



CAPACITY

OPERATION



4HP > 6HP

-20°C > +46°C

High efficiency for true energy savings, low GWP refrigerant to help support decarbonization, compact chassis for simplified product integration: the perfect investment to answer all small to medium building heating and cooling requirements.

Features

PRELIMINARY DATA

Outdoor unit			MCY-MUG0401HSW-E	MCY-MUG0501HSW-E	MCY-MUG0601HSW-E*
Capacity range	HP		4	5	6
Cooling capacity	kW		12.1	14.0	15.5
Heating capacity rated/max	kW		12.1/14.2	14.0/16.0	15.5/17
Power supply	V-ph-Hz		1phase 50Hz 220/230/240V	1phase 50Hz 220/230/240V	1phase 50Hz 220/230/240V
Efficiency	EER rated	W/W	4.14	3.75	3.61
	EER 50% load	W/W	6.86	6.22	5.8
	SEER	η/std	396.2%/9.98	365.4%/9.21	349.0%/8.8
Efficiency	COP rated	W/W	5.08	4.75	4.61
	COP 50% load	W/W	7.04	6.47	6.39
	COP -7°C 100% load	W/W	4.51	4.21	4.09
	SCOP	η/std	205.4%/5.21	194.2%/4.93	189.0%/4.80
Electrical characteristics	Running current	A	C	14.2 - 13.1	17.8 - 16.3
	Power input	kW	C	2.92	3.73
	Running current	A	H	11.9 - 10.9	14.4 - 13.2
	Power input	kW	H	2.38	2.95
Dimensions (h x w x d)	mm		1050x1010x370		
Weight	kg		100		
Compressor	Type		Hermetic twin rotary compressor		
	Motor output	kW	3.75		
Fan unit	Type		Propeller fan (Quantity 1)		
	Motor output	W	100		
	Air volume	m³/h	4560		
External static pressure available	Pa		20		
Refrigerant charge R32	kg		2.4		
	CO ₂ Teq		1.62		
Power supply wiring	MCA	A	23.5		
	MOCP	A	32.0		
Pipe connection	Gas line type - Diameter		Flare - 5/8"		
	Liquid line type - Diameter		Flare - 3/8"		
Connectivity	Max. number of connected indoor units		8		
	Diversity ratio	Min/Max	80/130%		
Sound pressure level	Cooling	dB(A)	52		
	Heating	dB(A)	54		
Sound power level	Cooling	dB(A)	69		
	Heating	dB(A)	71		
Operating temperature range	Cooling	CDB	-5 / 46		
	Heating	CWB	-20 / 15.5		

