MITSUBISHI ELECTRIC

Changes for the Better

AIR CONDITIONING SYSTEMS

for a greener tomorrow



CITY MULTI

CM11SP-A

90th Anniversary
MITSUBISHI ELECTRIC GROUP

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

Our Latest Technologies

VRF system

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

Inverter driven technology

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

Intelligent Power Module (IPM) technology

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

R410A refrigerant

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

Unsurpassed air conditioning from Mitsubishi Electric

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

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Sophisticated yet simple technology

Reliable

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


PEFY-VMS1


PEFY-VMR


PFFY-VKM

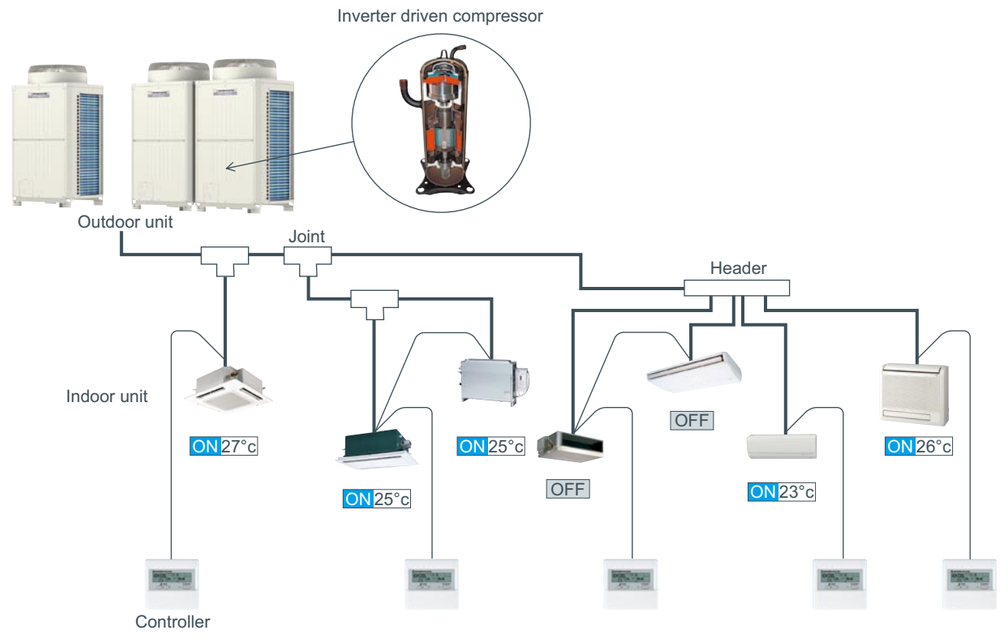
>All the CITY MULTI outdoor units are made under stringent control.

VRF system

Our answer to VRF

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

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



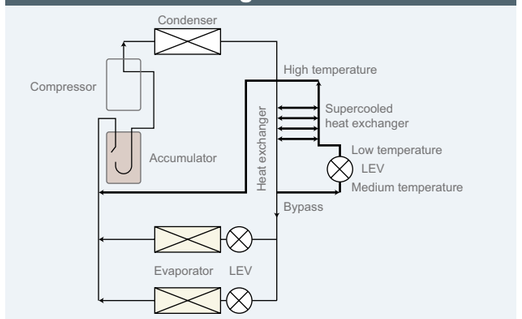


Unbeatable Efficiency

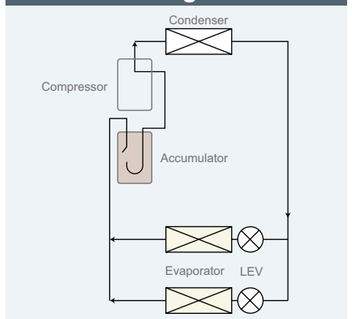
Heat Interchange Circuit

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

CITY MULTI Refrigerant Circuit



Common Refrigerant Circuit



Inverter Driven Compressor Technology **- now up to 36HP**

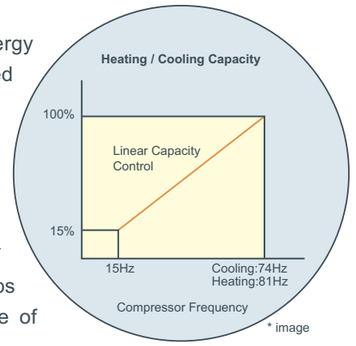


Low Starting Currents

Using inverter driven technology saves energy for several reasons:

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

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



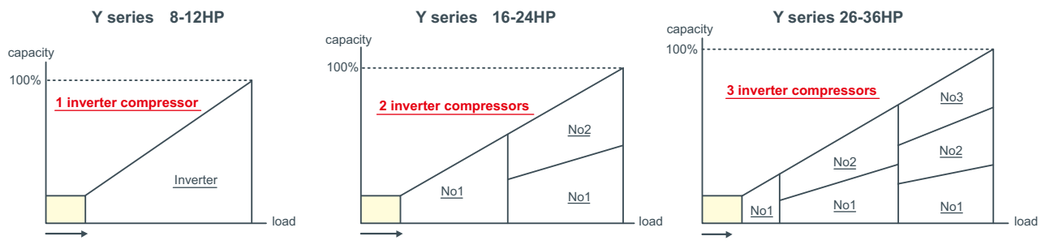
Using proven single inverter driven compressor technology, the CITY MULTI range is favored by the industry for low starting currents (only 8 amps for a 12HP YJMS outdoor unit), and smooth transition across the range of compressor frequencies.

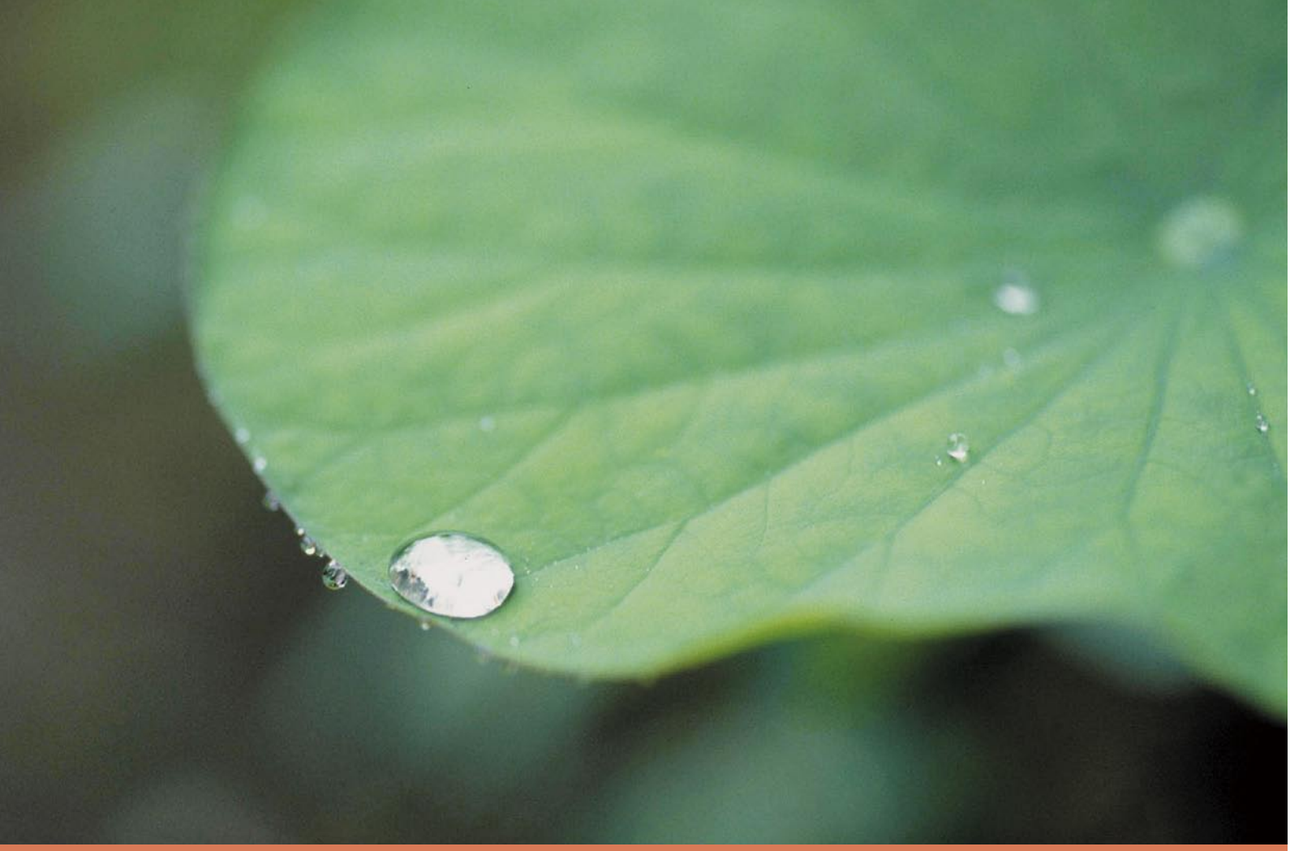
* The values vary depending on the actual conditions such as ambient temperature.

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

The outdoor unit combinations comprise 1 unit for 8-12HP systems, 2 units for 16-24HP systems and 3 units for 26-36HP systems. Each unit carries one inverter compressor making simple and highly reliable control possible. Not only does it allow low starting currents, the inverter-driven compressor also provides precise indoor comfort and adapts to the air conditioning load.

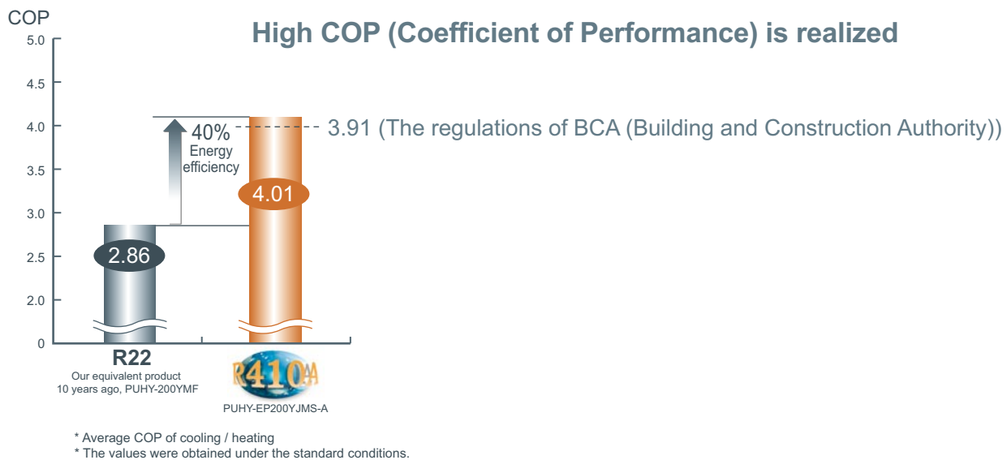
Stable and smooth operation





Total Energy Conservation

Comparison of COP (energy efficiency) – 8HP system



* Average COP of cooling / heating
* The values were obtained under the standard conditions.

Intelligent Power Module (IPM) Technology

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

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

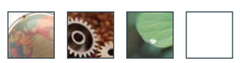
The difference between YJMS-A and previous Mitsubishi Electric models

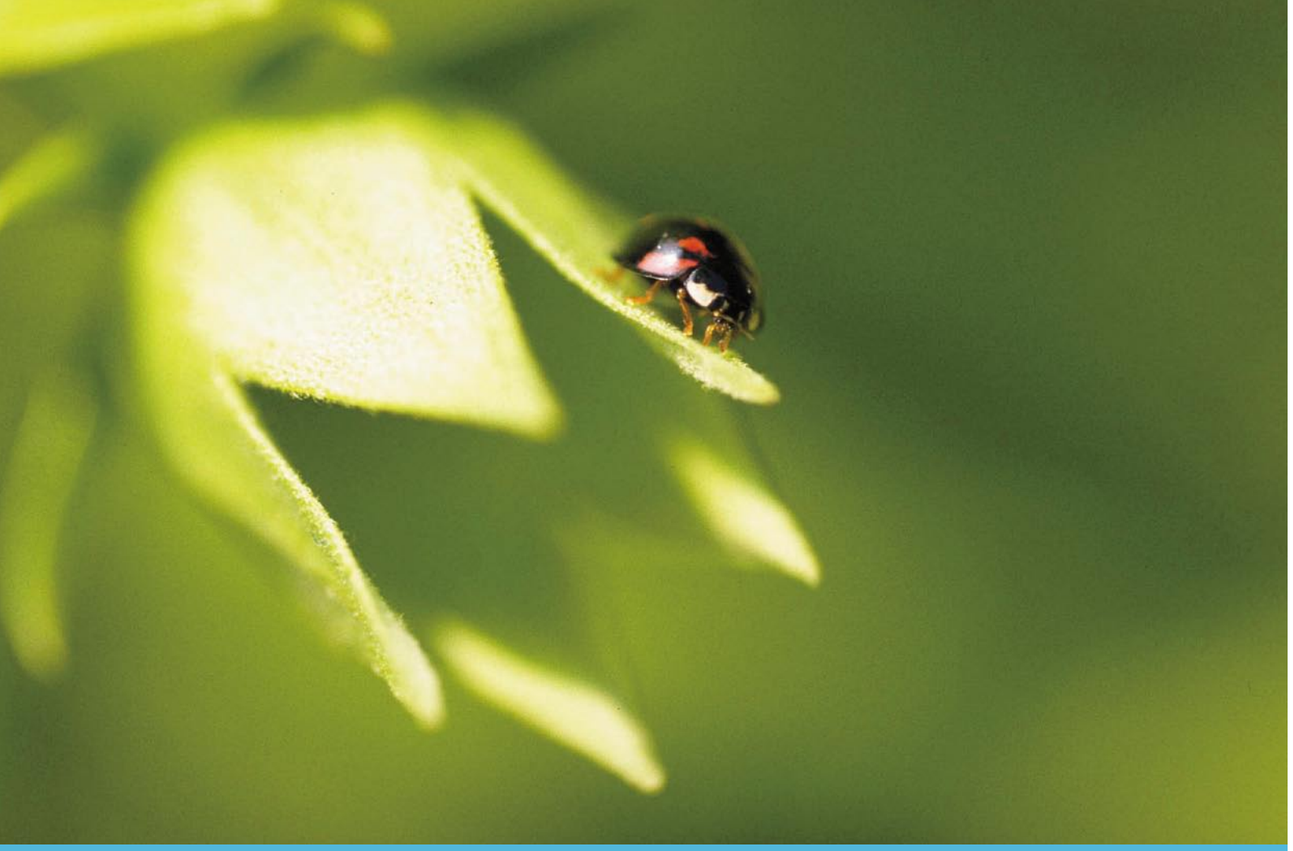
Technology is key when increased efficiency is demanded. The CITY MULTI YJMS-A range is able to deliver this in simple ways.

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

The importance of COP

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





For the Environment

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

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

Efficient R410A refrigerant

History of refrigerant

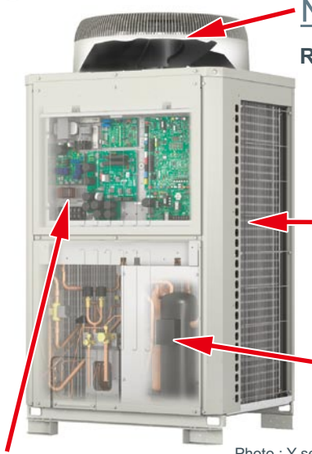
R22, an HCFC-based refrigerant, has been a popular choice for most chillers. R22 has been targeted by the Montreal Protocol to be phased out in new equipment. Additionally, governments in many countries are enforcing a ban of HCFC-based refrigerants for new installations.

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

Technical aspects of refrigerant

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

New Design



New fan design

Reduction of operation noise

New heat exchanger design

Improvement of COP

New inverter compressor

Improvement of COP

Photo : Y series

New Control Box design

Improvement of reliability and easy maintenance



Remote Controller

Individual Remote Controller

Centralized Remote Controller

The importance of control

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

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

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

A degree of difference

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

The simpler, the better

With the array of comprehensive control systems available from Mitsubishi Electric, it becomes simple to design and install air conditioning systems. From a simple hand-held controller to a AG-150A system - you are in control.



System Controller

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

M-NET

▶MELANS

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

Individual Remote Controller

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

Remote Controller
PAR-30MAA
PAR-21MAA
PAR-F27MEA

Simple Remote Controller
PAC-YT51CRB
PAC-SE51CRA

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

Centralized Remote Controller

AG-150A
PAC-YG50ECA
GB-50ADA

Advanced Touch Controller
AT-50A

ON/OFF Remote Controller
PAC-YT40ANRA

PI Controller
PAC-YG60MCA

DIDO Controller
PAC-YG66DCA

AI Controller
PAC-YG63MCA

CITY MULTI
OUTDOOR UNIT
● S :PUMY
● Y :PUHY
INDOOR UNIT
● PEFY ● PCFY
● PMFY ● PKFY
● PLFY ● PFFY

Interface
BAC-HD150
Interface
LMAP02

BACnet® transmission line (Ethernet)
LonWorks® transmission line

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

BUILDING MANAGEMENT SYSTEM

Ethernet

Air-Conditioning Control System

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

Integrated centralized control software TG-2000A

Integrated centralized control software TG-2000A

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

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

Model	Local remote controller *10						System controller *10								
	PAR-30MAA	PAR-21MAA	PAR-F27MEA	PAC-YT51CRB	PAC-SE51CRA	PAR-FL32MA	PAC-YT40ANRA	AT-50A	AG-150A		AG-150A + PAC-YG50ECA		GB-50ADA		TG-2000A *4 *5
Controllable Groups / Indoors (Group / Indoor) *9	1 / 16	1 / 16	1 / 16	1 / 16	1 / 16	1 / 16	16 / 50	50 / 50	50 / 50		150 / 150		50 / 50		2000 / 2000
									AG-150A	Browser*4	AG-150A	Browser*4	GB-50ADA	Browser*4	
■Operating															
ON / OFF	○	○	○	○	○	○	◎	◎	◎ ■	◎ ■	◎ ■	◎ ■	▲	◎ ■	◎ ■
Mode (cool / heat / dry / fan)	○	○	○	○	N	○	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■	◎ ■
Temperature-set	○	○	○	○	○	○	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■	◎ ■
Local Permit / Prohibit	N	N	N	N	N	N	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■	◎ ■
Fan speed	○	○	○	○	○	○	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■	◎ ■
Air-flow direction	○	○	○	N	N	○	N	◎	◎ ■	◎ ■	◎ ■	◎ ■	N	◎ ■	◎ ■
■Status monitoring															
ON / OFF	○	○	○	○	○	○	◎	◎	◎	○	◎	○	▲	○	○ ■
Mode (cool / heat / dry / fan)	○	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Temperature-set	○	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Local Permit / Prohibit	○	○	○	○	○	○	○	○	○	○	○	○	N	○	○
Fan speed	○	○	○	○	○	○	N	○	○	○	○	○	N	○	○
Air-flow direction	○	○	○	N	N	○	N	○	○	○	○	○	N	○	○
Indoor temperature	○	○	○	N	N	N	N	○	○	○	○	○	N	○	○
Filter sign	○	○	○	N	N	N	N	◎	○	○	○	○	N	○	○
Error flashing	○	○	○	○	○	○	○	◎	○	○	○	○	▲	○	○ ■
Error code	○	○	○	○	○	N	○	○	○	○	○	○	N	○	○
Operation hour	N	N	N	N	N	N	N	N	N	N	N	N	N	N	●
■Scheduling															
One-day	○	○	○	N	N	N	N	○	●	●	●	●	N	●	●
Times of ON / OFF per day	1	8	1 / 1	N	N	1 / 1	N	16	24	24	24	24	N	24	24
Weekly	○	○	N	N	N	N	N	○	○(●)	○(●)	○(●)	○(●)	N	○(●)	○(●)
Times of ON / OFF per week	8 x 7	8 x 7	N	N	N	N	N	16 x 7	24 x 7	24 x 7	24 x 7	24 x 7	N	24 x 7	24 x 7
Annual	N	N	N	N	N	N	N	N	●	●	●	●	N	●	●
Optimized start-up	N	N	N	N	N	N	N	N	○	○	○	○	N	○	○
Auto-off timer	○	○	○	N	N	N	N	N	N	N	N	N	N	N	N
Min. timer setting unit (minute)	5	1	10	N	N	10	N	5	1	1	1	1	N	1	1
■Recording															
Error record	○	N	N	N	N	N	N	○	○	○	○	○	N	○	○
Daily / monthly report	N	N	N	N	N	N	N	N	N	N	N	N	N	N	◎
Electricity charge	N	N	N	N	N	N	N	N	N	N	N	N	N	N	●
■Other															
Temp-set limitation by Local R / C	○	○	○	○	N	N	N	N	N	N	N	N	N	N	N
Temp-set limitation by System controller *4	○ *6	○ *6	○	○ *6	○ *7	N	N	○ *6	N	○ *2 *6	N	○ *2 *6	N	○ *2 *6	◎ *6
Auto-lock	○	○	○	N	N	N	N	◎	N	N	N	N	N	N	N
Night setback	○	N	N	N	N	N	N	◎	○	○*2	○	○*2	N	○*2	○
Sliding temperature control	N	N	N	N	N	N	N	N	○	○*2	○	○*2	N	○*2	○
■Management (Group / Interlocked)										*2		*2		*2	
Ventilation interlock	N /○	N /○	N /○	N /○	N /○	N	○	○	○	○/○	○	○/○	N	○/○	○/○
Group setting	○ *1	○ *1	○	○ *1	○	N	○	○	○	○*2	○	○*2	N	○*2	○
Block setting	N	N	N	N	N	N	N	N	○	○*2	N	○*2	N	○*2	○
Revision of electricity charge	N	N	N	N	N	N	N	N	N	N	N	N	N	N	□ ●
■Operating on LOSSNAY interlocked (Group / Interlocked)															
ON / OFF	N /○	N /○	N /○	N /○	N /○ *8	N /○	◎/◎ *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 / N	◎/ N	○/ N
■Status monitoring on LOSSNAY interlocked (Group / Interlocked)															
ON / OFF	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	○/ N

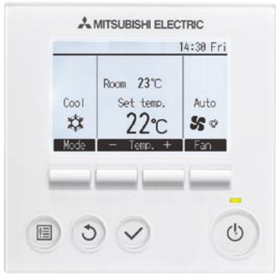
◎: Each group / Batched ; ○: Each group ; □: Block (for CITY MULTI Indoor unit, not for all Mr.SLIM) ; ●: AG-150A / GB-50ADA license registration possible.
(●) : License registration for the optional functions required N : Not Available (Not Used.) △: Batched only ; ▲: Batched handling (for maintenance)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

*1. Group setting via wiring between Indoor units with cross-over cable;
*2. Installation possible at Initial setting web browser;
*3. Inter-lock is set at Local remote controller.
*4. AG-150A/GB-50ADA license registration to AG-150A/GB-50ADA is required to monitor and operate the units by browser and TG-2000A.
5. AG-150A connected with PAC-YG50ECA is compatible with TG-2000A Ver.6.1 or later. GB-50ADA is compatible with TG-2000A Ver. 6.3* or later.
*6. This function can be set only on the ME/Simple ME remote controller. This function cannot be used with the MA/Simple MA remote controller.
(But, the validity of this function with the MA/Simple MA remote controller depends on the indoor unit model, and there are possibilities that this function can be used with them.)
*7. This function is available only when applying together with TG-2000A, AG-150A and GB-50ADA.
*8. Inter-lock is set from system controller. (Except PAC-YT40ANRA)
*9. The maximum number of controllable units decreases depending on the indoor unit model.
*10. For indoor use only.

Individual Remote Controller

Wired MA remote controller PAR-30MAA

NEW



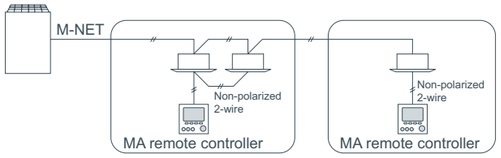
Dimensions: 120(W) x 120(H) x 19(D) mm
: 4-3/4(W) x 4-3/4(H) x 3/4(D) in.

• Language selection

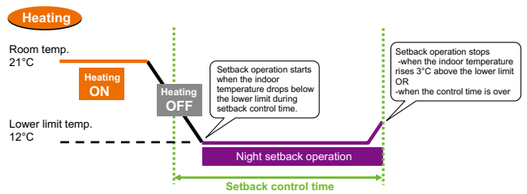
• Backlit LCD (Liquid Crystal Display)
Large, easy-to-see display
Full-dot LCD display with large characters for easy viewing
Contrast also adjustable

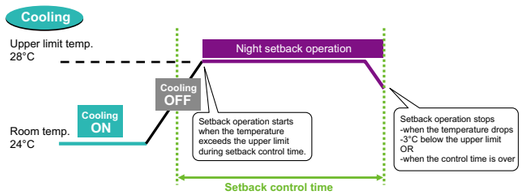
• Night Setback
To prevent indoor dew or excessive temperature rise, this control starts heating operation when the control object group is stopped and the room temperature drops below the preset lower limit temperature. Also, this control starts cooling operation when the control object group is stopped and the room temperature rises above the preset upper limit temperature.

Example of system configuration



*It's not possible to connect two 30MAA (Main/Sub) to one indoor unit.





Functions

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

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

Wired MA remote controller PAR-21MAA

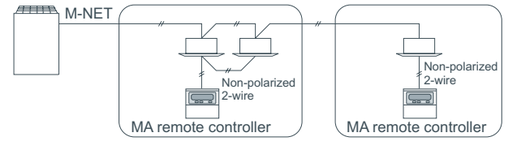


Dimensions: 130(W) x 120(H) x 19(D) mm
: 5-1/8(W) x 4-23/32(H) x 3/4(D) in.

