MITSUBISHI ELECTRIC

Changes for the Better

SPLIT-TYPE AIR CONDITIONERS

Mitsubishi Electric Quality



From Japan to the World

Advanced systems in every product

Lineup

		Type	13,000 Btu/h	18,000 Btu/h	24,000 Btu/h
M-Series	**Wall-mounted**	Inverter type	 MSY-GT13VF	 MSY-GT18VF	 MSY-GT24VF
		Fixed Speed type	 MS-GS13VF	 MS-GS18VF	 MS-GS24VF
				18,000 Btu/h	24,000 Btu/h
P-Series	**Ceiling-cassette**	Inverter type		 PLY-ZM18EA	 PLY-ZM24EA
	Ceiling-suspended	Inverter type		 PCY-ZM18KA	 PCY-ZM24KA
	Ceiling-concealed	Inverter type		 PEY-ZM18JAG	 PEY-ZM24JAG
	Floor-standing	Inverter type			

*Specifications for P series are when connected to the Y models under T1 condition.

30,000 Btu/h	36,000 Btu/h	—	—	Page
 MSY-GT30VF	 MSY-GT36VF			p5
 MS-GS30VF	 MS-GS36VF			p13
30,000 Btu/h	**36,000 Btu/h**	**45,000 Btu/h***	**60,000 Btu/h***	
 PLY-ZM30EA	 PLY-ZM36EA	 PLY-ZM45EA		p19
 PCY-ZM30KA	 PCY-ZM36KA	 PCY-ZM45KA		p23
 PEY-ZM30JAG	 PEY-ZM36JAG	 PEY-ZM45JAG	 PEY-ZM60GAG	p25
 PSY-ZM30KA	 PSY-ZM36KA	 PSY-ZM45KA		p29



M SERIES

M-Series Line-up

INDOOR UNIT

MSY-GT series



MSY-GT13VF



MSY-GT18VF
MSY-GT24VF
MSY-GT30VF



MSY-GT36VF

MS-GS series



MS-GS13VF



MS-GS18VF
MS-GS24VF



MS-GS30VF
MS-GS36VF

OUTDOOR UNIT

MUY-GT series



MUY-GT13VF



MUY-GT18VF
MUY-GT24VF



MUY-GT30VF
MUY-GT36VF

MU-GS series



MU-GS13VF
MU-GS18VF



MU-GS18VF
MU-GS24VF



MU-GS36VF

M series <Inverter models>

MSY-GT series



MSY-GT13VF



MSY-GT18/24/30VF

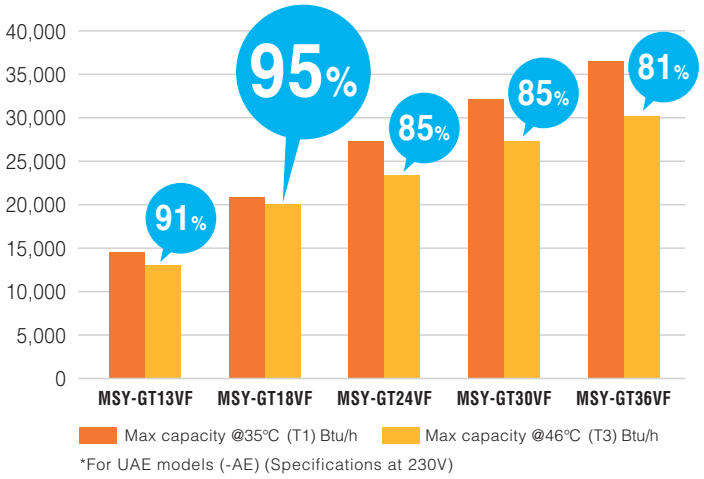


MSY-GT36VF



HIGH COOLING PERFORMANCE

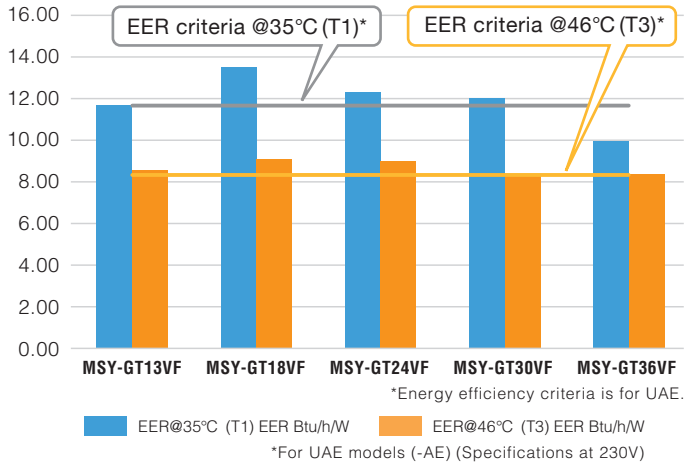
MSY-GT series achieve strong cooling opereation even at high ambient temperature. Cooling capacity (@46°C) keeps 95% compared @35°C for 18,000Btu class.*



*For UAE models (-AE) (Specifications at 230V)

High Energy Efficiency

The classes from low-capacity (13,000Btu) to high-capacity (36,000Btu), have achieved high energy efficiency not only rated condition (@35°C), but even at high ambient 46°C.

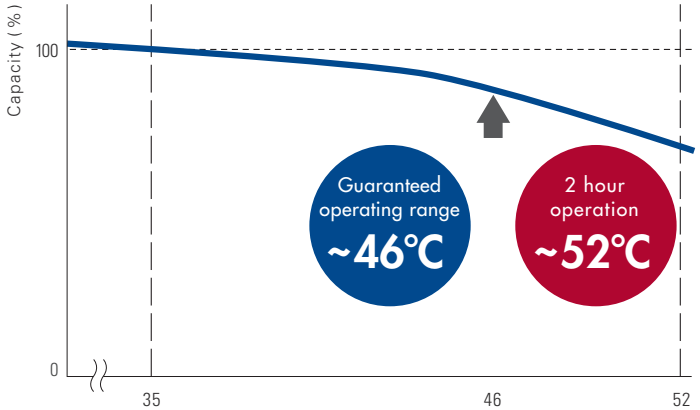


*Energy efficiency criteria is for UAE.

*For UAE models (-AE) (Specifications at 230V)

HIGH COOLING PERFORMANCE EVEN IN TROPICAL CONDITION

Powerful cooling performance realizes guaranteed operating range up to 46°C. In addition, it realizes to keep operaitng for 2hours at 52°C.



*Capacity curve is image

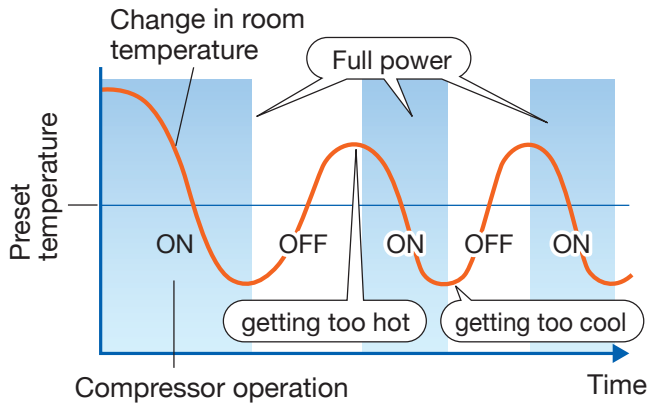
Inverter Technology

Below is a simple comparison of air conditioner operation control with and without an inverter.

■ **Inverter operation comparison**

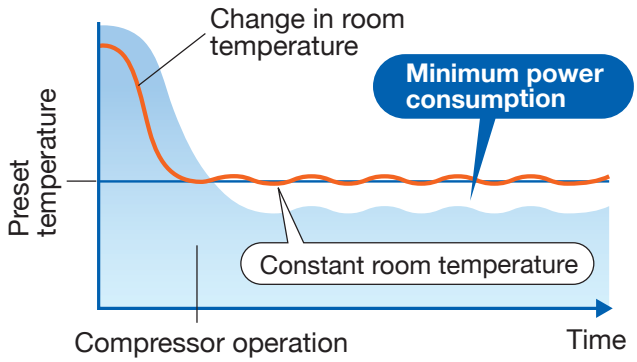
Non-inverter air conditioner

On/Off operation of compressor keeps room temperature



Inverter air conditioner

Optimum control of frequency keeps preset room temperature



The compressors of air conditioners without an inverter start and stop repeatedly in order to maintain the preset room temperature. This repetitive on/off operation uses excessive electricity and compromises room comfort. The compressors of air conditioners equipped with an inverter run continuously; the inverter quickly optimizing the operating frequency according to changes in room temperature. This ensures energy-efficient operation and a more comfortable room.

Point 1 Quick & Powerful

Increasing the compressor motor speed by controlling the operation frequency ensures powerful output at start-up, brings the room temperature to the comfort zone faster than units not equipped with an inverter. Hot rooms are cooled, and cold rooms are heated faster and more efficiently.

Point 2 Room Temperature Maintained

The compressor motor operating frequency and the change of room temperature are monitored to calculate the most efficient waveform to maintain the room temperature in the comfort zone. This eliminates the large temperature swings common with non-inverter systems, and guarantees a pleasant, comfortable environment.

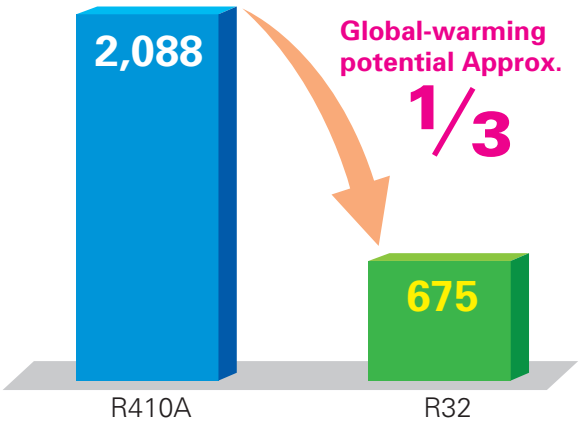
R32 refrigerant



Points for Use

The new R32 refrigerant has a global-warming potential approximately 1/3*1 that of our current refrigerant, R410A; thereby dramatically reducing the impact on global-warming more than ever.

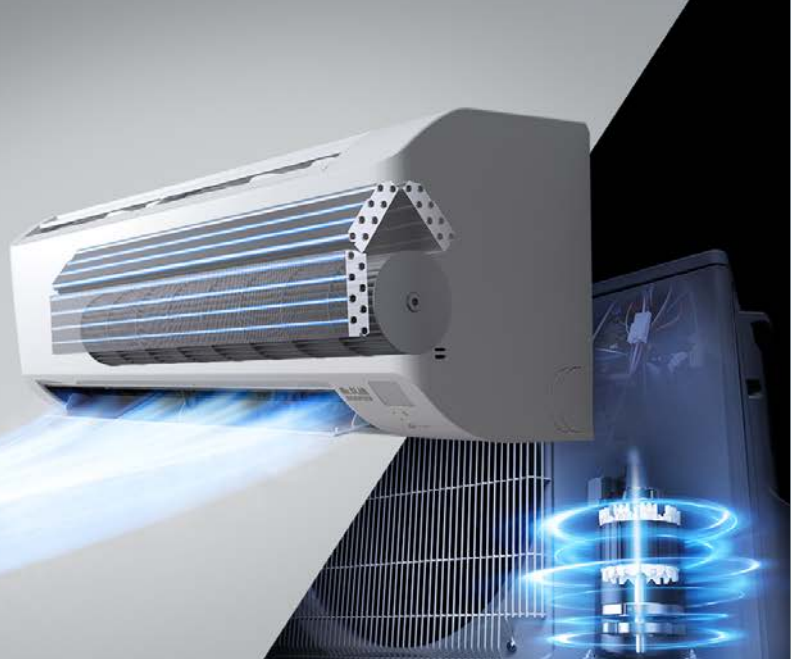
Comparison of Global Warming Potential



*1: Source: IPCC 4th Assessment Report, global-warming potential (GWP) 100-year value. Comparison of 2,088(R410A) and 675 (R32).

Fast Cooling

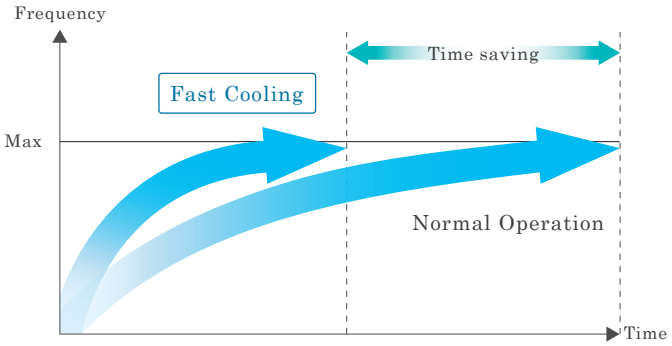
Fast Cooling is the most essential desire in air conditioner.
MITSUBISHI ELECTRIC's Fast Cooling brings
you fast refreshment in your life.



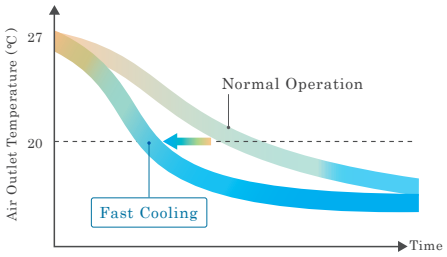
＊Image

01 Compressor Frequency image

Pressing the Fast Cooling button makes the compressor reach its maximum frequency remarkably faster than in Normal Operation.

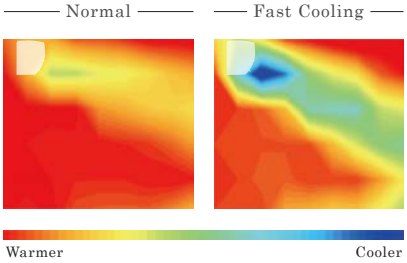


02 Air Outlet Temperature



Lowers the air outlet temperature faster than Inverter Normal Operation.

03 Thermography



Quickly cools the room with the highest-volume, and low-temperature airblow at 2min. after operation.

04 Fast Cooling button

Once activated, this mode continues for 15 minutes.



Fast Cooling mode starts immediately with the push of a button. Accoding to preference,air direction can be changed freely.

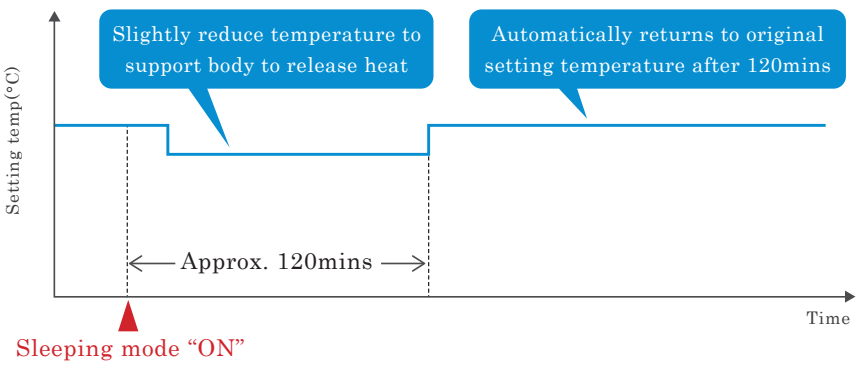
Error code display

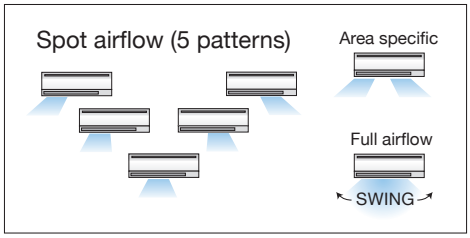


Error codes are displayed on the remote controller for trouble shooting.
＊For the details, please refer to the operating Instructions

Sleep mode

Sleep mode can support body to release heat by operating slightly lower temperature than set temperature before press “sleep mode” bottom for 2hours.





*Manual : MSY-GT13
Auto : MSY-GT18/24/30/36

Dual Barrier Coating*

Dual Barrier Coating prevents dust and greasy dirt from getting into the air conditioner

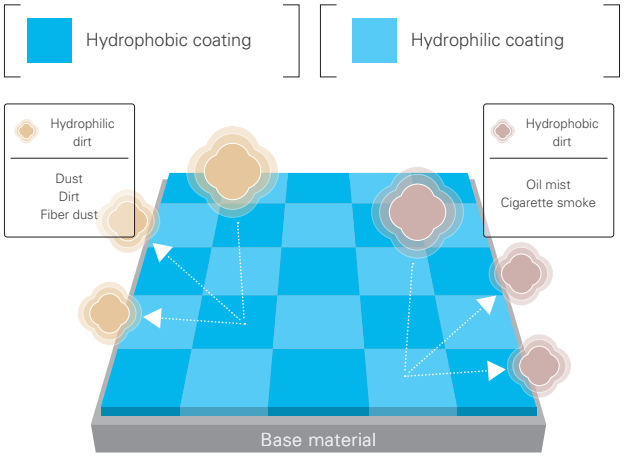
*Only for Fan



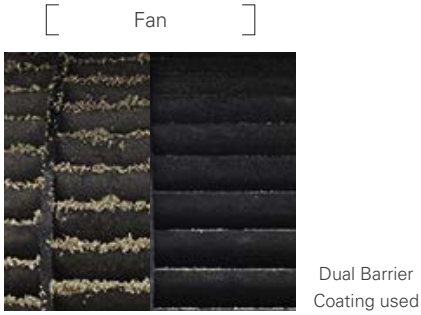
*Image

State-of-the-art coating technology

Dual Barrier repels both types of dirt



Comparison of dirt on Fan

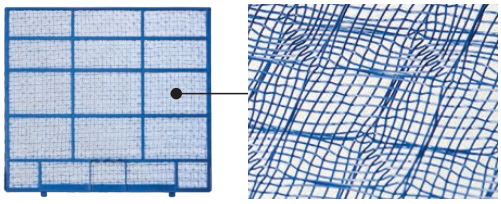


Dirt is generally classified into two groups. Dual Barrier Coating works as a two barrier coating with blended "Hydrophobic coating" that prevent hydrophilic dirt penetration and "Hydrophilic coating" that prevent hydrophobic dirt.

Nano platinum filter

Nano Platinum

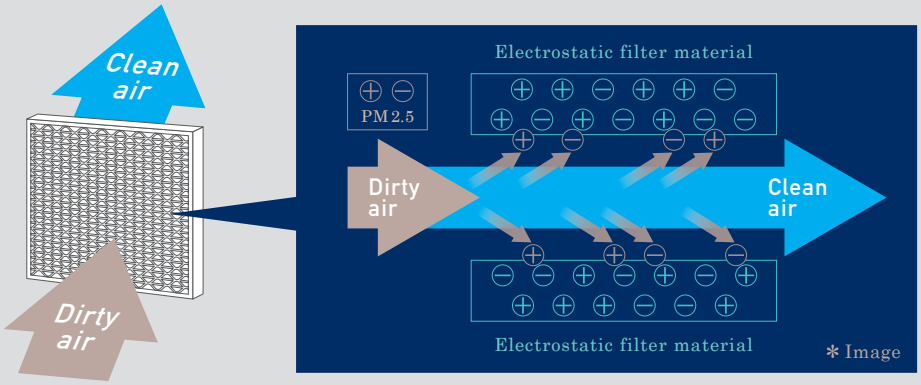
Nano Platinum Filter with the three-dimensional surface has a large capture area and incorporates nanometer-sized platinum-ceramic particles that work to break bacteria, mold, and also odours.





Microparticle Catching Filter

Effectively catches floating PM2.5 particles to maintain clean air in the room.



*Image

Electrostatic material removes PM2.5 from the air and absorbs it when passing through the filter



Model name:
MAC-EMF515FT-E (for MSY-GT13VF)
MAC-EMF615FT-E (for MSY-GT18/24/30VF)
MAC-EMF715FT-E (for MSY-GT36VF)

M series Inverter models Specification

MSY-GT series for UAE

Indoor Unit				MSY-GT13VF	MSY-GT18VF	MSY-GT24VF	MSY-GT30VF	MSY-GT36VF
Outdoor Unit				MUY-GT13VF	MUY-GT18VF	MUY-GT24VF	MUY-GT30VF	MUY-GT36VF
Power supply (Outdoor) [Single phase]			V	220-230-240	220-230-240	220-230-240	220-230-240	220-230-240
Refrigerant				R32	R32	R32	R32	R32
T1* (Specifications at 230V)		Capacity (Min-Max)	kW	3.810 (1.50 - 4.25)	5.280 (1.81 - 6.02)	7.050 (2.11 - 8.04)	8.210 (2.11 - 9.44)	10.030 (2.90 - 10.76)
			Btu/h	13,000 (5,118 - 14,502)	18,016 (6,176 - 21,155)	24,056 (7,200 - 27,434)	28,014 (7,200 - 32,211)	34,224 (9,895 - 36,715)
		Total input		1.110	1.340	1.960	2.330	3.420
		EER		11.71	13.44	12.27	12.02	10.01
T3* (Specifications at 230V)		Capacity (Max)	kW	3.225 (3.85)	5.450 (5.90)	6.260 (6.87)	7.490 (8.06)	8.060 (8.90)
			Btu/h	11,004 (13,137)	18,596 (20,132)	21,360 (23,441)	25,557 (27,502)	27,502 (30,368)
		Total input	kW	1.290	2.055	2.405	3.080	3.315
		EER	Btu/h/W	8.53	9.05	8.88	8.30	8.30
Operating Current (220-230-240V)			A	5.2 - 5.0 - 5.0	6.3 - 6.0 - 5.8	9.0 - 8.6 - 8.2	10.7 - 10.2 - 9.8	15.7 - 15.0 - 14.4
Indoor Unit	Power Input	Rated	kW	0.030	0.038	0.038	0.046	0.080
	Running Current	Rated	A	0.24	0.34	0.34	0.39	0.74
	Dimension	H*W*D	mm	280*838*228	325*1100*238	325*1100*238	325*1100*238	365*1170*295
	Net weight		kg	8.9	14.7	14.7	14.7	20
	Air Volume (Slo-Lo-Med-Hi-SHi)		m3/min	5.2-7.5-9.3-11.4-13.8	9.0-11.1-13.1-15.4-20.0	9.6-11.9-14.4-16.6-20.0	7.9-11.3-13.9-17.7-21.7	10.1-14.5-17.7-22.3-27.1
	Sound level (SPL)(Slo-Lo-Med-Hi-SHi)		dB(A)	26-31-36-41-47	27-33-38-43-49	28-34-39-44-50	30-37-42-46-53	32-38-43-48-53
Outdoor Unit	Dimension	H*W*D	mm	550*800*285	714*800*285	714*800*285	880*840*330	880*840*330
	Net weight		kg	31.5	38	38	47	49
	Air Volume		m3/min	36.4	53.2	56.4	60.2	63.2
	Sound level (SPL)		dB(A)	52	55	56	57	57
	Breaker Size		A	10	16	16	20	20
Piping	Piping diameter	Liquid-Gas	inch	1/4 - 1/2	1/4 - 1/2	1/4 - 1/2	1/4 - 5/8	1/4 - 5/8
	Max piping length	Out-In	m	20	30	30	30	30
	Max Height deffierence	Out-In	m	12	15	15	15	15
Guaranteed operating range (Outdoor)			°C	21 ~ 46				

*Specifications are based on the following condition.
T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
*Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 5151:2011

