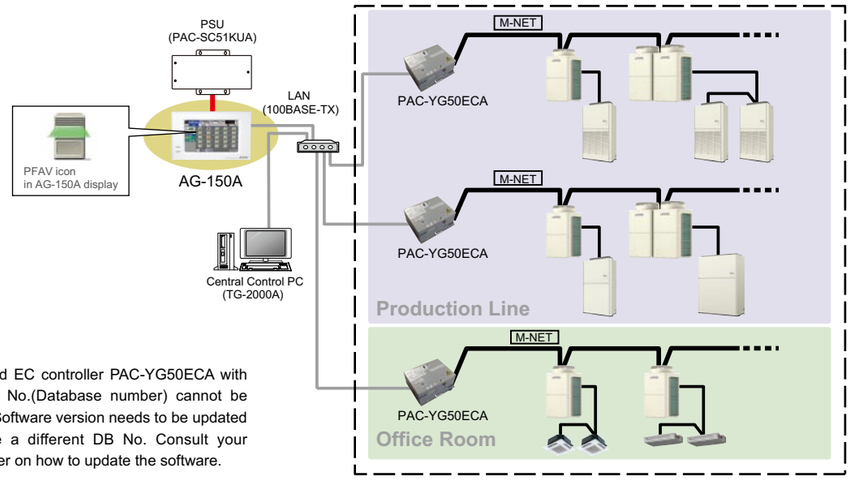
CENTRALIZED CONTROL

With a centralized controller AG-150A, up to 150 units[*1] in the same/different floors of a building can be controlled and monitored at the same time. For example, in factories, PFAV series in production lines and units in office rooms can be centrally controlled with the same AG-150A. By optimizing the performance of all the air conditioners in a building, running costs can be minimized and will result in a constant, comfortable environment.

*1 The number of controllable units differ depending on the indoor unit. PFAV-P750VM-E and P900VM-E-F are counted as 2 units due to the 2 indoor controller board.

Example



* AG-150A and EC controller PAC-YG50ECA with different DB No.(Database number) cannot be connected. Software version needs to be updated if they have a different DB No. Consult your nearest dealer on how to update the software.

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

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

FM33568 / ISO 9001;2008

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

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

EC97J1227 051

⚠NOTICE

■When installing or relocating the air conditioners, use only the specified refrigerant (R410A) to charge the refrigerant lines.
Do not mix any other refrigerant and do not allow air to remain the lines.
If air is mixed with refrigerant, then it can be the cause of abnormal high pressure in the refrigerant lines, and may result in an explosion and other hazards.
The use of any refrigerant other than that specified for the system will cause mechanical failure or system malfunction or unit breakdown.
In the worse case, this could lead to a serious impediment to securing product safety.
MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.

MITSUBISHI ELECTRIC CORPORATION

http://Global.MitsubishiElectric.com

MEE10K036

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

MITSUBISHI ELECTRIC
Changes for the Better

for a greener tomorrow eco Changes

AIR CONDITIONING SYSTEMS

PFAV

PFAV-P250VM-E
PFAV-P500VM-E
PFAV-P750VM-E
PFAV-P300VM-E-F
PFAV-P600VM-E-F
PFAV-P900VM-E-F

(YHA version)



