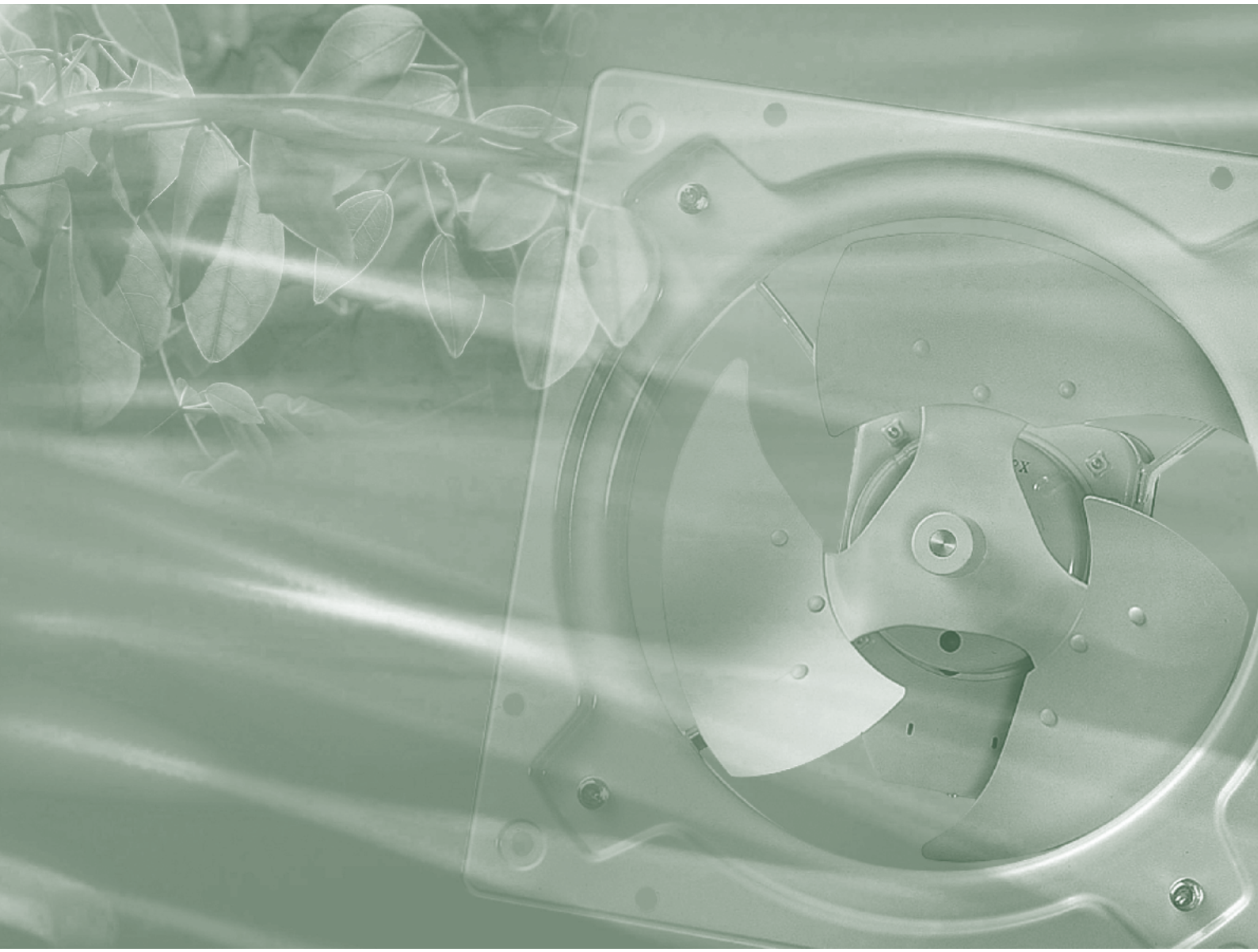
TERAL

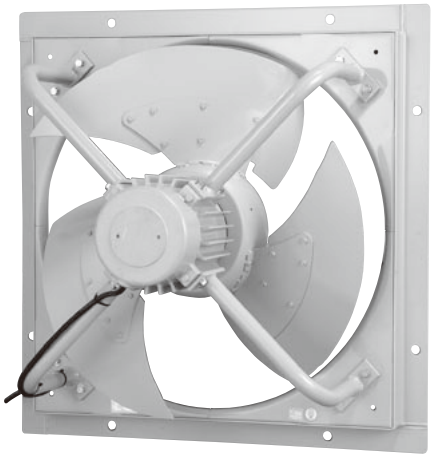
Pressure Fans



TERAL INC.

Low Noise Pressure Fans

Low noise models matched with the needs of the times



❶ Low noise level lower by 9 dB (A) (in comparison with our existing models)

A new uniquely designed three-dimensional blade has achieved a massive cut in noise level from existing models. A 75 cm model has achieved noise reduction by 9 dB(A), a 90 cm model by 7 dB(A) and a 105 cm model by 5 dB(A). (the 60-hertz exhaust type.)

❷ Air flow maintained from the existing models (exhaust type)

Normally, noise reduction tends to result in an air volume decline. This product cuts noise while maintaining the air volume at a level equivalent to that of conventional models.

❸ Operable in higher static pressure conditions

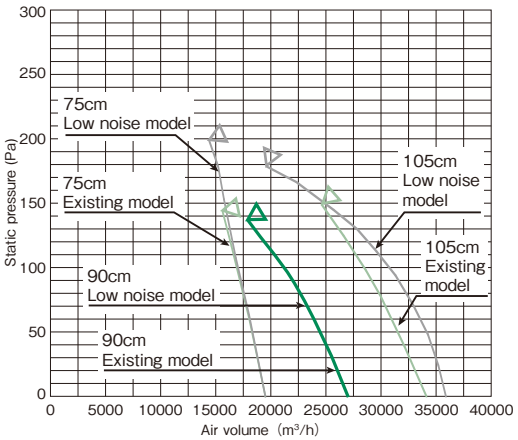
The motor design has been changed to enable the fan to be operated in conditions with higher static pressure. (The performance is unchanged in the 90 cm model for 60 Hz.)

