

OUTDOOR UNITS

Maxi MVD V6X Series - 2 pipes

Super DC Inverter (up to 270 kW)



R410A

**Range
PREMIUM**



OPTIONAL COMPONENTS

More information on the optional components in "MUNDOCLIMA CONTROL SYSTEMS"

Centralized controller

Software control



CCM-180A/WS
(CL 97 800)



CCM-270B/WS
(CL 97 802)



IMMP-BAC(A)
(CL 97 826)



IMMP-S(A)
(CL 97 825)



GW-MOD(A)
(CL 97 828)



GW-LON(A)
(CL 97 829)

BMS

Black Box

Wattmeter



CCM17 (V6DZ)
(CL 97 823)



DTS343-3
(CL 97 827)

MINI MVD V6X SERIES



VERSATILITY

Up to 13 modules

The Super DC Inverter Maxi MVD V6X modular system, consists of 8 basic modules that can be combined with up to 3 modules according to the installation needs. They make up a total system capacity that can go from 8 up to 96 HP (270kW) in increments of 2 HP.



8 / 10 / 12 HP



14 / 16 / 18 / 20 / 22 HP



24 / 26 / 28 / 30 / 32 HP

8 / 10 / 12 / 14 / 16 / 18 / 20 / 22 / 24 / 26 / 28 / 30 / 32 HP ... Max. 96 HP (270 kW)



HIGH EFFICIENCY

DC Inverter EVI Scroll Compressor (Enhanced Steam Injection)

The EVI compressor allows the unit to operate in heating mode as far as -25°C thanks to the 2 stages of compression and the wide frequency range of 15 - 140Hz.

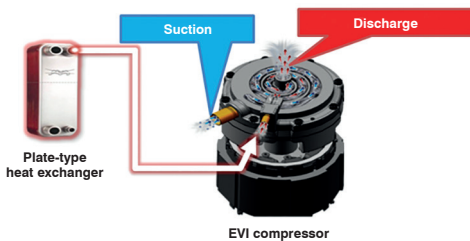
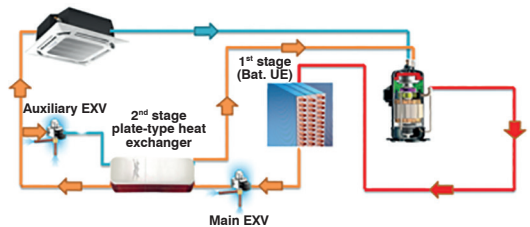


Plate-type heat exchanger

The plate heat exchanger increases the subcooling of the refrigerant, resulting in a 10% improvement in energy efficiency and a reduction in refrigerant flow noise.



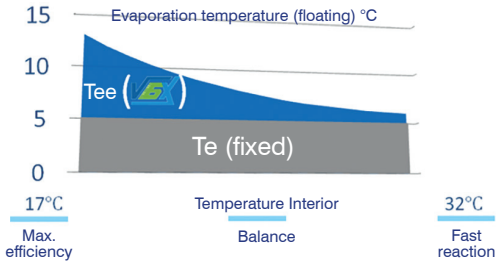
MINI MVD V6X SERIES



HIGH EFFICIENCY

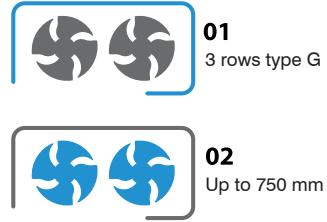
Evaporation/floating condensation temperature

The evaporation temperature (in cooling) and the condensation temperature (in heating) are automatically adjusted according to the indoor and outdoor temperature to balance comfort and energy efficiency.



High efficiency heating exchanger

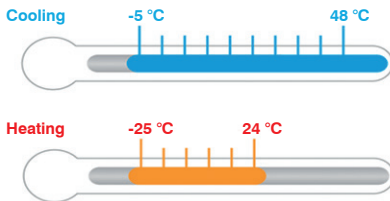
- 01** - The modules from 24 to 32 HP incorporate a 3-row G-type battery, with an exchange surface area 1.5 times greater than that of the 22 HP module.
- 02** - The modules from 24 to 32 HP also have super large fans with a diameter of up to 750 mm.



