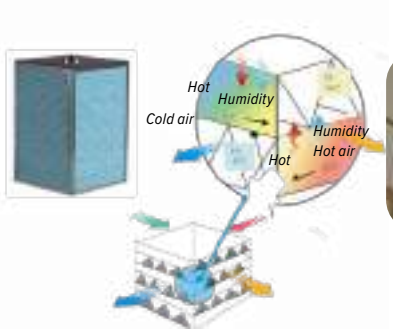
HRV-DX-2

HRV-DX-2-XMI D500-D1000

DC INVERTER | R-410A | IDU V6

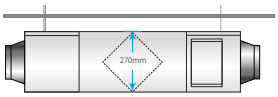
ENHANCED EFFICIENCY

Heat recovery ventilator with coil DX HRV-DX-2 combines technological advantages of enthalpic energy exchange between exhaust and supply air through a special core realized with pre-treated paper and of DX coil connected to VRF system to which is connected. Thus, the unit can both heat or cool and ventilate the rooms, improving both comfort and energy saving.



INSTALLATION FLEXIBILITY

Due to a minimum height of 270 mm, the unit can be installed in limited false cellings. As components are cabled and included in the unit, installation is simple as for other VRF indoor units since it is sufficient to perform electric and refrigerant connections with the system.



HIGH FILTRATION GRADE AND AIR QUALITY

The healthiness of the air and the minimum fouling of the exchanger are guaranteed by filters G3 (ISO 16890 Coarse 50%) and F9 (ISO 16890 ePM2.5 95%) on the supply section and G3 (ISO 16890 Coarse 50%) on the exhaust section, in order to increase the air quality supplied to the environment. For maximum air quality, the Bioxigen® purification system is included, which allows, through a controlled bipolar ionization process, multiple benefits such as an antibacterial effect and the removal of odors, pollutants, mold and pollen.

BYPASS FOR FREE COOLING

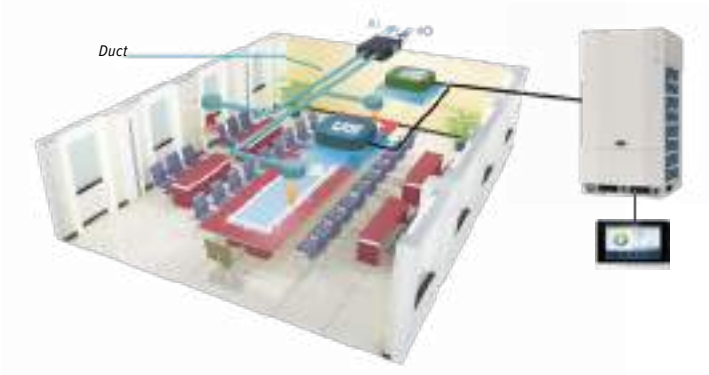
During summer, when external temperatures are lower than internal, air is diverted , excluding the recovery, directly to the ambient, reducing the requested load of the installation and enhancing energy efficiency.

3 FAN SPEEDS

The unit is equipped with DC fan with 3 speeds available optimizing the air flow rate according to the requests.

CONTROLLER INCLUDED AND FLEXIBLE CONTROL

Wired controller to manage the unit is supplied with the unit.. Moreover, the unit is totally compatible with VRF control systems via centralized controls or BMS together with other indoor units of the system.



HRV-DX-2-XMI D500÷D1000

HRV-DX-2 HEAT RECOVERY VENTILATOR WITH DX COIL

Size		HRV-DX-2-XMi	D500	D1000
Cooling [1]	Capacity	kW	3,0	5,8
	Power input	W	150	390
	Temperature exchange efficiency	%	76,0	76,0
	Enthalpy exchange efficiency	%	63,0	60,0
Heating [2]	Capacity	kW	2,5	5,2
	Power input	W	150	390
	Temperature exchange efficiency	%	76,0	76,0
	Enthalpy exchange efficiency	%	67,0	62,0
Pipe connections	Liquid	mm	Ø 6,35	Ø 6,35
	Gas	mm	Ø 12,7	Ø 12,7
Nominal air flow		m^3/h	500	1000
External static pressure		Pa	90	115
Sound pressure level [3]		dB(A)	39	43
Dimensions (Width x Height x Depth) [4]		mm	1664x270x955	1920x388x1290
Weight		kg	90	105
Fresh Air Diameter		mm	Ø 200	Ø 250
Operating temperature range [5]		°C	-15 - 40	-15 - 40
Power supply		V/Ph/Hz	220-240/1~/50	

(1) Capacities calculated with inlet coil air 28,5°C DB, 50% UR. Exchange efficiencies calculated with outdoor temperature 32°C DB 50%UR; inlet air 26°C DB 50% UR.

(2) Capacities calculated with inlet coil air 28,5°C DB, 50% UR. Exchange efficiencies calculated with outdoor temperature 32°C DB 50%UR; inlet air 26°C DB 50% UR.

(3) Sound values are measured at a position 1m from service side of casing, with ducted supply, exhaust, return and fresh air, at nominal conditions.

(4) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

(5) For ambient temperatures below -5°C, it is recommended to use a unit with pre-heating heater

accessories

WDC-86E/KD	Wired controller (already supplied with standard version)
WDC-120G/WK	Wired control with weekly timer function and group control
BIOX-DX	Bioxigen purification system® (already supplied with standard version)
PRE-DX-500	Electric pre-heater (size D500)
PRE-DX-1000	Electric pre-heater (size D1000)

HRV-DXL-2

HRV-DXL-2-XMI D1500-D3100

DC INVERTER | R-410A | IDU V6

ENHANCED EFFICIENCY

Heat recovery ventilator with coil DX HRV-DXL-2 combines technological advantages of enthalpic energy exchange between exhaust and supply air through a special core realized with pre-treated paper and of DX coil connected to VRF system to which is connected. Thus, the unit can both heat or cool and ventilate the rooms, improving both comfort and energy saving.

WIDER RANGE

In addition to the units of the HRV-DX-2 series with 500 and 1000 m³/h, the HRV-DXL-2 series can treat air flow rates up to 3100 m³/h, further expanding the offer of air handling units in combination with Clivet VRF systems.

HIGH FILTRATION GRADE AND AIR QUALITY

The healthiness of the air and the minimum fouling of the exchanger are guaranteed by filters F7 (ISO 16890 ePM1 55%) on the supply section and M5 (ISO 16890 ePM10 55%) on the exhaust section, in order to increase the air quality supplied to the environment. For maximum air quality, the Bioxigen® purification system is available as an accessory, which allows, through a controlled bipolar ionization process, multiple benefits such as an antibacterial effect and the removal of odors, pollutants, mold and pollen.

BYPASS FOR FREE COOLING

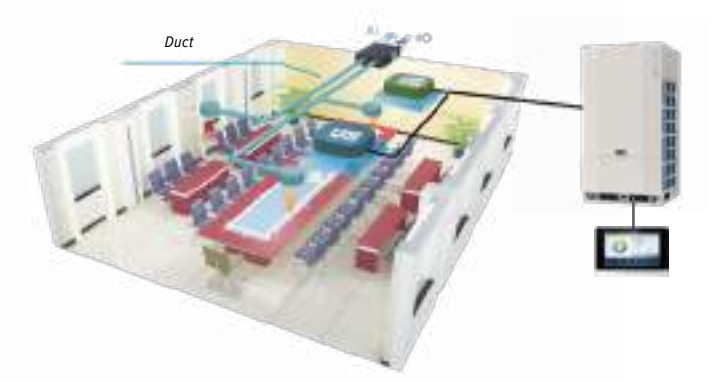
During summer, when external temperatures are lower than internal, air is diverted , excluding the recovery, directly to the ambient, reducing the requested load of the installation and enhancing energy efficiency.

3 FAN SPEEDS

The unit is equipped with DC fan with 3 speeds available optimizing the air flow rate according to the requests.

CONTROLLER INCLUDED AND FLEXIBLE CONTROL

Wired controller to manage the unit is supplied with the unit.. Moreover, the unit is totally compatible with VRF control systems via centralized controls or BMS together with other indoor units of the system.



HRV-DXL-2 - HEAT RECOVERY VENTILATOR WITH DX COIL

Size	HRV-DXL-2-XMi		D1500	D2300	D3100
Cooling [1]	Capacity	kW	9,9	14,2	19,3
	Power input	kW	0,62	1,31	1,50
	Temperature exchange efficiency	%	60,1	60,2	57,4
	Enthalpy exchange efficiency	%	58,3	58,5	52,5
Heating [2]	Capacity	kW	8,6	12,2	17,1
	Power input	kW	0,62	1,31	1,50
	Temperature exchange efficiency	%	73,0	73,2	71,4
	Enthalpy exchange efficiency	%	62,5	62,7	55,5
Pipe connections	Liquid	mm	Ø 9,53	Ø 9,53	Ø 9,53
	Gas	mm	Ø 15,9	Ø 15,9	Ø 15,9
Nominal air flow		m^3/h	1500	2300	3100
External statiuc pressure nominal / max		Pa	190 / 520	210 / 425	190 / 370
Sound pressure level [3]		dB(A)	53	59	58
Dimensions (Width x Height x Depth) [4]		mm	2535x670x1290	2535x670x1290	2635x670x1400
Weight		kg	230	250	270
Fresh Air Diameter		mm	300x410, 230x260	500x410, 330x290	400x510, 330x285
Operating temperature range [5]		°C	-15 - 45	-15 - 45	-15 - 45
Power supply		V/Ph/Hz	220-240/1~/50		

(1) Capacities calculated with inlet coil air 28,5°C DB, 50% UR. Exchange efficiencies calculated with outdoor temperature 32°C DB 50%UR; inlet air 26°C DB 50% UR.

(2) Capacities calculated with inlet coil air 13°C DB, 40% UR. Exchange efficiencies calculated with outdoor temperature-5°C DB 80%UR; inlet air 20°C DB 50% UR.

(3) Sound values are measured at a position 1m from service side of casing, with ducted supply, exhaust, return and fresh air, at nominal conditions.

(4) Unit body dimensions given are the largest external dimensions of the unit, including hanger attachments

(5) For outdoor temperatures below -5°C it is recommended to equip the unit with the pre-heater.

accessories

WDC-86E/KD Compact wired controller (already supplied with standard version)

WDC-120G/WK Wired control with weekly timer function and group control

configurations

Version	Clivet code	Bioxigen purification system®	Electric pre-heater pre-heating	Description
HRV-DXL-2-XMi D1500	AAWPG60001	-	-	Standard unit
	AAWPG60002	•	-	Unit with Bioxigen purification system® included
	AAWPG60003	-	•	Unit with electric pre-heater included
	AAWPG60004	•	•	Unit with Bioxigen purification system® and electric pre-heater included
HRV-DXL-2-XMi D2300	AAWPK60001	-	-	Standard unit
	AAWPK60002	•	-	Unit with Bioxigen purification system® included
	AAWPK60003	-	•	Unit with electric pre-heater included
	AAWPK60004	•	•	Unit with Bioxigen purification system® and electric pre-heater included
HRV-DXL-2-XMi D3100	AAWPK70001	-	-	Standard unit
	AAWPK70002	•	-	Unit with Bioxigen purification system® included
	AAWPK70003	-	•	Unit with electric pre-heater included
	AAWPK70004	•	•	Unit with Bioxigen purification system® and electric pre-heater included

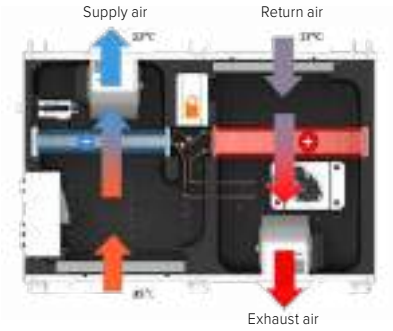
FRESH LARGE EVO

CiSDN-Y EF 1 S

DC INVERTER R-32 ODU V6

ACTIVE THERMODYNAMIC RECOVERY

Fresh Large EVO uses active thermodynamic recovery technology to supply air with a temperature above room temperature during heating and below during cooling. In this way, in addition to the ventilation load, it is also able to meet part of the building's heating and cooling needs.
The air inlet and exhaust sections are separated to avoid contamination of the flows.



R32 INVERTER R32

Inverter technology allows the unit to operate even at reduced power and ensure high performance throughout the entire year.
The refrigeration circuit uses environmentally friendly R32 refrigerant which has:
Low GWP (Global Warming Potential)
Better performance in extreme conditions
Low refrigerant charge
High heat transfer coefficient

WIDE OPERATING RANGE

Thanks to inverter technology, the operating range is particularly expanded. In heating mode, the unit is able to deliver neutral air to the environment even at -20°C of outside temperature and without the need for auxiliary thermal integrations.

SILENT MODE

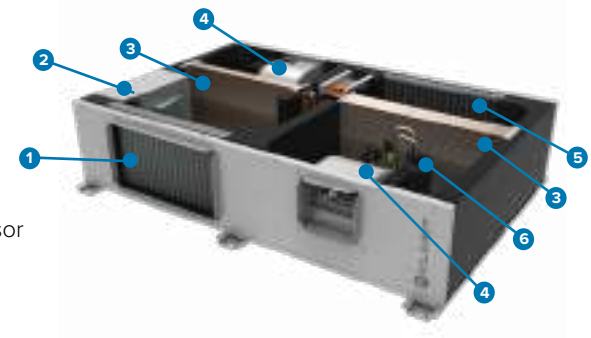
To reduce noise, it is possible to set the Silent and Supersilent modes from an external signal or from the HMI.

NEW

AIR RENEWAL

FLEXIBLE INSTALLATION

The components are all housed in a single unit. In addition, the energy generated by the active thermodynamic recovery system reduces the capacity and therefore the cost of the optional air conditioning system.



1. Outdoor air filter
2. Electric Control Box Case
3. Air-gas finned exchanger
4. DC inverter fan with constant flow
5. Exhausted air filter
6. Rotary DC inverter compressor

FLEXIBLE INSTALLATION

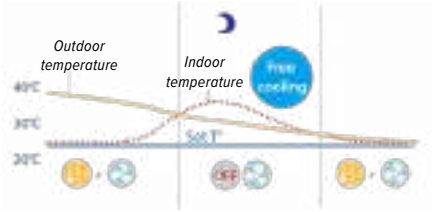
The unit is optimised for easy floor or false ceiling installation. The lightweight EEP structure makes it easier to handle and ensures excellent acoustic and thermal insulation performance. Furthermore, with a height of only 300 mm, the first size also fits easily into residential applications.