MSY-GT series for Qatar

Indoor Unit				MSY-GT13VF	MSY-GT18VF	MSY-GT24VF	MSY-GT30VF
Outdoor Unit				MUY-GT13VF	MUY-GT18VF	MUY-GT24VF	MUY-GT30VF
Power supply (Outdoor) [Single phase]			V	220-230-240	220-230-240	220-230-240	220-230-240
Refrigerant				R32	R32	R32	R32
T1* (Specifications at 240V)		Capacity (Min-Max)	kW	3.810 (1.50 - 4.25)	5.280 (1.81 - 6.20)	7.050 (2.11 - 8.04)	8.210 (2.11 - 9.44)
			Btu/h	13,000 (5,118 - 14,502)	18015 (6,176 - 21,154)	24,055 (7,199 - 27,432)	28,013 (7,199 - 32,209)
		Total input		1.110	1.340	1.960	2.330
		EER		11.71	13.44	12.27	12.02
T3* (Specifications at 240V)		Capacity (Max)	kW	3.225 (3.85)	5.450 (5.90)	6.260 (6.87)	7.490 (8.06)
			Btu/h	11,004 (13,137)	18,595 (20,131)	21,359 (23,440)	25,556 (27,569)
		Total input	kW	1.290	2.055	2.405	3.080
		EER	Btu/h/W	8.53	9.05	8.88	8.3
Operating Current (220-230-240V)			A	5.2 - 5.0 - 5.0	6.3 - 6.0 - 5.8	9.0 - 8.6 - 8.2	10.7 - 10.2 - 9.8
Indoor Unit	Power Input	Rated	kW	0.030	0.038	0.038	0.046
	Running Current	Rated	A	0.24	0.34	0.34	0.39
	Dimension	H*W*D	mm	280*838*228	325*1100*238	325*1100*238	325*1100*238
	Net weight		kg	8.9	14.7	14.7	14.7
	Air Volume (Slo-Lo-Med-Hi-SHi)		m3/min	5.2-7.5-9.3-11.4-13.8	9.0-11.1-13.1-15.4-20.0	9.6-11.9-14.4-16.6-20.0	7.9-11.3-13.9-17.7-21.7
	Sound level (SPL)(Slo-Lo-Med-Hi-SHi)		dB(A)	26-31-36-41-47	27-33-38-43-49	28-34-39-44-50	30-37-42-46-53
Outdoor Unit	Dimension	H*W*D	mm	550*800*285	714*800*285	714*800*285	880*840*330
	Net weight		kg	31.5	38	38	47
	Air Volume		m3/min	36.4	53.2	56.4	60.2
	Sound level (SPL)		dB(A)	52	55	56	57
	Breaker Size		A	10	16	16	20
Piping	Piping diameter	Liquid-Gas	inch	1/4 - 1/2	1/4 - 1/2	1/4 - 1/2	1/4 - 5/8
	Max piping length	Out-In	m	20	30	30	30
	Max Height deffierence	Out-In	m	12	15	15	15
Guaranteed operating range (Outdoor)			°C	21 ~ 46			

*Specifications are based on the following condition.
T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
*Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 5151:2011

M series Inverter models Specification

MSY-GT series for Kuwait

Specifications for leaflet For Kuwait

Indoor Unit				MSY-GT13VF	MSY-GT18VF	MSY-GT24VF	MSY-GT30VF
Outdoor Unit				MUY-GT13VF	MUY-GT18VF	MUY-GT24VF	MUY-GT30VF
Power supply (Outdoor) [Single phase]			V	220-230-240	220-230-240	220-230-240	220-230-240
Refrigerant				R32	R32	R32	R32
T1* (Specifications at 240V)		Capacity (Min-Max)	kW	3.810 (1.50 - 4.25)	5.280 (1.81 - 6.20)	7.050 (2.11 - 8.04)	8.210 (2.11 - 9.44)
			Btu/h	13,000 (5,118 - 14,502)	18,015 (6,176 - 21,154)	24,055 (7,199 - 27,432)	28,013 (7,199 - 32,209)
		Total input	kW	1.110	1.340	1.960	2.330
		EER	Btu/h	11.71	13.44	12.27	12.02
T4* (Specifications at 240V)		Capacity (Max)	kW	1.700	3.820	3.950	4.000
			Btu/h	5,800	13,017	13,477	13,648
		Total input	kW	0.580	1.300	1.347	1.364
		EER	Btu/h/W	10.0	10.01	10.01	10.01
Operating Current (220-230-240V)			A	5.2 - 5.0 - 5.0	6.3 - 6.0 - 5.8	9.0 - 8.6 - 8.2	10.7 - 10.2 - 9.8
Indoor Unit	Power Input	Rated	kW	0.030	0.038	0.038	0.046
	Running Current	Rated	A	0.24	0.34	0.34	0.39
	Dimension	H*W*D	mm	280*838*228	325*1100*238	325*1100*238	325*1100*238
	Net weight		kg	8.9	14.7	14.7	14.7
	Air Volume (Slo-Lo-Med-Hi-SHi)		m3/min	5.2-7.5-9.3-11.4-13.8	9.0-11.1-13.1-15.4-20.0	9.6-11.9-14.4-16.6-20.0	7.9-11.3-13.9-17.7-21.7
	Sound level (SPL)(Slo-Lo-Med-Hi-SHi)		dB(A)	26-31-36-41-47	27-33-38-43-49	28-34-39-44-50	30-37-42-46-53
Outdoor Unit	Dimension	H*W*D	mm	550*800*285	714*800*285	714*800*285	880*840*330
	Net weight		kg	31.5	38	38	47
	Air Volume		m3/min	36.4	53.2	56.4	60.2
	Sound level (SPL)		dB(A)	52	55	56	57
	Breaker Size		A	10	16	16	20
Piping	Piping diameter	Liquid-Gas	inch	1/4 - 1/2	1/4 - 1/2	1/4 - 1/2	1/4 - 5/8
	Max piping length	Out-In	m	20	30	30	30
	Max Height deffierence	Out-In	m	12	15	15	15
Guaranteed operating range (Outdoor)			°C	21 ~ 46			

*Specifications are based on the following condition.
T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
T4- Condition : indoor temperature of 26.6°CDB/ 19.4°CWB, and outdoor temperature of 48°CDB.
*Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 5151:2011
*T4 condition is measured by the third party organization.

MSY-GT series for Bahrain

Indoor Unit				MSY-GT13VF	MSY-GT18VF	MSY-GT24VF	MSY-GT30VF
Outdoor Unit				MUY-GT13VF	MUY-GT18VF	MUY-GT24VF	MUY-GT30VF
Power supply (Outdoor) [Single phase]			V	220-230-240	220-230-240	220-230-240	220-230-240
Refrigerant				R32	R32	R32	R32
T1* (Specifications at 230V)		Capacity (Min-Max)	kW	3.810 (1.50 - 4.25)	5.280 (1.81 - 6.2)	7.050 (2.11 - 8.04)	8.210 (2.11 - 9.44)
			Btu/h	13,000 (5,118 - 14,502)	18,015 (6,176 - 21,154)	24,055 (7,199 - 27,432)	28,013 (7,199 - 32,209)
		Total input		1.110	1.340	1.960	2.330
		EER		11.71	13.44	12.27	12.02
T3* (Specifications at 230V)		Capacity (Max)	kW	3.225 (3.85)	5.450 (5.90)	6.260 (6.87)	7.490 (8.06)
			Btu/h	11,004 (13,137)	18,595 (20,131)	21,359 (23,440)	25,556 (27,569)
		Total input	kW	1.290	2.055	2.405	3.080
		EER	Btu/h/W	8.53	9.05	8.88	8.30
Operating Current (220-230-240V)			A	5.2 - 5.0 - 5.0	6.3 - 6.0 - 5.8	9.0 - 8.6 - 8.2	10.7 - 10.2 - 9.8
Indoor Unit	Power Input	Rated	kW	0.030	0.038	0.038	0.046
	Running Current	Rated	A	0.24	0.34	0.34	0.39
	Dimension	H*W*D	mm	280*838*228	325*1100*238	325*1100*238	325*1100*238
	Net weight		kg	8.9	14.7	14.7	14.7
	Air Volume (Slo-Lo-Med-Hi-SHi)		m3/min	5.2-7.5-9.3-11.4-13.8	9.0-11.1-13.1-15.4-20.0	9.6-11.9-14.4-16.6-20.0	7.9-11.3-13.9-17.7-21.7
	Sound level (SPL)(Slo-Lo-Med-Hi-SHi)		dB(A)	26-31-36-41-47	27-33-38-43-49	28-34-39-44-50	30-37-42-46-53
Outdoor Unit	Dimension	H*W*D	mm	550*800*285	714*800*285	714*800*285	880*840*330
	Net weight		kg	31.5	38	38	47
	Air Volume		m3/min	36.4	53.2	56.4	60.2
	Sound level (SPL)		dB(A)	52	55	56	57
	Breaker Size		A	10	16	16	20
Piping	Piping diameter	Liquid-Gas	inch	1/4 - 1/2	1/4 - 1/2	1/4 - 1/2	1/4 - 5/8
	Max piping length	Out-In	m	20	30	30	30
	Max Height deffierence	Out-In	m	12	15	15	15
Guaranteed operating range (Outdoor)			°C	21 ~ 46			

*Specifications are based on the following condition.
T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
*Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 5151:2011

M series <Fixed speed type>

MS-GS series



MS-GS13VF



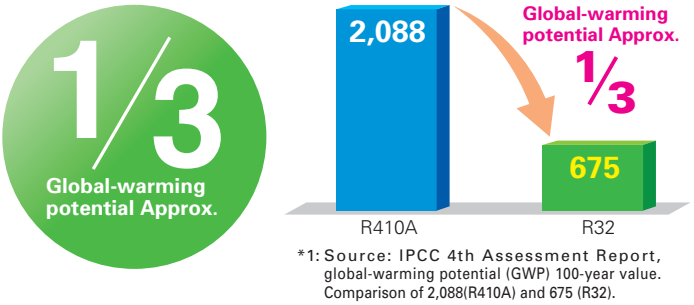
MS-GS18/24VF



MS-GS30/36VF



R32 refrigerant



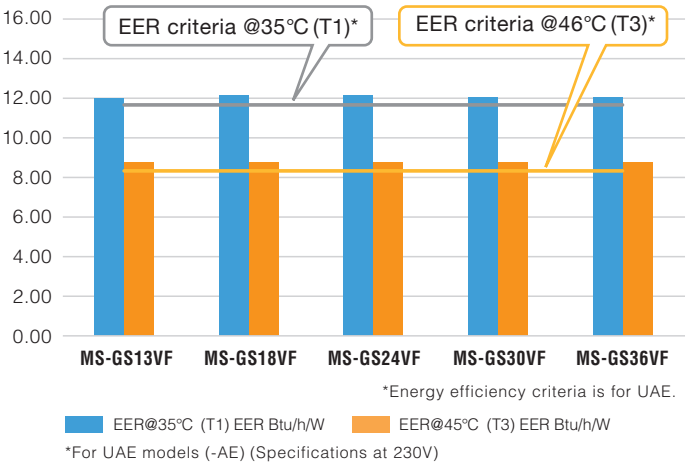
*1: Source: IPCC 4th Assessment Report, global-warming potential (GWP) 100-year value. Comparison of 2,088(R410A) and 675 (R32).

Points for Use

The new R32 refrigerant has a global-warming potential approximately 1/3*1 that of our current refrigerant, R410A; thereby dramatically reducing the impact on global-warming more than ever.

High Energy Efficiency

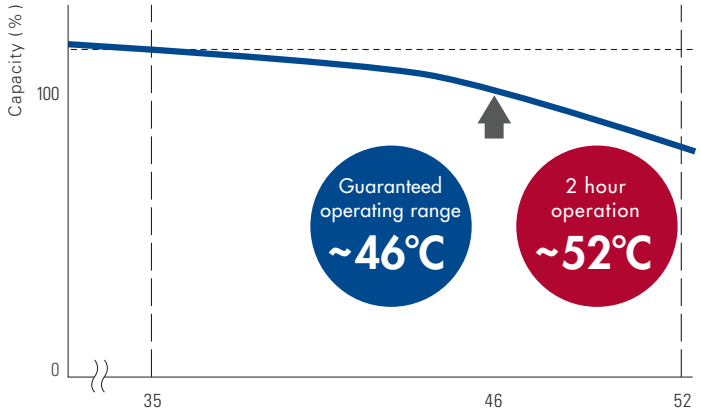
The classes from low-capacity (13,000Btu) to high-capacity (36,000Btu) , have achieved high energy efficiency not only rated condition (@35°C), but even at high ambient 46°C .



*For UAE models (-AE) (Specifications at 230V)

HIGH COOLING PERFORMANCE EVEN IN TROPICAL CONDITION

Powerful cooling performance realizes guaranteed operating range up to 46°C . In addition, it realizes to keep operaitng for 2hours at 52°C .



*Capacity curve is image

Air Volume

Airflow volume(SHI) is improved 142% from previous series and it can reach users more airflow.

142% improvement

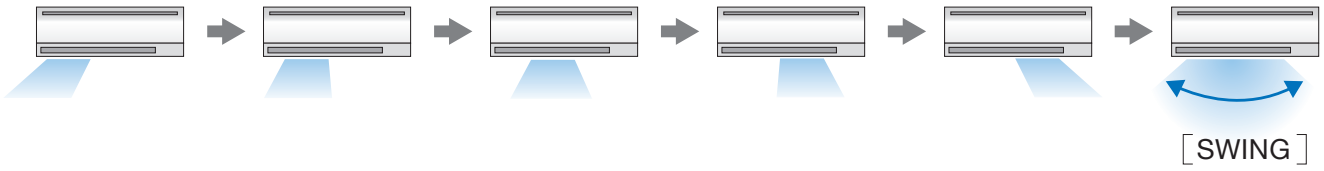
Airflow (SHI) m3/min

		Class				
		13	18	24	30	36
Previous		10.4	18.1	22.0	21.6	23.2
New	MS-GS series	14.8	22.0	22.4	25.0	25.4
		142%	122%	102%	116%	109%

Vane Control (Up-Down & Left-Right)

MS-GS series can selet 5direction and swing (Up-down) and 5direction, side and swing (Left-Right). Once you select airflow direction on the remote controller, airflow will reach as you select.

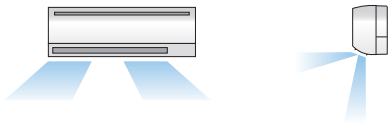
Left - Right



Up - Doun



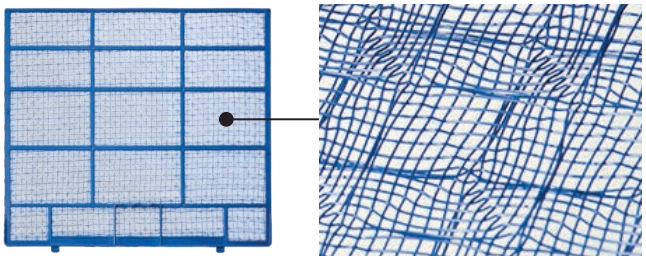
Area specific

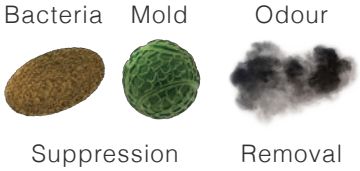


*Manual : MS-GS13
Auto : MS-GS18/24/30/36

Nano Platinum filter

Nano Platinum Filter with the tree-dimensional surface has a large capture area and incorporates nanometer-sized platinum-ceramic particles that work to break bacteria, mold, and also odours.





M series Fixed speed models Specification

MS-GS series for UAE

Indoor Unit				MS-GS13VF	MS-GS18VF	MS-GS24VF	MS-GS30VF	MS-GS36VF
Outdoor Unit				MU-GS13VF	MU-GS18VF	MU-GS24VF	MU-GS30VF	MU-GS36VF
Power supply (Outdoor) [Single phase]			V	220-230-240	220-230-240	220-230-240	220-230-240	220-230-240
Refrigerant				R32	R32	R32	R32	R32
T1* (Specifications at 230V)		Capacity	kW	3.500	5.200	6.700	8.200	9.500
			Btu/h	11,942	17,743	22,861	27,980	32,415
		Total input	kW	0.995	1.475	1.900	2.330	2.700
		EER	Btu/h/W	12.00	12.03	12.03	12.01	12.01
		CSPF		12.76	12.76	12.76	12.76	12.76
T3* (Specifications at 230V)		Capacity	kW	3.300	4.700	5.920	7.034	8.215
			Btu/h	11,260	16,037	20,200	24,001	28,031
		Total input	kW	1.310	1.865	2.350	2.790	3.260
		EER	Btu/h/W	8.6	8.6	8.6	8.6	8.6
		CSPF		10.54	10.51	10.51	10.47	10.47
Operating Current			A	4.4	6.5	8.7	10.3	12.6
Indoor Unit	Power Input	Rated	kW	0.050	0.050	0.050	0.070	0.070
	Running Current	Rated	A	0.39	0.42	0.40	0.61	0.61
	Dimension	H*W*D	mm	290*799*232	325*1,100*238	325*1,100*238	365*1,170*295	365*1,170*295
	Net weight		kg	9.2	14.9	14.9	20	20
	Air volume (Lo-Med-Hi-SHi)		m3/min	7.1-9.9-12.6-14.8	12.5-14.9-17.1-22.0	12.5-14.3-17.1-22.4	15.0-19.0-23.0-25.0	15.4-19.1-23.2-25.4
	Sound level (SPL) (Lo-Med-Hi-SHi)		dB(A)	29-37-42-48	35-41-46-53	37-42-47-53	37-42-47-53	40-45-50-53
Outdoor Unit	Dimension	H*W*D	mm	525*718*255	525*718*255	880*840*330	880*840*330	1,258*870*295
	Net Weight		kg	33.5	34.0	58.5	66.5	81.5
	Air volume		m3/min	31.7	32.4	52.0	52.0	85.8
	Sound level (SPL)		dB(A)	52	53	56	56	57
	Breaker Size		A	10	15	20	20	25
Piping	Piping diameter	Liquid-Gas	inch	1/4-3/8	1/4-1/2	1/4-5/8	1/4-5/8	3/8-3/4
	Max piping length	Out-In	m	20	30	30	30	30
	Max height deffierence	Out-In	m	10	10	10	10	15
Guaranteed operating range (Outdoor)			°C	21 ~ 46				

*Specifications are based on the following condition.
T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
*Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 5151:2011

MS-GS series for Qatar

Indoor Unit				MS-GS13VF	MS-GS18VF	MS-GS24VF	MS-GS30VF	MS-GS36VF
Outdoor Unit				MU-GS13VF	MU-GS18VF	MU-GS24VF	MU-GS30VF	MU-GS36VF
Power supply (Outdoor) [Single phase]			V	220-230-240	220-230-240	220-230-240	220-230-240	220-230-240
Refrigerant				R32	R32	R32	R32	R32
T1* (Specifications at 240V)		Capacity	kW	3.500	5.200	6.700	8.200	9.500
			Btu/h	11,942	17,742	22,860	27,978	32,414
		Total input	kW	1.000	1.480	1.910	2.340	2.790
		EER	Btu/h/W	11.94	11.99	11.97	11.96	11.62
		CSPF		12.69	12.72	12.69	12.69	12.35
T3* (Specifications at 240V)		Capacity	kW	3.300	4.700	5.920	7.034	8.215
			Btu/h	11,260	16,036	20,199	24,000	28,030
		Total input	kW	1.310	1.865	2.350	2.790	3.260
		EER	Btu/h/W	8.6	8.6	8.6	8.6	8.6
		CSPF		10.51	10.48	10.44	10.41	10.2
Operating Current			A	4.3	6.4	8.5	9.9	12.2
Indoor Unit	Power Input	Rated	kW	0.050	0.050	0.050	0.070	0.070
	Running Current	Rated	A	0.39	0.42	0.40	0.61	0.61
	Dimension	H*W*D	mm	290*799*232	325*1,100*238	325*1,100*238	365*1,170*295	365*1,170*295
	Net weight		kg	9.2	14.9	14.9	20.0	20.0
	Air volume (Lo-Med-Hi-SHi)		m3/min	7.1-9.9-12.6-14.8	12.5-14.9-17.1-22.0	12.5-14.3-17.1-22.4	15.0-19.0-23.0-25.0	15.4-19.1-23.2-25.4
	Sound level (SPL) (Lo-Med-Hi-SHi)		dB(A)	29-37-42-48	35-41-46-53	37-42-47-53	37-42-47-53	40-45-50-53
Outdoor Unit	Dimension	H*W*D	mm	525*718*255	525*718*255	880*840*330	880*840*330	1,258*870*295
	Net Weight		kg	33.5	34.0	58.5	66.5	81.5
	Air volume		m3/min	31.7	32.4	52.0	52.0	85.8
	Sound level (SPL)		dB(A)	52	53	56	56	57
	Breaker Size		A	10	15	20	20	25
Piping	Piping diameter	Liquid-Gas	inch	1/4-3/8	1/4-1/2	1/4-5/8	1/4-5/8	3/8-3/4
	Max piping length	Out-In	m	20	30	30	30	30
	Max height deffierence	Out-In	m	10	10	10	10	15
Guaranteed operating range (Outdoor)			°C	21 ~ 46				

*Specifications are based on the following condition.
T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
*Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 5151:2011

M series Fixed speed models Specification

MS-GS series for Bahrain

Indoor Unit				MS-GS13VF	MS-GS18VF	MS-GS24VF	MS-GS30VF	MS-GS36VF
Outdoor Unit				MU-GS13VF	MU-GS18VF	MU-GS24VF	MU-GS30VF	MU-GS36VF
Power supply (Outdoor) [Single phase]			V	220-230-240	220-230-240	220-230-240	220-230-240	220-230-240
Refrigerant				R32	R32	R32	R32	R32
T1* (Specification at 230V)		Capacity	kW	3.500	5.200	6.700	8.200	9.500
			Btu/h	11,942	17,742	22,860	27,978	32,414
		Total input	kW	0.995	1.475	1.900	2.330	2.700
		EER	Btu/h/W	12.00	12.03	12.03	12.01	12.01
		CSPF		12.76	12.76	12.76	12.76	12.76
T3* (Specification at 230V)		Capacity	kW	3.300	4.700	5.920	7.034	8.215
			Btu/h	11,260	16,036	20,199	24,000	28,030
		Total input	kW	1.310	1.865	2.350	2.790	3.260
		EER	Btu/h/W	8.6	8.6	8.6	8.6	8.6
		CSPF		10.54	10.51	10.51	10.47	10.47
Operating Current			A	4.4	6.5	8.7	10.3	12.6
Indoor Unit	Power Input	Rated	kW	0.050	0.050	0.050	0.070	0.070
	Running Current	Rated	A	0.39	0.42	0.40	0.61	0.61
	Dimension	H*W*D	mm	290*799*232	325*1,100*238	325*1,100*238	365*1,170*295	365*1,170*295
	Net weight		kg	9.2	14.9	14.9	20.0	20.0
	Air volume (Lo-Med-Hi-SHi)		m3/min	7.1-9.9-12.6-14.8	12.5-14.9-17.1-22.0	12.5-14.3-17.1-22.4	15.0-19.0-23.0-25.0	15.4-19.1-23.2-25.4
	Sound level (SPL) (Lo-Med-Hi-SHi)		dB(A)	29-37-42-48	35-41-46-53	37-42-47-53	37-42-47-53	40-45-50-53
Outdoor Unit	Dimension	H*W*D	mm	525*718*255	525*718*255	880*840*330	880*840*330	1,258*870*295
	Net Weight		kg	33.5	34.0	58.5	66.5	81.5
	Air volume		m3/min	31.7	32.4	52.0	52.0	85.8
	Sound level (SPL)		dB(A)	52	53	56	56	57
	Breaker Size		A	10	15	20	20	25
Piping	Piping diameter	Liquid-Gas	inch	1/4-3/8	1/4-1/2	1/4-5/8	1/4-5/8	3/8-3/4
	Max piping length	Out-In	m	20	30	30	30	30
	Max height deffierence	Out-In	m	10	10	10	10	15
Guaranteed operating range (Outdoor)			°C	21 ~ 46				

*Specifications are based on the following condition.
T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
*Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 5151:2011



P SERIES

P-Series Line-up

INDOOR UNIT

4-way ceiling-cassette	Ceiling-suspended	Ceiling-concealed	Floor-standing
			
PLY-ZM	PCY-ZM	PEY-ZM  PEY-(Z)M	PSY-ZM

OUTDOOR UNIT



SUY-ZM18



SUY-ZM24/30



PUY-ZM36



PUY-ZM45
PUY-(Z)M60

4-way ceiling-cassette

PLY SERIES (R32 MODELS)

(3Di-see Sensor: optional)



PLY-ZM18/24/30/36/45EA-AE [SA, GU]


*optional


optional


*optional


optional

* Signal receiver is required.



A sophisticated design that matches a variety of rooms and a high level of convenience enhancing your quality of life are combined in this compact, multi-functional indoor unit.

Beautiful Square Design

The beautiful design harmonizes with any interior, making it ideal for facilities such as offices and retail stores. Direct line-based square design enables designs of ceiling to match the design of direct line type illuminations, thereby creating a beautiful space.



