

MILLER®

R410A
50Hz&60Hz

MMV (X/I SERIES)

DC INVERTER VRF SYSTEM

CAC Catalogue

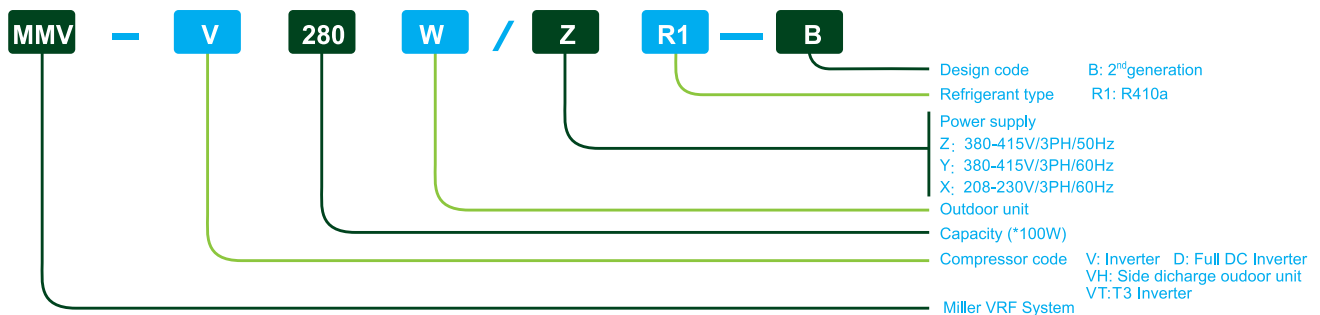


MMV Combination Series

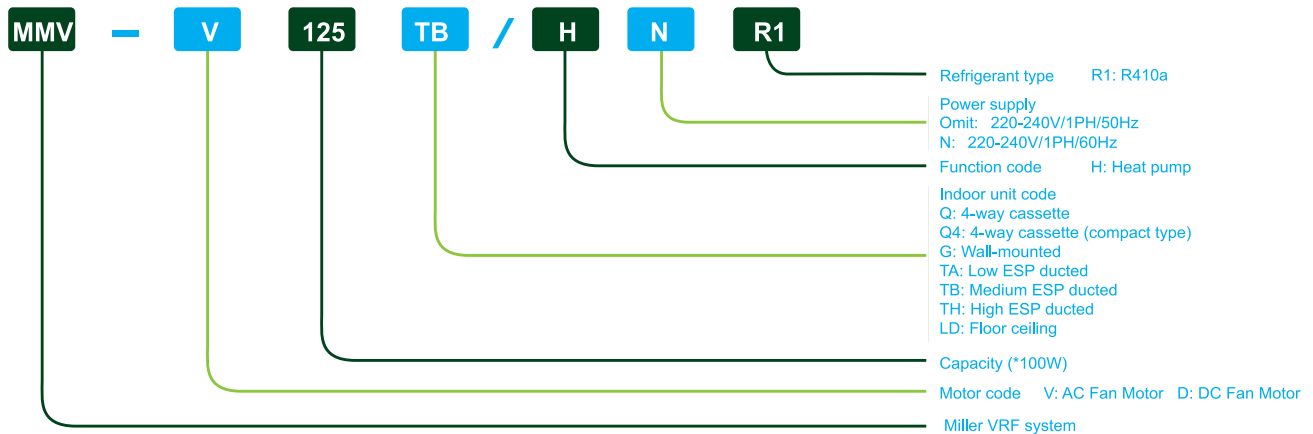


How To Read The Model Name

Outdoor unit



Indoor unit



MMV-X 380V - 415V / 50Hz & 60Hz FULL DC INVERTER VRF SYSTEM

Basic Modules



8/10HP



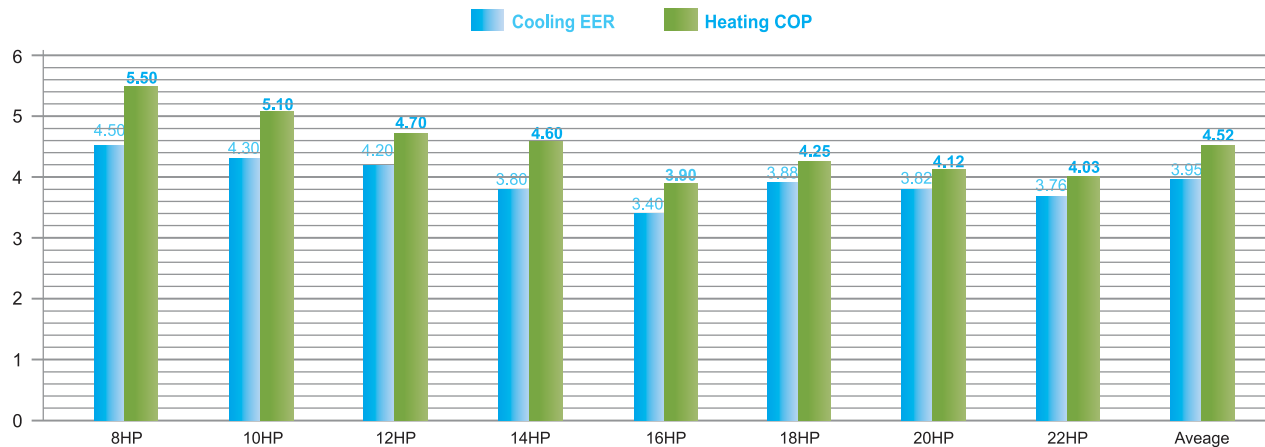
12/14/16 HP



18/20/22HP

Capacity	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP
		25.2kW	28kW	33.5kW	40kW	45kW	50kW	56kW
Compressor	DC	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC
Fan motor	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC

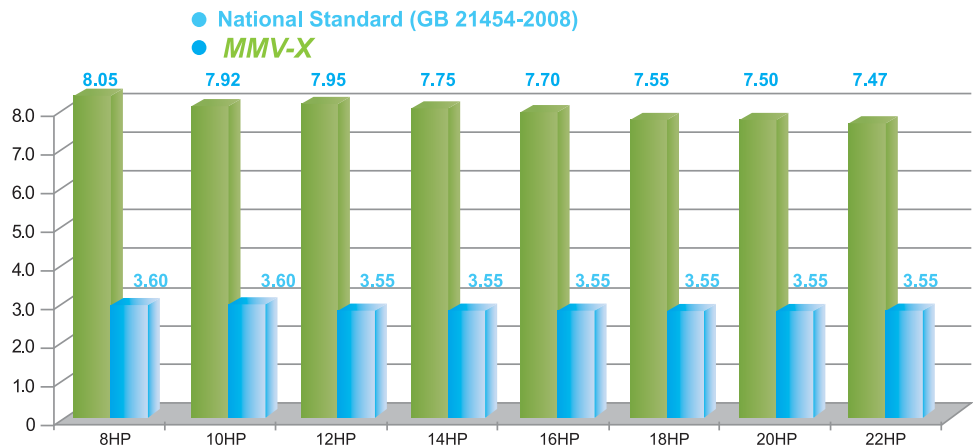
EER & COP



IPLV(C)

IPLV: Integrated Part Load Value (ARI 550/590)
(C): Cooling condition

The Integrated Part Load Value (IPLV) is a performance characteristic developed by the Air-Conditioning, Heating and Refrigeration Institute (AHRI). It is most commonly used to describe the performance of a AC system capable of capacity modulation. Unlike an EER (Energy Efficiency Ratio) or COP (coefficient of performance), which describes the efficiency at full load conditions, the IPLV is derived from the equipment efficiency while operating at various capacities. Since a VRF system does not always run at 100% capacity, the EER or COP is not an ideal representation of the typical equipment performance. The IPLV is a very important value to consider since it can affect energy usage and operating costs throughout the lifetime of the equipment.

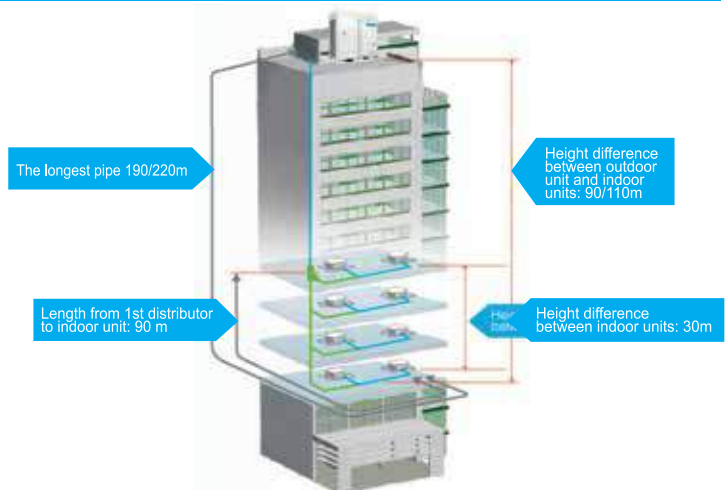


Combination Table

Cooling Capacity										
HP	Cooling Capacity(KW)	8HP	10HP	12HP	14HP	16HP	18HP	20HP	22HP	Max. Connected Indoor Unit Quantity
8	25.2	●								13
10	28		●							16
12	33.5			●						16
14	40				●					20
16	45					●				20
18	50						●			20
20	56							●		24
22	61.5								●	24
24	67			●●						28
26	73		●			●				28
28	78		●				●			28
30	84		●					●		32
32	89.5		●						●	32
34	95			●					●	36
36	101					●		●		36
38	106.5					●			●	36
40	112							●●		42
42	117.5							●	●	42
44	123								●●	42
46	129		●			●		●		48
48	134.5		●			●			●	48
50	140		●					●●		54
52	145.5		●					●	●	54
54	151		●						●●	54
56	156.5			●					●●	58
58	162.5					●		●	●	58
60	168					●			●●	58
62	179						●		●●	64
64	179							●	●●	64
66	184.5								●●●	64
68	190.5		●			●		●	●	64
70	196		●			●			●●	64
72	201.5		●					●●	●	64
74	207		●					●	●●	64
76	212.5		●						●●●	64
78	218			●					●●●	64
80	224					●		●	●●	64
82	229.5					●			●●●	64
84	234.5						●		●●●	64
86	240.5							●	●●●	64
88	246								●●●●	64

Long Piping & Height Difference

- The total pipe length: 1000m
- The longest pipe :
 - Actual length 190m
 - Equivalent length 220m
- Equivalent length from first indoor distributor to last indoor unit: 90m
- Height difference between indoor and outdoor unit:
 - Outdoor unit above <90m
 - Outdoor unit below <110m
- Height difference between indoor units: 30m



MMV-X 208V-230V / 60Hz FULL DC INVERTER VRF SYSTEM

Basic Modules



8/10HP



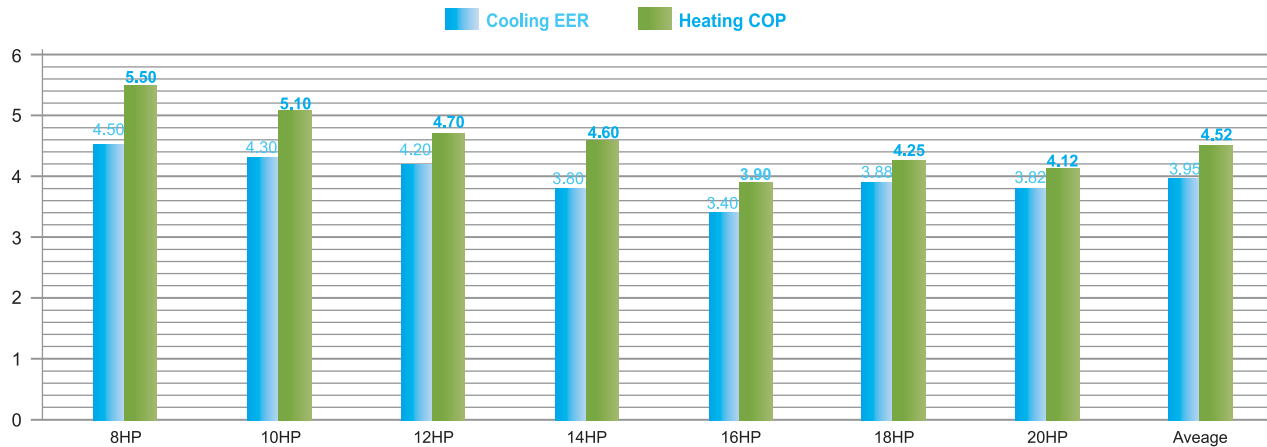
12/14/16 HP



18/20HP

Capacity	8HP	10HP	12HP	14HP	16HP	18HP	20HP
		25.2kW	28kW	33.5kW	40kW	45kW	50kW
Compressor	DC	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC
Fan motor	DC	DC	DC+DC	DC+DC	DC+DC	DC+DC	DC+DC

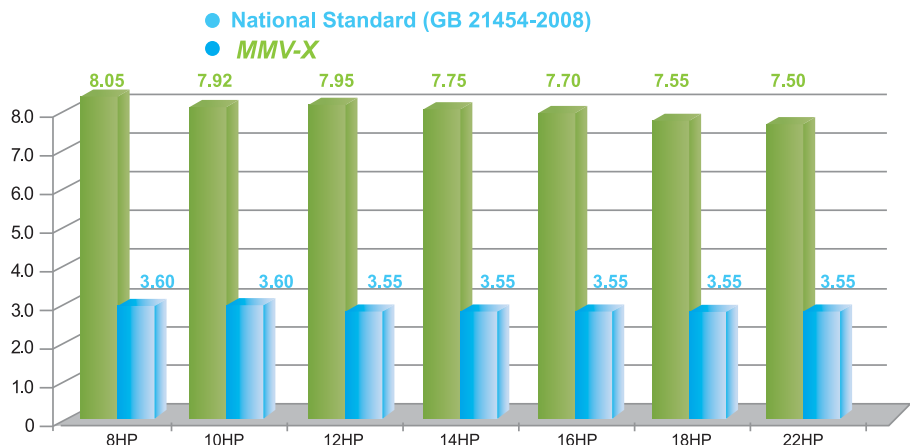
EER & COP



IPLV(C)

IPLV: Integrated Part Load Value (ARI 550/590)
(C): Cooling condition

The Integrated Part Load Value (IPLV) is a performance characteristic developed by the Air-Conditioning, Heating and Refrigeration Institute (AHRI). It is most commonly used to describe the performance of an AC system capable of capacity modulation. Unlike an EER (Energy Efficiency Ratio) or COP (coefficient of performance), which describes the efficiency at full load conditions, the IPLV is derived from the equipment efficiency while operating at various capacities. Since a VRF system does not always run at 100% capacity, the EER or COP is not an ideal representation of the typical equipment performance. The IPLV is a very important value to consider since it can affect energy usage and operating costs throughout the lifetime of the equipment.

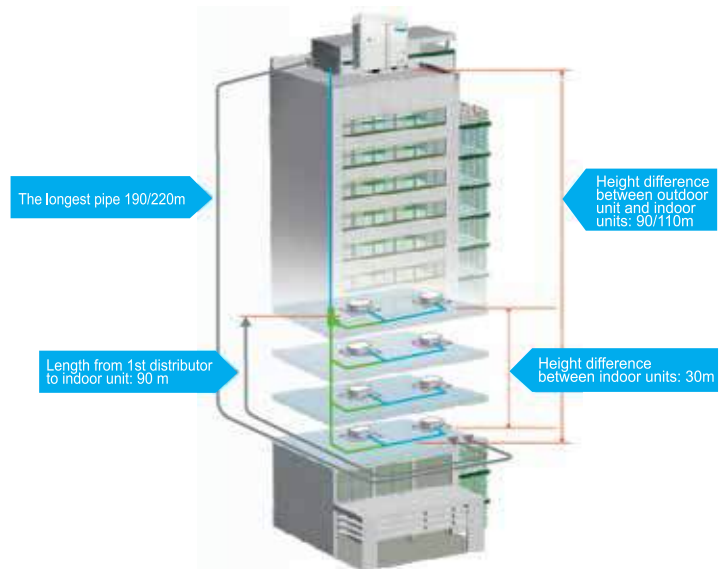


Combination Table

HP	Cooling Capacity(KW)	Cooling Capacity							Max. Connected Indoor Unit Quantity
		8HP	10HP	12HP	14HP	16HP	18HP	22HP	
8	25.2	●							13
10	28		●						16
12	33.5			●					16
14	40				●				20
16	45					●			20
18	50						●		20
20	56							●	24
22	61.5		●	●					24
24	67			●●					28
26	73		●			●			28
28	78		●				●		28
30	84		●					●	32
32	89.5			●				●	32
34	95					●	●		36
36	101					●		●	36
38	106						●	●	36
40	112							●●	42
42	117.5		●	●				●	42
44	123			●●				●	42
46	129		●			●		●	48
48	134		●				●	●	48
50	140		●					●●	54
52	145.5			●				●●	54
54	152				●			●●	54
56	157					●		●●	58
58	162						●	●●	58
60	168						●●●		58
62	175.2	●					●	●●	64
64	179			●●				●●	64
66	185		●			●		●●	64
68	190		●				●	●●	64
70	196		●					●●●	64
72	201.5			●				●●●	64
74	207					●	●	●●	64
76	213					●		●●●	64
78	218						●	●●●	64
80	224							●●●●	64

Long Piping & Height Difference

- The total pipe length: 1000m
- The longest pipe :
 - Actual length 190m
 - Equivalent length 220m
- Equivalent length from first indoor distributor to last indoor unit: 90m
- Height difference between indoor and outdoor unit:
 - Outdoor unit above <90m
 - Outdoor unit below <110m
- Height difference between indoor units: 30m



MMV-I 380V - 415V / 50Hz INDIVIDUAL TYPE VRF SYSTEM

8 Models

MMV -i is not a modular product, it is individual type which is developed for those projects need high cost-performance ratio AC equipments.