• New display-Larger, easier-to-see characters
• Dot Liquid Crystal Display (LCD)
• Multi-language Display

• Set temperature in 1°C/°F increment
• Weekly timer
Up to 8 ON/OFF/temperature setting per day in 1 minute increment. Setting kept in nonvolatile memory. No need to worry about re-setting at power failure.
• Room temperature control with thermostat sensor inside the unit
• Self-diagnosis function immediately informs error code in case of malfunction

Example of system configuration



Multi-language Display Example [Dot display table]

Language		English	German	Spanish	Russian	Italian	Chinese	French	Japanese
Waiting for start-up		PLEASE WAIT	←	←	←	←	←	←	←
Operation mode	Cool	COOL	Kühlen	FRÍO	Холод	COOL	制冷	FROID	冷房
	Dry	DRY	Trocknen	DESHUMIDIFICACION	Сушка	DRY	除湿	DESHU	ドライ
	Heat	HEAT	Heizen	CALOR	Тепло	HEAT	制熱	CHAUD	暖房
	Auto	AUTO	AUTO	AUTOMÁTICO	Авто	AUTO	自动	AUTO	自動
	Auto(Cool)	COOL	Kühlen	FRÍO	Холод	COOL	制冷	FROID	冷房
	Auto(Heat)	HEAT	Heizen	CALOR	Тепло	HEAT	制熱	CHAUD	暖房
	Fan	FAN	Lüfter	VENTILACIÓN	Вент	VENTILAZIONE	送风	VENTILATION	送風
	Ventilation	VENTILATION	Gebläse betrieb	VENTILACIÓN	Вентиляция	ARIA ESTERNA	换气	VENTILATION	換気
	Stand by (Hot adjust)	STAND BY	STAND BY	CALENTANDO	Обогрев: пауза	STAND BY	准备中	PRE CHAUFFAGE	準備中
	Defrost	DEFROST	Abtauen	DESCONGELACIÓN	Оттаивание	SBRINAMENTO	除霜中	DEGIVRAGE	霜取中
Not use button		NOT AVAILABLE	Nicht Verfügbar	NO DISPONIBLE	НЕ ДОСТУПНО	NON DISPONIBILE	无效按钮	NON DISPONIBLE	無効ボタン
Check (Error)		CHECK	Prüfen	COMPROBAR	Проверка	CHECK	检查	CONTROLE	点検
Test run		TEST RUN	Testbetrieb	TEST FUNCIONAMIENTO	Тестовый запуск	TEST RUN	试运转	TEST	試ウンテン
Self check		SELF CHECK	Selbst-diagnose	AUTO REVISIÓN	Самодиагностика	SELF CHECK	自我诊断	AUTO CONTROLE	自己シンダン
Unit function selection		FUNCTION SELECTION	Funktion saüswahl	SELECCIÓN DE FUNCIÓN	Выбор функции	SELEZIONE FUNZIONI	功能选择	SELECTION FONCTIONS	キノウ選択
Setting of ventilation		SETTING OF VENTILATION	Lüftungstufen Wahlen	CONFIG. VENTILACIÓN	Настройка вентсетки.	IMPOSTAZIONE ARIAESTERNA	换气设定	SELECTION VENTILATION	換気設定

Functions

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

Item	Description	Operations	Display
ON/OFF	ON and OFF operation for a single group	○	○
Operation mode switching	Switches between Cool / Dry / Auto* / Fan / Heat. Operation modes vary depending on the air conditioner unit. * Auto only supported for the CITY MULTI R2 and WR2 series.	○	○
Temperature setting	Sets the temperature for a single group Range of temperature setting Cool/Dry : 19°C - 30°C (14°C - 30°C) / 67°F - 87°F (57°F - 87°F) Heat : 17°C - 28°C (17°C - 28°C) / 63°F - 83°F (63°F - 83°F) Auto : 19°C - 28°C (17°C - 28°C) / 67°F - 83°F (63°F - 83°F) ( ) For PEFY/PFFY by setting DipSW 7-1 to ON and limits to NI6H fan speed only.	○	○
Fan speed setting	Models with 4 air flow speed settings: Hi/Mid-2/Mid-1/Low Models with 3 air flow speed settings: Hi/Mid/Low Models with 2 air flow speed settings: Hi/Low Fan speed setting (including Auto) varies depending on the model.	○	○
Air flow direction setting	Air flow direction angles (4-angle, or 5-angle Swing) Auto Louver ON/OFF Air flow direction settings vary depending on the model.	○	○
Permit / Prohibit local operation	Individually prohibit operation of each local remote control function (ON/OFF, Change operation mode, Set temperature, Reset filter). *1: When the local remote controller inactivation command is received from the main system controller, " ⛔ " is displayed.	×	○*1
Prohibition/permission of specified mode (Cooling prohibited/heating prohibited /cooling-heating prohibited)	By the setting from System Controller, the operation for the following modes is prohibited. At cooling prohibited : Coo l, Dry, Auto, At heating prohibited : Heat, Auto, At cooling-heating prohibited : Cool, Heat, Dry, Auto	×	○
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed.	×	□
Ventilation equipment	Up to 16 indoor units can be connected to an interlocked system that has one LOSSNAY. LOSSNAY items that can be set are "Hi" "Low" "Stop". Ventilation mode switching is not available.	○	○
Set temperature range limit	Set temperature range limit to cooling, heating, or auto mode.	○	○
Auto lock function	Setting/releasing of simplified locking for remote control switch can be performed. · Locking of all switches · Locking of all switches except ON/OFF switch	○	○

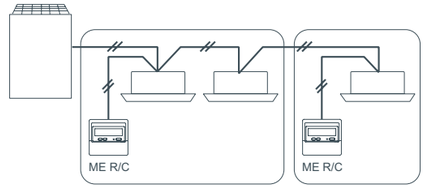
Wired ME remote controller PAR-F27MEA



Dimensions: 130(W) x 120(H) x 19(D) mm
: 5-1/8(W) x 4-23/32(H) x 3/4(D) in.

- **This remote control requires non-polar wiring to only one indoor unit.**
- **Group operation over multiple outdoor units is possible. Grouping can be changed without re-wiring, which makes dividing rooms for tenants easier.**
- **LCD temperature setting and display in 1°C/1°F increments.**

Example of system configuration



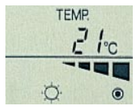
Functions

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

Item	Description	Operations	Display
ON/OFF	ON and OFF operation for a single group	○	○
Operation mode switching	Switches between Cool / Dry / Auto / Fan / Heat. Operation modes vary depending on the air conditioner unit. Auto mode the CITY MULTI R2 and WR2 series only.	○	○
Temperature setting	Sets the temperature for a single group Range of temperature setting Cool/Dry : 19°C - 30°C (14°C - 30°C), Heat: 17°C - 28°C (17°C - 28°C), Auto: 19°C - 28°C (17°C - 28°C)	○	○
Fan speed setting	Models with 4 air flow speed settings: Hi/Mid-2/Mid-1/Low Models with 3 air flow speed settings: Hi/Mid/Low Models with 2 air flow speed settings: Hi/Low Fan speed setting varies depending on the model.	○	○
Air flow direction setting	Air flow direction angles (4-angle, Swing) Louver ON/OFF Air flow direction settings vary depending on the model.	○	○
Permit / Prohibit local operation	Individually prohibit operation of each local remote control function (ON/OFF, Change operation mode, Set temperature, Reset filter). *1: When the local remote controller inactivation command is received from the master system controller, "-CENTRALLY CONTROLLED-" is displayed.	×	○*1
Prohibition/permission of specified mode (Cooling prohibited/heating prohibited /cooling-heating prohibited)	By the setting from System Controller, the operation for the following modes is prohibited. At cooling prohibited : Cool, Dry, Auto, At heating prohibited : Heat, Auto, At cooling-heating prohibited : Cool, Heat, Dry, Auto	×	○
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed.	×	□
Timer operation	Thanks to the three timer modes equipped, a proper mode can be selected to mee the usage. One day timer : ON/OFF setting of one time on one day can be applied. Daily timer : ON/OFF setting by the One day timer can be reperted for everyday. Auto OFF timer : OFF timer can be set in a range from 30 minutes to 4 hours. * Setting of Auto OFF timer automatically activates OFF timer at the next operation. This function can be utilized to prevent the negligence of OFF setting.	○	○
Ventilation equipment	Up to 16 indoor units can be connected to an interlocked system that has one LOSSNAY. LOSSNAY items that can be set are "Hi" "Low" "Stop". Ventilation mode switching is not available.	○	○
Set temperature range limit	Set temperature range limit to cooling, heating, or auto mode.	○	○
Auto lock function	Setting/releasing of simplified locking for remote control switch can be performed. · Locking of all switches · Locking of all switches except ON/OFF switch	○	○

Simple remote controller PAC-YT51CRB (MA)



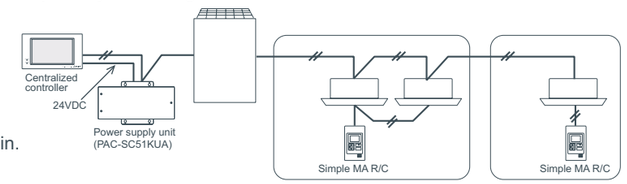


PAC-YT51CRB

Dimensions: 70(W) x 120(H) x 41(D) mm
: 2-3/4(W) x 4-23/32(H) x 1-5/8(D) in.

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

Example of system configuration



Functions

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

Item	Description	Operations	Display
ON/OFF	ON and OFF operation for a single group	○	○
Operation mode switching	Switches between Cool / Dry / Auto* / Fan / Heat. Operation modes vary depending on the air conditioner unit. * Auto only supported for the CITY MULTI R2 and WR2 series.	○	○
Temperature setting	Sets the temperature for a single group Range of temperature setting Cool/Dry : 19°C - 30°C (14°C - 30°C) / 67°F - 87°F (57°F - 87°F) Heat : 17°C - 28°C (17°C - 28°C) / 63°F - 83°F (63°F - 83°F) Auto : 19°C - 28°C (17°C - 28°C) / 67°F - 83°F (63°F - 83°F)	○	○
Fan speed setting	Models with 4 air flow speed settings: Hi/Mid-2/Mid-1/Low Models with 3 air flow speed settings: Hi/Mid/Low Models with 2 air flow speed settings: Hi/Low Fan speed setting (including Auto) varies depending on the model.	○	○
Permit / Prohibit local operation	Individually prohibit operation of each local remote control function (ON/OFF, Set temperature). *1: When the local remote controller inactivation command is received from the main system controller, "CENTRAL" is displayed.	×	○*1
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed.	×	□
Ventilation equipment	Up to 16 indoor units can be connected to an interlocked system that has one LOSSNAY.	○	×
Set temperature range limit	Set temperature range limit to cooling, heating, or auto mode.	○	○

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



PAR-FL32MA

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



PAR-FA32MA

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

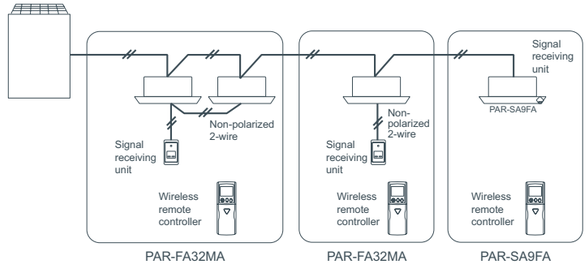


PAR-SA9FA
(4-way Cassette signal receiver)

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

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

Example of system configuration



Correspondence table

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

Functions

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

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

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

Advanced Touch Controller

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

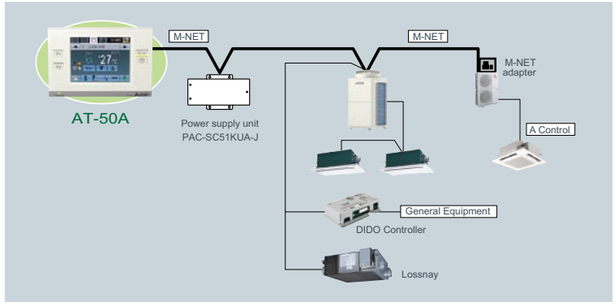
Touch controller AT-50A

NEW



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

System structure



New Design

Backlit LCD (Liquid Crystal Display) Touch Panel

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



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



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



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



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

New Functions

Three in One

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

Weekly and daily schedule

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

System changeover

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

Night setback function

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

Main system controller/Sub system controller

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

Simple button arrangement

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

Functions

[Basic Functions]

- ON/OFF
- Operation mode switching
- Temperature setting
- Fan speed setting
- Airflow direction setting
- Louver setting

Advanced Functions

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

Item	Description	Operations	Display
Permit / Prohibit	The ON/OFF, operation mode, setting temperature and filter sign reset operations using the local remote controllers can be prohibited. Only ON/OFF and filter reset can be prohibited for the LOSSNAY group.	◎	◎
Operation lock	The operation lock can be set to the input operation of AT-50A. Each button can be set. (Function Button 1, Function Button 2, Collective ON/OFF, Touch Panel) Each function can be set. (Operation mode, Setting temperature, Fan speed, Menu button) The password for the lock release can be set.	◎	◎
Error display	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed. * When an error occurs, the "ON/OFF" LED flashes. The operation monitor screen show abnormal icon over the unit. The error monitor screen shows the abnormal unit address and error code. The error log monitor screen shows the time and date, the abnormal unit address, error code and source of detection.	×	□◎
Ventilation (independent)	Switches the mode "Bypass/Heat recovery/Auto" for LOSSNAY groups.	◎	◎
Ventilation (interlocked)	The LOSSNAY will run in interlock with the operation of indoor unit. The mode cannot be changed. The LED will turn ON during operation after interlocking.	◎	◎
Temperature-set limitation	Batch-setting to temperature range limit at cooling, heating, and auto mode. This function cannot be used with the MA remote controller. (Depends on the indoor unit model.)	◎	◎
Specific mode operation prohibit (Cooling prohibit, heating prohibit, cooling/ heating prohibit)	When set as the main controller, operation of the following modes with the local remote controllers can be prohibited. When cooling is prohibited: Cooling, dry, automatic can not be chosen. When heating is prohibited: Heating, automatic can not be chosen. When cooling/heating is prohibited: Cooling, dry, heating, automatic can not be chosen.	◎	◎
External input (Emergency stop input, etc.)	The following input with level signals or pulse signals are available. Level signal: "Emergency stop input" or "Collective ON/OFF" Pulse signal: "Collective ON/OFF" or "Local remote controller prohibit/permit" One input can be selected from those above. * An external input/output adapter (PAC-YT41HAA (sold separately)) is required. Relays and DC power supply or other devices must be prepared at the site.	◎	◎
External output (Error output, operation output)	"ON/OFF" and "error/normal" are output with the level signal. * An external input/output adapter (PAC-YT41HAA (sold separately)) is required. Relays and DC power supply or other devices must be prepared at the site.	◎	◎
Checking the Gas Amount	Use this function to check for refrigerant leak from the outdoor unit. * When this function is used, the gas amount checking function of the outdoor unit cannot be used. This function is for CITY MULTI R2 and Y (PUMY is excluded.) series only.	□	□
Schedule operation	Weekly schedule setting up to 12 pattern is available. In one pattern, up to 16 setting of "ON/OFF", "Operation mode", "Set Temperature", "Fan speed", "Air flow direction" and "Permit / Prohibit local operation" can be scheduled. Two types of weekly schedule(Summer/Winter) can be set. Today's schedule setting up to 5 pattern in available.	○	○

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

Centralized Remote Controller

Just press a switch to start. All of the units can be On/Off by pressing the main switch, and each unit in the group can be On/Off with individual switch. The PAC-YT40ANRA also has hardwired connection available (On/Off input, fire alarm input, run output, fault output).

ON/OFF remote controller PAC-YT40ANRA

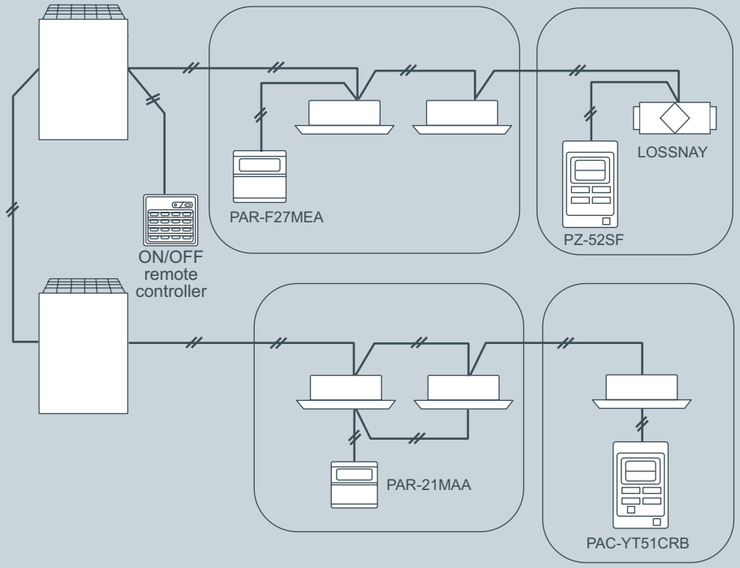


• Dimensions:130(W) x 120(H) x 19(D) mm
:5-1/8(W) x 4-23/32(H) x 3/4(D) in.

- **The group setting is kept in nonvolatile memory. No need to worry about re-setting at power failure.**
- **No individual AC power supply is needed.**
  The power can be supplied from one outdoor unit (R410A) or Power supply unit.

FUNCTION	DESCRIPTION	PAC-YT40ANRA	
UNITS	Max No.Units	50 units/16 groups	
		OPERATIONS	DISPLAY
ON/OFF	Run and stop operation	✓	✓
ERROR INDICATION	LED flashes during failure. (The error code can be confirmed by removing the cover.)	–	✓
VENTILATION OPERATION (INDEPENDENT)	Group operation of only LOSSNAY units possible. *Only ON/OFF of group.	✓	✓
VENTILATION OPERATION (INTERLOCKED)	The LOSSNAY will run in interlock with the operation of indoor unit. *The fan rate and mode cannot be changed. The LED will turn ON only during operation after interlocking.	✓	✓
EXTERNAL INPUT	On/Off/Fire Alarm	✓	–
EXTERNAL OUTPUT	On/Off/Faults	–	✓

System example



Centralized Remote Controller

With a new colored touch panel, and continuation of all the G-50A functions, AG-150A visualizes its functions from basic control to advanced operations and bringing an ultimate controller to reality.

Centralized controller AG-150A

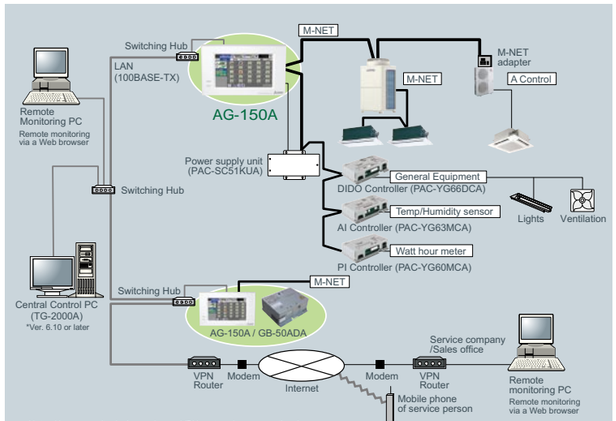


Dimensions: 300(W) x 185(H) x 70.3(D) mm
: 11-13/16(W) x 7-5/16(H) x 2-13/16(D) in.



Option : Black surface cover
PAC-YG71CBL

System structure



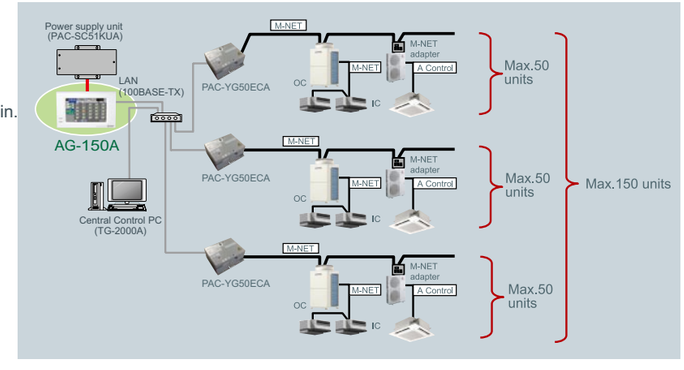
Expansion Controller PAC-YG50ECA



Dimensions: 250(W) x 217(H) x 97.2(D) mm
: 9-7/8(W) x 8-9/16(H) x 3-7/8(D) in.

With a connection of a Expansion Controller, maximum of 150 units/groups can be connected to AG-150A.

System structure



*Do not connect PAC-YG50ECA to TB3 of the outdoor unit.
*Use a security device such as a VPN router when connecting the AG-150A etc. to the Internet to prevent unauthorized access.

New Design

Backlight color liquid crystal
Backlight makes it easy to see and control units.
One can identify whether a unit is ON or OFF from a distance.
Control in the night with no lights is possible.

Touch panel
9 inch wide, high-resolution
Touch panel enables operation of units by touching with index finger.
When object unit is touched, orange box appears around the unit icon indicating the unit selected.

Flat back
Easy installation
Allows for an installation of the unit either directly to the wall surface* or using the installation hole in the wall.
*Optional parts are required.

USB memory compatible
Measurement/initial setting CSV data extractable with USB memory.
Can save and overwrite setting data.

New Functions

Controllable units/groups
Controls up to 50 units/groups (including indoor units, LOSSNAY, DIDO/AI/PI controller)
Up to 150 units can be controlled via expansion controller;PAC-YG50ECA (AG-150A software needs to be upgraded)

Monitoring functions
Temperature/Humidity (using AI controller with web browser) *1
General equipment such as lights on LCD (using DIDO controller)
Interlock function from AI controller, DIDO controller to indoor units and between DIDO units are available.
AG-150A interlock with DIDO controller or free contact on an indoor unit available. * Ver. 2.30 or later

Energy saving functions
Seasonal scheduling and automatic switch over *1
Yearly scheduling on LCD *1
Scheduling fan speed and airflow direction
Optimized Start up *1
External temperature interlock control *1
Night setback control *1
*1 License required.

Functions

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

Item	Description	Operations	Display
Controllable unit	50 units/groups or 150 units/groups via expansion controller; PAC-YG50ECA.		
ON/OFF	Run and stop operation for the air conditioner units and general equipment. (To operate general equipment, PAC-YG66DCA is required.)	○ ◎ △ ●	○ ◎
Operation mode switching	Switches between Cool / Dry / Auto / Fan / Heat. (Group of LOSSNAY unit : automatic ventilation/ vent - heat interchange/ normal ventilation) depending on the air conditioner unit. Auto mode is for CITY MULTI R2 and WR2 series only.	○ ◎ △ ●	○
Temperature setting	Cool/Dry : 19˚C (67˚F) - 30˚C (87˚F) [14˚C (57˚F) - 30˚C (87˚F)] Heat : 17˚C (63˚F) - 28˚C (83˚F) [17˚C (63˚F) - 28˚C (83˚F)] Auto : 19˚C (67˚F) - 28˚C (83˚F) [17˚C (63˚F) - 28˚C (83˚F)] [ ] in case of using middle-temperature on PEFY-VML/VMR/VMS/VMH-by setting DipSW7-1 to ON. Yet, PEFY-P-VMH-E-F is excluded.	○ ◎ △ ●	○
Fan speed setting	Models with 4 air flow speed settings: Hi/Mid-2/Mid-1/Low Models with 3 air flow speed settings: Hi/Mid/Low Models with 2 air flow speed settings: Hi/Low Fan speed setting (including Auto) varies depending on the model.	○ ◎ △ ●	○
Air flow direction setting	Air flow direction angles, 4-angle or 5-angle Swing, Auto (Louver cannot be set)	○ ◎ △ ●	○
Schedule operation	Weekly schedule can be set by groups based on daily operation pattern.	○ ◎ △ ●	○
Permit / Prohibit local operation	Individually prohibit operation of each local remote control function (Start/Stop, Change operation mode, Set temperature, Reset filter).	○ ◎ △ ●	○
Indoor unit intake temperature	Measures the intake temperature of the indoor unit only when the indoor unit is operating.	×	○
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed.	×	□ ◎
Test run	This operates air conditioner units in test run mode.	○ ◎ △ ●	○
Ventilation interlock	The ventilation unit (LOSSNAY) is able to automatically start its operation when operation of the interlocked indoor unit starts.	○ ◎ △ ●	○
External input/output	By using optional external input/output adaptor (PAC-YG10HA) you can set and monitor the following. Input : By level signal : "Batch start/stop", "Batch emergency stop" By pulse signal : "Batch start/stop", "Enable/disable local remote controller" Output : "Start/stop", "Error/Normal"	◎	◎

*NOTE: Operation and displayed content vary depending on the indoor unit model.
♦Future release schedule is subject to change without notice.

Centralized controller GB-50ADA-J*

New



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

*GB-50ADA-J is indicated as GB-50ADA.

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

Web Browser

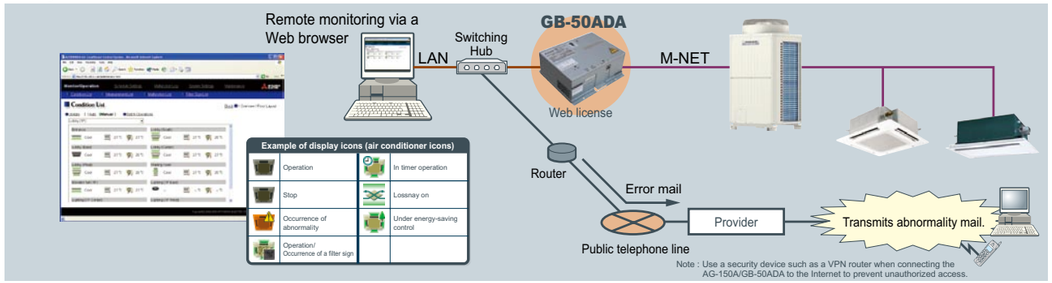
Enables monitoring and operation of indoor units using a PC with Microsoft® Internet Explorer (Ver.6 or 7 or 8) (Web browser function is an optional and needs license registration.)
*When connecting to the Internet, please use the VPN (Virtual Private Network).

Using "Dial-up Connection"
• Enables monitoring and operation from a remote place
• Enables error notification by e-mails to a PC or to a mobile phone

Function	Description GB-50ADA (web browser)
Controllable unit	Up to 50 units/groups.
Dimensions W x H x D	250 (9-7/8) x 217 (8-9/16) x 97.2 (3-7/8) mm (in)
ON / OFF	Run and stop operation for the air conditioner units
Mode selection	Switches between Cool / Dry / Auto / Fan / Heat.
Temperature setting	The temperature can be set within the following range. Cool/Dry :19-30°C [14-30°C] / 67-87°F [57-87°F] Heat :17-28°C [17-28°C] / 63-83°F [63-83°F] Auto :19-28°C [17-28°C] / 67-83°F [63-83°F] ( ) in case of using middle-temperature on PEFY, PEFY-VML/VMR/VMS/VMH-by setting DipSW7-1 to ON. Yet, PEFY-P-VMH-E-F is excluded. *Set temperature range varies depending on the model.
Air flow direction setting	Air flow direction angles, 4-angle or 5-angle Swing, Auto (Louver cannot be set)
Timer operation / Schedule	Annaul/Weekly (2 types)/today schedule can be set for each group of air conditioning units. Optimized startup setting is also available.
Permit / Prohibit function	Individually prohibit operation of each local remote control function
Indoor unit intake temperature	Measures the intake temperature of the indoor unit only when the indoor unit is operating.
Error	When an error is currently occurring on an air conditioner unit, the afflicted unit and the error code are displayed.
Test run	-
Ventilation interlock	Operation of indoor groups or general equipment can be interlocked by the change of state (ON/OFF, mode, error of indoor groups and general equipment).

*NOTE: Operation and displayed content vary depending on the indoor unit model.
License registration is necessary to perform each function on GB-50ADA.

System Structure



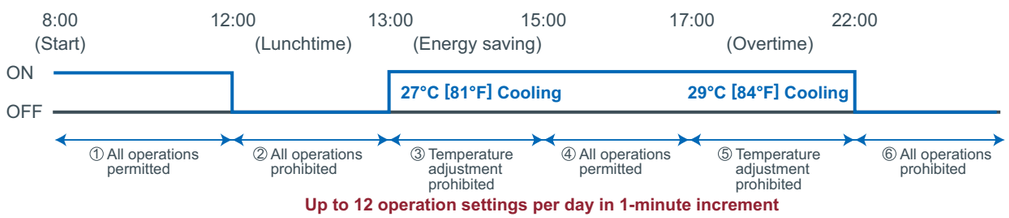
Annual / Weekly Schedule

Enables Weekly and Annual scheduling with a registering license

• ON/OFF, operation mode, temperature setting, prohibit remote controller operation can be set.
• For annual schedule, it is possible to set 50 day-long settings up to 24 months into the future.