Standard model	Outdoor model	Pressure-resistant explosion-proof model	Stainless model
Exhaust Intake	Exhaust Intake	Exhaust Intake	Exhaust
Impeller diameter: 20 to 120 cm	Impeller diameter: 25 to 120 cm	Impeller diameter: 20 to 120 cm	Impeller diameter: 25 to 50 cm
Full stainless model	**Frameless model**	**Centrifugal signal output model**	**Direct current power model**
Exhaust	Exhaust	Exhaust	Exhaust Intake
Impeller diameter: 30 to 40 cm	Impeller diameter: 30 to 45 cm	Impeller diameter: 25 to 60 cm	Impeller diameter: 30 to 35 cm

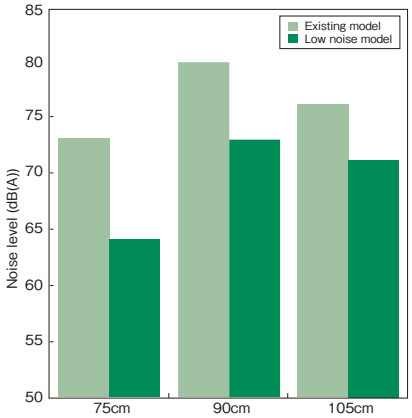
■Comparison with Existing Models

※at the frequency of 60 Hz

●Comparison in Air Volume (exhaust type)



●Comparison in Noise (exhaust type)



■Model Code Descriptions

A model code is assigned to each model of our pressure fans in accordance with the descriptions below. In the event of contacting us, please specify the model code and the voltage used. (For any information not included in the descriptions below, please contact us.)

⑦	①		②	③	④	⑤	⑥
	PF	-	14	B	T	2	G

①Model Type: PF: Standard type (different voltage type) PFS: Stainless type
EPP: Pressure-resistant explosion-proof type WP: Outdoor type
DCP: Direct current power type WPS: Full stainless type
TP: Frameless type S: Centrifugal signal output type

②Impeller diameter: Indicated in inches; For a value in centimeters, multiply the value in inches by 2.5.

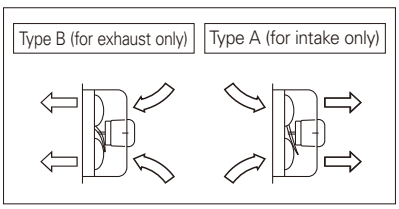
③Airflow direction: B: Exhaust A: Intake

④Power supply category: S: Single phase power T: Three phase power

⑤Voltage 1: 100 volt class 2: 200 volt class 4: 400 volt class

⑥Series code: in alphabets in ascending order

⑦Number of poles: None: Standard
Number specified: Multi-pole type ("6" for six poles, "8" for eight poles)



Handling Precautions

1 Install the pressure fan at a height of 1.8 meters or more from the floor surface.
Failure to do so may cause injuries or accidents. In the case of installing it at a height of 1.8 meters or less, use the optionally available guard net.

2 Make sure that the metallic part of the main unit of the pressure fan does not come in direct contact with any building finished with metal lath, wire lath or metal. Any contact may cause an electric leakage, electrification or fire.

3 Be sure to observe the operating ambient temperature and the humidity range. Any excess over the setting range of the specific model may result in burning, deformation or breakage.

4 For any model equipped with a ground wire, be sure to ground it.

5 Some models come with a drain plug attached to the motor. When any such model is used outdoors or at any place with high humidity, attach it underneath the motor and remove the lower drain plug before use.

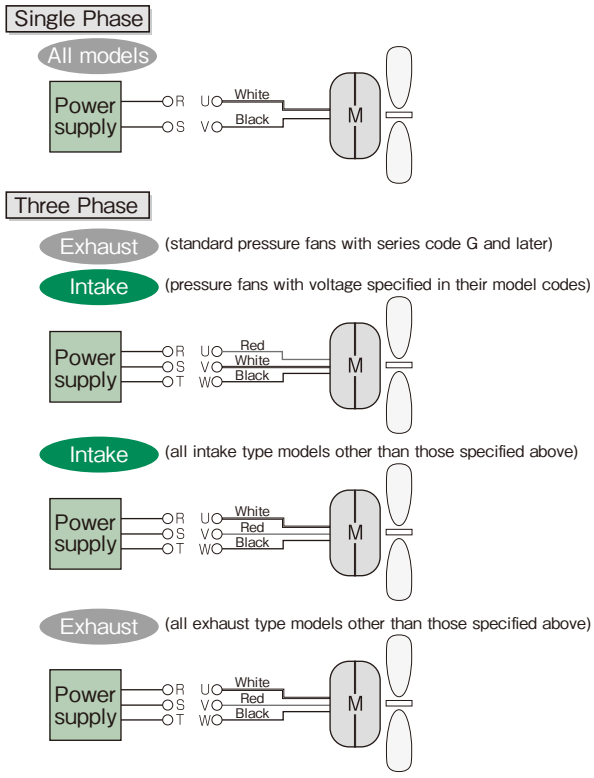
6 Install the pressure fan at any sturdy position where no vibration occurs. If the position of installation has insufficient strength, the fan may cause resonance that damages the blade or causes any other accident. If it is installed at any position that is considered weak, add some reinforcement and install it firmly.

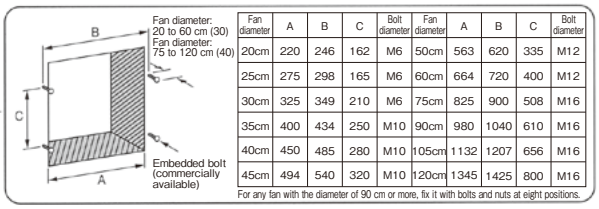
7 Some motors may have built-in thermal protectors so that they will automatically come into a halt in the event of constrained, overload or open-phase operation or if the ambient temperature is outside the operating range. In this event, power off the fan immediately, remedy the cause and wait until the motor cools down before resuming the operation.

8 For installation
For installation of the main unit of the pressure fan and combination with optional accessories, please refer to the diagram below.

9 Use a motor breaker (overload protector) or equivalent as a protection circuit. Choose a motor breaker with around 1.2 times to 1.5 times the allowable current level of the specific fan for the purpose of prevention of malfunction.

10 The diagrams below illustrate connections of power lead wires.



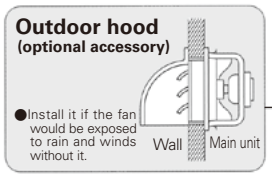


Fan diameter	A	B	C	Bolt diameter	Fan diameter	A	B	C	Bolt diameter
20cm	220	246	162	M6	50cm	563	620	335	M12
25cm	275	298	165	M6	60cm	664	720	400	M12
30cm	325	349	210	M6	75cm	825	900	508	M16
35cm	400	434	250	M10	90cm	980	1040	610	M16
40cm	450	485	280	M10	105cm	1132	1207	656	M16
45cm	494	540	320	M10	120cm	1345	1425	800	M16

For any fan with the diameter of 90 cm or more, fix it with bolts and nuts at eight positions.

