MITSUBISHI ELECTRIC

Changes for the Better

AIR CONDITIONING SYSTEMS

CITY MULTI



City Multi is ponieer in VRF Technology Mitsubishi Electric continues to grow through smart innovations.

Today's Buildings need to provide or much more than just a comfortable space for occupants. Regulations & stringent environmental tragets on carbon emission means building owners needs future proof tech that not only reduces running cost but also improves indoor air quality & provide optimal efficiency.

Mitsubishi Electric is a global, market leading environmental technologies manufacturer. The Living Environment Group are continually pioneering solutions that cool, heat, ventilate and control our buildings in some of the most energy efficient ways possible.

We believe that global climate challenges need local solutions. We aim to help individuals and businesses reduce the energy consumption of their buildings and their running costs.

Providing accurate and controlled comfort all year round, our air conditioning range can work on their own or in conjunction with other systems in a hybrid solution. Whatever the requirement, we offer a solution that matches the needs of almost any building.

At Mitsubishi Electric we have evolved, and today we offer advanced environmental systems that really can make a world of difference.



Developed in Japan

Mitsubishi Electric is renowned globally and is a household name with a solid reputation for excellent products and services. The company was founded in 1920 and is known by its present name: Mitsubishi Electric. Since our founding, we have risen to the top level of the air conditioning industry and we continue to maintain that position. The company is proud of its achievements in providing some of awarded systems on the market.

History of CITY MULTI



1984 Japan
Launch of the CITY MULTI series of variable refrigerant flow (VRF) air-conditioning systems.

1992
Export of CITY MULTI begins.

2010 Overseas



2014 Overseas





2019 Overseas
Key parts are improved to create high performance modules.



2024 Overseas
The latest in the series achieves even higher energy efficiency.

Reliable modules appreciated

* The models for Japan were awarded.

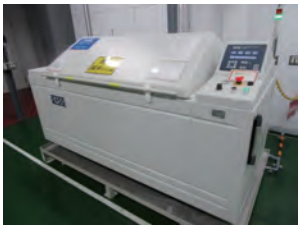
1991	CITY MULTI R2-Series (awarded "Technical Prize" by Japan Society of Refrigerating and Air Conditioning Engineers)*
2000	City Multi R2 New Refrigerant Series (awarded "Chairman Prize" of ECCJ)*
2007	"Replace Multi Air Conditioner" (awarded "Chairman Prize" by Japan Institute of Invention and Innovation)*
2010	"Replace Multi Air Conditioner" (honored by Minister of Education, Culture, Sports, Science and Technology in the science and technology category)
2011	Ceiling concealed reheat indoor unit "PEFY-AF1200CFM(R)" for North America (awarded "Product of the Year" prize at AHR Expo 2011)
2015	"Grand Multi Air Conditioner 2015" (awarded "Technical Prize" by Japan Society of Refrigerating and Air Conditioning Engineers)*
2017	City Multi Hybrid VRF (awarded "Air Conditioning Product of the Year" prize at The ACR News Awards 2017)

Creating high-quality products with cutting-edge technologies and professional people who have deep experience in the development factory

All models of CITY MULTI to be exported around the world are examined at the development factory to ensure that they can withstand the environmental conditions in each region, and products that have passed the quality check are supplied. The marketing, unit design and quality control departments put together a team to work on developing high-quality products. Also the parts used in the units are checked for quality. We have determined the evaluation criteria for more than 300 parts and use only those that have passed the durability and safety tests.

Salt spray test

A sodium chloride solution is sprayed on the part to be tested and evaluated, and the rust generated on the surface is observed to evaluate the corrosion resistance.
In accordance with JRA90021, the standard models and BS models are subjected to this salt spray test for 480 hours and 960 hours respectively.



Heat shock test

The part is exposed to repeated temperature changes to verify its resistance to changes in ambient temperature.



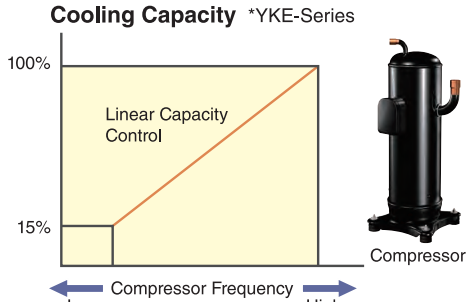
All parts for CITY MULTI have been checked for quality and reliability.

Energy saving performance

The advantage of CITY MULTI from Mitsubishi Electric is its high energy efficiency, which leads to increased energy savings.
The energy-saving performance of CITY MULTI has been improved to a high level within the industry through technical innovation.

Smart control for saving energy

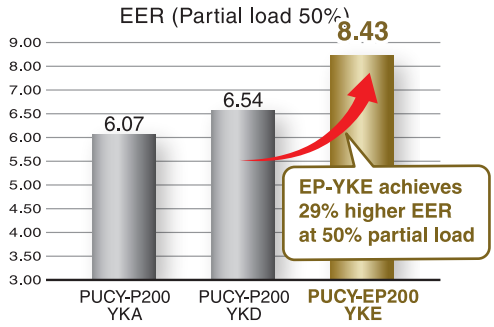
The compressor varies its speed to match the indoor cooling or heating demand, thus it only consumes the amount of energy required. When an inverter driven system is operating at partial load, the energy efficiency of the system is significantly higher than that of a standard fixed speed, non inverter system.

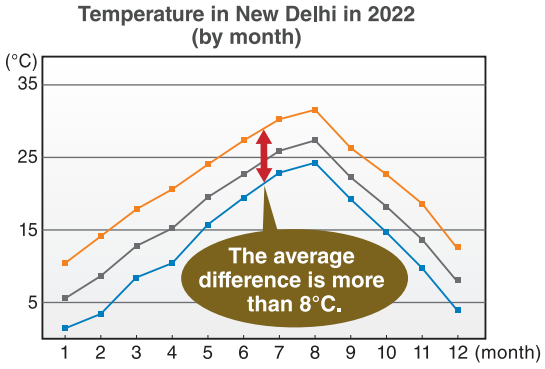


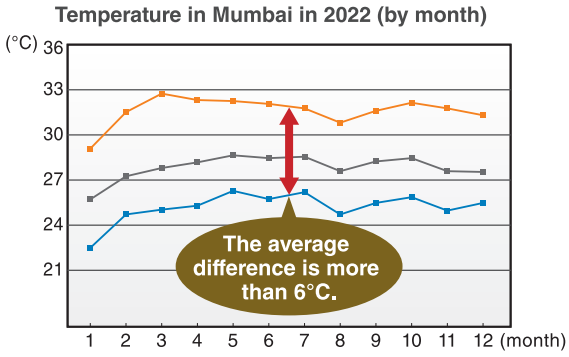
* Values vary depending on actual conditions, such as ambient temperature.

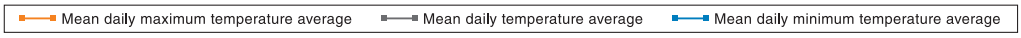
The importance of partial-load efficiency

The energy efficiency ratio (EER) is an index calculated at an ambient temperature of 35°C [95°F]. Actually, the temperature difference between day and night is large, even on hot days.Therefore, it is important to save energy across various temperatures where the EER cannot be measured perfectly. **CITY MULTI can achieve true energy savings by improving efficiency not only under rated conditions, but also under partial-load conditions.**



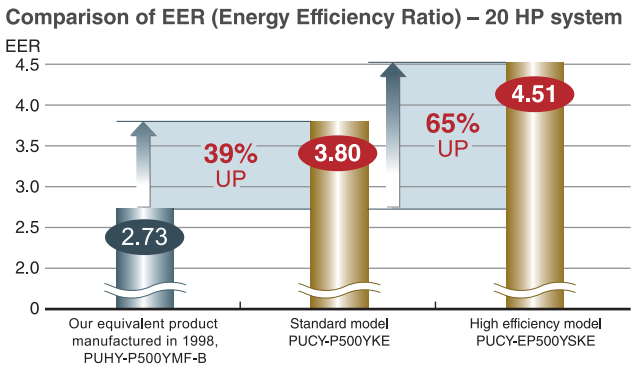






High rated performance

CITY MULTI's distinct advantage is its high energy efficiency, which leads to increased energy savings. One of the industry's highest level of energy-saving performance has been achieved through technical innovation.

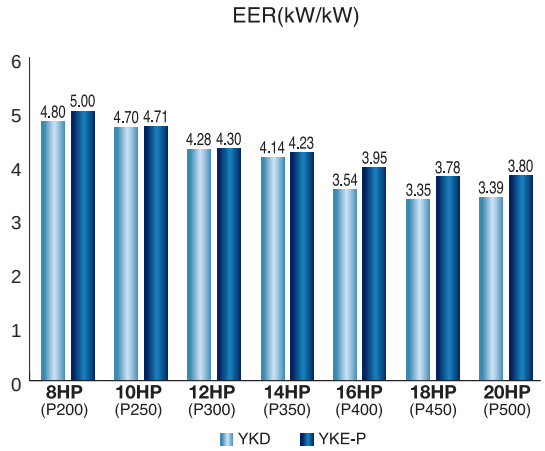


Higher EER ratings

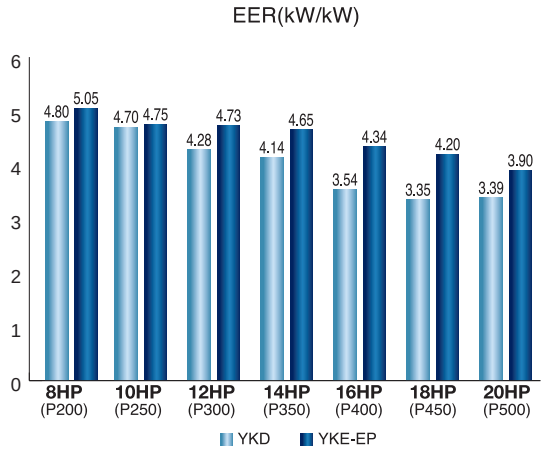
Improved ratings for all models

Compared to conventional products (YKD series), the YKE series achieves improved EER in all models and heat pump models from 8 to 60HP.

PUCY-P Standard (Cooling only)



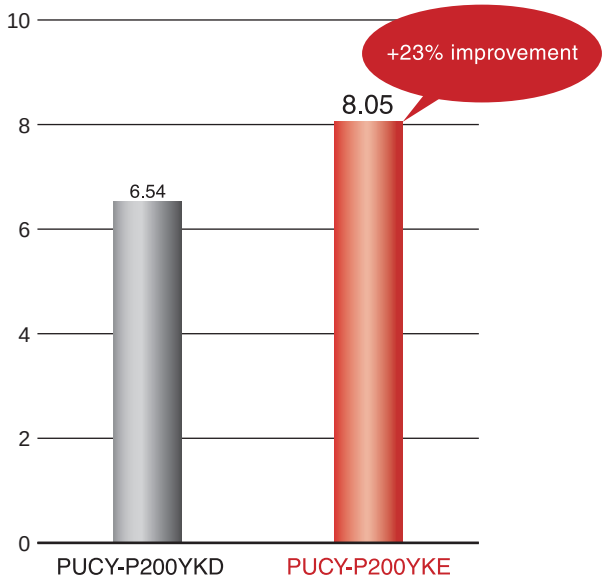
PUCY-EP High efficiency (Cooling only)



High partial-load performance

At times when the temperature difference between daytime and morning/evening is large, efficient operation also under low-load conditions is important. The multi-port design of the compressor helps to improve partial-load efficiency compared to conventional models, enabling highly efficient operation throughout the year, including season changeover periods.

EER
(Partial load 50%)

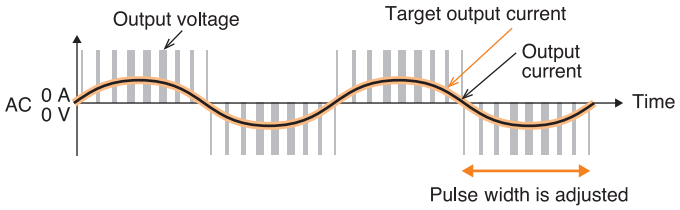


PWM control

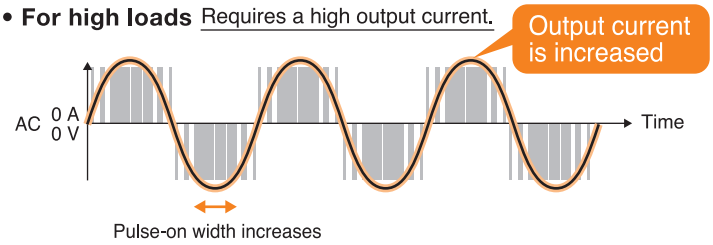
PUCY P | PUCY GP | PUCY EP | PUHY P | PUHY EP

PWM is used to control the number of motor revolutions according to operational load. It varies the inverter pulse width (electric signal wave occurring over a short period) to control the output. Optimal control of electrical current is required according to operation.

- **For low loads** Does not require a high target output current.



- **For high loads** Requires a high output current.



To achieve the target output current, the intervals at which the "pulse" signal is turned on are controlled to adjust the output current.
At low load time, the pulse-on width is minimized to save energy.

The increased pulse-on width increases both the duration that the voltage is applied and the amount of electrical current compared to the low load time, and accelerates the rotation speed of the compressor from 60 rps to 120 rps.*

*The number of compressor rotations differs depending on the usage condition.

The ability to adjust the pulse range and output current to suit a given load increases the operating range of the unit.

Further enhanced energy savings

Energy saving assist function

In addition to the basic energy saving design, energy saving assist functions can be activated easily via DIP switch settings. This allows matching the equipment to various installation patterns.

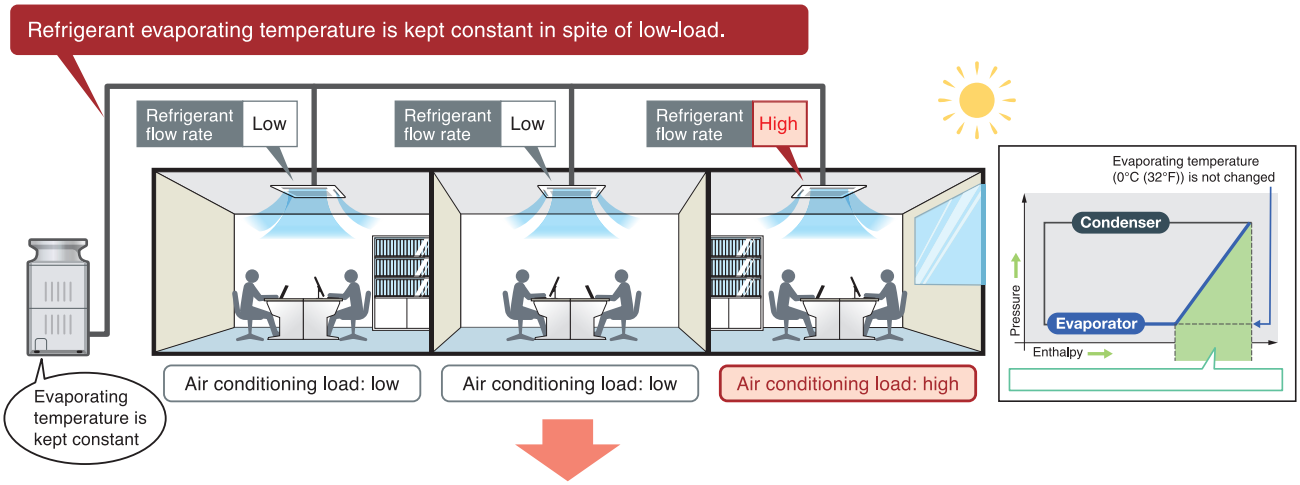
Evaporating temperature control

PUCY P PUCY GP PUCY EP PUHY P PUHY EP

During cooling operation, the temperature of the refrigerant can be controlled according to the air conditioning load. This helps energy efficient operation.

Normal mode

The evaporating temperature is kept constant regardless of the load. Even at low loads, the normal evaporating temperature does not change, which leads to energy waste during partial load operation.



Smart evaporation temperature control mode

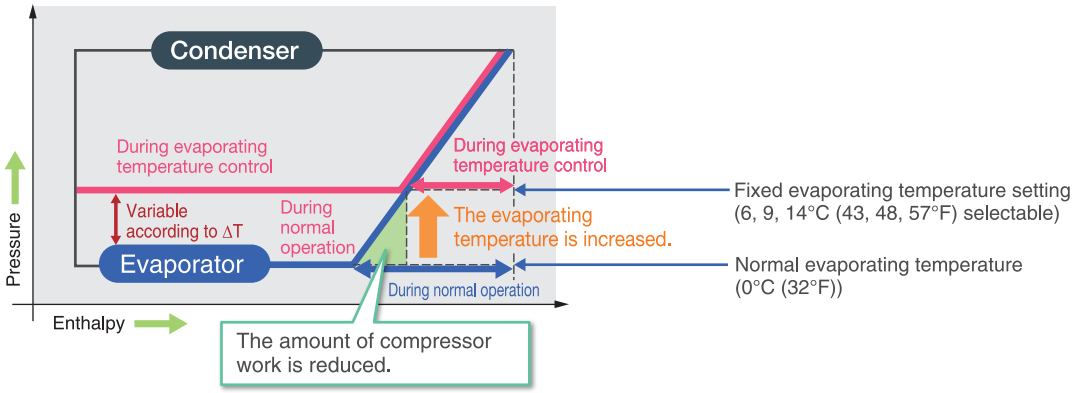
The YKE and YKD series supports evaporating temperature control which adjusts the refrigerant evaporating temperature. Two control methods are available: fixed control and automatic shift control.

* Changing the evaporating temperature is achieved by changing DIP switch settings on the outdoor unit. Refer to "Evaporating temperature setting method" and the Service Handbook for details.
* Raising the evaporating temperature will lower the latent heat processing capability. Select the appropriate mode for the installation location, taking factors such as ambient temperature into consideration.

1. Fixed control

The target evaporating temperature is changed and controlled to be constant. Selecting an evaporating temperature that is higher than for normal cooling will reduce the load of the compressor and improve operation efficiency.

• Concept of evaporating temperature control (fixed control)



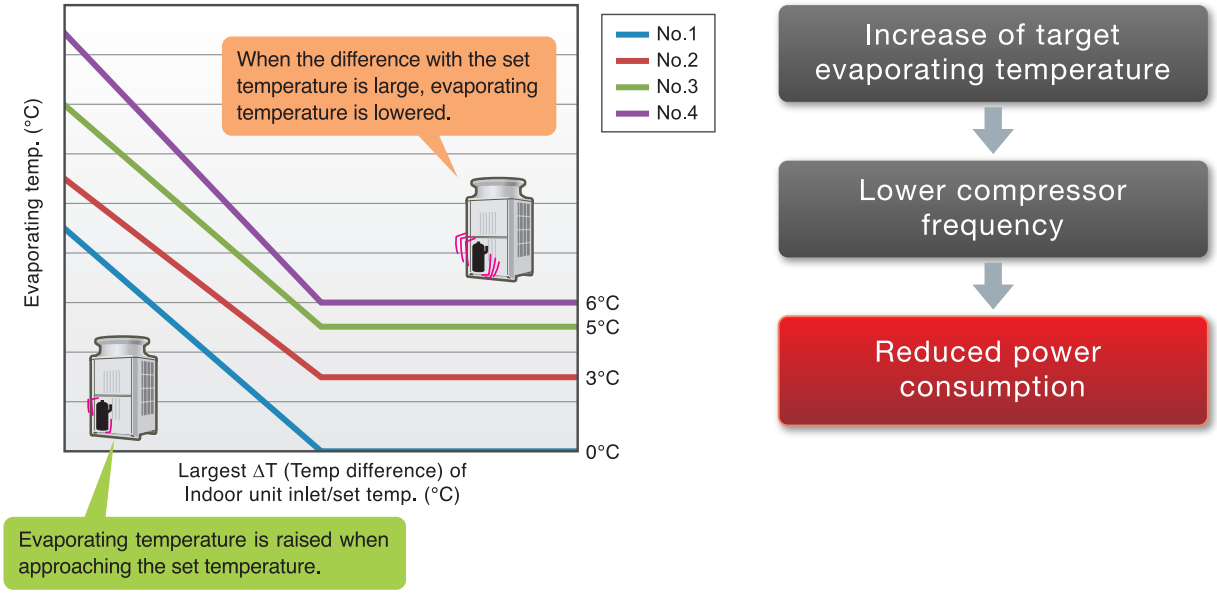
* Because evaporating temperature will constantly be higher, cooling capacity is reduced, which may result in the room not reaching the set temperature.
* To change the evaporating temperature setting, it is necessary to change the setting of the DIP switch on the outdoor unit.

2. Automatic shift control

Evaporating temperature is shifted according to the air conditioning load (ΔT). When approaching the set temperature, evaporating temperature is raised to reduce compressor workload and save energy. Four control patterns can be selected.

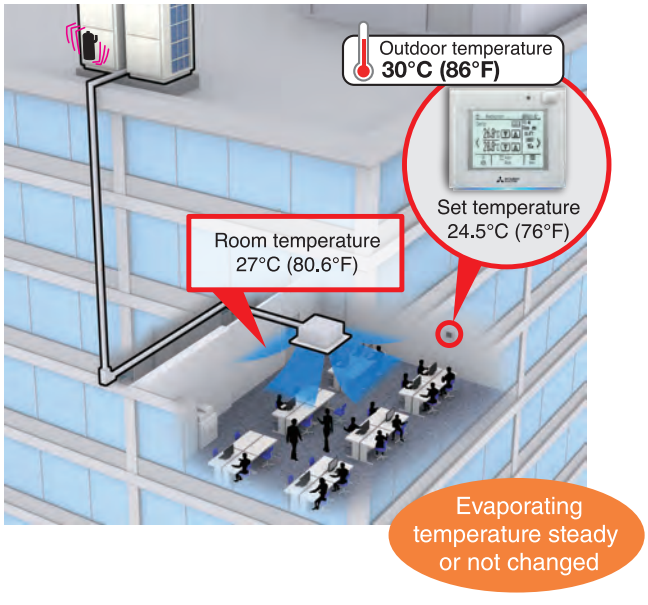
• Concept of evaporating temperature control (automatic shift control)

4 patterns for setting target evaporating temperature

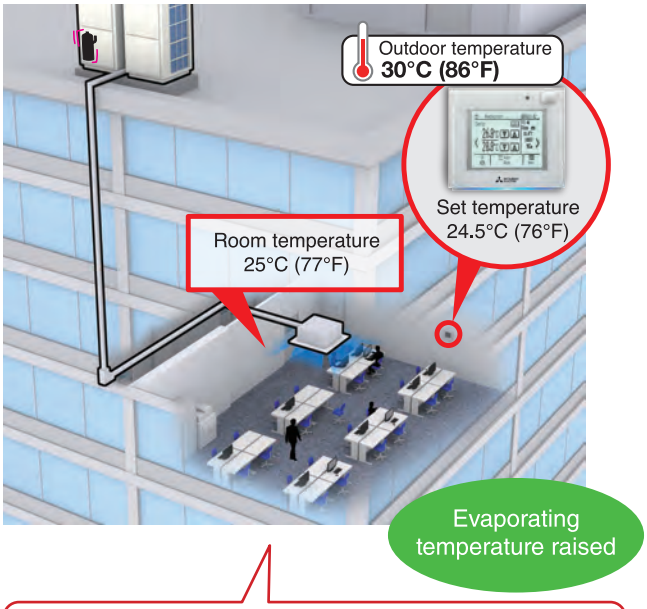


*1 To activate evaporating temperature control, use terminal external input.
*2 To change the evaporating temperature setting, it is necessary to change the setting of the DIP switch on the outdoor unit.

High load At start of operation / With many people inside the room



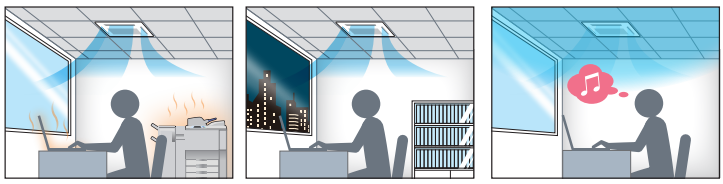
Low load As room temperature approaches set temperature



Evaporating temperature is changed according to the difference between room temperature and set temperature.

Suitable situations

(1) Locations with mainly sensible heat load by OA equipment (offices and similar)
(2) Relatively low-load conditions during air conditioning season (mornings or nights)
(3) When higher temperature of discharge air is desired in windy conditions



Cooling capacity at high outdoor air temperatures

1. Cooling operation possible up to intake temperature of 52°C

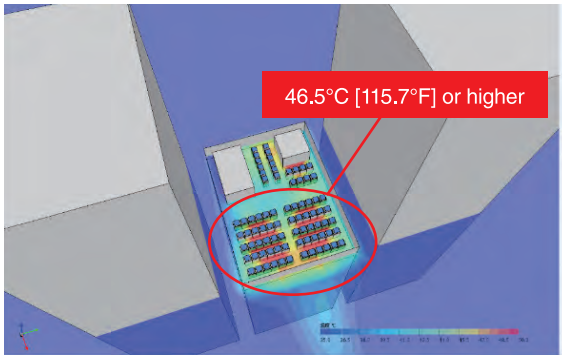
PUCY P PUCY GP PUCY EP PUHY P PUHY EP

In built-up areas with a high density of buildings, winds may be blocked, causing an accumulation of warm air in the vicinity of the outdoor unit. Because the operation range of the YKE series has been guaranteed up to 52°C (126°F), operation will remain stable even in such situations.

Example of flow analysis

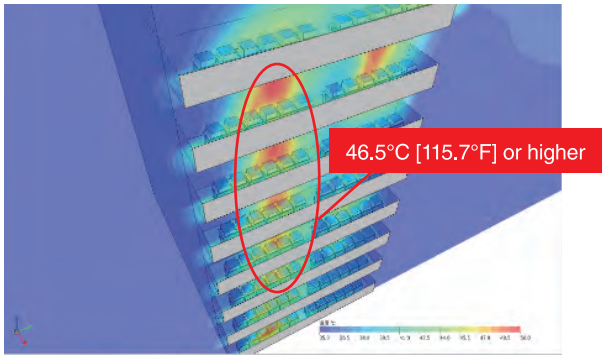
■Conditions : Outdoor air temperature = 35°C (DB), Room temperature = 27°C (DB)

Built-up area with buildings and outdoor units

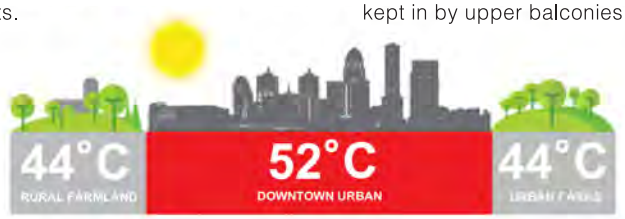


If the passage of air is blocked in a built-up area, the high-temperature air discharged from the outdoor units may be kept around the units.

Installation on each floor a high-rise building



When the outdoor units are installed on balconies, the high-temperature air discharged from the units may be kept in by upper balconies.

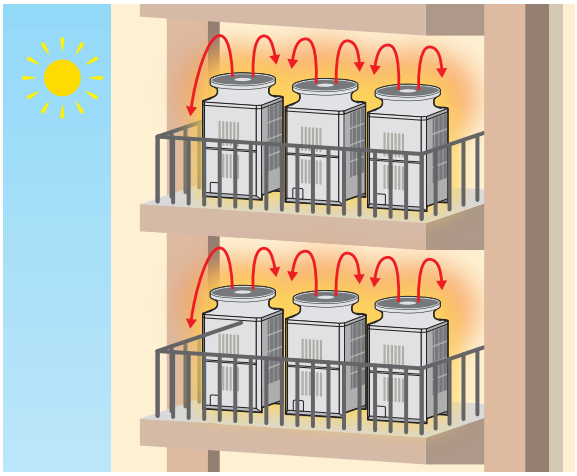


Temperatue range for cooling

PUHY-P YKD *PUCY-P YKD	-5°C [23°F] 10°C [75°F]	up to	52°C [125°F]

Suitable situations

Installation in locations such as on balconies or between buildings, where high-temperature air may tend to accumulate.





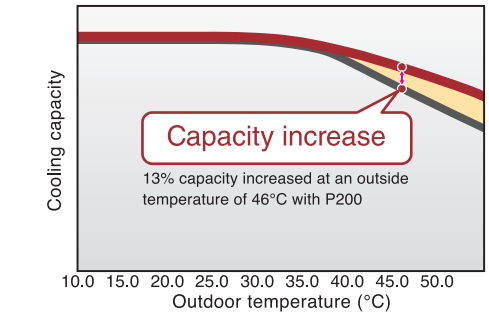
2. Cooling operation assist function

Capacity assist mode

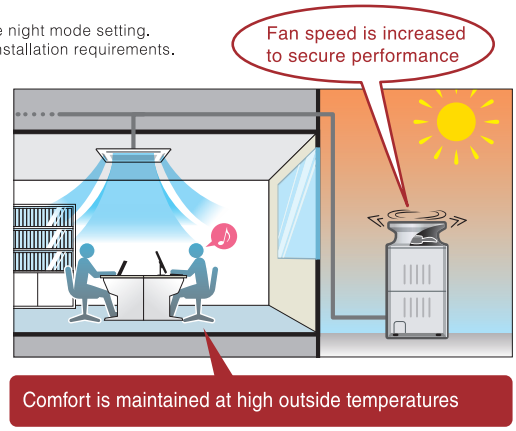
During cooling operation at high outside temperatures, cooling capacity tends to be decreased. The YKE and YKD series provides capacity assist mode where the fan speed is automatically raised when the outside temperature reaches or exceeds around 38°C. This prevents a drop in cooling capacity during operation at high outside air temperatures. Comfort is improved, thanks to continued high performance of the unit.

* Requires a DIP switch setting
* This function will be disabled when the unit is set to the outdoor high static pressure setting or to the night mode setting. The outdoor unit will make more noise due to an increased airflow. Choose the mode according to installation requirements.

Cooling capacity, with indoor units running at 100%



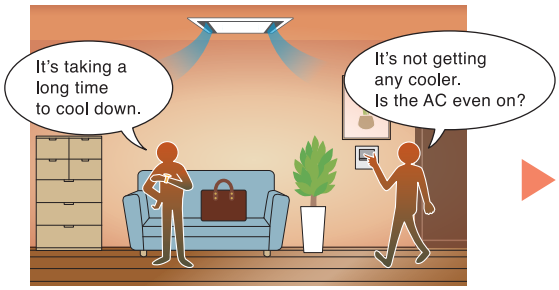
Capacity assist mode Standard mode Indoor condition (27°CDB/19°CWB)



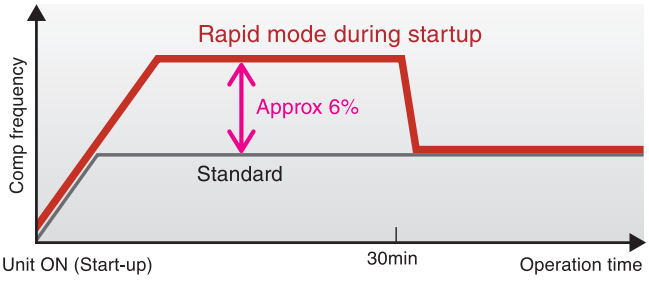
Rapid mode during startup (Quick-start up)

The rotation speed of the compressor can be raised during the first 30 minutes after cooling startup, to quickly establish comfortable conditions when returning home or at the start of a workday.

* Requires a DIP switch setting
* Selecting this mode may increase operation noise. Choose the mode according to installation requirements.



The room does not cool off very quickly, and it takes a while before the room becomes comfortable.



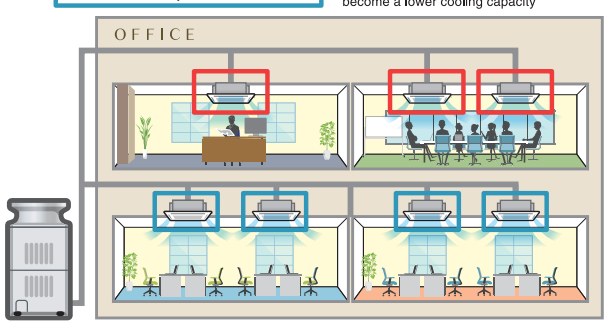
Priority Cooling Function

The cooling priority function enables the assurance of optimal comfort within designated spaces.

* Up to 3 indoor units can be priorizied
* Maximum 20% capacity of thermo-ON indoor units

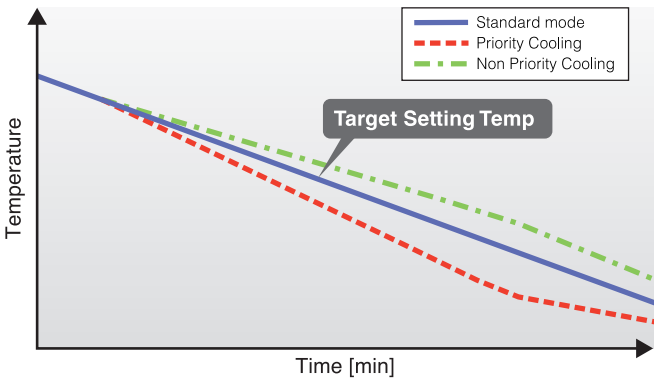
Priority Indoor Units
Non-Priority Indoor Units

* The room temp with Priority Cooling Indoor Units decreases faster
* Capacity with Non-priority cooling Indoor unit become a lower cooling capacity



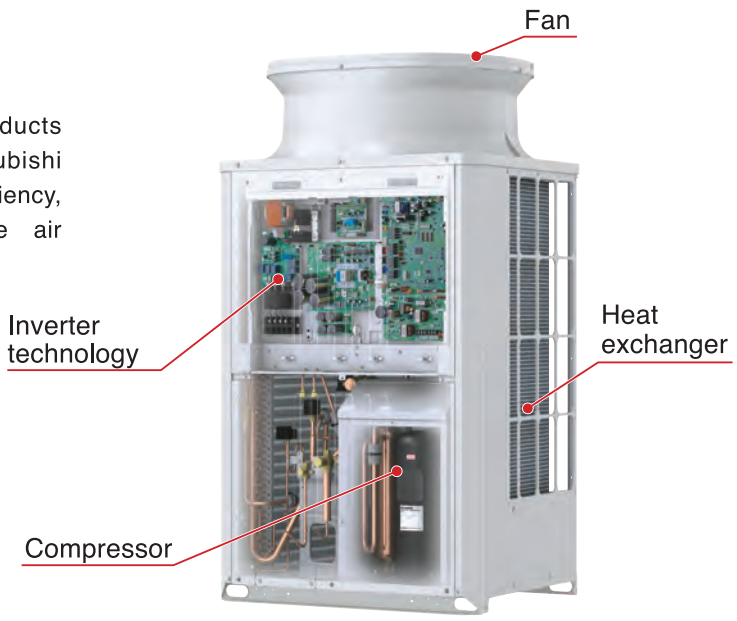
Indoor units located in rooms which requires to be cooled down quickly can be selected for priority cooling.

Priority Cooling Temperature transition image



Key Technologies

All major parts of YKE and YKD series products reflect technological excellence of Mitsubishi Electric. This results in high energy efficiency, enhanced cooling capacity at high outside air temperatures, and further improved reliability.



Inverter technology

As a manufacturer of general electric equipment, our inverter-related components are developed and manufactured using Mitsubishi Electric technology.

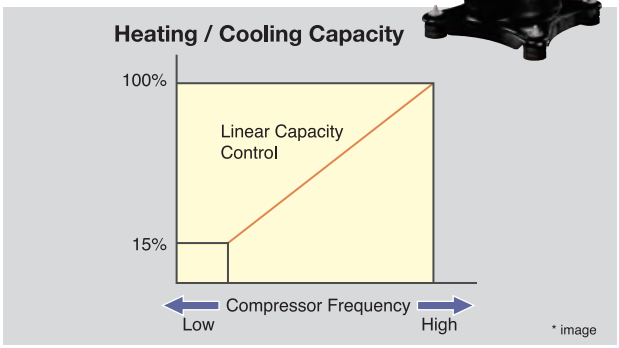
All compressors are inverter-driven type and developed and manufactured by Mitsubishi Electric

PUCY P PUCY GP PUCY EP PUHY P PUHY EP



The compressor varies its speed to match the indoor cooling or heating demand, thus it only consumes the energy amount of energy 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%, although full load condition is not prevailed all time. Therefore, fixed speed systems cannot match the annual efficiency of inverter driven systems.



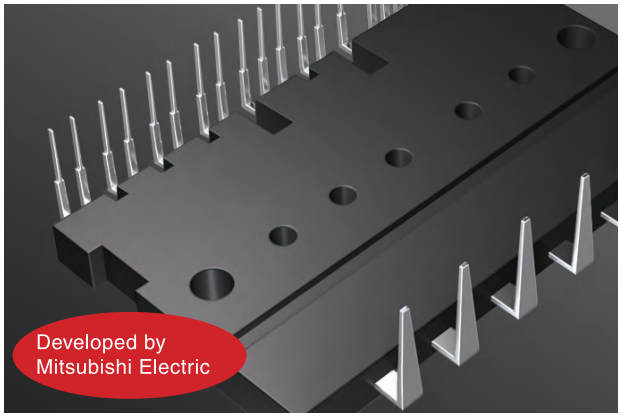
* Values vary depending on actual conditions, such as ambient temperature.

Intelligent Power Module (IPM) manufactured by Mitsubishi Electric

PUCY P PUCY GP PUCY EP PUHY P PUHY EP

Power modules manufactured by Mitsubishi Electric* are installed in the inverter circuit boads that drive compressors and fans. Furthermore, a specialized drive circuit that ensures excellent performance make a high-quality, high-performance inverter possible.
IPM technology ensures effective operation even at lower partial load and realizes automatic control to operate the air conditioners appropriately according to the situation, resulting in energy savings.

*Except models using PUHY-P200/250YKD module.



Self-developed Compressor

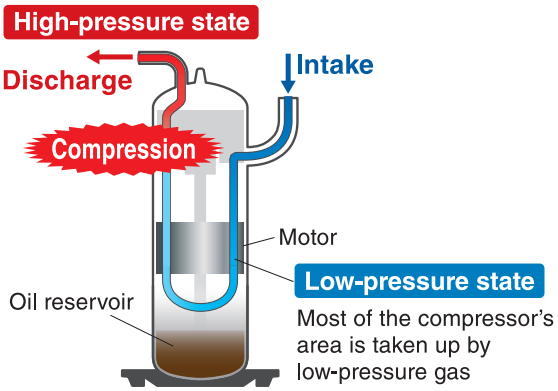
The compressor is the heart of an air conditioner, contains inverter control. Mitsubishi Electric manages all compressor production processes, from development, design, and manufacture to quality control. We develop high-performance compressors to improve performance to a higher level.



Key compressor parts designed by Mitsubishi Electric

Key parts of the compressor such as the scroll and motor (core) are designed by Mitsubishi Electric to increase the operation efficiency of the outdoor unit.
In order to achieve energy saving operation while also improving reliability, a low-pressure shell compressor is used, resulting in stable long-term running performance.

High reliable low-pressure shells



Cross section of compressor

* except PUMY series

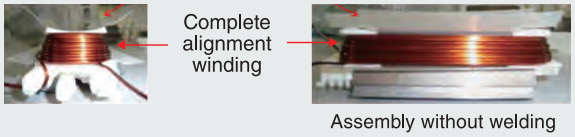
Low-pressure shell compressor for top flow models

Most of the area in the compressor is taken up by the low-pressure gas. The refrigerant is drawn in from the side of the compressor and moves to the bottom of the shell where it flows to the scroll section and is compressed. The compressed high-pressure gas is discharged from the top of the compressor. **This prevents the motor and bearings from being heated up by the compressed high-pressure gas.**
The refrigerant is collected at the bottom of the shell to reduce the rate of compressor damage caused by liquid refrigerant compression.

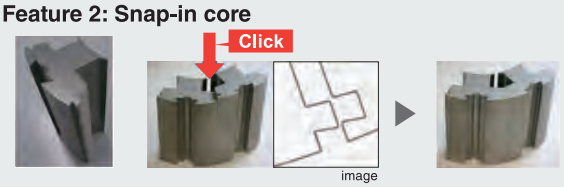
Snap-in core

Mitsubishi Electric has incorporated a new and original production process that wraps a conductor directly around the split core to create a compact and highly efficient motor.

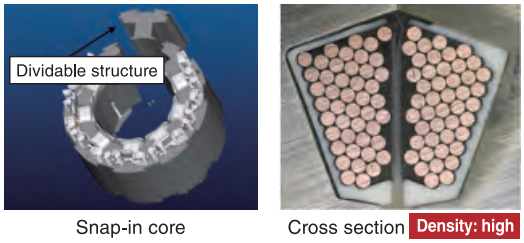
Feature 1: Coils wound around each core



Feature 2: Snap-in core



Compressor motor



Motor efficiency is high at low speeds when coil occupancy is high, thus improving compression efficiency for low-load operation.

Compressor

Multi-port mechanism

PUCY P PUCY GP PUCY EP PUHY P PUHY EP

In addition to the conventional discharge port, the multi port design model features two sub-ports, which performes according to the air conditioning load. This prevents excessive compression and improves operation efficiency.