ELECTRONIC FILTRATION WITH IFD TECHNOLOGY (OPTIONAL)

High performance electronic filters with iFD technology can be provided for optimal air purification:
- Degree of filtration equivalent to that of conventional E10 filters (ISO 16890 ePM1 90%).
Extremely low pressure drop
- Easy maintenance and regeneration

FREE COOLING

In the summer, when it is warm outdoors, the thermodynamic circuit is not activated. This means that the air, once filtered, is introduced directly into the room, reducing the thermal load of the system.



SECOND FLOW SET

A second airflow value can be enabled via an external signal. Ideal for applications with independent rooms served by a single unit, such as classrooms with different occupancy levels.

CONNECTIVITY

For easy management in both residential and commercial environments, the unit is integrated into Clivet's main supervision systems: CONTRO4 NRG, CLIVET EYE, INTELLIAIR, platforms with Modbus protocol (standard supplied) and second-generation VRF and IMMPRO2 centralized control systems.

DEDICATED ROOM CONTROL

The remote control room thermostat with room temperature and humidity probe connected to the unit allows you to:
Desired temperature and humidity in the environment.

Manual or automatic change of operation mode (Heating, cooling, ventilation).
- Manage diagnostics with a specific code for the type of error.

technical data

FRESH LARGE EVO

Size		CiSDN-Y EF 1S	Size 1	Size 2	Size 3
Ventilation	Airflow	m³/h	500	1000	2000
	Maximum static pressure (1)	Pa	250	425	300
	Filtration class on the supply side EN 779	-	M5	M5	M5
	Filtration class on the supply side EN ISO 16890	-	ePM10 65%	ePM10 65%	ePM10 65%
Cooling (2)	Capacity	kW	1,90	3,50	7,10
	Total power input	kW	0,28	0,78	1,70
	EER	-	6,83	4,49	4,17
Heating (3)	Capacity	kW	2,3	4,6	9,6
	Total power input	kW	0,38	0,85	2,05
	COP		6,09	5,42	4,68
Refrigeration circuits		Nr	1	1	1
Refrigerant charge		kg	0,6	0,8	1,7
No. of compressors		Nr	1	1	1
Type of compressors (4)		-	ROT	ROT	ROT
Minimum air flow		m³/h	300	700	1400
Maximum air flow		m³/h	720	1500	2500
Dimensions (Width x Height x Depth)		mm	1743x310x1220	1743x410x1220	1743x590x1220
Weight		kg	96	126	138
Air connection dimensions		mm	553x213, 230x110	553x303, 230x200	553x483, 230x200
Operating temperature range		°C		'-20~45	
Power supply		V\Ph\Hz	230/1~/50	230/1~/50	230/1~/50

(1) Static pressure available with standard unit
(2) Data according to EN 14511:2022. Outdoor air temperature 35°C D.B. / 24°C W.B. Extracted air temperature 27°C D.B. / 19°C W.B. Supply air temperature 24°C. Available pressure 50 Pa
(3) Data according to EN 14511:2022. Outdoor air temperature 7°C D.B. / 6°C W.B. Extracted air temperature 20°C D.B. / 12°C W.B. Supply air temperature 20°C. Available pressure 50 Pa
(4) ROT = Rotary compressor

versions and configurations

FC	Thermal free cooling (Standard)
PCOSME	Constant supply and exhaust airflow (Standard)
PVARC	Variable air flow on supply and exhaust with CO_2 probe
PVARCV	Variable supply and exhaust airflow with CO_2 +VOC probe
PPAQC	Provision for CO_2 probe signal
FM5S	M5 outdoor air filter (ISO 16890 ePM10 65%) (Standard)
FM5R	M5 return air filter (ISO 16890 ePM10 65%) (Standard)
F7B	F7 high efficiency air filter (ISO 16890 ePM1 60%)
FELIFD	Electronic filters with iFD technology (ISO 16890 ePM1 90%)
FG3CX	G3 duct pre-filtration (ISO 16890 Coarse 40%)
II	Indoor installation (Standard)
CRC	Remote control with user interface (Standard)
CMSC9	Serial communication module for Modbus supervisor (Standard)
IOTX	Industrial IoT module for functions and services on cloud platform
VRFGX	VRF Gateway
CUE1	External humidifier control with ON-OFF control
CDP	Condensation drain pump, installed on the unit (Standard)
MEAX	Energy consumption meter
ADOFX	Kit of antivibration mounts for ceiling installation
APAVX	Kit of antivibration mounts for floor installation

ZEPHIR^3

CPAN-XHE3 SIZE 1÷SIZE 6

DC INVERTER R-410A ODU V6

THE WHOLE PRIMARY AIR PLANT IN A SINGLE STAND-ALONE SYSTEM

ZEPHIR3 contains all the components required to operate perfectly. These have already been optimised and tested by Clivet to ensure 100% efficient and reliable results.
Built-in controls allow operation with constant supply temperature, at maximum available capacity, at high airflow.
Central and local application.

(1) Air return and exhaust section with energy recovery
(2) Fresh air handling and inlet section
(3) Thermodynamic inverter and manage and control electronics section

EFFICIENT AND RELIABLE

Reversible heat pump technology:
- Recovers energy from exhaust air, a heat source that is favourable and steady over time
- The active thermodynamic circuit produces capacity amplifying the energy contained in the exhaust air
- The capacity produced satisfies most of the whole system's demand
- Eliminate the waste typical of central systems, such as pumping, storage, thermal loss on the pipework
- As much as 30% savings on ventilation.

SELF CONTAINED. EASY

It autonomously produces heating and cooling capacity to handle Primary Air:
- No connection to external heating and cooling stations
- 80% less works on site
- Industrial product optimised and tested to provide constantly reliable results.

CONTINUOUS HUMIDITY CONTROL

The quality of the air indoors depends largely on humidity: one of Primary Air system's main tasks is to control it. In summer mode, ZEPHIR^3 uses a thermodynamic circuit to first attain the desired conditions of humidity, and then uses hot gas modulating post-heating to attain the desired temperature. This technology makes it possible to obtain the exact temperature conditions free of charge (no auxiliary heating system is necessary) and efficiently (it disposes of part of the heat attributed to the condenser). In winter mode, when required by the outdoor conditions and application of the system, ZEPHIR^3 can humidify renewal air with the designated optional steam section with immersed electrodes or steam-powered section.

NO CROSS CONTAMINATION

A resistent steel wall keeps the two flows separate. All the technological components are located in individual compartments that can be easily accessed for routine maintenance.

COMPACT

Requires 50% less space compared with a primary air handling unit at modular sections. It has already all the settings and power components.

NO WASTE FILTRATION

High performance electronic filters with iFD technology come as standard to ensure excellent levels of air filtration:
- Degree of filtration equivalent to that of conventional E10 filters (ISO 16890 ePM1 90%)
- Extremely low pressure drops
- Easy maintenance and regeneration by washing.

UNIFIED CONTROL ZEPHIR^3+VRF

The VRF gateway option makes it easy to manage the Zephir3 units and also the VRF systems from the CCM270 and the IMMPRO2 centralized supervision control.

CPAN-XHE3 SIZE 1÷SIZE 6

ZEPHIR³

Size			CPAN-XHE3	Size 1	Size 2	Size 3	Size 4	Size 5	Size 6
Operation with constant supply temperature	Standard airflow	Nominal air flow	l/s	361	611	1278	2000	2638	3333
		Nominal air flow	m³/h	1300	2200	4600	7200	9500	12000
		Max external static pressure (supply)	Pa	630	630	630	600	420	630
		Max external static pressure (extraction)	Pa	630	630	630	630	540	630
	Cooling	Total cooling capacity (1)	kW	10,6	17,5	38,7	58,4	79	95,9
		Re-heating capacity (1)	kW	2,70	4,20	10,9	14,9	21,3	22,9
		Compressor power input (1)	kW	2,91	4,92	11,1	15,7	20,4	23,2
		EERc (1)	-	4,57	4,41	4,47	4,67	4,91	5,12
	Heating	Heating capacity (2)	kW	5,93	10	21	32,9	43,4	54,9
		Compressor power input (2)	kW	0,71	1,35	2,54	4,22	5,75	8,77
		COPc (2)	-	8,38	7,45	8,28	7,8	7,55	6,26
Operation at maximum available capacity	Standard airflow	Nominal air flow	l/s	361	611	1278	2000	2638	3333
		Nominal air flow	m³/h	1300	2200	4600	7200	9500	12000
		Max external static pressure (supply)	Pa	630	630	630	600	420	630
		Max external static pressure (extraction)	Pa	630	630	630	630	540	630
	Cooling	Total cooling capacity (3)	kW	10,6	17,5	38,7	58,4	79	95,9
		Compressor power input (3)	kW	3,26	5,52	12,5	17,7	22,9	26,1
		Add. available capacity to space (3)	kW	3,57	5,67	14,0	19,8	27,7	30,9
		EERc (3)	-	3,25	3,18	3,1	3,31	3,45	3,68
	Heating	Heating capacity (4)	kW	10,5	17,8	37,1	58,2	76,8	96,9
		Compressor power input (4)	kW	2,28	3,77	7,13	11,2	14,4	18,3
		COPc (4)	-	4,61	4,72	5,21	5,2	5,33	5,29
Operation with high airflow	Maximum air flow	Nominal air flow	l/s	528	972	1944	2556	3194	3889
		Nominal air flow	m³/h	1900	3500	7000	9200	11500	14000
		Max external static pressure (supply)	Pa	630	470	630	455	345	615
		Max external static pressure (extraction)	Pa	630	530	630	535	400	630
	Cooling	Total cooling capacity (5)	kW	9,2	18,2	31,9	45,1	62	80,6
		Compressor power input (5)	kW	1,56	3,38	4,46	6,97	13,8	17,8
		EERc (5)	-	5,89	5,38	7,15	6,48	4,5	4,51
	Heating	Heating capacity (6)	kW	6	11,1	22,1	29,1	36,3	44,2
		Compressor power input (6)	kW	0,54	1,31	2,48	3,11	3,4	5,44
		COPc (6)	-	11,1	8,46	8,91	9,36	10,7	8,14
Refrigeration circuits			Nr	1	1	2	2	2	2
No. of compressors			Nr	1	1	2	2	3	3
Type of compressors (7)			-	ROT	SCROLL	SCROLL	SCROLL	SCROLL	SCROLL
Type of supply fan (8)			-	RAD	RAD	RAD	RAD	RAD	RAD
Number of Supply fans			Nr	1	1	1	1	1	2
Type of exhaust fan			-	RAD	RAD	RAD	RAD	RAD	RAD
Number of exhaust fans			Nr	1	1	1	1	1	2
Minimum air flow			l/s	278	444	917	1444	2083	2639
Minimum air flow			m³/h	1000	1600	3300	5200	7500	9500
Maximum air flow (9)			l/s	528	972	1944	2556	3194	3889
Maximum air flow (9)			m³/h	1900	3500	7000	9200	11500	14000
Sound Pressure Level (10)			dB(A)	60	61	61	60	62	64
Dimensions (Width x Height x Depth)			mm	1895x1025x950	1895x1625x950	2465x1810x1735	2465x2260x1735	2465x2260x2025	2465x2260x2330
Weight			kg	320	450	1070	1285	1450	1670
Power supply				400/3~/50					

Erp (Energy Related Products) European Directive, that includes the Commission delegated Regulation (EU) No 2016/2281 also known as Ecodesign Lot21, does not report this Product category.

DB = dry bulb; WB = wet bulb; EERc = Thermodynamic efficiency of the system in cooling; COPc = Thermodynamic efficiency of the system in heating

(1) Outdoor air temperature: 35°C D.B./ 24°C W.B; Exhaust air temperature: 26°C D.B. Supply air humidity ratio: 11g/kg; Supply air temperature: 24°C D.B.

(2) Outdoor air temperature: 7°C D.B./6.0°C W.B. Exhaust air temperature: 20°C D.B./ 12°C W.B; Supply air temperature: 20°C D.B.

(3) Outdoor air temperature: 35°C D.B./ 24°C W.B; Exhaust air temperature: 26°C D.B. Supply air humidity ratio: 11g/kg

(4) Outdoor air temperature: 7°C D.B./6.0°C W.B. Exhaust air temperature: 20°C D.B./ 12°C W.B; Supply air temperature: 28°C D.B.

(5) Outdoor air temperature: 35°C D.B./ 24°C W.B; Exhaust air temperature: 26°C D.B. Supply air temperature: 22°C D.B.

(6) Outdoor air temperature: 7°C D.B./6.0°C W.B. Exhaust air temperature: 20°C D.B./ 12°C W.B; Supply air temperature: 16°C D.B.

