MITSUBISHI ELECTRIC

Changes for the Better

for a greener tomorrow eco Changes

AIR CONDITIONING SYSTEMS

CITY MULTI



CM15AS-O

Air conditioning is an ideal way of controlling the temperature, movement and cleanliness of air inside any building, large or small. With today's buildings being so well insulated and increasingly full of electronic equipment, the need for effective climate control is greater than ever. Not only does it cool in the summer months, but air conditioning can also heat, doing away with the need for separate heating systems altogether. More and more people today are enjoying the benefits of comfortable working and living environments made possible with air conditioning.

Our Latest Technologies

VRF system

VRF stands for Variable Refrigerant Flow. A VRF air conditioning system modulates the flow of refrigerant depending upon the capacity requirements of the building. In its simplest form, a VRF system comprises an air-cooled outdoor unit and a series of indoor units that regulate the air temperature inside an internal space.

Intelligent Power Module (IPM) technology

The CITY MULTI range from Mitsubishi Electric provides precise control of energy input, through utilization of its Intelligent Power Module (IPM) technology. By employing this technology, highly efficient operation is possible with compact units closely matching building requirements.

Inverter driven technology

At Mitsubishi Electric we strive to continually meet the increasing demands of our customers, being the first in the industry to offer highly advanced 'inverter driven' systems. Using inverter technology our systems produce just the right amount of output to match the exact requirement of any building. These systems work so efficiently that they don't waste valuable energy by over-heating or over-cooling, resulting in greatly reduced running costs. Alternative systems that may appear cheaper, can often cost substantially more to run, making us the most cost effective choice all round.

R410A refrigerant

As scientific evidence points to man-made chemicals for the damage caused to the ozone layer, we only use chlorine-free refrigerants that are safe with zero ODP (Ozone Depletion Potential). Accordingly, our systems require less energy to run, and have a significantly lower indirect global warming potential. In short, we produce the most efficient equipment possible, while helping to protect the environment.

Unsurpassed air conditioning from Mitsubishi Electric

Known the world over, Mitsubishi Electric is a trusted household name associated with a variety of products and services. Founded in 1920, the company known today as Mitsubishi Electric, quickly rose to the forefront of the air conditioning industry - a position we still enjoy today. We pride ourselves on offering some of the most energy efficient systems available on the market.

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The New Cooling-only Models

Mitsubishi Electric offers a wide variety of lineup of cooling-only models including standard, high COP, and super high COP models.

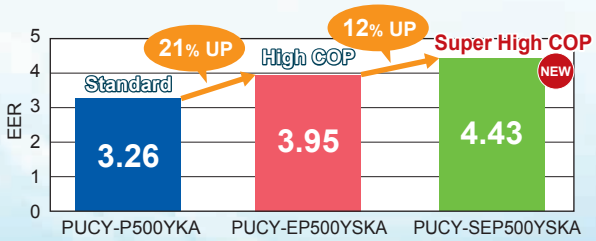
Super High COP Models NEW

New Super High COP model

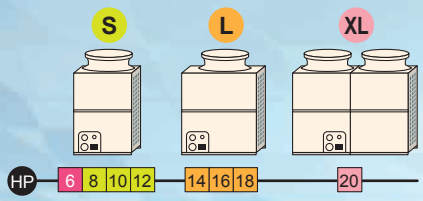
New lineup from 6 HP to 26 HP
EER of 4 or higher has been achieved for all models.

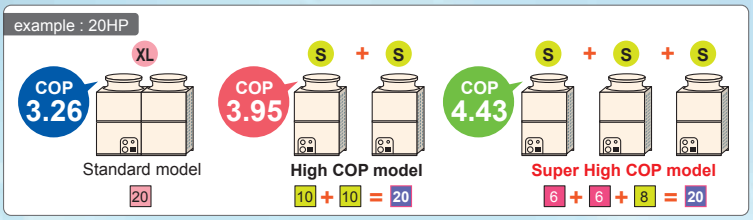
Model	P150	P300	P350	P400	P450	P500	P550	P600	P650
HP	6	12	14	16	18	20	22	24	26
Module& Combination	S	S+S	S+S	S+S	S+S+S	S+S+S	S+S+S	S+S+S	S+S+S
	6	6+6	6+8	6+10	6+6+6	6+6+8	6+8+8	6+8+10	6+10+10
EER	4.71	4.71	4.3	4.24	4.71	4.43	4.19	4.16	4.14

Super high efficiency has been achieved by combinations of 6 HP (P150) modules.



Standard, High COP, or Super High COP options are available by different combinations of modules.

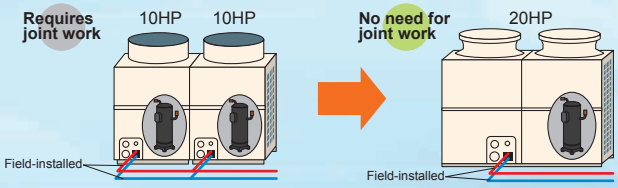




YKA features

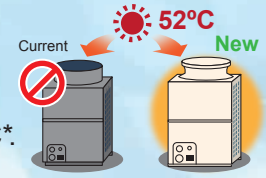
Single module up 20 HP

Capable of covering up to 20 HP with a single module and a single compressor.
Reduced piping work.



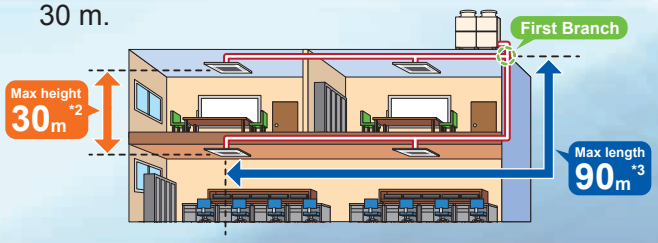
Compatibility to outdoor temperature of up to 52ºC *1

Capable of running cooling operations in the outdoor temperature of up to 52ºC*.
*Compared to 46ºC of the older model



Increase in the limit of piping length

Farthest indoor from first branch: 90 m
Height difference between indoor and indoor units is up to 30 m.





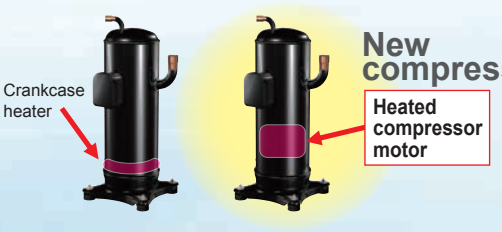
All modules feature inverter-driven compressors. Maximum 60 HP

*1 : Any continuous operation over 46ºC may require an increased frequency of maintenance.
*2 : If the height difference between indoor units exceeds 15 meters (but does not exceed 30 meters), use one-size larger pipes for indoor unit liquid pipes.
*3 : When the piping length exceeds 40m, use one size larger liquid pipe starting with the section of piping where 40m is exceeded and all piping after that point.

Energy saving

Compressor

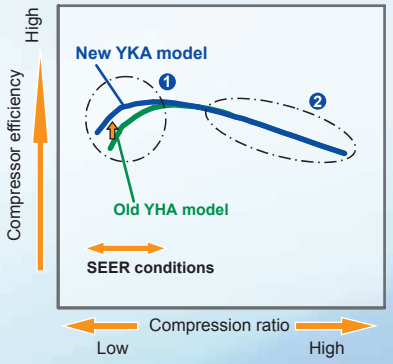
- **Improved efficiency by the use of DC brushless motor.**
- **Improved partial-load characteristics achieved by the optimized scroll shape.**



Improved SEER performance

Optimized scroll shape (improved volumetric capacity ratio)

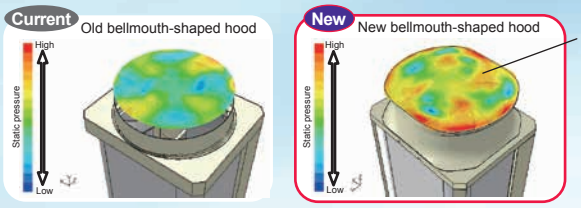




- **Reduced standby power consumption by heating the compressor instead of a crankcase heater.**

Unit casing

- **Improved static pressure at the exhaust air outlet that allows for a reduction in fan input power by the changed shape of the bellmouth hood.**

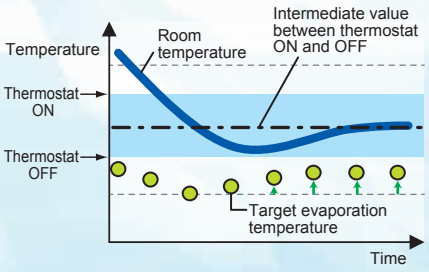


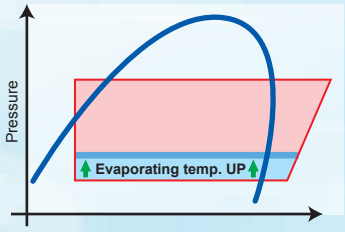
The new bellmouth-shaped hood achieves reduction in fan rotation and increases the pressure at the hood outlet compared to that of the old one, resulting in reduced input power to the fan.

Control

- **ET control (Evaporating Temperature control)**

Reduced energy consumption in cooling by controlling the refrigerant temperature according to the operation load and raising evaporating temperature.





Current control method

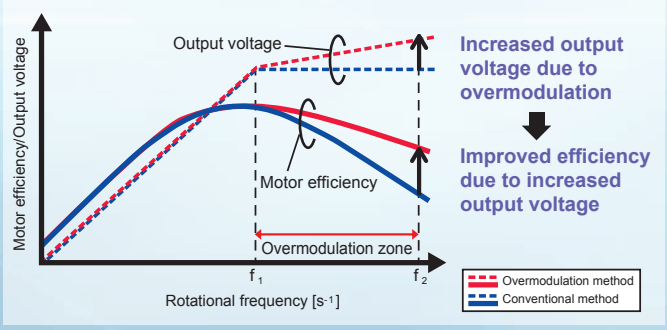
Evaporating temperature was kept constant.

New control method

Evaporating temperature is raised according to the operation load, decreasing compressor input power and increasing operation efficiency.

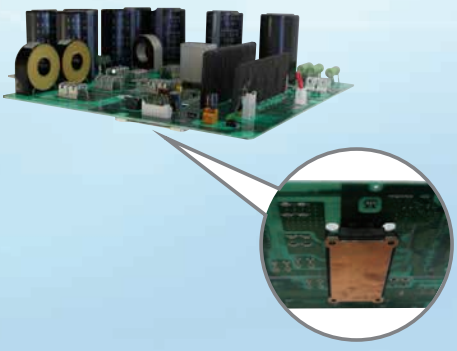
- **Original PWM overmodulation control**

Improved total efficiency of motor and inverter with the use of our original PWM overmodulation control, increasing the output voltage during high-load operation (when the motor is rotating at high speed).



Increased output voltage due to overmodulation

Improved efficiency due to increased output voltage



VRF System

Sophisticated Yet Simple Technology

Reliable

Designed and manufactured to the highest standards, the CITY MULTI range offers one of the most reliable air conditioning systems available. Simple to install and easy to maintain, this range provides ideal solutions you can trust to protect your investment.



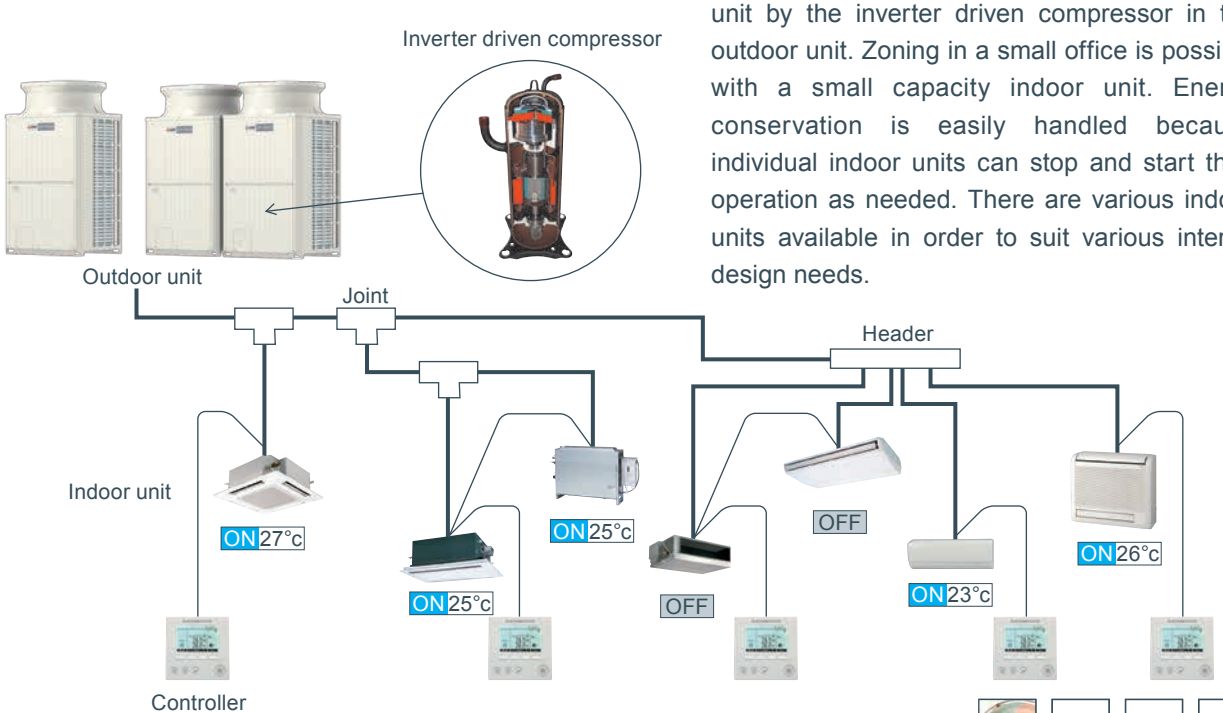
PEFY-PVMA

>All the CITY MULTI outdoor units are made under stringent control.

Our Answer to VRF

Mitsubishi Electric sets the boundaries of VRF technology with the CITY MULTI range, which is available using R410A refrigerant with zero ODP (Ozone Depletion Potential). The range has been specifically designed for today's building requirements and addresses key market issues such as energy efficiency, adaptability and reliability. With user friendly control systems utilizing internet technology and integrated cooling and ventilation indoor units, CITY MULTI is the benchmark and market leader in VRF technology.

VRF is a multi and direct expansion type air conditioning system where by one outdoor unit can be connected with multiples indoor units. The amount of refrigerant can be regulated freely according to the load on the indoor unit by the inverter driven compressor in the outdoor unit. Zoning in a small office is possible with a small capacity indoor unit. Energy conservation is easily handled because individual indoor units can stop and start their operation as needed. There are various indoor units available in order to suit various interior design needs.



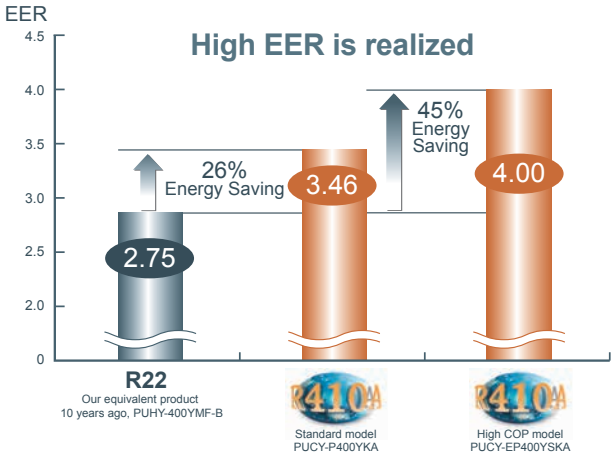
Intelligent Power Module (IPM) Technology

Total Energy Conservation

The YKA range from Mitsubishi Electric provides precise control of energy input, through utilization of its Intelligent Power Module (IPM) technology. By employing this technology, it is possible to closely match the building requirements and to achieve more accurate control of the occupied space. By using incremental 1Hz steps of capacity control, the amount of required power input is significantly reduced, resulting in greatly improved EER's.

In addition, IPM technology ensures effective performance under partial load conditions, a condition that most systems will be in for the majority of the normal working life cycle. By taking account the efficiency at both part load, and peak load conditions, R410A CITY MULTI is designed to provide unbeatable year round/seasonal efficiency.

Comparison of EER (Energy Efficiency Ratio) – 16HP system



* The values were obtained under the standard conditions.

The Difference between YKA and Previous Mitsubishi Electric Models

Technology is a key when increased efficiency is demanded. The CITY MULTI YKA range is able to deliver this in simple ways.

A highly efficient R410A scroll compressor design results in less friction losses at the motor. A simplified refrigerant circuit (low pressure loss) including a new accumulator design also adds a few more points to the efficiency scale. Enhancements to the heat interchange circuit, an inverter driven fan motor and a heat exchanger design again add vital increases to overall system efficiencies and EERs.

The Importance of EER

EER stands for "Energy Efficiency Ratio". It is a measure of the useful energy a system can deliver compared to the energy it consumes. It is calculated by dividing the energy output by the energy input of a system. The higher the figure then the more efficient the system is deemed to be. Mitsubishi Electric VRF models, the world's highest energy-efficient air-conditioners, will undoubtedly reduce millions of tons of CO_2 emissions.

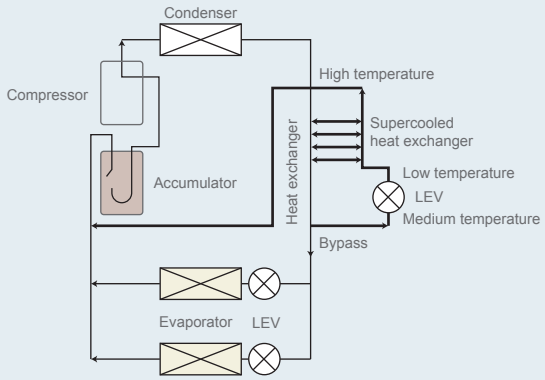


Unbeatable Efficiency

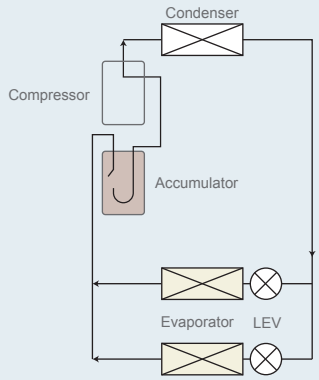
Heat Interchange Circuit

The unique Heat Interchange Circuit (HIC) enhances efficiency by providing additional sub-cooling and allows the expansion device to effectively control the refrigerant distribution, thereby increasing the operating efficiency and reducing the volume of refrigerant in each system.

CITY MULTI Refrigerant Circuit



Common Refrigerant Circuit



Inverter Driven Compressor Technology



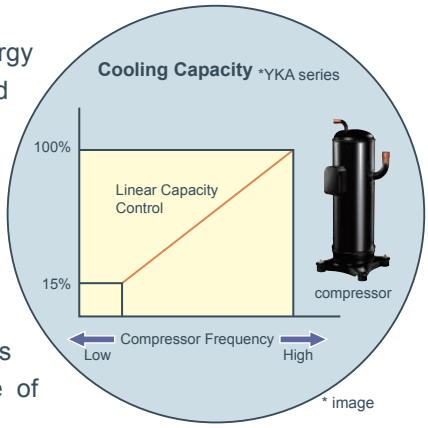
Low Starting Currents

Using inverter driven technology saves energy for several reasons:

The compressor varies its speed to match the indoor cooling or heating demand and therefore only consumes the energy that is required.

When an inverter driven system is operating at partial load, the energy efficiency of the system is significantly higher than that of a standard fixed speed, non inverter system.
The fixed speed system can only operate at 100%, however, partial load conditions prevail for the majority of the time. Therefore fixed speed systems cannot match the annual efficiencies of inverter driven systems.

Using proven single inverter driven compressor technology, the CITY MULTI range is favored by the industry for low starting currents (only 8 amps for a 16HP YKA outdoor unit), and smooth transition across the range of compressor frequencies.

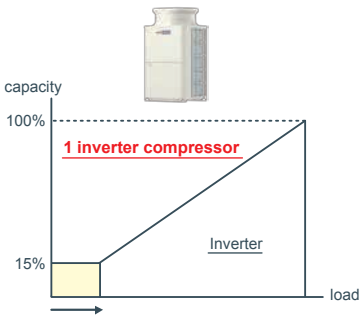


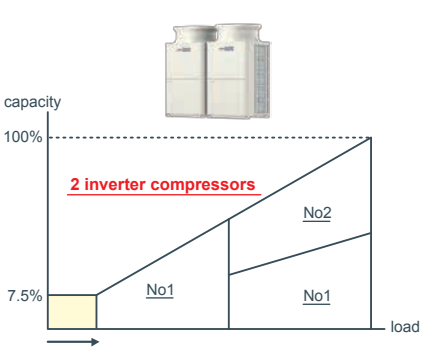
* The values vary depending on the actual conditions such as ambient temperature.

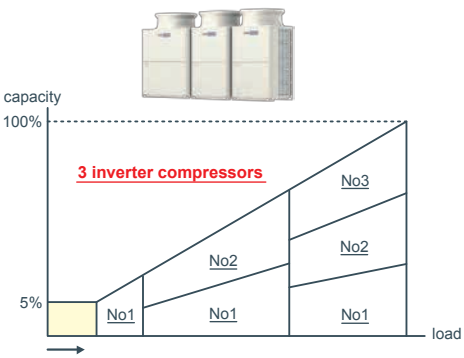
All CITY MULTI compressors are inverter-driven type.
-Capable of precisely matching a building's cooling and heating demands.

The outdoor unit combinations comprise 1 unit for 8-20HP systems, 2 units for 22-40HP systems and 3 units for 42-60HP systems. Each unit carries one inverter compressor making simple and highly reliable control possible. Not only does it allow low starting currents, the inverter-driven compressor also provides precise indoor comfort and adapts to the air conditioning load.

Stable and Smooth Operation (for standard models)









Efficient R410A Refrigerant

Total Energy Conservation

Enhancing Environmental Care (measures for the RoHS Directive and the refrigerant reduction)
Every unit is in compliance with the RoHS Directive,* which stands for the Restriction of Hazardous Substances: Lead-free soldering is used to avoid Lead Groundwater Contamination on the print board. The amount of refrigerant on the unit has also been reduced to enhance environmental care.

* RoHS Directive: the restriction of the use of certain hazardous substances in electrical and electronic equipment that has been sold in EU since July 2006

History of Refrigerant



R22, an HCFC-based refrigerant, has been a popular choice for most chillers. R22 has been targeted by the Montreal Protocol to be phased out in new equipment. Additionally, governments in many countries are enforcing a ban of HCFC-based refrigerants for new installations.

Because of these restrictions, R410A refrigerants are desirable. R410A is a blend of HFCs, which do not deplete the ozone.

Technical Aspects of Refrigerant

R410A is a more efficient refrigerant as it has a higher specific heat capacity when compared to R407C or R22. This higher energy carrying capacity allows for smaller pipe sizes, longer pipe runs and reduces the volume of refrigerant within a system. This is a major factor when concerning safety and environmental requirements in the design, manufacture, installation, operation, maintenance and disposal or refrigerating systems.

New Design



New Unit Casing

Reduction in fan input power

New Heat Exchanger Design

Improvement of COP

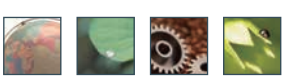
New Control Box Design

Improvement of reliability and easy maintenance

New Inverter Compressor

Improvement of COP

Photo : Y series





Outdoor Unit

Cooling-only Series (Y), High COP (Y)

Heat Pump Series (S)

Wide Selection of Outdoor Units

System	Type	Model name	HP	4	5	6	7	8	9	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
			Model	P100	P125	P150	P175	P200	P225	P250	P300 SEP300	P350 SEP350	P400 SEP400	P450 SEP450	P500 SEP500	P550 SEP550	P600 SEP600	P650 SEP650	P700	P750	P800	P850	P900	P950	P1000	P1050	P1100	P1150	P1200	P1250	P1300	P1350	P1400	P1450	P1500
Air Cooled	Cooling only	Y series (Page19 - 26) PUCY-P YKA(-BS) PUCY-P YSKA(-BS)						8		10	12					10 12 12	10											14 16 16	16 16 16	16 18 18	16 18 18	18 18 18	18		20 20 20
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		Y series - High COP (Page19 - 26) PUCY-EP YSKA(-BS)	*1										8 8	8 10	10 10			12		8 8	8 10	10 10	10 12	12 12	12										
																		14	14 14	14	14	14	14	14	14 14	14 14	14 14 16								
		Y series - Super High COP (Page27 - 28) PUCY-P YKA(-BS) PUCY-SEP-YSKA(-BS)				6					6 6	6 8	6 10	6 6	6 6	6 8	6 8	6 10																	
	Heat Pump	S series (Page17) PUMY-P VHMB(-BS) PUMY-P YHMB(-BS) PUMY-P VHMS PUMY-P YHMS		4	5	P140 6																													
		S series (Page18) PUMY-P YKM(-BS)					7	8	9																										

*1. Indicates S, L, XL modules *2. The circled numbers in the table indicate the horse power, and the combination of S, L, and XL modules.



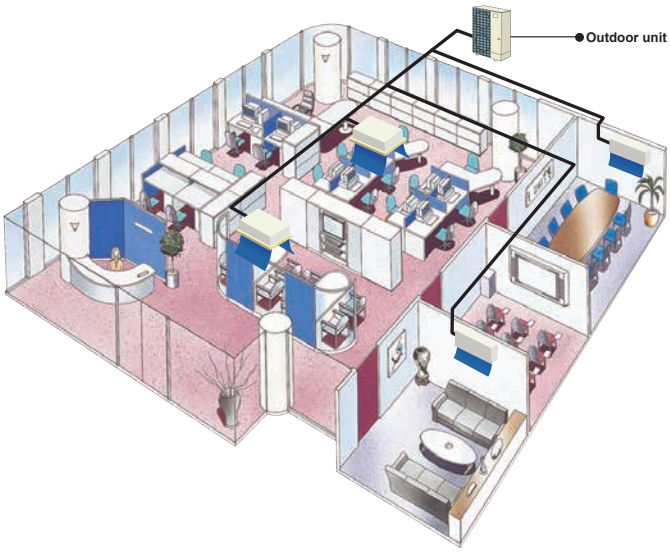
Cooling or Heating

S series
- PUMY-P VHMB(-BS)
- PUMY-P YHMB(-BS)
- PUMY-P VHMS
- PUMY-P YHMS

The two-pipe zoned system designed for Heat Pump Operation

The CITY MULTI S series (for small applications) make use of a two-pipe refrigerant system, which allows for system changeover from cooling to heating, ensuring that a constant indoor climate is maintained in all zones. The compact outdoor unit utilizes R410A refrigerant and an INVERTER-driven compressor to use energy effectively.
With a wide line-up of indoor units in connection with a flexible piping system, the CITY MULTI series can be configured for all applications. Up to 12 (S series) indoor units can be connected with up to 130% connected capacity to maximize engineer's design options. This feature allows easy air conditioning in each area with convenient individual controllers.

Small Offices (S series)

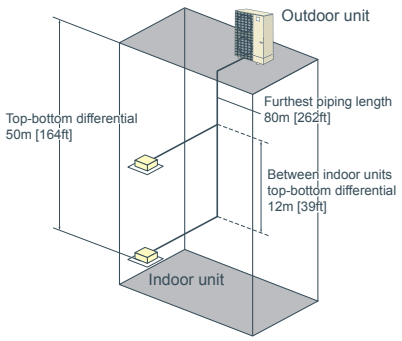


System Pipe Lengths

[4-6HP (S series)]

Refrigerant Piping Lengths	Maximum meters [Feet]
Total length	120 [393]
Maximum allowable length	80 [262]
Farthest indoor from first branch	30 [98]

Vertical differentials between units	Maximum meters [Feet]
Indoor/outdoor (outdoor higher)	50 [164]
Indoor/outdoor (outdoor lower)	20 [65]
Indoor/indoor	12 [39]



Advanced Energy-saving Technologies



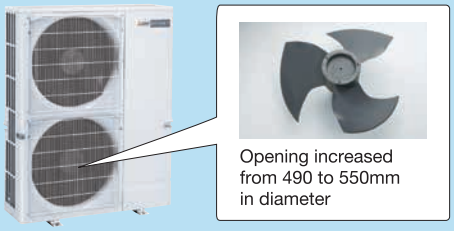
S series | PUMY-P YKM

Highly efficient fan and grille for outdoor unit

The shapes of the fan and grille of the outdoor unit have been redesigned, realising an increase in blowing capacity and more efficient heat exchange while maintaining the same operating noise level.

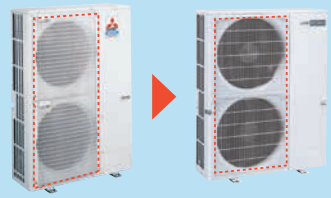
Outdoor unit fan opening increased

The diameter of the opening for the fan in the outdoor unit has been increased from 490 to 550mm. Blowing capacity has been increased while maintaining the same fan rotation speed.



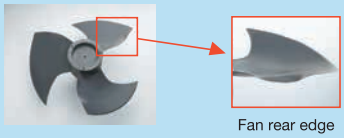
Grille shape changed

The shape of the air outlet grille has been changed to reduce pressure loss. This has helped to improve heat exchange performance.



Inflexed fan

Adoption of a fan with improved ventilation characteristics and a newly designed rear edge that suppresses wind turbulence raises fan operation efficiency.

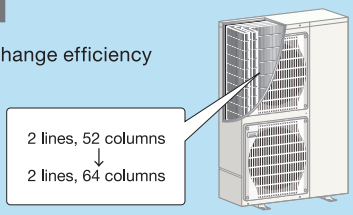


Highly efficient heat exchanger

A high density and increase in surface area have improved the heat-exchange efficiency of the heat exchanger.

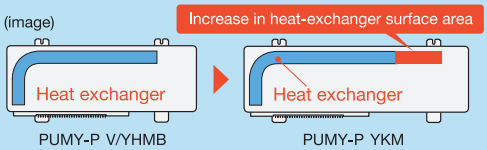
High-density heat exchanger

The pipe diameter has been changed from 9.52 to 7.94mm, resulting in a high-density heat exchanger.



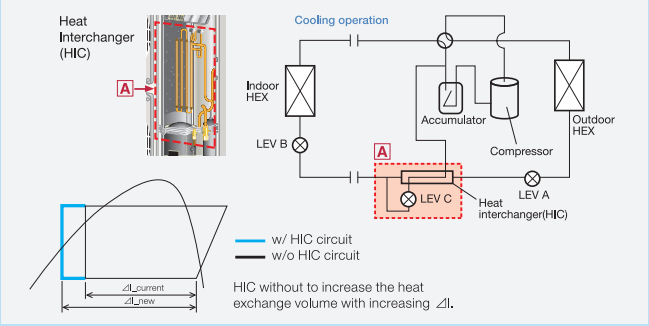
Heat-exchange surface area increased

Heat exchanger size extended horizontally, increasing the surface area.



Heat Interchanger (HIC) Added

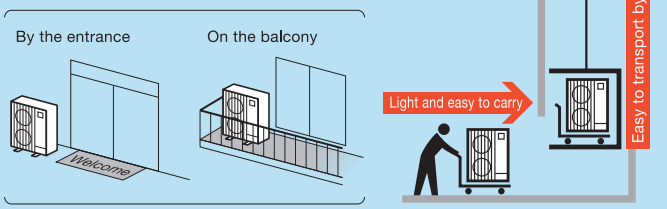
A HIC circuit has been added to improve energy efficiency during cooling operation. Liquid refrigerant is rerouted, transformed into a gas state and injected back into the system to increase overall pressure of the refrigerant being sent to the compressor, thereby reducing the load on the compressor and raising efficiency.





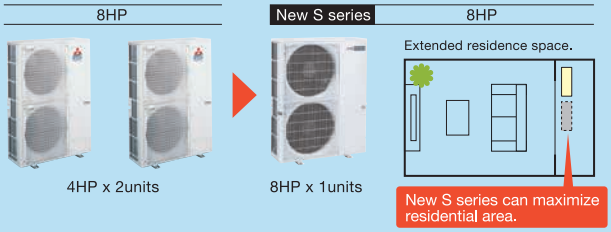
Light weight

Even 8HP, easy to transport and install at site.



Smaller footprint

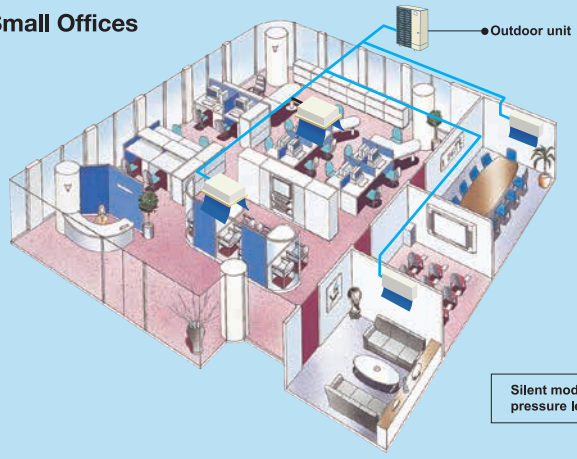
Flexible choice and suitable for the limited outdoor space.