C= Cooling mode

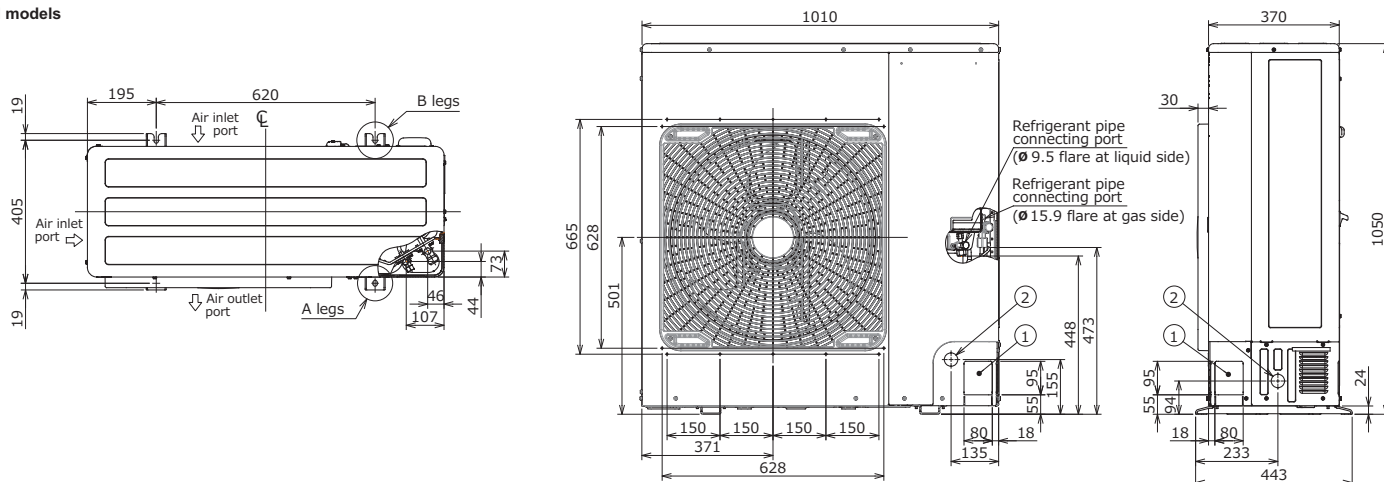
H= Heating mode

* In combination with 4-Way Cassette

Drawings

Unit: mm

All models

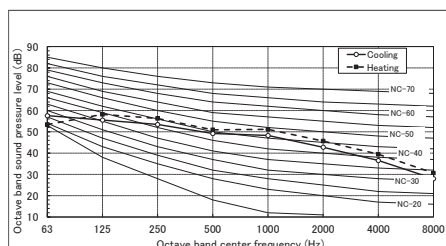


Piping rules

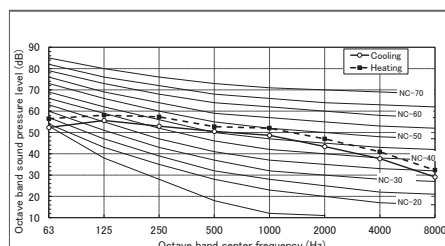
			Allowable value	
			With PMV kit	Without PMV kit
Piping length	Total extension of pipe (Liquid pipe, real length)		250m	300m
	Farthest piping length	Equivalent length	130m	150m
		Real length	100m	120m
	Max equivalent length of main piping		70m	80m
	Max equivalent length of farthest piping form 1st branching		30m	40m
	Max. real length of indoor unit connecting piping		15m	15m
Difference in height	Height between indoor and outdoor units	Upper outdoor unit	Below 10m	
		Lower outdoor unit	50m	50m
	Height between indoor units	Upper outdoor unit	40m	40m

Sound pressure levels

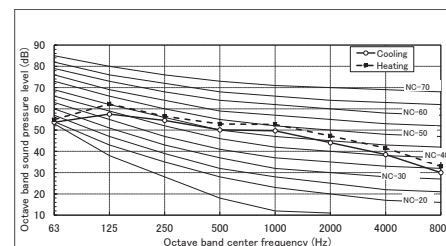
MCY-MUG0401HSW-E



MCY-MUG0501HSW-E



MCY-MUG0601HSW-E



Night mode sound pressure levels

Sound reduction and capacity approximation (reference)

Outdoor unit (base unit)	During low-noise mode dB(A)		Capacity*	
	Cooling	Heating	Cooling	Heating
Model 0401*	46	48	approx. 90 %	approx. 95 %
Model 0501*	46	48	approx. 80 %	approx. 80 %
Model 0601*	47	49	approx. 80 %	approx. 75 %

*Relative to maximum capacity

Accessories

	Name	Model name	Capacity	Appearance	Remarks
Branching joints and headers	Y-shape branching joint	RBM-BY55E	Under 6.4hp		
	4-branching header	RBM-HY1043E	Under 14.2hp		
	8-branching header	RBM-HY1083E	Under 14.2hp		
PM kits	PMV Kits	RBM-PMV0363E	For 0.6 to 1.3hp IDUs		
		RBM-PMV0903E	For 17 to 3hp IDUs		
Shut-off valve (for 2-pipe applications)	Single output	RBM-SV1121HUPE	<4HP		206x385x282 1 output - From 1 to 16 IDU per output
		RBM-SV1801HUPE	4HP ≤ P < 6.4HP		206x385x282 1 output - From 1 to 16 IDU per output
		RBM-SV6701HUPE	6.4HP ≤ P < 24HP		216x385x282 1 output - From 1 to 16 IDU per output
Battery kit		TCB-BT1UPE			Battery kit for flow selector and shut-off valve
Leak detector		TCB-LD1UPE			
Optional PCB of outdoor unit	Power peak-cut control board	TCB-PCDM4E			To limit the capacity of the VRF outdoor unit at 85%, 75%, 70% or 60% load or to stop it. Dry contact
	External master ON/OFF, night mode and priority selection control board	TCB-PCMO4E			Dry contact
	Output control board	TCB-PCIN4E			Operation output: The operation indicator is ON while any indoor unit in the system is operating. Error output: The error indicator is ON when an error occurs on even one of the indoor or outdoor units in the system. Dry contact



CAPACITY

OPERATION



4HP > 5HP

-20°C > +46°C

Compact, efficient, adaptable, energy saver, the side blow VRF is the solution to cool and heat small/medium size buildings.

