

AIR CONDITIONING SYSTEMS

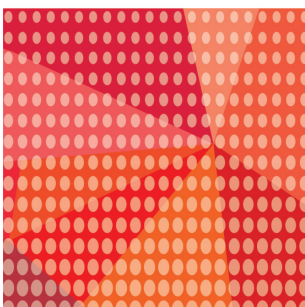
HYBRID
CITY MULTI



DATA BOOK

MODEL

PFFY-W-VCM-A



PFFY-W-VCM-A

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1. SPECIFICATIONS

Floor standing (Concealed type)

PFFY-W-VCM-A

Model			PFFY-W20VCM-A	PFFY-W25VCM-A	PFFY-W32VCM-A	PFFY-W40VCM-A	
Power source			1-phase 220-230-240 V 50/60 Hz	1-phase 220-230-240 V 50/60 Hz	1-phase 220-230-240 V 50/60 Hz	1-phase 220-230-240 V 50/60 Hz	
Cooling capacity (Nominal)	*1	kW	2.2	2.8	3.6	4.5	
	*1	kcal/h	1,900	2,400	3,100	3,900	
	*1	BTU/h	7,500	9,600	12,300	15,400	
	*2	Power input	kW	0.022	0.029	0.035	0.038
	*2	Current input	A	0.25	0.33	0.38	0.38
Heating capacity (Nominal)	*3	kW	2.5	3.2	4.0	5.0	
	*3	kcal/h	2,200	2,800	3,400	4,300	
	*3	BTU/h	8,500	10,900	13,600	17,100	
	*2	Power input	kW	0.022	0.029	0.035	0.038
	*2	Current input	A	0.25	0.33	0.38	0.38
External finish			Galvanized steel plate	Galvanized steel plate	Galvanized steel plate	Galvanized steel plate	
External dimension H x W x D							
			*4 mm	615 (690) x 700 x 200	615 (690) x 700 x 200	615 (690) x 700 x 200	
			*4 in.	24-1/4 (27-3/16) x 27-9/16 x 7-7/8	24-1/4 (27-3/16) x 27-9/16 x 7-7/8	24-1/4 (27-3/16) x 35-7/16 x 7-7/8	
Net weight			kg (lbs)	18.5 (42)	18.5 (42)	19 (42)	
Heat exchanger			Cross fin (Aluminum fin and copper tube)				
Water Volume			L	0.8	0.8	1.0	
FAN	Type x Quantity		Sirocco fan x 2				
	*5 External static press.	Pa	<0> - 10 - <40> - <60>				
		mmH ₂ O	<0.0> - 1.0 - <4.1> - <6.1>				
	Motor Type		DC motor				
	Motor output		kW				
	Driving mechanism		Direct-driven by motor				
	Air flow rate		(Low-Mid-High)				
			m ³ /min				
			L/s				
			cfm				
Sound pressure level (measured in anechoic room)			(Low-Mid-High)				
			*2 dB <A>				
Insulation material			Polystyrene foam, Polyethylene foam, Urethane foam				
Air filter			PP honeycomb fabric.				
Protection device			Fuse				
Refrigerant control device			Flow control valve				
Connectable outdoor unit/HBC controller/Hydro unit			HYBRID CITY MULTI/CMB-WM-V-AA, CMB-WM-V-AB/CMH-WM-V-A				
Water piping diameter	Connection size	Inlet	mm O.D.	22	22	22	
		Outlet	mm O.D.	22	22	22	
	*6 *7 Field pipe size	Inlet	mm I.D.	20	20	20	
		Outlet	mm I.D.	20	20	20	
Field drain pipe size			mm (in.)				
			O.D.32 (1-1/4)				
Drawing	External		KL94T470, KL94R952				
	Wiring		KL94R951				
	Refrigerant cycle		-				
Standard attachment	Document		Installation Manual, Instruction Book				
	Accessory		Washer, Drain hose, Tie band, Leg, Screw				
Optional parts							
Remarks			* Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. * Due to continuing improvement, above specifications may be subject to change without notice.				

Notes:	Unit converter
1. Nominal cooling conditions Indoor: 27°C D.B./19°C W.B. (81°F D.B./66°F W.B.), Outdoor: 35°C D.B. (95°F D.B.) Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)	kcal = kW x 860
2. The values are measured at the factory setting of external static pressure.	BTU/h = kW x 3,412
3. Nominal heating conditions Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.) Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)	cfm = m ³ /min x 35.31
4. The values in () show the height of unit with leg.	lbs = kg/0.4536
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.	
6. Be sure to install a valve on the water inlet/outlet.	*Above specification data is
7. Install a strainer (40 mesh or more) on the pipe next to the valve to remove the foreign matters.	subject to rounding variation.
8. Please group units that operate on 1 branch of HBC controller.	

1. SPECIFICATIONS

Floor standing (Concealed type)