Scheduling example in the office



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

Centralized Remote Controller

PI Controller PAC-YG60MCA



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

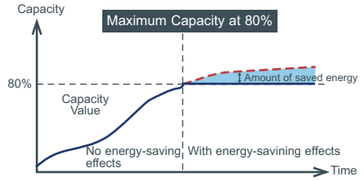
No more PLCs are needed!
Our new PI controller makes it possible to perform energy saving without PLC, which is cost saving.
Maximum of 4 measurement meter (WHM, gas meter, water meter, calorie meter) can be connected to the PI controller and can be used also for charge calculation.
*24 VDC power needs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

Energy Saving Control (Peak Cut)

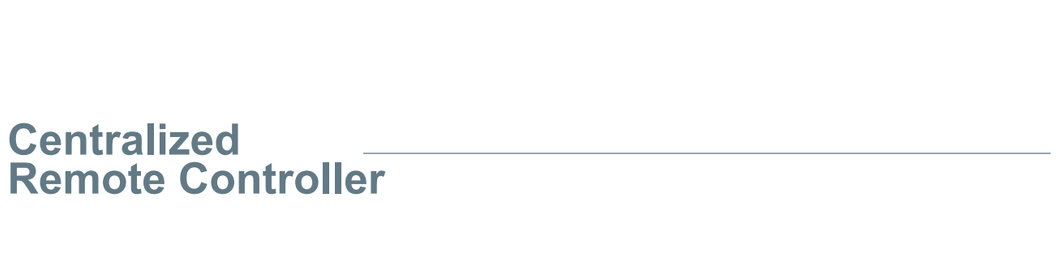
Enables Energy Saving Control with the use of our new PI controller. (Registration of "Energy Management license pack" is required.)

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

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



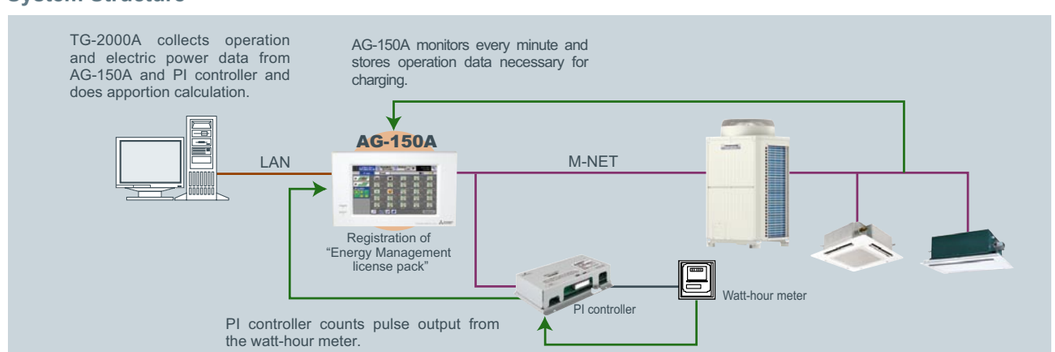
System Structure



Charge Calculation

Enables charge calculation for each tenant and output as CSV file

System Structure



Centralized Remote Controller

DIDO Controller PAC-YG66DCA



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

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

General-purpose equipment Control

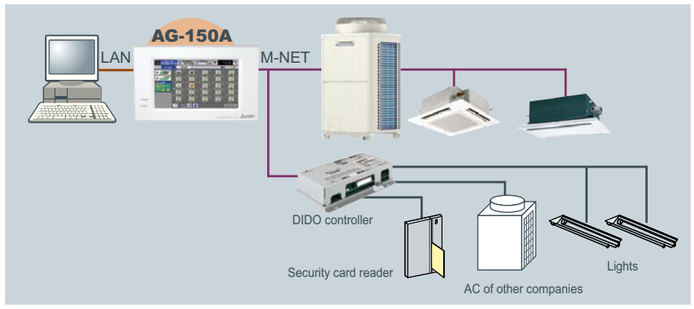
Enables to control and monitor equipment other than air-conditioners (air-conditioners of other companies, lights, ventilators, etc.)

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

Icon display (Lights)



System Structure



AI Controller PAC-YG63MCA



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

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

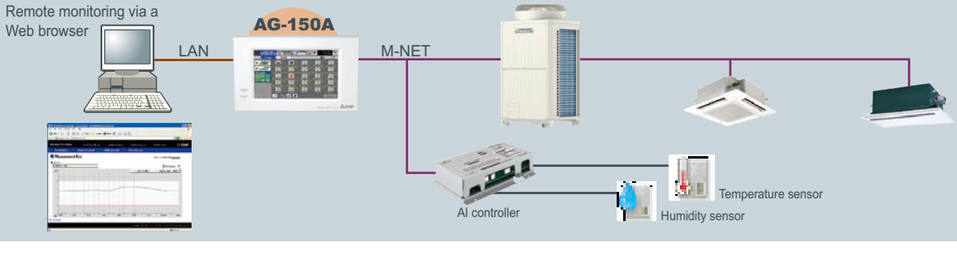
Temperature/Humidity Monitoring

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

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

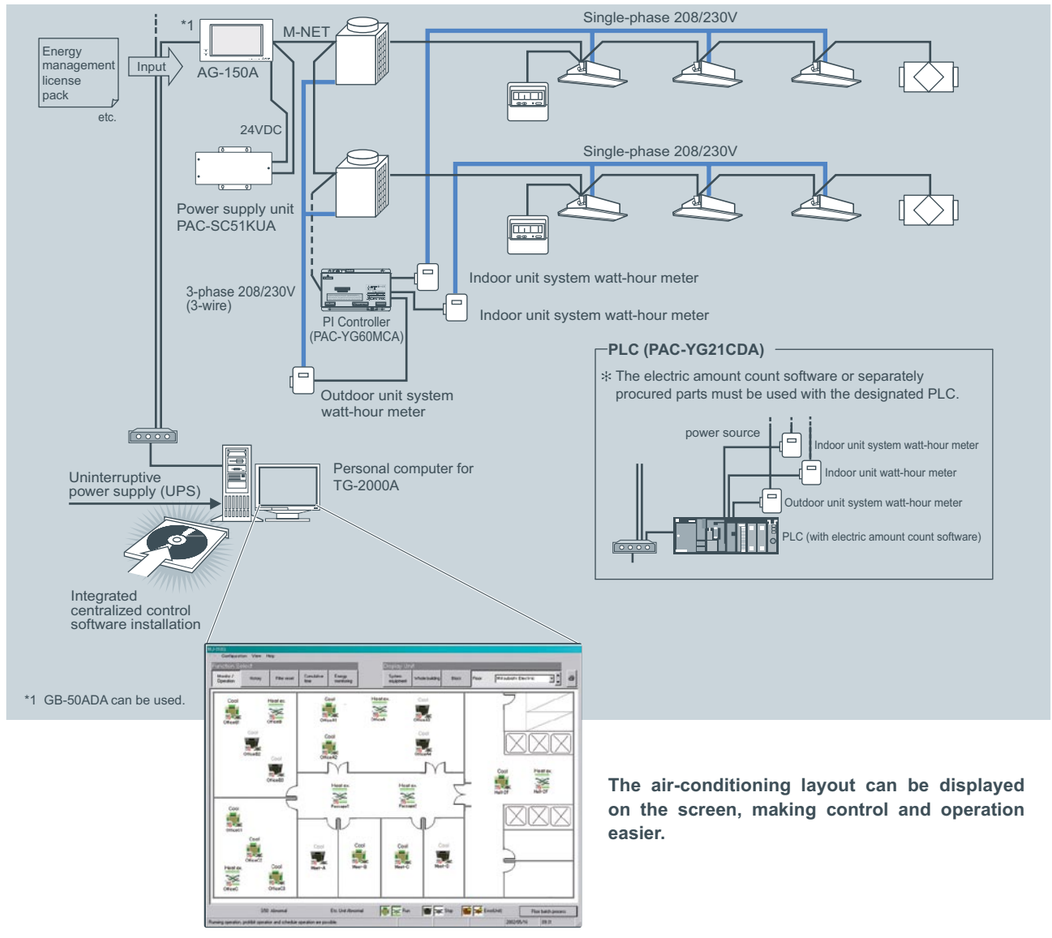
- Trend displays of measurement data can be shown on a Web browser.
- An alarm can be output by e-mail when measurement data exceeds a preset upper or lower limit.

System Structure



Integrated centralized control software TG-2000A

Example of Basic System Configuration



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

Effective use of TG-2000A

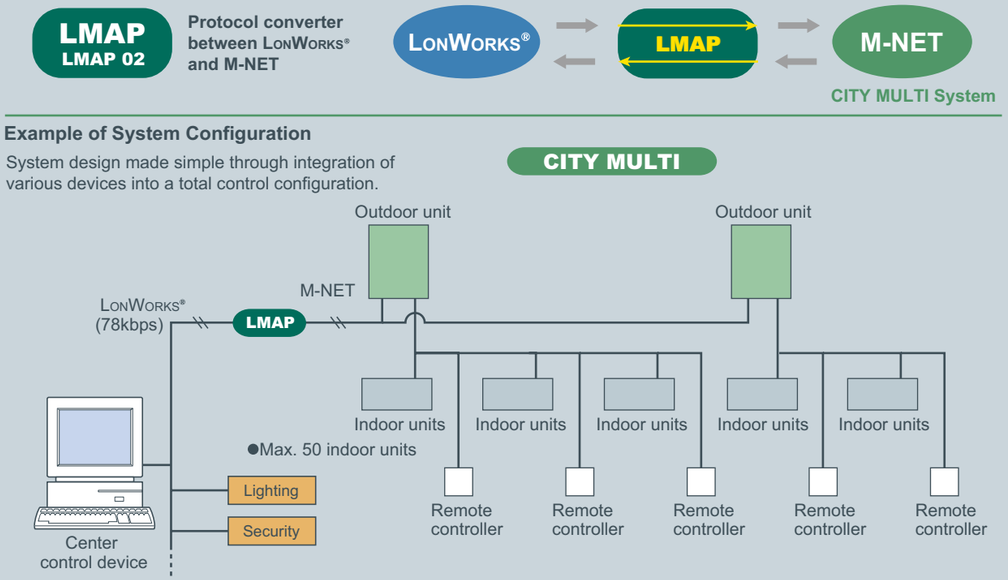
Multiple air conditioning charges in multiple buildings can be calculated. The power apportionment percentage data and apportioned power rate can be calculated for each unit, and can be output as a CSV file.

For example, installing TG-2000A to the system in the headquarters makes it possible to control AG-150A/GB-50ADA units that are used in branch offices.

LonWorks® (LMAP02)

CITY MULTI can easily combine into a Building Management System (BMS) via the LonWorks® and M-NET adapter LMAP02. LonWorks® is an opened transmission protocol widely used at BMS, and related equipment control.
CITY MULTI is therefore compatible with large-scaled BMS management via LonWorks®.

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



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

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

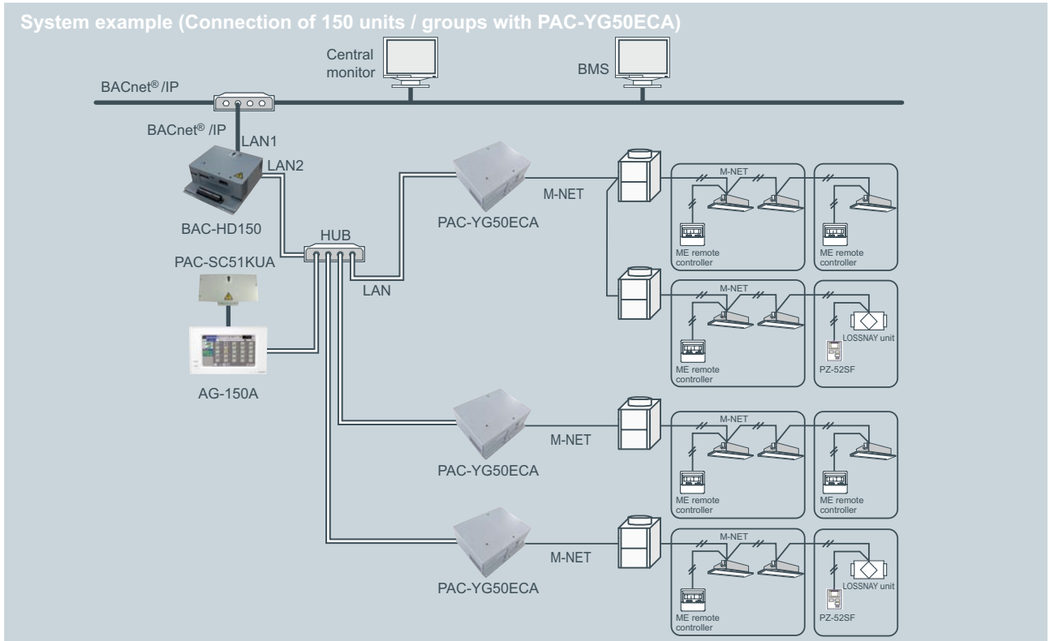
LonWorks® INTERFACE

FUNCTION	CONTENT
Control	
ON/OFF	Run/Stop
Mode Operation	Cooling/Drying/Heating/Auto/Fan
Setpoint Adjustment	Cooling 19-30°C,Heating 17-28°C,Auto 19-28°C
Fan Speed Control	Lo-Mi1-Mi2-Hi
Permit/Prohibit	On/Off,Mode,Setpoint
Emergency Stop	-
Monitoring	
ON/OFF	Run/Stop
Mode	Cooling/Drying/Heating/Auto/Fan
Setpoint	Cooling 19-30°C,Heating 17-28°C,Auto 19-28°C
Fan Speed	Lo-Mi1-Mi2-Hi
Permit/Prohibit	On/Off,Mode,Setpoint
Alarm State	-
Room Temperature	-10°C~50°C
Thermo ON/OFF	On/Off

BACnet® (BAC-HD150)

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

BAC-HD150 can control up to 50 units/groups (including LOSSNAY).
Up to 150 units/groups (including LOSSNAY) can be controlled from one BAC-HD150 with three expansion controllers PAC-YG50ECA. (50 units/PAC-YG50ECA)



BACnet® and M-NET adapter

FUNCTION	CONTENT
Operation	
ON/OFF	Run/Stop
Mode	Cool/Dry/Heat/Auto/Fan
Fan Speed	Low-Mid1-Mid2-Hi
Airflow Direction	Horizontal- 60°-80°-100°swing
Set Temperature	Cooling 19-30°C [67-87°F], Heating 17-28°C [63-83°F], Auto 19-28°C [67-83°F]
Filter Sign Reset	Normal/Reset
Permit/Prohibit	ON/OFF, Mode, Filter sign reset, Set temp.
Forced OFF	Release/Effective
Monitoring	
ON/OFF	Run/Stop
Mode	Cool/Dry/Heat/Auto/Fan
Fan Speed	Low-Mid1-Mid2-Hi
Air Direction	Horizontal- 60°-80°-100°swing
Set Temperature	Cooling 19-30°C [67-87°F], Heating 17-28°C [63-83°F], Auto 19-28°C [67-83°F]
Filter Sign	Normal/Reset
Permit/Prohibit	ON/OFF, Mode, Filter sign reset, Set temp.
Indoor Temperature	-
Alarm Signal	Normal/Abnormal
Error Code	2 Character code- Indicates all unit alarms
Communication State	Normal/Abnormal



Indoor unit

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

Wide selection of indoor units

Ceiling cassette (4-way air flow) Page33 - Page34

i-see Sensor

PLFY-P VBM-E
PLFY-P VCM-E

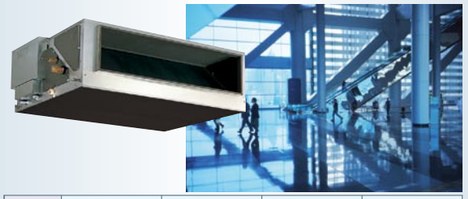


Model	P20	P25	P32	P40	P50
Capacity	2.2kW	2.8kW	3.6kW	4.5kW	5.6kW

Model	P63	P80	P100	P125
Capacity	7.1kW	9.0kW	11.2kW	14.0kW

Fresh Air Intake Page47 - Page48

PEFY-P VMH-E-F



Model	P80	P140	P200	P250
Capacity	9.0kW	16.0kW	22.4kW	28.0kW

Ceiling cassette (2-way air flow) Page35 - Page36

PLFY-P VLMD-E



Model	P20	P25	P32	P40	P50
Capacity	2.2kW	2.8kW	3.6kW	4.5kW	5.6kW

Model	P63	P80	P100	P125
Capacity	7.1kW	9.0kW	11.2kW	14.0kW

Ceiling suspended Page49 - Page50

PCFY-P VKM-E





Model	P40	P63	P100	P125
Capacity	4.5kW	7.1kW	11.2kW	14.0kW

Ceiling cassette (1-way air flow) Page37 - Page38

PMFY-P VBM-E



Model	P20	P25	P32	P40
Capacity	2.2kW	2.8kW	3.6kW	4.5kW

Wall mounted Page51 - Page52

PKFY-P VBM-E



PKFY-P VKM-E





PKFY-P VHM-E

Model	P15	P20	P25	P32	P40	P50	P63	P100
Capacity	1.7kW	2.2kW	2.8kW	3.6kW	4.5kW	5.6kW	7.1kW	11.2kW

Ceiling concealed Page39 - Page46

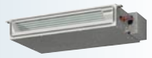
PEFY-P VMR-E-L/R



PEFY-P VMA(L)-E



PEFY-P VMS1(L)-E



New

PEFY-P VMH(S)-E



Model	P15	P20	P25	P32	P40	P50	P63
Capacity	1.7kW	2.2kW	2.8kW	3.6kW	4.5kW	5.6kW	7.1kW

Model	P71	P80	P100	P125	P140	P200	P250
Capacity	8.0kW	9.0kW	11.2kW	14.0kW	16.0kW	22.4kW	28.0kW

Floor standing / Floor mounted concealed Page53 - Page58

PFFY-P VLEM-E





PFFY-P VKM-E

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



Model	P20	P25	P32	P40	P50	P63
Capacity	2.2kW	2.8kW	3.6kW	4.5kW	5.6kW	7.1kW

INDOOR UNIT
Ceiling cassette type 4-way airflow
PLFY-P VBM-E
PLFY-P VCM-E

i-see Sensor



PLFY-P VBM



PLFY-P VCM

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



Automatic Air Speed Adjustment

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

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

Controls the four fan speed modes automatically

Low ➡ Mid1 ➡ Mid2 ➡ High ➡ Auto

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

Draft-less Air Distribution

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



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

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

Cooling softly with Wide Air Flow

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



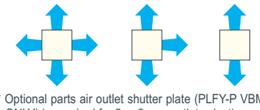
72 patterns of airflow to accommodate any room layout are available.

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

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

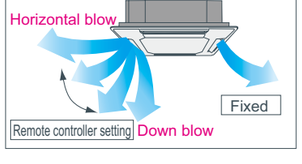
72 airflow patterns

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

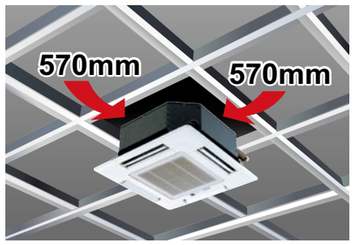


* Optional parts air outlet shutter plate (PLFY-P VBM-E ONLY) is required for 2 or 3 way outlet selection.

Setting the air direction for each outlet with wired remote controller



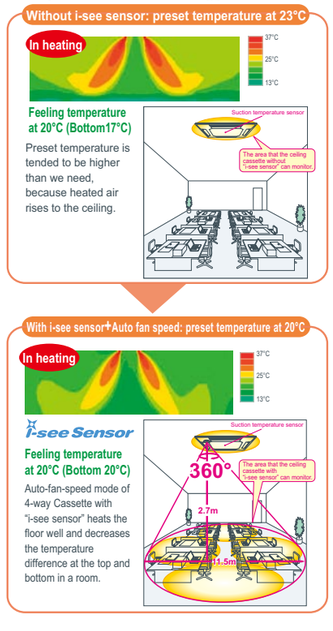
Compact body to match with 2 feets (600mm) x 2 feets (600mm) ceiling design (VCM)



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

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

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



▸Specifications

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

			PLFY-P20VCM-E	PLFY-P25VCM-E	PLFY-P32VCM-E	PLFY-P40VCM-E
Power source			1-phase 220-240V 50Hz			
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	0.05	0.05	0.06	0.06
	Heating	kW	0.05	0.05	0.06	0.06
Current	Cooling	A	0.23	0.23	0.28	0.28
	Heating	A	0.23	0.23	0.28	0.28
External finish (Munsell No.)	Unit		Galvanized steel sheet with gray heat insulation			
	Panel		White (6.4Y 8.9/0.4)			
Dimension H x W x D	Unit	mm(in.)	208 x 570 x 570 (8-1/4 x 22-1/2 x 22-1/2)			
	Panel	mm(in.)	20 x 650 x 650 (13/16 x 25-5/8 x 25-5/8)			
Net weight	Unit	kg(lbs.)	15.5 (35)		17 (38)	
	Panel	kg(lbs.)	3 (7)		3 (7)	
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)			
Fan	Type x Quantity		Turbo fan x 1			
	Airflow rate (Lo-Mid-Hi) *2	m³/min	8-9-10	8-9-10	8-9-11	8-9-11
		L/s	133-150-167	133-150-167	133-150-183	133-150-183
		cfm	283-318-353	283-318-353	283-318-388	283-318-388
	External static pressure	Pa	0 (direct blow)			
Motor	Type		1-phase induction motor			
	Output	kW	0.011	0.015	0.02	0.02
Air filter			PP Honeycomb (long life type)			
Refrigerant pipe diameter	Gas(Flare)	mm(in.)	ø12.7 (ø1/2)			
	Liquid(Flare)	mm(in.)	ø6.35 (ø1/4)			
Field drain pipe diameter		mm(in.)	O.D. 32 (1-1/4)			
Sound pressure level (Lo-Mid-Hi) *2 *3		dB(A)	28-31-35	28-31-37	29-33-38	30-34-39

Notes:

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

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

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

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



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



Equipped with drain pump mechanism as standard

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



Compact unit and low noise level attained!

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

dB(A)

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

<220V,240V>

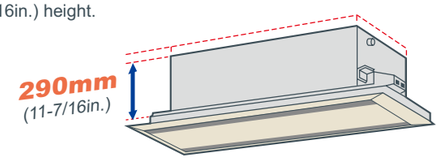
dB(A)

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

<230V>

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

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



Terminal block on outside of main unit makes wiring easier

Fresh air directly taken in

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

Long life filter equipped as standard

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

Easy installation

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

▸Specifications

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

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

Notes:

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

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

*3 It is measured in anechoic room.

INDOOR UNIT
Ceiling cassette type 1-way airflow
PMFY-P VBM-E



Compact and lightweight body perfect for limited ceiling space applications.



Compact size for smooth installation and maintenance

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

Quiet operation

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

Sound pressure level table

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

<220V,240V>

Drain pump

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



mm (in.)

▸Specifications

			PMFY-P20VBM-E	PMFY-P25VBM-E	PMFY-P32VBM-E	PMFY-P40VBM-E
Power source			1-phase 220-240V 50Hz			
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 (0.98Y 8.99/0.63)			
Dimension H x W x D	Unit	mm(in.)	230 x 812 x 395 (9-1/16 x 32 x 15-9/16)			
	Panel	mm(in.)	30 x 1000 x 470 (1-3/16 x 39-3/8 x 18-9/16)			
Net weight	Unit	kg(lbs.)	14 (31)			
	Panel	kg(lbs.)	3 (7)			
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)			
Fan	Type		Line flow fan x 1			
	Airflow rate (Lo-Mid2-Mid1-Hi) *2	m^3/min	6.5-7.2-8.0-8.7	7.3-8.0-8.6-9.3		7.7-8.7-9.7-10.7
		L/s	108-120-133-145	122-133-143-155		128-145-162-178
		cfm	230-254-283-307	258-283-304-328		272-307-343-378
	External staticpressure	Pa	0			
Motor	Type		1-phase induction motor			
	Output	kW	0.028			
Air filter			PP Honeycomb fabric			
Refrigerant pipe diameter	Gas(Flare)	mm(in.)	ø12.7 (ø1/2)			
	Liquid(Flare)	mm(in.)	ø6.35 (ø1/4)			
Field drain pipe diameter		mm(in.)	O.D. 26 (1)			
Sound pressure level (Lo-Mid2-Mid1-Hi) *2 *3		dB(A)	27-30-33-35	32-34-36-37		33-35-37-39

Notes:

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

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

*3 It is measured in anechoic room.

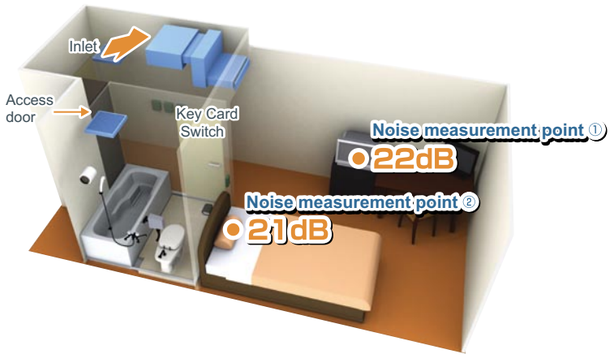
INDOOR UNIT
Ceiling concealed type



PEFY-P VMR-E-L/R

Static Pressure 5Pa | Width 640mm (25-6/32in.) | Ultra Low Noise | Piping connection L model R model

Problem solver for residential hotels, museums, libraries, or hospitals where low noise is especially a must!



Operable by key card switch

It is possible to operate / stop by taking a key card in and out.

Ultra low noise

Quiet indoor environment can be achieved with 21dB around the bed and 22dB around the desk.
*The noise level may differ by the room size or the setting of the unit.

Enables to install for symmetric design room

Left or right piping and control boxes are available depending on the layout of each room. Plus, as in the above figure, easy maintenance is possible from the access door in the bathroom.
*Seen from the front, the pipe and control box are on the right side for -R models.

Energy saving

Energy saving can be realized by preventing us from failing to switch off of the air conditioners with a centralized system when no one is in the room.
Note: Compact and simple controllers, designed specifically to control only start/stop, fan speed and temperature can be set in each room for the occupants' enhanced individual comfort.

Easy Maintenance

Drain pan and heat exchangers are washable from the access door in the bathroom, making maintenance easy and cost saving.