Features

Outdoor unit		HP	MCY-	MHP0406HT-E	MHP0506HT-E1
Capacity range		HP		4	5
Cooling capacity		kW		12.1	14.0
Heating capacity		kW		12.5	16.0
Power supply		V-ph-Hz		1 phase 50Hz 220/230/240V	1 phase 50Hz 220/230/240V
Efficiency	EER rated	W/W		3.73	3.23
	EER 50% load	W/W		6.10	4.93
	SEER	η/std		320.20%/8.08	307.8%/7.77
Efficiency	COP rated	W/W		4.42	4.0
	COP 50% load	W/W		5.25	5.48
	COP -7°C 100% load	W/W		3.88	3.47
	SCOP	η/std		150.2%/3.83	152.2%/3.88
Electrical characteristics	Running current	A	C	14.4/13.8/13.2	20.8/19.9/19
	Power input	kW	C	3.24	4.33
	Running current	A	H	13.4/12.8/12.3	19.1/18.3/17.5
	Power input	kW	H	2.83	4.0
Dimensions (h x w x d)		mm		910x990x390	910x990x390
Weight		kg		100	100
Compressor	Type			Hermetic twin rotary compressor	Hermetic twin rotary compressor
	Motor output	kW		3.75	3.75
Fan unit	Type			Propeller fan (Quantity 1)	Propeller fan (Quantity 1)
	Motor output	W		100	100
	Air volume	m³/h		4020	4260
External static pressure available		Pa			
R410A refrigerant charge		kg		3.3	3.3
		CO ₂ Teq		6.9	6.9
Power supply wiring	MCA	A		26.5	28.0
	MCOP	A		32.0	32.0
Pipe connection	Gas line type - Diameter			Flare - 5/8"	Flare - 5/8"
	Liquid line type - Diameter			Flare - 3/8"	Flare - 3/8"
Connectivity	Max. number of connected indoor units			8	10
	Diversity ratio	Min/Max			80/130%
Sound pressure level	Cooling	dB(A)	C	54.0	54.0
	Heating	dB(A)	H	57.0	58.0
Sound power level	Cooling	dB(A)	C	73.0	73.0
	Heating	dB(A)	H	73.0	74.0
Operation temperature range	Cooling	CDB	C		-5/+46
	Heating	CWB	H		-20/+15