1. Drive the embedded bolt
(commercially available).

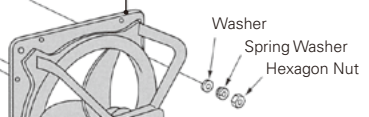
Outdoor hood
(optional accessory)



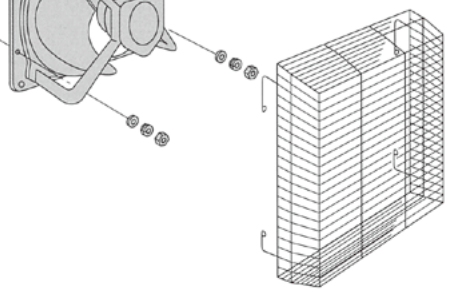
●Install it if the fan would be exposed to rain and winds without it.

Shutter and fixed louver
●For preventing intrusion of winds and rain, it is recommended to attach a shutter.

2. Attach the main unit of the pressure fan.
●Fix it with four washers, four spring washers (commercially available) and then four hexagon nuts (commercially available).

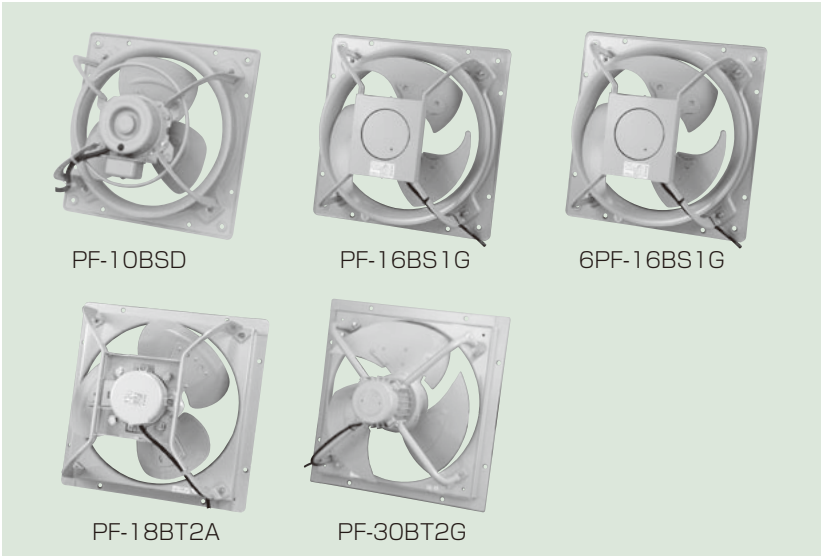


3. Remove the drain caps
(on the back side of the motor and the bottom surface)
and others.
●Be sure to remove them at any place with high humidity.



Guard Net (optional accessory)
●Be sure to attach it if the fan is installed at a height of 1.8 meters or more.

Standard Type (Exhaust / Intake) Impeller Diameter: 20 to 120 cm



※Please note that the photo shows typical examples and that they may partly differ from real items.

Purposes

Ventilation of, air intake into and air exhaust from factories and warehouses and embedding into equipment

Specifications

Airflow direction	Model	Impeller diameter (cm)	Number of poles (P)	Power supply (V)	Rated output (W)	Air volume(m³/h)		Power consumption (W)		Allowable current (A)		Starting current (A)		Noise(dB(A))		Estimated mass (kg)
						50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Exhaust type	PF-8BSD	20	4	100 single phase	15	552	654	23	25	0.4	0.5	0.5	0.5	38	41	3
				200 single phase				26	32	0.2	0.25	0.3	0.3			
	PF-10BSD	25		100 single phase	20	1020	1200	43	48	0.7	0.8	1.2	1.1	41	44	3.5
				200 single phase				46	52	0.35	0.4	0.6	0.6			
	PF-12BS1G	30		100 single phase	50	1800	2040	58	75	0.9	1.05	1.4	1.4	41	44	5
	PF-12BS2G			200 single phase				63	74	0.5	0.55	0.8	0.8			
	PF-12BT2G			200 three phase				48	64	0.3	0.32	0.85	0.82			
	PF-14BS1G	35		100 single phase	100	2660	3150	125	165	2.0	2.3	5.0	4.7	43.5	47	9.2
	PF-14BS2G			200 single phase				134	164	1.1	1.2	2.8	2.7			
	PF-14BT2G			200 three phase				102	122	1.0	1.0	2.9	2.7			
	PF-16BS1G	40		100 single phase	200	4080	4680	188	240	3.5	3.45	8.3	7.9	46	50	11
	PF-16BS2G			200 single phase				200	250	1.8	1.8	4.3	4.2			
	PF-16BT2G			200 three phase		4022	4543	162	227	1.2	1.2	4.1	3.9			
	PF-16BT2F			200 three phase	400	4990	5790	300	420	2.3	2.5	8.3	6.3	57	61	12.3
	6PF-16BS1G		6	100 single phase	100	2880	3340	86	101	1.4	1.6	2.8	2.6	40	44	10.8
	6PF-16BS2G			200 single phase				98	116	0.72	0.84	1.6	1.6			
	6PF-16BT2G			200 three phase				114	118	0.9	0.9	2.2	2.1			
	PF-18BS1A	45		100 single phase	250	5010	5838	230	340	5.5	7.5	11	11	54	58	23.5
	PF-18BS2A			200 single phase				230	340	2.7	3.7	6.5	5.9			
	PF-18BT2A			200 three phase		5034	5802	210	310	2.3	3.0	6.5	5.7			23
	PF-20BS1G	50		100 single phase	400	6200	7020	300	450	7.0	7.2	11	11	49	53	25
	PF-20BS2G			200 single phase				300	450	3.5	3.6	6.5	5.9			
	PF-20BT2G			200 three phase		6120	7140	270	410	2.6	2.8	6.5	5.7			24.6
	PF-24BT2G	60			750	9420	11160	460	690	4.2	4.2	12	10	51	55.5	33
	8PF-24BT2G		8		400	7060	8360	250	330	3.0	3.0	5.8	4.6	45	49.5	33
	PF-30BT2G	75	6		1500	19500	19500	1500	1640	7.7	6.7	33	29	62	64	77.5
	PF-36BT2G	90			2200	27000	27000	1720	2050	9.0	9.0	38	34	69	73	86
	8PF-36BT2		8		1500	22800	22800	850	1200	6.7	6.2	25	23	71	74	76
	PF-42BT2G	105			2200	36000	36000	2050	2450	14	12.5	42	35	67	71	118
	PF-48B	120	10		3700	42000	42000	3200	3200	20	17	74	63	75	76	153

- The output, air volume and noise figures mentioned above represent the values in the state of operation under free air conditions.
- The air volume has been measured in the JIS C 9603-compliant orifice chamber method, except for the models with the impeller diameter range from 90 cm to 120 cm, for which the JIS B 8330-compliant suction pipe method was employed.
- The noise figure represents the average of the values measured at three points that are 1.5 meters distant from one another. The value in actual operation varies depending on the installation method and the duct form.
- The allowable current figure represents the critical point of operation. Use it for reference at the time of selecting a motor breaker.
- Make sure that the product is operated at any place where no corrosive or explosive gas or no steam is generated.
- The conditions (temperature and humidity) in the environment where the fan is operated are as follows. Observe these conditions when operating the product.

