MITSUBISHI ELECTRIC
Changes for the Better

for a greener tomorrow eco Changes



PFAV

CONFIDENTIAL

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What is PFAV units?

PFAV series is a large capacity floor standing indoor unit with high air flow operation specially designed for various types of large spaced application.

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One to one connection unit.

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The range of PFAV series

Fresh Air Units	Cooling Cap (Kw)	Air Flow Rate (CMM)	Ex. Static Pressure (Pa)
PFAV-P250VM-E	28.0	90	30/90
PFAV-P500VM-E	56.0	180	30/130
PFAV-P750VM-E	80.0	260	100/310

Standard Model	Cooling Cap (Kw)	Air Flow Rate (CMM)	Ex. Static Pressure
PFAV-P300VM-E-F	33.5	45	80
PFAV-P600VM-E-F	67.0	90	110/170
PFAV-P900VM-E-F	100	120	210/330

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Model type		Standard type		
Model size		P250	P500	P750
Nominal HP		10HP	20HP	30HP
Nominal cooling cap. *1	kW	25.0	50.0	71.0
Nominal heating cap. *2	kW	28.0	56.0	80.0
Floor standing PFAV-P-VM-E				
Connectable outdoor unit type		PUHY-P250YHA	PUHY-P500YHA	PUHY-P750YHA
Dimension: H (mm) W		**1748mm 1200mm**	**1899mm 1420mm**	**1860mm 1750mm**
D		**485mm**	**635mm**	**1064mm**

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Model type		Fresh air intake type		
Model size		P300	P600	P900
Nominal HP		10HP	20HP	30HP
Nominal cooling cap. *1	kW	28.0	56.0	80.0
Nominal heating cap. *2	kW	26.5	50.0	71.0
Floor standing **PFAV-P-VM-E-F**				
Connectable outdoor unit type		PUHY-P250YHA	PUHY-P500YHA	PUHY-P750YHA
Dimension: H (mm) W		**1748mm 1200mm**	**1899mm 1420mm**	**1860mm 1750mm**
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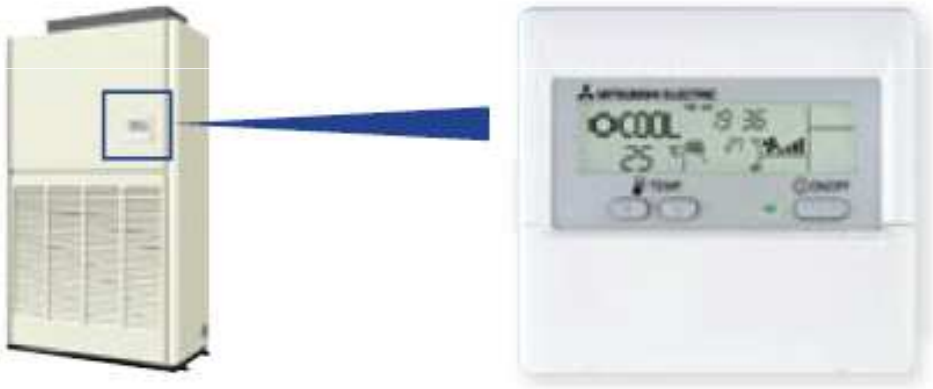
Features

- ✓ Highly Energy Efficient Models
- ✓ R410a Refrigerant
- ✓ Easy Installation and maintenance
- ✓ Compact Outdoor Units which offers small footprint
- ✓ Higher Reliability
- ✓ Wide range of airflow and static pressure and piping length up to 165m
- ✓ Wide Temperature Range (Range from Indoor inlet temp (WB) (10~25DegC) for normal series