PFFY-W-VCM-A

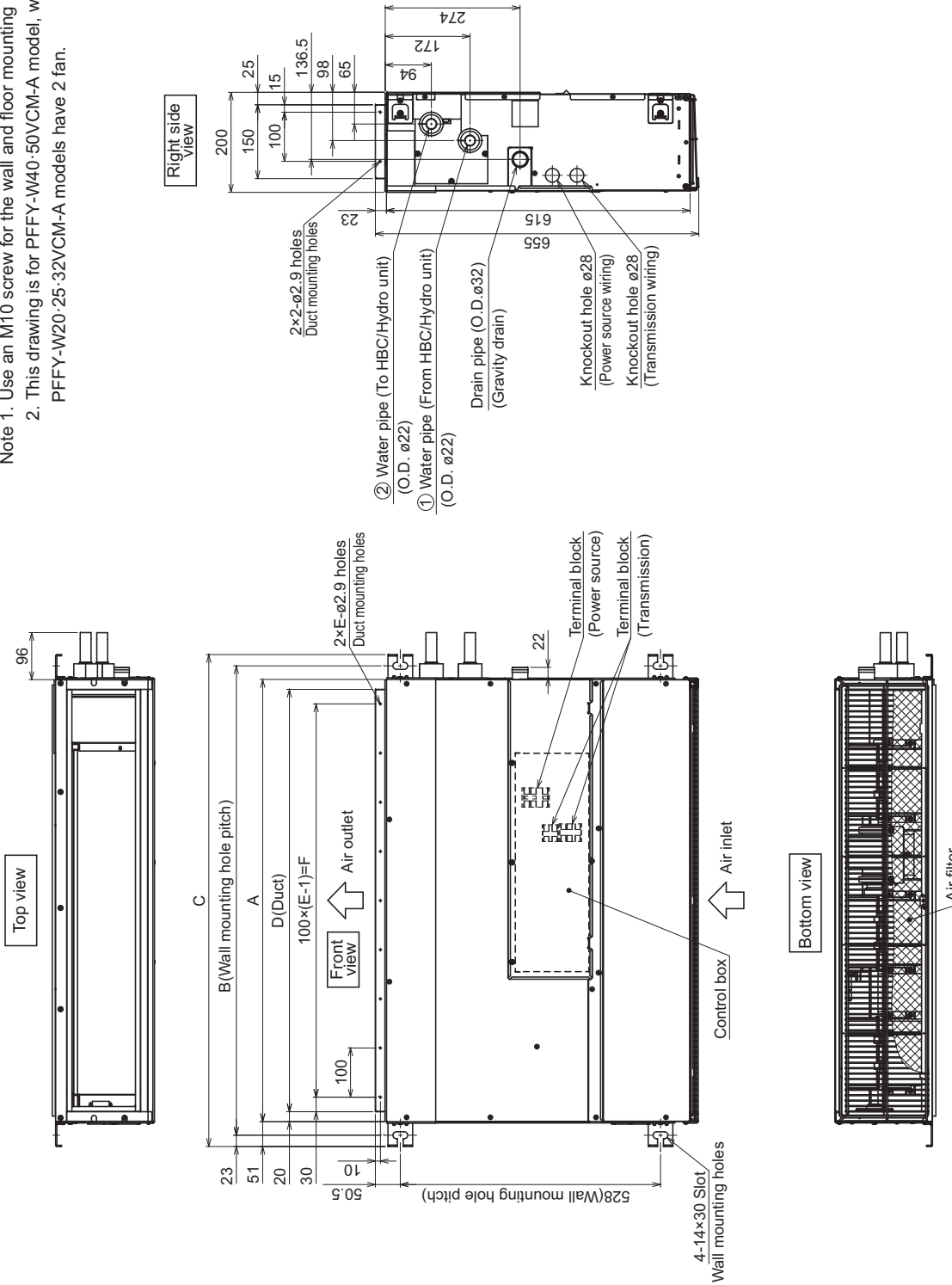
Model		PFFY-W50VCM-A				
Power source		1-phase 220-230-240 V 50/60 Hz				
Cooling capacity (Nominal)	*1	kW	5.6			
	*1	kcal/h	4,800			
	*1	BTU/h	19,100			
	*2	Power input	kW	0.062		
	*2	Current input	A	0.52		
Heating capacity (Nominal)	*3	kW	6.3			
	*3	kcal/h	5,400			
	*3	BTU/h	21,500			
	*2	Power input	kW	0.062		
	*2	Current input	A	0.52		
External finish		Galvanized steel plate				
External dimension H x W x D		*4	mm	615 (690) x 900 x 200		
		*4	in.	24-1/4 (27-3/16) x 35-7/16 x 7-7/8		
Net weight		kg (lbs)	23 (51)			
Heat exchanger		Cross fin (Aluminum fin and copper tube)				
		Water Volume	L	1.3		
FAN		Type x Quantity		Sirocco fan x 3		
*5		External static press.	Pa	<0> - 10 - <40> - <60>		
			mmH ₂ O	<0.0> - 1.0 - <4.1> - <6.1>		
		Motor Type		DC motor		
		Motor output	kW	0.096		
		Driving mechanism		Direct-driven by motor		
		Air flow rate		(Low-Mid-High)		
			m ³ /min	10.5 - 12.5 - 14.5		
			L/s	175 - 208 - 242		
			cfm	371 - 441 - 512		
Sound pressure level (measured in anechoic room)				(Low-Mid-High)		
		*2	dB <A>	28-32-35		
Insulation material		Polystyrene foam, Polyethylene foam, Urethane foam				
Air filter		PP honeycomb fabric.				
Protection device		Fuse				
Refrigerant control device		Flow control valve				
Connectable outdoor unit/HBC controller/Hydro unit		HYBRID CITY MULTI/CMB-WM-V-AA, CMB-WM-V-AB/CMH-WM-V-A				
Water piping diameter	Connection size	Inlet	mm O.D.	22		
		Outlet	mm O.D.	22		
	Field pipe size	Inlet	mm I.D.	20		
		Outlet	mm I.D.	20		
*6 *7			mm (in.)	O.D.32 (1-1/4)		
Drawing	External		KL94T470, KL94R952			
	Wiring		KL94R951			
	Refrigerant cycle		-			
Standard attachment	Document		Installation Manual, Instruction Book			
	Accessory		Washer, Drain hose, Tie band, Leg, Screw			
Optional parts						
Remarks				* Details on foundation work, duct work, insulation work, electrical wiring, power source switch, and other items shall be referred to the Installation Manual. * Due to continuing improvement, above specifications may be subject to change without notice.		

Notes:	Unit converter
1.Nominal cooling conditions Indoor: 27°C D.B./19°C W.B. (81°F D.B./66°F W.B.), Outdoor: 35°C D.B. (95°F D.B.) Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)	kcal =kW x 860 BTU/h =kW x 3,412
2.The values are measured at the factory setting of external static pressure.	cfm =m ³ /min x 35.31
3.Nominal heating conditions Indoor: 20°C D.B. (68°F D.B.), Outdoor: 7°C D.B./6°C W.B. (45°F D.B./43°F W.B.) Pipe length: 7.5 m (24-9/16 ft.), Level difference: 0 m (0 ft.)	lbs =kg/0.4536
4.The values in () show the height of unit with leg.	
5.The factory setting of external static pressure is shown without < > . Refer to "Fan characteristics curves", according to the external static pressure, in DATA BOOK for the usable range of air flow rate.	
6.Be sure to install a valve on the water inlet/outlet.	*Above specification data is
7.Install a strainer (40 mesh or more) on the pipe next to the valve to remove the foreign matters.	subject to rounding variation.
8.Please group units that operate on 1 branch of HBC controller.	

PFFY-W20, 25, 32, 40, 50VCM-A Bottom suction · wall mounting

Unit: mm

- Note 1. Use an M10 screw for the wall and floor mounting bolt (field supply).
 2. This drawing is for PFFY-W40-50VCM-A model, which have 3 fans.
 PFFY-W20-25-32VCM-A models have 2 fan.

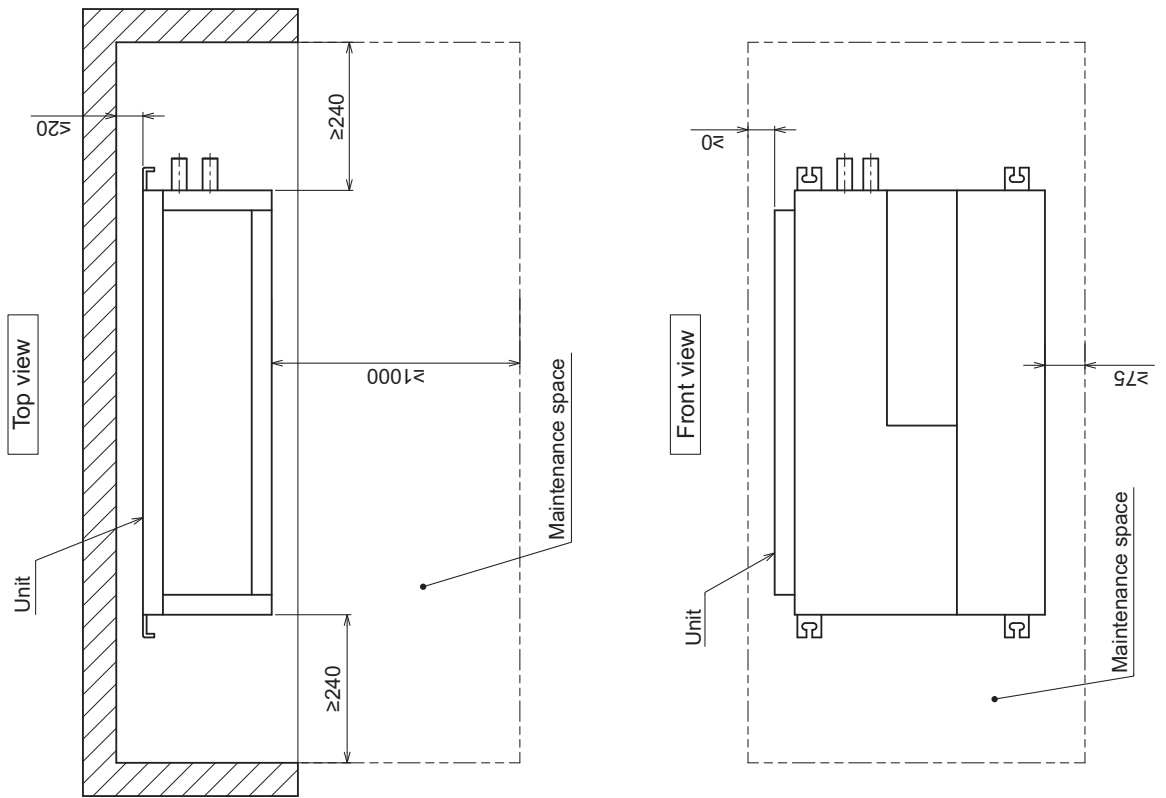


Model	A	B	C	D	E	F	① Water pipe (From HBC/Hydro unit)	② Water pipe (To HBC/Hydro unit)
PFFY-W20-25-32VCM-A	700	756	802	660	7	600	O.D. ø22	O.D. ø22
PFFY-W40-50VCM-A	900	956	1002	860	9	800	O.D. ø22	O.D. ø22