(7) ROT = Rotary compressor; SCROLL = Scroll compressor

(8) RAD = radial fan

(9) In case of use with high air flow only the maximum flow rate value is possible

(10) The sound pressure level is referred at a distance of 1 m from the ducted unit surface operating in free field conditions. External static pressure 50 Pa. Please note that when the unit is installed in conditions different from nominal test conditions (e.g. near walls or obstacles in general), the sound levels may undergo substantial variations. Sound levels refer to unit with standard air flow rate

versions,configurations and accessories

RTA	Active thermodynamic recovery (Standard)
RECH	Hydronic recovery device for extended operating range
EPWRC	EXTRAPOWER-C (with additional chilled water heat exchanger)
EPWRH	EXTRAPOWER-H (with additional hot water heat exchanger, without electronic filters)
CCA	Copper/aluminium exchanger on exhaust air with acrylic lining on exhaust air
CEA	Copper/aluminium exchanger on exhaust air with acrylic lining on exhaust air
PVARC	Variable air flow on supply and exhaust with CO_2 probe
PVARCV	Variable air flow on supply and exhaust with CO_2+VOC probe
PVARP	Variable air flow on supply and exhaust air with supply pressure probe
MHSEX	Immersed electrodes steam humidifying module
MOB	Serial port RS485 with Modbus protocol
BACIP	BACnet-IP serial communication module
LON	Serial port RS485 with LonWorks protocol
CPHGM	Refrigeration circuit with capacity modulation(Standard)
IO	Outdoor installation (Standard)
II	Indoor installation
VSXSA	Modification of the supply humidity ratio setpoint "X_SA"
DESM	Smoke detector
AMRX	Rubber antivibration mounts
AMRUX	Rubber antivibration mounts for unit and humidification module
RSSX	Remote supply air sensor
PTCO	Set up for shipping via container
F7	High efficiency F7 air filter (ISO 16980 ePM1 60%)
VRFG	VRF Gateway

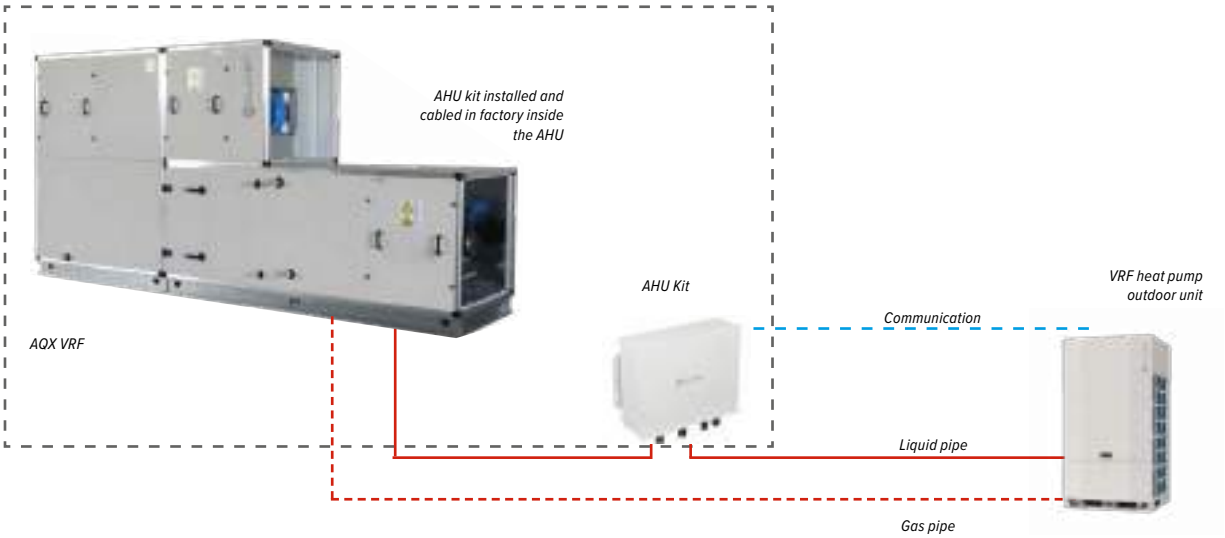
AQX VRF

AQX VRF 3000÷20000

DC INVERTER R-410A IDU V8

EFFICIENT AND FLEXIBLE

Direct expansion coil air handling units combine fresh air ventilation with the flexibility and air conditioning efficiency typical of Clivet VRF systems.
The unit is easy to install: thanks to the dedicated kit to manage air handling unit pre-cabled and included in AQX VRF, it is sufficient to connect it to VRF system from refrigerant and electrical point of view.



ONE SOLUTION, TWO POSSIBLE CONFIGURATIONS

Designed to control return air temperature, the solution is available in two versions:
- AQX VRF standard ➜ 7 pre-defined configurations (3000, 5000, 7500, 10000, 12500, 15000, 20000 m³/h);
- AQX VRF custom ➜ freely configurable to specific requirements (flow-rate range 350-61600 m³/h, capacity 1.8-270 kW), many accessories available.

AQX VRF air handling units are available in single configuration connected in a 1-to-1 combination to a dedicated VRF outdoor unit (A), or in multiple configuration with more AQX VRF units connected to the same VRF outdoor unit (B), or in mixed configuration with other VRF indoor units all managed by the same VRF outdoor unit (C).

A

B

C

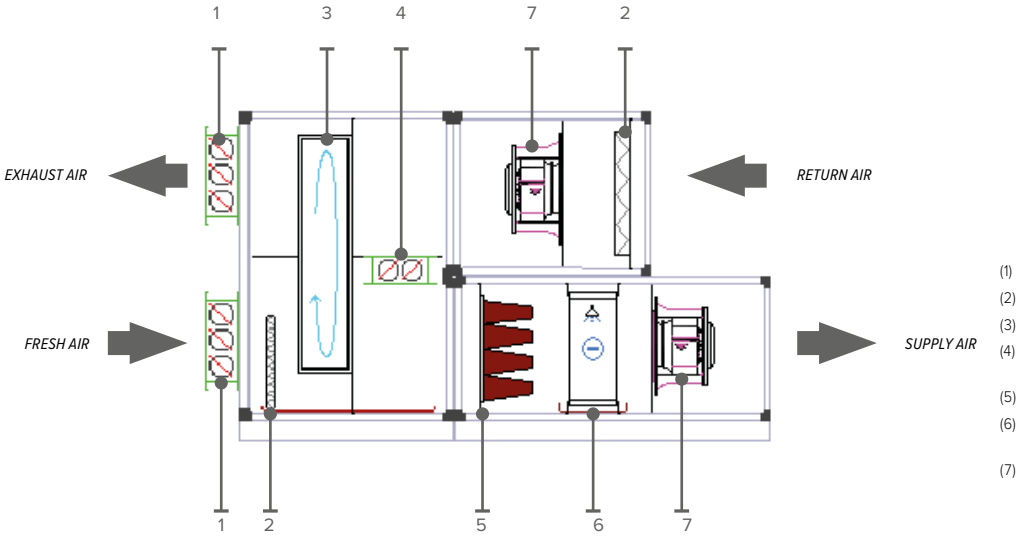
If managed with other VRF indoor units, AQX VRF capacity must not exceed 30% of that of the outdoor unit

AQX VRF Standard

AQX VRF STANDARD COMBINATIONS WITH VRF OUTDOOR UNITS

AQX VRF standard units are designed to be coupled with Clivet VRF outdoor units with the following combinations:

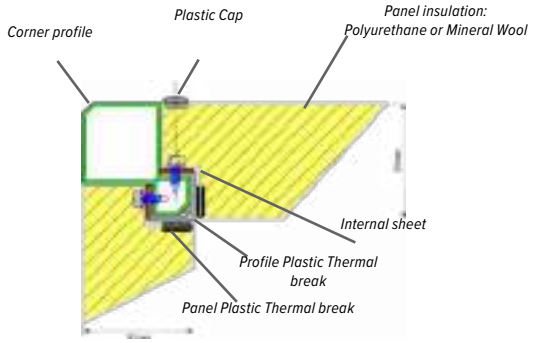
Size / AQX VRF	3000	5000	7500	10000	12500	15000	20000
Outdoor unit	MSAN6-XMi 200T	MSAN6-XMi 260T MSAN8-X 252T CVT8-X 252T	MSAN8-X 400T CVT8-X 400T	MSAN8-X 500T CVT8-X 500T	MSAN8-X 615T CVT8-X 615T	CVT8-X 730T	CVT8-X 850T



(1) Damper
(2) Synthetic G4 (ISO 16890 Coarse 60%) filter
(3) Rotary enthalpic heat recovery
(4) Mixing damper regulated by integrated CO_2 sensor
(5) Rigid bag F7 (ISO 16890 ePM1 50%) filter
(6) Direct expansion coil for heating and cooling
(7) Plug fan EC brushless fan

STRUCTURE

Frame is composed of profiles having 50x50 mm sections for its light weight and extra corrosion resistance, ensuring the best thermal break. Profiles are double chamber type so that fixing screws are totally to have the maximum seal.
Closing panels are double skin type, with double sheet steel and insulation through polyurethane foam with gasket on all external perimeter for thermal break.

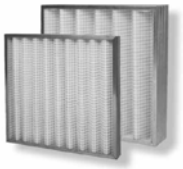


FILTERS

In order to provide quality of supply air, filter section is composed of synthetic G4 (ISO 16890 Coarse 60%) filters placed on exhaust and outdoor air sections and F7 (ISO 16890 ePM1 50%) rigid bag filter on supply air..

FANS

Supply and exhaust air fans are plug fan type, directly coupled to high efficiency EC brushless motor in order to ensure an external static pressure of 300 Pa.



ROTARY ENTHALPIC HEAT RECOVERY

Energy recovery from indoor exhaust air is ensured by a rotary enthalpic heat recovery: in the first half of rotation, the sensible and latent heat is transferred to the heat-adsorbing materials of the wheel and gives that energy in the second part of rotation to the side that has lower energy.
The rotary wheel is composed of a special hygroscopic aluminum matrix designed with a special distribution to increase sensible and latent heat transfer area and efficiency.

MIXING DAMPER WITH INTEGRATED CO_2 SENSOR

In addition to bypass damper, AQX VRF air handling units are equipped as standard with a mixing damper with integrated CO_2 sensor. As a result, fresh air airflow is mixed with exhaust air from indoor in a variable percentage depending on environmental air quality measured in CO_2 ppm.
Besides a better energy efficiency, this system facilitates system start-up, accelerating steady operation of the plant

INTEGRATED ELECTRICAL BOX

Electrical panel, complete with VRF outdoor unit control interface, is included and pre-cabled inside the AQX VRF unit, strongly simplifying installing operations.

technical data

AQX VRF 3000÷20000

AQX VRF STANDARD

Size		AQX VRF	3000	5000	7500	10000	12500	15000	20000
Nominal air flow		m^3/h	3000	5000	7500	10000	12500	15000	20000
Air flow range		m^3/h	2400-3000	4000-5000	6000-7500	8000-10000	10000-12500	12000-15000	16000-20000
Max. external static pressure		Pa	300	300	300	300	300	300	300
Cooling [1]	DX coil capacity	kW	17,5	26	40	50	61,5	73	85
	Heat recovery capacity	kW	13	21,8	34,9	44,4	54,3	66,6	87,4
	Power input	kW	2,1	3,3	5,1	6,6	7,9	9,5	12,7
	Temperature exchange efficiency	%	73,3	73,5	77,9	73,9	73,4	74	73,5
Heating [2]	DX coil capacity	kW	17,5	26	40	50	61,5	73	85
	Heat recovery capacity	kW	24,4	40,9	65,1	82,5	101,9	123,9	136,7
	Power input	kW	2,1	3,3	5,1	6,6	7,9	9,5	12,7
	Temperature exchange efficiency	%	73,3	73,5	77,9	73,9	73,4	74	73,5
Energy class		-	A+	A+	A+	A	A	A	A
Dimensions (Width x Height x Depth) [3]		mm	2790x1580x1070	2840x1980x1320	3040x1930x1570	3140x2130x1820	3290x2380x1970	3140x2530x2170	3290x2680x2470
Weight		kg	484	662	772	931	1131	1267	1567
Power supply		V/Ph/Hz	400/3~/50						

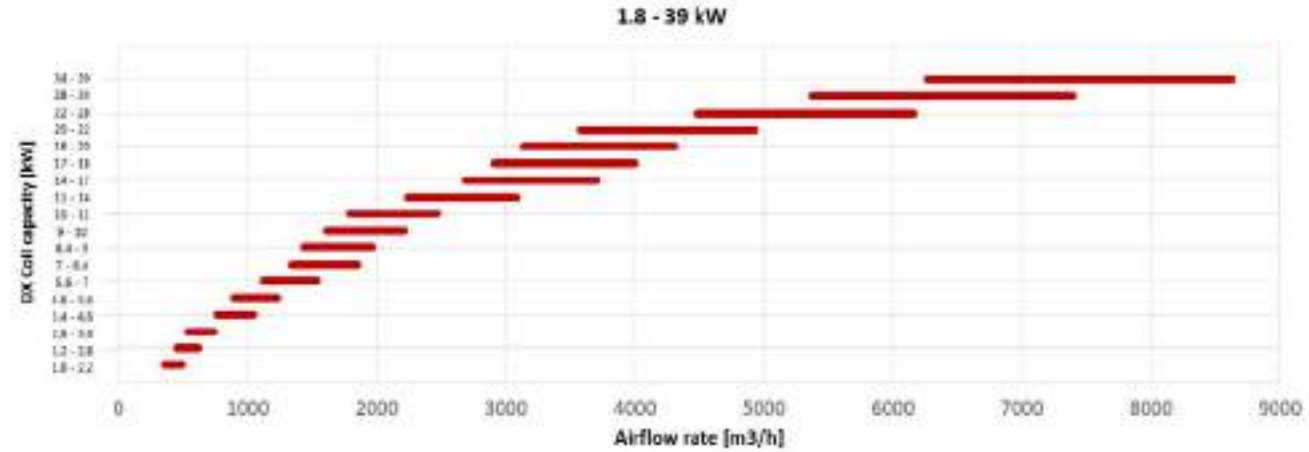
(1) Indoor temperature 27°C DB/50% R.H.; Outdoor temperature 35°C DB/50% R.H.
(2) Indoor temperature 20°C DB/50% R.H.; Outdoor temperature -5°C DB/80% R.H.
(3) Height including base
(4) Some technical specifications may vary if components are updated. Please refer to the AHU data sheet supplied with your order.

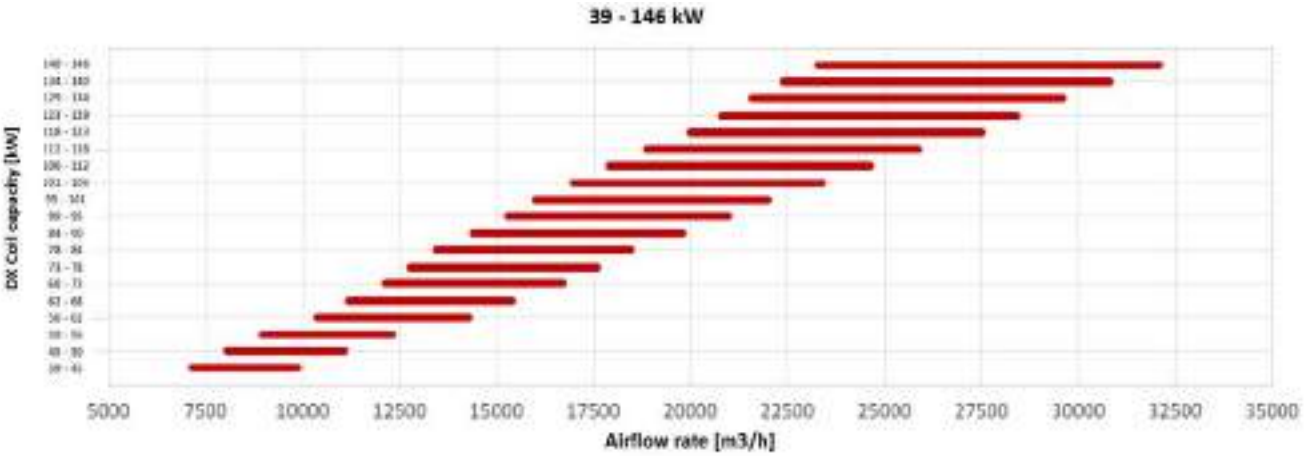
AQX VRF Custom

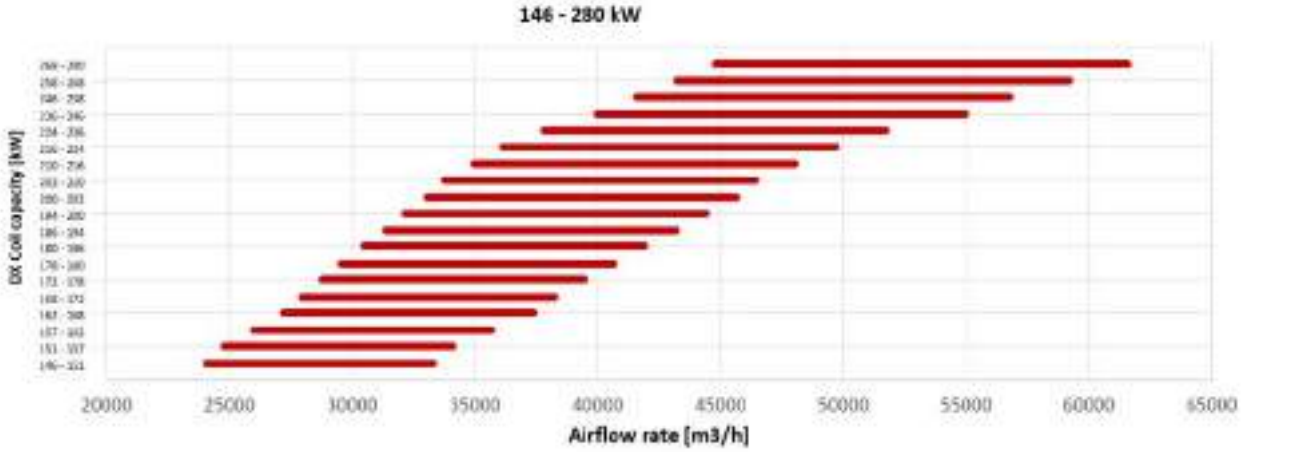
THE MOST FLEXIBLE AIR HANDLING UNITS THAT CAN BE COMBINED WITH VRF

In addition to the standard AQX VRF version, multiple versions are available with direct expansion coil capacities ranging from 1.8 to 270 kW and air flow rates from 350 to 61600 m³/h, which can be combined with different accessories according to specific design requirements.