SPECIFICATION

STANDARD model

Model Name	Indoor		PFAV-P250VM-E		PFAV-P500VM-E		PFAV-P750VM-E	
	Outdoor		PUHY-P250YHA(-BS)		PUHY-P500YSHA(-BS) (PUHY-P250YHA(-BS) × 2,CMY-Y100VBK2)		PUHY-P750YSHA (-BS) (PUHY-P350YHA(-BS)+PUHY-P400YHA(-BS),CMY-Y200VBK2)	
Operation			Cooling	Heating	Cooling	Heating	Cooling	Heating
System capacity		kW	25.0 (Maximum28.0)	28.0 (Maximum 31.5)	50.0 (Maximum56.0)	56.0 (Maximum 63.0)	71.0 (Maximum 80.0)	80.0 (Maximum 90.0)
System Power input		kW	7.46 / 7.53	8.27 / 8.34	17.85 / 18.84	17.00 / 17.99	26.33 / 27.40	23.93 / 25.00
System current		A	14.5-13.8-13.3 / 13.4-12.8-12.3	15.8-15.0-14.4 / 14.7-14.0-13.4	32.3-30.7-29.6 / 32.6-31.0-29.9	30.8-29.3-28.2 / 31.1-29.6-28.5	48.1-45.7-44.1 / 47.5-45.1-43.5	43.4-41.2-39.8 / 42.8-40.6-39.2
Power source			3-phase 4-wire 380-400-415V (50Hz / 60Hz)		3-phase 4-wire 380-400-415V (50Hz / 60Hz)		3-phase 4-wire 380-400-415V (50Hz / 60Hz)	
Power input		kW	0.82 / 0.89		2.37 / 3.36		4.30 / 5.37	
Current		A	3.4-3.2-3.1 / 2.3-2.2-2.1		6.2-5.9-5.7 / 6.5-6.2-6.0		10.9-10.4-10.0 / 10.3-9.8-9.4	
Fan	Type × Quantity		Sirocco fan × 2		Sirocco fan × 1		Sirocco fan × 1	
	Airflow rate	m³ / min	90		180		260	
	External static pressure	Pa	30 / 90		30 / 130		100 / 310	
	Motor output	kW	2.2		5.5		7.5	
Refrigerant			R410A		R410A		R410A	
External finish			Galvanized steel plate (with polyester coating)		Galvanized steel plate (with polyester coating)		Galvanized steel plate (with polyester coating)	
			<MUNSEL 5Y 8/1 or similar>		<MUNSEL 5Y 8 / 1 or similar>		<MUNSEL 5Y 8 / 1 or similar>	
External dimension H × W × D		mm	1748 × 1200 × 485		1899 × 1420 × 635		1860 × 1750 × 1064	
Protection devices		Fan motor	Thermal switch		Thermal switch		Thermal switch	
Refrigerant piping diameter	Liquid pipe		9.52 Brazed (12.7 for over 90m)		15.88 Brazed		19.05 Brazed	
	Gas pipe		22.2 Brazed		28.58 Brazed		34.93 Brazed	
Refrigerant piping allowable length		m	165		165		165	
Sound pressure level		dB(A)	55		59 / 62		65	
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)		Cross fin (Aluminum plate fin and copper tube)		Cross fin (Aluminum plate fin and copper tube)	
Air filter			Synthetic fiber unwoven cloth filter		Synthetic fiber unwoven cloth filter		PP Honeycomb fabric filter	
Net weight		kg	156		265		459	
Operating temperature range			Cooling	Heating	Cooling	Heating	Cooling	Heating
			Indoor:10°CWB~25°CWB	Indoor:15°CDB~28°CDB	Indoor:10°CWB~25°CWB	Indoor:15°CDB~28°CDB	Indoor:10°CWB~25°CWB	Indoor:15°CDB~28°CDB
			(Outdoor:-5°CDB~43°CDB)	(Outdoor:-20°CWB~15.5°CWB)	(Outdoor:-5°CDB~43°CDB)	(Outdoor:-20°CWB~15.5°CWB)	(Outdoor:-5°CDB~43°CDB)	(Outdoor:-20°CWB~15.5°CWB)

1. Cooling/Heating capacity indicates the maximum value at operation under the following conditions.
   <Cooling> Indoor:27˚CDB/19˚CWB Outdoor:35˚CDB
   <Heating> Indoor:20˚CDB Outdoor:7˚CDB/6˚CWB
   Pipe length :7.5m,Level difference:0m
2. The sound pressure level is measured in an anechoic room.
3. Long period operation in a high temperature and humidity atmosphere(dew point of 23˚C or more) may cause condensation.
4. Works not included: Installation / foundation work, electric connection work, duct work, insulation work. The power source switch and other items are not specified in the specifications.