For models for single-phase power supply
Impeller diameter of 25 cm or less: Temperature: from -10 deg. C to +50 deg. C, Humidity: 90% or less, Altitude: 1,000 m or less
Impeller diameter ranging from 30 cm to 40 cm 4P: Temperature: from -20 deg. C to +50 deg. C, Humidity: 90% or less, Altitude: 1,000 m or less
Impeller diameter of 40 cm or more 6P: Temperature: from -10 deg. C to +50 deg. C, Humidity: 85% or less, Altitude: 1,000 m or less

For models for three phase power supply
Temperature: from -30 deg. C to +50 deg. C, Humidity: 85% or less*, Altitude: 1,000 m or less
※For the models with the impeller diameter of 40 cm or less and with four poles, the humidity must be 90% or less.

Specifications

Airflow direction	Model	Impeller diameter (cm)	Number of poles (P)	Power supply (V)	Rated output (W)	Air volume(m³/h)		Power consumption (W)		Allowable current (A)		Starting current (A)		Noise(dB(A))		Estimated mass (kg)
						50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Intake type	PF-8ASD	20	4	100 single phase	15	546	642	25	28	0.4	0.5	0.5	0.5	38	42	3
				200 single phase				30	35	0.2	0.25	0.3	0.3			
	PF-10ASD	25		100 single phase	20	1014	1176	47	50	0.7	0.8	1.2	1.1	42	46	3.5
				200 single phase				49	56	0.35	0.4	0.6	0.6			
	PF-12AS1D	30		100 single phase	50	1630	1860	54	70	0.85	0.95	1.4	1.4	49	51	5
	PF-12AS2D			200 single phase				60	74	0.45	0.49	0.8	0.8			
	PF-12AT2D			200 three phase				46	64	0.3	0.33	0.85	0.82			
	PF-14AS1D	35		100 single phase	100	2484	2898	140	180	2.3	2.3	5.0	4.7	54	57	9.2
	PF-14AS2D			200 single phase				148	184	1.0	1.0	2.8	2.7			
	PF-14AT2D			200 three phase		2538	2904	120	146	1.0	1.0	2.9	2.7			
	PF-16AS1D	40		100 single phase	200	3528	4008	210	270	3.15	3.4	8.3	7.9	55	59	10.5
	PF-16AS2D			200 single phase				204	260	1.7	1.7	4.3	4.2			
	PF-16AT2D			200 three phase		3600	4140	184	263	1.14	1.14	4.1	3.9			
	PF-16AT2F			200 three phase	400	4745	5568	305	460	2.3	2.5	8.3	6.3	57	61	12.3
	6PF-16AS1D		6	100 single phase	100	2442	2832	90	107	1.5	1.6	2.8	2.6	45	49	10.5
	6PF-16AS2D			200 single phase				102	120	0.75	0.75	1.6	1.6			
	6PF-16AT2D			200 three phase		2466	3048	114	123	0.86	0.86	2.2	2.1			
	PF-18AS1A	45		100 single phase	200	3906	4530	250	370	5.8	6.7	11	11	56	60	23.5
	PF-18AS2A			200 single phase				250	370	2.9	3.4	6.5	5.9			
	PF-18AT2A			200 three phase		3920	4600	230	340	2.3	3.0	6.5	5.7			23
	PF-20AS1A	50		100 single phase	400	5280	6120	270	400	6.5	6.8	11	11	58	61	24.5
	PF-20AS2A			200 single phase				270	400	3.2	3.4	6.5	5.9			
	PF-20AT2A			200 three phase		5220	6000	250	340	2.7	3.0	6.5	5.7			24.3
	PF-24AT2G	60			750	6360	7380	490	710	4.1	4.1	12	10	55.5	59	33
	8PF-24AT2G		8		400	5420	6280	270	360	3.0	2.8	5.8	4.6	48.5	52	33
	PF-30AT2G	75	6		1500	15000	15000	1380	1600	7.4	7.8	33	29	68	69	81
	8PF-36AT2	90	8		1500	22800	22800	1040	1040	6.4	6.1	25	23	71	74	76
	PF-42AT2	105			2200	34200	34200	2500	2260	11.4	10.3	42	35	74	76	103
	PF-48A	120	10		3700	42000	42000	3200	3200	20	17	74	63	75	76	153

- The output, air volume and noise figures mentioned above represent the values in the state of operation under free air conditions.
- The air volume has been measured in the JIS C 9603-compliant orifice chamber method, except for the models with the impeller diameter range from 90 cm to 120 cm, for which the JIS B 8330-compliant suction pipe method was employed.
- The noise figure represents the average of the values measured at three points that are 1.5 meters distant from one another. The value in actual operation varies depending on the installation method and the duct form.
- The allowable current figure represents the critical point of operation. Use it for reference at the time of selecting a motor breaker.
- Make sure that the product is operated at any place where no corrosive or explosive gas or no steam is generated.
- The conditions (temperature and humidity) in the environment where the fan is operated are as follows. Observe these conditions when operating the product.

For models for single-phase power supply
Impeller diameter of 25 cm or less: Temperature: from -10 deg. C to +50 deg. C, Humidity: 90% or less, Altitude: 1,000 m or less
Impeller diameter ranging from 30 cm to 40 cm 4P: Temperature: from -20 deg. C to +50 deg. C, Humidity: 90% or less, Altitude: 1,000 m or less
Impeller diameter of 40 cm or more 6P: Temperature: from -10 deg. C to +50 deg. C, Humidity: 85% or less, Altitude: 1,000 m or less
For models for three phase power supply
Temperature: from -30 deg. C to +50 deg. C, Humidity: 85% or less*, Altitude: 1,000 m or less
※For the models with the impeller diameter of 40 cm or less and with four poles, the humidity must be 90% or less.

