NEW

DC Inverter AIR R-410A CONTROL SYSTEM SPLIT VRF

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

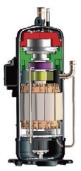
VRF MV6i

High efficiency heat pump outdoor units

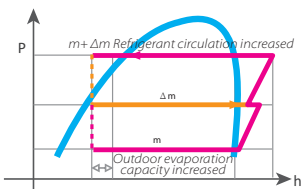
3 Unique Innovations

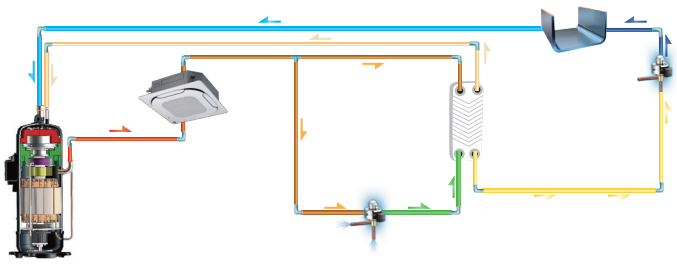
EVI (ENHANCED VAPOR INJECTION) COMPRESSOR

Thanks to the vapor injection DC inverter compressor, the MV6i 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

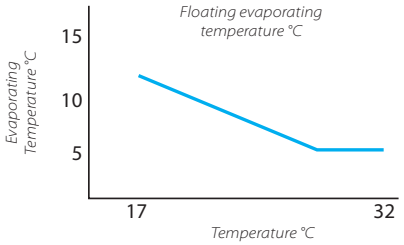




EMS (ENERGY MANAGEMENT SYSTEM)

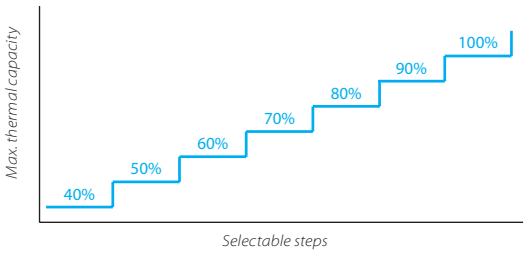
Floating refrigerant temperature for balancing comfort and efficiency

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.



Capacity output limitation for shortage of electricity

With the integration of EMS, for projects with limited electricity supply, MV6i can be set to output 40-100% capacity.



MR. DOCTOR

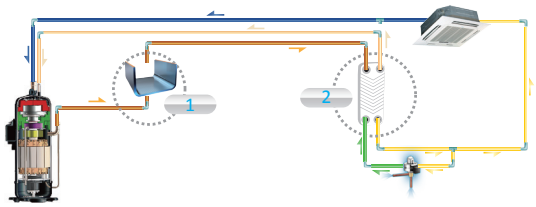
Force cooling /heating commissioning: Force cooling or force heating operation can check the system comprehensively and quickly.

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

High Efficiency

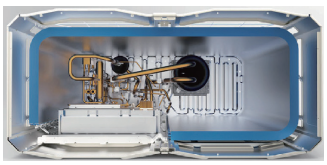
PHE (PLATE HEAT EXCHANGER) SUBCOOLING

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

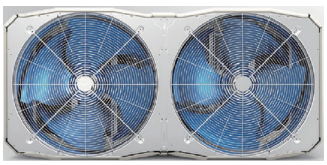


HIGH EFFICIENCY G-TYPE HEAT EXCHANGER

24-32HP units use high efficiency 3-rows G-type heat exchanger which heat exchange area is 1,5 times than 22HP unit. The 24-32HP units also use super big size fan which diameter is up to 750mm.