CONFORT

WIDE WORKING TEMPERATURE RANGE

The V6X Series can stably operate in heating mode between -25°C and 24°C, with 100% efficiency down to -5°C and in cooling mode between -5°C and 48°C.



Mode Priority

The 5 possible priority setting configurations in the operation mode provide more freedom and convenience to meet customer needs.

In addition, the system can be blocked for cooling or heating only through a potential-free contact (CN91 port).



Auto Priority



Cooling Priority



VIP Priority/Voting



Only Heating



Only Cooling

Multiple silent modes

The silent mode includes several reduced noise programming options that can be used when low noise operations are required.

In total there are: 4 night silent modes, 3 silent modes and 4 super silent modes.



In super silent mode, both the maximum fan speed and the frequency of the compressor are limited.



In night and silent mode, only the maximum fan speed is limited.

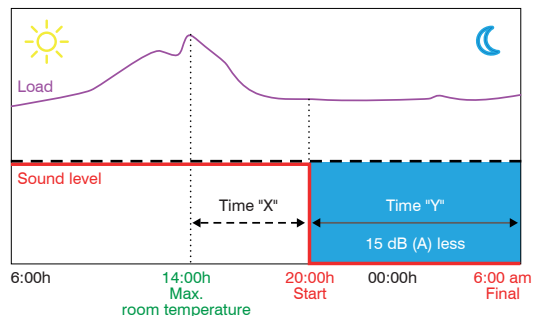
The nightly silent mode is activated "X" hours after the maximum temperature peak is recorded by the outdoor unit, and deactivated "Y" hours later.

Mode 1 → X = 6h; Y = 10h

Mode 2 → X = 8h; Y = 10h

Mode 3 → X = 6h; Y = 12h

Mode 4 → X = 8h; Y = 8h



Note: The curve shown in the graph is an example.

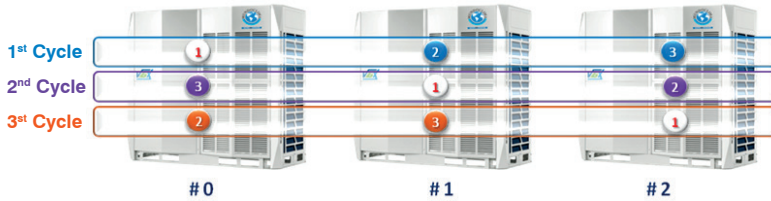
MINI MVD V6X SERIES



HIGH RELIABILITY

ROTATION FUNCTION

This function matches the running time of the outdoor units in a multiple system, extending significantly the life of the compressors.



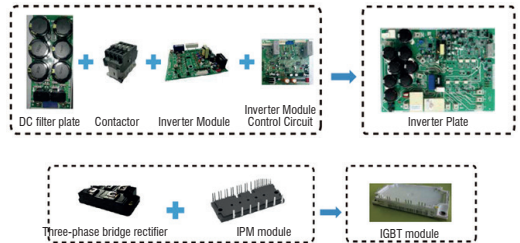
Dual backup function

- 01 - "Backup" of the compressors. The equipment can be left running with only one compressor for 4 days (only equipments with 2 compressors).
- 02 - In a multiple installation "Backup" of the modules.



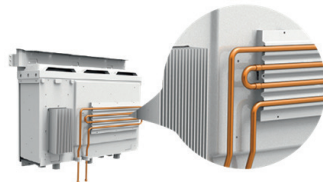
Fewer components

Integration of different components within the same electronic board, and communication between RS485 bus type boards, thus minimizing the risk of failure.