Special Specifications

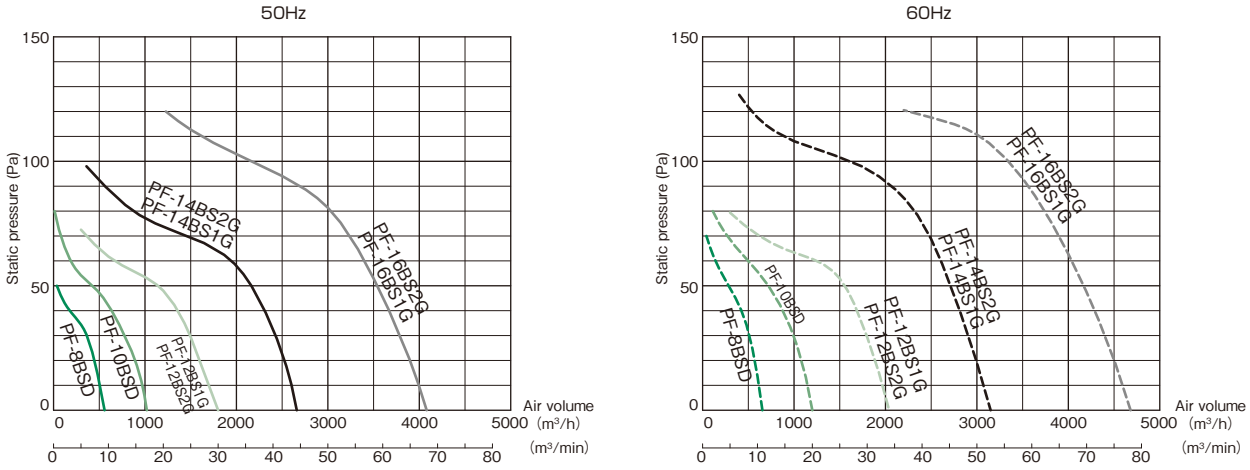
Impeller diameter (cm)	Airflow direction	Special order features					
		Different voltage	Heat resistance of 60 deg ℃	Heat resistance of 80 deg ℃	Acid-resistant (salt-resistant) coating	Specified color	MFP
20	Exhaust	×	×	×	○	○	×
	Intake	×	×	×	○	○	×
25	Exhaust	×	×	×	○	○	×
	Intake	×	×	×	○	○	×
30	Exhaust	×	×	×	○	○	×
	Intake	×	×	×	○	○	×
35	Exhaust	※1	○	○	○	○	○
	Intake	※1	○	○	○	○	○
40	Exhaust	※1	※2	※2	○	○	※3
	Intake	※1	※2	※2	○	○	※3
45	Exhaust	※1	○	○	○	○	○
	Intake	※1	○	○	○	○	○
50	Exhaust	※1	○	○	○	○	○
	Intake	※1	○	○	○	○	○
60	Exhaust	○	○	○	○	○	○
	Intake	○	○	○	○	○	○
75	Exhaust	○	○	○	○	○	○
	Intake	○	○	○	○	○	○
90	Exhaust	○	○	○	○	○	○
	Intake	○	○	○	○	○	○
105	Exhaust	○	○	○	○	○	○
	Intake	○	○	○	○	○	○
120	Exhaust	○	○	○	○	○	○
	Intake	○	○	○	○	○	○

※1: 400 volt-class available in three phase only
※2: Heat resistant feature available in three phase only
※3: MFP feature available in three phase only

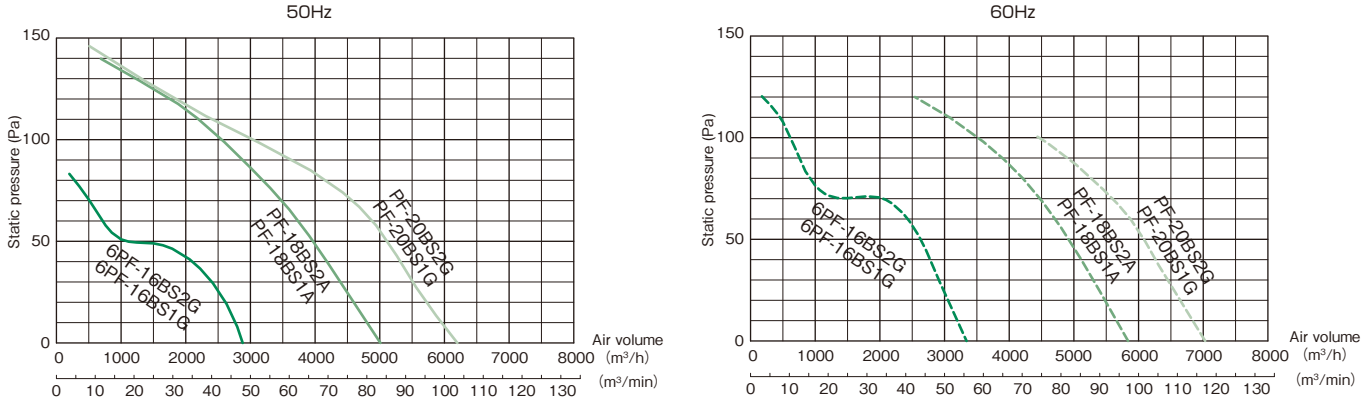
Selection Diagrams

[Exhaust type]

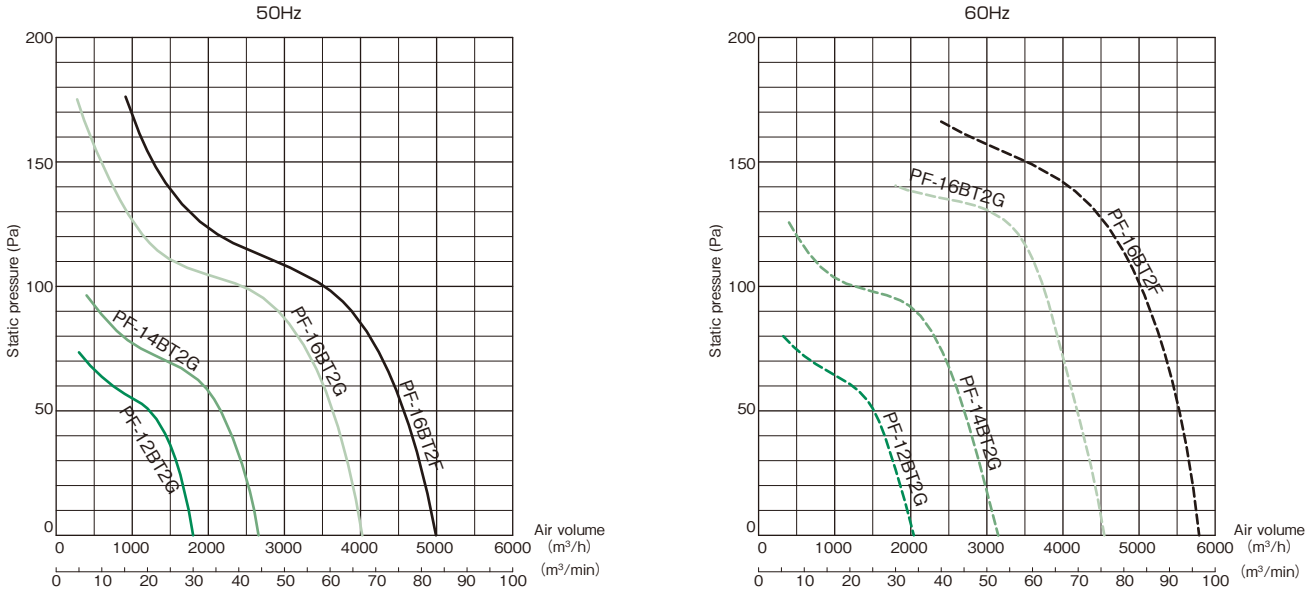
Single phase, impeller diameter of 20 cm to 40 cm, four poles



