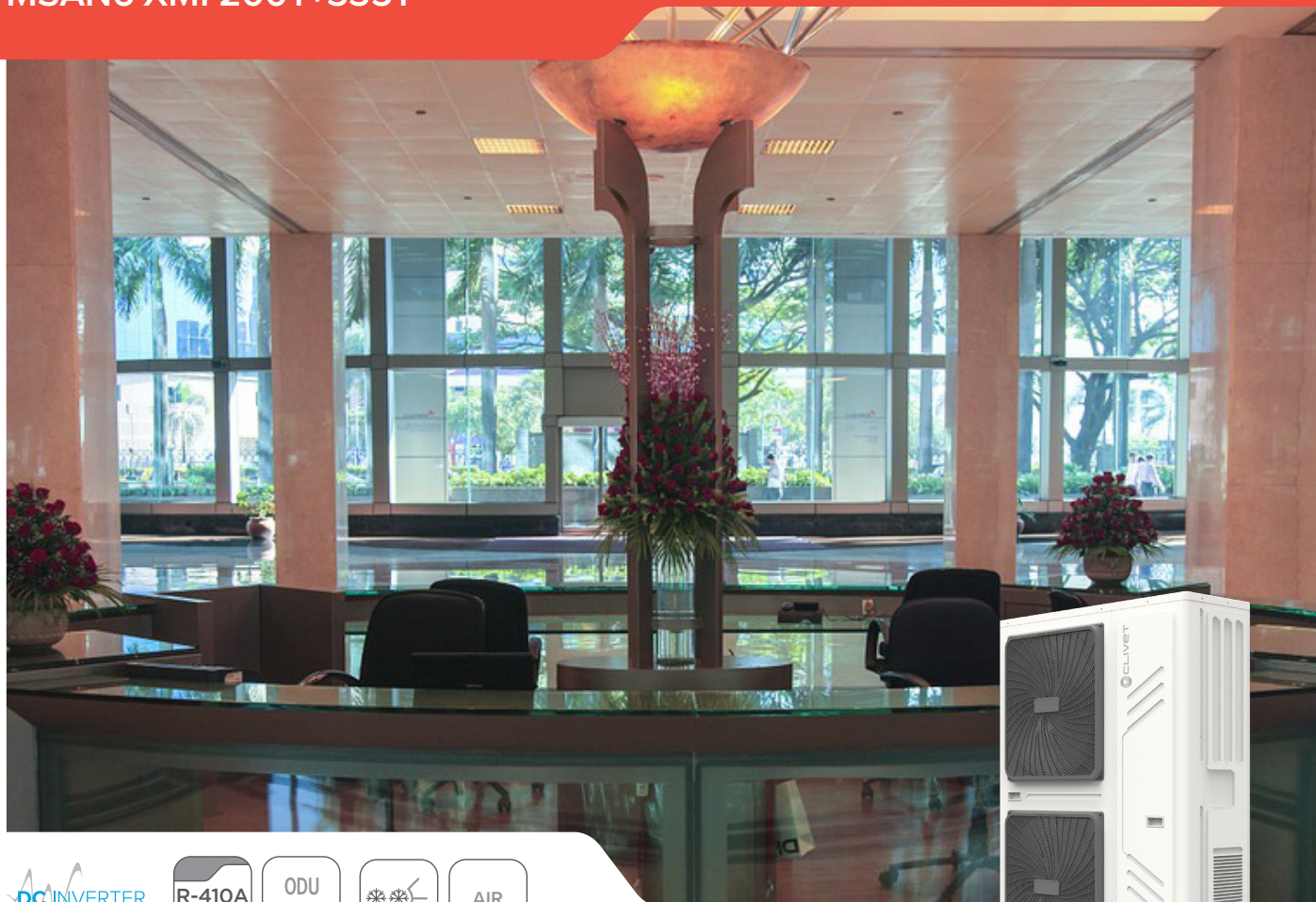


MINI VRF MSAN6

MSAN6-XMI 200T÷335T

OUTDOOR UNIT



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

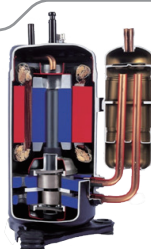


Compact design heat pump outdoor units

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%.



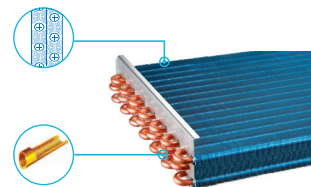
Compressor (Twin Rotary) structure

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.



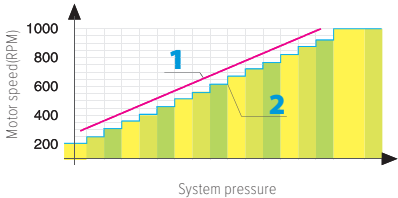
Newly designed grill



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.

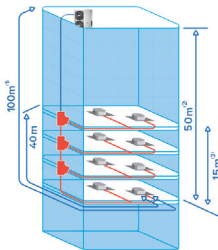


WIDE OPERATING TEMPERATURE RANGE

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 units up to 50 m. The height 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
- 3. Level difference between indoor units

Allowed values

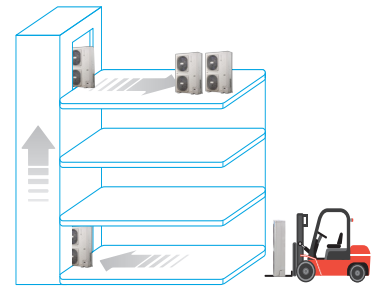
Allowed values				200T	224T	260T	280T	335T
Piping length	Total piping length	Actual	m	150	150	150	150	150
	Longest piping	Actual	m	100	100	100	100	100
		Equivalent	m	110	110	110	110	110
		Longest length after first branch		m	40	40	40	40
Difference in height	Height difference	Outdoor unit up	m	50	50	50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

Easy Installation

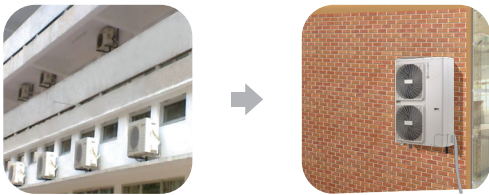
EASY TRANSPORTATION

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.

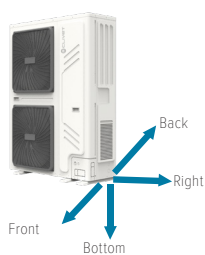
AUTO ADDRESSING

Outdoor unit can distribute addresses for indoor units automatically.

Wireless and wired controllers can query and modify each indoor unit's address.



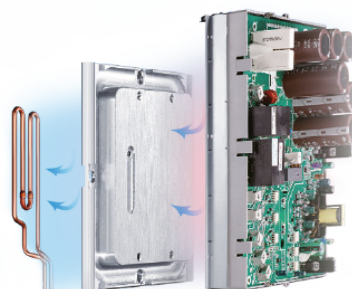
FOUR-WAY PIPING CONNECTION



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.





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	kW	20	22,4	26	28,5	33,5
	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 9.52	Ø 9.52	Ø 9.52	Ø 9.52	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.