FRESH AIR INTAKE model

Model Name	Indoor		PFAV-P300VM-E-F		PFAV-P600VM-E-F		PFAV-P900VM-E-F	
	Outdoor		PUHY-P250YHA(-BS)		PUHY-P500YSHA(-BS) (PUHY-P250YHA(-BS) × 2,CMY-Y100VBK2)		PUHY-P750YSHA(-BS) (PUHY-P350YHA(-BS)+PUHY-P400YHA(-BS),CMY-Y200VBK2)	
Operation			Cooling	Heating	Cooling	Heating	Cooling	Heating
System capacity		kW	28.0 (Maximum 33.5)	26.5 (Maximum 28.0)	56.0 (Maximum 67.0)	50.0 (Maximum 56.0)	80.0 (Maximum 100.0)	71.0 (Maximum 80.0)
System Power input		kW	6.73 / 6.72	7.57 / 7.56	14.69 / 15.05	15.43 / 15.79	22.54 / 22.74	21.43 / 21.63
System current		A	12.6-11.9-11.5 / 12.2-11.5-11.1	14.0-13.3-12.8 / 13.6-12.9-12.4	26.1-24.9-24.0 / 26.2-25.0-24.0	27.4-26.1-25.1 / 27.5-26.2-25.1	40.5-38.5-37.1 / 39.6-37.6-36.2	38.7-36.8-35.5 / 37.8-35.9-34.6
Power source			3-phase 4-wire 380-400-415V (50Hz / 60Hz)		3-phase 4-wire 380-400-415V (50Hz / 60Hz)		3-phase 4-wire 380-400-415V (50Hz / 60Hz)	
Power input		kW	0.37 / 0.36		0.90 / 1.26		1.77 / 1.97	
Current		A	1.9-1.8-1.7 / 1.5-1.4-1.3		2.9-2.8-2.8 / 3.0-2.9-2.8		5.6-5.3-5.1 / 4.7-4.4-4.2	
Fan	Type × Quantity		Sirocco fan × 2		Sirocco fan × 1		Sirocco fan × 1	
	Airflow rate	m³ / min	45		90		120	
	External static pressure	Pa	80		110 / 170		210 / 330	
	Motor output	kW	1.5		2.2		3.7	
Refrigerant			R410A		R410A		R410A	
External finish			Galvanized steel plate (with polyester coating)		Galvanized steel plate (with polyester coating)		Galvanized steel plate (with polyester coating)	
			<MUNSEL 5Y 8 / 1 or similar>		<MUNSEL 5Y 8 / 1 or similar>		<MUNSEL 5Y 8 / 1 or similar>	
External dimension H × W × D		mm	1748 × 1200 × 485		1899 × 1420 × 635		1860 × 1750 × 1064	
Protection devices		Fan motor	Thermal switch		Thermal switch		Thermal switch	
Refrigerant piping diameter	Liquid pipe		9.52 Brazed (12.7 for over 90m)		15.88 Brazed		19.05 Brazed	
	Gas pipe		22.2 Brazed		28.58 Brazed		34.93 Brazed	
Refrigerant piping allowable length		m	165		165		165	
Sound pressure level		dB(A)	48.5		50 / 53		57	
Heat exchanger			Cross fin (Aluminum plate fin and copper tube)		Cross fin (Aluminum plate fin and copper tube)		Cross fin (Aluminum plate fin and copper tube)	
Air filter			Synthetic fiber unwoven cloth filter		Synthetic fiber unwoven cloth filter		PP Honeycomb fabric filter	
Net weight		kg	151		248		437	
Operating temperature range			Cooling	Heating	Cooling	Heating	Cooling	Heating
			Indoor:15°CWB~35°CWB	Indoor:0°CDB~20°CDB	Indoor:15°CWB~35°CWB	Indoor:0°CDB~20°CDB	Indoor:15°CWB~35°CWB	Indoor:0°CDB~20°CDB
			(Outdoor:20°CDB~43°CDB)	(Outdoor:-4°CWB~15.5°CWB)	(Outdoor:20°CDB~43°CDB)	(Outdoor:-4°CWB~15.5°CWB)	(Outdoor:20°CDB~43°CDB)	(Outdoor:-4°CWB~15.5°CWB)