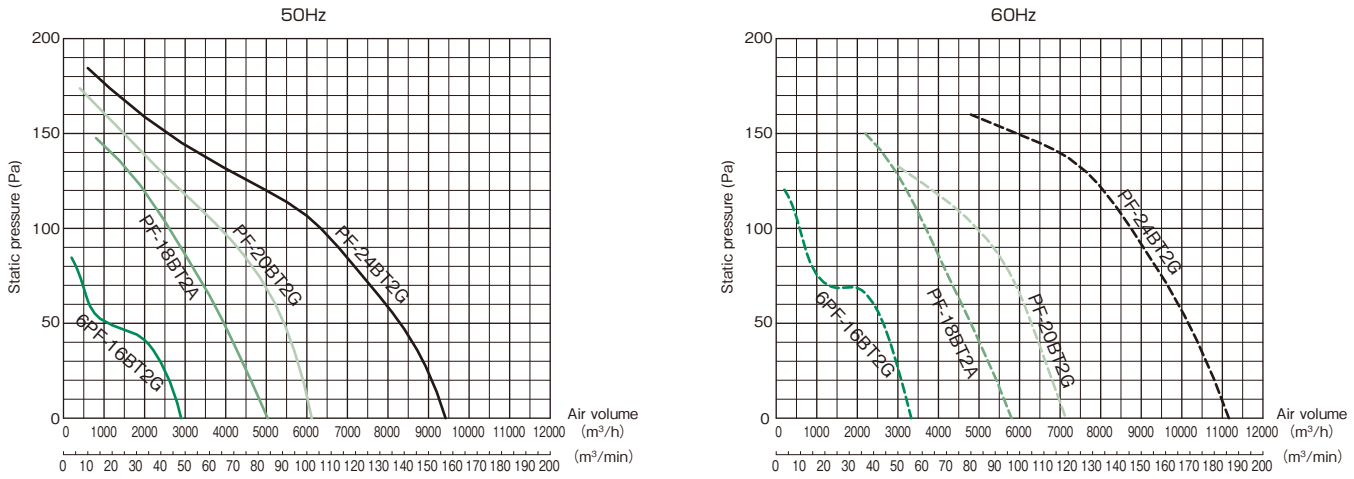
Single phase, impeller diameter of 40 cm to 50 cm, six poles



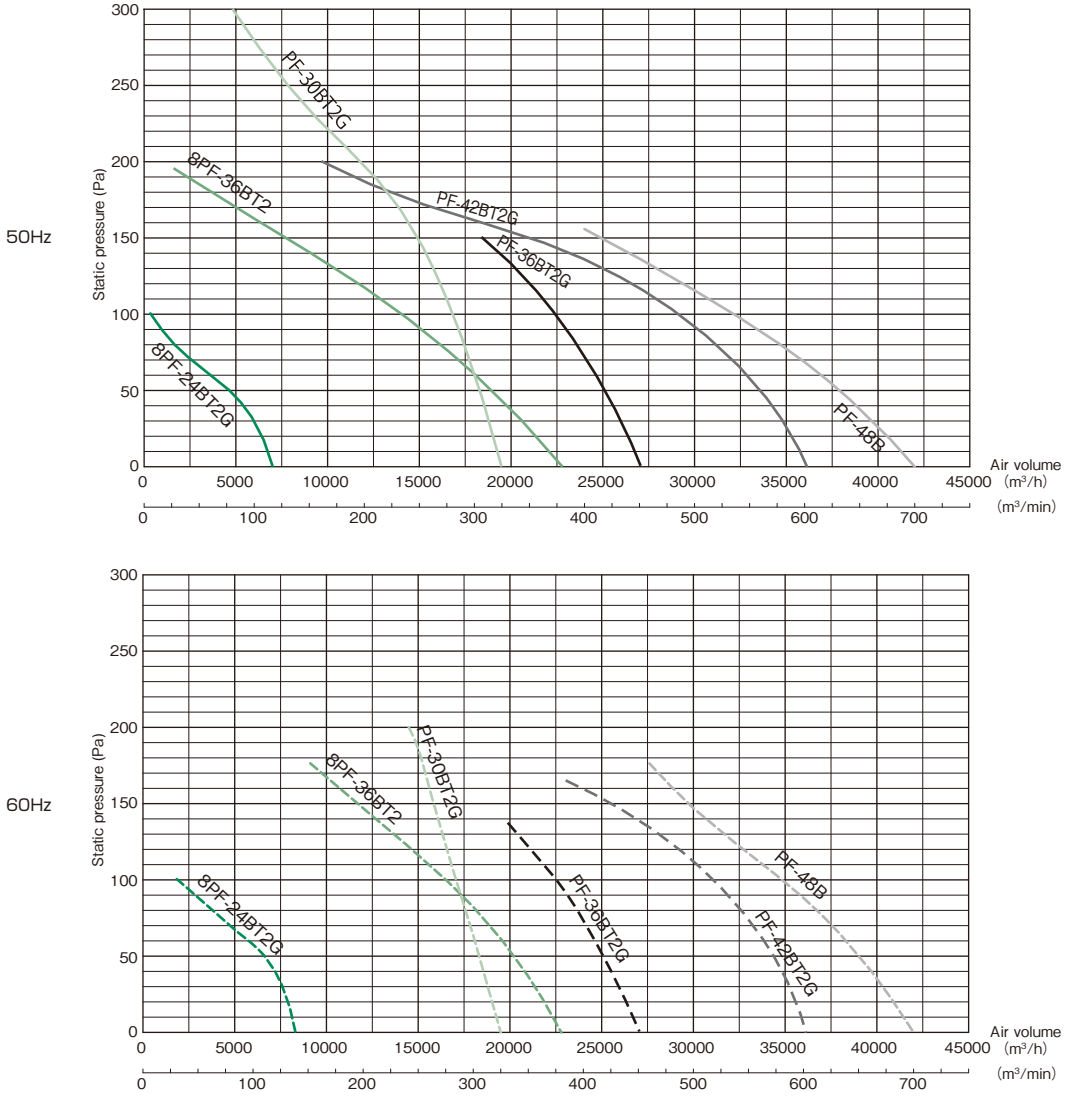
Three phase, impeller diameter of 30 cm to 40 cm, four poles