  (15~35DegC) for fresh air series
- ✓ Advance controllers

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Control

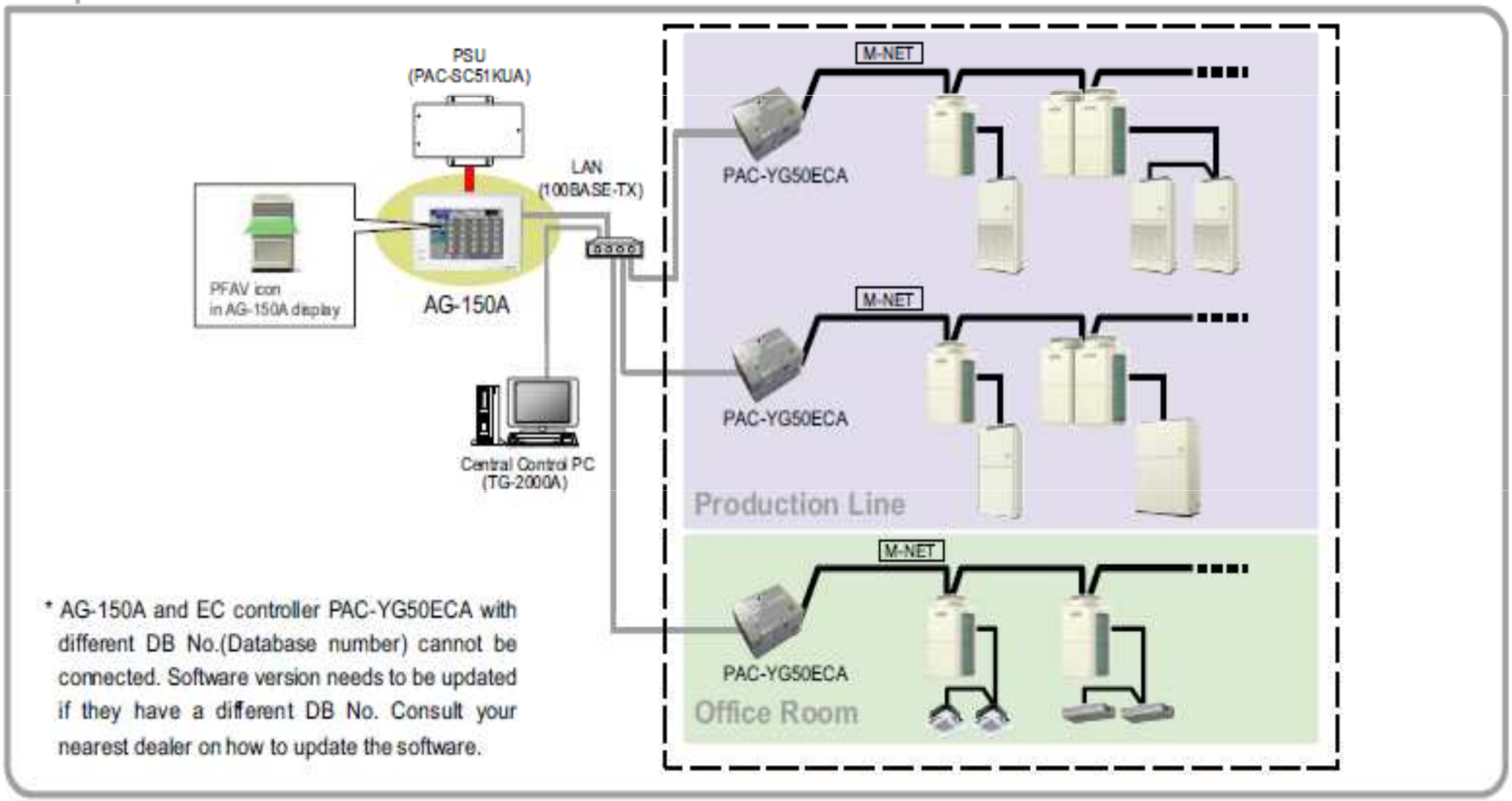


- Auto off Timer
- Limiting set Temperature Range
- Locking Function

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Centralized Controllers

Example

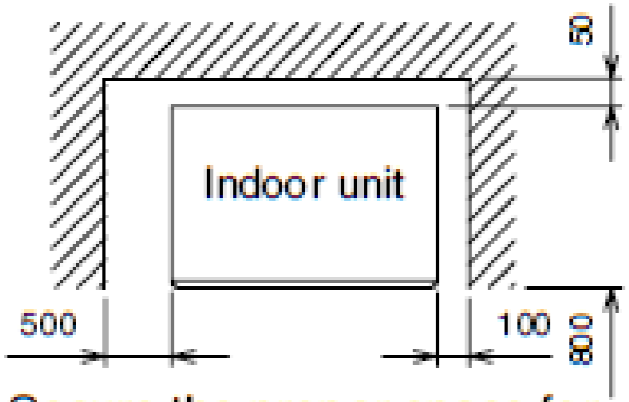


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Installation Guideline

Required space for service and air flow

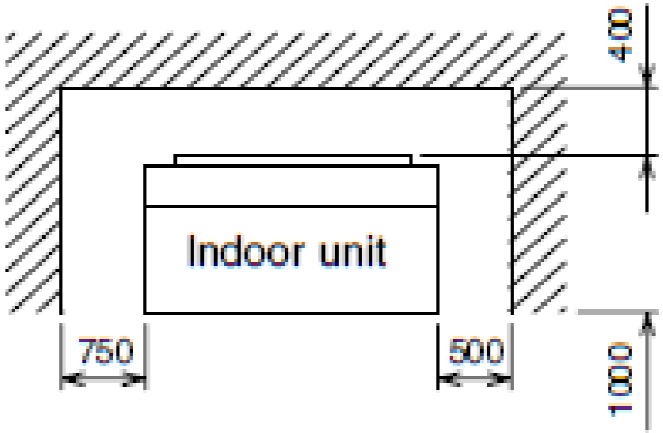
Minimum necessary dimension.