▸Specifications

				PEFY-P20VMR-E-L	PEFY-P25VMR-E-L	PEFY-P32VMR-E-L
Power source				1-phase 220-230-240V 50Hz		
Cooling capacity		*1	kW	2.2	2.8	3.6
		*1	BTU/h	7,500	9,600	12,300
Heating capacity		*1	kW	2.5	3.2	4.0
		*1	BTU/h	8,500	10,900	13,600
Power consumption	Cooling		kW	0.06	0.06	0.07
	Heating		kW	0.06	0.06	0.07
Current	Cooling		A	0.29	0.29	0.34
	Heating		A	0.29	0.29	0.34
External finish				Galvanized		
Dimension H x W x D	Rear inlet		mm (in.)	292 x 640 x 580 (11-1/2 x 25-1/4 x 22-7/8)		
	Bottom inlet		mm (in.)	300 x 640 x 570 (11-7/8 x 25-1/4 x 22-1/2)		
Net weight			kg(lbs.)	18 (40)		
Heat exchanger				Cross fin (Aluminum fin and copper tube)		
Fan	Type x Quantity			Sirocco fan x 1		
	Airflow rate (Lo-Mid-Hi)		m³/min	4.8-5.8-7.9		4.8-5.8-9.3
			L/s	80-97-132		80-97-155
			cfm	170-205-279		170-205-328
	External static pressure	*2	Pa	5		
Motor	Type			1-phase induction motor		
	Output		kW	0.018		0.023
Air filter				PP Honeycomb fabric (washable)		
Refrigerant pipe diameter	Gas		mm(in.)	ø12.7 (ø1/2) Brazed		
	Liquid		mm(in.)	ø6.35 (ø1/4) Brazed		
Field drain pipe diameter			mm(in.)	O.D. 26 (1)		
Sound pressure level (Lo-Mid-Hi)	220V	*3	dB(A)	20-25-30		20-25-33
	230V			21-26-32		21-26-35
	240V			22-27-30		22-27-33

				PEFY-P20VMR-E-R	PEFY-P25VMR-E-R	PEFY-P32VMR-E-R
Power source				1-phase 220-230-240V 50Hz		
Cooling capacity		*1	kW	2.2	2.8	3.6
		*1	BTU/h	7,500	9,600	12,300
Heating capacity		*1	kW	2.5	3.2	4.0
		*1	BTU/h	8,500	10,900	13,600
Power consumption	Cooling		kW	0.06	0.06	0.07
	Heating		kW	0.06	0.06	0.07
Current	Cooling		A	0.29	0.29	0.34
	Heating		A	0.29	0.29	0.34
External finish				Galvanized		
Dimension H x W x D	Rear inlet		mm (in.)	292 x 640 x 580 (11-1/2 x 25-1/4 x 22-7/8)		
	Bottom inlet		mm (in.)	300 x 640 x 570 (11-7/8 x 25-1/4 x 22-1/2)		
Net weight			kg(lbs.)	18 (40)		
Heat exchanger				Cross fin (Aluminum fin and copper tube)		
Fan	Type x Quantity			Sirocco fan x 1		
	Airflow rate (Lo-Mid-Hi)		m³/min	4.8-5.8-7.9		4.8-5.8-9.3
			L/s	80-97-132		80-97-155
			cfm	170-205-279		170-205-328
	External static pressure	*2	Pa	5		
Motor	Type			1-phase induction motor		
	Output		kW	0.018		0.023
Air filter				PP Honeycomb fabric (washable)		
Refrigerant pipe diameter	Gas		mm(in.)	ø12.7 (ø1/2) Brazed		
	Liquid		mm(in.)	ø6.35 (ø1/4) Brazed		
Field drain pipe diameter			mm(in.)	O.D. 26(1)		
Sound pressure level (Lo-Mid-Hi)	220V	*3	dB(A)	20-25-30		20-25-33
	230V			21-26-32		21-26-35
	240V			22-27-30		22-27-33

Notes:

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

*2 The external static pressure is set to 5Pa (at 220V, 230V, 240V).

*3 Measured in anechoic room. Sound pressure levels of the unit with a rear air inlet. (Sound pressure levels are higher than the unit with a bottom air inlet.)

INDOOR UNIT
Ceiling concealed type



PEFY-P VMS1(L)-E

Static Pressure **5~50Pa** | Height **200mm** 7-28/32in. | **Low Noise** | Width **790mm** 31-1/8in. | Width **990mm** 39in. | Width **1,190mm** 46-7/8in.

The ultra thin unit of 200mm offers increased flexibility, and is particularly suitable for places where low noise operation is desired from a slim line body.



Changeable static pressure

The unit is made suitable for a variety of applications with its four static pressure settings of 5, 15, 35, 50Pa.

Changeable airflow rate

Low, middle, and high fan speed settings deliver precise comfort.

Choice for drain pump

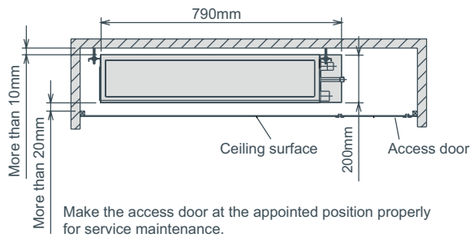
Drain pump is an optional part for the VMS1L, and a standard for VMS1.
*For places where low noise operation is especially required (i.e. Hotels), VMS1L (without drain pump) is recommended.

PP Honeycomb fabric

Washable PP Honeycomb fabric filter as standard

Ultra low height unit with 200mm (7-28/32in.) high
Ultra-narrow width of 790mm (P15-P32 models)
[990mm for P40,50 models / 1190mm for P63 models]

Can be installed easily in tight spaces, such as ceiling cavities or drop-ceilings.



Make the access door at the appointed position properly for service maintenance.

Reduced noise thanks to the use of newly designed centrifugal fan and coil

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

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

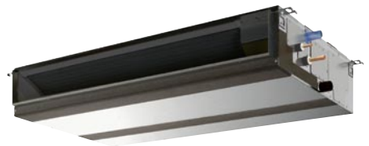
▸Specifications

			PEFY-P15VMS1(L)-E	PEFY-P20VMS1(L)-E	PEFY-P25VMS1(L)-E	PEFY-P32VMS1(L)-E	PEFY-P40VMS1(L)-E	PEFY-P50VMS1(L)-E	PEFY-P63VMS1(L)-E
Power source			1-phase 220-240V 50Hz						
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 *4	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 *4	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 press *5	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 *4 (Lo-Mid-Hi) (mesured 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
*4 The values are measured at the factory setting of external static pressure.
*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.

INDOOR UNIT
Ceiling Concealed Type



PEFY-P VMA(L)-E

Middle Static Pressure 35~150Pa | Slim Body Height 250mm

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



Compact Indoor Units

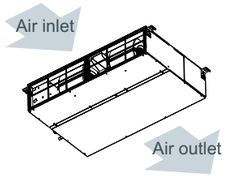
For all models, unit height are unified to 250mm. Compared to the previous model, the height size is reduced, allowing installation in tight spaces, such as ceiling cavities or drop-ceilings.



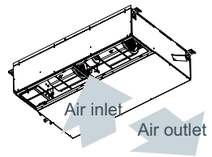
PEFY-P VMA(L)		20	25	32	40	50	63	71	80	100	125	140
Height	mm	250										
Width	mm	700			900		1,100			1,400		1,600
Depth	mm	732										

Air Inlet

(1) Rear inlet



(2) Bottom inlet



Drain Pump Option

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



PEFY-P VMA-E Drain pump built-in



PEFY-P VMAL-E No Drain pump

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

External static pressure

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

External static pressure setting

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

Analogue input

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

IT terminal

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

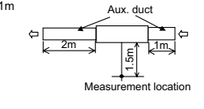
▸Specifications

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

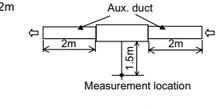
			PEFY-P63VMA(L)-E	PEFY-P71VMA(L)-E	PEFY-P80VMA(L)-E	PEFY-P100VMA(L)-E	PEFY-P125VMA(L)-E	PEFY-P140VMA(L)-E
Power source			1-phase 220-230-240V 50Hz					
Cooling capacity *1		kW	7.1	8.0	9.0	11.2	14.0	16.0
(Nominal) *1		BTU/h	24,200	27,300	30,700	38,200	47,800	54,600
Heating capacity *2		kW	8.0	9.0	10.0	12.5	16.0	18.0
(Nominal) *2		BTU/h	27,300	30,700	34,100	42,700	54,600	61,400
Power consumption	Cooling *3	kW	0.12 [0.10]	0.14 [0.12]	0.14 [0.12]	0.24 [0.22]	0.34 [0.32]	0.36 [0.34]
	Heating *3	kW	0.10	0.12	0.12	0.22	0.32	0.34
Current	Cooling *3	A	1.01 [0.90]	1.15 [1.04]	1.15 [1.04]	1.47 [1.36]	2.05 [1.94]	2.21 [2.10]
	Heating *3	A	0.90	1.04	1.04	1.36	1.94	2.10
External finish			Galvanized steel plate					
Dimension H x W x D		mm	250 x 1,100 x 732	250 x 1,100 x 732	250 x 1,100 x 732	250 x 1,400 x 732	250 x 1,400 x 732	250 x 1,600 x 732
		in.	9-7/8 x 43-5/16 x 28-7/8	9-7/8 x 43-5/16 x 28-7/8	9-7/8 x 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)	32 (71) [31(69)]	32 (71) [31 (69)]	32 (71) [31 (69)]	42 (93) [41 (91)]	42 (93) [41 (91)]	46 (102) [45 (10)]
Heat exchanger			Cross fin (Aluminum fin and copper tube)					
Fan	Type x Quantity		Sirocco fan x 2					
	Airflow rate (Low-Mid-High)	m^3/min	13.5 - 16.0 - 19.0	14.5 - 18.0 - 21.0	14.5 - 18.0 - 21.0	23.0 - 28.0 - 33.0	28.0 - 34.0 - 40.0	29.5 - 35.5 - 42.0
		L/s	225 - 267 - 317	242 - 300 - 350	242 - 300 - 350	383 - 467 - 550	467 - 567 - 667	492 - 592 - 700
		cfm	477 - 565 - 671	512 - 636 - 742	512 - 636 - 742	812 - 989 - 1,165	989 - 1,201 - 1,412	1,042 - 1,254 - 1,483
	External static pressure *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					
	Output	kW	0.121	0.121	0.121	0.244	0.244	0.244
Air filter			PP honeycomb fabric.					
Refrigerant pipe diameter	Liquid (R410A)	mm(in.)	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	9.52 (3/8) Brazed	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	15.88 (5/8) Brazed
Field drain pipe diameter		mm(in.)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)	O.D.32 (1-1/4)
Sound pressure level (measured in anechoic room)								
(Low-Mid-High) *3 *5		dB(A)	29-32-36	30-34-38	30-34-38	32-37-41	35-40-44	36-41-45
*3 *6		dB(A)	25-29-33	26-29-34	26-29-34	28-33-37	32-36-40	33-37-42

Notes:

* [ ] is in case of PEFY-P VMAL-E
*1 Nominal cooling conditions
Indoor: 27°CDB/19°CWB(81°FDB/66°FWB), Outdoor: 35°CDB(95°FDB)
Pipe length: 7.5m(24-9/16ft.), Level difference: 0m(0ft.)
*2 Nominal heating conditions
Indoor: 20°CDB(68°FDB), Outdoor: 7°CDB/6°CWB(45°FDB/43°FWB)
Pipe length: 7.5m(24-9/16ft.), Level difference: 0m(0ft.)
*3 The values are measured at the factory setting of external static pressure.
*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 Measured in anechoic room with a 1m air inlet duct and 2m air outlet duct attached to the unit and 1.5m below the unit.



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



INDOOR UNIT
Ceiling concealed type
PEFY-P VMH(S)-E

High Static Pressure



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



High static pressure of 200 Pa or higher

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

PEFY-P VMH-E		P40	P50	P63	P71	P80	P100	P125	P140	P200	P250
External static pressure (Pa)	220V	50/100/200								——	
	230/240V	100/150/200								——	
	380V	——								110/220	
	400/415V	——								130/260	

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

*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.

Reduced noise thanks to the use of newly designed centrifugal fan

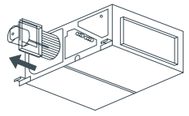
Sound pressure level table (Standard static pressure 220V)

dB(A)

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

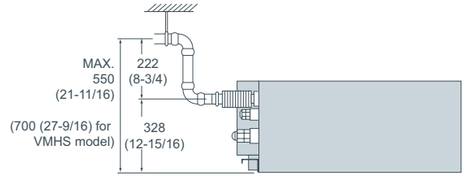
One-side maintenance

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



Drain pump (option) ensures up to 550mm (21-11/16in.) for VMH model / 700mm (27-9/16in.) for VMHS model of lift

The introduction of an upper drain pump allows the drain connection to be raised as high as 550mm(21-11/16in.) for VMH model/700mm (27-9/16in.) for VMHS model, allowing more freedom in piping layout design and reducing horizontal piping requirements.



mm (in.)

▸Specifications

				PEFY-P40VMH-E	PEFY-P50VMH-E	PEFY-P63VMH-E	PEFY-P71VMH-E	PEFY-P80VMH-E	PEFY-P100VMH-E	PEFY-P125VMH-E	PEFY-P140VMH-E
Power source				1-phase 220-240V 50Hz							
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
Heating capacity	*1		kW	5.0	6.3	8.0	9.0	10.0	12.5	16.0	18.0
	*1		BTU/h	17,100	21,500	27,300	30,700	34,100	42,700	54,600	61,400
Power consumption	*5	Cooling	kW	0.19		0.24	0.26	0.32	0.48		0.48
		Heating	kW	0.19		0.24	0.26	0.32	0.48		0.48
Current	*5	Cooling	A	0.88		1.12	1.20	1.47	2.34		2.35
		Heating	A	0.88		1.12	1.20	1.47	2.34		2.35
External finish				Galvanized							
Dimension H x W x D			mm	380 x 750 x 900			380 x 1,000 x 900		380 x 1,200 x 900		
			in.	15 x 29-9/16 x 35-7/16			15 x 39-3/8 x 35-7/16		15 x 47-1/4 x 35-7/16		
Net weight			kg(lbs.)	44 (98)	45 (100)		50 (111)		70 (155)		
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)							
Fan	Type x Quantity			Sirocco fan x 1					Sirocco fan x 2		
	Airflow rate (Lo-Hi)		m³/min	10.0-14.0		13.5-19.0	15.5-22.0	18.0-25.0	26.5-38.0		28.0-40.0
			L/s	167-233		225-317	258-367	300-417	442-633		467-667
			cfm	353-494		477-671	547-777	636-883	936-1342		989-1413
	External static pressure *6	220V	Pa	<50>-100-<200>							
		230,240V	Pa	<100>-150-<200>							
Motor	Type			1-phase induction motor							
	Output	*2	kW	0.08		0.12	0.14	0.18	0.26		
Air filter (option)				Synthethic fiber unwoven cloth filter (long life)							
Refrigerant pipe diameter	Gas (flare)		mm(in.)	ø12.7 (ø1/2)		ø15.88 (ø5/8)					
	Liquid (flare)		mm(in.)	ø6.35 (ø1/4)		ø9.52 (ø3/8)					
Field drain pipe diameter			mm(in.)	O.D. 32 (1-1/4)							
Sound pressure level (Lo-Hi)	*4	220V	dB(A)	27-34		32-38	32-39	35-41	34-42		
		230,240V	dB(A)	31-37		36-41	35-41	38-43	38-44		

				PEFY-P200VMH-E	PEFY-P250VMH-E	PEFY-P200VMHS-E	PEFY-P250VMHS-E
Power source				3-phase 380-415V 50Hz		1-phase 220-240V 50Hz	
Cooling capacity	*1		kW	22.4	28.0	22.4	28.0
	*1		BTU/h	76,400	95,500	76,400	95,500
Heating capacity	*1		kW	25.0	31.5	25.0	31.5
	*1		BTU/h	85,300	107,500	85,300	107,500
Power consumption	*5	Cooling	kW	0.99	1.23	0.63	0.82
		Heating	kW	0.99	1.23	0.63	0.82
Current *5	Cooling	380-415V	A	1.62	2.00	—	—
		220-230-240V	A	—	—	3.47-3.32-3.18	4.72-4.43-4.14
	Heating	380-415V	A	1.62	2.00	—	—
		220-230-240V	A	—	—	3.47-3.32-3.18	4.72-4.43-4.14
External finish				Galvanized		Galvanized steel plate	
Dimension H x W x D			mm	470 x 1,250 x 1,120		470 x 1,250 x 1,120	
			in.	18-9/16 x 49-1/4 x 44-1/8		18-9/16 x 49-1/4 x 44-1/8	
Net weight			kg(lbs.)	100 (221)		97 (214)	100 (221)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)		Cross fin (Aluminum plate fin and copper tube)	
Fan	Type x Quantity			Sirocco fan x 2		Sirocco fan x 2	
	Airflow rate		m³/min	58.0	72.0	—	—
			L/s	967	1200	—	—
			cfm	2048	2543	—	—
		Lo-Mid-Hi	m³/min	—	—	50.0-61.0-72.0	58.0-71.0-84.0
			L/s	—	—	833-1017-1200	967-1183-1400
			cfm	—	—	1766-2154-2542	2048-2507-2966
	External static pressure *6	380V	Pa	<110>-220		—	
		400,415V	Pa	<130>-260		—	
			Pa	—		<50>-<100>-150-<200>-<250>	
			mmH_2O	—		<5.1>-<10.2>-15.3-<20.4>-<25.5>	
Motor	Type			3-phase induction motor		DC motor	
	Output		kW	0.76 *3	1.08 *3	0.87	0.87
Air filter(option)				Synthethic fiber unwoven cloth filter (long life)		Synthethic fiber unwoven cloth filter (long life filter) and filter box are recommended.	
Refrigerant pipe diameter	Gas (flare)		mm(in.)	ø19.05 (ø3/4)	ø22.2 (ø7/8)	ø19.05 (ø3/4)	ø22.2 (ø7/8)
	Liquid (flare)		mm(in.)	ø9.52 (ø3/8)		ø9.52 (ø3/8)	
Field drain pipe diameter			mm(in.)	O.D. 32 (1-1/4)		O.D. 32 (1-1/4)	
Sound pressure level		380V	dB(A)	42 (110Pa) / 45 (220Pa) *4	50 (110Pa) / 52 (220Pa) *4	—	—
		400,415V	dB(A)	44 (130Pa) / 47 (260Pa) *4	52 (130Pa) / 54 (260Pa) *4	—	—
		Lo-Mid-Hi	dB(A)	—	—	36-39-43 *4 *5	39-42-46 *4 *5

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, Outdoo r: 35°C(95°F)DB
Heating Indoor : 20°C(68°F)DB, Outdoor : 7°C(45°F)DB/6°C(43°F)WB

*2 The value are that at 240V.

*3 The value are that at 415V.

*4 It is measured in anechoic room.

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

*6 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.

INDOOR UNIT
Fresh Air Intake Type

PEFY-P VMH-E-F

Fresh Air Intake



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





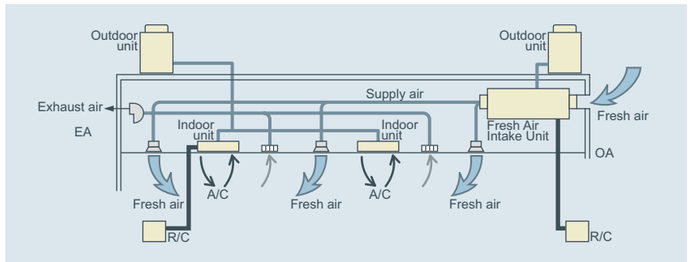
*** Limits of capacity connectable to outdoor unit**
Max. 110% of outdoor unit capacity, excepting heating at outdoor temperature of less than -5°C(23°F) (100%).

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

The Fresh Air intake indoor unit can take fresh outdoor air into any building in any place at any time.

Office, Lobby, Workshop,
Rest room, Nursing home,
Smoking corner,
Kitchen in restaurant

Example



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

▸Specifications

				PEFY-P80VMH-E-F	PEFY-P140VMH-E-F
Power source				1-phase 220-240V 50Hz	
Cooling capacity	*1		kW	9.0	16.0
	*1		BTU/h	30,700	54,600
Heating capacity	*1		kW	8.5	15.1
	*1		BTU/h	29,000	51,500
Power consumption	Cooling		kW	0.16	0.29
	Heating		kW	0.16	0.29
Current	Cooling		A	0.67	1.24
	Heating		A	0.67	1.24
External finish				Galvanized	
Dimension H x W x D			mm(in.)	380 x 1000 x 900 (15 x 39-3/8 x 35-7/16)	380 x 1200 x 900 (15 x 47-1/4 x 35-7/16)
Net weight			kg(lbs.)	50 (111)	70 (155)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)	
Fan	Type x Quautity			Sirocco fan x 1	Sirocco fan x 2
	Airflow rate		m^3/min	9.0	18.0
			L/s	150	300
			cfm	18	636
	External static pressure (Lo-Mid-Hi) *14	208V	Pa	<35>-85-<170>	<35>-85-<170>
		220V	Pa	<40>-115-<190>	<50>-115-<190>
		230V	Pa	<50>-130-<210>	<60>-130-<220>
		240V	Pa	<80>-170-<220>	<100>-170-<240>
Motor	Type			1-phase induction motor	
	Output		kW	0.09 (at 220V)	0.14 (at 220V)
Air filter (option)				Synthetic fiber unwoven cloth filter (long life)	
Refrigerant pipe diameter	Gas (Flare)		mm(in.)	ø15.88 (ø5/8)	
	Liquid (Flare)		mm(in.)	ø9.52 (ø3/8)	
Field drain pipe diameter			mm(in.)	O.D.32 (1-1/4)	
Sound pressure level (Lo-Mid-Hi)	208, 220V		dB(A)	<27>-38-<43>	<28>-38-<43>
	230, 240V		dB(A)	<33>-43-<45>	<34>-43-<45>

			PEFY-P200VMH-E-F	PEFY-P250 VMH-E-F
Power source			3-phase 380-415V 50Hz	
Cooling capacity		kW	22.4	28.0
		BTU/h	76,400	95,500
Heating capacity		kW	21.2	26.5
		BTU/h	72,300	90,400
Power consumption	Cooling	kW	0.34	0.39
	Heating	kW	0.34	0.39
Current	Cooling	A	0.58	0.68
	Heating	A	0.58	0.68
External finish			Galvanized	
Dimension H x W x D *14		mm(in.)	470 x 1250 x 1120 (18-9/16 x 49-1/4 x 44-1/8)	
Net weight		kg(lbs.)	100 (221)	
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)	
Fan	Type x Quautity		Sirocco fan x 2	
	Airflow rate	m^3/min	28	35
		L/s	467	583
		cfm	989	1236
	External static pressure *14	380V Pa	<140>-200	<110>-190
		400V Pa	<150>-210	<120>-200
		415V Pa	<160>-220	<130>-210
Motor	Type		3-phase induction motor	
	Output	kW	0.20	0.23
Air filter (option)			Synthetic fiber unmoven cloth filter (long life type)	
Refrigerant pipe diameter	Gas (Flare)	mm(in.)	ø19.05 (ø3/4)	ø22.2 (ø7/8)
	Liquid (Flare)	mm(in.)	ø9.52 (ø3/8)	
Field drain pipe diameter		mm(in.)	O.D.32 (1-1/4)	
Sound pressure level	380V	dB(A)	<39>-42	<40>-44
	400V	dB(A)	<40>-43	<40>-45
	415V	dB(A)	<40>-44	<41>-46

Notes:

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

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

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

INDOOR UNIT
Ceiling suspended type

PCFY-P VKM-E



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



Extra slim, extra stylish

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

Auto vane distributes air evenly

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

Long life filter as standard

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

Keeps airflow at optimum level according to ceiling height

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

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

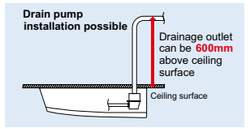
m (ft)

Greatly simplified installation

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

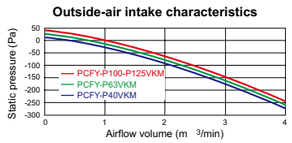
Drain pump option available with all models

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



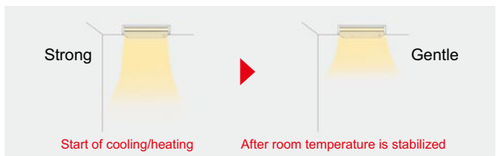
Outside-air intake

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



Equipped with automatic air-speed adjustment

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



▸Specifications

				PCFY-P40VKM-E	PCFY-P63VKM-E	PCFY-P100VKM-E	PCFY-P125VKM-E
Power source				1-phase 220-240V 50Hz			
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)	ø15.88 (ø5/8) / ø19.05 (ø3/4) (Compatible)	
	Liquid (Flare)		mm(in.)	ø6.35 (ø1/4)	ø9.52 (ø3/8)		
Field drain pipe diameter			mm(in.)	O.D. 26 (1)			
Sound pressure level (Lo-Mid2-Mid1-Hi) *2 *3			dB(A)	29-32-34-36	31-33-35-37	36-38-41-43	36-39-42-44

Notes:

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

*2 Airflw rate/Sound pressure level are shown in (low-middle 2-middle 1-high).

*3 It is measured in anechoic room.

INDOOR UNIT
Wall mounted type


PKFY-P VBM


PKFY-P VHM


PKFY-P VKM

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

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



Capacity range

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

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

4-way piping provides more flexibility in selecting installation sites

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

Flat panel & Pure white finish

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



Built-in signal receiver

PKFY-P VBM features

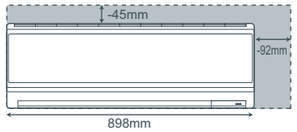
Compact profile

Quiet operation

PKFY-P VHM features

Compact size of 898mm

Width size reduced to match small size buildings and offices.



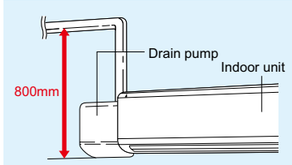
Comparison with PKFY-P VGM-E

Light unit

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

Drain pump (option)

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



▸Specifications

				PKFY-P15VBM-E	PKFY-P20VBM-E	PKFY-P25VBM-E	PKFY-P32VHM-E	PKFY-P40VHM-E	PKFY-P50VHM-E
Power source				1-phase 220-240V 50Hz					
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	*4	kW	0.04			0.04		
	Heating		kW	0.04			0.03		
Current	Cooling	*4	A	0.20			0.40		
	Heating		A	0.20			0.30		
External finish(Munsell No.)				Plastic (1.0Y 9.2/0.2)			Plastic (1.0Y 9.2/0.2)		
Dimension H x W x D			mm(in.)	295 x 815 x 225 (11-5/8 x 32-1/8 x 8-7/8)			295 x 898 x 249(11-5/8 x 35-3/8 x 9-13/16)		
Net weight			kg(lbs.)	10 (23)			13(29)		
Heat exchanger				Cross fin (Aluminum fin and copper tube)					
Fan	Type x Quantity			Line flow fan x 1					
	Airflow rate (Lo-Mid2-Mid1-Hi)	*2	m³/min	4.9-5.0-5.2-5.3	4.9-5.2-5.6-5.9		9-10-11	9-10.5-11.5	9-10.5-12
			L/s	82-83-87-88	82-87-93-98		150-167-183	150-175-192	150-175-200
			cfm	173-177-184-187	173-184-198-208		318-353-388	318-371-406	318-371-424
	External static pressure		Pa	0					
Motor	Type			1-phase induction motor			DC motor		
	Output		kW	0.017			0.030		
Air filter				PP Honeycomb					
Refrigerant pipe diameter	Gas (Flare)		mm(in.)	ø12.7 (ø1/2)					ø12.7 (ø1/2) / ø15.88 (ø5/8) (Compatible)
	Liquid (Flare)		mm(in.)	ø6.35 (ø1/4)					ø6.35 (ø1/4) / ø9.52 (ø3/8) (Compatible)
Field drain pipe diameter			mm(in.)	I.D.16 (5/8)					
Sound pressure level (Lo-Mid2-Mid1-Hi)		*2 *3	dB(A)	29-31-32-33	29-31-34-36		34-37-41	34-38-41	34-39-43

Notes:

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

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

*3 It is measured in anechoic room.