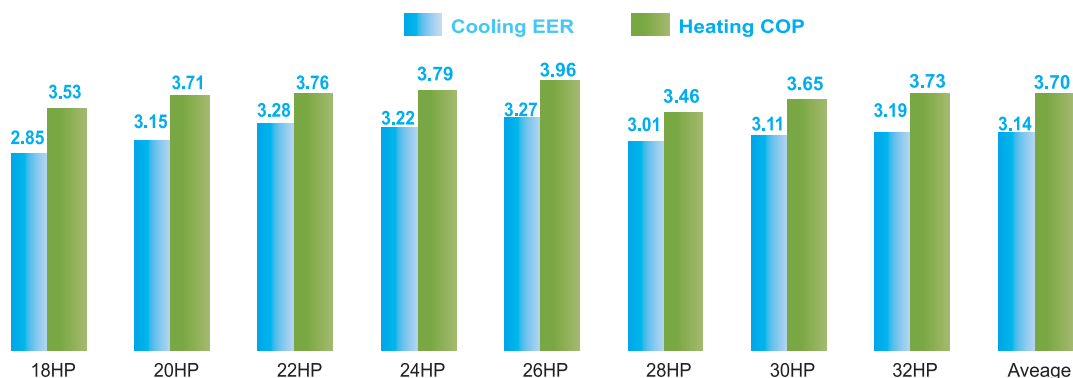
18/20/22/24HP



26/28/30/32HP

Capacity	18HP	20HP	22HP	24HP	26HP	28HP	30HP	32HP
	53kW	56kW	60W	67kW	73kW	80kW	85kW	90kW
Compressor	DC+FIX+FIX				DC+FIX+FIX+FIX			
Fan motor	DC+AC				DC+AC+AC+AC			

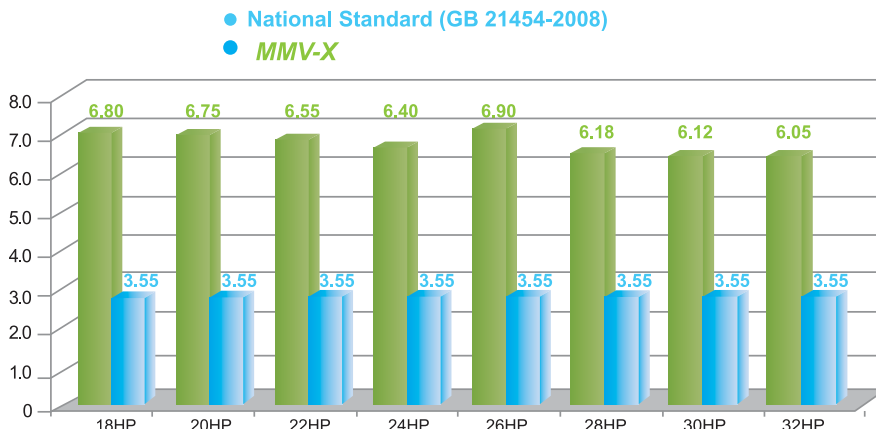
EER & COP



IPLV(C)

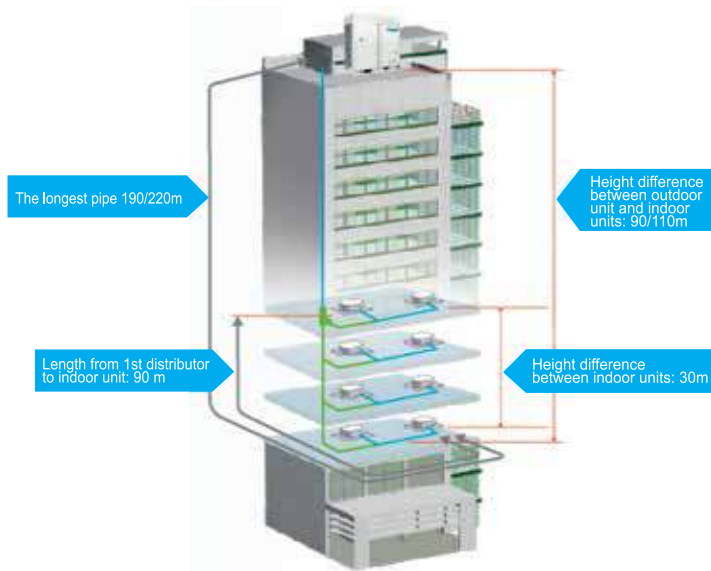
IPLV: Integrated Part Load Value (ARI 550/590)
(C): Cooling condition

The Integrated Part Load Value (IPLV) is a performance characteristic developed by the Air-Conditioning, Heating and Refrigeration Institute (AHRI). It is most commonly used to describe the performance of a AC system capable of capacity modulation. Unlike an EER (Energy Efficiency Ratio) or COP (coefficient of performance), which describes the efficiency at full load conditions, the IPLV is derived from the equipment efficiency while operating at various capacities. Since a VRF system does not always run at 100% capacity, the EER or COP is not an ideal representation of the typical equipment performance. The IPLV is a very important value to consider since it can affect energy usage and operating costs throughout the lifetime of the equipment.



Long Piping & Height Difference

- The total pipe length: 1000m
- The longest pipe :
 - Actual length 190m
 - Equivalent length 220m
- Equivalent length from first indoor distributor to last indoor unit: 90m
- Height difference between indoor and outdoor unit:
 - Outdoor unit above <90m
 - Outdoor unit below <110m
- Height difference between indoor units: 30m



MMV-I 380V - 415V / 50Hz INDIVIDUAL TYPE VRF SYSTEM

HP			18	20	22	24
Model Name	380~415V/3PH/50Hz		MMV-V530W/ZR1-Bi	MMV-V560W/ZR1-Bi	MMV-V600W/ZR1-Bi	MMV-V670W/ZR1-Bi
Max.Connected indoor units quality			20	20	24	28
Performance data						
Cooling	Capacity	KW	53	56	60	67
		Btu/h	180000	190000	204000	228000
		RT	15.1	16.0	17.1	19.1
	Power input	KW	18.6	17.6	18.3	20.8
	EER	W/W	2.85	3.18	3.28	3.22
Heating	Capacity	KW	60	63	67	75
		Btu/h	204000	215000	228000	255000
	Power input	KW	17	17	17.8	19.8
	COP	W/W	3.53	3.71	3.76	3.79
Physical data						
Compressor	Quantity		3	3	3	3
	Type		Hermetic scroll			
Refrigerant	Type		R410A			
	Throttle type		EXV			
	Volume	Kg	17	17	17	17
Motor	Type		DC+AC	DC+AC	DC+AC	DC+AC
	Quantity		2	2	2	2
	ESP	Pa	85			
Dimension (WxHxD)	Net	mm	1970×1620×765	1970×1620×765	1970×1620×765	1970×1620×765
	Packing	mm	2030×1750×825	2030×1750×825	2030×1750×825	2030×1750×825
Net weight		Kg	390	390	390	390
Sound pressure level		dB(A)	≤63	≤63	≤63	≤63
Piping data						
Total equivalent pipeline length<90m	Liquid	mm	Φ15.88	Φ15.88	Φ15.88	Φ15.88
	Gas	mm	Φ31.8	Φ31.8	Φ31.8	Φ34.9
Total equivalent pipeline length≥90m	Liquid	mm	Φ19.05	Φ19.05	Φ19.05	Φ22.2
	Gas	mm	Φ31.8	Φ31.8	Φ31.8	Φ34.9

Notes:1. Cooling operating temperature range is from -5°C to 50°C. Heating operating temperature range is from -20°C to 30°C

2. The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB

3. The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB

4. Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

5. The above data may be changed without notice for future improvement on quality and performance.

HP			26	28	30	32
Model Name	380~415V/3PH/50Hz		MMV-V730W/ZR1-Bi	MMV-V800W/ZR1-Bi	MMV-V850W/ZR1-Bi	MMV-V900W/ZR1-Bi
Max.Connected indoor units quality			28	28	32	32
Performance data						
Cooling	Capacity	KW	73	56	85	90
		Btu/h	249000	272000	290000	307000
		RT	20.9	22.9	24.3	25.7
	Power input	KW	22.3	26.6	27.3	28.2
	EER	W/W	3.27	3.01	3.11	3.19
Heating	Capacity	KW	81.5	88	95	100
		Btu/h	278000	300000	324000	341000
	Power input	KW	20.6	25.4	26	26.8
	COP	W/W	3.96	3.46	3.65	3.79
Physical data						
Compressor	Quantity		4	4	4	4
	Type		Hermetic scroll			
Refrigerant	Type		R410A			
	Throttle type		EXV			
	Volume	Kg	23	23	23	23
Motor	Type		DC+AC+AC+AC	DC+AC+AC+AC	DC+AC+AC+AC	DC+AC+AC+AC
	Quantity		4	4	4	4
	ESP	Pa	85			
Dimension (WxHxD)	Net	mm	2541×1620×765	2541×1620×765	2541×1620×765	2541×1620×765
	Packing	mm	2631×1750×825	2631×1750×825	2631×1750×825	2631×1750×825
Net weight		Kg	530	530	530	530
Sound pressure level		dB(A)	≤65	≤65	≤65	≤65
Piping data						
Total equivalent pipeline length<90m	Liquid	mm	Φ19.05	Φ19.05	Φ19.05	Φ19.05
	Gas	mm	Φ34.9	Φ34.9	Φ34.9	Φ34.9
Total equivalent pipeline length≥90m	Liquid	mm	Φ22.2	Φ22.2	Φ22.2	Φ22.2
	Gas	mm	Φ34.9	Φ34.9	Φ34.9	Φ34.9

Notes:1. Cooling operating temperature range is from -5°C to 50°C. Heating operating temperature range is from -20°C to 30°C

2. The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB

3. The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB

4. Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

5. The above data may be changed without notice for future improvement on quality and performance.

MMV-X 380V - 415V / 50Hz & 60Hz FULL DC INVERTER VRF SYSTEM

			Basic modules							
HP			08	10	12	14	16	18	20	22
Model Name	380-415V/3PH/50Hz		MMV-D252W/ZR1	MMV-D280W/ZR1	MMV-D335W/ZR1	MMV-D400W/ZR1	MMV-D450W/ZR1	MMV-D500W/ZR1	MMV-D560W/ZR1	MMV-D615W/ZR1
	380-415V/3PH/60Hz		MMV-D252W/YR1	MMV-D280W/YR1	MMV-D335W/YR1	MMV-D400W/YR1	MMV-D450W/YR1	MMV-D500W/YR1	MMV-D560W/YR1	MMV-D615W/YR1
Max. Connected indoor units quantity			13	16	16	20	20	20	24	24
Performance data										
Cooling	Capacity	KW	25.2	28.0	33.5	40.0	45.0	50.0	56.0	61.5
		Btu/h	85000	95000	114000	136000	153000	170000	191000	209000
	Power input	RT	7.1	7.9	9.5	11.3	12.7	14.2	15.9	17.4
		W/W	4.50	4.30	4.20	3.80	3.40	3.88	3.82	3.76
Heating	Capacity	KW	27.4	31.5	37.5	45.0	50.0	56.0	63.0	69.0
		Btu/h	93000	107000	127000	153000	170000	191000	214000	235000
	Power input	kW	4.98	6.18	7.98	9.78	12.82	13.18	15.29	17.12
		W/W	5.50	5.10	4.70	4.60	3.90	4.25	4.12	4.03
Physical data										
Compressor	Quantity		1DC				2DC			
	Type		Hermatic scroll							
Refrigerant	Type		R410A							
	Throttle type		EXV							
	Volume	Kg	10	12	14	16	16.5	17		
Motor	Type		DC motor							
	Quantity		2DC							
	ESP	Pa	85							
Dimension (WxDxH)	Net	mm	970x765x1620			1260x765x1620			1349x765x1620	
	Packing	mm	1030x825x1750			1315x825x1750			1405x825x1780	
Net weight	Kg	208			242	286	295	312	323	
Sound pressure level	dB(A)	58			60	60	60	63		
Total equivalent pipeline length < 90m	Liquid	mm	Ø9.52	Ø12.7		Ø15.88				
	Gas	mm	Ø22.2	Ø25.4		Ø28.6			Ø31.80	
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø12.7			Ø15.88			Ø19.05	
	Gas	mm	Ø25.4			Ø28.6			Ø31.80	
Oil balance pipe	mm									

- Notes: 1. Cooling operating temperature range is from -5°C to 50°C. Heating operating temperature range is from -20°C to 30°C
 2. The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB
 3. The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB
 4. Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 5. The above data may be changed without notice for future improvement on quality and performance.

			3 modules combination								
HP			46	48	50	52	54	56	58	60	62
Model Name	380-415V/3PH/50Hz		MMV-D1290W/ZR1	MMV-D1345W/ZR1	MMV-D1400W/ZR1	MMV-D1455W/ZR1	MMV-D1510W/ZR1	MMV-D1565W/ZR1	MMV-D1625W/ZR1	MMV-D1680W/ZR1	MMV-D1730W/ZR1
	380-415V/3PH/60Hz		MMV-D1290W/YR1	MMV-D1345W/YR1	MMV-D1400W/YR1	MMV-D1455W/YR1	MMV-D1510W/YR1	MMV-D1565W/YR1	MMV-D1625W/YR1	MMV-D1680W/YR1	MMV-D1730W/YR1
Max. Connected indoor units quantity			48	48	54	54	54	58	58	58	64
Performance data											
Cooling	Capacity	KW	129.0	134.5	140.0	145.5	151.0	156.5	162.5	168.0	173.0
		Btu/h	440000	458000	477000	496000	515000	533000	554000	573000	590000
	Power input	RT	36.6	38.6	39.8	41.3	42.9	44.4	46.2	47.7	49.1
		W/W	3.77	3.72	3.94	3.88	3.83	3.83	3.68	3.64	3.78
Heating	Capacity	KW	144.5	150.5	157.5	163.5	169.5	175.5	182.0	188.0	194.0
		Btu/h	493000	513000	537000	557000	578000	598000	620000	641000	651000
	Power input	kW	34.29	36.12	36.76	38.59	40.42	42.22	45.23	47.05	47.42
		W/W	4.21	4.17	4.28	4.24	4.19	4.16	4.02	3.99	4.09
Physical data											
Compressor	Quantity		1DC+2DC+2DC					2DC+2DC+2DC			
	Type		Hermatic scroll								
Refrigerant	Type		R410A								
	Throttle type		EXV								
	Volume	Kg	/								
Motor	Type		DC motor								
	Quantity		1DC+2DC+2DC					2DC+2DC+2DC			
	ESP	Pa	85								
Dimension (WxDxH)	Net	mm	/								
	Packing	mm	/								
Net weight	Kg	/									
Sound pressure level	dB(A)	/									
Piping data											
Total equivalent pipeline length < 90m	Liquid	mm	Ø19.05			Ø22.2					
	Gas	mm	Ø38.10			Ø44.5					
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø22.20			Ø25.4					
	Gas	mm	Ø41.30			Ø44.5					
Oil balance pipe	mm	Ø6.35									

- Notes: 1. Cooling operating temperature range is from -5°C to 50°C. Heating operating temperature range is from -20°C to 30°C
 2. The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB
 3. The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB
 4. Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 5. The above data may be changed without notice for future improvement on quality and performance.

2 modules combination										
24	26	28	30	32	34	36	38	40	42	44
MMV-D670W/ZR1	MMV-D730W/ZR1	MMV-D780W/ZR1	MMV-D840W/ZR1	MMV-D900W/ZR1	MMV-D950W/ZR1	MMV-D1010W/ZR1	MMV-D1065W/ZR1	MMV-D1120W/ZR1	MMV-D1175W/ZR1	MMV-D1230W/ZR1
MMV-D670W/YR1	MMV-D730W/YR1	MMV-D780W/YR1	MMV-D840W/YR1	MMV-D900W/YR1	MMV-D950W/YR1	MMV-D1010W/YR1	MMV-D1065W/YR1	MMV-D1120W/YR1	MMV-D1175W/YR1	MMV-D1230W/YR1
28	28	28	32	32	36	36	36	42	42	42
67.0	73.0	78.0	84.0	90.0	95.0	101.0	106.5	112.0	117.5	123.0
228000	249000	266000	286000	307200	324000	344000	363000	382000	400000	419000
19.0	20.7	22.1	23.8	25.60	27.0	28.7	30.2	31.8	33.4	34.9
15.95	19.75	19.33	21.02	23.00	24.42	27.74	29.68	29.02	30.95	32.89
4.20	3.70	4.03	4.00	3.90	3.89	3.64	3.59	3.86	3.80	3.74
75.0	81.5	87.5	94.5	100.5	106.5	113.0	119.0	126.0	132.0	138.0
255000	278000	298000	322000	344600	363000	385000	406000	429000	450000	470000
15.96	19.00	19.35	21.47	23.30	25.10	28.11	29.94	30.58	32.41	34.24
4.70	4.29	4.52	4.40	4.31	4.24	4.02	3.97	4.12	4.07	4.03
1DC+2DC	1DC+2DC					2DC+2DC				
Hermatic scroll										
R410A										
EXV										
/										
DC motor										
2DC+2DC	1DC+2DC					2DC+2DC				
85										
/										
/										
/										
/										
Ø15.88	Ø19.05					Ø19.05				
Ø31.88	Ø34.90					Ø38.10				
Ø19.05	Ø22.20					Ø22.20				
Ø34.90	Ø38.10					Ø41.30				
Ø6.35										

3 modules combination						4 modules combination						
64	66	68	70	72	74	76	78	80	82	84	86	88
MMV-D1790W/ZR1	MMV-D1845W/ZR1	MMV-D1905W/ZR1	MMV-D1960W/ZR1	MMV-D2015W/ZR1	MMV-D2070W/ZR1	MMV-D2125W/ZR1	MMV-D2180W/ZR1	MMV-D2240W/ZR1	MMV-D2295W/ZR1	MMV-D2345W/ZR1	MMV-D2405W/ZR1	MMV-D2460W/ZR1
MMV-D6790W/YR1	MMV-D1845W/YR1	MMV-D1905W/YR1	MMV-D1960W/YR1	MMV-D2015W/YR1	MMV-D2070W/YR1	MMV-D2125W/YR1	MMV-D2180W/YR1	MMV-D2240W/YR1	MMV-D2295W/YR1	MMV-D2345W/YR1	MMV-D2405W/YR1	MMV-D2460W/YR1
179.0	184.5	190.5	196.0	201.5	207.0	212.5	218.0	224.0	229.5	234.5	240.5	246.0
610000	629000	649000	668000	687000	706000	725000	743000	764000	783000	800000	820000	839000
50.8	52.4	54.1	55.7	57.2	58.8	60.4	61.9	63.6	65.2	66.6	68.3	69.9
47.40	49.33	50.70	52.63	51.97	53.91	55.84	57.31	60.63	62.57	62.15	63.84	65.78
3.78	3.74	3.76	3.72	3.88	3.84	3.81	3.80	3.69	3.67	3.77	3.77	3.74
201.0	207.0	213.5	218.0	226.5	232.5	238.5	244.5	251.0	257.0	263.0	270.0	276.0
685000	706000	728000	743000	772000	793000	813000	834000	856000	876000	897000	921000	941000
49.53	51.36	51.41	53.24	53.88	55.71	57.54	59.34	62.35	64.19	64.54	66.66	68.49
4.06	4.03	4.15	4.09	4.20	4.17	4.14	4.12	4.03	4.00	4.07	4.05	4.03
1DC+2DC+2DC+2DC						2DC+2DC+2DC+2DC						
Hermatic scroll												
R410A												
EXV												
/												
DC motor												
1DC+2DC+2DC+2DC						2DC+2DC+2DC+2DC						
85												
/												
/												
/												
/												
Ø25.4						Ø25.4						
Ø44.5						Ø54.0						
Ø25.4						Ø25.4						
Ø54.0						Ø54.0						
Ø6.35												

MMV-X 208V-230V / 60Hz FULL DC INVERTER VRF SYSTEM

		Basic modules								
HP		8	10	12	14	16	18	20	22	
Model Name	208-230V/3PH/60Hz	MMV-D252W/XR1	MMV-D280W/XR1	MMV-D335W/XR1	MMV-D400W/XR1	MMV-D450W/XR1	MMV-D500W/XR1	MMV-D560W/XR1	MMV-D615W/XR1	
Max. Connected indoor units quantity		13	16	16	20	20	20	24	24	
Performance data										
Cooling	Capacity	KW	25.2	28	33.5	40.0	45.0	50.0	56.0	61.5
		Btu/h	85000	95000	114000	136000	153000	170500	191000	209000
	Power input	RT	7.1	7.9	9.5	11.3	12.7	14.3	15.9	17.4
		KW	5.79	6.94	8.49	10.59	12.72	14.46	16.68	18.43
Heating	Capacity	W/W	4.34	4.03	3.94	3.77	3.54	3.45	3.35	3.99
		KW	27.4	31.5	37.5	45.0	50.0	56.0	63.0	69.0
	Power input	Btu/h	93000	107000	127000	153000	170000	190960	214000	235000
		KW	5.89	7.2	8.82	10.99	12.42	14.14	16.02	18.02
COP		W/W	4.65	4.39	4.25	4.00	4.02	3.96	3.93	4.31
Physical data										
Compressor	Quantity	1			2			1+1		
	Type	Hermetic scroll								
Refrigerant	Type	R410A								
	Throttle type	EXV								
	Volume	Kg	10	12	16	16	15	16.5	10+12	
Motor	Type	DC motor								
	Quantity	1			2			1+2		
	ESP	Pa	85							
Dimension (WxDxH)	Net	mm	970x765x1620		1260x765x1620		1348x765x1620			
	Packing	mm	1030x825x1750		1315x825x1750		1405x825x1780			
Net weight		Kg	208	242	286	305	320			
Sound pressure level		dB(A)	58			60		63		
Piping data										
Total equivalent pipeline length < 90m	Liquid	mm	Ø9.52	Ø12.7	Ø15.88					
	Gas	mm	Ø22.2	Ø25.4	Ø28.6			Ø31.8		
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø12.7		Ø15.88			Ø19.05		
	Gas	mm	Ø25.4		Ø28.6		Ø31.8			
Oil balance pipe		mm	/							

- Notes:
- Cooling operating temperature range is from -5°C to 50°C. Heating operating temperature range is from -20°C to 30°C
 - The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB
 - The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB
 - Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 - The above data may be changed without notice for future improvement on quality and performance.