Connected indoor unit : MMU-UP_1HP-E

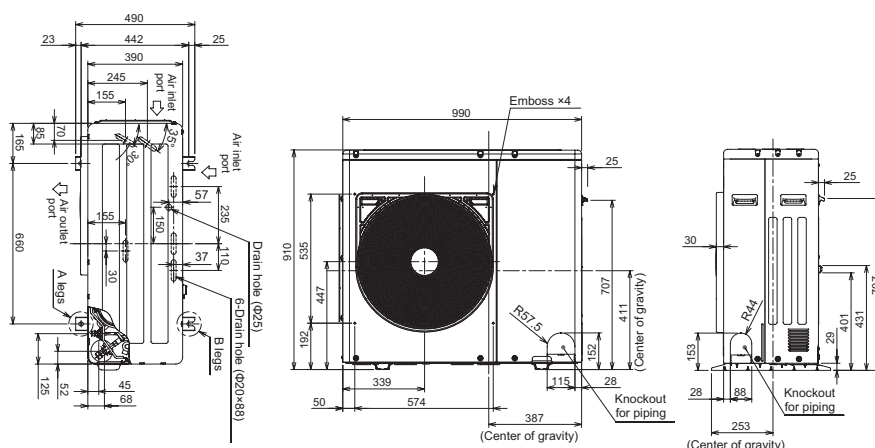
C = Cooling mode

H = Heating mode

Drawings

MCY-MHP0406HT-E
MCY-MHP0506HT-E1

Unit: mm



Piping rules

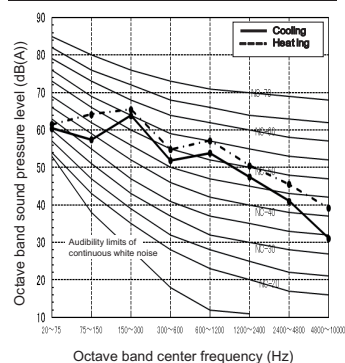
Allowable value					
Piping length	Total extension of pipe (Liquid pipe, real length)	Length	With PMV kit	Without PMV kit	Piping section
	Farthest piping length		75m	90m	L1 + L2 + L3 + a + b + c + d + e + f
	Max equivalent length of main piping		50m	60m	L1 + L3 + f
	Max equivalent length of farthest piping from 1st branching		40m	50m	
	Max. real length of indoor unit connecting piping		25m	30m	L1
	Real length between PMV kit and indoor unit		15m	20m	L3 + f
Difference in height	Height between indoor and outdoor units	Upper outdoor unit	10m	10m	a, b, c, d, e, f
	Height between indoor unit and PMV kit	Lower outdoor unit	15m	15m	
	Height between indoor units	Upper outdoor unit	10m	10m	
			10m	-	

Sound pressure levels

Unit: dB(A)

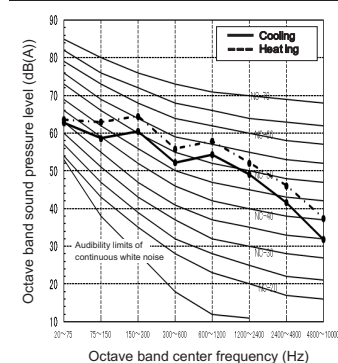
MCY-MHP0406HT-E

Sound pressure level (dB(A))	Cooling	Heating
	54	57



MCY-MHP0506HT-E1

Sound pressure level (dB(A))	Cooling	Heating
	55	58



Night mode sound pressure levels

Sound reduction and capacity approximation (Reference)

Type		Night operation sound reduction dB (A)		Capacity	
		Cooling	Heating	Cooling	Heating
Single fan	0406	50	50	Approx. 95%	Approx. 80%
	0506	50	50	Approx. 85%	Approx. 75%

Accessories

	Name	Model name	Capacity	Appearance	Remarks
Branching joints and headers	Y-shape branching joint	RBM-BY55E	Under 6.4hp		
	4-branching header	RBM-HY1043E	Under 14.2hp		
	8-branching header	RBM-HY1083E	Under 14.2hp		
PM kits	PMV Kits	RBM-PMV0361U-E	For 0.6 to 1.3hp IDUs		
		RBM-PMV0901U-E	For 1.7 to 3hp IDUs		
Optional PCB of outdoor unit	Power peak-cut control board	TCB-PCDM4E			Limit capacity of the VRF outdoor unit at 85%, 75%, 70% or 60% load or stop it. Dry contact
	External master ON/OFF, night mode and priority selection control board	TCB-PCMO4E			Dry contact
	Output control board	TCB-PCIN4E			Operation output: The operation indicator is on while any indoor unit in the system is operating. Error output: The error indicator is on when an error is occurred one of the indoor or outdoor units in the system. Dry contact



OPERATION



-20°C > +46°C

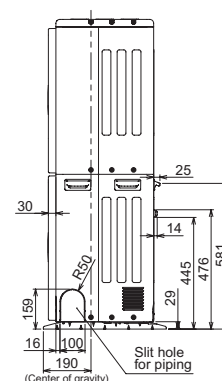
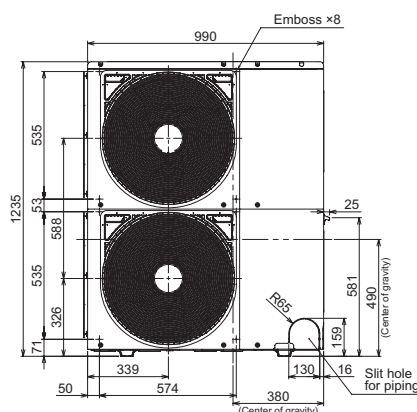
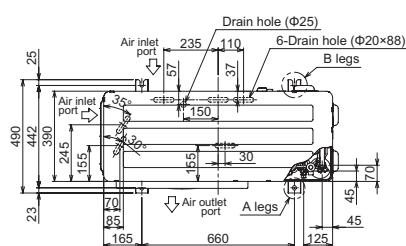
Features