Three phase, impeller diameter of 40 cm to 60 cm, six poles



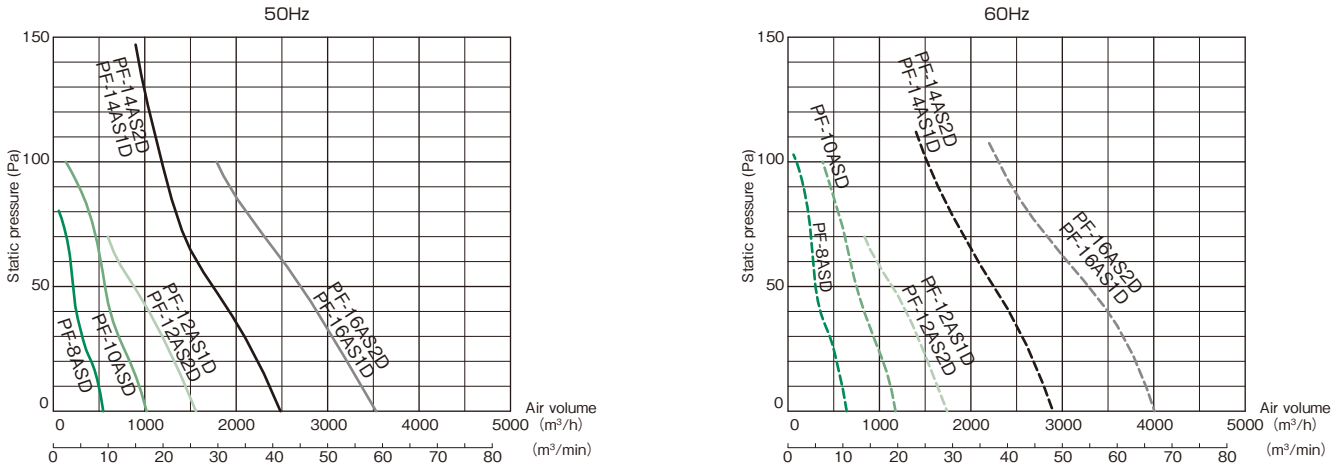
Three phase, impeller diameter: 60 cm, eight poles, impeller diameter: 75 to 120 cm



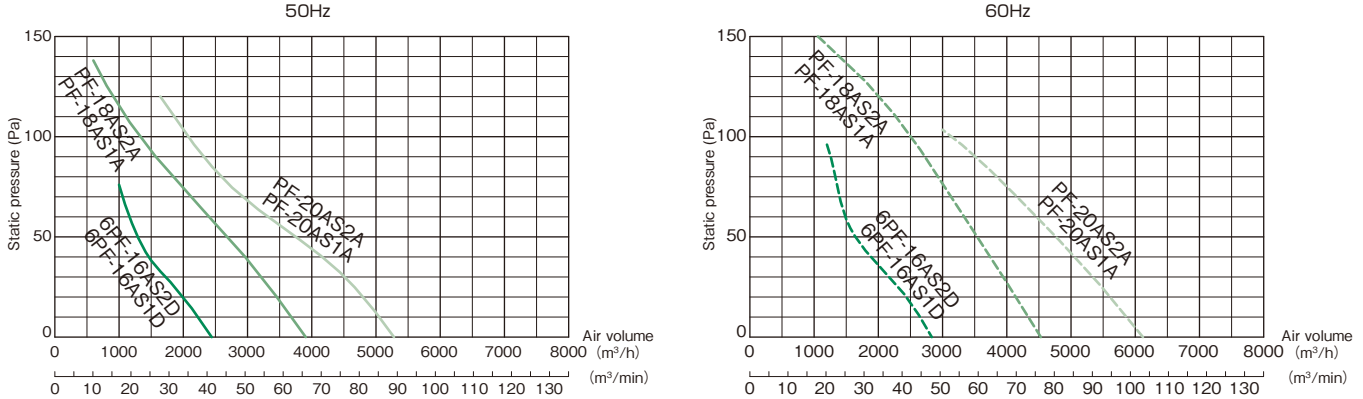
Selection Diagrams

[Intake type]

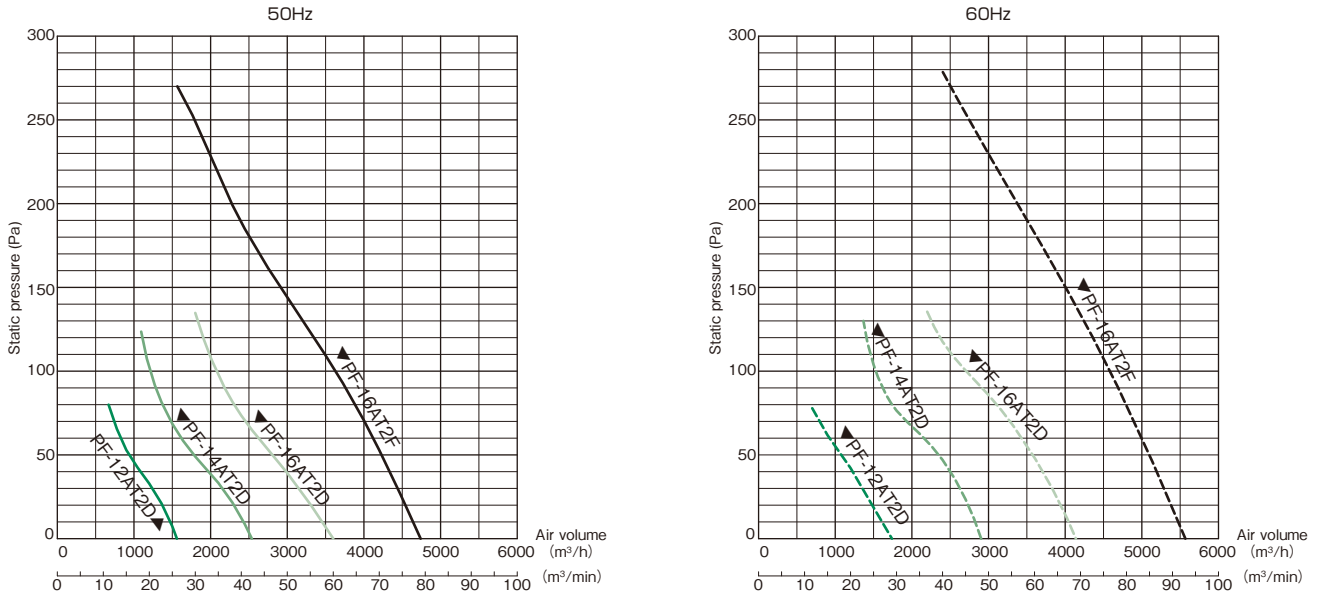
Single phase, impeller diameter of 20 cm to 40 cm, four poles