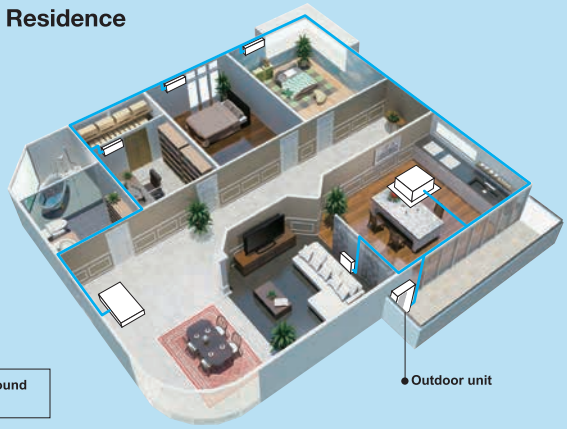
The two-pipe zoned system designed for Heat Pump Operation

The CITY MULTI S series (for small applications) make use of a two-pipe refrigerant system, which allows for system changeover from cooling to heating, ensuring that a constant indoor climate is maintained in all zones. The compact outdoor unit utilizes R410A refrigerant and an INVERTER-driven compressor to use energy effectively.
With a wide range of indoor unit line-up in connection with a flexible piping system, the CITY MULTI series can be configured for all applications. Up to 12 (S series) indoor units can be connected with up to 130% connected capacity to maximize engineer's design options. This feature allows easy air conditioning in each area with convenient individual controllers.

Small Offices



Residence

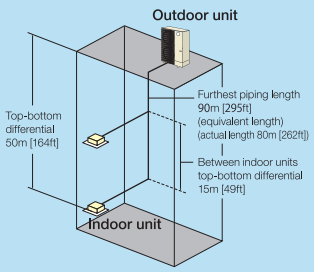


Silent mode can reduce sound pressure level by 3dB(A)

[P175~225(YKM)]

Refrigerant Piping Lengths	Maximum meters [Feet]
Total length	150[492]
Maximum allowable length	80(90equivalent) [262(295)]
Farthest indoor from first branch	30 [98]

Vertical differentials between units	Maximum meters [Feet]
Indoor/outdoor (outdoor higher)	50 [164]
Indoor/outdoor (outdoor lower)	40 [131]
Indoor/indoor	15 [49]



Y (Cooling-only) series

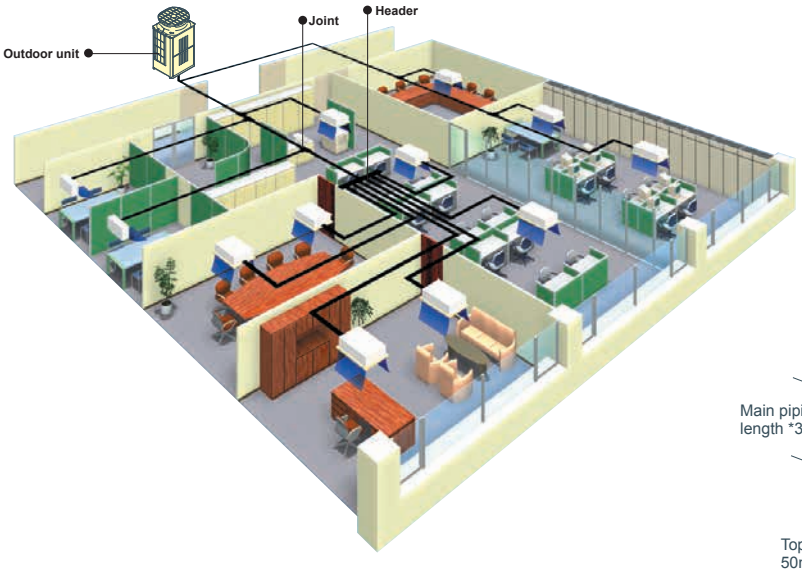


Y series — **PUCY-P YKA(-BS)** **PUCY-P YSKA(-BS)** **PUCY-EP YSKA(-BS)**

The CITY MULTI Y series compact outdoor unit utilizes R410A refrigerant and an INVERTER-driven compressor to use energy effectively.

With a wide line-up of indoor units in connection with a flexible piping system, the CITY MULTI series can be configured for all applications. Up to 50 (Y series) indoor units can be connected with up to 130% connected capacity to maximize engineer's design options. This feature allows easy air conditioning in each area with convenient individual controllers.

Large Offices (Y series)

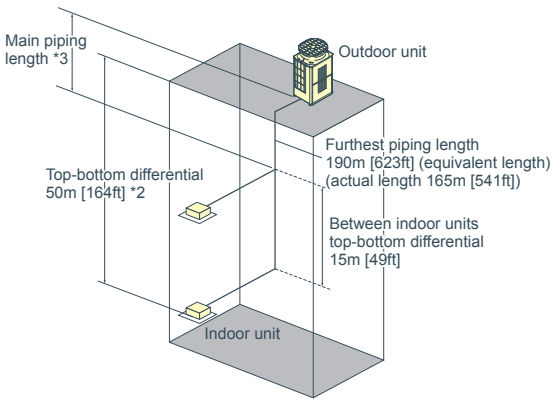


System Pipe Lengths

[8-60HP (Cooling-only Y series)]
[16-44HP (Cooling-only High COP Y series)]

Refrigerant Piping Lengths	Maximum meters [Feet]
Total length	1,000 [3,280]*1
Maximum allowable length	165 (190 equivalent) [541(623)]
Farthest indoor from first branch	40 [131]*2
Main piping length	*3

Vertical differentials between units	Maximum meters [Feet]
Indoor/outdoor (outdoor higher)	50 [164]*4
Indoor/outdoor (outdoor lower)	40 [131]*4, *5
Indoor/indoor	15 [49]*6

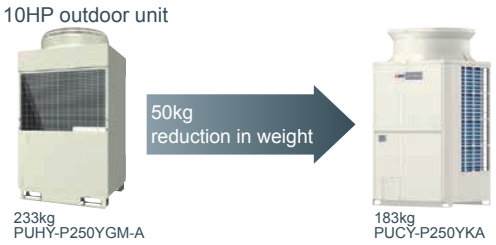


*1 The maximum total piping length in the system with the P1400 through P1500 model units is 800 meters.
*2 90m is available. When the piping length is 40m or longer, use the one size larger liquid pipe between the indoor unit and the first branch. [for PUCY-P-Y(S)KA(-BS)/PUCY-EP-YSKA(-BS)]
*3 In the system with the P1400 through P1500 model units, pipe length restrictions apply to the main pipes as follows.
P1400: 110 m max.
P1450: 90 m max.
P1500: 60 m max.
*4 Depending on the model and installation conditions, top-bottom differential 90m [295ft] (o/u above) and 60m [196ft] (o/u below) is available. For more detailed information, please contact your nearest sales office or distributor.
*5 4m or less in cooling at outdoor temperature 10°C or lower for PUHY-P-YHA (-BS) only.
*6 30m is available. When the height difference is 15m or greater, use the one size larger liquid pipe between the indoor unit and the indoor unit. [for PUCY-P-Y(S)KA(-BS)/PUCY-EP-YSKA(-BS)]

Features in Y (Cooling-only) series

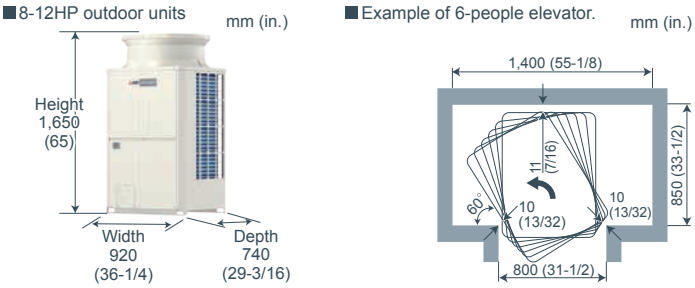
Compact Design
Industry Leading Weight Saving

The manageability of the outdoor unit has been improved due to a drastic reduction in its weight, leading to easy transportation, installation, and reduction in withstand load.



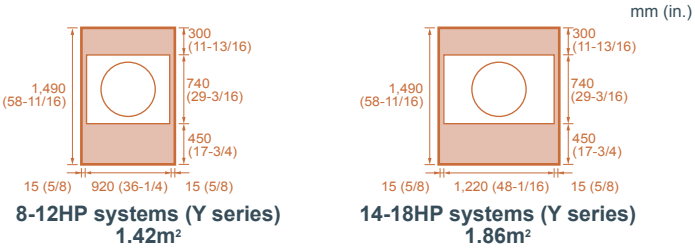
Industry Leading Space Saving

The downsized outdoor unit can be transported through a 800 mm wide door.

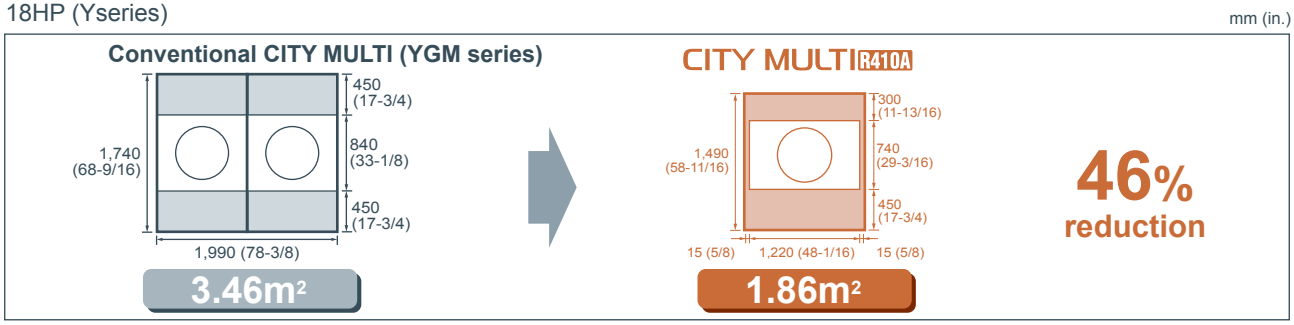


Effective Use of Space

The new models have a smaller foot print and service space requirement than previous models.



18HP (Yseries)



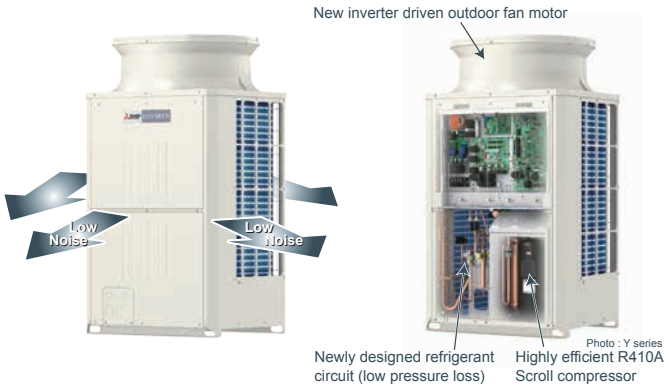
The unit can easily be transported even into slender buildings.



The narrow space between buildings makes it difficult to use a crane.

Low Noise Levels New Fan Design

CITY MULTI VRF systems led the introduction of larger single fan motors some decades ago, achieving substantially lower noise levels over multiple designs. Continuing the development in the areas of blade shape and weight, Mitsubishi Electric have managed to achieve even higher performance and lower noise levels. To reduce noise levels further and comply with inner city residential noise regulations, all outdoor units include low noise mode. This function works by lowering the fan speed and compressor frequency proportionally with reduction in demand.

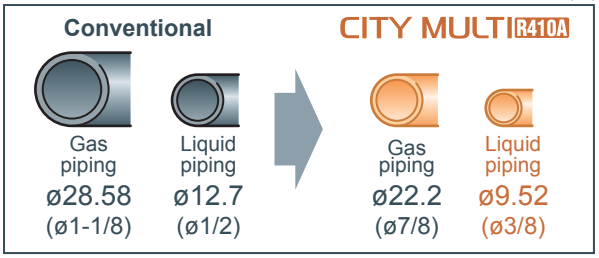


The compressor compartment is sealed by metal panels to attain low noise levels in all directions.

R410A Pipe Sizing

As R410A has a higher specific heat capacity than R22, the pipework is smaller. This means the pipe itself is cheaper, easier to install and less riser space is required within the building.

mm (in.)

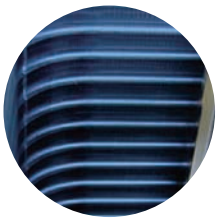


Based on 10HP model

Blue Fin Treatment

The anti-corrosion Blue Fin treatment of the heat exchanger is especially effective in urban environments where the traffic pollutions can damage the aluminum fins reducing the capacity and life expectancy of the unit. All CITY MULTI R410A outdoor units have been treated with Blue Fin.

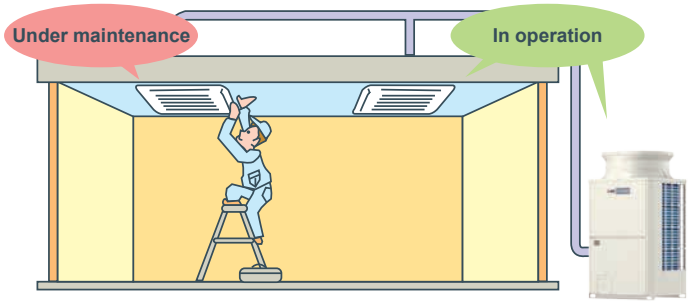
*Standard:Anti-corrosion Blue Fin treatment & copper tube.
BS type (optional):salt-resistant cross fin & copper tube.



Easy Maintenance

Even when one of the indoor units in the system is under maintenance, the other indoor unit can still operate.

* Not applicable to all situations.
* Be sure to turn off the power to the indoor unit when repairing or servicing the unit.



System Check

Ensuring simple and easy maintenance, system tests are available to check wiring, sensors and the refrigerant amount.

60Pa High Static Pressure as standard

Y series corresponds to high static pressure of 60Pa, ideal and flexible for any type of application.

OUTDOOR UNIT
S Series
PUMY-P VHMB(-BS) / VHMS



► Specifications

Model			PUMY-P100VHMB(-BS)	PUMY-P125VHMS	PUMY-P140VHMS
Power Source			1-phase 220-230-240V 50Hz, 1-phase 220V 60Hz		
Cooling Capacity (Nominal)	*1	kW	11.2	14	15.5
	*1	BTU/h	38,200	47,800	52,900
	Power Input	kW	3.34	3.77	4.26
	Current Input	A	15.4	17.3	19.5
	COP (kW/kW)		3.35	3.71	3.64
Temp range of cooling	Indoor	W.B.	15 ~ 24°C		
	Outdoor	D.B.	10 ~ 46°C		
Heating Capacity (Nominal)	*2	kW	12.5	16	18
	*2	BTU/h	42,700	54,600	61,500
	Power Input	kW	3.66	3.96	4.61
	Current Input	A	16.9	18.1	21.1
	COP (kW/kW)		3.42	4.04	3.9
Temp range of hheating	Indoor	W.B.	15 ~ 27°C		
	Outdoor	D.B.	0 ~ 15°C		
Indoor unit connectable	Total capacity		50 ~ 130% of outdoor unit capacity		
	Model/Quantity		P15 ~ P125 / 1 ~ 8		
Sound pressure level (measured in anechoic room)		dB<A>	49 / 51	50 / 52	51 / 53
Diameter of refrigerant pipe	Liquid (High press.)	mm(in.)	Φ9.52 (Φ3/8)	Φ9.52 (Φ3/8)	Φ9.52 (Φ3/8)
	Gas (High press.)	mm(in.)	Φ15.88 (Φ5/8)	Φ15.88 (Φ5/8)	Φ15.88 (Φ5/8)
External Finish			Galvanized steel sheet <MUNSELL 3Y 7.8/1.1>		
External dimension H x W x D		mm(in.)	1,350 x 950 x 330 (53-3/16 x 37-7/16 x 13)		
Net weight		kg(lbs)	129 (284)	136 (300)	136 (300)
Heat exchanger			Salt-resistant cross fin & copper tube	Plate fin coil (Anti corrosion fin treatment)	
Compressor	Type		Inverter scroll hermetic compressor		
	Starting method		Inverter		
	Motor output	kW	2.2	2.6	3
Fan	Air flow rate	m³/min	100	90	90
		L/s	1,667	1500	1500
		cfm	3,532	3177	3177
	Type x Quantity		Propeller fan x 2		
	Motor output	kW	0.06 X 2		
Protection	High pressure protection		High pressure sensor, High pressure switch 4.15 MPa		
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection		
	Compressor		Compressor thermo protection, Over-current protection (PUMY-P.VHMSR1) Discharge thermo protection, Over-current protection (PUMY-P.VHMB / VHMS)		
Refrigerant	Type x Original charge		R410A x 8.5kg (19 lbs)		

Notes:

*1,*2 Nominal conditions

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)
Heating	20°C DB(68°F DB)	7°C DB/6°C WB(45°F DB/43°F WB)	7.5m (24-9/16ft.)	0m (0ft.)

*Nominal condition *1,*2 are subject to ISO 15042.

*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT
S Series
PUMY-P YKM



► Specifications

Model			PUMY-P175YKM	PUMY-P200YKM	PUMY-P225YKM
Power source			3-phase 380-415V 50Hz	3-phase 380-415V 50Hz	3-phase 380-415V 50Hz
Cooling capacity *1		kW	20.0	22.4	25.0
(Nominal) *1		BTU / h	68,200	76,400	85,300
	Power input	kW	5.48	6.91	9.62
	Current input	A	8.95-8.51-8.20	11.29-10.72-10.34	15.72-14.93-14.39
	EER	kW / kW	3.65	3.24	2.60
Temp. range of	Indoor temp.	W.B.	15.0~24.0°C(59~75°F)	15.0~24.0°C(59~75°F)	15.0~24.0°C(59~75°F)
cooling	Outdoor temp.	D.B.	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)
Heating capacity *2		kW	22.4	25.0	27.3
(Nominal) *2		BTU / h	76,400	85,300	93,200
	Power input	kW	5.73	6.96	7.65
	Current input	A	9.36-8.89-8.57	11.37-10.80-10.41	12.50-11.87-11.44
	COP	kW / kW	3.91	3.59	3.57
Temp. range of	Indoor temp.	D.B.	15.0~27.0°C(59~81°F)	15.0~27.0°C(59~81°F)	15.0~27.0°C(59~81°F)
heating	Outdoor temp.	W.B.	-20.0~15.0°C(-4~59°F)	-20.0~15.0°C(-4~59°F)	-20.0~15.0°C(-4~59°F)
Indoor unit	Total capacity		50~130 % of outdoor unit capacity	50~130 % of outdoor unit capacity	50~130 % of outdoor unit capacity
connectable	Model / Quantity		P15~P224 / 12	P15~P250 / 12	P15~P250 / 12
Sound pressure level (measured in anechoic room)		dB <A>	56/ 61	56 / 61	58 / 63
Refrigerant piping	Liquid pipe	mm (in.)	9.52(3/8) Flare *3	9.52(3/8) Flare *3	9.52(3/8) Flare *3
diameter	Gas pipe	mm (in.)	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed
FAN	Type x Quantity		Propeller Fan x 2	Propeller Fan x 2	Propeller Fan x 2
	Air flow rate	m^3 /min	134	134	143.8
		L/s	2,233	2,233	2,397
		cfm	4,732	4,732	5,078
	Motor output	kW	0.2 + 0.2	0.2 + 0.2	0.2 + 0.2
Compressor	Type x Quantity		Scroll hermetic compressor x 1	Scroll hermetic compressor x 1	Scroll hermetic compressor x 1
	Starting method		Inverter	Inverter	Inverter
	Motor output	kW	4.7	5.4	6.0
External finish			Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1	Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1	Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1
External dimension HxWxD		mm	1,338 x 1,050 x 330 (+25)	1,338 x 1,050 x 330 (+25)	1,338 x 1,050 x 330 (+25)
		in.	52-11/16 x 41-11/32 x 13 (+1)	52-11/16 x 41-11/32 x 13 (+1)	52-11/16 x 41-11/32 x 13 (+1)
Protection devices	High pressure protection		High pressure Switch	High pressure Switch	High pressure Switch
	Inverter circuit (COMP./FAN)		Overcurrent detection, Overheat detection (Heatsink thermistor)	Overcurrent detection, Overheat detection (Heatsink thermistor)	Overcurrent detection, Overheat detection (Heatsink thermistor)
	Compressor		Compressor thermistor, Over current detection	Compressor thermistor, Over current detection	Compressor thermistor, Over current detection
	Fan motor		Overheating, Voltage protection	Overheating, Voltage protection	Overheating, Voltage protection
Refrigerant	Type x original charge		R410A 7.3kg	R410A 7.3kg	R410A 7.3kg
Net weight		kg (lbs)	138(304)	138(304)	138(304)
Heat exchanger			Cross Fin and Copper tube	Cross Fin and Copper tube	Cross Fin and Copper tube
Defrosting method			Reversed refrigerant circuit	Reversed refrigerant circuit	Reversed refrigerant circuit
Optional parts			Joint: CMY-Y62-G-E Header: CMY-Y64/68-G-E	Joint: CMY-Y62-G-E Header: CMY-Y64/68-G-E	Joint: CMY-Y62-G-E Header: CMY-Y64/68-G-E

Notes:

*1,*2 Nominal conditions

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27ºC DB/19ºC WB (81ºF DB/66ºF WB)	35ºC DB(95ºF DB)	7.5m (24-9/16ft.)	0m (0ft.)
Heating	20ºC DB(68ºF DB)	7ºC DB/6ºC WB(45ºF DB/43ºF WB)	7.5m (24-9/16ft.)	0m (0ft.)

*Nominal condition *1,*2 are subject to ISO 15042.
*Due to continuing improvement, above specification may be subject to change without notice.
*3 Liquid pipe diameter:12.7mm in case of farthest piping length is longer than 60m.

OUTDOOR UNIT
Y Series - Cooling-only
PUCY-P YKA(-BS)



► Specifications

Model			PUCY-P200YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P300YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P400YKA (-BS)	PUCY-P450YKA (-BS)	PUCY-P500YKA (-BS)
Power source			3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz
Cooling capacity (Nominal)	*1	kW	22.4	28.0	33.5	40.0	44.0	48.0	56.0
		kcal/h	20,000	25,000	30,000	35,000	39,000	43,000	50,000
	*1	BTU / h	76,400	95,500	114,300	136,500	150,100	163,800	191,100
	Power input	kW	5.59	7.08	8.95	10.78	12.71	15.73	17.17
	Current input	A	9.4-8.9-8.6	11.9-11.3-10.9	15.1-14.3-13.8	18.1-17.2-16.6	21.4-20.3-19.6	26.5-25.2-24.3	28.9-27.5-26.5
	EER	kW / kW	4.00	3.95	3.74	3.71	3.46	3.05	3.26
Cooling capacity	*3	kW	22.7	28.4	34.0	40.6	44.7	48.8	56.9
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity						
	Model / Quantity		P15~P250/1~17	P15~P250/1~21	P15~P250/1~26	P15~P250/1~30	P15~P250/1~34	P15~P250/1~39	P15~P250/1~43
Sound pressure level (measured in anechoic room)		dB <A>	57	58	61	61	63	63	65
Refrigerant piping diameter	Liquid pipe	mm (in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed (12.7 (1/2) Brazed, farthest length >= 90 m)	9.52 (3/8) Brazed (12.7 (1/2) Brazed, farthest length >= 40 m)	12.7 (1/2) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed
	Gas pipe	mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2
	Air flow rate	m^3/min	175	175	175	175	175	175	320
		L/s	2,917	2,917	2,917	2,917	2,917	2,917	5,333
		cfm	6,179	6,179	6,179	6,179	6,179	6,179	11,299
	Control, Driving mechanism		Inverter-control, Direct-driven by motor						
	Motor output	kW	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 2
	*2 External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH2O)	0 Pa (0 mmH2O)	0 Pa (0 mmH2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	5.5	6.9	8.1	10.4	10.8	12.4	14.3
	Case heater	kW	–	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>						
External dimension HxWxD		mm	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,750 x 740
		in.	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)						
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection						
Refrigerant	Type x original charge		R410A x 5.5 kg (13 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.8 kg (27 lbs)
Net weight		kg (lbs)	174 (384)	183 (404)	201 (444)	237 (523)	237 (523)	237 (523)	305 (673)
Heat exchanger			Salt-resistant cross fin & copper tube						
Optional parts			Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/ LS-G2,CMY-Y202S-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2 Header: CMY-Y104/108/1010-G

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT
Y Series - Cooling-only
PUCY-EP YSKA(-BS)



► Specifications

Model			PUCY-EP400YSKA (-BS)	PUCY-EP450YSKA (-BS)	PUCY-EP500YSKA (-BS)	PUCY-P550YSKA (-BS)	PUCY-P600YSKA (-BS)
Power source			3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz
Cooling capacity (Nominal)	*1	kW	44.8	50.4	56.0	61.5	68.0
		kcal/h	38,500	43,300	48,200	52,900	58,500
	*1	BTU / h	152,900	172,000	191,100	209,800	232,000
	Power input	kW	11.18	12.59	14.16	15.97	17.79
	Current input	A	18.8-17.9-17.2	21.2-20.1-19.4	23.9-22.7-21.8	26.9-25.6-24.6	30.0-28.5-27.4
	EER	kW / kW	4.00	4.00	3.95	3.85	3.82
Cooling capacity	*3	kW	45.5	51.2	56.9	62.5	69.1
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity		P15~P250/1~34	P15~P250/1~39	P15~P250/1~43	P15~P250/2~47	P15~P250/2~50
Sound pressure level (measured in anechoic room)		dB <A>	60	60.5	61	63	63
Refrigerant piping diameter	Liquid pipe	mm (in.)	12.7 (1/2) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed
	Gas pipe	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed

Set Model

Model			PUCY-P200YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P300YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P350YKA (-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate	m^3/min	175	175	175	175	175	175	175	175	175	175
		L/s	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917
		cfm	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179
	Control, Driving mechanism		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor	
	Motor output	kW	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1
*2	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor		Inverter scroll hermetic compressor		Inverter scroll hermetic compressor		Inverter scroll hermetic compressor		Inverter scroll hermetic compressor	
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	5.5	5.5	5.5	6.9	6.9	6.9	6.9	8.1	6.9	10.4
	Case heater	kW	–	–	–	–	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>									
External dimension HxWxD		mm	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 1,220 x 740
		in.	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 48-1/16 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection	
Refrigerant	Type x original charge		R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 11.5 kg (26 lbs)
Net weight		kg (lbs)	174 (384)	174 (384)	174 (384)	183 (404)	183 (404)	183 (404)	183 (404)	201 (444)	183 (404)	237 (523)
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube	
Pipe between unit and distributor	Liquid pipe	mm (in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed
	Gas pipe	mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G						Outdoor Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT
Y Series - Cooling-only
PUCY-EP YSKA(-BS)



► Specifications

Model			PUCY-EP650YSKA (-BS)	PUCY-EP700YSKA (-BS)	PUCY-EP750YSKA (-BS)	PUCY-EP800YSKA (-BS)
Power source			3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz
Cooling capacity (Nominal)	*1	kW	73.5	80.0	84.8	90.4
		kcal/h	63,200	68,800	72,900	77,700
	*1	BTU / h	250,800	273,000	289,300	308,400
	Power input	kW	19.74	21.56	21.85	23.33
	Current input	A	33.3-31.6-30.5	36.3-34.5-33.3	36.8-35.0-33.7	39.3-37.4-36.0
	EER	kW / kW	3.72	3.71	3.88	3.87
Cooling capacity	*3	kW	74.7	81.3	86.2	91.9
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Sound pressure level (measured in anechoic room)		dB <A>	64	64	64	64
Refrigerant piping diameter	Liquid pipe	mm (in.)	15.88 (5/8) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed
	Gas pipe	mm (in.)	28.58 (1-1/8) Brazed	34.93 (1-3/8) Brazed	34.93 (1-3/8) Brazed	34.93 (1-3/8) Brazed

Set Model

Model			PUCY-P300YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P350YKA (-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate	m^3/min	175	175	175	175	175	175	175	175	175	175
		L/s	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917
		cfm	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179
	Control, Driving mechanism		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1
*2	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor		Inverter scroll hermetic compressor		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	8.1	10.4	10.4	10.4	5.5	5.5	10.4	5.5	6.9	10.4
	Case heater	kW	–	–	–	–	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>									
External dimension HxWxD		mm	1,650 x 920 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 1,220 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 1,220 x 740
		in.	65 x 36-1/4 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 48-1/16 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection			Over-heat protection, Over-current protection		
Refrigerant	Type x original charge		R410A x 6.5 kg (15 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 11.5 kg (26 lbs)
Net weight		kg (lbs)	201 (444)	237 (523)	237 (523)	237 (523)	174 (384)	174 (384)	237 (523)	174 (384)	183 (404)	237 (523)
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed
	Gas pipe	mm (in.)	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G		Outdoor Twinning kit: CMY-Y200VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G		Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT
Y Series - Cooling-only
PUCY-EP YSKA(-BS)



► Specifications

Model			PUCY-EP850YSKA (-BS)	PUCY-EP900YSKA (-BS)	PUCY-EP950YSKA (-BS)	PUCY-EP1000YSKA (-BS)
Power source			3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz
Cooling capacity (Nominal)	*1	kW	96.0	101.5	107.0	113.5
		kcal/h	82,600	87,300	92,000	97,600
	*1	BTU / h	327,600	346,300	365,100	387,300
	Power input	kW	24.80	26.71	28.68	30.51
	Current input	A	41.8-39.7-38.3	45.0-42.8-41.2	48.4-45.9-44.3	51.5-48.9-47.1
	EER	kW / kW	3.87	3.80	3.73	3.72
Cooling capacity	*3	kW	97.6	103.2	108.8	115.4
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Sound pressure level (measured in anechoic room)		dB <A>	64	65	66	66
Refrigerant piping diameter	Liquid pipe	mm (in.)	19.05 (3/4) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed
	Gas pipe	mm (in.)	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed

Set Model

Model			PUCY-P250YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P300YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P300YKA (-BS)	PUCY-P300YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P300YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P350YKA (-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate	m³/min	175	175	175	175	175	175	175	175	175	175	175	175
		L/s	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917
		cfm	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179
	Control, Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1
*2	External static press.		0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)	0 Pa (0 mmH₂O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor			Inverter scroll hermetic compressor			Inverter scroll hermetic compressor			Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	6.9	6.9	10.4	6.9	8.1	10.4	8.1	8.1	10.4	8.1	10.4	10.4
	Case heater	kW	–	–	–	–	–	–	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>											
External dimension HxWxD		mm	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 1,220 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 1,220 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 1,220 x 740	1,650 x 920 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740
		in.	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection			Over-heat protection, Over-current protection			Over-heat protection, Over-current protection			Over-heat protection, Over-current protection		
Refrigerant	Type x original charge		R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)
Net weight		kg (lbs)	183 (404)	183 (404)	237 (523)	183 (404)	201 (444)	237 (523)	201 (444)	201 (444)	237 (523)	201 (444)	237 (523)	237 (523)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed	9.52 (3/8) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed
	Gas pipe	mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH₂O, 6.1mmH₂O).
*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT
Y Series - Cooling-only
PUCY-EP YSKA(-BS)



► Specifications

Model			PUCY-EP1050YSKA (-BS)	PUCY-EP1100YSKA (-BS)	PUCY-P1150YSKA (-BS)	PUCY-P1200YSKA (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz
Cooling capacity (Nominal)	*1	kW	120.0	124.0	128.0	132.0
		kcal/h	103,200	106,600	110,100	113,500
	*1	BTU / h	409,400	423,100	436,700	450,400
	Power input	kW	32.34	34.25	36.15	38.15
	Current input	A	54.5-51.8-49.9	57.8-54.9-52.9	61.0-57.9-55.8	64.4-61.1-58.9
	EER	kW / kW	3.71	3.62	3.54	3.46
Cooling capacity	*3	kW	122.0	126.1	130.1	134.2
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50	P15~P250/2~50	P15~P250/2~50
Sound pressure level (measured in anechoic room)		dB <A>	66	67	67.5	68
Refrigerant piping diameter	Liquid pipe	mm (in.)	19.05 (3/4) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed	19.05 (3/4) Brazed
	Gas pipe	mm (in.)	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed

Set Model

Model			PUCY-P350YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P400YKA (-BS)	PUCY-P350YKA (-BS)	PUCY-P400YKA (-BS)	PUCY-P400YKA (-BS)	PUCY-P400YKA (-BS)	PUCY-P400YKA (-BS)	PUCY-P400YKA (-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate	m^3/min	175	175	175	175	175	175	175	175	175	175	175	175
		L/s	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917
		cfm	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179
	Control, Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1
	*2 External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor			Inverter scroll hermetic compressor			Inverter scroll hermetic compressor			Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	10.4	10.4	10.4	10.4	10.4	10.8	10.4	10.8	10.8	10.8	10.8	10.8
	Case heater	kW	–	–	–	–	–	–	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>											
External dimension HxWxD		mm	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740
		in.	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection			Over-heat protection, Over-current protection			Over-heat protection, Over-current protection			Over-heat protection, Over-current protection		
Refrigerant	Type x original charge		R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)
Net weight		kg (lbs)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed
	Gas pipe	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT
Y Series - Cooling-only
PUCY-P YSKA(-BS)



► Specifications

Model			PUCY-P1250YSKA (-BS)	PUCY-P1300YSKA (-BS)
Power source			3-phase 4-wire 380-400-415V 50/60Hz	3-phase 4-wire 380-400-415V 50/60Hz
Cooling capacity (Nominal)	*1	kW	136.0	140.0
		kcal/h	117,000	120,400
	*1	BTU / h	464,000	477,700
	Power input	kW	41.27	44.82
	Current input	A	69.6-66.1-63.7	75.6-71.8-69.2
	EER	kW / kW	3.29	3.12
Cooling capacity	*3	kW	138.3	142.3
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50
Sound pressure level (measured in anechoic room)		dB <A>	68	68
Refrigerant piping diameter	Liquid pipe	mm (in.)	19.05 (3/4) Brazed	19.05 (3/4) Brazed
	Gas pipe	mm (in.)	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed

Set Model

Model			PUCY-P400YKA (-BS)	PUCY-P400YKA (-BS)	PUCY-P450YKA (-BS)	PUCY-P400YKA (-BS)	PUCY-P450YKA (-BS)	PUCY-P450YKA (-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate	m^3/min	175	175	175	175	175	175
		L/s	2,917	2,917	2,917	2,917	2,917	2,917
		cfm	6,179	6,179	6,179	6,179	6,179	6,179
	Control, Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1
*2	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter-control, Direct-driven by motor			Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	10.8	10.8	12.4	10.8	12.4	12.4
	Case heater	kW	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		
External dimension HxWxD		mm	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740
		in.	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit (COMP/FAN)		Over-heat protection, Over-current protection			Over-heat protection, Over-current protection		
Refrigerant	Type x original charge		R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)
Net weight		kg (lbs)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed
	Gas pipe	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT
Y Series - Cooling-only
PUCY-P YSKA(-BS)



► Specifications

Model			PUCY-P1350YSKA (-BS)	PUCY-P1400YSKA (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity (Nominal)	*1	kW	144.0	152.0
		kcal/h	123,800	130,700
	*1	BTU / h	491,300	518,600
	Power input	kW	48.39	52.59
	Current input	A	81.6-77.6-74.8	88.7-84.3-81.2
	EER	kW / kW	2.97	2.89
Cooling capacity	*3	kW	146.4	154.5
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50
Sound pressure level (measured in anechoic room)		dB <A>	68	68.5
Refrigerant piping diameter	Liquid pipe	mm (in.)	19.05 (3/4) Brazed	19.05 (3/4) Brazed
	Gas pipe	mm (in.)	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed

Set Model

Model			PUCY-P450YKA (-BS)	PUCY-P450YKA (-BS)	PUCY-P450YKA (-BS)	PUCY-P450YKA (-BS)	PUCY-P450YKA (-BS)	PUCY-P500YKA(-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2
	Air flow rate	m^3/min	175	175	175	175	175	320
		L/s	2,917	2,917	2,917	2,917	2,917	5,333
		cfm	6,179	6,179	6,179	6,179	6,179	11,299
	Control, Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 2
*2	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor			Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	12.4	12.4	12.4	12.4	12.4	14.3
	Case heater	kW	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		
External dimension HxWxD		mm	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,220 x 740	1,650 x 1,750 x 740
		in.	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 48-1/16 x 29-3/16	65 x 68-15/16 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit (COMP/FAN)		Over-heat protection, Over-current protection			Over-heat protection, Over-current protection		
Refrigerant	Type x original charge		R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.5 kg (26 lbs)	R410A x 11.8 kg (27 lbs)
Net weight		kg (lbs)	237 (523)	237 (523)	237 (523)	237 (523)	237 (523)	305 (673)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed
	Gas pipe	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT
Y Series - Cooling-only
PUCY-P YSKA(-BS)



► Specifications

Model			PUCY-P1450YSKA (-BS)	PUCY-P1500YSKA (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity (Nominal)	*1	kW	160.0	168.0
		kcal/h	137,600	144,500
	*1	BTU / h	545,900	573,200
	Power input	kW	56.53	60.64
	Current input	A	95.4-90.6-87.3	102.3-97.2-93.7
	EER	kW / kW	2.83	2.77
Cooling capacity	*3	kW	162.7	170.8
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity		P15~P250/2~50	P15~P250/2~50
Sound pressure level (measured in anechoic room)		dB <A>	69.5	70
Refrigerant piping diameter	Liquid pipe	mm (in.)	19.05 (3/4) Brazed	19.05 (3/4) Brazed
	Gas pipe	mm (in.)	41.28 (1-5/8) Brazed	41.28 (1-5/8) Brazed

Set Model

Model			PUCY-P450YKA (-BS)	PUCY-P500YKA (-BS)	PUCY-P500YKA(-BS)	PUCY-P500YKA (-BS)	PUCY-P500YKA (-BS)	PUCY-P500YKA(-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Air flow rate	m^3/min	175	320	320	320	320	320
		L/s	2,917	5,333	5,333	5,333	5,333	5,333
		cfm	6,179	11,299	11,299	11,299	11,299	11,299
	Control, Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.92 x 1	0.92 x 2	0.92 x 2	0.92 x 2	0.92 x 2	0.92 x 2
*2	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor			Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	12.4	14.3	14.3	14.3	14.3	14.3
	Case heater	kW	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		
External dimension HxWxD		mm	1,650 x 1,220 x 740	1,650 x 1,750 x 740	1,650 x 1,750 x 740	1,650 x 1,750 x 740	1,650 x 1,750 x 740	1,650 x 1,750 x 740
		in.	65 x 48-1/16 x 29-3/16	65 x 68-15/16 x 29-3/16	65 x 68-15/16 x 29-3/16	65 x 68-15/16 x 29-3/16	65 x 68-15/16 x 29-3/16	65 x 68-15/16 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit (COMP/FAN)		Over-heat protection, Over-current protection			Over-heat protection, Over-current protection		
Refrigerant	Type x original charge		R410A x 11.5 kg (26 lbs)	R410A x 11.8 kg (27 lbs)	R410A x 11.8 kg (27 lbs)	R410A x 11.8 kg (27 lbs)	R410A x 11.8 kg (27 lbs)	R410A x 11.8 kg (27 lbs)
Net weight		kg (lbs)	237 (523)	305 (673)	305 (673)	305 (673)	305 (673)	305 (673)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed
	Gas pipe	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT Y Series - Cooling-only
Super High COP PUCY-SEP YSKA(-BS)

NEW



► Specifications

Model			PUCY-P150YKA (-BS)	PUCY-SEP300YSKA (-BS)	PUCY-SEP350YSKA (-BS)	PUCY-SEP400YSKA (-BS)	PUCY-SEP650YSKA (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity (Nominal)	*1	kW	16.0	32.0	38.4	44.0	72.0
		kcal / h	15,000	27,500	33,000	37,800	61,900
	*1	BTU / h	54,600	109,200	131,000	150,100	245,700
	Power input	kW	3.39	6.79	8.93	10.37	17.39
	Current input	A	5.7-5.4-5.2	11.4-10.8-10.4	15.0-14.3-13.8	17.5-16.6-16.0	29.3-27.8-26.8
	EER	kW / kW	4.71	4.71	4.30	4.24	4.14
Cooling capacity	*3	kW	16.2	32.5	39.0	44.7	73.1
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity		P15~P250/1~12	P15~P250/1~26	P15~P400/1~30	P15~P500/1~34	P15~P500/1~50
Sound pressure level (measured in anechoic room)		dB <A>	57	60.5	60.5	61	62.5
Refrigerant piping diameter	Liquid pipe	mm (in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed (12.7 (1/2) Brazed, farthest length >= 40 m)	12.7 (1/2) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed
	Gas pipe	mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed

Set Model

Model			PUCY-P150YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P250YKA (-BS)	PUCY-P250YKA (-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate	m^3/min	175	175	175	175	175	175	175	175	175	175
		L/s	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917
		cfm	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179
	Control, Driving mechanism		Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		
	Motor output	kW	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1
*2	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type		Inverter scroll hermetic compressor	MITSUBISHI ELECTRIC Inverter scroll hermetic compressor		MITSUBISHI ELECTRIC Inverter scroll hermetic compressor		MITSUBISHI ELECTRIC Inverter scroll hermetic compressor		MITSUBISHI ELECTRIC Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	4.2	4.2	4.2	4.2	5.5	4.2	6.9	4.2	6.9	6.9
	Case heater	kW	–	–	–	–	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3.0Y 7.8/11 or similar>		Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3.0Y 7.8/11 or similar>		Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3.0Y 7.8/11 or similar>		Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3.0Y 7.8/11 or similar>		
External dimension H x W x D		mm	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740
		in.	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)	High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection	Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		Over-heat protection, Over-current protection		
Refrigerant	Type x original charge		R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 6.5 kg (15 lbs)	R410A x 6.5 kg (15 lbs)
Net weight		kg (lbs)	174 (384)	174 (384)	174 (384)	174 (384)	174 (384)	174 (384)	183 (404)	174 (384)	183 (404)	183 (404)
Heat exchanger			Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	-	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed
	Gas pipe	mm (in.)	-	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed
Optional parts			Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G	Outdoor Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G		Outdoor Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G		Outdoor Twinning kit: CMY-Y100VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G		Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2,CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).

*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)

*Due to continuing improvement, above specification may be subject to change without notice.

OUTDOOR UNIT Y Series - Cooling-only
Super High COP PUCY-SEP YSKA(-BS)

NEW



► Specifications

Model			PUCY-SEP450YSKA (-BS)	PUCY-SEP500YSKA (-BS)	PUCY-SEP550YSKA (-BS)	PUCY-SEP600YSKA (-BS)
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz	3-phase 4-wire 380-400-415 V 50/60 Hz
Cooling capacity (Nominal)	*1	kW	48.0	54.4	60.8	66.4
		kcal / h	41,300	46,800	52,300	57,100
	*1	BTU / h	163,800	185,600	207,400	226,600
	Power input	kW	10.19	12.27	14.50	15.96
	Current input	A	17.2-16.3-15.7	20.7-19.6-18.9	24.4-23.2-22.4	26.9-25.5-24.6
	EER	kW / kW	4.71	4.43	4.19	4.16
Cooling capacity	*3	kW	48.7	55.2	61.7	67.4
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)	15.0~24.0°C (59~75°F)
	Outdoor	D.B.	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)	10.0~52.0°C (50~126°F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model / Quantity		P15~P500/1~39	P15~P500/1~43	P15~P500/1~47	P15~P500/1~50
Sound pressure level (measured in anechoic room)		dB <A>	62	62	62	62.5
Refrigerant piping diameter	Liquid pipe	mm (in.)	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed
	Gas pipe	mm (in.)	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed	28.58 (1-1/8) Brazed

Set Model

Model			PUCY-P150YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P150YKA (-BS)	PUCY-P200YKA (-BS)	PUCY-P250YKA (-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate	m^3/min	175	175	175	175	175	175	175	175	175	175	175	175
		L/s	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917	2,917
		cfm	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179	6,179
	Control, Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1	0.92 x 1
*2	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type		MITSUBISHI ELECTRIC Inverter scroll hermetic compressor			MITSUBISHI ELECTRIC Inverter scroll hermetic compressor			MITSUBISHI ELECTRIC Inverter scroll hermetic compressor			MITSUBISHI ELECTRIC Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	4.2	4.2	4.2	4.2	4.2	5.5	4.2	5.5	5.5	4.2	5.5	6.9
	Case heater	kW	–	–	–	–	–	–	–	–	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3.0Y 7.8/11 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3.0Y 7.8/11 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3.0Y 7.8/11 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3.0Y 7.8/11 or similar>		
External dimension H x W x D		mm	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740	1,650 x 920 x 740
		in.	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16	65 x 36-1/4 x 29-3/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)			High pressure sensor, High pressure switch at 4.15 MPa (601 psi)		
	Inverter circuit (COMP./FAN)		Over-heat protection, Over-current protection			Over-heat protection, Over-current protection			Over-heat protection, Over-current protection			Over-heat protection, Over-current protection		
Refrigerant	Type x original charge		R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 5.5 kg (13 lbs)	R410A x 6.5 kg (15 lbs)
Net weight		kg (lbs)	174 (384)	174 (384)	174 (384)	174 (384)	174 (384)	174 (384)	174 (384)	174 (384)	174 (384)	174 (384)	174 (384)	183 (404)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed
	Gas pipe	mm (in.)	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed	22.2 (7/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2,CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK3 Joint: CMY-Y102SS/LS-G2,CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1 Nominal cooling conditions (subject to JIS B8615-2)

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27°C DB/19°C WB (81°F DB/66°F WB)	35°C DB(95°F DB)	7.5m (24-9/16ft.)	0m (0ft.)

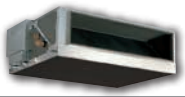
*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*3 Reference data under condition of Indoor: 27°CD.B./19.5°CW.B. (81°FD.B./67°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
*Due to continuing improvement, above specification may be subject to change without notice.



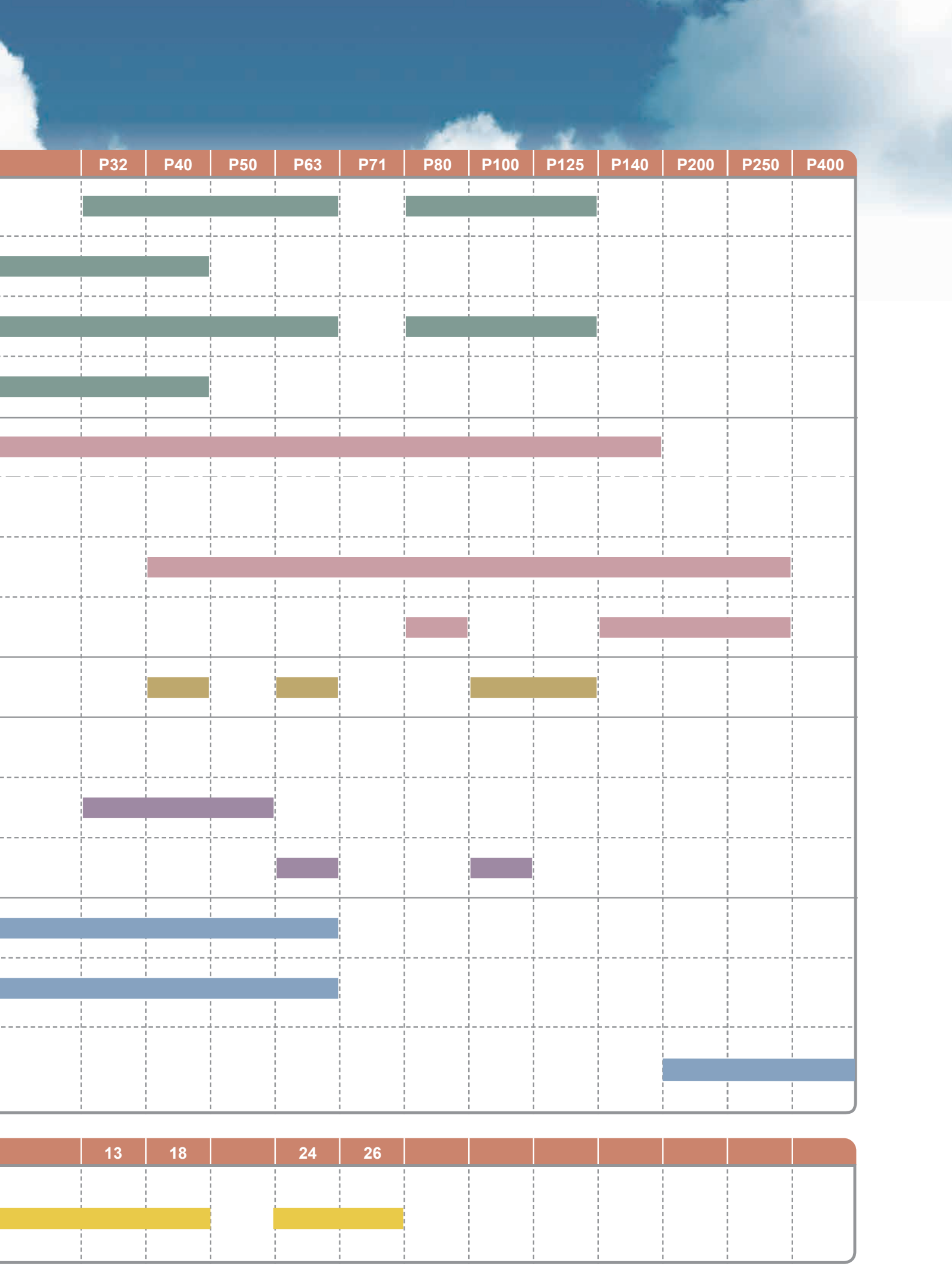
Indoor Unit

- Ceiling cassette type 4-way airflow
- Ceiling cassette type 2-way airflow
- Ceiling cassette type 1-way airflow
- Ceiling concealed type
- Fresh Air Intake type
- Ceiling suspended type
- Wall mounted type
- Wall mounted type Starmex
- Floor standing exposed
- Floor mounted concealed type
- Lossnay

Wide Selection of Indoor Units

Type		Model name	Model	P15	P20	P25
Ceiling Cassette	4-way air flow	PLFY-P VBM-E Page32 - Page33				
		PLFY-P VCM-E2 Page32 - Page33				
	2-way air flow	PLFY-P VLMD-E Page34 - Page35				
	1-way air flow	PMFY-P VBM-E Page36				
Ceiling Concealed		PEFY-P VMA(L)-E				
		PEFY-P VMA3-E Page38 - Page39				
		PEFY-P VMH(S)-E Page40 - Page41				
	Fresh Air Intake	PEFY-P VMH-E-F Page42 - Page43				
Ceiling Suspended		PCFY-P VKM-E Page37				
Wall Mounted		PKFY-P VBM-E Page44 - Page45				
		PKFY-P VHM-E Page44 - Page45				
		PKFY-P VKM-E Page44 - Page45				
Floor Standing/ Floor Mounted Concealed		PFFY-P VLEM-E Page52				
		PFFY-P VLRM-E PFFY-P VLRMM-E Page48 - Page49				
		PFFY-P YM-E PFFY-P YMH-E NEW Page50 - Page51				

Type	Model name	Model	05	07	10
Wall Mounted Starmex	MSY-GE Page46 - Page47				


P32
P40
P50
P63
P71
P80
P100
P125
P140
P200
P250
P400
13
18
24
26

INDOOR UNIT
Ceiling cassette type 4-way airflow
PLFY-P VBM-E i-see Sensor
PLFY-P VCM-E2



PLFY-P VBM

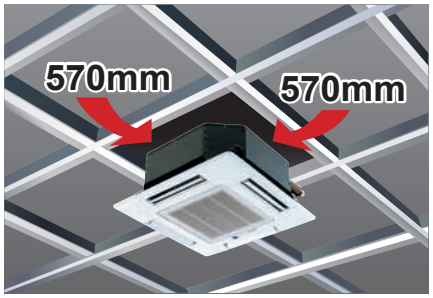


PLFY-P VCM

The new 4-way cassette VBM offers 72 different airflow patterns, making it ideal for applications with ceilings up to 4.2 m (13-13/16ft) in height.



Compact body to match with 2 feets (600mm) x 2 feets (600mm) ceiling design (VCM)



Automatic Air Speed Adjustment

Auto-fan-speed mode enables speedy and comfortable heating during heating startup.

The Auto-fan-speed mode is added to the usual four steps "Low, Mid1, Mid2, High."
The Auto-fan-speed mode enables speedy and comfortable air conditioning because the air flow speeds up when starting, and air flow slows down when the air conditioning becomes stable. (PLFY-P VBM-E ONLY)

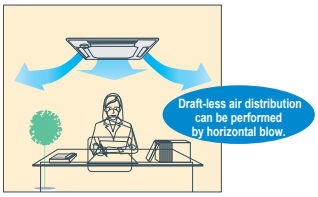
Controls the four fan speed modes automatically

Low → Mid1 → Mid2 → High → Auto

* When using a wireless remote controller, initial settings are required.

Draft-less Air Distribution

The horizontal blow mode* newly employed supplies airflow horizontally not bringing cooled/warmed air directly to occupants thus preventing discomfort sensation due to excessive cooling or direct exposing of occupants to the air blow.
(PLFY-P VBM-E ONLY)



*Default
*The ceiling may be smudged at a spot where the supplied airflow is seriously disturbed.

Wide Air Flow (PLFY-P VBM-E ONLY)

Cooling softly with Wide Air Flow

Discharge air reaches wider area and the fan speed is decreased by 20% thanks to the new wide shape air outlet.



72 patterns of airflow to accommodate any room layout are available.

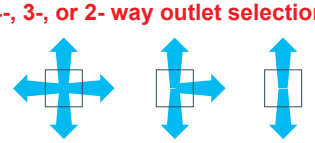
First in the industry
*On the commercial air conditioners (According to the survey by Mitsubishi Electric)

The number of outlet can be set to 4, 3, or 2. Flexible airflow is available by fixing the up-down airflow direction of the outlet with a wired remote controller (or manually).

72 airflow patterns

=

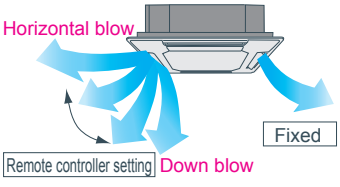
4-, 3-, or 2- way outlet selection*



* Optional parts air outlet shutter plate (PLFY-P VBM-E ONLY) is required for 2 or 3 way outlet selection.

×

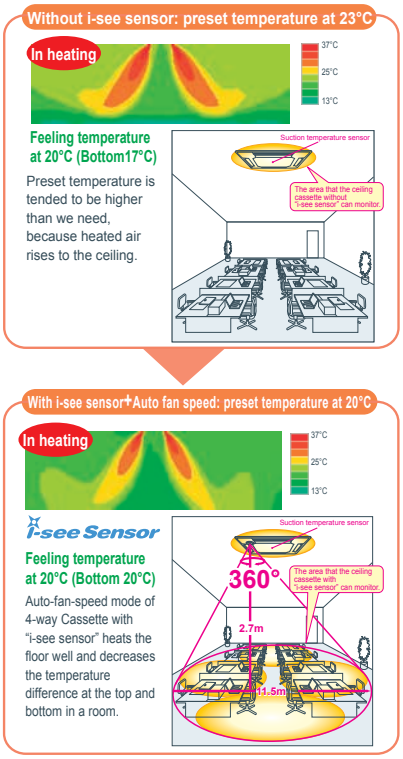
Setting the air direction for each outlet with wired remote controller



"i-see sensor" can be used with ceiling cassette type 4-way airflow unit. (Option PAC-SA1ME-E, PLFY-VBM-E ONLY)

New 4-way Cassette PLFY-VBM controls the temperature difference at the top and bottom in a room by checking the floor temperature with "i-see sensor". Comfortable air conditioning can be realized smoothly with "sensible temperature control." (Option PAC-SA1ME-E, PLFY-VBM-E ONLY)

Prevents overcooling/overheating, and improves comfort/energy-efficiency



▸Specifications

				PLFY-P32VBM-E	PLFY-P40VBM-E	PLFY-P50VBM-E	PLFY-P63VBM-E	PLFY-P80VBM-E	PLFY-P100VBM-E	PLFY-P125VBM-E
Power source				1-phase 220-240V 50Hz / 1-phase 220V 60Hz						
Cooling capacity	*1		kW	3.6	4.5	5.6	7.1	9.0	11.2	14.0
	*1		BTU/h	12,300	15,400	19,100	24,200	30,700	38,200	47,800
Cooling capacity	*4		kW	3.7	4.6	5.7	7.2	9.2	11.4	14.2
Heating capacity	*1		kW	4.0	5.0	6.3	8.0	10.0	12.5	16.0
	*1		BTU/h	13,600	17,100	21,500	27,300	34,100	42,700	54,600
Power consumption		Cooling	kW	0.03	0.04		0.05	0.07	0.15	0.16
		Heating	kW	0.02	0.03		0.04	0.06	0.14	0.15
Current		Cooling	A	0.27	0.29		0.36	0.51	1.00	1.07
		Heating	A	0.20	0.22		0.29	0.43	0.94	1.00
External finish (Munsell No.)		Unit		Galvanized steel sheet						
		Panel		White (6.4Y 8.9/0.4)						
Dimension H x W x D		Unit	mm(in.)	258 x 840 x 840 (10-3/16 x 33-8/1 x 33-8/1)					298 x 840 x 840 (11-3/4 x 33-1/8 x 33-1/8)	
		Panel	mm(in.)	35 x 950 x 950 (1-3/8 x 37-7/16 x 37-7/16)						
Net weight		Unit	kg(lbs.)	22 (49)			23 (51)		27 (60)	
		Panel	kg(lbs.)	6 (13)						
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)						
Fan	Type x Quantity			Turbo fan x 1						
	Airflow rate (Lo-Mid1-Mid2-Hi) *2		m³/min	11-12-13-14	12-13-14-16		14-15-16-18	16-18-20-22	21-24-27-29	22-25-28-30
			L/s	183-200-217-233	200-217-233-267		233-250-267-300	267-300-333-367	350-400-450-483	367-417-467-500
			cfm	388-424-459-494	424-459-494-565		494-530-565-636	565-636-706-777	742-848-953-1024	777-883-989-1059
	External static pressure		Pa	0						
Motor	Type			DC motor						
	Output		kW	0.050					0.120	
Air filter				PP Honeycomb						
Refrigerant pipe diameter	Gas (Flare)		mm(in.)	ø12.7 (ø1/2)		ø12.7 (ø1/2) / ø15.88 (ø5/8) (Compatible)	ø15.88(ø5/8)		ø15.88 (ø5/8) / ø19.05 (ø3/4) (Compatible)	
	Liquid (Flare)		mm(in.)	ø6.35 (ø1/4)		ø6.35 (ø1/4) / ø9.52 (ø3/8) (Compatible)	ø9.52 (ø3/8)			
Field drain pipe diameter			mm(in.)	O.D. 32 (1-1/4)						
Sound pressure level (Lo-Mid1-Mid2-Hi) *2 *3			dB(A)	27-28-29-31	27-28-30-31		28-29-30-32	30-32-35-37	34-37-39-41	35-38-41-43

				PLFY-P15VCM-E2	PLFY-P20VCM-E2	PLFY-P25VCM-E2	PLFY-P32VCM-E2	PLFY-P40VCM-E2
Power source				1-phase 220-240V 50Hz				
Cooling capacity	*1		kW	1.7	2.2	2.8	3.6	4.5
	*1		BTU/h	5,800	7,500	9,600	12,300	15,400
Cooling capacity	*4		kW	1.7	2.2	2.8	3.7	4.6
Heating capacity	*1		kW	1.9	2.5	3,2	4.0	5.0
	*1		BTU/h	6,500	8,500	10,900	13,600	17,100
Power consumption		Cooling	kW	0.04	0.05	0.05	0.06	0.06
		Heating	kW	0.04	0.05	0.05	0.06	0.06
Current		Cooling	A	0.19	0.23	0.23	0.28	0.28
		Heating	A	0.19	0.23	0.23	0.28	0.28
External finish (Munsell No.)		Unit		Galvanized steel sheet with gray heat insulation				
		Panel		White (6.4Y 8.9/0.4)				
Dimension H x W x D		Unit	mm(in.)	208 x 570 x 570 (8-1/4 x 22-1/2 x 22-1/2)				
		Panel	mm(in.)	20 x 650 x 650 (13/16 x 25-5/8 x 25-5/8)				
Net weight		Unit	kg(lbs.)	15.5 (35)			17 (38)	
		Panel	kg(lbs.)	3 (7)			3 (7)	
Heat exchanger				Cross fin (Aluminum fin and copper tube)				
Fan	Type x Quantity			Turbo fan x 1				
	Airflow rate (Lo-Mid-Hi) *2		m³/min	8-8.5-9	8-9-10	8-9-10	8-9-11	8-9-11
			L/s	133-142-150	133-150-167	133-150-167	133-150-183	133-150-183
			cfm	283-300-353	283-318-353	283-318-353	283-318-388	283-318-388
	External static pressure		Pa	0				
Motor	Type			1-phase induction motor				
	Output		kW	0.008	0.011	0.015	0.02	0.02
Air filter				PP Honeycomb fabric (long life type)				
Refrigerant pipe diameter	Gas(Flare)		mm(in.)	ø12.7 (ø1/2)				
	Liquid(Flare)		mm(in.)	ø6.35 (ø1/4)				
Field drain pipe diameter			mm(in.)	O.D. 32 (1-1/4) (PVC pipe VP-25 connectable)				
Sound pressure level (Lo-Mid-Hi) *2 *3			dB(A)	28-30-31	28-31-35	29-31-37	29-33-38	30-34-39

Notes:

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27°C(81°F)DB/19°C(66°F)WB,Outdoor 35°C(95°F)DB
Heating : Indoor 20°C(68°F)DB,Outdoor 7°C(45°F)DB/6°C(43°F)WB

*2 Airflow rate/Sound pressure level are in (low-middle-high) or (low-middle1-middle2-high).

*3 It is measured in anechoic room at power source 230V.

*4 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

INDOOR UNIT
Ceiling cassette type 2-way airflow
PLFY-P VLMD-E

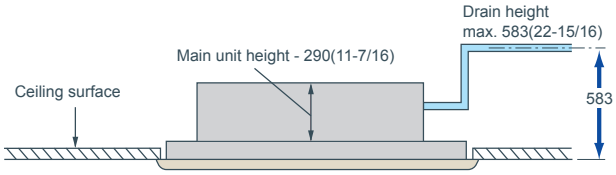


Slim body of 290mm(11-7/16in.) height



Equipped with drain pump mechanism as standard

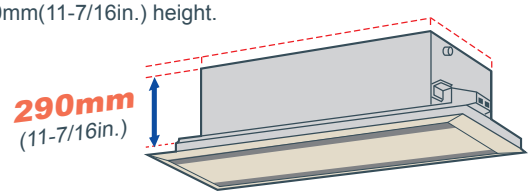
The drain can be positioned anywhere up to 583mm(22-15/16in.) from the ceiling's surface, providing greater freedom with long cross-piping and allowing more versatility with piping layouts.



mm (in.)

Slim body - only 290mm(11-7/16in.) height

The slimline body is highly suitable for installation in narrow ceiling spaces and for replacing obsolete air-conditioning equipment in older buildings. The main unit is only 290mm(11-7/16in.) height.



Terminal block on outside of main unit makes wiring easier

Compact unit and low noise level attained!

Sound pressure level table (Standard static pressure) at 0Pa

dB(A)

	Capacity		P20	P25	P32	P40	P50	P63	P80	P100	P125
Sound pressure Level	Fan Speed	High	33			36	37	39	39	42	46
		Mid	30			33	34	37	36	39	42/44
		Low	27			29	31	32	33	36	40

<220V,240V>

dB(A)

	Capacity		P20	P25	P32	P40	P50	P63	P80	P100	P125
Sound pressure Level	Fan Speed	High	34			37	38	40	40	43	46
		Mid	31			34	35	38	37	41	42/44
		Low	28			30	32	33	34	37	40

<230V>

Fresh air directly taken in

Fresh air can be taken in to the main unit directly (optional accessories needed.)

Long life filter equipped as standard

The antibacterial long life filter does not require maintenance for approximately a year.

Easy installation

Lighter panel and placing the electric board near the panel make installation and maintenance easier. Also, the heat exchanger is washable by displacing the center panel, filter, and fan.

▸Specifications

			PLFY-P20VLMD-E	PLFY-P25VLMD-E	PLFY-P32VLMD-E	PLFY-P40VLMD-E
Power source			1-phase 220-240V 50Hz / 1-phase 220-230V 60Hz			
Cooling capacity	*1	kW	2.2	2.8	3.6	4.5
	*1	BTU/h	7,500	9,600	12,300	15,400
Cooling capacity	*4	kW	2.2	2.8	3.7	4.6
Heating capacity	*1	kW	2.5	3.2	4.0	5.0
	*1	BTU/h	8,500	10,900	13,600	17,100
Power consumption	Cooling	kW	0.072 / 0.075	0.072 / 0.075	0.072 / 0.075	0.081 / 0.085
	Heating	kW	0.065 / 0.069	0.065 / 0.069	0.065 / 0.069	0.074 / 0.079
Current	Cooling	A	0.36 / 0.37	0.36 / 0.37	0.36 / 0.37	0.40 / 0.42
	Heating	A	0.30 / 0.32	0.30 / 0.32	0.30 / 0.32	0.34 / 0.37
External finish (Munsell No.)	Unit		Galvanized steel plate			
	Panel		Pure white (6.4Y 8.9/0.4)			
Dimension H x W x D	Unit	mm (in.)	290 x 776 x 634 (11-7/16 x 30-9/16 x 25)			
	Panel	mm (in.)	20 x 1080 x 710 (13/16 x 42-9/16 x 28)			
Net weight	Unit	kg(lbs.)	23 (51)		24 (53)	
	Panel	kg(lbs.)	6.5 (15)			
Heat exchanger			Cross fin			
Fan	Type x Quantity		Turbo fan x 1			
	Airflow rate *2 (Lo-Mid-Hi)	m³/min	6.5-8.0-9.5			7.0-8.5-10.5
		L/s	108-133-158			117-142-175
		cfm	230-283-335			247-300-371
	External static pressure	Pa	0			
Motor	Type		1-phase induction motor			
	Output	kW	0.015 (at 240V)			
Air filter			PP honeycomb fabric (long life type)			
Refrigerant pipe diameter	Gas(Flare)	mm(in.)	ø12.7 (ø1/2)			
	Liquid(Flare)	mm(in.)	ø6.35 (ø1/4)			
Field drain pipe diameter		mm(in.)	O.D.32 (1-1/4)			
Sound pressure level (Lo-Mid-Hi) *2 *3	220V,240V	dB(A)	27-30-33			29-33-36
	230V	dB(A)	28-31-34			30-34-37

			PLFY-P50VLMD-E	PLFY-P63VLMD-E	PLFY-P80VLMD-E	PLFY-P100VLMD-E	PLFY-P125VLMD-E
Power source			1-phase 220-240V 50Hz / 1-phase 220-230V 60Hz				
Cooling capacity	*1	kW	5.6	7.1	9.0	11.2	14.0
	*1	BTU/h	19,100	24,200	30,700	38,200	47,800
Cooling capacity	*4	kW	5.7	7.2	9.2	11.4	14.2
Heating capacity	*1	kW	6.3	8.0	10.0	12.5	16.0
	*1	BTU/h	21,500	27,300	34,100	42,700	54,600
Power consumption	Cooling	kW	0.082 / 0.086	0.101 / 0.105	0.147 / 0.156	0.157 / 0.186	0.28 / 0.28
	Heating	kW	0.075 / 0.080	0.094 / 0.099	0.140 / 0.150	0.150 / 0.180	0.27 / 0.27
Current	Cooling	A	0.41 / 0.43	0.49 / 0.51	0.72 / 0.74	0.75 / 0.88	1.35 / 1.35
	Heating	A	0.35 / 0.38	0.43 / 0.46	0.66 / 0.69	0.69 / 0.83	1.33 / 1.33
External finish (Munsell No.)	Unit		Galvanized steel plate				
	Panel		Pure white (6.4Y 8.9 / 0.4)				
Dimension H x W x D	Unit	mm (in.)	290 x 946 x 634 (11-7/16 x 37-1/4 x 25)		290 x 1446 x 634 (11-7/16 x 56-15/16 x 25)		290 x 1708 x 606 (11-7/16 x 67-1/4 x 23-7/8)
	Panel	mm (in.)	20 x 1250 x 710 (13/16 x 49-1/4 x 28)		20 x 1750 x 710 (13/16 x 68-15/16 x 28)		20 x 2010 x 710 (13/16 x 79-3/16 x 28)
Net weight	Unit	kg(lbs.)	27 (60)	28 (62)	44 (98)	47 (104)	56 (124)
	Panel	kg(lbs.)	7.5 (17)		12.5 (28)		13.0 (29)
Heat exchanger			Cross fin				
Fan	Type x Quantity		Turbo fan x 1		Turbo fan x 2		Sirocco fan x 4
	Airflow rate *2 (P50~P100:Lo-Mid-Hi)	m³/min	9.0-11.0-12.5	11.0-13.0-15.5	15.5-18.5-22.0	17.5-21.0-25.0	24.0-27.0-30.0-33.0
		L/s	150-183-208	167-217-258	258-308-367	292-350-417	400-450-500-550
	(P125:Lo-Mid2-Mid1-Hi)	cfm	318-388-441	353-459-547	547-653-777	618-742-883	848-953-1,059-1,165
	External static pressure	Pa	0				
Motor	Type		1-phase induction motor				
	Output	kW	0.020 (at 240V)		0.020 (at 240V)	0.030 (at 240V)	0.078 x 2 (at 240V)
Air filter			PP honeycomb fabric (long life type)				Synthetic fiber unwoven cloth filter (long life)
Refrigerant pipe diameter	Gas (Flare)	mm(in.)	ø12.7 (ø1/2)	ø15.88 (ø5/8)			
	Liquid (Flare)	mm(in.)	ø6.35 (ø1/4)	ø9.52 (ø3/8)			
Field drain pipe diameter		mm(in.)	O.D.32 (1-1/4)				
Sound pressure level (Lo-Mid-Hi) *2 *3	220V,240V	dB(A)	31-34-37	32-37-39	33-36-39	36-39-42	40-42-44-46 (Lo-Mid2-Mid1-Hi)
	230V	dB(A)	32-35-38	33-38-40	34-37-40	37-41-43	

Notes:

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27°C(81°F)DB/19°C(66°F)WB,Outdoor 35°C(95°F)DB
Heating : Indoor 20°C(68°F)DB,Outdoor 7°C(45°F)DB/6°C(43°F)WB

*2 Airflow rate/Sound pressure level are in (low-middle-high) or (low-middle2-middle1-high).