		3 modules combination								
HP		46	48	50	52	54	56	58	60	
Model Name	208-230V/3PH/60Hz	MMV-D1290W/XR1	MMV-D1340W/XR1	MMV-D1400W/XR1	MMV-D1455W/XR1	MMV-D1520W/XR1	MMV-D1570W/XR1	MMV-D1620W/XR1	MMV-D1680W/XR1	
Max. Connected indoor units quantity		48	48	54	54	54	58	58	58	
Performance data										
Cooling	Capacity	KW	129.0	134.0	140.0	145.5	152.0	157.0	162.0	168.0
		Btu/h	440000	457000	477000	496000	518000	535000	552000	573000
	Power input	RT	36.6	38.1	39.8	41.3	43.2	44.6	46.0	47.7
		KW	36.34	38.08	40.30	41.85	43.95	46.08	47.82	50.04
Heating	Capacity	W/W	3.55	3.52	3.47	3.48	3.46	3.41	3.39	3.36
		KW	144.5	150.5	157.5	163.5	169.0	176.0	182.0	189.0
	Power input	Btu/h	493000	513000	537000	557000	576000	600000	620000	644000
		KW	35.67	37.36	39.24	40.86	43.03	44.49	46.18	48.06
COP		W/W	4.05	4.03	4.01	4.00	3.93	3.96	3.94	3.93
Physical data										
Compressor	Quantity	1+2+2			2+2+2					
	Type	Hermetic scroll								
Refrigerant	Type	R410A								
	Throttle type	EXV								
	Volume	Kg	10+15+16.5	10+15+16.5	10+16.5+16.5	12+16.5+16.5	16+16.5+16.5		15+16.5+16.5	16.5+16.5+16.5
Motor	Type	DC motor								
	Quantity	1+2+2			1+2+2			2+2+2		
	ESP	Pa	85							
Dimension (WxDxH)	Net	mm	/							
	Packing	mm	/							
Net weight		Kg	/							
Sound pressure level		dB(A)	/							
Piping data										
Total equivalent pipeline length < 90m	Liquid	mm	Ø19.05			Ø22.2				
	Gas	mm	Ø38.1			Ø44.5				
Total equivalent pipeline length ≥ 90m	Liquid	mm	Ø22.2		Ø25.4		Ø25.4			
	Gas	mm	Ø41.3		Ø44.5		Ø44.5			
Oil balance pipe		mm	Ø6.35				Ø6.35			

- Notes:
- Cooling operating temperature range is from -5°C to 50°C. Heating operating temperature range is from -20°C to 30°C
 - The cooling conditions: indoor side 27°C(80.6°F) DB, 19°C(60°F)WB outdoor side 35°C(95°F) DB
 - The heating conditions: indoor side 20°C(68°F) DB, 15°C(44.6°F)WB outdoor side 7°C(42.8°F)DB
 - Sound level: measured at a point 1 m in front of the unit at a height of 1.3 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 - The above data may be changed without notice for future improvement on quality and performance.

2 modules combination											
24	26	28	30	32	34	36	38	40	42	44	
MMV-D670W/XR1	MMV-D730W/XR1	MMV-D780W/XR1	MMV-D840W/XR1	MMV-D895W/XR1	MMV-D950W/XR1	MMV-D1010W/XR1	MMV-D1060W/XR1	MMV-D1120W/XR1	MMV-D1175W/XR1	MMV-D1230W/XR1	
28	28	28	32	32	36	36	36	42	42	42	
67.0	73.0	78.0	84.0	89.5	95.0	101.0	106.0	112.0	117.5	123.0	
228000	249000	266000	286000	305000	324000	344000	361000	382000	400000	419000	
19.0	20.7	22.1	23.8	25.4	27.0	28.7	30.1	31.8	33.4	34.9	
16.98	19.66	21.40	23.62	25.17	27.18	29.40	31.14	33.36	32.11	33.66	
3.98	3.71	3.64	3.56	3.56	3.50	3.44	3.40	3.36	3.66	3.65	
75.0	81.5	87.5	94.5	100.5	106.0	113.0	119.0	126.0	132.0	138.0	
255000	278000	298000	322000	342000	361000	385000	406000	429000	450000	470000	
17.64	19.65	21.34	23.22	25.17	26.59	28.47	30.16	32.04	33.04	33.66	
4.30	4.15	4.10	4.07	3.99	3.99	3.97	3.95	3.93	4.00	4.10	
1+1	1+2			2+2				1+1+2			
Hermetic scroll											
R410A											
EXV											
12+12	10+16	10+15	10+16.5	12+16.5	16+15	16+16.5	15+16.5	16.5+16.5	10+12+16.5	12+12+16.5	
2+2	1+2			2+2		2+2			1+2+2	2+2+2	
				85						85	
				/						/	
				/						/	
				/						/	
				/						/	
Ø15.88	Ø19.05							Ø19.05			
Ø19.05	Ø34.9			Ø22.2				Ø38.1			
Ø34.9	Ø38.1			Ø6.35				Ø41.3			

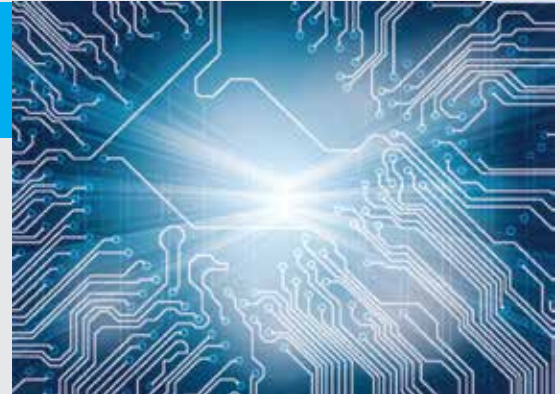
4 modules combination											
62	64	66	68	70	72	74	76	78	80		
MMV-D1752W/XR1	MMV-D1790W/XR1	MMV-D1850W/XR1	MMV-D1900W/XR1	MMV-D1960W/XR1	MMV-D2015W/XR1	MMV-D2070W/XR1	MMV-D2130W/XR1	MMV-D2180W/XR1	MMV-D2240W/XR1		
64	64	64	64	64	64	64	64	64	64	64	
175.2	179.0	185.0	190.0	196.0	201.5	207.0	213.0	218.0	224.0		
597000	610000	631000	648000	668000	687000	706000	726000	743000	764000		
49.8	50.8	52.6	54.0	55.7	57.2	58.8	60.5	61.9	63.6		
49.17	50.34	53.02	54.76	56.98	58.53	60.54	62.76	64.50	66.72		
3.56	3.56	3.49	3.47	3.44	3.44	3.42	3.39	3.38	3.36		
195.4	201.0	207.5	213.5	220.5	224.0	232.0	239.0	245.0	252.0		
666000	685000	707000	728000	752000	764000	791000	815000	835000	859000		
48.31	49.68	51.69	53.38	55.26	56.88	58.63	60.51	62.20	64.08		
4.04	4.05	4.01	4.00	3.99	3.94	3.96	3.95	3.94	3.93		
1+2+2+2	2+2+2+2	1+2+2+2				2+2+2+2					
Hermetic scroll											
R410A											
EXV											
10+15+15+15	12+12+16.5+16.5	10+16+16.5+16.5	10+15+16.5+16.5	10+16.5+16.5+16.5	12+16.5+16.5+16.5	16+15+16.5+16.5	16+16.5+16.5+16.5	15+16.5+16.5+16.5	16.5+16.5+16.5+16.5		
1+2+2+2	2+2+2+2	1+2+2+2				2+2+2+2					
				85							
				/						/	
				/						/	
				/						/	
				/						/	
				Ø44.5		Ø25.4				Ø54.0	
				Ø25.4		Ø25.4				Ø25.4	
				Ø44.5		Ø54.0				Ø54.0	
				Ø6.35		Ø6.35					

Advantages

High Efficiency

Low carbon life advocate

Miller CAC always focus on low-carbon energy-saving products development, and spare no effort for technological research and development, to become a practitioner and advocate of low-carbon technology!



Core Technologies Make High Efficiency

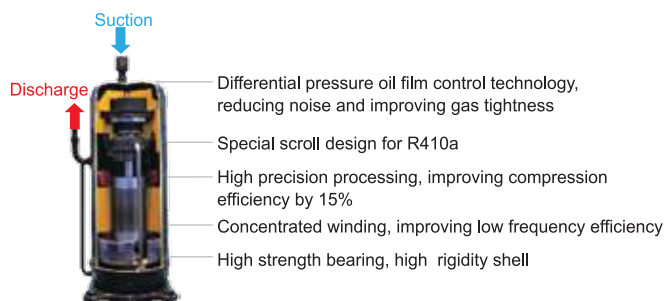


High Efficiency DC Inverter Compressor

- From Hitachi, famous inverter compressor manufacture.
- R410a ECO friendly refrigerant.
- Small torque fluctuation, low vibration and quiet operation.
- High efficiency due to its patent internal structure design.
- Internal oil circulation structure.
- High Reliability.
- Wide rotation speed range.



- High pressure chamber
 - Has small suction superheat and high refrigerant volume efficiency
 - Has large refrigerant discharge buffer volume, Low vibration and noise



- Neodymium permanent magnet rotor, has powerful magnetic force, large torque and high efficiency.
- Concentrated winding, improving low frequency efficiency.

Neodymium permanent magnet rotor

Powerful magnetic force, large force moment and high efficiency.



Ferrite magnet



Neodymium permanent magnet

Concentrated winding

Magnetic efficiency is 12% higher than distributed winding



Concentrated winding



Distributed winding

High Efficiency DC Motor

- High efficiency DC fan motor is from well-known brand.
- Low noise and high efficiency because of high-density wire winding engineering.
- Brushless with built-in sensor.

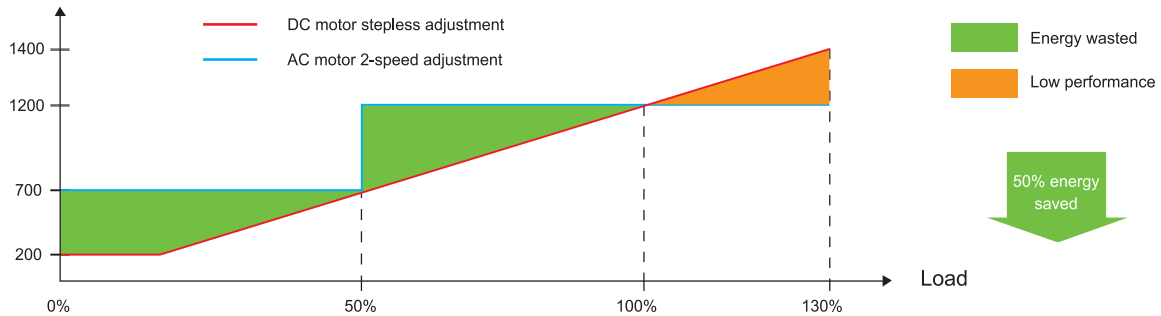


DC fan motor

Stepless Control

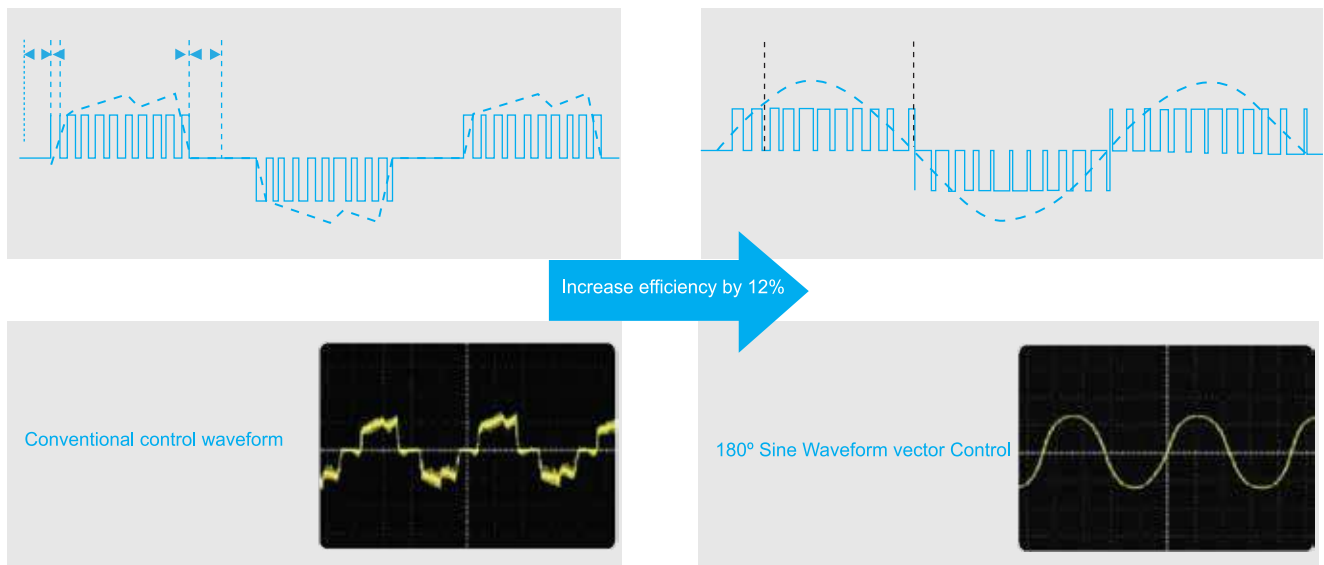
DC fan motor can be stepless controlled by outdoor PCB according to system's operating pressure. And it is able to reduce the energy consumption and maintain the system in the best performance.

Load-Revolution curve



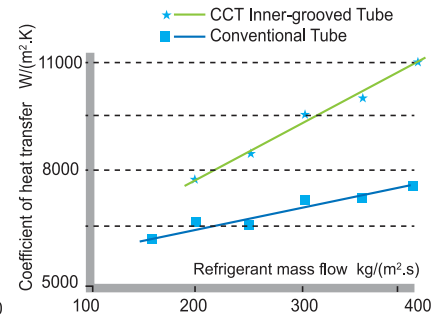
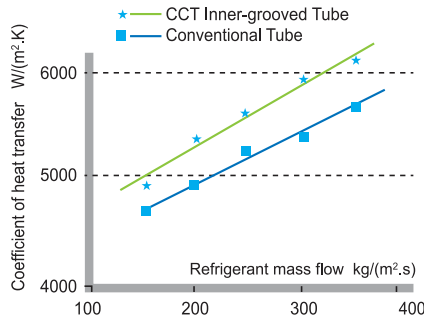
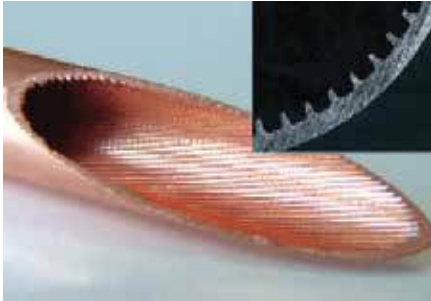
180° Sine Waveform Control

The perfect combination of 180° Sine waveform rotor frequency drive control technology and excellent IPM inverters, reduces the reactive loss of motor-driven, increases motor efficiency by 12%.

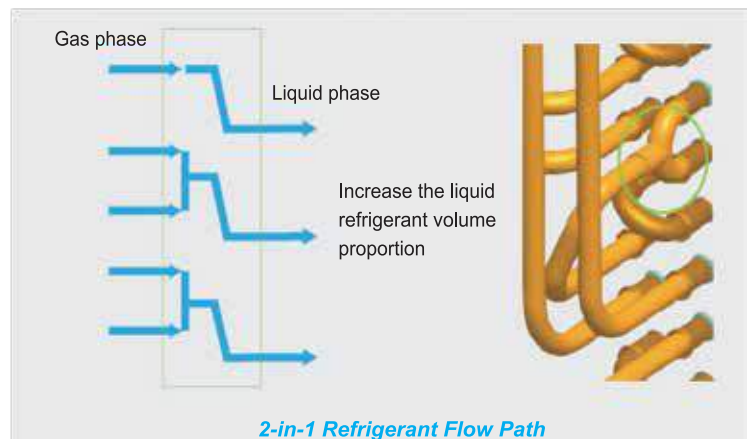
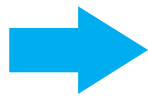
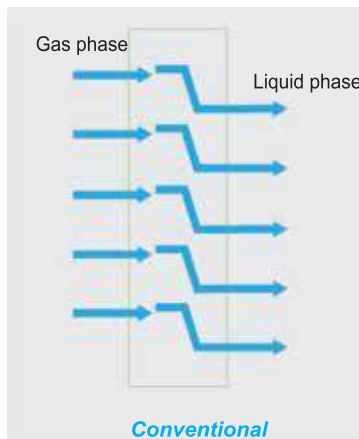


CCT Inner-grooved Tube

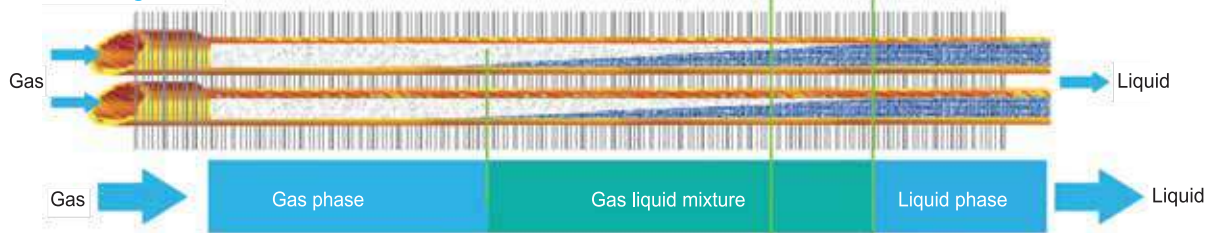
CCT(Continuous Cooling Transformation) inner-grooved copper tube has high thermometric conductivity. This inner-grooved fins break the refrigerant flow boundary layer to enhance refrigerant disturbance to increase heat-exchanging efficiency.