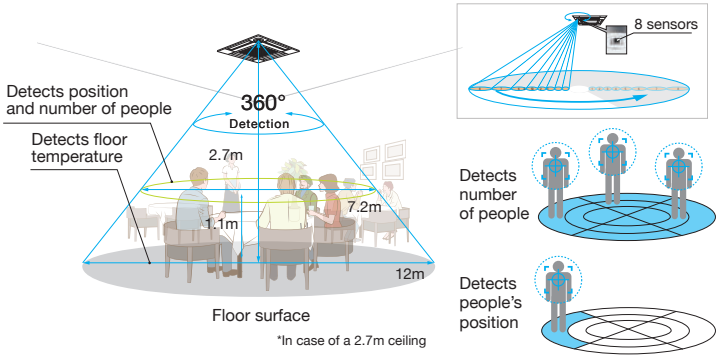
3D i-see Sensor



The "3D i-see Sensor" built into the optional corner panel eliminates uneven temperature distribution and reduces electricity consumption.

Highly Accurate Motion Detection

A total of eight sensors rotate a full 360° in intervals. In addition to detecting body temperature, our original algorithm also detects the number of occupants in the room and their positions.



"3D i-see Sensor" temperature-sensing technology improves energy efficiency and enhances room comfort

The "3D i-see Sensor" is an innovative Mitsubishi Electric technology that uses a radiation-based sensor to monitor temperature throughout an entire room. When connected to the air conditioner control panel, the "3D i-see Sensor" works to maximize room comfort.

Sensible temperature control prevents excessive cooling through pioneering control technology

By measuring the inlet temperature and floor temperature, temperatures felt by the human body (sensible temperature) are computed. This allows the proper sensible temperature to always be maintained through the suppression of excessive cooling.

Detects Number of People (3D i-see Sensor: optional)

Room occupancy energy-saving mode

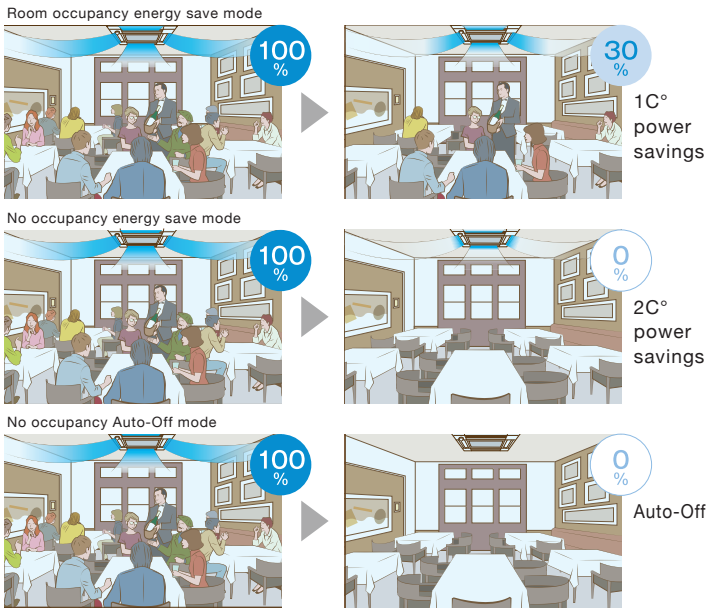
The 3D i-see Sensor detects the number of people in the room. It then calculates the occupancy rate based on the maximum number of people in the room up to that point in time in order to save air-conditioning power. When the occupancy rate is approximately 30%, air-conditioning power equivalent to 1°C during cooling operation is saved. The temperature is controlled according to the number of people.

No occupancy energy-saving mode

When 3D i-see Sensor detects that no one is in the room, the system is switched to a pre-set power-saving mode. If the room remains unoccupied for more than 60min, air-conditioning power equivalent to 2°C during cooling operation is saved. This contributes to preventing waste in terms of cooling.

No occupancy Auto-OFF mode

When the room remains unoccupied for a pre-set period of time, the air conditioner turns off automatically, thereby providing even greater power savings. The time until operation is stopped can be set in intervals of 10min, ranging from 60 to 180 min.



*PAR-41MAA is required for each setting
**% is room occupancy rate.

Detect People's Position (3D i-see Sensor: optional)

Direct/Indirect settings

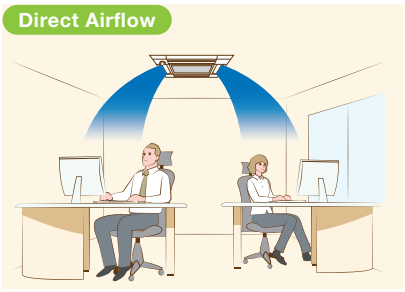
Some people do not like the feel of wind, some want to be warm from head to toe. People's likes and dislikes vary. With the 3D i-see Sensor, it is possible to choose to block or not block to the wind for each vane.

Direct (Downward)



Indirect (Horizontal)







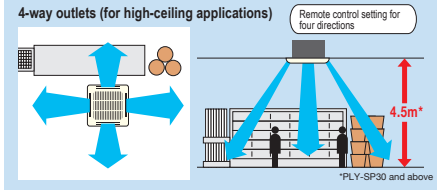
*Only available for models equipped with 3D i-see Sensor.
*PAR-41MAA or PAR-SL100A-E is required for each setting.

Vane Control Applications

For Shopping Malls

Wide airflow coverage down to the floor even in expansive spaces like large factory-outlet centers or shopping malls with high ceilings.

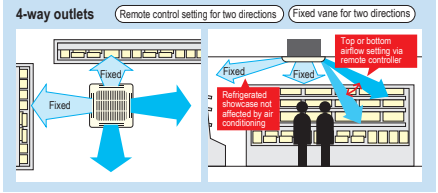
The unique airflow design of the powerful ceiling-cassette models reduces pressure loss and provides wide cool-air coverage from high ceilings to the floor even in expansive spaces like shopping malls with ceilings over 4 metres in height.



For Retail Outlets (e.g. grocery stores)

These units are ideal for maintaining constant temperatures in environments that have equipment such as refrigerated showcases.

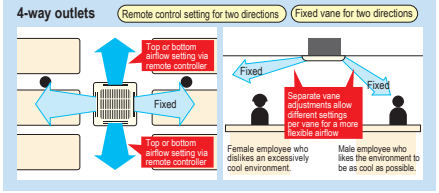
Individual vane angle adjustment enables precise airflow control to specific areas of the store to reduce unnecessary air conditioning of areas such as refrigerated showcases.



For Offices

Flexible and pleasant airflow eliminates annoying drafts within the office environment.

In office environments, annoying drafts can be bothersome, leading to discomfort and reduced productivity. Precise vane control helps to eliminate this problem.

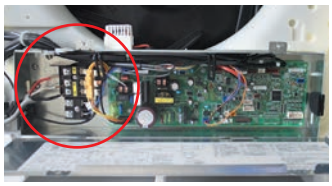


Easy Installation and Maintainance

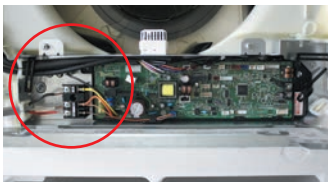
Electrical box wiring

After reviewing the power supply terminal position in the electrical box, the structure was redesigned to improve connectivity. This has made previously complex wiring work easier.

■ Previous model (PLY-P**BA)



■ New model (PLY-ZM**EA)



Increased space for plumbing work

The top and bottom positions of the liquid and gas pipes have been reversed to allow the gas pipe work, which requires more effort, to be completed first. Further, through structural innovations related to the space around the pipes, the area where the spanner can be moved has been increased, thus improving liquid pipe work and enabling it to be completed smoothly.

■ Previous model (PLY-P**BA)



■ New model (PLY-ZM**EA)



Temporary hanging hook

The structure of the panel has been revised and is now equipped with a temporary hanging hook. This has improved work efficiency during panel installation.





No need to remove screws

Installation is possible without removing the screws for the corner panel and the control box, simply loosen them. This lowers the risk of losing screws.

■ Corner panel



■ Control box cover



Lightweight decorative panel

After reviewing the structure and materials, weight has been reduced approximately 20% compared to the previous model, reducing the burden of installation.



Automatic Grille Lowering Function (PLP-6EAJ)

An automatic grille lowering function is available for easy filter maintenance. Special wired and wireless remote controllers can be used to lower the intake grille for maintenance.



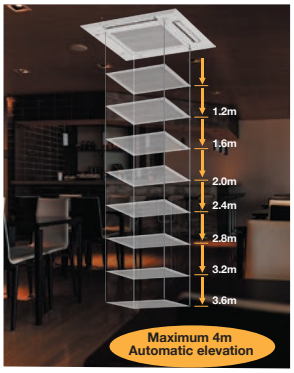
Grille Elevation Remote Controller
(comes with the automatic elevation panel)



Wired Remote Controller
PAR-41MAA



Wireless Remote Controller
PAR-SL101A-E



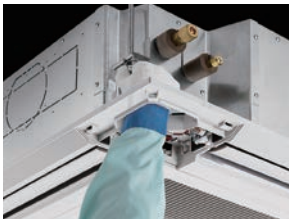
Fresh-air Intake

Indoor air quality is significantly enhanced by the direct intake of fresh air from outside. An optional multi-function casement (PAC-SJ41-TM-E) is also available for the intake of a larger volume of air.



Handy Corner Pocket Design Simplifies Maintenance

By using the handy pockets equipped on the four corners of the grille, maintenance work such as drain pan cleaning and height adjustments can be accomplished without removing the grille.



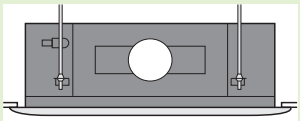
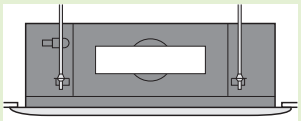
Drain Water Lifting Mechanism

A high-performance drain pump on the drain water lifting mechanism allows the drain water pipe to be routed as high as 850mm from the ceiling surface.



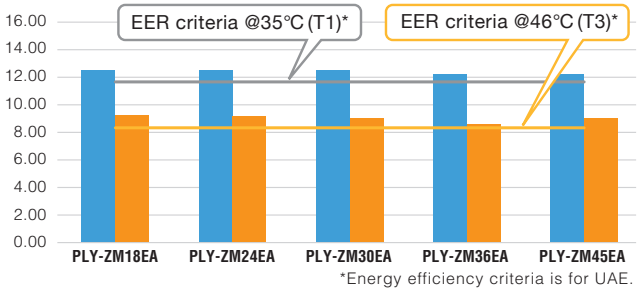
Compatible with Round and Rectangular Ducts

For easy connection to branch ducts, knock-out holes are designed to fit both round and rectangular ducts. Matching the shape of the duct fringe provides more flexibility during installation.

Connecting to round ducts	Connecting to rectangular ducts
	
150mm diameter cutout	350mm x 100mm cutout

High Energy Efficiency

The classes from low-capacity (18,000Btu) to high-capacity (45,000Btu), have achieved high energy efficiency not only rated condition (35°C), but even at high ambient 46°C.



*Energy efficiency criteria is for UAE.

EER@35°C (T1) EER Btu/h/W EER@46°C (T3) EER Btu/h/W

*For UAE models (-AE) (Specifications at 230V)

P series Inverter models Specification

4-way celling-cassette (-AE, -SA, -GU)

Indoor				PLY-ZM18EA	PLY-ZM24EA	PLY-ZM30EA	PLY-ZM36EA	PLY-ZM45EA	
Outdoor			-AE	SUY-ZM18VA	SUY-ZM24VA	SUY-ZM30VA	PUY-ZM36VKA	PUY-ZM45VKA	PUY-ZM45YKA
			-GU						-
			-SA	SUY-ZM18NA	SUY-ZM24NA	SUY-ZM30NA	PUY-ZM36NKA	PUY-ZM45NKA	PUY-ZM45XKA
Power supply (Outdoor)			-AE, -GU	V	220 - 240 / Single / 50				380-415/Three/50
			-SA		220 / Single / 60				380 / Three / 60
Refrigerant					R32				
T1		Capacity (Min-Max)		kW	5.31 (2.80-5.40)	7.10 (3.60-8.90)	8.80 (4.10-9.70)	10.60 (4.10-10.70)	13.20 (6.20-15.00)
				Btu/h	18,100 (9,554-18,425)	24,200 (12,283-30,367)	30,000 (13,989-33,096)	36,200 (13,989-36,508)	45,000 (21,154-51,180)
		Total input		kW	1.448	1.936	2.400	2.979	3.704
		EER		Btu/h/W	12.50			12.15	
T3		Capacity		kW	4.77	6.39	7.50	9.55	11.90
				Btu/h	16,300	21,800	25,600	32,600	40,600
		Total input		kW	1.753	2.370	2.844	3.820	4.511
		EER		Btu/h/W	9.30	9.20	9.00	8.55	9.00
Operating Current			-AE	A	7.90	10.60	12.90	17.20	20.20	7.60
			-SA		8.20	11.10	13.50	17.90	21.10	8.00
			-GU		6.30	8.40	10.60	13.00	16.10	6.20
Indoor Unit	Power Input	Rated		kW	0.03	0.04	0.09			
	Running Current	Rated		A	0.33	0.43	0.91		0.99	
	Dimension<Panel>	H*W*D		mm	258*840*840 <40*950*950>		298*840*840 <40*950*950>			
	Net weight<Panel>			kg	19 <5>	21 <5>	27 <5>			
	Air Volume (Slo-Lo-Med-Hi-SHi)			m^3/min	14-16-17-18	16-17-19-21	21-25-28-31		24-26-29-32	
	Sound level (SPL)(Slo-Lo-Med-Hi-SHi)			dB(A)	27-29-31-32	28-30-32-35	32-37-41-43		36-39-42-44	
Outdoor Unit	Dimension	H*W*D		mm	714*800*285	880*840*330		981*1050*330	1338*1050*330	
	Net weight			kg	38	48	46	65	100	102
	Air Volume			m^3/min	45.6	63.4		87	116	
	Sound level (SPL)			dB(A)	51	54			55	
	Breaker Size			A	16	20		25	40	25
Piping	Piping diameter	Liquid-Gas		inch	1/4 - 1/2	3/8 - 5/8				
	Max piping length	Out-In		m	30		50		55	
	Max Height deffierence	Out-In		m	20	25	30		30	
Guaranteed Operation Range (Outdoor)					18-52					

* Specifications are based on the following condition.
  T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
  T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
* Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 13253:2011
* T1 and T3 are specifications at 230V.
* Operating current specifications are at 220-230-240V.

Ceiling-suspended

PCY SERIES (R32 MODELS)



PCY-ZM18/24/30/36/45KA-AE [GU]



optional *optional *optional

* Signal receiver is required.



A stylish indoor unit design and airflow settings for both high- and low-ceiling interiors expand installation possibilities

Stylish Indoor Unit Design

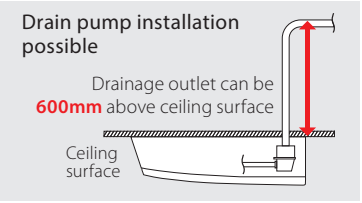
A stylish rectangular design is adopted for the indoor units of all models. As a result, the units blend in better with the ceiling.



PCY-ZM**KA

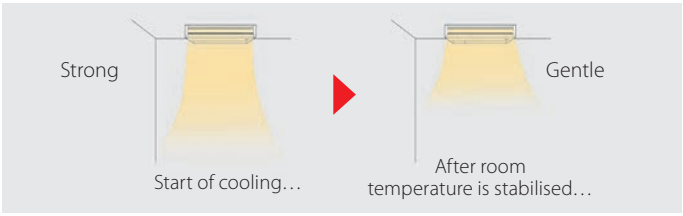
Optional Drain Pump for Full-capacity Models

The pumping height of the optional drain pump has been increased from 400mm to 600mm, expanding flexibility in choosing unit location during installation work.



Automatic Air-speed Adjustment

In addition to the conventional 4-speed settings, units are now equipped with an automatic air-speed adjustment mode. This setting automatically adjusts the air-speed to conditions that match the room environment. At the start of cooling operation, the airflow is set to high-speed to quickly cool the room. When the room temperature reaches the desired setting, the airflow speed is decreased automatically for stable, comfortable cooling operation.



Fresh-air Intake

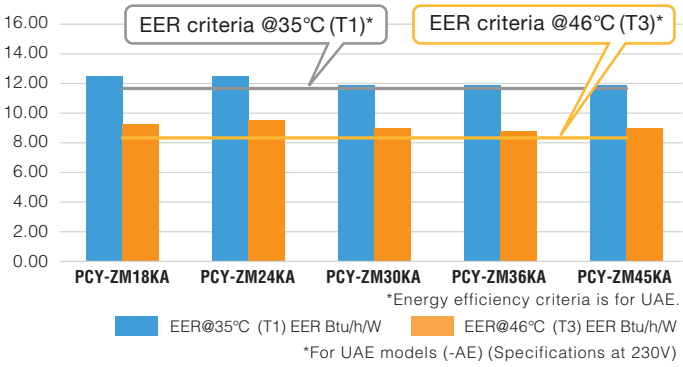
Units are equipped with a knock-out hole that enables the induction of fresh air from outside.

Flockless Vanes

With the adoption of flockless vanes, dirt and other impurities can be cleaned off easily using a mild household detergent.

High Energy Efficiency

The classes from low-capacity (18,000Btu) to high-capacity (45,000Btu), have achieved high energy efficiency not only rated condition (35°C), but even at high ambient 46°C.



*Energy efficiency criteria is for UAE.

EER@35°C (T1) EER Btu/h/W EER@46°C (T3) EER Btu/h/W

*For UAE models (-AE) (Specifications at 230V)

P series Inverter models Specification

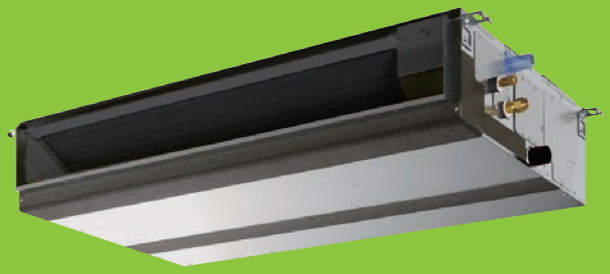
Ceiling-suspended (-AE, -GU)

Indoor				PCY-ZM18KA	PCY-ZM24KA	PCY-ZM30KA	PCY-ZM36KA	PCY-ZM45KA	
Outdoor			-AE, -GU	SUY-ZM18VA	SUY-ZM24VA	SUY-ZM30VA	PUY-ZM36VKA	PUY-ZM45VKA	PUY-ZM45YKA
									-
Power supply (Outdoor)			-AE, -GU V/Phase/Hz	220 - 240 / Single / 50					380-415/Three/50
Refrigerant				R32					
T1		Capacity (Min-Max)	kW	5.31 (2.80-5.40)	7.10 (3.60-8.90)	8.80 (4.10-9.70)	10.60 (4.10-10.70)	13.20 (6.20-15.00)	
			Btu/h	18,100 (9,554-18,425)	24,200 (12,283-30,367)	30,000 (13,989-33,096)	36,200 (13,989-36,508)	45,000 (21,154-51,180)	
		Total input	kW	1.448	1.936	2.510	3.029	3.766	
		EER	Btu/h/W	12.50		11.95		11.95	
T3		Capacity	kW	4.77	6.39	7.50	9.55	11.90	
			Btu/h	16,300	21,800	25,600	32,600	40,600	
		Total input	kW	1.753	2.271	2.844	3.672	4.511	
		EER	Btu/h/W	9.30	9.60	9.00	8.90	9.00	
Operating Current		-AE	A	6.7	8.8	11.6	13.9	17.1	6.5
		-GU		6.4	8.5	11.2	13.4	16.4	6.3
Indoor Unit	Power Input	Rated	kW	0.07	0.08	0.16		0.16	
	Running Current	Rated	A	0.61	0.72	1.35		1.35	
	Dimension	H*W*D	mm	230*1280*680		230*1600*680			
	Net weight		kg	32		40			
	Air Volume (low-med2-med1-high)		m^3/min	16-17-18-20	16-18-20-22	27-29-32-34			
	Sound level(SPL)(low-med2-med1-high)		dB(A)	34-36-38-40	34-36-40-42	42-44-46-48			
Outdoor Unit	Dimension	H*W*D	mm	714*800*285	880*840*330		981*1050*330	1338*1050*330	
	Net weight		kg	38	48	46	65	100	102
	Air Volume		m^3/min	45.6	63.4		87	116	
	Sound level (SPL)		dB(A)	51	54			55	
	Breaker Size		A	16	20		25	40	25
Piping	Piping diameter	Liquid-Gas	inch	1/4 - 1/2	3/8 - 5/8				
	Max piping length	Out-In	m	30		50		55	
	Max Height deffierence	Out-In	m	20	25	30		30	
Guaranteed Operation Range (Outdoor)				18-52					

* Specifications are based on the following condition.
  T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
  T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
* Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 13253:2011
* T1 and T3 are specifications at 230V.
* Operating current specifications are at 220-230-240V.

Ceiling-concealed

PEY SERIES (MODELS)



PEY-ZM18/24/30/36/45JAG-AE [SA, GU]



PEY-(Z)M60GAG-AE
PEY-ZM60GAG-SA [GU]



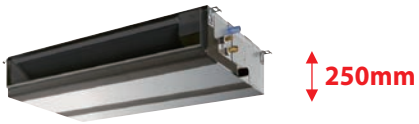
optional *optional(60) *optional(18-45)
* Signal receiver is required.



The thin, ceiling-concealed indoor units of the PEY series are the perfect answer for the air-conditioning requirements of buildings with minimum ceiling installation space and wide-ranging external static pressure. Energy-saving efficiency has been improved, thereby reducing electricity consumption and contributing to a further reduction in operating cost.

Compact Indoor Units*

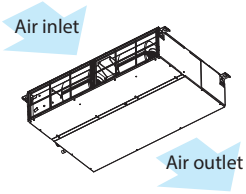
The unit height is unified to 250mm.
which makes installation in low ceilings with minimal clearance space possible.
*PEY-ZM18/24/30/36/45JAG



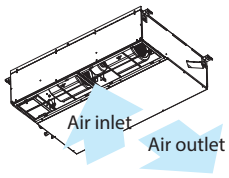
Air Inlet

Units with bottom inlets make more noise than those with rear inlets. It is recommended that the rear inlet be selected when installing a unit in a room that should be quiet, such as a bedroom.

(1) Rear inlet



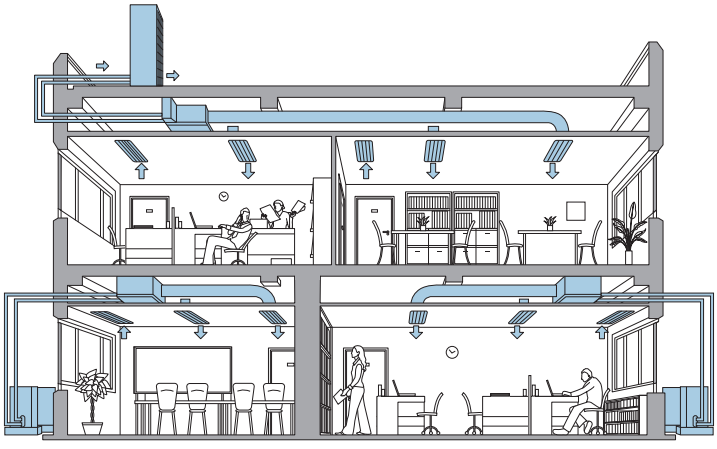
(2) Bottom inlet



Wide Selection of Fan Speeds and External Static Pressure

Five-stage external static pressure conversions and three fan speed*1 selections are available. Capable of being set to a maximum of 150Pa*2, units are applicable to a wide range of building types. *1 PEY-ZM18/24/30/36/45JAG *2 PEY-ZM60GAG

■Flexible duct design



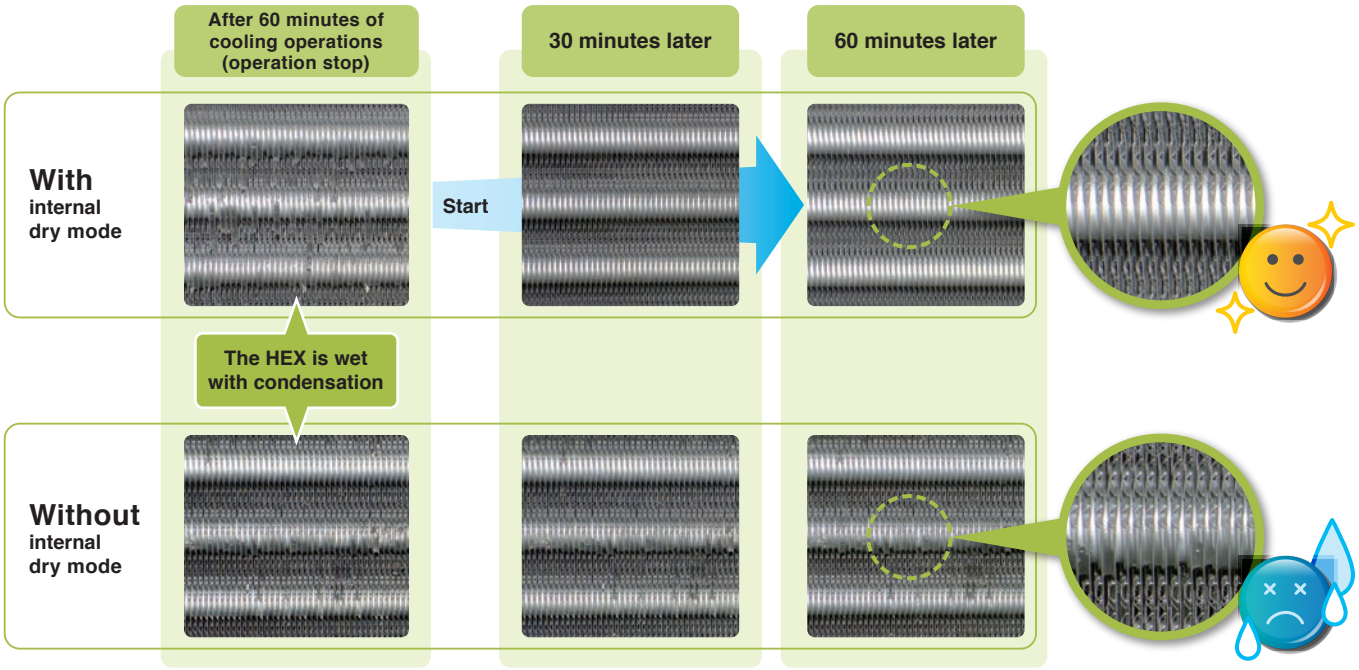
■External static pressure setting

PEY-ZM18/24/30/36/45JAG	35/50/70/100/125Pa
PEY-ZM60GAG	50/100/150Pa

Internal Dry Mode (for PEY-ZM18/24/30/36/45JAG)

To dry the heat exchanger (HEX), the unit will operate in the fan mode at high speed after cooling or drying operation has stopped. The drying time is selectable from 30 or 60 minutes.