*3 It is measured in anechoic room.

*4 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

INDOOR UNIT
Ceiling cassette type 1-way airflow



PMFY-P VBM-E

Compact and lightweight body perfect for limited ceiling space applications.



Compact size for smooth installation and maintenance

Unit body size has been standardized for all models at 812mm for easier installation. Body weight is only 14kg for the main unit and 3kg for the panel, making this unit one of the lightest in the industry.

Quiet operation

Newly developed airflow control technology reduces noise level to only 27dB (P20VBM) for industry-leading quiet performance.

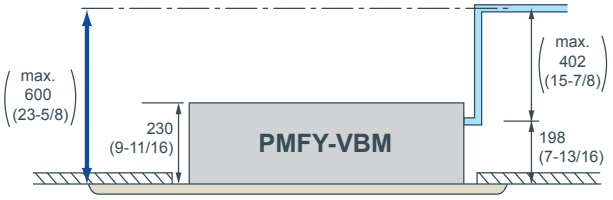
Sound pressure level table

	Capacity		P20	P25	P32	P40
Sound pressure level	Fan Speed	High	35	37		39
		Mid 1	33	36		37
		Mid 2	30	34		35
		Low	27	32		33

<220V,240V>

Drain pump

The drain can be positioned anywhere up to 600mm(23-5/8in.) from the ceiling's surface.



mm (in.)

▸Specifications

			PMFY-P20VBM-E	PMFY-P25VBM-E	PMFY-P32VBM-E	PMFY-P40VBM-E
Power source			1-phase 220-240V 50Hz / 1-phase 220V 60Hz			
Cooling capacity	*1	kW	2.2	2.8	3.6	4.5
	*1	BTU/h	7,500	9,600	12,300	15,400
Cooling capacity	*4	kW	2.2	2.8	3.7	4.6
Heating capacity	*1	kW	2.5	3.2	4.0	5.0
	*1	BTU/h	8,500	10,900	13,600	17,100
Power consumption	Cooling	kW	0.042	0.044		0.054
	Heating	kW	0.042	0.044		0.054
Current	Cooling	A	0.20	0.21		0.26
	Heating	A	0.20	0.21		0.26
External finish (Munsell No.)			White (0.98Y 8.99/0.63)			
Dimension H x W x D	Unit	mm(in.)	230 x 812 x 395 (9-1/16 x 32 x 15-9/16)			
	Panel	mm(in.)	30 x 1000 x 470 (1-3/16 x 39-3/8 x 18-9/16)			
Net weight	Unit	kg(lbs.)	14 (31)			
	Panel	kg(lbs.)	3 (7)			
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)			
Fan	Type		Line flow fan x 1			
	Airflow rate (Lo-Mid2-Mid1-Hi) *2	m^3/min	6.5-7.2-8.0-8.7	7.3-8.0-8.6-9.3		7.7-8.7-9.7-10.7
		L/s	108-120-133-145	122-133-143-155		128-145-162-178
		cfm	230-254-283-307	258-283-304-328		272-307-343-378
	External staticpressure	Pa	0			
Motor	Type		1-phase induction motor			
	Output	kW	0.028			
Air filter			PP Honeycomb fabric			
Refrigerant pipe diameter	Gas(Flare)	mm(in.)	ø12.7 (ø1/2)			
	Liquid(Flare)	mm(in.)	ø6.35 (ø1/4)			
Field drain pipe diameter		mm(in.)	O.D. 26 (1)			
Sound pressure level (Lo-Mid2-Mid1-Hi) *2 *3		dB(A)	27-30-33-35	32-34-36-37		33-35-37-39

Notes:

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor 27°C(81°F)DB/19°C(66°F)WB,Outdoor 35°C(95°F)DB
Heating : Indoor 20°C(68°F)DB,Outdoor 7°C(45°F)DB/6°C(43°F)WB

*2 Airflow rate/Sound pressure level are in (low-middle 2-middle1-high).

*3 It is measured in anechoic room.

*4 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

INDOOR UNIT
Ceiling suspended type

PCFY-P VKM-E



Designed for ultra-quiet operation and easy maintenance, provides exceptionally comfortable air-conditioning.

Extra slim, extra stylish

Sleek and slim with stylishly curved lines, the PCFY series blends right into any interior. It also features a single air outlet which allows the auto vane to act as a shutter when the unit is turned off.

Auto vane distributes air evenly

The auto vane swings up and down automatically to distribute air more evenly to every corner of the room.

Long life filter as standard

Long life filter is equipped as standard enabling up to 2,500 hours of operation (office use) without maintenance.

Keeps airflow at optimum level according to ceiling height

The most suitable airflow can be selected for ceilings up to 4.2m high, enhancing air-conditioning efficiency and comfort. (P100/P125)

	Standard	High ceiling
Ceiling height	3.0(9-13/16)	4.2(13-3/4)

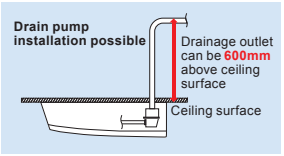
m (ft)

Greatly simplified installation

The direct suspension system eliminates the task of removing the attachment fixture from the main unit, greatly shortening installation time.

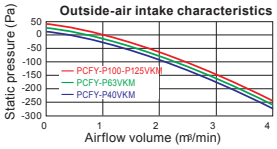
Drain pump option available with all models

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



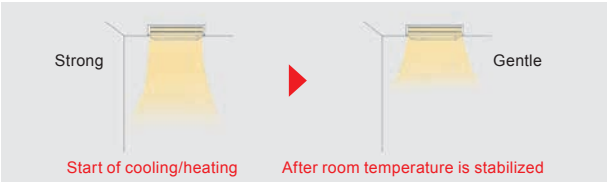
Outside-air intake

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



Equipped with automatic air-speed adjustment

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



▸Specifications

			PCFY-P40VKM-E	PCFY-P63VKM-E	PCFY-P100VKM-E	PCFY-P125VKM-E
Power source			1-phase 220-240V 50Hz / 1-phase 220V 60Hz			
Cooling capacity	*1	kW	4.5	7.1	11.2	14.0
	*1	BTU/h	15,400	24,200	38,200	47,800
Cooling capacity	*4	kW	4.6	7.2	11.4	14.2
Heating capacity	*1	kW	5.0	8.0	12.5	16.0
	*1	BTU/h	17,100	27,300	42,700	54,600
Power consumption	Cooling	kW	0.04	0.05	0.09	0.11
	Heating	kW	0.04	0.05	0.09	0.11
Current	Cooling	A	0.28	0.33	0.65	0.76
	Heating	A	0.28	0.33	0.65	0.76
External finish(Munsell No.)			6.4Y 8.9/ 0.4			
Dimension H x W x D		mm	230 x 960 x 680	230 x 1,280 x 680	230 x 1,600 x 680	
		in.	9-1/16 x 37-13/16 x 26-3/4	9-1/16 x 50-3/8 x 26-3/4	9-1/16 x 63 x 26-3/4	
Net weight		kg(lbs.)	24(53)	32 (71)	36 (79)	38 (84)
Heat exchanger			Cross fin (Aluminum fin and copper tube)			
Fan	Type x Quantity		Sirocco fan x 2	Sirocco fan x 3	Sirocco fan x 4	
	Airflow rate (Lo-Mid2-Mid1-Hi) *2	m³/min	10-11-12-13	14-15-16-18	21-24-26-28	21-24-27-31
		L/s	167-183-200-217	233-250-267-300	350-400-433-467	350-400-450-517
		cfm	353-388-424-459	494-530-565-636	742-847-918-989	742-847-953-1,095
	External static pressure	Pa	0			
Motor	Type		DC motor			
	Output	kW	0.090	0.095	0.160	
Air filter			PP Honeycomb (long life)			
Refrigerant pipe diameter	Gas (Flare)	mm(in.)	ø12.7 (ø1/2)	ø15.88 (ø5/8)	ø15.88 (ø5/8) / ø19.05 (ø3/4) (Compatible)	
	Liquid (Flare)	mm(in.)	ø6.35 (ø1/4)	ø9.52 (ø3/8)		
Field drain pipe diameter		mm(in.)	O.D. 26 (1)			
Sound pressure level (Lo-Mid2-Mid1-Hi) *2 *3		dB(A)	29-32-34-36	31-33-35-37	36-38-41-43	36-39-42-44

Notes:

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling Indoor : 27°C(80.6°F)DB/19°C(66.2°F)WB,Outdoor 35°C(95°F)DB
Heating Indoor : 20°C(68°F)DB,Outdoor 7°C(44.6°F)DB/6°C(42.8°F)WB

*2 Airflw rate/Sound pressure level are shown in (low-middle 2-middle 1-high).
*3 It is measured in anechoic room.
*4 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

INDOOR UNIT
Ceiling Concealed Type



PEFY-P VMA(L)-E
PEFY-P VMA3-E

Middle Static Pressure 35~150Pa

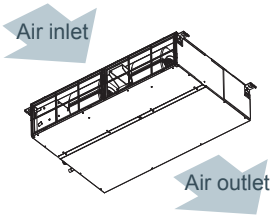
Slim Body Height 250mm

With precise control of indoor temperature while operating with optimum energy usage, it offers a high-energy saving efficiency.

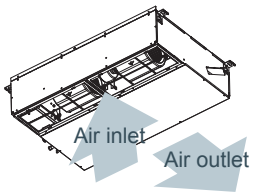


Air Inlet

(1) Rear inlet



(2) Bottom inlet



* The units with bottom inlet make more noise than those with rear inlet. It is recommended that the rear inlet be selected when installing the units in the rooms that should be quiet such as bedrooms.

Compact Indoor Units

For all models, unit height are unified to 250mm. Compared to the previous model, the height size is reduced, allowing installation in tight spaces, such as ceiling cavities or drop-ceilings.



Reduction in height size

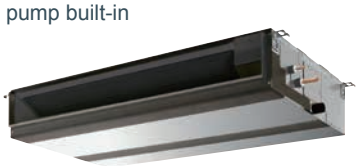
PEFY-P VMA(L)		20	25	32	40	50	63	71	80	100	125	140
Height	mm	250										
Width	mm	700			900		1,100			1,400		1,600
Depth	mm	732										

Drain Pump Option

The line-up consists of two types, models with or without a built-in drain pump allowing more freedom in piping layout design.



PEFY-P VMA-E Drain pump built-in



PEFY-P VMAL-E No Drain pump

* Units with a "L" at the end of the model name are not equipped with a drain pump.

External static pressure

Five-stage external static pressure settings provide flexibility for duct extension, branching and air outlet configuration and are adjustable to meet different application conditions.
Setting ranges to a maximum of 150Pa.

External static pressure setting

Series	20	25	32	40	50	63	71	80	100	125	140
PEFY-P VMA(L)	35/50/70/100/150Pa										

Analogue input

Analogue input allows unit to control the fan speed setting in conjunction with damper condition.

IT terminal

IT terminal is available. For details, contact your local distributor.

▸Specifications

				PEFY-P20VMA(L)-E	PEFY-P25VMA(L)-E	PEFY-P32VMA(L)-E	PEFY-P40VMA(L)-E	PEFY-P50VMA(L)-E	PEFY-P63VMA(L)-E
Power source *1				1-phase 220-230-240V 50 / 60Hz					
Cooling capacity *1			kW	2.2	2.8	3.6	4.5	5.6	7.1
(Nominal) *2			BTU/h	7,500	9,600	12,300	15,400	19,100	24,200
Cooling capacity *7			kW	2.2	2.8	3.7	4.6	5.7	7.2
Heating capacity *2			kW	2.5	3.2	4.0	5.0	6.3	8.0
(Nominal) *3			BTU/h	8,500	10,900	13,600	17,100	21,500	27,300
Power consumption	Cooling *3		kW	0.06 [0.04]	0.06 [0.04]	0.07 [0.05]	0.09 [0.07]	0.11 [0.09]	0.12 [0.10]
	Heating *3		kW	0.04	0.04	0.05	0.07	0.09	0.10
Current	Cooling *3		A	0.53 [0.42]	0.53 [0.42]	0.55 [0.44]	0.64 [0.53]	0.74 [0.63]	1.01 [0.90]
	Heating		A	0.42	0.42	0.44	0.53	0.63	0.90
External finish				Galvanized steel plate					
Dimension H x W x D			mm	250 x 700 x 732	250 x 700 x 732	250 x 700 x 732	250 x 900 x 732	250 x 900 x 732	250 x 1,100 x 732
			in.	9-7/8 x 27-9/16 x 28-7/8	9-7/8 x 27-9/16 x 28-7/8	9-7/8 x 27-9/16 x 28-7/8	9-7/8 x 35-7/16 x 28-7/8	9-7/8 x 35-7/16 x 28-7/8	9-7/8 x 43-5/16 x 28-7/8
Net weight			kg(lbs)	23 (51) [22 (49)]	23 (51) [22 (49)]	23 (51) [22 (49)]	26 (58) [25 (56)]	26 (58) [25 (56)]	32 (71) [31(69)]
Heat exchanger				Cross fin (Aluminum fin and copper tube)					
Fan	Type x Quantity			Sirocco fan x 1					Sirocco fan x 2
	Airflow rate (Low-Mid-High)		m^3/min	6.0 - 7.5 - 8.5	6.0 - 7.5 - 8.5	7.5 - 9.0 - 10.5	10.0 - 12.0 - 14.0	12.0 - 14.5 - 17.0	13.5 - 16.0 - 19.0
			L/s	100 - 125 - 142	100 - 125 - 142	125 - 150 - 175	167 - 200 - 233	200 - 242 - 283	225 - 267 - 317
			cfm	212 - 265 - 300	212 - 265 - 300	265 - 318 - 371	353 - 424 - 494	424 - 512 - 600	477 - 565 - 671
	External static pressure *4		Pa	<20> - <35> - 50 - <70> - <100> - <150>	<20> - <35> - 50 - <70> - <100> - <150>	<20> - <35> - 50 - <70> - <100> - <150>	<20> - <35> - 50 - <70> - <100> - <150>	<20> - <35> - 50 - <70> - <100> - <150>	<20> - <35> - 50 - <70> - <100> - <150>
Motor	Type			DC motor					
	Output		kW	0.085	0.085	0.085	0.085	0.085	0.121
Air filter				PP honeycomb fabric.					
Refrigerant pipe diameter	Liquid (R410A)		mm(in.)	6.35 (1/4) Brazed	6.35 (1/4) Brazed	6.35 (1/4) Brazed	6.35 (1/4) Brazed	6.35 (1/4) Brazed	9.52 (3/8) Brazed
	Gas (R410A)		mm(in.)	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	12.7 (1/2) Brazed	15.88 (5/8) Brazed
Field drain pipe diameter			mm(in.)	O.D.32 (1-1/4)	O.D.32(1-1/4)	O.D.32(1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)
Sound pressure level (measured in anechoic room)									
(Low-Mid-High) *3 *5			dB(A)	26-28-29	26-28-29	28-30-34	28-30-34	28-32-35	29-32-36
*3 *6			dB(A)	23-25-26	23-25-26	23-26-29	23-27-30	25-29-32	25-29-33

				PEFY-P71VMA(L)-E	PEFY-P80VMA(L)-E	PEFY-P100VMA(L)-E	PEFY-P125VMA(L)-E	PEFY-P140VMA(L)-E	PEFY-P20VMA3-E
Power source *1				1-phase 220-230-240V 50 / 60Hz					
Cooling capacity *1			kW	8.0	9.0	11.2	14.0	16.0	2.2
(Nominal) *2			BTU/h	27,300	30,700	38,200	47,800	54,600	7,500
Cooling capacity *7			kW	8.1	9.2	11.4	14.2	16.3	—
Heating capacity *2			kW	9.0	10.0	12.5	16.0	18.0	2.5
(Nominal) *3			BTU/h	30,700	34,100	42,700	54,600	61,400	8,500
Power consumption	Cooling *3		kW	0.14 [0.12]	0.14 [0.12]	0.24 [0.22]	0.34 [0.32]	0.36 [0.34]	0.110
	Heating *3		kW	0.12	0.12	0.22	0.32	0.34	0.090
Current	Cooling *3		A	1.15 [1.04]	1.15 [1.04]	1.47 [1.36]	2.05 [1.94]	2.21 [2.10]	0.90
	Heating		A	1.04	1.04	1.36	1.94	2.10	0.79
External finish				Galvanized steel plate					
Dimension H x W x D			mm	250 x 1,100 x 732	250 x 1,100 x 732	250 x 1,400 x 732	250 x 1,400 x 732	250 x 1,600 x 732	250 x 900 x 732
			in.	9-7/8 x 43-5/16 x 28-7/8	9-7/8 x 43-5/16 x 28-7/8	9-7/8 x 55-1/8 x 28-7/8	9-7/8 x 55-1/8 x 28-7/8	9-7/8 x 63 x 28-7/8	9-7/8 x 35-7/16 x 28-7/8
Net weight			kg(lbs)	32 (71) [31 (69)]	32 (71) [31 (69)]	42 (93) [41 (91)]	42 (93) [41 (91)]	46 (102) [45 (100)]	27(60)
Heat exchanger				Cross fin (Aluminum fin and copper tube)					
Fan	Type x Quantity			Sirocco fan x 2					Sirocco fan x 1
	Airflow rate (Low-Mid-High)		m^3/min	14.5 - 18.0 - 21.0	14.5 - 18.0 - 21.0	23.0 - 28.0 - 33.0	28.0 - 34.0 - 40.0	29.5 - 35.5 - 42.0	12.0 - 14.5 - 17.0
			L/s	242 - 300 - 350	242 - 300 - 350	383 - 467 - 550	467 - 567 - 667	492 - 592 - 700	200 - 242 - 283
			cfm	512 - 636 - 742	512 - 636 - 742	812 - 989 - 1,165	989 - 1,201 - 1,412	1,042 - 1,254 - 1,483	424 - 512 - 600
	External static pressure *4		Pa	<20> - <35> - 50 - <70> - <100> - <150>	<20> - <35> - 50 - <70> - <100> - <150>	<20> - <35> - 50 - <70> - <100> - <150>	<20> - <35> - 50 - <70> - <100> - <150>	<20> - <35> - 50 - <70> - <100> - <150>	<35> - 50 - <70> - <100> - <125>
Motor	Type			DC motor					
	Output		kW	0.121	0.121	0.244	0.244	0.244	0.085
Air filter				PP honeycomb fabric.					
Refrigerant pipe diameter	Liquid (R410A)		mm(in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	6.35 (1/4)Flare
	Gas (R410A)		mm(in.)	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	15.88 (5/8) Brazed	12.7 (1/2)Flare
Field drain pipe diameter			mm(in.)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)
Sound pressure level (measured in anechoic room)									
(Low-Mid-High) *3 *5			dB(A)	30-34-38	30-34-38	32-37-41	35-40-44	36-41-45	30-35-39
*3 *6			dB(A)	26-29-34	26-29-34	28-33-37	32-36-40	33-37-42	—

Notes:

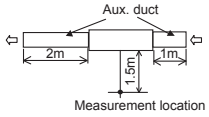
*1 Nominal cooling conditions
Indoor: 27°C(81°F)DB/19°C(66°F)WB, Outdoor: 35°C(95°F)DB
Pipe length: 7.5m(24-9/16ft.), Level difference: 0m(0ft.)

*2 Nominal heating conditions
Indoor: 20°C(68°F)DB, Outdoor: 7°C(45°F)DB/6°C(43°F)WB
Pipe length: 7.5m(24-9/16ft.), Level difference: 0m(0ft.)

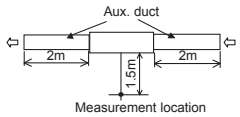
*3 The values are measured at the rated external static pressure.

*4 The rated external static pressure is shown without < >.The factory setting is the rated value.

*5 Measured in anechoic room with a 1m air inlet duct and 2m air outlet duct attached to the unit and 1.5m below the unit.



*6 Measured in anechoic room with a 2m air inlet duct and 2m air outlet duct attached to the unit and 1.5m below the unit.



*7 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

* [ ] is in case of PEFY-P VMAL-E

* When PEFY-P20VMA2-E is connected, the available range of outdoor temperature is between 10°C and 49°C.

INDOOR UNIT
Ceiling concealed type
PEFY-P VMH-E2

NEW

High Static Pressure



Increased design flexibility from sufficient external static pressure allows authentic duct air- conditioning with an elegant interior layout.

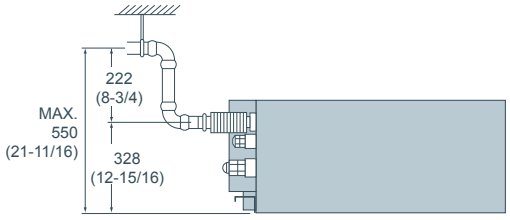


IT terminal

IT terminal is available. For details, contact your local distributor.

Drain pump (option) ensures up to 550mm (21-11/16in.) of lift

The introduction of an upper drain pump allows the drain connection to be raised as high as 550mm(21-11/16in.), allowing more freedom in piping layout design and reducing horizontal piping requirements.



mm (in.)

High static pressure of 200 Pa

The additional external static pressure capacity provides flexibility for duct extension, branching and air outlet configuration.

PEFY-P VMH-E2		P40	P50	P63	P71	P80	P100	P125	P140
External static pressure (Pa)	220V	50/100/200							
	230/240V	100/150/200							

Reduced noise thanks to the use of newly designed centrifugal fan

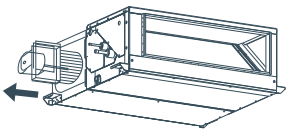
Sound pressure level table (Standard static pressure 220V)

dB(A)

Sound pressure Level	Capacity		P40	P50	P63	P71	P80	P100	P125	P140
	Fan Speed	High	34	34	38	39	41	42	42	42
		Low	27	27	32	32	35	34	34	34

One-side maintenance

All maintenance to the unit, including fan inspection and fan motor removal, can be conducted from the inspection opening on one side.



▸Specifications

				PEFY-P40VMH-E2	PEFY-P50VMH-E2	PEFY-P63VMH-E2	PEFY-P71VMH-E2
Power source				4.5	1-phase 220-240V 50Hz / 1-phase 220-240V 60Hz		
Cooling capacity	*1		kW	15,400	5.6	7.1	8.0
	*1		BTU/h	5.0	19,100	24,200	27,300
Heating capacity	*3		kW	17,100	6.3	8.0	9.0
	*3		BTU/h		21,500	27,300	30,700
Power consumption	*2	Cooling	kW	0.190 / 0.230	0.190/0.230	0.240/0.300	0.260/0.330
		Heating	kW	0.190 / 0.230	0.190/0.230	0.240/0.300	0.260/0.330
Current	*2	Cooling	A	0.88 / 1.06	0.88/1.06	1.12/1.38	1.20/1.51
		Heating	A	0.88 / 1.06	0.88/1.06	1.12/1.38	1.20/1.51
External finish				Galvanized steel plate			
Dimension H x W x D			mm	380 x 745 x 900	380 x 745 x 900	380 x 745 x 900	380 x 1,030 x 900
			in.	15 x 29-3/8 x 35-7/16	15 x 29-3/8 x 35-7/16	15 x 29-3/8 x 35-7/16	15 x 40-9/16 x 35-7/16
Net weight			kg(lbs.)	42 (93)	42 (93)	43 (95)	57 (126)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)			
Fan	Type x Quantity			Sirocco fan x 1			Sirocco fan x 2
	Airflow rate (Lo-Hi)		m^3/min	10.0 - 14.0	10.0 - 14.0	13.5 - 19.0	15.5 - 22.0
			L/s	167 - 233	167 - 233	225 - 317	258 - 367
			cfm	353 - 494	353 - 494	477 - 671	547 - 777
*4	External static pressure	220V	Pa	<50> 100 <200>			
		230,240V	Pa	<100> 150 <200>			
Motor	Type			1-phase induction motor			
	Output		kW	0.130	0.130	0.180	0.230
Air filter (option)				Synthetic fiber unwoven cloth filter (long life filter) and filter box are recommended.			
Refrigerant pipe diameter		Gas	mm(in.)	12.7 (1/2)Brazed	12.7 (1/2)Brazed	15.88 (5/8)Brazed	15.88 (5/8)Brazed
		Liquid	mm(in.)	6.35 (1/4)Brazed	6.35 (1/4)Brazed	9.52 (3/8)Brazed	9.52 (3/8)Brazed
Field drain pipe diameter			mm(in.)	O.D. 32 (1-1/4)			
Sound pressure level (Lo-Hi)	*2	220V	dB(A)	27-34	27-34	32-38	32-39
		230,240V	dB(A)	31-37	31-37	36-41	35-41

Specifications

				PEFY-P80VMH-E2	PEFY-P100VMH-E2	PEFY-P125VMH-E2	PEFY-P140VMH-E2
Power source				1-phase 220-240V 50Hz / 1-phase 220-240V 60Hz			
Cooling capacity	*1		kW	9.0	11.2	14.0	16.0
	*1		BTU/h	30,700	38,200	47,800	54,600
Heating capacity	*3		kW	10.0	12.5	16.0	18.0
	*3		BTU/h	34,100	42,700	54,600	61,400
Power consumption	*2	Cooling	kW	0.320/0.400	0.480/0.580	0.480/0.580	0.480/0.590
		Heating	kW	0.320/0.400	0.480/0.580	0.480/0.580	0.480/0.590
Current	*2	Cooling	A	1.47/1.83	2.34/2.66	2.34/2.66	2.35/2.70
		Heating	A	1.47/1.83	2.34/2.66	2.34/2.66	2.35/2.70
External finish				Galvanized steel plate			
Dimension H x W x D			mm	380 x 1,030 x 900	380 x 1,195 x 900	380 x 1,195 x 900	380 x 1,195 x 900
			in.	15 x 40-9/16 x 35-7/16	15 x 47-1/16 x 35-7/16	15 x 47-1/16 x 35-7/16	15 x 47-1/16 x 35-7/16
Net weight			kg(lbs.)	57 (126)	66 (146)	66 (146)	68 (150)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)			
Fan	Type x Quantity			Sirocco fan x 2			
	Airflow rate (Lo-Hi)		m^3/min	18.0 - 25.0	26.5 - 38.0	26.5 - 38.0	28.0 - 40.0
			L/s	300 - 417	442 - 633	442 - 633	467 - 667
			cfm	636 - 883	936 - 1,342	936 - 1,342	989 - 1,412
	*4 External static pressure	220V	Pa	<50> 100 <200>			
		230,240V	Pa	<100> 150 <200>			
Motor	Type			1-phase induction motor			
	Output		kW	0.230	0.400	0.400	0.400
Air filter (option)				Synthetic fiber unwoven cloth filter (long life filter) and filter box are recommended.			
Refrigerant pipe diameter	Gas		mm(in.)	15.88 (5/8)Brazed	15.88 (5/8)Brazed	15.88 (5/8)Brazed	15.88 (5/8)Brazed
	Liquid		mm(in.)	9.52 (3/8)Brazed	9.52 (3/8)Brazed	9.52 (3/8)Brazed	9.52 (3/8)Brazed
Field drain pipe diameter			mm(in.)	O.D. 32 (1-1/4)			
Sound pressure level (Lo-Hi)	*2	220V	dB(A)	35-41	34-42	34-42	34-42
		230,240V	dB(A)	38-43	38-44	38-44	38-44

				PEFY-P200VMH-E	PEFY-P250VMH-E	PEFY-P200VMHS-E	PEFY-P250VMHS-E
Power source				3-phase 380-415V 50Hz / 3N ~ 380-415V 60Hz		1-phase 220-240V 50Hz / 1-phase 220-240V 60Hz	
Cooling capacity	*1		kW	22.4	28.0	22.4	28.0
	*1		BTU/h	76,400	95,500	76,400	95,500
Cooling capacity	*10		kW	22.8	28.5	22.8	28.5
Heating capacity	*1		kW	25.0	31.5	25.0	31.5
	*1		BTU/h	85,300	107,500	85,300	107,500
Power consumption		Cooling	kW	0.99 / 1.14	1.23 / 1.41	0.63 *7	0.82 *7
		Heating	kW	0.99 / 1.14	1.23 / 1.41	0.63 *7	0.82 *7
Current	Cooling	380-415V	A	1.62 / 1.86	2.00 / 2.30	—	—
		220-230-240V	A	—	—	3.47-3.32-3.18 *7	4.72-4.43-4.14 *7
	Heating	380-415V	A	1.62 / 1.86	2.00 / 2.30	—	—
		220-230-240V	A	—	—	3.47-3.32-3.18 *7	4.72-4.43-4.14 *7
External finish				Galvanized		Galvanized steel plate	
Dimension H x W x D			mm	470 x 1,250 x 1,120		470 x 1,250 x 1,120	
			in.	18-9/16 x 49-1/4 x 44-1/8		18-9/16 x 49-1/4 x 44-1/8	
Net weight			kg(lbs.)	100 (221)		97 (214)	100 (221)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)		Cross fin (Aluminum plate fin and copper tube)	
Fan	Type x Quantity			Sirocco fan x 2		Sirocco fan x 2	
	Airflow rate		m^3/min	58.0	72.0	—	—
			L/s	967	1200	—	—
			cfm	2048	2543	—	—
		Lo-Mid-Hi	m^3/min	—	—	50.0-61.0-72.0	58.0-71.0-84.0
			L/s	—	—	833-1017-1200	967-1183-1400
			cfm	—	—	1766-2154-2542	2048-2507-2966
	External static pressure	380V	Pa	110 · 220 *4		—	
		400,415V	Pa	130 · 260 *4		—	
			Pa	—		<50>-<100>-150-<200>-<250> *8	
			mmH_2O	—		<5.1>-<10.2>-15.3-<20.4>-<25.5> *8	
Motor	Type			3-phase induction motor		DC motor	
	Output		kW	0.76 *5	1.08 *5	0.87	0.87
Air filter(option)				Synthethic fiber unwoven cloth filter (long life)		Synthethic fiber unwoven cloth filter (long life filter) and filter box are recommended.	
Refrigerant pipe diameter	Gas (Brazing)		mm(in.)	ø19.05 (ø3/4)	ø22.2 (ø7/8)	ø19.05 (ø3/4)	ø22.2 (ø7/8)
	Liquid (Brazing)		mm(in.)	ø9.52 (ø3/8)		ø9.52 (ø3/8)	
Field drain pipe diameter			mm(in.)	O.D. 32 (1-1/4)		O.D. 32 (1-1/4)	
Sound pressure level	380V		dB(A)	42 (110Pa) / 45 (220Pa) *6	50 (110Pa) / 52 (220Pa) *6	—	—
	400,415V		dB(A)	44 (130Pa) / 47 (260Pa) *6	52 (130Pa) / 54 (260Pa) *6	—	—
	Lo-Mid-Hi		dB(A)	—	—	36-39-43 *9	39-42-46 *9

Notes:

*1 Cooling/heating capacity indicates the maximum value at operation under the following condition.
Cooling Indoor : 27°C(81°F)DB/19°C(66°F)WB, Outdoor : 35°C(95°F)DB
Heating Indoor : 20°C(68°F)DB, Outdoor : 7°C(45°F)DB/6°C(43°F)WB
*2 The external static pressure is set to 100Pa (at 220V) /150Pa (at 230, 240V) at factory shipment.
*3 The value are that at 240V.
*4 The external static pressure is set to 220Pa (at 380V) /260Pa (at 400, 415V) at factory shipment.
*5 The value are that at 415V.
*6 It is measured in anechoic room.
*7 The values are measured at the rated external static pressure.
*8 The rated external static pressure is shown without < >.
The factory setting is the rated value.
*9 It is measured at the rated external static pressure in anechoic room.
*10 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

INDOOR UNIT
Fresh Air Intake Type



PEFY-P VMH-E-F

Fresh Air Intake

Fresh Air can be taken in with temperature control.
Ideal for Offices, Stores and Restaurants.