Outdoor unit		HP	MCY-	MHP0404HS-E	MHP0504HS-E	MHP0604HS-E
Capacity range		HP		4	5	6
Cooling capacity		kW		12.1	14.0	15.5
Heating capacity		kW		12.5	16.0	18.0
Power supply		V-ph-Hz		1phase 50Hz 220/230/240V	1phase 50Hz 220/230/240V	1phase 50Hz 220/230/240V
Efficiency	EER rated	W/W		4.28	4.00	3.61
	EER 50% load	W/W		6.93	6.86	6.78
	SEER	η/std		373.8%/9.42	366.2%/9.23	384.2%/9.68
Efficiency	COP rated	W/W		4.83	4.27	4.18
	COP 50% load	W/W		6.63	6.20	6.16
	COP -7°C 100% load	W/W		4.29	3.80	3.72
	SCOP	η/std		163.8%/4.17	166.6%/4.24	171.8%/4.37
Electrical characteristics	Running current	A	C	13.5/13.0/12.4	16.6/15.9/15.2	20.1/19.2/18.4
	Power input	kW	C	2.83	3.50	4.29
	Running current	A	H	12.5/12.0/11.5	17.8/17.0/16.3	20.2/19.3/18.5
	Power input	kW	H	2.59	3.75	4.31
Dimensions (h x w x d)		mm		1235x990x390		
Weight		kg		127	127	127
Compressor	Type			Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor
	Motor output	kW		3.75	3.75	3.75
Fan unit	Type			Propeller fan (Quantity 2)	Propeller fan (Quantity 2)	Propeller fan (Quantity 2)
	Motor output	W		100+100	100+100	100+100
	Air volume	m³/h		5660	5820	6050
External static pressure available		Pa		30	30	30
R410A refrigerant charge		kg		6.4	6.4	6.4
		CO ₂ Teq		13.363	13.363	13.363
Power supply wiring	MCA	A		23.5	26.5	28.0
	MCOP	A		32.0	32.0	32.0
Pipe connection	Gas line type - Diameter			Flare - 5/8"	Flare - 5/8"	Flare - 3/4"
	Liquid line type - Diameter			Flare - 3/8"	Flare - 3/8"	Flare - 3/8"
Connectivity	Max. number of connected indoor units			8	10	13
	Diversity ratio	Min/Max		80/130%		
Sound pressure level	Cooling	dB(A)	C	49	50	51
	Heating	dB(A)	H	52	53	54
Sound power level	Cooling	dB(A)	C	66	68	68
	Heating	dB(A)	H	69	70	71
Operation temperature range	Cooling	CDB	C	-5 to 46	-5 to 46	-5 to 46
	Heating	CWB	H	-20 to 15	-20 to 15	-20 to 15

Unit: mm

Drawings

All models



Piping rules

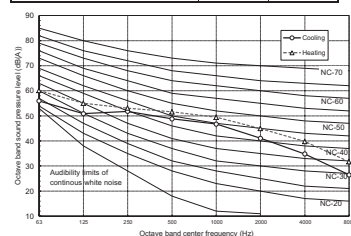
				Allowable value		
Piping length	Total extension of pipe (Liquid pipe, real length)			With PMV kit	Without PMV kit	Piping section
	Farthest piping length	Equivalent length		150m	180m	L1 + L2 + L3 + a + b + c + d + e + f
		Real length		80m	125m	L1 + L3 + f
	Max equivalent length of main piping			65m	100m	
	Max equivalent length of farthest piping form 1st branching			50m	65m	L1
	Max. real length of indoor unit connecting piping			15m	35m	L3 + f
Difference in height	Max. real length of indoor unit connecting piping			15m	15m	a, b, c, d, e, f
	Real length between PMV kit and indoor unit			Between 2m and 10m	-	
	Height between indoor and outdoor units	Upper outdoor unit		30m	30m	
		Lower outdoor unit		20m	20m	
Difference in height	Height between indoor units			15m	15m	
	Height between indoor unit and PMV kit			15m	-	

Sound pressure levels

Unit: dB(A)