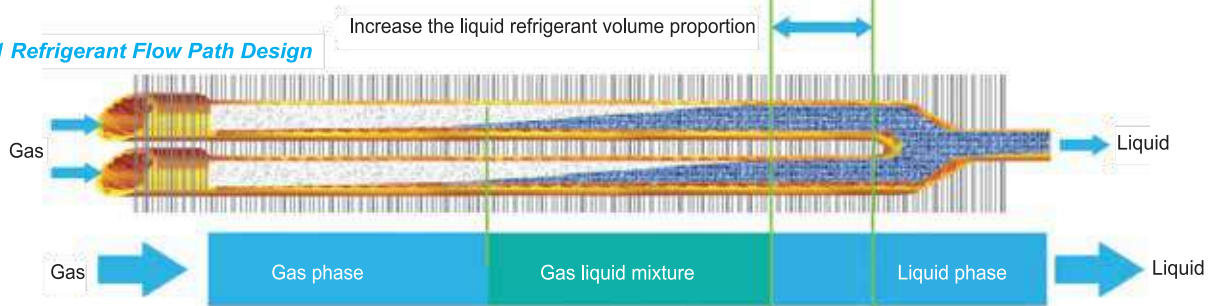
2-in -1 Refrigerant Flow Path Design



Conventional design

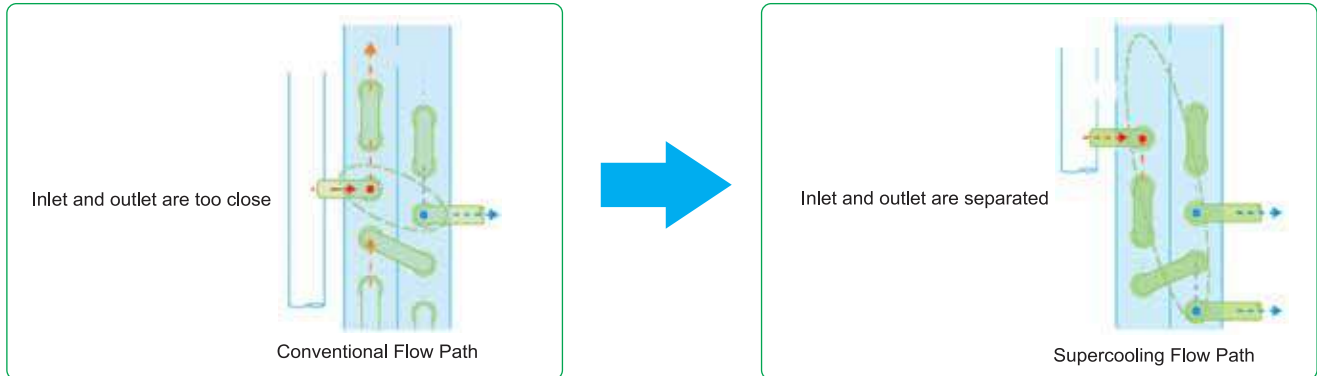


2-in-1 Refrigerant Flow Path Design



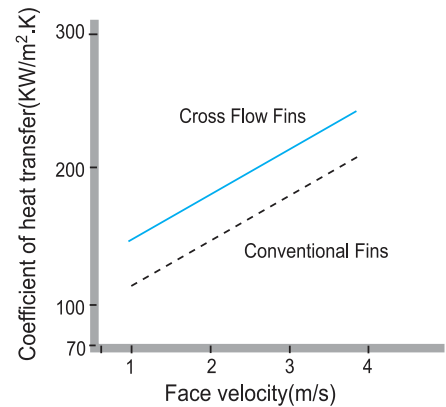
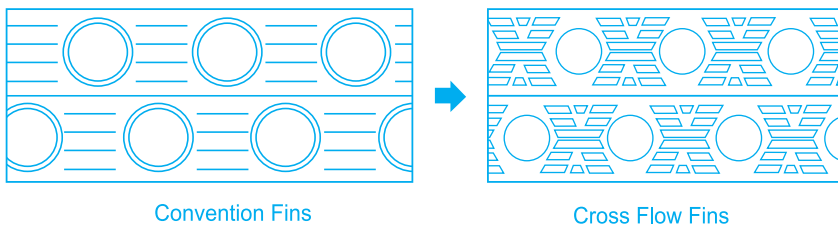
Supercooling Flow Path Design

Supercooling flow path design, separates the refrigerant inlet and outlet, increase the supercooling degree, reduce the effect of high temperature inlet gas refrigerant to low temperature outlet liquid refrigerant, therefore, the system efficiency will be greatly increased.



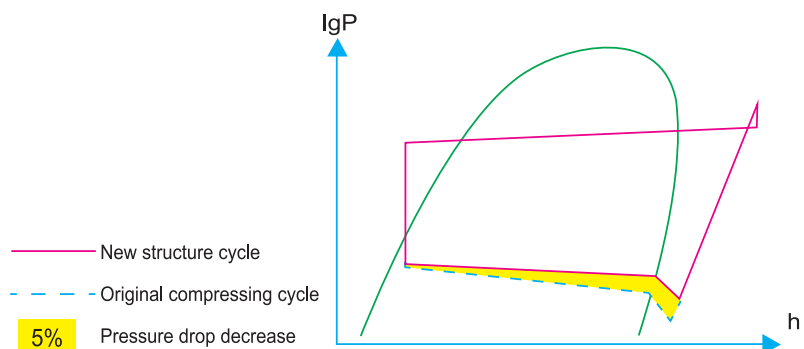
Cross Flow Fins

- Has low air resistance and great heat transfer coefficient.
- Frosting improved, frost on the heat-exchanger will be well-distributed, easy for defrosting.



Low Resistance Internal piping

- Thanks to the optimization pipeline design, 5% pressure drop are reduced.
- EER and COP increase, because of evaporating temperature increase and compressor work decrease.



Benefits For Users

Livable environment creator

Miller focuses on starting point of AC system: create a friendly, comfortable and pleasant living environment as always. New MMV DC VRF system's comfort technologies include quick cooling and heating, precise temperature control, low noise, use environmental friendly refrigerant and so on, we strive to create livable environment for users.....

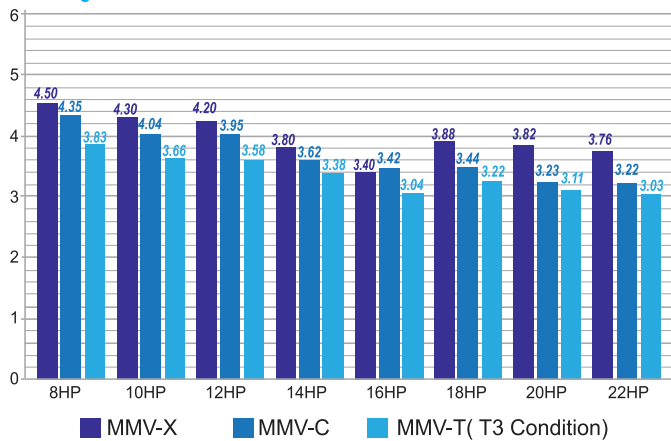


Excellent in EER and COP

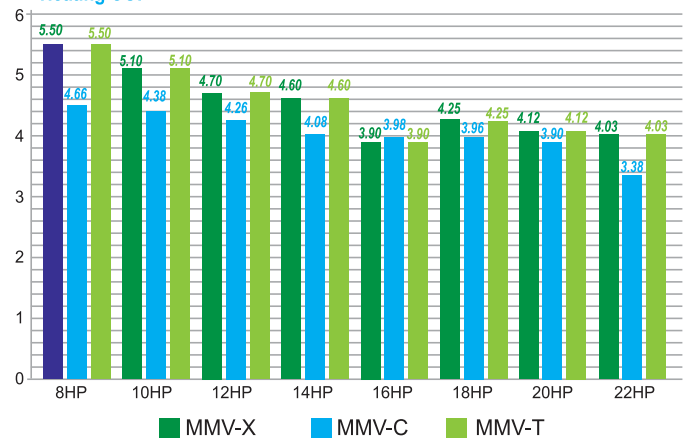
MMV-X

Thanks to DC devices(compressor and motor), piping optimization design and new refrigerant control logic, system's EER and COP are significantly increase.

Cooling EER

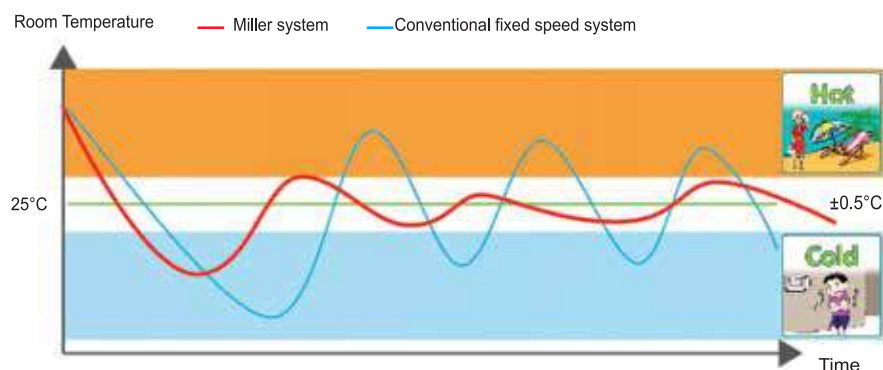


Heating COP



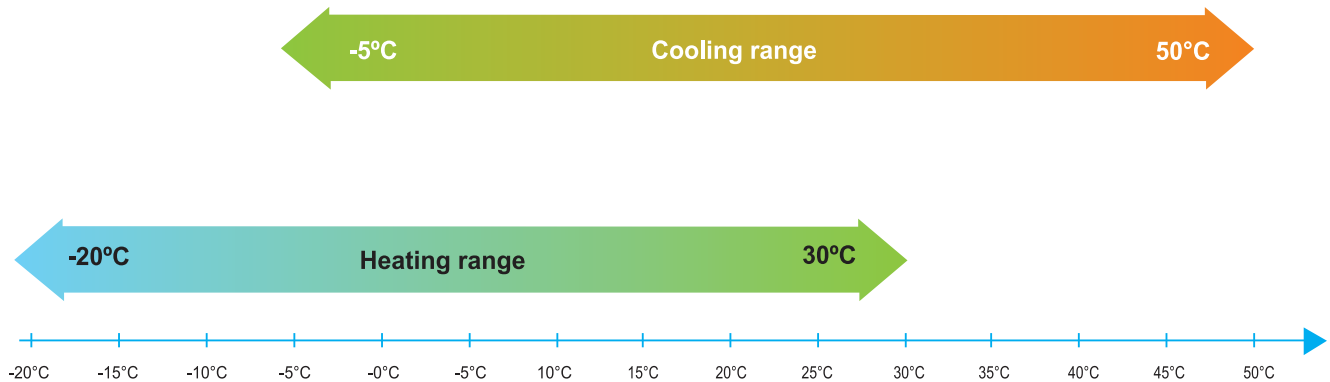
Outstanding Comfort Ability

- Miller MMV system have excellent cooling & heating performance, thanks to the high efficiency DC fan motor, DC compressor and optimized refrigerant flow control logic.
- Precisely room temperature control by adopting 2000 pulse EXV. Indoor temperature fluctuation can be maintain within 0.5 C, offers outstanding comfort ability.



Wide Operation Range

- Cooling operating temperature is up to 50°C, suitable for the hot region. ForT3 VRF units, the cooling operating temperature is up to 55°C.
- Heating operating temperature is down to -20°C. In the cold winter, MMV system can stably produce heat.



- Outdoor unit running at temperature above 50°C need customized in factory, please consult to sales engineer.

7 Improvements To Reduce Noise

Maximum 10dB(A) of operating sound decrease.



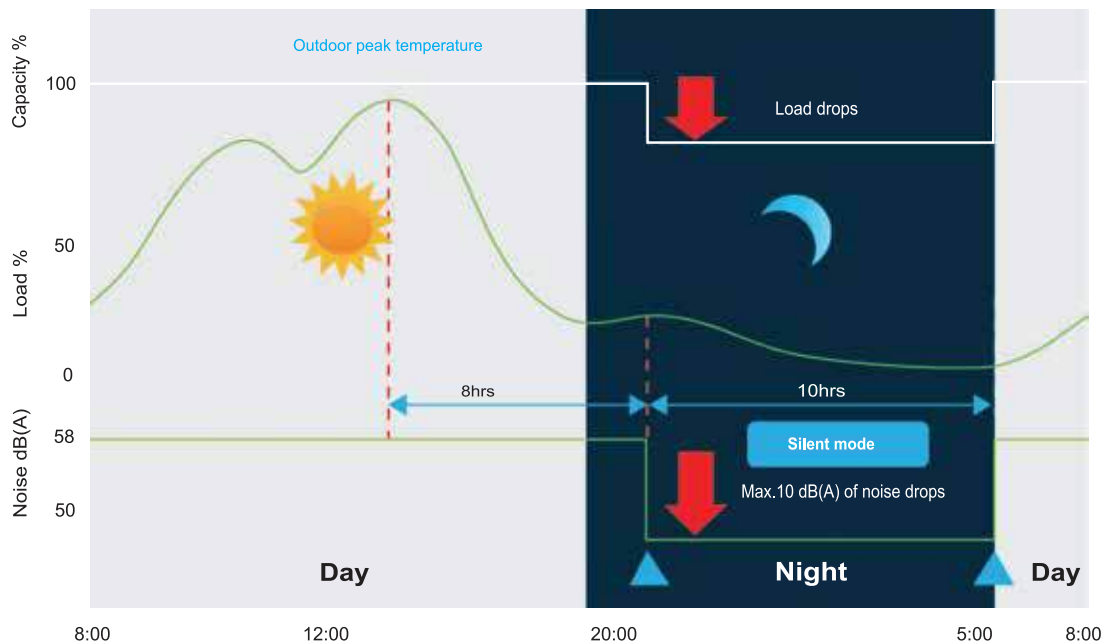
Low Noise Fan Blade

- Anti-vibration forward fan blade.
- Special design to reduce the air vibration and disturbance.



Silent Mode, Night Time Noise Control

- Compressor and fan motor rotating speed can be reduced to lower the noise at night.
- Maximum 10dB(A) decrease.



Snow-proof Function

- In the cold weather, outdoor fan will start to run for a while at intervals, for preventing the snow to accumulate on fan blade. Because accumulated snow will freeze and block fan blade rotating, even worse it will damage the motor.
- It only start when temperature is lower than 0°C.



The PHE Economizer

MMV-X

- PHE Economizer technology provide a additional sub cooling .
- Improved heat exchanger + PHE economizer + Optimized control logic
- Heating performance highly increased



PHE Economizer

The PHE economizer need customization.

3-stage Back Up Function

MMV-X

- Module back up function.
- When some modules are failure, the others can keep running by simply settings.



- Compressor back up function
- When one compressor is failure, the other one can keep running by simply settings.

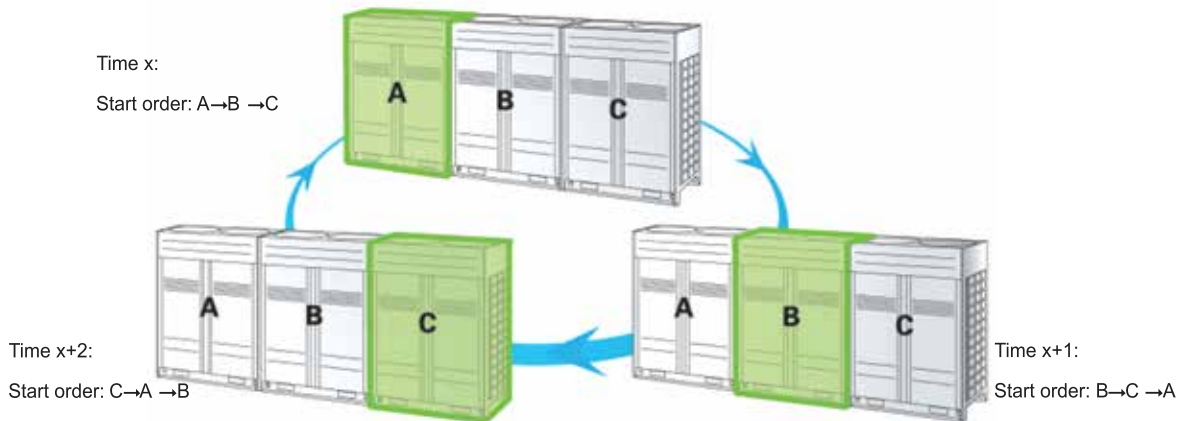


- Fan motor back up function.
- When one fan motor is failure, the other one can keep running by simply settings.



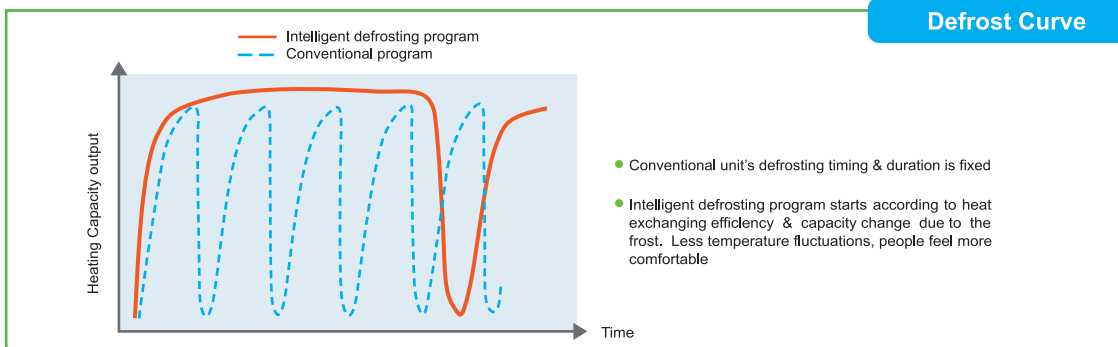
All Outdoor Units Cycle Operation

- In one combination system, any outdoor unit can run as master unit.
- Balance the lifespan among outdoor units in one system.



Intelligent Defrosting Program

Program starts only when unit needs to. Whereas conventional unit's defrosting timing & duration is fixed, causing fluctuations in temperature and personal comfort.