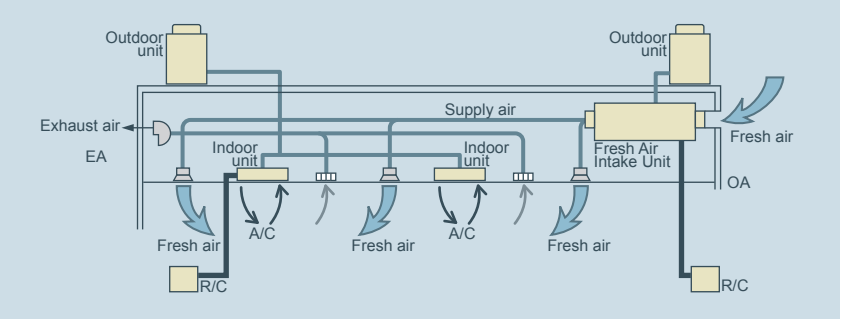
The Fresh Air intake indoor unit can be installed in any place.

Fresh Air can be taken in with temperature control.
Outside air will be cooled down or heated up to supply it to the room, and this reduces the air conditioning load in a room.
High-capacity humidifier will keep room air moist and comfortable during heating.
*Supply air temperature control cannot be used.

Office, Lobby, Workshop, Restroom, Nursing home, Smoking corner, Kitchen in restaurant

*** Limits of capacity connectable to outdoor unit**
Max. 110% of outdoor unit capacity, excepting heating at outdoor temperature of less than -5°C(23°F) (100%).

Example



< Note>
Fan remains in operation during Thermo-OFF. Using this model with other type of indoor unit is recommended to prevent cold draft which is caused due to intaken fresh air.

▸Specifications

				PEFY-P80VMH-E-F	PEFY-P140VMH-E-F
Power source				1-phase 220-240V 50Hz / 1-phase 208-230V 60Hz	
Cooling capacity		*1	kW	9.0	16.0
		*1	BTU/h	30,700	54,600
Heating capacity		*1	kW	8.5	15.1
		*1	BTU/h	29,000	51,500
Power consumption	Cooling		kW	0.16 / 0.21	0.29 / 0.33
	Heating		kW	0.16 / 0.21	0.29 / 0.33
Current	Cooling		A	0.67 / 0.91	1.24 / 1.48
	Heating		A	0.67 / 0.91	1.24 / 1.48
External finish				Galvanized	
Dimension H x W x D			mm(in.)	380 x 1000 x 900 (15 x 39-3/8 x 35-7/16)	380 x 1200 x 900 (15 x 47-1/4 x 35-7/16)
Net weight			kg(lbs.)	50 (111)	67 (148)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)	
Fan	Type x Quantity			Sirocco fan x 1	Sirocco fan x 2
	Airflow rate		m^3/min	9.0	18.0
			L/s	150	300
			cfm	318	636
	External static pressure (Lo-Mid-Hi)	208V	Pa	35 - 85 - 170	35 - 85 - 170
		220V	Pa	40 - 115 - 190	50 - 115 - 190
		230V	Pa	50 - 130 - 210	60 - 130 - 220
		240V	Pa	80 - 170 - 220	100 - 170 - 240
Motor	Type			1-phase induction motor	
	Output		kW	0.09 (at 220V)	0.14 (at 220V)
Air filter (option)				Synthetic fiber unwoven cloth filter (long life)	
Refrigerant pipe diameter	Gas (Flare)		mm(in.)	ø15.88 (ø5/8)	
	Liquid (Flare)		mm(in.)	ø9.52 (ø3/8)	
Field drain pipe diameter			mm(in.)	O.D.32 (1-1/4)	
Sound pressure level (Lo-Mid-Hi) *2	208, 220V		dB(A)	27 - 38 - 43	28 - 38 - 43
	230, 240V		dB(A)	33 - 43 - 45	34 - 43 - 45

				PEFY-P200VMH-E-F	PEFY-P250 VMH-E-F
Power source				3-phase 380-415V 50Hz / 3N~ 380-415V 60Hz	
Cooling capacity			kW	22.4	28.0
			BTU/h	76,400	95,500
Heating capacity			kW	21.2	26.5
			BTU/h	72,300	90,400
Power consumption	Cooling		kW	0.34 / 0.42	0.39 / 0.50
	Heating		kW	0.34 / 0.42	0.39 / 0.50
Current	Cooling		A	0.58 / 0.74	0.68 / 0.86
	Heating		A	0.58 / 0.74	0.68 / 0.86
External finish				Galvanized	
Dimension H x W x D			mm(in.)	470 x 1250 x 1120 (18-9/16 x 49-1/4 x 44-1/8)	
Net weight			kg(lbs.)	100 (221)	
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)	
Fan	Type x Quantity			Sirocco fan x 2	
	Airflow rate		m^3/min	28	35
			L/s	467	583
			cfm	989	1236
	External static pressure	380V	Pa	140 / 200	110 / 190
		400V	Pa	150 / 210	120 / 200
		415V	Pa	160 / 220	130 / 210
Motor	Type			3-phase induction motor	
	Output		kW	0.20	0.23
Air filter (option)				Synthetic fiber unwoven cloth filter (long life type)	
Refrigerant pipe diameter	Gas (Flare)		mm(in.)	ø19.05 (ø3/4)	ø22.2 (ø7/8)
	Liquid (Flare)		mm(in.)	ø9.52 (ø3/8)	
Field drain pipe diameter			mm(in.)	O.D.32 (1-1/4)	
Sound pressure level *2	380V		dB(A)	39 / 42	40 / 44
	400V		dB(A)	40 / 43	40 / 45
	415V		dB(A)	40 / 44	41 / 46

Notes:

1. The cooling and heating capacites are the maximum capacites that were obitained by operating in the above air conditions and with a refrigerant pipe of about 7.5m.
2. The actual capacity characteristics vary with the combination of indoor and outdoor units. See the technical infomation.
3. The operating noise is the data that was obitained by measuring it 1.5m from the the bottom of the unit in an anechoic room. (Noise meter A-scale value)
4. The figure of Electrical characteristic indicates at 240V 50Hz/230V60Hz (PEFY-P80, 140VHM-E-F type), at 220Pa setting at 415V (PEFY-P200, 250VMH-E-F type).
5. When the 100% fresh air indoor units are connected, the maximum connectable indoor units to 1 outdoor unit are as follows

Heat pump models	Cooling only
110%(100% in case of heating below-5°C(23°F))	110%

6. Operational temp range is (Cooling : from 21°C(70°F)DB/15.5°C(60°F)WB to 43°C(109°F)DB/35°C(95°F)WB
   Heating : from -10°C(14°F)DB to 20°C(68°F)DB)
   * Thermo off(Fan) operation automatically starts either when temperature is lower than 21°C(70°F)DB in cooling mode or when the temperature exceeds 20°C(68°F)DB in heating mode.
7. As the room temp in sensed by the thermo in the remote controller or the one in the room, be sure to use either remote controller or room thermo.
8. Autochangeover function or Dry mode is NOT available. Fan mode operation during the thermo off in Cooling/Heating mode.
9. In any case, the air flow rate should be kept lower than 110% of the above chart. Please see "Fan curves" for the details.
10. When this unit is used as sole A/C system, be careful about the dew in air outlet grilles in cooling mode.
11. Un-conditioned outdoor air such as humid air or cold air blows to the indoor during thermo off operation.
    Please be careful when positioning indoor unit air outlet grilles, ie take the necessary precautions for cold air, and also insulate rooms for dew condensation prevention as required.
12. Air filter must be installed in the air intake side. The filter should be attached where easy maintenance in possible in case of usage of fild supply filters.
13. Long life cannot be used with Hi-efficiency filter together (PEFY-P80 · 140VMH-E-F type).

INDOOR UNIT
Wall mounted type

PKFY-P VBM-E
PKFY-P VHM-E
PKFY-P VKM-E


PKFY-P VBM


PKFY-P VHM


PKFY-P VKM

Elegant Design and Compact Dimensions Ideal for Offices, Stores and Residential Uses.



Capacity range

Capacity	P15	P20	P25	P32	P40	P50	P63	P100
VBM*	●	●	●					
VHM				●	●	●		
VKM							●	●

*External LEV box (optional) is recommended for hotels, hospitals or dormitories where the background noise is low.

4-way piping provides more flexibility in selecting installation sites

All piping including drainage can be connected from the rear, right, base, and left of the unit, providing much greater flexibility in piping and selecting installation site.

Flat panel & Pure white finish

All models have changed from the grill design, adopting the flat panel layout.
Pursuing a design that harmonizes with virtually any interior, the unit color has been changed from white to pure white.



Built-in signal receiver

PKFY-P VBM features

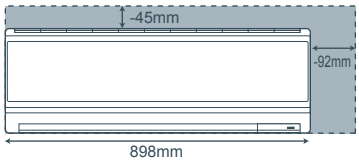
Compact profile

Quiet operation

PKFY-P VHM features

Compact size of 898mm

Width size reduced to match small size buildings and offices.



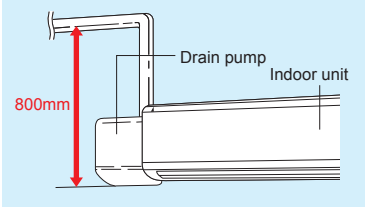
Comparison with PKFY-P VGM-E

Light unit

Approx. 3kg reduced from conventional model (P32-50). Easier installation.

Drain pump (option)

The optional drain pump allows the drain connection to be raised as high as 800mm, allowing more freedom in piping layout design.



▸Specifications

				PKFY-P15VBM-E	PKFY-P20VBM-E	PKFY-P25VBM-E	PKFY-P32VHM-E	PKFY-P40VHM-E	PKFY-P50VHM-E
Power source				1-phase 220-240V 50Hz / 1-phase 220V 60Hz					
Cooling capacity		*1	kW	1.7	2.2	2.8	3.6	4.5	5.6
		*1	BTU/h	5,800	7,500	9,600	12,300	15,400	19,100
Cooling capacity		*5	kW	1.7	2.2	2.8	3.7	4.6	5.7
Heating capacity		*1	kW	1.9	2.5	3.2	4.0	5.0	6.3
		*1	BTU/h	6,500	8,500	10,900	13,600	17,100	21,500
Power consumption	Cooling	*4	kW	0.04			0.04		
	Heating		kW	0.04			0.03		
Current	Cooling	*4	A	0.20			0.40		
	Heating		A	0.20			0.30		
External finish(Munsell No.)				Plastic (1.0Y 9.2/0.2)			Plastic (1.0Y 9.2/0.2)		
Dimension H x W x D			mm(in.)	295 x 815 x 225 (11-5/8 x 32-1/8 x 8-7/8)			295 x 898 x 249(11-5/8 x 35-3/8 x 9-13/16)		
Net weight			kg(lbs.)	10 (23)			13(29)		
Heat exchanger				Cross fin (Aluminum fin and copper tube)					
Fan	Type x Quantity			Line flow fan x 1					
	Airflow rate (Lo-Mid2-Mid1-Hi)	*2	m^3/min	4.9-5.0-5.2-5.3	4.9-5.2-5.6-5.9		9-10-11	9-10.5-11.5	9-10.5-12
			L/s	82-83-87-88	82-87-93-98		150-167-183	150-175-192	150-175-200
			cfm	173-177-184-187	173-184-198-208		318-353-388	318-371-406	318-371-424
	External static pressure		Pa	0					
Motor	Type			1-phase induction motor			DC motor		
	Output		kW	0.017			0.030		
Air filter				PP Honeycomb					
Refrigerant pipe diameter	Gas (Flare)		mm(in.)	ø12.7 (ø1/2)					ø12.7 (ø1/2) / ø15.88 (ø5/8) (Compatible)
	Liquid (Flare)		mm(in.)	ø6.35 (ø1/4)					ø6.35 (ø1/4) / ø9.52 (ø3/8) (Compatible)
Field drain pipe diameter			mm(in.)	I.D.16 (5/8)					
Sound pressure level (Lo-Mid2-Mid1-Hi)		*2 *3	dB(A)	29-31-32-33	29-31-34-36		34-37-41	34-38-41	34-39-43

Notes:

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling Indoor : 27°C(81°F)DB/19°C(66°F)WB,Outdoor 35°C(95°F)DB
Heating Indoor : 20°C(68°F)DB,Outdoor 7°C(45°F)DB/6°C(43°F)WB

*2 Airflow rate/Sound pressure level are in (low-middle2-middle1-high).

*3 It is measured in anechoic room.

*4 Electrical characteristic of cooling are included optional drain-pump.

*5 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

				PKFY-P63VKM-E	PKFY-P100VKM-E
Power source				1-phase 220-230-240V 50Hz / 1-phase 220V 60Hz	
Cooling capacity		*1	kW	7.1	11.2
		*1	BTU/h	24,200	38,200
Cooling capacity		*5	kW	7.2	11.4
Heating capacity		*1	kW	8.0	12.5
		*1	BTU/h	27,300	42,600
Power consumption	Cooling	*4	kW	0.05	0.08
	Heating		kW	0.04	0.07
Current	Cooling	*4	A	0.37	0.58
	Heating		A	0.30	0.51
External finish(Munsell No.)				Plastic (1.0Y 9.2/0.2)	
Dimension H x W x D			mm(in.)	365 x 1,170 x 295 (14-3/8 x 46-1/16 x 11-5/8)	
Net weight			kg(lbs.)	21 (46)	
Heat exchanger				Cross fin (Aluminum fin and copper tube)	
Fan	Type x Quantity			Line flow fan x 1	
	Airflow rate (Lo-Hi)	*2	m^3/min	16-20	20-26
			L/s	267-333	333-433
			cfm	565-706	706-918
	External static pressure		Pa	0	
Motor	Type			DC motor	
	Output		kW	0.056	
Air filter				PP Honeycomb	
Refrigerant pipe diameter	Gas (Flare)		mm(in.)	ø15.88 (ø5/8)	ø15.88 (ø5/8) / ø19.05 (ø3/4) (Compatible)
	Liquid (Flare)		mm(in.)	ø9.52 (ø3/8)	
Field drain pipe diameter			mm(in.)	I.D. 16(5/8)	
Sound pressure level (Lo-Hi)		*2 *3	dB(A)	39-45	41-49

Notes:

*1 Cooling/heating capacity indicates the maximum value at operation under the following condition.
Cooling Indoor : 27°C(81°F)DB/19°C(66°F)WB, Outdoor : 35°C(95°F)DB
Heating Indoor : 20°C(68°F)DB, Outdoor : 7°C(45°F)DB/6°C(43°F)WB

*2 Airflow rate/Sound pressure level are in (low-high).

*3 It is measured in anechoic room.

*4 Electrical characteristic of cooling are included optional drain-pump.

*5 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

STARMEX INDOOR UNIT
Wall mounted type

MSY-GE SERIES

Starmex Indoor Units with LEV kit / Branch Box for residential uses.



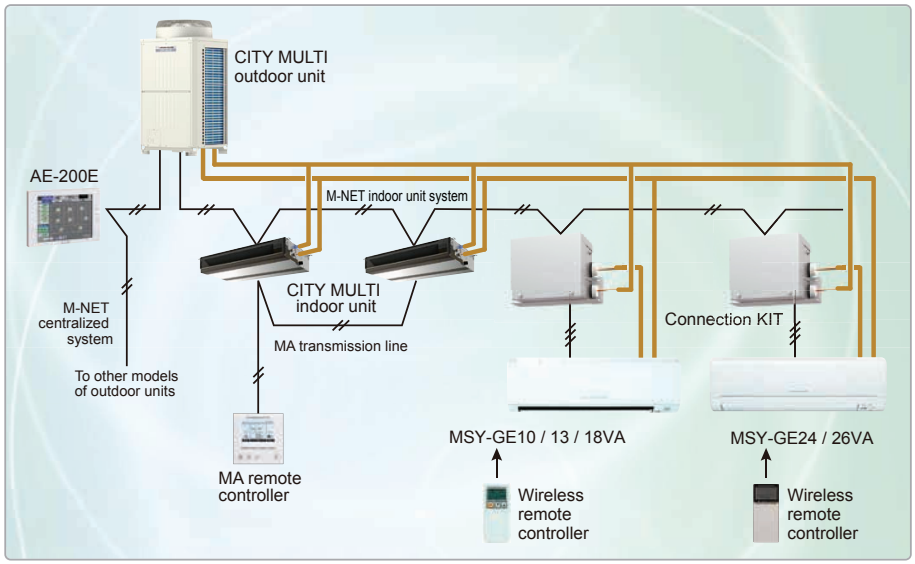
MSY-GE10VA / 13VA / 18VA



MSY-GE24VA /26VA

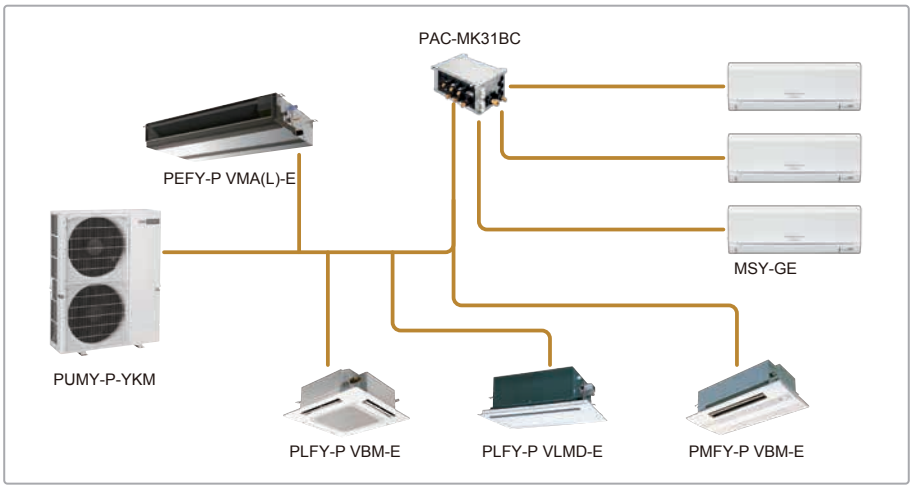


System Structure



*Refer to the relevant manuals for detailed information and restrictions.

System Structure



▸Specifications

			MSY-GE10VA	MSY-GE13VA	MSY-GE18VA	MSY-GE24VA	MSY-GE26VA
Cooling capacity *1		kW	2.5	3.5	5.0	6.0	7.1
		BTU/h	8,500	11,900	17,000	20,500	24,200
Power Consumption	Cooling	kW	0.020	0.029	0.043	0.065	
Current	Cooling	A	0.22	0.29	0.39	0.55	
Dimension H x W x D		mm	295 x 798 x 232			325 x 1100 x 238	
Net weight		kg	10			16	
Fan	Airflow Rate *2 (Quiet, Low, Med, High, Superhigh)	m^3/min	4.2-4.9-6.7-8.9-11.4	4.2-4.9-6.7-9.2-12.8	6.5-7.8-9.6-11.8-15.1	9.7-11.5-13.3-15.4-17.9-20.7	
		L/s	70-82-112-148-190	70-82-112-153-213	108-130-160-197-252	162-192-222-257-298-345	
		cfm	148-173-237-314-403	148-173-237-325-452	230-275-339-417-533	343-406-470-544-632-731	
	External Static Rate	Pa	Free Blow				
Motor	Type		Horizontal Vane Motor			Vertical Vane Motor	
	Output		12VDC				
Refrigerant Pipe Diameter	Gas (Flare)	mm	9.52		12.7	15.88	
	Liquid(Flare)	mm	6.35		6.35	9.52	
Sound Pressure Level (Quiet, Low, Med, High, Superhigh *2 *3		dB(A)	19-21-29-36-40	19-22-30-36-45	28-33-38-44	30-37-41-45-49	

Notes:
*1 Test conditions are based on ISO 5151 (measure under rated operating frequency)
Cooling : Indoor Dry-bulb temperature 27°C Wet-bulb temperature 19°C
Outdoor Dry-bulb temperature 35°C Wet-bulb temperature 24°C

*2 Airflow rate / Sound pressure level are in (Quiet, Low, Med, High, Superhigh)

*3 Measured in anechoic room.



CITI MULTI Connection KIT PAC-LV11M-J
Feature
- Connection between CITY MULTI Y-series / S-series and RAC
- Wider indoor unit selection options

- Can be installed vertically and horizontally
- Maximum distance of 15m between Connection KIT and rac Indoor unit.
- No need for drain pipe.

▸Specifications

MODEL			PAC-LV11M-J
Power Source			Single / 220-240V / 50Hz
Connectable Number of Indoor Unit			1
External Finish			Galvanized steel Sheet (No external finish)
External Dimension (HxWxD)		mm	183 x 355 x 142
Net Weight		kg	3.5
Refrigerant Piping Diameter	Liquid Pipe	mm	6.35 Brazed
	Gas Pipe	mm	-
Wiring	To Outdoor Unit		2-core shield cable



PAC-MK31 BC



PAC-MK51 BC

▸Specifications

MODEL			PAC-MK31 BC	PAC-MK51 BC
Power Supply (from outdoor unit)			Single / 220/230/240V / 50Hz	
Connectable Number of Indoor Unit			3	5
External Finish			Galvanized sheets	
External Dimension (H x W x D)		mm	170 x 450 x 280	
Net Weight		kg	6.7	7.4
Refrigerant Piping Diameter (outdoor side)	Liquid Pipe	mm	Φ9.52	
	Gas Pipe	mm	Φ15.88	

* Please refer to Service Handbook for detailed specification.

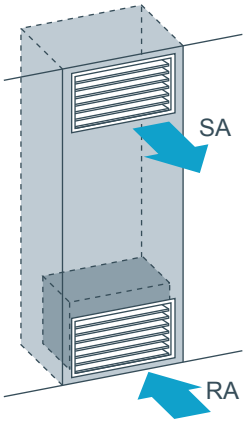
INDOOR UNIT
Floor mounted concealed type

PFFY-P VLRM-E
PFFY-P VLRMM-E



Easily installable floor-standing concealed unit for perimeter zone





installation image (PFFY-P VLRMM-E)

Compact unit for easy air conditioning in perimeter zones.

The unit is designed for applications requiring a built-in, concealed, floor-standing unit.

Installation flexibility

The unit can be field-converted from top discharge to front discharge to increase installation flexibility.

Maximum external static pressure 60Pa (VLRMM model)

The additional external static pressure capacity provides flexibility for duct extension, branching, and air outlet configuration.

▸Specifications

				PFFY-P20VLRM-E	PFFY-P25VLRM-E	PFFY-P32VLRM-E	PFFY-P40VLRM-E	PFFY-P50VLRM-E	PFFY-P63VLRM-E
Power source				1-phase 220-240V 50Hz / 1-phase 208-230V 60Hz					
Cooling capacity		*1	kW	2.2	2.8	3.6	4.5	5.6	7.1
		*1	BTU/h	7,500	9,600	12,300	15,400	19,100	24,200
Cooling capacity		*5	kW	2.2	2.8	3.7	4.6	5.7	7.2
Heating capacity		*1	kW	2.5	3.2	4.0	5.0	6.3	8.0
		*1	BTU/h	8,500	10,900	13,600	17,100	21,500	27,300
Power consumption	Cooling		kW	0.04 / 0.06		0.06 / 0.07	0.065 / 0.075	0.085 / 0.09	0.1 / 0.11
	Heating		kW	0.04 / 0.06		0.06 / 0.07	0.065 / 0.075	0.085 / 0.09	0.1 / 0.11
Current	Cooling		A	0.19 / 0.25		0.29 / 0.30	0.32 / 0.33	0.40 / 0.41	0.46 / 0.47
	Heating		A	0.19 / 0.25		0.29 / 0.30	0.32 / 0.33	0.40 / 0.41	0.46 / 0.47
External finish(Munsell No.)				Galvanized steel plate					
Dimension H x W x D			mm	639 x 886 x 220		639 x 1,006 x 220		639 x 1,246 x 220	
			in.	25-3/16 x 34-15/16 x 8-11/16		25-3/16 x 39-5/8 x 8-11/16		25-3/16 x 49-1/16 x 8-11/16	
Net weight			kg(lbs.)	22 (49)		24 (53)	25 (56)	29 (64)	30 (67)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)					
Fan	Type x Quantity			Sirocco fan x 1		Sirocco fan x 2			
	Airflow rate (Lo-Hi)	*2	m^3/min	5.5-6.5		7.0-9.0	9.0-11.0	12.0-14.0	12.0-15.5
			L/s	92-108		117-150	150-183	200-233	200-258
			cfm	194-230		247-318	318-388	424-494	424-547
	External static pressure		Pa	0					
Motor	Type			1-phase induction motor					
	Output		kW	0.015		0.018	0.030	0.035	0.050
Air filter				PP Honeycomb fabric (washable)					
Refrigerant pipe diameter	Gas (Flare)		mm(in.)	ø12.7 (ø1/2)					ø15.88 (ø5/8)
	Liquid (Flare)		mm(in.)	ø6.35 (ø1/4)					ø9.52 (ø3/8)
Field drain pipe diameter			mm(in.)	I.D.26 (1) <Accessory hose O.D.27 (1-3/32) (top end :20 (13/16))>					
Sound pressure level (Lo-Hi)		*2 *3 *4	dB(A)	34-40		35-40	38-43		40-46

Notes:

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling Indoor : 27°C(81°F)DB/19°C(66°F)WB, Outdoor 35°C(95°F)DB
Heating Indoor : 20°C(68°F)DB, Outdoor 7°C(45°F)DB/6°C(43°F)WB

*2 Air flow rate/Sound pressure level are in (Low-High)

*3 Measured point : 1m x 1m, Power supply : AC240V/50Hz
· 1dB(A) lower at AC230V/50Hz · 2dB(A) lower at AC220V/50Hz · 3dB(A) lower at 1.5m x 1.5m point

*4 It is measured in anechoic room.

*5 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

				PFFY-P20VLRMM-E	PFFY-P25VLRMM-E	PFFY-P32VLRMM-E	PFFY-P40VLRMM-E	PFFY-P50VLRMM-E	PFFY-P63VLRMM-E
Power source				1-phase 220-240V 50Hz / 1-phase 220-240V 60Hz					
Cooling capacity		*1	kW	2.2	2.8	3.6	4.5	5.6	7.1
		*1	BTU/h	7,500	9,600	12,300	15,400	19,100	24,200
Cooling capacity		*4	kW	2.2	2.8	3.7	4.6	5.7	7.2
Heating capacity		*1	kW	2.5	3.2	4.0	5.0	6.3	5.7
		*1	BTU/h	8,500	10,900	13,600	17,100	21,500	8.0
Power consumption	Cooling		kW	0.04		0.04	0.05	0.05	27,300
	Heating		kW	0.04		0.04	0.05	0.05	0.07
Current	Cooling		A	0.34		0.38	0.43	0.48	0.07
	Heating		A	0.34		0.38	0.43	0.48	0.59
External finish(Munsell No.)				Galvanized steel plate					0.59
Dimension H x W x D			mm	639 x 886 x 220		639 x 1,006 x 220		639 x 1,246 x 220	
			in.	25-3/16 x 34-15/16 x 8-11/16		25-3/16 x 39-5/8 x 8-11/16		25-3/16 x 49-1/16 x 8-11/16/1625 (56)	
Net weight			kg(lbs.)	21 (47)		24 (53)	25 (56)	29 (64)	
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)					
Fan	Type x Quantity			Sirocco fan x 1		Sirocco fan x 2			
	Airflow rate (Lo-Mid-Hi)		m^3/min	4.5-5.5-6.5		6.5-7.5-9.0	8.0-9.5-11.0	10.0-12.0-14.0	11.0-13.0-15.5
			L/s	75-92-108		108-125-150	133-158-183	167-200-233	183-217-258
			cfm	159-194-230		230-265-318	282-335-388	353-424-494	388-459-547
	External static pressure	*2	Pa	20/40/60					
Motor	Type			DC brushless motor					
	Output		kW	0.096					
Air filter				PP Honeycomb fabric (washable)					
Refrigerant pipe diameter	Gas		mm(in.)	ø12.7 (ø1/2) Brazed					ø15.88 (ø5/8) Brazed
	Liquid		mm(in.)	ø6.35 (ø1/4) Brazed					ø9.52 (ø3/8) Brazed
Field drain pipe diameter			mm(in.)	I.D.26 (1) <Accessory hose O.D.27 (1-3/32) (top end :20 (13/16))>					
Sound pressure level (Lo-Mid-Hi)	20Pa		dB(A)	31-36-40		27-32-37	30-36-40	32-37-41	35-40-44
	40Pa		dB(A)	34-39-42		30-35-41	32-38-42	35-40-44	36-42-47
	60Pa	*3	dB(A)	35-40-43		32-37-42	3.5-39-44	36-41-45	38-43-48

Notes:

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling Indoor : 27°C(81°F)DB/19°C(66°F)WB, Outdoor 35°C(95°F)DB
Heating Indoor : 20°C(68°F)DB, Outdoor 7°C(45°F)DB/6°C(43°F)WB
pipe length : 7.5m(24-9/16ft) Height difference : 0m(0ft)

*2 The external static pressure is set to 20Pa at factory shipment.

*3 The sound pressure level in operation is measured at 1m apart from the front side and the bottom side of the unit in anechoic room.
(Noise meter A-scale value) Connect the duct of 1m in length to the air outlet.

*4 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB

INDOOR UNIT
Floor standing exposed

PFFY-P YM-E NEW
PFFY-P YMH-E



Floor-standing CITY MULTI units featuring large capacity, great airflow rate, and high static pressure are suitable for air conditioning large spaces, such as event halls, churches, subway stations, airports, and offices.



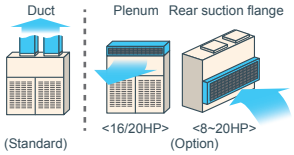
Wide ranges of airflow rate and static pressure options are available to suit a greater variety of purposes.

		Air flow rate (m³/min)	Static pressure (Pa)
		High, 50/60Hz	380V, 50/60Hz
PFFY-P200YM-E	8 HP	65.0/69.0	0
PFFY-P250YM-E	10HP	77.0/72.0	0
PFFY-P200YMH-E*	8 HP	65.0	180/200
PFFY-P250YMH-E*	10HP	72.0	180/210
PFFY-P400YM-E	16HP	150.0	210/390
PFFY-P500YM-E	20HP	200.0	290/510

*High static pressure model

Increased adaptation to local needs

In addition to the standard duct blowing, the plenum blowing and the rear suction are made selectable as optional.



Pulley belt option

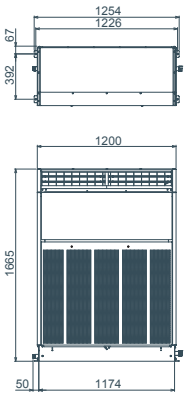
This option supports the use of wider ranges of airflow rate and static pressure to suit a greater variety of purposes.

Reduces installation and maintenance time and costs

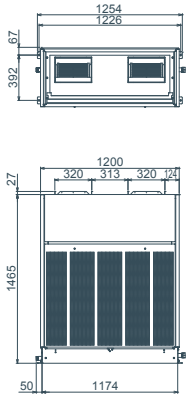
This series is a floor standing large capacity indoor unit, which reduces the piping and installation burdens, moreover makes maintenance easy.

Plenum or duct type

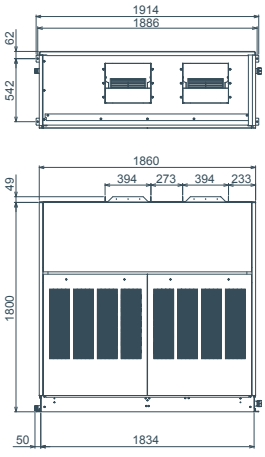
Plenum specifications : P200/P250YM-E



Duct specifications : P200/P250YMH-E



Duct specifications : P400/P500YM-E



Installation example

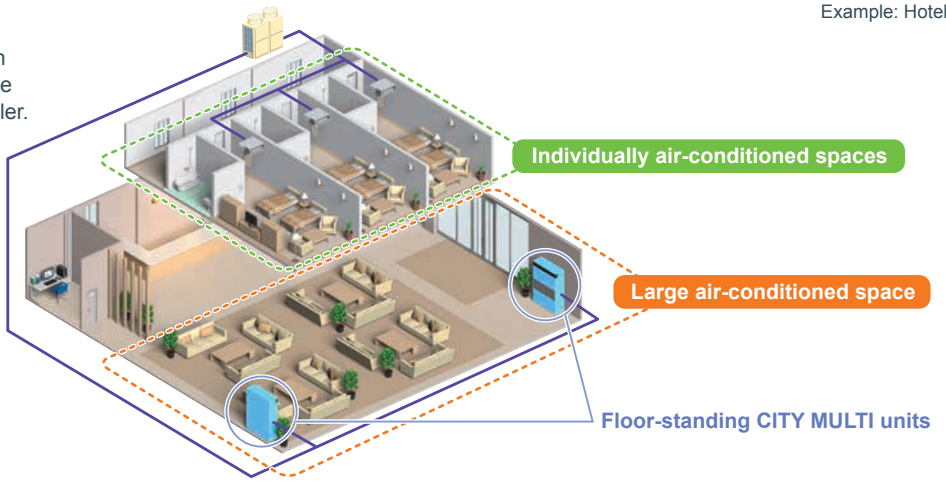
Example: Hotel

▶Requirements

Different series adopted to each optimum zone are required to be managed with the same controller.