Possible customizations can concern:
- Fans and motors
- Heat recovery section
- Filters
- Humidifiers
- Pre-heating, post-heating auxiliary sections
- Internal panels
- Silencers
- Additional accessories







Return air temperature control range. Refer to the installation manual for other types of control.

Control Systems - Product Lineup

	Type
Remote controllers	Infrared remote controls
	Wired Controllers
Centralized Control	Advanced Centralized Controllers
Network controls and gateways	Cloud Gateway
	Network Control System
	BMS integration (Gateways)
Accessories	

Name	Compatibility	Image
RM12F1	IDU V8	
WDC3-86S / WDC3-86T / WDC3-120T	IDU V8	
TC3-10.1	FULL V8	
CCM-180/WS / CCM270A/WS	V8 oo V6	
GW3-CLOUD NEW	FULL V8 V8 oo V6	
Software ed Hardware IMMPRO2	FULL V8 V8 oo V6	
BACnet Gateway GW3-BAC	FULL V8	
BACnet Gateway IMMP-BAC(A)	V8 oo V6	
LonWorks Gateway GW3-LON	FULL V8	
LonWorks Gateway GW-LON / GW-LON(A)	V8 oo V6	
ModBus Gateway GW3-MOD	FULL V8	
ModBus Gateway GW-MOD(A)	V8 oo V6	
Konnex Gateway GW3-KNX	IDU V8	
Konnex Gateway GW-KNX / GW-KNX(A)	IDU V6	
XYE MA3-EK extension kit	FULL V8	
XYE MA-EK extension kit	V8 oo V6	
Digital Power Meter DTS343-3	V8 oo V6 FULL V8	
Remote ambient temperature sensor RT02	IDU V8	
Signal repeater REPE-01	FULL V8	
Switch Module MIA-SM	IDU V8	
MIA-EK1 / MIA-EK2 expansion boards		
N8RS-01 leak detector	FULL V8 R-32	
N8SV-01 shut-off valve		
Display Board DB01	IDU V8	
AHU Kit NEW	IDU V8	

INFRARED REMOTE CONTROLS

BACKGROUND LIGHT

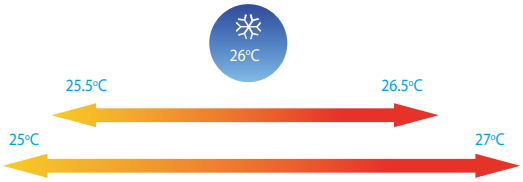
The background light allows users to operate the device in the dark. The device lights up when a button is pressed, and turns off when the selected operation is completed.

AUTO ADDRESSING

In addition to the unit's auto addressing function, users can set the indoor unit's address on the wireless remote controller.

TEMPERATURE SETTING

Set temperature can be adjusted in 0.5°C or 1°C steps, enabling precise comfort control.



7-SPEED FAN CONTROL

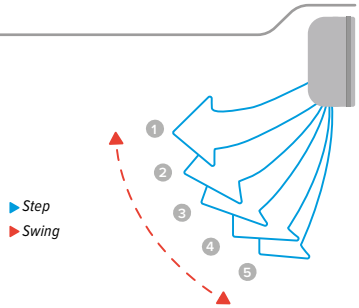
7 indoor fan speeds provide control flexibility to meet the needs of different indoor conditions.

INDIVIDUAL FIN ADJUSTMENT

The RM12F1 model allows the user to adjust the position of the individual fins of the 4-way boxes, resulting in better air distribution and greater comfort.

5-STEP SWING LOUVER

The air is comfortably spread upwards and downwards thanks to the 5-step swing louver that can be programmed via the controller.



DISPLAY SHUT-OFF

Indoor unit displays can be shut off at night, creating a better environment for rest.

EMS2 ACTIVATION

Just pressing a button.on the RM12F1 remote control, the user can enable or disable EMS2 energy saving algorithm of FullV8 systems

characteristics

RM12F1

Compatibility	IDU V8
On/Off	●
7-speed fan control	●
Mode selection	●
Auto Mode	●
Temperature setting (0,5°C or 1°C steps)	●
Dual Temperature Set Points	-
Eco mode	-
EMS2 control	●
Soft Wind	●
Keyboard lock	●
Auto Swing	●
5-step Swing Louver	●
Air direction control	●
Individual fin adjustment	●
Background light	●
Daily timer	●
Clock display	-
Address setting	●
Remote signal infrared receiver	-
Clean Filter Reminder	-
Follow me function	-
Silent mode	●
Display switch-off*	●
Indoor temperature display	-
°F/°C display	-
Weekly Schedule Control	-
Delay function	-
Automatic re-start	-
Error reporting	-
2 permission levels	-
Bi-directional Communication	-
Group management	-
Main or Secondary Controller Setting	-
Extension function	-
Daylight saving time	-
Dot matrix display	-
IDU error check function	-
IDU parameter querying	●
Indoor unit parameter setting	●
Operate parameter setting	-

technical data

		RM12F1
Dimensions (Width x Height x Depth)	mm	48x170x20
Coils	-	1,5V(LR03/AAA)x2

WIRED CONTROLLERS

EXCLUSIVE CONTROL MODES V8

SIMPLIFIED WIRED CONTROLLER

The new wired controller WDC-86S allows the access to the most common functions such as On/Off, change of operation mode, temperature regulation and fan speed control. It is possible to manage a group of up to maximum 16 indoor units.

NEW UNIQUE DESIGN

Deluxe controllers WDC3-86T and WDC-120T have a total black design exclusive for Clivet Characterized by a color touch screen display, they mainly differ in size and for the the four special kays to easy access main functions

ONE TO ONE AND GROUP CONTROL

All controls can be connected to a single unit or be used to control a group of up to 16 indoor units. Within the group, the Deluxe controls can also connect one-to-one to single units and control their mode setting independently.

BUILT-IN WI-FI CONNECTION

Deluxe controls can be connected to a Wi-Fi network without any additional device and allow the remote control of the units by installing the SmartHome APP, available on the Apple Store and Google Play.

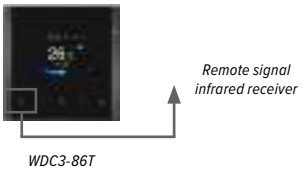
OTHER MODES

FOLLOW ME

With the follow me function, the indoor unit responds to the temperature measured by the temperature sensor built-in to the wireless remote controller, rather than the temperature sensor in the indoor unit itself, enabling more precise control of the temperature in the user's immediate environment.

REMOTE SIGNAL INFRARED RECEIVER

A signal receiver is incorporated into the controllers, allowing the system status to be adjusted using a remote control.

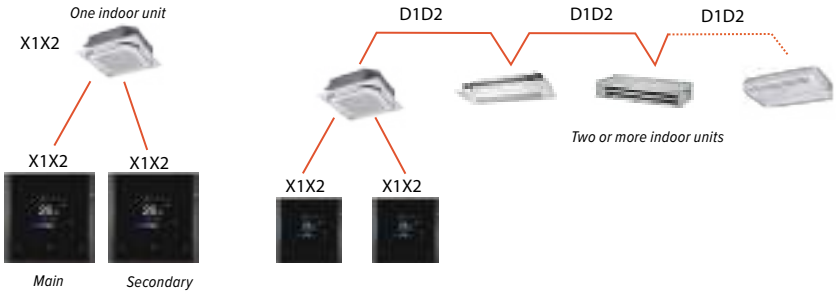


GROUP CONTROL*

One controller can be used to unify the settings across up to 16 indoor units.

MAIN OR SECONDARY CONTROLLER SETTING

Two controllers can be used together, with the indoor units' operating mode and settings being set according to the most recent instruction received. The controller display screens are synchronized so that both displays update when a setting is adjusted.



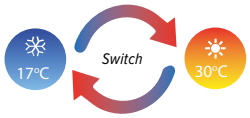
EXTENSION FUNCTION*

The extension function is specifically designed for users working overtime. Pressing the delay button postpones system shutdown by 1 or 2 hours.

*Function not available for WDC3-86S control

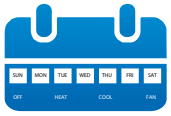
DUAL TEMPERATURE SET POINTS

With dual temperature set point control, in auto mode, it is possible to control in a customized way set temperatures for which units switch automatically between heating and cooling mode, adapting each indoor unit to specific users' needs.



WEEKLY SCHEDULE TIMER

The weekly schedule timer allows users to set multiple schedules each with its own operating mode, temperature settings and fan speeds.



*Function not available for WDC3-86S control

BI-DIRECTIONAL COMMUNICATION

The wired controller can query the system operating parameters thanks to the new bi-directional communication functionality. In addition, settings including static pressure, cold draft prevention and temperature compensation can be configured on the wired controller.

characteristics

	WDC3-86S	WDC3-86T	WDC3-120T
Compatibility	IDU V8	IDU V8	IDU V8
On/Off	●	●	●
Mode selection	●	●	●
Temperature setpoint (0.5°C or 1°C steps)	●	●	●
Auto Mode	●	●	●
Dual Temperature Set Points	-	●	●
5-step Swing Louver	●	●	●
7-speed fan control	●	●	●
Control via the APP	-	●	●
EMS2 activation	-	●	●
Keyboard lock	●	●	●
Auto Swing	●	●	●
Background light	●	●	●
Daily timer	●	●	●
Weekly Schedule Control	-	●	●
Address setting	●	●	●
Remote signal infrared receiver	●	●	●
Clean Filter Reminder	●	●	●
Follow me function	●	●	●
Indoor temperature display	●	●	●
°F/°C display	●	●	●
Extension function	-	●	●
Automatic re-start	●	●	●
2 permission levels	●	●	●
Group management	●	●	●
One-at-a-time control	-	●	●
IDU error check function	●	●	●
Display shut-off	-	●	●
Bi-directional Communication	●	●	●
Silent mode	●	●	●
Daylight saving time	-	●	●
Clock display	-	●	●
IDU parameter querying	●	●	●
Operate parameter setting	●	●	●
Language	English	14 languages	14 languages

technical data

		WDC3-86S	WDC3-86T	WDC3-120T
Dimensions (Width x Height x Depth)	mm	86x86x18	86x86x18	120x120x20
Power supply (from IDU)	-	18V DC	18V DC	18V DC

CENTRALIZED CONTROL

CONTROL SYSTEM
SPLIT VRF
CCM-270A/WS

TOUCH SCREEN

The colorful touch screen and lively display make the interface more convenient and simple.

UNIT MODEL RECOGNITION

The controller recognizes the model of indoor and outdoor units and different models are represented by different icons.

GROUP MANAGEMENT

Units can be viewed according to group, system or location, making unit management clearer and more convenient.

SCHEDULE MANAGEMENT

Daily, weekly or annual schedules can be used to set unit settings such as on/off, operating mode, set temperature, fan speed and swing.

ENERGY MANAGEMENT

User can set limits or locks on an indoor unit, such as minimum cooling temperature, maximum heating temperature, fan speed lock, operation mode lock, swing lock, remote controller lock and wired controller lock.

ENERGY CONSUMPTION DETECTION*

In combination with the DTS343-3 energy meter, consumption can be allocated to the individual indoor units and shown on the display or on a browser.
The data obtained can be saved on a USB flash drive for further processing.

* Function available for TC3-10.1 and CCM-270A/WS control

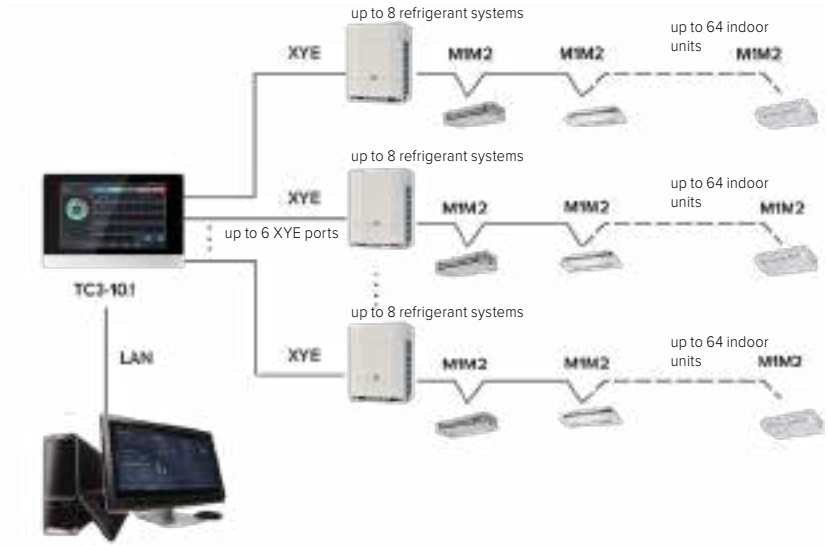
LAN ACCESS

A desktop or laptop PC can be used for browser-based access via a LAN connection.