Conventional structure

		Operation pattern	
		Partial load	Rating, high pressure difference
Main port	Valve 1	Open	Open

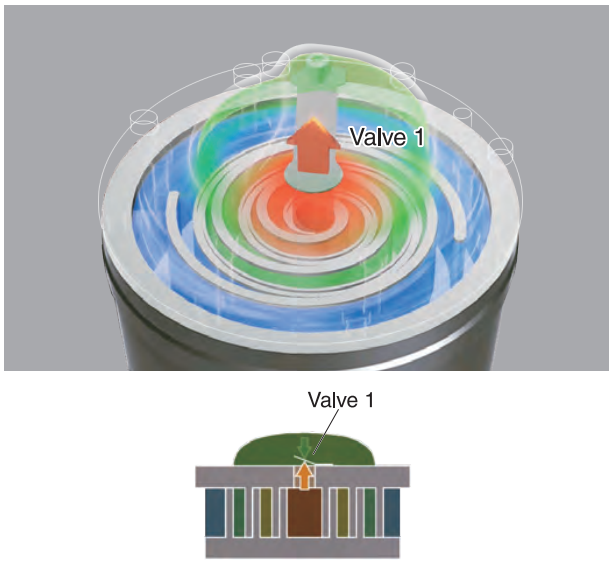
Structure with multi-port design

		Operation pattern	
		Partial load	Rating, high pressure difference
Main port	Valve 1	Open	Open
Sub-port	Valve 2/3	Open	Closed

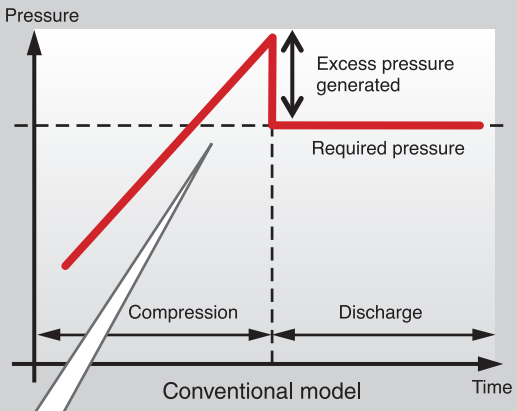
The sub-port is opened during partial load operation to discharge the over-compressed gas.

In case of partial load operation

Conventional structure



■ Concept of refrigerant pressure (during partial-load operation, etc.)

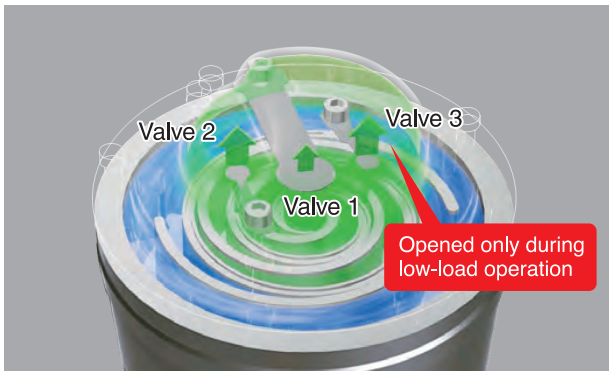


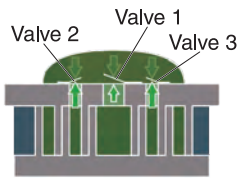
Conventional model

Because there is only one discharge port, compression capacity is first raised regardless of load, and then lowered to the target discharge pressure. This results in operation loss due to over-compression.

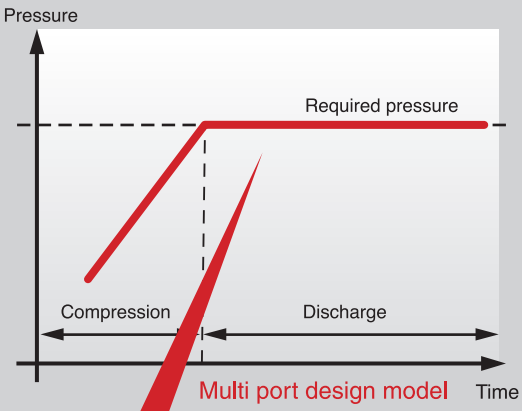
Structure with multi-port design

* Depend on model.





■ Concept of refrigerant pressure



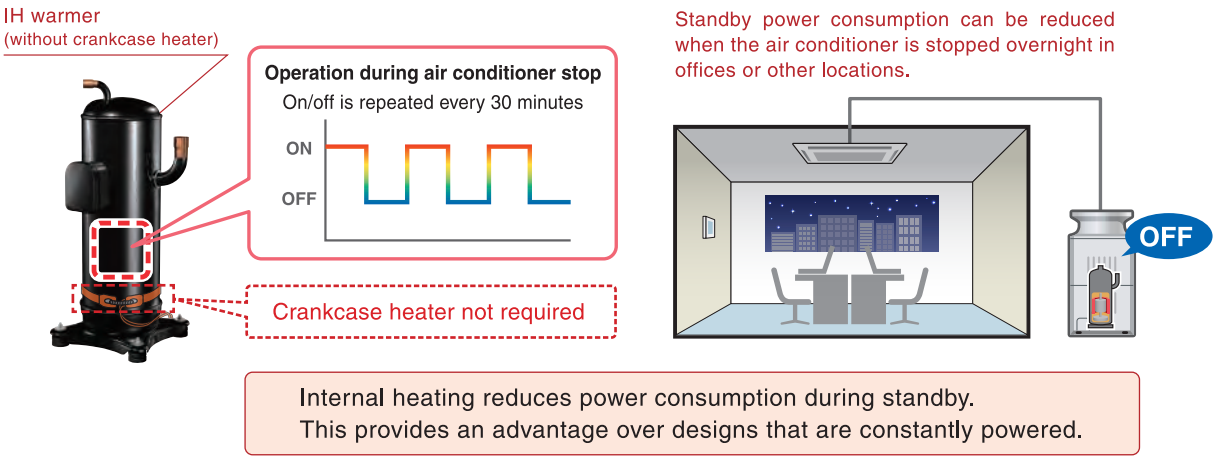
Multi-port

When the target discharge pressure is reached, the multi-ports are opened to release refrigerant gas.
This reduces operation loss due to over-compression.

IH (induction heating) warmer

In order to prevent refrigerant and oil from mixing while the air conditioner is stopped, it is necessary to always warm the compressor. Mitsubishi Electric provides the required heating by energizing the windings of the compressor (using a voltage that does not drive the compressor motor) instead of a belt type heater that applies heat from the outside, resulting in reduced loss and lower power consumption. In addition, remains on for 30 minutes after operation is stopped, and subsequently is switched on and off every 30 minutes. Standby power consumption therefore is lower than with a belt heater that is constantly powered.

* Normally, the compressor is heated while the outdoor unit is stopped to prevent liquid refrigerant from remaining in the compressor and to evaporate the liquid refrigerant in the compressor.

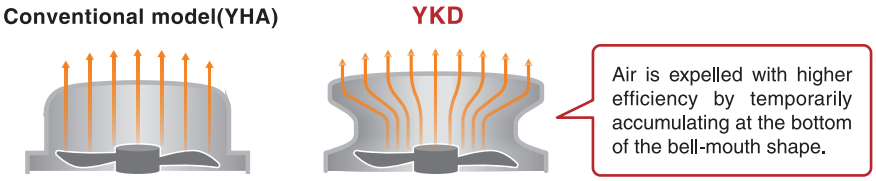


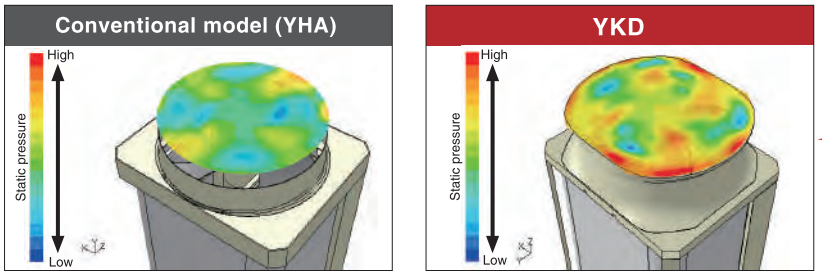
Internal heating reduces power consumption during standby.
This provides an advantage over designs that are constantly powered.

Fan

Bell-mouth shape design realizes higher air discharge efficiency

This design reduces the fan input value and contributes to energy savings. In addition, more efficient air discharge improves stability during operation at high outside air temperatures.

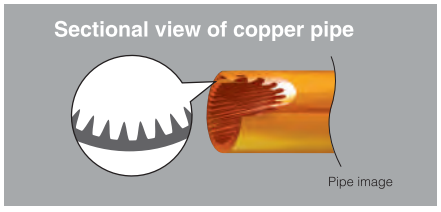




Changes to the bell- mouse shape improve the static pressure during air discharge, resulting realize energy saving operation

Heat exchanger

Grooves are formed in the copper pipe to improve the heat exchange performance.



The grooved structure in the copper pipe of the heat exchanger increases the heat exchange area to contact with refrigerant.

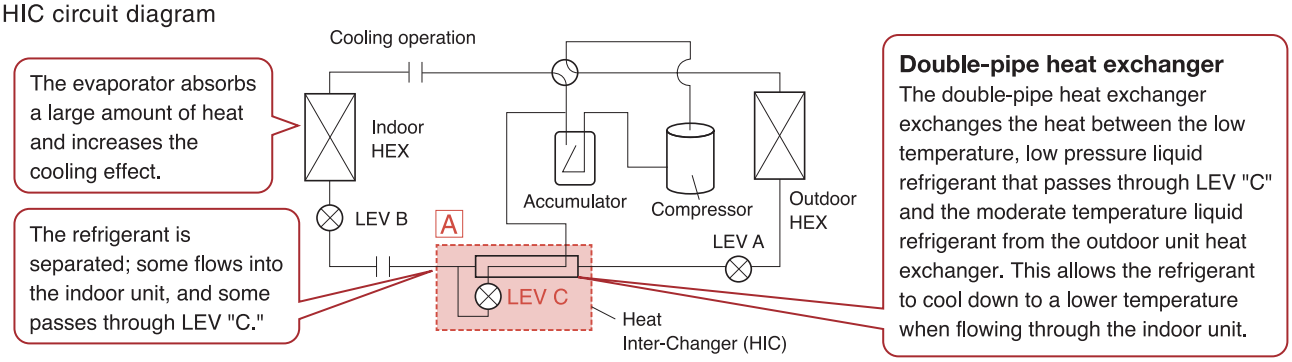
Heat Inter-Changer (HIC) circuit

The HIC circuit increases cooling efficiency. This technology raises the degree of supercooling, increasing both cooling capacity and cooling efficiency.
The HIC circuit is installed before the point at which the high pressure liquid refrigerant, which passes through the heat exchanger of the outdoor unit, flows into the indoor unit. The temperature of the liquid refrigerant, to which heat is discharged from the outdoor unit heat exchanger, is further lowered before the refrigerant enters the expansion valve, to allow the evaporator to absorb a large amount of heat and increase cooling efficiency.

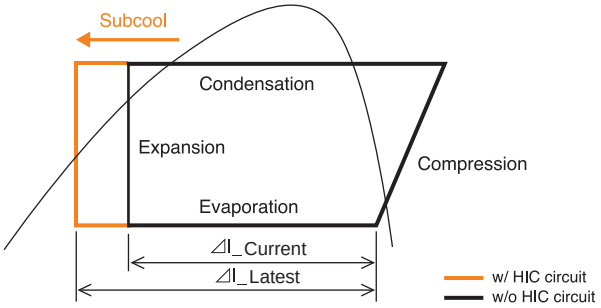
HIC mechanism

Some of the high pressure liquid refrigerant that passes through the outdoor unit heat exchanger flows directly into the indoor unit, and the rest passes through linear expansion valve (LEV) "C" to lower both the temperature and pressure. The heat is exchanged between the low temperature, low pressure liquid refrigerant that passes through LEV "C" and the moderate temperature liquid refrigerant from the outdoor unit heat exchanger. This further lowers the temperature of the liquid refrigerant before it enters LEV "B." This heat exchange system uses a "double-pipe" heat exchanger.

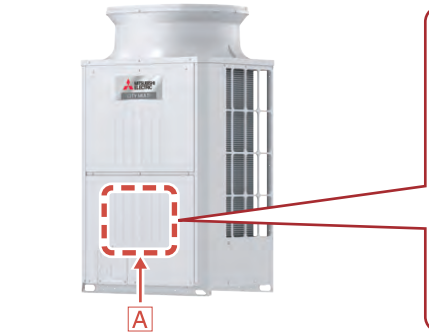
HIC circuit diagram



HIC circuit effect (Image using a Mollier diagram)

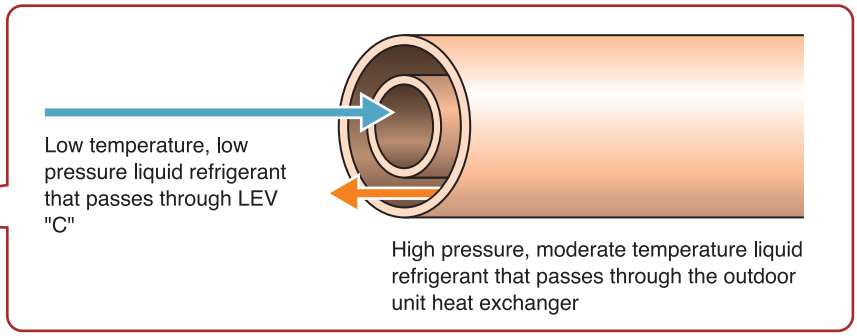


HIC circuit
(Double-pipe heat exchanger)



Heat Inter-Changer (HIC) circuit

Double-pipe heat exchanger cross section
(High-performance grooved pipe)



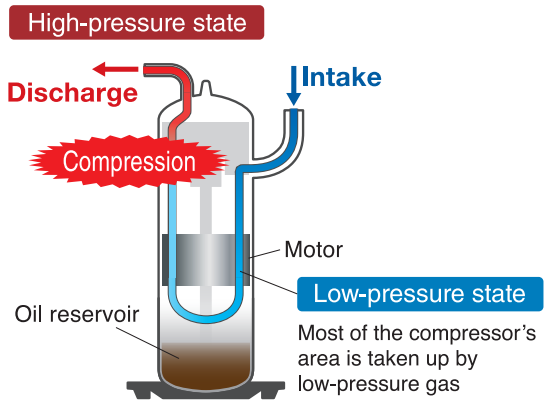
High reliability

1. Compressor

Liquid and gas refrigerants are separated beforehand by the accumulator to prevent liquid refrigerant from flowing into the compressor. Moreover, compressor structure is filled with low-pressure gas refrigerant. If liquid backflow occurs, the liquid will not enter the scroll of the compressed part directly.

Low-pressure shells

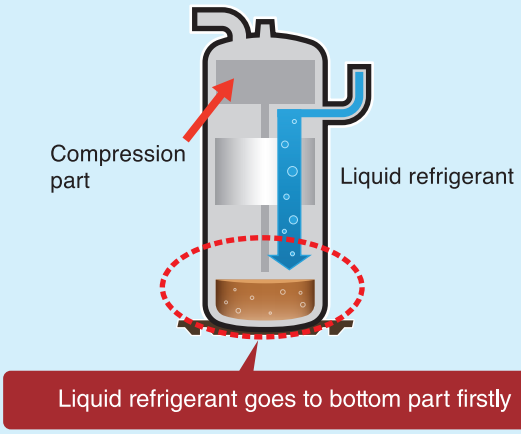
PUCY P PUCY GP PUCY EP PUHY P PUHY EP



Cross section of compressor

Most of the area in the compressor is taken up by the low-pressure gas. This prevents the motor and bearings from being heated up by the compressed high-pressure gas. The refrigerant is collected at the bottom of the shell to reduce the rate of compressor damage caused by liquid refrigerant compression.

When liquid backflow has occurred



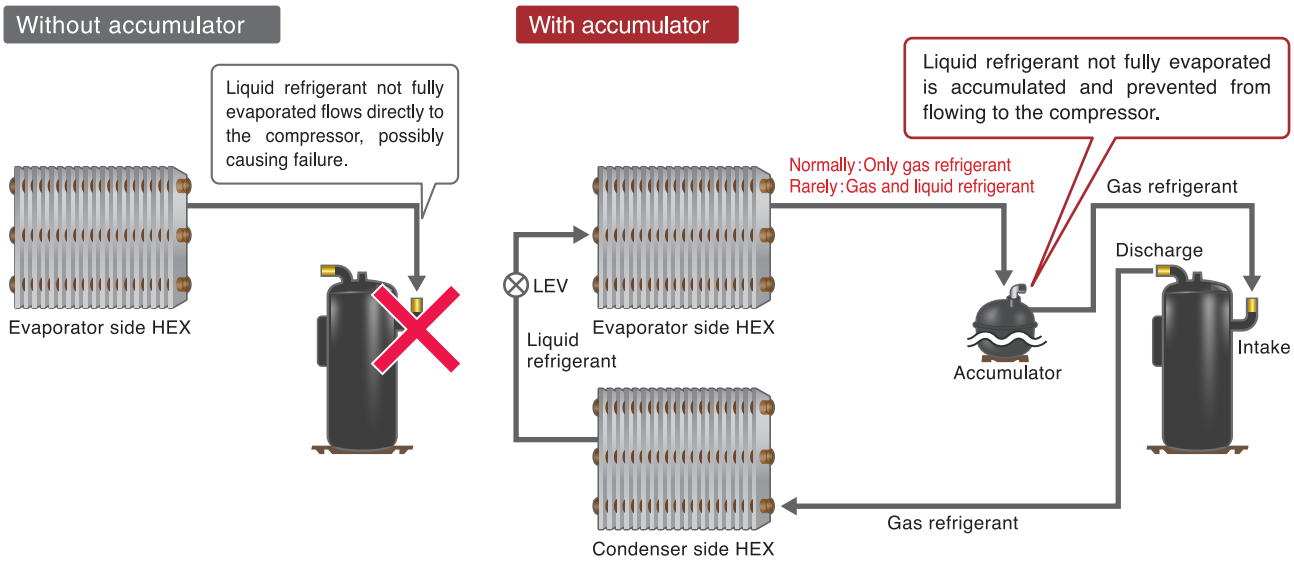
Liquid refrigerant doesn't go to compression part directly so that compressor itself is protected from malfunction due to liquid back .

Accumulator for preventing liquid backflow

PUCY P PUCY GP PUCY EP PUHY P PUHY EP

When the refrigerant is not completely evaporated by the evaporator, it may remain as a liquid, flowing back into the compressor and causing liquid compression, which poses the risk of serious damage to the compressor. To counter this problem, Mitsubishi Electric uses an accumulator placed between the evaporator and the compressor to separate the liquid refrigerant.

* Adding too much refrigerant will cause excess refrigerant to accumulate in the accumulator, resulting in liquid back flow. Be sure to add only the proper amount of refrigerant.



Operation with one compressor up to 20HP.

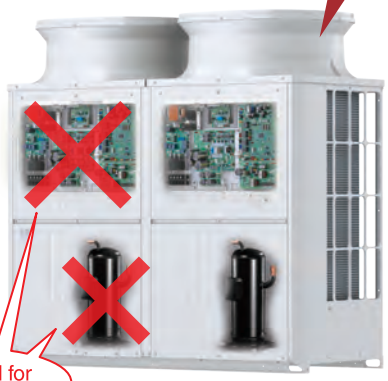
Outdoor units can be operated by one compressor, which contributes to improve service with less refrigerant piping work and compornents.

1 compressor model



S module

Lower number of required key parts reduces maintenance requirements



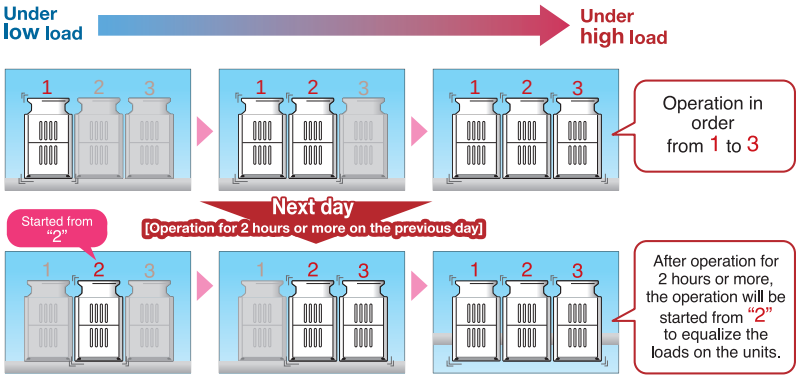
No need for our model

XL module

Rotation control

With the combination model, the outdoor units operate alternately. This reduces the operating load and leads to a longer service life.

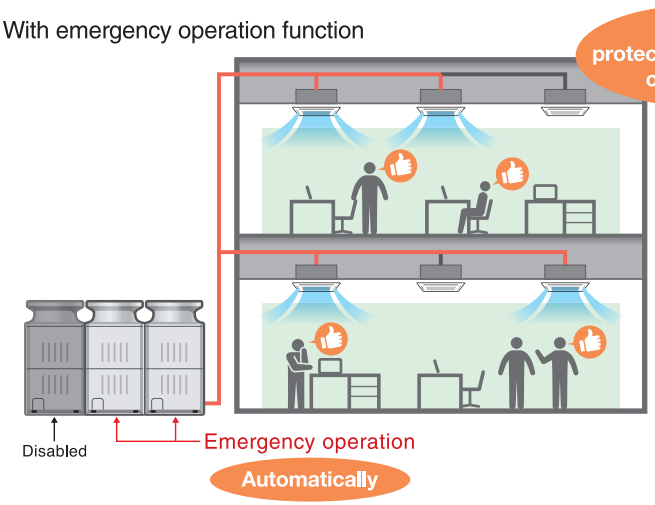
After operation for 2 hours or more, the next operation will be started from the outdoor unit "2." The unit to be started first is changed to equalize the operating time of the units.



Emergency operation mode

Emergency operation is possible with the indoor unit's remote control. With the combination model, if there is at least one module that can operate normally, the other outdoor unit temporaly performs emergency operation.

With emergency operation function



Even when one unit has fell in a malfunction, other outdoor units continue to operate.

* The number of indoor units that can continue to operate during emergency operation is limited. For information on the maximum total capacity of indoor units, refer to the Service Handbook for the outdoor unit.

High reliability

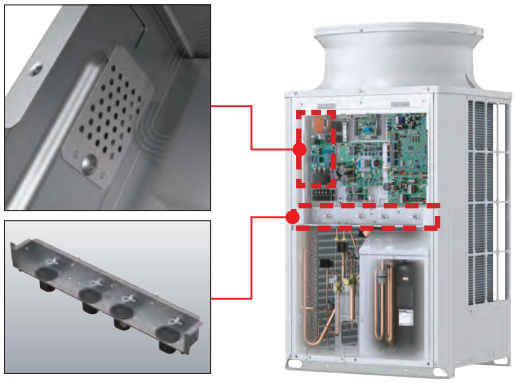
2. Electric parts

Gecko Guard

The YKE series is equipped with preventive measures that keep insects from entering the control board box and causing a malfunction.

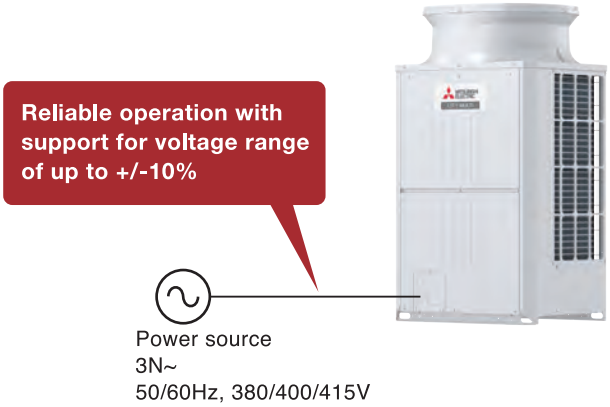
A slit prevents geckos from entering from the side.

A preventive measure at the bottom of the control board also keeps geckos out.



Allowable operating up to ±10% voltage range

Operation of this model is guaranteed even for voltages up to 10% more or less than the indicated allowable voltage.



* When used 380V, operation is guaranteed even for voltages of up to maximum +20%

Naturally cooled PCB (Print circuit board)

PCBs (printed circuit boards) carry a large number of electronic components. When operation load increases, suitable cooling measures are required.
Mitsubishi Electric places PCBs in the natural air flow path which enables air cooling to maintain efficiency and improve reliability of each electronic component.



Access from front panel

Electrical parts are concentrated in the upper part of the panel which can be opened for easy replacement of PCBs if required.
Because the compressor is located in the lower right when the panel is opened, the service technician can easily perform maintenance from the front.



* Arrange a qualified technician for maintenance or service.

3. Corrosion resistance

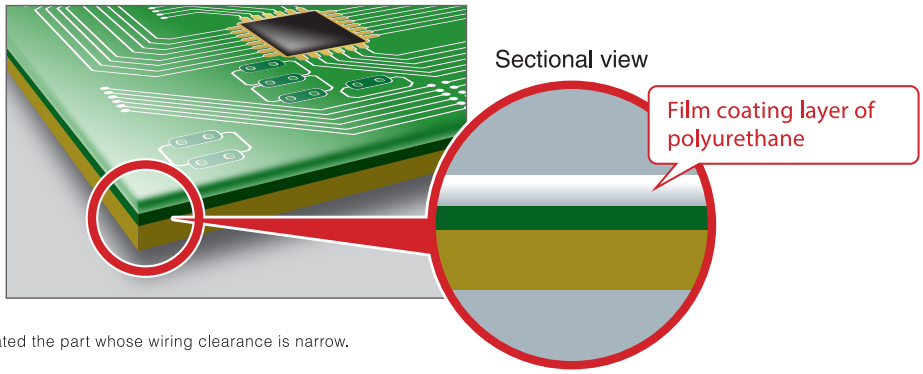
Even in installation environments near coastal areas, Mitsubishi Electric products reduce the effects of corrosion due to salt damage by using a special coating designed for outdoor units.

* Effectiveness varies depending on the installation location.

Film coating on PCB (Print circuit board)

PUCY P PUCY GP PUCY EP PUHY P PUHY EP

The printed circuit boards are protected by a film coating of polyurethane that covers the entire board to ensure resistance against salt corrosion.

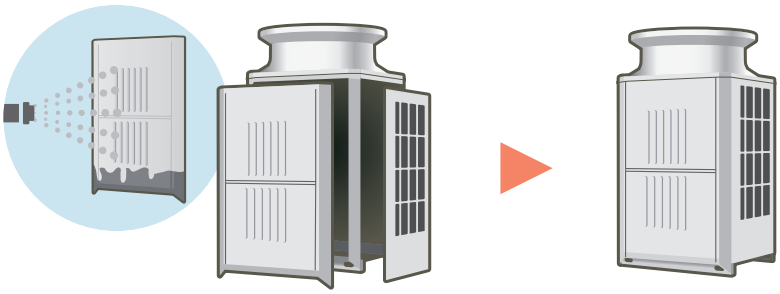


* Standard model is only coated the part whose wiring clearance is narrow.

Polyester coated sheet

PUCY P PUCY GP PUCY EP PUHY P PUHY EP

To prevent corrosion of the unit even in locations subject to the influence of sea breezes, the outdoor units are made with polyester coated steel sheets compliant with the JRA 9002 standard. The panel coating is used both on standard models and BS models, while BS models also include a thicker coating.



New heat exchanger design

PUCY P PUCY GP PUCY EP

The new YKE series incorporates a new heat exchanger comprising aluminum alloy flat tubes and fins treated with zinc for anti-corrosion. This design is especially effective in coastal and urban environments where salt or traffic exhaust can damage aluminum heat exchangers and reduce their capacity and life expectancy of the unit.

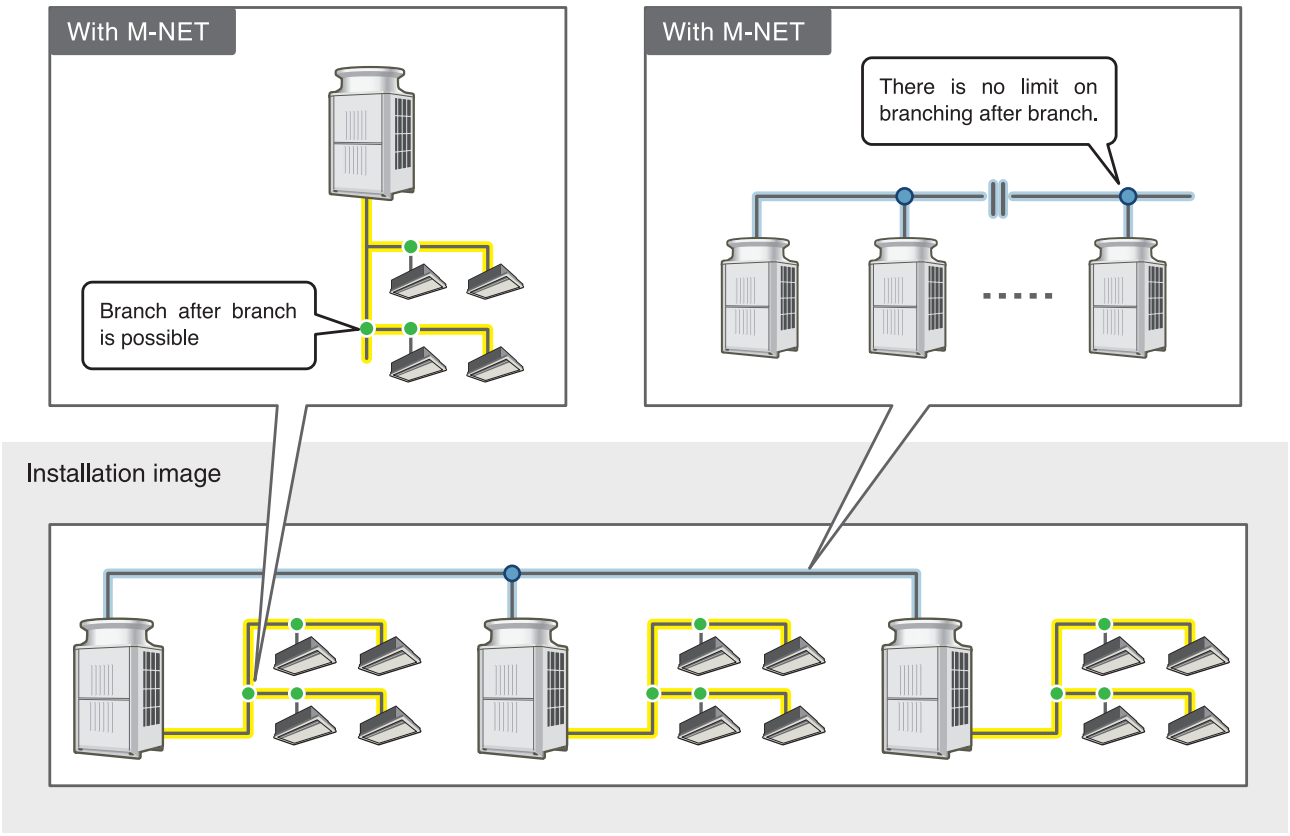


High installation flexibility

1. Flexible wiring design

Flexible M-NET design

The total wiring length of the original M-NET system connecting the CITY MULTI units of Mitsubishi Electric is unlimited. The system also supports multiple branching levels which greatly increases design flexibility for various buildings.

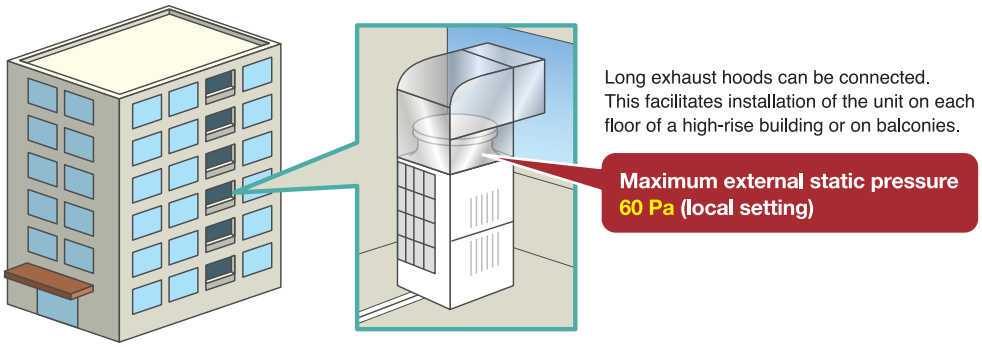


* The maximum power-supply distance of M-NET communication is 200 meters, a booster unit is required over 200 meters.
  Regarding maximum distance to the farthest device, please refer to "Explanatory material for M-NET 1000 m."

2. Flexible external static pressure setting

Selectable external static pressure of the outdoor unit

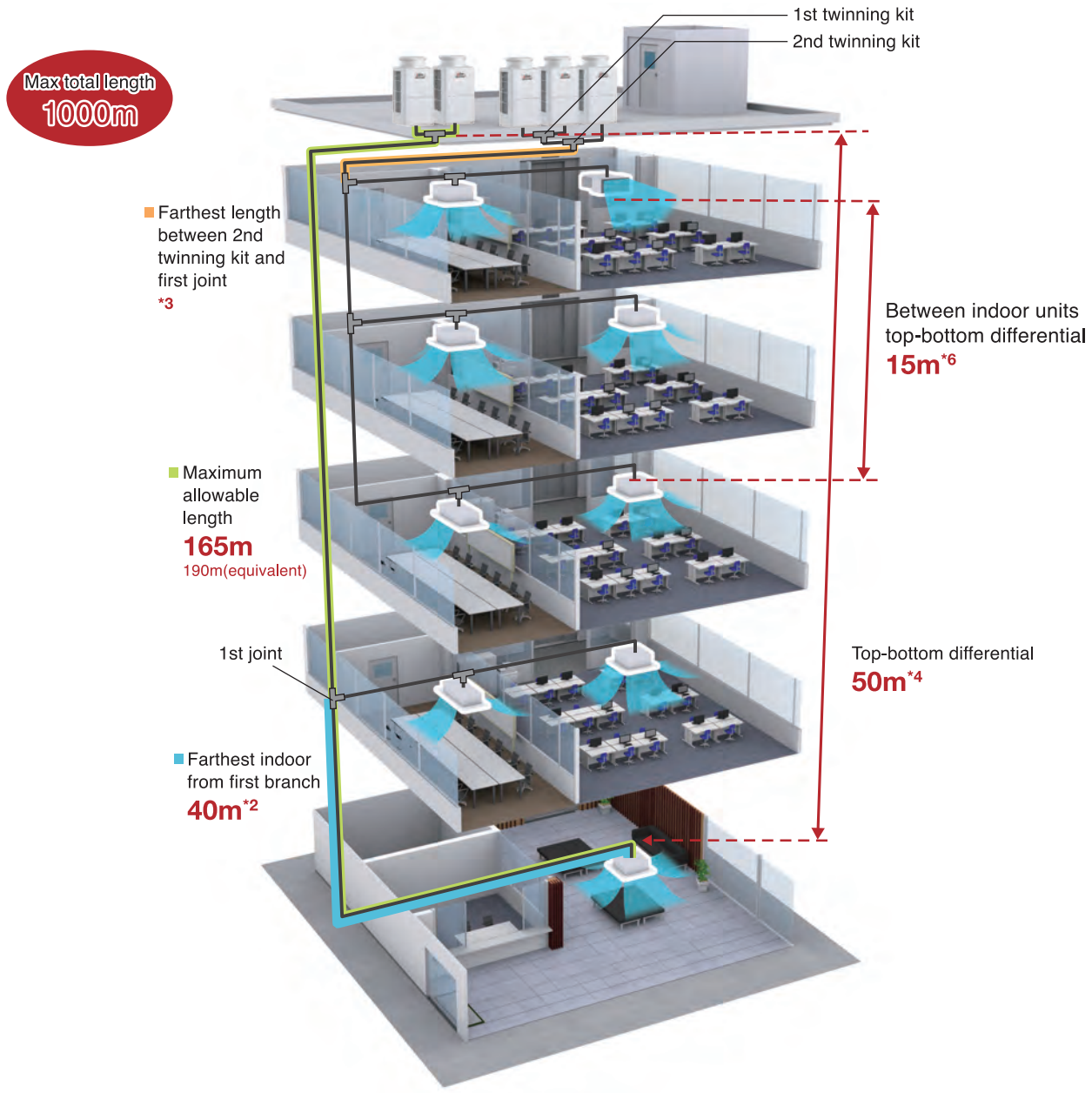
The static pressure specification of the outdoor unit can be selected (0, 30, 60 Pa).
This facilitates installation of the unit on each floor of a high-rise building or on balconies.



High installation flexibility

3. Long piping length

Piping design also provides the flexibility to match the requirements of various buildings. With CITY MULTI, even large-scale building installations are no problem.



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
Farthest length between 2nd twinning kit and first joint	*3

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

*1 The maximum total piping length in systems with model units P1400 through P1500 800 m [2625 ft.].
*2 90m is available. 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.
[for PUCY-P-YKE(-BS) / PUCY-GP-YKE(-BS) / PUCY-EP-YKE(-BS)/ PUHY-(E)P-YKD(-BS)]
*3 In systems with model units P1400 through P1500, pipe length restrictions apply to the main pipes as follows:
P1400: 110 m [360 ft.] max.
P1450: 90 m [295 ft.] max.
P1500: 60 m [197 ft.] max.
*4 Depending on the model and installation conditions, top-bottom differential 90m [295ft]. For more detailed information, please contact your nearest sales office or distributor.
*5 4 m [13 ft.] or less in cooling at outdoor temperature 10°C [50°F] or lower for heat pump series.
*6 30m is available. If the height difference between indoor units exceeds 15 m [49 ft.] (but does not exceed 30 m [98 ft.]), use pipes that are one size larger for indoor unit liquid pipes.
[for PUCY-P-YKE(-BS) / PUCY-GP-YKE(-BS) / PUCY-EP-YKE(-BS) / PUHY-(E)P-YKD(-BS)]

Other useful functions

Flexible noise setting

PUCY P / PUCY GP / PUCY EP *1 / PUHY P / PUHY EP *2

The low-noise mode provides four fan speed levels — 85%, 70%, 60% and 50%. A level that matches customer requests can be set using the dip switch on the outdoor unit when low-noise operation is required.

*1 PUCY-P/GP/EP: Low-noise mode can reduce noise by 85%, 70%, 60%, and 50%.
*2 PUHY-P/EP: Low noise mode can reduce noise by 50%.

- Quiet night-time operation
- 4 noise level options
- Flexible response to various situations
- Easy setting and scheduling by using the AE-C400E-X



PUCY-P200YKE

Standard 57dB

-13 dB

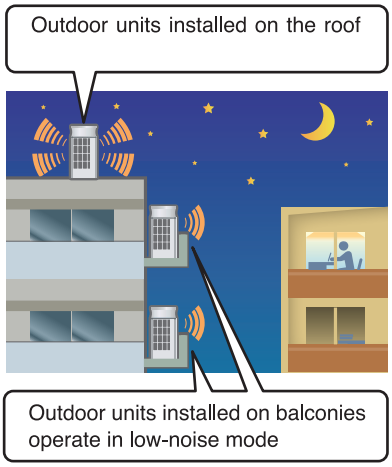
Flexible noise setting 44dB* (50%)

* Operation noise may be higher depending on the installation environment or operation status.
* Increased adaptability and model selection range for buildings where low noise is essential.



AE-C400E-X

Flexible noise setting can be scheduled from the AE-C400E-X browser by connecting a PC.



System changeover (for heat pump)

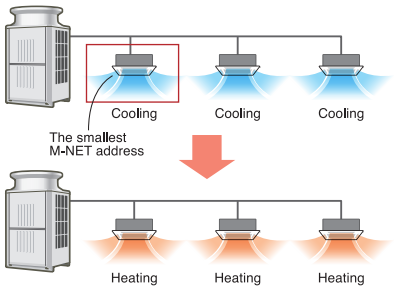
PUHY P / PUHY EP

Normal switching between cooling and heating

With CITY MULTI's switchable cooling/heating models, in order to switch from cooling to heating, the operation mode of all indoor units performing cooling operation needs to be manually switched.