▶Solution

Large-capacity floor-standing indoor units and ceiling concealed indoor units are connected to one outdoor unit, achieving both individual air conditioning and large space air conditioning.



▸Specifications

			PFFY-P200YM-E	PFFY-P250YM-E	PFFY-P200YMH-E	PFFY-P250YMH-E	PFFY-P400YM-E	PFFY-P500YM-E
Power source			3-phase 4-wire 380-400-415 V 50/60 Hz					
Cooling capacity (Nominal)	*1	kW	22.4	28.0	22.4	28.0	45.0	56.0
	*1	BTU/h	76,400	95,500	76,400	95,500	153,500	191,100
	*2 Power input	kW	0.490/0.680	1.05/1.26	1.00/1.41	1.31/1.41	2.86/3.79	3.94/5.30
	*2 Current input (380-400-415 V)	A	0.97-0.98-0.99/ 1.24-1.23-1.22	1.74-1.83-1.88/ 2.06-2.05-2.04	1.82-1.85-1.87/ 2.37-2.37-2.37	2.14-2.18-2.20/ 2.18-2.18-2.18	5.23-5.25-5.33/ 6.16-6.18-6.26	7.66-7.68-7.76/ 8.49-8.51-8.58
Heating capacity (Nominal)	*3	kW	25.0	31.5	25.0	31.5	50.0	63.0
	*3	BTU/h	85,300	107,500	85,300	107,500	170,600	215,000
	*2 Power input	kW	0.490/0.680	1.05/1.26	1.00/1.41	1.31/1.41	2.86/3.79	3.94/5.30
	*2 Current input (380-400-415 V)	A	0.97-0.98-0.99/ 1.24-1.23-1.22	1.74-1.83-1.88/ 2.06-2.05-2.04	1.82-1.85-1.87/ 2.37-2.37-2.37	2.14-2.18-2.20/ 2.18-2.18-2.18	5.23-5.25-5.33/ 6.16-6.18-6.26	7.66-7.68-7.76/ 8.49-8.51-8.58
External finish			Galvanized steel plate (with polyester coating) <MUNSELL 3.0Y 7.8/1.1 or similar>					
External dimension HxWxD		mm	1,665 x 1,200 x 500	1,665 x 1,200 x 500	1,465 x 1,200 x 500	1,465 x 1,200 x 500	1,800 x 1,860 x 650	1,800 x 1,860 x 650
		in.	65-9/16 x 47-1/4 x 19-11/16	65-9/16 x 47-1/4 x 19-11/16	57-11/16 x 47-1/4 x 19-11/16	57-11/16 x 47-1/4 x 19-11/16	70-7/8 x 73-1/4 x 25-5/8	70-7/8 x 73-1/4 x 25-5/8
Net weight		kg (lbs)	157 (347)	158 (349)	138 (305)	139 (307)	310 (684)	362 (799)
Heat exchanger			Cross fin (Aluminum fin and copper tube)					
FAN	Type x Quantity		Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2
	External static press. (380 V)	Pa	<0>	<0>	<180>/<200>	<180>/<210>	<210>/<390>	<290>/<510>
		mmH_2O	<0.0>	<0.0>	<18.4>/<20.4>	<18.4>/<21.4>	<21.4>/<39.8>	<29.6>/<52.0>
	Motor Type		3-phase induction motor					
	Motor output	kW	0.400	0.500	0.770	0.770	3.700	5.500
	Driving mechanism		Direct-driven by motor				Belt driving	
	Air flow rate		(High-Low)		(High)			
		m^3/min	65.0 - 59.0/69.0 - 60.0	77.0 - 56.0/72.0 - 50.0	65.0	72.0	150.0	200.0
		L/s	1,083 - 983/1,150 - 1,000	1,283 - 933/1,200 - 833	1,083	1,200	2,500	3,333
		cfm	2,295 - 2,083/2,436 - 2,119	2,719 - 1,977/2,542 - 1,766	2,295	2,542	5,297	7,062
Sound pressure level (measured in anechoic room) (380 V)			(High-Low)		(High)			
	*2	dB<A>	58-56/60-56	63-60/62-60	58/60	60/61	68/69	69/69
Air filter			PP honeycomb fabric.					
Refrigerant piping diameter	Liquid (R410A)	mm (in.)	9.52 (3/8)Brazed	9.52 (3/8)Brazed	9.52 (3/8)Brazed	9.52 (3/8)Brazed	12.7 (1/2)Brazed	15.88 (5/8)Brazed
	Gas (R410A)	mm (in.)	22.22 (7/8)Brazed	22.22 (7/8)Brazed	22.22 (7/8)Brazed	22.22 (7/8)Brazed	28.58 (1-1/8)Brazed	28.58 (1-1/8)Brazed
Field drain pipe size		in.	Rc 1	Rc 1	Rc 1	Rc 1	Rc 1-1/4	Rc 1-1/4

Notes:

*1 Nominal cooling conditions
Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)

*2 The values are measured at the factory setting of external static pressure.

*3 Nominal heating conditions
Indoor: 20°CD.B. (68°FD.B.), Outdoor: 7°CD.B./6°CW.B. (45° FD.B./43°FW.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)

*4 Long period operation in a high temperature and humidity atmosphere (dew point of 23°C or more) may cause condensation to form in the indoor unit.

*5 Connect to the outdoor/heat source unit which capacity is larger than or equal to the indoor unit capacity. (PFFY-P400, P500YM-E only)

*6 This unit cannot be connected to R2 or WR2 series. (PFFY-P400, P500YM-E only)

* Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual.
* Due to continuing improvement, above specifications may be subject to change without notice.

INDOOR UNIT
Floor standing exposed

PFFY-P VLEM-E



A compact cased unit providing simple, effective air conditioning in perimeter zones.



Its basic design is suitable for various locations such as offices, shops, and hospitals.
A remote controller can be mounted on the unit on site.

Compact unit for easy air conditioningin perimeter zones.

The unit is easy to install, and at only 220mm (8-11/16 in.) deep offers an unobtrusive method of delivering highly efficient air conditioning performance.

▸Specifications

			PFFY-P20VLEM-E	PFFY-P25VLEM-E	PFFY-P32VLEM-E	PFFY-P40VLEM-E	PFFY-P50VLEM-E	PFFY-P63VLEM-E
Power source			1-phase 220-240V 50Hz / 1-phase 208-230V 60Hz					
Cooling capacity	*1	kW	2.2	2.8	3.6	4.5	5.6	7.1
	*1	BTU/h	7,500	9,600	12,300	15,400	19,100	24,200
Cooling capacity	*5	kW	2.2	2.8	3.7	4.6	5.7	7.2
Heating capacity	*1	kW	2.5	3.2	4.0	5.0	6.3	8.0
	*1	BTU/h	8,500	10,900	13,600	17,100	21,500	27,300
Power consumption	Cooling	kW	0.04 / 0.06		0.06 / 0.07	0.065 / 0.075	0.085 / 0.09	0.1 / 0.11
	Heating	kW	0.04 / 0.06		0.06 / 0.07	0.065 / 0.075	0.085 / 0.09	0.1 / 0.11
Current	Cooling	A	0.19 / 0.25		0.29 / 0.30	0.32 / 0.33	0.40 / 0.41	0.46 / 0.47
	Heating	A	0.19 / 0.25		0.29 / 0.30	0.32 / 0.33	0.40 / 0.41	0.46 / 0.47
External finish(Munsell No.)			Acrylic paint (5Y 8/1)					
Dimension H x W x D		mm	630 x 1,050 x 220		630 x 1,170 x 220		630 x 1,410 x 220	
		in.	24-13/16 x 41-3/8 x 8-11/16		24-13/16 x 46-1/8 x 8-11/16		24-13/16 x 55-9/16 x 8-11/16	
Net weight		kg(lbs.)	28 (62)		30 (67)	32 (71)	36 (80)	37 (82)
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)					
Fan	Type x Quantity		Sirocco fan x 1		Sirocco fan x 2			
	Airflow rate (Lo-Hi) *2	m³/min	5.5-6.5		7.0-9.0	9.0-11.0	12.0-14.0	12.0-15.5
		L/s	92-108		117-150	150-183	200-233	200-258
		cfm	194-230		247-318	318-388	424-494	424-547
	External static pressure	Pa	0					
Motor	Type		1-phase induction motor					
	Output	kW	0.015		0.018	0.030	0.035	0.050
Air filter			PP Honeycomb fabric (washable)					
Refrigerant pipe diameter	Gas (Flare)	mm(in.)	ø12.7 (ø1/2)					ø15.88 (ø5/8)
	Liquid (Flare)	mm(in.)	ø6.35 (ø1/4)					ø9.52 (ø3/8)
Field drain pipe diameter		mm(in.)	I.D.26 (1) <Accessory hose O.D.27 (1-3/32) (top end :20 (13/16))>					
Sound pressure level (Lo-Hi) *2 *3 *4		dB(A)	34-40		35-40	38-43		40-46

Notes:

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling Indoor : 27°C(81°F)DB/19°C(66°F)WB,Outdoor 35°C(95°F)DB
Heating Indoor : 20°C(68°F)DB, Outdoor 7°C(45°F)DB/6°C(43°F)WB

*2 Air flow rate/Sound pressure level are in (Low-High)

*3 Measured point : 1m x 1m, Power supply : AC240V/50Hz
· 1dB(A) lower at AC230V/50Hz
· 2dB(A) lower at AC220V/50Hz
· 3dB(A) lower at 1.5m x 1.5m point

*4 It is measured in anechoic room.

*5 Reference data under condition of Indoor 27°C(81°F)DB/19.5°C(67°F)WB, Outdoor 35°C(95°F)DB



Remote Controller

- Individual Remote Controller
- Centralized Remote Controller

The importance of control

The need for control is paramount in order to optimise the performance of any air conditioning system and minimize its running costs. Mitsubishi Electric offers a wide range of control options designed to meet such needs.

Operating an air conditioning system without the right control can prove costly. It's therefore important to ensure that every system is correctly specified to the degree of control it requires. Mitsubishi Electric have a wide range of controls available 'off-the-shelf' and individual control systems can be specifically designed to match.

Good controls will benefit any application, large or small. Air conditioning products need to react to a variety of factors: different room sizes, usage and staff levels; changes in the climate; electronic equipment and lighting ...the list goes on. So whatever the application, optimum control of air conditioning systems is essential and will result in a constant, comfortable environment, which in turn is both energy and cost efficient.

A degree of difference

When an air conditioning system is not properly controlled, it will not run as efficiently as it should. For every degree that the system deviates from the required temperature, energy costs can rise by up to 5%. Specify one of the many control options from Mitsubishi Electric to ensure air conditioning works as intended, whilst giving the optimum amount of control.

The simpler, the better

With the array of comprehensive control systems available from Mitsubishi Electric, it becomes simple to design and install air conditioning systems. From a simple hand-held controller to a AE-200E system - you are in control.



System Controller

MITSUBISHI ELECTRIC's Air-conditioner Network System (MELANS) leads air conditioner management a PC browser and Network era.

MELANS

Use of our MELANS products enhances EFFICIENCY and QUALITY of air-conditioning, contributing to ENERGY SAVING and reduction in running cost. We offer a wide variety of MELANS products to meet all requirements - from the smallest and simplest to the largest and most complex.
We have individual remote controllers, various centralized controllers, and centralized integrated software, as well as BMS interface hardware and software etc. Above all, with AE-200E/AE-50E/AG-150A/EB-50GU-J, PC browser and long distance remote control (monitoring and operating) via communication Network is possible and easy.

M-NET

Individual Remote Controller

All of the local remote controllers feature liquid crystal and LED displays and easy to operate.

Remote Controller
- PAR-31MAAE
- PAR-21MAA
- PAR-U02MEDA

Simple Remote Controller
- PAC-YT52CRA

Wireless Remote Controller
- PAR-FL32MA
- PAR-FA32MA
- PAR-SA9FA-E
- PAR-SL94B-E

Centralized Remote Controller

Advanced Touch Controller
- AT-50B

ON/OFF Remote Controller
- PAC-YT40ANRA

- AE-200E/AE-50E
- AG-150A
- PAC-YG50ECA
- EB-50GU-J
- EW-50E (NEW)

AHC ADAPTER
- PAC-IF01AHC-J *1

PI Controller
- PAC-YG60MCA

DIDO Controller
- PAC-YG66DCA

AI Controller
- PAC-YG63MCA

*1. Advanced HVAC CONTROLLER

CITY MULTI

OUTDOOR UNIT
- S : PUMY
- Y : PUCY/PUHY

INDOOR UNIT
- PEFY
- PCFY
- PMFY
- PKFY
- PLFY
- PFFY

Interface
- BAC-HD150

Interface
- LMAP04-E

BACnet® transmission line (Ethernet)

LONWORKS® transmission line

MITSUBISHI ELECTRIC's CITY MULTI can be easily connected to the building management system through BACnet®.

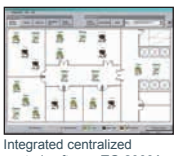
BUILDING MANAGEMENT SYSTEM

Ethernet

Air-Conditioning Control System

This is a specialized air conditioning management system, in which up to 2000 indoor units can be centrally controlled.

Integrated centralized control software TG-2000A



Integrated centralized control software TG-2000A

*Some controllers cannot be used in combination with certain models of devices.

Integrated Communications Control with Mitsubishi Electric's Unique Transmission Network (M-NET)

Model	Local remote controller *9					System controller *9													
	PAR-31MAAE	PAR-21MAA	PAR-U02MEDA	PAC-YT52CRA	PAR-FL32MA	PAC-YT40ANRA	AT-50B	AE-200E / AE-50E		AE-200E + AE-50E / EW-50E		EW-50E		AG-150A		AG-150A + PAC-YG50ECA		EB-50GU-J		TG-2000A *4 *5
Controllable Groups / Indoors (Group / Indoor) *8	1 / 16	1 / 16	1 / 16	1 / 16	1 / 16	16 / 50	50 / 50	50 / 50		200 / 200		50 / 50		50 / 50		150 / 150		50 / 50		2000 / 2000
								AE-200E	Browser*4	AE-200E	Browser*4	EW-50E	Browser*4	AG-150A	Browser*4	AG-150A	Browser*4	EB-50GU-J	Browser*4	
■Operating																				
ON / OFF	○	○	○	○	○	◎	◎	◎■	◎■	◎■	◎■	▲	◎■	◎■	◎■	◎■	◎■	▲	◎■	◎■
Mode (cool / heat / dry / fan)	○	○	○	○	○	N	◎	◎■	◎■	◎■	◎■	N	◎■	◎■	◎■	◎■	◎■	N	◎■	◎■
Temperature-set	○	○	○	○	○	N	◎	◎■	◎■	◎■	◎■	N	◎■	◎■	◎■	◎■	◎■	N	◎■	◎■
Dual set point *10	○	N	○	○	N	○*11	◎	◎■	◎■	◎■	◎■	N	◎■	N	N	N	N	N	◎■	◎■
Local Permit / Prohibit	N	N	N	N	N	N	◎	◎■	◎■	◎■	◎■	N	◎■	◎■	◎■	◎■	◎■	N	◎■	◎■
Fan speed	○	○	○	○	○	N	◎	◎■	◎■	◎■	◎■	N	◎■	◎■	◎■	◎■	◎■	N	◎■	◎■
Air-flow direction	○	○	○	○	○	N	◎	◎■	◎■	◎■	◎■	N	◎■	◎■	◎■	◎■	◎■	N	◎■	◎■
■Status monitoring																				
ON / OFF	○	○	○	○	○	◎	◎	◎	○	◎	○	▲	○	◎	○	◎	○	▲	○	○■
Mode (cool / heat / dry / fan)	○	○	○	○	○	N	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Temperature-set	○	○	○	○	○	N	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Local Permit / Prohibit	○	○	○	○	○	○	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Fan speed	○	○	○	○	○	N	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Air-flow direction	○	○	○	○	○	N	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Indoor temperature	○	○	○	○	N	N	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Filter sign	○	○	○	N	N	N	◎	○	○	○	○	N	○	○	○	○	○	N	○	○
Error flashing	○	○	○	○	○	○	◎	○	○	○	○	▲	○	○	○	○	○	▲	○	○■
Error code	○	○	○	○	N	○	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Operation hour	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	●
■Scheduling																				
One-day	○	○	○	N	N	N	○	◎■	◎■	◎■	◎■	N	◎■	●	●	●	●	N	●	●
Times of ON / OFF per day	1	8	1	N	1	N	16	24	24	24	24	N	24	24	24	24	24	N	24	24
Weekly	○	○	○	N	N	N	○	◎■	◎■	◎■	◎■	N	◎■	○(●)	○(●)	○(●)	○(●)	N	○(●)	○(●)
Times of ON / OFF per week	8 x 7	8 x 7	8 x 7	N	N	N	16 x 7	24 x 7	24 x 7	24 x 7	24 x 7	N	24 x 7	24 x 7	24 x 7	24 x 7	24 x 7	N	24 x 7	24 x 7
Annual	N	N	N	N	N	N	N	◎■	◎■	◎■	◎■	N	◎■	●	●	●	●	N	●	●
Optimized start-up	N	N	N	N	N	N	N	○	○	○	○	N	○	○	○	○	○	N	○	○
Auto-off timer	○	○	○	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Min. timer setting unit (minute)	5	1	5	N	10	N	5	1	1	1	1	N	1	1	1	1	1	N	1	1
■Recording																				
Error record	○	N	N	N	N	N	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Daily / monthly report	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	◎
Electricity charge	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	●
Energy management data	N	N	N	N	N	N	N	N	●	N	●	N	●	N	N	N	N	N	●	N
■Other																				
Temp-set limitation by Local R / C	○	○	○	○	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Temp-set limitation by System controller *4	○ *6	○ *6	○	○ *6	N	N	○*6	N	○*2 *6	N	○*2 *6	N	○*2 *6	N	○*2 *6	N	○*2 *6	N	○*2 *6	◎ *6
Operation-lock	○	○	○	○	N	N	◎	N	N	N	N	N	N	N	N	N	N	N	N	N
Night setback	○	N	○	N	N	N	◎	○	○*2	○	○*2	N	○*2	○	○*2	○	○*2	N	○*2	○
Sliding temperature control	N	N	N	N	N	N	N	○	○*2	○	○*2	N	○*2	○	○*2	○	○*2	N	○*2	○
■Management (Group / Interlocked)																				
Ventilation interlock	N /○	N /○	N /○	N /○	N	○	○	○	○/○*2	○	○/○*2	N	○/○*2	○	○/○*2	○	○/○*2	N	○/○*2	○/○
Group setting	○ *1	○ *1	○	○ *1	N	○	○	○	○*2	○	○*2	N	○*2	○	○*2	○	○*2	N	○*2	○
Block setting	N	N	N	N	N	N	N	○	○*2	○	○*2	N	○*2	○	○*2	○	○*2	N	○*2	○
Revision of electricity charge	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	□ ●
■Operating on LOSSNAY interlocked (Group / Interlocked)																				
ON / OFF	N /○	N /○	N /○	N /○	N /○*7	◎/◎*3	◎/◎	◎/◎	◎/◎	◎/◎	◎/◎	▲/▲	◎/◎	◎/◎	◎/◎	◎/◎	◎/◎	▲/▲	◎/◎	◎/◎
Fan speed	N /○	N /○	N /○	N	N	N	◎/◎	◎/◎	◎/◎	◎/◎	◎/◎	N / N	◎/◎	◎/◎	◎/◎	◎/◎	◎/◎	N / N	◎/◎	◎/◎
Ventilation mode	N / N	N / N	N	N	N	N	◎/ N	◎/ N	◎/ N	◎/ N	◎/ N	N / N	◎/ N	◎/ N	◎/ N	◎/ N	◎/ N	N / N	◎/ N	○/ N
■Status monitoring on LOSSNAY interlocked (Group / Interlocked)																				
ON / OFF	N /○	N /○	N /○	N /○	N	N	○/○	◎/◎	◎/◎	◎/◎	◎/◎	▲/▲	◎/◎	◎/◎	◎/◎	◎/◎	◎/◎	▲/▲	◎/◎	◎/◎
Fan speed	N /○	N /○	N /○	N	N	N	○/○	○/○	○/○	○/○	○/○	N / N	○/○	○/○	○/○	○/○	○/○	N / N	○/○	○/○
Ventilation mode	N	N	N	N	N	N	○/ N	○/ N	○/ N	○/ N	○/ N	N / N	○/ N	○/ N	○/ N	○/ N	○/ N	N / N	○/ N	○/ N

◎: Each group / Batched ; ○: Each group ; □: Block (for CITY MULTI Indoor unit, not for all Mr.SLIM) ; ●: AE-200E/AE-50E/EW-50E/AG-150A/EB-50GU-J license registration possible.
(●) : License registration for the optional functions required N : Not Available (Not Used.) △: Batched only ; ▲: Batched handling (for maintenance) ■: Block

*1. Group setting via wiring between Indoor units with cross-over cable;
*2. Installation possible at Initial setting web browser;
*3. Inter-lock is set at Local remote controller.
*4. AE-200E/AE-50E/EW-50E/AG-150A/EB-50GU-J license registration to AE-200E/AE-50E/EW-50E/AG-150A/EB-50GU-J is required to monitor and operate the units by browser and TG-2000A.
5. AG-150A connected with PAC-YG50ECA is compatible with TG-2000A Ver.6.10 or later. EB-50GU-J is compatible with TG-2000A Ver. 6.40A or later. AE-200E/AE-50E is compatible with TG-2000A Ver. 6.50* or later. Contact your local distributor for which version of TG-2000A supports EW-50E.
*6. This function can be set only on the ME remote controller. This function cannot be used with the MA/Simple MA remote controller. (But, the validity of this function with the MA/Simple MA remote controller depends on the indoor unit model, and there are possibilities that this function can be used with them.)
*7. Inter-lock is set from system controllers (Except PAC-YT40ANRA) or local remote controllers.
*8. The maximum number of controllable units decreases depending on the indoor unit model.
*9. For indoor use only.
*10. This function is supported only when all the indoor units, remote controllers, and system controllers that are connected to a given group features the function.
*11. For the availability of the function, please contact your local distributor.
*12. Supports the dual set point function
*13. BAC-HD150 ver. 2.10 and later supports the dual set point function.

LOSSNAY remote controller PZ-52SF

■Controllable LOSSNAY Groups	1
■Controllable LOSSNAY unit	16
■Operating ON/OFF	○
Mode (automatic ventilation/vent-heat interchange/normal ventilation)	○
Local Permit-Prohibit	N
Fan speed	○
Air flow direction	N
■Scheduling	N
■Recording	N

■Management Group setting	○
Block setting	N
■Status monitoring ON/OFF	○
Mode (automatic ventilation/vent-heat interchange/normal ventilation)	○
Local Permit-Prohibit	○
Fan speed	○
Air flow direction	N
Filter sign	○
Error flashing	○
Error code	○

Air conditioner control system interface

LMAP04-E : LonWorks® Interface
Controls up to 50 Groups/ 50 units, for details, refer to its description. *12

BAC-HD150: BACnet® Interface
Controls up to 50 Groups/ 50 units, up to 150 Groups/ 150 units with three expansion controllers for details, refer to its description. *13

○ : Each group, N: Not Available

Individual Remote Controller

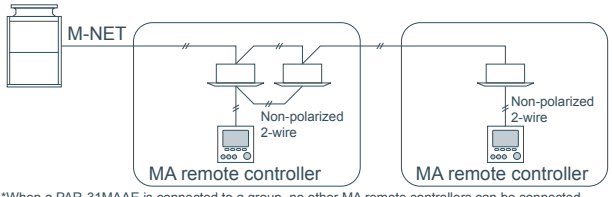
Wired MA remote controller PAR-31MAAE



Dual Set Point

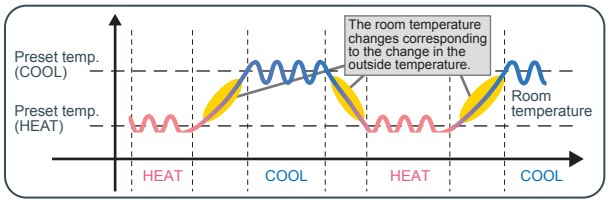
Dimensions: 120(W) x 120(H) x 19(D) mm
: 4-3/4(W) x 4-3/4(H) x 3/4(D) in.

Example of system configuration



*When a PAR-31MAAE is connected to a group, no other MA remote controllers can be connected to the same group.

Operation pattern during Auto (dual set point) mode



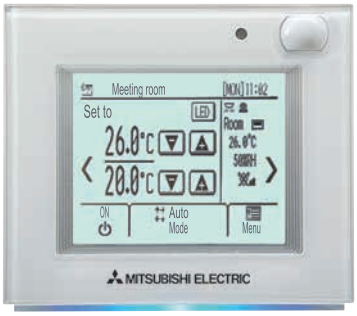
- **Temperature will be displayed either in Centigrade in 0.5- or 1-degree increments, or in Fahrenheit, depending on the indoor unit model and the display mode setting on the remote controller.**
- **Dual set point**
  When the operation mode is set to the Auto (dual set point) mode, two preset temperatures (one each for cooling and heating) can be set. Depending on the room temperature, indoor unit will automatically operate in either the Cool or Heat mode and keep the room temperature within the preset range.
  *Please contact your Mitsubishi Electric sales office for details.
- **Backlit LCD (Liquid Crystal Display)**
  Large, easy-to-see display
  Full-dot LCD display with large characters for easy viewing
  Contrast also adjustable
- **Night Setback**
  To prevent indoor dew or excessive temperature rise, this control starts heating operation when the control object group is stopped and the room temperature drops below the preset lower limit temperature. Also, this control starts cooling operation when the control object group is stopped and the room temperature rises above the preset upper limit temperature.
- **Language selection**
  Language to be displayed on the screen can be selected from eight languages: English, French, German, Spanish, Italian, Portuguese, Swedish, and Russian.

Functions

○: Each group ×: Not available

Item	Description	Operations	Display
ON/OFF	Switches between ON and OFF.	○	○
Operation mode switching	Switches among Cool/Dry/Fan/Auto/Heat.	○	○
Room temp. setting	The temperature can be set within the following range. Cool/Dry : 19°C - 30°C / 67°F - 87°F Heat : 17°C - 28°C / 63°F - 83°F Auto : 19°C - 28°C / 67°F - 83°F * Set temperature range varies depending on the model.	○	○
Air flow direction setting	Changes airflow direction. * Available airflow directions vary depending on the model.	○	○
Louver setting	Switches between louver ON/OFF.	○	○
Ventilation equipment control	Interlocked setting and interlocked operation setting with the CITY MULTI LOSSNAY units can be made. The Stop/Low/High settings of the ventilation equipment can be controlled.	○	○
Error information	When an error occurs, an error code and the unit address appear. Air conditioning unit model, serial number, and contact number can be set to appear when an error occurs. (The information above needs to be entered in advance.) * An error code may not appear depending on the error.	–	○
Timer	ON/OFF timer Turns ON and OFF daily at a set time. • Time can be set in 5-minute increments. • It is also possible to set the ON time only or the OFF time only. Auto-OFF timer Turns off the unit after a certain period of operation. • Operation time can be set to a value from 30 to 240 minutes in 10-minute increments.	○	○
Allows/disallows local operation	The following operation can be prohibited by making certain settings on the centralized controller: ON/OFF, operation mode setting, temperature setting, fan speed, air direction, and filter sign reset. * While an operation is prohibited, the operation icon lights up (only on the Main display in the "Full" mode).	×	○
Operation lock	The following operation can be prohibited respectively: ON/OFF, operation mode setting, temperature setting, and airflow direction setting.	○	○
Temperature range restriction	The room temperature range for each operation mode can be restricted.	○	○
Auto return	The units operate at the preset temperature after a designated period. (Time can be set to a value from 30 to 120 in 10-minute increments.) * Not valid when the temperature setting range is restricted.	○	×

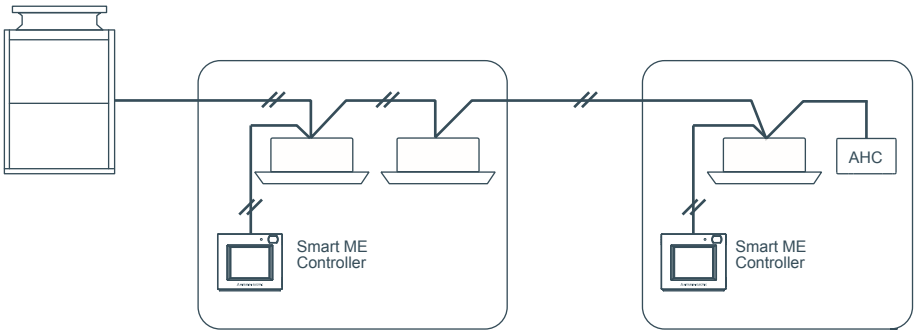
Smart ME Controller PAR-U02MEDA



Dimensions : 5-17/32(W) x 4-3/4(H) x 1(D) in.
: 140(W) x 120(H) x 25(D) mm

- **Smart ME Controller is a remote controller designed to control Mitsubishi Electric's air conditioning units and also allows for the control of other manufacturer's products connected via Mitsubishi Electric's AHC (Advanced HVAC CONTROLLER).**
- **It can control up to sixteen indoor units and one AHC.**
- **Smart ME Controller features such basic functions as operations and monitoring of air conditioning units and schedule-control functions and is equipped with four built-in sensors (temperature, humidity, occupancy, brightness), which enable an integrated control of the system, including the humidifiers and ventilation units connected to the system via AHC, to help create a comfortable environment.**
  When the built-in occupancy sensor detects vacancy in a specific zone, the controller uses its internal function to reduce energy-consumption.

Example of system configuration



Functions

○:Each group ×:Not available

Item	Description	Operations	Display
ON/OFF	Switches between ON and OFF.	○	○
Fan speed setting	Changes fan speed. * Available fan speeds vary depending on the model.	○	○
Air flow direction setting	Changes airflow direction. * Available airflow directions vary depending on the model.	○	○
Allows/disallows local operation	The following operation can be prohibited by making certain settings on the centralized controller: ON/OFF, operation mode setting, temperature setting, fan speed, air direction, and filter sign reset. * While an operation is prohibited, the operation icon lights up.	×	○
Error information	When an error occurs, an error code and the unit address appear. Contact number can be set to appear when an error occurs. (The information above needs to be entered on the Service menu.)	—	○
Schedule (Weekly timer)	Weekly ON/OFF times, operation mode, and set temperatures can be set. • Time can be set in 5-minute increments. Up to 8 schedule patterns can be set per day of the week. * Not valid when the ON/OFF timer is set.	○	○
Timer	ON/OFF timer Turns ON and OFF daily at a set time. • Time can be set in 5-minute increments. • It is also possible to set the ON time only or the OFF time only. Auto-OFF timer Turns off the unit after a certain period of operation. • Operation time can be set to a value from 30 to 240 in 10-minute increments.	○	○
Energy-save control during vacancy	When vacancy is detected by the occupancy sensor, the energy-save control assist function is activated. Four control types are available for selection: ON/OFF temperature/Fan speed/Thermo-off. The brightness sensor can be used in conjunction with the occupancy sensor to detect the occupancy/vacancy status more accurately.	○	○

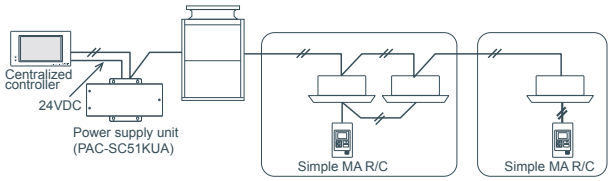
Individual Remote Controller

Simple remote controller PAC-YT52CRA (MA)



Dimensions: 70(W) x 120(H) x 14.5(D) mm
: 2-3/4(W) x 4-23/32(H) x 9/16(D) in.

Example of system configuration



- **Dual set point**
  When the operation mode is set to the Auto (dual set point) mode, two preset temperatures (one each for cooling and heating) can be set. Depending on the room temperature, indoor unit will automatically operate in either the Cool or Heat mode and keep the room temperature within the preset range.
  *Please contact your Mitsubishi Electric sales office for details.
- **Backlit LCD**
  Backlight for operation in dark place
- **Flat back**
  Install without hole on wall Slim and flat type
  Thickness is less than 14.5mm [0.6(in)]
- **Vane button (standard)**
  The Vane button has been added to allow the user to change airflow direction (ceiling-cassette and wall-mounted types).

Pressing the button will switch the vane directions.



*The settable vane direction varies depending on the indoor unit model to be connected.
* If the unit has no vane function, the vane direction cannot be set. In this case, the vane icon blinks when the button is pressed.