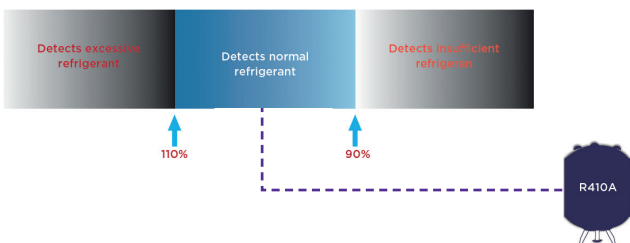
Cooling liquid

The electric panel is kept cold by a cooling liquid, the liquid pipe passes through the heat dissipator. Compared to the air cooling method, the temperature of the PCB is 10°C lower.



Detection of lack/excess of gas

The V6X Series can detect if the system lacks refrigerant or if there is an excess.



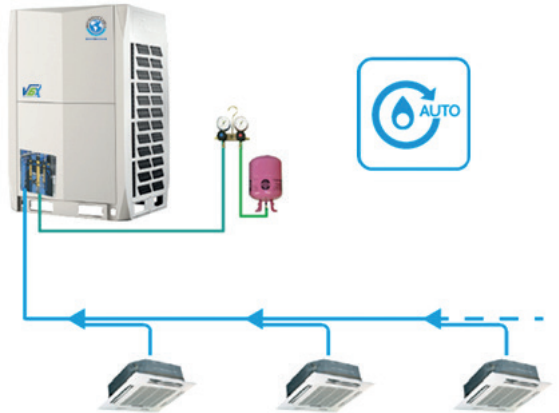
MINI MVD V6X SERIES



Easier installation

Automatic refrigerant gas charging

The V6X Series charges the refrigerant gas automatically without having to perform the additional charge calculation.



Energy management system

For projects with temporary power supply restrictions, the V6X Series can be configured to limit its capacity to 40 ~ 100%.



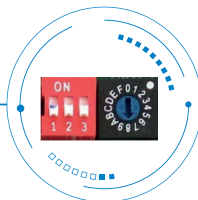
High static pressure

The available static fan pressure can be increased by simply activating a micro-switch on the control board of the outdoor unit.



Triple possibility of configurations

The parameters of the external unit can be configured and checked out in 3 ways:



Locally, through the micro-switches on the outside.



From the wired WDC and centralized controls CCM-180 and CCM-270.



From a computer using the IMMP-S software.

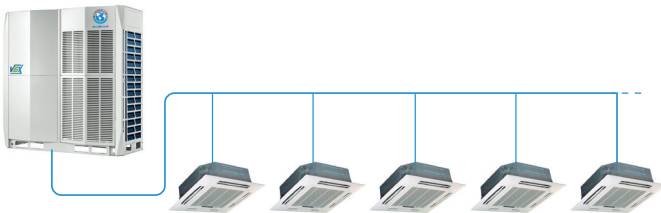
MINI MVD V6X SERIES



EASIER INSTALLATION

Up to 1 km of pipe

- Total pipe length/ vertical: **1 km**
- Pipe length of the furthest indoor unit (equivalent): **175 m (200 m)**
- Pipe length between the first distributor and the furthest indoor unit (when certain conditions are met): **40 m (90 m)**
- Height difference between indoor and outdoor units. (Highest outdoor unit): **90 m (110 m)**
- Height difference between indoor units: **30 m**



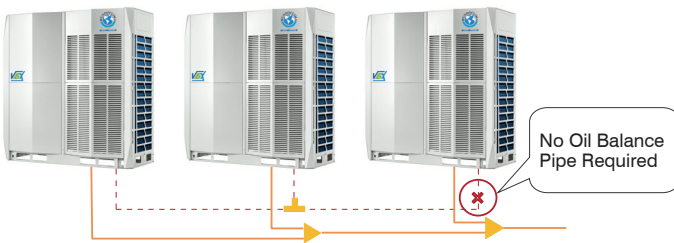
Automatic addressing

By default, the first time the power supply to the entire system is activated, the outdoor unit automatically assigns the address to each indoor unit. It is also possible to observe and modify the address of each interior unit from your controller.