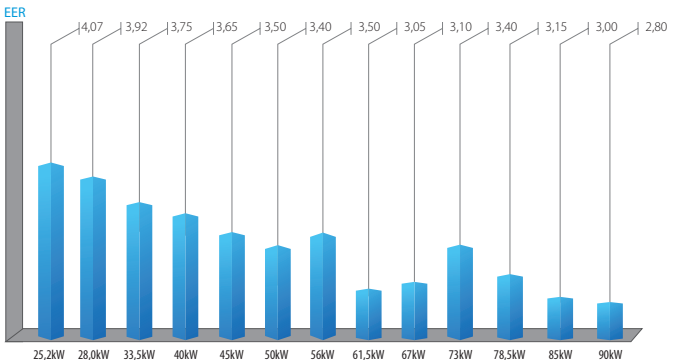


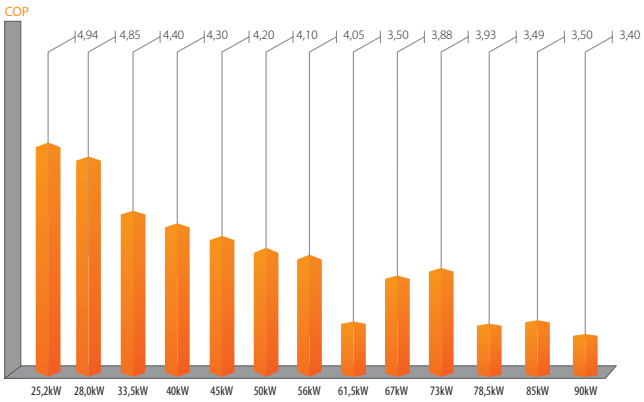
3-rows G-type heat exchanger



Super big size fan

HIGH EER AND COP VALUES





Wide Application Range

WIDE CAPACITY RANGE

VRF MV6i series has been designed for single module installation, with a capacity ranging from 8 HP to 32 HP.

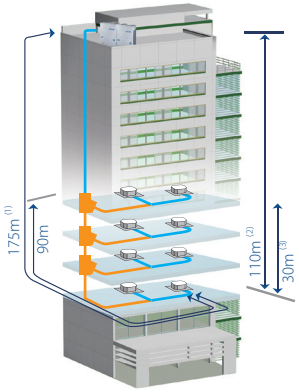
8/10/12 HP
(with single fan)

14/16/18 HP
(with single fan)

20/22 HP
(with dual fans)

24/26/28/30/32 HP
(with dual fans)

LONG PIPING CAPABILITY



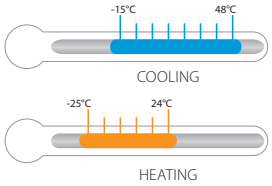
Piping length	Capability
Total piping length	1000m
Longest length - actual (equivalent)	175m (200m)
Longest length after first branch	90m*
Largest height difference between indoor and outdoor units - ODU up (down)	90m (110m)
Largest height difference between indoor units	30m

** 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) Longest actual piping length
(2) Level difference between indoor units and outdoor units
(3) Level difference between indoor units

WIDE OPERATION RANGE

VRF MV6i can operate in a wide ambient temperature range.
It can operate stably from -15°C up to 48°C in cooling mode and from -25°C to 24°C in heating mode.

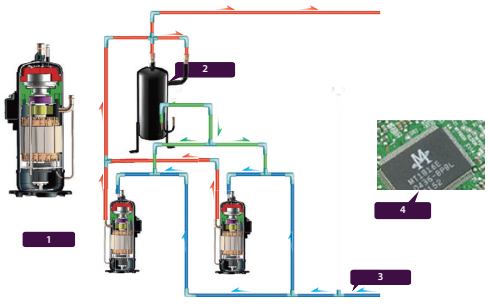


High Reliability

PRECISE OIL CONTROL TECHNOLOGY

Four 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. Oil balance pipes between compressors ensure even oil distribution to keep compressors running normally.
4. Auto oil return program monitors the running time and system status to ensure reliable oil return.



BACKUP OPERATION

Compressor backup

Operation compressor
Standby compressor
Failed compressor

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.