- **The only wiring required is cross-over wiring based on two-wire signal lines.**
- **Room temperature sensors are built-in.**
- **Can operate all types of indoor units**
  *Since this controller has limited functions, it should always be used in conjunction with standard controller or centralized controller.
- **LCD temperature setting and display in 1°C /1°F increments.**

Functions

□: Each unit ○: Each group ×: Not available

Item	Description	Operations	Display
ON/OFF	Changes between ON and OFF.	○	○
Operation mode switching	Select from COOL, DRYING, FAN, AUTO, and HEAT. * AUTO mode is settable only when those functions are available on the indoor unit.	○	○
Temperature setting	The temperature can be set within the following range. Cool/Drying : 19°C - 35°C/67°F - 95°F Heat : 5°C - 28°C/41°F - 83°F Auto (single set point) : 19°C - 28°C/67°F - 83°F Auto (dual set points) [Cool] Same as the set temp. range for Cool mode. [Heat] Same as the set temp. range for Heat mode. * Set temperature range varies depending on the model.	○	○
Fan speed setting	Changes the fan speed. * The settable fan speed varies depending on the indoor unit model to be connected.	○	○
Permit / Prohibit local operation	By setting a centralized controller, the following local operations are prohibited: ON/OFF; operation mode; preset temperature; * The CENTRAL icon appears while the local operations are prohibited.	×	○
Error	Displays the current error status with the address. * The address may not be displayed depending on the error status.	×	□
Ventilation equipment	When the CITY MULTI indoor unit is connected, interlocked setting of the CITY MULTI LOSSNAY unit is possible. When the Mr. SLIM indoor unit (A-control) is connected, interlocked operation of the microcomputer-type LOSSNAY unit is possible.	○	○
Set temperature range limit	The preset temperature range can be restricted for each operation mode (COOL/HEAT/AUTO).	○	○

Wireless remote controller PAR-FL32MA / PAR-FA32MA / PAR-SA9FA



PAR-FL32MA

Dimensions: 58(W) x 159(H) x 19(D) mm
: 2-5/16(W) x 6-5/16(H) x 3/4(D) in.



PAR-FA32MA

Dimensions: 70(W) x 120(H) x 22.5(D) mm
: 2-3/4(W) x 4-3/4(H) x 7/8(D) in.



PAR-SA9FA-E
(4-way Cassette signal receiver)

Dimensions: 256(H) x 19(D) mm

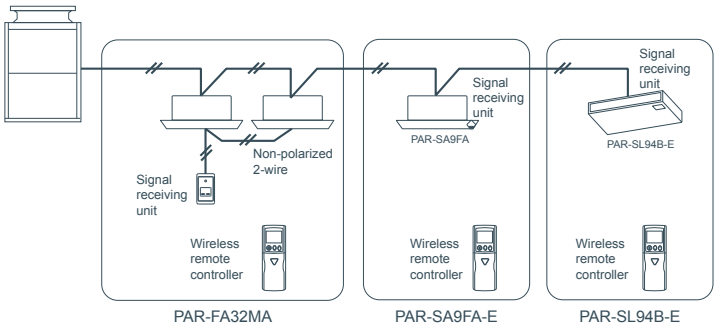


PAR-SL94B-E
(Wireless remote controller kit for ceiling suspended)

Dimensions: 182(W) x 57(H) x 31(D) mm

- **No need to configure addresses for group operation.**
- **Lit LED keeps you informed of operation - blinking even gives you the error code via the number of blinks.**
- **Can be used with the MA remote controller.**
  *When used in group configurations, wiring between indoor units is required.
  *Combining ME remote controller and/or LOSSNAY remote controller in a group is not possible.
- **LCD temperature setting and display in 1°C /1°F increments.**

Example of system configuration



Correspondence table

	receiver	transmitter
PMFY-P VBM PLFY-P VCM/VLMD PFFY-P VKM PEFY-P VMR-E-L/R/VMH PFFY-P VLEM/VKM/VLRM/VLRMM PEFY-P VMS1(L) PEFY-VMA(L)	PAR-FA32MA	PAR-FL32MA
PCFY-P VKM	PAR-FA32MA PAR-SL94B-E	
PLFY-P VBM-E	PAR-SA9FA-E	
PKFY-P VBM-E PKFY-P VHM/VKM	Built-in	

Functions

○: Each group ×: Not available

Item	Description	Operations	Display
ON/OFF	ON and OFF operation for a single group	○	○
Temperature setting	Sets the temperature for a single group Range of temperature setting Cool/Dry : 19°C - 30°C (14°C - 30°C) / 67°F - 87°F (57°F - 87°F) Heat : 17°C - 28°C (17°C - 28°C) / 63°F - 83°F (63°F - 83°F) Auto : 19°C - 28°C (17°C - 28°C) / 67°F - 83°F (63°F - 83°F) ( ) For PEFY/PFFY by setting DipSW 7-1 to ON and limits to NI6H fan speed only. * Set to PAR-FL32MA according to its Installation Manual 4 "Model setting".	○	○
Air flow direction setting	Air flow direction angles (4-angle, Swing) Auto Louver ON/OFF. Air flow direction settings vary depending on the model.	✳	✳
Timer operation	One ON/OFF setting can be set for one day.	○	○
Permit / Prohibit local operation	Individually prohibit operation of each local remote control function (ON/OFF, Change operation mode, Set temperature, Reset filter). *1 If operation is performed when the local remote controller inactivation command is received from the main system controller, a buzzer will ring and an LED will flash.	×	○*1
Ventilation equipment	Up to 16 indoor units can be connected to an interlocked system that has one LOSSNAY.	×	×

* Some models will have different display for the air flowdirection and fan speed.
Set the air flow direction and fan speed when performing initial setting.

Centralized Remote Controller

AHC ADAPTER PAC-IF01AHC-J



Dimensions: 4-9/16(W) x 3-1/2(H) x 1-9/16(D) in.
: 116(W) x 90(H) x 40(D) mm

Advanced HVAC CONTROLLER (hereafter referred to as AHC) comprises of MITSUBISHI ELECTRIC's AHC ADAPTER (PAC-IF01AHC-J) and α2 SIMPLE APPLICATION CONTROLLER* (hereafter referred to as ALPHA2).

*α2 SIMPLE APPLICATION CONTROLLER is one of the Programming Logic Controllers that are manufactured by MITSUBISHI ELECTRIC CORPORATION.

AHC allows for the connection of MITSUBISHI ELECTRIC's air conditioning network system (hereafter referred to as M-NET) to other systems, which was not possible with the use of ALPHA2 alone. AHC provides the following functions.

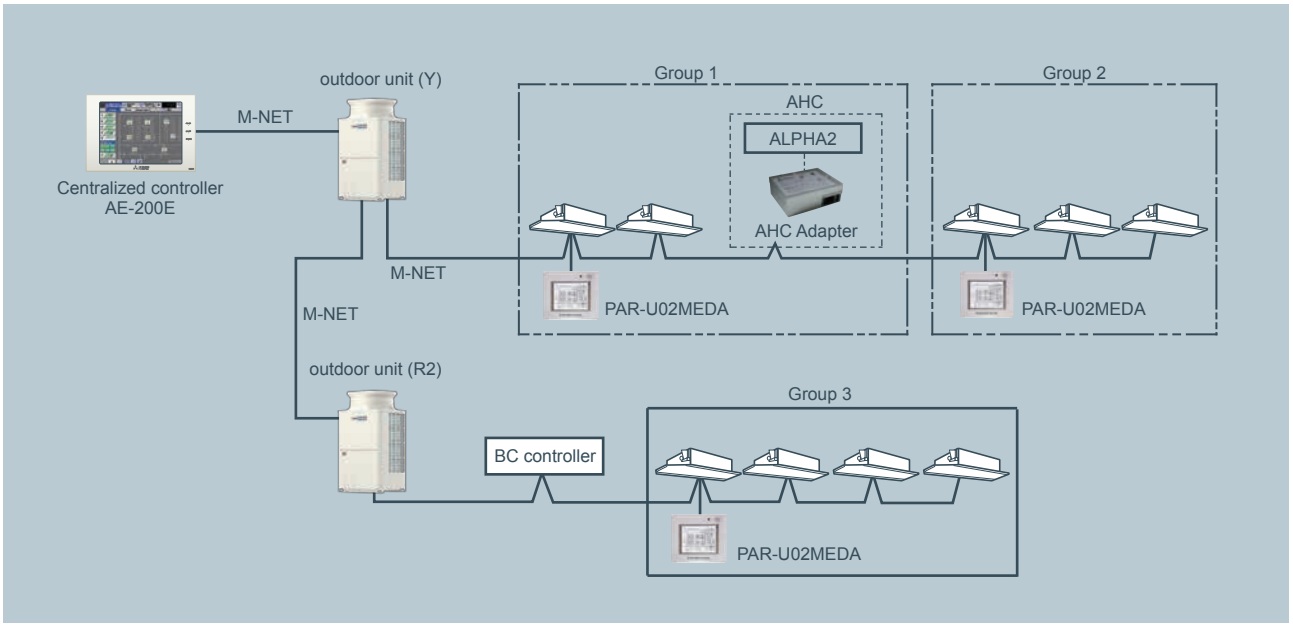
① Controls external devices using the sensor data of the air conditioning units connected to M-NET.
② Interlocks the operation of air conditioning units and external devices that are connected to ALPHA2.
③ Controls air conditioning units that are connected to M-NET.
④ Allows for the combined use of the items ①-③ above.
⑤ Monitors the input/output status of ALPHA2 via a remote controller or a centralized controller.

Compatible controllers

- Remote Controller: PAR-U02MEDA
- Centralized Controller: EB-50GU-J, AE-200E, AE-50E, EW-50E

* Refer to the manual that came with ALPHA2 for information about ALPHA2.
* The use of AHC ADAPTER requires either a remote controller or a centralized controller.

System Structure



Centralized Remote Controller

PI Controller PAC-YG60MCA



Dimension: 200(W) x 120(H) x 45(D) mm
: 7-7/8(W) x 4-3/4(H) x 1-13/16(D) in.

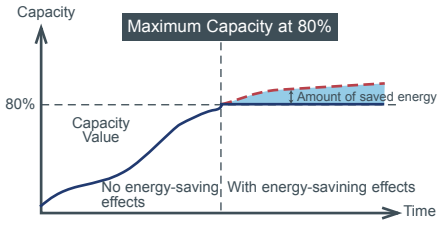
No more PLCs are needed!
Our new PI controller makes it possible to perform energy saving without PLC, which is cost saving.
Maximum of 4 measurement meter (WHM, gas meter, water meter, calorie meter) can be connected to the PI controller and can be used also for charge calculation.
*24 VDC power needs to be provided on site.

Energy Saving Control (Peak Cut)

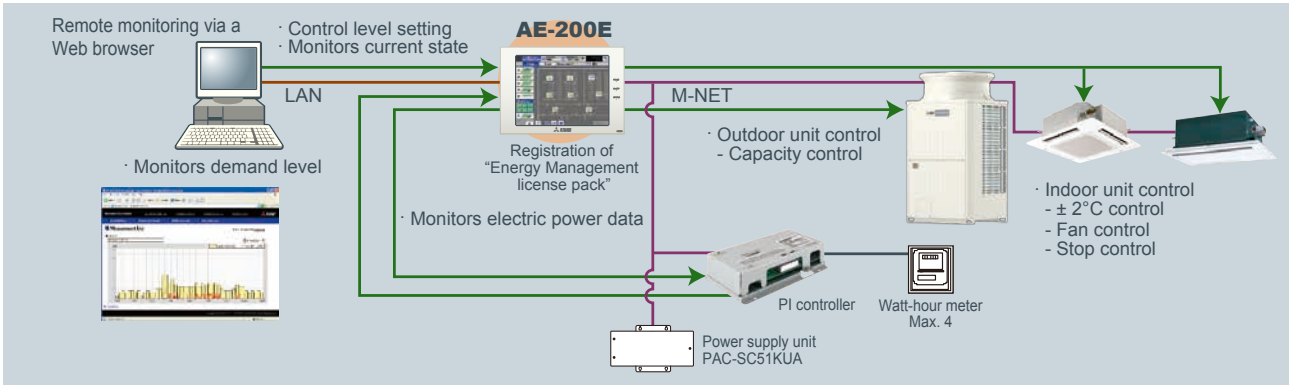
Enables Energy Saving Control with the use of our new PI controller. (Registration of "Energy Management license pack" is required.)

To perform energy saving, the capacity of the outdoor unit is controlled.

*Please note that when using an energy saving control, there are no warranties to failures such as usage over the contracted electricity.



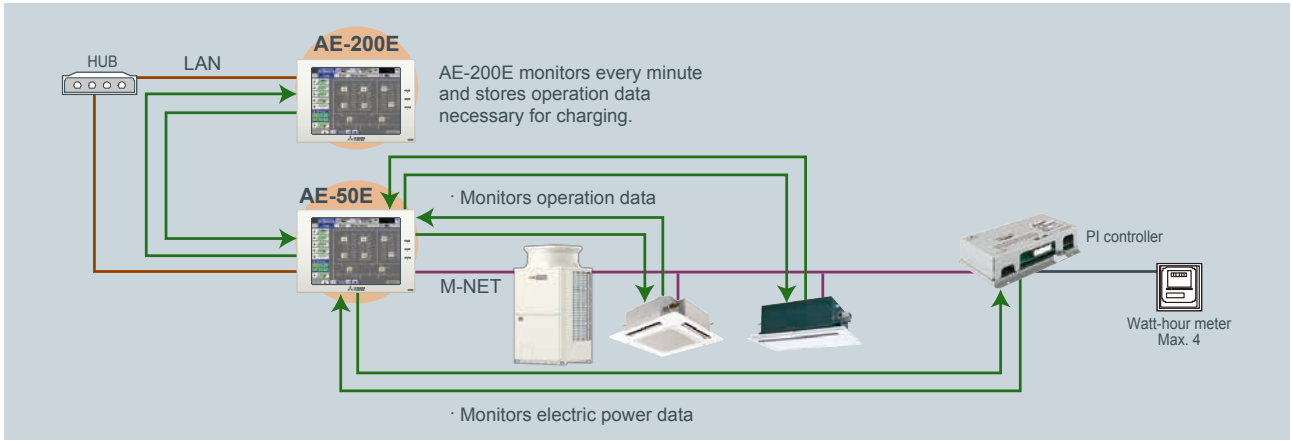
System Structure



Charge Calculation

Enables charge calculation for each tenant and output as CSV file

System Structure



DIDO Controller PAC-YG66DCA



Dimension: 200(W) x 120(H) x 45(D) mm
: 7-7/8(W) x 4-3/4(H) x 1-13/16(D) in.

No more PLCs are needed!
Our new DIDO controller makes it possible to control general-purpose equipment without PLC, which is cost saving.
Up to 6 general-purpose equipment can be connected to the DIDO controller.
*24 VDC power needs to be provided on site.

General-purpose equipment Control

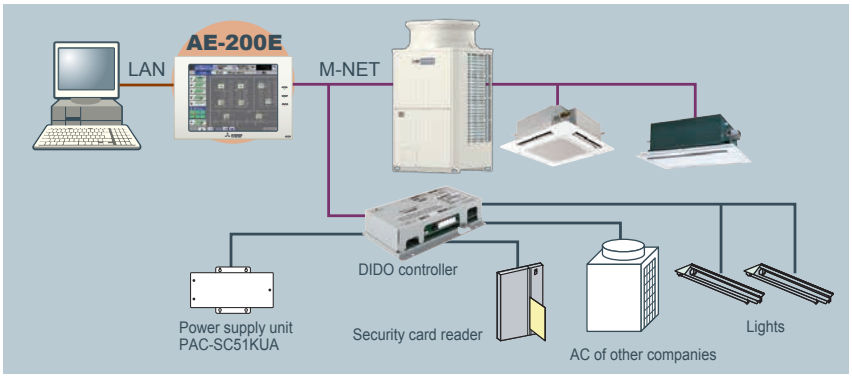
Enables to control and monitor equipment other than air-conditioners (air-conditioners of other companies, lights, ventilators, etc.)

- In addition to above, the air-conditioners can be interlocked with general-purpose equipment. E.g. Interlock between indoor units and security system.
- The indoor units can be turned ON/OFF when the security system is activated/deactivated.

Icon display (Lights)



System Structure



AI Controller PAC-YG63MCA



Dimension: 200(W) x 120(H) x 45(D) mm
: 7-7/8(W) x 4-3/4(H) x 1-13/16(D) in.

Our new AI controller makes it possible to monitor the values measured by the temperature/humidity sensor connected to the AI controller.
The AI controller has two input and two output channels.
*24 VDC power needs to be provided on site.

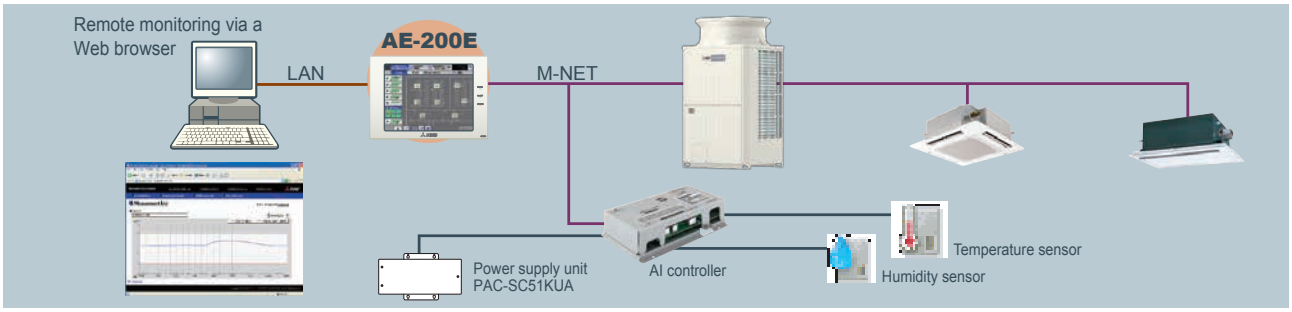
Temperature/Humidity Monitoring

Monitors the values measured by the temperature/humidity sensor connected to the AI controller

Temperature : Pt100, 4 to 20mA DC, 1 to 5 VDC, 0 to 10 VDC
Humidity : 4 to 20mA DC, 1 to 5 VDC, 0 to 10 VDC

- Trend displays of measurement data can be shown on a Web browser.
- An alarm can be output by e-mail when measurement data exceeds a preset upper or lower limit.

System Structure



Centralized Remote Controller

With our new Advanced Touch Controller AT-50B, easy and simple operation on the touch panel offers an optimal air environment for individual unit.

Advanced Touch controller AT-50B



Dimensions: 180(W) x 120(H) x 30(D) mm
: 7-2/16(W) x 4-12/16(H) x 1-3/16(D) in.

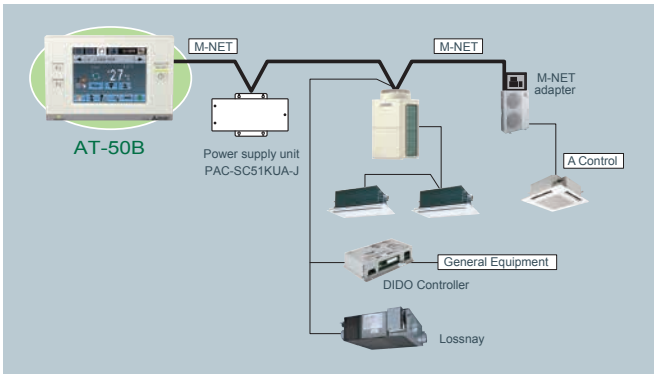
Dual Set Point

- **Temperature will be displayed either in Centigrade in 0.5- or 1-degree increments, or in Fahrenheit, depending on the indoor unit model and the display mode setting on the remote controller.**
- **Dual set point**

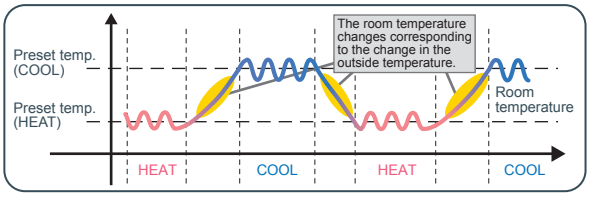
  When the operation mode is set to the Auto (dual set point) mode, two preset temperatures (one each for cooling and heating) can be set. Depending on the room temperature, indoor unit will automatically operate in either the Cool or Heat mode and keep the room temperature within the preset range.

  *Please contact your Mitsubishi Electric sales office for details.

System structure



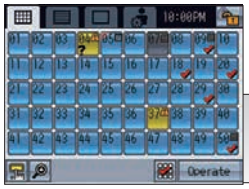
Operation pattern during Auto (dual set point) mode



Design

Backlit LCD (Liquid Crystal Display) Touch Panel

5-inch color LCD touch panel enables easy and simple operation.
The backlight lights up when the panel is touched, and lights off after certain period of time.
The touch panel displays the operation status of the units in GRID, LIST or in GROUP.



GRID (zoom-out) screen
Displays the operation status of all groups.



GRID (zoom-in) screen
Displays the detailed operation status of each group.



LIST screen
Displays the detailed operation status of each group with group name.



GROUP screen
Displays the detailed operation status of each group.
Sets group operations.

Functions

Three in One
The following three features are integrated into AT-50B.
- Control up to 50 indoor units from one location
- A weekly programmable timer, being able to control up to 50 indoor units
- Control up to 50 units/50 groups of air conditioners

Weekly and daily schedule
5 patterns of one day and 12 patterns of weekly schedule (16 settings max. per pattern).
Two types of weekly schedule can be set.

System changeover
Operation mode can be switched depending on indoor temperature setting and target temperature of each group or a representative indoor unit.

Night setback function
This function allows having a two-temperature setting to keep the desired room temperature when the units are not in operation and during the time this function is effective. The unit automatically starts heating (cooling) operation when the temperature drops below (rises above) the preset lower (upper) limit temperature. This is not only for comfort environment, but also for saving energy.

Main system controller/Sub system controller
AT-50B can be set to Sub System controller.
When connecting multiple system controllers, designate the system controller with many functions as the "Main", and set the system controllers with few functions as the "Sub".

Simple button arrangement
The F1 (Function 1) and the F2 (Function 2) button can be set as a run button of the following collective operation. (Setback/Schedule/Operation Mode/Temperature Correction/Remote Controller Prohibition)

Functions
[Basic Functions]
- ON/OFF
- Operation mode switching
- Temperature setting
- Fan speed setting
- Airflow direction setting
- Louver setting

Advanced Functions

□: Each unit ○: Each group ◎: Group or collective ×: Not available

Item	Description	Operations	Display
Permit / Prohibit	The ON/OFF, operation mode, setting temperature, fan speed, air direction, filter sign reset operations, and timer using the local remote controllers can be prohibited. Only ON/OFF and filter reset can be prohibited for the LOSSNAY group. *The settable items vary depending on the models.	◎	◎
Operation lock	The operation lock can be set to the input operation of AT-50B. Each button can be set. (Function Button 1, Function Button 2, Collective ON/OFF, Touch Panel) Each function can be set. (Operation mode, Setting temperature, Fan speed, Menu button) The password for the lock release can be set.	◎	◎
Error display	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed. * When an error occurs, the "ON/OFF" LED flashes. The operation monitor screen show abnormal icon over the unit. The error monitor screen shows the abnormal unit address and error code. The error log monitor screen shows the time and date, the abnormal unit address, error code and source of detection.	×	□◎
Ventilation (independent)	Switches the mode "Bypass/Heat recovery/Auto" for LOSSNAY groups.	◎	◎
Ventilation (interlocked)	The LOSSNAY will run in interlock with the operation of indoor unit. The mode cannot be changed. The LED will turn ON during operation after interlocking.	◎	◎
Temperature-set limitation	Batch-setting to temperature range limit at cooling, heating, and auto mode. This function cannot be used with the MA remote controller. (Depends on the indoor unit model.)	◎	◎
Specific mode operation prohibit (Cooling prohibit, heating prohibit, cooling/ heating prohibit)	When set as the main controller, operation of the following modes with the local remote controllers can be prohibited. When cooling is prohibited: Cooling, dry, automatic can not be chosen. When heating is prohibited: Heating, automatic can not be chosen. When cooling/heating is prohibited: Cooling, dry, heating, automatic can not be chosen.	◎	◎
External input (Emergency stop input, etc.)	The following input with level signals or pulse signals are available. Level signal: "Emergency stop input" or "Collective ON/OFF" Pulse signal: "Collective ON/OFF" or "Local remote controller prohibit/permit" One input can be selected from those above. * An external input/output adapter (PAC-YT51HAA-J (sold separately)) is required. Relays and DC power supply or other devices must be prepared at the site.	◎	◎
External output (Error output, operation output)	"ON/OFF" and "error/normal" are output with the level signal. * An external input/output adapter (PAC-YT51HAA-J (sold separately)) is required. Relays and DC power supply or other devices must be prepared at the site.	◎	◎
Checking the Gas Amount	Use this function to check for refrigerant leak from the outdoor unit. * When this function is used, the gas amount checking function of the outdoor unit cannot be used. This function is for CITY MULTI R2 and Y (PUMY is excluded.) series only.	□	□
Schedule operation	Weekly schedule setting up to 12 pattern is available. In one pattern, up to 16 setting of "ON/OFF", "Operation mode", "Set Temperature", "Fan speed", "Air flow direction" and "Permit / Prohibit local operation" can be scheduled. Two types of weekly schedule(Summer/Winter) can be set. Today's schedule setting up to 5 pattern in available.	○	○

* Depending on the installation conditions, power supply unit (PAC-SC51KUA) is required. Please contact your local distributor or MITSUBISHI ELECTRIC branch office for further information.

Centralized Remote Controller

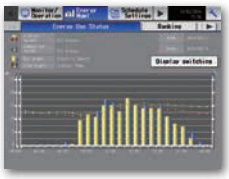
Centralized controller AE-200E/AE-50E



Dimensions: 284(W) x 200(H) x 65(D) mm
: 11-5/32(W) x 7-27/32(H) x 2-9/16(D) in.

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Control Screen for Power Consumption

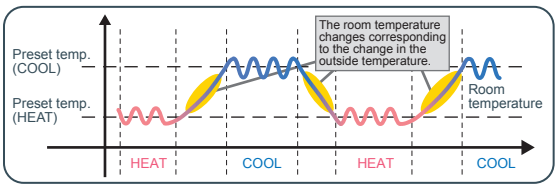


Energy consumption of applicable area is displayed by the month, day, and hour. Energy consumption of two different units, groups and blocks can be compared. Fan operation time as well as energy consumption can be displayed.



Energy consumptions of air-conditioning equipment are ranked and displayed by individual air-conditioning equipment and by area, thus visualizing high-load components. Also, comparison of energy consumption with target electric energy is possible.

Operation pattern during Auto (dual set point) mode



- **By comprehensibly showing the energy consumption of air-conditioning equipment, it provides assistance in energy saving.**
  - Energy consumption of air-conditioning equipment by individual area is displayed using graphs for easier viewing.
  - Enables comparisons with the previous year's power consumption as well as with the target electric power, thus allowing users to check the operating state at a glance.
  - Floor layout is displayed on the 10.4-inch LCD touch panel, facilitating easier operation of air-conditioning equipment.
- **In an easy and flexible manner, an optimum system can be established according to the scale of facilities.**
  - Implements control on up to 50 indoor units of air-conditioning equipment.
  - By using three units of expansion controller "AE-50E/EW-50E", the centralized control is implemented for the maximum of 200 indoor units.
  - Connection with PC allows implementation of control on more than 200 indoor units via Web browser.*1

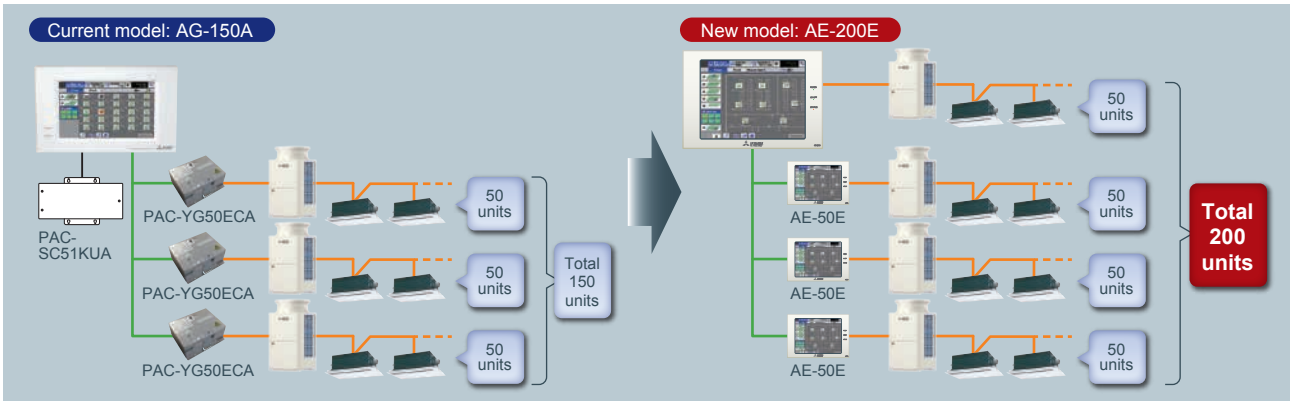
  *1. Please contact your local distributor for when the feature is supported.
- **Features for operating and monitoring the hot water heat pump are also available on CAHV, PWFY, and CRHV.*2**
  - Centralized batch control on CAHV, PWFY, and CRHV *2 is possible in addition to that on air-conditioning unit.

  *2. Please contact your local distributor for when these features are supported on CRHV.
- **Dual set point**

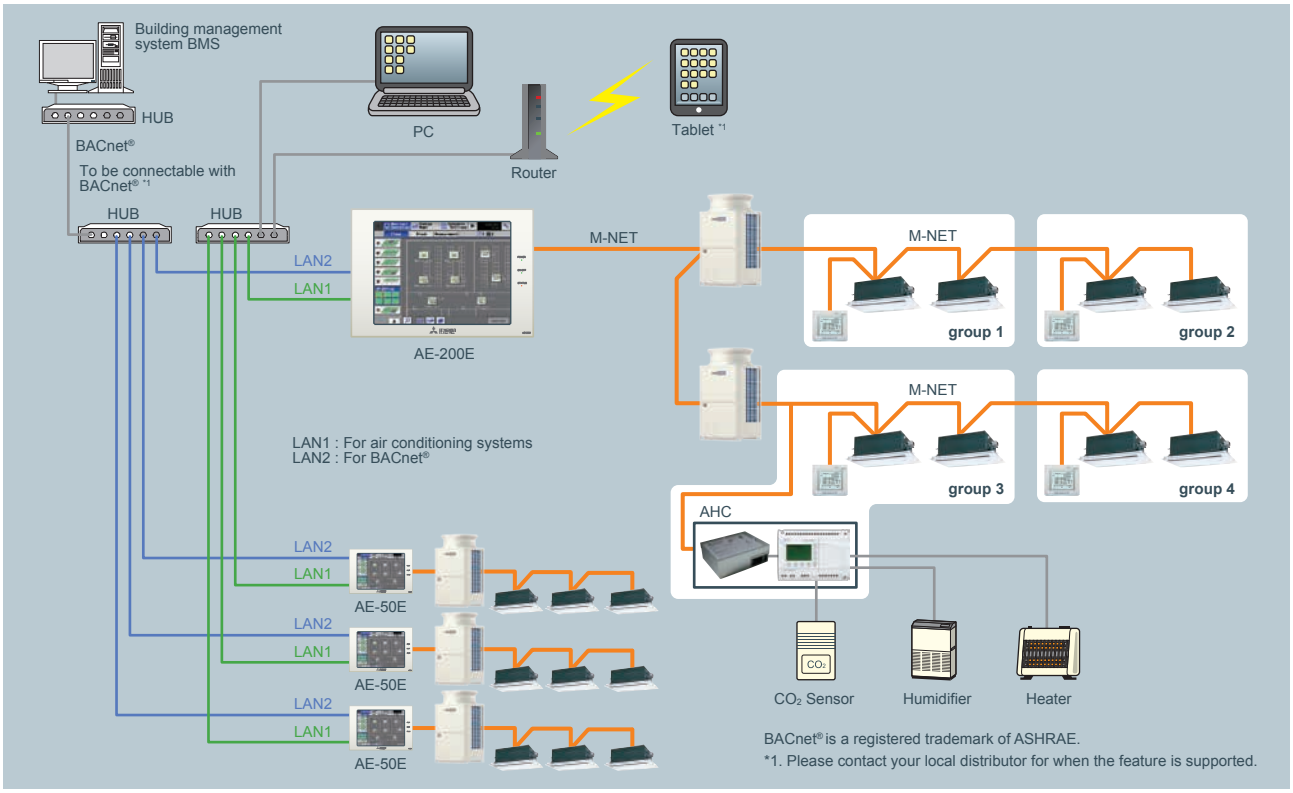
  When the operation mode is set to the Auto (dual set point) mode, two preset temperatures (one each for cooling and heating) can be set. Depending on the room temperature, indoor unit will automatically operate in either the Cool or Heat mode and keep the room temperature within the preset range.

  *Please contact your Mitsubishi Electric sales office for details.