PFFY-W20, 25, 32, 40, 50VCM-A Bottom suction · wall mounting

Unit: mm

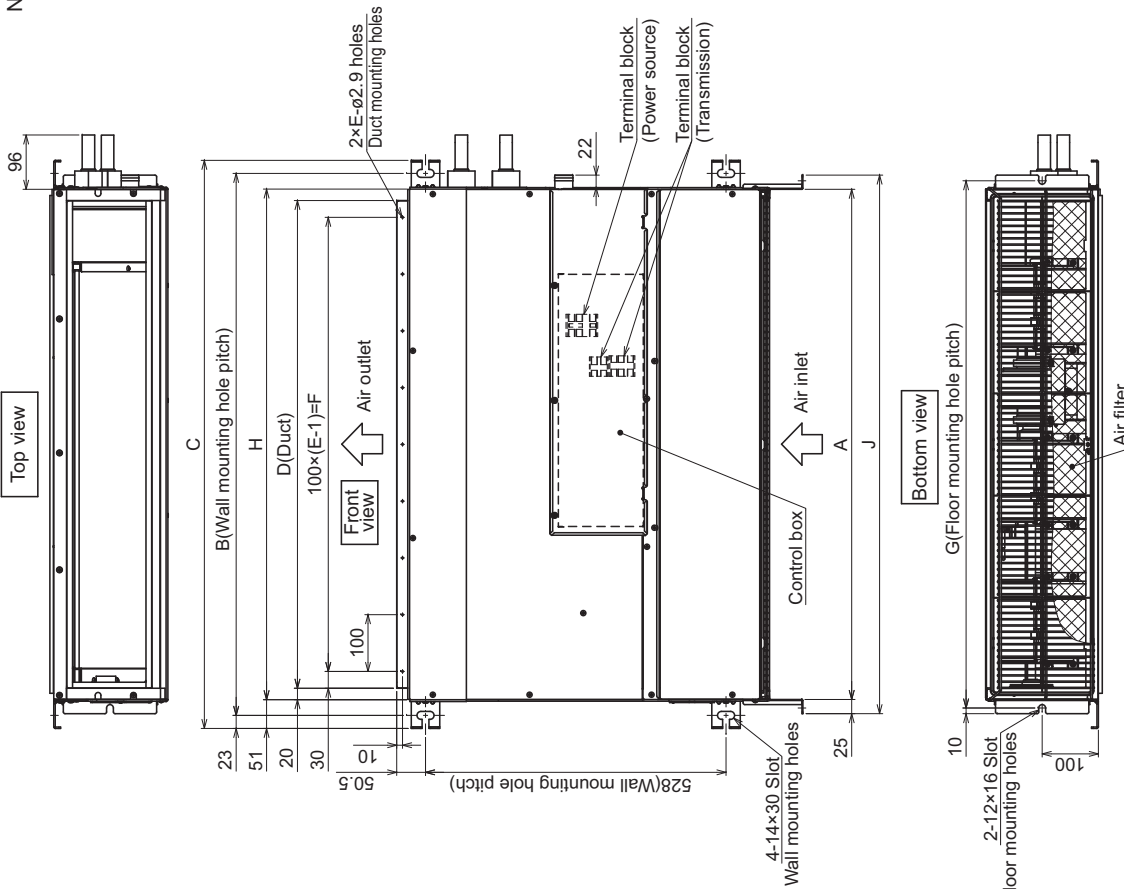
[Maintenance access space]
Secure enough access space to allow for the maintenance, inspection, and replacement of the motor, fan, heat exchanger, drain pan and control box.



PFFY-W20, 25, 32, 40, 50VCM-A Bottom suction · floor mounting

Unit: mm

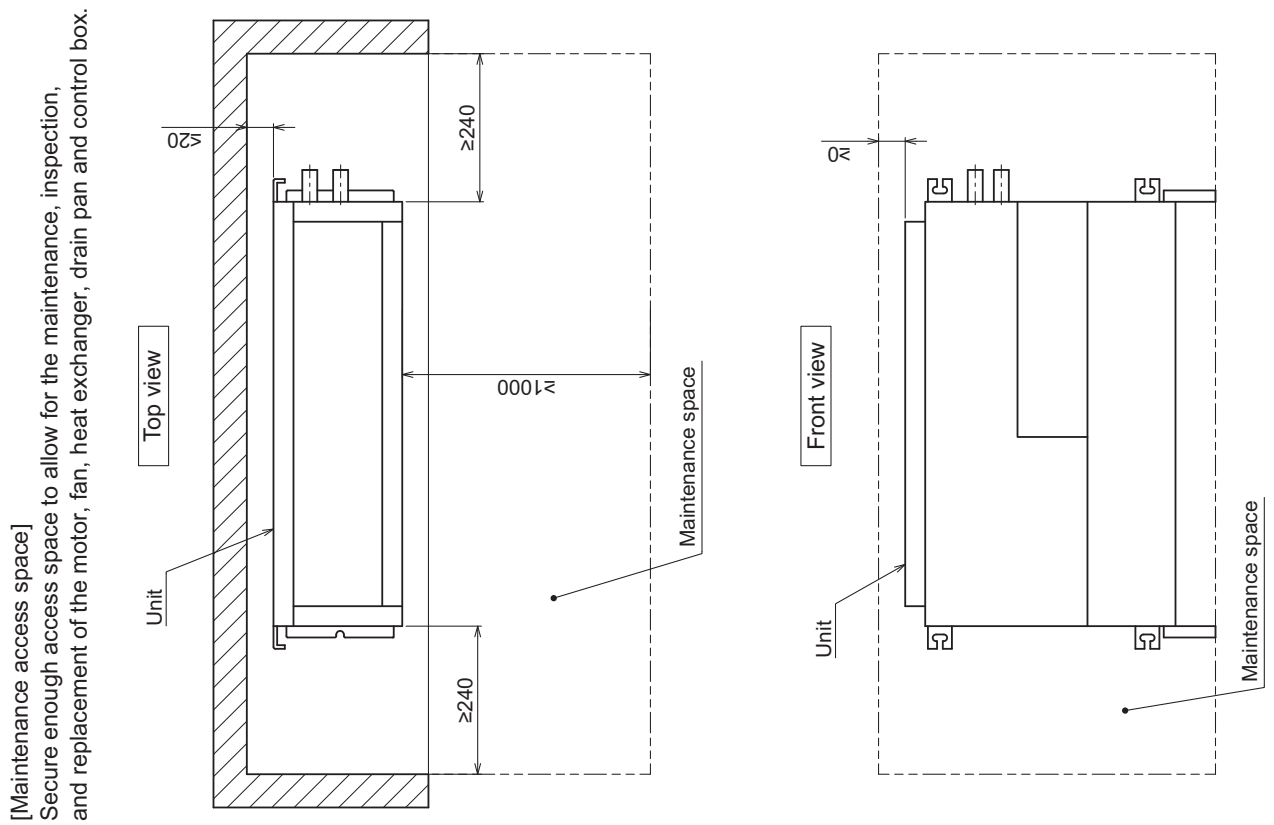
- Note 1. Use an M10 screw for the wall and floor mounting bolt (field supply).
 2. This drawing is for PFFY-W40-50VCM-A model, which have 3 fans.
 PFFY-W20-25-32VCM-A models have 2 fan.