■**Operating Sample**



*Under norminal cooling conditions (Indoor) (27CD.B./19˚CW.B.) *Results will vary depending on indoor temperature and humidity conditions.

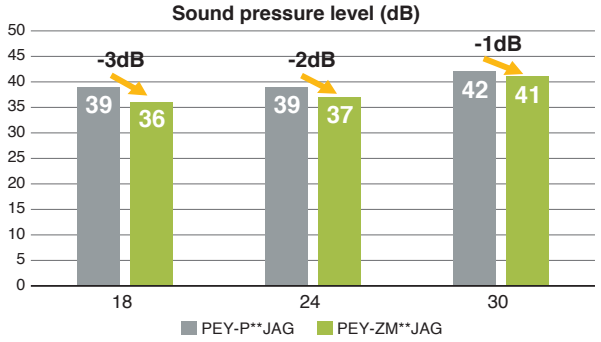
High Power Fan Speed Mode (for PEY-ZM18/24/30/36/45JAG)

This start-up mode is run with the increased fan speed for a maximum of 15 minutes to rapidly cool or heat the space (after the first Thermo-ON operation).

*Power consumption and sound pressure level will increase in this mode.
*High power fan speed mode is not available when the external static pressure is set to 125 Pa.

Reduced Noise Level

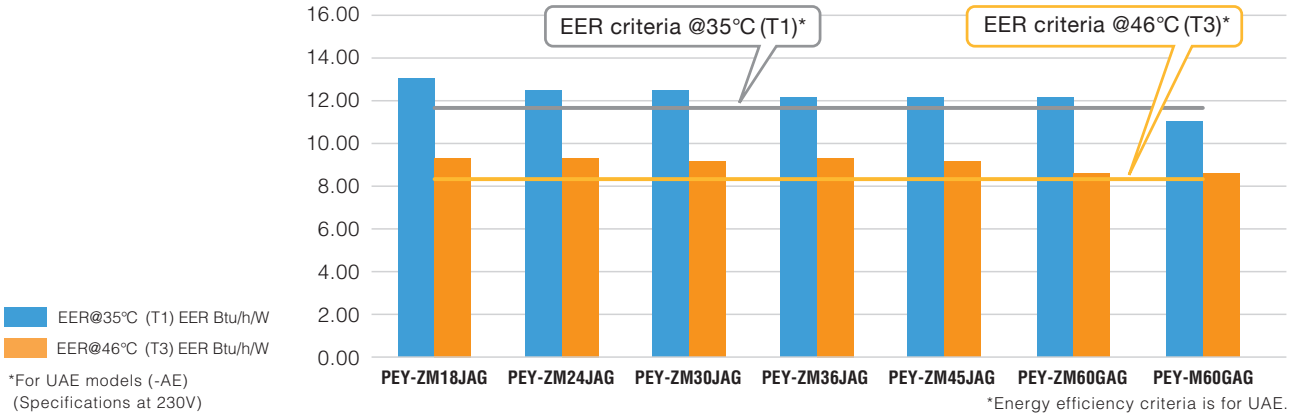
The noise levels of low capacity models (ZM18/24/30) are reduced compared to conventional models. The ZM18 model achieves 3dB reduction in noise level.



*Specifications reported are figures of high notch sound pressure level.

High Energy Efficiency

The classes from low-capacity (18,000Btu) to high-capacity (60,000Btu), have achieved high energy efficiency not only rated condition (35°C), but even at high ambient 46°C.



*For UAE models (-AE)
(Specifications at 230V)

*Energy efficiency criteria is for UAE.

P series Inverter models Specification

Ceiling-concealed (-AE, -SA, -GU)

Indoor				PEY-ZM18JAG	PEY-ZM24JAG	PEY-ZM30JAG	PEY-ZM36JAG	PEY-ZM45JAG	
Outdoor			-AE	SUY-ZM18VA	SUY-ZM24VA	SUY-ZM30VA	PUY-ZM36VKA	PUY-ZM45VKA	PUY-ZM45YKA
			-GU						-
			-SA	SUY-ZM18NA	SUY-ZM24NA	SUY-ZM30NA	PUY-ZM36NKA	PUY-ZM45NKA	PUY-ZM45XKA
Power supply (Outdoor)		-AE, -GU	V/Phase/Hz	220 - 240 / Single / 50					380-415/Three/50
		-SA		220 / Single / 60					380 / Three / 60
Refrigerant				R32					
T1		Capacity (Min-Max)	kW	5.31 (2.80-5.40)	7.10 (3.60-8.90)	8.80 (4.10-9.70)	10.60 (4.10-10.70)	13.20 (6.20-15.00)	
			Btu/h	18,100 (9,554-18,425)	24,200 (12,283-30,367)	30,000 (13,989-33,096)	36,200 (13,989-36,598)	45,000 (21,154-40,944)	
		Total input	kW	1.387	1.936	2.400	2.979	3.704	
		EER	Btu/h/W	13.05	12.50		12.15		
T3		Capacity	kW	4.77	6.39	7.90	9.55	11.90	
			Btu/h	16,300	21,800	27,000	32,600	40,600	
		Total input	kW	1.772	2.370	3.000	3.544	4.511	
		EER	Btu/h/W	9.20	9.20	9.00	9.20	9.00	
Operating Current			-AE	6.4	8.8	10.9	13.6	16.7	6.3
			-SA	6.7	9.2	11.4	14.2	17.5	6.6
			-GU	6.1	8.4	10.5	13	16.1	6.1
Indoor Unit	Power Input	Rated	kW	0.09	0.14	0.19	0.32		
	Running Current	Rated	A	0.69	0.95	1.25	1.98		
	Dimension	H*W*D	mm	250*900*732	250*1100*732	250*1400*732			
	Net weight		kg	26.0	29.5	36.5	38.0		
	Air Volume (Lo-Med-Hi)		m^3/min	12.0-14.5-17.0	17.5-21.0-25.0	24.0-29.0-34.0	29.5-35.5-42.0		
	External Static Pressure		Pa	50					
	Sound level (SPL) (Lo-Med-Hi)		dB(A)	28 - 32 - 36	29 - 33 - 37	33 - 37 - 41	36 - 40 - 44		
Outdoor Unit	Dimension	H*W*D	mm	714*800*285	880*840*330		981*1050*330	1338*1050*330	
	Net weight		kg	38	48	46	65	100	102
	Air Volume		m^3/min	45.6	63.4		87	116	
	Sound level (SPL)		dB(A)	51	54			55	
	Breaker Size		A	16	20		25	40	25
Piping	Piping diameter	Liquid-Gas	inch	1/4 - 1/2	3/8 - 5/8				
	Max piping length	Out-In	m	30		50		55	
	Max Height deffierence	Out-In	m	20	25	30			
Guaranteed Operation Range (Outdoor)			°C	18-52					

* Specifications are based on the following condition.
  T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
  T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
* Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 13253:2011
* T1 and T3 are specifications at 230V.
* Operating current specifications are at 220-230-240V.

Indoor				PEY-ZM60GAG		PEY-M60GAG	
Outdoor			-AE	PUY-ZM60VKA	PUY-ZM60YKA	PUY-M60VKA	PUY-M60YKA
			-GU		-	-	-
			-SA	PUY-ZM60NKA	PUY-ZM60XKA	-	-
Power supply (Outdoor)		-AE, -GU	V/Phase/Hz	220-240/Single/50	380-415/Three/50	220-240/Single/50	380-415/Three/50
		-SA		220 / Single / 60	380 / Three / 60	220 / Single / 60	380 / Three / 60
Refrigerant				R32			
T1		Capacity (Min-Max)	kW	15.00 (6.30-17.60)		17.60 (6.30-17.60)	
			Btu/h	51,200 (21,496-60,051)		60,000 (21,496-60,051)	
		Total input	kW	4.213		6.678	
		EER	Btu/h/W	12.15		9.00	
T3		Capacity	kW	14.95			
			Btu/h	51,000			
		Total input	kW	5.965			
		EER	Btu/h/W	8.55			
Operating Current		-AE	A	20.1	7.1	30.8	10.5
		-SA		20.8	7.4	—	—
		-GU		19.4	6.8	—	—
Indoor Unit	Power Input	Rated	kW	0.49			
	Running Current	Rated	A	3.82			
	Dimension	H*W*D	mm	400*1400*634			
	Net weight		kg	63.0			
	Air Volume (Lo-Med-Hi)		m^3/min	48.0-60.0			
	External Static Pressure		Pa	50			
	Sound level (SPL) (Lo-Med-Hi)		dB(A)	42 - 45			
Outdoor Unit	Dimension	H*W*D	mm	1338*1050*330			
	Net weight		kg	100	102	100	102
	Air Volume		m^3/min	122			
	Sound level (SPL)		dB(A)	55		56	
	Breaker Size		A	40	25	40	25
Piping	Piping diameter	Liquid-Gas	inch	3/8 - 5/8			
	Max piping length	Out-In	m	55			
	Max Height deffierence	Out-In	m	30			
Guaranteed Operation Range (Outdoor)			°C	18-52			

* Specifications are based on the following condition.
  T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
  T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
* Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 13253:2011
* T1 and T3 are specifications at 230V.
* Operating current specifications are at 220-230-240V.

Floor-standing

PSY SERIES (R32 MODELS)



PSY-ZM30/36/45KA-AE



*optional



*optional

* Signal receiver is required.



Streamlined, Lightweight Design

The PS Series has a streamlined design and takes up very little floor space. Adding to this appeal, the unit weight has been significantly reduced for easier handling.

Whisper-quiet Performance

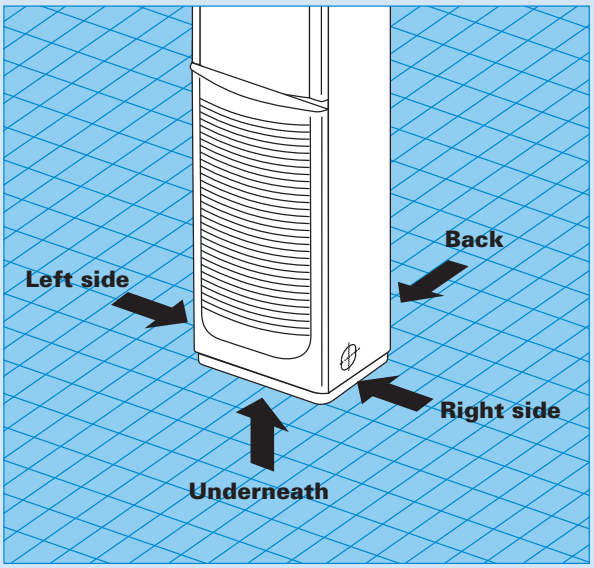
To ensure extra comfort, the PS Series offers whisper-quiet operation thanks to a newly developed low-noise fan and improved air-duct design.

Less Installation Time; 4-way Pipe Directions

To reduce installation time, the piping connection position has been raised to simplify the arrangement of pipes. Piping can also be easily installed in four directions — left side, back, from underneath and on the right side of the unit. Even in the corner of a room is easy installation.

4-way pipe work connections enable greater freedom in installation

Remarkable freedom in choosing installation sites is allowed by providing piping connection to the indoor unit in four places: left side, back, from underneath and on the right side of the unit. Even installation in the corner of a room is easy.



Flockless Vanes

With the adoption of new flockless vanes, dirt and other impurities can be cleaned off easily using a mild household detergent.

A Slim Design

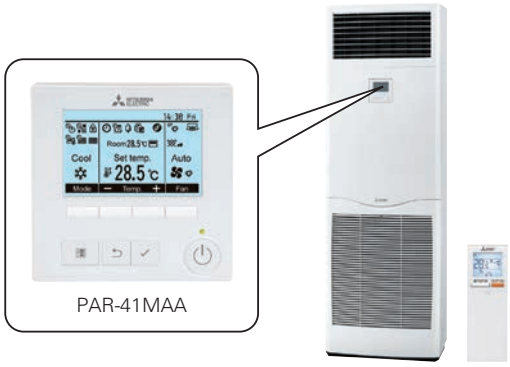
With a width of only 600mm, this slim unit can fit neatly into narrow spaces.





Built-in MA Smart Remote Controller

The large and easy-to-read LCD makes it easy to perform a variety of functions. Equipped with PAR-41MAA, the latest wired remote controller. Offering excellent readability and a diverse range of functions, the remote controller increases user-friendliness and boosts user satisfaction.

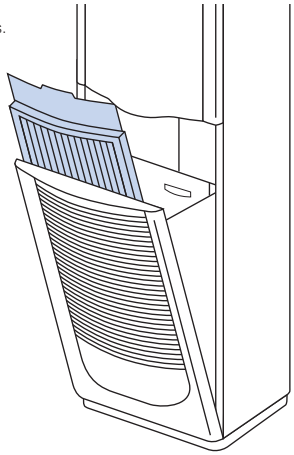


Equipped with a Long-life Filter as Standard

Indoor units are equipped with a long-life filter that has a maximum service life of 2,500hr* (based on use under average office conditions). Filter cleaning is drastically reduced. Furthermore, the adoption of an “open-and-close grille” makes it easy to take the filter out to clean off dust and particulates.

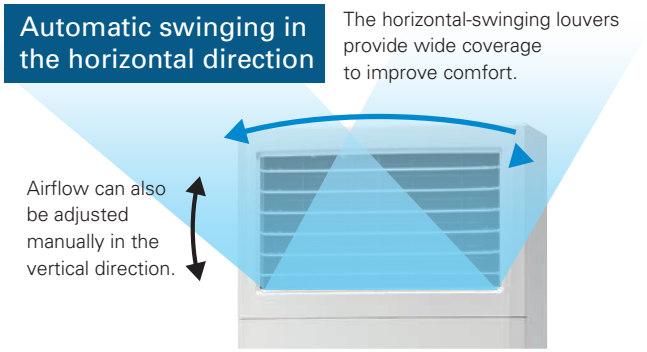
*May vary according to operating conditions.

Easy maintenance



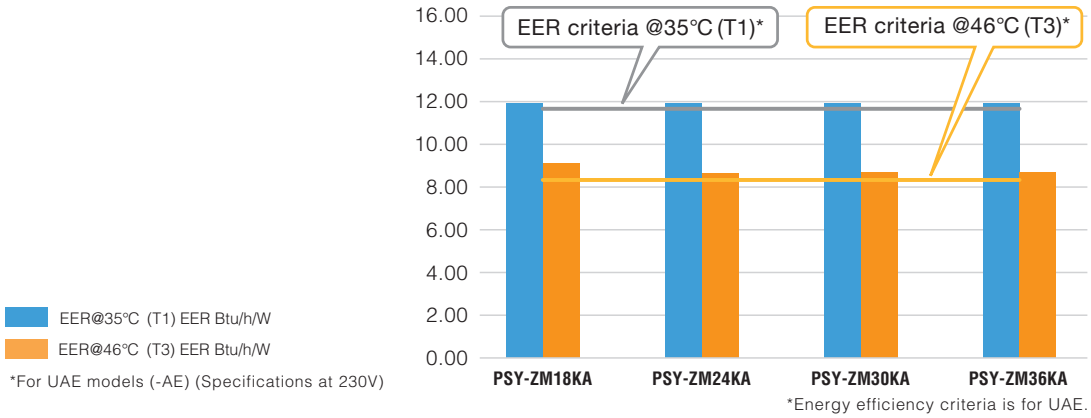
A Wide Airflow Range with Horizontal Swinging

The horizontal swinging function can be turned on or off via the remote controller to deliver comfort over a wider area.



High Energy Efficiency

The classes from low-capacity (30,000Btu) to high-capacity (45,000Btu), have achieved high energy efficiency not only rated condition (@35°C), but even at high ambient 46°C.



*For UAE models (-AE) (Specifications at 230V)

*Energy efficiency criteria is for UAE.

P series Inverter models Specification

Floor-standing (-AE)

Indoor				PSY-ZM30KA	PSY-ZM36KA	PSY-ZM45KA	
Outdoor			-AE	SUY-ZM30VA	PUY-ZM36VKA	PUY-ZM45VKA	PUY-ZM45YKA
Power supply (Outdoor)			V/Phase/Hz	220 - 240 / Single / 50			
Refrigerant				R32			
T1		Capacity (Min-Max)	kW	8.80 (4.10-9.70)	10.60 (4.10-10.70)	12.00 (6.20-15.00)	
			Btu/h	30,000 (13,989-33,096)	36,200 (13,989-36,508)	41,000 (21,154-51,180)	
		Total input	kW	2.510	3.029	3.430	
		EER	Btu/h/W	11.95			
T3		Capacity	kW	7.50	9.00	11.20	
			Btu/h	25,600	30,800	38,200	
		Total input	kW	2.844	3.601	4.442	
		EER	Btu/h/W	9.00	8.55	8.60	
Operating Current			A	16.0	20.0	26.5	11.5
Indoor Unit	Power Input	Rated	kW	0.11			
	Running Current	Rated	A	0.73			
	Dimension	H*W*D	mm	1900*600*360			
	Net weight		kg	48			
	Air Volume (Lo-Med-Hi)		m^3/min	25-28-31			
	Sound level (SPL) (Lo-Med-Hi)		dB(A)	45-49-51			
Outdoor Unit	Dimension	H*W*D	mm	880*840*330	981*1050*330	1338*1050*330	
	Net weight		kg	46	65	100	102
	Air Volume		m^3/min	63.4	87	116	
	Sound level (SPL)		dB(A)	54		55	
	Breaker Size		A	20	25	40	25
Piping	Piping diameter	Liquid-Gas	inch	3/8 - 5/8			
	Max piping length	Out-In	m	50		55	
	Max Height deffierence	Out-In	m	30			
Guaranteed Operation Range (Outdoor)				18-52			

*Specifications are based on the following condition.
T1- Condition : indoor temperature of 27°CDB/ 19°CWB, and outdoor temperature of 35°CDB/24°CWB.
T3- Condition : indoor temperature of 29°CDB/ 19°CWB, and outdoor temperature of 46°CDB/24°CWB.
* Unit is able to operate up to 52 deg C based on the testing condition of UAE S/ISO 13253:2011
* T1 and T3 are specifications at 230V.
* Operating current specifications are at 220-230-240V.

Outdoor Unit



SUY-ZM18VA-AE [GU]
SUY-ZM18NA-SA



SUY-ZM24/30VA-AE [GU]
SUY-ZM24/30NA-SA



PUY-ZM36VKA-AE [GU]
PUY-ZM36NKA-SA

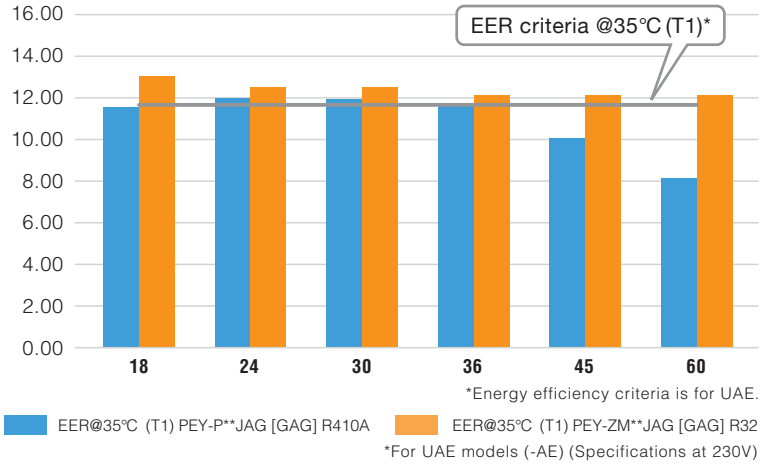


PUY-ZM45/60VKA-AE [GU]
PUY-ZM45/60YKA-AE
PUY-M60V[Y]KA-AE
PUY-ZM45/60N[X]KA-SA

Improved Energy Efficiency

Introduction of new R32 refrigerant realises improved cooling efficiency.

Introduction of new R32 refrigerant reduces energy consumption and realizs energy savings.



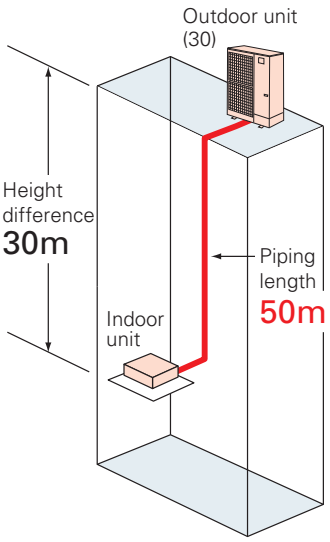
*For UAE models (-AE) (Specifications at 230V)

Longer Piping (18/24/30/36/45)

Piping length and height difference (18/24/30) are longer than R410A models. Installation flexibility increases widely. Piping length (36/45) are also longer from 50m to 55m.

Capacity Class	Max. Piping Length (m)		Max. Height Difference (m)	
	R410A SUY-P	R32 SUY/PUY-ZM	R410A SUY-P	R32 SUY/PUY-ZM
18	20	30	12	20
24	30	30	15	25
30	30	50	15	30
36	30	50	15	30

*SUY-P : SUY-P**VA3 SUY-ZM : SUY/PUY-ZM**VA



Blue Fin Condenser

A special coating is applied to the heat exchanger to increase corrosion toughness.



CONTROL TECHNOLOGIES



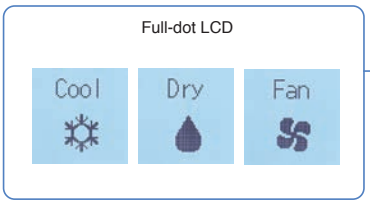
PAR-41MAA (Optional)

User-friendly Deluxe Remote Controller with Excellent Operability and Visibility

Full-dot Liquid-crystal Display Adopted

Easier to read thanks to use of a full-dot liquid-crystal display with backlight, and easier to use owing to the adoption of a menu format that enabled the number of operating buttons to be reduced.

Display Example [Operation Mode]



PAR-41MAA



Easy-to-Read & Easy-to-Use

Inverted display screen

The screen background color can be set to black to suit the atmosphere of the installation location.



Energy-efficient Control

Operation Control Functions

Auto-return — **Prevents wasteful operation by automatically returning to the preset temperature after specified operating time**

After adjusting the initial temperature on a hot day, it is easy to forget to return the temperature setting to its original value. The Auto-return function automatically resets the temperature back to the original setting after a specified period of time, thereby preventing overcooling. The Auto-return activation time can be set in 10-minute units, in a range between 30 and 120 minutes.

*Auto-return cannot be used when Temperature Range Restriction is in use.