Using system-changeover to switch between cooling and heating

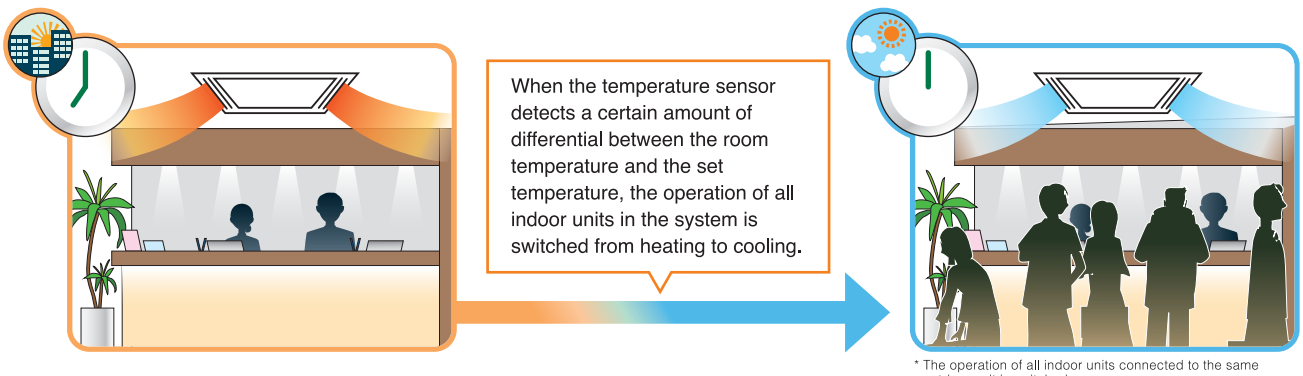
Depending on the dip switch settings, all indoor units can automatically switch their operation mode according to the operation mode of a specific indoor unit (the unit with the smallest M-NET address). Operation can be automatically switched between cooling and heating according to the temperature difference between the preset temperature on a specific indoor unit and the room temperature.



* Please avoid the indoor unit with the smallest number address to group with other indoor units.

Suitable situations

When both cooling and heating operations are required in a single day due to an extreme differences between the hottest and coldest parts of the day.



* The operation of all indoor units connected to the same outdoor unit is switched.

Wide selection of outdoor units

System	Series	Type	Model name	Model	HP 4	5	5.5	7	8	9	10	12	14	16
					P100	P125	P140	P175	P200	P225	P250	P300	P350	P400
Air cooled	S	Cooling only	**S-Series** PUMY-CP VKM (-BS) PUMY-SP YKM (-BS) PUMY-CP YBM (-BS) 		VKM (4) (5) (5.5)			YKM (7)	(8)	(9)	YBM (10)	(12)		
		Heat Pump	**S-Series** PUMY-P VKM (-BS) PUMY-P YKM (-BS) PUMY-P YBM (-BS) 		VKM (4) (5) (5.5)			YKM (7)	(8)	(9)	YBM (10)	(12)		
	Y	Cooling Only	**Y-Series Standard type** PUCY-P YKE(-BS) PUCY-P YSKE(-BS) 	S					(8)		(10)	(12)		
				L									(14)	(16)
				XL										
			Y-Series - High Standard type PUCY-GP YSKE(-BS) 	S										(8) (8)
				L										
				XL										
			Y-Series - High Efficiency type PUCY-EP YKE(-BS)  **Single**	S					(8)		(10)			
				XL								(12)	(14)	(16)
			PUCY-EP YSKE(-BS)  **Combination**	S										(8) (8)
				XL										
			Y-Series PUCY-P YKD(-BS) PUCY-P YSKD(-BS) 	S					(8)		(10)	(12)		
				L									(14)	(16)
				XL										
			Y-Series - High Efficiency PUCY-EP YSKD(-BS) 	S										(8) (8)
				L										
				XL										
		Heat Pump	**Y-Series** PUHY-P YKD(-BS) PUHY-P YSKD(-BS) 	S					(8)		(10)	(12)		
				L									(14)	(16)
				XL										
			Y-Series - High Efficiency PUHY-EP YSKD(-BS) 	S										(8) (8)
				L										
				XL										

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

18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52	54	56	58	60
P450	P500	P550	P600	P650	P700	P750	P800	P850	P900	P950	P1000	P1050	P1100	P1150	P1200	P1250	P1300	P1350	P1400	P1450	P1500
		10 12	10	10	10	12						12 12	12								
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				14	14 14	14	14	14	14	14	14 14	14 14 14	14 14 16								
		10 12	10	10	10	12						12 12	12								
18			14	16	18	18	16 16	16 18	18 18	18		18	14 18	14 16 16	16 16 16	16 16 18	16 18 18	18 18 18	18 18	18		
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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 14 16								
		10 12	10	10	10	12						12 12	12								
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				14	14 14	14	14	14	14	14	14 14	14 14 14	14 14 16								

S-series



PUMY

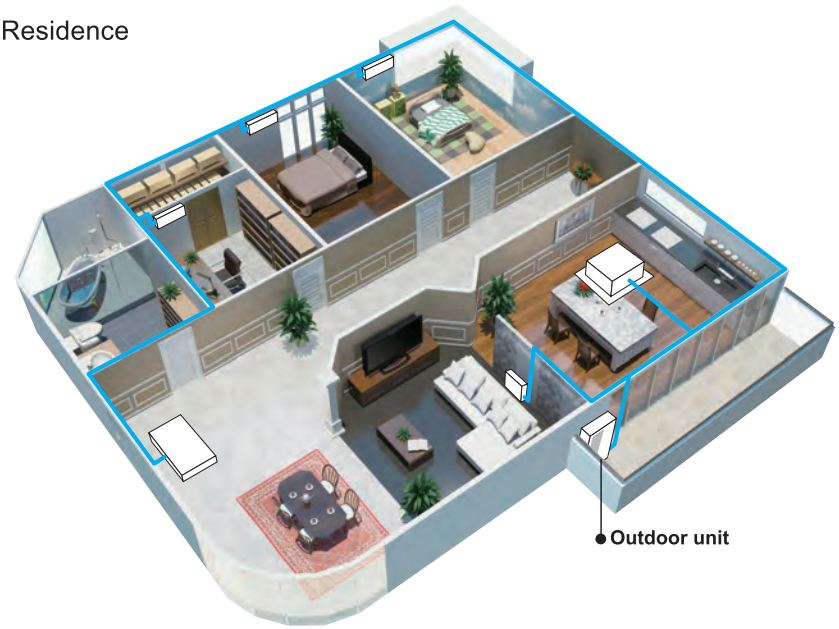
The line-up of side-flow type outdoor units includes models from 4 HP to 12 HP, which offers flexibility in installations in tight spaces. This type is suitable for small-scale offices and residences. 1-phase type (VKM) and 3-phase type (YKM/YBM) are available.

Heat pump
- PUMY-SP VKM
- PUMY-P YKM
- PUMY-P YBM

Cooling only
- PUMY-CP VKM
- PUMY-CP YKM
- PUMY-CP YBM

Installation image

Residence



Advantage of PUMY (for residences)

One outdoor unit (10 HP-12 HP) can be connected up to 29 indoor units (P15-250). Even when indoor units are installed in many rooms, one outdoor unit can connect multiple indoor units.

↓

Space savings

Wide selection from 4 HP up to 12 HP

Model	100	125	140	175	200	225	250	300
Heat pump	SP100-140VKM			P175-225YKM			P250-300YBM	
Cooling only	CP100-140VKM			CP175-225YKM			CP250-300YBM	

10-12 HP (P250-P300) is available!

Heat pump



SP100-140 P175-225 P250-300

Cooling only



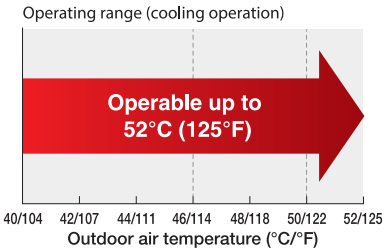
CP100-140 CP175-225 CP250-300

Features

①Operation guaranteed at an outside air temperature of up to 52°C [125°F].

- New inverter technology has made it possible for units to operate at an outdoor air temperature as high as 52°C [125°F].

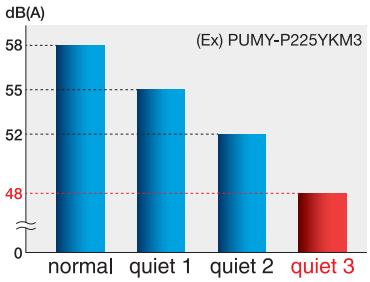
Operation at high temperatures (52°C/125°F)



②Quiet mode

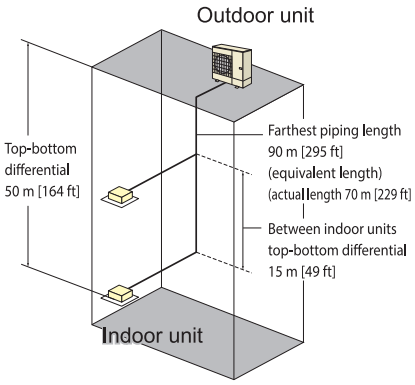
All models have three quiet modes in addition to the normal mode, and a suitable noise mode can be selected from among the four available modes. The noise level can be set according to the application, for example, in a residential zone where noise may be an issue.

* Capacity reduction differs by mode setting.
* PAC-SC36NA-E is required to activate this mode.
* Available during cooling only.



Piping length

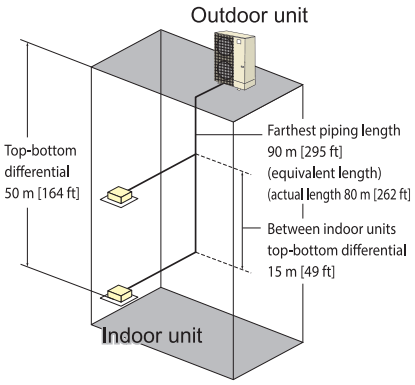
[CP100-140/VKM] [SP100-140/VKM]



Refrigerant Piping Lengths Maximum meters [feet]	
Total length	120 [393]
Maximum allowable length	70 (90 equivalent)[229 (295)]
Farthest indoor from first branch	50 [164]*1

Vertical differentials between units Maximum meters [feet]	
Indoor/outdoor (outdoor higher)	50 [164]
Indoor/outdoor (outdoor lower)	30 [98]
Indoor/indoor	15 [49]

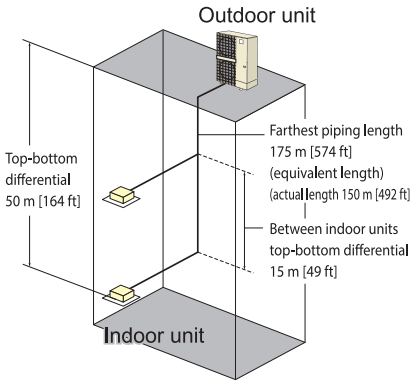
[CP175-225YKM] [P175-225YKM]



Refrigerant Piping Lengths Maximum meters [feet]	
Total length	150 [492]
Maximum allowable length	80 (90 equivalent) [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]

[CP250-300YBM] [P250-300YBM]



Refrigerant Piping Lengths Maximum meters [feet]	
Total length	310 [1,017]
Maximum allowable length	150 (175 equivalent) [492 (574)]
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]

*1 Use liquid pipe of ø9.52 for less than P50 indoor units, when farthest length from the first branch exceeds 30m.

S-series

PUMY-CP VKM (-BS)



Specifications

Model				PUMY-CP100VKM (-BS)	PUMY-CP125VKM (-BS)	PUMY-CP140VKM (-BS)
Power source				1-phase 220-230-240 V, 50 Hz; 1-phase 220 V, 60 Hz		
Cooling capacity (Nominal)		*1	kW	11.2	14.0	15.5
		*1	BTU/h	38,200	47,800	52,900
	Power input		kW	2.80	3.84	4.70
	Current input		A	12.99-12.42-11.90, 12.99	17.81-17.04-16.33, 17.81	21.80-20.85-19.98, 21.80
	EER		kW/kW	4.00	3.65	3.30
Temp. range of cooling	Indoor temp.		W.B.	15 to 24°C (59 to 75°F)		
	Outdoor temp.		D.B.	10 to 52°C (50 to 126°F)		
Indoor unit connectable	Total capacity			50 to 150% of outdoor unit capacity *2		
	Model/Quantity	CITY MULTI		15–125/7	15–140/10	15–140/12
Sound pressure level (measured in anechoic room)		*3	dB <A>	52/-	53/-	54/-
Refrigerant piping diameter	Liquid pipe		mm (in.)	9.52 (3/8) Flared		
	Gas pipe		mm (in.)	15.88 (5/8) Flared		
Fan	Type x Quantity			Propeller Fan × 1		
	Air flow rate		m^3/min	78.8		
			L/s	1,313		
			cfm	2,782		
	*4 Motor output		kW	0.20 x 1		
Compressor	Type x Quantity			Twin rotary hermetic compressor × 1		
	Starting method			Inverter		
	Motor output		kW	2.8	3.4	3.6
External finish				Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1		
External dimension H x W x D			mm	981 × 1050 × 330 (+25)		
			in.	38-5/8 × 41-3/8 × 13 (+1)		
Protection devices	High pressure protection			High pressure switch		
	Inverter circuit (COMP./FAN)			Overcurrent detection, Overheat detection (Heat Sink thermistor)		
	Compressor			Compressor thermistor, Overcurrent detection, Compressor protector		
	Fan motor			Overheating, Voltage protection		
Refrigerant	Type x original charge			R410A 2.9kg		
Net weight			kg (lbs)	86 (190) *5		
Heat exchanger				Micro Slit Fin and Copper tube		
Defrosting method				—		
Optional parts				Joint: CMY-Y62-G-E		

Notes:

*1 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°C DB)	7.5m (24-9/16ft.)	0m (0ft.)

*2 Up to 150% can be connected. However, up to 130% for simultaneous operation
*3 Cooling mode/Heating mode
*4 External static pressure option is available (30Pa/3.1mmH_2O).
*5 87 (192), for PUMY-CP100/125/140VKM-BS.
*Nominal conditions *1 are subject to ISO 15042.
*Due to continuing improvement, above specification may be subject to change without notice.
*To prevent noise issue, PUMY-P/SP/CP series cannot be connected with PLFY-P80/100/125VMMD model.

S-series

PUMY-CP YKM (-BS)



Specifications

Model				PUMY-CP175YKM (-BS)	PUMY-CP200YKM (-BS)	PUMY-CP225YKM (-BS)
Power source				3-phase 380-400-415 V, 50 Hz; 3-phase 380 V, 60 Hz		
Cooling capacity (Nominal)		*1	kW	20.0	22.4	25.0
		*1	BTU/h	68,200	76,400	85,300
	Power input		kW	5.00	5.74	6.54
	Current input		A	8.94-8.50-8.19, 8.94	10.03-9.53-9.18, 10.03	11.17-10.61-10.23, 11.17
	EER		kW/kW	4.00	3.90	3.82
Temp. range of cooling	Indoor temp.		W.B.	15.0 to 24.0°C (59 to 75°F)		
	Outdoor temp.		D.B.	10 to 52.0°C (50 to 126°F)		
Indoor unit connectable	Total capacity			50 to 150% of outdoor unit capacity *2		
	Model/Quantity	CITY MULTI		15–200/12	15–250/12	15–250/12
Sound pressure level (measured in anechoic room)		*3	dB <A>	57/-	57/-	58/-
Refrigerant piping diameter	Liquid pipe		mm (in.)	9.52 (3/8) Flared*4		
	Gas pipe		mm (in.)	22.2 (7/8) Brazed		
Fan	Type x Quantity			Propeller Fan × 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
	*5 Motor output		kW	0.20 + 0.20		
Compressor	Type x Quantity			Scroll hermetic compressor × 1		
	Starting method			Inverter		
	Motor output		kW	3.5	3.9	4.3
External finish				Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1		
External dimension H x W x D			mm	1,338 × 1,050 × 330 (+25)		
			in.	52-11/16 × 41-11/32 × 13 (+1)		
Protection devices	High pressure protection			High pressure switch		
	Inverter circuit (COMP./FAN)			Overcurrent detection, Overheat detection (Heat Sink thermistor)		
	Compressor			Compressor thermistor, Overcurrent detection, Compressor protector		
	Fan motor			Overheating, Voltage protection		
Refrigerant	Type x original charge			R410A 6.3kg		
Net weight			kg (lbs)	129 (285) *6		
Heat exchanger				Cross Fin and Copper tube		
Defrosting method				Reversed refrigerant circuit		
Optional parts				Joint: CMY-Y62-G-E		

Notes:

*1 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.)

*2 Up to 150% can be connected. However, up to 130% for simultaneous operation.
*3 Cooling mode/Heating mode
*4 Liquid pipe diameter: 12.7mm in case that the farthest piping length is longer than 60m, or piping length from outdoor unit to a branch box is longer than 20m.
*Nominal conditions *1 are subject to ISO 15042.
*Due to continuing improvement, above specification may be subject to change without notice.
*To prevent noise issue, PUMY-P/SP/CP series cannot be connected with PLFY-P80/100/125VMMD model.

S-series

PUMY-CP YBM (-BS)



Specifications

Model				PUMY-CP250YBM (-BS)	PUMY-CP300YBM (-BS)
Power source				3-phase 380-400-415 V, 50 Hz; 3-phase 380 V, 60 Hz	
Cooling capacity (Nominal)	*1		kW	28.0	33.5
	*1		BTU/h	95,500	114,300
	Power input		kW	7.18	8.59
	Current input		A	11.73-11.14-10.74, 11.73	14.03-13.33-12.85, 14.03
	EER		kW/kW	3.90	3.90
Temp. range of cooling	Indoor temp.		W.B.	15.0 to 24.0°C (59 to 75°F)	
	Outdoor temp.		D.B.	10.0 to 52.0°C (50 to 126°F)	
Indoor unit connectable	Total capacity			50 to 150% of outdoor unit capacity *2	
	Model/ Quantity	CITY MULTI		15–250/24	15–250/29
Sound pressure level (measured in anechoic room)			dB <A>	59	60
Refrigerant piping diameter	Liquid pipe		mm (in.)	9.52(3/8) Flared *5	12.7(1/2) Flared
	Gas pipe		mm (in.)	22.2(7/8) Brazed	25.4(1) Brazed
Fan	Type x Quantity			Propeller Fan × 2	
	Air flow rate		m^3/min	178	178
			L/s	2,966	2,966
			cfm	6,285	6,285
	Motor output		kW	0.375 + 0.375	
Compressor *3	Type x Quantity			Scroll hermetic compressor × 1	
	Starting method			Inverter	
	Motor output		kW	6.77	7.59
External finish				Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1	
External dimension H x W x D			mm	1,662 × 1,050 × 460 (+45)	
			in.	65-7/16 × 41-11/32 × 18-7/64 (+1-49/64)	
Protection devices	High pressure protection			High pressure switch	
	Inverter circuit			Overcurrent detection, Overheat detection (Heat Sink thermistor)	
	Compressor			Compressor thermistor, Overcurrent detection, Compressor protector	
	Fan motor			Overcurrent, Overheating, Voltage protection	
Refrigerant	Type x original charge			R410A 8.0kg	
Net weight			kg (lbs)	185 (408) *4	
Heat exchanger				Micro-Slit Fin and Copper tube	
Defrosting method				—	
Optional parts				Joint: CMY-Y62-G-E	

Notes:

*1 Nominal conditions

	Indoor	Outdoor	Pipe length	Level difference	External static press.
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.)	0 Pa

*2 Up to 150% can be connected. However, up to 130% for simultaneous operation.
*3 External static pressure option is available (30 Pa/3.1 mmH_2O).
*4 187 (413) for PUMY-CP250/300YBM-BS.
*5 Liquid pipe diameter: 12.7mm, in case of farthest piping length (farthest indoor unit from outdoor unit) is longer than 90m, or connect with PEFY-P200/250.
*Nominal conditions *1 are subject to ISO 15042.
*Due to continuing improvement, above specification may be subject to change without notice.
*To prevent noise issue, PUMY-P/SP/CP series cannot be connected with PLFY-P80/100/125VMMD model.

S-series

PUMY-SP VKM (-BS)



Specifications

Model				PUMY-SP100VKM (-BS)	PUMY-SP125VKM (-BS)	PUMY-SP140VKM (-BS)
Power source				1-phase 220-230-240 V, 50 Hz; 1-phase 220 V, 60 Hz		
Cooling capacity (Nominal)	*1		kW	11.2	14.0	15.5
	*1		BTU/h	38,200	47,800	52,900
	Power input		kW	2.78	3.84	4.31
	Current input		A	12.89-12.33-11.82, 12.89	17.81-17.04-16.33, 17.81	19.99-19.12-18.32, 19.99
	EER		kW/kW	4.03	3.65	3.60
Temp. range of cooling	Indoor temp.		W.B.	15 to 24°C (59 to 75°F)		
	Outdoor temp.*3*4		D.B.	-5 to 52°C (23 to 126°F)		
Heating capacity (Nominal)	*2		kW	12.5	16.0	16.5
	*2		BTU/h	42,650	54,600	56,300
	Power input		kW	2.58	3.90	4.02
	Current input		A	11.97-11.45-10.97, 11.97	18.09-17.30-16.58, 18.09	18.65-17.83-17.09, 18.65
	COP		kW/kW	4.84	4.10	4.10
Temp. range of heating	Indoor temp.		D.B.	15 to 27°C (59 to 81°F)		
	Outdoor temp.		W.B.	-20 to 15°C (-4 to 59°F)		
Indoor unit connectable	Total capacity			50 to 130% of outdoor unit capacity		
	Model/ Quantity	CITY MULTI		15–125/7	15–140/10	15–140/12
Sound pressure level (Cooling/Heating) *5 (measured in anechoic room)			dB <A>	51/54	53/56	54/56
Refrigerant piping diameter	Liquid pipe		mm (in.)	9.52 (3/8) Flared		
	Gas pipe		mm (in.)	15.88 (5/8) Flared		
Fan	Type x Quantity			Propeller Fan × 1		
	Air flow rate		m^3/min	75	83	
			L/s	1,283	1,383	
			cfm	2,791	2,931	
*6	Motor output		kW	0.20 x 1		
Compressor	Type x Quantity			Twin rotary hermetic compressor × 1		
	Starting method			Inverter		
	Motor output		kW	2.8	3.4	3.6
External finish				Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1		
External dimension H x W x D			mm	981 × 1050 × 330 (+25)		
			in.	38-5/8 × 41-3/8 × 13 (+1)		
Protection devices	High pressure protection			High pressure switch		
	Inverter circuit (COMP./FAN)			Overcurrent detection, Overheat detection (Heat Sink thermistor)		
	Compressor			Compressor thermistor, Overcurrent detection, Compressor protector		
	Fan motor			Overheating, Voltage protection		
Refrigerant	Type x original charge			R410A 3.5kg		
Net weight			kg (lbs)	93 (205) *7		
Heat exchanger				Cross Fin and Copper tube		
Defrosting method				Reversed refrigerant circuit		
Optional parts				Joint: CMY-Y62-G-E		

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.)

*3 10 to 52°C D.B. [50 to 126°F D.B.], when connecting following models: PKFY-P15/20/25/32VLM, PFFY-P20/25/32VLEM, PFFY-P20/25/32VLRM(M), PFFY-P20/25/32VCM, PFFY-P20/25/32VKM, PEFY-P-VMA4 and M-Series, S-Series, and P-Series type indoor unit with branch box, M-Series type indoor unit with connection kit.
*4 -15 to 52°C D.B. [5 to 126°F D.B.], when using an optional air protect guide [PAC-SH95AG-E]. However, this condition does not apply to the indoor unit listed in*3.
*5 Cooling mode/Heating mode
*6 External static pressure option is available (30 Pa/3.1 mmH_2O).
*7 94 (207), for PUMY-SP100/125/140VKM-BS. 95 (209), for PUMY-SP100/125/140YKM-BS.
*Nominal conditions *1,*2 are subject to ISO 15042.
*Due to continuing improvement, above specification may be subject to change without notice.
*To prevent noise issue, PUMY-P/SP/CP series cannot be connected with PLFY-P80/100/125VMMD model.

S-series

PUMY-P YKM (-BS)



Specifications

Model				PUMY-P175YKM (-BS)	PUMY-P200YKM (-BS)	PUMY-P225YKM (-BS)
Power source				3-phase 380-400-415 V, 50 Hz; 3-phase 380 V, 60 Hz		
Cooling capacity (Nominal)	*1		kW	20.0	22.4	25.0
	*1		BTU/h	68,200	76,400	85,300
	Power input		kW	5.00	5.74	6.54
	Current input		A	8.94-8.50-8.19, 8.94	10.03-9.53-9.18, 10.03	11.17-10.61-10.23, 11.17
	EER		kW/kW	4.00	3.90	3.82
Temp. range of cooling	Indoor temp.		W.B.	15.0 to 24.0°C (59 to 75°F)		
	Outdoor temp. *3*4		D.B.	-5.0 to 52.0°C (23 to 126°F)		
Heating capacity (Nominal)	*2		kW	22.4	25.0	27.3
	*2		BTU/h	76,400	85,300	93,200
	Power input		kW	5.14	5.99	6.80
	Current input		A	9.19-8.73-8.42, 9.19	10.47-9.94-9.58, 10.47	11.61-11.03-10.63, 11.61
	COP		kW/kW	4.35	4.17	4.01
Temp. range of heating *4	Indoor temp.		D.B.	15.0 to 27.0°C (59 to 81°F)		
	Outdoor temp.		W.B.	-20.0 to 15.0°C (-4 to 59°F)		
Indoor unit connectable	Total capacity			50 to 130% of outdoor unit capacity		
	Model/ Quantity	CITY MULTI		15–200/12	15–250/12	15–250/12
Sound pressure level (measured in anechoic room)		*5	dB <A>	57/61	57/61	58/63
Refrigerant piping diameter	Liquid pipe		mm (in.)	9.52 (3/8) Flared *6		
	Gas pipe		mm (in.)	22.2 (7/8) Brazed		
Fan	Type x Quantity			Propeller Fan × 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	0.20 + 0.20		
Compressor	Type x Quantity			Scroll hermetic compressor × 1		
	Starting method			Inverter		
	Motor output		kW	4.3	5.2	5.4
External finish				Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1		
External dimension H x W x D			mm	1,338 × 1,050 × 330 (+25)		
			in.	52-11/16 × 41-11/32 × 13 (+1)		
Protection devices	High pressure protection			High pressure switch		
	Inverter circuit (COMP./FAN)			Overcurrent detection, Overheat detection (Heat Sink thermistor)		
	Compressor			Compressor thermistor, Overcurrent detection, Compressor protector		
	Fan motor			Overheating, Voltage protection		
Refrigerant	Type x original charge			R410A 7.3kg		
Net weight			kg (lbs)	138 (305) *7		
Heat exchanger				Cross Fin and Copper tube		
Defrosting method				Reversed refrigerant circuit		
Optional parts				Joint: CMY-Y62-G-E		

Notes:

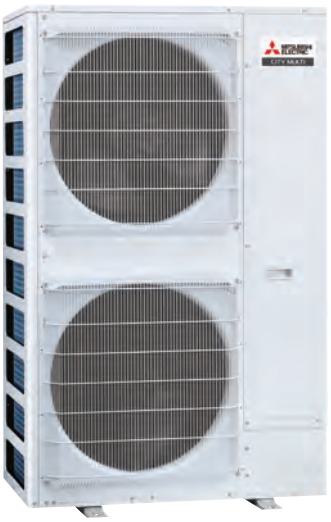
*1,*2 Nominal conditions

	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.)

*3 10 to 52°C D.B. : When connecting PKFY-P15/20/25/32VLM, PFFY-P20/25/32VKM, PFFY-P20/25/32VLEM, PFFY-P20/25/32VLRM(M), PFFY-P20/25/32VCM, PEFY-P-VMA4, M, S and P series indoor unit.
*4 -15 to 52°C D.B. [5 to 126°F D.B.], when using an optional air protect guide [PAC-SH95AG-E]. However, this condition does not apply to the indoor unit listed in*3.
*5 Cooling mode / Heating mode
*6 Liquid pipe diameter: 12.7mm in case that the farthest piping length is longer than 60m, or piping length from outdoor unit to a branch box is longer than 20m.
*7 139 (307) for PUMY-P175/200/225YKM-BS.
*Nominal conditions *1,*2 are subject to ISO 15042.
*Due to continuing improvement, above specification may be subject to change without notice.
*To prevent noise issue, PUMY-P/SP/CP series cannot be connected with PLFY-P80/100/125VMMD model.

S-series

PUMY-P YBM (-BS)



Specifications

Model				PUMY-P250YBM (-BS)	PUMY-P300YBM (-BS)
Power source				3-phase 380-400-415 V, 50 Hz; 3-phase 380 V, 60 Hz	
Cooling capacity (Nominal)	*1		kW	28.0	33.5
	*1		BTU/h	95,500	114,300
	Power input		kW	6.83	8.17
	Current input		A	11.16-10.60-10.22, 11.16	13.35-12.68-12.22, 13.35
	EER		kW/kW	4.10	4.10
Temp. range of cooling	Indoor temp.		W.B.	15.0 to 24.0°C (59 to 75°F)	
	Outdoor temp.*3*4		D.B.	-5.0~52.0°C (23 to 126°F)	
Heating capacity (Nominal)	*2		kW	31.5	37.5
	*2		BTU/h	107,400	127,900
	Power input		kW	6.06	7.36
	Current input		A	9.90-9.41-9.07, 9.90	12.02-11.42-11.01, 12.02
	COP		kW/kW	5.20	5.10
Temp. range of heating *4	Indoor temp.		D.B.	15.0 to 27.0°C (59 to 81°F)	
	Outdoor temp.		W.B.	-20.0 to 15.0°C (-4 to 59°F)	
Indoor unit connectable	Total capacity			50 to 130% of outdoor unit capacity	
	Model/ Quantity	CITY MULTI		15–250/21	15–250/25
Sound pressure level (measured in anechoic room)	*5		dB <A>	59/60	60/62
Refrigerant piping diameter	Liquid pipe		mm (in.)	9.52(3/8) Flared *8	12.7(1/2) Flared
	Gas pipe		mm (in.)	22.2(7/8) Brazed	25.4(1) Brazed
Fan	Type x Quantity			Propeller Fan × 2	
	Air flow rate		m^3/min	187/183	187/197
			L/s	3116/3050	3116/3283
			cfm	6603/6462	6603/6956
*5	Motor output		kW	0.375 + 0.375	
Compressor	Type x Quantity			Scroll hermetic compressor × 1	
	Starting method			Inverter	
*6	Motor output		kW	6.65	7.35
External finish				Galvanized Steel Sheet Munsell No. 3Y 7.8/1.1	
External dimension H x W x D			mm	1,662 × 1,050 × 460 (+45)	
			in.	65-7/16 × 41-11/32 × 18-7/64 (+1-49/64)	
Protection devices	High pressure protection			High pressure switch	
	Inverter circuit (COMP./FAN)			Overcurrent detection, Overheat detection (Heat Sink thermistor)	
	Compressor			Compressor thermistor, Overcurrent detection, Compressor protector	
	Fan motor			Overcurrent, Overheating, Voltage protection	
Refrigerant	Type x original charge			R410A 9.3kg	
Net weight			kg (lbs)	192 (424) *7	
Heat exchanger				Ring Fin and Copper tube	
Defrosting method				Reversed refrigerant circuit	
Optional parts				Joint: CMY-Y62-G-E	

Notes:

*1, *2 Nominal conditions

	Indoor	Outdoor	Pipe length	Level difference	External static press.
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.)	0 Pa
Heating	20°C DB	7°C DB/6°C WB (45°F DB/43°F WB)	7.5m (24-9/16ft.)	0m (0ft.)	0 Pa

*3 10 to 52°C D.B. : When connecting PKFY-P15/20/25/32VLM, PFFY-P20/25/32VKM, PFFY-P20/25/32VLEM, PFFY-P20/25/32VLRM(M), PFFY-P20/25/32VCM, PEFY-P-VMA4, M, S and P series indoor unit.
*4 -15 to 52°C D.B. [5 to 126°F D.B.], when using an optional air protect guide [PAC-SH21AG-E]. However, this condition does not apply to the indoor unit listed in*3.
*5 Cooling mode/Heating mode
*6 External static pressure option is available (30 Pa/3.1 mmH_2O).
*7 194 (428) for PUMY-P250/300YBM-BS.
*8 Liquid pipe diameter: 12.7mm, in case of farthest piping length (farthest indoor unit from outdoor unit) is longer than 90m, or connect with PEFY-P200/250.
*Nominal conditions *1,*2 are subject to ISO 15042.
*Due to continuing improvement, above specification may be subject to change without notice.
*To prevent noise issue, PUMY-P/SP/CP series cannot be connected with PLFY-P80/100/125VMMD model.

YKE-series

The YKE series not only realize high energy savings and quality performance from Mitsubishi Electric, they also feature further improved reliability. This is especially important in the Asian climate which requires cooling capacity at high outside air temperatures.





S module



L module



XL module

* Product images are PUCY models

Three lines of models meet a range of energy-saving requirements.

Standard (PUCY-P)

Compact design that delivers standard efficiency. Provides flexible installation options and high energy efficiency.

High standard (PUCY-GP)

Combining the standard line with even greater efficiency.

High efficiency (PUCY-EP)

Delivers the highest energy efficiency and partial load within the YKE series.

Further enhanced energy savings

- Higher EER rating in all models (compared to conventional models)
- Improved energy efficiency under partial load conditions
- Greater energy savings with evaporating temperature control

High cooling capacity in high outdoor air temperatures

- Operation is guaranteed up to an outside air temperature (intake temperature) of 52°C.
- The assist function boosts cooling power at high outside air temperatures.
- Startup time is reduced in rapid mode.

High reliability

- The structure comprises high-reliability components, including a low-pressure shell compressor and polyurethane-coated circuit boards.
- Enhanced operational reliability is achieved by an emergency operation mode, rotation function, etc.

High installation flexibility

- A two-pipe system and M-NET wiring allow flexible installation options.
- External static pressure can be set to match site conditions.

YKE-series - Cooling-only Standard type

PUCY-P YKE (-BS)



Specifications

Model			PUCY-P200YKE (-BS)	PUCY-P250YKE (-BS)	PUCY-P300YKE (-BS)	PUCY-P350YKE (-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	22.4	28.5	33.5	40.0
		BTU/h	76,400	97,200	114,300	136,500
	Power input	kW	4.48	6.04	7.78	9.45
	Current input	A	7.5-7.1-6.9	10.1-9.6-9.3	13.1-12.4-12.0	15.9-15.1-14.6
	EER	kW/kW	5.00	4.71	4.30	4.23
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
	Quantity		1~17	1~21	1~26	1~30
Sound power level (measured in anechoic room)		dB <A>	77.5	78.5	78.5	81.5
Refrigerant piping diameter	Liquid pipe	mm (in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed (12.7 (1/2) Brazed, farthest length >= 90 m)	9.52 (3/8) Brazed (12.7 (1/2) Brazed, farthest length >= 40 m)	12.7 (1/2) 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
Fan	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate	m^3/min	150	150	150	210
		L/s	2,500	2,500	2,500	3,500
		cfm	5,296	5,296	5,296	7,415
	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
*2	External static press.		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	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter	Inverter
	Motor output	kW	3.0	4.3	5.8	7.3
	Case heater	kW	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 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 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 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 3.0 kg (7 lbs)	R410A x 3.0 kg (7 lbs)	R410A x 3.0 kg (7 lbs)	R410A x 5.0 kg (12 lbs)
Net weight		kg (lbs)	170 (375)	170 (375)	170 (375)	207 (457)
Heat exchanger			Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube
Optional parts			Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2

Notes:

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

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

*2 External static pressure option is available (30 Pa, 60 Pa/3.1 mmH_2O, 6.1 mmH_2O). Consult your dealer about the specification when setting External static pressure option.
*3 The sound level may increase at high outside air temperature.
*Due to continuing improvement, above specifications may be subject to change without notice.

YKE-series - Cooling-only Standard type

PUCY-P YKE (-BS)



Specifications

Model			PUCY-P400YKE (-BS)	PUCY-P450YKE (-BS)	PUCY-P500YKE (-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
Cooling capacity (Nominal)	*1	kW	44.0	48.0	56.0
		BTU/h	150,100	163,800	191,100
	Power input	kW	11.12	12.67	14.73
	Current input	A	18.7-17.8-17.1	21.3-20.3-19.5	24.8-23.6-22.7
	EER	kW/kW	3.95	3.78	3.80
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)
	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)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Quantity		1~34	1~39	1~43
Sound power level (measured in anechoic room)		dB <A>	83.5	83.5	82.5
Refrigerant piping diameter	Liquid pipe	mm (in.)	12.7 (1/2) 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
Fan	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 2
	Air flow rate	m^3/min	250	250	320
		L/s	4,167	4,167	5,333
		cfm	8,828	8,828	11,299
	Control, Driving mechanism		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 2
	*2 External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type		Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter
	Motor output	kW	8.7	10.0	10.9
	Case heater	kW	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>
External dimension H x W x D		mm	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 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)	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
Refrigerant	Type x original charge		R410A x 5.0 kg (12 lbs)	R410A x 5.0 kg (12 lbs)	R410A x 6.0 kg (14 lbs)
Net weight		kg (lbs)	207 (457)	207 (457)	260 (574)
Heat exchanger			Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube
Optional parts			Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2

Notes:

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

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

*2 External static pressure option is available (30 Pa, 60 Pa/3.1 mmH_2O, 6.1 mmH_2O). Consult your dealer about the specification when setting External static pressure option.
*3 The sound level may increase at high outside air temperature.
*Due to continuing improvement, above specifications may be subject to change without notice.

YKE-series
- Cooling-only High Efficiency type
PUCY-EP YKE (-BS)



Specifications

Model			PUCY-EP200YKE (-BS)	PUCY-EP250YKE (-BS)	PUCY-EP300YKE (-BS)	PUCY-EP350YKE (-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	22.4	28.5	33.5	40.0
		BTU/h	76,400	97,200	114,300	136,500
	Power input	kW	4.43	6.00	7.08	8.60
	Current input	A	7.4-7.1-6.8	10.1-9.6-9.2	11.9-11.3-10.9	14.5-13.7-13.2
	EER	kW/kW	5.05	4.75	4.73	4.65
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
	Quantity		1~17	1~21	1~26	1~30
Sound power level (measured in anechoic room)		dB <A>	77.5	78.5	80.5	80
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
	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
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 2	Propeller fan x 2
	Air flow rate	m^3/min	150	150	320	320
		L/s	2,500	2,500	5,333	5,333
		cfm	5,296	5,296	11,299	11,299
	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 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)
Compressor	Type		Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter	Inverter
	Motor output	kW	2.9	4.3	4.3	5.6
	Case heater	kW	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 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 1,750 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 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)	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 3.0 kg (7 lbs)	R410A x 3.0 kg (7 lbs)	R410A x 6.0 kg (14 lbs)	R410A x 6.0 kg (14 lbs)
Net weight		kg (lbs)	170 (375)	170 (375)	247 (545)	262 (578)
Heat exchanger			Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube
Optional parts			Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2

Notes:

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

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

*2 External static pressure option is available (30 Pa, 60 Pa/3.1 mmH_2O, 6.1 mmH_2O). Consult your dealer about the specification when setting External static pressure option.
*3 The sound level may increase at high outside air temperature.
*Due to continuing improvement, above specifications may be subject to change without notice.

YKE-series
- Cooling-only High Efficiency type
PUCY-EP YKE (-BS)



Specifications

Model			PUCY-EP400YKE (-BS)	PUCY-EP450YKE (-BS)	PUCY-EP500YKE (-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
Cooling capacity (Nominal)	*1	kW	44.0	48.0	56.0
		BTU/h	150,100	163,800	191,100
	Power input	kW	10.13	11.42	14.33
	Current input	A	17.1-16.2-15.6	19.2-18.3-17.6	24.1-22.9-22.1
	EER	kW/kW	4.34	4.20	3.90
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)
	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)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Quantity		1~34	1~39	1~43
Sound power level (measured in anechoic room)		dB <A>	80	80.5	82.5
Refrigerant piping diameter	Liquid pipe	mm (in.)	12.7 (1/2) 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
FAN	Type x Quantity		Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Air flow rate	m^3/min	320	320	320
		L/s	5,333	5,333	5,333
		cfm	11,299	11,299	11,299
	Control, Driving mechanism		Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor
	Motor output	kW	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)
Compressor	Type		Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter
	Motor output	kW	6.9	8.0	10.6
	Case heater	kW	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>
External dimension H x W x D		mm	1,650 x 1,750 x 740	1,650 x 1,750 x 740	1,650 x 1,750 x 740
		in.	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)	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
Refrigerant	Type x original charge		R410A x 6.0 kg (14 lbs)	R410A x 6.0 kg (14 lbs)	R410A x 6.0 kg (14 lbs)
Net weight		kg (lbs)	260 (574)	260 (574)	260 (574)
Heat exchanger			Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube	Salt-resistant corrugated fin & aluminium alloy tube
Optional parts			Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2

Notes:

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

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

*2 External static pressure option is available (30 Pa, 60 Pa/3.1 mmH_2O, 6.1 mmH_2O). Consult your dealer about the specification when setting External static pressure option.
*3 The sound level may increase at high outside air temperature.
*Due to continuing improvement, above specifications may be subject to change without notice.

YKD-Series

PUCY/PUHY

These models are provided with high-performance inverter compressors to achieve high energy-saving performance. A wide lineup of models with up to 60 HP can be applied to various usage.



The CITY MULTI Y-Series (for large applications) makes use of a two-pipe refrigerant system, and realizes enhanced cooling capacity at high outside air temperatures. The compact outdoor unit utilizes R410A refrigerant and an INVERTER-driven compressor to use energy effectively. 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 engineering design options. This feature allows easy air conditioning in each area with convenient individual controllers.