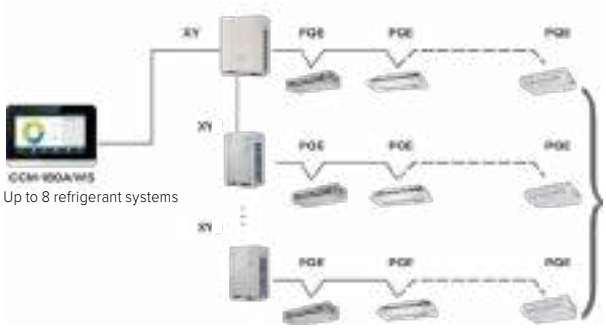
* Function available for TC3-10.1 and CCM-270A/WS control

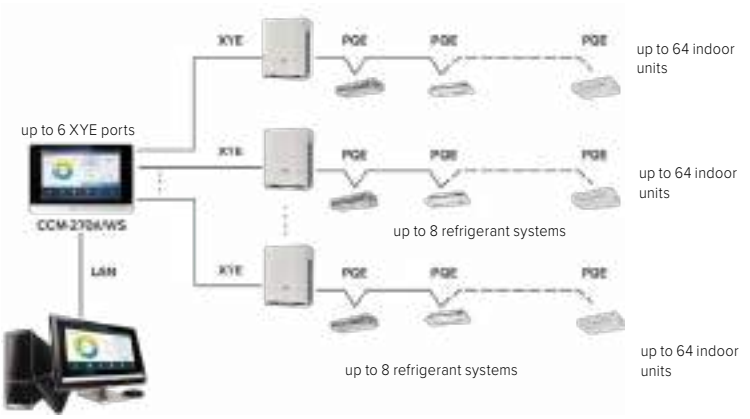
WIRING DIAGRAM

The controllers can be connected to the master outdoor unit directly.



CONTROL SYSTEMS





characteristics

	TC3-10.1	CCM-180A/WS	CCM-270A/WS
Compatibility	FULL V8	V8 ∞ V6	V8 ∞ V6
Max. number of indoor units	384	64 *	384
Max. number of refrigerant systems	48	8	48
Touch screen	10,1"	6,2"	10,1"
On/Off	●	●	●
7-speed fan control	●	●	●
Mode selection	●	●	●
Temperature setting (0,5°C steps)	●	●	●
Swing function	●	●	●
5-step Swing Louver	●	●	●
Clock display	●	●	●
Indoor temperature display	●	●	●
°F/°C display	●	●	●
2 permission levels	●	●	●
Extension function	-	●	-
Holiday setting	●	●	●
Weekly Schedule Control	●	●	●
Indoor unit type/ model recognition	●	●	●
Visual schematic	-	-	●
Energy management	●	●	●
Group management	●	●	●
Error check function	●	●	●
Parameter querying	●	●	●
USB output	●	●	●
Report display	Error report and operation record	Error report	Error report and operation record
Operating log	●	-	●
LAN access	●	-	●
Zephir3 / Fresh Large EVO control	-	-	●

*Not compatible with HWM-2-XMi high temperature hydro module management.

technical data

		TC3-10.1	CCM-180A/WS	CCM-270A/WS
Dimensions (Width x Height x Depth)	mm	270x183x32	182x123x34	270x183x32
Power supply	-	24V AC (adapter not included)	12V DC (adapter 100/240V, 50/60Hz supplied)	24V AC (adapter not included)

CLOUD GATEWAY

FULL V8 | V8 ∞ V6

The Cloud Gateway allows remote management of up to 64 indoor units from a PC, tablet or smartphone via the Internet. With access to the Cloud server, individual units or groups can be monitored and controlled.

USER-FRIENDLY CONTROL INTERFACES

- Software control/ Cloud server control (WEB access).
- Allows single and group control.
- Color indication and icons makes it easy to recognize unit status.
- Includes a full-screen display, and allows temperature adjustment by swiping.

WEB SITE CLOUD SERVER

In addition to the app, you can check and monitor the status of the system at any time and anywhere from the cloud server website

GROUP CONTROL

Different groups can be created to manage multiple indoor units simultaneously with a single touch

WEEKLY SCHEDULE CONTROL

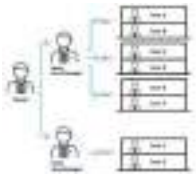
Users can set a weekly schedule either for specific units or for groups of units. Each day may be divided into multiple sections. The controller automatically controls each units' on/off status, operating mode, fan speed and temperature settings according to the schedule.

CLEAR ICONS

The main operation parameters are displayed through clear and user-friendly icons

MULTIPLE ACCESS LEVELS

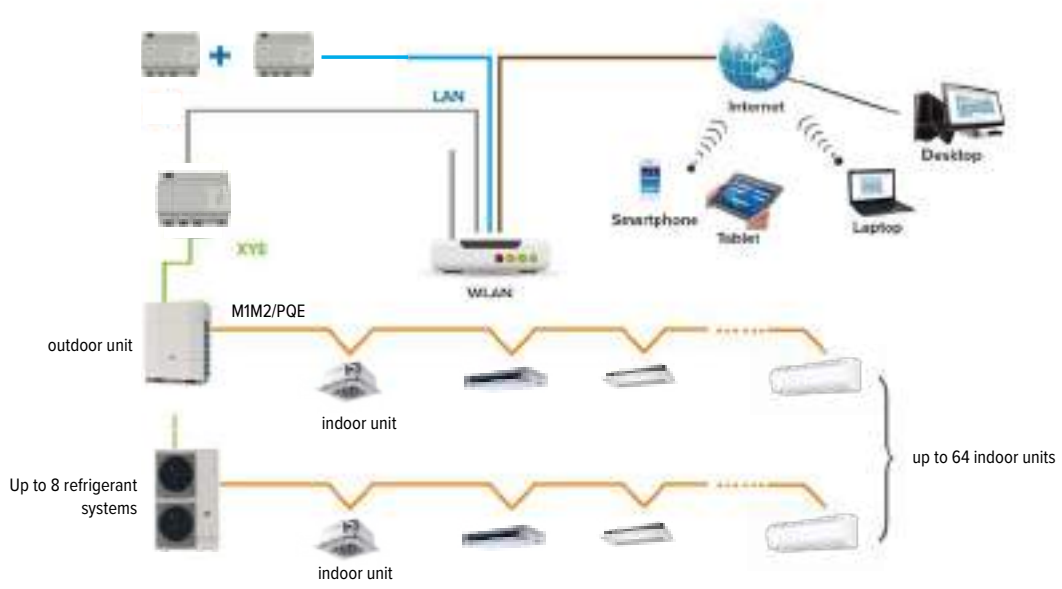
The administrator can set up different sub-users with different permissions to better manage the system.



ADDED CONVENIENCE

The air conditioner can be remote controlled by a phone or tablet. Query and control the running state of the A/C anytime, anywhere, and schedule queries and actions in advance. Remotely turn off the air conditioner to avoid wasting power.

ELECTRICAL CONNECTIONS



characteristics

GW3-CLOUD

Application scenario	Smartphone/Tablet via APP	PC via WEB BROWSER
Max. number of indoor units	64*	64*
Max. number of refrigerant systems	8	8
Application name	iEasyComfort	iEasyComfort
On/Off	●	●
Mode selection	●	●
Set temperature	●	●
Swing function	●	●
Ambient temperature display	●	●
°F/°C display	●	●
Weekly Schedule Control	●	●
Energy management	●	●
Group management	●	●
Error check function	●	●
Parameter querying	●	●
Configuration	●	-
Account registration	●	-
Demo	●	●
LAN access	●	●

*For high temperature Hydro Module HWM-2-XMi, control is limited to ON/OFF and water temperature display.

technical data

		GW3-CLOUD
Dimensions (Width x Height x Depth)	mm	154x124*52
Power supply	-	12V DC power output included

IMMPRO2 NETWORK CONTROL SYSTEM

FULL V8 | V8∞V6

The network control system can be used to manage a large number of VRF systems via PC. The new IMMPRO2 version has been completely redesigned and features improved accessibility to the functions thanks to the dashboards that can be set by the user and a much more user-friendly interface.

DEVICE MANAGEMENT AND CONTROL

Users can manage all VRF units flexibly from a single centraliser by grouping them according to different criteria (system, position, function, etc.). If is also possible to limit different modes of the units, such as the settable temperature range, fan speed, operating modes or set locks on wired and remote controllers.

USER MANAGEMENT AND PERMISSIONS

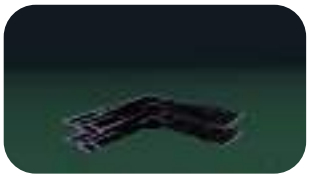
The administrator can assign user accounts according to their building management role.
For each user role, it is possible to set permissions or restrict access to certain software or VRF system modes.

SCHEDULE FUNCTIONS

IMMPRO2 can be used for detailed time scheduling of indoor units. The schedule can be set for the whole year.

2D/3D DISPLAY AND SETUP

Users can upload floor plan drawings and add the locations of various
equipment. The software will be able to display the map of the building in 2D or 3D.



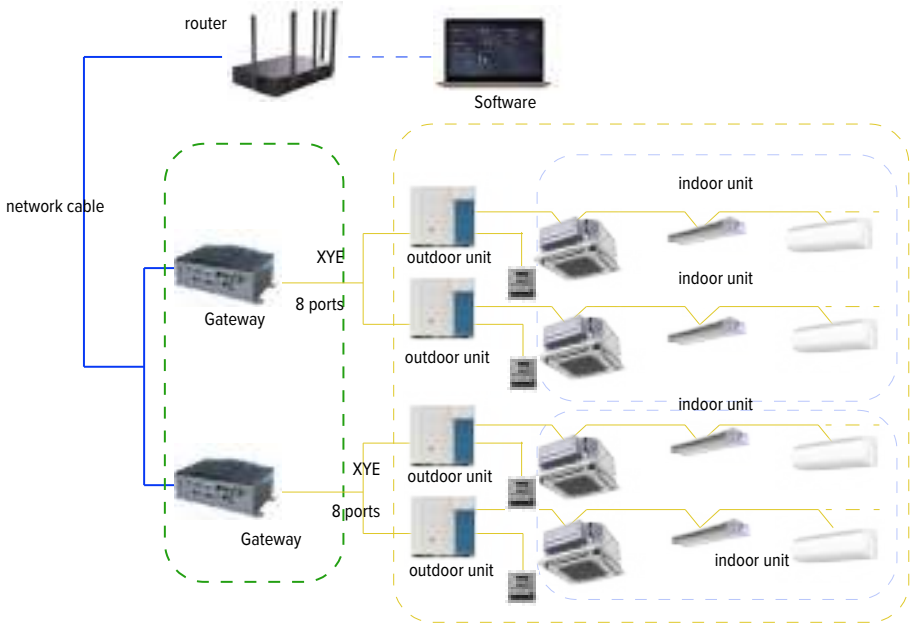
ALLOCATION OF CONSUMPTION

If the DTS343-3 energy meter is installed, the IMMPRO2 can collect information on the system's energy consumption and, thanks to a patented calculation algorithm, estimate the energy consumption of the indoor units and thus allocate the costs to the various system users.

CUSTOMISABLE DASHBOARD

Users can customise the dashboard for quick access to the most frequently used functions.

WIRING DIAGRAM



Software Features

Software	IMMPRO2
Max. IMMPRO interfaces number per IMMPRO2 software	10
Max. number of indoor units per IMMPRO software	5120
Max. number of refrigerant systems per IMMPRO software	1024
Temperature setting (0,5°C steps)	●
7-speed fan control	●
Auto Swing	●
5-step Swing Louver	●
Outdoor unit Eco mode setting	●
Holiday setting	●
Annual schedule management	●
Clock display	●
4 permission levels	●
Unit model recognition	●
Electricity Charge Distribution (Patented)	●
Visual schematic	2D/3D
Energy management	●
Group management	●
Error check function	●
System parameter querying	●
Report output	●
Operating log	●
LAN access	●
Data backup	●
Remote VPN access	●
Zephir3 / Fresh Large EVO control	●

Gateway characteristics

MK2-B331
Dimensions (LxHxD) (mm) 237×144×87.2
Power supply: 220Vca - 9~30V DC adapter included

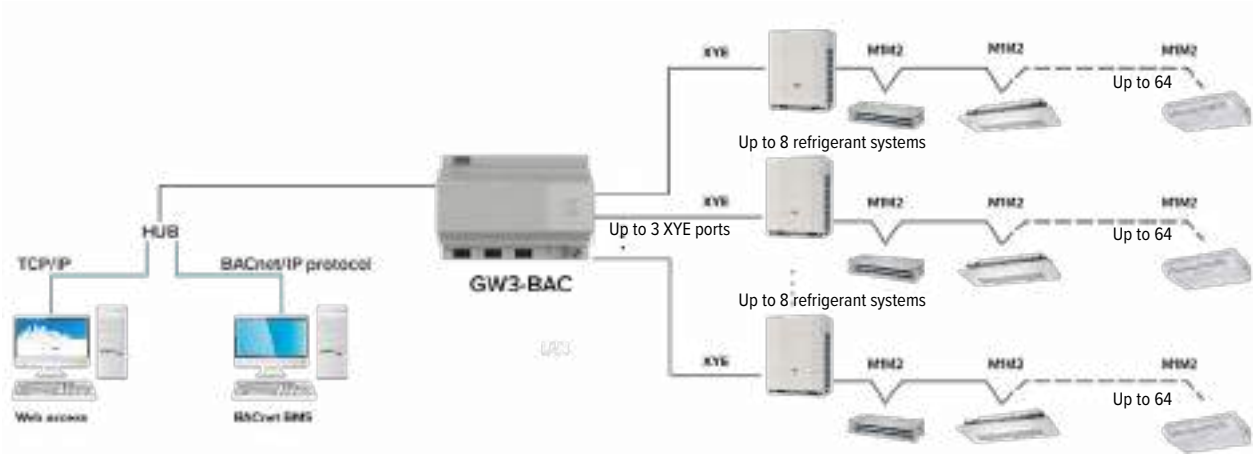
BACNET® GATEWAY

FULL INTEGRATION

Bacnet Gateway allow VRF systems to be monitored and controlled alongside other building management technology that use the BACnet protocol such as access control, fire detection and lighting systems.