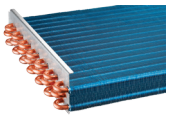
ANTI-CORROSION PROTECTION

Outdoor units are given anti-corrosion treatment for non-extreme conditions as standard and can also be customized with heavy anti-corrosion 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

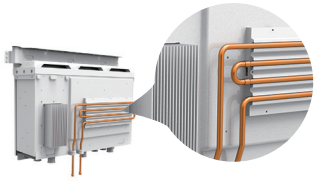
- Fan motor
- Painted sheet metal
- Screws / Bolts / Gaskets
- Heat exchanger aluminum foil
- Heat exchanger copper pipe
- Electric Control Box Case




REFRIGERANT COOLING PCB

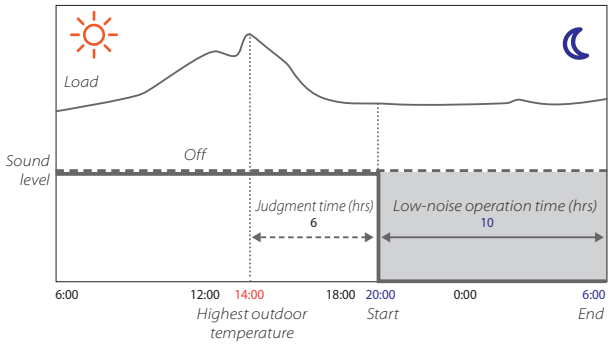
The MV6i series uses refrigerant cooling technology to cool the electric control box. It decreases the average temperature of electrical control components by about 8 degrees, guaranteeing the stable and safe running of the control system.



Enhanced Comfort

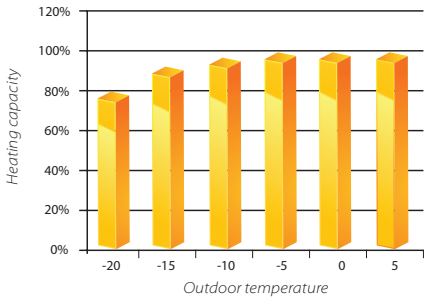
NIGHT SILENT MODE

The night silent mode feature includes various scheduling options that can be used to reduce noise levels when low noise operation is required.



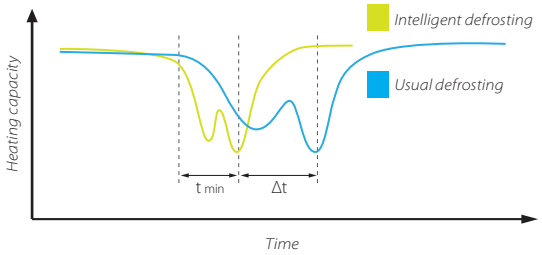
ENHANCED HEATING CAPACITY

Thanks to the vapour injection DC Inverter compressors, 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.



INTELLIGENT DEFROSTING TECHNOLOGY

The intelligent defrosting program calculates the time required for defrosting according to the actual system status, eliminating heat losses from unnecessary defrosting. A specialized defrosting valve reduces time required for defrosting to as little at four minutes.



MULTIPLE PRIORITY MODE SETTINGS AVAILABLE

Operating mode priority can be set among different modes (automatic, cooling priority, VIP indoor unit, heating only, cooling only) to satisfy every specific user's need. Setting can be performed on outdoor unit directly or by centralized controller.

SMART INPUT/OUTPUT CONTACTS

Convenient connectors are available as standard on unit PCB, to realize some convenient operations on field with other building appliances depending on users' needs. Available contacts are heating/cooling switch as input and alarm as output.

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.