YKD-series - Cooling-only

PUCY-P YKD (-BS)



Specifications

Model			PUCY-P200YKD (-BS)	PUCY-P250YKD (-BS)	PUCY-P300YKD (-BS)	PUCY-P350YKD (-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	22.4	28.0	33.5	40.0
		BTU/h	76,400	95,500	114,300	136,500
	Power input	kW	4.66	5.95	7.82	9.66
	Current input	A	7.8-7.4-7.2	10.0-9.5-9.1	13.2-12.5-12.0	16.3-15.4-14.9
	EER	kW/kW	4.80	4.70	4.28	4.14
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~P250/1~17	P15~P250/1~21	P15~P300/1~26	P15~P300/1~30
Sound pressure level (measured in anechoic room)		dB <A>	57	58	61	61
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
	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
Fan	Type x Quantity		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	210
		L/s	2,917	2,917	2,917	3,500
		cfm	6,179	6,179	6,179	7,415
	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
*2	External static press.		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	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter	Inverter
	Motor output	kW	5.5	6.9	8.1	10.4
	Case heater	kW	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 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 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 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 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)
Net weight		kg (lbs)	174 (384)	183 (404)	200 (441)	236 (521)
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
Optional parts			Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/ LS-G2,CMY-Y202S-G2

Notes:

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

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27 °CD.B./19 °CW.B. (81 °FD.B./66 °FW.B.)	35 °CD.B. (95 °FD.B.)	7.5 m (24-9/16 ft.)	0 m (0 ft.)

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

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

YKD-series - Cooling-only

PUCY-P YKD (-BS)



Specifications

Model			PUCY-P400YKD (-BS)	PUCY-P450YKD (-BS)	PUCY-P500YKD (-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
Cooling capacity (Nominal) *1		kW	44.0	48.0	56.0
		BTU/h	150,100	163,800	191,100
	Power input	kW	12.42	14.32	16.51
	Current input	A	20.9-19.9-19.1	24.1-22.9-22.1	27.8-26.4-25.5
	EER	kW/kW	3.54	3.35	3.39
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)
	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)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model/Quantity		P15~P400/1~34	P15~P400/1~39	P15~P500/1~43
Sound pressure level (measured in anechoic room)		dB <A>	63	63	65
Refrigerant piping diameter	Liquid pipe	mm (in.)	12.7 (1/2) 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
Fan	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 2
	Air flow rate	m^3/min	210	210	320
		L/s	3,500	3,500	5,333
		cfm	7,415	7,415	11,299
	Control, Driving mechanism		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 2
*2	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type		Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter
	Motor output	kW	10.8	12.4	13.3
	Case heater	kW	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>
External dimension H x W x D		mm	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 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)	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
Refrigerant	Type x original charge		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)	236 (521)	236 (521)	304 (671)
Heat exchanger			Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube
Optional parts			Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2	Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2	Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2

Notes:

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

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27 °CD.B./19 °CW.B. (81 °FD.B./66 °FW.B.)	35 °CD.B. (95 °FD.B.)	7.5 m (24-9/16 ft.)	0 m (0 ft.)

*2 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*Due to continuing improvement, above specifications may be subject to change without notice.

YKD-series

PUHY-P YKD (-BS)



Specifications

Model			PUHY-P200YKD (-BS)	PUHY-P250YKD (-BS)	PUHY-P300YKD (-BS)	PUHY-P350YKD (-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	22.4	28.0	33.5	40.0
		BTU/h	76,400	95,500	114,300	136,500
	Power input	kW	4.48	5.88	7.59	9.66
	Current input	A	7.5-7.1-6.9	9.9-9.4-9.0	12.8-12.1-11.7	16.3-15.4-14.9
	EER	kW/kW	5.00	4.76	4.41	4.14
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.	-5.0~52.0 °C (23~126 °F)	-5.0~52.0 °C (23~126 °F)	-5.0~52.0 °C (23~126 °F)	-5.0~52.0 °C (23~126 °F)
Heating capacity (Nominal)	*2	kW	22.4	28.0	33.5	40.0
		BTU/h	76,400	95,500	114,300	136,500
	Power input	kW	5.05	6.33	8.11	9.61
	Current input	A	8.5-8.0-7.8	10.6-10.1-9.7	13.6-13.0-12.5	16.2-15.4-14.8
	COP	kW/kW	4.43	4.42	4.13	4.16
Temp. range of heating	Indoor	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)	15.0~27.0 °C (59~81 °F)
	Outdoor	W.B.	-20.0~15.5 °C (-4~60 °F)	-20.0~15.5 °C (-4~60 °F)	-20.0~15.5 °C (-4~60 °F)	-20.0~15.5 °C (-4~60 °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~P250/1~17	P15~P250/1~21	P15~P300/1~26	P15~P300/1~30
Sound pressure level (measured in anechoic room)		dB <A>	57	58	61	61
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
	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
Fan	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1
	Air flow rate	m^3/min	175	175	185	210
		L/s	2,917	2,917	3,083	3,500
		cfm	6,179	6,179	6,532	7,415
	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
	*3 External static press.		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	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter	Inverter
	Motor output	kW	5.5	6.9	8.1	10.4
	Case heater	kW	–	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 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 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 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 8.0 kg (18 lbs)	R410A x 8.0 kg (18 lbs)	R410A x 8.0 kg (18 lbs)	R410A x 11.5 kg (26 lbs)
Net weight		kg (lbs)	191 (422)	191 (422)	204 (450)	243 (536)
Heat exchanger			Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube	Salt-resistant cross fin & aluminium tube	Salt-resistant cross fin & copper tube
Optional parts			Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2	Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2

Notes:

*1,*2 Nominal conditions

	Indoor	Outdoor	Pipe length	Level difference
Cooling	27 °CD.B./19 °CW.B. (81 °FD.B./66 °FW.B.)	35 °CD.B. (95 °FD.B.)	7.5 m (24-9/16 ft.)	0 m (0 ft.)
Heating	20 °CD.B. (68°FD.B.)	7 °CD.B./6 °CW.B. (45 °FD.B./43 °FW.B.)	7.5 m (24-9/16 ft.)	0 m (0 ft.)

*3 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specifications may be subject to change without notice.

YKD-series

PUHY-P YKD (-BS)



Specifications

Model			PUHY-P400YKD (-BS)	PUHY-P450YKD (-BS)	PUHY-P500YKD (-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
Cooling capacity (Nominal)	*1	kW	45.0	48.0	55.0
		BTU/h	153,500	163,800	187,700
	Power input	kW	12.71	14.32	16.22
	Current input	A	21.4-20.3-19.6	24.1-22.9-22.1	27.3-26.0-25.0
	EER	kW/kW	3.54	3.35	3.39
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)
	Outdoor	D.B.	-5.0~52.0 °C (23~126 °F)	-5.0~52.0 °C (23~126 °F)	-5.0~52.0 °C (23~126 °F)
Heating capacity (Nominal)	*2	kW	45.0	48.0	55.0
		BTU/h	153,500	163,800	187,700
	Power input	kW	10.92	13.33	15.71
	Current input	A	18.4-17.5-16.8	22.5-21.3-20.6	26.5-25.1-24.2
	COP	kW/kW	4.12	3.60	3.50
Temp. range of heating	Indoor	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)
	Outdoor	W.B.	-20.0~15.5 °C (-4~60 °F)	-20.0~15.5 °C (-4~60 °F)	-20.0~15.5 °C (-4~60 °F)
Indoor unit connectable	Total capacity		50~130% of outdoor unit capacity	50~130% of outdoor unit capacity	50~130% of outdoor unit capacity
	Model/Quantity		P15~P400/1~34	P15~P400/1~39	P15~P500/1~43
Sound pressure level (measured in anechoic room)		dB <A>	63	63	65
Refrigerant piping diameter	Liquid pipe	mm (in.)	12.7 (1/2) 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
Fan	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 2
	Air flow rate	m^3/min	210	210	360
		L/s	3,500	3,500	6,000
		cfm	7,415	7,415	12,712
	Control, Driving mechanism		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 2
*3	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type		Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter
	Motor output	kW	10.8	12.4	13.3
	Case heater	kW	–	–	–
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>
External dimension H x W x D		mm	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 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)	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
Refrigerant	Type x original charge		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)	241 (532)	241 (532)	285 (629)
Heat exchanger			Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube	Salt-resistant cross fin & copper tube
Optional parts			Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2	Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2	Joint: CMY-Y102SS/LS-G2,CMY-Y202S-G2

Notes:

*1,*2 Nominal conditions

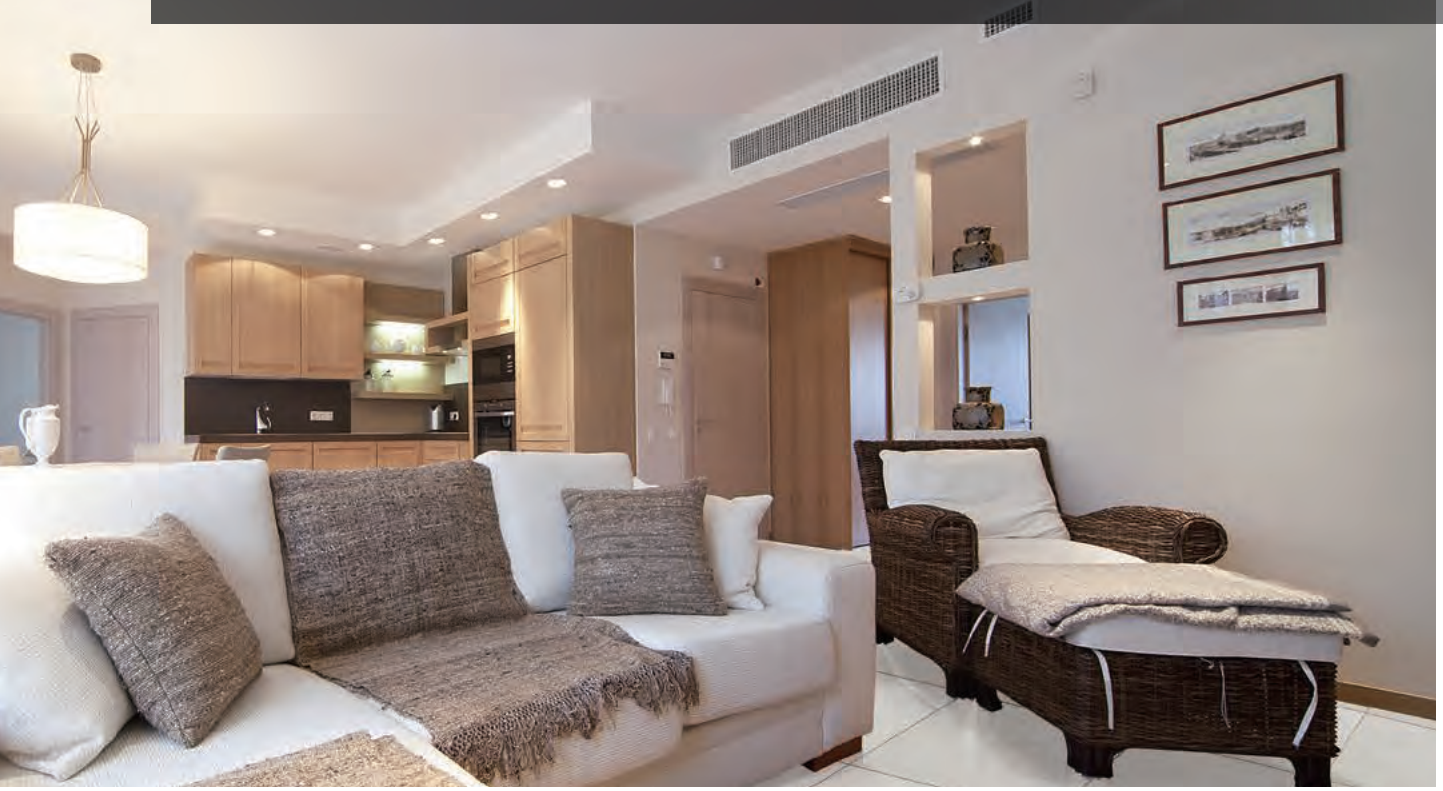
	Indoor	Outdoor	Pipe length	Level difference
Cooling	27 °CD.B./19 °CW.B. (81 °FD.B./66 °FW.B.)	35 °CD.B. (95 °FD.B.)	7.5 m (24-9/16 ft.)	0 m (0 ft.)
Heating	20 °CD.B. (68°FD.B.)	7 °CD.B./6 °CW.B. (45 °FD.B./43 °FW.B.)	7.5 m (24-9/16 ft.)	0 m (0 ft.)

*3 External static pressure option is available (30Pa, 60Pa / 3.1mmH_2O, 6.1mmH_2O).
*Nominal condition *1,*2 are subject to JIS B8615-2.
*Due to continuing improvement, above specifications may be subject to change without notice.



Indoor unit

A suitable unit can be selected from among a wide lineup of 17 types of units according to a building's needs. The lineup includes the cassette type, ensuring improved comfort and a pleasant appearance, the ceiling concealed type, excelling in quietness and ensuring flexible placement of air outlets, and the ceiling suspended and wall-mounted types.



Wide Selection of Indoor Units

Ceiling Cassette Type

4-way airflow type

PLFY-P VHM



Office Hospital School Restaurant

Capacity zone

PLFY-P (kW)	3.6	4.5	5.6	7.1	9.0	11.2	14.0	16.0

›››P 45 - 47

4-way airflow type

PLFY-P VFM



Office Hospital School Restaurant

Capacity zone

kW	1.7	2.2	2.8	3.6	4.5	5.6

›››P 48 - 50

2-way airflow type

PLFY-P VMMD



Office Hospital School Residence

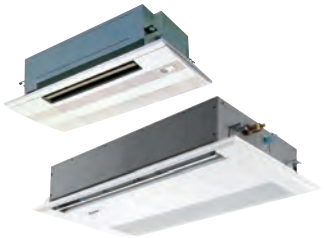
Capacity zone

kW	2.2	2.8	3.6	4.5	5.6	7.1	9.0	11.2	14.0

›››P 51 - 52

1-way airflow type

PMFY-P VBM
PMFY-P VFM



Office School Restaurant Residence

Capacity zone

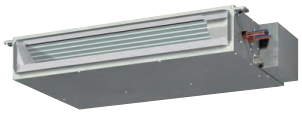
VBM-E (kW)	2.2	2.8	3.6	4.5
VFM-PA (kW)	5.6	7.1	8.0	9.0

›››P 53 - 54

Ceiling Concealed Type

Low static pressure type

PEFY-P VMS1(L)



Office Residence Restaurant Hotel

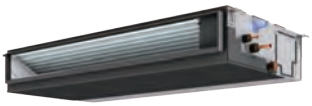
Capacity zone

kW	1.7	2.2	2.8	3.6	4.5	5.6	7.1

›››P 56 - 57

Medium static pressure type

PEFY-P VMA(L)



Office School Residence Hotel

Capacity zone

VMA(L) (kW)	2.2	2.8	3.6	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0
VMA3/4 (kW)	2.2	2.8	3.6	4.5	5.6	7.1	8.0				

›››P 58 - 59

High static pressure type

PEFY-P VMH(S)-E







Office Hospital School Restaurant

Capacity zone

kW	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0	22.4	28.0

›››P 60 - 61

Fresh air intake type

PEFY-P VMHS-E-F



Office Hospital School Restaurant

Capacity zone

kW	14.0	22.4	28.0

›››P 62 - 63

Other Type

Ceiling suspended type

PCFY-P VKM



Office School Restaurant

Capacity zone

kW	4.5	7.1	11.2	14.0

›››P 64 - 65

Wall-mounted type

PKFY-P VLM
PKFY-P VKM


P15-P32VLM


P40/P50VLM

P63/P100VKM

Office Restaurant

Capacity zone

VLM (kW)	1.7	2.2	2.8	3.6	4.5	5.6
VKM (kW)	7.1	11.2				

›››P 66 - 67

Floor standing type (for perimeter zone)

PFFY-P VEM-E



Office School

Capacity zone

kW	2.2	2.8	3.6	4.5	5.6	7.1

›››P 68 - 69

Floor standing type (for perimeter zone)

PFFY-P VCM-E



Office Hotel

Capacity zone

kW	2.2	2.8	3.6	4.5	5.6	7.1

›››P 70 - 71

Floor standing type

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



Restaurant Airport hall

Capacity zone

YM (kW)	45.0	56.0
YMH (kW)	22.4	28.0

›››P 72 - 73

AHU KIT

PAC-AH M



Capacity zone

kW	11.2	14.0	16.0	22.4	28.0	45.0	56.0

Office Hospital School Restaurant Airport hall

›››P 74 - 75

Branch Box System

PAC-MK BC
MSXY-MP VA
MSXZ-FP VA



Residence

Capacity zone

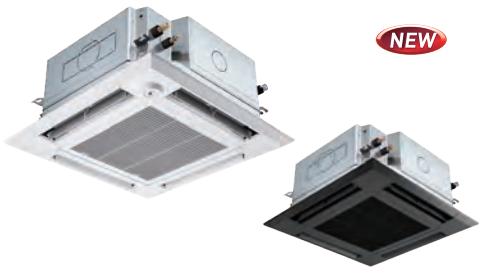
kW	2.5	3.5	3.6	5.2	6.6

›››P 76 - 77

Ceiling Cassette Type

4-way airflow type

PLFY-P VHM



- With new feature such as Silver Antibacterial Agent and Dual Barrier Material improve cleanliness
- To improve constructability and maintainability, new features are incorporated
- New panel with thinner and smarter design
- The airflow pattern can be selected from 4, 3, or 2 directions
- With the 3D i-see Sensor, “felt temperature* control” is available, contributing to improve comfort/energy efficiency

*i.e., the temperature felt by people in the room

3D i-see Sensor	Decoration Panel	Drain Pump	Air Flow Rate 4 types	Fresh air intake usable

4-way airflow type

PLFY-P VFM



- 625 mm [24 in.] compact design. Fits perfectly with 2-inch by 2-inch ceiling systems
- With 3D i-see Sensor, smart control based on the number of people in the room is available, contributing to improve comfort/energy efficiency

3D i-see Sensor	Decoration Panel	Drain Pump	Air Flow Rate 3 types	Fresh air intake usable

2-way airflow type

PLFY-P VMMD

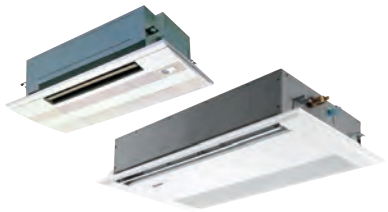


- A new design features a pure white panel sporting the Mitsubishi Electric logo.
- The maximum lifting height of the drain pump has been extended to 850mm from the ceiling surface.
- Power consumption has been reduced by changing the AC fan motors to DC.

3D i-see Sensor	Decoration Panel	Drain Pump	Air Flow Rate 3 types	Fresh air intake usable

1-way airflow type

PMFY-P VBM
PMFY-P VFM



- Line up expanded up to P80
- The 1-way air flow type that is recommended to install on the edges of a room
- Thin design with a height of 230 mm [9-1/16 in.]

Decoration Panel	Drain Pump	Air Flow Rate 4 types	Fresh air intake usable

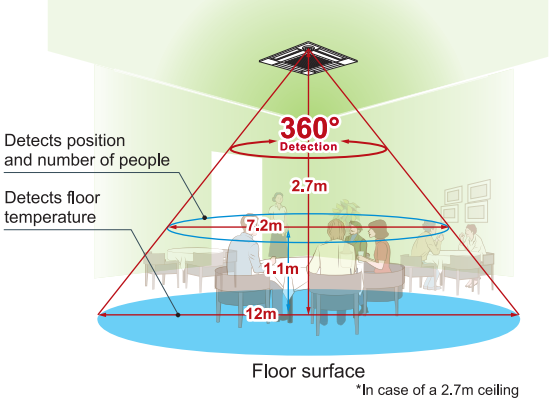
3D i-see Sensor



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

Highly accurate motion detection

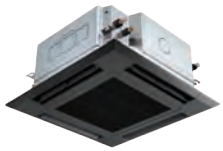
A total of eight sensors rotate a full 360° in 3-minute intervals. In addition to detecting body temperature, our original algorithm also detects the number of occupants in the room and their positions.





PLFY-P VHM







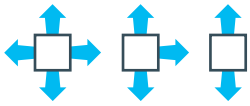
Optimum Airflow

2-, 3-, 4-way Airflow Pattern Selection

Three outlet options to choose from-bidirectional, 3-way, and 4-way to suit different types of installation. Select, for example, 4-directional for installation in the center of the room and 3-directional for installation in the corner.

2-, 3-, 4-way airflow pattern selection

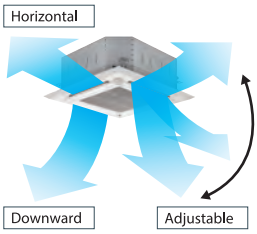
* Optional shuffle placement is required for 2- and 3-way patterns.



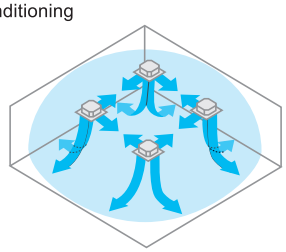
Individual Vane Angle Settings

Vane directions can be changed or fixed from the remote controller to direct the supply air at or away from the objects or the occupants in the room.

Airflow direction at each vane can be set using the wired remote controller or the wireless remote controller (PAR-SL101A-E).



Multi-directional air-conditioning



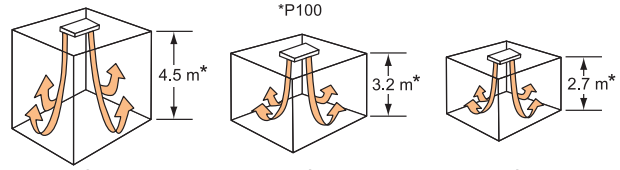
2-, 3-, 4-way Airflow Pattern Selection

Individual Vane Angle Settings

The combination of individual vane setting enables the optimal outlet setting for each room layout to ensure even temperature distribution throughout each room. The result is uniformly comfortable air conditioning.

Equipped with High- and Low-ceiling Modes

Units are equipped with high- and low-ceiling operation modes that make it possible to switch the airflow volume to match a room's height. The ability to choose the optimum airflow volume makes it possible to optimize the breezy sensation felt throughout the room.



4-way airflow with high-ceiling setting

4-way airflow with standard setting

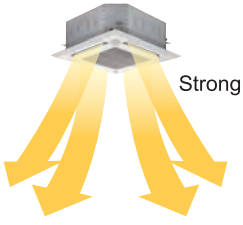
4-way airflow with low-ceiling setting

Airflow Range

Model / Airflow pattern	P32–P80			P100/P125/P140		
	High-ceiling setting	Standard setting	**Low-ceiling setting**	**High-ceiling setting**	Standard setting	**Low-ceiling setting**
4-way	**3.5 m**	2.7 m	**2.5 m**	**4.5 m**	3.2 m	**2.7 m**
3-way	**3.5 m**	3.0 m	**2.7 m**	**4.5 m**	3.6 m	**3.0 m**
2-way	**3.5 m**	3.3 m	**3.0 m**	**4.5 m**	4.0 m	**3.3 m**

Automatic Air-speed Adjustment

An automatic air-speed mode that adjusts airflow speed automatically is adopted to maintain comfortable room conditions at all times. This setting automatically adjusts the air-speed to conditions that match the room environment.



At the start of the heating / cooling operation, the airflow is set to high-speed to quickly heat / cool the room.



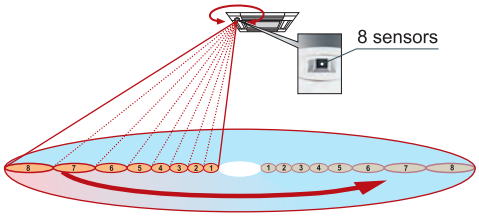
When the room temperature reaches the desired setting, the airflow speed is decreased automatically for stable and comfortable heating/cooling operation.

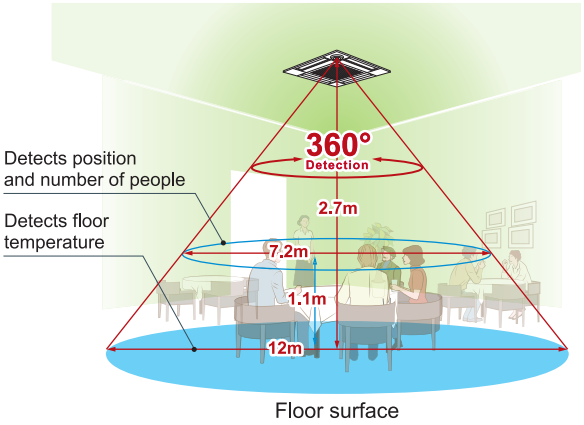
3D i-see Sensor



• Highly accurate people detection

A total of eight sensors rotate a full 360° in 3-minute intervals. In addition to detecting human body temperature, our original algorithm also detects people's positions and the number of people.





*In case of a 2.7m ceiling

• Detects number of people

Room occupancy energy-saving mode

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

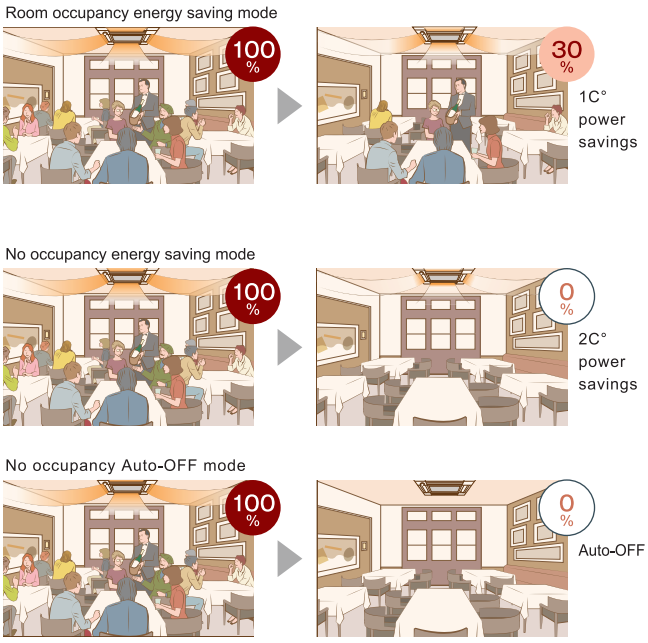
No occupancy energy-saving mode

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

No occupancy Auto-OFF mode

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

*No occupancy Auto-OFF mode is not available when multiple indoor units are operated by one MA remote controller.

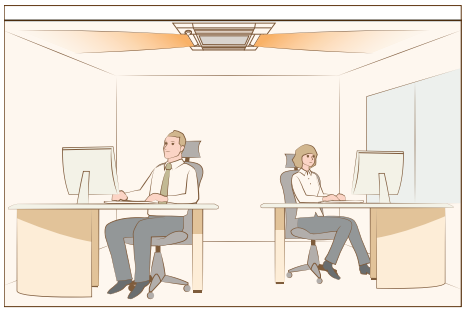


*PAR-41MAAM is required for each setting.

• Detects people's position

Direct/Indirect settings*

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

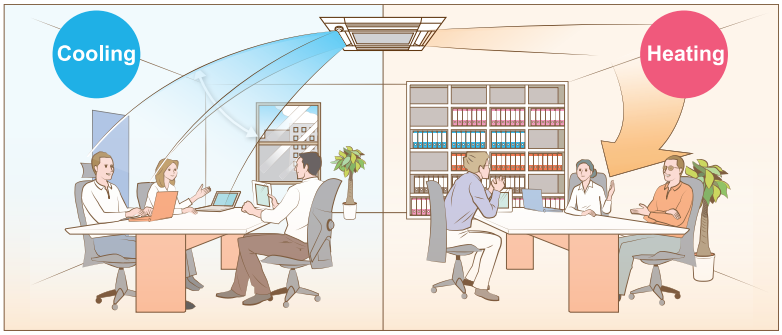


*PAR-41MAAM or PAR-SL101A-E is required for each setting.

Seasonal airflow*

<When cooling>
Saves energy while keeping a comfortable effective temperature by automatically switching between ventilation and cooling. When a pre-set temperature is reached, the air conditioning unit switches to swing fan operation to maintain the effective temperature. This clever function contributes to keeping a comfortable coolness.

<When heating>
The air conditioning unit automatically switches between circulator and heating. Wasted heat that accumulates near the ceiling is reused via circulation. When a pre-set temperature is reached the air conditioner switches from heating to circulator and blows air in the horizontal direction. It pushes down the warm air that has gathered near the ceiling to people's height, thereby providing smart heating.



*PAR-41MAAM is required for each setting.

Specifications

Model				PLFY-P32VHM	PLFY-P40VHM	PLFY-P50VHM	PLFY-P63VHM
Power source				1-phase 220-240V 50Hz/1-phase 220-230V 60Hz			
Cooling capacity		*1	kW	3.6	4.5	5.6	7.1
		*1	BTU/h	12,300	15,400	19,100	24,200
		Power input	kW	0.03	0.03	0.03	0.05
		Current input	A	0.32	0.32	0.34	0.45
Heating capacity		*2	kW	4.0	5.0	6.3	8.0
		*2	BTU/h	13,600	17,100	21,500	27,300
		Power input	kW	0.03	0.03	0.03	0.05
		Current input	A	0.25	0.25	0.27	0.38
External finish (Munsell No.)		Unit		Galvanized steel sheet			
		Panel		MUNSELL (1.0Y 9.2/0.2)			
External dimension H x W x D		Unit	mm	258 x 840 x 840			
		Panel	mm	35 x 950 x 950			
Net weight		Unit	kg	19			21
		Panel	kg	5			
Heat exchanger				Micro slit fin (Aluminumfin and copper tube)			
Fan	Type x Quantity			Turbo fan x 1			
	Airflow rate (Low-Mid2-Mid1-High)		m^3/min	14 - 15 - 16 - 17	14 - 15 - 16 - 18	14 - 15 - 17 - 19	14 - 16 - 19 - 22
			L/s	233 - 250 - 267 - 283	233 - 250 - 267 - 300	233 - 250 - 283 - 317	233 - 267 - 317 - 367
			cfm	494 - 530 - 565 - 600	494 - 530 - 565 - 636	494 - 530 - 600 - 671	494 - 565 - 671 - 777
	External static pressure		Pa	0			
Motor	Type			DC motor			
	Output		kW	0.050			
Air filter				PP honeycomb			
Sound pressure level (Low-Mid2-Mid1-High)			dB (A)	24 - 26 - 28 - 29	24 - 26 - 28 - 30	24 - 27 - 29 - 31	26 - 29 - 32 - 35
Refrigerant control device				LEV			
Diameter of refrigerant pipe		Liquid	mm (in.)	ø6.35 (ø1/4) Flare			ø9.52 (ø3/8) Flare
		Gas	mm (in.)	ø12.7 (ø1/2) Flare			ø15.88 (ø5/8) Flare
Field drain pipe size			mm (in.)	O.D 32 (1-1/4)			

Model				PLFY-P80VHM	PLFY-P100VHM	PLFY-P125VHM	PLFY-P140VHM
Power source				1-phase 220-240V 50Hz/1-phase 220-230V 60Hz			
Cooling capacity		*1	kW	9.0	11.2	14.0	16.0
		*1	BTU/h	30,700	38,200	47,800	54,600
		Power input	kW	0.06	0.10	0.12	0.13
		Current input	A	0.60	1.00	1.11	1.25
Heating capacity		*2	kW	10.0	12.5	16.0	18.0
		*2	BTU/h	34,100	42,700	54,600	61,400
		Power input	kW	0.06	0.10	0.12	0.13
		Current input	A	0.53	0.93	1.04	1.18
External finish (Munsell No.)		Unit		Galvanized steel sheet			
		Panel		MUNSELL (1.0Y 9.2/0.2)			
External dimension H x W x D		Unit	mm	298 x 840 x 840			
		Panel	mm	35 x 950 x 950			
Net weight		Unit	kg	21	24		26
		Panel	kg	5			
Heat exchanger				Micro slit fin (Aluminumfin and copper ube)			
Fan	Type x Quantity			Turbo fan x 1			
	Airflow rate (Low-Mid2-Mid1-High)		m^3/min	14 - 17 - 21 - 25	19 - 23 - 28 - 34	21 - 25 - 30 - 35	22 - 26 - 31 - 36
			L/s	233 - 283 - 350 - 417	317 - 383 - 467 - 567	350 - 417 - 500 - 583	367 - 433 - 517 - 600
			cfm	494 - 600 - 742 - 883	671 - 812 - 989 - 1201	742 - 883 - 1059 - 1236	777 - 918 - 1095 - 1271
	External static pressure		Pa	0			
Motor	Type			DC motor			
	Output		kW	0.120			
Air filter				PP honeycomb			
Sound pressure level (Low-Mid2-Mid1-High)			dB (A)	26 - 30 - 34 - 38	32 - 36 - 40 - 44	33 - 37 - 41 - 44	35 - 39 - 43 - 46
Refrigerant control device				LEV			
Diameter of refrigerant pipe		Liquid	mm (in.)	ø9.52 (ø3/8) Flare			
		Gas	mm (in.)	ø15.88 (ø5/8) Flare			
Field drain pipe size			mm (in.)	O.D 32 (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. 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.)

Optional Parts

Description	For PLFY-P VHM
Anti-allergy enzyme filter	PAC-SK70KF-E
Plasma Quad Connect	PAC-SL36FT-E
Multi-functional Casement	PAC-SK76TM-E
Duct flange for fresh air intake	PAC-SH65OF-E
Side-suspend parts	PAC-SK79LK-E
Air outlet shutter plate	PAC-SK67SP-E
High effciency filter element	PAC-SK71KF-E
Space Panel	PAC-SK64AS-E
3D Total Flow unit	PLP-U160HLR-E

Panel Option

Description	For PLFY-P VHM
Standard Panel	PLP-6HA
Panel with SL100/101 R/C	PLP-6HALM
Panel with 21MA R/C	PLP-6HAMD
Automatic filter elevation and signal receiver	PLP-6HAJ
Black panel (standard)	PLP-6HAB
Black panel (with signal receiver)	PLP-6HALMB
3D i-see Sensor Corner Panel	PAC-SL35ME-E
Signal receiver Corner Panel	PAR-SR5LA-E



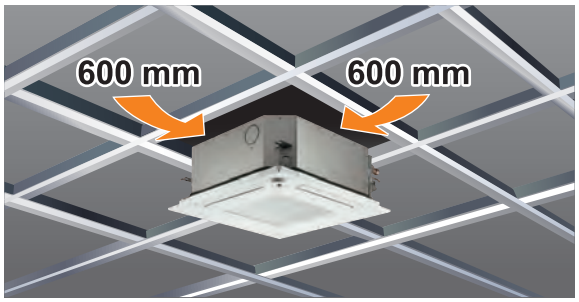
PLFY-P VFM



Office Hospital School Restaurant

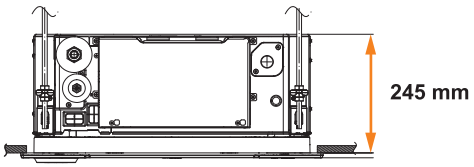
Beautiful square design

The straight square design matches 2 × 2 (600 mm × 600 mm) ceiling construction specifications.
Direct line-based square design enables designs of system ceiling to match the design of direct line type illuminations, thereby creating a beautiful space.



The height above ceiling 245 mm

The height above ceiling of 245 mm is top class in the industry*, and enables fitting into narrow ceiling space.



* As of Aug 2015. Among compact 4-way cassettes for system ceiling. (An incompany investigation.)

Compact & light-weight design

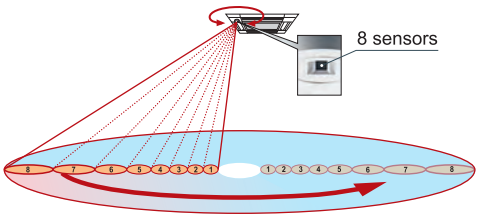
The panel weighs 3 kg, and the unit's body weighs 14 kg (P15, P20 and P25 models) or 15 kg (P32, P40 and P50 models). Their weight is 5 kg lighter than the PLFY-VEM-E model, allowing them to be easily suspended.

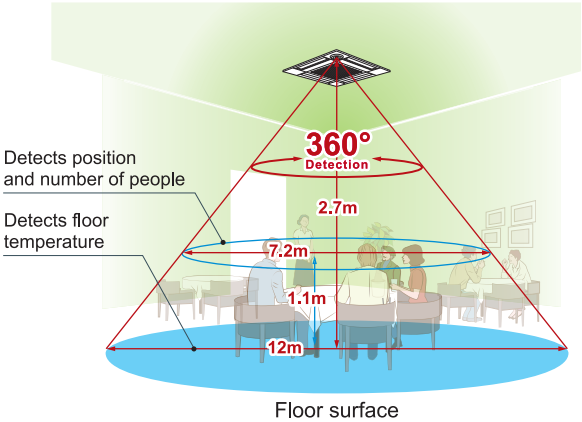
3D i-see Sensor



• Highly accurate people detection

A total of eight sensors rotate a full 360° in 3-minute intervals. In addition to detecting human body temperature, our original algorithm also detects people's positions and the number of people.





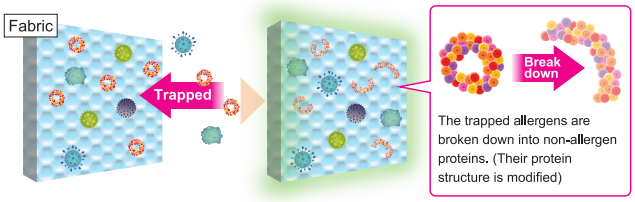
Anti-Allergy Enzyme Filter

The optional anti-allergy enzyme filter PAC-SK46KF-E contains artificial enzymes to filter out or reduce the level of bacteria[*1], viruses[*2], and allergens (pollen)[*3].

It can be easily added to units that have already been installed[*4].

* This is effective against bacteria that are attached to the filter surface for 18 hours and viruses that are attached to the filter surface for 24 hours. However, it does not actively remove them from the room itself.

Anti-bacterial | Removes viruses | Anti-allergen | Removes odors



1. The filter fabric traps bacteria, viruses, and allergens.
2. The enzymes inside the filter break down the bacteria, viruses, and allergens to reduce their.

(Image provided for illustrative purposes only.)

*1: According to tests performed by the Boken Quality Evaluation Institute. Testing procedure: JIS L 1902, Quantitative Test (bacterial solution absorption method). Test number: 006109-1, 2. Target: Two types of bacteria attached to the filter. Test result: At least a 99% reduction after 18 hours compared to untreated fabric. *2: According to tests performed by the Japan Textile Products Quality and Technology Center. Testing procedure: JIS L 1922, Determination of Antiviral Activity of Textile Products. Test number: 19KB060923-1. Target: One type of virus attached to the filter. Test result: At least a 99% reduction after 24 hours compared to untreated fabric. *3: According to tests performed by the Japan Food Research Laboratories. Testing procedure: ELISA method. Test number: No. 10014572002-01. Target: One type of pollen attached to the filter. Test result: At least a 99% reduction. *4: For a list of models that are compatible with this product, please referto the feature page of each indoor unit.

Optional Parts

Description	Model	Applicable models
i-see Sensor corner panel	PAC-SF1ME-E	P15, P20, P25, P32, P40, P50
Wireless signal receiver	PAR-SF9FA-E	P15, P20, P25, P32, P40, P50
Anti-allergy enzyme filter	PAC-SK46KF-E	P15, P20, P25, P32, P40, P50

Panel & Corner panel

		With signal Receiver	With 3D i-see Sensor	With New Wireless
Panel	SLP-2FA			
	SLP-2FAL	●		
	SLP-2FAE		●	
	SLP-2FALE	●	●	
	SLP-2FALM	●		●
	SLP-2FALME	●	●	●
Corner panel	PAR-SF9FA-E	●		
	PAC-SF1ME-E		●	

Specifications

Model				PLFY-P15VFM	PLFY-P20VFM	PLFY-P25VFM	PLFY-P32VFM	PLFY-P40VFM	PLFY-P50VFM
Power source				1-phase 220-240V 50Hz/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
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		kW	0.02	0.02	0.02	0.02	0.03	0.04
	Heating		kW	0.02	0.02	0.02	0.02	0.03	0.04
Current	Cooling		A	0.19	0.21	0.22	0.23	0.28	0.40
	Heating		A	0.14	0.16	0.17	0.18	0.23	0.35
External finish (Munsell No.)	Unit			Galvanized steel sheet					
	Panel			MUNSELL (1.0Y 9.2/0.2)					
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.)	10 x 625 x 625 (3/8 x 24-5/8 x 24-5/8)					
Net weight	Unit		kg (lbs.)	14 (31)			15 (33)		
	Panel		kg (lbs.)	3 (7)					
Heat exchanger				Cross fin (Aluminum fin and copper tube)					
Fan	Type x Quantity			Turbo fan x 1					
	Airflow rate (Lo-Mid-Hi)		m^3/min	6.5-7.5-8.0	6.5-7.5-8.5	6.5-8.0-9.0	7.0-8.0-9.5	7.5-9.0-11.0	9.0-11.0-13.0
			L/s	108-125-133	108-125-142	108-133-150	117-133-158	125-150-183	150-183-217
			cfm	230-265-282	230-265-300	230-282-318	247-282-335	265-318-388	318-388-459
	External static pressure		Pa	0					
Motor	Type			DC motor					
	Output		kW	0.05					
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	dB (A)	26-28-30	26-29-31	26-30-33	26-30-34	28-33-39	33-39-43

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

2-way airflow type

PLFY-P VMMD-E





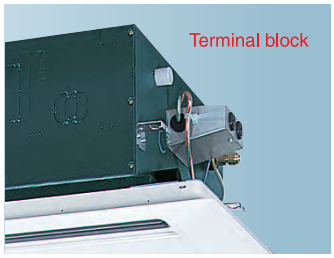
Slimline body

The height of the main unit is merely 290mm (11-7/16 in.) for the P20-P100 models.