Model	A	B	C	D	E	F	G	H	J	① Water pipe (From HBC/Hydro unit) O.D. ø22	② Water pipe (To HBC/Hydro unit) O.D. ø22
PFFY-W20-25-32VCM-A	700	756	802	660	7	600	730	700	750	O.D. ø22	O.D. ø22
PFFY-W40-50VCM-A	900	956	1002	860	9	800	930	900	950	O.D. ø22	O.D. ø22

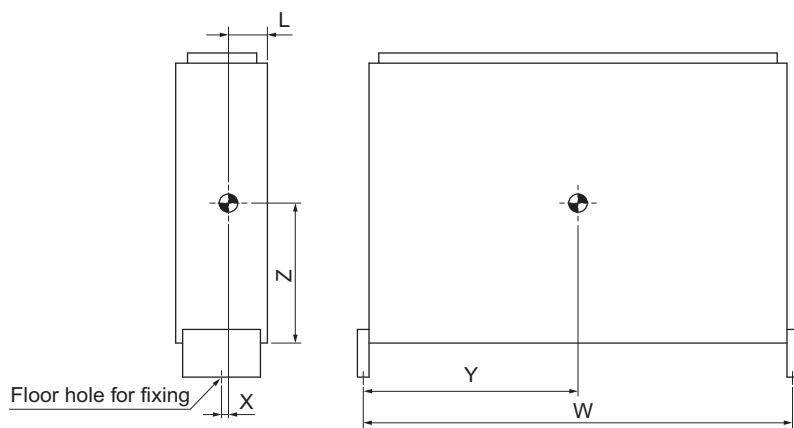
PFFY-W20, 25, 32, 40, 50VCM-A Bottom suction · floor mounting

Unit: mm



PFFY-W20, 25, 32, 40, 50VCM-A

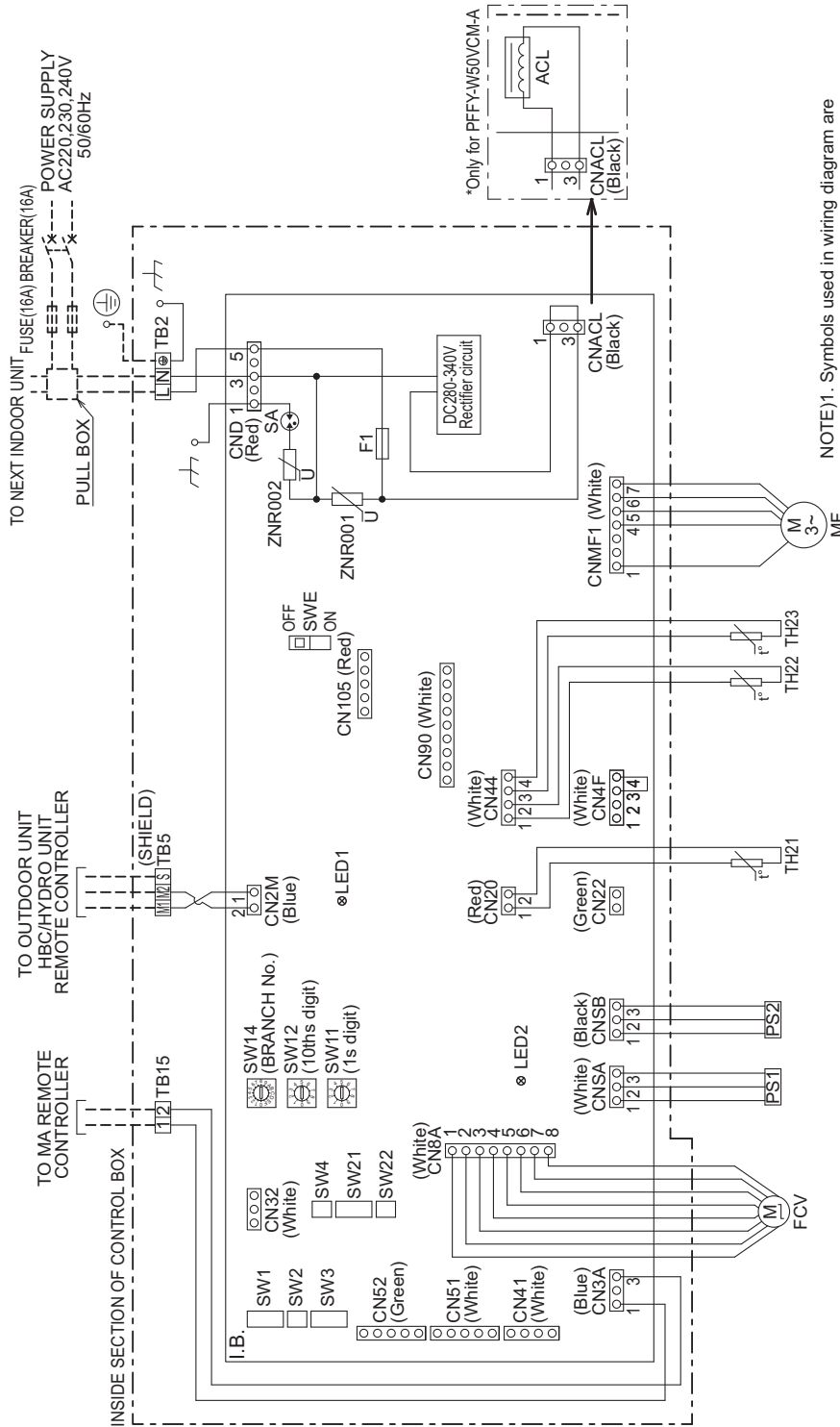
PFFY-W-VCM-A



(mm) [in.]

Model name	W	L	X	Y	Z
PFFY-W20VCM-A	730 [28-3/4]	95 [3-3/4]	5 [1/4]	365 [14-3/8]	280 [11-1/16]
PFFY-W25VCM-A	730 [28-3/4]	95 [3-3/4]	5 [1/4]	365 [14-3/8]	280 [11-1/16]
PFFY-W32VCM-A	730 [28-3/4]	95 [3-3/4]	5 [1/4]	365 [14-3/8]	280 [11-1/16]
PFFY-W40VCM-A	930 [36-5/8]	95 [3-3/4]	5 [1/4]	495 [19-1/2]	290 [11-7/16]
PFFY-W50VCM-A	930 [36-5/8]	95 [3-3/4]	5 [1/4]	495 [19-1/2]	290 [11-7/16]

PFFY-W20, 25, 32, 40, 50VCM-A



SYMBOL EXPLANATION

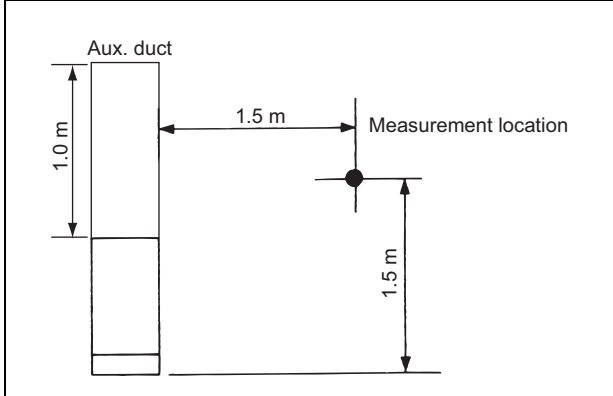
SYMBOL	NAME	SYMBOL	NAME	SYMBOL	NAME
ACL	AC reactor(Power factor improvement)	I.B.	Indoor controller board	I.B.	Indoor controller board
MF	Fan Motor	SA	Arrestor	SW1	Switch (for mode selection)
FCV	Flow control valve	F1	Fuse AC250V 6.3A	SW2	Switch (for capacity code)
PS1	Pressure sensor (valve inlet)	ZNR001	Varistor	SW3	Switch (for mode selection)
PS2	Pressure sensor (valve outlet)	ZNR002	Varistor	SW4	Switch (for mode selection)
TB2	Power source terminal block	CN22	Connector (Optional Thermistor)	SW11	Switch (1s digit address set)
TB5	Transmission terminal block	CN32	Connector (Remote switch)	SW12	Switch (10ths digit address set)
TB15	Transmission terminal block	CN41	Connector (HA terminal-A)	SW14	Switch (BRANCH No.)
TH21	Thermistor (inlet air temp. detection)	CN51	Connector (Centrally control)	SW21	Switch (for static pressure selection)
TH22	Thermistor (inlet temp. detection)	CN52	Connector (Remote indication)	SW22	Switch (Wireless pair No.)
TH23	Thermistor (piping temp.detection/inlet water)	CN90	Connector (Wireless)	SWE	Connector (emergency operation)
TH23	Thermistor (piping temp.detection/outlet water)	CN105	Connector (IT terminal)	LED1	LED (Power supply)
				LED2	LED(Remote controller supply)

NOTE)1. Symbols used in wiring diagram are
 ○ ○ ○ ○ : Connector, □ : Terminal,
 (Heavy dotted line): Field wiring,
 (Thin dotted line): Optional parts.