Without oil balance pipe

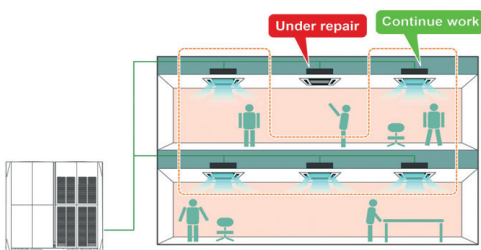
Thanks to the new oil management technology, in the modular systems, there is no need to install the oil balance pipe.



EASIER MAINTENANCE

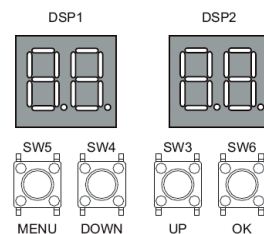
Maintenance mode

When the maintenance mode is activated, the outdoor unit does not check the number of indoor units connected, so that the system can continue to operate without them.



Settings menu

The main board incorporates the new parameter settings menu that allows us to adjust most of the equipment's functions.



MINI MVD V6X SERIES



TECHNICAL SPECIFICATIONS

Model			MVD-V6X252W / V2GN1	MVD-V6X280W / V2GN1	MVD-V6X335W / V2GN1	MVD-V6X400W / V2GN1	
Code			CL 23 600	CL 23 601	CL 23 602	CL 23 603	
Power supply		Ph, V, Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz	
Cooling (1)	Capacity	kW	25.2	28	33.5	40	
	Power consumption	kW	5.3	6.3	8.7	9.9	
	SEER (6)		7.70	7.54	7.28	6.22	
	EER		4.75	4.45	3.85	4.05	
Heating (2)	Capacity	kW	25.2	28	33.5	40	
	Power consumption	kW	4.6	5.2	6.6	8.5	
	SCOP (6)		4.11	4.11	4.51	4.31	
	COP		5.50	5.40	5.10	4.70	
Nominal intensity / max.		A	24 / 32	25.2 / 32	26.4 / 32	33.1 / 40	
Connectivity	Pluggable capacity	%	50 - 130	50 - 130	50 - 130	50 - 130	
	Max. quantity of indoor units		13	16	20	23	
Compressor	Brand		Hitachi	Hitachi	Hitachi	Hitachi	
	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter	
	Number		1	1	1	1	
	Model nº 1		AA55PHDG-D1Y2	AA55PHDG-D1Y2	AA55PHDG-D1Y2	DC80PHDG-D1Y2	
	Model nº 2		---	---	---	---	
Fan	Type		DC	DC	DC	DC	
	Number		1	1	1	1	
	Flow rate	m ³ /h	11,000	11,000	11,000	13,000	
	Static pressure	Standard	Pa	0 - 20	0 - 20	0 - 20	0 - 20
Adjustable		Pa	20 - 60	20 - 60	20 - 60	20 - 60	
Sound pressure (3)		dB(A)	58	58	60	62	
Sound power		dB(A)	78	78	81	85	
Dimensions (Width x Height x Depth)		mm	990x1635x790	990x1635x790	990x1635x790	1340x1635x850	
Weight		kg	227	227	227	277	
Refrigerant	Type / PCA		R410A / 2088	R410A / 2088	R410A / 2088	R410A / 2088	
	Number	kg/TCO ₂ eq	11 / 22.97	11 / 22.97	11 / 22.97	13 / 27.14	
Pipe length	Max. vertical	Outdoor unit upward	m	90	90	90	
		Lower outdoor unit	m	110	110	110	
	Total		m	1000	1000	1000	
Connection pipes (4)	Liquid	mm (inches)	12.7 (1/2")	12.7 (1/2")	15.9 (5/8")	15.9 (5/8")	
	Gas	mm (inches)	25.4 (1")	25.4 (1")	28.6 (1 1/8")	31.8 (1 1/4")	
Electrical connections (5)	Power wiring / ICP		mm ²	4 x 6 + T / 32	4 x 6 + T / 32	4 x 6 + T / 32	4 x 10 + T / 40
	Signal wiring		mm ²	3 x 0,75 (shielded)	3 x 0,75 (shielded)	3 x 0,75 (shielded)	3 x 0,75 (shielded)
Working temperature range	Cooling	°C	-5 to 48	-5 to 48	-5 to 48	-5 to 48	
	Heating	°C	-25 to 24	-25 to 24	-25 to 24	-25 to 24	