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

				PKFY-P63VKM-E	PKFY-P100VKM-E
Power source				1-phase 220-230-240V 50Hz	
Cooling capacity		*1	kW	7.1	11.2
		*1	BTU/h	24,200	38,200
Heating capacity		*1	kW	8.0	12.5
		*1	BTU/h	27,300	42,600
Power consumption	Cooling	*4	kW	0.05	0.08
	Heating		kW	0.04	0.07
Current	Cooling	*4	A	0.37	0.58
	Heating		A	0.30	0.51
External finish(Munsell No.)				Plastic (1.0Y 9.2/0.2)	
Dimension H x W x D			mm(in.)	365 x 1,170 x 295 (14-3/8 x 46-1/16 x 11-5/8)	
Net weight			kg(lbs.)	21 (46)	
Heat exchanger				Cross fin (Aluminum fin and copper tube)	
Fan	Type x Quantity			Line flow fan x 1	
	Airflow rate (Lo-Hi)	*2	m³/min	16-20	20-26
			L/s	267-333	333-433
			cfm	565-706	706-918
	External static pressure		Pa	0	
Motor	Type			DC motor	
	Output		kW	0.056	
Air filter				PP Honeycomb	
Refrigerant pipe diameter	Gas (Flare)		mm(in.)	ø15.88 (ø5/8)	ø15.88 (ø5/8) / ø19.05 (ø3/4) (Compatible)
	Liquid (Flare)		mm(in.)	ø9.52 (ø3/8)	
Field drain pipe diameter			mm(in.)	I.D. 16(5/8)	
Sound pressure level (Lo-Hi)		*2 *3	dB(A)	39-45	41-49

Notes:

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

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

*3 It is measured in anechoic room.

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

INDOOR UNIT
Floor standing exposed

PFFY-P VKM-E



For living rooms, bed rooms, or offices where a sophisticated design is required. The latest Mitsubishi innovation – floor-standing air-conditioner sophisticated in design, rich in function.

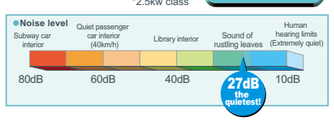


Quiet operation

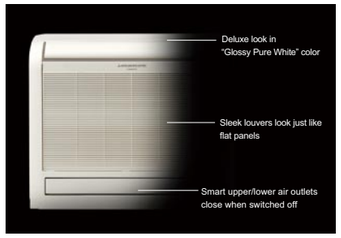
Mitsubishi Electric air conditioners have always been some of the quietest models available in the market. Our new floorstanding models are no exception.
It can create a silent and comfortable space where the occupants would not even recognize the existence of air conditioner operation.

ONLY 27dB

*2.5kw class

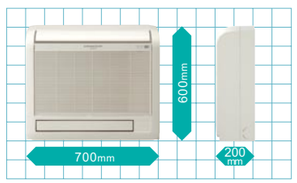


Sophisticated Design



From Mitsubishi Electric, an innovative new floor-standing air-conditioner. Our pleasing mix of streamlined form and diversified function. Engineered to keep room walls free, furnish comfy cooling in summer, toasty heating in winter.
The “Glossy Pure White” colour ensures a deluxe look, the perfect match for any room. Both upper and lower air outlets remain closed when switched OFF, in a smart and striking image.
A superb new air-conditioner from Mitsubishi, providing a handsome fit for your own distinctive interior.

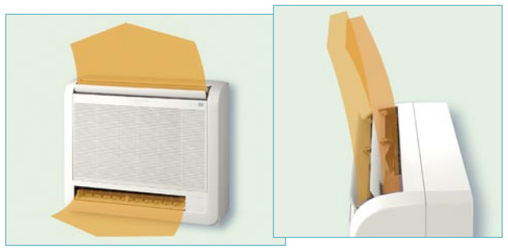
Slim but Mighty



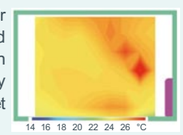
The unit body is slim and trim, the essence in compact. An ideal size for living rooms, bedrooms, and more. The removable and washable front panel makes cleaning a snap.
Easy and regular cleaning allows your air-conditioner stay beautiful while keeping its energy-efficient operation always possible.

Optimum Air Distribution

Comfy room temperatures are realized by the optimum, powerful and efficient air distribution through upper and lower air outlets.
The upper vane angle is remote controllable, with 5 air flow direction levels (+Swing and Auto modes) and 4 wind power levels (+Auto mode).
By setting the vane angle almost vertical, annoying direct wind can be avoided for your better comfort.



The air from both upper and lower air outlets is optimally controlled and distributed evenly to every corner of the room. In heating mode, the warm air is smartly controlled to stay at the floor level: Your feet do not feel chilled any more!



▸Specifications

				PFFY-P20VKM-E	PFFY-P25VKM-E	PFFY-P32VKM-E	PFFY-P40VKM-E
Power source				1-phase 220-240V 50Hz			
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	0.025	0.025	0.025	0.028
	Heating		kW	0.025	0.025	0.025	0.028
Current	Cooling		A	0.20	0.20	0.20	0.24
	Heating		A	0.20	0.20	0.20	0.24
External finish				Plastic (Pure white)			
Dimension			mm	600 x 700 x 200			
H x W x D			in.	23-5/8 x 27-9/16 x 7-7/8			
Net weight			kg(lbs.)	15 (34)			
Heat exchanger				Cross fin (Alminium plate fin and copper tube)			
Fan	Type x Quantity			Line flow fan x 2			
	Airflow rate *2 (Lo-Mid-Hi-SHi)		m^3/min	5.9-6.8-7.6-8.7	6.1-7.0-8.0-9.1	6.1-7.0-8.0-9.1	8.0-9.0-9.5-10.7
	Eaternal static pressure		Pa	0			
Motor	Type			DC motor			
	Output		kW	0.03 x 2			
Air filter				PP honeycomb fabric (Catechin Filter)			
Refrigerant pipe diameter	Gas(Flare)		mm(in.)	ø12.7 (ø1/2)			
	Liquid(Flare)		mm(in.)	ø6.35 (ø1/4)			
Field drain pipe diameter				I.D.16 (5/8)			
Sound pressure level (Lo-Mid-Hi-SHi)		*2	dB(A)	27-31-34-37	28-32-35-38	28-32-35-38	35-38-42-44

Notes:

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

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

*3 It is measured in anechoic room.

INDOOR UNIT
Floor standing exposed

PFFY-P VLEM-E



Floor mounted lowboy type effective in perimeter zone.



Standardized design with mild lines.
Supports various types of spaces from office buildings and shop buildings to hospitals.
Water vapor permeable film humidifier can be installed.
Remote controller can be installed onto the main unit.

Compact unit for easy air conditioning in perimeter zone.

The compact body of 220mm(8-11/16in.) in depth can be easily installed in the perimeter zone for effective air conditioning in the perimeter zone.

Electronics dry function dehumidify refreshingly.

Optimum dehumidification depending on indoor temperature to prevent over-cooling. Refreshing dehumidification can be attained.

▸Specifications

				PFFY-P20VLEM-E	PFFY-P25VLEM-E	PFFY-P32VLEM-E	PFFY-P40VLEM-E	PFFY-P50VLEM-E	PFFY-P63VLEM-E
Power source				1-phase 220-240V 50Hz					
Cooling capacity	*1		kW	2.2	2.8	3.6	4.5	5.6	7.1
	*1		BTU/h	7,500	9,600	12,300	15,400	19,100	24,200
Heating capacity	*1		kW	2.5	3.2	4.0	5.0	6.3	8.0
	*1		BTU/h	8,500	10,900	13,600	17,100	21,500	27,300
Power consumption		Cooling	kW	0.04		0.06	0.065	0.085	0.1
		Heating	kW	0.04		0.06	0.065	0.085	0.1
Current		Cooling	A	0.19		0.29	0.32	0.40	0.46
		Heating	A	0.19		0.29	0.32	0.40	0.46
External finish(Munsell No.)				Acrylic paint (5Y 8/1)					
Dimension H x W x D			mm	630 x 1,050 x 220		630 x 1,170 x 220		630 x 1,410 x 220	
			in.	24-13/16 x 41-3/8 x 8-11/16		24-13/16 x 46-1/8 x 8-11/16		24-13/16 x 55-9/16 x 8-11/16	
Net weight			kg(lbs.)	23 (51)		25 (56)	26 (58)	30 (67)	32 (71)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)					
Fan	Type x Quantity			Sirocco fan x 1		Sirocco fan x 2			
	Airflow rate (Lo-Hi) *2		m^3/min	5.5-6.5		7.0-9.0	9.0-11.0	12.0-14.0	12.0-15.5
			L/s	92-108		117-150	150-183	200-233	200-258
			cfm	194-230		247-318	318-388	424-494	424-547
	External static pressure		Pa	0					
Motor	Type			1-phase induction motor					
	Output		kW	0.015		0.018	0.030	0.035	0.050
Air filter				PP Honeycomb fabric (washable)					
Refrigerant pipe diameter		Gas (Flare)	mm(in.)	ø12.7 (ø1/2)					ø15.88 (ø5/8)
		Liquid (Flare)	mm(in.)	ø6.35 (ø1/4)					ø9.52 (ø3/8)
Field drain pipe diameter			mm(in.)	I.D.26 (1) <Accessory hose O.D.27 (1-3/32) (top end :20 (13/16))>					
Sound pressure level (Lo-Hi) *2 *3 *4			dB(A)	34-40		35-40	38-43		40-46

Notes:

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

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

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

*4 It is measured in anechoic room.

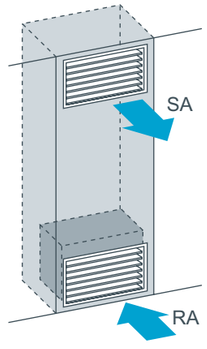
INDOOR UNIT
Floor mounted concealed type

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



Neatly installed with pericover concealed.
Easy installation in perimeter zone.





installation image
(PFFY-P VLRMM-E)

Compact unit for easy air conditioning in perimeter zone.

The body is concealed in the pericover to pursue harmony with the interior.
The compact body of 220mm(8-11/16in.) in depth can be easily installed in the perimeter zone.

Electronics dry function dehumidify refreshingly to prevent over-cooling.

Optimum dehumidification depending on indoor temperature to prevent over-cooling. Refreshing dehumidification can be attained.

Maximum external static pressure 60Pa (VLRMM model)

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

▸Specifications

				PFFY-P20VLRM-E	PFFY-P25VLRM-E	PFFY-P32VLRM-E	PFFY-P40VLRM-E	PFFY-P50VLRM-E	PFFY-P63VLRM-E
Power source				1-phase 220-240V 50Hz					
Cooling capacity	*1		kW	2.2	2.8	3.6	4.5	5.6	7.1
	*1		BTU/h	7,500	9,600	12,300	15,400	19,100	24,200
Heating capacity	*1		kW	2.5	3.2	4.0	5.0	6.3	8.0
	*1		BTU/h	8,500	10,900	13,600	17,100	21,500	27,300
Power consumption		Cooling	kW	0.04		0.06	0.065	0.085	0.1
		Heating	kW	0.04		0.06	0.065	0.085	0.1
Current		Cooling	A	0.19		0.29	0.32	0.40	0.46
		Heating	A	0.19		0.29	0.32	0.40	0.46
External finish(Munsell No.)				Galvanized steel plate					
Dimension H x W x D			mm	639 x 886 x 220		639 x 1,006 x 220		639 x 1,246 x 220	
			in.	25-3/16 x 34-15/16 x 8-11/16		25-3/16 x 39-5/8 x 8-11/16		25-3/16 x 49-1/16 x 8-11/16	
Net weight			kg(lbs.)	18.5 (41)		20 (45)	21 (47)	25 (56)	27 (60)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)					
Fan	Type x Quaulity			Sirocco fan x 1		Sirocco fan x 2			
	Airflow rate (Lo-Hi)	*2	m^3/min	5.5-6.5		7.0-9.0	9.0-11.0	12.0-14.0	12.0-15.5
			L/s	92-108		117-150	150-183	200-233	200-258
			cfm	194-230		247-318	318-388	424-494	424-547
	External static pressure		Pa	0					
Motor	Type			1-phase induction motor					
	Output		kW	0.015		0.018	0.030	0.035	0.050
Air filter				PP Honeycomb fabric (washable)					
Refrigerant pipe diameter		Gas (Flare)	mm(in.)	ø12.7 (ø1/2)					ø15.88 (ø5/8)
		Liquid (Flare)	mm(in.)	ø6.35 (ø1/4)					ø9.52 (ø3/8)
Field drain pipe diameter			mm(in.)	I.D.26 (1) <Accessory hose O.D.27 (1-3/32) (top end :20 (13/16))>					
Sound pressure level (Lo-Hi)	*2 *3 *4		dB(A)	34-40		35-40	38-43		40-46

Notes:

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

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

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

*4 It is measured in anechoic room.

				PFFY-P20VLRMM-E	PFFY-P25VLRMM-E	PFFY-P32VLRMM-E	PFFY-P40VLRMM-E	PFFY-P50VLRMM-E	PFFY-P63VLRMM-E
Power source				1-phase 220-240V 50Hz					
Cooling capacity	*1		kW	2.2	2.8	3.6	4.5	5.6	7.1
	*1		BTU/h	7,500	9,600	12,300	15,400	19,100	24,200
Heating capacity	*1		kW	2.5	3.2	4.0	5.0	6.3	8.0
	*1		BTU/h	8,500	10,900	13,600	17,100	21,500	27,300
Power consumption		Cooling	kW	0.04		0.04	0.05	0.05	0.07
		Heating	kW	0.04		0.04	0.05	0.05	0.07
Current		Cooling	A	0.34		0.38	0.43	0.48	0.59
		Heating	A	0.34		0.38	0.43	0.48	0.59
External finish(Munsell No.)				Galvanized steel plate					
Dimension H x W x D			mm	639 x 886 x 220		639 x 1,006 x 220		639 x 1,246 x 220	
			in.	25-3/16 x 34-15/16 x 8-11/16		25-3/16 x 39-5/8 x 8-11/16		25-3/16 x 49-1/16 x 8-11/16	
Net weight			kg(lbs.)	18.5 (41)		20 (45)	21 (47)	25 (56)	27 (60)
Heat exchanger				Cross fin (Aluminum plate fin and copper tube)					
Fan	Type x Quaulity			Sirocco fan x 1		Sirocco fan x 2			
	Airflow rate (Lo-Mid-Hi)		m^3/min	4.5-5.5-6.5		6.5-7.5-9.0	8.0-9.5-11.0	10.0-12.0-14.0	11.0-13.0-15.5
			L/s	75-92-108		108-125-150	133-158-183	167-200-233	183-217-258
			cfm	159-194-230		230-265-318	282-335-388	353-424-494	388-459-547
	External static pressure *2		Pa	20/40/60					
Motor	Type			DC motor					
	Output		kW	0.096					
Air filter				PP Honeycomb fabric (washable)					
Refrigerant pipe diameter		Gas	mm(in.)	ø12.7 (ø1/2) Brazed					ø15.88 (ø5/8) Brazed
		Liquid	mm(in.)	ø6.35 (ø1/4) Brazed					ø9.52 (ø3/8) Brazed
Field drain pipe diameter			mm(in.)	I.D.26 (1) <Accessory hose O.D.27 (1-3/32) (top end :20 (13/16))>					
Sound pressure level (Lo-Mid-Hi) *3		20Pa	dB(A)	31-36-40		27-32-37	30-36-40	32-37-41	35-40-44
		40Pa	dB(A)	34-39-42		30-35-41	32-38-42	35-40-44	36-42-47
		60Pa	dB(A)	35-40-43		32-37-42	3.5-39-44	36-41-45	38-43-48

Notes:

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

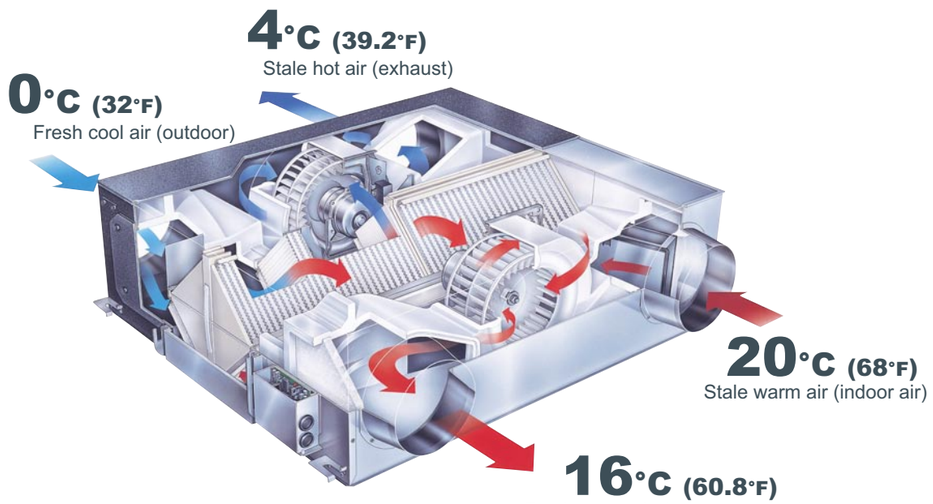
*2 The external static pressure is set to 20Pa at factory shipment.

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



The Ventilation System for Enhanced Air Quality - Lossnay

Combine with Lossnay Ventilation System Enhanced Air Quality.
Unified Control System Allows Greater Design Freedom.



LGH-15RX5 [150m³/h Single phase 220-240V 50Hz]
LGH-25RX5 [250m³/h Single phase 220-240V 50Hz]
LGH-35RX5 [350m³/h Single phase 220-240V 50Hz]
LGH-50RX5 [500m³/h Single phase 220-240V 50Hz]
LGH-65RX5 [650m³/h Single phase 220-240V 50Hz]

LGH-80RX5 [800m³/h Single phase 220-240V 50Hz]
LGH-100RX5 [1000m³/h Single phase 220-240V 50Hz]
LGH-150RX5 [1500m³/h Single phase 220-240V 50Hz]
LGH-200RX5 [2000m³/h Single phase 220-240V 50Hz]

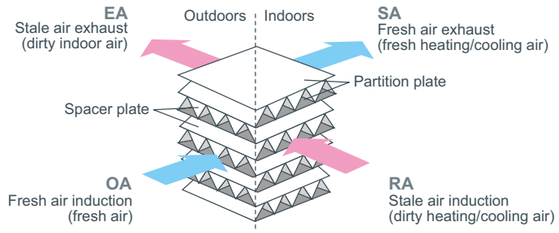
Heat-Exchange Efficiency Obtainable Only with Lossnay.

The secret to the unmatched comfort provided by Lossnay core is the cross-flow, plate-fin structure off the heat-exchange unit. A diaphragm made of a specially processed paper fully separates inducted and exhausted air supplies, ensuring that only fresh air is introduced to the indoor environment.
The superior heat-transfer and moisture permeability of the special paper assure highly effective total heat exchange (temperature and humidity) when inducted and exhausted air supplies cross in the Lossnay core.

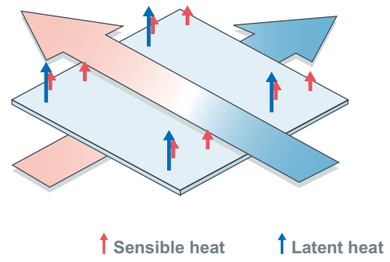
LOSSNAY Technology

- **Two paths ventilation**
  LOSSNAY simultaneously intakes Fresh Air and exhausts Dirty Air.
- **Total energy recover**
  LOSSNAY returns BOTH sensible heat and latent heat.

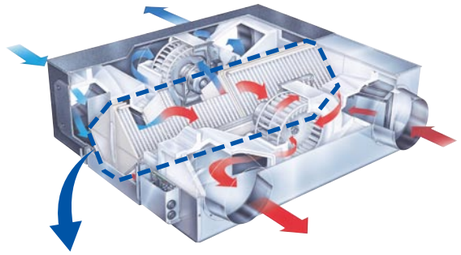
A. Two paths ventilation



B. Total Energy transfer

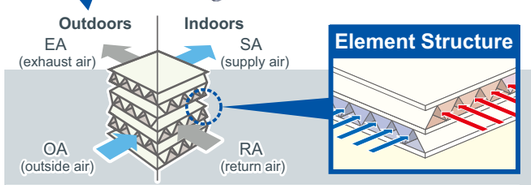


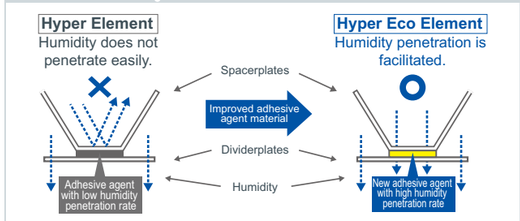
- **Hyper Eco Core**
  Better energy conservation by improved total heat exchange efficiency.

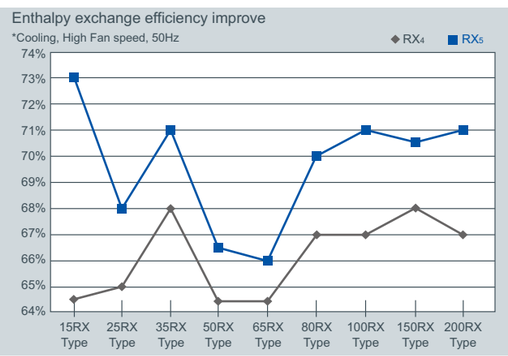


Introducing the new Hyper Eco Element

Mitsubishi's newly developed Hyper Eco Element is on board, offering the industry's best total heat exchange efficiency. Energy conservation performance has been improved not only by reducing the air conditioning load associated with ventilation, but also by facilitating humidity penetration.



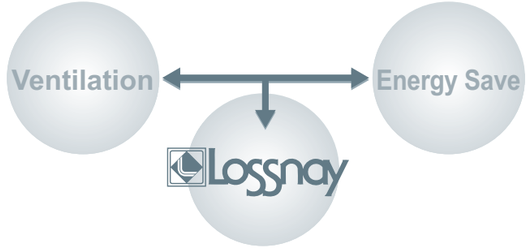




RX5 SERIES

Why LOSSNAY is necessary.

- **Without ventilation...**
  Lack of Ventilation makes people sick by dirty indoor air including CO_2, Dust, Bacteria.
- **If just opening windows...**
  Opening windows eliminates dirty air BUT wastes much air-con energy.
- **So we recommend LOSSNAY**
  LOSSNAY is simultaneous pursuit of Ventilation and Energy Saving.

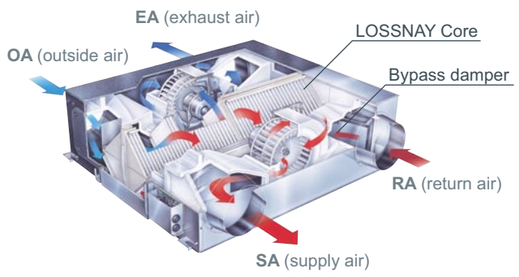


- **This is LOSSNAY !**

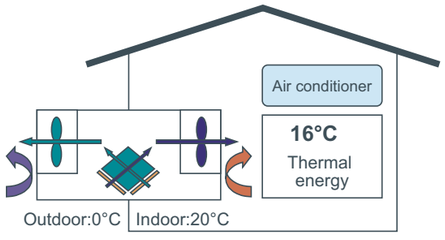
ADVANTAGES

Clean air supply, dirty air exhaust by Two air paths (OA→ SA and RA→ EA)
Energy recovery by LOSSNAY Core
Free cooling by bypass damper
MULTI VENTILATION MODE for multi ventilation request (Power supply, Power supply/exhaust, Power exhaust)

UNIT STRUCTURE



Energy Recovery Image

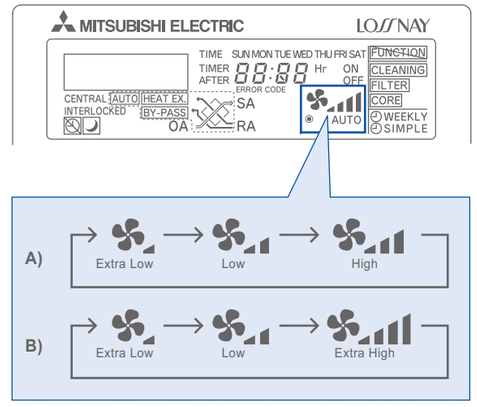


How much recovery?
OA temp. : 0°C → SA temp. : 16°C (Indoor 20°C)

Extra Low Mode

■Additional energy conservation by using a four-level air volume system that allows more precise control.

In addition to the conventional Extra High, High, and Low modes, an Extra Low mode is added to provide a more dynamic range of air volume settings and versatility in a variety of installation environments, yielding much better energy conservation. Using a simplified timer function, it switches to Extra Low operation when the operation stop button is activated and it is accordingly possible to implement 24-hour energy conservation ventilation.



* The Extra High and High ventilation modes are selectable by the initial setting.
* Extra-Low not equipped LGH-150RX5 and 200RX5.
* The ventilation mode is actually selected in three levels, and the remote controller also displays these three levels.

Energy Saving by WEEKLY timer

Air volume level can be set hourly (max 8 times) and weekly. You can pre-set air volume according to the predictable requirement so that LOSSNAY can automatically operate at only necessary air-speed at the specified time period, which saves power consumption while maintaining the indoor air quality. Besides, once the weekly timer has been set, no switching on-off is required.

Example A (Hourly)

current RX4 series with PZ-41SLB controller

8:00 — high — 22:00

new RX5 series with PZ-60DR-E

8:00	9:00	12:00	13:00	17:00	19:00	22:00
low	high	low	high	low	extra low	

Total power consumption in one day : LGH-100RX4-E : 6,600W (14 hours)
LGH-100RX5-E : 5,390W (14 hours) → **1,210W (18%) less**

Example B (Weekly)

	8:00	9:00	12:00	13:00	17:00	19:00	22:00
Monday to Thursday	low	high	low	high	low	extra low	
Friday	low	high	low	high	extra low		
Saturday to Sunday	extra low						

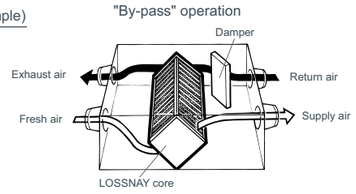
New function: "By-pass" Ventilation External Control Setting

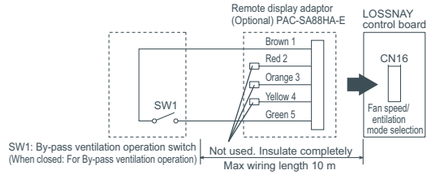
In addition to the automatic damper open/close function, open/close control via external devices is now possible, delivering a “By-pass” ventilation system that is suitable to the installed environment.