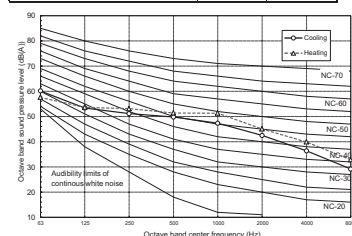
MCY-MHP0404HS-E

Sound pressure level (dB(A))	Cooling	Heating
	49	52



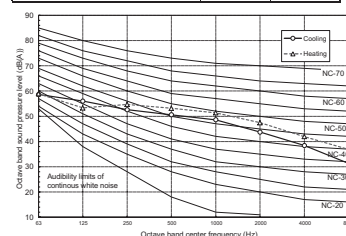
MCY-MHP0504HS-E

Sound pressure level (dB(A))	Cooling	Heating
	50	53



MCY-MHP0604HS-E

Sound pressure level (dB(A))	Cooling	Heating
	51	54



Night mode sound pressure levels

Sound reduction and capacity approximation (Reference)

Outdoor unit (base unit)	During low-noise mode dB(A)		Capacity*	
	Cooling	Heating	Cooling	Heating
Model 0404*	46	48	approx. 90 %	approx. 95 %
Model 0504*	46	48	approx. 80 %	approx. 80 %
Model 0604*	47	49	approx. 80 %	approx. 75 %

*Relative to maximum capacity

Accessories

	Name	Model name	Capacity	Appearance	Remarks
Branching joints and headers	Y-shape branching joint	RBM-BY55E	Under 6.4hp		
	4-branching header	RBM-HY1043E	Under 14.2hp		
	8-branching header	RBM-HY1083E	Under 14.2hp		
PM kits	PMV Kits	RBM-PMV0361U-E	For 0.6 to 1.3hp IDUs		
		RBM-PMV0901U-E	For 17 to 3hp IDUs		
Optional PCB of outdoor unit	Power peak-cut control board	TCB-PCDM4E			Limit capacity of the VRF outdoor unit at 85%, 75%, 70% or 60% load or stop it. Dry contact
	External master ON/OFF, night mode and priority selection control board	TCB-PCMO4E			Dry contact
	Output control board	TCB-PCIN4E			Operation output: The operation indicator is on while any indoor unit in the system is operating. Error output: The error indicator is on when an error is occurred on even one of the indoor or outdoor units in the system. Dry contact



CAPACITY

OPERATION



4HP > 10HP

-20°C > +46°C

Up to 10HP capacity using compact side blow chassis, the MiNi SMMS-e 3PH is particularly adapted to projects downtown.