Remote ON/OFF Control Function

- Indoor units standard build in with ON/OFF control port.
- It can be used for hotel card control and also can be used for long distance remote ON/OFF control. And no need additional hotel VRF indoor unit control module.
- When contactor is open (card pulled out), indoor unit will be off can not be controlled, current running parameters will be saved in indoor PCB.
- When contactor is close (card insert), indoor unit will recover pervious running state .



Emergency Stop Operation Function

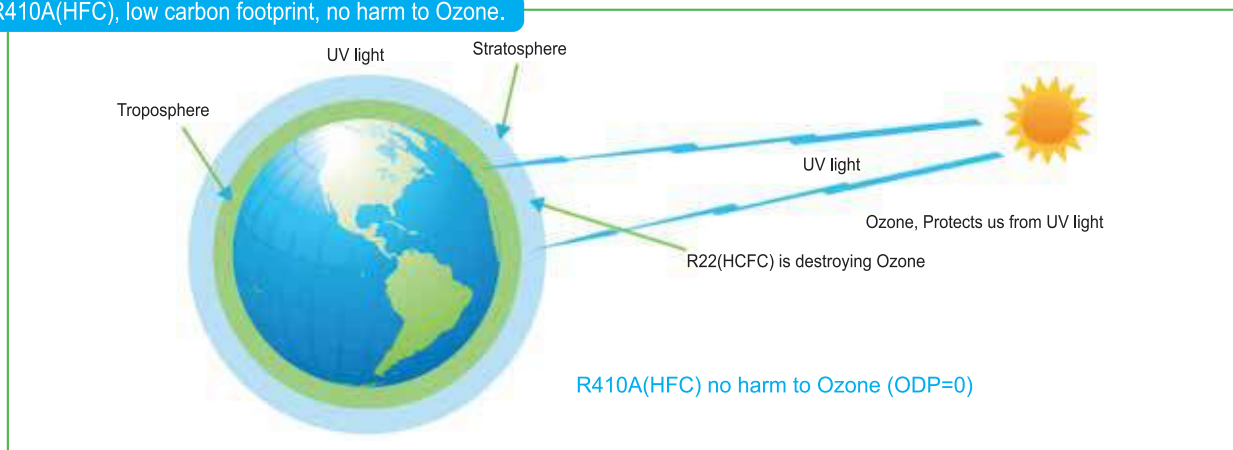
Outdoor unit have a fire alarm linkage signal control function. When emergency situation can stop the whole AC system.



Environment Friendly

Refrigerant R410A(HFC), low carbon footprint, no harm to Ozone.

R410A(HFC), low carbon footprint, no harm to Ozone.



Benefits For Installers



Optimization for designer and installer

MMV DC inverter VRF system is designed with flexible modular combination concept, we keep optimizing the module size, reduce equipment on space occupied to meet the demand of designer and installer. Some unique technologies are used for our installers to reduce their working load, installation is becoming easier and easier!

4 Units Combination, Capacity Up To 88HP

MMV-X

Max. outdoor units can be combined into a bigger system, capacity can be up to 88HP.



8HP ~ 22HP



24HP ~ 44HP



46HP ~ 66HP



68HP ~ 88HP

Individual Type, Saving Installation Work

MMV-I

Individual type outdoor unit is already combined in miller factory, installer can save outdoor unit combination work.



32HP



16HP



16HP

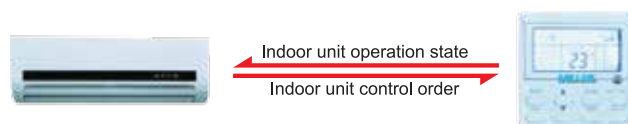
Adjustable Outdoor Fan Static Pressure

- Thanks to DC fan motor, the external static pressure of outdoor fan is adjustable.
- Outdoor units can be installed in the service floor or facility room.
- Maximum ESP 85Pa.



Bidirectional Communication Wired Controller

- Bidirectional communication. Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller.
- Compact design.
- Timer function.



User can check the error code and inquiry unit status very easy, safe and convenient.



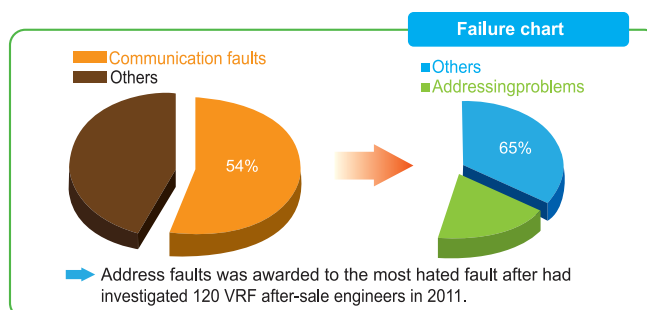
Touch Screen Wired Controller

- APP remote control by WIFI.
- Air filter cleaning reminding function.
- Touch screen with black background and white light
- Ultra thin body and stylish design meet high-end environments.
- On/off, temperature setting, fan speed setting, mode setting, timer and check function.



Automatic Addressing

- Automatic addressing will reduce artificial faults by 35% and 5% manual works.
 - 54% system failure were caused by communication faults.
 - 65% communication faults were caused by address problems.
 - Most of the address problems were: address setting forgotten, wrong settings, address repeat.



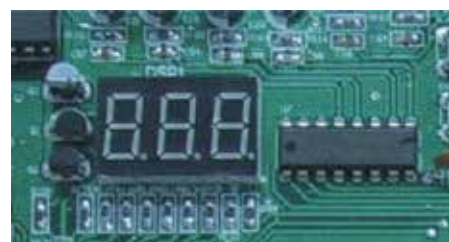
Addressing Methods

- 2 addressing methods:
 - Automatically addressing: system will distribute address to indoor unit automatically.
 - Manually setting by wireless remote controller.
- Addressing method can be selected easily by adjusting the switch on outdoor PCB.



LED Display On The PCB

LED display on the PCB, it can show system's operation status and error codes.



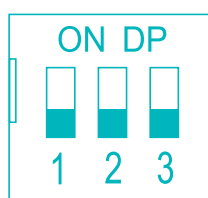
Service Window

Thanks to the service window, checking outdoor unit's status and setting is now easy, no need to remove the electric control box cover.

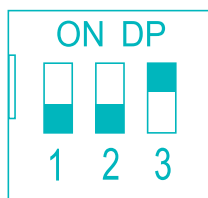


Mode Restriction

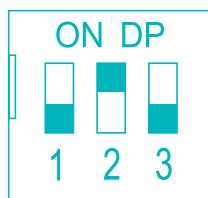
- 5 kinds of mode restriction
 - First start indoor units priority mode.
 - Cooling(or heating)priority mode.
 - Cooling only(or heating only)mode.
- Mode restriction function can be selected on the outdoor PCB.



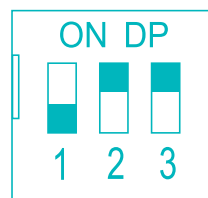
Heating priority
(Default setting)



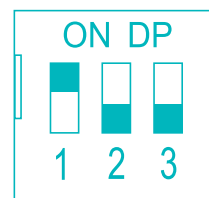
Cooling priority



First-start priority



Heating only



Cooling only

Humanized Internal Structure

- All key components are designed to close to outside, it is convenient for repair and replacement.
- Thanks to the new balance technology, gas balance pipe does no longer exist, brazing points and leaking risk are decreased.

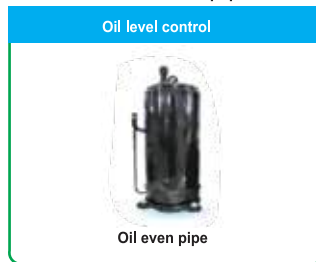


G-Stage Oil Control

1st stage: Compressor internal oil separation



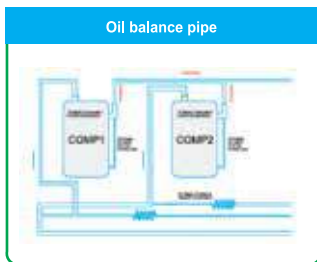
2nd stage: Oil return from the oil even pipe



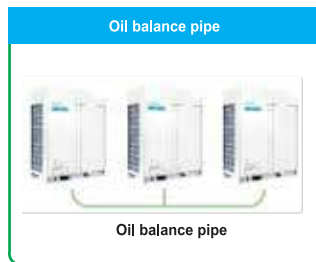
3rd stage: Oil return from the system oil separator



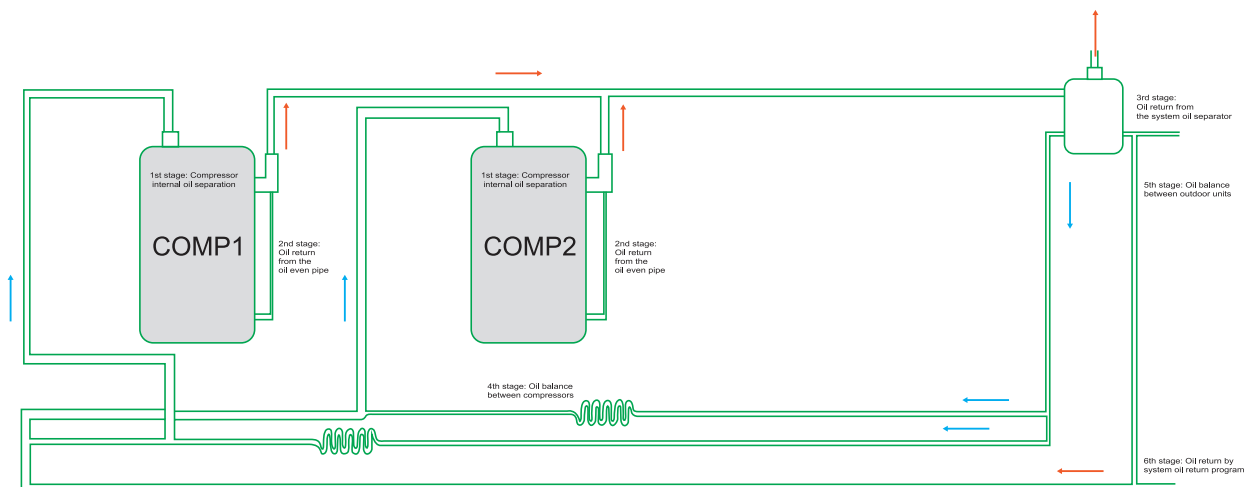
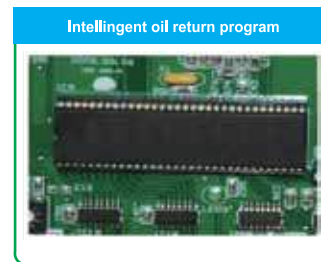
4th stage: Oil balance between compressors



5th stage: Oil balance between outdoor units

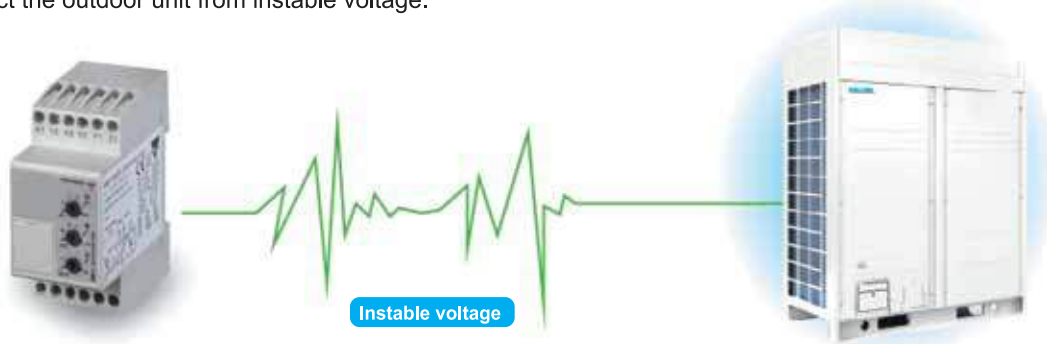


6th stage: Oil return by system oil return program



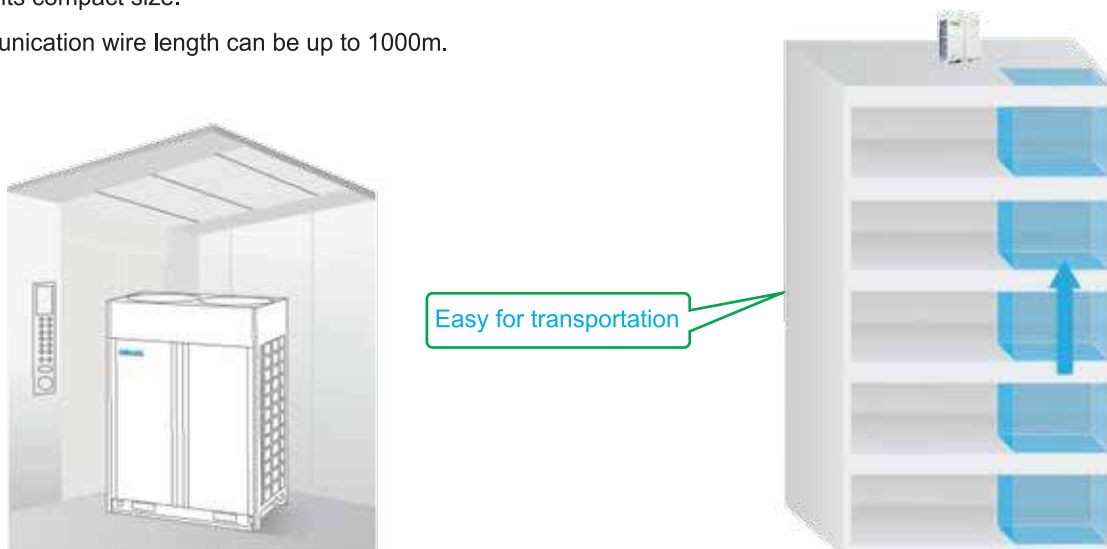
3-Phase Power Protector (Optional)

Protect the outdoor unit from instable voltage.



Easy Installation

- Easy for the outdoor unit to transport to roof floor by elevator due to its compact size.
- Communication wire length can be up to 1000m.














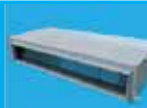


Use 2-Core Shielded Wire As Signal Wire

- Save installation cost.
- Reduce manual works.



Indoor Units Line Up

Capacity (KW)	1-way cassette	2-way cassette	4-way cassette	ROUND-FLOW cassette	4-way cassette (compact type)	Floor standing unit	Floor standing type
							
2.2	●				●		●
2.8	●				●		●
3.6	●				●		●
4.5	●	●			●	●	●
5.6	●	●	●	●		●	●
7.1	●	●	●	●		●	●
8.0		●	●	●		●	●
9.0			●	●		●	
10.0			●	●		●	
11.2			●	●		●	
12.0						●	
12.5			●	●		●	
14.0			●	●		●	
15.0						●	
16.0			●	●		●	

Capacity (KW)	Concealed type	Wall-mounted	Floor Ceiling	Short ceiling concealed ducted unit	Medium ESP ducted unit	High ESP ducted unit	Fresh air processor
							
2.2	●	●		●			
2.8	●	●		●			
3.6	●	●		●			
4.5	●	●	●	●			
5.6	●	●	●	●			
7.1	●	●	●	●	●	●	
8.0	●		●		●	●	
9.0			●		●	●	
10.0					●	●	
11.2			●				
12.0					●	●	
14.0			●				●
15.0					●		
16.0			●				
20.0						●	
22.4							●
25.0						●	
28.0						●	●
45.0						●	●
56.0						●	●

1-way Cassette



Controller				
Standard	Optional			
Wireless	Wireless	Wired	Centralized	

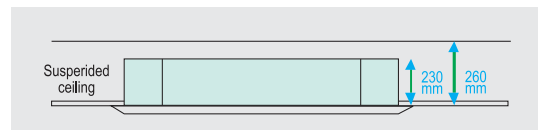
Features

Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard (built-in)	Standard (built-in)	Standard	Optional

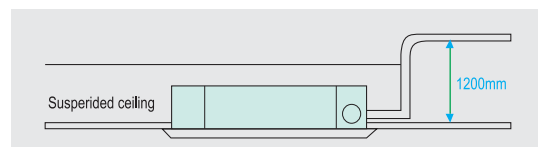
Slim body, easy to install

Has slim body with 250mm height, it is specially suitable for low suspended ceiling rooms.



Built-in with drainage pump

Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



Specification

Model name	Power type	Capacity				Motor input	Air flow	Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller	
		Cooling		Heating						Packing	Body	Panel packing	Panel	Net	Gross	Gas	Liquid	Drain		
		kW	kBtu/h	kW	kBtu/h	kW	m ³ /h	CFM	dB(A)	Pa	mm	mm	mm	mm	kg	kg	mm	mm	mm	
MMV-V22Q1/HR1-B	50Hz	2.2	7.5	2.5	8.5	0.04	520	306	32~36	/	1160x275x655	994x250x532	1090x65x540	1070x50x520	24/3.6	30/5.0	Φ9.53	Φ6.35	OD Φ25	Remote controller
MMV-V28Q1/HR1-B	50Hz	2.8	9.5	3.2	10.9															
MMV-V36Q1/HR1-B	50Hz	3.6	12.2	4.0	13.6															
MMV-V45Q1/HR1-B	50Hz	4.5	15.3	5.0	17.0	0.05	610	360	36~41	/	1160x315x655	994x290x532	1090x65x540	1070x50x520	26/3.6	32/5.0	Φ12.7	Φ6.35	OD Φ25	Remote controller
MMV-V56Q1/HR1-B	50Hz	5.6	19.1	6.3	21.4	0.07	750	440	35~41	/	1170x305x690	1304x290x572	1390x70x560	1380x50x520	34/3.6	39/5.0				
MMV-V71Q1/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.09	950	550	38~45	/										

Notes:

1. Power supply: 220~240V/1PH for 50Hz.

2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB.

3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

4. The above data may be changed without notice for future improvement on quality and performance.

2-way Cassette



Controller				
Standard	Optional			
Wireless	Wireless	Wired		Centralized

Features

• Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard (built-in)	Standard (built-in)	Standard	/

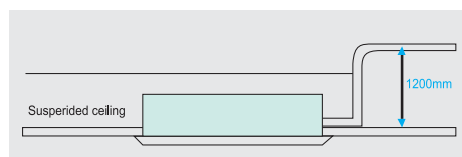
• 2 way air direction

Two direction air flow, flexibly install in various rooms or hallway



• Built-in with drainage pump

Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.



Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling	Heating	kW	kBtu/h		m³/h	CFM			mm	mm	mm	mm	Net	Gross	Gas	Liquid	Drain	
MMV-V45Q2/HR1-B	50Hz	4.5	15.3	5.0	17	0.07	800	470	36~42	/	1215x365x630	1068x310x517	1235x70x655	1205x50x630	33/6.5	36/8.5	Ø12.7	Ø6.35	Remote controller	
MMV-V56Q2/HR1-B	50Hz	5.5	19.1	6.3	21.4															
MMV-V71Q2/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.10	1120	650	40~46	/	1455x365x630	1308x310x517	1475x70x655	1445x50x630	40/7.5	47/10.0	Ø15.9	Ø9.53		
MMV-V80Q2/HR1-B	50Hz	8.0	27.2	9.0	30.7															

Notes:

1. Power supply: 220~240V/1PH for 50Hz;
2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.

4-way Cassette / Round-flow Cassette



Controller				
Standard	Optional			
Wireless	Wireless	Wired	Centralized	

Features

• Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard (built-in)	Standard (built-in)	Standard	Optional

• 4 ways air delivering

Air flow is soft and smooth, air can be delivered to every corner without dead angle, it makes the room temperature distribution more balance.