Notes:

- (1) Nominal cooling conditions: indoor 27°C DB, 19°C WB and outdoor 35°C DB, 24°C WB, for a pipe length of 7.5 m and a height difference of 0 m.
- (2) Nominal heating conditions: indoor 20°C DB, 15°C WB and outdoor 7°C DB, 6°C WB, for a pipe length of 7.5 m and a height difference of 0 m.
- (3) Sound pressure measured in anechoic chamber at 1 m frontal distance and 1.3m height.
- (4) The specified diameters are for the service valves, this does not mean that the pipe must have this diameter.
- (5) Recommended power wiring for L < 20m should be calculated according to the conditions of each installation.
- (6) Data measured under EUROVENT EN 14825 conditions, at 100% simultaneity with high pressure duct-type indoor units.

MINI MVD V6X SERIES



TECHNICAL SPECIFICATIONS

Model			MVD-V6X450W / V2GN1	MVD-V6X500W / V2GN1	MVD-V6X560W / V2GN1	MVD-V6X615W / V2GN1
Code			CL 23 604	CL 23 605	CL 23 606	CL 23 607
Power supply		Ph, V, Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz
Cooling (1)	Capacity	kW	45	50	56	61.5
	Power consumption	kW	12.0	12.5	15.1	18.4
	SEER (6)		5.98	6.85	6.54	6.35
	EER		3.75	4.00	3.70	3.35
Heating (2)	Capacity	kW	45	50	56	61.5
	Power consumption	kW	9.8	10.6	12.7	15.0
	SCOP (6)		4.31	3.80	3.80	3.80
	COP		4.60	4.70	4.40	4.10
Nominal intensity / max.		A	33.1 / 40	40.8 / 50	43.9 / 50	47.9 / 63
Connectivity	Pluggable capacity	%	50 - 130	50 - 130	50 - 130	50 - 130
	Max. quantity of indoor units		26	29	33	36
Compressor	Brand		Hitachi	Hitachi	Hitachi	Hitachi
	Type		DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Number		1	2	2	2
	Model n° 1		DC80PHDG-D1Y2	AA55PHDG-D1Y2	AA55PHDG-D1Y2	AA55PHDG-D1Y2
	Model n° 2		---	AA55PHDG-D1Y2	AA55PHDG-D1Y2	AA55PHDG-D1Y2
Fan	Type		DC	DC	DC	DC
	Number		1	2	2	2
	Flow rate	m ³ /h	13,000	17,000	17,000	17,000
	Static pressure	Standard	Pa	0 - 20	0 - 20	0 - 20
Adjustable		Pa	20 - 60	20 - 60	20 - 60	20 - 60
Sound pressure (3)		dB(A)	65	65	66	66
Sound power		dB(A)	88	88	88	88
Dimensions (Width x Height x Depth)		mm	1340 x 1635 x 850	1340 x 1635 x 825	1340 x 1635 x 825	1340 x 1635 x 825
Weight		kg	277	348	348	348
Refrigerant	Type / PCA		R410A / 2088	R410A / 2088	R410A / 2088	R410A / 2088
	Number	kg/TCO ₂ eq	13 / 27.14	17 / 35.50	17 / 35.50	17 / 35.50
Pipe length	Max. vertical	Outdoor unit upward	m	90	90	90
		Lower outdoor unit	m	110	110	110
	Total		m	1000	1000	1000
Connection pipes (4)	Liquid	mm (inches)	15.9 (5/8")	19.1 (3/4")	19.1 (3/4")	19.1 (3/4")
	Gas	mm (inches)	31.8 (1 1/4")	31.8 (1 1/4")	31.8 (1 1/4")	31.8 (1 1/4")
Electrical connections (5)	Power wiring / ICP	mm ²	4 x 10 + T / 40	4 x 10 + T / 50	4 x 10 + T / 50	4 x 16 + T / 63
	Signal wiring	mm ²	3 x 0,75 (shielded)	3 x 0,75 (shielded)	3 x 0,75 (shielded)	3 x 0,75 (shielded)
Working temperature range	Cooling	°C	-5 to 48	-5 to 48	-5 to 48	-5 to 48
	Heating	°C	-25 to 24	-25 to 24	-25 to 24	-25 to 24