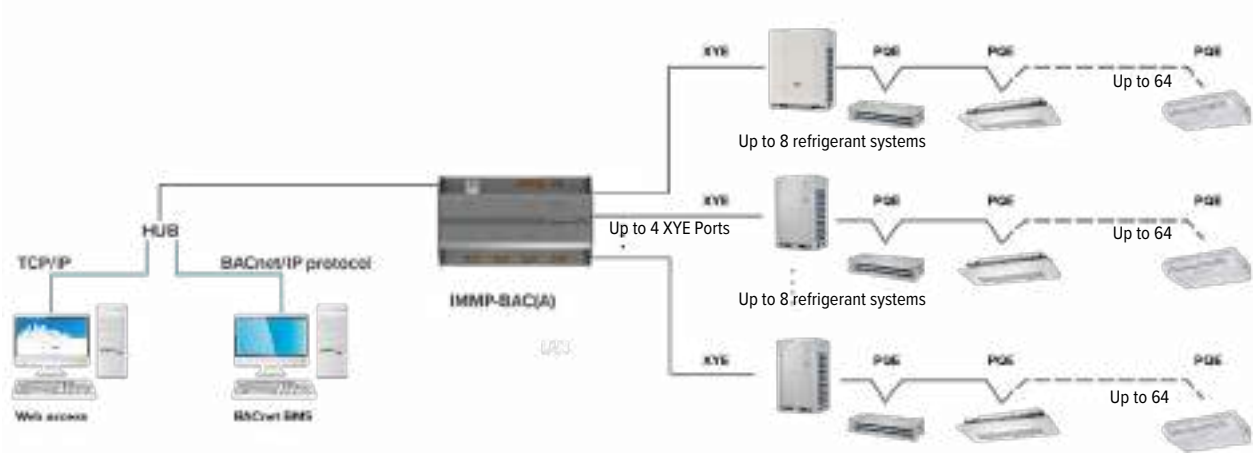
GW3-BAC ELECTRICAL CONNECTIONS

The gateway can be connected directly to the XYE ports of the master external units.



IMMP-BAC(A) ELECTRICAL CONNECTIONS

The gateway can be connected directly to the XYE ports of the master external units.



characteristics


		GW3-BAC	IMMP-BAC(A)
Max number of indoor units connectable		192	256
Max. number of refrigerant systems connectable		24	32
Control [1]	On/Off	●	●
	Mode selection	●	●
	Set temperature	●	●
	Fan speed	●	●
	Energy management	●	●
	Auto mode	●	●
	High temperature Hydromodule	-	●
Indoor unit monitoring [1]	Room temperature display	●	●
	Error status	●	●
	Error alarms	●	●
Outdoor unit monitoring [1]	Operating mode	●	●
	Outdoor ambient temperature	●	●
	Fan speed	●	●
	Compressor operating frequency	●	●
	Compressor discharge temperature	●	●
	System pressure	●	●
	Error status	●	●
	Error alarms	●	●
LAN access		●	●
BTL certification		-	●
Compatibility	Siemens	APOGEE	APOGEE
	Trane	TRACER	TRACER
	Honeywell	ALERTON	ALERTON
	Schneider	Andover Continuum	Andover Continuum
	Johnson Controls	METASYS	METASYS

(1) Refer to technical documentation for a complete list of controllable/monitorable parameters

compatibility

	 FULL V8	 V8 ∞ V6
 **GW3-BAC**	✓	-
 **IMMP-BAC(A)**	-	✓

technical data

		GW3-BAC	IMMP-BAC(A)
Dimensions (Width x Height x Depth)	mm	154x124x52	190x116x67
Power supply	-	24V AC - 50/60Hz (adapter not included)	24V AC - 50/60Hz (adapter not included)

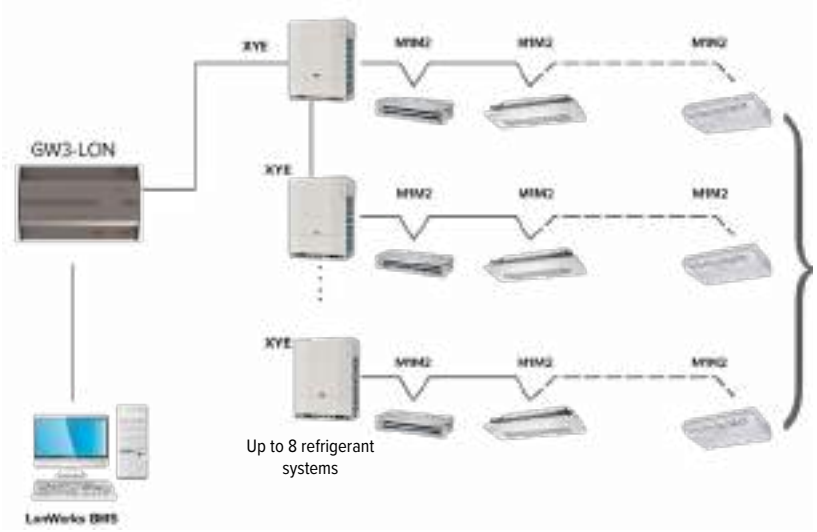
LONWORKS® GATEWAY

FULL INTEGRATION

Gateway LonWorks allow Clivet VRF systems to be monitored and controlled alongside other building management technology on the LonWorks platform such as security, fire safety and lighting systems.

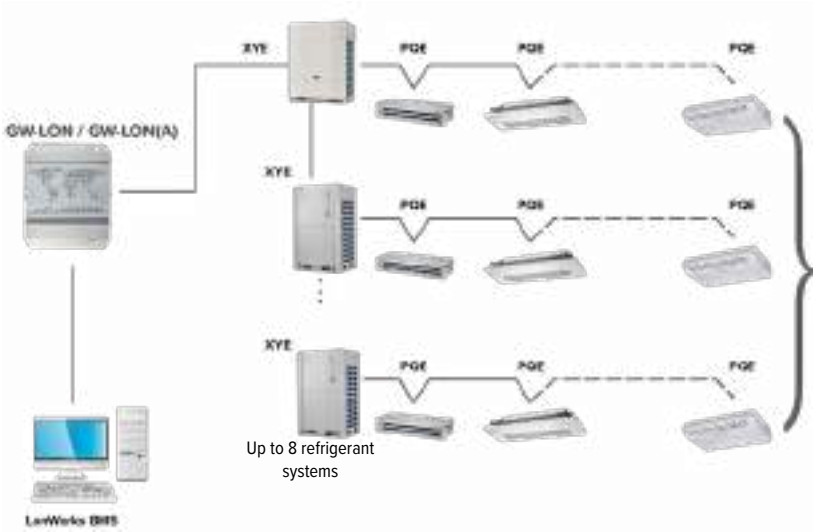
GW3-LON ELECTRICAL CONNECTIONS

The gateway can be connected directly to the XYE ports of the master external units.



WIRING DIAGRAM GW-LON / GW LON(A)

The gateway can be connected directly to the XYE ports of the master external units.



characteristics



		GW3-LON	GW-LON(A)	GW-LON
Max number of indoor units connectable		32	32	64
Max. number of refrigerant systems connectable		8	8	8
Control [1]	Mode selection	●	●	●
	Set temperature	●	●	●
	Fan speed	●	●	●
	Group shut down	●	●	●
	On / Off	●	●	●
	Auto mode	●	●	-
	High temperature Hydromodule	-	●	-
Indoor unit monitoring [1]	Operating mode	●	●	●
	Set temperature	●	●	●
	Fan speed	●	●	●
	Online status	●	●	●
	Operating status	●	●	●
	Room temperature	●	●	●
	Error status	●	●	●
Outdoor unit monitoring	Error status	●	●	●

compatibility

	FULL V8	V8 ∞ V6
 **GW3-LON**	✓	-
 **GW-LON(A)**	-	✓
 **GW-LON**	-	✓

technical data

		GW3-LON	GW-LON(A)	GW-LON
Dimensions (Width x Height x Depth)	mm	170x116*67	170x116X67	251x319x61
Power supply	-	24V AC - 50/60Hz (adapter not included)	24V AC - 50/60Hz (adapter not included)	100/240V AC - 50/60Hz

(1) Refer to technical documentation for a complete list of controllable/monitorable parameters

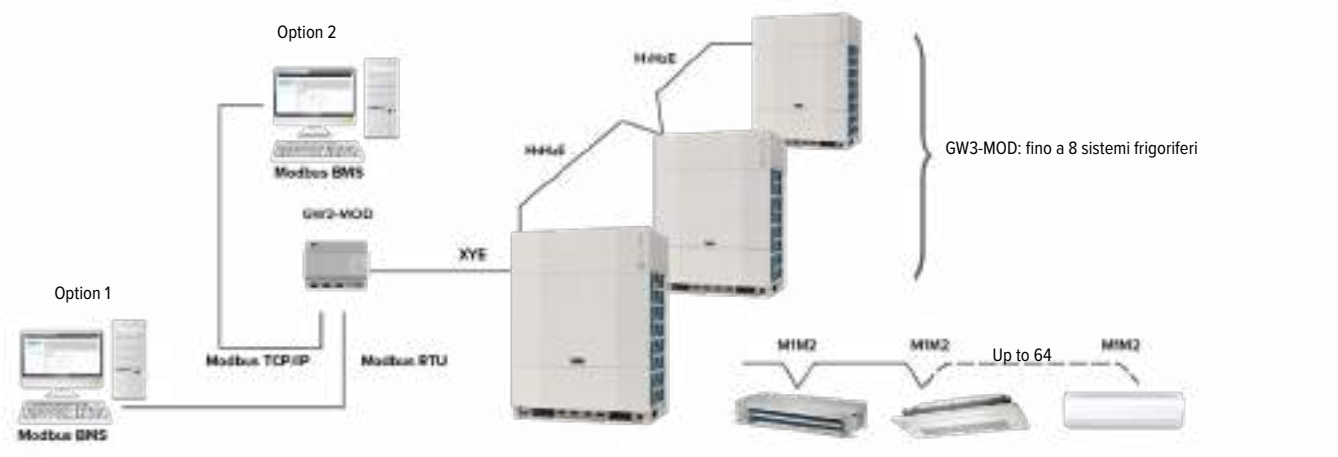
MODBUS® GATEWAY

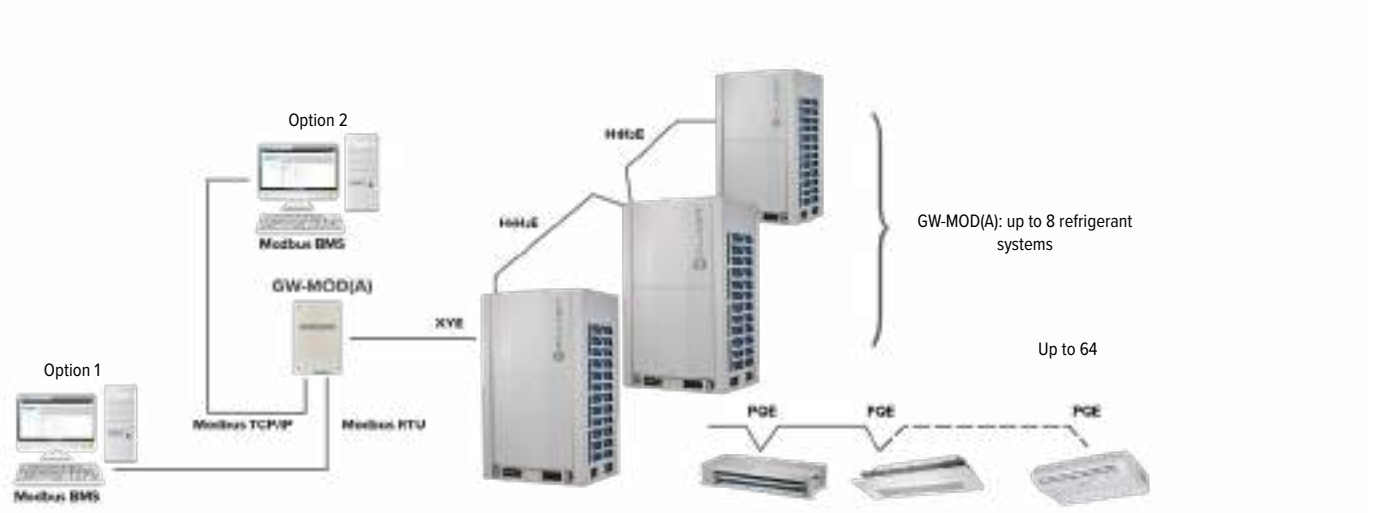
FULL INTEGRATION

The Modbus Gateway enable seamless connection of Clivet VRF systems with building management systems built on the Modbus communication protocol.

GW3-MOD ELECTRICAL CONNECTIONS

The gateway can be connected directly to the XYE ports of the master external units.





characteristics

		GW3-MOD	GW-MOD(A)
Max number of indoor units connectable		64	64
Max. number of refrigerant systems connectable		8	8
Connects to BMS through either TCP/IP or RTU		●	●
Control [1]	On / Off	●	●
	Mode selection	●	●
	Set temperature	●	●
	Fan speed	●	●
	Group on/off	●	●
	Auto mode	-	●
	High temperature Hydromodule	-	●
Indoor unit monitoring [1]	Online Status	●	●
	Room temperature	●	●
	Error status	●	●
	Operating mode	●	●
Outdoor unit monitoring [1]	Operating mode	●	●
	Block status	●	●
	Fan speed	●	●
	Set temperature	●	●
	Outdoor ambient temperature	●	●
	Error status	●	●

compatibility

	FULL V8	V8 ∞ V6
 **GW3-MOD**	✓	-
 **GW-MOD(A)**	-	✓

technical data

		GW3-MOD	GW-MOD(A)
Dimensions (Width x Height x Depth)	mm	154x124*52	128x225x28
Power supply	-	12V DC power output included	12V DC (adapter 100/240V, 50/60Hz supplied)

(1) Refer to technical documentation for a complete list of controllable/monitorable parameters

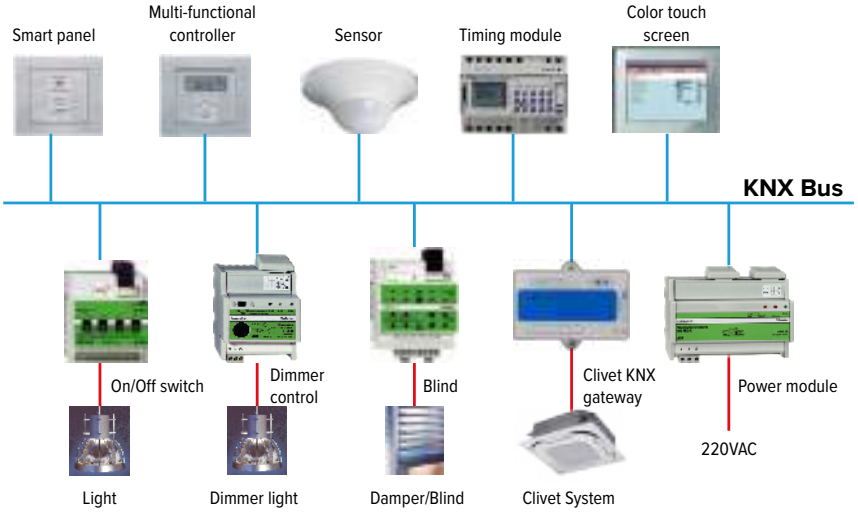
KNX GATEWAY

FULL INTEGRATION

KNX Gateway enable full integration of Clivet VRF systems with home and building management systems built on the NKX network communications protocol.