Comparison in the number of connectable units



System Structure



With a license
Personal web: Personal web browser Simple Maintenance Tool: Allow to connect Maintenance tool Energy Management license pack: Charge + Energy saving + Peak cut, Energy Monitor Interlock control: Interlock control by AE-200E

Functions

□ : Each unit ○ : Each group ● : Each block △ : Each floor ◎ : Collective × : Not available

Item	Description	Operations	Display
Controllable number of unit	Up to 50 units/50 groups		
ON/OFF	ON and OFF operation for the air conditioning units and general equipment. (To operate general equipment, PAC-YG66DCA is required.)	○◎△●	○◎
Operation mode	Switches between several operation modes depending on the air conditioning unit. Air conditioning unit : Cool/Dry/Auto(*)/Fan/Heat LOSSNAY unit : Heat Recovery/Bypass/Auto CAHV, CRHV, Air To Water (PWFY) units : Heating, Heating ECO, Hot Water, Anti-freeze, Cooling(**) * Auto mode is for CITY MULTI R2 and WR2 series only. ** Only PWFY	○◎△●	○
Temperature setting	Cool/Dry : 19°C (67°F) -35°C (95°F) [14°C (57°F) -30°C (87°F)] Heat : 4.5°C (40°F) -28°C (83°F) [17°C (63°F) -28°C (83°F)] Auto : 19°C (67°F) -28°C (83°F) [17°C (63°F) -28°C (83°F)] The range of temperature depends on the air conditioning unit. [ ] in case of using middle-temperature on PDFY, PEFY-VML/VMR/VMS/VMH-by setting DipSW7-1 to ON. Yet, PEFY-P-VMH-E-F is excluded.	○◎△●	○
Fan speed setting	Models with 4 air flow speed settings : Hi/Mid-2/Mid-1/Low Models with 3 air flow speed settings : Hi/Mid/Low Models with 2 air flow speed settings : Hi/Low Fan speed setting (including Auto) varies depending on the model.	○◎△●	○
Air flow direction setting	Air flow direction angles, 4-angles or 5-angles Swing, Auto (Louver cannot be set)	○◎△●	○
Schedule operation	Weekly schedule can be set by groups based on daily operation pattern.	○◎△●	○
Permit/prohibit local operation	Individually prohibits operation of each local remote controller function. (ON/OFF, Operation mode, Set temperature, Filter sign reset, Air Direction*, Fan Speed*, Timer*) * This function depends on the model.	○◎△●	○
Indoor unit intake temperature	Measures the intake temperature of the indoor unit only when the indoor unit is operating.	×	○
Error	When an error is currently occuring on an air conditioning unit, the afflicated unit and the error code are displayed.	×	□◎
Test run	This operates air conditioning units in test run mode.	○◎△●	○
Ventilation interlock	The ventilation unit (LOSSNAY) is able to automatically start its operation when operation of the interlocked indoor unit starts.	○◎△●	○
External input/output	By using optional external input/output adapter (PAC-YG10HA-E) you can set and monitor the following. Input : By level signal : "Batch ON/OFF", "Batch emergency stop" By pulse signal : "Batch ON/OFF", "Enable/disable local remote controller" Output : "ON/OFF", "Error/Normal"	◎	◎
Energy Management	Bar Graph : Indoor unit Electric Energy, FAN operation time, Thermo-ON time (TOTAL, Cooling, Heating) can be displayed hourly, daily and monthly. Line Graph : Outdoor temp., Room temp., Set temp. (Heating, Cooling) input from PAC-YG63MCA and temp. from AHC.	×	□○●
Advanced HVAC Controller (AHC)	The status of AHC can only be monitored.	×	○
New Smart ME contoroller	The status of sensor on this controller can be monitored.	×	○
Smartphone/Tablet	The specified Web browser on iOS and Android OS can monitor and operate AE-200E. *1	○	○
New Web design	The web screen design is renewed for user friendly interface. *1	○◎△●	○
Initial setting software	The initial setting can be configured without the connection of AE-200E. *1	×	×
Apportionment of power consumption	Apportionment of power consumption can be calculated on AE-200 without TG-2000A. *2	●	□●
BACnet® communication	ANSI/ASHRAE 135-2010 (ISO16484-5) is supported and approved by the BTL. *1	○	×

*1. Please contact your local distributor for when the feature is supported.]
*2. One more AE-50E unit is necessary.

Centralized Remote Controller

Centralized controller EW-50E

NEW



Dual Set Point

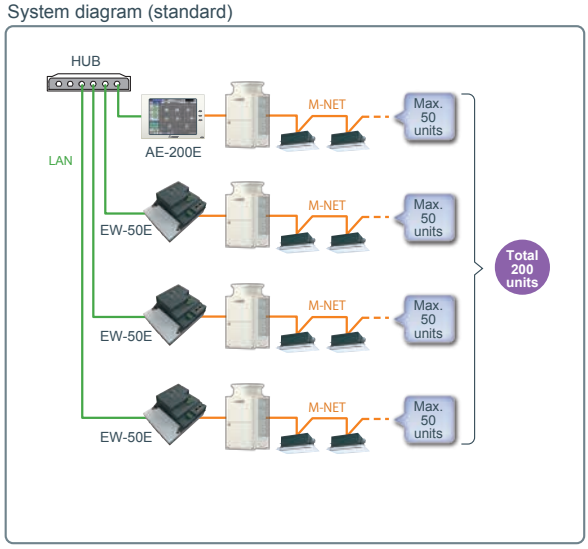
Dimensions: 209(W) x 172(H) x 92(D) mm
: 8-1/4(W) x 6-25/32(H) x 3-5/8(D) in.

Main Features

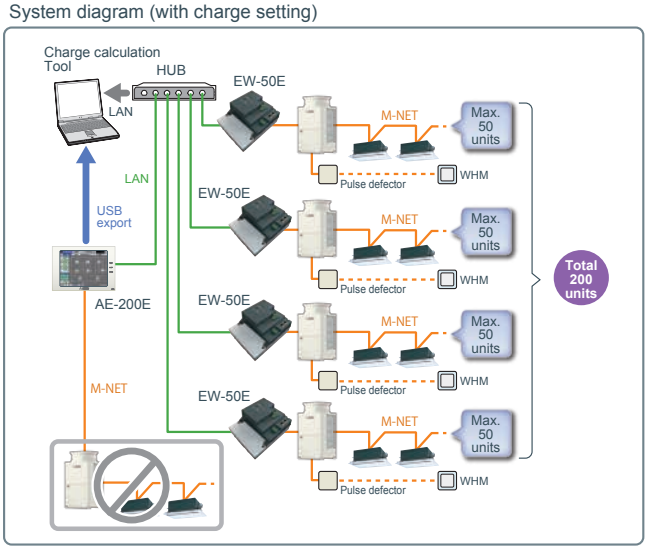
- **Available as the expansion controller for AE-200E**
  Connecting three EW-50E units to an AE-200E makes it possible to operate and monitor a maximum of 200 indoor units.
- **Apportioned electricity charge function**
  The amount of power consumed by the air conditioners is calculated with the use of AE-200E. The calculated data can be output to the PC via USB memory or LAN, and the charge report can be created with the use of the designated charge calculation tool.
  *The apportioned electricity charge function on AE-200E and TG-2000A cannot be used together.
  *To use the apportioned electricity charge function on AE-200E, check that the version of TG-2000A is 6.60 or later, even if the apportioned electricity charge function on TG-2000A is not used.
  *For other restrictions, refer to the Installation Manual and Instruction Book.

System Structure

System diagram (standard)



System diagram (with charge setting)

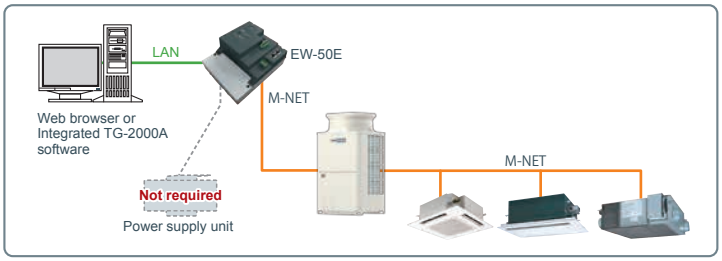


* When M-NET of AE-200E is not used, a maximum of four EW-50E units can be connected.

- **Enabled to operate and monitor air conditioners independently by using a PC**
  Even without an AE-200E, EW-50E is possible to monitor and operate air conditioners using a browser software*1. Via the Internet, air conditioners can be monitored and operated from a remote location. In addition, air conditioners in multiple buildings can be operated collectively.*2

* 1. The operation of this product has been confirmed on Internet Explorer 8, IE9, IE10, and IE11, and on Oracle® Java Ver8.
Microsoft® Internet Explorer is a trademark or registered trademark of Microsoft Corporation in the United States and other countries.
Oracle® and Java® are trademarks or registered trademarks of Oracle Corporation, its subsidiaries, and related companies in the United States or other countries.
Company names and product names in this brochure may be trademarks or registered trademarks of the respective rights holder.

* 2. When connecting an EW-50E via the Internet, do not directly connect the EW-50E to the Internet.
Instead, always connect via a router via a VPN function that can ensure security.
To monitor the indoor units connected to EW-50E, use TG-2000A of Ver. 6.60 or later.



• **Manage air conditioner usage conditions**
It is possible to use a web browser to display the energy consumption of air conditioners in an easy-to-understand manner.





• **Operable without the transmission line power supply unit**
Because the EW-50E unit is equipped with a power supply function, power supply from a transmission line power supply unit is not necessary.
Since power supply from an outdoor unit is also not necessary, self-sustained operation is possible even when the outdoor unit system goes down. (If the power consumption factor exceeds 1.5, a power supply unit is required.)

• **Energy-saving control**
By adding an energy-saving control license (optional product), the set temperature can be changed automatically*1 based on the room temperature surrounding each air conditioner. Therefore, energy-saving control is possible without affecting comfort greatly.

* 1. This function changes the set temperature in units of +2°C for cooling and -2°C for heating by the specified time interval.
If the difference between the suction temperature and the set temperature is significant, it is possible to exclude it from the energy-saving subject.

Functions

* The functions and specifications are subject to change.

◎: By group or multiple groups ○: By group □: Batch only

Item	Remarks	Setting	Display
ON/OFF	Switches to ON or OFF air conditioners and general equipment.	◎	◎
Operation mode switching	Switches to cool, dry, auto, fan, or heat operation. * Depending on the unit, some modes are not available.	◎	○
Room temperature setting	The temperature can be set in the following range. The values inside the parenthesis are for indoor units for medium temperature. * Depending on the model, the setting temperature range differs. · Cooling/dry : 19°C to 35°C (4.5°C to 30°C) · Heating : 17°C to 28°C (17°C to 28°C) · Auto : 19°C to 28°C (17°C to 28°C)	◎	○
Set temperature 0.5°C increments	The temperature can be set and displayed in 0.5°C increments. * With some unit combinations, the temperature is set in 1°C increments.	◎	○
Fan speed setting	The fan speed can be set to 4 levels, 3 levels, 2 levels or automatic. * Available fan speeds differ depending on the unit.	◎	○
Air direction setting	Fixed swing in five levels or auto air direction can be set. * Available air directions differ depending on the unit.	◎	○
Prohibition of local remote controller operation	It is possible to disable the ability to use to local remote controller to run or stop, the operation mode, set temperature, filter sign reset, wind speed, wind direction and timer operation. * In the Lossnay group, only ON/OFF and filter reset can be disabled. * Disabling of the fan speed, air direction, and timer operation can be set for the PAC-SF50AT, PAR-36MA, PAR-F30ME, and PAC-YT52CR models.	◎	○
Room temperature display	Displays the suction temperature of the indoor unit.	—	○
Error display	Displays the current error content together with the address.	—	◎
Schedule operation	Today/weekly/weekly by season/yearly Setting content: ON/OFF, operation mode, set temperature, disable local remote controller, air direction/fan	◎	○
Energy management	Displays the power consumption* or operating hours. * Requires an optional part.	—	◎
Ventilator operation (solo)	Group operation can be possible for free plan Lossnay units only. * The above group operation mode includes auto ventilation, heat exchange, and normal ventilation.	◎	○
Ventilator operation (interlocked)	Free plan Lossnay units and indoor units can be interlocked and operated together. * At this point, air volume can be operated but the ventilation mode cannot be selected.	◎	○
External input (timer connection, emergency stop input, etc.)	Using a level signal or pulse signal, it is possible to input the following. Level signal: Emergency Stop Input, Batch ON/OFF, and Demand Input. Pulse signal: Batch ON/OFF or Operation Disable/Enable * Requires an external power supply and separately sold external I/O adapter (PAC-YG10HA). Of the above inputs, only one input can be selected.	□	—
External output (error output, operation output)	Using the level signal, ON/OFF and Error/Normal are output. *Requires an external power supply and separately sold external I/O adapter (PAC-YG10HA).	—	□
Web browser	Monitor/operation, failure, filter sign monitoring, schedule setting, interlocked control setting (option), energy saving control setting (option), energy saving peak cut setting (option), set temperature range restrictions, other	◎*1	◎*1
Filter reset	Filter sign reset	○	○
Connectable location	Centralized system transmission line: Connectable Recommended Indoor and outdoor transmission line: Connectable	—	—

* The functions and specifications differ depending on the connected equipment and model.
* Electric energy can be proportionally divided using the EW-50E alone.
But the apportioned electricity charge function requires an AE-200E or TG-2000A.

■Notes
* 1. Some items do not support the multi group setting and display.
* 2. Use only items for which the unit has the function.

■Connectable equipment: Free plan direct expansion system air conditioner
Inverter air conditioner for facility
Package air conditioner for facility (the AW control model can be connected using an M control compatible indoor unit)
A Control Mr. Slim (Can be connected using an M-NET adapter or special outdoor unit)
Kirigamine room air conditioner (Requires a system control interface or M-NET control interface)
Free plan Lossnay/Lossnay with heating and humidification
Independent humidification unit *2
Environmental measuring controller, metering measurement controller, general interface

Centralized controller EB-50GU-J



EB-50GU-J (without display)
• Dimensions:9-7/8 (W) x 8-9/16 (H) x 3-7/8 (D) in.
:250 (W) x 217 (H) x 97.2 (D) mm

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The Web Server Function enables Remote Operation or Scheduling Via a Web Browser on a Personal Computer!
Up to 50 indoor units can be controlled!

Web Browser

Enables monitoring and operation of indoor units using a PC with Microsoft® Internet Explorer (Ver.8 or Ver.9)

*When connecting to the Internet, please use the VPN (Virtual Private Network).

Using "Dial-up Connection"

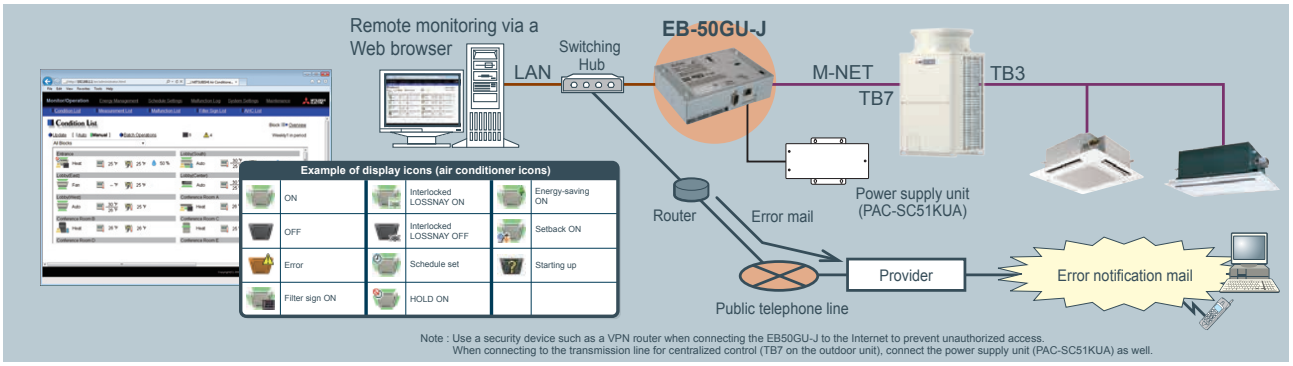
- Enables monitoring and operation from a remote place
- Enables error notification by e-mails to a PC or to a mobile phone

□:Each unit ○:Each group ●:Each block △:Each floor ◎:Collective ×:Not available

Function	Description	Operations	Display
ON / OFF	ON and OFF operation for the air conditioner units	○●◎	○◎
Mode selection	Switches between COOL/DRY/FAN/AUTO/HEAT	○●◎	○
Temperature setting	The temperature can be set within the following range. Cool/Drying: 67°F - 95°F/19°C - 35°C Heat: 40°F - 83°F/4.5°C - 28°C Auto (single set point): 67°F - 83°F/19°C - 28°C Auto (dual set points) [Cool] Same as the set temp. range for Cool mode. [Heat] Same as the set temp. range for Heat mode. *The settable temperature ranges and items vary depending on the indoor and outdoor unit models.	○●◎	○
Air flow direction setting	Air flow direction angles, 4-angle or 5-angle Swing, Auto (Louver cannot be set)	○●◎	○
Timer operation / Schedule	Annual/Weekly (5 types)/today schedule can be set for each group of air conditioning units. Optimized startup setting is also available.	○●◎	○
Permit / Prohibit function	Individually prohibit operation of each local remote control function	○●◎	○
Indoor unit intake temperature	Measures the intake temperature of the indoor unit only when the indoor unit is operating.	×	○
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed.	×	□
Test run	This operates air conditioner units in test run mode.	○◎△●	○
Ventilation interlock	Operation of indoor groups or general equipment can be interlocked by the change of state (ON/OFF, mode, error of indoor groups and general equipment).	○	○
AHC status	Displays the status of input and output ports of each Advanced HVAC CONTROLLER (AHC).	×	□
Energy Use Status	On the Energy Use Status screen, the energy-control-related status, such as electric energy consumption, operation time, and outdoor temperature, can be displayed in a graph. Operators can check the detailed status of given indoor units by specifying the date to display the data per group, block, or unit address.	×	□○●

*NOTE: Operation and displayed content vary depending on the indoor unit model.

System Structure (image)

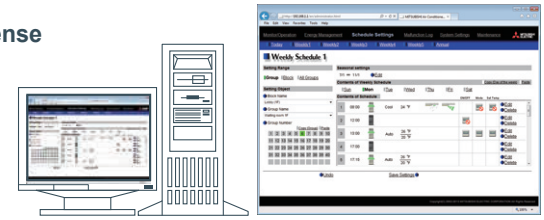


Note : Use a security device such as a VPN router when connecting the EB50GU-J to the Internet to prevent unauthorized access.
When connecting to the transmission line for centralized control (TB7 on the outdoor unit), connect the power supply unit (PAC-SC51KUA) as well.

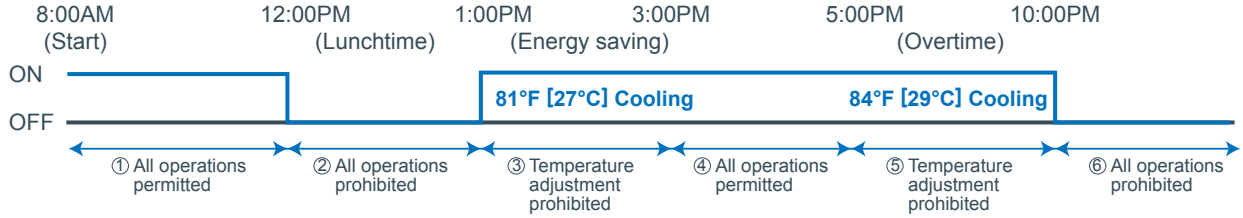
Annual / Weekly Schedule

Enables Weekly and Annual scheduling with a registering license

- The operations that can be scheduled for air conditioning unit group: ON/OFF/Optimized Start, Mode, Set Temp, Air Direction, Fan Speed, and Prohibit Remote Controller operation
- For annual schedule, it is possible to set 50 day-long settings up to 24 months into the future.



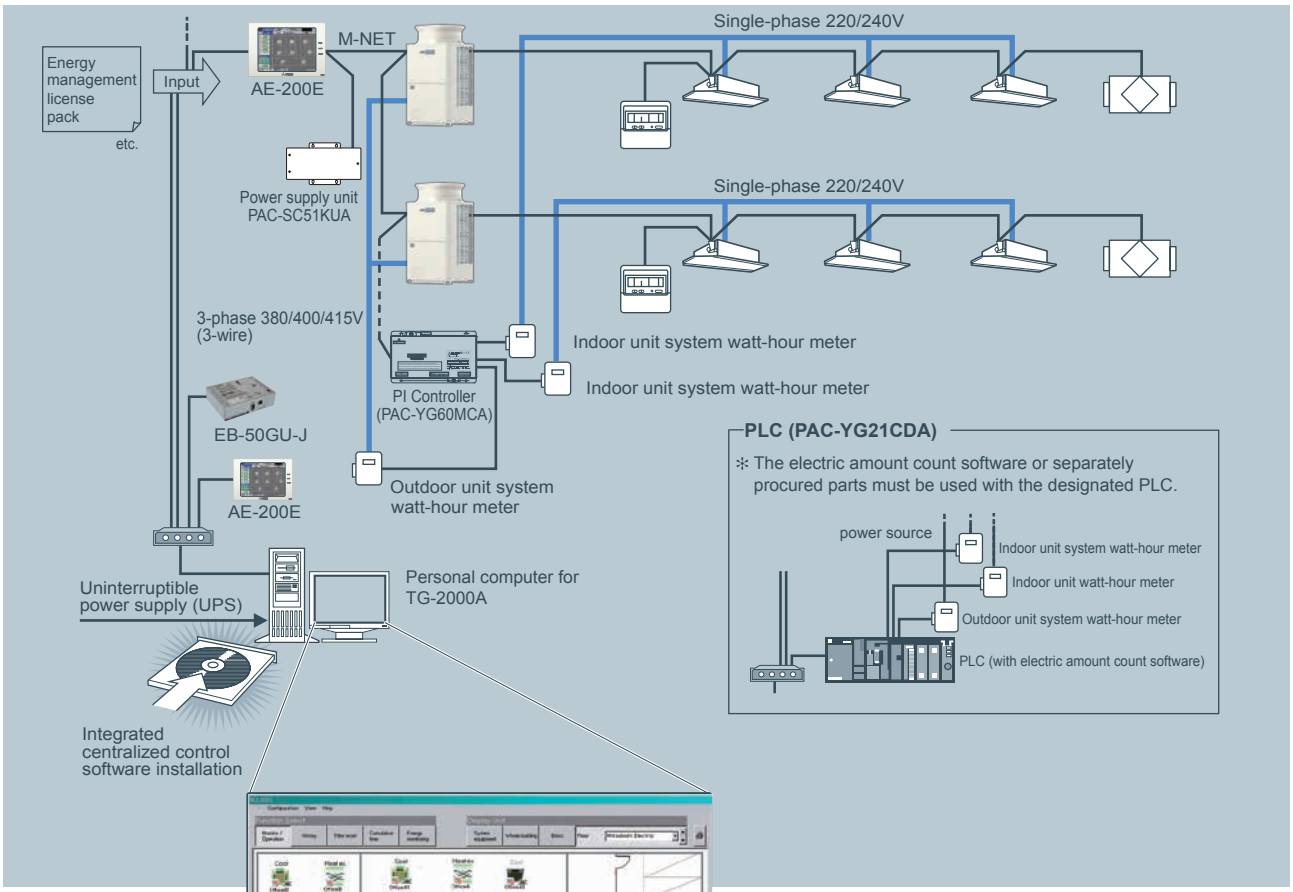
Scheduling example in the office

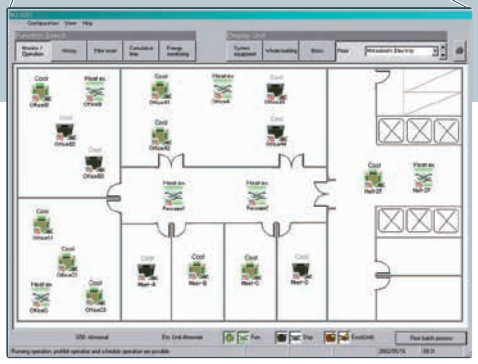


Up to 12 operation settings per day in 1-minute increment

Integrated centralized control software TG-2000A

Example of Basic System Configuration





The air-conditioning layout can be displayed on the screen, making control and operation easier.

Effective use of TG-2000A

Multiple air conditioning charges in multiple buildings can be calculated. The power apportionment percentage data and apportioned power rate can be calculated for each unit, and can be output as a CSV file.

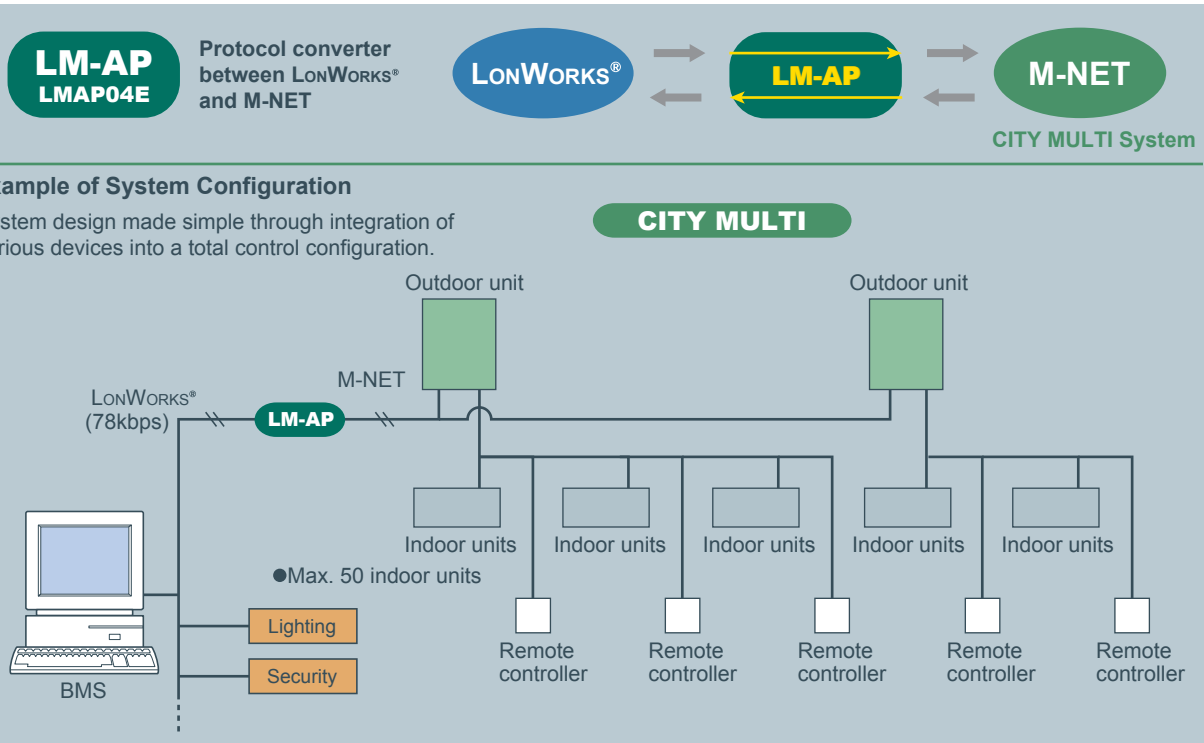
For example, installing TG-2000A to the system in the headquarters makes it possible to control AE-200E, AE-50E, EW-50E, AG-150A, or EB-50GU-J units that are used in branch offices. (Version 6.60 or later)

LonWorks® (LMAP04E)

CITY MULTI can easily combine into a Building Management System (BMS) via the LonWorks® and M-NET adapter LMAP04. LonWorks® is an opened transmission protocol widely used at BMS, and related equipment control. CITY MULTI is therefore compatible with large-scaled BMS management via LonWorks®.

Dual Set Point

One LM ADAPTER unit can connect up to 50 Groups/50 indoor units.
Using a single LonWorks® adapter (LM-AP), you can connect up to a maximum of 50 indoor units.



LonWorks®
The building management system is connected to the CITY MULTI air conditioning system using LonWorks®, which is widely used on field networks, allowing for an open network and savings in construction to face.

Lon, LonWorks® and the Echelon logo are trademarks of Echelon Corporation registered in the United States and other countries.

LonWorks® INTERFACE

FUNCTION	CONTENT
Control	
ON/OFF	Switches between ON and OFF
Mode Operation	Cooling/Drying/Heating/Auto/Fan
Setpoint Adjustment	Cooling 19-35°C, Heating 4.5-28°C, Auto 19-28°C
Fan Speed Control	Lo-Mi1-Mi2-Hi
Permit/Prohibit	ON/OFF, Mode, Setpoint
Emergency Stop	-
Monitoring	
ON/OFF	Switches between ON and OFF
Mode	Cooling/Drying/Heating/Auto/Fan
Setpoint	Cooling 19-35°C, Heating 4.5-28°C, Auto 19-28°C
Fan Speed	Lo-Mi1-Mi2-Hi
Permit/Prohibit	ON/OFF, Mode, Setpoint
Alarm State	-
Room Temperature	-10°C~50°C
Thermo ON/OFF	ON/OFF

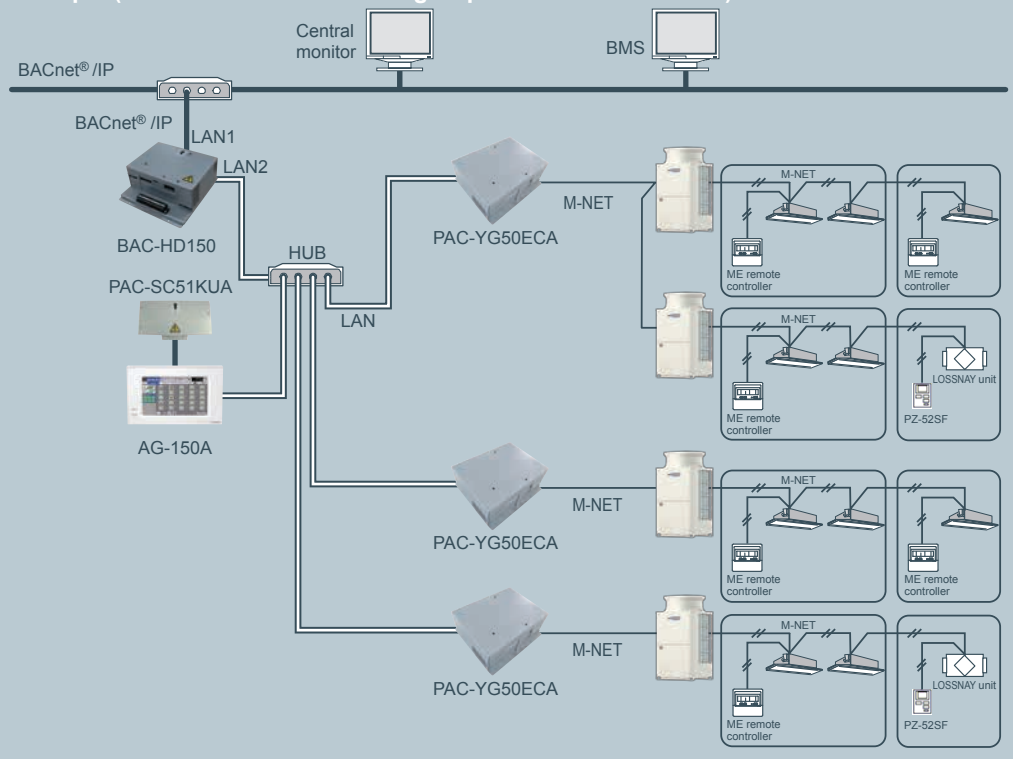
BACnet® (BAC-HD150)

CITY MULTI can easily combine into a Building Management System (BMS) via the BACnet® and M-NET adapter BAC-HD150. BACnet® is an opened transmission protocol widely used at BMS, and related equipment control. CITY MULTI is therefore compatible with large-scaled BMS via BACnet®.

Dual Set Point

BAC-HD150 can control up to 50 units/groups (including LOSSNAY).
Up to 150 units/groups (including LOSSNAY) can be controlled from one BAC-HD150 with three expansion controllers PAC-YG50ECA. (50 units/PAC-YG50ECA)
When the dual-set-point function is used, no expansion controllers can be connected, and only up to 50 units/groups can be controlled from each BAC-HD150.

System example (Connection of 150 units / groups with PAC-YG50ECA)



BACnet® and M-NET adapter

FUNCTION	CONTENT
Operation	
ON/OFF	Switches between ON and OFF
Mode	Cool/Dry/Heat/Auto/Fan
Fan Speed	Low-Mid1-Mid2-Hi
Airflow Direction	Horizontal- 60°-80°-100°swing
Set Temperature	Cooling 19-35°C [67-95°F], Heating 4.5-28°C [40-83°F], Auto 19-28°C [67-83°F]
Filter Sign Reset	Normal/Reset
Permit/Prohibit	ON/OFF, Mode, Filter sign reset, Set temp.
Forced OFF	Release/Effective
Monitoring	
ON/OFF	Switches between ON and OFF
Mode	Cool/Dry/Heat/Fan
Fan Speed	Low-Mid1-Mid2-Hi
Air Direction	Horizontal- 60°-80°-100°swing
Set Temperature	Cooling 19-35°C [67-95°F], Heating 4.5-28°C [40-83°F], Auto 19-28°C [67-83°F]
Filter Sign	Normal/Reset
Permit/Prohibit	ON/OFF, Mode, Filter sign reset, Set temp.
Indoor Temperature	-
Alarm Signal	Normal/Abnormal
Error Code	2 Character code- Indicates all unit alarms
Communication State	Normal/Abnormal

eco Changes for a greener tomorrow

Eco Changes is the Mitsubishi Electric Group's environmental statement, and expresses the Group's stance on environmental management. Through a wide range of businesses, we are helping contribute to the realization of a sustainable society.

The Air Conditioning & Refrigeration Systems Works acquired ISO 9001 certification under Series 9000 of the International Standard Organization (ISO) based on a review of Quality management for the production of refrigeration and air conditioning equipment.

ISO Authorization System
The ISO 9000 series is a plant authorization system relating to quality management as stipulated by the ISO. ISO 9001 certifies quality management based on the "design, development, production, installation and auxiliary services" for products built at an authorized plant.

FM33568 / ISO 9001;2008

The Air Conditioning & Refrigeration Systems Works acquired environmental management system standard ISO 14001 certification.

The ISO 14000 series is a set of standards applying to environmental protection set by the International Standard Organization (ISO).
Registered on March 10, 1998.

EC97J1227 051

⚠Warning

■Do not use refrigerant other than the type indicated in the manuals provided with the unit and on the nameplate.
- Doing so may cause the unit or pipes to burst, or result in explosion or fire during use, during repair, or at the time of disposal of the unit.
- It may also be in violation of applicable laws.
- MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.

■Our air-conditioning equipments and heat pumps contain a fluorinated greenhouse gas, R410A.

MITSUBISHI ELECTRIC CORPORATION

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