Notes:

- (1) Nominal cooling conditions: indoor 27°C DB, 19°C WB and outdoor 35°C DB, 24°C WB, for a pipe length of 7.5 m and a height difference of 0 m.
- (2) Nominal heating conditions: indoor 20°C DB, 15°C WB and outdoor 7°C DB, 6°C WB, for a pipe length of 7.5 m and a height difference of 0 m.
- (3) Sound pressure measured in anechoic chamber at 1 m frontal distance and 1.3m height.
- (4) The specified diameters are for the service valves, this does not mean that the pipe must have this diameter.
- (5) Recommended power wiring for L < 20m should be calculated according to the conditions of each installation.
- (6) Data measured under EUROVENT EN 14825 conditions, at 100% simultaneity with high pressure duct-type indoor units.

MINI MVD V6X SERIES



TECHNICAL SPECIFICATIONS

Model			MVD-V6X670W V2GN1	MVD-V6X730W V2GN1	MVD-V6X785W V2GN1	MVD-V6X850W V2GN1	MVD-V6X900W V2GN1
Code			CL 23 608	CL 23 609	CL 23 610	CL 23 611	CL 23 612
Power supply		Ph, V, Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz	3N-, 400V, 50/60Hz
Cooling (1)	Capacity	kW	67	73	78.5	85	90
	Power consumption	kW	18.1	20.9	24.2	27.4	31.0
	SEER (6)		7.00	6.51	6.22	6.10	5.90
	EER		3.70	3.49	3.25	3.10	2.90
Heating (2)	Capacity	kW	67	73	78.5	85	90
	Power consumption	kW	14.9	17.6	20.7	23.0	25.7
	SCOP (6)		3.86	3.86	3.86	3.84	3.84
	COP		4.50	4.15	3.80	3.70	3.50
Nominal intensity / max.		A	48.4 / 63	52.9 / 63	58.7 / 63	64.9 / 80	66.9 / 80
Connectivity	Pluggable capacity	%	50 - 130	50 - 130	50 - 130	50 - 130	50 - 130
	Max. quantity of indoor units		39	43	46	50	53
Compressor	Brand		Hitachi	Hitachi	Hitachi	Hitachi	Hitachi
	Type		DC Inverter				
	Number		2	2	2	2	2
	Model nº 1		AA55PHDG-D1Y2				
	Model nº 2		AA55PHDG-D1Y2			DC80PHDG-D1Y2	
Fan	Type		DC	DC	DC	DC	DC
	Number		2	2	2	2	2
	Flow rate	m ³ /h	25,000	25,000	25,000	24,000	24,000
	Static pressure	Standard	Pa	0 - 20	0 - 20	0 - 20	0 - 20
Adjustable		Pa	20 - 60	20 - 60	20 - 60	20 - 60	20 - 60
Sound pressure (3)		dB(A)	67	68	68	68	68
Sound power		dB(A)	89	90	90	90	90
Dimensions (Width x Height x Depth)		mm	1730 x 1830 x 850				
Weight		kg	430	430	430	475	475
Refrigerant	Type / PCA		R410A / 2088	R410A / 2088	R410A / 2088	R410A / 2088	R410A / 2088
	Number	kg/TCO ₂ eq	22 / 45.94	22 / 45.94	22 / 45.94	25 / 52.2	25 / 52.2
Pipe length	Max. vertical	Outdoor unit upward	m	90	90	90	90
		Lower outdoor unit	m	110	110	110	110
	Total	m	1000	1000	1000	1000	1000
Connection pipes (4)	Liquid	mm (inches)	19.1 (3/4")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")	22.2 (7/8")
	Gas	mm (inches)	31.8 (1 1/4")	31.8 (1 1/4")	31.8 (1 1/4")	38.1 (1 1/2")	38.1 (1 1/2")
Electrical connections (5)	Power wiring / ICP	mm ²	4 x 16 + T / 63	4 x 16 + T / 63	4 x 16 + T / 63	4 x 25 + T / 80	4 x 25 + T / 80
	Signal wiring	mm ²	3 x 0,75 (shielded)	3 x 0,75 (shielded)	3 x 0,75 (shielded)	3 x 0,75 (shielded)	3 x 0,75 (shielded)
Working temperature range	Cooling	°C	-5 to 48	-5 to 48	-5 to 48	-5 to 48	-5 to 48
	Heating	°C	-25 to 24	-25 to 24	-25 to 24	-25 to 24	-25 to 24