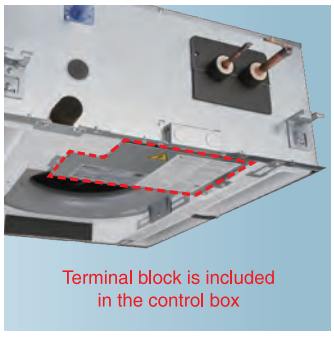
Built-in control box

The terminal block, which was previously mounted on the outside of the unit, is now built into the control box. This structural change has improved connectivity and wiring workability.

Conventional unit



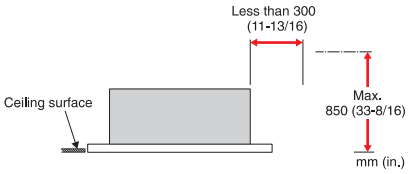
New unit



The control box is accessible from the bottom of the unit.

Extended lift of drain pump

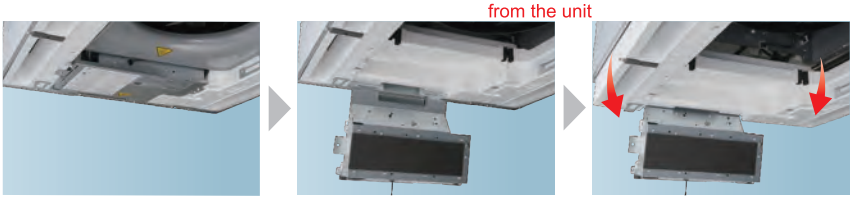
The maximum lift of the drain pump has been extended to 850mm (33-8/16 in.) from the ceiling surface, allowing for greater flexibility in piping layout.



Easy detachment of drain pan

New attachments for control box reduce the workload of attaching and detaching the drain pan. This makes cleaning the drain pan easier.

Control box can be suspended from the unit



Reduced power consumption and weight

New structures and components improve energy efficiency and installability. The drain pan has been modified to provide smoother airflow, and the fan motor has been changed from AC to DC. These improvements have reduced power consumption of the new model by up to 78% compared to the conventional models (P20). Additionally, the net weight of the new models is lighter than the conventional models, making installation easier.

Versatile airflow settings and vane control deliver comfort throughout the room

Four levels of airflow setting available

The conventional models (P20-P100) had three levels of airflow setting, but the new models offer four levels to accommodate various installation conditions.

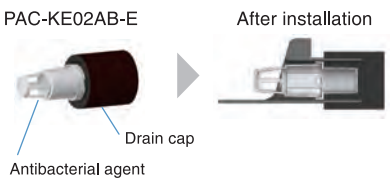
Airflow rate setting

	P20-P100	P125
Conventional models (VLMD)	Low-Mid-High	Low-Mid2-Mid1-High
New models (VMMD)	**Low-Mid2-Mid1-High**	Low-Mid2-Mid1-High

Silver-Ionized Antibacterial Agent for Drain Pan

PAC-KE02AB-E (Optional parts)

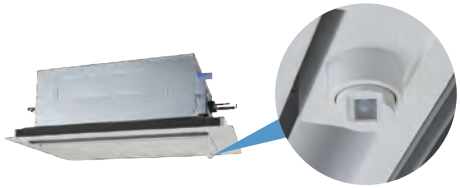
The optional Antibacterial Agent can be installed on drain pan to suppress bacterial growth*, reducing the occurrence of slime. It can reduce the maintenance frequency of drain pan.



* According to tests performed by the Boken Quality Evaluation Institute.
Testing procedure: Antibacterial test of drain water based on the SIAA shake method.
Test number: 11233843-1 Test result: Effective against bacteria (Antibacterial Activity Value 4.3)

New "3D i-see Sensor" panel

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



Specifications

Model			PLFY-P20VMMD	PLFY-P25VMMD	PLFY-P32VMMD	PLFY-P40VMMD
Power source			1-phase 220-230-240V 50/60Hz			
Cooling capacity (Nominal)	*1	kW	2.2	2.8	3.6	4.5
	*1	BTU/h	7,500	9,600	12,300	15,400
	Power input	kW	0.016	0.023	0.024	0.031
	Current input	A	0.21 - 0.20 - 0.18	0.29 - 0.27 - 0.24	0.30 - 0.28 - 0.27	0.37 - 0.35 - 0.34
Heating capacity (Nominal)	*2	kW	2.5	3.2	4.0	5.0
	*2	BTU/h	8,500	10,900	13,600	17,100
	Power input	kW	0.013	0.020	0.021	0.029
	Current input	A	0.17 - 0.16 - 0.15	0.25 - 0.23 - 0.20	0.26 - 0.24 - 0.23	0.33 - 0.31 - 0.30
External finish			Galvanized steel plate			
External dimension H x W x D		mm	290 x 770 x 650			
		in.	11-7/16 x 30-3/8 x 25-5/8			
Net weight		kg (lbs.)	20 (45)		21 (47)	
Decoration panel	Model		CMP-40LWH-E			
	External finish		MUNSELL (1.0Y 9.2/0.2)			
	Dimension	mm	20 x 1,080 x 710			
	H x W x D	in.	13/16 x 42-9/16 x 28			
	Net weight	kg (lbs)	7 (16)			
Heat exchanger			Cross fin (Aluminum fin and copper tube)			
FAN	Type x Quantity		Turbo fan x 1			
	External static pressure	Pa	0			
		mmH_2O	0.0			
	Motor Type		DC motor			
	Motor output	kW	0.050			
	Airflow rate		(Low-Mid2-Mid1-High)			
		m^3/min	4.8 - 6.5 - 7.8 - 8.6	4.8 - 6.7 - 8.6 - 10.0	4.9 - 7.4 - 8.3 - 10.0	7.4 - 8.9 - 10.0 - 11.0
		L/s	80 - 108 - 130 - 143	80 - 112 - 143 - 167	82 - 123 - 138 - 167	123 - 148 - 167 - 183
		cfm	169 - 230 - 275 - 304	169 - 237 - 304 - 353	173 - 261 - 293 - 353	261 - 314 - 353 - 388
Sound pressure level (measured in anechoic room)		dB (A)	(Low-Mid2-Mid1-High) 21.5 - 25.0 - 28.0 - 30.0	21.5 - 25.5 - 30.0 - 35.0	23.5 - 28.5 - 31.5 - 36.0	28.5 - 33.0 - 36.0 - 39.5
Air filter			PP honeycomb fabric (long life filter).			
Connectable outdoor unit		*3	R410A CITY MULTI			
Refrigerant piping diameter	Liquid (R410A)	mm (in.)	6.35 (1/4) Brazed			
	Gas (R410A)	mm (in.)	12.7 (1/2) Brazed			
Field drain pipe size		mm (in.)	O.D.32 (1-1/4)			

Model			PLFY-P50VMMD	PLFY-P63VMMD	PLFY-P80VMMD	PLFY-P100VMMD	PLFY-P125VMMD
Power source			1-phase 220-230-240V 50/60Hz				
Cooling capacity (Nominal)	*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
	Power input	kW	0.032	0.056	0.064	0.096	0.196
	Current input	A	0.32 - 0.31 - 0.29	0.49 - 0.48 - 0.47	0.52 - 0.50 - 0.49	0.73 - 0.70 - 0.69	1.37 - 1.33 - 1.28
Heating capacity (Nominal)	*2	kW	6.3	8.0	10.0	12.5	16.0
	*2	BTU/h	21,500	27,300	34,100	42,700	54,600
	Power input	kW	0.029	0.053	0.061	0.093	0.195
	Current input	A	0.28 - 0.27 - 0.26	0.45 - 0.44 - 0.43	0.48 - 0.46 - 0.45	0.69 - 0.67 - 0.65	1.33 - 1.28 - 1.24
External finish			Galvanized steel plate				
External dimension H x W x D		mm	290 x 940 x 650		290 x 1,440 x 650		331 x 1,440 x 650
		in.	11-7/16 x 37-1/16 x 25-5/8		11-7/16 x 56-3/4 x 25-5/8		13-1/16 x 56-3/4 x 25-5/8
Net weight		kg (lbs.)	24 (53)	26 (58)	39 (86)	42 (93)	47 (104)
Decoration panel	Model		CMP-63LWH-E		CMP-125LWH-E		
	External finish		MUNSELL (1.0Y 9.2/0.2)		MUNSELL (1.0Y 9.2/0.2)		
	Dimension	mm	20 x 1,250 x 710		20 x 1,750 x 710		
	H x W x D	in.	13/16 x 49-1/4 x 28		13/16 x 68-15/16 x 28		
	Net weight	kg (lbs)	8 (18)		11.5 (27)		
Heat exchanger			Cross fin (Aluminum fin and copper tube)				
FAN	Type x Quantity		Turbo fan x 1		Turbo fan x 2		
	External static pressure	Pa	0				
		mmH_2O	0.0				
	Motor Type		DC motor				
	Motor output	kW	0.050		0.050 x 2		0.120 x 2
	Airflow rate		(Low-Mid2-Mid1-High)				
		m^3/min	9.0 - 10.0 - 11.5 - 13.0	9.0 - 11.0 - 13.0 - 15.5	14.7 - 17.5 - 20.4 - 22.2	16.0 - 19.0 - 21.0 - 24.5	22.8 - 25.3 - 28.2 - 31.5
		L/s	150 - 167 - 192 - 217	150 - 183 - 217 - 258	245 - 292 - 340 - 370	267 - 317 - 350 - 408	380 - 422 - 470 - 525
		cfm	318 - 353 - 406 - 459	318 - 388 - 459 - 547	519 - 618 - 720 - 784	565 - 671 - 742 - 865	805 - 893 - 996 - 1,112
Sound pressure level (measured in anechoic room)		dB (A)	(Low-Mid2-Mid1-High) 31.0 - 33.5 - 37.0 - 39.5	31.0 - 35.5 - 40.0 - 44.5	32.0 - 36.5 - 40.5 - 43.0	36.0 - 39.5 - 43.0 - 46.5	45.5 - 48.5 - 51.5 - 55.0
Air filter			PP honeycomb fabric (long life filter).				
Connectable outdoor unit		*3	R410A CITY MULTI				
Refrigerant piping diameter	Liquid (R410A)	mm (in.)	6.35 (1/4) Brazed	9.52 (3/8) Brazed			
	Gas (R410A)	mm (in.)	12.7 (1/2) Brazed	15.88 (5/8) Brazed			
Field drain pipe size		mm (in.)	O.D.32 (1-1/4)				

Notes:

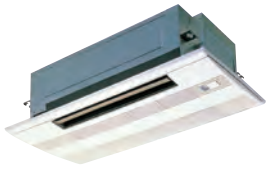
*1. Nominal cooling conditions
Indoor: 27°CD.B./19°CW.B. (81°FD.B./66°FW.B.), Outdoor: 35°CD.B. (95°FD.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
*2. Nominal heating conditions
Indoor: 20°CD.B. (68°FD.B.), Outdoor: 7°CD.B./6°CW.B. (45°FD.B./43°FW.B.)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)
*3. To prevent noise issue, PLFY-P80/100/125VMMD model cannot be connected with PUMY-P/SP/CP series.

Optional Parts

Description	Model	Aplicable capacity
Decoration panel	CMP-40LWH-E	P20, P25, P32, P40
	CMP-63LWH-E	P50, P63
	CMP-125LWH-E	P80, P100, P125
3D i-see Sensor panel	CMP-40LWE-E	P20, P25, P32, P40
	CMP-63LWE-E	P50, P63
	CMP-125LWE-E	P80, P100, P125
OA duct flange	PAC-KG11OF	P20, P25, P32, P40, P50, P63, P80, P100, P125
Silver-Ionized Antibacterial Agent for Drain Pan	PAC-KE02AB-E	P20, P25, P32, P40, P50, P63, P80, P100, P125



PMFY-P VBM
PMFY-P VFM



PMFY-P VBM-E (P20-P40)

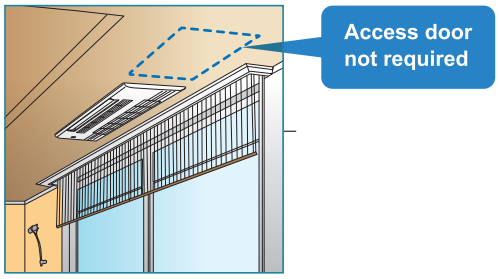


PMFY-P VFM-PA (P50-P80)



Ceiling Mounted

Installing a the 1-way airflow type unit in a room creates a more spacious feel that enhances room comfort. This overhead format is also an excellent solution when lighting equipment is installed at the center of the room and fixtures such as book shelves are mounted on wall surfaces.



Expanded line-up

Newly introducing bigger capacity P50-P80 models to suit larger room sizes.

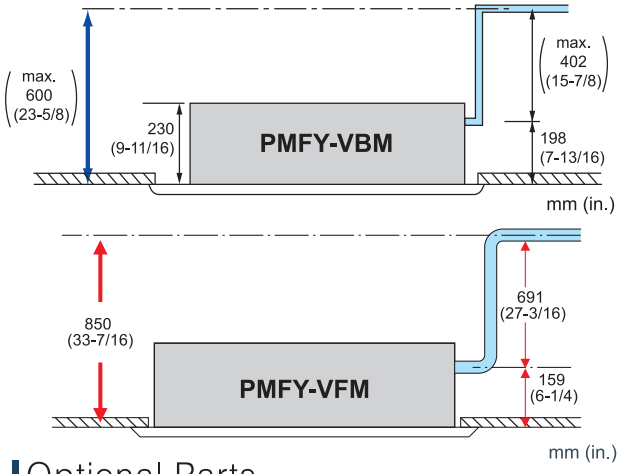
Capacity	P20	P25	P32	P40	P50	P63	P71	P80
Model	PMFY-P VBM				PMFY-P VFM			

Compact size for smooth installation and maintenance(PMFY-P VBM)

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

Drain pump is equipped as stanadard feature

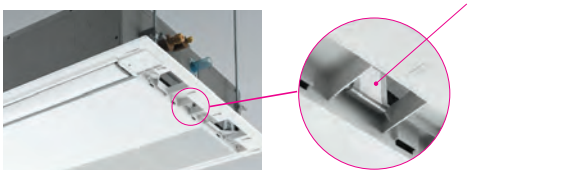
The drain can be positioned anywhere up to 600 mm (23-5/8 in.) for P20-40VBM models and 850 mm (33-7/16 in.) for P50-80VFM models from the ceiling's surface.



Easy installation (PMFY-P VFM)

Temporary hanging hook

The panel is equipped with a temporary hanging hook. This structure makes work efficiency easier during panel installation.



Easy access to suspension bolt

The structure of the panel makes access to suspension bolt easier for height adjustment during installation and maintenance.



Optional Parts

Description	Model	Applicable capacity
Decoration panel	PMP-40BMW	P20, P25, P32, P40
	PMP-63FMW	P50, P63, P71, P80
Anti-allergy enzyme filter	PAC-SK47KF-E	P50, P63, P71, P80
Left/right airflow direction louver	PAC-SJ15LR-E	P50, P63, P71, P80
External LEV box	PAC-SG95LE-E	P50, P63

Specifications

Model				PMFY-P20VBM	PMFY-P25VBM	PMFY-P32VBM	PMFY-P40VBM
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
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 (6.4Y 8.9/0.4)			
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 x Quantity			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 static pressure		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

Model				PMFY-P50VFM	PMFY-P63VFM	PMFY-P71VFM	PMFY-P80VFM
Power source				1-phase 220-240V 50Hz/1-phase 220-230V 60Hz			
Cooling capacity		*1	kW	5.6	7.1	8.0	9.0
		*1	BTU/h	19,100	24,200	27,300	30,700
Heating capacity		*1	kW	6.3	8.0	9.0	10.0
		*1	BTU/h	21,500	27,300	30,700	34,100
Power consumption	Cooling		kW	0.060	0.075	0.090	0.13
	Heating		kW	0.045	0.060	0.075	0.12
Current	Cooling		A	0.47	0.63	0.74	1.01
	Heating		A	0.42	0.55	0.62	0.96
External finish (Munsell No.)				White (6.4Y 8.9/0.4)			
Dimension H x W x D	Unit		mm (in.)	225 x 1112 x 724 (8-7/8 x 43-3/4 x 24-1/2)			
	Panel		mm (in.)	20 x 1340 x 800 (13/16 x 52-3/4 x 31-1/2)			
Net weight	Unit		kg (lbs.)	26 (57)	28 (62)		29 (64)
	Panel		kg (lbs.)	6.5 (14)			
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)			
Fan	Type x Quantity			Sirocco fan x 2	Sirocco fan x 3		
	Airflow rate (Lo-Mid2-Mid1-Hi)	*2	m^3/min	11-12-14-16	14-16-17-19	14-16-18-20	12-16-20-24
			L/s	183-200-233-267	233-267-283-317	233-267-300-333	200-270-330-400
			cfm	388-424-494-565	494-565-600-671	494-565-636-706	420-570-710-850
	External static pressure		Pa	0			
Motor	Type			DC motor			
	Output		kW	0.09	0.095		
Air filter				PP honeycomb fabric			
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-Mid2-Mid1-Hi)		*2 *3	dB (A)	29-32-35-38	32-35-37-39	32-35-38-41	36-41-46-50

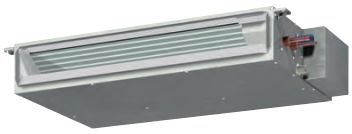
Notes:

*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.

Ceiling Concealed Type

Low static pressure type

PEFY-P VMS1(L)



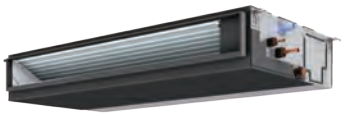
- The thin design with a body height of only 200 mm [7-7/8 in.] (all horsepower models) enables installation in a narrow space in the ceiling
- Low-noise operation
- Compact body with an external static pressure of up to 50 Pa

Static pressure up to 50 Pa	Low noise	Height 200 mm	Drain pump (standard) up to 550 mm [21-11/16 in.]	Air flow rate 3 stages

VMS1 model only

Medium static pressure type

PEFY-P VMA(L)



- Thin design of a body height of 250 mm [9-7/8 in.] (all horsepower models)
- The rear or bottom air inlet can be selected
- The drain pump is optionally selectable

Static pressure up to 150 Pa	Height 250 mm	Rear or bottom inlet	Drain pump (standard) up to 700 mm [27-9/16 in.]	Air flow rate 3 stages

* The maximum value varies depending on the model.

VMA model only

High static pressure type

PEFY-P VMH(S)



- External static pressure of up to 250 Pa*1, ensuring flexible duct design
- Applicable to drain pumps (option) from 550 mm [21-11/16 in.] to up to 700 mm [27-9/16 in.]

Static pressure up to 250 Pa	Drain pump option up to 700 mm [27-9/16 in.]	Air flow rate 3 stages*2

*1 The maximum value varies depending on the model.

Fresh air intake type

PEFY-P VMHS-E-F



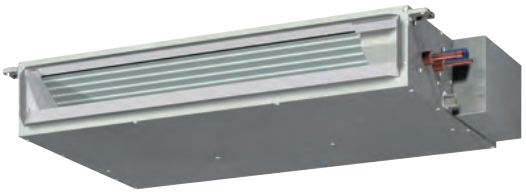
- Controllable outlet air temperature
- Fresh air intake type indoor unit
- Usable with external static pressures of up to 250 Pa, and available with three different types of air flow

Controllable outlet air temperature	Static pressure up to 250 Pa	Drain pump option up to 700 mm [27-9/16 in.]	Fresh air intake type	Air flow rate 3 stage

Low static pressure type



PEFY-P VMS1(L)



Office Residence Restaurant Hotel

Compact design with a height of only 200 mm [7-7/8 in.] (all models) and a width of 790 mm [31-1/8 in.] (P15 to P32), 990 mm [39 in.] (P40 and P50), or 1190 mm [46-7/8 in.] (P63)

Thin body design with a height of only 200 mm [7-7/8 in.] (all models) enables installation in a narrow space in the ceiling.

PEFY-P VMS1(L)-E		P15	P20	P25	P32	P40	P50	P63
Height	mm [in.]	200 [7-7/8]						
Width	mm [in.]	790 [31-1/8]				990 [39]		1190 [46-7/8]



Low-noise design

The centrifugal fan and coil are designed to reduce noise, making these models suitable for spaces where quietness is required.

Sound pressure level table (Standard static pressure) at 15 Pa dB(A)

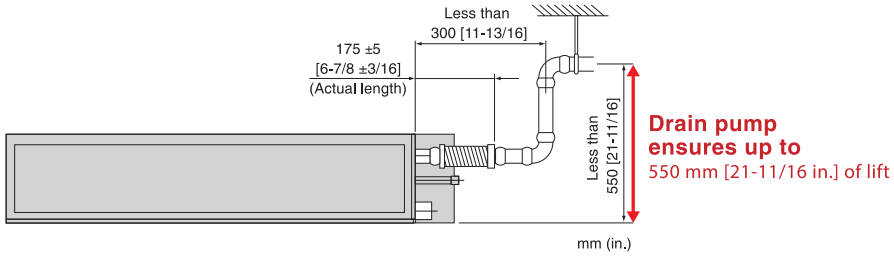
Capacity			P15	P20	P25	P32	P40	P50	P63
Sound Pressure Level	Fan Speed	High	28	29	30	32	33	35	36
		Mid	24	25	26	27	30	32	33
		Low	22	23	24	24	28	30	30

Selectable external static pressure

The unit may have a compact body, but its external static pressure can be up to 50 Pa.
The external static pressure can be selected from 5, 15, 35 and 50 Pa.
(The factory default is 15 Pa.)

Models with and without drain pump are available

PEFY-P VMS1 is provided with a drain pump as standard and does not require a drain trap. PEFY-P VMS1L which is model without drain pump is recommended for places where low-noise operation is required (i.e. hotels)



Connectable to Plasma Quad Connect

The optional Plasma Quad Connect MAC-100FT-E can be installed on the indoor unit's air inlet side. For installation, PQ attachment is required.

Optional Parts

Description	Model	Applicable capacity
Drain pump*1	PAC-KE07DM-E	P15, 20, 25, 32, 40, 50, 63
Control box replace kit	PAC-KE70HS-E	P15, 20, 25, 32, 40, 50, 63
Plasma quad connect*2	MAC-100FT-E	P15, 20, 25, 32, 40, 50, 63
PQ attachment*2	PAC-HA11PAR	P15, 20, 25, 32, 40, 50, 63

*1 For PEFY-VMS1L only
*2 Plasma quad connect (MAC-100FT-E) should be used together with PQ attachment.

Specifications

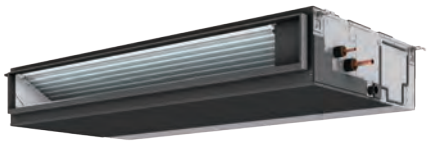
Model				PEFY-P15VMS1(L)	PEFY-P20VMS1(L)	PEFY-P25VMS1(L)	PEFY-P32VMS1(L)	PEFY-P40VMS1(L)	PEFY-P50VMS1(L)	PEFY-P63VMS1(L)
Power source				1-phase 220-240V 50Hz/1-phase 220-240V 60Hz						
Cooling capacity		*1	kW	1.7	2.2	2.8	3.6	4.5	5.6	7.1
		*1	BTU/h	5,800	7,500	9,600	12,300	15,400	19,100	24,200
Heating capacity		*1	kW	1.9	2.5	3.2	4.0	5.0	6.3	8.0
		*1	BTU/h	6,500	8,500	10,900	13,600	17,100	21,500	27,300
Power consumption	*3	Cooling	kW	0.05 [0.03]	0.05 [0.03]	0.06 [0.04]	0.07 [0.05]	0.07 [0.05]	0.09 [0.07]	0.09 [0.07]
		Heating	kW	0.03 [0.03]	0.03 [0.03]	0.04 [0.04]	0.05 [0.05]	0.05 [0.05]	0.07 [0.07]	0.07 [0.07]
Current	*3	Cooling	A	0.42 [0.31]	0.47 [0.36]	0.50 [0.39]	0.50 [0.39]	0.56 [0.45]	0.67 [0.56]	0.72 [0.61]
		Heating	A	0.31 [0.31]	0.36 [0.36]	0.39 [0.39]	0.39 [0.39]	0.45 [0.45]	0.56 [0.56]	0.61 [0.61]
External finish				Galvanized						
Dimension H x W x D			mm	200 x 790 x 700				200 x 990 x 700		200 x 1,190 x 700
			in.	7-7/8 x 31-1/8 x 27-9/16				7-7/8 x 39 x 27-9/16		7-7/8 x 46-7/8 x 27-9/16
Net weight		*3	kg (lbs.)	19 (42) [18 (40)]			20 (45) [19 (42)]	24 (53) [23 (51)]		28 (62) [27 (60)]
Heat exchanger				Cross fin (Aluminium fin and copper tube)						
Fan	Type x Quantity			Sirocco fan x 2				Sirocco fan x 3		Sirocco fan x 4
	Airflow rate (Lo-Mid-Hi)		m^3/min	5-6-7	5.5-6.5-8	5.5-7-9	6-8-10	8-9.5-11	9.5-11-13	12-14-16.5
			L/s	83-100-117	91-108-133	91-117-150	100-133-167	133-158-183	158-183-217	200-233-275
			cfm	176-212-247	194-229-282	194-247-317	212-282-353	282-335-388	335-388-459	424-494-583
	External static pressure		Pa	5-15-35-50						
Motor	Type			DC 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.)	O.D. 32 (1-1/4)						
Sound pressure level (Lo-Mid-Hi) (measured in anechoic room)			dB (A)	22-24-28	23-25-29	24-26-30	24-27-32	28-30-33	30-32-35	30-33-36

Notes:

*1 Cooling/Heating capacity indicates the maximum value at operation under the following condition.
Cooling : Indoor : 27°CD.B./19°CW.B.(81°FD.B./66°FW.B.) Outdoor : 35°CD.B.(95°FD.B.)
Heating : Indoor : 20°CD.B.(68°FD.B.) Outdoor : 7°CD.B./6°CW.B.(45°FD.B./43°FW.B.)
Pipe length : 7.5m(24-9/16ft) Height difference : 0m(0ft)
*2 The external static pressure is set to 15 Pa at factory shipment.
*3 [ ] is in case of PEFY-P15-63VMS1L-E

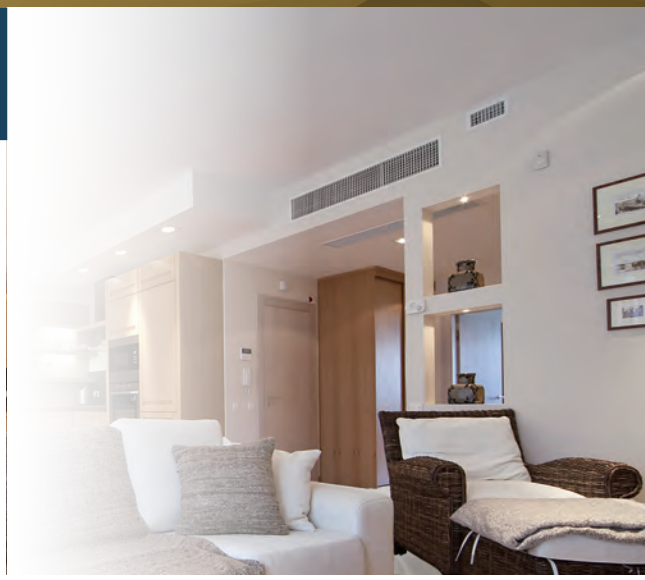
Medium static pressure type

PEFY-P VMA(L)



PEFY-P VMA(L)-E4

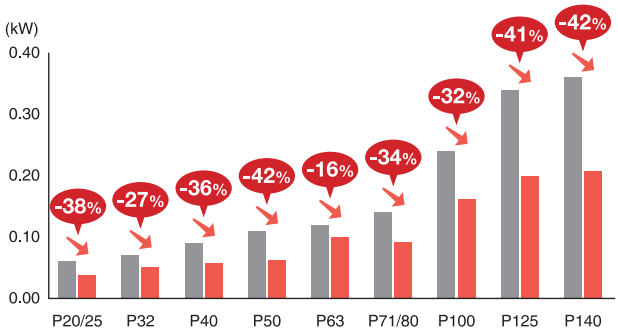




Less power consumption

The shape of fan wing and casing is improved to provide more smooth airflow. Besides, the drain pump motor is changed from AC motor to high-efficient DC motor. Operation efficiency is increased by the air flow and motor, which realizes up to 42% reduction in energy consumption (P50/140).

Comparison of energy consumption in cooling operation



PEFY-P VMA-E (Conventional model)
PEFY-P VMA-E4 (New model)

* The values are measured at high fan speed setting and external static pressure of 50 Pa.

External static pressure is settable up to 150 Pa (VMA(L))

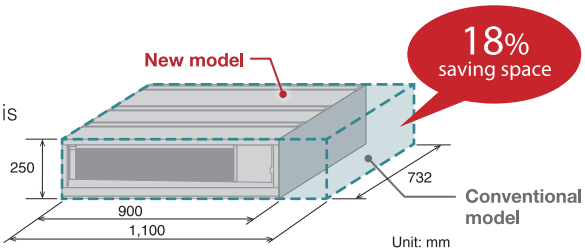
Five-stage external static pressure settings provide flexibility for duct extension, branching, and air outlet configuration and are adjustable to meet different application conditions. Setting ranges to maximum of 150 Pa.

External static pressure settings

Series	20	25	32	40	50	63	71	80	100	125	140
PEFY-P VMA(L)-E4	35/50/70/100/150 Pa						40/50/70/100/150 Pa				

Compact unit requires less installation space (applicable to the PEFY-P63VMA-E4 model only)

The use of new fan with improved air pathway helps to reduce the size of the P63 model unit. The P63 model unit is 200 mm less in width and fits into tighter ceiling space.

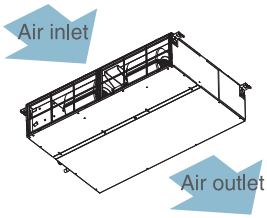


Air inlet direction can be easily changed

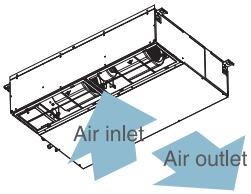
By simply switching the closing board and air filter, the inlet layout can be changed from the rear inlet to the bottom inlet. (At factory shipment: Rear inlet)

Two air inlet options can be chosen, rear or bottom:

1. Rear inlet



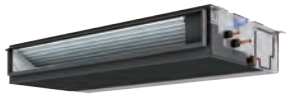
2. Bottom inlet



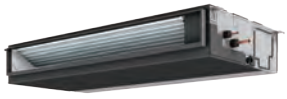
* Unit with a bottom inlet make more noise than those with a rear inlet. It is recommended that the rear inlet be selected when installing the units in rooms that should be quiet, such as bedrooms.

Drain pump is optionally selectable

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

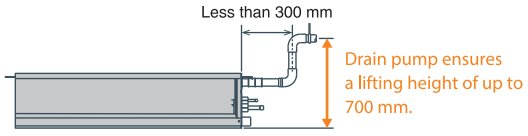


PEFY-P VMA-E4 Built-in drain pump



PEFY-P VMAL-E4 No drain pump

Built-in drain pump	PEFY-P VMA-E4
No drain pump	PEFY-P VMAL-E4



Specifications

* [ ] is in case of PEFY-P VMAL-E4.

Model			PEFY-P20VMA(L)	PEFY-P25VMA(L)	PEFY-P32VMA(L)	PEFY-P40VMA(L)	PEFY-P50VMA(L)	PEFY-P63VMA(L)
Power source			1-phase 220-230-240 V 50/60 Hz					
Cooling capacity *1		kW	2.2	2.8	3.6	4.5	5.6	7.1
(Nominal) *1		BTU/h	7,500	9,600	12,300	15,400	19,100	24,200
	Power input *2	kW	0.032 [0.030]	0.032 [0.030]	0.044 [0.042]	0.047 [0.045]	0.066 [0.064]	0.087 [0.085]
	Current input *2 (220-230-240 V)	A	0.26 - 0.25 - 0.24	0.26 - 0.25 - 0.24	0.36 - 0.34 - 0.33	0.39 - 0.37 - 0.36	0.53 - 0.51 - 0.49	0.69 - 0.66 - 0.63
Heating capacity *3		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 input *2	kW	0.030	0.030	0.042	0.045	0.064	0.085
	Current input *2 (220-230-240 V)	A	0.26 - 0.25 - 0.24	0.26 - 0.25 - 0.24	0.36 - 0.34 - 0.33	0.39 - 0.37 - 0.36	0.53 - 0.51 - 0.49	0.69 - 0.66 - 0.63
External finish			Galvanized steel plate					
External dimension		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 900 x 732
H x W x D		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 35-7/16 x 28-7/8
Net weight		kg (lbs)	21.5 (49) [21 (47)]	21.5 (49) [21 (47)]	21.5 (49) [21 (47)]	26 (58) [25.5 (58)]	26 (58) [25.5 (58)]	27 (60) [26.5 (60)]
Heat exchanger			Cross fin (Aluminum fin and copper tube)					
FAN	Type x Quantity		Sirocco fan x 1	Sirocco fan x 1	Sirocco fan x 1	Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 2
	External static press. *4	Pa	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>	35 - <50> - <70> - <100> - <150>
	Motor Type		DC motor					
	Motor output	kW	0.085	0.085	0.085	0.121	0.121	0.121
	Air flow rate (Lo-Mid-Hi)	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
Sound pressure level (measured in anechoic room) (Lo-Mid-Hi) *2 *5		dB <A>	22.0 - 26.0 - 28.0	22.0 - 26.0 - 28.0	24.0 - 28.0 - 31.0	24.0 - 29.0 - 32.0	25.0 - 32.0 - 35.0	28.0 - 32.0 - 36.0
Air filter			PP honeycomb fabric.					
Refrigerant piping 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 size		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)

Model			PEFY-P71VMA(L)	PEFY-P80VMA(L)	PEFY-P100VMA(L)	PEFY-P125VMA(L)	PEFY-P140VMA(L)
Power source			1-phase 220-230-240 V 50/60 Hz				
Cooling capacity *1		kW	8.0	9.0	11.2	14.0	16.0
(Nominal) *1		BTU/h	27,300	30,700	38,200	47,800	54,600
	Power input *2	kW	0.080 [0.078]	0.080 [0.078]	0.142 [0.140]	0.199 [0.197]	0.208 [0.206]
	Current input *2 (220-230-240 V)	A	0.60 - 0.57 - 0.55	0.60 - 0.57 - 0.55	1.01 - 0.97 - 0.93	1.29 - 1.23 - 1.18	1.40 - 1.34 - 1.28
Heating capacity *3		kW	9.0	10.0	12.5	16.0	18.0
(Nominal) *3		BTU/h	30,700	34,100	42,700	54,600	61,400
	Power input *2	kW	0.078	0.078	0.140	0.197	0.206
	Current input *2 (220-230-240 V)	A	0.60 - 0.57 - 0.55	0.60 - 0.57 - 0.55	1.01 - 0.97 - 0.93	1.29 - 1.23 - 1.18	1.40 - 1.34 - 1.28
External finish			Galvanized steel plate				
External dimension		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
H x W x D		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
Net weight		kg (lbs)	30 (67) [29.5 (67)]	30 (67) [29.5 (67)]	37.5 (84) [37 (82)]	38.5 (86) [38 (84)]	41.5 (93) [41 (91)]
Heat exchanger			Cross fin (Aluminum fin and copper tube)				
FAN	Type x Quantity		Sirocco fan x 2	Sirocco fan x 2	Sirocco fan x 3	Sirocco fan x 3	Sirocco fan x 3
	External static press. *4	Pa	40 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>	40 - <50> - <70> - <100> - <150>	<40> - 50 - <70> - <100> - <150>	<40> - 50 - <70> - <100> - <150>
	Motor Type		DC motor				
	Motor output	kW	0.121	0.121	0.300	0.300	0.300
	Air flow rate (Lo-Mid-Hi)	m^3/min	14.5 - 18.0 - 21.0	14.5 - 18.0 - 21.0	23.0 - 28.0 - 32.0	28.0 - 34.0 - 37.0	29.5 - 35.5 - 40.0
		L/s	242 - 300 - 350	242 - 300 - 350	383 - 467 - 533	467 - 567 - 617	492 - 592 - 667
		cfm	512 - 636 - 742	512 - 636 - 742	812 - 989 - 1,130	989 - 1,201 - 1,306	1,042 - 1,254 - 1,412
Sound pressure level (measured in anechoic room) (Lo-Mid-Hi) *2 *5		dB <A>	26.0 - 32.0 - 35.0	26.0 - 32.0 - 35.0	31.0 - 36.0 - 39.0	35.0 - 39.0 - 41.0	34.0 - 38.0 - 41.0
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	9.52 (3/8) Brazed
	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
Field drain pipe size		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)

Notes:

*1 Nominal cooling conditions
Indoor: 27°CDB/19°CWB (81°FDB/66°FWB), Outdoor: 35°CDB (95°FDB)
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°CDB (68°FDB), Outdoor: 7°CDB/6°CWB (45°FDB/43°FWB)
Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)

*4 The factory setting of airflow mode and external static pressure mode is shown without < >.
Refer to "Fan characteristics curves", according to the external static pressure, in DATA BOOK for the usable range of air flow rate.

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



PEFY-P VMH (S)-E



PEFY-P VMHS-E (P40-P140)



PEFY-P VMHS-E (P200/P250)



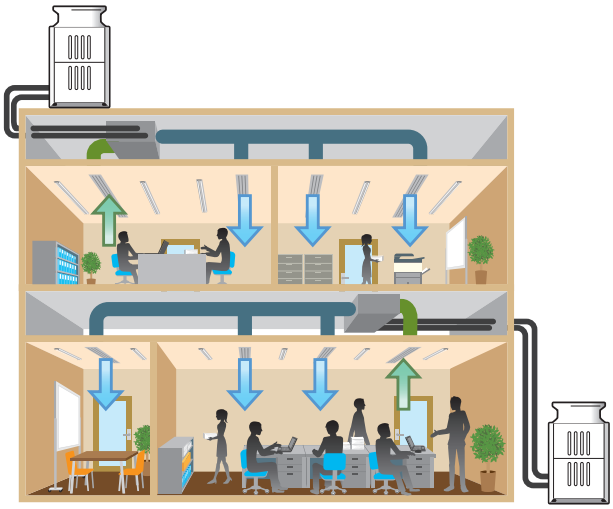
Sufficient external static pressure ensuring flexible duct design

Sufficient external static pressure enables designs with long ducts and greatly expands design possibilities. Ducted air-conditioning that maches an interior design can be realized.

PEFY-P VMHS	P40	P50	P63	P71	P80	P100	P125	P140
External static pressure (Pa)	50 – <100> – <150> – <200>							

PEFY-P VMHS-E	P200	P250
External static pressure (Pa)	<50> – <100> – 150 – <200> – <250>*	

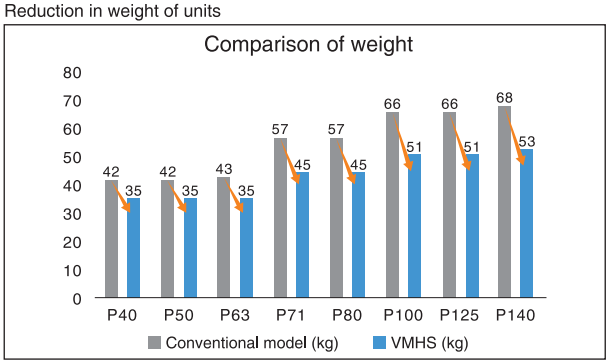
* The rated external static pressure is shown without < >.
The factory setting is the rated value.



Low Power Consumption and Weight by DC motor(VMHS)

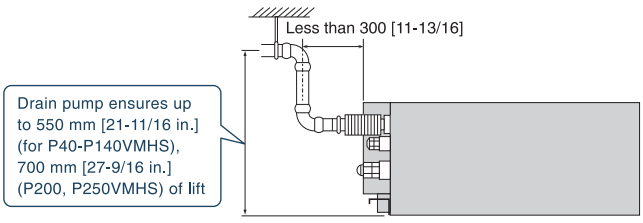
P40 to P140VMHS Models use DC motors. This reduces the power consumption and weight of the units.

Reduction in weight of units



Drain pump (option) ensures up to 550 mm [21-11/16 in.] for P40-P140VMHS, 700 mm [27-9/16 in.] for P200/P250VMHS models

The introduction of an upper drain pump allows the drain connection to be raised as high as 550 mm [21-11/16 in.] for P40-P140VMHS, models/700 mm [27-9/16 in.] for P200, 500VMHS models, allowing more freedom in piping layout design and reducing horizontal piping requirements.



mm (in.)