Establish the wire connection by inserting the optional remote display adaptor (PAC-SA88HA-E) in the connector CN16 (Ventilation mode selector).

With SW1 is “ON”, the ventilation mode of LOSSNAY is changed to the By-pass ventilation regardless of the setting on the remote controller.

Control devices (example)
· Temperature sensor
· Humidity sensor
· Timers





•Automatic ventilation setting
The automatic damper mode automatically provides the correct ventilation for the conditions in the room. The following shows the effect “By-pass” ventilation will have under various conditions.

1. Reduces cooling load
If the air outside is cooler than the air inside the building during the cooling season (such as early morning or at night), “By-pass” ventilation will draw in the cooler outside air and reduce the cooling load on the system.

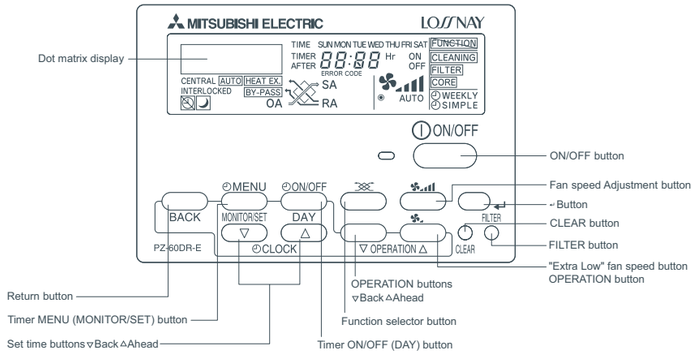
2. Night purge
“By-pass” ventilation can be used to release hot air from inside the building that has accumulated in buildings a business district during the hot summer season.

3. Office equipment room cooling
During cold season, fresh air can be drawn in and used as is to cool rooms where the temperature has risen due to the use of office equipment.

* When the outdoor air tempereture drops lower than 8°C it changes to the heat exchange ventilation. (Display of the remote controller does not change.)
* In the case of “By-pass” ventilation, the supply air temperature slightly rises more than the outside air temperature because of the heat effect around the ducts or the unit motors.

New Remote Controller PZ-60DR-E

A new remote controller for the RX5 series is now available. In addition to boosting the energy conservation performance of the main unit, the remote controller features a variety of new functions which also pursue additional energy conservation.
The appearance of the remote controller conforms to Mitsubishi air conditioner interface design standards.
Functions that were set using Dip-Switch on the LOSSNAY main unit can now be configured as needed using the new remote controller.
This eliminates the need to crawl under the eaves to change operation settings.
Also, a newly adopted dot matrix display provides much more information, making it easy to check maintenance indications, operation status display, and explanations required when configuring settings.



Model line up



LGH-15~100RX5-E

■ Specification

LGH-15RX5-E

Model		LGH-15RX5-E							
Frequency / Power source		50Hz / Single phase 220-240V							
Ventilation mode		LOSSNAY ventilation				By-pass ventilation			
Fan speed		Extra High	High	Low	Extra Low	Extra High	High	Low	Extra Low
Current (A)		0.44-0.46	0.37-0.38	0.25-0.25	0.14-0.15	0.45-0.46	0.37-0.38	0.25-0.26	0.14-0.15
Power consumption (W)		96-110	80-90	53-59	30-35	97-110	81-91	54-61	30-35
Air volume	(m^3/h)	150	150	110	70	150	150	110	70
	(L/s)	42	42	31	19	42	42	31	19
External static pressure	(mmH_2O)	10.2-10.7	6.6-7.1	3.6-4.1	1.4	10.2-10.7	6.6-7.1	3.6-4.1	1.4
	(Pa)	100-105	65-70	35-40	14	100-105	65-70	35-40	14
Temperature exchange efficiency (%)		82.0	82.0	84.0	85.5	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	75.0	75.0	77.5	81.0	—	—	—	—
	Cooling	73.0	73.0	76.5	81.0	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of panel in an anechoeic chamber)		27.5-28	26.5-27	22-23.5	18	28.5-29	27-28	23-24	18-19
Weight (kg)		20							
Starting current		Under 0.8 A Less							

*The Air outlets noise (45˚ angle, 1.5 meters in front of the unit) is about 6 dB greater than the indicated value. (at High Fan speed)

LGH-25RX5-E

Model		LGH-25RX5-E							
Frequency / Power source		50Hz / Single phase 220-240V							
Ventilation mode		LOSSNAY ventilation				By-pass ventilation			
Fan speed		Extra High	High	Low	Extra Low	Extra High	High	Low	Extra Low
Current (A)		0.52-0.55	0.47-0.48	0.26-0.27	0.17-0.18	0.53-0.55	0.47-0.48	0.26-0.27	0.17-0.18
Power consumption (W)		113-129	102-114	56-62	36-42	115-131	103-115	56-63	36-42
Air volume	(m^3/h)	250	250	155	105	250	250	155	105
	(L/s)	69	69	43	29	69	69	43	29
External static pressure	(mmH_2O)	8.2-8.7	5.1-6.1	2-2.5	0.9	8.2-8.7	5.1-6.1	2-2.5	0.9
	(Pa)	80-85	50-60	20-25	9	80-85	50-60	20-25	9
Temperature exchange efficiency (%)		79.0	79.0	81.5	83.5	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	69.5	69.5	74.0	77.5	—	—	—	—
	Cooling	68.0	68.0	72.5	76.0	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of panel in an anechoeic chamber)		26-27	25-26	20-21.5	18-19	26.5-27.5	25.5-26.5	20.5-22	18-19
Weight (kg)		20							
Starting current		Under 0.9 A Less							

*The Air outlets noise (45˚ angle,1.5 meters in front of the unit) is about 10 dB greater than the indicated value. (at High Fan speed)

LGH-35RX5-E

Model		LGH-35RX5-E							
Frequency / Power source		50Hz / Single phase 220-240V							
Ventilation mode		LOSSNAY ventilation				By-pass ventilation			
Fan speed		Extra High	High	Low	Extra Low	Extra High	High	Low	Extra Low
Current (A)		0.92-0.92	0.74-0.74	0.5-0.51	0.28-0.3	0.93-0.94	0.77-0.77	0.51-0.52	0.28-0.3
Power consumption (W)		195-212	160-169	105-116	58-69	197-217	164-173	105-116	58-69
Air volume	(m^3/h)	350	350	210	115	350	350	210	115
	(L/s)	97	97	58	32	97	97	58	32
External static pressure	(mmH_2O)	15.8-16.3	7.6-8.2	2.5-3.1	0.9	15.8-16.3	7.6-8.2	2.5-3.1	0.9
	(Pa)	155-160	75-80	25-30	9	155-160	75-80	25-30	9
Temperature exchange efficiency (%)		80.0	80.0	85.0	88.0	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	71.5	71.5	76.5	81.5	—	—	—	—
	Cooling	71.0	71.0	75.5	81.0	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of panel in an anechoeic chamber)		32-32	28.5-29.5	21.5-23	18	32.5-32.5	29.5-30.5	21.5-24	18
Weight (kg)		29							
Starting current		Under 2.4 A Less							

*The Air outlets noise (45˚ angle, 1.5 meters in front of the unit) is about 10 dB greater than the indicated value. (at High Fan speed)



LGH-15~100RX5-E

LGH-50RX5-E

Model		LGH-50RX5-E							
Frequency / Power source		50Hz / Single phase 220-240V							
Ventilation mode		LOSSNAY ventilation				By-pass ventilation			
Fan speed		Extra High	High	Low	Extra Low	Extra High	High	Low	Extra Low
Current (A)		1.2-1.25	1.0-1.0	0.85-0.85	0.4-0.4	1.25-1.25	1.0-1.0	0.85-0.85	0.4-0.4
Power consumption (W)		255-286	207-228	175-190	80-95	260-290	210-230	180-195	80-95
Air volume	(m^3/h)	500	500	390	180	500	500	390	180
	(L/s)	139	139	108	50	139	139	108	50
External static pressure	(mmH_2O)	15.3-15.8	6.6-9.2	4.1-6.1	1.0	15.3-15.8	6.6-9.2	4.1-6.1	1.0
	(Pa)	150-155	65-90	40-60	10	150-155	65-90	40-60	10
Temperature exchange efficiency (%)		78.0	78.0	81.0	86.0	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	69.0	69.0	71.0	78.0	—	—	—	—
	Cooling	66.5	66.5	68.0	77.0	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of panel in an anechoeic chamber)		33-34	30.5-32	26.5-28	19	34-35	31-32.5	27-29	19
Weight (kg)		32							
Starting current		Under 3.0 A Less							

*The Air outlets noise (45° angle, 1.5 meters in front of the unit) is about 16 dB greater than the indicated value. (at High Fan speed)

LGH-65RX5-E

Model		LGH-65RX5-E							
Frequency / Power source		50Hz / Single phase 220-240V							
Ventilation mode		LOSSNAY ventilation				By-pass ventilation			
Fan speed		Extra High	High	Low	Extra Low	Extra High	High	Low	Extra Low
Current (A)		1.7-1.8	1.5-1.5	1.2-1.2	0.6-0.6	1.7-1.8	1.5-1.5	1.2-1.2	0.6-0.6
Power consumption (W)		350-380	308-322	248-265	120-140	350-385	310-335	250-265	120-140
Air volume	(m^3/h)	650	650	520	265	650	650	520	265
	(L/s)	181	181	144	74	181	181	144	74
External static pressure	(mmH_2O)	11.2-12.2	6.1-8.2	4.1-5.1	0.8	11.2-12.2	6.1-8.2	4.1-5.1	0.8
	(Pa)	110-120	60-80	40-50	8	110-120	60-80	40-50	8
Temperature exchange efficiency (%)		77.0	77.0	80.0	86.0	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	68.5	68.5	70.5	78.0	—	—	—	—
	Cooling	66.0	66.0	68.5	77.0	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of panel in an anechoeic chamber)		34-34.5	32-33	28.5-31.5	22	34.5-35	32.5-33.5	28.5-30.5	22-22.5
Weight (kg)		40							
Starting current		Under 4.4 A Less							

*The Air outlets noise (45° angle, 1.5 meters in front of the unit) is about 10 dB greater than the indicated value. (at High Fan speed)

LGH-80RX5-E

Model		LGH-80RX5-E							
Frequency / Power source		50Hz / Single phase 220-240V							
Ventilation mode		LOSSNAY ventilation				By-pass ventilation			
Fan speed		Extra High	High	Low	Extra Low	Extra High	High	Low	Extra Low
Current (A)		1.75-1.75	1.6-1.6	1.45-1.45	0.60-0.65	1.75-1.75	1.6-1.6	1.45-1.45	0.60-0.65
Power consumption (W)		380-415	345-370	315-340	125-145	380-415	345-370	315-340	120-145
Air volume	(m^3/h)	800	800	700	355	800	800	700	355
	(L/s)	222	222	194	99	222	222	194	99
External static pressure	(mmH_2O)	14.8-15.3	10.7-12.2	8.2-9.7	2	14.8-15.3	10.7-12.2	8.2-9.7	2
	(Pa)	145-150	105-120	80-95	20	145-150	105-120	80-95	20
Temperature exchange efficiency (%)		79.0	79.0	80.5	87.5	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	71.0	71.0	72.5	79.5	—	—	—	—
	Cooling	70.0	70.0	71.5	79.5	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of panel in an anechoeic chamber)		33.5-34.5	32-33	30-31	22	34.5-35.5	33-34	31-32	22
Weight (kg)		53							
Starting current		Under 3.8 A Less							

*The Air outlets noise (45° angle, 1.5 meters in front of the unit) is about 16 dB greater than the indicated value. (at High Fan speed)



LGH-15~100RX5-E



LGH-150/200RX5-E

LGH-100RX5-E

Model		LGH-100RX5-E							
Frequency / Power source		50Hz / Single phase 220-240V							
Ventilation mode		LOSSNAY ventilation				By-pass ventilation			
Fan speed		Extra High	High	Low	Extra Low	Extra High	High	Low	Extra Low
Current (A)		2.3-2.4	2.1-2.1	1.7-1.7	0.9-0.9	2.3-2.4	2.1-2.1	1.7-1.7	0.9-0.9
Power consumption (W)		500-535	445-475	350-380	175-200	510-550	460-485	365-395	175-200
Air volume	(m^3/h)	1000	1000	755	415	1000	1000	755	415
	(L/s)	278	278	210	115	278	278	210	115
External static pressure	(mmH_2O)	16.3-17.3	10.2-11.2	5.6-6.1	1.8	16.3-17.3	10.2-11.2	5.6-6.1	1.8
	(Pa)	160-170	100-110	55-60	18	160-170	100-110	55-60	18
Temperature exchange efficiency (%)		80.0	80.0	83.0	87.0	—	—	—	—
Enthalpy exchange efficiency (%)	Heating	72.5	72.5	74.0	80.0	—	—	—	—
	Cooling	71.0	71.0	73.0	79.0	—	—	—	—
Noise (dB) (Measured at 1.5m under the center of panel in an anechoeic chamber)		36-37	34-35	31-32.5	21-22	37-38	35-36	32-33	21-22
Weight (kg)		59							
Starting current		Under 4.6 A Less							

*The Air outlets noise (45° angle, 1.5 meters in front of the unit) is about 17 dB greater than the indicated value. (at High Fan speed)

LGH-150RX5-E

Model		LGH-150RX5-E					
Frequency / Power source		50Hz / Single phase 220-240V					
Ventilation mode		LOSSNAY ventilation			By-pass ventilation		
Fan speed		Extra High	High	Low	Extra High	High	Low
Current (A)		3.5-3.5	3.2-3.2	2.9-2.9	3.5-3.5	3.2-3.2	2.9-2.9
Power consumption (W)		760-830	690-740	630-680	765-835	695-745	635-685
Air volume	(m^3/h)	1500	1500	1300	1500	1500	1300
	(L/s)	417	417	361	417	417	361
External static pressure	(mmH_2O)	16.3-17.8	13.3-13.8	9.7-10.2	16.3-17.8	13.3-13.8	9.7-10.2
	(Pa)	160-175	130-135	95-100	160-175	130-135	95-100
Temperature exchange efficiency (%)		80.0	80.0	81.0	—	—	—
Enthalpy exchange efficiency (%)	Heating	72.0	72.0	72.5	—	—	—
	Cooling	70.5	70.5	71.5	—	—	—
Noise (dB) (Measured at 1.5m under the center of panel in an anechoeic chamber)		38-39	36-37.5	33.5-35	39-40.5	37.5-39	35.5-37
Weight (kg)		105					
Starting current		Under 7.3 A Less					

*The Air outlets noise (45° angle, 1.5 meters in front of the unit) is about 19 dB greater than the indicated value. (at High Fan speed)

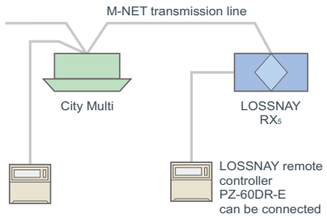
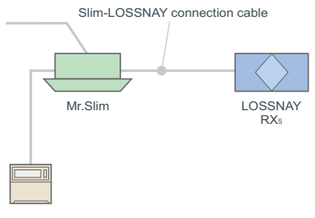
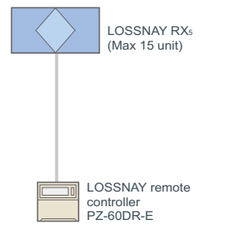
LGH-200RX5-E

Model		LGH-200RX5-E					
Frequency / Power source		50Hz / Single phase 220-240V					
Ventilation mode		LOSSNAY ventilation			By-pass ventilation		
Fan speed		Extra High	High	Low	Extra High	High	Low
Current (A)		4.8-4.8	4.2-4.2	3.4-3.4	4.8-4.8	4.2-4.2	3.4-3.4
Power consumption (W)		1035-1100	910-980	715-785	1040-1110	915-980	720-785
Air volume	(m^3/h)	2000	2000	1580	2000	2000	1580
	(L/s)	556	556	439	556	556	439
External static pressure	(mmH_2O)	16.3-16.8	10.2-10.7	6.1-6.6	16.3-16.8	10.2-10.7	6.1-6.6
	(Pa)	160-165	100-105	60-65	160-165	100-105	60-65
Temperature exchange efficiency (%)		80.0	80.0	83.0	—	—	—
Enthalpy exchange efficiency (%)	Heating	72.5	72.5	73.5	—	—	—
	Cooling	71.0	71.0	72.0	—	—	—
Noise (dB) (Measured at 1.5m under the center of panel in an anechoeic chamber)		39.5-40	37-38	32.5-34	40.5-41	38-39	33.5-35
Weight (kg)		118					
Starting current		Under 11.9A Less					

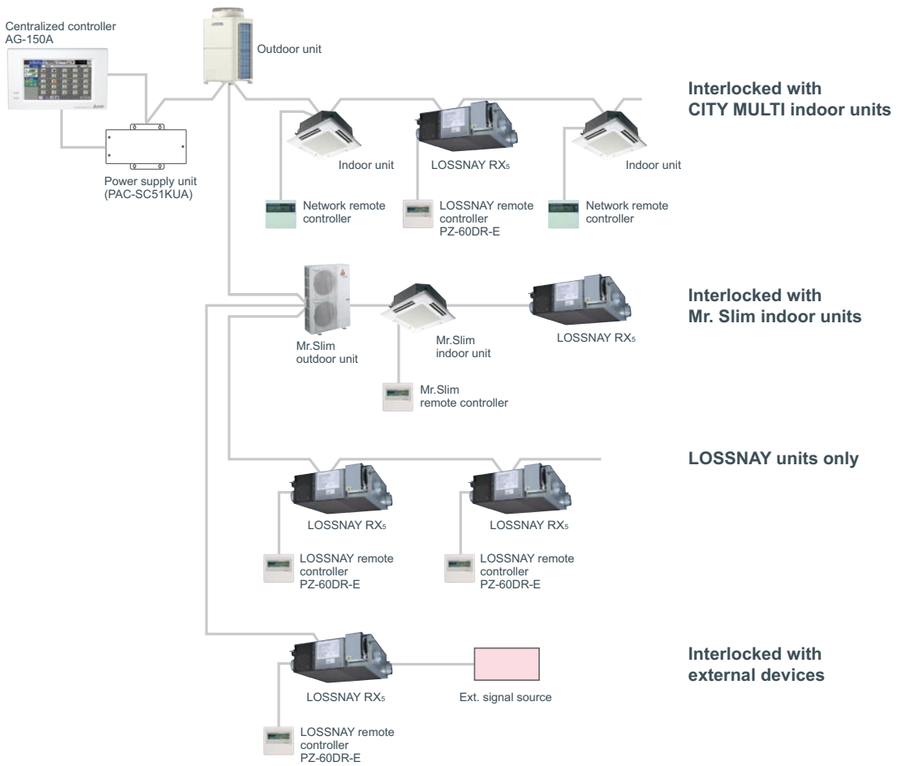
*The Air outlets noise (45° angle, 1.5 meters in front of the unit) is about 20 dB greater than the indicated value. (at High Fan speed)

Control

■The New Remote Controller PZ-60DR-E enable simple control setting

Interlocked with Air conditioners		LOSSNAY independent
Interlocked with City Multi	Interlocked with Mr.Slim	
		
(PZ-52SF-E can be used insted of PZ-60DR-E, However, function is limited and connecting position is different.)	(The LOSSNAY remote controller (PZ-60DR-E, PZ-41SLB-E) can not be used with this system.)	(PZ-41SLB-E can be connected however function is limited.)

■Centralized Controller System



Interlocked with CITY MULTI indoor units

Interlocked with Mr. Slim indoor units

LOSSNAY units only

Interlocked with external devices

Lossnay

VL-100U-E

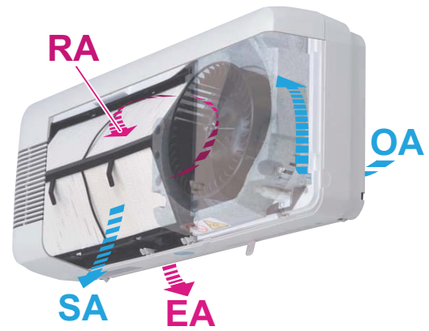


Heat Recovery Ventilators for Residential Use

Time Spent in Comfort with a Breath of Fresh Air

Energy Saving
Reduced heat loss contributes to lower air conditioning costs.

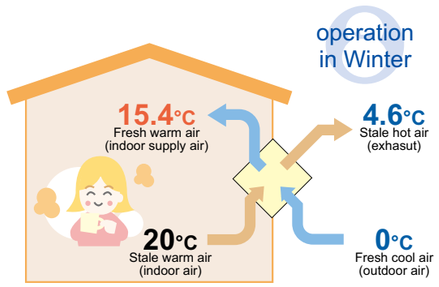
Fresh Air
Simultaneous air supply/exhaust function ensures that air stays fresh with efficient ventilation.

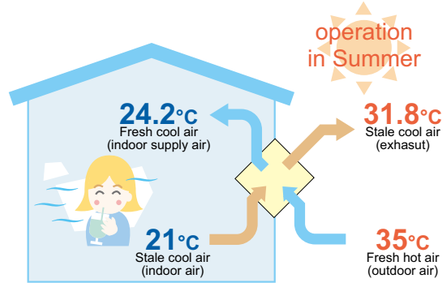


Quiet Operation
Super sound insulation and quiet operation.

Simple Installation
Easy Installation through boring of 2 installation holes.

Total-Heat-Exchange Concept





•Heat-exchange calculating equation

Indoor supply-air temperature (°C) = Outdoor temperature (°C) + { Indoor temperature (°C) − Outdoor temperature (°C) } × temp exchange efficiency (%)

Calculation example : 15.4°C = 0°C + (20°C - 0°C) x 77% (Low notch)

•Heat-exchange calculating equation

Indoor supply-air temperature (°C) = Outdoor temperature (°C) − {Outdoor temperature (°C) − Indoor temperature (°C)} × temp exchange efficiency (%)

Calculation example : 24.2°C = 35°C - (35°C - 21°C) x 77% (Low notch)

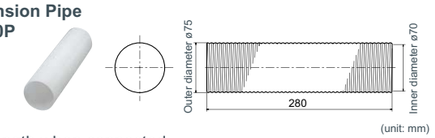
Specification

- •Simple installation through boring of 2 installation holes.
- •Low-noise(Less than 30dB at low notch).
- •1-motor 2-fan system. •Air-volume:low/high 2-notch.
- •Air-supply/exhaust pipes and plastic weather cover are supplied as accessories.
- •Equipped with an outdoor-air shutter. •Pull-string switch

Supply Voltage (V)	Power line frequency (Hz)	Notch	Air volume (m³/h)	Power Consumption (W)	Temp.exchange efficiency (%)	Noise (dB)	Weight (kg)
220-240	50	HI	105	26	70	39	6.5
		LO	65	23	77	29.5	
220	60	HI	90	26	73	37	
		LO	50	21	80	26	

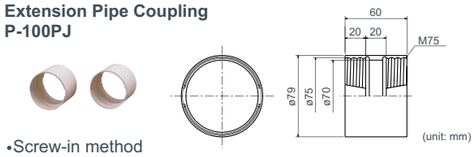
Optional parts

Extension Pipe P-100P



•Total length when connected to the pipe extension coupling is 300mm.

Extension Pipe Coupling P-100PJ



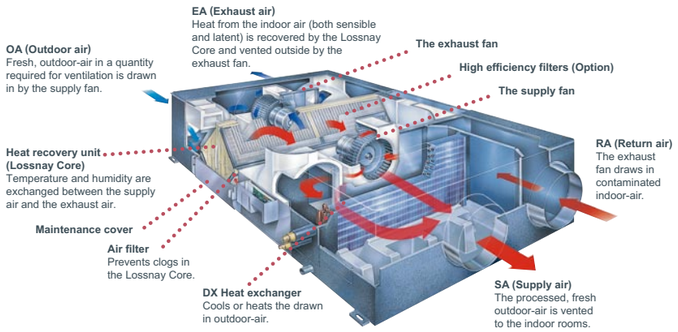
•Screw-in method

OA Processing Units



Ideal Indoor-Air Quality — For Your Comfort and Health

The OA (outdoor-air) Processing Unit creates an optimum indoor-air environment at an unparalleled rate of cost efficiency providing substantial energy savings. Forced air ventilating and humidifying functions unique to this system keep indoor-air fresh and free of contaminants preventing “sick building syndrome” and the spread of airborne viruses such as the flu. Another novel feature of the OA Processing Unit is the “Lossnay core,” a heat-exchange unit that functions to transfer heat efficiently, cutting ventilation load by as much as 70%. This special combination of functionality and performance designed to ensure users ample comfort and year-round health which cannot be found anywhere else on the market.



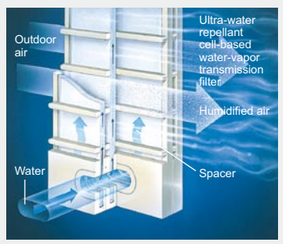
GUF-50RD(H)$_3$ *1
[Cooling Capacity
5.46 (DX coil:3.63, Lossnay:1.83)KW
Heating capacity
6.18 (DX coil:4.17, Lossnay:2.01)KW
500m^3/h Single phase 220-240V 50Hz]

GUF-100RD(H)$_3$ *1
[Cooling Capacity
11.17 (DX coil:7.32, Lossnay3.85)KW
Heating capacity
12.50 (DX coil:8.30, Lossnay:4.20)KW
1000m^3/h Single phase 220-240V 50Hz]
*1 H : Humidifying Type

New Permeable Film Humidifier (RDH$_3$ model)

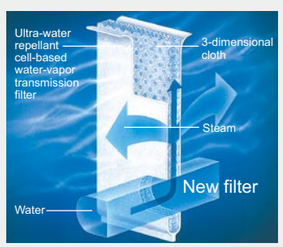
Comfortable Level of Humidity for Exceptionable Air Quality

The OA Processing Unit is equipped with a new permeable film humidifier developed and patented by Mitsubishi Electric. Steam transmission efficiency has been improved remarkably by lowering the resistance of the material. The use of a 3-layer film that allows only the transfer of steam prevents the production of white powder, so there is no need for the use of a water purifier.



Highly Efficient Humidification

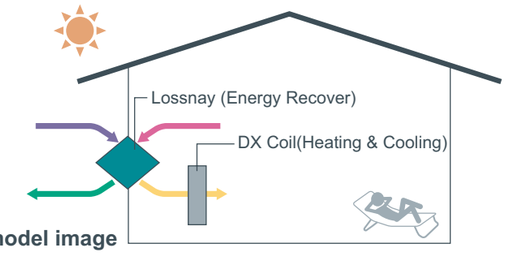
Improvements in the system of airflow patterns and water injection techniques have resulted in a substantial increase in humidifying volume.