Features

Outdoor unit		HP	MCY-	MHP0404HS8-E	MHP0504HS8-E	MHP0604HS8-E	MHP0806HS8-E	MHP1006HS8-E
Capacity range		HP		4	5	6	8	10
Cooling capacity		kW		12.1	14.0	15.5	22.4	28.0
Heating capacity (rated/max)		kW		12.5	16.0	18.0	22.4/25	28/31.5
Power supply		V-ph-Hz		3-phase 50Hz 380/400/415V	3-phase 50Hz 380/400/415V	3-phase 50Hz 380/400/415V	3-phase 50Hz 380/400/415V	3-phase 50Hz 380/400/415V
Efficiency	EER rated	W/W		4.29	4.03	3.65	3.36	3.00
	EER 50% load	W/W		6.93	6.48	5.91	5.69	5.19
	SEER	η/std		375.8%/9.47	368.6%/9.29	386.6%/9.74	320.6%/8.09	293%/7.40
Efficiency	COP rated	W/W		4.86	4.30	4.22	4.31	4.00
	COP 50% load	W/W		6.70	6.25	6.25	6.05	5.62
	COP -7°C 100% load	W/W		4.32	3.80	3.75	3.51	3.27
	SCOP	η/std		164.6%/4.19	167.0%/4.25	172.2%/4.38	177%/4.50	179.8%/4.57
Electrical characteristics	Running current	A	C	4.8/4.5/4.4	5.7/5.4/5.2	7.0/6.7/6.4	11.1/10.6/10.2	15.3/14.5/14.0
	Power input	kW	H	2.82	3.47	4.25	6.67	9.34
	Running current	A	C	4.4/4.2/4.0	6.1/5.8/5.6	7.0/6.6/6.4	8.7/8.2/7.9	11.4/10.9/10.5
	Power input	kW	H	2.57	3.72	4.27	5.20	7.00
Dimensions (h x w x d)		mm		1235x990x3901740x990x390				
Weight		kg		125125125147147				
Compressor	Type			Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor	Hermetic twin rotary compressor
	Motor output	kW		3.75	3.75	3.75	6.60	6.60
Fan unit	Type			Propeller fan (Quantity 2)	Propeller fan (Quantity 2)	Propeller fan (Quantity 2)	Propeller fan (Quantity 2)	Propeller fan (Quantity 2)
	Motor output	W		100+100	100+100	100+100	100+100	100+100
	Air volume	m³/h		5660	5820	6050	8460	8820
External static pressure available		Pa		30	30	30	20	20
R410A refrigerant charge		kg		6.4	6.4	6.4	4.4	4.4
		CO₂ Teq		13.4	13.4	13.4	9.2	9.2
Power supply wiring	MCA	A		12.5	12.5	12.5	17.0	20.0
	MCOP	A		16.0	16.0	16.0	20.0	25.0
Pipe connection	Gas line type - Diameter			Flare - 5/8"	Flare - 5/8"	Flare - 3/4"	Flare - 3/4"	Flare - 3/4"
	Liquid line type - Diameter			Flare - 3/8"	Flare - 3/8"	Flare - 3/8"	Flare - 3/8"	Flare - 3/8"
Connectivity	Max. number of connected indoor units			8	10	13	12	16
	Diversity ratio	Min/Max		80/130%				
Sound pressure level	Cooling	dB(A)	C	49	50	51	58	59
	Heating	dB(A)	H	52	53	54	59	60
Sound power level	Cooling	dB(A)	C	66	68	68	75	77
	Heating	dB(A)	H	67	69	70	75	77
Operation temperature range	Cooling	CDB	C	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
	Heating	CWB	H	-20 to 15	-20 to 15	-20 to 15	-20 to 15	-20 to 15

Connected indoor unit : MMU-UP_1HP-E

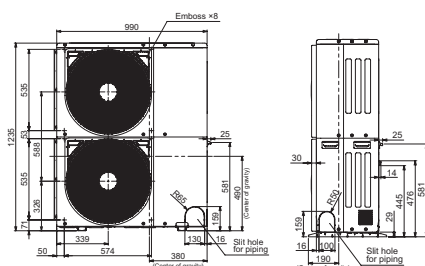
C = Cooling mode

H = Heating mode

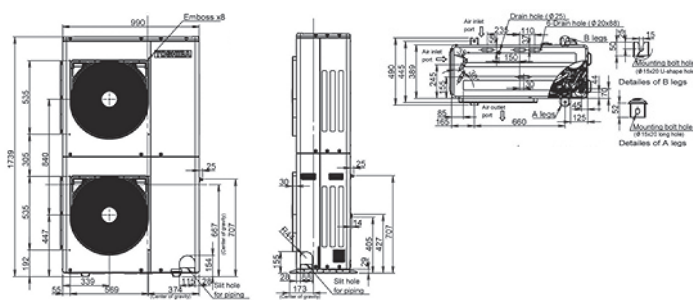
Drawings

Unit: mm

MCY-MHP_4HS8-E



MCY-MHP_6HS8-E



Piping rules

					Allowable value				
					With PMV kit		Without PMV kit		Piping section
					4 to 6HP	8 & 10HP	4 to 6HP	8 & 10HP	
Piping length	Total extension of pipe (Liquid pipe, real length)				150m	250m	180m	300m	L1 + L2 + L3 + a + b + c + d + e + f
	Farthest piping length			Equivalent length	65m	100m	125m	150m	L1 + L3 + f
				Real length	80m	130m	120m		L1 + L3 + f
	Max equivalent length of main piping				50m	70m	65m	80m	L1
	Max equivalent length of farthest piping form 1st branching				15m	30m	35m	40m	L3 + f
	Max. real length of indoor unit connecting piping				15m		15m		a, b, c, d, e, f
Real length between PMV kit and indoor unit					Between 2m and 10m		-		
Difference in height	Height between indoor and outdoor units			Upper outdoor unit	30m		30m		
				Lower outdoor unit	20m	30m	20m	30m	
	Height between indoor units				15m		15m		
	Height between indoor unit and PMV kit				15m		-		

(*1): (D) is outdoor unit furthest from the 1st branch and (I) is the indoor unit furthest from the 1st branch.
 (*2): If the height difference (H1) between indoor and outdoor unit exceeds 3 m, set 65 m or less.
 (*3): If the max. combined outdoor unit capacity is 54HP or more, then max. equivalent length is 70 m or less (real length is 50 m or less).
 (*4): If the height difference (H2) between indoor units exceeds 3 m, set 50 m or less.