Optional Parts

Description	Model	Applicable capacity VMHS-E	Remarks
Drain pump	PAC-KE04DM-F	-	
	PAC-KE05DM-F	P200, P250	
	PAC-DRP10DDP-E2	P40-P140	
Long life filter	PAC-KE86LAF	P40, P50, P63	
	PAC-KE88LAF	P71, P80	
	PAC-KE89LAF	P100, P125, P140	
	PAC-KE85LAF	P200, P250	
Filter box	PAC-KE63TB-F	P40, P50, P63	Required when long life filter is used
	PAC-KE99TB-F	P71, P80	
	PAC-KE140TB-F	P100, P125, P140	
	PAC-KE250TB-F	P200, P250	

Specifications

Model				PEFY-P40VMHS-E	PEFY-P50VMHS-E	PEFY-P63VMHS-E	PEFY-P71VMHS-E	PEFY-P80VMHS-E	PEFY-P100VMHS-E	PEFY-P125VMHS-E	PEFY-P140VMHS-E
Power source				1-phase 220-230-240 V 50/60 Hz							
Cooling capacity		*1	kW	4.5	5.6	7.1	8.0	9.0	11.2	14.0	16.0
		*1	BTU/h	15,400	19,100	24,200	27,300	30,700	38,200	47,800	54,600
	*2	Power input	kW	0.055		0.090	0.075	0.090	0.160		0.190
	*2	Current input (220-230-240 V)	A	0.41-0.39-0.38		0.64-0.62-0.59	0.54-0.52-0.50	0.63-0.61-0.58	1.05-1.01-0.96		1.24-1.19-1.14
Heating capacity		*3	kW	5.0	6.3	8.0	9.0	10.0	12.5	16.0	18.0
		*3	BTU/h	17,100	21,500	27,300	30,700	34,100	42,700	54,600	61,400
	*2	Power input	kW	0.055		0.090	0.075	0.090	0.160		0.190
	*2	Current input (220-230-240 V)	A	0.41-0.39-0.38		0.64-0.62-0.59	0.54-0.52-0.50	0.63-0.61-0.58	1.05-1.01-0.96		1.24-1.19-1.14
External finish				Galvanized steel plate							
External dimension H x W x D			mm	380 x 745 x 900			380 x 1,030 x 900		380 x 1,195 x 900		
			in.	15 x 29-3/8 x 35-7/16			15 x 40-9/16 x 35-7/16		15 x 47-1/16 x 35-7/16		
Net weight			kg (lbs.)	35 (78)			45 (100)		51 (113)		53 (117)
Heat exchanger				Cross fin (Aluminum fin and copper tube)							
Fan	Type x Quantity			Sirocco fan x 1			Sirocco fan x 2				
	*4 External static press.		Pa	50-<100>-<150>-<200>							
			mmH_2O	5.1-<10.2>-<15.3>-<20.4>							
	Motor Type			DC motor							
	Motor output		kW	0.121			0.244		0.375		
	Air flow rate			(Low-Mid-High)							
			m^3/min	10.0-12.0-14.0		13.5-16.0-19.0	15.5-18.0-22.0	18.0-21.5-25.0	26.5-32.0-38.0		28.0-34.0-40.0
			L/s	167-200-233		225-267-317	258-300-367	300-358-417	442-533-633		467-567-667
			cfm	353-424-494		477-565-671	547-636-777	636-759-883	936-1,130-1,342		989-1,201-1,412
Sound pressure level (measured in anechoic room)				(Low-Mid-High)							
		*2	dB <A>	20-23-27		24-27-32	24-26-30	25-27-30	27-31-34		27-32-36
Air filter				Option:Synthetic fiber unwoven cloth filter (long life filter) and filter box are recommended.							
Refrigerant piping diameter	Gas (R410A)		mm (in.)	12.7 (1/2) Brazed		15.88 (5/8) Brazed					
	Liquid (R410A)		mm (in.)	6.35 (1/4) Brazed		9.52 (3/8) Brazed					
Field drain pipe diameter			mm (in.)	O.D.32 (1-1/4)							

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

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 The factory setting of external static pressure is shown without < >. Refer to "Fan characteristics curves", according to the external static pressure, in DATA BOOK for the usable range of air flow rate.
*5 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
*6 The rated external static pressure is shown without < >.
The factory setting is the rated value.
*7 It is measured at the rated external static pressure in anechoic room.

Fresh air intake type



PEFY-P VMHS-E-F



PEFY-P VMHS-E-F (P125)

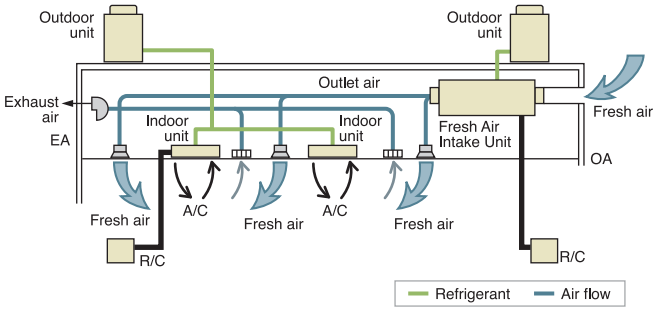


PEFY-P VMHS-E-F (P200/P250)

Enables Intake of Outside Air

Fresh air can be taken in with temperature control. Fresh air intake is available for each air-conditioning zone.

* Fresh air intake type indoor unit is designed to supply pretreated outside air into the room. Do not use to handle internal thermal load.



Flexible Air-Flow Setting

Four levels of external static pressure levels to choose from compared to the three levels on the existing models

Model	P125	P200	P250
External static pressure (Pa)	<100> – <150> – 200 – <250>		

*The factory setting of external static pressure is shown without chevrons "< >".

Two types of air-flow modes are available, each of which has three air-flow rates to choose from.

Mode	Normal-airflow rate	High-airflow rate
Air-flow rate	Low-Medium-High	Low-Medium-High

*Air-flow rates are accessible from the remote controller.

Controllable Outlet Air Temperature

Pre-treating the intake air before being supplied to the room contributes to the stability of room temperature, ensuring optimized comfort of the occupants.

* Outlet air temperature may fluctuate, depending on the outside air temperature and the operating status of indoor and outdoor units.

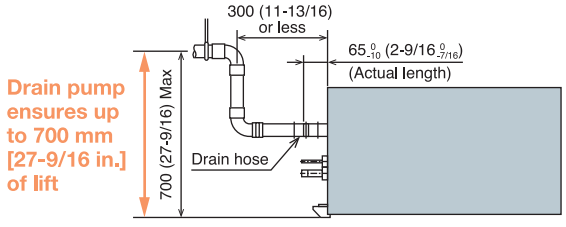
Equipped with DC Fan Motor

Fan motor has been changed to higher efficiency DC motor. Power source has been changed from three-phase power supply to single-phase power supply, which allows for easier installation.

* Comparison with PEFY-P140, 200, 250VMH-E-F

Drain Pump (Optional)

Greater design flexibility made possible by the increased head height (Max. 700 mm)*



* Comparison with PEFY-P140, 200, 250VMH-E-F

Optional Parts

Description	Model	Applicable capacity
Drain pump kit	PAC-DRP10DP-E2	P125
	PAC-KE06DM-F	P200, 250
Long life filter	PAC-KE89LAF	P125
	PAC-KE85LAF	P200, 250
Filter box	PAC-KE140TB-F	P125
	PAC-KE250TB-F	P200, 250

Specifications

Model				PEFY-P125VMHS-E-F		PEFY-P200VMHS-E-F		PEFY-P250VMHS-E-F *6	
Power source				1-phase 220-230-240 V 50/60 Hz		1-phase 220-230-240 V 50/60 Hz		1-phase 220-230-240 V 50/60 Hz	
Cooling capacity (Nominal)	*1		kW	14.0		22.4		28.0	
	*1		BTU/h	47,800		76,400		95,500	
	*2	Power input	kW	0.220		0.260		0.350	
	*2	Current input (220 V)	A	1.43		1.66		2.16	
Temp. range of cooling				17°CD.B./15.5°CW.B. ~ 43°CD.B./35°CW.B. * Thermo-off (FAN-mode) automatically starts if the outdoor temperature is lower than 17°CD.B.		17°CD.B./15.5°CW.B. ~ 43°CD.B./35°CW.B. * Thermo-off (FAN-mode) automatically starts if the outdoor temperature is lower than 17°CD.B.		17°CD.B./15.5°CW.B. ~ 43°CD.B./35°CW.B. * Thermo-off (FAN-mode) automatically starts if the outdoor temperature is lower than 17°CD.B.	
Heating capacity (Nominal)	*3		kW	8.9		13.9		17.4	
	*3		BTU/h	30,400		47,400		59,400	
	*2	Power input	kW	0.230		0.270		0.360	
	*2	Current input (220 V)	A	1.52		1.85		2.38	
Temp. range of heating				-10°CD.B. ~ 20°CD.B. * Thermo-off (FAN-mode) automatically starts if the outdoor temperature is higher than 20°CD.B.		-10°CD.B. ~ 20°CD.B. * Thermo-off (FAN-mode) automatically starts if the outdoor temperature is higher than 20°CD.B.		-10°CD.B. ~ 20°CD.B. * Thermo-off (FAN-mode) automatically starts if the outdoor temperature is higher than 20°CD.B.	
External finish				Galvanized		Galvanized		Galvanized	
External dimension HxWxD			mm	380 x 1,195 x 900		470 x 1,250 x 1,120		470 x 1,250 x 1,120	
			in.	15 x 47-1/16 x 35-7/16		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.)	49 (109)		78 (172)		81 (179)	
Heat exchanger				Cross fin (Aluminum fin and copper tube)		Cross fin (Aluminum fin and copper tube)		Cross fin (Aluminum fin and copper tube)	
FAN		Type x Quantity		Sirocco fan x 1		Sirocco fan x 2		Sirocco fan x 2	
	*4, 5	External static press.	Pa	<100> - <150> - 200 - <250>		<100> - <150> - 200 - <250>		<100> - <150> - 200 - <250>	
			mmH_2O	<10.2> - <15.3> - 20.4 - <25.5>		<10.2> - <15.3> - 20.4 - <25.5>		<10.2> - <15.3> - 20.4 - <25.5>	
		Motor Type		DC motor		DC motor		DC motor	
		Motor output	kW	0.244		0.375		0.375	
		Driving mechanism		Direct-driven by motor		Direct-driven by motor		Direct-driven by motor	
	*4, 5	Air flow rate		Normal-airflow rate mode	<High-airflow rate mode>	Normal-airflow rate mode	<High-airflow rate mode>	Normal-airflow rate mode	<High-airflow rate mode>
		(Low-Mid-High)	m^3/min	14.0 - 15.5 - 18.0	15.5 - 18.0 - 20.0	22.5 - 25.0 - 28.0	25.0 - 28.0 - 32.0	28.0 - 31.0 - 35.0	31.0 - 35.0 - 40.0
			L/s	233 - 258 - 300	258 - 300 - 333	375 - 417 - 467	417 - 467 - 533	467 - 517 - 583	517 - 583 - 667
			cfm	494 - 547 - 636	547 - 636 - 706	794 - 883 - 989	883 - 989 - 1,130	989 - 1,095 - 1,236	1,095 - 1,236 - 1,412
Sound pressure level (measured in anechoic room)				Normal-airflow rate mode	<High-airflow rate mode>	Normal-airflow rate mode	<High-airflow rate mode>	Normal-airflow rate mode	<High-airflow rate mode>
(Low-Mid-High)	*2		dB <A>	34-37-41	36-40-42	35-38-41	36-39-42	38-40-44	38-41-45
Air filter				Option: Synthetic fiber unwoven cloth filter (long life filter).		Option: Synthetic fiber unwoven cloth filter (long life filter).		Option: Synthetic fiber unwoven cloth filter (long life filter).	
Refrigerant piping diameter		Liquid (R410A)	mm (in.)	9.52 (3/8) Brazed		9.52 (3/8) Brazed		9.52 (3/8) Brazed	
		Gas (R410A)	mm (in.)	15.88 (5/8) Brazed		19.05 (3/4) Brazed		22.22 (7/8) Brazed	
Field drain pipe size			mm (in.)	O.D.32 (1-1/4)		O.D.32 (1-1/4)		O.D.32 (1-1/4)	
Optional parts		Drain pump kit		PAC-DRP10DP-E2		PAC-KE06DM-F		PAC-KE06DM-F	
		Long life filter		PAC-KE89LAF		PAC-KE85LAF		PAC-KE85LAF	
		Filter box		PAC-KE140TB-F		PAC-KE250TB-F		PAC-KE250TB-F	

Notes:

Cooling capacity indicates the maximum value at operation under the following condition. Cooling: Indoor 33°CDB/28°CWB, Outdoor 33°CDB. The set temperature of the remote controller is 18°C.
The value are measured at the factory setting of airflow mode and external static pressure.
Heating capacity indicates the maximum value at operation under the following condition. Heating: Indoor 0°CDB/-2.9°CWB, Outdoor 0°CDB/-2.9°CWB. The set temperature of the remote controller is 25°C.
The factory setting of airflow mode and external static pressure mode is shown without < >. Refer to "Fan characteristics curves", according to the external static pressure, in DATA BOOK for the usable range of air flow rate.
If the airflow rate is over the usable range, dew drop can be caused from the air outlet and the air flow rate is changed automatically because of the output down by the fan motor control. If the air flow rate is less than the usable range, condensation from the unit surface can be caused.
Regarding P250VMHS-E-F, the middle notch air flow rate is different from the spec value when the external static pressure setting is set to 100Pa. See "Fan characterics curves" in DATA BOOK for the details.

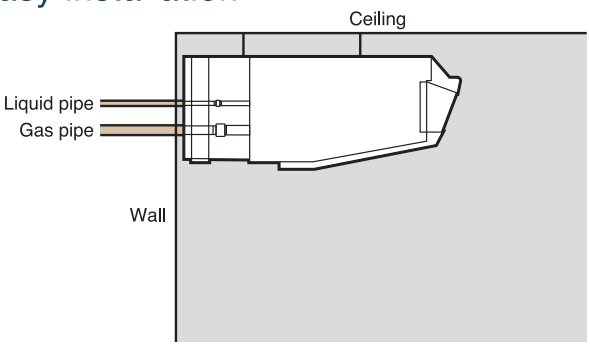
- The combination of fresh air intake type indoor units with other types of indoor units to handle internal thermal load which may cause the conflict of operation mode. It is not recommended when fresh air intake type indoor unit is connected to the Y series.
- Depending on the air conditioning load, outside temperature, and due to the activation of protection functions, the desired preset temperature may not always be achieved and the discharge temperature may swing. Note that untreated outside air may be delivered directly into the room upon the activation of protection functions.
- Fresh air intake type indoor units cannot be connected to PUMY series, except for PUMY-SP125/140VKM, PUMY-CP125/140VKM, PUMY-CP200/225YKM, PUMY-P200/225YKM, PUMY-(C)P250/300YBM. Fresh air intake type indoor unit and PUMY have to be one to one connection.
- The maximum connectable indoor units to 1 outdoor unit are 110% (100% in case of heating below -5°C).
- When fresh air intake type indoor units connect to an outdoor unit together with other types of indoor unit, the total capacity of fresh air intake type indoor units needs to be 30% or less of the connected outdoor unit capacity.
- The system changeover function is available only when all the connected indoor units are fresh air intake type indoor units.
- The fan temporary stops during defrost.
- The cooling and heating capacities are the maximum capacities that were obtained by operating in the above air conditions and with a refrigerant pipe of about 7.5 m and a level difference of 0 m.
- The actual capacity characteristics vary with the combination of indoor and outdoor units. See the technical information in DATA BOOK for the details.
- Thermo off (Fan) operation automatically starts either when temperature is lower than 17°CDB in cooling mode or when the temperature exceeds 20°CDB in heating mode.
- Dry mode is not available.
- When this unit is used as sole A/C system, be careful about the dew in air outlet grilles in cooling mode.
- 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.
- Air filter must be installed in the air intake side. The filter should be attached where easy maintenance is possible in case of usage of field supply filters.

PCFY-P VKM





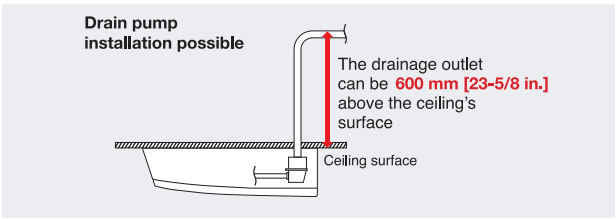
Easy installation



The ceiling suspended cassette can easily be installed without requiring duct work, even if the ceiling does not have sufficient space.

Drain pump is available for all models

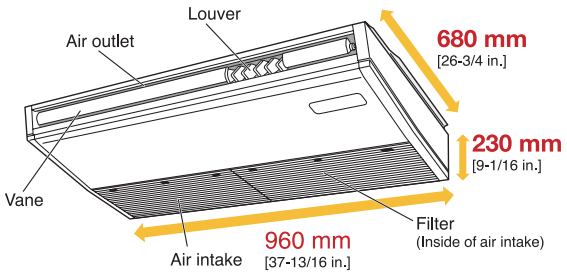
The optional drain pump allows the drain connection to be raised as high as 600mm [23-5/8 in.], expanding flexibility in choosing the unit's location.



Equipped with automatic air-speed adjustment

In addition to the conventional 4-speed settings, units are now equipped with an automatic air-speed adjustment mode. This setting automatically adjusts the air-speed to conditions that match the room environment. At the start of 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.

230 mm [9-1/16 in.] high unit is designed in consideration of interior design coordination

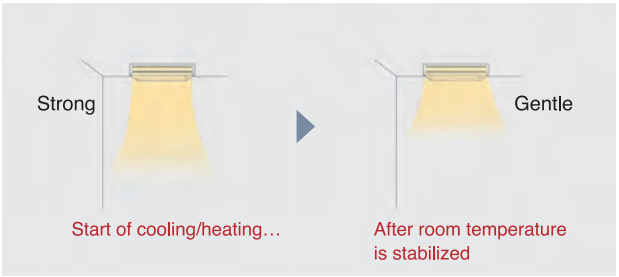


Sleek and slim with stylishly curved lines, the PCFY-Series is designed to blend into interior.

Auto Vane Control

Outlet vanes can be moved up and down using the remote controller. This improved airflow control feature solves the problem of drafts.





Optional Parts

Description	Model	Applicable capacity
Drain pump kit	PAC-SJ92DM-E	P40
	PAC-SJ93DM-E	P63, 100, 125
High efficiency filter	PAC-SH88KF-E	P40
	PAC-SH89KF-E	P63
	PAC-SH90KF-E	P100, 125
Wireless remote controller kit	PAR-SL94B-E	P40, 63, 100, 125
Anti-allergy enzyme filter	PAC-SK48KF-E	P40
	PAC-SK49KF-E	P63
	PAC-SK50KF-E	P100, 125

Specifications

Model				PCFY-P40VKM	PCFY-P63VKM	PCFY-P100VKM	PCFY-P125VKM
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
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	m^3/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)		
	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.

PKFY-P VLM
PKFY-P VKM



PKFY-P VLM (P15~P32)



PKFY-P VLM (P40/P50)



PKFY-P VKM (P63/P100)

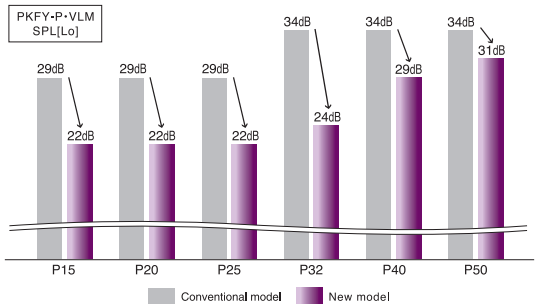


Sophisticated design with new white color that matches the room's interior (VKM Model)

A sharp and simple form that combines beauty and function. The simple square design harmonizes beautifully with the straight lines created by the intersection of the walls, floor and ceiling. Also adopted a new white body color. It will make your life and space beautiful and comfortable without disturbing the atmosphere of the room.

Low noise

The noise level has been reduced compared to the conventional model (PKFY-P VBM/VHM) by improving the unit structure such as the line flow fan.



* Measurement condition (Fan speed: Low)
* It is measured in anehoic room.

Improved Airflow control

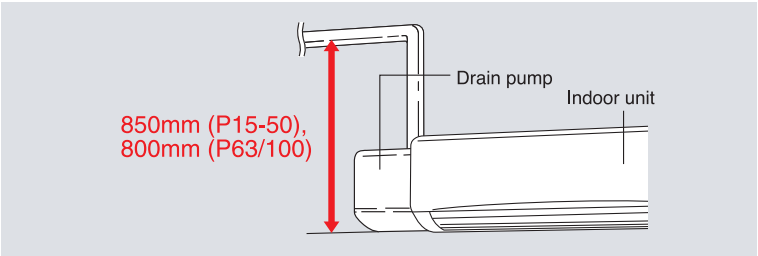
Fan speed and Vane control

The VLM can set the fan speed to 4 steps and auto mode. Also, the vane angle can be set to 5 steps. This has enabled air conditioning to be tailored to your taste.

		Conventional		Current
		PKFY-P**VBM	PKFY-P**VHM	PKFY-P**VLM-E
Fan Speed		4 speeds	3 speeds + AUTO	4 speeds + AUTO
Vane Control	Vane Angle	4 steps	5 steps	5 steps
	Swing mode	–	✓	✓

Drain pump option

The optional drain pump allows the drain connection to be raised as high as 850mm (P15-50), 800mm (P63/100), allowing more flexible in piping layout design.



Optional Parts

Description	Model	Applicable capacity
External LEV Box	PAC-SG95LE-E	P15, 20, 25, 32, 40, 50, 63
Drain pump kit	PAC-SL48DM-E	P15, 20, 25, 32, 40, 50, 63, 100
Plasma quad connect	MAC-100FT-E	P15, 20, 25, 32, 40, 50, 63, 100

Specifications

Model				PKFY-P15VLM	PKFY-P20VLM	PKFY-P25VLM	PKFY-P32VLM	PKFY-P40VLM	PKFY-P50VLM
Power source				1-phase 220-240 V 50 Hz, 1-phase 220-230 V 60Hz					
Cooling capacity (Nominal)		*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
	Power input		kW	0.02	0.02	0.03	0.05	0.05	0.05
	Current input		A	0.20	0.20	0.25	0.45	0.45	0.45
Heating capacity (Nominal)		*2	kW	1.9	2.5	3.2	4.0	5.0	6.3
		*2	BTU/h	6,500	8,500	10,900	13,600	17,100	21,500
	Power input		kW	0.01	0.01	0.02	0.04	0.04	0.04
	Current input		A	0.15	0.15	0.20	0.40	0.40	0.40
External finish (Munsell No.)				Plastic, MUNSELL (0.7PB 9.2/0.4)					
External dimension H x W x D			mm	299 x 773 x 237				299 x 898 x 237	
			in.	11-25/32 x 30-7/16 x 9-11/32				11-25/32 x 35-3/8 x 9-11/32	
Net weight			kg (lbs.)	11 (25)				13 (29)	
Heat exchanger				Cross fin (Aluminum fin and copper tube)					
Fan	Type x Quantity			Line flow fan x 1					
	External static press		Pa (mmH_2O)	0 (0)					
	Motor type			DC motor					
	Motor output		kW	0.03					
	Driving mechanism			Direct driven					
	Airflow rate (Lo-Mid2-Mid1-Hi)		m^3/min	4.0-4.4-4.8-5.3	4.0-4.6-5.2-5.9	4.0-4.6-5.4-6.7	4.3-5.9-8.0-10.4	6.3-7.7-9.5-11.5	6.8-8.3-10.2-12.4
			L/s	67-73-80-88	67-77-87-98	67-77-90-112	72-98-133-173	105-128-158-192	113-138-170-207
			cfm	141-155-169-187	141-162-184-208	141-162-191-237	152-208-282-367	222-272-335-406	240-293-360-438
Noise level (measured in anechoic room)			dB (A)	22-26-28-30	22-27-30-33	22-27-31-35	24-33-41-48	29-35-40-44	31-36-41-46
Insulation material				Polyethylene sheet					
Air filter				PP honeycomb					
Protection device				Fuse					
Refrigerant control device				LEV					
Refrigerant piping diameter	Liquid (Flare)		mm (in.)	ø6.35 (ø1/4)					
	Gas (Flare)		mm (in.)	ø12.7 (ø1/2)					
Field drain pipe diameter			mm (in.)	I.D.16 (5/8)					
Optional parts	DRAIN PUMP KIT			PAC-SL48DM-E					
	EXTERNAL LEV BOX			PAC-SG95LE-E					

Notes:

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

Model				PKFY-P63VKM	PKFY-P100VKM
Power source				1-phase 220-240V 50Hz, 1-phase 220V-230V 60Hz	
Cooling capacity (Nominal)		*1	kW	7.1	11.2
		*1	BTU/h	24,200	38,200
	Power input		kW	0.05	0.08
(220V)	Current input		A	0.37	0.58
Heating capacity (Nominal)		*2	kW	8.0	12.5
		*2	BTU/h	27,300	42,600
	Power input		kW	0.04	0.07
(220V)	Current input		A	0.30	0.51
External finish (Munsell No.)				Plastic, MUNSELL (0.7PB 9.2/0.4)	
External dimension H x W x D			mm	365x1170x295	
			in.	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	
	External static press		Pa (mmH_2O)	0 (0)	
	Motor type			DC motor	
	Motor output		kW	0.056	
	Driving mechanism			Direct-drive	
	Airflow rate (Low-High)		m^3/min	16-20	20-26
			L/s	267-333	333-433
			cfm	565-706	706-918
Sound pressure level (measured in anechoic room)			dB (A)	39-45	41-49
Insulation material				Polyethylene sheet	
Air filter				PP honeycomb	
Protection device				Fuse	
Refrigerant control device				LEV	
Refrigerant piping diameter	Liquid (Flare)		mm (in.)	ø9.52 (ø3/8)	
	Gas (Flare)		mm (in.)	ø15.88 (ø5/8)	
Field drain pipe diameter			mm (in.)	I.D.16 (5/8)	
Optional parts	DRAIN PUMP KIT			PAC-SL48DM-E	
	EXTERNAL LEV BOX			PAC-SG95LE-E	-

Notes:

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

Floor standing exposed type

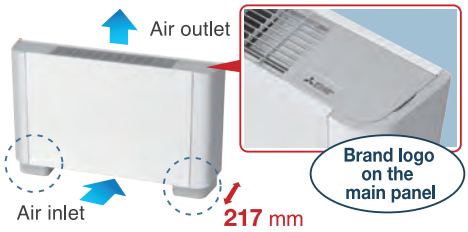
PFFY-P VEM





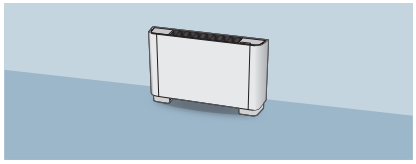
New design

The new sophisticated design in clear white and pearl grey blends in with any interior.
Having a depth of merely 217 mm [8-9/16 in.], the compact unit is ideal for installation around the perimeter of a room.
Three installation options are available to suit a wide range of applications.



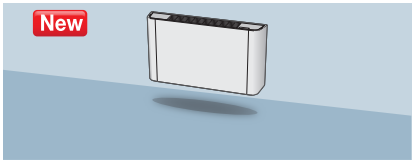
Three installation options

Floorstanding



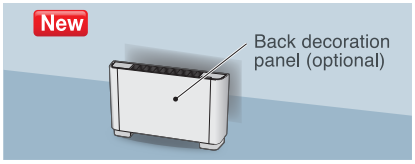
Conventional floorstanding installation is possible.

Wall-mounted



Wall-mounted installation allows for a stylish interior design.

Freestanding



With the optional back decoration panel, the unit can be installed away from the wall for more design flexibility.

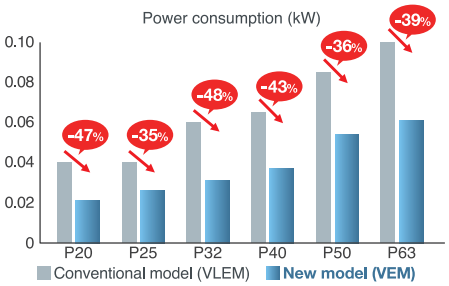
*The legs are not attached to the unit at the time of shipment from the factory. They need to be attached when installing the unit on the floor.

Reduced power consumption and noise

The PFFY-P VEM-E features new components and an optimized structure for more efficient and comfortable operation.

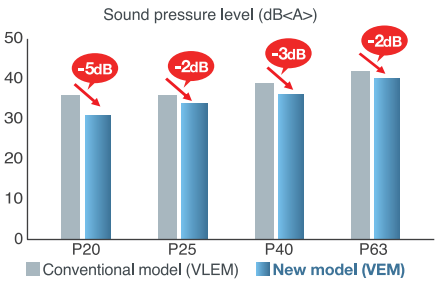
- The unit is equipped with a high-efficiency DC fan motor.
- The inner pipes of the heat exchanger have been downsized from ø9.52 to ø7.0 to fit in more pipings.
- The new structure realizes smooth airflow and reduces pressure loss in the air pathway.

Reduced power consumption



*Measurement conditions (Power source: AC220-240V/50Hz, Fan speed: High)
The unit consumes the same amount of power in both cooling and heating modes.

Reduced noise



*Measurement conditions (Measured point: 1.5m×1.5m, Power source: AC230V/50Hz)
Sound pressure level as measured in an anechoic room.

Flexible airflow setting

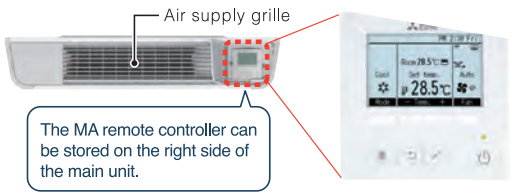
Airflow can be set to three levels to suit various installation conditions and maintain a comfortable room temperature.

Airflow setting

	Model	Airflow
New	PFFY-P VEM	Low-**Mid**-High*
Conventional	PFFY-P VLEM	Low-High

* The airflow setting has been increased from two levels to three levels.

Remote controller storage in the main unit

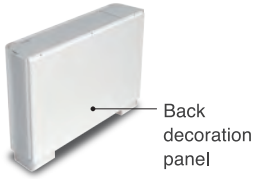


PAR-41MAAM

Optional parts

Description	Model	Remarks
Back decoration panel*	PAC-BP32VEM-E	For PFFY-P20, 25, 32VEM-E
	PAC-BP50VEM-E	For PFFY-P40, 50VEM-E
	PAC-BP63VEM-E	For PFFY-P63VEM-E

* The back decoration panel is required for freestanding installation. When it is attached to the main unit, the pipes must run under the floor. Refer to the Installation Manual for details.



Specifications

Model				PFFY-P20VEM	PFFY-P25VEM	PFFY-P32VEM	PFFY-P40VEM	PFFY-P50VEM	PFFY-P63VEM
Power source				1-phase 220-230-240 V 50/60 Hz					
Cooling capacity (Nominal)		*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
	Power input		kW	0.021	0.026	0.031	0.037	0.054	0.061
	Current input		A	0.26-0.25-0.24	0.31-0.30-0.29	0.37-0.35-0.34	0.39-0.38-0.36	0.58-0.56-0.55	0.52-0.50-0.48
Heating capacity (Nominal)		*2	kW	2.5	3.2	4.0	5.0	6.3	8.0
		*2	BTU/h	8,500	10,900	13,600	17,100	21,500	27,300
	Power input		kW	0.021	0.026	0.031	0.037	0.054	0.061
	Current input		A	0.26-0.25-0.24	0.31-0.30-0.29	0.37-0.35-0.34	0.39-0.38-0.36	0.58-0.56-0.55	0.52-0.50-0.48
External finish				Galvanized steel plate, MUNSELL (1.0Y 9.2/0.2)/ABS, MUNSELL (5.32GY 8.75/0.37)					
External dimension H x W x D			mm	669 (726) x 1,142 x 217	669 (726) x 1,142 x 217	669 (726) x 1,142 x 217	669 (726) x 1,342 x 217	669 (726) x 1,342 x 217	669 (726) x 1,542 x 217
		*3	in.	26-3/8 (28-5/8) x 45 x 8-9/16	26-3/8 (28-5/8) x 45 x 8-9/16	26-3/8 (28-5/8) x 45 x 8-9/16	26-3/8 (28-5/8) x 52-7/8 x 8-9/16	26-3/8 (28-5/8) x 52-7/8 x 8-9/16	26-3/8 (28-5/8) x 60-3/4 x 8-9/16
Net weight			kg (lbs.)	29.5 (67)	29.5 (67)	30 (67)	35 (78)	35 (78)	39.5 (89)
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 3	Sirocco fan x 3	Sirocco fan x 4
	External static press.		Pa	0					
			mmH_2O	0.0					
	Motor Type			DC motor					
	Motor output		kW	0.096					
	Driving mechanism			Direct-driven by motor					
	Air flow rate			(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
			m^3/min	5.0 - 6.0 - 7.0	5.5 - 6.5 - 8.0	5.5 - 7.0 - 8.5	8.0 - 9.5 - 11.0	10.0 - 11.5 - 13.5	12.0 - 14.0 - 16.5
			L/s	83 - 100 - 117	92 - 108 - 133	92 - 117 - 142	133 - 158 - 183	167 - 192 - 225	200 - 233 - 275
			cfm	177 - 212 - 247	194 - 230 - 282	194 - 247 - 300	282 - 335 - 388	353 - 406 - 477	424 - 494 - 583
Sound pressure level				(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)	(Low-Mid-High)
(measured in anechoic room)			dB <A>	23.0-27.0-31.0	25.0-29.0-34.0	25.0-31.0-36.0	29.0-33.0-36.0	34.0-37.0-41.0	32.0-36.0-40.0
Air filter				PP honeycomb fabric.					
Refrigerant piping 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 size			mm (in.)	O.D.32 (1-1/4)					
Optional parts	Back decoration panel			PAC-BP32VEM-E	PAC-BP32VEM-E	PAC-BP32VEM-E	PAC-BP50VEM-E	PAC-BP50VEM-E	PAC-BP63VEM-E

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. 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.)
*3. The values in () show the height of unit with leg.
* 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.

Floor standing concealed type



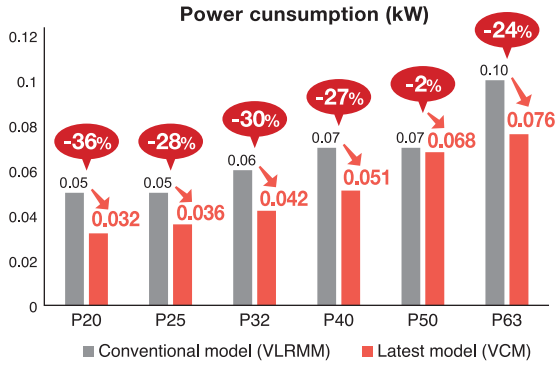
PFFY-P VCM



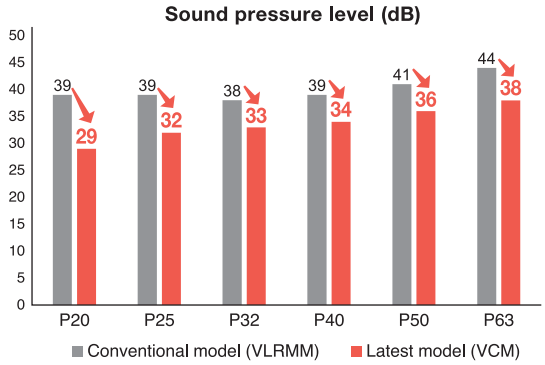
Office Hotel

Reduced power consumption and noise

The structure realizes smooth airflow to reduce pressure loss in the air pathway. Additionally, the inner pipes of its heat exchanger have been downsized from ø9.52 to ø7.0 to contain a larger number of pipings.
The combination of the structure and components contributes to reducing power consumption and operation noise.



* Measurement condition (External static pressure: 40Pa Fan speed: High)
* The unit consumes the same power in both cooling and heating modes.

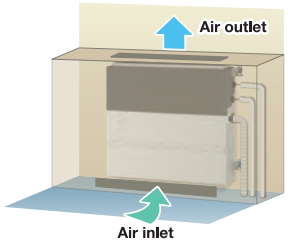


* Measurement condition (External static pressure: 40Pa Fan speed: High)
* The sound pressure level in operation is measured at 1.5 m apart from the front side and bottom side of the unit in anechoic room.

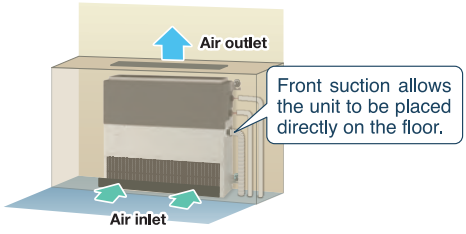
Flexible installation pattern ideal for perimeter zone air conditioning

Air inlet can be selected from two patterns, bottom suction or front suction, by changing the panel, fan guard and filter.

• Bottom suction*1

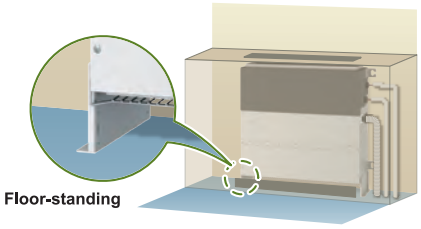


• Front suction*2



• Floor standing with legs

The unit can be placed on the floor with the supplied legs attached.



* Height of unit (with legs) is 690 mm.

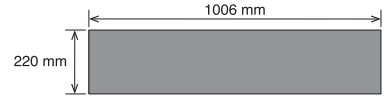
*1 Select a site where the flow of supply air is not blocked. The unit cannot be placed directly on the floor in the case of bottom suction.

*2 Front suction makes more noise than bottom suction. Bottom suction is recommended when installing the unit in rooms that need to be quiet, such as bedrooms.

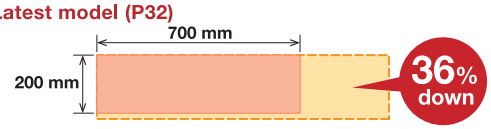
Smaller footprint

The latest model (P32) has a 36% smaller footprint compared to the PFFY-VLRMM, owing to a redesigning of the positions of the inner components.

Conventional model (P32)



Latest model (P32)



Flexible airflow and external static pressure setting

Airflow rate and external static pressure can be selected to suit various installation conditions.