Night Setback — **Keep desired room temperatures automatically**

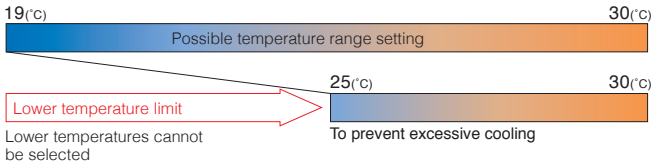
This function monitors the room temperature and automatically activates the cooling mode when the temperature rises above the preset maximum temperature setting.

Temperature Range Restriction — **Temperature Range Restriction prevents overcooling**

Using a temperature that is 1°C higher for cooling results in a 10% reduction in power consumption.* Temperature Range Restriction limits the maximum and minimum temperature settings, contributing to the prevention of overcooling.

*In-house calculations

Cooling/Dry (Setting example of minimum temp. at 25°C)



Recommended for: Office, Restaurant

Auto-off Timer — **Turns cooling off automatically after preset time elapses**

When using Auto-off Timer, even if one forgets to turn off the unit, operation stops automatically after the preset time elapses, thereby preventing wasteful operation. Auto-off Timer can be set in 10-minute units, in a range between 30 minutes and 4 hours. Eliminates all anxiety about forgetting to turn off the unit.

Recommended for: Meeting room, Changing room

Operation Lock — **Fixed temperature setting promotes energy savings**

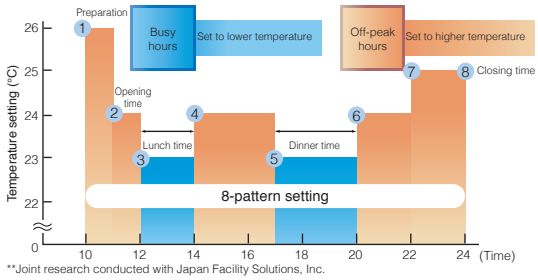
In addition to operation start/stop, the operation mode, temperature setting and airflow direction can be locked. Unwanted adjustment of temperature settings is prevented and an appropriate temperature is constantly maintained, leading to energy savings. This feature is also useful in preventing erroneous operation or tampering.

Recommended for: Office, School, Public hall, Hospital, Computer server facility

Weekly Timer — **Set up to 8 patterns per day including temperature control**

The Weekly Timer enables the setting of operation start and stop times and adjusting the temperature as standard features. Up to 8 patterns per day can be set, providing operation that matches the varying conditions of each period, such as the number of customers in the store. *Weekly Timer cannot be used when On/Off Timer is in use.

Setting Example (restaurant in summer time)



**Joint research conducted with Japan Facility Solutions, Inc.

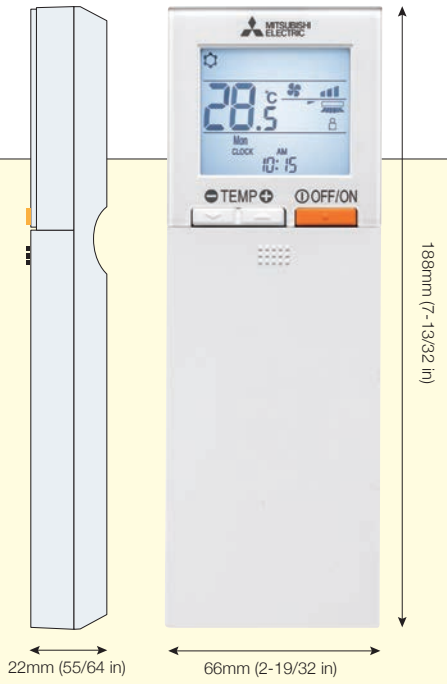
Manual Vane Angle Setting (4-way ceiling cassette) — **Direction of vertical airflow for each vane can be set**

Setting the vertical airflow direction for each individual vane can be performed simply via illustrated display. Seasonal settings such as switching between cooling and heating are easily changed as well.

Auto-descending Panel Operation — **Easily raise/lower panels using the remote controller**

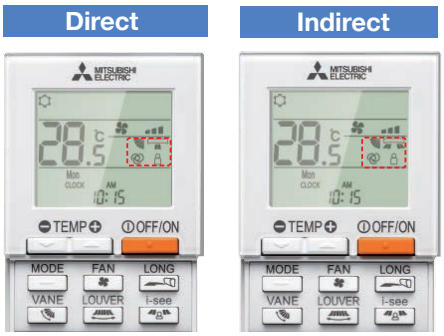
Auto-descending panel operation is available as an option. Panels can be raise/lower using a button on the wired remote controller. Filter cleaning can be performed easily.

Wireless Remote Controller
PAR-SL101A-E



3D i-see Sensor
(Direct/Indirect Airflow)

Pressing the i-see button enables direct or indirect setting of all vanes.



Weekly Timer

The Weekly Timer enables the setting of operation start and stop times and adjusting the temperature as standard features.



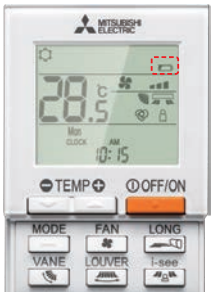
Backlight

Backlight function incorporated, making screen easy to read in the dark. Even in dimly lit rooms, the screen can be seen clearly for trouble-free remote controller operation.



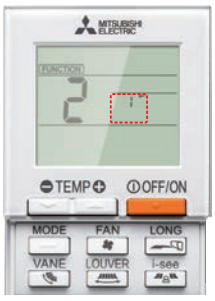
Battery Replacement Indicator

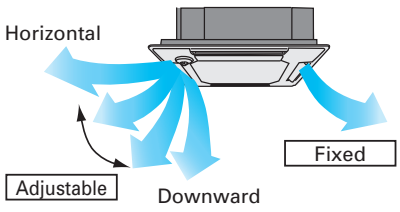
Previous wireless remote controllers were not able to check when the battery was low. Beginning with the PAR-SL100A-E, a battery charge indicator that shows the charge status is included in the LCD so it can be seen when the battery is low and needs to be changed.



Individual Vane Settings

The airflow directions of the four vanes can each be adjusted independently. Easily set the optimum airflow according to the room setting.





Inverter Technologies

Mitsubishi Electric inverters ensure superior performance including the optimum control of operation frequency. As a result, optimum power is applied in all heating/cooling ranges and maximum comfort is achieved while consuming minimal energy. Fast, comfortable operation and amazingly low running cost — That's the Mitsubishi Electric promise.

INVERTERS — HOW THEY WORK

Inverters electronically control the electrical voltage, current and frequency of electrical devices such as the compressor motor in an air conditioner. They receive information from sensors monitoring operating conditions, and adjust the revolution speed of the compressor, which directly regulates air conditioner output. Optimum control of operation frequency results in eliminating the consumption of excessive electricity and providing the most comfortable room environment.

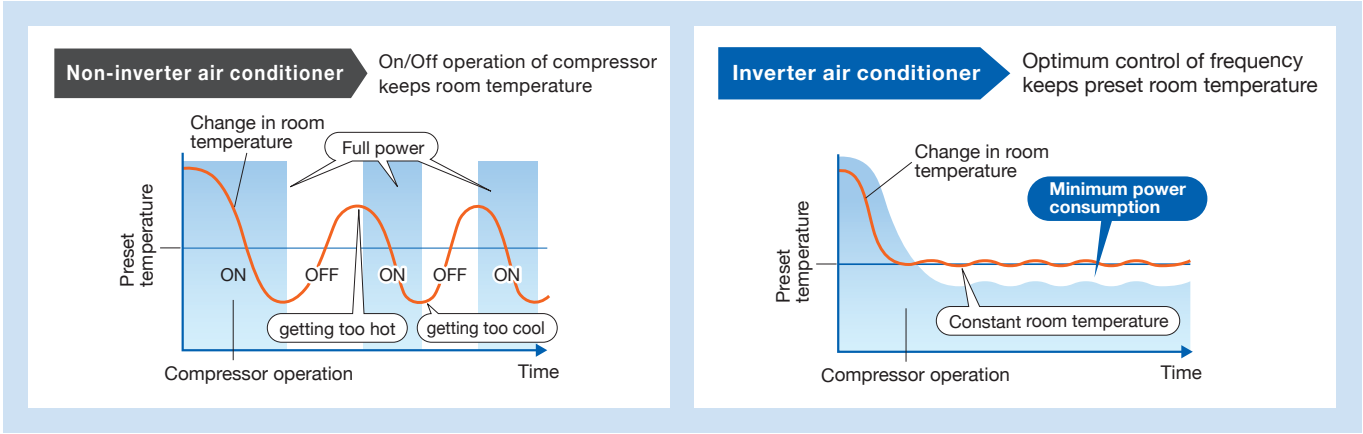
ECONOMIC OPERATION

Impressively low operating cost is a key advantage of inverter air conditioners. We've combined advanced inverter technologies with cutting-edge electronics and mechanical technologies to achieve a synergistic effect that enables improvements in heating/cooling performance efficiency. Better performance and lower energy consumption are the result.

TRUE COMFORT

Below is a simple comparison of air conditioner operation control with and without an inverter.

■ Inverter operation comparison



The compressors of air conditioners without an inverter start and stop repeatedly in order to maintain the preset room temperature. This repetitive on/off operation uses excessive electricity and compromises room comfort. The compressors of air conditioners equipped with an inverter run continuously; the inverter quickly optimizing the operating frequency according to changes in room temperature. This ensures energy-efficient operation and a more comfortable room.

Point 1 Quick & Powerful

Increasing the compressor motor speed by controlling the operation frequency ensures powerful output at start-up, brings the room temperature to the comfort zone faster than units not equipped with an inverter. Hot rooms are cooled, and cold rooms are heated faster and more efficiently.

Point 2 Room Temperature Maintained

The compressor motor operating frequency and the change of room temperature are monitored to calculate the most efficient waveform to maintain the room temperature in the comfort zone. This eliminates the large temperature swings common with non-inverter systems, and guarantees a pleasant, comfortable environment.

KEY TECHNOLOGIES

Our Rotary Compressor

Our rotary compressors use our original "Poki-Poki Motor" and "Heat Caulking Fixing Method" to realise downsizing and higher efficiency, and are designed to match various usage scenes in residential to commercial applications. Additionally, development of an innovative production method known as "Divisible Middle Plate" realises further size/weight reductions and increased capacity while also answering energy-efficiency needs.

Our Scroll Compressor

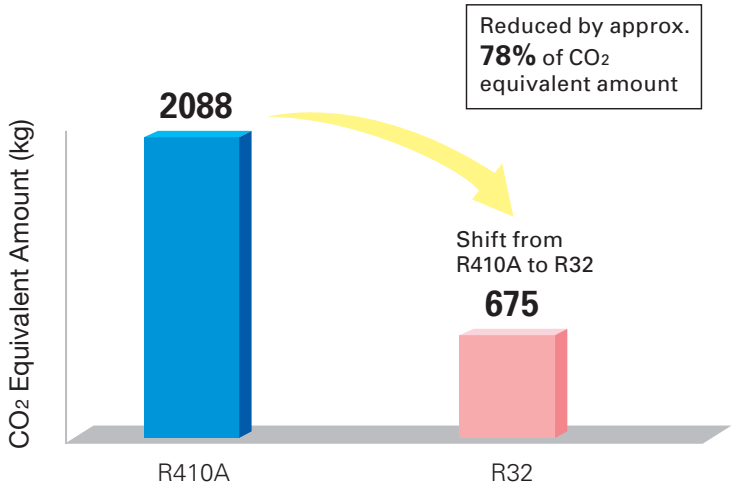
Our scroll compressors are equipped with an advanced frame compliance mechanism that allows self-adjustment of the position of the orbiting scroll according to pressure load and the accuracy of the fixed scroll position. This minimises gas leakage in the scroll compression chamber, maintains cooling capacity and reduces power loss.

Mitsubishi Electric takes on the challenge of creating new value and contribute to a sustainable future in order to solve various environmental problems.

Preventing Global Warming

Mitsubishi Electric is actively introducing R32 refrigerant which has a global warming potential approximately 1/3 that of R410A refrigerant. Not only by shifting from R410A to R32 but by decreasing the diameter of refrigerant piping, we are also striving to reduce the amount of refrigerant usage. Throught these activities, we have achieved significant reduction in CO2 equivalent amount compared to conventional models and realised minimizing the negative impact to the environment more than ever.

Reducing the amount of refrigerant usage



*1 Source: IPCC 4th Assessment Report, Global Warming Potential 100-year value.
*2 Reduction rate difers model by model.

Effective use of materials (Reduce & Recycle)

1. Accelerating the downsizing technology to reduce material use while balancing energy saving performance.
2. Designing products that are easy to separate and recycle.
3. All models are designed for WEEE and RoHS (II) compliance.*

*WEEE and RoHS directive: The Waste Electrical and Electronic Equipment (WEEE) Directive is a recycling directive for this type for equipment, while the Restrictions of Hazardous Substances (RoHS) Directive is an EU directiverestricting the use of ten specified substances in electronic and electrical devices. In the EU, it is no longer possible (from July 2019) to sell products containing any of the ten substances.

Balancing comfort and ecology

Mitsubishi Electric develops technologies to balance comfort and ecology, achieving greater efficiency in heat pump operation.

	Comfort	Ecology
1. Inverter	Faster start-up and more stable indoor temperature than non-inverter units.	Fewer On/Off operations than with non-inverter, saving energy.
2. 3D i-see Sensor	Since the positions of people can be detected, airflow can be set to personal taste, such as in airflow path or protected from the wind. The ability to adjust to individual preferences realizes more comfortable air conditioning.	Since the number of people in a room can be detected, energy-saving operation is adjusted or the power is turned off automatically. Efficient air conditioning with less waste is realized.
3. Dual Barrier Coating Dual Barrier Material	Prevents the indoor unit from getting dirty, delivering you clean air.	Keeping the inside of air conditioner clean leads to efficient operation and energy saving.

Major Functions

Air Distribution

Horizontal Vane

The air outlet vane swings up and down so that the airflow is spread evenly throughout the room.

Vertical Vane

The air outlet fin swings from side to side so that the airflow reaches every part of the room.

High Ceiling Mode

In the case of rooms with high ceilings, the outlet-air volume can be increased to ensure that air is circulated all the way to the floor.

Low Ceiling Mode

If the room has a low ceiling, the airflow volume can be reduced for less draft.

Auto Fan Speed Mode

The airflow speed mode adjusts the fan speed of the indoor unit automatically according to the present room conditions.

Filters & Cleaning Functions

Fresh-air Intake

Indoor air quality is enhanced by the direct intake of fresh exterior air.

High-efficiency Filter

This high-performance filter has a much finer mesh compared to standard filters, and is capable of capturing minute particulates floating in the air that were not previously caught.

Air Purifying Filter

The filter has a large capture area and also generates antibacterial, antifungal, and deodorant effects.

Oil Mist Filter

The oil mist filter prevents oil mist from penetrating into the inner part of the air conditioner.

Long-life Filter

A special process for the entrapment surface improves the filtering effect, making the maintenance cycle longer than that of units equipped with conventional filters.

Filter Check Signal

Air conditioner operating time is monitored, and the user is notified when filter maintenance is necessary.

Nano Platinum Filter

This filter has a large capture area and incorporates nanometer-sized platinum-ceramic particles that work to kill bacteria and deodorize the circulating air.

Microparticle Catching Filter

The Filter effectively catches floating PM2.5 particles to maintain clean air in the room.

Electrostatic Anti-Allergy Enzyme Filter

This filter is charged with static electricity, enabling it to attract and capture dust particles that regular filters cannot capture. This filter can also trap allergens such as molds and bacteria and decompose them using enzymes retained in the filter.

Functions

On/Off Operation Timer

Use the remote controller to set the times of turning the air- conditioner On/Off.

Sleep Mode

When Sleep Mode is activated using the wireless remote controller, it will switch to the settings described below.

- After 30 minutes, the set temperature will automatically change to the sleep mode set temperature which the user can set beforehand.
- The fan speed will immediately change to low fan speed.

Self-Diagnostic Function (Check Code Display)

Check codes are displayed on the remote controller or the operation indicator to inform the user of malfunctions detected.

Failure Recall Function

Operation failures are recorded, allowing confirmation when needed.

Function List for M-Series

		MSY-GT series					MS-GS series				
		13	18	24	30	36 (only AE1)	13	18	24	30	36
	Refrigerant	R32					R32				
	Power supply	220 - 230 - 240V, 50Hz, 1 Phase					220 - 230 - 240V, 50Hz, 1 Phase				
	Type	Inverter					Fixed Speed				
	Function	Cooling Only					Cooling Only				
Technology	DC Inverter	●	●	●	●	●					
	DC Fan motor	●	●	●	●	●	●(Indoor)	● (Indoor)	● (Indoor)	● (Indoor)	● (Indoor)
	PAM	●	●	●	●	●	—	—	—	—	—
	Heat caulking (compressor)	●	●	●	●	●	—	—	—	—	—
	Grooved Piping	●	●	●	●	●	●	●	●	●	●
Air quality	Dual barrier coating	● (FAN)					—	—	—	—	—
	Nano-platinum filter	●	●	●	●	●	●	●	●	●	●
	Microparticle catching filter	OPT					—	—	—	—	—
	Electro static anti-allergy enzyme filter	OPT					OPT				
Air distribution	Auto horizontal vane	●	●	●	●	●	●	●	●	●	●
	Auto vertical vane	—	●	●	●	●	—	●	●	●	●
	Double horizontal vane	—	●	●	●	●	—	●	●	●	●
	Auto fan speed adjustment	●	●	●	●	●	●	●	●	●	●
	Fan speed level	5 speed					4-speed				
Convenience	On/off timer	●	●	●	●	●	●	●	●	●	●
	Auto restart	●	●	●	●	●	●	●	●	●	●
	Fast cooling	●	●	●	●	●	—	—	—	—	—
	Sleep mode	●	●	●	●	●	—	—	—	—	—
	I feel	●	●	●	●	●	●	●	●	●	●
	Powerful cool mode	—	—	—	—	—	●	●	●	●	●
	Econo cool	—	—	—	—	—	●	●	●	●	●
Installation	Cleaning-free pipe reuse	●	●	●	●	●	●	●	●	●	●
	Flare connection	●	●	●	●	●	●	●	●	●	●
Maintenance	Self-diagnose function (Error code)	● (1-way)					—	—	—	—	—
	Failure recall function	●	●	●	●	●	●	●	●	●	●
	Blue fin condenser	●	●	●	●	●	—	—	—	—	—

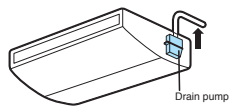
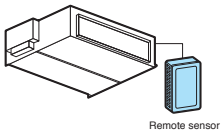
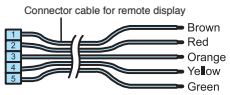
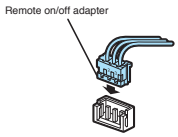
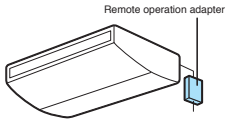
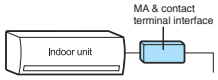
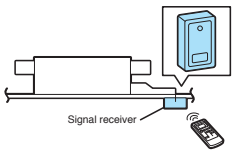
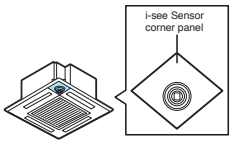
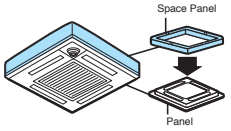
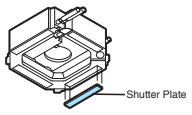
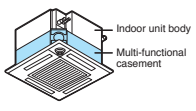
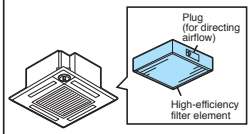
Function List for P-Series

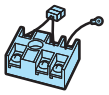
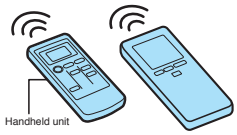
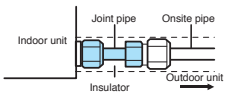
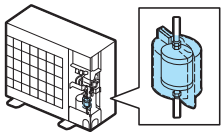
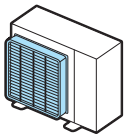
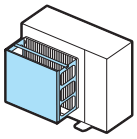
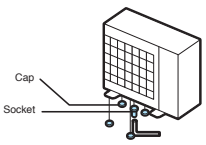
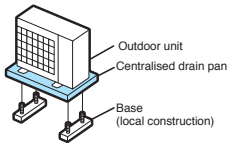
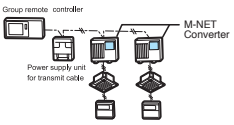
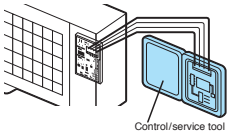
Category		Icon							
		Combination	Indoor unit	PLY-ZM18/24/30/36/45EA		PCY-ZM18/24/30/36/45KA			
			Outdoor unit	SUY-ZM18/24/30VA	PUY-ZM36VKA PUY-ZM45V(Y)KA	SUY-ZM18/24/30VA	PUY-ZM36VKA PUY-ZM45V(Y)KA		
Technology		DC Inverter		●	●	●	●		
		Joint Lap DC Motor		●		●			
		Magnetic Flux Vector Sine Wave Drive			●		●		
		Reluctance DC Rotary Compressor		●	●	●	●		
		Heating Caulking (Compressor)		●	36	●	36		
		DC Fan Motor		●	●	●	●		
		Vector-Wave Eco Inverter			●		●		
		Pulse Amplitude Modulation (PAM)		●	36,45V	●	36,45V		
		Power Receiver and Twin LEV Control			45		45		
		Grooved Piping		●	●	●	●		
Functions	Energy Saving	Felt Temperature Control (3D i-see Sensor)		Opt	Opt				
		Area Temperature Monitor							
		Demand Function			Opt		Opt		
		Auto Vane		●	●	●	●		
	Air Quality	Fresh-air Intake		●	●	●	●		
		High-efficiency Filter		Opt	Opt	Opt	Opt		
		Long-life Filter		●	●	●	●		
		Filter Check Signal		●	●	●	●		
	Air Distribution	Horizontal Vane		●	●	●	●		
		Vertical Vane							
		High Ceiling Mode		●	●	●	●		
		Low Ceiling Mode		●	●	●	●		
		Auto Fan Speed Mode		●	●	●	●		
	Convenience	On/Off Operation Timer		●	●	●	●		
		Auto Restart		●	●	●	●		
		Low-noise Operation (outdoor unit)			●		●		
		Operation Lock							
		Built-in Weekly Timer Function							
		Rotation, Back-up and 2nd Stage Cut-in Functions			Opt		Opt		
		PAR-41MAA Control		Opt	Opt	Opt	Opt		
		Centralised On/Off Control		Opt	Opt	Opt	Opt		
		System Group Control		Opt	Opt	Opt	Opt		
		M-NET Connection		Opt	Opt	Opt	Opt		
	Installation	Cleaning-free Pipe Reuse		●	●	●	●		
		Reuse of Existing Wiring			Opt		Opt		
		Drain Pump		●	●	Opt	Opt		
		Pump Down Switch			●		●		
		Flare Connection		●	●	●	●		
	Maintenance	Self-Diagnotic Function (Check Code Display)		●	●	●	●		
		Failure Recall Function		●	●	●	●		

*Opt: Optional parts must be purchased.
*1 Able to use by setting with remote controller.