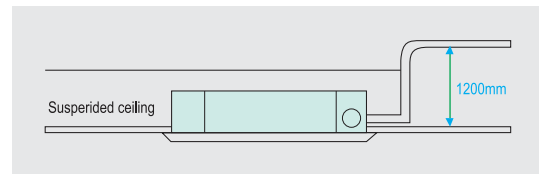
• 360° round panel is optional.



• Built-in with drainage pump

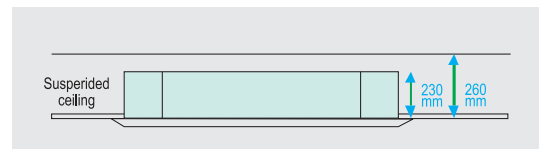
Built-in with low noise long life drainage pump, Pumping head is 1200mm, flexible for drainage pipe design.

Note : The pumping head of 4-way cassette unit (compact type) is 700mm.



• Slim body, easy to install

Has slim body with 230mm height, it is specially suitable for low suspended ceiling rooms.



• DC fan motor is optional

Specification

4-way Cassette Unit

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller		
		Cooling		Heating			m³/h	CFM			dB(A)	Pa	Packing	Body	packing	Panel	Net	Gross	Gas		Liquid	Drain
		kW	kBtu/h	kW	kBtu/h																	
MMV-V56Q/HR1-C	50Hz	5.6	19.1	6.3	21.4	0.054	810	470	35-39	/	920x265x985	833x232x900	1030x105x1030	950x50x950	24	30	Φ12.7	Φ6.35	ODΦ25	Remote controller		
MMV-V56Q/HNR1-C	60Hz														24	30						
MMV-V71Q/HR1-C	50Hz	7.1	24.2	8.0	27.2	0.093	1200	700	36-39	/	920x265x985	833x232x900	1030x105x1030	950x50x950	24	30	Φ15.9	Φ9.53	ODΦ25	Remote controller		
MMV-V71Q/HNR1-C	60Hz														24	30						
MMV-V80Q/HR1-C	50Hz	8	27.2	8.8	30	0.16	1600	940	37-41	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.53	ODΦ25	Remote controller		
MMV-V80Q/HNR1-C	60Hz														28.5	35						
MMV-V90Q/HR1-C	50Hz	9	30.7	10.0	34.1	0.16	1600	940	37-41	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.53	ODΦ25	Remote controller		
MMV-V90Q/HNR1-C	60Hz														28.5	35						
MMV-V100Q/HR1-C	50Hz	10	34.1	11.0	37.5	0.16	1600	940	37-41	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.53	ODΦ25	Remote controller		
MMV-V100Q/HNR1-C	60Hz														28.5	35						
MMV-V112Q/HR1-C	50Hz	11.2	38.2	12.5	42.6	0.16	1600	940	37-41	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.53	ODΦ25	Remote controller		
MMV-V112Q/HNR1-C	60Hz														28.5	35						
MMV-V125Q/HR1-C	50Hz	12.5	42.6	14.0	47.7	0.16	1600	940	37-41	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.53	ODΦ25	Remote controller		
MMV-V125Q/HNR1-C	60Hz														28.5	35						
MMV-V140Q/HR1-C	50Hz	14.0	47.7	15.0	51.1	0.16	1600	940	37-41	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.53	ODΦ25	Remote controller		
MMV-V140Q/HNR1-C	60Hz														28.5	35						
MMV-V160Q/HR1-C	50Hz	16.0	54.5	17.0	58	0.16	1600	940	37-41	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.53	ODΦ25	Remote controller		
MMV-V160Q/HNR1-C	60Hz														28.5	35						

4-way Cassette Unit (Compact type)

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller		
		Cooling		Heating			m³/h	CFM			dB(A)	Pa	Packing	Body	packing	Panel	Net	Gross	Gas		Liquid	Drain
		kW	kBtu/h	kW	kBtu/h																	
MMV-V22Q4/HR1-C	50Hz	2.2	7.5	2.5	8.5	0.038	447	263	22-34	/	745x375x675	653x267x585	750x95x750	650x30x650	17.5	25	Φ9.53	Φ6.35	ODΦ25	Remote controller		
MMV-V22Q4/HNR1-C	60Hz														17.5	25						
MMV-V28Q4/HR1-C	50Hz	2.8	9.5	3.2	10.9	0.038	447	263	22-34	/	745x375x675	653x267x585	750x95x750	650x30x650	17.5	25	Φ9.53	Φ6.35	ODΦ25	Remote controller		
MMV-V28Q4/HNR1-C	60Hz														17.5	25						
MMV-V36Q4/HR1-C	50Hz	3.6	12.2	4.0	13.6	0.040	515	303	27-38	/	745x375x675	653x267x585	750x95x750	650x30x650	17.5	25	Φ12.7	Φ6.35	ODΦ25	Remote controller		
MMV-V36Q4/HNR1-C	60Hz														17.5	25						
MMV-V45Q4/HR1-C	50Hz	4.5	15.3	5.0	17	0.040	515	303	27-38	/	745x375x675	653x267x585	750x95x750	650x30x650	17.5	25	Φ12.7	Φ6.35	ODΦ25	Remote controller		
MMV-V45Q4/HNR1-C	60Hz														17.5	25						

Round-flow Cassette

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller		
		Cooling		Heating			m³/h	CFM			dB(A)	Pa	Packing	Body	packing	Panel	Net	Gross	Gas		Liquid	Drain
		kW	kBtu/h	kW	kBtu/h																	
MMV-V56QR/HR1	50Hz	5.6	19.1	6.3	21.4	0.09	860	500	32~39	/	920x265x985	833x232x900	1030x105x1030	950x50x950	24	30	Φ12.7	Φ6.5	Φ25	Remote controller		
MMV-V71QR/HR1	50Hz														24	30						
MMV-V80QR/HR1	50Hz	8.0	27.2	8.8	30	0.18	1200	700	35~39	/	920x265x985	833x232x900	1030x105x1030	950x50x950	24	30	Φ15.9	Φ9.52	Φ25	Remote controller		
MMV-V90QR/HR1	50Hz														24	30						
MMV-V90QR/HR1	50Hz	9.0	30.7	10	34.1	0.18	1400	820	37~41	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.52	Φ25	Remote controller		
MMV-V100QR/HR1	50Hz														28.5	35						
MMV-V100QR/HR1	50Hz	10	34.1	11	37.5	0.18	1400	820	37~41	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.52	Φ25	Remote controller		
MMV-V112QR/HR1	50Hz														28.5	35						
MMV-V112QR/HR1	50Hz	11.2	38.2	12.5	42.6	0.27	1800	1050	38~42	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.52	Φ25	Remote controller		
MMV-V125QR/HR1	50Hz														28.5	35						
MMV-V125QR/HR1	50Hz	12.5	42.6	14	47.7	0.27	1800	1050	38~42	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.52	Φ25	Remote controller		
MMV-V140QR/HR1	50Hz														28.5	35						
MMV-V140QR/HR1	50Hz	14	47.7	15	51.1	0.27	1800	1050	38~42	/	920x310x985	833x286x900	1030x105x1030	950x50x950	28.5	35	Φ15.9	Φ9.52	Φ25	Remote controller		
MMV-V160QR/HR1	50Hz														28.5	35						

Notes: 1. Power supply: 220~240V/1PH/50Hz:

2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB:

3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions:

4. The above data may be changed without notice for future improvement on quality and performance.

Floor standing unit



Controller				
Standard	Optional			
Wireless	Wireless	Wired		Centralized

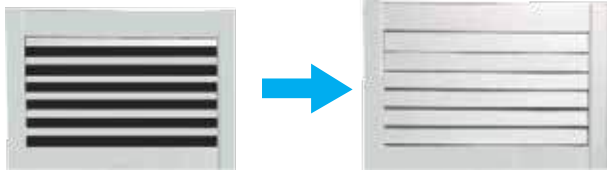
Features

● Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard (built-in)	/	Standard	Optional

● Anti-dust design

When unit is off, the louvers will close automatically .



● 3 dimensional air supply

Two step motor are built in, the air can be easily delivered to every corner.

Specification

Floor Standing Unit

Model name	Power type	Capacity				Motor input kW	Air flow m³/h	Sound Level dB(A)	ESP Pa	Dimension (WxHxD)		Weight		Connecting pipe			Standard controller
		Cooling		Heating						Body mm	Packing mm	Body kg	packing kg	Gas mm	Liquid mm	Drain mm	
MMV-V45F/HR1	50Hz	4.5	15.3	5	17.0	0.1	920	48	/	528x1760x271	645x1940x380	38.5	49.5	Φ12.7	Φ6.35	Φ20	Remote controller
MMV-V56F/HR1	50Hz	5.6	19	6.3	21.4												
MMV-V71F/HR1	50Hz	7.1	24	8	27.2												
MMV-V80F/HR1	50Hz	8	27.2	9	30.6												
MMV-V90F/HR1	50Hz	9	30.7	10	34.0												
MMV-V100F/HR1	50Hz	10	34.1	11	37.4	0.2	1620	53	613x1929x379	745x2080x510	56	72.5	Φ15.9	Φ9.53	Φ25		
MMV-V112F/HR1	50Hz	11.2	38	12.4	42.2												
MMV-V125F/HR1	50Hz	12.5	42.5	13.9	47.3												
MMV-V140F/HR1	50Hz	14	47.6	15.5	52.7												
MMV-V160F/HR1	50Hz	16	54.4	17.8	60.5												

Notes:1. Power supply: 220~240V/1PH/50Hz;




2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB;

3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions;

4. The above data may be changed without notice for future improvement on quality and performance.

Floor standing unit



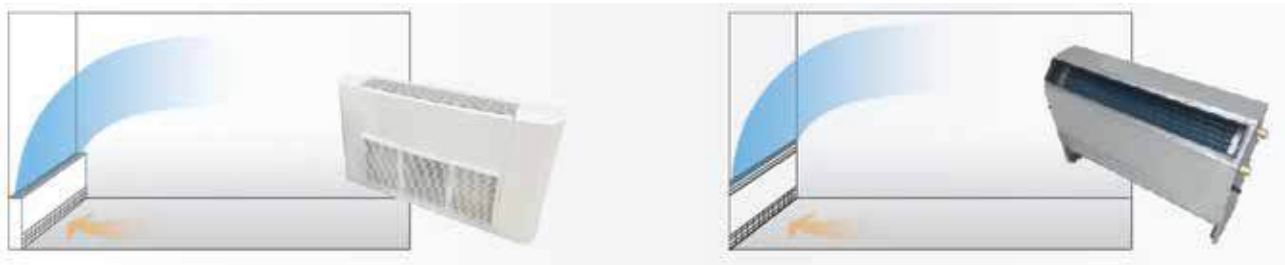
Controller			
Standard	Optional		
Wired	Wired	Wireless	Centralized
			

Features

- **Accessories**

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard (built-in)	/	Standard	Optional

- **Tow type for option**



Floor standing type
(Installed on the floor)

Concealed type
(concealed in perimeter wall)

- **Excellent solution for installing beneath the window and provide comfortable environment.**
- **Convenient maintenance and efficiently eliminate noise because of special installation.**

Short Ceiling Concealed Ducted Unit



Controller			
Standard	Optional		
Wired	Wired	Wireless	Centralized
			

Features

● Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Optional	Standard (built-in)	Optional	Standard	Optional

● Short body, easy to install.

Has short body , minimum 700mm width , it is specially suitable for installation location in entrance ceiling of hotel room. Low noise and light Weight.

● Drain pump is optional

Pumping head is 750mm.

● DC fan motor is optional

● Big air flow low noise centrifugal fan wheel

Big air flow low noise centrifugal fan blade with special air tunnel system, and the unique shock absorption measures, making this series ducted units' running noise is as low as 24 dB(A), let users to enjoy the comfort, sleep without any disturbance.



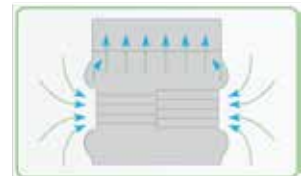
● Special resin material fan wheel.



● All vanes are dislocation distribution to offset sound wave, so that the noise can be reduced.



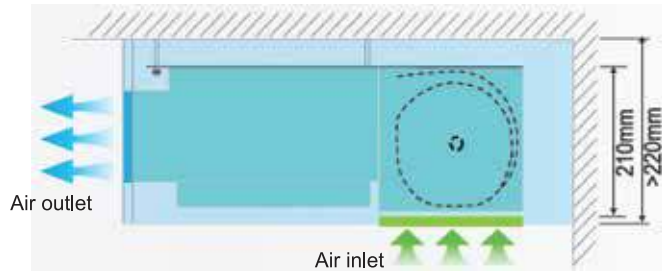
● High efficiency low noise motor, motor and support frame with rubber ring isolation, can absorb vibration and reduce noise.



● Air inlet of fan wheel casing is arch curved design; it can reduce air flow's disturbance, make it flow smoother to reduce noise.

- **Slim body, easy to install**

Has slim body with 210mm height, it is specially suitable for low suspended ceiling rooms.



Specification

Model name	Power type	Capacity				Motor input	Air flow		Sonud Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m ³ /h	CFM			Packing	Body	Packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h															
MMV-V22TA/HR1-C	50Hz	2.2	7.5	2.5	8.5	0.05	450	260	24~29	30	910x240x510	814x210x457	/	/	16	18.5	Φ9.53	OD Φ25	Wired controller	
MMV-V22TA/HNR1-C	60Hz														16	18.5				
MMV-V28TA/HR1-C	50Hz	2.8	9.5	3.2	10.9	0.07	550	324	25~32	30	910x240x510	814x210x457	/	/	16	18.5	Φ6.35	OD Φ25	Wired controller	
MMV-V28TA/HNR1-C	60Hz														16.5	19				
MMV-V36TA/HR1-C	50Hz	3.6	12.2	4	13.6	0.08	620	360	32~37	30	910x240x510	814x210x457	/	/	16.5	19	Φ12.7	OD Φ25	Wired controller	
MMV-V36TA/HNR1-C	60Hz														16.5	19				
MMV-V45TA/HR1-C	50Hz	4.5	15.3	5	17	0.09	800	520	28~38	30	1110x240x510	1010x210x467	/	/	21	24	Φ15.9	Φ9.53	Wired controller	
MMV-V45TA/HNR1-C	60Hz														25.5	28.5				
MMV-V56TA/HR1-C	50Hz	5.6	19.1	6.3	21.4	0.11	1000	640	30~39	30	1310x240x510	1214x210x467	/	/	25.5	28.5	Φ15.9	Φ9.53	Wired controller	
MMV-V56TA/HNR1-C	60Hz														25.5	28.5				
MMV-V71TA/HR1-C	50Hz	7.1	24.2	8	27.2	0.11	1000	640	30~39	30	1310x240x510	1214x210x467	/	/	25.5	28.5	Φ15.9	Φ9.53	Wired controller	
MMV-V71TA/HNR1-C	60Hz														25.5	28.5				

Notes: 1. Power supply: 220~240V/1PH for 50Hz; 208~230V/1PH for 60Hz.

2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB.

3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

4. The above data may be changed without notice for future improvement on quality and performance.

Medium Static Pressure Ducted Unit



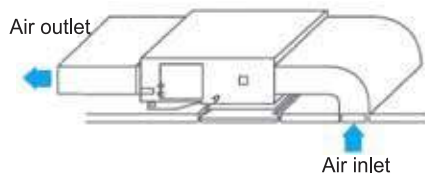
Controller			
Standard	Optional		
Wired	Wired	Wireless	Centralized
			

Features

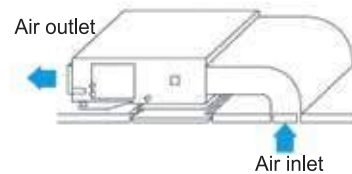
Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Standard	Standard (built-in)	Optional	Standard	Optional

Standard ESP is 70Pa, 30Pa can be customized.



70Pa ESP, suitable for long distance air supply



30Pa (can be set on site), suitable for low noise requirement rooms

Convenient in drainage pipe installation

Reserved drainage pipe outlet holes on left side and right side, installer can choose the outlet holes on site as per actual conditions, flexible for drainage pipe installation.



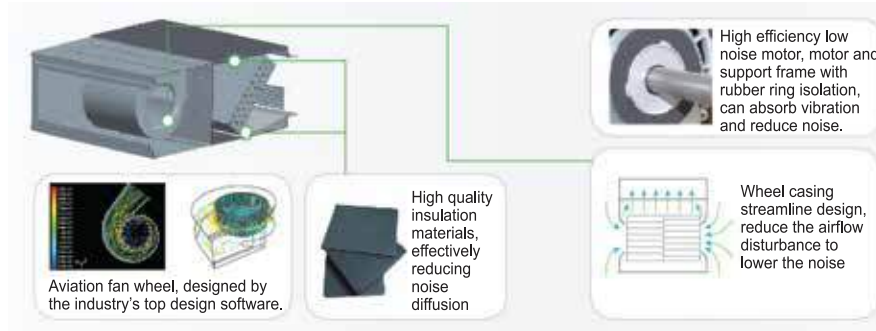
Left drainage hole



Right drainage hole

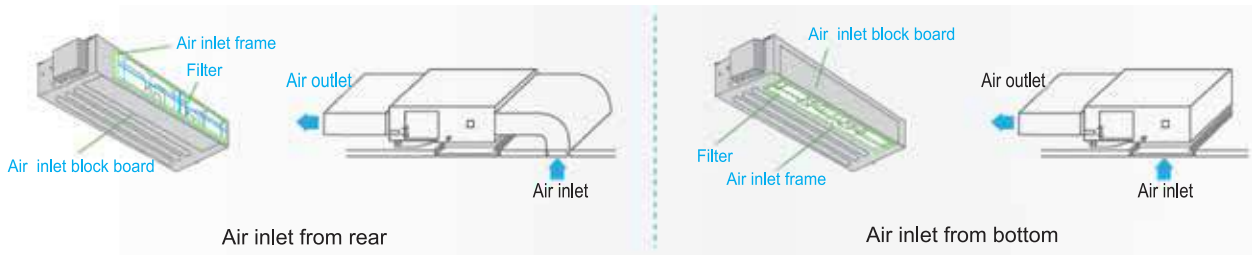
● Whole unit low noise design, silent operation

Using multiple noise reduction technology, including the design of high efficiency low noise motor, aviation fan wheel, low vibration wheel casing, unique design, the inner wall configuration with high quality insulation materials, and so on, to make the units running in a low noise condition.



● Two air return installation methods

Air return from rear or bottom is easy to change on site, convenient for installation.