MV6i-XMi 252T÷900T

VRF MV6i



Size		MV6i-XMi	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
	Power input	kW	6,19	7,14	8,9	11,0	12,9	14,7	16,0	20,2
	EER	-	4,07	3,92	3,75	3,65	3,50	3,40	3,50	3,05
	Operating temperature range (DB)	°C	-15 ~ 48	-15 ~ 48	-15 ~ 48	-15 ~ 48	-15 ~ 48	-15 ~ 48	-15 ~ 48	-15 ~ 48
Heating [2]	Capacity	kW	25,2	28,0	33,5	40,0	45,0	50,0	56,0	61,5
	Power input	kW	5,10	5,77	7,60	9,30	10,7	12,2	13,8	17,6
	COP	-	4,94	4,85	4,40	4,30	4,20	4,10	4,05	3,50
	Operating temperature range (DB)	°C	-25~ 24	-25~ 24	-25~ 24	-25~ 24	-25~ 24	-25~ 24	-25~ 24	-25~ 24
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	20	23	26	29	33	36
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	2	2
Refrigerant	Factory charge	kg	11	11	11	13	13	13	17	17
	CO_2 equivalence	ton	22,97	22,97	22,97	27,14	27,14	27,14	35,50	35,50
Pipe connections	Liquid pipe	mm	Ø 12,7	Ø 12,7	Ø 15,9	Ø 15,9	Ø 15,9	Ø 19,1	Ø 19,1	Ø 19,1
	Gas pipe	mm	Ø 25,4	Ø 25,4	Ø 28,6	Ø 31,8	Ø 31,8	Ø 31,8	Ø 31,8	Ø 31,8
Fan motors	Quantity	-	1	1	1	1	1	1	2	2
	Static pressure	Pa	0 ~ 40	0 ~ 40	0 ~ 40	0 ~ 40	0 ~ 40	0 ~ 40	0 ~ 40	0 ~ 40
Dimensions (Width x Height x Depth)		mm	990x1635x790	990x1635x790	990x1635x790	1340x1635x850	1340x1635x850	1340x1635x850	1340x1635x825	1340x1635x825
Weight		kg	227	227	227	277	277	295	344	344
Air flow rate		m^3/h	11000	11000	11000	13000	13000	13000	17000	17000
Sound pressure level [4]		dB(A)	58	58	60	62	65	65	66	66
Sound power level [4]		dB(A)	78	78	81	85	88	88	88	88
Power supply		V/Ph/Hz	380-415/3/50							

VRF MV6i

Size		MV6i-XMi	670T	730T	785T	850T	900T
Capacity		HP	24	26	28	30	32
Cooling [1]	Capacity	kW	67,0	73,0	78,5	85,0	90,0
	Power input	kW	21,6	21,6	24,9	28,3	32,1
	EER	-	3,10	3,40	3,15	3,00	2,80
	Operating temperature range (DB)	°C	-15 ~ 48	-15 ~ 48	-15 ~ 48	-15 ~ 48	-15 ~ 48
Heating [2]	Capacity	kW	67,0	73,0	78,5	85,0	90,0
	Power input	kW	17,27	18,58	22,49	24,3	26,5
	COP	-	3,88	3,93	3,49	3,50	3,40
	Operating temperature range (DB)	°C	-25~ 24	-25~ 24	-25~ 24	-25~ 24	-25~ 24
Connectable indoor units	Total Capacity Index [3]	-	50 ~ 130%	50 ~ 130%	50 ~ 130%	50 ~ 130%	50 ~ 130%
	Max quantity	-	39	43	46	50	53
Compressor	Type	-	DC Inverter	DC Inverter	DC Inverter	DC Inverter	DC Inverter
	Quantity	-	2	2	2	2	2
Refrigerant	Factory charge	kg	22	22	22	25	25
	CO_2 equivalence	ton	45,94	45,94	45,94	52,20	52,20
Pipe connections	Liquid pipe	mm	Ø 19,1	Ø 22,2	Ø 22,2	Ø 22,2	Ø 22,2
	Gas pipe	mm	Ø 31,8	Ø 31,8	Ø 31,8	Ø 38,1	Ø 38,1
Fan motors	Quantity	-	2	2	2	2	2
	Static pressure	Pa	0 ~ 40	0 ~ 40	0 ~ 40	0 ~ 40	0 ~ 40
Dimensions (Width x Height x Depth)		mm	1730x1830x850	1730x1830x850	1730x1830x850	1730x1830x850	1730x1830x850
Weight		kg	407	429	429	475	475
Air flow rate		m^3/h	25000	25000	25000	24000	24000
Sound pressure level [4]		dB(A)	67	68	68	68	68
Sound power level [4]		dB(A)	89	90	90	90	90
Power supply		V/Ph/Hz	380-415/3/50				

Notes

(1) Indoor temperature 27°C DB/19°C WB; Outdoor temperature 35°C DB/24°C WB. Interconnecting piping length is 7,5m, level difference is zero.
(2) Indoor temperature 20°C DB/15°C WB; Outdoor temperature 7°C DB/6°C WB. Interconnecting piping length is 7,5m, level difference is zero.
(3) Total Capacity Index = indoor unit total capacity/outdoor unit capacity
(4) Sound values are measured in a semi-anechoic room, at a position 1m in front of the unit and 1,3m above the floor.