2. Have all electric work done by a licensed electrician according to the local regulations.
 3. Earth leakage circuit breaker should be set up on the wiring of the power supply.

5-1. Sound levels

PFFY-W-VCM-A



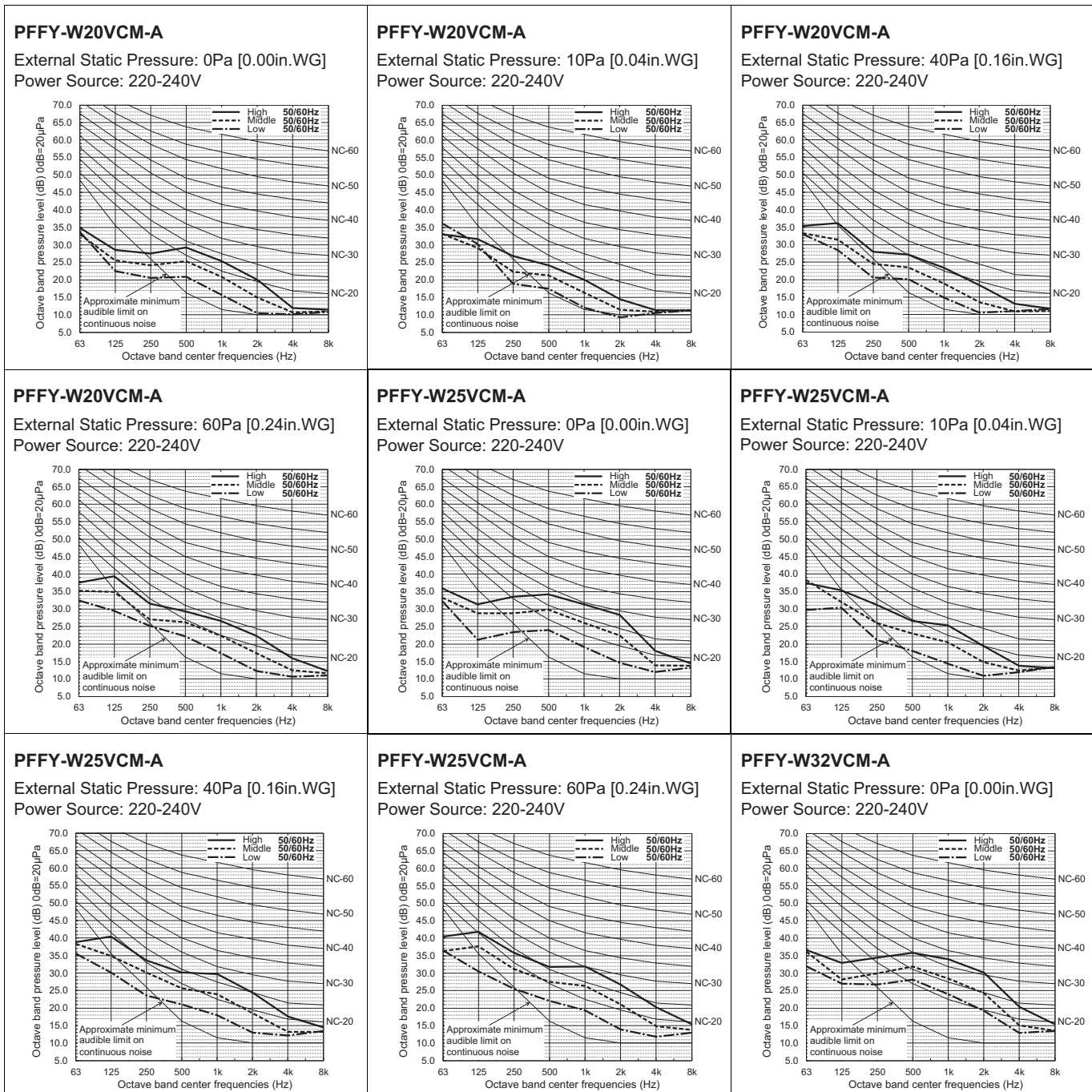
* Measured in anechoic room

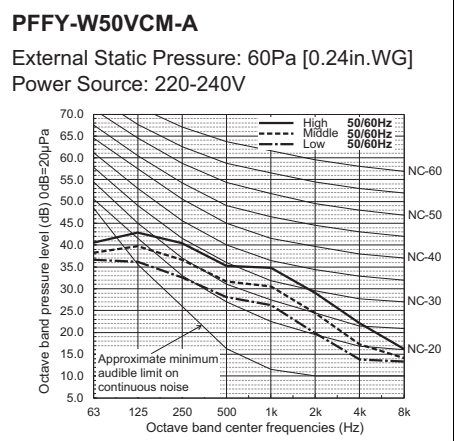
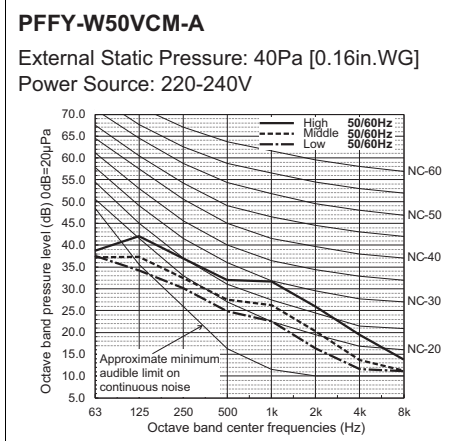
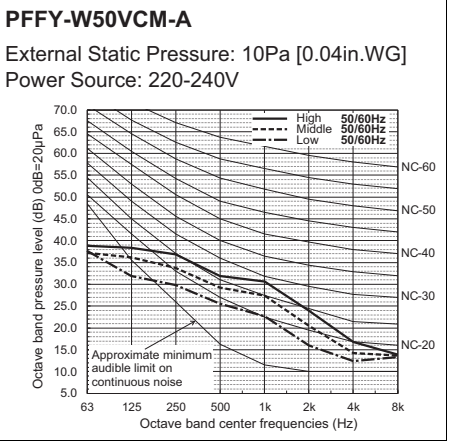
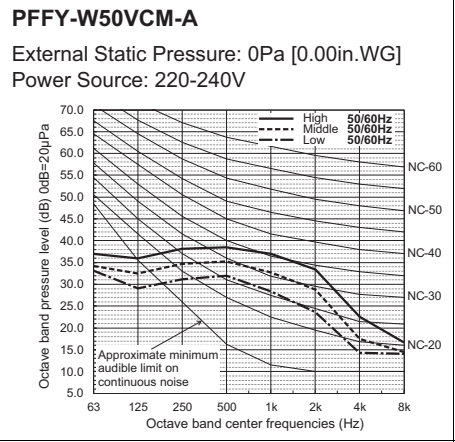
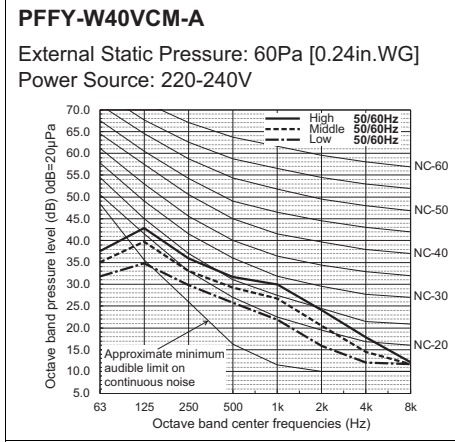
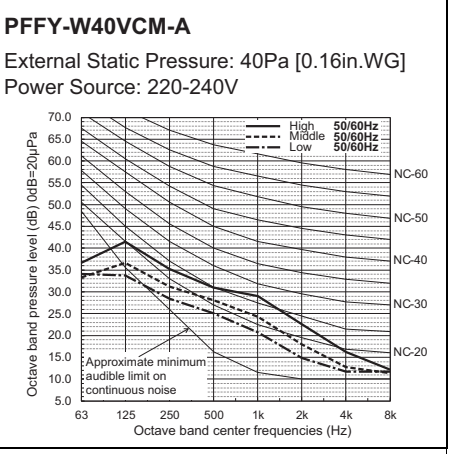
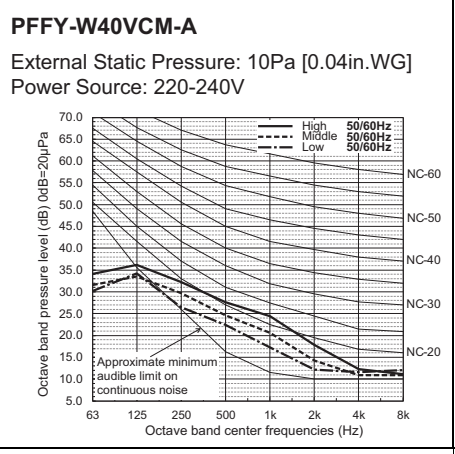
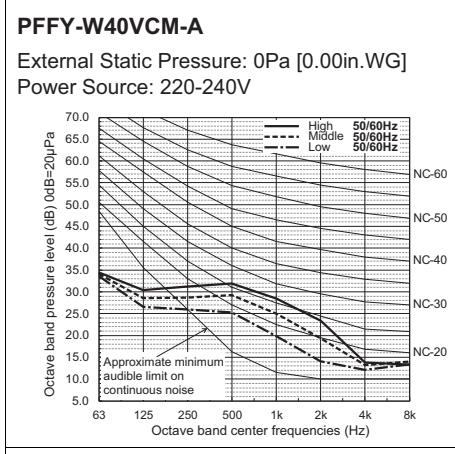
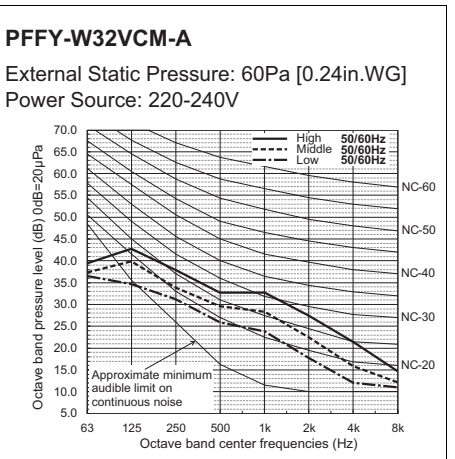