● DC fan motor is optional

Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m ³ /h	CFM			Packing	Body	Packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h															
MMV-V71TH/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.30	1220	720	36-41	70	1255x325x720	1209x260x680			33	37				Wired controller
MMV-V71TH/HNR1-B	60Hz																			
MMV-V80TH/HR1-B	50Hz	8.0	27.2	9.0	30.7										46	50	Φ15.9	Φ9.53	ODΦ25	
MMV-V80TH/HNR1-B	60Hz																			
MMV-V90TH/HR1-B	50Hz	9.0	30.2	10.0	34.1		1850	1080	38-43						46	50				
MMV-V90TH/HNR1-B	60Hz																			
MMV-V100TH/HR1-B	50Hz	10.0	34.1	11.0	37.5										46	50				
MMV-V100TH/HNR1-B	60Hz																			
MMV-V120TH/HR1-B	50Hz	12.0	40.9	13.0	44.3										46	50				
MMV-V120TH/HNR1-B	60Hz																			
MMV-V150TH/HR1-B	50Hz	15.0	51.1	17.0	58		2000	1170	40-44						46	50				
MMV-V150TH/HNR1-B	60Hz																			

Notes: 1. Power supply: 220~240V/1PH for 50Hz: 208~230V/1PH for 60Hz
 2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 4. The above data may be changed without notice for future improvement on quality and performance.

High Static Pressure Ducted Unit



Controller			
Standard	Optional		
Wired	Wired	Wireless	Centralized
			

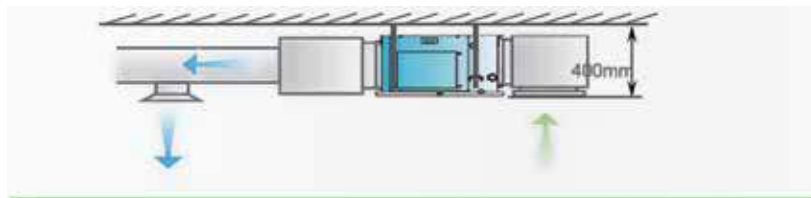
Features

- **Accessories**

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Standard	Standard (built-in)	Optional	Standard	/

- **Slim body, saving suspended ceiling spaces**

Slim body, saving suspended ceiling spaces.



- **Can be used with various diffusers**

Used with various diffusers, meet for different kinds of decoration.



Round diffuser



Spiral diffuser



Square diffuser



Linear diffuser

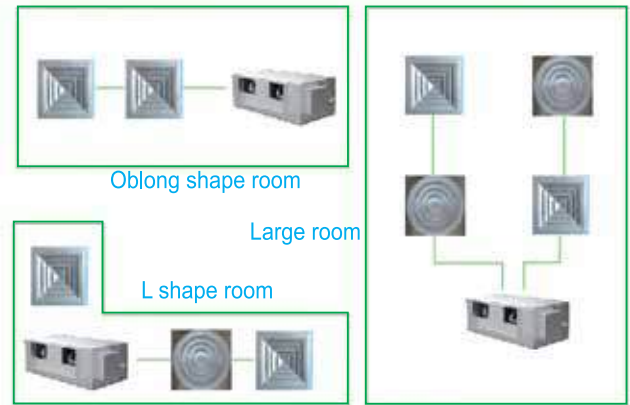
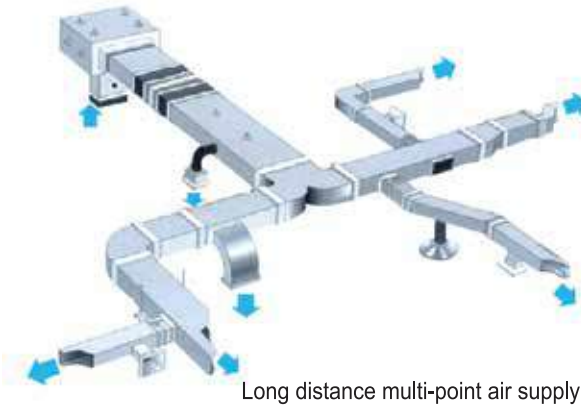


Rectangular diffuser

• High static pressure

Big air flow with high static pressure, easy for large rooms duct design.
Suitable for different shape of rooms.

High static pressure ducted unit



Specification

Model name	Power type	Capacity				Motor input kW	Air flow		Sound Level dB(A)	ESP Pa	Dimension (W×H×D)				Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m³/h	CFM			Packing mm	Body mm	Packing mm	Panel mm	Net kg	Gross kg	Gas mm	Liquid mm	Drain mm	
		kW	kBtu/h	kW	kBtu/h															
MMV-V71TH/HR1-B	50Hz	7.1	24.2	7.8	26.6	0.34	1500	880	40-42	150	1490x325x720	1445x260x680	/	/	46	50	Φ15.9	Φ9.53	ΦD Φ25	Wired controller
MMV-V71TH/HNR1-B	60Hz																			
MMV-V80TH/HR1-B	50Hz																			
MMV-V80TH/HNR1-B	60Hz																			
MMV-V90TH/HR1-B	50Hz																			
MMV-V90TH/HNR1-B	60Hz																			
MMV-V100TH/HR1-B	50Hz	10.0	34.1	11.0	37.5	0.45	2300	1350	44-52	150	1245x445x655	1190x370x620	/	/	46	50	Φ15.9	Φ9.53	ΦD Φ25	Wired controller
MMV-V100TH/HNR1-B	60Hz																			
MMV-V120TH/HR1-B	50Hz																			
MMV-V120TH/HNR1-B	60Hz																			
MMV-V150TH/HR1-B	50Hz																			
MMV-V150TH/HNR1-B	60Hz																			
MMV-V200TH/HR1-B	50Hz	20.0	68.2	22.0	75.0	1.2	4000	2350	45-53	150	1510x580x870	1465x448x811	/	/	102	113	Φ22.2	Φ12.7	OD Φ30	Wired controller
MMV-V200TH/HNR1-B	60Hz																			
MMV-V250TH/HR1-B	50Hz																			
MMV-V250TH/HNR1-B	60Hz																			
MMV-V280TH/HR1-B	50Hz																			
MMV-V280TH/HNR1-B	60Hz																			
MMV-V450TH/HZR1-B	50Hz	45.0	153.5	50.0	170.6	1.6	6000	3520	60	200	2267x840x1050	2165x676x916	/	/	222	260	Φ28.6	Φ18.9	OD Φ32	Wired controller
MMV-V450TH/HXR1-B	60Hz																			
MMV-V560TH/HZR1-B	50Hz																			
MMV-V560TH/HXR1-B	60Hz																			

- Notes: 1. 45kW & 56kW units' power supply are 380~415V/3PH for 50Hz and 208~230V/3PH for 60Hz, the others' power supply is 220~240V/1PH for 50Hz and 208~230V/1PH for 60Hz
 2. Cooling test condition: Indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
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Wall Mounted Unit



84# panel



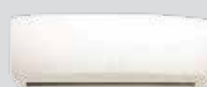
87# (optional)



107# (optional)



150# (optional)



155# (optional)



156# (optional)

Controller			
Standard	Optional		
Wireless	Wireless	Wired	Centralized

Features

● Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard (built-in)	/	Standard	/

● Air supply smoothly

Cross flow fan, In Cooling mode, cold air is blown from horizontal. In heating mode, warm air is blown from vertical.

● 6 panels can be chosen, suitable for all kinds of decoration style

Simple, elegant, stylish, mirror design, suitable for all kinds of decoration style.

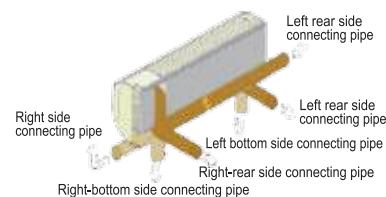


● Flexible in installation

Refrigerant pipe can be connected from 3 directions.

● Wide adjustable angle air supply

65° Wide angle air supply, louver angle can be fixed or set to auto-swing by controller.



Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (W×H×D)				Body Weight		Connecting pipe			Standard controller
		Cooling		Heating			m³/h	CFM			Packing	Body	packing	Panel	Net	Gross	Gas	Liquid	Drain	
		kW	kBtu/h	kW	kBtu/h															
MMV-V22G/HR1-B2	50Hz	2.2	7.5	2.5	8.5	0.033	540	320	24-33	/	983x377x300	900X296X216	/	/	12	14	Φ9.53	Φ6.35	OD Φ20	Remote controller
MMV-V22G/HNR1-B2	60Hz																			
MMV-V28G/HR1-B2	50Hz	2.8	9.5	3.2	10.9	0.033	540	320	24-33	/	983x377x300	900X296X216	/	/	12	14	Φ9.53	Φ6.35	OD Φ20	Remote controller
MMV-V28G/HNR1-B2	60Hz																			
MMV-V36G/HR1-B2	50Hz	3.6	12.2	4.0	13.6	0.041	600	360	24-33	/	983x377x300	900X296X216	/	/	12	14	Φ12.7	Φ6.35	OD Φ20	Remote controller
MMV-V36G/HNR1-B2	60Hz																			
MMV-V45G/HR1-B2	50Hz	4.5	15.3	5.0	17	0.041	600	360	33-40	/	983x377x300	900X296X216	/	/	12	14	Φ12.7	Φ6.35	OD Φ20	Remote controller
MMV-V45G/HNR1-B2	60Hz																			
MMV-V56G/HR1-B2	50Hz	5.6	19.1	6.2	21.1	0.052	920	540	35-43	/	1145x392x318	1080x304x221	/	/	16	18	Φ15.9	Φ9.53	OD Φ20	Remote controller
MMV-V56G/HNR1-B2	60Hz																			
MMV-V71G/HR1-B2	50Hz	7.1	24.2	7.8	26.6	0.052	920	540	35-43	/	1145x392x318	1080x304x221	/	/	16	18	Φ15.9	Φ9.53	OD Φ20	Remote controller
MMV-V71G/HNR1-B2	60Hz																			

- Notes: 1. Power supply: 220~240V/1PH for 50Hz; 208~230V/1PH for 60Hz
 2. Cooling test condition: Indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB
 3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
 4. The above data may be changed without notice for future improvement on quality and performance.



Floor Ceiling Unit



Controller				
Standard	Optional			
Wireless	Wireless	Wired		Centralized

Features

• Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
/	Standard	Standard (built-in)	Optional	Standard	/

• Suspended installation, saves valuable floor space

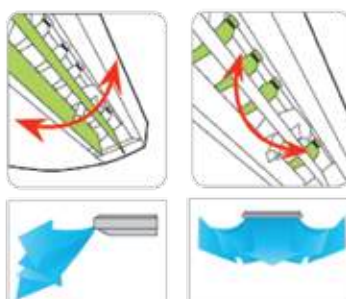
- The use of ark effect: need to take up valuable floor position.
- The use of a hanging type indoor machine effect: Due to the adoption of a suspended installation, without occupying the ground position, will be valuable floor space to save up to add a set of dining table.



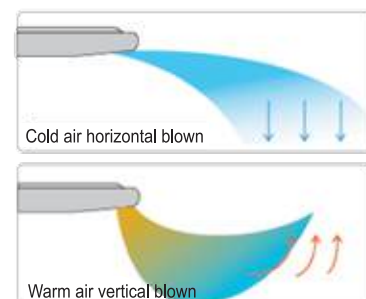
• Wide angle air supply



- Configured with low noise high performance centrifugal fans, has big air flow and long distance air supply.

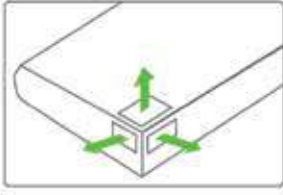


- 3 dimensional air supply, wide air supply angle, easily supply to every corners.

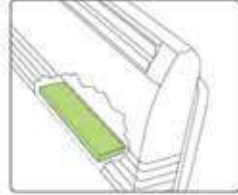


- In Coling mode, cold air is blown from horizontal. In heating mode, warm air is blown from vertical.

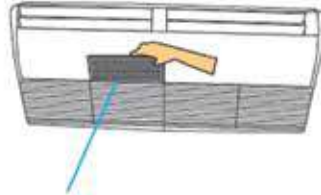
Easy for installation



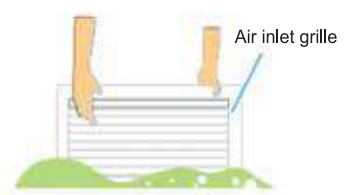
Refrigerant pipe can be connected from 3 directions.



Electrical control box is in the rear of fan wheel casing, easy to remove, convenient for maintenance.



long term filter can be remove from air inlet grille to clean



Water washable

Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (W×H×D)				Body Weight		Connecting pipe			Standard controller	
		Cooling		Heating			m³/h	CFM			Packing	Body	packing	Panel	Net	Gross	Gas	Liquid	Drain		
		kW	kBtu/h	kW	kBtu/h																mm
MMV-V45LD/HR1-B	50Hz	4.5	15.3	5.0	17	0.06	950	550	37~46	/	1325x770x330	1245x680x240	/	/	/	35	42	Φ12.7	Φ6.35	OD Φ20	Remote controller
MMV-V45LD/HNR1-B	60Hz																				
MMV-V56LD/HR1-B	50Hz	5.6	19.1	6.3	21.4	0.15	1300	760	39~48	/	1325x770x330	1245x680x240	/	/	/	36	42	Φ15.9	Φ9.53	OD Φ25	
MMV-V56LD/HNR1-B	60Hz																				
MMV-V71LD/HR1-B	50Hz	7.1	24.2	8.0	27.2	0.26	2300	1350	45~52	/	1750x770x330	1670x680x240	/	/	/	36	42	Φ15.9	Φ9.53	OD Φ25	
MMV-V71LD/HNR1-B	60Hz																				
MMV-V80LD/HR1-B	50Hz	8.0	27.2	8.8	30	0.375	1500	880	44~50	/	1750x770x330	1670x680x240	/	/	/	38	44	Φ15.9	Φ9.53	OD Φ25	
MMV-V80LD/HNR1-B	60Hz																				
MMV-V90LD/HR1-B	50Hz	9.0	30.7	10.0	34.1	0.26	2300	1350	45~52	/	1750x770x330	1670x680x240	/	/	/	51	58	Φ15.9	Φ9.53	OD Φ25	
MMV-V90LD/HNR1-B	60Hz																				
MMV-V112LD/HR1-B	50Hz	11.2	38.2	12.5	42.6	0.26	2300	1350	45~52	/	1750x770x330	1670x680x240	/	/	/	51	58	Φ15.9	Φ9.53	OD Φ25	
MMV-V112LD/HNR1-B	60Hz																				
MMV-V140LD/HR1-B	50Hz	14.0	47.7	15	51.1	0.26	2300	1350	45~52	/	1750x770x330	1670x680x240	/	/	/	51	58	Φ15.9	Φ9.53	OD Φ25	
MMV-V140LD/HNR1-B	60Hz																				
MMV-V160LD/HR1-B	50Hz	16.0	54.5	17	58	0.26	2300	1350	45~52	/	1750x770x330	1670x680x240	/	/	/	51	58	Φ15.9	Φ9.53	OD Φ25	
MMV-V160LD/HNR1-B	60Hz																				

Notes: 1. Power supply: 220~240V/1PH for 50Hz; 208~230V/1PH for 60Hz

2. Cooling test condition: indoor side 27°C DB, 19°C WB outdoor side 35°C DB. Heating test condition: indoor side 20°C DB, 15°C WB outdoor side 7°C DB

3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.

4. The above data may be changed without notice for future improvement on quality and performance.



Fresh Air Processor



Controller			
Standard	Optional		
Wired	Wired	Wireless	Centralized
			

Features

● Accessories

Plenum box	Air filter	EXV	Drain pump	AC Motor	DC Motor
Standard	Optional	Standard (built-in)	Optional	Standard	/

● Healthy and comfortable

Fresh air is imported, provides a healthy and comfortable living environment.

● 100% Fresh air processing unit

Both fresh air filtration and heating/cooling can be achieved in a single system.

Indoor units and fresh air processing unit can be connected to the same refrigerant system, increase design flexibility and greatly reduce total system costs.

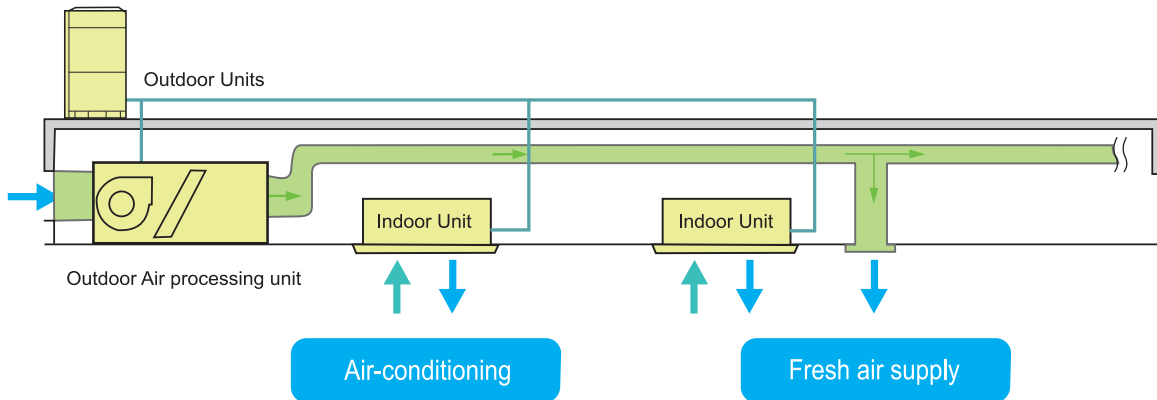
● High external static pressure

External static pressure can be up to 300Pa for more flexible duct applications. The maximum distance of air supply is about 20m and the maximum height of air supply is about 6.5m.

● Innovative air supply technology for excellent room temperature control

Fresh air unit can be connected with other type indoor units(only for 14/22.4/28kw fresh air unit).

Layout Example:



- Notes: 1. When VRF system connect fresh air indoor unit and other type indoor units together, the capacity combination ratio between indoor unit and outdoor unit should within 100%.
2. Fresh air unit capacity can't not bigger than 30% of total indoor units capacity.