1. Cooling/Heating capacity indicates the maximum value at operation under the following conditions.
   <Cooling> Indoor,Outdoor:33°CDB/28°CWB
   <Heating> Indoor,Outdoor:7°CDB/3°CWB
   Pipe length:7.5m,Level difference:0m
2. The sound pressure level is measured in an anechoic room.
3. The indoor intake air temperature should be kept more than 0°C.
4. At factory setting, the fan temporary stops in defrosting. Change DIP SW for fan to operate in defrosting.
5. Indoor temperature and humidity cannnot be controlled with Fresh air intake type.
6. Works not included: Installation / foundation work, electric connection work, duct work, insulation work. The power source switch and other items are not specified in the specifications.

Optional parts	Description	Model	Applicable capacity
Indoor unit	Plenum chamber	PAC-CC83PL-E	PFAV-P250VM-E
		PAC-CC85PL-E	PFAV-P500VM-E
		PAC-CC87PL-E	PFAV-P750VM-E
Outdoor unit	Twinning kit	CMY-Y100VBK2	PUHY-P500YSHA
		CMY-Y200VBK2	PUHY-P750YSHA

PFAV series

PFAV series is a large capacity floor standing indoor unit with high air flow operation especially designed for various types of large spaced application. The unit is an one-to-one connection unit meaning one indoor is connected to one outdoor unit. The lineup consists of two models; standard model and fresh air intake model, selectable depending on usage .



Adaptable to various applications

With wide range of airflow and static pressure, and piping length up to 165m, PFAV series can provide flexibility in design by adapting to various applications from shops, schools, and to factories.

	Air flow rate	External static pressure
	m³/min	Pa
PFAV-P250VM-E	90	30/90
PFAV-P500VM-E	180	30/130
PFAV-P750VM-E	260	100/310
PFAV-P300VM-E-F	45	80
PFAV-P600VM-E-F	90	110/170
PFAV-P900VM-E-F	120	210/330

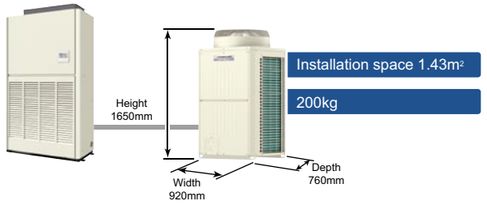
Large capacity indoor unit

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

OUTDOOR UNIT

Compact outdoor unit

PFAV series can only be connected to PUHY-YHA outdoor units. YHA series offers small footprint and lightweight inversely to high heating capacity, which allows easy transportation and saves installation space.



High Reliability

Outdoor heat exchangers have been treated with an anti-corrosion coating ensuring higher resistance against salt damage or air pollution.

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

CONTROL

With the usage of MA controller (PAR-21MAA), which is embedded at the PFAV series, following energy saving functions can be provided.



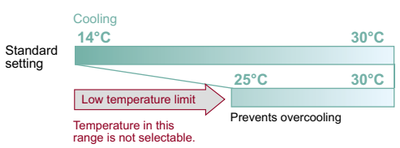
PAR-21MAA

Auto-OFF timer

Automatically switches off based on presetting time. (Preset time can be 30min-4hours, per 30min)

Limiting set temperature range

By limiting lowest / highest temperature, it is possible to save energy when air conditioners are frequently used.



Locking function

To sustain optimal temperature, and prevent operational errors, buttons can be locked to only ON/OFF control.