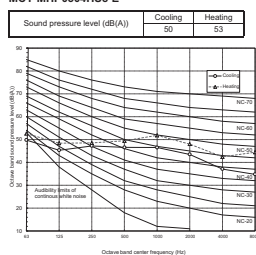
(*5): If the height difference (H2) between indoor units exceeds 3 m, set 30 m or less.
 (*6): Total charging refrigerant is 140kg or less.
 (*7): Extension up till 90m is possible with conditions below
 - Outdoor Temperature Cooling : 10 - 46 (DB)
 Heating : -5 - 15.5 (WB)
 - Equivalent length of farthest piping from 1st branching Li < 50m
 - Real length of main piping L1 < 100m

- Height difference between indoor units H2<3M
 - Total capacity of combined indoor units : 90% - 105%
 - Single CDU, and up to 20HP
 - Minimum capacity of connectable indoor : unit 4HP or Larger

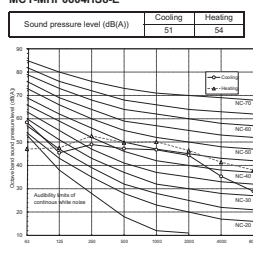
Sound pressure levels

Unit: dB(A)

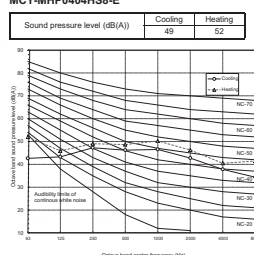
MCY-MHP0504HS8-E



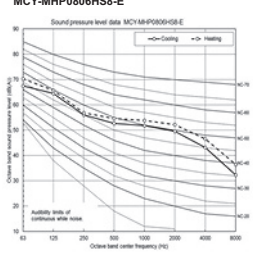
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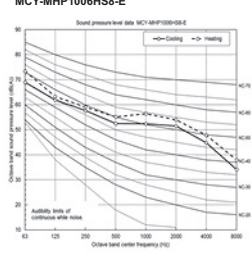
MCY-MHP0404HS8-E



MCY-MHP0806HS8-E



MCY-MHP1006HS8-E



Night mode sound pressure levels

Sound reduction and capacity approximation (Reference)

Outdoor unit (base unit)	During low-noise mode dB(A)		Capacity*	
	Cooling	Heating	Cooling	Heating
Model 0404*	46	48	approx. 90%	approx. 95%
Model 0504*	46	48	approx. 80%	approx. 80%
Model 0604*	47	49	approx. 80%	approx. 75%
Model 0806*	50	50	approx. 85 %	approx. 80 %
Model 1006*	50	50	approx. 80 %	approx. 75 %

*Relative to maximum capacity

Accessories

	Name	Model name	Capacity	Appearance	Remarks
Branching joints and headers	Y-shape branching joint	RBM-BY55E	under 6.4hp		
		RBM-BY105E	between 6.4 and 20.2hp		
	4-branching header	RBM-HY1043E	under 14.2hp		
	8-branching header	RBM-HY1083E	under 14.2hp		
PM kits	PMV Kits	RBM-PMV0361U-E	for 0.6 to 1.3hp IDUs		
		RBM-PMV0901U-E	for 17 to 3hp IDUs		
Optional PCB of outdoor unit	Power peak-cut control board	TCB-PCDM4E			"Limit capacity of the VRF outdoor unit at 85%, 75%, 70% or 60% load or stop it. Dry contact"
	External master ON/OFF, night mode and priority selection control board	TCB-PCMO4E			Dry contact
	Output control board	TCB-PCIN4E			"Operation output: The operation indicator is on while any indoor unit in the system is operating. Error output: The error indicator is on when an error is occurred on even one of the indoor or outdoor units in the system. Dry contact"