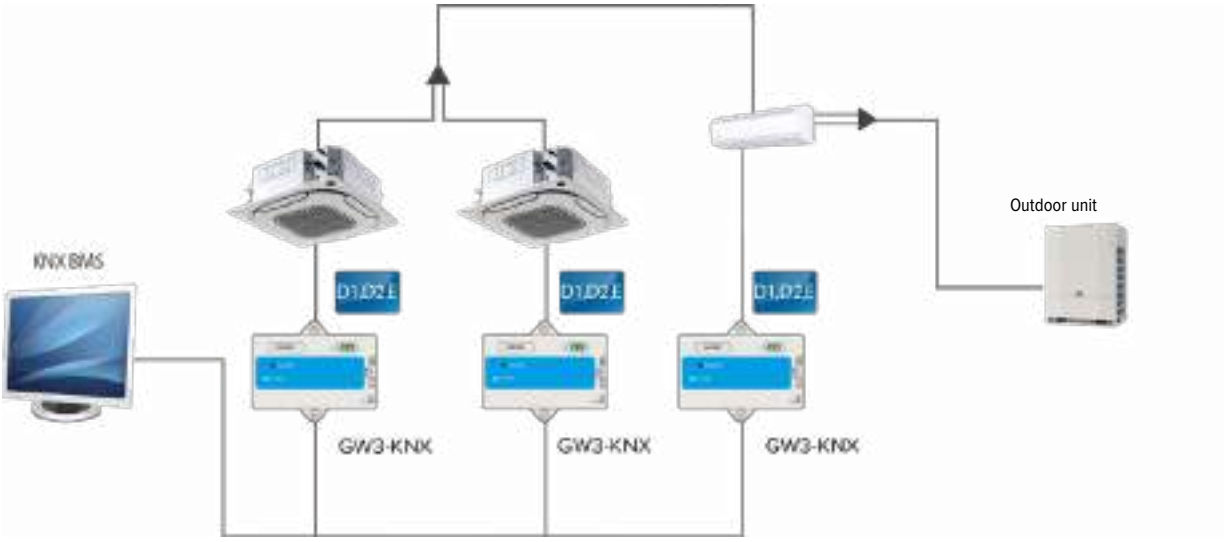
BROAD INTEGRATION

Being compatible with the KNX protocol means the Clivet's VRF air conditioners can be integrated into control system alongside the widw range of KNX compatible products that are available.



ELECTRICAL CONNECTIONS

Each Gateway can be connected to each indoor unit on D1D2E port.



characteristics

		GW3-KNX	GW-KNX
Max number of indoor units connectable		1	1
Control [1]	On / Off	●	●
	Mode selection	●	●
	Set temperature	● (intervals of 1 °C)	● (intervals of 1 °C)
	Fan speed	● (3 speed)	● (3 speed)
	Swing	●	●
Indoor unit monitoring [1]	On / Off	●	●
	Mode selection	●	●
	Set temperature	●	●
	Fan speed	●	●
	Swing	●	●
Outdoor unit monitoring [1]	Ambient temperature	●	●
	Fan speed	●	●
	Set temperature	●	●
	Outdoor ambient temperature	●	●
	Error status	●	●

		GW-KNX(A)
Max number of indoor units connectable		1
Control [1]	On / Off	●
	Ambient temperature	●
	Supply water temperature	●
	Mode selection	●
	DWH mode water temperature	●
Monitoring [1]	On / Off	●
	Current operating mode	●
	Supply water temperature	●
	Ambient temperature	●
	Control status	●
	DWH mode water temperature	●
	Error codes	●

compatibility

	IDU V8	IDU V6
 **GW3-KNX**	✓	-
 **GW-KNX**	-	✓ Except Hydromodule
 **GW-KNX (A)**	-	✓ Hydromodule

technical data

		GW3-KNX / GW-KNX / GW-KNX(A)
Dimensions (Width x Height x Depth)	mm	85x51x16
Power supply	-	29VDC (KNX bus power supply)

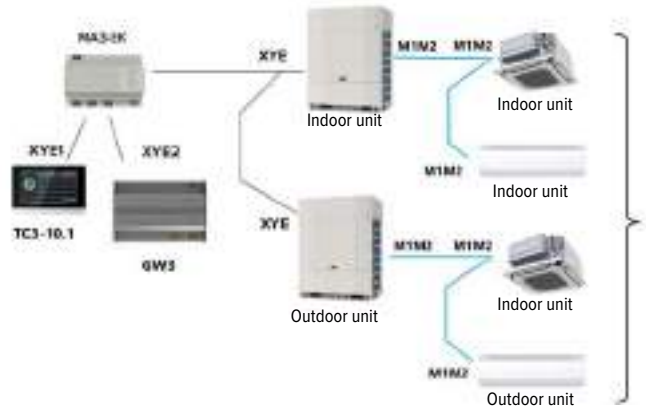
(1) Refer to technical documentation for a complete list of controllable/monitorable parameters

XYE EXTENSION KIT

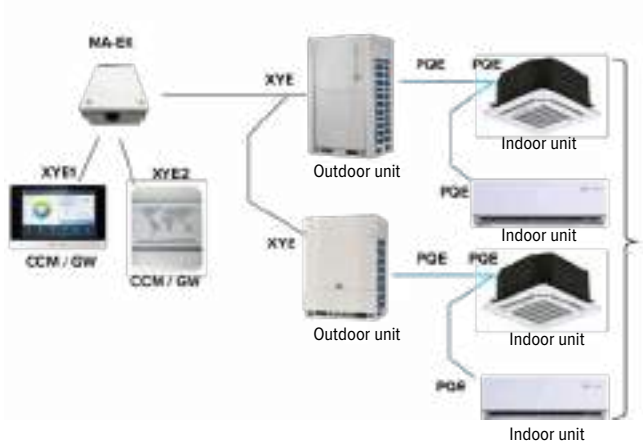
PRACTICAL CONNECTION IN ONLY ONE POINT

The XYE duplication kit allows to connect 2 centralized controls or gateways to the same system in a single point on the external units.In this way it is possible to manage the VRF systems by combining different control interfaces, to the advantage of plant flexibility.
In this way it is possible to manage the VRF systems by combining different control interfaces, to the advantage of plant flexibility.

INSTALLATION SCHEME



Up to 64 indoor units
Upt to 8 VRF systems



Up to 64 indoor units
Upt to 8 VRF systems

technical data

		MA3-EK	MA-EK
Compatibility		FULL V8	V8 ∞ V6
Dimensions (Width x Height x Depth)	mm	154x124x52	225x128x28
Power supply	-	12V DC (adapter 100/240V, 50/60Hz supplied)	12V DC (adapter 100/240V, 50/60Hz supplied)

DIGITAL POWER METER

FULL V8 | V8 ∞ V6

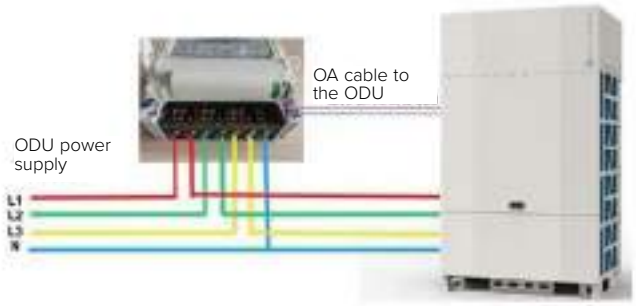
The DTS343-3 digital electricity meter can be connected to the outdoor unit to measure electricity consumption.

LOW POWER CONSUMPTION

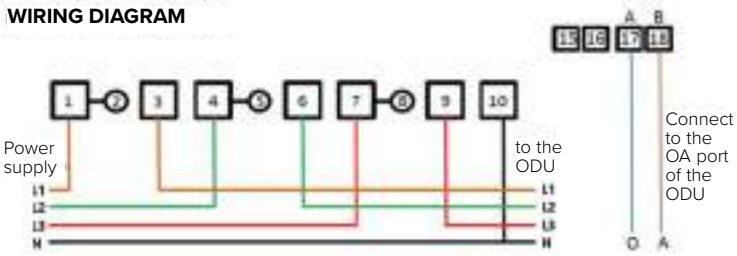
The digital power meter consumes minimal energy.
Voltage circuit: less than 1.5W/6VA
Current circuit: less than 0.4VA /fase

INSTALLATION SCHEME

The digital power meter is tested after manufacture so it can be immediately deployed and used on-site. The LED indicators and installation schematic are shown in the figure on the left.



WIRING DIAGRAM



technical data

		DTS343-3
Dimensions (Width x Height x Depth)	mm	170x156x77
Power supply	mm	220V - 500V (50/60Hz)

REMOTE AMBIENT TEMPERATURE SENSOR

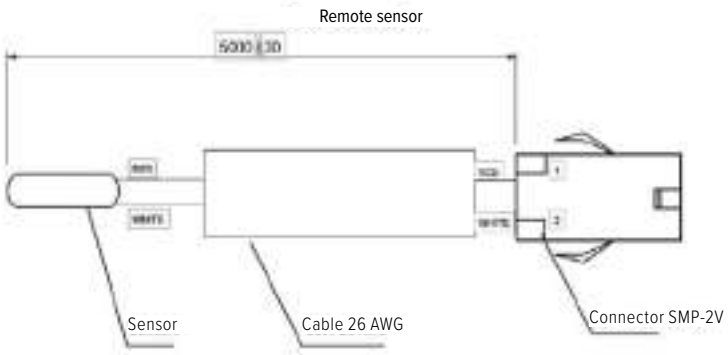
IDU
V8

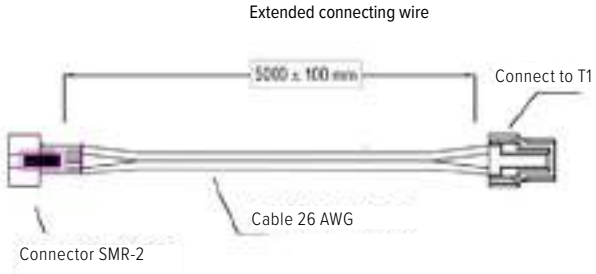
HANDY ROOM TEMPERATURE READING

The remote ambient temperature sensor RT02 allows the user to control the operation of the indoor unit based on the temperature read by the probe that replaces the sensor on the intake grille of the indoor unit.
Ideal for applications in which it is required to control systems exclusively via centralized controllers or BMS and user prefers not to install remote controllers locally, this sensor allows to read air temperature in the most representative point in the room and to regulate the indoor unit consequently

SENSOR SUPPLIED WITH EXTENSION CABLE TO MEET EVERY NEED

The accessory consists of the actual 5 m sensor and an adapter that serves as a 5 m extension cord, for a total length of 10 m. This makes it possible to cover any type of installation distance from the indoor unit to the reading point.





INSTALLATION SCHEME

Installation of the probe is extremely easy: simply disconnect the factory-wired return air sensor in the indoor unit from the unit's circuit board (connector T1) and replace it with the connector on one end of the adapter, once the other end is connected to the remote temperature sensor.

technical data

		RT02
Length	mm	10000 (= 5000 + 5000)
Power supply	-	3,5V DC

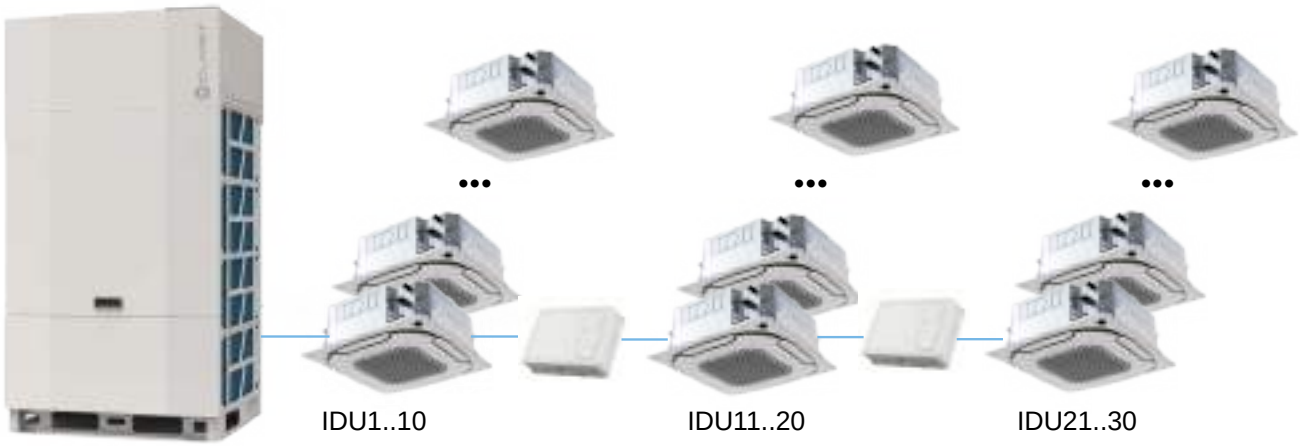
EASYCOM BUS REPEATER

FULL V8

When using the EasyCom bus with separate power supplied indoor units, the limitations linked to the voltage drop along the bus itself must be taken into account. When using more than 10 indoor units or the bus length is more than 200m, signal repeaters must be used.
The REPE-01 signal repeater allows the control of an additional 10 units and adds 200m of maximum length to the EasyCom bus. It is possible to install a maximum of 2 repeaters for a length of 600m and a number of internal units equal to 30.

EasyCom BUS Length	N° Indoor units	Repeaters
Less than 200m	< = 10	No
Between 200 m and 400 m	Between 11 and 20	1
Between 400 m and 600 m	Between 21 and 30	2

Example of repeater use with 30 indoor units



technical data

		REPE-01
Dimensions (Width x Height x Depth)	mm	170x50x120
Power supply	-	220V AC 50Hz

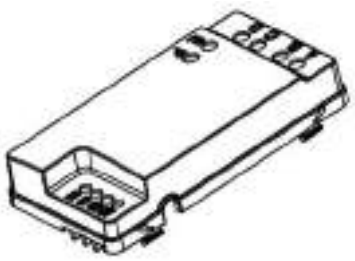
SWITCH MODULE AND EXPANSION CARDS

IDU
V8

The internal units of the V8 series can be provided with optional expansion cards adding the possibility for further functions. Each card is equipped with dedicated I/O contacts, thus expanding the installation possibilities of the units.