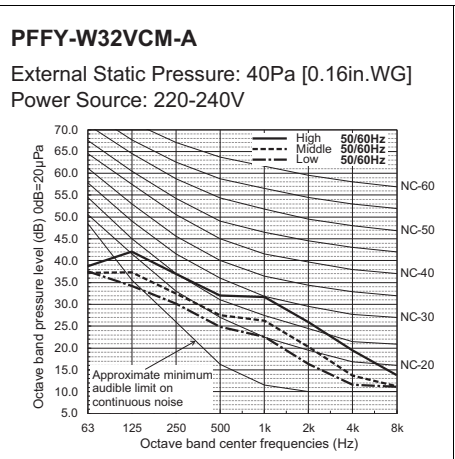
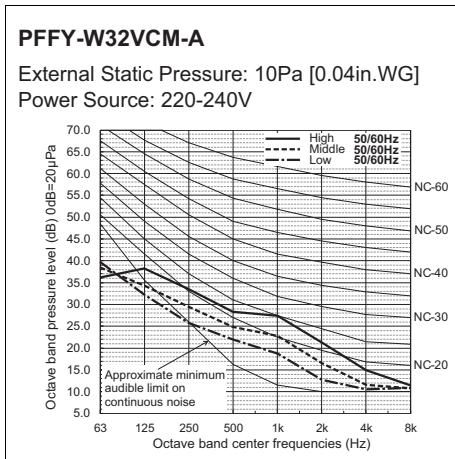
Sound level at anechoic room: Low-Middle-High

	Sound level dB (A)			
	0Pa	10Pa	40Pa	60Pa
PFFY-W20VCM-A	22-26-30	21-23-26	22-25-29	24-28-32
PFFY-W25VCM-A	25-31-36	22-26-30	24-29-34	25-31-36
PFFY-W32VCM-A	29-33-38	25-28-32	28-31-36	29-33-37
PFFY-W40VCM-A	26-30-33	25-27-30	27-30-34	28-32-35
PFFY-W50VCM-A	33-37-41	28-32-35	30-34-38	31-35-39

* The value for the sound pressure level 0 Pa is the value when the duct is not attached.

5-2. NC curves





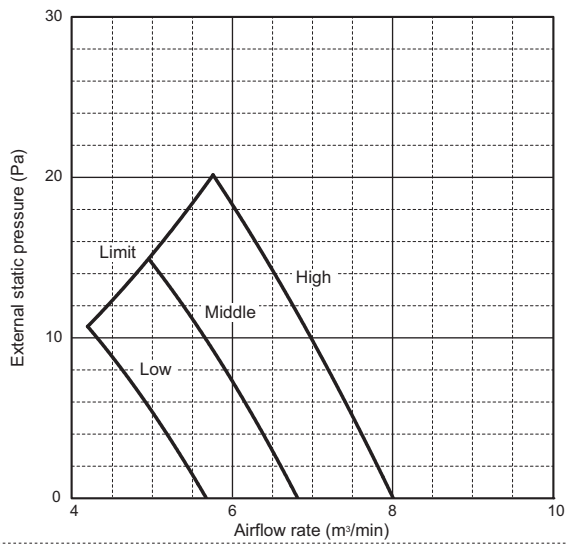
6. FAN CHARACTERISTICS CURVES

Floor standing (Concealed type)