STANDARD model

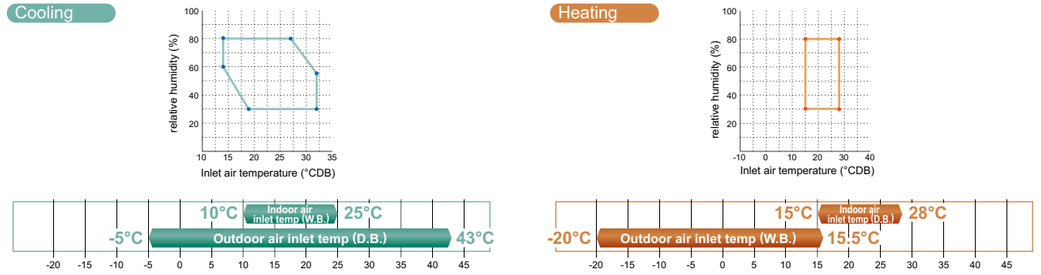
Features

Highly energy efficient with easy installation and maintenance, the standard PFAV model is suitable for working places where large capacity air conditioning is required.

Line up



Wide temperature range



By controlling the air volume of the outdoor unit fan, operation is available even when the outdoor temperature is -5°C for cooling and -20°C for heating.

*In heating operation, operation capacity may fall below the rated capacity in low outdoor temp. / indoor inlet temp. conditions.

FRESH AIR INTAKE model

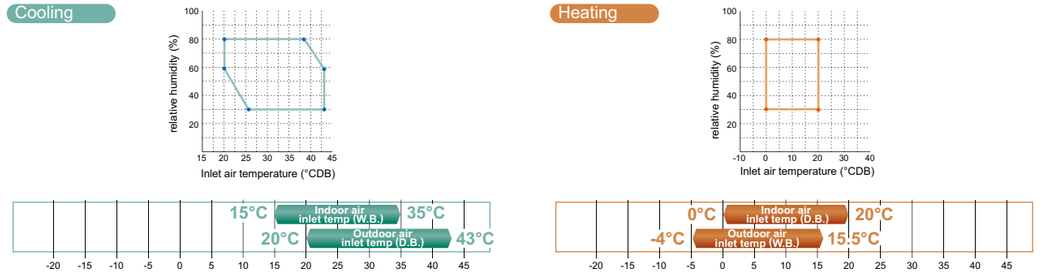
Features

Fresh air intake model takes in fresh air from the outdoor suitable for application such as factories and laboratories where intake of indoor air is not favored.

Line up



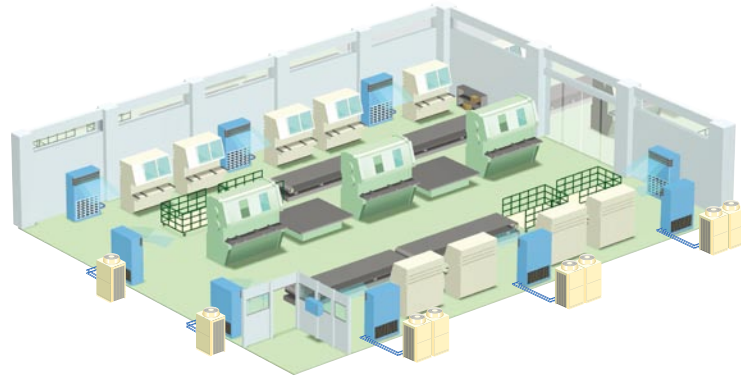
Wide temperature range



Heating operation is available at -4°C Outdoor temperature making it adaptable for places with frequent heating requirements.