MIA-SIM SWITCH MODULE

This switch module is used to connect the R32 N8RS-01 leak detector and other expansion cards. It comes with the connection cable and is connected to the indoor unit electrical board. It does not need a separate power supply.
It is equipped with a dry contact reporting the on/off status of the unit's fan and a connector for other expansion cards.
A Switch Module can be connected to a single expansion card 1 and up to four expansion cards 2



EXPANSION CARD 1 MIA-EK01

Expansion Board 1 is used to connect and control third-party external accessories via three programmable output contacts. It connects to the MIA-SM switch module or other expansion cards and must be powered separately.

E.g. Output signals available for third parties: On fan, ON/OFF unit, signal for electric resistance preheaters, cold/heat mode, occupancy (for units equipped with a suitable sensor), defrost

EXPANSION BOARD 2 MIA-EK02

Expansion Board 2 provides additional contacts to control the internal units via third-party electromechanical controls. It connects to the MIA-SM switch module or other expansion cards and must be powered separately.

E.g. available input signals: 0-10V set point adjustment, Heating/Cooling, 3 velocities; Output: Defrost

technical data

		MIA-SM	MIA-EK1	MIA-EK2
Dimensions (Width x Height x Depth)	mm	100x40x50	170x50x120	243x68x160
Power supply	-	12V DC da IDU	220V AC 50Hz	220V AC 50Hz

SAFETY MEASURES FOR R32 SYSTEMS

In VRF systems that use R32 gas as refrigerant, which is classified as mildly flammable A2L, attention must be paid to the dimensions of the rooms where the internal units are installed. If they are too small compared to the total refrigerant charge of the system (EN 60335-40-20 2023 standard), it is necessary to install additional safety devices or furthermore, connect them to alarm or mechanical ventilation systems.

REFRIGERANT LEAK DETECTOR - N8RS-01

If it detects an R32 refrigerant gas leak, this accessory immediately shuts down the system, emits an audible and visual alarm and starts the indoor unit connected to it at maximum speed to ensure correct air circulation and prevent the refrigerant from becoming concentrated and therefore dangerous.

Installation

The N8RS-01 detector connects to the indoor unit via the MIA-SM switch module and must be powered independently from the system. It must be installed at a maximum height of 1.5m from the ground.
It is equipped with a dry contact to activate, if necessary, additional alarm or ventilation systems.

SHUT OFF VALVE – N8SV-01

Another optional safety device required by standard EN 60335-40-20 2023 is the shut-off valve. This accessory is installed on the main pipe of the VRF system and, if necessary, enables part of the refrigerant gas in the outdoor unit to be stored and stopped from flowing to the indoor units. This minimises the amount of gas that can be dispersed into the environment. The procedure is activated by the refrigerant leak detector N8RS-01.

Installation

The N8SV-01 valve is connected to the outdoor unit via the EasyCom bus and must be powered independently from the system. It must be installed outside before any branch of the circuit.

technical data

		N8RS-01	N8SV-01
Dimensions (Width x Height x Depth)	mm	170x50x120	740x156x240
Power supply	-	220V AC 50Hz	220V AC 50Hz

DISPLAY BOARD DB01

IDU
V8

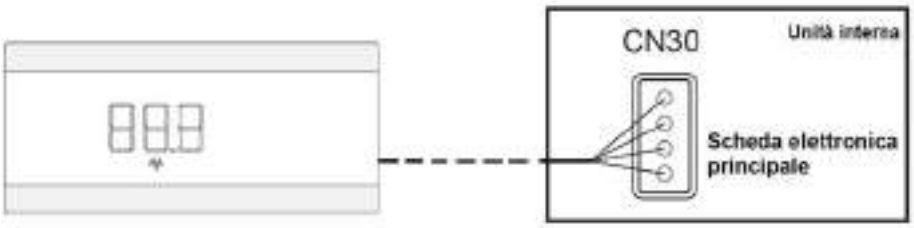
CONTROLLING INDOOR UNITS VIA REMOTE CONTROLLER

Ducted indoor units CN-3, CNT2-3, CNT3-3, CNFA-3 and floor-mounted units DZ***-3 are supplied without infrared receiver. The display board must be added so that they can be controlled by the remote controller RM12F1. In addition to the infrared receiver, the three-digit display shows information on the set and ambient temperature and any unit failures. For floor-mounted units, however, it is advisable to use the wired controller that can be concealed inside the unit.

ENCLOSED CONNECTION CABLE

The display board comes with a one-metre long connecting cable to the indoor unit for easy installation.

INSTALLATION SCHEME



To use the display board, simply connect it to connector CN30 on the indoor unit board.

technical data

		DB01
Cable Length	m	1
Power supply	-	5V DC from the indoor unit
Dimensions (Length x Height x Depth)	mm	150x66x25

AHU-KIT F

R-410A R-32 IDU V8

WIDE CAPACITY RANGE

Up to four modules can be used in parallel, for a total capacity range from 06 to 96 HP.

NEW

AHUKZ-00F
1,8-9kW

AHUKZ-01F
9-20 kW

AHUKZ-02F
20-36 kW

AHUKZ-03F
36-56 kW

AHUKZ-04F
56-168kW

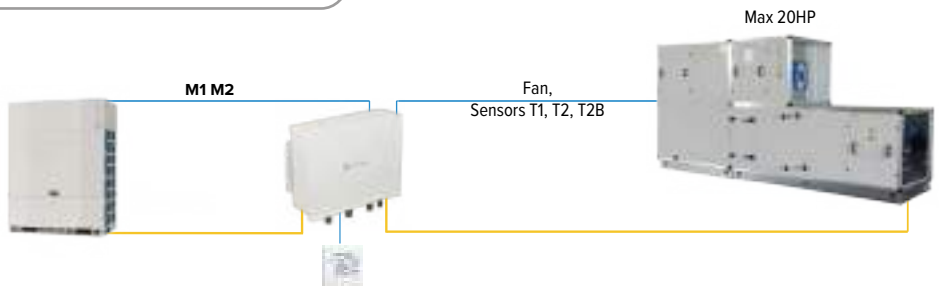
MULTIPLE WAYS OF USE

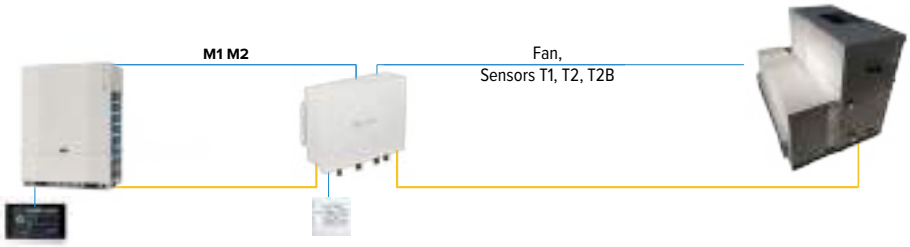
The units managed through the kit can be managed in a simplified way through the Clivet wired control provided, making the main settings from the control and letting the module send and receive the signals directly to the unit. For applications requiring greater complexity, it is possible to interpose a third party controller (PLC) delegating to it the control of the equipment and communicating with the VRF system through the AHU kit by means of input/output signals.
This ensures maximum flexibility in the use and customisation of the modes specifically required for each application.

INTEROPERABILITY

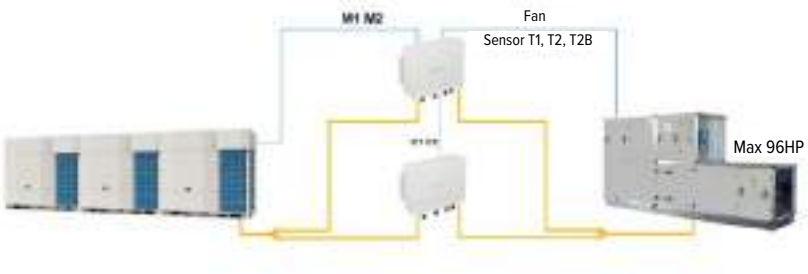
AHU kit can be used to connect VRF outdoor units to direct expansion air handling units such as Clivet AQX, or to DX indoor units such as Clivet SAHU, providing a suitable solution to each project specific needs.
AHU kits are compatible with Clivet VRF systems in combination also with all other indoor units series. Whole system can be managed via centralized controllers or other gateways.

SINGLE AHU CONTROL BOX CONNECTION





MULTI AHU CONTROL BOXES CONNECTION



technical data

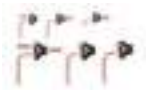
		AHUKZ-00F	AHUKZ-01F	AHUKZ-02F	AHUKZ-03F	AHUKZ-04F
Airflow range*	m^3/h	350~1850	1430~4000	3140~7390	6270~12320	10400~61600
Capacity range	kW	1,8~9	9~20	20~36	36~56	56~168
Dimensions (Width x Height x Depth)	mm	479×384×134	479×384×134	479×384×134	479×384×134	479x384x134
Power supply	-	220-240V (50/60Hz)	220-240V (50/60Hz)	220-240V (50/60Hz)	220-240V (50/60Hz)	220-240V(50/60Hz)

* return air temperature control range. Refer to the installation manual for other types of control.

accessories

WDC3-86S	Wired controller (already supplied with standard version)
WDC3-120T	Wired controller with weekly schedule

BRANCH JOINTS

Type		Name	Packed Dimensions (mm)	Gross Weight (kg)	Description
Branch joint for heat pump outdoor unit		FQZHW-02N1E FQZHW-02N1G	255×150×185 405x270x120	2,0 2,8	For connecting two CVT8/MSAN8 series outdoor units
		FQZHW-03N1E FQZHW-03N1G	345×160×285 585x340x140	4,3 5	For connecting three CVT8/MSAN8 series outdoor units
		FQZHW-04N1G	470x370x260	6,6	For connecting 4 MSAN8 series outdoor units
Branch joint indoor unit		FQZHN-01D	290×105×100	0,4	A*<22.4/23 kW
		FQZHN-02D	290×105×100	0,6	22.4/23kW<=A*<33.0
		FQZHN-03D	310×130×125	0,9	33kW<=A*<92/104kW
		FQZHN-04D	350×180×170	1,5	92/104kW<=A*<154kW
		FQZHN-05D	365×195×215	1,9	154kW<=A*<245kW
		FQZHN-06D	390×230×255	3,1	245kW≤A*<269kW
		FQZHN-07D	390×230×255	3,4	269kW≤A*
VRF Header		DXFQT4-01	450x240x100	1,4	VRF Header - 4 branches
		DXFQT8-01	755x275x130	3,1	VRF Header - 8 branches

A* = total capacity of indoor units connected to this branch joint. Different values depend on series

Type		Name	Packed Dimensions (mm)	Gross Weight (kg)	Description
Branch joint between heat recovery outdoor unit		FQZHW-02SB1	272×167×232	3,5	For two MV6R series outdoor units connection
		FQZHW-03SB1	472×157×312	6,1	For three MV6R series outdoor units connection
Branch joint between MS BOX unit and outdoor unit		FQZHN-01SB1	257×127×107	0,4	A*<16.8kW
		FQZHN-02SB1	287×137×107	1,0	16.8≤A*<33kW
		FQZHN-03SB1	297×167×177	1,6	33kW≤A*<71kW
		FQZHN-04SB1	372×197×187	2,4	71kW≤A*<104kW
		FQZHN-05SB1	432×222×227	3,5	104kW≤A*
Branch joint between MS BOX and indoor unit		FQZHN-01D	290×105×100	0,4	A*<22.4kW
		FQZHN-02D	290×105×100	0,6	22.4kW≤A*<28kW
Branch joint kit for MS box for 16-28 kW indoor units connection		FQZHN-09A	287x137x107	0,7	16kW≤A*≤28kW

A* = total capacity of indoor units connected to this branch joint

INDEX

KEY

	ODU		IDU		PROTOCOL BUS	
	V8	V6	V8	V6	EASYCOM	PQE
	✓	-	✓	-	✓	-
	✓	-	✓	-	-	✓
	✓	-	-	✓	-	✓
	-	✓	✓	-	-	✓
	-	✓	-	✓	-	✓

ODU V8	Mini VRF MSAN8-X, MSAN8-Y and VRF CVT8, MSAN8
ODU V6	Mini VRF MSAN6 and VRF MV6R, Zephir[3] and Fresh Large EVO

IDU V8	Series ****-3-XY indoor units, AHU Kit and AQX
IDU V6	HRV-DX/L and HWM-2

FOR OVER 35 YEARS WE HAVE BEEN OFFERING SOLUTIONS FOR SUSTAINABLE COMFORT AND THE WELL-BEING OF PEOPLE AND THE ENVIRONMENT

clivet.com

Valid from: March 2025
DG25B023GB-00

CLIVET S.p.A.
Via Camp Lonc 25, Z.I. Villapaiera 32032 - Feltre (BL) - Italy
Tel. +39 0439 3131 - info@clivet.it

CLIVET GMBH
Hummelsbütteler Steindamm 84,
22851 Norderstedt, Germany
Tel. +49 40 325957-0 - info.de@clivet.com

Clivet Group UK LTD
Units F5 & F6 Railway Triangle,
Portsmouth, Hampshire PO6 1TG
Tel. +44 02392 381235 -
Enquiries@Clivetgroup.co.uk

CLIVET LLC
Office 508-511, Elektozavodskaya st. 24,
Moscow, Russian Federation, 107023
Tel. +7495 6462009 - info.ru@clivet.com

CLIVET MIDEAST FZCO
Dubai Silicon Oasis (DSO) Headquarter Building,
Office EG04-05, P.O Box-342009, Dubai, UAE
Tel. +9714 5015840 - info@clivet.ae

Clivet South-East Europe d.o.o.
Jaruščica 9b
10000, Zagreb, Croatia
Tel. +3851 222 8784 - info.see@clivet.com

CLIVET France
6 Allée Kepler,
77420 Champs-sur-Marne - France
mail: info.fr@clivet.com
Tel: +33 1 88 60 99 40

Clivet Airconditioning Systems Pvt Ltd
Office No.501 & 502,5th Floor, Commercial –I,
Kohinoor City, Old Premier Compound, Off LBS
Marg, Kirol Road, Kurla West, Mumbai
Maharashtra 400070, India
Tel. +91 22 30930200 - sales.india@clivet.com