P-Series					
	PEY-ZM18/24/30/36/45JAG		PEY-(Z)M60GAG	PSY-ZM30/36/45KA	PSY-ZM30/36/45KA
	SUY-ZM18/24/30VA	PUY-ZM36VKA PUY-ZM45V(Y)KA	PUY-(Z)M60V(Y)KA	SUY-ZM18/24/30VA	PUY-ZM36VKA, 45V/YKA
	●	●	●	●	●
	●			●	
		●	●		●
	●	●	●	●	●
	●	36		●	36
	●	●	●	●	●
		●	●		●
	●	36,45V	60V	36,45V	36,45V
		45	●	45	45
	●	●	●	●	●
				Opt	Opt
		Opt	Opt		Opt
				●	●
	●	●	●	●	●
				●	●
				●	●
				●	●*1
				●	●*1
				●	●*1
	●	●	●	●	●
	●	●	●	●	●
		●	●		●
				●*1	●*1
				●*1	●*1
		Opt	Opt	●*1	●*1
	Opt	Opt	Opt	●	●
	Opt	Opt	Opt	●	●
	Opt	Opt	Opt		
	Opt	Opt	Opt		
	●	●	●	●	●
		Opt	Opt		Opt
	Opt	Opt	Opt		
		●	●		●
	●	●	●	●	●
	●	●	●	●	●
	●	●	●	●	●

Major Optional Parts

Part Name	Description
Drain Pump Pumps drain water to a point higher than that where the unit is installed.	 *for ceiling-suspended units
Remote Sensor Sensor to detect the room temperature at remote positions.	
Connector Cable for Remote Display Connector used to display the operation status and control on/off function from a distance.	
Remote On/Off Adapter Connector for receiving signals from the local system to control the on/off function.	
Remote Operation Adapter Adapter to display the operation status and control on/off function from a distance.	
MA Interface Interface for connecting with the PAR-41MAA remote controller and PAC-YT52CRA.	
Wireless Remote Controller Signal Receiver Receives operation signals from the wireless remote controller handheld unit.	
3D i-see Sensor Corner Panel for PLA Corner panel holding the 3D i-see Sensor.	
Space Panel Decorative cover for the installation when the ceiling height is low.	
Shutter Plate Plate for blocking an air outlet of the 4-way cassette (PLA) indoor unit.	
Multi-functional Casement Casement for fresh-air intake and attaching the high-efficiency filter element (optional).	
High-efficiency Filter Element Element for high-efficiency filter. Removes fine dust particles from the air.	 *For 4-way cassette units (PLA)

Part Name	Description
Fresh-air Intake Duct Flange Flange attachment for adding a duct to take in fresh air from outside.	 *For 4-way cassette units (PLA)
Power Supply Terminal Kit Terminal bed to change the power supply from outdoor power supply to separate indoor/ outdoor power supplies.	
Wired Remote Controller Advanced deluxe remote controller with full-dot liquid-crystal display and backlight. Equipped with convenient functions like night-setback.	
Wireless Remote Controller Signal Sender Handheld unit for sending operation signals to the indoor unit.	
Joint Pipe Part for connecting refrigerant pipes of different diametres.	
Liquid Refrigerant Dryer Removes water and minute particles from refrigerant pipes.	
Air Discharge Guide Changes the direction of air being exhausted from the outdoor unit.	
Air Protection Guide Protects the outdoor unit from the wind.	
Drain Socket A set of caps to cover unnecessary holes at the bottom of the outdoor unit, and a socket to guide drain water to the local drain pipe.	
Centralised Drain Pan Catches drain water generated by the outdoor unit.	
M-NET Converter Used to connect P Series A-control models to M-NET controllers.	
Control/Service Tool Monitoring tool to display operation and self-diagnosis data.	

Optional Parts List for M-Series

		MSY-GT series					MS-GS series				
		13	18	24	30	36 (only AE1)	13	18	24	30	36
Microparticle catching filter (PM2.5)	MAC-EMF515FT-E	●									
	MAC-EMF615FT-E		●	●	●						
	MAC-EMF715FT-E					●					
Electro static anti-allergy enzyme filter	MAC-2310FT-E		●	●	●			●	●		
	MAC-2320FT	●					●				
	MAC-3310FT-E					●				●	●

Optional Parts List for P-series (Indoor unit)

		4-way cassette	Ceiling-suspended	Ceiling-concealed		Floor-standing
		PLY-ZM 18/24/30/36/45EA	PCY-ZM 18/24/30/36/45KA	PEY-ZM 18/24/30/36/45JAG	PEY-(Z)M 60GAG	PSY-ZM 30/36/45KA
Drain pump	PAC-SJ92DM-E		18			
	PAC-SJ93DM-E		24/30/36/45			
	PAC-DRP20DP-E			●		
Remote sensor	PAC-SE41TS-E	●	●	●	●	●
Connector cable for remote display	PAC-SA88HA-E	●	●	●	●	●
Multiple remote controller adapter	PAC-725AD	●	●	●	●	
Remote on/off adaptor	PAC-SE55RA-E	●	●	●	●	●
Remote operation adaptor	PAC-SF40RM-E	●	●	●	●	●
M-NET and Teminal interface	MAC-334IF-E	●	●	●	●	
Wireless remote controller signal receiver	PAR-SE9FA-E	●				
	PAR-SA9CA-E			●	●	●
3D i-see sensor corner panel	PAC-SE1ME-E	●				
Space panel	PAC-SJ65AS-E	●				
Shutter plate	PAC-SJ37SP-E	●				
Multi-function casement	PAC-SJ41TM-E	●				
High-efficiency filter element	PAC-SH59KF-E	●				
Flange for fresh-air intake	PAC-SH65OF-E	●				
Power supply terminal kit	PAC-SJ39HR-E	●				
	PAC-SG96HR-E					●
High-efficiency filter	PAC-SH89KF-E		18/24			
	PAC-SH90KF-E		30/36/45			
Filter box	PAC-KE92TB-E			18		
	PAC-KE93TB-E			24		
	PAC-KE94TB-E			30/36/45		
Thermister for Outlet-air	PAC-SE10TC-J			●		
Wired Remote Controller	PAR-21MAA	●		●		
	PAR-41MAA	●	●	●	●	
Wireless Controller	PAR-SL97A-E					●
	PAR-SL101A-E	●	●	●	●	●

Optional Parts List for P-series (Outdoor unit)

		SUY	PUY		
		SUY-ZM 18/24/30VA	PUY-ZM 36VKA	PUY-ZM 45V(Y)KA	PUY-ZM 60V(Y)KA
Joint pipe	PAC-SG73RJ-E		●	●	●
	PAC-SG75RJ-E		●	●	●
Filetr dryer for liquid pipe	PAC-SG82DR-E		●	●	●
Air protection guide	PAC-SH95AG-E		●	●	●
Air outlet guide	PAC-SH96SG-E		●	●	●
Drain Socket	PAC-SG61DS-E		●	●	●
Centralized drain pan	PAC-SH97DP-E		●	●	●
M-NET converter	PAC-SJ95MA-E		●	●	●
Control/Service tool	PAC-SK52ST		●	●	●
External/Input adapter	PAC-SC36NA-E		●	●	●

M-series
Specifications and installation

Total input based on the indicated voltage (indoor/outdoor)

	Indoor	Outdoor
50Hz	Single-phase, 220-240V	Single-phase, 220-240V

Guaranteed operating range

Cooling	Indoor	Outdoor
	The others	MU-GH13/18VA MU-GK24VA MU-GM18/24VC
Upper limit	32°CDB/23°CWB	46°CDB
Lower limit	21°CDB/15°CWB	21°CDB

*DB: Dry bulb WB: Wet bulb

Sound pressure level

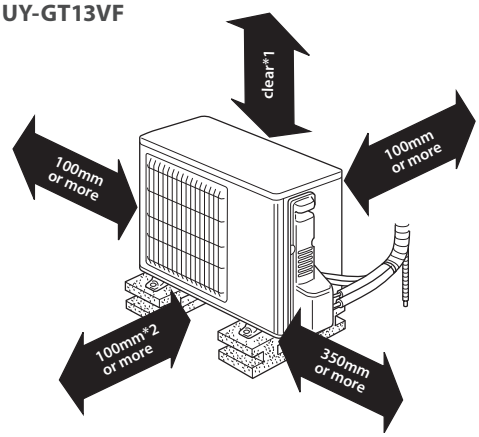
- Sound pressure measurements were conducted in an anechoic chamber.
- The actual noise level depends on the distance from the unit and the acoustic environment.

Refrigerant piping length

Models	Between indoor and outdoor units	
	Max. height difference (m)	Max. piping length (m)
MU-GS13VF	10	20
MUY-GT13VF	12	20
MU-GS18/24/30VF	10	30
MUY-GT18/24/30/36VF MU-GS36VF	15	30

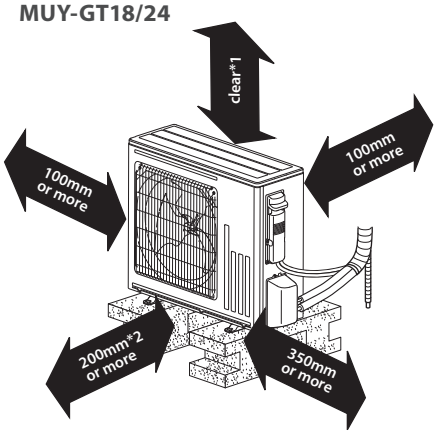
Outdoor unit installation space requirements

MUY-GT13VF



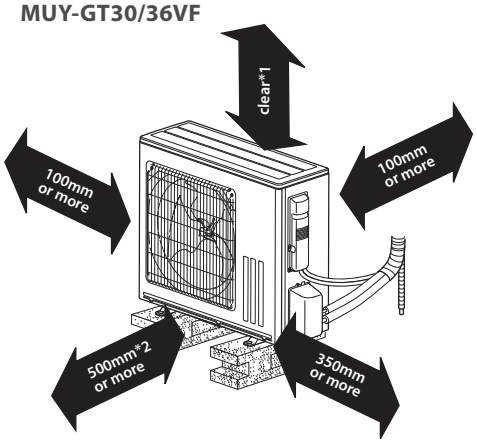
*1 100mm or more when front and sides of unit are clear
*2 When any 2sides of left, right and rear of unit are clear.

MUY-GT18/24



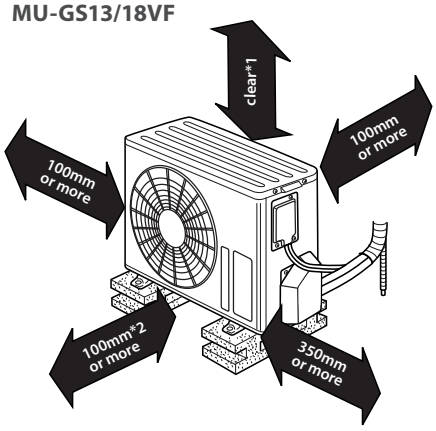
*1 200mm or more when front and sides of unit are clear
*2 When any 2sides of left, right and rear of unit are clear.

MUY-GT30/36VF



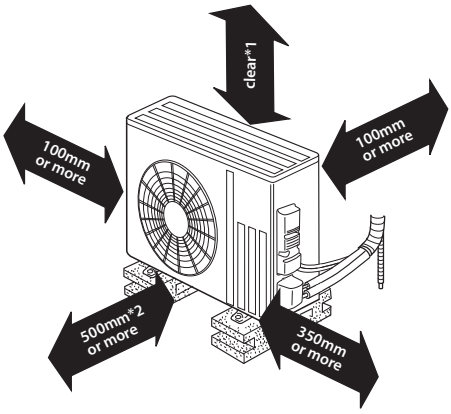
*1 500mm or more when front and sides of unit are clear
*2 When any 2sides of left, right and rear of unit are clear.

MU-GS13/18VF



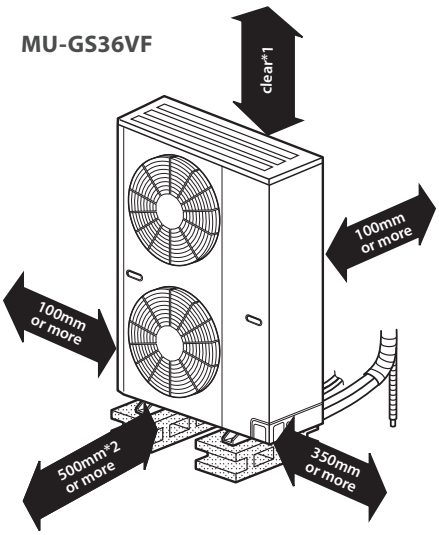
*1 100mm or more when front and sides of unit are clear
*2 When any 2sides of left, right and rear of unit are clear.

MU-GS24/30VF



*1 500mm or more when front and sides of unit are clear
*2 When any 2sides of left, right and rear of unit are clear.

MU-GS36VF



*1 500mm or more when front and sides of unit are clear
*2 When any 2sides of left, right and rear of unit are clear.

Notice: If there is any obstruction around the unit, check the condition details in the Data Book.

P-series
Specifications and installation

Notes for All Specifications

Rating conditions
Cooling – Indoor: 27°C DB, 19°C WB Outdoor: 35°C DB
Refrigerant piping length (one-way): 7.5m (25ft)

Total input based on the indicated voltage (indoor/outdoor)

	Indoor	Outdoor	
		18/24/30/36/42/48V	45/60Y
50Hz	Single-phase, 220-240V	Single-phase, 220-240V	Three-phase, 380-415V
60Hz	Single-phase, 220V	Single-phase, 220V	Three-phase, 380V

Guaranteed Operating Range (Cooling)

Cooling	Indoor	Outdoor	
		SUY-ZM18/24/30/36VA	PUY-(Z)M45/60V/YKA
Upper limit	32°CDB/23°CWB	52°CDB	
Lower limit	21°CDB/15°CWB	18°CDB	

*DB: Dry Bulb WB: Wet Bulb

Sound Pressure Level

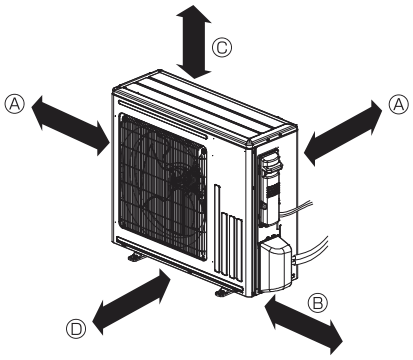
- Sound pressure measurements were conducted in an anechoic chamber.
- The actual noise level depends on the distance from the unit and the acoustic environment.

Refrigerant Piping Length

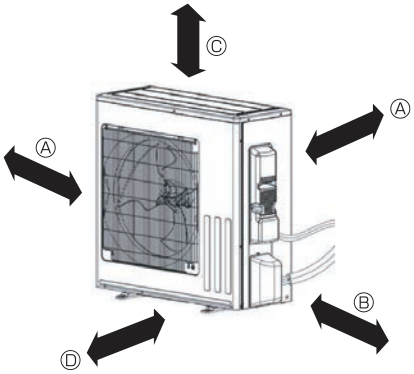
Models	Between indoor and outdoor units	
	Max. height difference (m)	Max. piping length (m)
SUY-KA18	12	20
SUY-KA24/30/36	15	30
PUY-P42V/YKA PUY-P48V/YKA	30	50

Outdoor unit installation space requirements

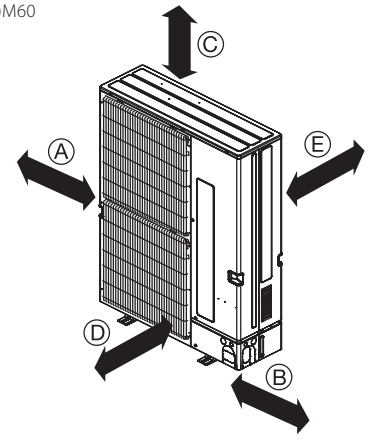
■ SUY-ZM18



■ SUY-ZM24/30



■ PUY-ZM36/45
■ PUY-(Z)M60



	SUY-ZM18	SUY-ZM24/30
Ⓐ	100mm or more	
Ⓑ	350mm or more	
Ⓒ	Basically open 100mm or more without any obstruction in front and on both sides of the unit.	500mm or more
Ⓓ	200mm or more (Open two sides of left, right, or rear side.)	–

*Please refer detailed information in Installation Manual.

	PUY-ZM36/45/60 PUY-(Z)M60
Ⓐ	200mm or more
Ⓑ	200mm or more
Ⓒ	Free
Ⓓ	1,000mm or more
Ⓔ	300mm or more

*Please refer detailed information in Installation Manual.

Notice: If there is any obstruction around the unit, check the condition details in the Data Book.

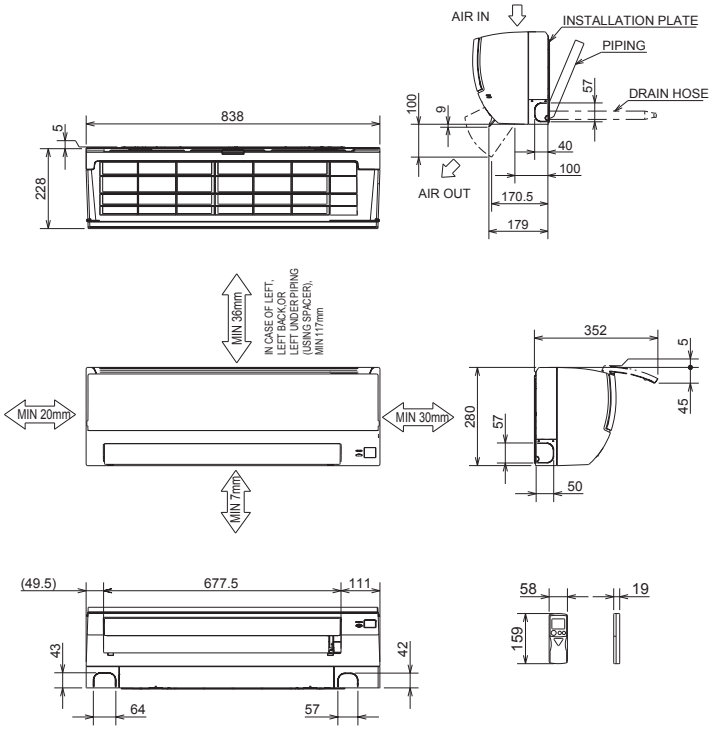
External Dimensions

M SERIES

Unit : mm

MSY-GT13VF

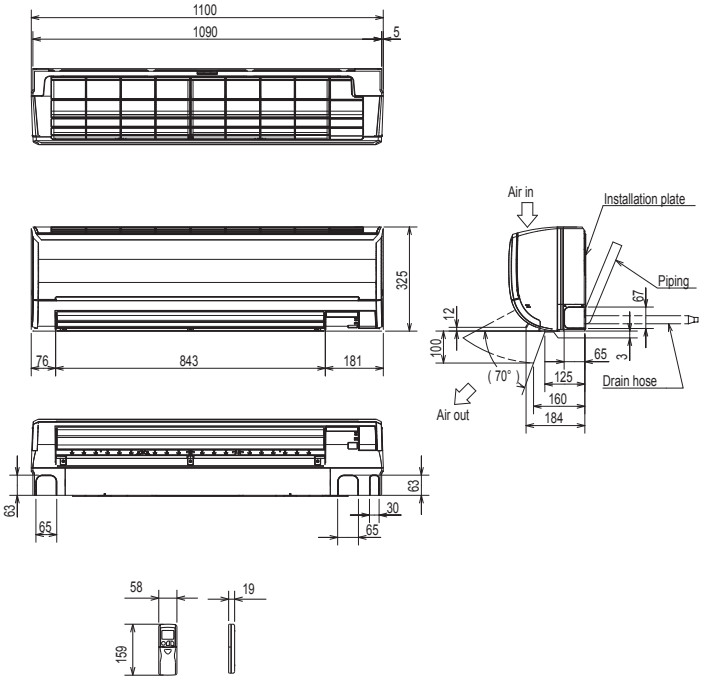
INDOOR UNIT



Piping		
	Insulation	ø37 O.D
	Liquid line	ø7 - 0.39m (Flared connection ø6.35)
	Gas line	ø9.52 - 0.34m (Flared connection ø12.7)
Drain hose		Insulation ø29 Connected part ø16 O.D

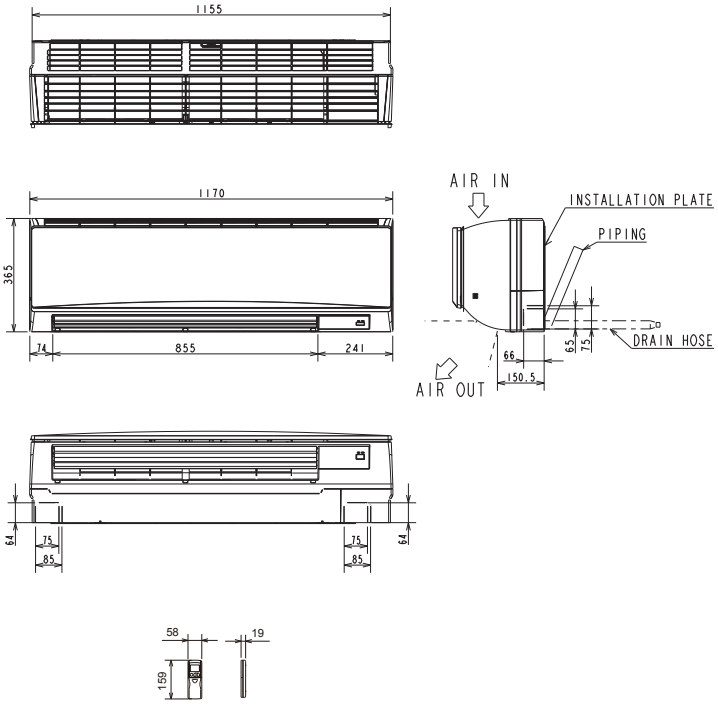
MSYGT18VF MSY-GT24VF MSYGT30VF MS-GS18VF MS-GS24VF