PFFY-W-VCM-A

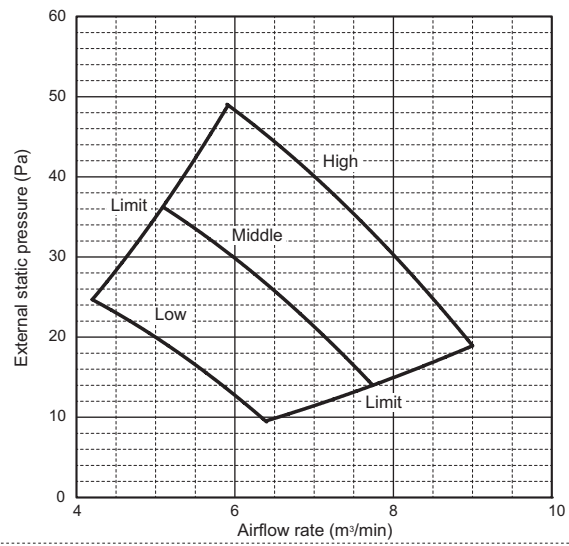
PFFY-W20VCM-A

External static pressure : 10Pa
Power source : 220-240V



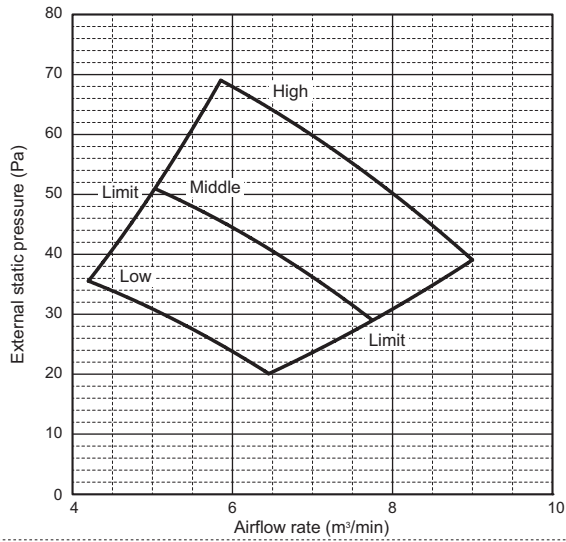
PFFY-W20VCM-A

External static pressure : 40Pa
Power source : 220-240V



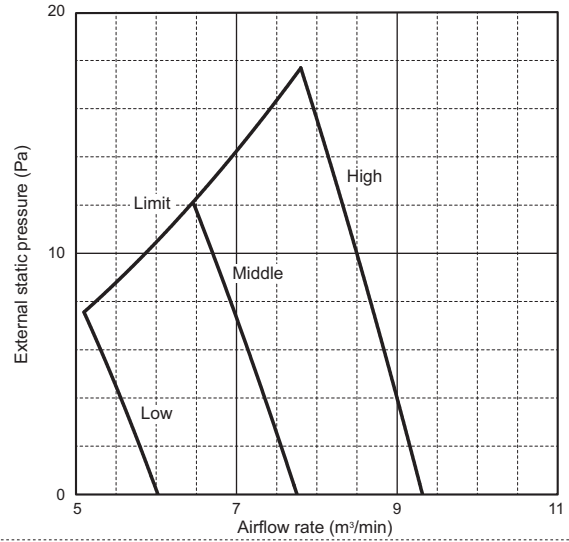
PFFY-W20VCM-A

External static pressure : 60Pa
Power source : 220-240V



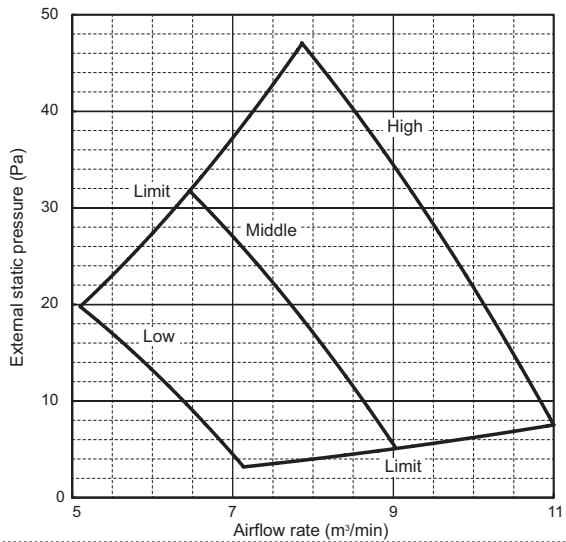
PFFY-W25VCM-A

External static pressure : 10Pa
Power source : 220-240V



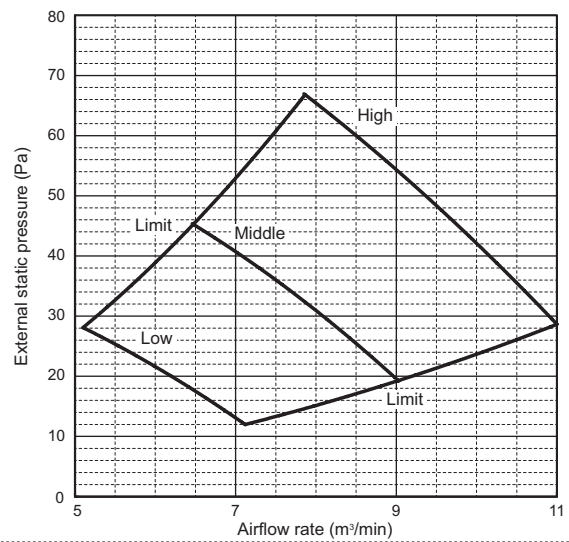
PFFY-W25VCM-A

External static pressure : 40Pa
Power source : 220-240V



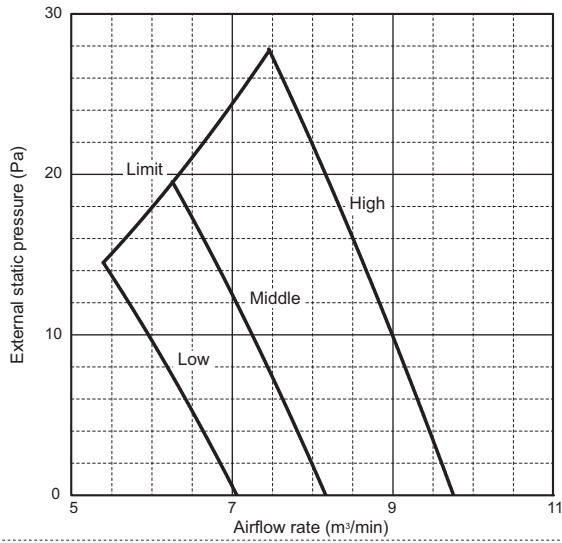
PFFY-W25VCM-A

External static pressure : 60Pa
Power source : 220-240V



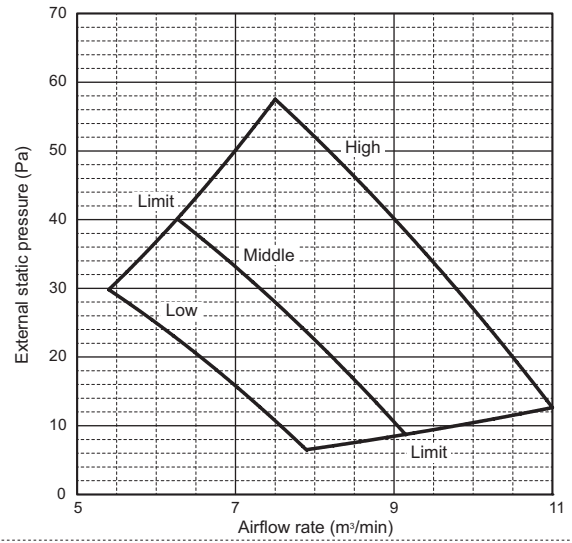
PFFY-W32VCM-A

External static pressure : 10Pa
Power source : 220-240V



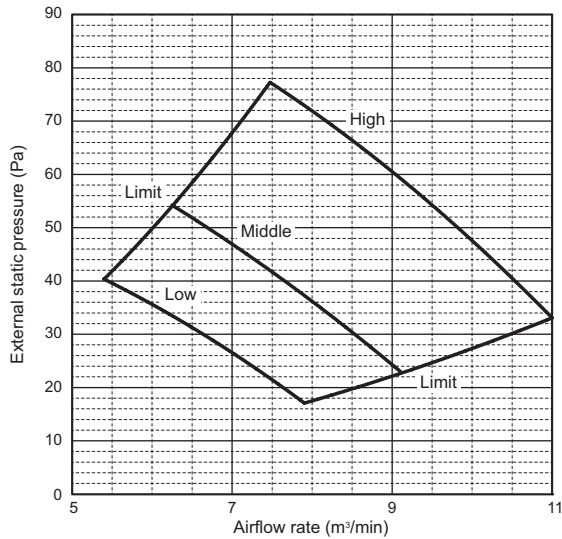
PFFY-W32VCM-A

External static pressure : 40Pa
Power source : 220-240V



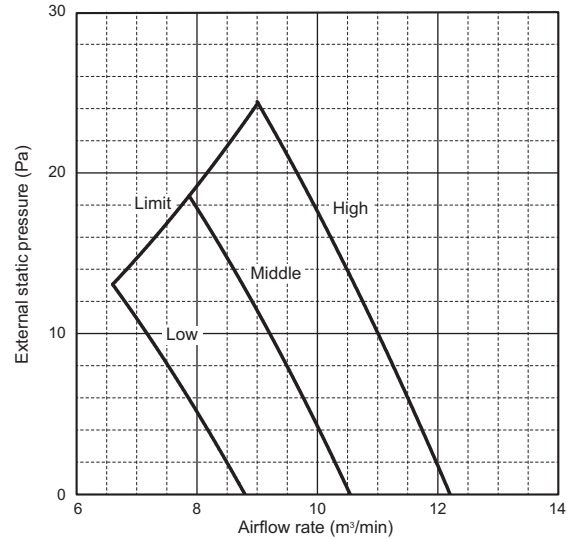
PFFY-W32VCM-A

External static pressure : 60Pa
Power source : 220-240V



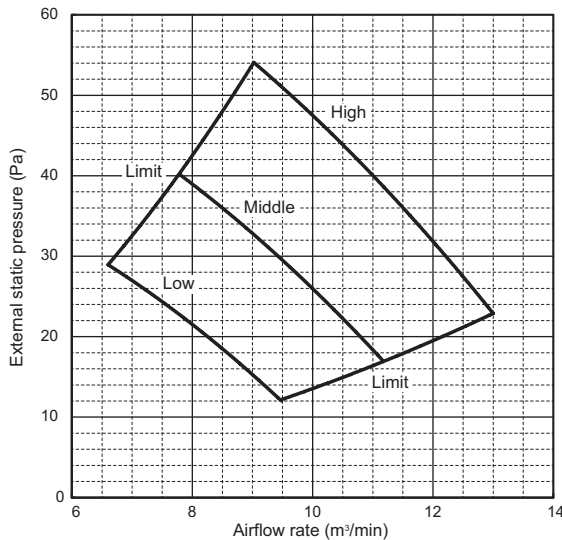
PFFY-W40VCM-A

External static pressure : 10Pa
Power source : 220-240V



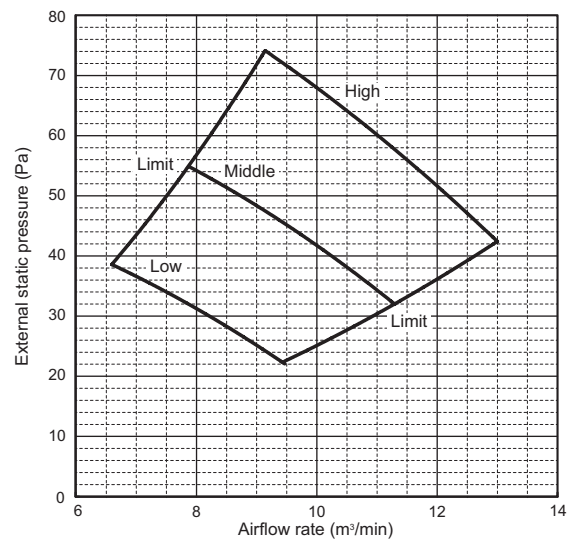
PFFY-W40VCM-A

External static pressure : 40Pa
Power source : 220-240V



PFFY-W40VCM-A

External static pressure : 60Pa
Power source : 220-240V



6. FAN CHARACTERISTICS CURVES