	Conventional		Latest
Model Name	PFFY-P VLRM	PFFY-P VLRMM	PFFY-P VCM
Airflow rate	Low-High	Low-Mid-High	Low-Mid-High
External static pressure(Pa)	0	20-40-60	0-10-40-60

Specifications

Model				PFFY-P20VCM	PFFY-P25VCM	PFFY-P32VCM
Power source				1-phase 220-230-240 V 50/60 Hz		
Cooling capacity		*1	kW	2.2	2.8	3.6
(Nominal)		*1	BTU/h	7,500	9,600	12,300
	*2	Power input	kW	0.022	0.026	0.031
	*2	Current input	A	0.25	0.30	0.34
Heating capacity		*3	kW	2.5	3.2	4.0
(Nominal)		*3	BTU/h	8,500	10,900	13,600
	*2	Power input	kW	0.022	0.026	0.031
	*2	Current input	A	0.25	0.30	0.34
External finish				Galvanized steel plate	Galvanized steel plate	Galvanized steel plate
External dimension		*4	mm	615 (690) x 700 x 200	615 (690) x 700 x 200	615 (690) x 700 x 200
H x W x D			in.	24-1/4 (27-3/16) x 27-9/16 x 7-7/8	24-1/4 (27-3/16) x 27-9/16 x 7-7/8	24-1/4 (27-3/16) x 27-9/16 x 7-7/8
Net weight			kg (lbs)	18 (40)	18 (40)	18.5 (42)
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
*5	External		Pa	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>
	static press.		mmH_2O	<0.0> - 1.0 - <4.1> - <6.1>	<0.0> - 1.0 - <4.1> - <6.1>	<0.0> - 1.0 - <4.1> - <6.1>
	Motor Type			DC motor	DC motor	DC motor
	Motor output		kW	0.096	0.096	0.096
	Driving mechanism			Direct-driven by motor	Direct-driven by motor	Direct-driven by motor
	Air flow rate			(Low-Mid-High)		
			m^3/min	5.0 - 6.0 - 7.0	5.5 - 6.5 - 8.0	5.5 - 7.0 - 8.5
			L/s	83 - 100 - 117	92 - 108 - 133	92 - 117 - 142
			cfm	177 - 212 - 247	194 - 230 - 282	194 - 247 - 300
Sound pressure level				(Low-Mid-High)		
(measured in anechoic room)		*2	dB<A>	21-23-26	22-25-29	23-26-30
Air filter				PP honeycomb fabric.	PP honeycomb fabric.	PP honeycomb fabric.
Refrigerant	Liquid (410A)		mm (in.)	6.35 (1/4)Brazed	6.35 (1/4)Brazed	6.35 (1/4)Brazed
piping diameter	Gas (410A)		mm (in.)	12.7 (1/2)Brazed	12.7 (1/2)Brazed	12.7 (1/2)Brazed
Field drain pipe size			mm (in.)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)

Model				PFFY-P40VCM	PFFY-P50VCM	PFFY-P63VCM
Power source				1-phase 220-230-240 V 50/60 Hz		
Cooling capacity		*1	kW	4.5	5.6	7.1
(Nominal)		*1	BTU/h	15,400	19,100	24,200
	*2	Power input	kW	0.038	0.052	0.058
	*2	Current input	A	0.38	0.50	0.49
Heating capacity		*3	kW	5.0	6.3	8.0
(Nominal)		*3	BTU/h	17,100	21,500	27,300
	*2	Power input	kW	0.038	0.052	0.058
	*2	Current input	A	0.38	0.50	0.49
External finish				Galvanized steel plate	Galvanized steel plate	Galvanized steel plate
External dimension		*4	mm	615 (690) x 900 x 200	615 (690) x 900 x 200	615 (690) x 1,100 x 200
H x W x D			in.	24-1/4 (27-3/16) x 35-7/16 x 7-7/8	24-1/4 (27-3/16) x 35-7/16 x 7-7/8	24-1/4 (27-3/16) x 43-5/16 x 7-7/8
Net weight			kg (lbs)	22.5 (51)	22.5 (51)	25.5 (58)
Heat exchanger				Cross fin (Aluminum fin and copper tube)		
FAN	Type x Quantity			Sirocco fan x 3	Sirocco fan x 3	Sirocco fan x 4
*5	External		Pa	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>	<0> - 10 - <40> - <60>
	static press.		mmH_2O	<0.0> - 1.0 - <4.1> - <6.1>	<0.0> - 1.0 - <4.1> - <6.1>	<0.0> - 1.0 - <4.1> - <6.1>
	Motor Type			DC motor	DC motor	DC motor
	Motor output		kW	0.096	0.096	0.096
	Driving mechanism			Direct-driven by motor	Direct-driven by motor	Direct-driven by motor
	Air flow rate			(Low-Mid-High)		
			m^3/min	8.0 - 9.5 - 11.0	10.0 - 11.5 - 13.5	12.0 - 14.0 - 16.5
			L/s	133 - 158 - 183	167 - 192 - 225	200 - 233 - 275
			cfm	282 - 335 - 388	353 - 406 - 477	424 - 494 - 583
Sound pressure level				(Low-Mid-High)		
(measured in anechoic room)		*2	dB<A>	25-27-30	28-31-34	28-32-35
Air filter				PP honeycomb fabric.	PP honeycomb fabric.	PP honeycomb fabric.
Refrigerant	Liquid (410A)		mm (in.)	6.35 (1/4)Brazed	6.35 (1/4)Brazed	9.52 (3/8)Brazed
piping diameter	Gas (410A)		mm (in.)	12.7 (1/2)Brazed	12.7 (1/2)Brazed	15.88 (5/8)Brazed
Field drain pipe size			mm (in.)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)

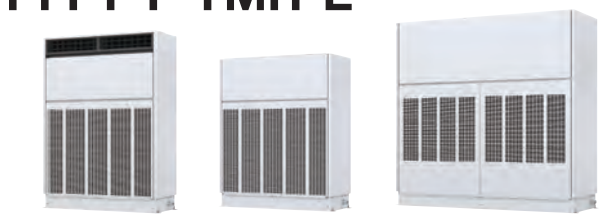
Notes:

*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. The values in ( ) show the height of unit with leg.
*5. The factory setting of external static pressure is shown without < >.
Refer to "Fan characteristics curves", according to the external static pressure, in DATA BOOK for the usable range of air flow rate.
*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.

Floor standing exposed type



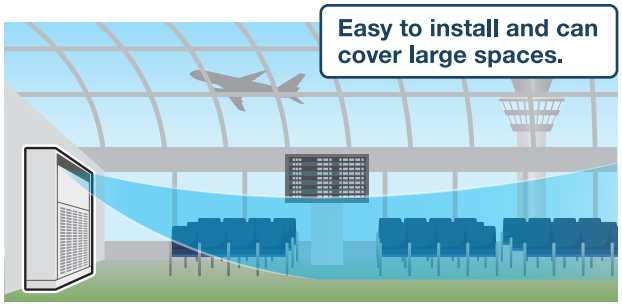
PFFY-P YM-E
PFFY-P YMH-E





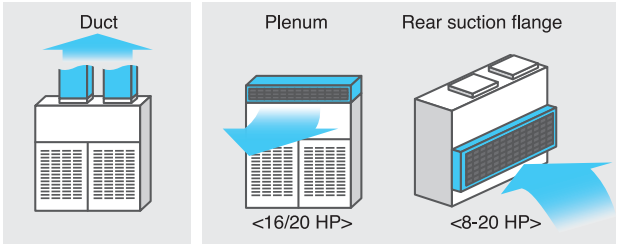
Reduces installation and maintenance time

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



Increased adaptation to local needs

In addition to the standard duct blowing, both plenum blowing and rear suction are optionally selectable.



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

		Air flow rate (m³/min [ft.³/min])	Static pressure (Pa)
		High, 50/60 Hz	380 V, 50/60 Hz
PFFY-P200YMH-E*	8 HP	65.0 [2300]	180/200
PFFY-P250YMH-E*	10 HP	72.0 [2540]	180/210
PFFY-P400YM-E	16 HP	150.0 [5300]	210/390
PFFY-P500YM-E	20 HP	200.0 [7060]	290/510

*High static pressure model

Pulley belt option

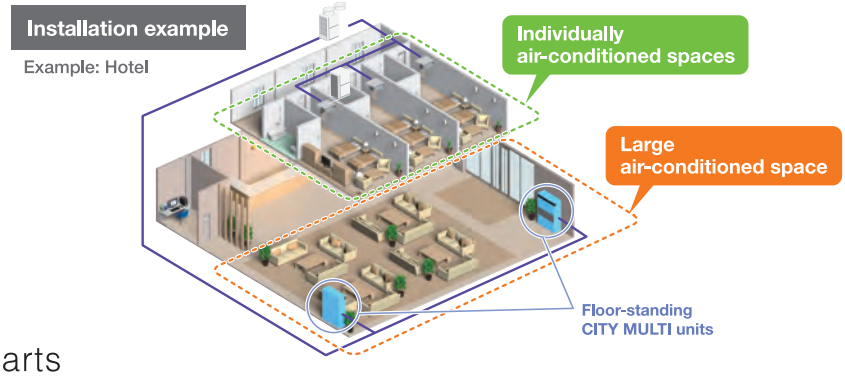
This option supports the use of wider ranges of airflow rates and static pressures to suit a greater variety of needs.

Both large-scale and individual air conditioning can be performed

When this model is used in a large space and CITY MULTI indoor units are used in individual rooms, one outdoor unit can control the air conditioners in these rooms of various sizes.

Multiple units can be connected to one outdoor unit

Multiple units of this model can be connected to one outdoor unit. Air can be spread throughout a large room.



Optional Parts

Description	Model	Applicable capacity
OA duct flange	PAC-ODF10DF-E	P200, 250
	PAC-ODF20DF-E	P400, 500
Plenum	PAC-PLE20PL-E1	P400, 500

Specifications

Model				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	45.0	56.0
		*1	BTU/h	76,400	95,500	153,500	191,100
	*2 Power input		kW	1.00/1.41	1.31/1.41	2.86/3.79	3.94/5.30
	*2 Current input (380-400-415 V)		A	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	50.0	63.0
		*3	BTU/h	85,300	107,500	170,600	215,000
	*2 Power input		kW	1.00/1.41	1.31/1.41	2.86/3.79	3.94/5.30
	*2 Current input (380-400-415 V)		A	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 H x W x D			mm	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.	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)	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
	External static press. (380 V)		Pa	180/200	180/210	210/390	290/510
			mmH_2O	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	0.770	0.770	3.700	5.500
	Driving mechanism			Direct-driven by motor		Belt driving	
	Air flow rate			(High)			
			m^3/min	65.0	72.0	150.0	200.0
			L/s	1,083	1,200	2,500	3,333
			cfm	2,295	2,542	5,297	7,062
Sound pressure level (measured in anechoic room) (380 V)		*2	dB (A)	(High) 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	12.7 (1/2) Brazed	15.88 (5/8) Brazed
	Gas (R410A)		mm (in.)	22.2 (7/8) Brazed	22.2 (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 1-1/4	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 in fan mode and 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 In case of this type of unit is connected, the maximum connected indoor unit capacity to one outdoor unit have to be less than or equal to 100%.
*6 This unit cannot be connected to PUMY-Series.

* 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.

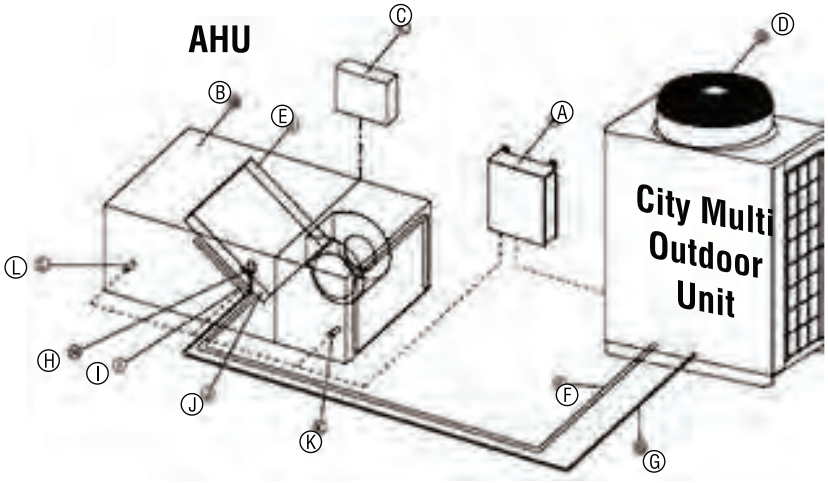
PAC-AH M







System Installation Image



Ⓐ Air handling unit controller (PAC-AH - M-J)
Ⓑ Air hamdling unit (field supply)
Ⓒ Controller (field supply)
Ⓓ Outdoor unit
Ⓔ Heat exchanger (field supply
Ⓕ Gas pipe
Ⓖ Liquid pipe
Ⓗ LEV-Kit
Ⓘ Thermistor (gas pipe)
Ⓙ Thermistor (liquid pipe)
Ⓚ Thermistor (suction air)
Ⓛ Thermistor (discharge air)

Air Handling Unit Package Type(AH-Series)

AH-series is for large capacity demand application such as shopping mall, airport, gym, etc.

Its high air flow operation will fulfill the various demand of air conditioning. Alongwith wide range of airflow, static pressure, and piping length up to 165 mtr. AH- series also provides optimized solution for both large capacity demand piping & installation burdens.

Moreover, it makes maintenance easy.

The unit is available with the additional accessories like controller interface and LEV Kit developed by Mitsubishi Electric, Japan.

AH-series can be connected with both PUHY-P & PUHY-EP, PUCY-P & PUCY-EP (high efficiency) series outdoor unit. This offers small footprint and lightweight.

Control of AH-series is common with standard IDU and covers each controller's standard features.

No need of separate centralised control, it can be controlled centrally with other VRF circuit through any of our centralised control

AHU Kit Type
PAC-AH M

Model	PAC-AH125M	PAC-AH125M	PAC-AH140M	PAC-AH250M
Air Handling Unit Size	P100	P125	P140	P200
Allowed Heat Exchanger Capacity (KW) -Heating	10.0 - 12.5	12.5 - 16.0	16.0 - 18.0	18.0 25.0
Allowed Hear Exchanger Capacity (KW) -Cooling	9.0 - 11.2	11.2 - 14.0	14.0 - 16.0	16.0 - 22.4

Model	PAC-AH250M	PAC-AH500M	PAC-AH500M
Air Handling Unit Size	P250	P400	P500
Allowed Heat Exchanger Capacity (KW) -Heating	25.0 - 31.5	40.0 - 50.0	50.0 - 63.0
Allowed Hear Exchanger Capacity (KW) -Cooling	22.4 - 28.0	36.0 - 45.0	45.0 - 56.0



Branch Box System

MSXY-MP VA
MSXZ-MP VA
MSXZ-FP VA

Residence



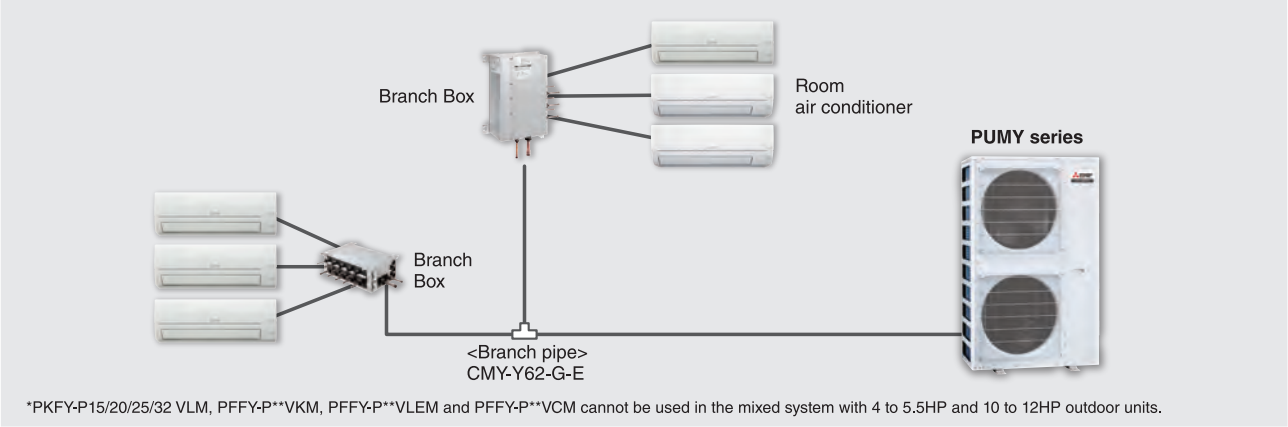
PAC-MK33BC
PAC-MK53BC





Quiet, Highly Efficient and Flexible Air Conditioning System

Specifically designed for villas, condominiums, shops and offices, with a long list of features, to make your place ideal and comfortable.



*PKFY-P15/20/25/32 VLM, PFFY-P**VKM, PFFY-P**VLEM and PFFY-P**VCM cannot be used in the mixed system with 4 to 5.5HP and 10 to 12HP outdoor units.

Quick Installation

Not only is heavy installation work a bother, it also costs a bundle of money. This is why we have worked hard to make the system as easy to install and maintain as possible. Not only the branch box simplifies the piping work, the flare connection adopted eliminates the use of fire for easier and safer installation.*

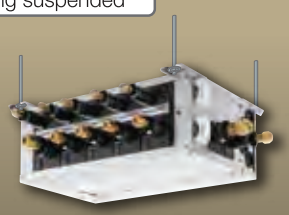
*When connecting branch box with PUMY-P175/200/225 YKM1, brazing is required.

Silent Operation

With the Branch Box, PUMY runs so smooth and quiet, you get comfort without any of the bothersome noise. Under low operating load, “Low-noise” mode will automatically be selected thus providing quiet operation. Connecting with our latest wall mounted indoor units allows creating a quiet and comfort space where the occupants would not even recognize the existence of air conditioner operation.

Types of Installation Method

Ceiling suspended



Floor installation



Wall installation



Ensure that the piping connected to the outdoor unit is set at a downward angle.

Wall Mounted Type Specifications

Model				MSXY-MP32VA	MSXY-MP50VA	MSXY-MP63VA	MSXZ-MP32VA	MSXZ-MP50VA	MSXZ-MP63VA
Type				Cooling Type			Heat pump		
Cooling Capacity			KW	3.60	5.20	6.60	3.60	5.20	6.60
Heating Capacity			KW	—	—	—	4.00	6.30	8.00
Refrigerant				R410					
Power supply			Source	230V, 50Hz					
Sound Presure Level	Indoor unit (Quiet -Lo-Med-Hi-SHi)		dB(A)	26-29-35-40-46	29-37-41-45-49	30-37-41-45-51	26-29-35-40-46	29-37-41-45-49	30-37-41-45-49
Air Volume	Indoor unit (Quiet -Lo-Med-Hi-SHi)		CFM	162-208-272-342-434	226-300-417-491-568	307-378-448-519-734	162-208-272-342-434	226-300-417-491-568	325-392-459-526-614
Operating Current	Max		A	0.3	0.4	0.5	0.3	0.4	0.4
External finish				PS (1.0Y 9.2/0.2)					
Indoor unit	Dimension H x W x D		mm	290x799x232	305x923x250	325x1,100x238	290x799x232	305x923x250	325x1,100x238
	Weight		kg	10	13	15	10	13	15.5
Ext.Piping	Diameter Liquid		mm (inches)	6.35(1/4)	6.35(1/4)	9.52(3/8)	6.35(1/4)	6.35(1/4)	9.52(3/8)
	Diameter Gas		mm (inches)	9.52(3/8)	15.88(5/8)	15.88(5/8)	9.52(3/8)	15.88(5/8)	15.88(5/8)
Pre filter				Nano-platinum Filter					
Air cleaning filter				Electrostatic Anti-allergy Enzyme Filter (Option)					
Timer				Weekly timer					
Vertical Swing				—	✓		—	✓	
Wide and Long				—	✓		—	✓	

Wall Mounted Type Specifications

Model			MSXZ-FP22VA	MSXZ-FP32VA
Type			Heat pump	
Cooling Capacity		KW	2.50	3.50
Heating Capacity		KW	2.90	4.00
Refrigerant			R410	
Power supply		Source	230V, 50Hz	
Special Presure Level	Quiet-Lo-Med-Hi-Shi	dB(A)	20-23-29-36-42	20-23-29-36-42
Air Volume	Quiet-Lo-Med-Hi-Shi	CFM	138-166-219-304-409	138-166-219-304-409
Operating Current	Max	A	0.4	0.4
External finish (Munsell No.)			PS (1.0Y 9.2/0.2)	
Dimensions (H x W x D)		mm	305x925x234	
Weight		kg	13.5	
Pre filter			ANTI-MOLD FILTER	
Air cleaning filter			ELECTROSTATIC ANTI-ALLERGY ENZYME FILTER (Option) DEODORIZING FILTER (Option)	
Timer			Weekly timer	
Vertical Swing			✓	
Wide and Long			—	

Branch Box Specifications

Model				PAC-MK54BC	PAC-MK34BC
Connectable number of indoor units				Maximum 5	Maximum 3
Power supply (from outdoor unit)				Single phase, 220/230/240 V, 50 Hz, Single phase, 220 V, 60 Hz	
Input			kW	0.003	
Running current			A	0.05 (Max. 6)	
Dimension W x D x H			mm	450x280x170	
Weight			kg	7.4	6.7
piping connection (Flare)	Branch (indoor side)*	Liquid	mm	ϕ 6.35 x 5 {A,B,C,D,E}	ϕ 6.35 x 3 {A,B,C}
		Gas	mm	ϕ 9.52 x 4 {A,B,C,D}, ϕ 12.7 x 1{E}	ϕ 9.52 x 3 {A,B,C}
	Main (outdoor side)	Liquid	mm	ϕ 9.52	
		Gas	mm	ϕ 15.88	

Notes:

* The piping connection size differs according to the type and capacity of indoor units. Match the piping connection size for indoor and branch box. If the piping connection size of branch box does not match the piping connection size of indoor units, use optional different-diameter joints to the branch box side. (Connect joint directly to the branch box side.)



Remote Controller



Building Management Zone

Centralized control



*This image shows AE-C400E-X.

NEW

AE-C400E-X/EW-C50E-X with BACnet Interface

For BACnet®



NEW

BACS-AP50E BACnet adapter

For BACnet®

BMS* and CITY MULTI can be connected. This enables control of the entire building and air-conditioning control on the BMS side. *Building management system

Floor Management Zone

System controller



AE-C400E-X NEW

This model, featuring a color LCD screen, can control up to 50 indoors unit when used independently, and up to 400 units can be controlled by connecting additional AE-C400E-X or EW-C50E-X.



EW-C50E-X NEW

This model can control up to 50 indoor units when used independently, or when connected to the AE-C400E-X as an expansion unit.



PAC-YT40ANRA

The power can be turned on and off easily for 50 indoor units in up to 16 groups with this single unit.



AT-50B

This model is suitable for control on each floor. You can control up to 50 indoor units on the color LCD screen.

The air conditioners in each group can be turned on and off, and their modes can be changed. The weekly timer allows them to be turned on automatically before work starts, and off after closing time.

Local remote controller



PAR-41MAAM
(MA remote controller)

The temperature can be set in steps of 0.5°C [1°F] increments, and the air flow direction and error icons are displayed on the screen.



PAR-21MAA
(MA remote controller)

The temperature can be set in steps of 1°C/1°F increments. The button panel can be accessed and closed when the buttons are not used.



PAR-U02MEDA
(ME remote controller)

All elements appear on the LCD screen, which features an occupancy sensor. All conditions including grouping can be set on this one controller.



PAC-YT52CRA
(MA remote controller)

A simple remote controller dedicated to setting the temperature and fan speed



PAR-CT01MAA-S
(MA remote controller)

All elements appear on the LCD screen. The background and character colors can be selected.



PAR-SL101A-E
(MA Wireless remote controller)

* Connected only to PLFY-P VHM-PA / PLFY-P VFM-E1/PKFY-P VLM-E
* Requires wireless signal receiving unit



PAR-FL32MA
(MA Wireless remote controller)

* Requires wireless signal receiving unit

A suitable remote controller can be selected to control the air conditioners in each room according to each use situation.



Building management system

System controller



AE-C400E-X



EW-C50E-X

PAC-SC51KUA

Power supply unit for transmission line

PAC-SF46EPA-G

Transmission booster



AT-50B



PAC-YT40ANRA

Expansion interface

PI Controller



DIDO Controller



AI Controller



Extension of air conditioner functions

BACnet®

AE-C400E-X
EW-C50E-X

M-NET

BACS-AP50E

M-NET

Using our MELANS products enhances air-conditioning EFFICIENCY and QUALITY, contributing to ENERGY SAVINGS and reducing running cost. We offer a wide variety of MELANS products to meet requirements - from the smallest and simplest, to the largest and most complex. We have individual remote controllers, various centralized controllers, BMS interface, etc.

Local remote controller

M-NET

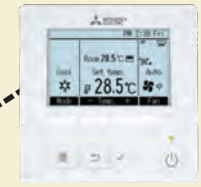
M-NET

CITY MULTI





A control



PAR-41MAAM
Full-dot LCD display

A control



PAR-21MAA

M-NET



PAR-U02MEDA
Sensor function
Full-dot LCD touch panel

A control



PAR-CT01MAA-S
Color LCD touch panel

A control



PAC-YT52CRA

A control



PAR-FL32MA



Wireless Remote Controller

Serial Communication



PAR-SL101A-E
(PLFY-P VHM-PA, PLFY-P VFM-E1, PKFY-P VLM-E only)



Wireless Remote Controller

MELANS

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

Model	Local remote controller *7							System controller *7							
	PAR-41MAAM	PAR-21MAA	PAR-U02MEDA	PAR-CT01MAA-S	PAC-YT52CRA	PAR-FL32MA	PAR-SL101A-E	PAC-YT40ANRA	AT-50B	AE-C400E-X		AE-C400E-X + AE-C / EW-C		EW-C50E-X	
Controllable Groups / Indoors (Group / Indoor) *6	1 / 16	1 / 16	1 / 16	1 / 16	1 / 16	1 / 16	1 / 1	16 / 50	50 / 50	50 / 50		400 / 400		50 / 50	
										AE-C400E-X	Browser	AE-C400E-X	Browser	EW-C50E-X	Browser
■Operation															
ON / OFF	○	○	○	○	○	○	○	◎	◎	◎ ■	◎ ■	◎ ■	◎ ■	▲	◎ ■
Mode (cool / heat / dry / fan)	○	○	○	○	○	○	○	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■
Temperature setting	○	○	○	○	○	○	○	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■
Relative temperature display	N	N	N	○	N	N	N	N	N	N	N	N	N	N	N
Dual set point *8	○	N	○	○	○	N	○ *9	○ *10	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■
Local Permit / Prohibit	N	N	N	N	N	N	N	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■
Fan speed	○	○	○	○	○	○	○	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■
Air flow direction	○	○	○	○	○	○	○	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■
■Status monitoring															
ON / OFF	○	○	○	○	○	○	○	◎	◎	◎	○	◎	○	▲	○
Mode (cool / heat / dry / fan)	○	○	○	○	○	○	○	N	○	○	○	○	○	N	○
Temperature setting	○	○	○	○	○	○	○	N	○	○	○	○	○	N	○
Local Permit / Prohibit	○	○	○	○	○	N	N	○	○	○	○	○	○	N	○
Fan speed	○	○	○	○	○	○	○	N	○	○	○	○	○	N	○
Air flow direction	○	○	○	○	○	○	○	N	○	○	○	○	○	N	○
Indoor temperature	○	○	○	○	○	N	N	N	○	○	○	○	○	N	○
Filter sign	○	○	○	○	N	N	N	N	◎	○	○	○	○	N	○
Error flashing	○	○	○	○	○	N	N	○	◎	○	○	○	○	▲	○
Error code	○	○	○	○	○	N	N	○	○	○	○	○	○	N	○
Operation hour	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
■Scheduling															
One day	○	○	○	○	N	N	N	N	○	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■
ON / OFF times per day	1	8	1	1	N	1	1	N	16	24	24	24	24	N	24
Weekly	○	○	○	○	N	N	N	N	○	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■
ON / OFF times per week	8 x 7	8 x 7	8 x 7	8 x 7	N	N	N	N	16 x 7	24 x 7	24 x 7	24 x 7	24 x 7	N	24 x 7
Annual	N	N	N	N	N	N	N	N	N	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■
Optimized start-up	N	N	N	N	N	N	N	N	N	○	○	○	○	N	○
Auto-off timer	○	○	○	○	N	N	N	N	N	N	N	N	N	N	N
Min. timer setting unit (minute)	5	1	5	5	N	10	10	N	5	1	1	1	1	N	1
■Recording															
Error log	○	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
Electricity charge	N	N	N	N	N	N	N	N	N	●	●	●	●	●	●
Energy management data	N	N	N	N	N	N	N	N	N	○	○	○	○	N	○

Model	Local remote controller *7							System controller *7							
	PAR-41MAAM	PAR-21MAA	PAR-U02MEDA	PAR-CT01MAA-S	PAC-YT52CRA	PAR-FL32MA	PAR-SL101A-E	PAC-YT40ANRA	AT-50B	AE-C400E-X		AE-C400E-X + AE-C / EW-C		EW-C50E-X	
Controllable Groups / Indoors (Group / Indoor) *6	1 / 16	1 / 16	1 / 16	1 / 16	1 / 16	1 / 16	1 / 1	16 / 50	50 / 50	50 / 50		400 / 400		50 / 50	
										AE-C400E-X	Browser	AE-C400E-X	Browser	EW-C50E-X	Browser

■Other

Temp-set limitation by Local R / C	○	○	○	○	○	N	N	N	N	N	N	N	N	N	N
Temp-set limitation by System controller	○*4	○*4	○	○*4	○*4	N	N	N	○*4	○	○*4	○	○*4	N	○*4
Operation lock	○	○	○	○	○	N	N	N	◎	N	N	N	N	N	N
Night setback	○	N	○	○	N	N	N	N	◎	○	○	○	○	N	○
Sliding temperature control	N	N	N	N	N	N	N	N	N	○	○	○	○	N	○
BACnet® connection	N	N	N	N	N	N	N	N	N	●	●	●	●	●	●

■Management (Group / Interlocked)

Group setting	○*1	○*1	○	○*1	○*1	N	N	○	○	○*2	○*2	○*2	○*2	N	○*2

■Operating on LOSSNAY interlocked (Group / Interlocked)

ON / OFF	N /○	N /○	N /○	N /○	N /○	N /○*5	N /○*5	◎/◎*3	◎/◎	◎/◎	◎/◎	◎/◎	◎/◎	▲/▲	◎/◎
Fan speed	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

■Status monitoring on LOSSNAY interlocked (Group / Interlocked)

ON / OFF	N /○	N /○	N /○	N /○	N /○	N	N	N	○/○	◎/◎	◎/◎	◎/◎	◎/◎	▲/▲	◎/◎
Fan speed	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

◎: Each group / Batched ; ○: Each group ; □: Block (for CITY MULTI Indoor unit, not for all Mr.SLIM) ; ●: AE-C400E-X/EW-C50E-X 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. Setting via the integrated web browser is possible for Ver. 1.4 or later.
*3. Interlock is set at Local remote controller.
*4. This function can only be set on the ME remote controller.
This function cannot be used with the MA/Simple MA remote controller.
(However, the validity of this function with the MA/Simple MA remote controller depends on the indoor unit model, and it is possible to use this function with them.)
*5. Interlock is set from system controllers (Except PAC-YT40ANRA) or local remote controllers.
*6. The maximum number of controllable units decreases depending on the indoor unit model.
*7. For indoor use only.
*8. This function is supported only when all of the indoor units, remote controllers, and system controllers that are connected to a given group features said function.
*9. Function setting of this remote controller is necessary.
*10. Please contact your local distributor regarding the availability of this function.

Optional Parts For Control

Model	Description
PAC-SE42TS-E	Remote Sensor for A/J/K/M-Net Control
PAC-SE55RA-E	Remote ON/OFF adaptor for Indoor Unit
PAC-SA88HA-EP	Remote Display Adaptor for Indoor Unit
PAC-SC37SA-E	Output signal connector
PAC-SC36NA-E	Input signal connector
PAC-SF46EPA-G	Transmission booster
PAC-SC51KUA	Power supply unit
PAC-YT51HAA-J	External input/output adapter for AT-50B
PAC-YG10HA-E	External input/output adapter for AE-C400E-X
PAC-YK94UTB-J	Electrical Box
PAC-YK96TK-J	Mounting Kit for control panel
PAC-YK92TB-J	Mounting attachment for wall-surface installation
PAC-YK91RF-J	Replace attachment



Lossnay



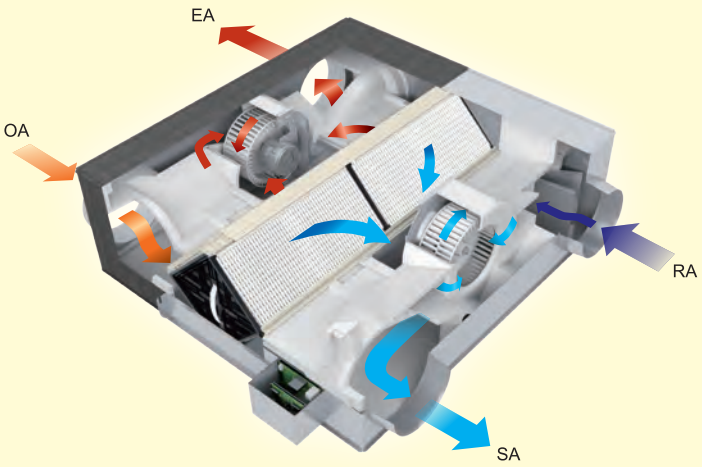
LOSSNAY System

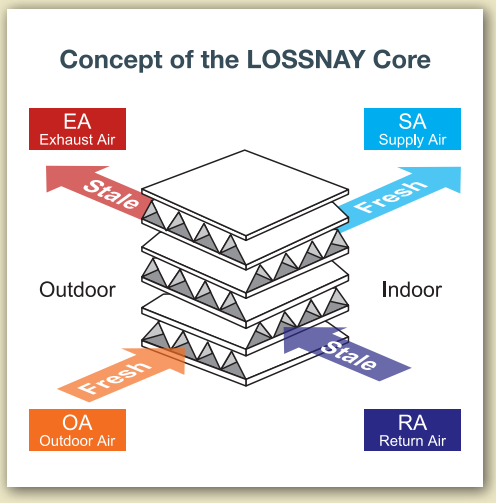
What is LOSSNAY?

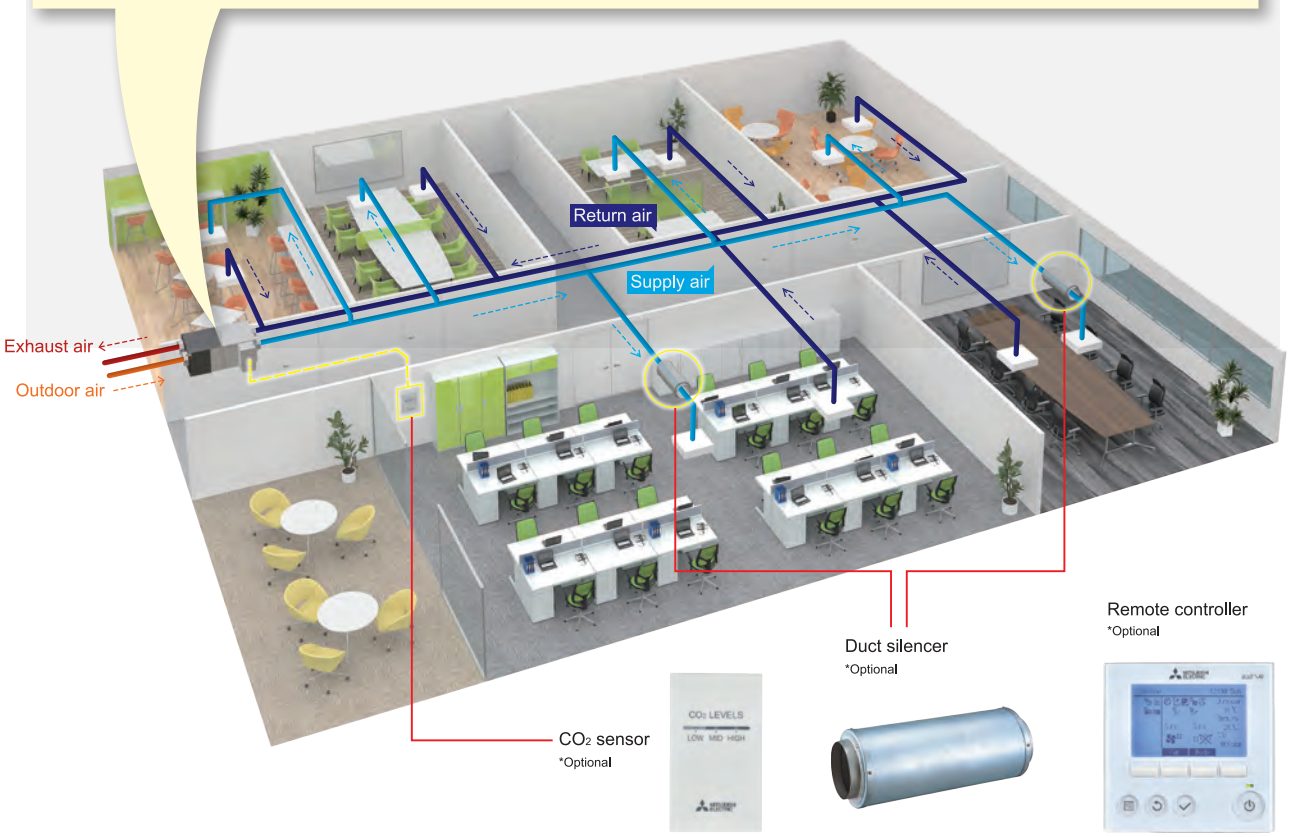
LOSSNAY is a total heat exchange ventilation system that uses paper characteristics to perform temperature (sensible heat) and humidity (latent heat) exchange.

■ How does LOSSNAY work?

The LOSSNAY core located at the crosspoint of each airflow transfers heat and humidity while going through each cross-air passage.





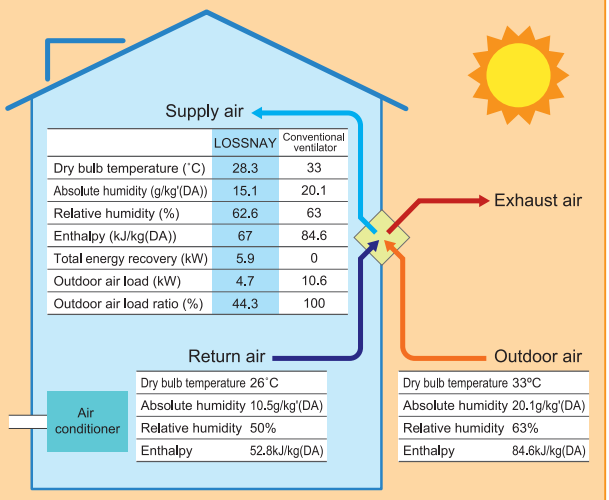


Temperature and Humidity Exchange

Without total heat exchange, air-conditioned air inside the building is expelled, and new hot or cold air is directly brought into the building. LOSSNAY can prevent this by total heat exchange so that fresh outdoor air is conditioned before it is brought into the room.

In summer

Air similar to the conditions of cooled (dehumidified) indoor air is supplied.



	LOSSNAY	Conventional ventilator
Dry bulb temperature (˚C)	28.3	33
Absolute humidity (g/kg'(DA))	15.1	20.1
Relative humidity (%)	62.6	63
Enthalpy (kJ/kg(DA))	67	84.6
Total energy recovery (kW)	5.9	0
Outdoor air load (kW)	4.7	10.6
Outdoor air load ratio (%)	44.3	100

Dry bulb temperature	26˚C
Absolute humidity	10.5g/kg'(DA)
Relative humidity	50%
Enthalpy	52.8kJ/kg(DA)

Dry bulb temperature	33ºC
Absolute humidity	20.1g/kg'(DA)
Relative humidity	63%
Enthalpy	84.6kJ/kg(DA)

Heat recovery calculation

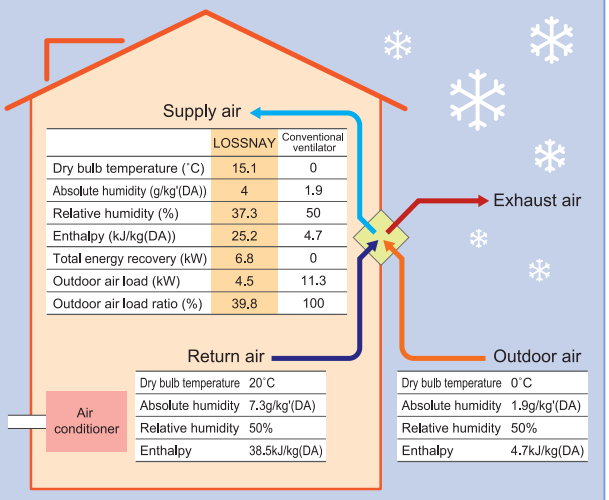
Indoor supply air temperature (ºC) = { Outdoor temperature (ºC) - { Outdoor temperature (ºC) - Indoor temperature (ºC) } × Temp. recovery efficiency (%)

Calculation example: 28.3˚C = 33˚C - (33˚C - 26˚C) × 67.5%

*The above applies to the case of LGH-100RVX3-E(1000m³/h).

In winter

Air similar to the conditions of heated (humidified) indoor air is supplied.



	LOSSNAY	Conventional ventilator
Dry bulb temperature (˚C)	15.1	0
Absolute humidity (g/kg'(DA))	4	1.9
Relative humidity (%)	37.3	50
Enthalpy (kJ/kg(DA))	25.2	4.7
Total energy recovery (kW)	6.8	0
Outdoor air load (kW)	4.5	11.3
Outdoor air load ratio (%)	39.8	100

Dry bulb temperature	20˚C
Absolute humidity	7.3g/kg'(DA)
Relative humidity	50%
Enthalpy	38.5kJ/kg(DA)

Dry bulb temperature	0˚C
Absolute humidity	1.9g/kg'(DA)
Relative humidity	50%
Enthalpy	4.7kJ/kg(DA)

Heat recovery calculation

Indoor supply air temperature (ºC) = { Indoor temperature (ºC) - Outdoor temperature (ºC) } × Temp. recovery efficiency (%) + Outdoor temperature (ºC)

Calculation example: 15˚C = (20˚C - 0˚C) × 75.5% + 0˚C

*The above applies to the case of LGH-100RVX3-E(1000m³/h).