INDOOR UNIT



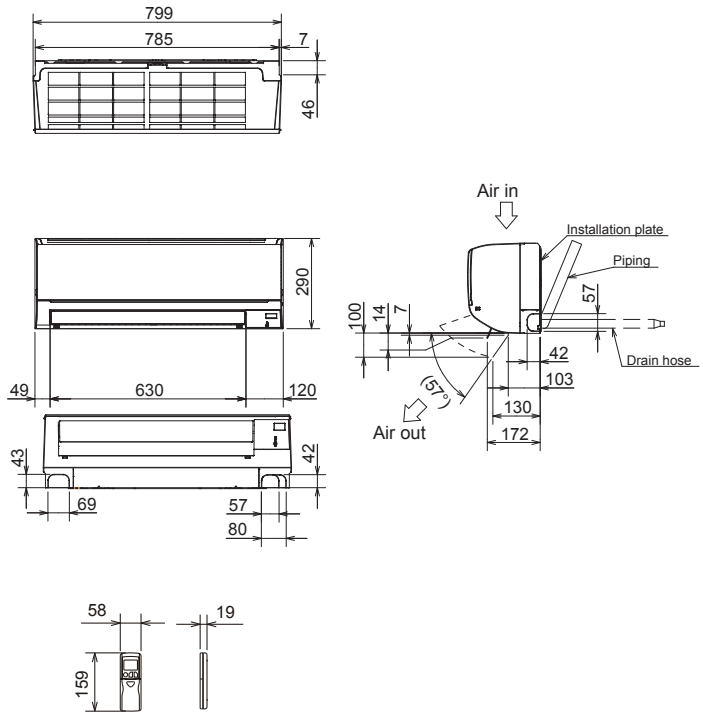
MSY-GT36VF MS-GS30VF MS-GS36VF

INDOOR UNIT



MS-GS13VF

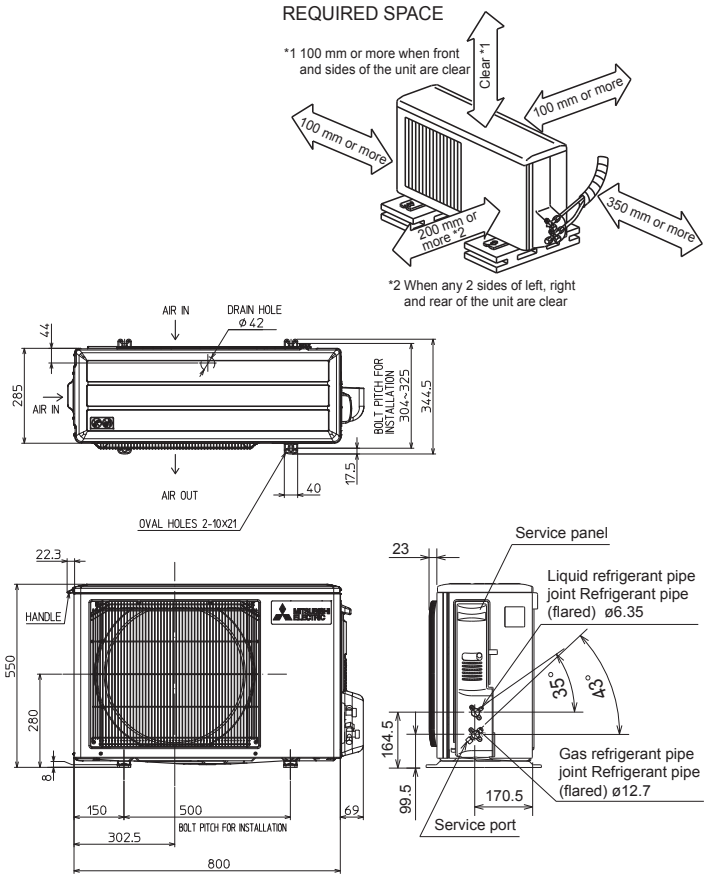
INDOOR UNIT



Unit : mm

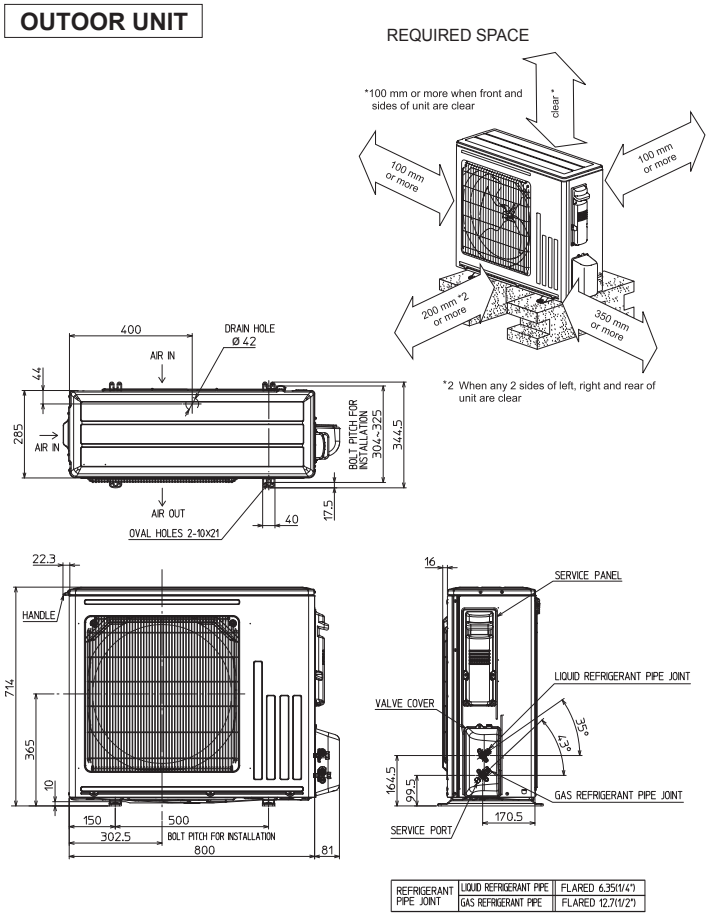
MUY-GT13VF

OUTOOR UNIT



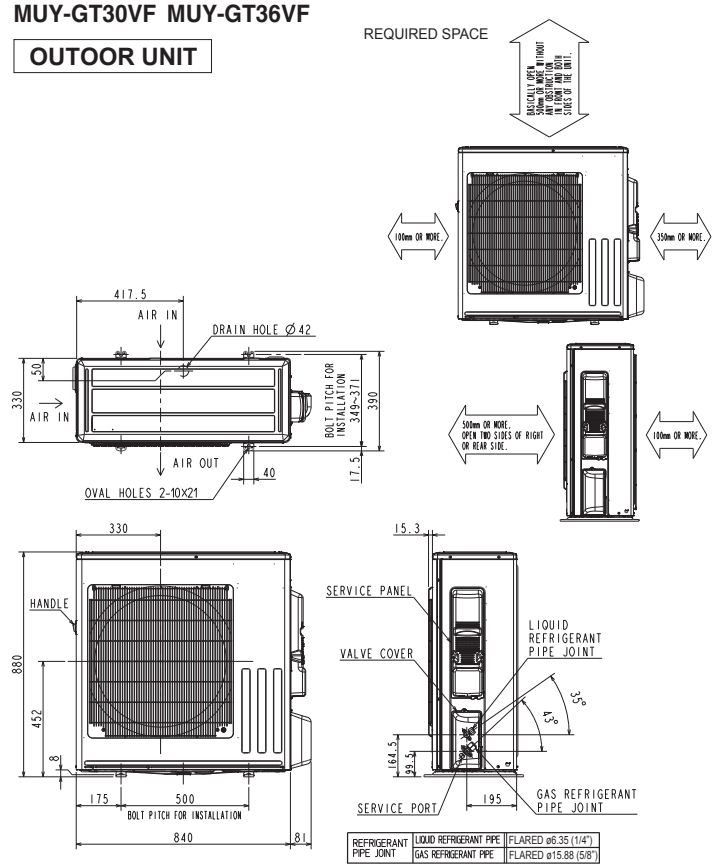
MUY-GT18VF MUY-GT24VF

OUTOOR UNIT



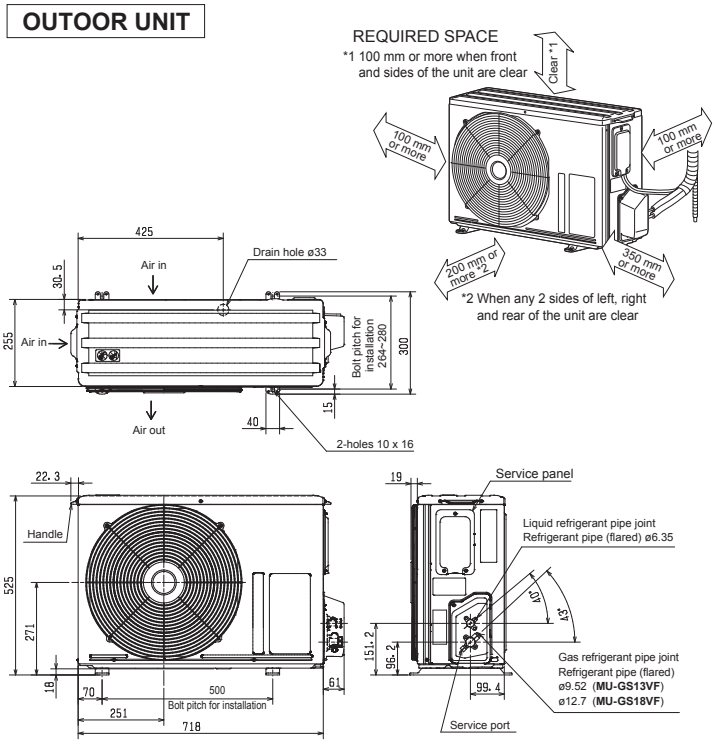
MUY-GT30VF MUY-GT36VF

OUTOOR UNIT



MU-GS13VF MU-GS18VF

OUTOOR UNIT



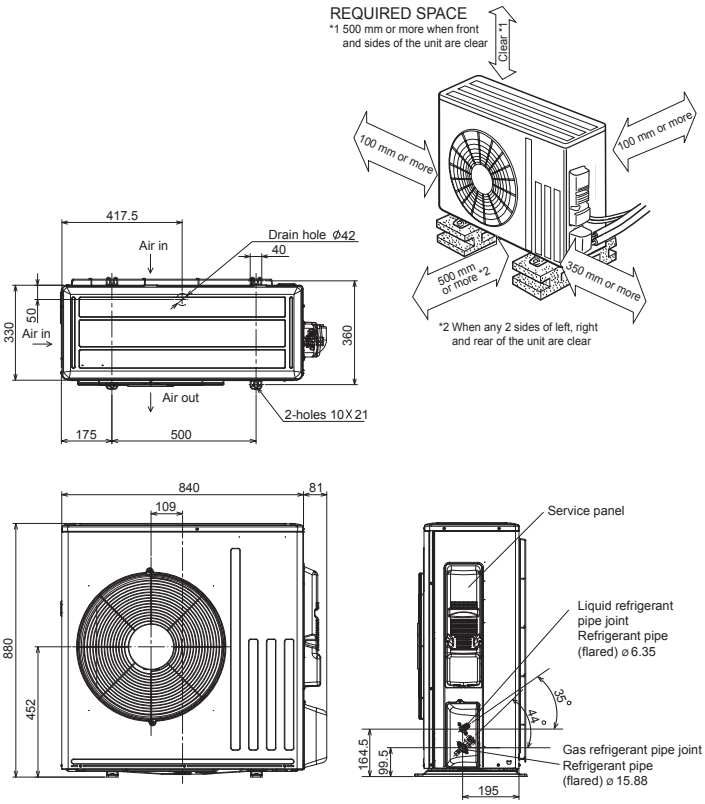
External Dimensions

M SERIES

Unit : mm

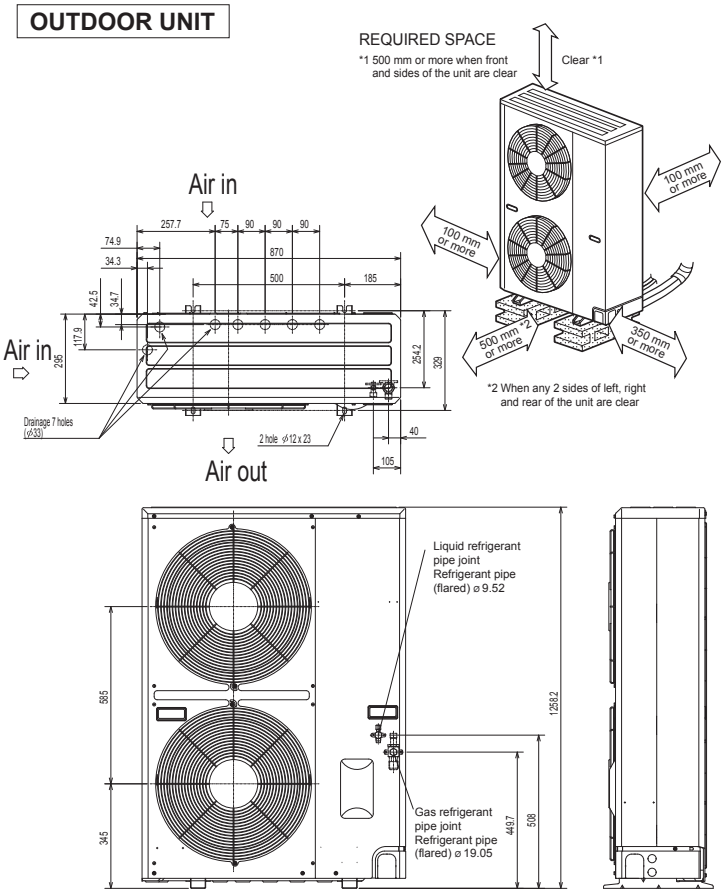
MU-GS24VF MU-GS30VF

OUTOOR UNIT



MU-GS36VF

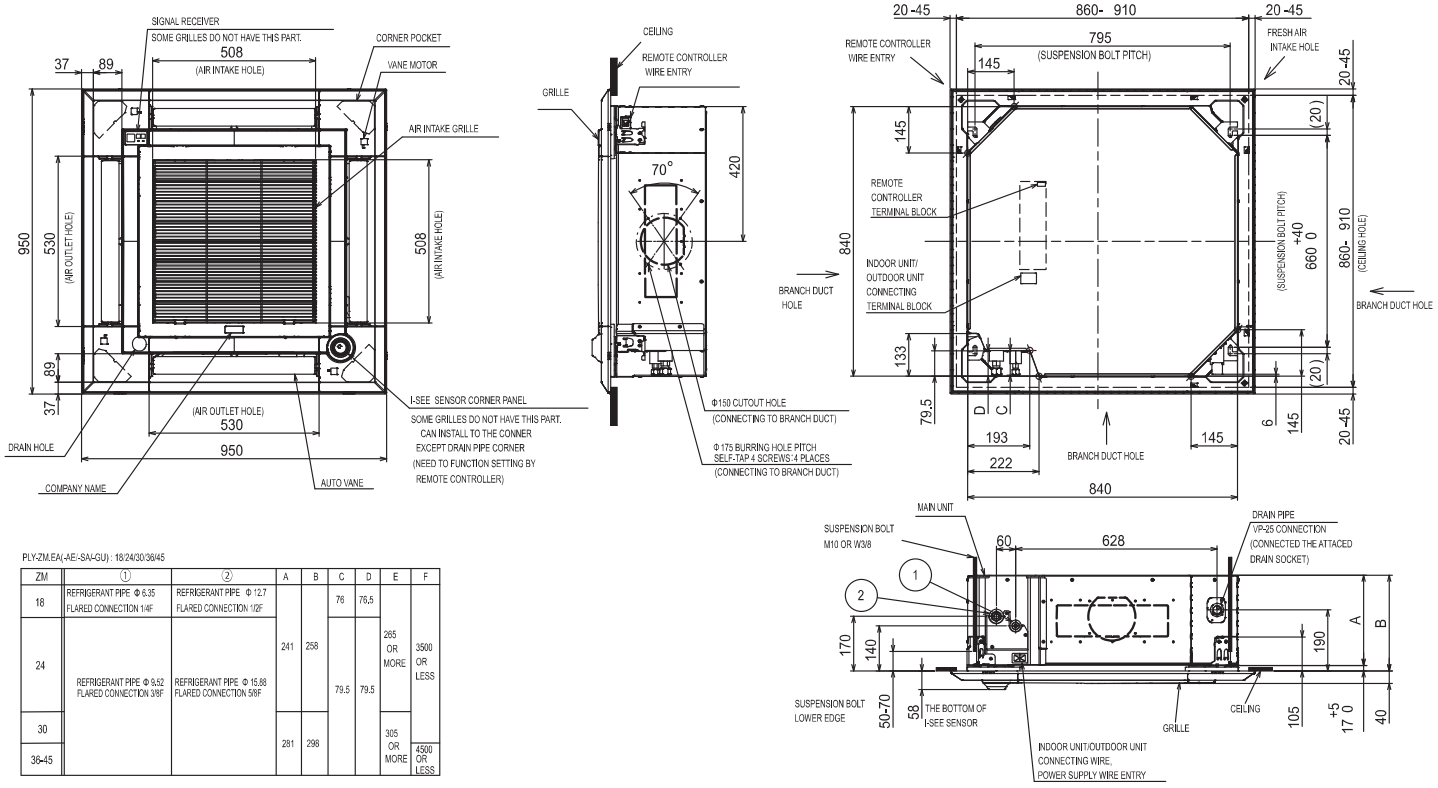
OUTDOOR UNIT



Unit : mm

PLY-ZM18EA PLY-ZM24EA PLY-ZM30EA PLY-ZM36EA PLY-ZM45EA

INDOOR UNIT

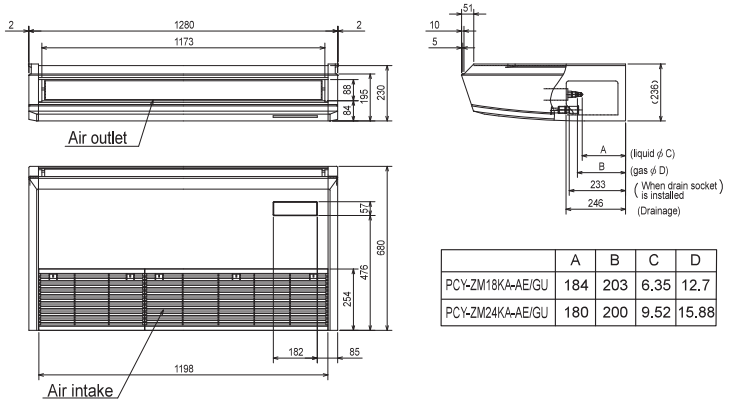


PLY-ZM,EA(-AE,-SA,-GU) : 18/24/30/36/45

ZM	①	②	A	B	C	D	E	F
18	REFRIGERANT PIPE Φ 6.35 FLARED CONNECTION 1/4F	REFRIGERANT PIPE Φ 12.7 FLARED CONNECTION 1/2F	241	258	76	76.5	265 OR MORE	3500 OR LESS
24	REFRIGERANT PIPE Φ 9.52 FLARED CONNECTION 3/8F	REFRIGERANT PIPE Φ 15.88 FLARED CONNECTION 5/8F			79.5	79.5		
30			281	298			305 OR MORE	4500 OR LESS
36-45								

PCY-ZM18KA PCY-ZM24KA

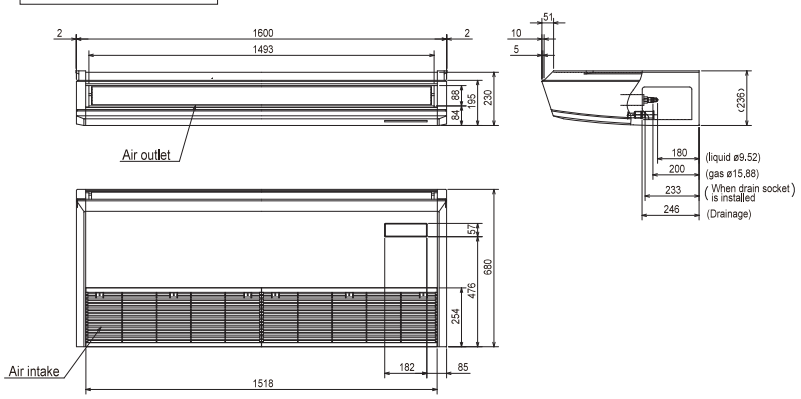
INDOOR UNIT



	A	B	C	D
PCY-ZM18KA-AE/GU	184	203	6.35	12.7
PCY-ZM24KA-AE/GU	180	200	9.52	15.88

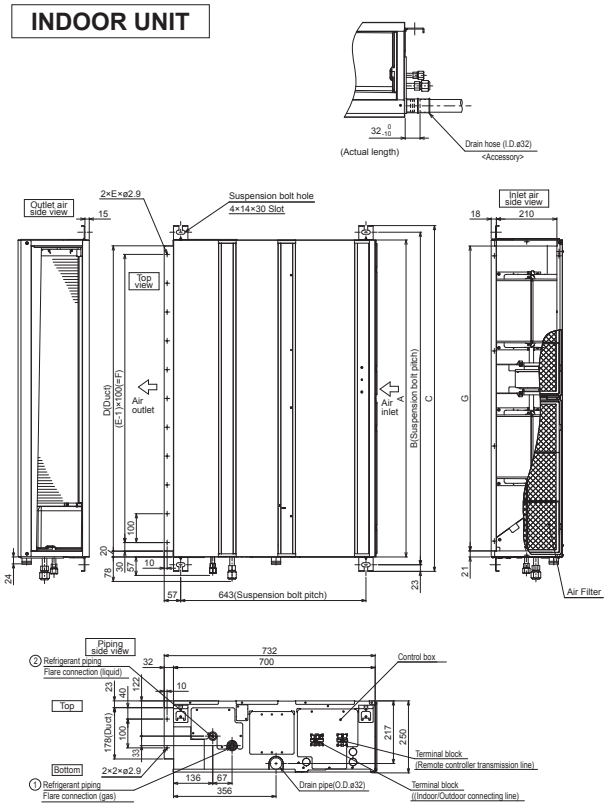
PCY-ZM30KA PCY-ZM36KA PCY-ZM45KA

INDOOR UNIT



PEY-ZM18JAG PEY-ZM24JAG PEY-ZM30JAG PEY-ZM36JAG PEY-ZM45JAG

INDOOR UNIT



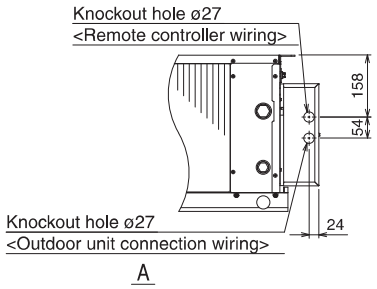
Model	A	B	C	D	E	F	G	① Gas pipe	② Liquid pipe
PEY-ZM18	900	954	1000	860	9	800	858	ø12.7	ø6.35
PEY-ZM24	1100	1154	1200	1060	11	1000	1058	ø15.88	ø9.52
PEY-ZM30, 36, 45	1400	1454	1500	1360	14	1300	1358		

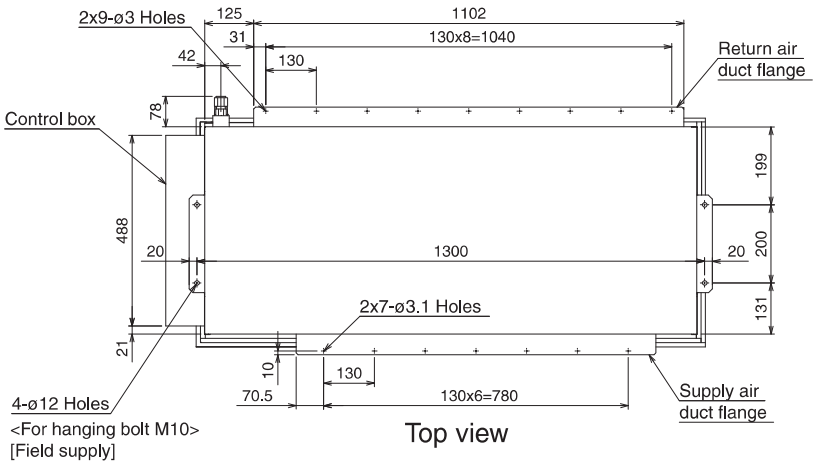
Unit : mm

PEY-ZM60GAG PEY-M60GAG

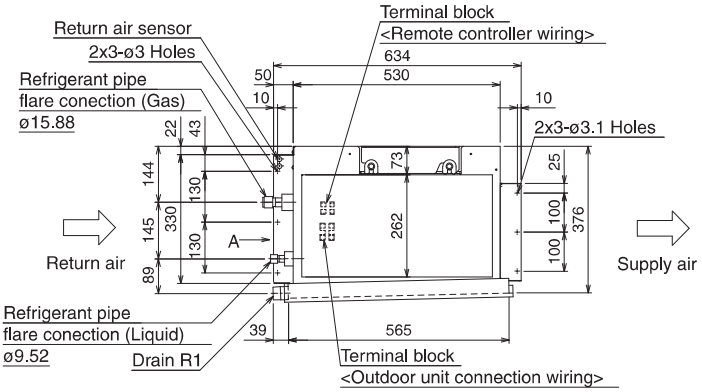
INDOOR UNIT

<Accessory>
·Pipe cover·····2pcs.
(For dew condensation prevention of local piping and unit connection.)