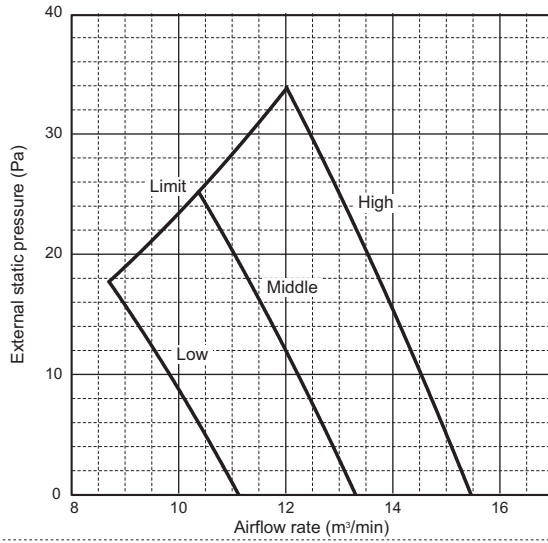
Floor standing (Concealed type)

PFFY-W-VCM-A

PFFY-W50VCM-A

External static pressure : 10Pa

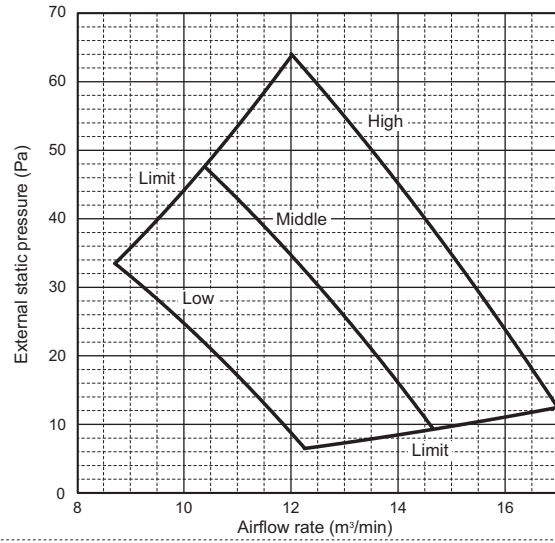
Power source : 220-240V



PFFY-W50VCM-A

External static pressure : 40Pa

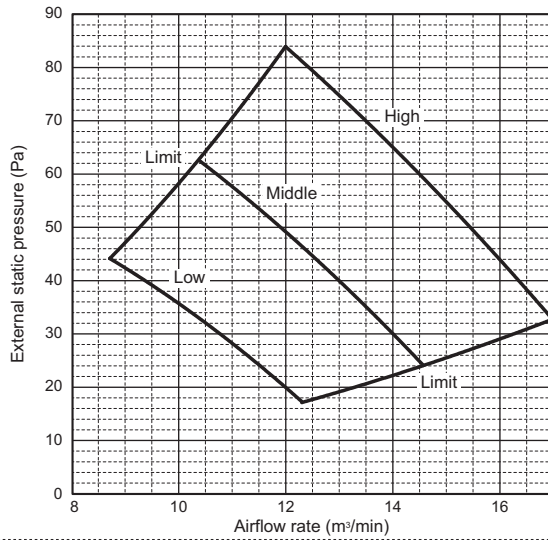
Power source : 220-240V



PFFY-W50VCM-A

External static pressure : 60Pa

Power source : 220-240V



7. ELECTRICAL CHARACTERISTICS

Floor standing (Concealed type)

Symbols: MCA (Max.Circuit Amps =1.25xFLA), FLA (Full Load Amps)
IFM (Indoor Fan Motor), Output (Fan motor rated output)

PFFY-W-VCM-A	Power supply			IFM	
	Volts/Hz	Range +-10%	MCA(A)	Output (kW)	FLA(A)
PFFY-W20VCM-A	220-240V/50Hz 220-240V/60Hz	Max.: 264V Min.: 198V	0.59	0.096	0.47
PFFY-W25VCM-A			0.70	0.096	0.56
PFFY-W32VCM-A			0.82	0.096	0.65
PFFY-W40VCM-A			0.83	0.096	0.66
PFFY-W50VCM-A			1.08	0.096	0.86

PFFY-W-VCM-A



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.

⚠ 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, repair, or at the time of disposal of the unit.
 - It may also be in violation of applicable laws.
 - MITSUBISHI ELECTRIC CORPORATION cannot be held responsible for malfunctions or accidents resulting from the use of the wrong type of refrigerant.
- Our air conditioning equipment and heat pumps contain a fluorinated greenhouse gas, R410A/R32.

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