2 Main Benefits of Heat Exchange Ventilation

Energy Saving

Total heat exchange maintains comfortable room temperature, and thereby conserves energy and reduces the load on the air conditioning system

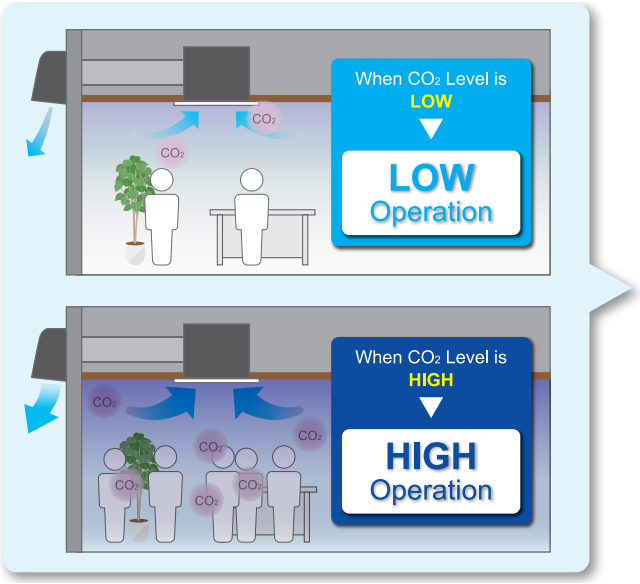
Clean

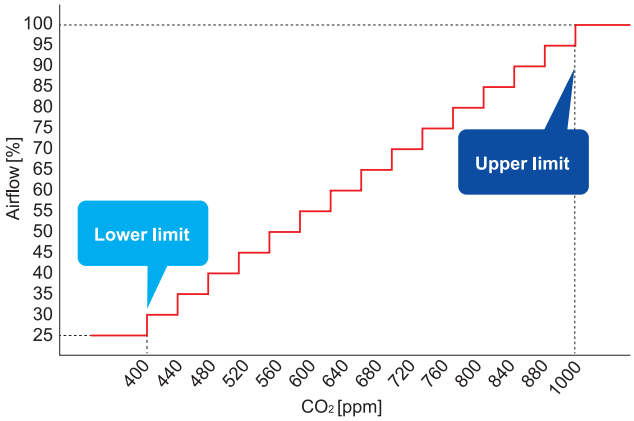
Outdoor air is filtered to prevent contaminants from coming in, and contaminated indoor air is expelled.

"CO_2 Sensor" — Clean and Efficient Operation

● 16 Steps of Automatic Airflow Control by CO_2 Level

The CO_2 sensor controls airflow in 16 steps depending on the CO_2 level in the room.
This saves energy by preventing over-ventilation while maintaining high indoor air quality.



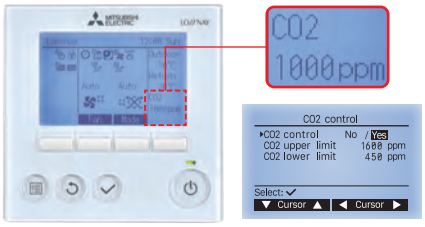


Upper Limit	600 to 2000 ppm
Lower Limit	300 to (upper limit - 300) ppm
Increment	50ppm

● 2 Ways to Monitor CO_2 Level

CO_2 level can be monitored with a LOSSNAY remote controller or wall-mounted CO_2 sensor.

LOSSNAY controller



PZ-62DR-EB

Wall-mounted CO_2 sensor

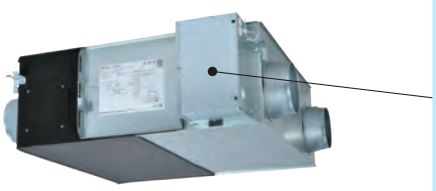
CO_2 in 3 levels : LOW, MID and HIGH

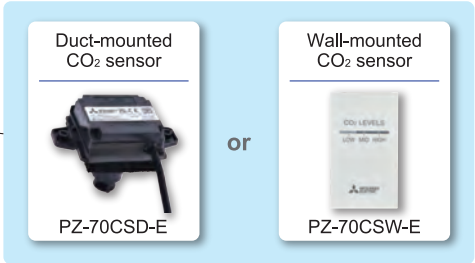


PZ-70CSW-E

● 2 Types of CO_2 Sensors

2 types of CO_2 sensors are available. Power is supplied to both sensors from the LOSSNAY circuit board.

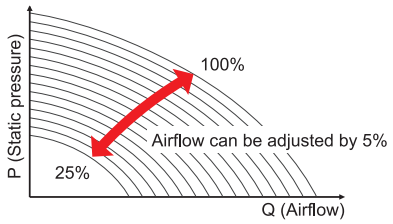




Other "Energy Saving" Features

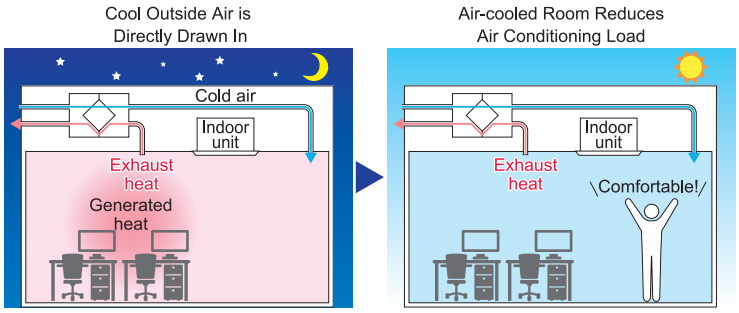
"Flexible Airflow Setting" Prevention of Over-Ventilation

Flexible airflow setting saves energy by preventing over-ventilation!
The fan speed of both supply and exhaust air can be flexibly adjusted within the range between 25% and 100% to ensure sufficient air volume. Airflow can be adjusted in 5% increments.



"Night Purge Mode" Reduction of Morning Air Conditioning Load

When the air conditioner is off and outside air is cooler at night, the Night Purge Mode draws the cooler air into the room. This mode reduces the load when the air conditioning starts up the next morning.



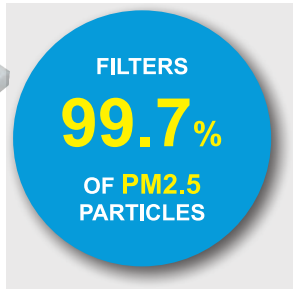
Other "Clean" Features

"Advanced High Efficiency Filter" Removes Outside Pollutants

The new optional filter (PZ-RFP3-E) removes 99.7% of particles larger than 0.5µm. By removing pollutants, fresh and clean air is supplied.

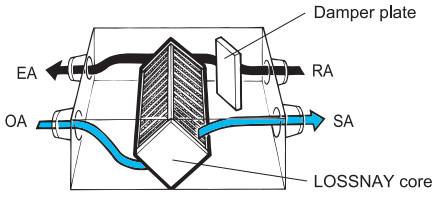
*GB/T 14295-2008: YG class 99.7%
(Collecting efficiency for particles that are 0.5µm or larger)
*PM2.5 is airborne particulates that are 2.5µm or smaller in size.
*The collecting performance of airborne particulates smaller than 0.3µm has not been confirmed.





No heat exchange needed? Try the "Bypass Mode"

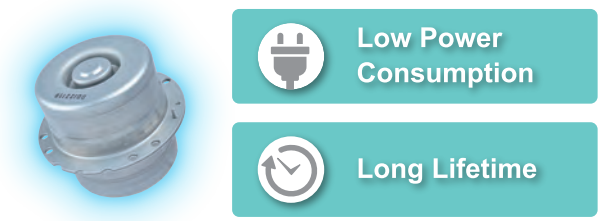
When air conditioning is off and heat exchange is not necessary, LOSSNAY can automatically switch to Bypass Mode.
This enables simple ventilation while filtering outside pollutants, so indoor air quality is maintained without heat exchanging the outside air.



"EC Motor" — High Static Pressure and Low Power Consumption

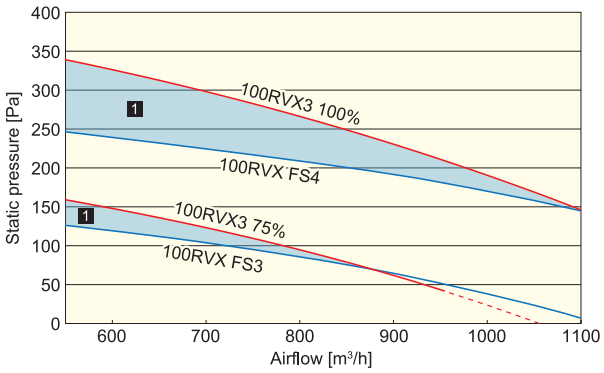
LOSSNAY uses a high efficiency EC motor to realize low power consumption. The RVX3 series is equipped with Mitsubishi Electric's original EC motor, which delivers improved external static pressure compared to the previous RVX model in addition to low power consumption. It also allows flexible duct work.

Mitsubishi Electric's EC Motor



The EC motor used in the RVX3 Series is developed and manufactured by Mitsubishi Electric.

Static Pressure of the RVX and RVX3 Series

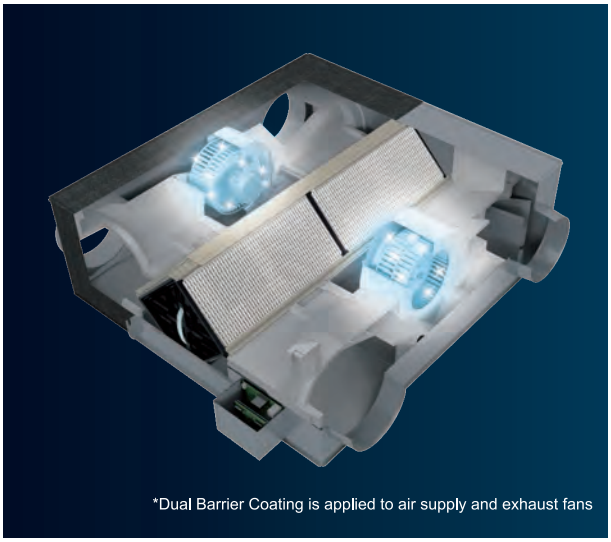


1 Increased static pressure

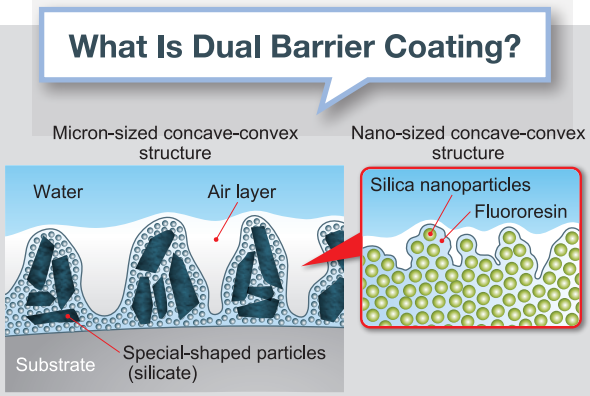
*The dotted lines of the fan curve indicate reference values.

"Dual Barrier Coated Blades" — Reduce Maintenance Frequency

Dual Barrier Coating is applied to the fan blades of LOSSNAY to minimize the adherence of dirt. It keeps the fan in a cleaner state for a longer period of time and thus reduces maintenance frequency.



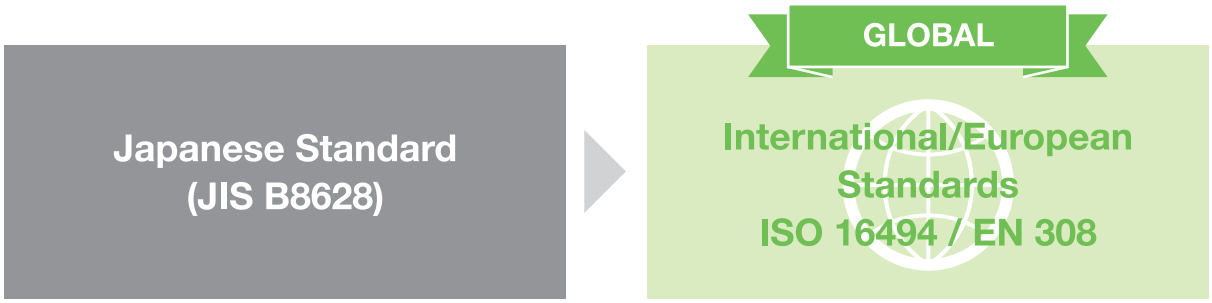
*Dual Barrier Coating is applied to air supply and exhaust fans



A water-repellent effect is achieved by creating a coating film that has nano-sized concave-convex structures formed by silica nanoparticles made of water-repellent fluororesin and micron-sized concave-convex structures formed by combining micron-sized special-shaped particles (silicate) with the silica nanoparticles. At the same time, the uneven structure forms an air layer that suppresses the adhesion of dust and sand that contain a lot of humidity, reducing the amount of dirt that adheres to the substrate.

RVX3 is tested under International standards!

From the new RVX3 Series, LOSSNAY is tested under the latest ISO and EN international standards in place of the conventional JIS Japanese standard. Testing under the standards of European countries can more widely prove that LOSSNAY is ecological at the global level.
Due to the change in testing standards, the method for testing temperature and enthalpy exchange has also changed, so that values are now shown to be lower than the previous model.



*LGH-15/25/35/50RVX3-E is tested under ISO16494,
LGH-65/80/100/160/200RVX3-E is tested under EN308 standards.

The **LOSSNAY RVX3 Series also complies with the ErP (Energy-related Products) Directive** which is required in the EU.

RVX3 is ErP Compliant!

ErP stands for Energy-related Products and refers to products that have an impact on energy consumption during use.

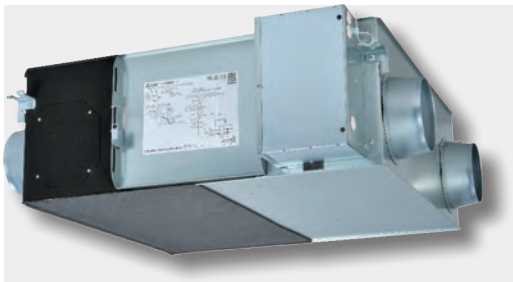
Being ErP compliant proves that **products meet the regulation set out by the European Commission.** Compliance with ErP indicates that LOSSNAY is a high-efficiency, ecological product.

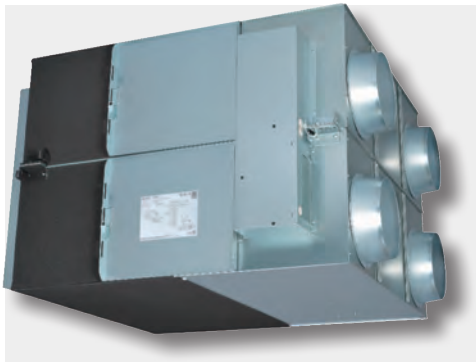
■ Regulations for compliance with the ErP Directive

Model	Criteria
Small Air Volume Model (15-50RVX3)	1 Air volume can be controlled by 3 or more notches.
	2 Has a bypass mode.
	3 Complies with the required specific energy consumption.
	4 Shows a signal when filter exchange is needed.
Large Air Volume Model (65-200RVX3)	1 Air volume can be controlled by 3 or more notches.
	2 Has a heat recovery function.
	3 Has a bypass mode.
	4 Heat recovery rate for heating is 73% or more.
	5 Complies with the required specific fan power.

Specifications & Dimensions

LGH-15RVX3-E
LGH-25RVX3-E
LGH-35RVX3-E
LGH-50RVX3-E
LGH-65RVX3-E
LGH-80RVX3-E
LGH-100RVX3-E
LGH-160RVX3-E
LGH-200RVX3-E





Model		LGH-15RVX3-E			
Electrical power supply		220-240V/50Hz, 220V/60Hz			
Fan speed		4	3	2	1
Default Airflow setting		100%	75%	50%	25%
Input power (W)*1		55	30	15	10
Airflow*1	(m^3/h)	150	113	75	38
	(L/s)	42	31	21	10
Specific fan power [W/(L/s)]*1		1.32	0.96	0.72	0.96
External static pressure (Pa)*1		120	68	30	8
Temperature exchange efficiency (%)*1	Heating	73.5	75.5	78.0	81.5
	Cooling	65.5	70.5	73.5	78.0
Enthalpy exchange efficiency (%)*1	Heating	70.5	73.5	76.5	80.5
	Cooling	58.0	62.0	66.0	73.0
Noise (dB)*2		27.0	22.0	18.0	17.0
Exhaust air transfer ratio (%)*3		5			
Weight (kg)		20			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz and horizontal installation.
*1 : Measured according to ISO 16494-1: 2022 *2 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*3 : Measured according to EN308: 2022 / FS3

■ LGH-25/35RVX3-E

Model		LGH-25RVX3-E				LGH-35RVX3-E			
Electrical power supply		220-240V/50Hz, 220V/60Hz				220-240V/50Hz, 220V/60Hz			
Fan speed		4	3	2	1	4	3	2	1
Default Airflow setting		100%	75%	50%	25%	100%	75%	50%	25%
Input power (W)*1		75	42	21	11	120	61	29	15
Airflow*1	(m^3/h)	250	188	125	63	350	263	175	88
	(L/s)	69	52	35	17	97	73	49	24
Specific fan power [W/(L/s)]*1		1.08	0.81	0.60	0.63	1.23	0.84	0.60	0.62
External static pressure (Pa)*1		120	68	30	8	160	90	40	10
Temperature exchange efficiency (%)*1	Heating	75.5	78.5	81.0	88.0	75.0	77.0	79.0	82.0
	Cooling	70.5	76.5	79.0	85.0	66.5	71.0	74.0	79.0
Enthalpy exchange efficiency (%)*1	Heating	69.0	72.0	75.5	84.0	72.0	74.5	77.5	80.0
	Cooling	59.0	63.5	68.0	75.0	60.0	64.5	68.5	74.5
Noise (dB)*2		30.5	25.0	19.5	17.0	30.5	24.5	19.0	17.0
Exhaust air transfer ratio (%)*3		5				5			
Weight (kg)		22				30			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz and horizontal installation.
*1 : Measured according to ISO 16494-1: 2022
*2 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*3 : Measured according to EN308: 2022 / FS3

LGH-50/65RVX3-E

Model		LGH-50RVX3-E				LGH-65RVX3-E			
Electrical power supply		220-240V/50Hz, 220V/60Hz				220-240V/50Hz, 220V/60Hz			
Fan speed		4	3	2	1	4	3	2	1
Default Airflow setting		100%	75%	50%	25%	100%	75%	50%	25%
Input power (W)*1		185	81	34	15	245	120	51	20
Airflow*1	(m^3/h)	500	375	250	125	650	488	325	163
	(L/s)	139	104	69	35	181	135	90	45
Specific fan power [W/(L/s)]*1		1.33	0.78	0.49	0.43	1.36	0.89	0.56	0.44
External static pressure (Pa)*1		150	85	38	10	150	85	38	10
Temperature exchange efficiency (%)*2	Heating	70.5	71.5	73.5	75.0	72.5	75.0	78.5	82.0
	Cooling	63.5	67.0	71.0	73.0	65.0	70.0	74.5	80.0
Enthalpy exchange efficiency (%)*2	Heating	68.5	69.5	72.0	73.0	69.5	72.0	76.5	80.0
	Cooling	53.5	58.0	63.0	68.0	55.5	60.0	66.5	74.0
Noise (dB)*3		35.0	27.0	21.0	17.0	37.5	31.5	24.0	17.5
Exhaust air transfer ratio (%)*4		5				5			
Weight (kg)		33				41			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz and horizontal installation.
*1 : Measured according to (LGH-50RVX3-E) ISO 16494-1: 2022, (LGH-65RVX3-E) EN13053: 2019
*2 : Measured according to (LGH-50RVX3-E) ISO 16494-1: 2022, (LGH-65RVX3-E) EN308: 2022
*3 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*4 : Measured according to EN308: 2022 / FS3

LGH-80/100RVX3-E

Model		LGH-80RVX3-E				LGH-100RVX3-E			
Electrical power supply		220-240V/50Hz, 220V/60Hz				220-240V/50Hz, 220V/60Hz			
Fan speed		4	3	2	1	4	3	2	1
Default Airflow setting		100%	75%	50%	25%	100%	75%	50%	25%
Input power (W)*1		343	160	64	23	438	210	83	27
Airflow*1	(m^3/h)	800	600	400	200	1000	750	500	250
	(L/s)	222	167	111	56	278	208	139	69
Specific fan power [W/(L/s)]*1		1.54	0.96	0.58	0.41	1.58	1.01	0.60	0.39
External static pressure (Pa)*1		170	96	43	11	190	107	48	12
Temperature exchange efficiency (%)*2	Heating	75.0	76.5	78.0	80.0	75.5	77.0	79.5	83.5
	Cooling	65.0	70.0	75.5	78.0	67.5	72.0	77.0	82.5
Enthalpy exchange efficiency (%)*2	Heating	62.0	65.0	70.5	73.5	60.5	63.0	68.5	75.5
	Cooling	54.5	58.5	65.0	70.5	55.5	61.0	66.0	73.5
Noise (dB)*3		39.0	33.5	25.0	18.0	40.0	35.0	27.0	18.5
Exhaust air transfer ratio (%)*4		5				5			
Weight (kg)		47				53			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz and horizontal installation.
*1 : Measured according to EN13053: 2019
*2 : Measured according to EN308: 2022
*3 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*4 : Measured according to EN308: 2022 / FS3

LGH-160/200RVX3-E

Model		LGH-160RVX3-E				LGH-200RVX3-E			
Electrical power supply		220-240V/50Hz, 220V/60Hz				220-240V/50Hz, 220V/60Hz			
Fan speed		4	3	2	1	4	3	2	1
Default Airflow setting		100%	75%	50%	25%	100%	75%	50%	25%
Input power (W)*1		687	324	128	45	855	416	163	57
Airflow*1	(m^3/h)	1600	1200	800	400	2000	1500	1000	500
	(L/s)	444	333	222	111	556	417	278	139
Specific fan power [W/(L/s)]*1		1.55	0.97	0.58	0.41	1.54	1.00	0.59	0.41
External static pressure (Pa)*1		170	96	43	11	170	96	43	11
Temperature exchange efficiency (%)*2	Heating	75.0	76.5	78.0	80.0	76.5	77.5	79.5	83.5
	Cooling	65.0	70.0	75.5	78.0	66.5	71.5	76.0	82.5
Enthalpy exchange efficiency (%)*2	Heating	62.0	65.0	70.5	73.5	60.5	64.0	67.5	76.0
	Cooling	54.5	58.5	65.0	70.5	57.0	60.0	65.0	71.0
Noise (dB)*3		41.0	35.0	26.0	18.0	41.5	36.0	27.5	18.0
Exhaust air transfer ratio (%)*4		5				5			
Weight (kg)		96				108			

*Input power, efficiency, and noise are based on rated air volume, 230V/50Hz.
*1 : Measured according to EN13053: 2019
*2 : Measured according to EN308: 2022
*3 : A-weighted sound pressure level measured at 1.5m under the center of the unit in an anechoic chamber.
*4 : Measured according to EN308: 2022 / FS3



E-Series Chillers & Hot Water Heat Pump



*For details, please consult the sales office.

E-Series Air-cooled Chiller

As a choice of HVAC system, chillers are widely used in versatile applications from commercial buildings to industrial use. With today's concerns on global warming and requirements to reduce energy use, building owners, as heavy energy users, are expected to choose energy efficient equipment.
Mitsubishi Electric's "e-series" chiller system is an air-cooled, inverter-driven and uniquely designed modular type of chiller with proven technology that offers comfort and energy conservation through daily operations.



Key Features

Energy efficiency

With DC inverter scroll compressors developed by Mitsubishi Electric and advanced inverter controls, the e-series ensures optimum operation according to the operation load and delivers high energy saving performance throughout the year.

Easy installation and space saving

The built-in header type is easy to install and requires less piping space.
Compared to a conventional chiller, e-series requires less installation space, which is an advantage especially with renewals where plant space tends to be limited.

Unique modular approach

Adds flexibility and unique aspects to the e-series.

Back-up

Emergency operation allows units to continue operating, and thereby reduces the backup requirement.

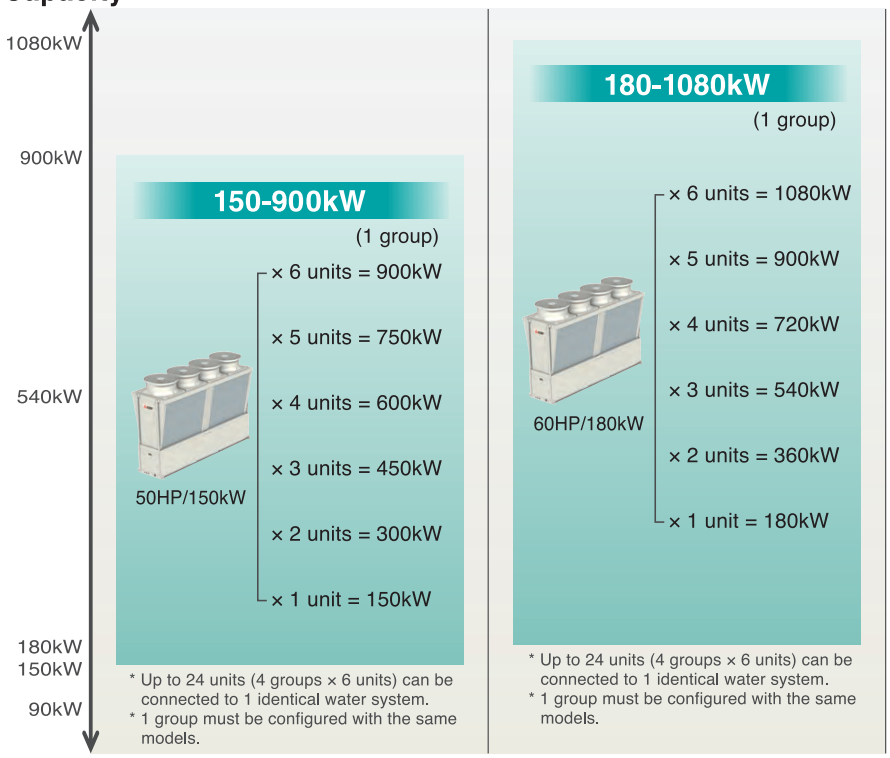
Scalability

Staged installations and future expansions can be realized to meet the building's requirements.

Module line-up

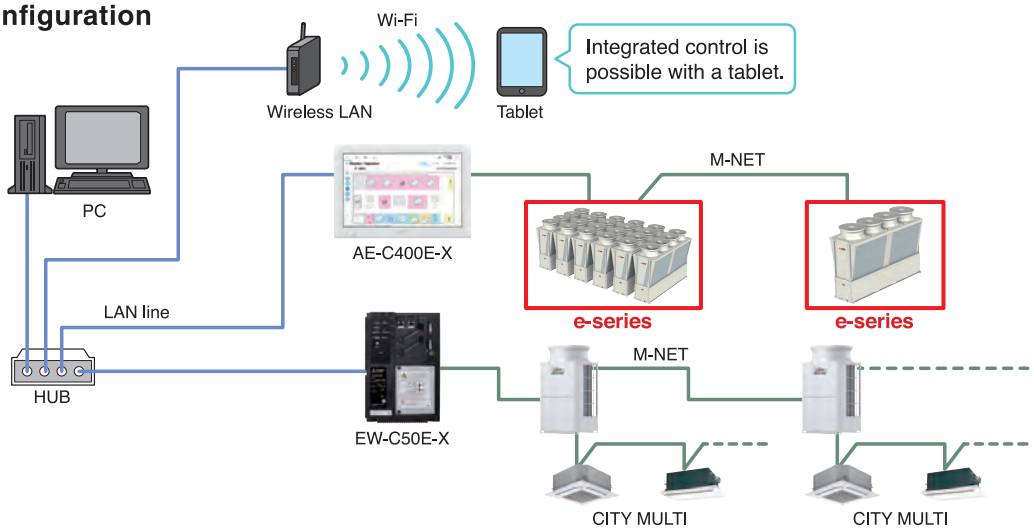
	50HP 150kW	60HP 180kW
Cooling Only		
Heat Pump		

Capacity



Combined management of CITY MULTI is also possible.

System configuration



E-Series Water-cooled Chiller



Easy Installation and Highly Efficient Operation

Its compactness contributes to easy carry-in with an elevator.

The use of low GWP refrigerant R32 achieves reduced impact on the environment.

The internal elements can be pulled out improving the ease of maintenance.

The unit can accomplish highly efficient operations (EER: 5.05/SEER: 7.66).

Compactness & Easy Installation

Thanks to its compact chassis, elevator carry-in is achievable, resulting in an easy installation and shorter construction period.

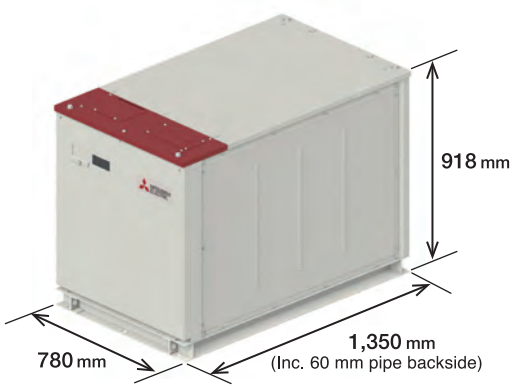
* Use an elevator that fulfills at least 800 mm for its door and 1,350 mm for its depth.
* A unit can be carried in through a 800 mm wide machine room door.



Carried in easily with an elevator*
*By an elevator for more than 11 people

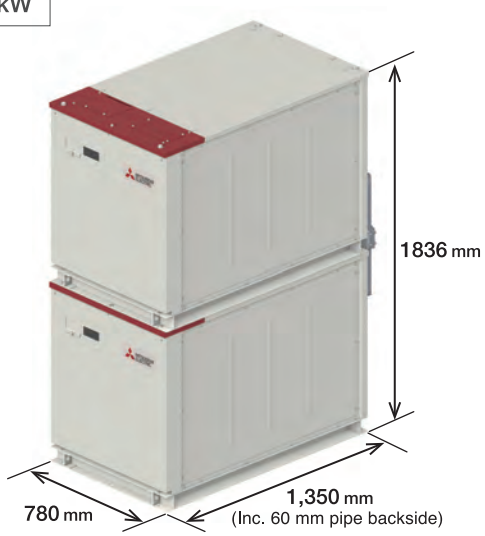
Single stack style

30HP 90kW



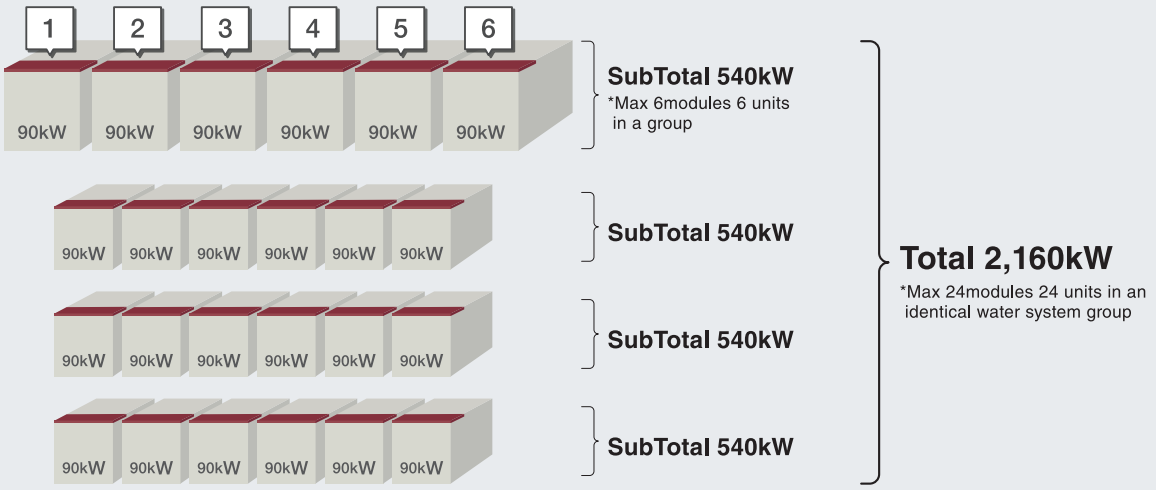
Double stack style

60HP 180kW

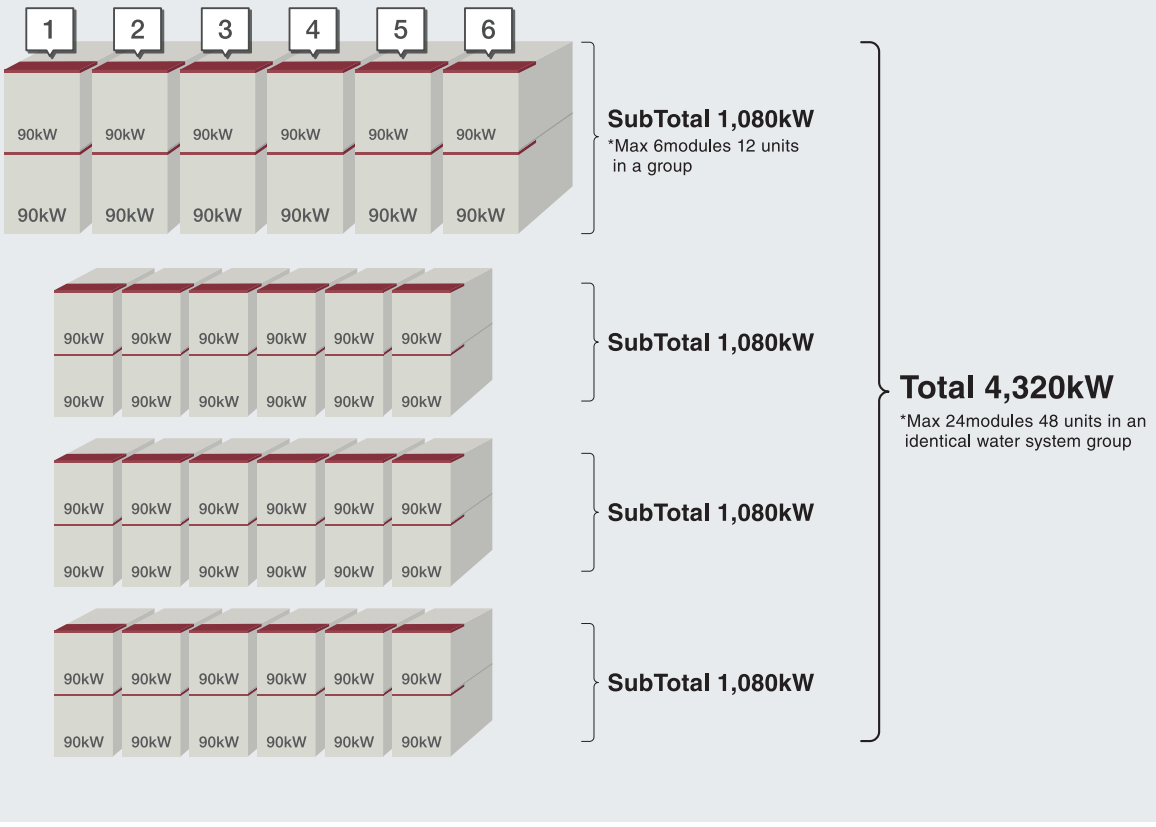


Capacity Combination

Single unit combination



Double stack



*For details, please consult the sales office.

CAHV - Hot Water Heat Pump

Mitsubishi Electric has been designing and manufacturing commercial hot water heat pumps since 1970. We were one of the first manufacturers in Japan to utilize heat pump technology to supply hot water. Our hot water heat pumps are used in Japan, Europe, Oceania, Asia, and many other regions.
As a pioneer in heat pump technology, we would continue to lead the industry.

Strength of Product

CAHV

R454C refrigerant



✓ **Circulating**

✓ Heating water gradually

✓ Up to 70°C Hot water

✓ Swimming pool



✓ Comfort heating



✓ Shower



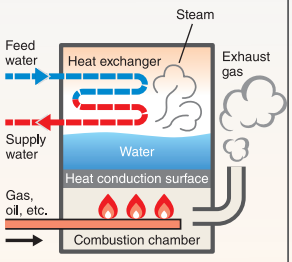
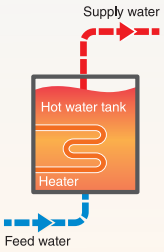
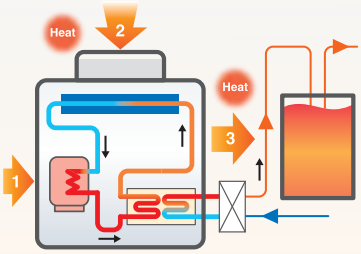
✓ Water tap



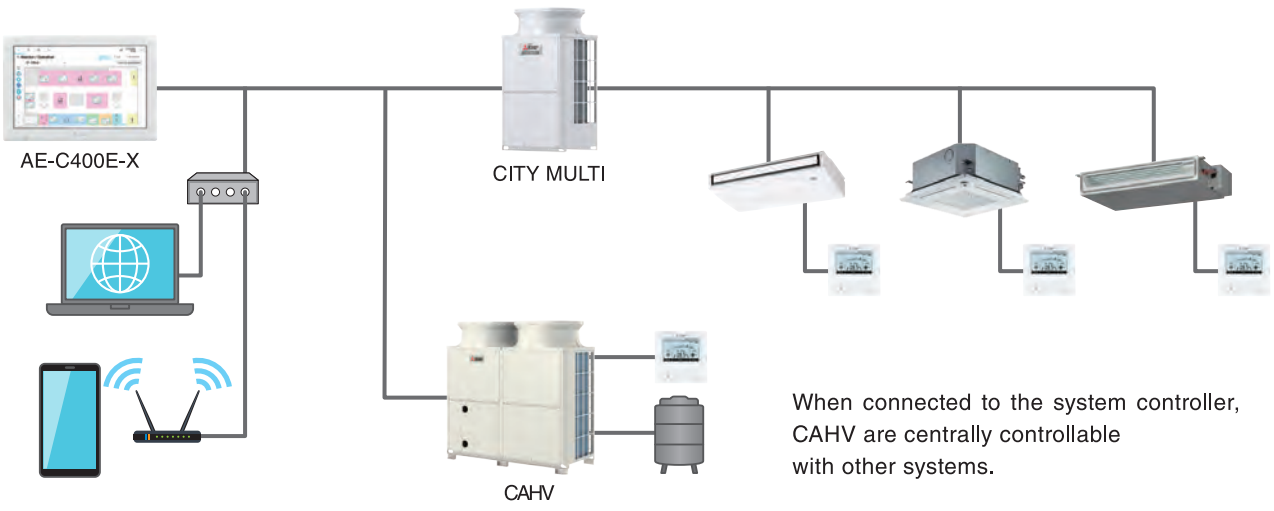
CAHV is a circulating hot water heat pump that provides high performance in keeping and raising hot water temperature.

Benefits of Heat Pump

Compared to gas boilers and electric heaters, heat pumps are safer, more energy efficient, and eco-friendly thanks to the non-combustion system.

	Gas Boiler	Electric Water Heater	Heat Pump
			
Safety	–	✓	✓
Energy Efficiency	–	–	✓
Installation Costs	✓	✓	–
Running Costs	–	✓	✓
Service Maintenance	–	✓	✓
Eco-Friendliness	–	–	✓

✓ :Have advantage compared to other system.



When connected to the system controller, CAHV are centrally controllable with other systems.

MITSUBISHI ELECTRIC INDIA PVT. LTD.

Head Office: 3rd Floor, Tower A, Global Gateway, MG Road,Gurugram- 122002 (Haryana)

Tel. No. (Main): 0124-6739300 I Fax: 0124-4630399 I Website: www.MitsubishiElectric.in I Email: customersupport@asia.meap.com

Customer Care Toll Free No.: 1800 102 2626

NORTH ZONE

Chandigarh
Tel. No.: +91-172-460164588
Mobile No.: +91-9779740016

Ludhiana
Tel. No.: +91-161-4061654
Mobile No.: +91-9888548211

Haryana
Mobile No.: +91-9811340092

Delhi - NCR
Tel. No.: +91-11-66057900
Mobile No.: +91-9999103302

Ghaziabad:
Tel. No.: 0120-4093681
Mobile No.: +91-9319986322

Jaipur
Tel. No.: +91 141-4011109
Mobile No.: +91-9950083217

Lucknow
Tel. No.: +91-522-4002607
Mobile No.:+91-8807522252

EAST ZONE

Kolkata
Tel. No.: +91-033-40858800
Mobile No.: +91-9073949593

WEST ZONE

Ahmedabad
Tel. No.: +91-79-67777888
Mobile No.: +91-9319591911

Indore
Tel. No.: +91-731-4098991
Mobile No.: +91-9770144696

Mumbai
Tel. No.: +91-22-66116200,
Mobile No.: +91-9322164448

Pune
Tel. No.: +91-20-27102000
Mobile No.:+91-7354113399

Nagpur
Tel. No.: +91-712-2284020
Mobile No.:+91-8446069699

Surat
Tel. No.: +91-261-4003111
Mobile No.: +91-8460067404

SOUTH ZONE

Bengaluru
Tel. No.: +91-80-40201600
Mobile No.: +91-8448398009

Chennai
Tel. No.: +91-44-49232222
Mobile No.: +91-9205599020

Coimbatore
Tel. No.: +91-422-4385606
Mobile No.: +91-9500998901

Hyderabad
Board No.: +91-40 43438888
Mobile No.: +91-978986248

Kochi
Tel. No.: +91-0484-4862093
Mobile No.: +91-8448397964

Vijaywada
Tel. No.: +91-0866-6516999
Mobile No.: +91-9205987310

SALES OFICE

Bhubenshwar
Mobile No.:+91-9073949593

Patna
Mobile No.:+91-9033425436

TECHNICAL CENTRE

Ahmedabad
Tel. No.: +91-079-67777874

Delhi
Tel. No.: +91-011-66057900

Bengaluru
Tel. No.: +91-080-40201600

Mumbai
Tel. No.: +91-022-66116200

Mobile No.: +91-8817936264

Chennai
Tel. No.: +91-044-49232222

MITSUBISHI ELECTRIC CORPORATION

www.MitsubishiElectric.in

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