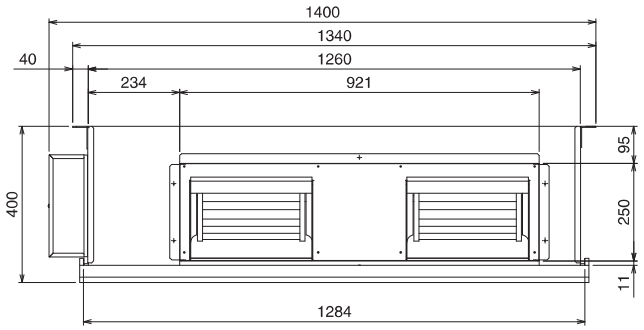




Top view



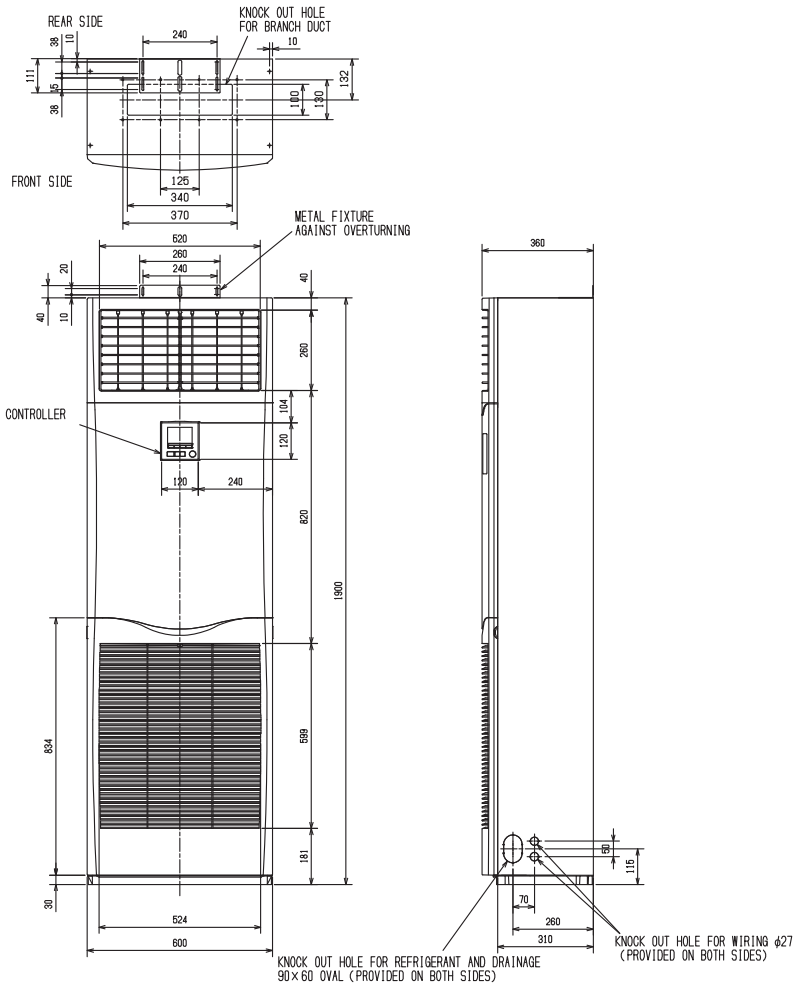
Left side view



Front view

PSY-ZM30/36/45KA-AE

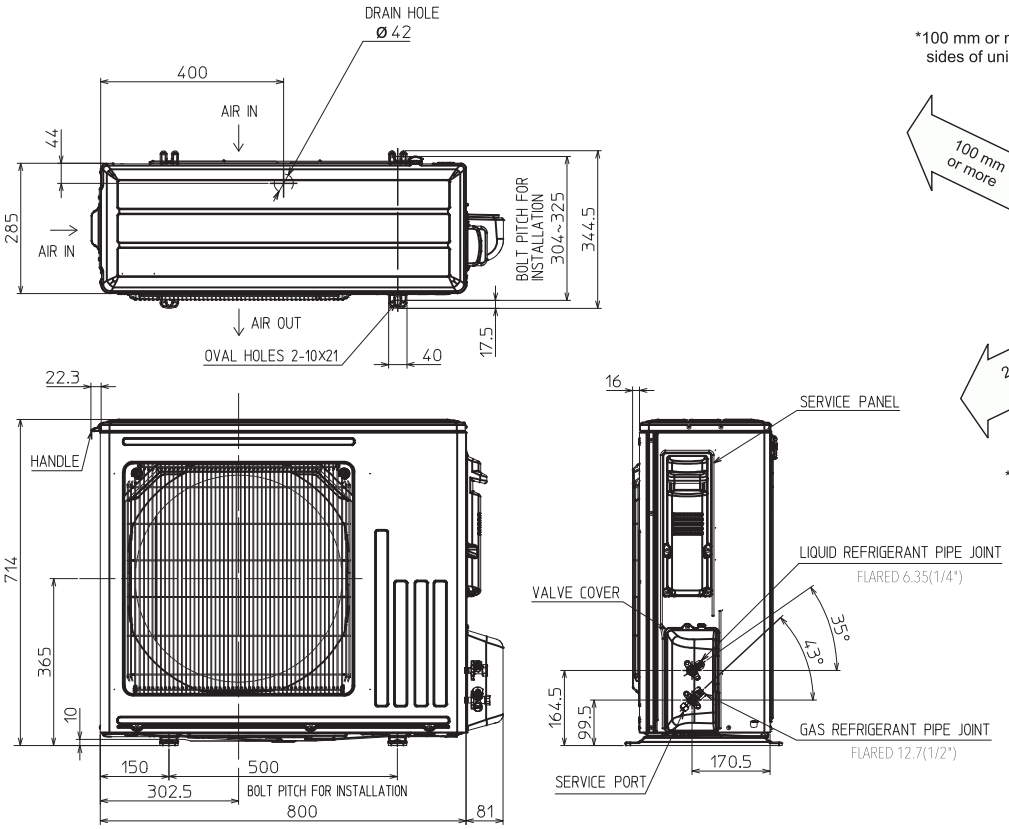
INDOOR UNIT



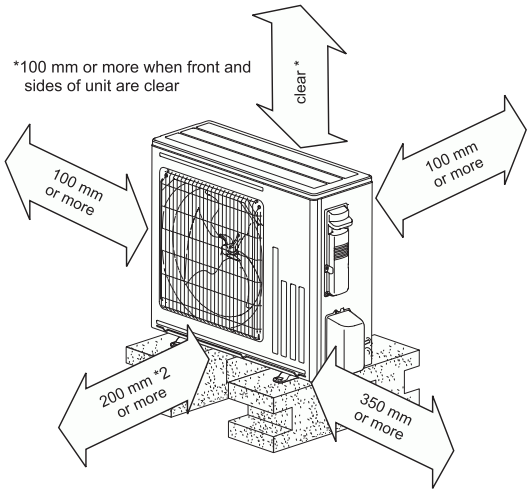
Unit : mm

SUY-ZM18VA SUY-ZM18NA

OUTDOOR UNIT



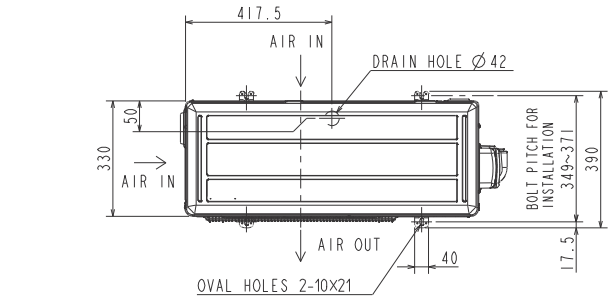
REQUIRED SPACE

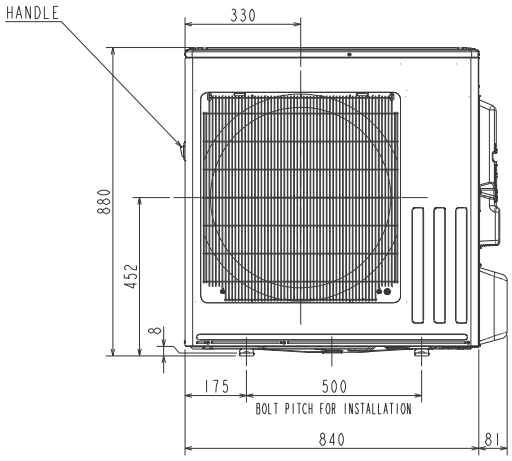


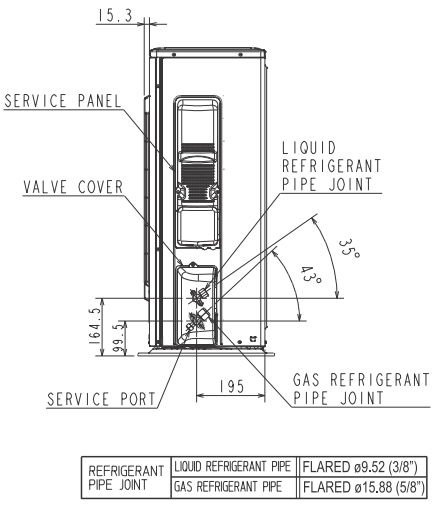
*2 When any 2 sides of left, right and rear of unit are clear

SUY-ZM24VA SUY-ZM24NA
SUY-ZM30VA SUY-ZM30NA

OUTDOOR UNIT

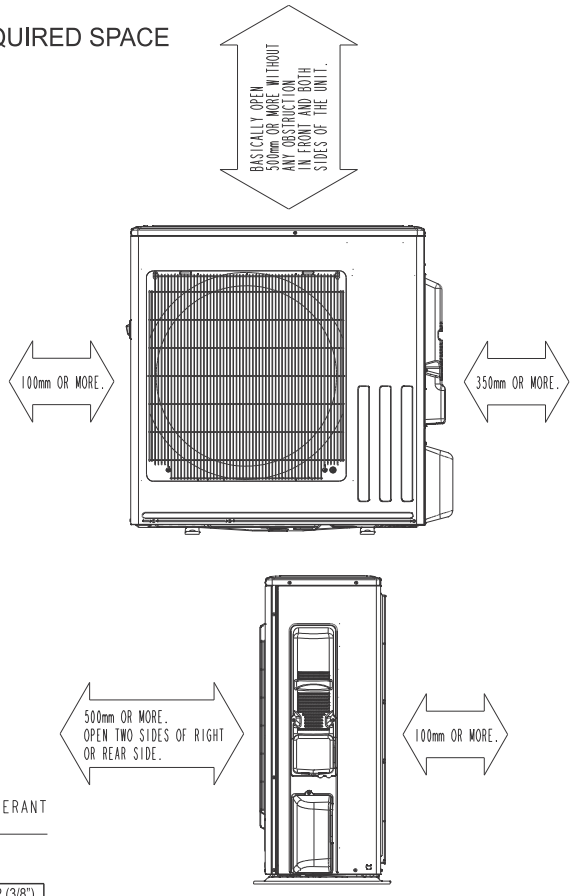






REFRIGERANT PIPE JOINT	LIQUID REFRIGERANT PIPE	FLARED ø9.52 (3/8")
	GAS REFRIGERANT PIPE	FLARED ø15.88 (5/8")

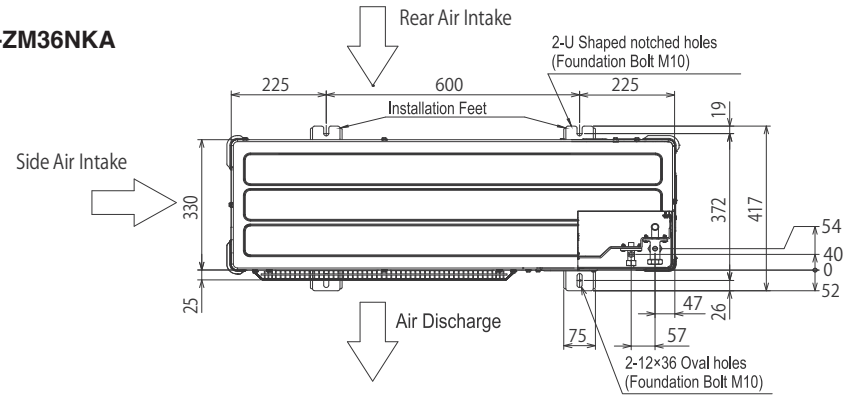
REQUIRED SPACE

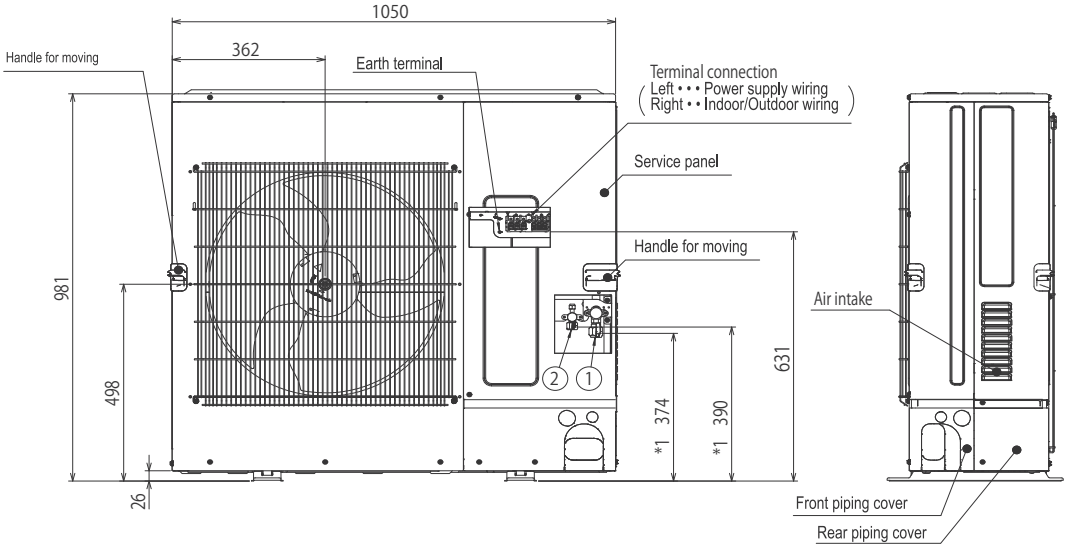


Unit : mm

PUY-ZM36VKA PUY-ZM36NKA

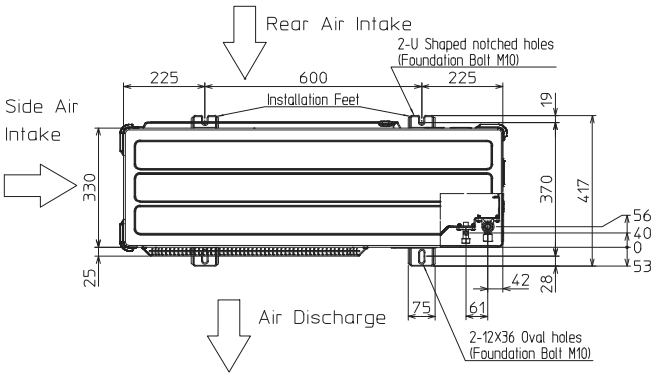
OUTDOOR UNIT

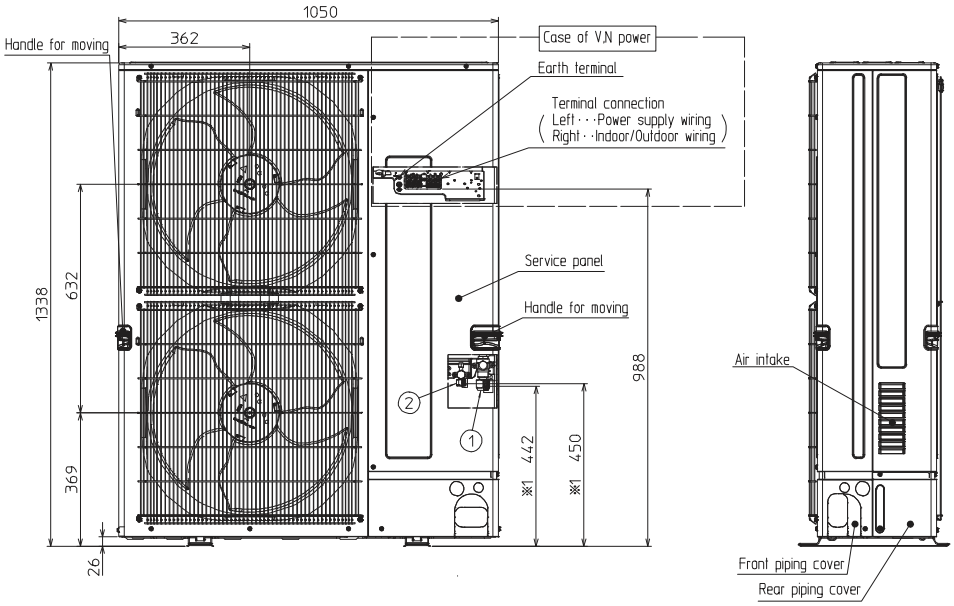




PUY-ZM45VKA PUY-ZM45NKA
PUY-ZM45YKA PUY-ZM45XKA
PUY-ZM60VKA PUY-ZM60NKA
PUY-ZM60YKA PUY-ZM60XKA
PUY-M60VKA PUY-M60YKA

OUTDOOR UNIT

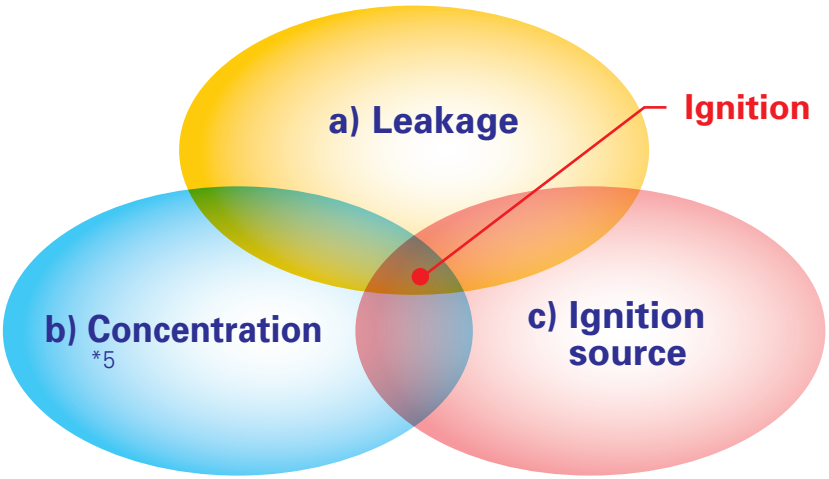




R32 REFRIGERANT

R32 REFRIGERANT PROPERTIES

Under the conditions shown below, there is a possibility that R32 could ignite.



	R32	R410A	R22
Chemical formula	CH_2F_2	CH_2F_2/CHF_2CF_3	$CHClF_2$
Composition (blend ratio wt. %)	Single composition	R32/R125 (50/50 wt %)	Single composition
Ozone depletion potential (ODP)	0	0	0.055
Global warming potential (GWP) *1	675	2088	1810
LFL(vol.%) *2	13.3	–	–
UFL(vol.%) *3	29.3	–	–
Flammability *4	Lower flammability (2L)	No flame propagation (1)	No flame propagation (1)

*1 IPCC 4th assessment report.
*2 LFL : Lower flammable limit
*3 UFL : Upper flammable limit
*4 ISO 817:2014
*5 R32 consistency is higher than LFL*1 and lower than UFL*2.

Although R32 is classified as low flammability, the possibility of igniting can be eliminated by ensuring the following three points.

a) Do not leak refrigerant.
<Installation> ·Vacuum drying should be done. Air purging is prohibited.
·Follow "4. Installation Points of Refrigerant Piping Work".
<Repair/Relocation/Removal> ·Pump down or recovering refrigerant should be done.

b) Prevent concentration.
·Ventilate during installation and servicing, such as open the door or window and use a fan.
·Follow "2. Installation Restrictions".

c) Keep ignition source away from the unit.
·Do not braze pipe and unit which contain refrigerant. Before brazing, refrigerant should be recovered.
·Do not install unit while the electricity is turned on. Turn off electricity at the fuse box and check the wiring using a tester.
·Do not smoke when working or during transportation of the product.

Note **Both R32 / R410A emit a toxic gas when coming into contact with an open flame.**

INSTALLATION RESTRICTIONS

In order to prevent the refrigerant from igniting, use the following instructions during installation.

1) Indoor Units

Install in a room with a floor area of Amin* or more, corresponding to refrigerant quantity M.
(M = factory-charged refrigerant + locally added refrigerant)

Install the indoor unit so that the height from the floor to the bottom of the indoor unit is hO*.

* Refer to table and drawings below.

< M Series >

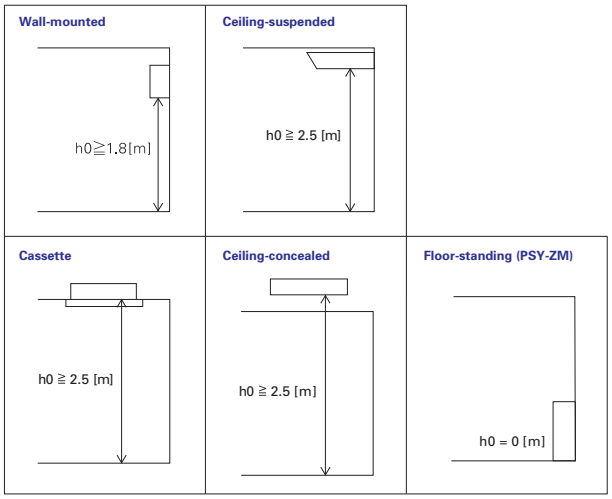
M [kg]	Amin[m²]
0.2< M≦ 0.3	0.8
≦ 0.4	1.0
≦ 0.5	1.3
≦ 0.6	1.5
≦ 0.7	1.7
≦ 0.8	2.0
≦ 0.9	2.2
≦ 1.0	2.5
≦ 1.1	2.7
≦ 1.2	2.9
≦ 1.3	3.2
≦ 1.4	3.4
≦ 1.5	3.7
≦ 1.6	3.9
≦ 1.7	4.2
≦ 1.8	4.4
≦ 1.9	4.6
≦ 2.0	4.9
≦ 2.1	5.1
≦ 2.2	5.4
≦ 2.3	5.6
≦ 2.4	5.8
≦ 2.5	6.0
≦ 2.6	6.5
≦ 2.7	7.0
≦ 2.8	7.5
≦ 2.9	8.1
≦ 3.0	8.6

< P Series >

M [kg]	Amin[m²]
1.0	4
1.5	6
2.0	8
2.5	10
3.0	12
3.5	14
4.0	16
4.5	20
5.0	24
5.5	29
6.0	35
6.5	41
7.0	47
7.5	54

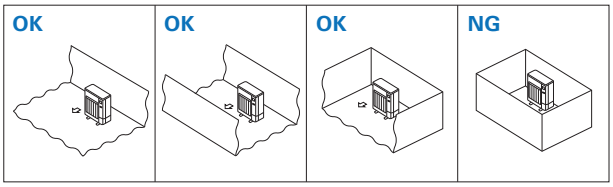
< Only for PSY-ZM >

M [kg]	Amin[m²]
< 1.84	No requirements
1.84	6
2.0	6
2.5	7
3.0	9
3.5	10
4.0	11
4.5	13
5.0	14
5.5	15
6.0	17
6.5	18
7.0	20
7.5	21
8.0	22
8.5	24
9.0	25
9.5	26



2) Outdoor Units

Install outdoor units in a place where at least one of the four sides is open or in a sufficiently large space without depressions.



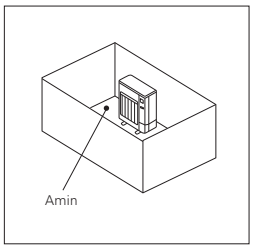
If you unavoidably install a unit in a space where all four sides are blocked or there are depressions, confirm that one of these situations (A, B or C) is satisfied.

A Secure sufficient installation space (minimum installation area Amin).

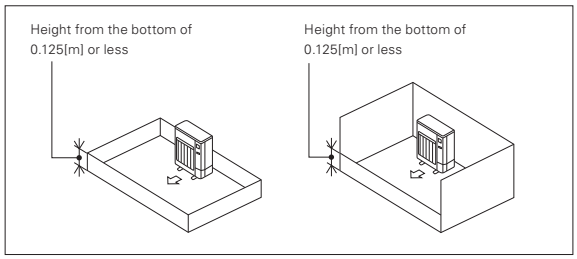
Install in a space with an installation area of Amin* or more, corresponding to refrigerant quantity M. (M = factory-charged refrigerant + locally added refrigerant)

* Refer to table and drawings below.

M[kg]	Amin[m²]
1.0	12
1.5	17
2.0	23
2.5	28
3.0	34
3.5	39
4.0	45
4.5	50
5.0	56
5.5	62
6.0	67
6.5	73
7.0	78
7.5	84

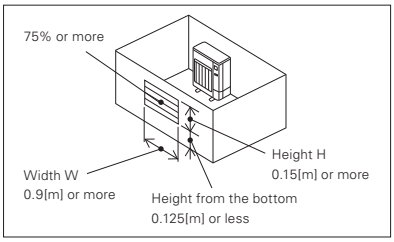


B Install in a space with a depression height of ≦0.125[m].



C Create an appropriate open ventilation area.

Make sure that the width of the open area is 0.9[m] or more and the height of the open area is 0.15[m] or more.
However, the height from the bottom of the installation space to the bottom edge of the open area should be 0.125[m] or less.
More than 75% of the ventilation area should be open to allow air circulation.



Note **These countermeasures (A, B or C) are for keeping safety not for specification guarantee.**

EXCELLENT QUALITY

Development

Taking into account the various harsh environments around the world, at MITSUBISHI ELECTRIC we have established uniquely strict quality control standards and various quality evaluation tests for our products.





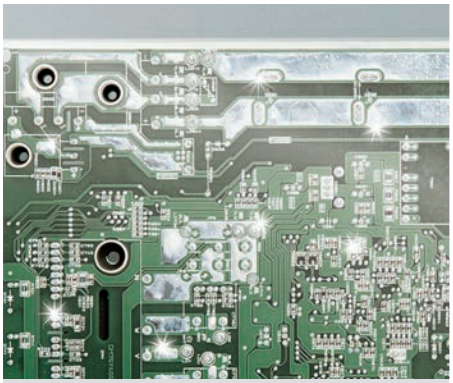


Design

In order to ensure our customers can use our products with peace of mind and for a long time, we select high-quality durable parts, and invest great care when designing and assembling our products.



Ensure its reliable operation and preventing fire accident in case of short circuit.



Special coating prevents any damages from humidity and insects.



Anti-rust painting and galvanized steel protect cabinet even under harsh environment.

Production

MITSUBISHI ELECTRIC makes full use of advanced production technology to efficiently produce top quality products. All of our products are inspected by experienced professionals.







⚠ NOTICE

■ Our air-conditioning equipment and heat pumps contain a fluorinated greenhouse gas, R32.

MITSUBISHI ELECTRIC CORPORATION

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2204822-1-13<IP>

New publication effective Mar. 2023.

Specifications are subject to change without notice.