Secure the proper space for installation work such as piping and wiring separately.

Required space for service and air flow

Minimum necessary dimension.

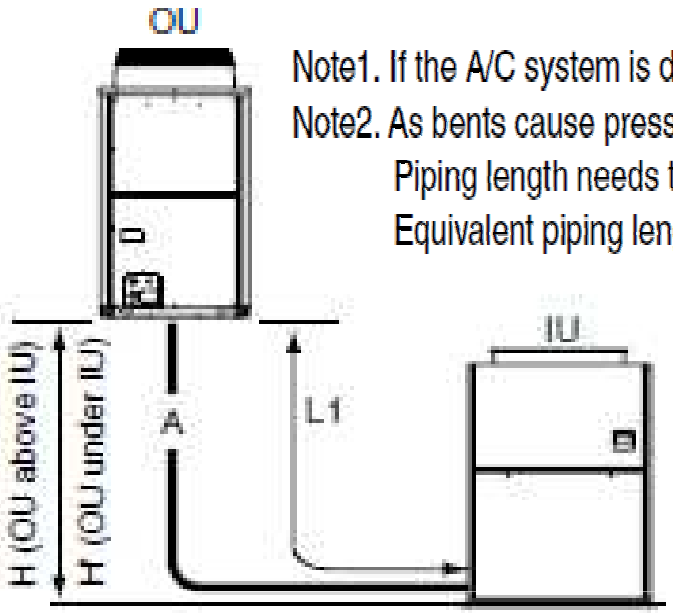


Secure the proper space for installation work such as piping and wiring separately.
Please secure the size of *sign when you serve the air filter from the right side of the main body.

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Design Consideration

(1) PUHY-P250 Piping



Note1. If the A/C system is designed to use cooling mode under outdoor temperature 0˚C, H'<=15m.
Note2. As bents cause pressure loss on transportation of refrigerant, fewer bents design is better;
Piping length needs to consider the actual length and equivalent length which bents are counted.
Equivalent piping length (m)=Actual piping length+"M" x Quantity of bent.

Fig. 2-(1)-A Piping scheme

Table2-(1)-1. Piping length **(m [ft.])**

Item	Piping in the figure	Max. length	Max. equivalent length
Farthest IU from OU (L1)	A	165 [541']	190 [623']
Height between OU and IU (OU above IU)	H	50 [164']	-
Height between OU and IU (OU under IU)	H'	40 [131']	-

OU: Outdoor Unit, IU: Indoor Unit

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Design Consideration

2. Indoor Installation

(1) Requirement on installation site

① In the way that the supply air is evenly distributed throughout the room,

② In a place where the intruding air does not affect the unit's performance,

③ In a place where the flow of supply or return air is not obstructed,

④ In a place where airborne flammable oil droplets or steam are not present,

⑤ In a place where the risk of flammable gas leakage, migration, and/or accumulation is absent,

⑥ In a place where no high-frequency emitting devices are used,

⑦ In the way that the sensor of a fire alarm is not located on the supply air outlet side.
(Heated supply air may trigger a false alarm during heating operation.)

⑧ Do not install the unit in a place where acid solutions are frequently used.

⑨ Do not install the unit in a place where special chemical sprays (e.g., sulfuric gas) are used.

⑩ Do not install the unit in a place where corrosive gas or organic solvents are present.

⑪ In an environment high in oil mist, formic acid that is generated from a mixture of oil and drain water can corrode the copper pipe and seriously shorten its life.

⑫ Corrosive gasses (e.g., sulfuric gas) that are generated in a place where food items are processed and/or stored can damage the indoor unit and seriously shorten its life.

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Design Consideration

<Caution>

- If the units are operated for a long time at the dew point temperature of 23˚C[73˚F] or more, condensate may collect and drip from the indoor units. If the units are operated under such conditions, cover the entire surface of all indoor units with insulating materials with a thickness of between 10 mm[7/16 in.] and 20 mm[13/16 in.] to prevent condensate from collecting.
- Indoor units that are installed in a machine room and connected to an adjacent room with a duct may collect condensate if the temperature and humidity in the machine room rise high enough. If this situation happens, circulate the air in the machine room and in the adjacent room to lower the temperature and humidity in the machine room.
- If the unit is installed in a room with good airtightness, negative pressure may be created in the room, which can hold the door shut. Create an air passage to prevent negative pressure from developing in the room.

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