APPLICATION

Example 1. Sheet metal processing factory



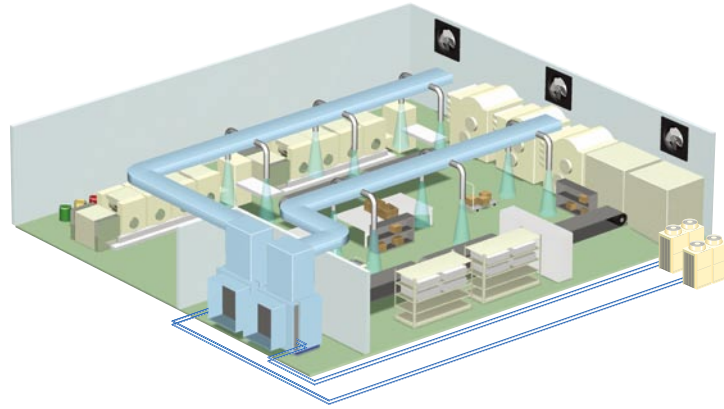
Requirements

Ducts cannot be installed in the ceiling with crane rails. High ceiling and heat generation from equipment need to be considered.

Solution

Floor standing PFAV series with optional plenum chamber.

Example 2. Printing factory



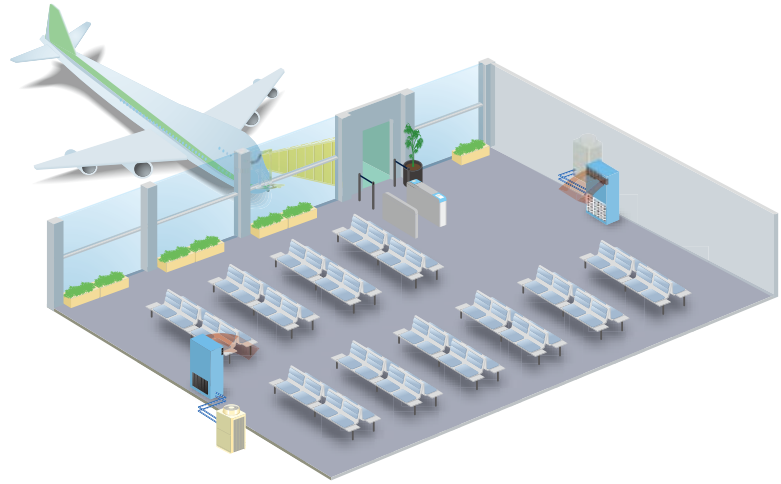
Requirement

Ventilation for ink and heat generation from equipment need to be considered.

Solution

Duct connected PFAV series for total air conditioning.

Example 3. Airport



Requirements

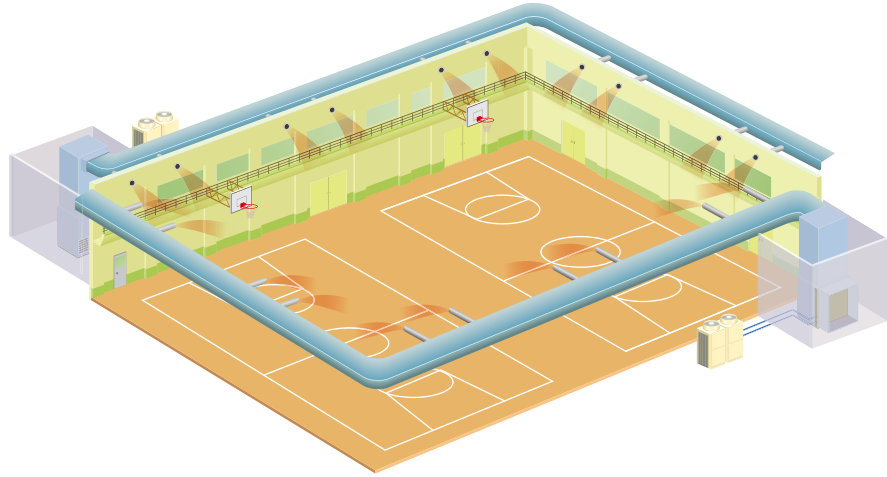
Air conditioning for spacious room.

Easy maintenance even when people are in the room.

Solution

Floor standing PFAV series with optional plenum chamber.

Example 4. Community center



Requirements

Air conditioning for spacious and high ceiling room.

Effective use of space.

Solution

Duct connected floor standing PFAV series.

To secure space, air conditioning is installed in the machine room.