Specification

Model name	Power type	Capacity				Motor input	Air flow		Sound Level	ESP	Dimension (WxHxD)				Body Weight		Connecting pipe			Standard controller		
		Cooling		Heating			m³/h	CFM			Packing	Body	packing	Panel	Net	Gross	Gas	Liquid	Drain			
		kW	kBtu/h	kW	kBtu/h																mm	mm
MMV-V140TF/HR1-B	50Hz	14.0	47.7	9.0	30.7	0.45	1400	820	42-48	220	1245x445x655	1190x370x620	/	/	47	51	Φ15.9	Φ9.53	Wired controller			
MMV-V140TF/HNR1-B	60Hz																					
MMV-V224TF/HR1-B	50Hz	22.4	76.4	16.0	54.5	1.2	2000	1170	45-52	220	1510x580x870	1465x448x811										
MMV-V224TF/HNR1-B	60Hz																					
MMV-V280TF/HR1-B	50Hz	28.0	95.5	20.0	68.2	1.2	2800	1640	45-52	220	1510x580x870	1465x448x811										
MMV-V280TF/HNR1-B	60Hz																					
MMV-V450TF/HZR1-B	50Hz	45.0	153.5	31.4	107.1	1.6	4000	3520	58	300	2267x840x1050	2165x676x916										
MMV-V450TF/HXR1-B	60Hz																					
MMV-V560TF/HZR1-B	50Hz	56.0	191.0	39.0	133.0	2.5	6000	4700	62	300	2267x840x1050	2165x676x916										
MMV-V560TF/HXR1-B	60Hz																					

- Notes: 1. 45kW & 56kW units' power supply are 280~415V/3PH for 50Hz and 208~230V/3PH for 60Hz, the others' power supply is 220~240V/1PH for 50Hz and 208~230V/1PH for 60Hz
2. Cooling test condition: Indoor and outdoor side 33°C DB, 28°C WB. Heating test condition: Indoor and outdoor side 0°C DB, -2.9°C WB
3. Sound level: measured at a point 1 m in front of the unit at a height of 1.5 m. During actual operation, these values are normally somewhat higher as a result of ambient conditions.
4. The above data may be changed without notice for future improvement on quality and performance.



Heat Recovery Ventilator



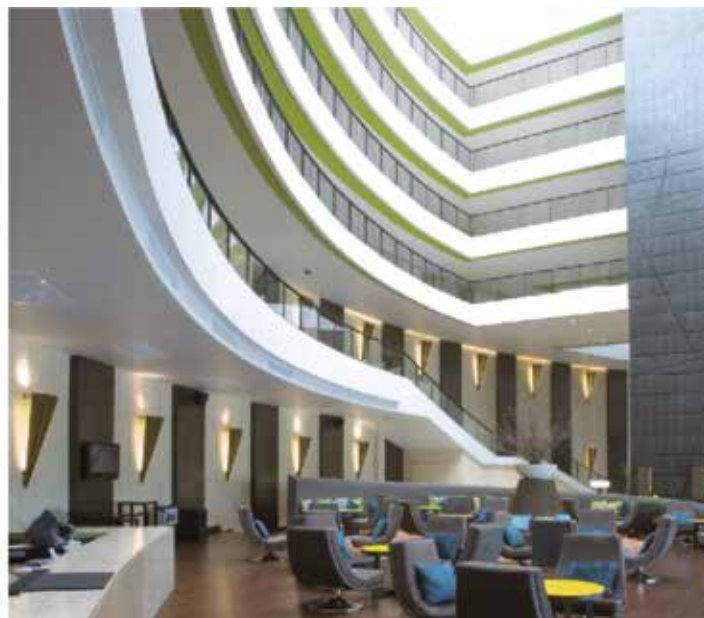
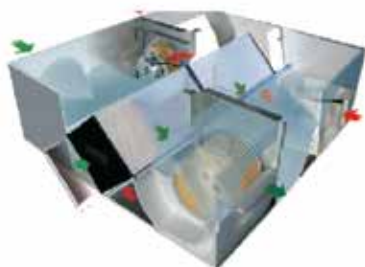
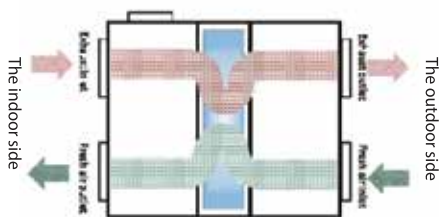
Features

- **How it works**

When air flow formed by exhaust air and outdoor air through the heat exchanged core in cross way, because of temperature difference in the two sides of flat partition board, the heat transmission is occurred.

In summer, outdoor air acquire cooling from air exhaust to decrease environment temperature; In winter, outdoor air acquire heating from air exhaust to increase temperature, that is to say, it realizing the energy recovery during air exhaust process to exchange the heating in heat exchanged core to outdoor air.

Application for : business office buildings, hotels, restaurants, meeting rooms, exhibition centres, leisure centres, workshop and other places.



Specification

Suspended type specification

Model	Air flow	ESP	Power input	Power supply (V)	Temperature exchanging efficiency (%)		Enthalpy exchanging efficiency (%)		Noise dB(A)	Body dimension (WxDxH) mm	Weight kg
	m ³ /h	Pa	W		Cooling	Heating	Cooling	Heating			
QR-X02D	200	75	65	220V/1PH/50Hz	60.0	65.0	50.0	55.0	30	666x580x264	25
QR-X03D	300	75	130		60.0	65.0	50.0	55.0	33	744x599x270	27
QR-X04D	400	80	200		60.0	65.0	50.0	55.0	35	744x804x270	30
QR-X05D	500	80	220		60.0	65.0	50.0	55.0	38	824x904x270	41
QR-X06D	600	90	242		60.0	65.0	50.0	55.0	40	824x904x270	42
QR-X08D	800	100	410		60.0	65.0	50.0	55.0	42	1116x884x388	68
QR-X10D	1000	150	510		60.0	65.0	50.0	55.0	43	1116x1134x388	82
QR-X13D	1300	150	530	380V/3PH/50Hz	60.0	65.0	50.0	55.0	45	1116x1134x388	82
QR-X15DS	1500	160	1000		60.0	65.0	50.0	55.0	51	1600x1200x540	200
QR-X20DS	2000	170	1200		60.0	65.0	50.0	55.0	53	1650x1400x540	225
QR-X25DS	2500	180	2000		60.0	65.0	50.0	55.0	55	1430x1610x540	240
QR-X30DS	3000	200	2100		60.0	65.0	50.0	55.0	57	1600x1700x640	270
QR-X40DS	4000	220	2400		60.0	65.0	50.0	55.0	60	1330x1725x1050	265
QR-X50DS	5000	240	3000		60.0	65.0	50.0	55.0	61	1660x1820x1050	280
QR-X60WS	6000	290	3600		60.0	65.0	50.0	55.0	70	1660x1820x1050	310
QR-X70WS	7000	310	4200		60.0	65.0	50.0	55.0	73	2060x1660x1168	360
QR-X80WS	8000	320	6000		60.0	65.0	50.0	55.0	74	2060x1660x1168	382
QR-X90WS	9000	340	7500		60.0	65.0	50.0	55.0	77	2310x1900x1200	500
QR-X100WS	10000	400	8000		60.0	65.0	50.0	55.0	78	2310x1900x1200	534

- Notes: 1. Cooling test condition: indoor side 27°C DB, 19.5°C WB; outdoor fresh air 35°C DB, 28°C;
 2. Heating test condition: indoor side 21°C DB, 13°C WB outdoor fresh air 5°C DB, 2°C;
 3. The above data may be changed without notice for future improvement on quality and performance.



CONTROLLERS AND SOFTWARE

Wireless Remote Controllers

Wireless remote controllers

- Indoor unit address inquiry
- Indoor unit address setting
- Temperature setting
- Operation mode setting
- Fan speed setting
- Timer function



Wired Controllers

- Bidirectional communication. Indoor unit's operating parameters (error code, temperature, address) can be inquired and displayed on the controller.
- Compact design
- Timer function



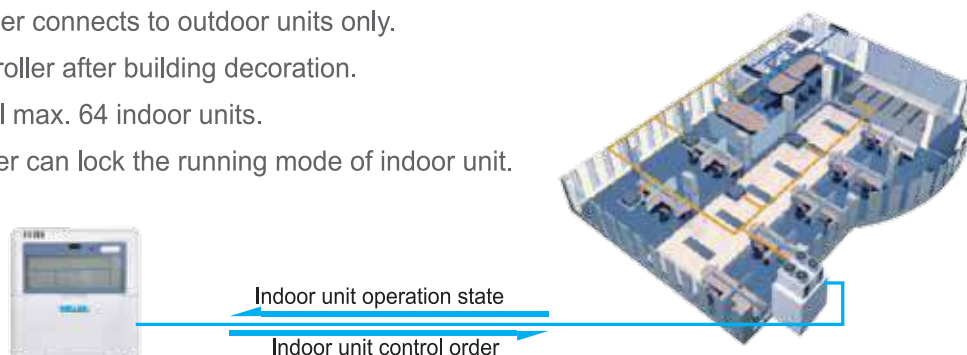
Touch Screen Wired Controller

- APP remote control by WIFI.
- Air filter cleaning reminding function.
- Touch screen with black background and white light
- Ultra thin body and stylish design meet high-end environments.
- On/off, temperature setting, fan speed setting, mode setting, timer and check function.



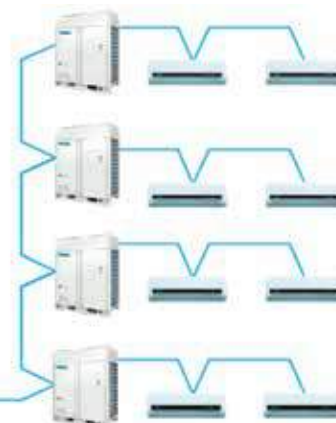
Simple Centralized Controller

- Easy to install. Controller connects to outdoor units only.
- Able to install this controller after building decoration.
- 1 Controller can control max. 64 indoor units.
- Mode lock function, user can lock the running mode of indoor unit.



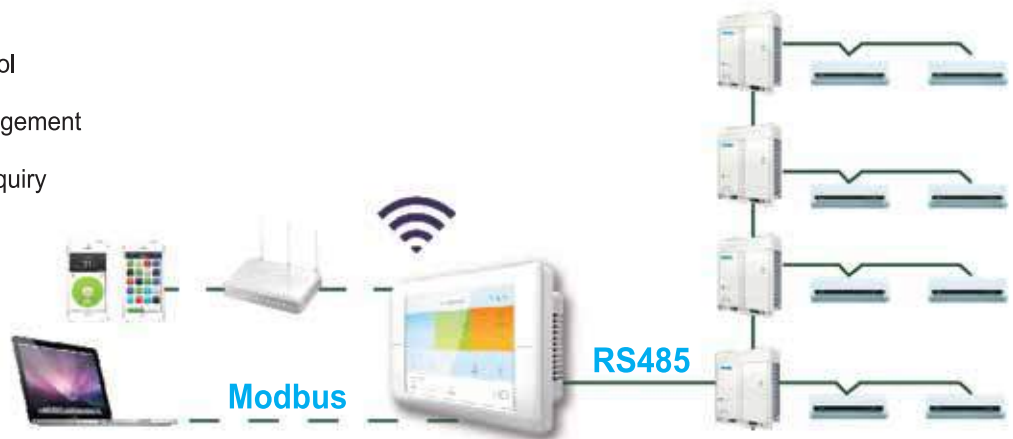
MMV –SMART (Smart centralized control App)

- Available on iOS and Android
- Single unit controller or group control
- Weekly schedule management
- 64 indoor unit can be controlled
- Operation parameter enquiry
- Remote control via cloud server



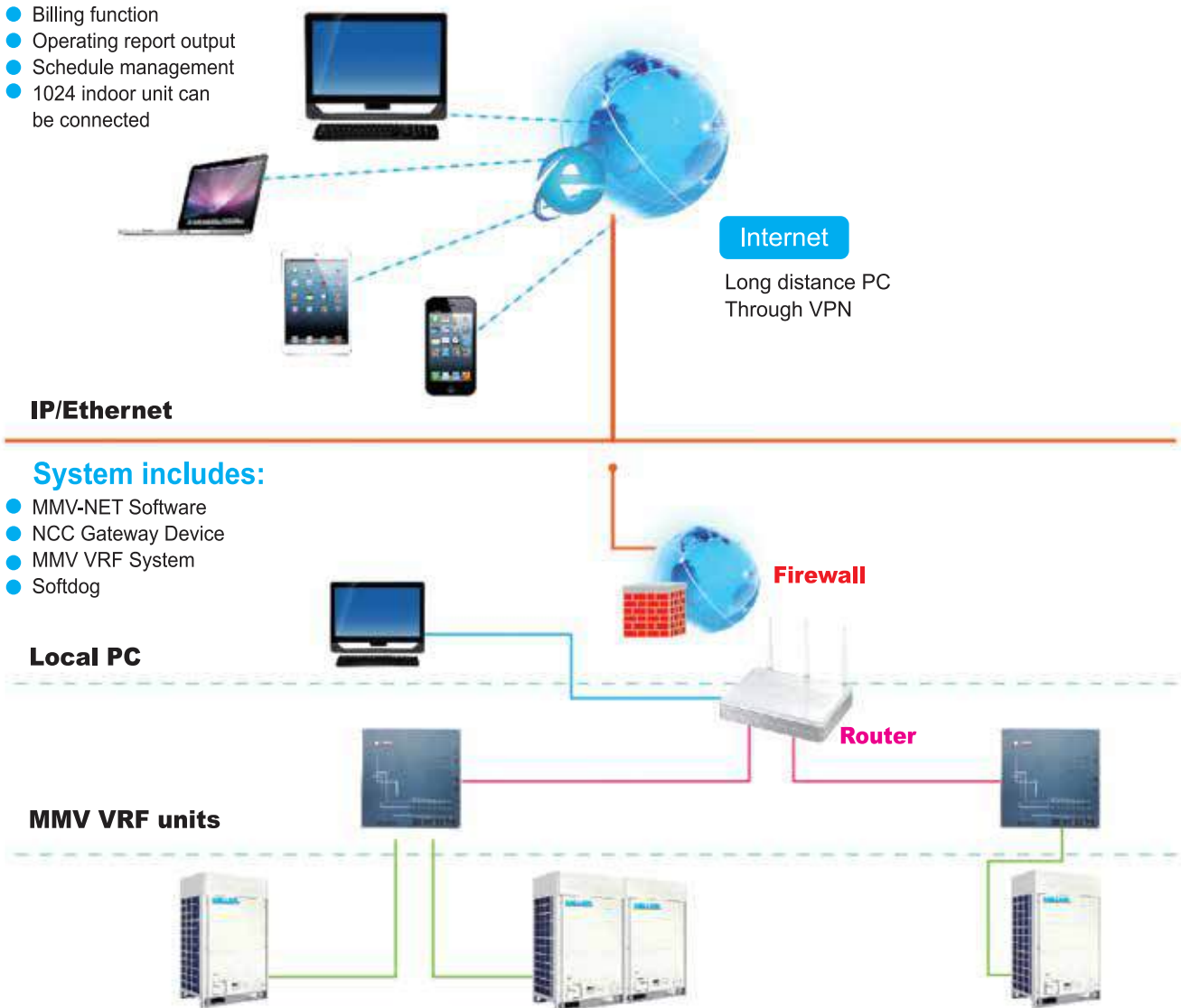
Touch screen centralized controller

- Build in WIFI modular
- Build in Modbus protocol
- Weekly schedule management
- Operation parameter enquiry
- User friendly UI design



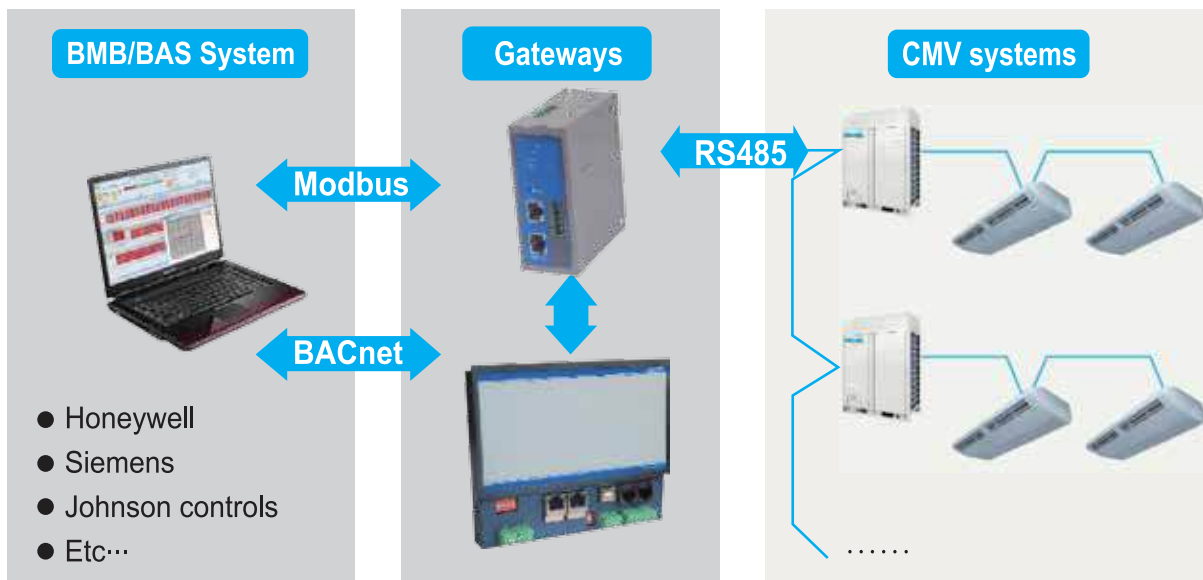
MMV - NET Control Software

- Billing function
- Operating report output
- Schedule management
- 1024 indoor unit can be connected



BMS Gateway

- BACnet gateway
Verified by BACnet International, fully compatible with all BACnet protocol product
- Modbus gateway
Outdoor unit built in with Modbus gateway can be customized



Doctor Kit Pro

- Operating status, error codes inquiry.
- Compressors, sensors, valves operating parameter. real-time monitored and display.
- Commissioning results can be reported.
- Built-in with troubleshooting instruction.

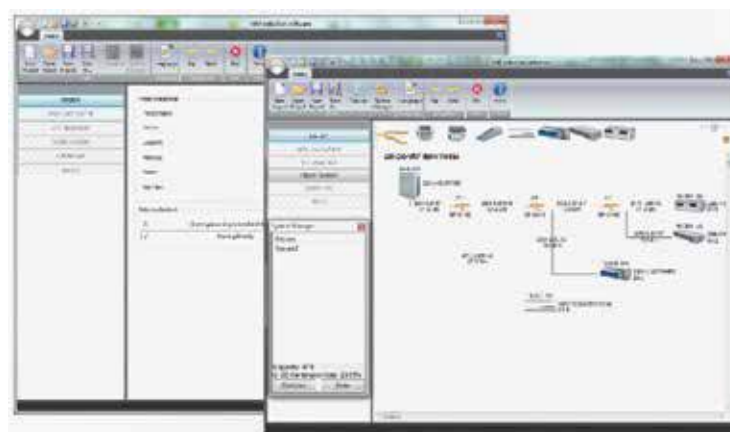


AHU Connection kit

- Miller AHU connection kit is an interface to allow 3rd party manufacturer's AHU connecting to Miller VRF outdoor units.
- 4 basic modules: 5HP/10HP/20HP/30HP
- Can be combined into bigger capacity.



VRF Selection Software Pro





China energy saving products



China Compulsory Certification



ISO9001:2000 International Quality System Certification



China Acknowledged Lab



Hong Kong safety certification



European Community CB certification



America and Canada C-UL certification



American ETL certification



Germany GS certification



Canada certification



Germany EMC certification



Hong Kong Grade 1 energy efficiency label



European Community CE certification



Russia GOST products qualification certification



France LCIE certification



Argentina S certification



South Africa SABS certification



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