Notes:

- (1) Nominal cooling conditions: indoor 27°C DB, 19°C WB and outdoor 35°C DB, 24°C WB, for a pipe length of 7.5 m and a height difference of 0 m.
- (2) Nominal heating conditions: indoor 20°C DB, 15°C WB and outdoor 7°C DB, 6°C WB, for a pipe length of 7.5 m and a height difference of 0 m.
- (3) Sound pressure measured in anechoic chamber at 1 m frontal distance and 1.3m height.
- (4) The specified diameters are for the service valves, this does not mean that the pipe must have this diameter.
- (5) Recommended power wiring for L < 20m should be calculated according to the conditions of each installation.
- (6) Data measured under EUROVENT EN 14825 conditions, at 100% simultaneity with high pressure duct-type indoor units.

MINI MVD V6X SERIES



COMBINATIONS

Capacity		Combination		Number of Ext. Units's	Max. quantity of Int. units's
kW	HP	HP			
25.2	8	8		1	13
28	10	10		1	16
33.5	12	12		1	20
40	14	14		1	23
45	16	16		1	26
50	18	18		1	29
56	20	20		1	33
51.5	22	22		1	36
67	24	24		1	39
73	26	26		1	43
78.5	28	28		1	46
85	30	30		1	50
90	32	32		1	53
95	34	12+22		2	56
101.5	36	14+22		2	59
106.5	38	16+22		2	63
112	40	12+28		2	64
117.5	42	20+22		2	64
123	44	22+22		2	64
128.5	46	22+24		2	64
134.5	48	22+26		2	64
140	50	22+28		2	64
146	52	26+26		2	64
151.5	54	26+28		2	64
157	56	28+28		2	64
163.5	58	28+30		2	64
168.5	60	28+32		2	64
175	62	30+32		2	64
180	64	32+32		2	64
185	66	12+22+32		3	64
191.5	68	14+22+32		3	64
196.5	70	16+22+32		3	64
202	72	12+28+32		3	64
207.5	74	20+22+32		3	64
213	76	22+22+32		3	64
218.5	78	22+24+32		3	64
224.5	80	22+26+32		3	64
230	82	22+28+32		3	64
236	84	26+26+32		3	64
241.5	86	26+28+32		3	64
247	88	28+28+32		3	64
253.5	90	28+30+32		3	64
258.5	92	28+28+32		3	64
265	94	30+32+32		3	64
270	96	32+32+32		3	64

Note:

- (1) In systems consisting of several modules, the power wiring and the electrical protections must be recalculated for each module .
- (2) Standard combinations, any other combination is possible (max. 3 units).
- (3) In systems formed by 2 modules, it is necessary to acquire the external unit distributor FQZHW-02N1E or if it is formed by 3 modules, the FQZHW-03N1E.