RDH3 SERIES
OUTDOOR AIR PROCESSING UNIT GUF type

General

GUF - For the finest indoor quality
GUF = [LOSSNAY] + [HEATING & COOLING]



GUF model image

Specification

Model			GUF-50RDH$_3$ *3		GUF-100RDH$_3$ *3		GUF-50RD$_3$		GUF-100RD$_3$	
Power source			1-phase 220-240V 50Hz							
Cooling capacity *1		kW	5.46	<1.83>	11.17	<3.85>	5.46	<1.83>	11.17	<3.85>
Figure in < > is the recovery *1		kcal / h	4,700	<1,600>	9,600	<3,300>	4,700	<1,600>	9,600	<3,300>
capacity by LOSSNAY core. *1		BTU / h	18,600	<6,200>	38,100	<13,100>	18,600	<6,200>	38,100	<13,100>
	Power input	kW	235-265		480-505		235-265		480-505	
	Current input	A	1.15		2.20		1.15		2.20	
Heating capacity *2		kW	6.18	<2.01>	12.50	<4.20>	6.18	<2.01>	12.50	<4.20>
Figure in < > is the recovery *2		kcal / h	5,300	<1,700>	10,800	<3,600>	5,300	<1,700>	10,800	<3,600>
capacity by LOSSNAY core. *2		BTU / h	21,100	<6,900>	42,700	<14,300>	21,100	<6,900>	42,700	<14,300>
	Power input	kW	235-265		480-505		235-265		480-505	
	Current input	A	1.15		2.20		1.15		2.20	
Capacity equivalent to indoor unit			P32		P63		P32		P63	
Humidifying capacity		kg / h	2.7		5.4		-		-	
		lbs / h	6.0		12.0		-		-	
	Humidifier		Permeable film humidifier				-			
External finish			Galvanized, with grey insulation sheet							
External dimension H x W x D		mm	317 x 1,016 x 1,288		398 x 1,231 x 1,580		317 x 1,016 x 1,288		398 x 1,231 x 1,580	
		in.	12-1/2 x 40 x 50-3/4		15-11/16 x 48-1/2 x 62-1/4		12-1/2 x 40 x 50-3/4		15-11/16 x 48-1/2 x 62-1/4	
Net weight		kg (lbs)	57 (126)		98 (217)		54 (120)		92 (203)	
Heat	LOSSNAY core		Partition, Cross-flow structure, Special preserved paper-plate.							
exchanger	Refrigerant coil		Cross fin (Aluminum fin and copper tube)							
FAN	Type x Quantity		SA: Centrifugal fan (Sirocco fan) x 1							
			EA: Centrifugal fan (Sirocco fan) x 1							
	External static press.	Pa	125		135		140		140	
		mmH$_2$O	12.7		13.8		14.3		14.3	
	Motor type		Totally enclosed capacitor permanent split-phase induction motor, 4 poles, 2units							
	Motor output	kW	-		-		-		-	
	Driving mechanism		Direct-driven by motor							
	Airflow rate (High value)	m^3 / h	500		1,000		500		1,000	
		L / s	139		139		139		139	
		cfm	294		589		294		589	
Sound pressure level (Low-High) (measured in anechoic room)		dB <A>	33.5-34.5		38-39		33.5-34.5		38-39	
Insulation material			Polyester sheet							
Air filter	Supplying air		Non-woven fabrics filter (Gravitational method 82%) & Optional part: High efficiency filter (Colorimetric method 65%)							
	Exhausting air		Non-woven fabrics filter (Gravitational method 82%)							
Protection device			Fuse							
Refrigerant control device			LEV							
Diameter of refrigerant pipe	Liquid	mm (in.)	ø6.35 (ø1/4) Flare		ø9.52 (ø3/8) Flare		ø6.35 (ø1/4) Flare		ø9.52 (ø3/8) Flare	
	Gas	mm (in.)	ø12.7 (ø1/2) Flare		ø15.88 (ø5/8) Flare		ø12.7 (ø1/2) Flare		ø15.88 (ø5/8) Flare	
Diameter of drain pipe		mm (in.)	VP25							

Notes:

*1 Cooling : Indoor 27°CDB/19°CWB, Outdoor 35°CDB/24°CWB
*2 Heating : Indoor 20°CDB/13.8°CWB, Outdoor 7°CDB/16°CWB
*3 Available for limited countries. Please contact your local distributor for further information.



Outdoor unit

- Heat Pump Series (S)
- Heat Pump Series (Y)



S (Heat Pump) series
Y (Heat Pump) series
Cooling or Heating

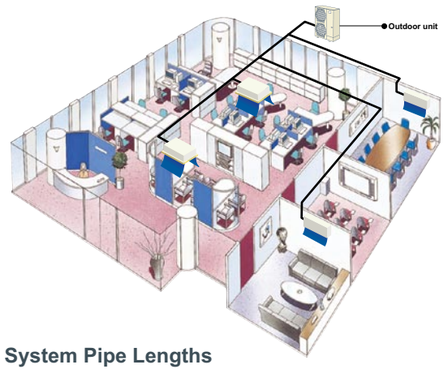
S series — PUMY-P VHMS(R1)(-BS), PUMY-P YHMS(R1)(-BS)

Y series — PUHY-EP YJMS-A(-BS), PUHY-EP YSJMS-A(-BS)

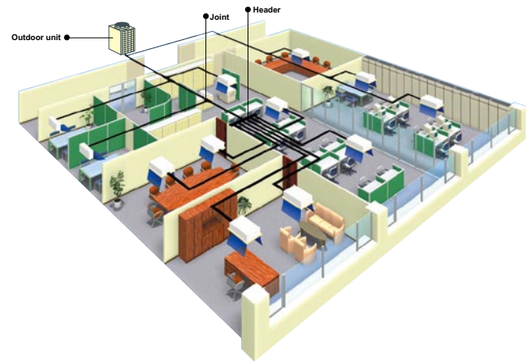
The two-pipe zoned system designed for Heat Pump Operation

The CITY MULTI S series (for small applications) and Y series (for large applications) make use of a two-pipe refrigerant system, which allows for system changeover from cooling to heating, ensuring that a constant indoor climate is maintained in all zones. The compact outdoor unit utilizes R410A refrigerant and an INVERTER-driven compressor to use energy effectively.
With a wide line-up of indoor units in connection with a flexible piping system, the CITY MULTI series can be configured for all applications. Up to 8 (S series) or 50 (Y series) indoor units can be connected with up to 130% connected capacity to maximize engineer's design options. This feature allows easy air conditioning in each area with convenient individual controllers.

Small Offices (S series)



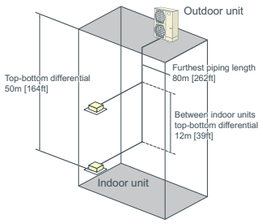
Large Offices (Y series)



System Pipe Lengths

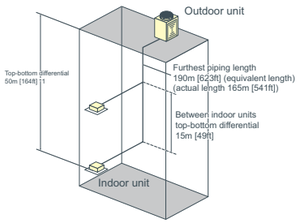
[5-6HP (S series)]

Refrigerant Piping Lengths	Maximum meters [Feet]
Total length	120 [393]
Maximum allowable length	80 [262]
Farthest indoor from first branch	30 [98]
Vertical differentials between units	**Maximum meters [Feet]**
Indoor/outdoor (outdoor higher)	50 [164]
Indoor/outdoor (outdoor lower)	20 [65]
Indoor/indoor	12 [39]



[8-36HP (Y series)]

Refrigerant Piping Lengths	Maximum meters [Feet]
Total length	1,000 [3,280]
Maximum allowable length	165 (190equivalent) [541(623)]
Farthest indoor from first branch	40 [131]
Vertical differentials between units	**Maximum meters [Feet]**
Indoor/outdoor (outdoor higher)	50 [164]*1
Indoor/outdoor (outdoor lower)	40 [131]*1
Indoor/indoor	15 [49]



*1 Depending on the model and installation conditions, top-bottom differential 90m [295ft] (o/u above) and 60m [196ft] (o/u below) is available. For more detailed information, please contact your nearest sales office or distributor.

Common Features in Y (Heat Pump) series

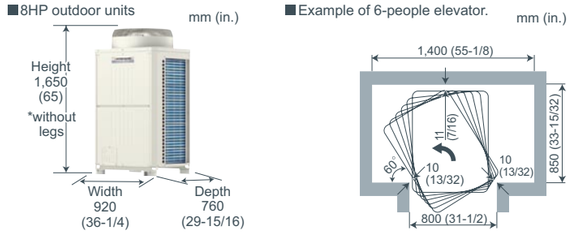
Compact Design
Industry leading weight saving

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



Industry leading space saving

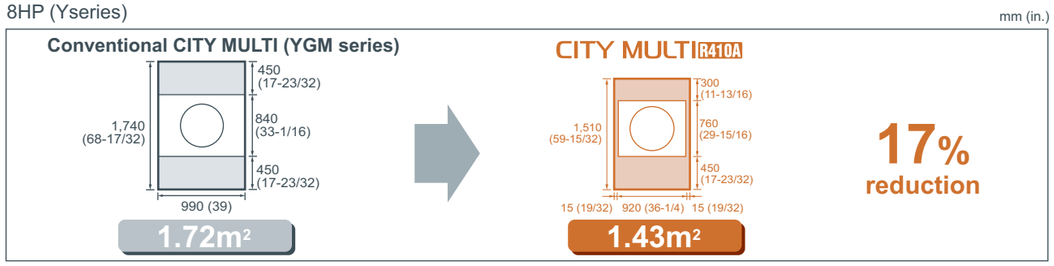
The downsized outdoor unit can be transported through a 800 mm wide door.



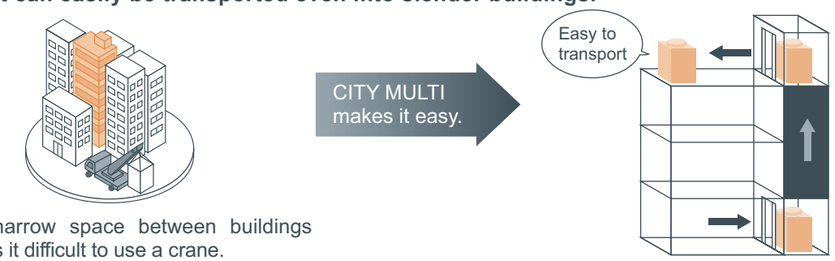
Effective Use of Space

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

8HP (Yseries)



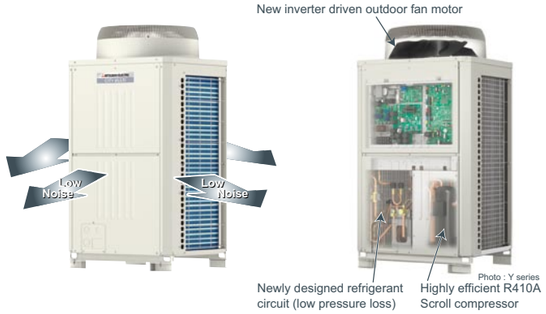
The unit can easily be transported even into slender buildings.



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

Low Noise Levels New Fan Design

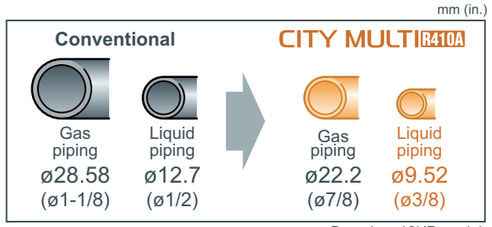
CITY MULTI VRF systems led the introduction of larger single fan motors some ten years ago, achieving substantially lower noise levels over multiple designs.
Continuing the development in the areas of blade shape and weight, Mitsubishi Electric have managed to achieve even higher performance and lower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



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

R410A Pipe Sizing

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

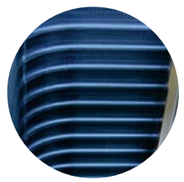


Based on 10HP model

Blue Fin Treatment

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

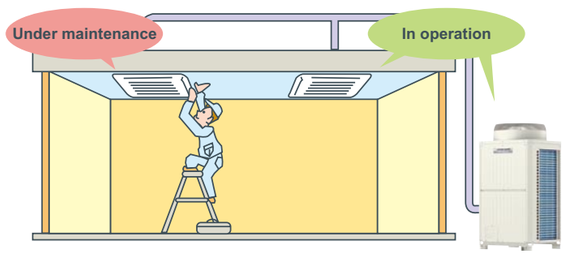
*Standard:Anti-corrosion Blue Fin treatment & copper tube.
BS type (optional):salt-resistant cross fin & copper tube.



Easy Maintenance

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

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



System Check

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

60Pa High Static Pressure as standard

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

Wide selection of outdoor units

Heat Pump Series

S Series (5HP-6HP)

Page77,78

PUMY-P VHMS(R1)(-BS)
PUMY-P YHMS(R1)(-BS)



Model	5HP	6HP
Model Name	PUMY-P125VHMS(R1)(-BS)	PUMY-P140VHMS(R1)(-BS)
	PUMY-P125YHMS(R1)(-BS)	PUMY-P140YHMS(R1)(-BS)

Y Series (8HP-12HP)

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PUHY-EP YJMS-A(-BS)



Model	8HP	10HP	12HP
Model Name	PUHY-EP200YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)

Y Series (16HP-20HP)

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PUHY-EP YSJMS-A(-BS)



Model	16HP	18HP	20HP
Model Name	PUHY-EP400YSJMS-A(-BS)	PUHY-EP450YSJMS-A(-BS)	PUHY-EP500YSJMS-A(-BS)

Y Series (20HP-24HP)

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PUHY-EP YSJMS-A(-BS)
PUHY-EP YSJMS-A1(-BS)



Model	20HP	22HP	24HP
Model Name	PUHY-EP500YSJMS-A1(-BS)	PUHY-EP550YSJMS-A(-BS)	PUHY-EP600YSJMS-A(-BS)

Y Series (26HP-28HP)

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PUHY-EP YSJMS-A(-BS)



Model	26HP	28HP
Model Name	PUHY-EP650YSJMS-A(-BS)	PUHY-EP700YSJMS-A(-BS)

Y Series (28HP-30HP)

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PUHY-EP YSJMS-A(-BS)
PUHY-EP YSJMS-A1(-BS)



Model	28HP	30HP
Model Name	PUHY-EP700YSJMS-A1(-BS)	PUHY-EP750YSJMS-A(-BS)

Y Series (30HP-32HP)

Page84

PUHY-EP YSJMS-A(-BS)
PUHY-EP YSJMS-A1(-BS)



Model	30HP	32HP
Model Name	PUHY-EP750YSJMS-A1(-BS)	PUHY-EP800YSJMS-A(-BS)

* The PUHY-EP-YSJMS-A(1) series requires a Twinning kit (optional). Refer to the data book for details.
* Unit photos are all standard models.

Wide selection of outdoor units

Y Series (32HP-34HP)

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PUHY-EP YSJMS-A(-BS)
PUHY-EP YSJMS-A1(-BS)



Model	32HP	34HP
Model Name	PUHY-EP800YSJMS-A1(-BS)	PUHY-EP850YSJMS-A(-BS)

Y Series (36HP)

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PUHY-EP YSJMS-A(-BS)



Model	36HP
Model Name	PUHY-EP900YSJMS-A(-BS)

* The PUHY-EP-YSJMS-A(1) series requires a Twinning kit (optional). Refer to the data book for details.
* Unit photos are all standard models.

OUTDOOR UNIT
S Series
PUMY-P VHMS(R1)(-BS)



▸Specifications

			PUMY-P125VHMS(R1)(-BS)	PUMY-P140VHMS(R1)(-BS)
Power source			1-phase 220-230-240V 50Hz	
Cooling capacity (Nominal)	*1	kW	14.0	15.5
	*1	BTU/h	47,800	52,900
	Power input	kW	3.77	4.26
	Current input	A	17.3	19.5
	COP (kW/kW)		3.71	3.64
Temp. range of cooling	Indoor	W.B.	15 ~ 24°C (59 ~ 75°F)	
	Outdoor	D.B.	10 ~ 46°C (50 ~ 115°F) In case of connecting fresh air type indoor unit : 21 to 43°CD.B. (70 to 109°FD.B.), 15.5 to 35°CW.B. (60 to 95°FW.B.) for P80 / 140	
Heating capacity (Nominal)	*2	kW	16.0	18.0
	*2	BTU/h	54,600	61,400
	Power input	kW	3.96	4.61
	Current input	A	18.1	21.1
	COP (kW/kW)		4.04	3.9
Temp. range of heating	Indoor temp.	D.B.	15 ~ 27°C (59 ~ 81°F)	
	Outdoor temp.	W.B.	0 ~ 15°C (32 ~ 59°F) In case of connecting fresh air type indoor unit : 0 to 20°CD.B. (32 to 68°FD.B.) for P80, 5 to 20°CD.B. (41 to 68°FD.B.) for P140	
Indoor unit connectable	Total capacity		50 ~ 130% of outdoor unit capacity	
	Model/Quantity		P15 ~ P140 / 1 ~ 8	P15 ~ P140 / 1 ~ 8
Sound pressure level (measured in anechoic room)		dB<A>	50 / 52	51 / 53
Diameter of refrigerant pipe	Liquid (High press.)	mm(in.)	ø9.52 (ø3/8)	ø9.52 (ø3/8)
	Gas (Low press.)	mm(in.)	ø15.88 (ø5/8)	ø15.88 (ø5/8)
External finish			<MUNSELL 3Y 7.8/1.1>	
External dimension H x W x D		mm (in.)	1,350 x 950 x 330 (53-3/16 x 37-7/16 x 13)	1,350 x 950 x 330 (53-3/16 x 37-7/16 x 13)
Net weight		kg (lbs)	136 (300)	136 (300)
Heat exchanger			Plate fin coil (Anti corrosion fin treatment)	
Compressor	Type		Hermetic	
	Starting method		Inverter	
	Motor output	kW	2.6	3.0
FAN	Air flow rate	m^3/min	90	90
		L/s	1,500	1,500
		cfm	3,178	3,178
	Type x Quantity		Propeller fan x 2	Propeller fan x 2
	Motor output	kW	0.06 x 2	0.06 x 2
Protection	High pressure protection		High pressure switch	
	Fan motor protection		Overheating / Voltage protection	
	Compressor		Dischagre thermo (VHMS), Compressor thermo (VHMSR1), Over-current protection	
Refrigerant	Type x Original charge		R410A x 9.1kg (20 lbs)	R410A x 9.1kg (20 lbs)

Notes:

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

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

OUTDOOR UNIT
S Series
PUMY-P YHMS(R1)(-BS)



▸Specifications

			PUMY-P125YHMS(R1)(-BS)	PUMY-P140YHMS(R1)(-BS)
Power source			3-phase, 380-400-415V, 50Hz	
Cooling capacity (Nominal)	*1	kW	14.0	15.5
	*1	BTU/h	47,800	52,900
	Power input	kW	3.77	4.26
	Current input	A	5.73	6.47
	COP (kW/kW)		3.71	3.64
Temp. range of cooling	Indoor	W.B.	15 ~ 24°C (59~75°F)	
	Outdoor	D.B.	10 ~ 46°C (50~115°F) In case of connecting fresh air type indoor unit : 21 to 43°CD.B. (70 to 109°FD.B.), 15.5 to 35°CW.B. (60 to 95°FW.B.) for P80 / 140	
Heating capacity (Nominal)	*2	kW	16.0	18.0
	*2	BTU/h	54,600	61,400
	Power input	kW	3.96	4.61
	Current input	A	6.02	7.00
	COP (kW/kW)		4.04	3.9
Temp. range of heating	Indoor temp.	D.B.	15~27°C (59~81°F)	
	Outdoor temp.	W.B.	0~15°C (32~59°F) In case of connecting fresh air type indoor unit : 0 to 20°CD.B. (32 to 68°FD.B.) for P80, 5 to 20°CD.B. (41 to 68°FD.B.) for P140	
Indoor unit connectable	Total capacity		50 ~ 130% of outdoor unit capacity	
	Model/Quantity		P15 ~ P140 / 1 ~ 8	P15 ~ P140 / 1 ~ 8
Sound pressure level (measured in anechoic room)		dB<A>	50/52	51/53
Diameter of refrigerant pipe	Liquid	mm(in.)	ø9.52 (ø3/8)	
	Gas	mm(in.)	ø15.88 (ø5/8)	
External finish			<MUNSELL 3Y 7.8/1.1>	
External dimension H x W x D		mm (in.)	1,350 x 950 x 330 (53-3/16 x 37-7/16 x 13)	
Net weight		kg (lbs)	149 (328)	
Heat exchanger			Plate fin coil (Anti corrosion fin treatment)	
Compressor	Type		Hermetic	
	Starting method		Inverter	
	Motor output	kW	2.6	3.0
FAN	Air flow rate	m^3/min	90	
	Type x Quantity		Propeller fan x 2	
	Motor output	kW	0.06 x 2	
Protection	High pressure protection		High pressure switch	
	Fan motor protection		Overheating / Voltage protection	
	Compressor		Discharge thermo (YHMS), Compressor thermo (YHMSR1), Over-current protection	
Defrosting method			Auto-defrost mode (Reversed refrigerant circle)	
Refrigerant	Type x Original charge		R410A x 9.1kg (20 lbs)	

Notes:

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

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

OUTDOOR UNIT
Y Series
PUHY-EP YJMS-A(-BS)



▸Specifications

Model			PUHY-EP200YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)
Power source			3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz
Cooling capacity (Nominal)	*1	kW	22.4	28.0	33.5
	*1	BTU / h	76,400	95,500	114,300
	Power input	kW	5.60	7.10	8.46
	Current input	A	8.9	11.3	13.5
	COP	kW / kW	4.00	3.94	3.95
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.	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)
Heating capacity (Nominal)	*2	kW	25.0	31.5	37.5
	*2	BTU / h	85,300	107,500	128,000
	Power input	kW	6.20	7.93	9.37
	Current input	A	9.9	12.7	15.0
	COP	kW / kW	4.03	3.97	4.00
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~P250 / 1~17	P15~P250 / 1~21	P15~P250 / 1~26
Sound pressure level (measured in anechoic room)		dB <A>	57	60	61
Power pressure level (measured in anechoic room)		dB <A>	77	80	81
Refrigerant piping diameter	Liquid pipe	mm (in.)	9.52(3/8) Brazed	9.52(3/8) Brazed (12.7(1/2) Brazed,total length >= 90m)	9.52(3/8) Brazed (12.7(1/2) Brazed,total length >= 40m)
	Gas pipe	mm (in.)	19.05(3/4) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 2
	Air flow rate	m^3/min	170	210	370
		L/s	2,833	3,500	6,167
		cfm	6,003	7,415	13,065
	Driving mechanism		Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor	Inverter-control, Direct-driven by motor
	Motor output	kW	0.46 x 1	0.46 x 1	0.46 x 2
*3	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor	Inverter scroll hermetic compressor	Inverter scroll hermetic compressor
	Starting method		Inverter	Inverter	Inverter
	Motor output	kW	5.4	6.8	7.7
	Case heater	kW	0.035	0.045	0.045
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>
External dimension HxWxD		mm	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,750 x 760
		in.	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)	High pressure sensor, High pressure switch at 4.15MPa (601 psi)	High pressure sensor, High pressure switch at 4.15MPa (601 psi)
	Inverter circuit (FAN)		Over-current protection	Over-current protection	Over-current protection
	Fan motor		Thermal switch	Thermal switch	Thermal switch
Refrigerant	Type x original charge		R410A x 8.0kg (18lbs)	R410A x 11.5kg (26lbs)	R410A x 11.8kg (27lbs)
Net weight		kg (lbs)	200(441)	250(552)	290(640)
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-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G	Joint: CMY-Y102SS/LS-G2 Header: CMY-Y104/108/1010-G

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 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 specification may be subject to change without notice.

OUTDOOR UNIT
Y Series
PUHY-EP YSJMS-A (-BS)



▸Specifications

Model			PUHY-EP400YSJMS-A(-BS)	PUHY-EP450YSJMS-A(-BS)	PUHY-EP500YSJMS-A(-BS)
Power source			3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz
Cooling capacity (Nominal)	*1	kW	45.0	50.0	56.0
	*1	BTU / h	153,500	170,600	191,100
	Power input	kW	11.30	12.69	14.17
	Current input	A	18.1	20.3	22.7
	COP	kW / kW	3.98	3.94	3.95
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.	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)
Heating capacity (Nominal)	*2	kW	50.0	56.0	63.0
	*2	BTU / h	170,600	191,100	215,000
	Power input	kW	12.46	14.07	15.78
	Current input	A	19.9	22.5	25.3
	COP	kW / kW	4.01	3.98	3.99
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~P250 / 1~34	P15~P250 / 1~39	P15~P250 / 1~43
Sound pressure level (measured in anechoic room)		dB <A>	60	62	62.5
Power pressure level (measured in anechoic room)		dB <A>	80	82	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

Set Model

Model			PUHY-EP200YJMS-A(-BS)	PUHY-EP200YJMS-A(-BS)	PUHY-EP200YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP200YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2
	Air flow rate	m^3/min	170	170	170	210	170	370
		L/s	2,833	2,833	2,833	3,500	2,833	6,167
		cfm	6,003	6,003	6,003	7,415	6,003	13,065
	Driving mechanism		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor	
	Motor output	kW	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 2
*3	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor		Inverter scroll hermetic compressor		Inverter scroll hermetic compressor	
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	5.4	5.4	5.4	6.8	5.4	7.7
	Case heater	kW	0.035	0.035	0.035	0.045	0.035	0.045
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	
External dimension HxWxD		mm	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 1,750 x 760
		in.	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)		High pressure sensor, High pressure switch at 4.15MPa (601 psi)		High pressure sensor, High pressure switch at 4.15MPa (601 psi)	
	Inverter circuit (FAN)		Over-current protection		Over-current protection		Over-current protection	
	Fan motor		Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch
Refrigerant	Type x original charge		R410A x 8.0kg (18lbs)	R410A x 8.0kg (18lbs)	R410A x 8.0kg (18lbs)	R410A x 11.5kg (26lbs)	R410A x 8.0kg (18lbs)	R410A x 11.8kg (27lbs)
Net weight		kg (lbs)	200(441)	200(441)	200(441)	250(552)	200(441)	290(640)
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube	
Pipe between unit and distributor	Liquid pipe	mm (in.)	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	12.7(1/2) Brazed
	Gas pipe	mm (in.)	19.05(3/4) Brazed	19.05(3/4) Brazed	19.05(3/4) Brazed	22.2(7/8) Brazed	19.05(3/4) Brazed	22.2(7/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y100VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G		Outdoor Twinning kit: CMY-Y100VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G		Outdoor Twinning kit: CMY-Y100VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G	

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 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 specification may be subject to change without notice.

OUTDOOR UNIT
Y Series
PUHY-EP YSJMS-A(1)(-BS)



▸Specifications

Model			PUHY-EP500YSJMS-A1(-BS)	PUHY-EP550YSJMS-A(-BS)	PUHY-EP600YSJMS-A(-BS)
Power source			3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz
Cooling capacity (Nominal)	*1	kW	56.0	63.0	69.0
	*1	BTU / h	191,100	215,000	235,400
	Power input	kW	14.28	16.07	17.55
	Current input	A	22.9	25.7	28.1
	COP	kW / kW	3.92	3.92	3.93
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.	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)
Heating capacity (Nominal)	*2	kW	63.0	69.0	76.5
	*2	BTU / h	215,000	235,400	261,000
	Power input	kW	15.94	17.38	19.22
	Current input	A	25.5	27.8	30.8
	COP	kW / kW	3.95	3.97	3.98
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~P250 / 1~43	P15~P250 / 1~47	P15~P250 / 1~50
Sound pressure level (measured in anechoic room)		dB <A>	63	63.5	64
Power pressure level (measured in anechoic room)		dB <A>	83	83.5	84
Refrigerant piping diameter	Liquid pipe	mm (in.)	15.88(5/8) Brazed	15.88(5/8) Brazed	15.88(5/8) Brazed
	Gas pipe	mm (in.)	28.58(1-1/8) Brazed	28.58(1-1/8) Brazed	28.58(1-1/8) Brazed

Set Model

Model			PUHY-EP250YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Air flow rate	m^3/min	210	210	210	370	370	370
		L/s	3,500	3,500	3,500	6,167	6,167	6,167
		cfm	7,415	7,415	7,415	13,065	13,065	13,065
	Driving mechanism		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor		Inverter-control, Direct-driven by motor	
	Motor output	kW	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 2	0.46 x 2	0.46 x 2
*3	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor		Inverter scroll hermetic compressor		Inverter scroll hermetic compressor	
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	6.8	6.8	6.8	7.7	7.7	7.7
	Case heater	kW	0.045	0.045	0.045	0.045	0.045	0.045
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>	
External dimension HxWxD		mm	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,750 x 760	1,710(1,650 without legs) x 1,750 x 760	1,710(1,650 without legs) x 1,750 x 760
		in.	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)		High pressure sensor, High pressure switch at 4.15MPa (601 psi)		High pressure sensor, High pressure switch at 4.15MPa (601 psi)	
	Inverter circuit (FAN)		Over-current protection		Over-current protection		Over-current protection	
	Fan motor		Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch
Refrigerant	Type x original charge		R410A x 11.5kg (26lbs)	R410A x 11.5kg (26lbs)	R410A x 11.5kg (26lbs)	R410A x 11.8kg (27lbs)	R410A x 11.8kg (27lbs)	R410A x 11.8kg (27lbs)
Net weight		kg (lbs)	250(552)	250(552)	250(552)	290(640)	290(640)	290(640)
Heat exchanger			Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube		Salt-resistant cross fin & copper tube	
Pipe between unit and distributor	Liquid pipe	mm (in.)	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	12.7(1/2) Brazed	12.7(1/2) Brazed	12.7(1/2) Brazed
	Gas pipe	mm (in.)	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y100VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G		Outdoor Twinning kit: CMY-Y100VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G		Outdoor Twinning kit: CMY-Y100VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S-G2 Header: CMY-Y104/108/1010-G	

Notes:

*1,*2 Nominal conditions

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

*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 specification may be subject to change without notice.

OUTDOOR UNIT
Y Series
PUHY-EP YSJMS-A(-BS)



▸Specifications

Model			PUHY-EP650YSJMS-A(-BS)	PUHY-EP700YSJMS-A(-BS)
Power source			3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz
Cooling capacity (Nominal)	*1	kW	73.0	80.0
	*1	BTU / h	249,100	273,000
	Power input	kW	18.52	20.25
	Current input	A	29.7	32.4
	COP	kW / kW	3.94	3.95
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C(59~75°F)	15.0~24.0°C(59~75°F)
	Outdoor	D.B.	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)
Heating capacity (Nominal)	*2	kW	81.5	88.0
	*2	BTU / h	278,100	300,300
	Power input	kW	20.47	22.05
	Current input	A	32.8	35.3
	COP	kW / kW	3.98	3.99
Temp. range of heating	Indoor	D.B.	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)
Indoor unit connectable	Total capacity		50~130 % of outdoor unit capacity	50~130 % of outdoor unit capacity
	Model / Quantity		P15~P250 / 1~50	P15~P250 / 1~50
Sound pressure level (measured in anechoic room)		dB <A>	63	63.5
Power pressure level (measured in anechoic room)		dB <A>	83	83.5
Refrigerant piping diameter	Liquid pipe	mm (in.)	15.88 (5/8) Brazed	19.05(3/4) Brazed
	Gas pipe	mm (in.)	28.58 (1-1/8) Brazed	34.93(1-3/8) Brazed

Set Model

Model			PUHY-EP200YJMS-A(-BS)	PUHY-EP200YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP200YJMS-A(-BS)	PUHY-EP200YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2
	Air flow rate	m^3/min	170	170	210	170	170	370
		L/s	2,833	2,833	3,500	2,833	2,833	6,167
		cfm	6,003	6,003	7,415	6,003	6,003	13,065
	Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 2
*3	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor			Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	5.4	5.4	6.8	5.4	5.4	7.7
	Case heater	kW	0.035	0.035	0.045	0.035	0.035	0.045
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		
External dimension HxWxD		mm	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 1,750 x 760
		in.	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)			High pressure sensor, High pressure switch at 4.15MPa (601 psi)		
	Inverter circuit (FAN)		Over-current protection			Over-current protection		
	Fan motor		Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch
Refrigerant	Type x original charge		R410A x 8.0kg (18lbs)	R410A x 8.0kg (18lbs)	R410A x 11.5kg (26lbs)	R410A x 8.0kg (18lbs)	R410A x 8.0kg (18lbs)	R410A x 11.8kg (27lbs)
Net weight		kg (lbs)	200(441)	200(441)	250(552)	200(441)	200(441)	290(640)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	12.7(1/2) Brazed
	Gas pipe	mm (in.)	19.05(3/4) Brazed	19.05(3/4) Brazed	22.2(7/8) Brazed	19.05(3/4) Brazed	19.05(3/4) Brazed	22.2(7/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1,*2 Nominal conditions

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

*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 specification may be subject to change without notice.

OUTDOOR UNIT
Y Series
PUHY-EP YSJMS-A(1)(-BS)



▸Specifications

Model			PUHY-EP700YSJMS-A1(-BS)	PUHY-EP750YSJMS-A(-BS)
Power source			3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz
Cooling capacity (Nominal)	*1	kW	80.0	85.0
	*1	BTU / h	273,000	290,000
	Power input	kW	20.40	21.62
	Current input	A	32.7	34.6
	COP	kW / kW	3.92	3.93
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C(59~75°F)	15.0~24.0°C(59~75°F)
	Outdoor	D.B.	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)
Heating capacity (Nominal)	*2	kW	88.0	95.0
	*2	BTU / h	300,300	324,100
	Power input	kW	22.22	23.92
	Current input	A	35.6	38.3
	COP	kW / kW	3.96	3.97
Temp. range of heating	Indoor	D.B.	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)
Indoor unit connectable	Total capacity		50~130 % of outdoor unit capacity	50~130 % of outdoor unit capacity
	Model / Quantity		P15~P250 / 1~50	P15~P250 / 1~50
Sound pressure level (measured in anechoic room)		dB <A>	64	64.5
Power pressure level (measured in anechoic room)		dB <A>	84	84.5
Refrigerant piping diameter	Liquid pipe	mm (in.)	19.05(3/4) Brazed	19.05(3/4) Brazed
	Gas pipe	mm (in.)	34.93(1-3/8) Brazed	34.93(1-3/8) Brazed

Set Model

Model			PUHY-EP200YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP200YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2
	Air flow rate	m^3/min	170	210	210	170	210	370
		L/s	2,833	3,500	3,500	2,833	3,500	6,167
		cfm	6,003	7,415	7,415	6,003	7,415	13,065
	Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 2
*3	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor			Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	5.4	6.8	6.8	5.4	6.8	7.7
	Case heater	kW	0.035	0.045	0.045	0.035	0.045	0.045
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		
External dimension HxWxD		mm	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,750 x 760
		in.	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)			High pressure sensor, High pressure switch at 4.15MPa (601 psi)		
	Inverter circuit (FAN)		Over-current protection			Over-current protection		
	Fan motor		Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch
Refrigerant	Type x original charge		R410A x 8.0kg (18lbs)	R410A x 11.5kg (26lbs)	R410A x 11.5kg (26lbs)	R410A x 8.0kg (18lbs)	R410A x 11.5kg (26lbs)	R410A x 11.8kg (27lbs)
Net weight		kg (lbs)	200(441)	250(552)	250(552)	200(441)	250(552)	290(640)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	12.7(1/2) Brazed
	Gas pipe	mm (in.)	19.05(3/4) Brazed	22.2 (7/8) Brazed	22.2(7/8) Brazed	19.05(3/4) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1,*2 Nominal conditions

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

*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 specification may be subject to change without notice.

OUTDOOR UNIT
Y Series
PUHY-EP YSJMS-A(1)(-BS)



▸Specifications

Model			PUHY-EP750YSJMS-A1(-BS)	PUHY-EP800YSJMS-A(-BS)
Power source			3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz
Cooling capacity (Nominal)	*1	kW	85.0	90.0
	*1	BTU / h	290,000	307,100
	Power input	kW	21.73	22.90
	Current input	A	34.8	36.7
	COP	kW / kW	3.91	3.93
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C(59~75°F)	15.0~24.0°C(59~75°F)
	Outdoor	D.B.	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)
Heating capacity (Nominal)	*2	kW	95.0	100.0
	*2	BTU / h	324,100	341,200
	Power input	kW	24.05	25.12
	Current input	A	38.5	40.2
	COP	kW / kW	3.95	3.98
Temp. range of heating	Indoor	D.B.	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)
Indoor unit connectable	Total capacity		50~130 % of outdoor unit capacity	50~130 % of outdoor unit capacity
	Model / Quantity		P15~P250 / 1~50	P15~P250 / 1~50
Sound pressure level (measured in anechoic room)		dB <A>	65	65
Power pressure level (measured in anechoic room)		dB <A>	85	85
Refrigerant piping diameter	Liquid pipe	mm (in.)	19.05(3/4) Brazed	19.05(3/4) Brazed
	Gas pipe	mm (in.)	34.93(1-3/8) Brazed	34.93(1-3/8) Brazed

Set Model

Model			PUHY-EP250YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP200YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 1	Propeller fan x 2	Propeller fan x 2
	Air flow rate	m^3/min	210	210	210	170	370	370
		L/s	3,500	3,500	3,500	2,833	6,167	6,167
		cfm	7,415	7,415	7,415	6,003	13,065	13,065
	Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 1	0.46 x 2	0.46 x 2
*3	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor			Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	6.8	6.8	6.8	5.4	7.7	7.7
	Case heater	kW	0.045	0.045	0.045	0.035	0.045	0.045
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		
External dimension HxWxD		mm	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 920 x 760	1,710(1,650 without legs) x 1,750 x 760	1,710(1,650 without legs) x 1,750 x 760
		in.	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 36-1/4 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)			High pressure sensor, High pressure switch at 4.15MPa (601 psi)		
	Inverter circuit (FAN)		Over-current protection			Over-current protection		
	Fan motor		Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch
Refrigerant	Type x original charge		R410A x 11.5kg (26lbs)	R410A x 11.5kg (26lbs)	R410A x 11.5kg (26lbs)	R410A x 8.0kg (18lbs)	R410A x 11.8kg (27lbs)	R410A x 11.8kg (27lbs)
Net weight		kg (lbs)	250(552)	250(552)	250(552)	200(441)	290(640)	290(640)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	9.52(3/8) Brazed	12.7(1/2) Brazed	12.7(1/2) Brazed
	Gas pipe	mm (in.)	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed	19.05(3/4) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1,*2 Nominal conditions

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

*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 specification may be subject to change without notice.

OUTDOOR UNIT
Y Series
PUHY-EP YSJMS-A(1)(-BS)



▸Specifications

Model			PUHY-EP800YSJMS-A1(-BS)	PUHY-EP850YSJMS-A(-BS)
Power source			3-phase 4-wire 400V 50Hz	3-phase 4-wire 400V 50Hz
Cooling capacity (Nominal)	*1	kW	90.0	96.0
	*1	BTU / h	307,100	327,600
	Power input	kW	23.01	24.55
	Current input	A	36.9	39.3
	COP	kW / kW	3.91	3.91
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C(59~75°F)	15.0~24.0°C(59~75°F)
	Outdoor	D.B.	-5.0~46.0°C(23~115°F)	-5.0~46.0°C(23~115°F)
Heating capacity (Nominal)	*2	kW	100.0	108.0
	*2	BTU / h	341,200	368,500
	Power input	kW	25.25	27.20
	Current input	A	40.4	43.6
	COP	kW / kW	3.96	3.97
Temp. range of heating	Indoor	D.B.	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)
Indoor unit connectable	Total capacity		50~130 % of outdoor unit capacity	50~130 % of outdoor unit capacity
	Model / Quantity		P15~P250 / 1~50	P15~P250 / 1~50
Sound pressure level (measured in anechoic room)		dB <A>	65	65.5
Power pressure level (measured in anechoic room)		dB <A>	85	85.5
Refrigerant piping diameter	Liquid pipe	mm (in.)	19.05(3/4) Brazed	19.05(3/4) Brazed
	Gas pipe	mm (in.)	34.93(1-3/8) Brazed	41.28(1-5/8) Brazed

Set Model

Model			PUHY-EP250YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)	PUHY-EP250YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)
FAN	Type x Quantity		Propeller fan x 1	Propeller fan x 1	Propeller fan x 2	Propeller fan x 1	Propeller fan x 2	Propeller fan x 2
	Air flow rate	m^3/min	210	210	370	210	370	370
		L/s	3,500	3,500	6,167	3,500	6,167	6,167
		cfm	7,415	7,415	13,065	7,415	13,065	13,065
	Driving mechanism		Inverter-control, Direct-driven by motor			Inverter-control, Direct-driven by motor		
	Motor output	kW	0.46 x 1	0.46 x 1	0.46 x 2	0.46 x 1	0.46 x 2	0.46 x 2
*3	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor			Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter	Inverter	Inverter	Inverter
	Motor output	kW	6.8	6.8	7.7	6.8	7.7	7.7
	Case heater	kW	0.045	0.045	0.045	0.045	0.045	0.045
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		
External dimension HxWxD		mm	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,750 x 760	1,710(1,650 without legs) x 1,220 x 760	1,710(1,650 without legs) x 1,750 x 760	1,710(1,650 without legs) x 1,750 x 760
		in.	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16	67-3/8(65 without legs) x 48-1/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)			High pressure sensor, High pressure switch at 4.15MPa (601 psi)		
	Inverter circuit (FAN)		Over-current protection			Over-current protection		
	Fan motor		Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch	Thermal switch
Refrigerant	Type x original charge		R410A x 11.5kg (26lbs)	R410A x 11.5kg (26lbs)	R410A x 11.8kg (27lbs)	R410A x 11.5kg (26lbs)	R410A x 11.8kg (27lbs)	R410A x 11.8kg (27lbs)
Net weight		kg (lbs)	250(552)	250(552)	290(640)	250(552)	290(640)	290(640)
Heat exchanger			Salt-resistant cross fin & copper tube			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	9.52(3/8) Brazed	9.52(3/8) Brazed	12.7(1/2) Brazed	9.52(3/8) Brazed	12.7(1/2) Brazed	12.7(1/2) Brazed
	Gas pipe	mm (in.)	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G			Outdoor Twinning kit: CMY-Y300VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1,*2 Nominal conditions

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

*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 specification may be subject to change without notice.

OUTDOOR UNIT
Y Series
PUHY-EP YSJMS-A(-BS)



▸Specifications

Model			PUHY-EP900YSJMS-A(-BS)
Power source			3-phase 4-wire 400V 50Hz
Cooling capacity (Nominal)	*1	kW	101.0
	*1	BTU / h	344,600
	Power input	kW	25.76
	Current input	A	41.3
	COP	kW / kW	3.92
Temp. range of cooling	Indoor	W.B.	15.0~24.0°C(59~75°F)
	Outdoor	D.B.	-5.0~46.0°C(23~115°F)
Heating capacity (Nominal)	*2	kW	113.0
	*2	BTU / h	385,600
	Power input	kW	28.39
	Current input	A	45.5
	COP	kW / kW	3.98
Temp. range of heating	Indoor	D.B.	15.0~27.0°C(59~81°F)
	Outdoor	W.B.	-20.0~15.5°C(-4~60°F)
Indoor unit connectable	Total capacity		50~130 % of outdoor unit capacity
	Model / Quantity		P15~P250 / 1~50
Sound pressure level (measured in anechoic room)		dB <A>	66
Power pressure level (measured in anechoic room)		dB <A>	86
Refrigerant piping diameter	Liquid pipe	mm (in.)	19.05(3/4) Brazed
	Gas pipe	mm (in.)	41.28(1-5/8) Brazed

Set Model

Model			PUHY-EP300YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)	PUHY-EP300YJMS-A(-BS)
FAN	Type x Quantity		Propeller fan x 2	Propeller fan x 2	Propeller fan x 2
	Air flow rate	m^3/min	370	370	370
		L/s	6,167	6,167	6,167
		cfm	13,065	13,065	13,065
	Driving mechanism		Inverter-control, Direct-driven by motor		
	Motor output	kW	0.46 x 2	0.46 x 2	0.46 x 2
*3	External static press.		0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)	0 Pa (0 mmH_2O)
Compressor	Type x Quantity		Inverter scroll hermetic compressor		
	Starting method		Inverter	Inverter	Inverter
	Motor output	kW	7.7	7.7	7.7
	Case heater	kW	0.045	0.045	0.045
External finish			Pre-coated galvanized steel sheets (+powder coating for -BS type) <MUNSELL 5Y 8/1 or similar>		
External dimension HxWxD		mm	1,710(1,650 without legs) x 1,750 x 760	1,710(1,650 without legs) x 1,750 x 760	1,710(1,650 without legs) x 1,750 x 760
		in.	67-3/8(65 without legs) x 68-15/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16	67-3/8(65 without legs) x 68-15/16 x 29-15/16
Protection devices	High pressure protection		High pressure sensor, High pressure switch at 4.15MPa (601 psi)		
	Inverter circuit (FAN)		Over-current protection		
	Fan motor		Thermal switch	Thermal switch	Thermal switch
Refrigerant	Type x original charge		R410A x 11.8kg (27lbs)	R410A x 11.8kg (27lbs)	R410A x 11.8kg (27lbs)
Net weight		kg (lbs)	290(640)	290(640)	290(640)
Heat exchanger			Salt-resistant cross fin & copper tube		
Pipe between unit and distributor	Liquid pipe	mm (in.)	12.7(1/2) Brazed	12.7(1/2) Brazed	12.7(1/2) Brazed
	Gas pipe	mm (in.)	22.2(7/8) Brazed	22.2(7/8) Brazed	22.2(7/8) Brazed
Optional parts			Outdoor Twinning kit: CMY-Y300VBK2 Joint: CMY-Y102SS/LS-G2, CMY-Y202S/302S-G2 Header: CMY-Y104/108/1010-G		

Notes:

*1,*2 Nominal conditions

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

*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 specification may be subject to change without notice.



Optional parts

OPTIONAL PARTS FOR INDOOR UNITS

>>4-way cassette type (PLFY-VBM/VCM)

Description	Model	Applicable capacity		Remarks
		VBM	VCM	
Decoration panel	SLP-2AAW / SLP-2ALW	–	P20, P25, P32, P40	SLP-2ALW is for PLFY-P-VCM-E2 or later model only. For more detailed information, please contact your nearest sales office or distributor.
	PLP-6BA	P32, P40, P50, P63, P80, P100, P125	–	
Automatic Filter Elevation Panel	PLP-6BAJ	P32, P40, P50, P63, P80, P100, P125	–	
Multi-functional casement	PAC-SH53TM-E	P32, P40, P50, P63, P80, P100, P125	–	
High-efficiency filter element	PAC-SH59KF-E	P32, P40, P50, P63, P80, P100, P125	–	
Wireless signal receiver	PAR-SA9FA-E	P32, P40, P50, P63, P80, P100, P125	–	
Space panel	PAC-SH48AS-E	P32, P40, P50, P63, P80, P100, P125	–	
"i-see" sensor	PAC-SA1ME-E	P32, P40, P50, P63, P80, P100, P125	–	
Duct flange for fresh air intake	PAC-SH65OF-E	P32, P40, P50, P63, P80, P100, P125	–	
Shutter plate	PAC-SH51SP-E	P32, P40, P50, P63, P80, P100, P125	–	

>>2-way cassette type (PLFY-VLMD)

Description	Model	Applicable capacity
Decoration panel	CMP-40VLW-C	P20, P25, P32, P40
	CMP-63VLW-C	P50, P63
	CMP-100VLW-C	P80, P100
	CMP-125VLW-C	P125
OA duct flange	PAC-KH11OF	P20, P25, P32, P40, P50, P63, P80, P100

>>1-way cassette type(PMFY-VBM)

Description	Model	Applicable capacity
Decoration panel	PMP-40BM	P20, P25, P32, P40

>>Ceiling concealed type (PEFY-VMH(S))

Description	Model	Applicable capacity	Remarks
Drain pump	PAC-KE04DM-F	P40~P250VMH	
	PAC-KE05DM-F	P200, P250VMHS	
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	Necessary when long life filter is used
	PAC-KE80TB-F	P71, P80	
	PAC-KE140TB-F	P100, P125, P140	
	PAC-KE250TB-F	P200, P250	

>>Ceiling concealed type (PEFY-VMA(L))

Description	Model	Applicable capacity
Filter box	PAC-KE91TB-E	P20, P25, P32
	PAC-KE92TB-E	P40,P50
	PAC-KE93TB-E	P63, P71, P80
	PAC-KE94TB-E	P100, P125
	PAC-KE95TB-E	P140

>>Fresh air intake type (PEFY-VMH-E-F)

Description	Model	Applicable capacity
Long life filter	PAC-KE88LAF	P80
	PAC-KE89LAF	P140
	PAC-KE85LAF	P200, P250
Filter box	PAC-KE80TB-F	P80
	PAC-KE140TB-F	P140
	PAC-KE250TB-F	P200/P250
Drain pump	PAC-KE04DM-F	P80, P140, P200, P250

>>Ceiling suspended type (PCFY-VKM)

Description	Model	Applicable capacity
Drain pump kit	PAC-SH83DM-E	P40
	PAC-SH84DM-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

>>Ceiling concealed type (PEFY-VMS1(L))

Description	Model	Applicable capacity	
Drain pump	PAC-KE07DM-E	P15, 20, 25, 32, 40, 50, 63	*For PEFY-VMS1L only
Control box replace kit	PAC-KE70HS-E	P15, 20, 25, 32, 40, 50, 63	

>>Wall mounted type (PKFY-VBM/VHM/VKM)

Description	Model	Applicable capacity
External LEV Box	PAC-SG95LE-E	P15, 20, 25, 32, 40, 50, 63
Drain pump kit	PAC-SH75DM-E	P32, 40, 50
	PAC-SH94DM-E	P63,100



OPTIONAL PARTS FOR OUTDOOR UNITS

>>For PUMY series

Description	Model
Branch Pipe (2 Branch)	CMY-Y62-G-E
Header	CMY-Y64-G-E
Header	CMY-Y68-G-E
Drain Socket	PAC-SG61DS-E
Centralized Drain Pan	PAC-SG64DP-E
Air Protect Guide (2 pcs required)	PAC-SH63AG-E

>>For PUHY series

Description	Model	Remarks
Twinning kit	CMY-Y100VBK2	For PUHY-EP400~EP600
	CMY-Y300VBK2	For PUHY-EP650~EP900
Branch pipe (Joint)	CMY-Y102SS-G2	200 or below (Total capacity of indoor unit)
	CMY-Y102LS-G2	201-400 (Total capacity of indoor unit)
	CMY-Y202S-G2	401-650 (Total capacity of indoor unit)
		The 1st branch of EP400~EP600
	CMY-Y302S-G2	651 or above (Total capacity of indoor unit)
		The 1st branch of EP650~EP900
Branch pipe (Header)	CMY-Y104-G	For 4 branches
	CMY-Y108-G	For 8 branches
	CMY-Y1010-G	For 10 branches

Note : Indoor unit capacities: the capacity of an indoor unit is the same as the number used for its type identification.

OPTIONAL PARTS FOR CONTROL

Model	Description
PAC-SE41TS-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-SA89TA-EP	Timer Adaptor for remote controller
PAC-SC37SA-E	Output signal connector
PAC-SC36NA-E	Input signal connector
PAC-SF46EPA	Transmission booster
LMAP02	Air conditioner interface
PAC-YG11CDA	Electric amount count software
PAC-YG31CDA	BAC net® interface
BAC-HD150	BAC net® and M-NET adapter

Model	Description
PAC-YT41HAA	External input/output adapter for AT-50A
PAC-YG10HA	External input/output adapter for AG-150A
PAC-YG50ECA	Expansion controller for AG-150A
PAC-SC51KUA	Power supply unit for AG-150A / GB-50ADA
PAC-YG81TB	Mounting attachment B type for AG-150A wall-mount installations
PAC-YG83UTB	Electric box for AG-150A wall-embed installations
PAC-YG85KTB	Mounting attachment A type for AG-150A/PAC-SC51KUA wall-mount installations
PAC-YG71CBL	Black surface cover for AG-150A

Maintenance equipment

Maintenance cycle [Note that maintenance cycle does not mean guarantee period.]

The following tables are applicable when using equipment under the conditions below.

- Normal use without frequent START/STOPs (The number of START/STOPs is assumed to be less than 6 times per hour in normal use.)
- Operating hours are assumed to be 10 hours per day/2500 hours per year.

Under the following conditions, equipment may not be able to be used at all, or the maintenance cycle and replacement cycle of equipment may need to be shortened.

- When using equipment in high temperature and humidity or in rapid changes in temperature and humidity
- When using equipment in a big electric change of power voltage, frequency, and waveform distortion (They cannot be used outside of acceptable range.)
- When using equipment installed in a place where there is a lot of vibration
- When using equipment in the air with hazardous gas or oil mist as well as dust, salinity, and sulfur dioxide/ hydrogen sulfide
- When using equipment with frequent START/STOP or long operating hours

Table 1. Maintenance cycle

Major components	Checking cycle	Maintenance cycle	Major components	Checking cycle	Maintenance cycle
Compressor	1 year	20,000 hours	Expansion valve	1 year	20,000 hours
Motor (Fan, Louver, drain pump)		20,000 hours	Valve (solenoid valve, four-way valve)		20,000 hours
Bearing		15,000 hours	Sensor (thermistor, presser sensor)		5 years
Electric board		25,000 hours	Drain pan		8 years
Heat exchanger		5 years			

Note1 This table shows major components. Refer to the maintenance contract for details.
Note2 This maintenance cycle shows a period in which products are expected to require no maintenance. Use this cycle for planning maintenance (budgeting the maintenance expense etc.) Checking/ Maintenance cycle may be shorter than the one on this table depending on the contents of maintenance check contract.

- Sudden unpredictable accident may occur even if check-up is performed.

Replacement cycle of consumable components [Note that replacement cycle does not mean guarantee period.]

Table 2. Replacement cycle

Major components	Checking cycle	Replacement cycle
Long-life filter	1 year	5 years
High-performance filter		1 year
Fan belt		5,000 hours
Smoothing capacitor		10 years
Fuse		10 years
Crank case heater		8 years

Note1 This table shows major components. Refer to the maintenance contract for details.
Note2 This replacement cycle shows a period in which products are expected to require no replacements. Use this cycle for planning maintenance (budgeting expenses for replacing equipments etc.)

for a greener tomorrow

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

FM33568 / ISO 9001;2008

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

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

EC97J1227 051

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

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

⚠ Warning

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

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MEE10K035

New publication effective Jun. 2011
Specifications subject to change without notice