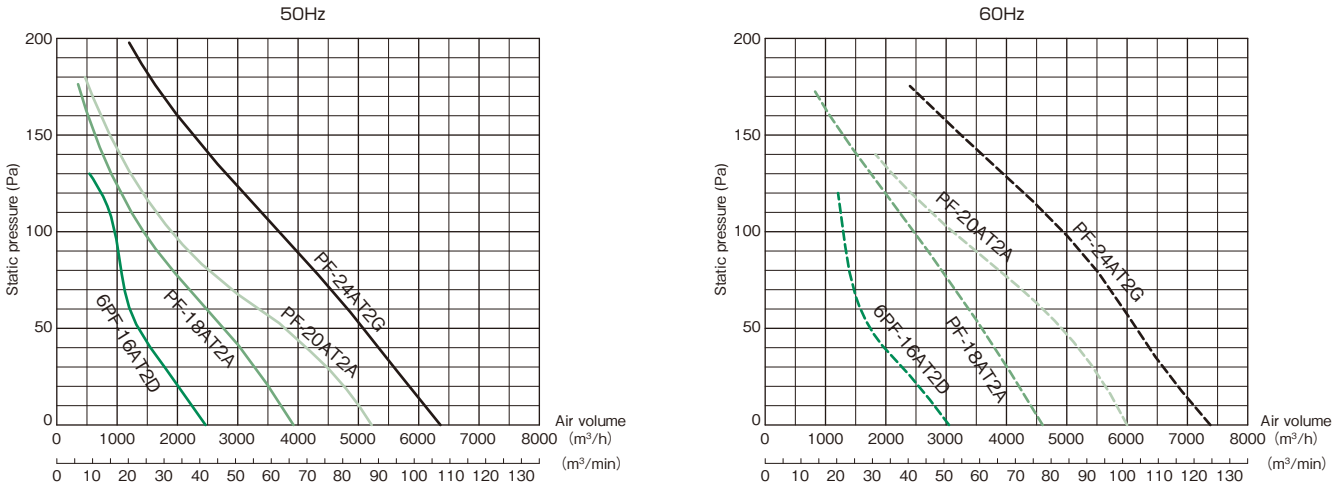
Single phase, impeller diameter of 40 cm to 50 cm, six poles



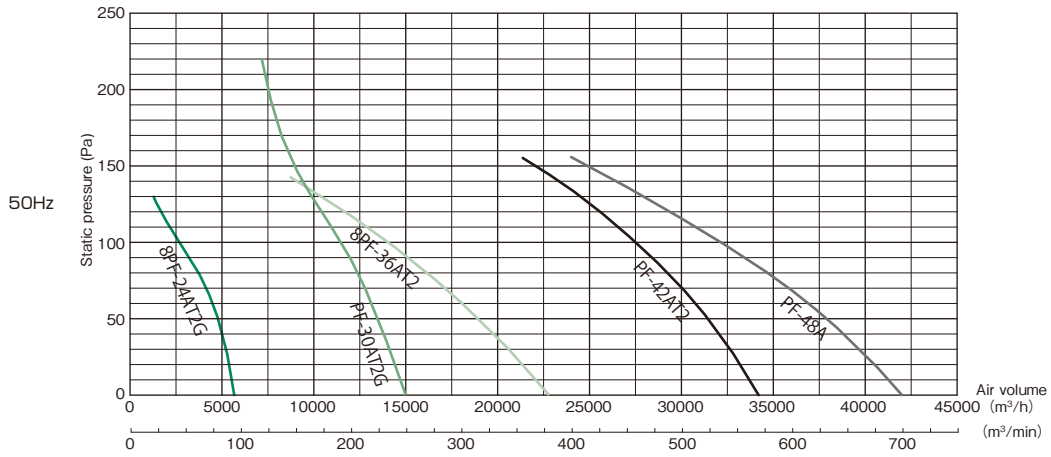
Three phase, impeller diameter of 30 cm to 40 cm, four poles

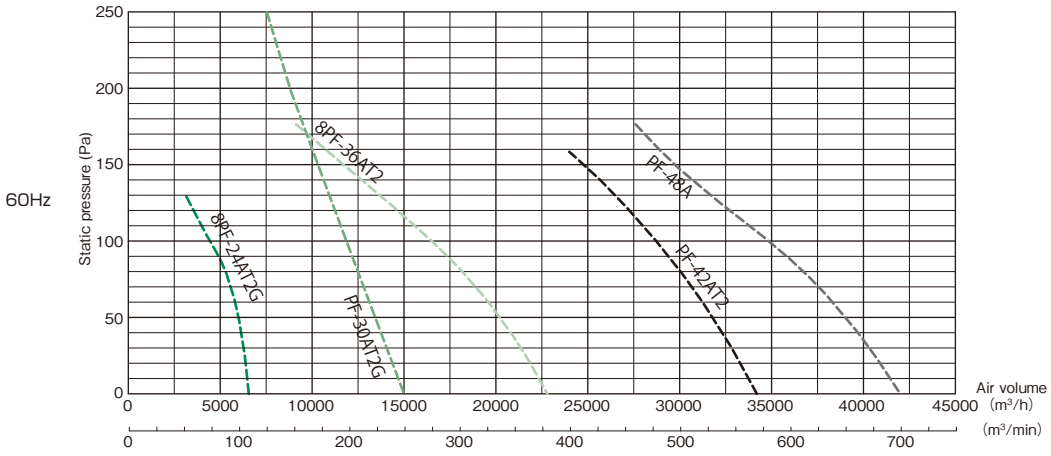


Three phase, impeller diameter of 40 cm to 60 cm, four poles



Three phase, impeller diameter: 60 cm, eight poles, impeller diameter: 75 to 120 cm





Assembly drawing [Exhaust type]

※For intake type, please contact us.

impeller diameter of 20 cm to 40 cm, four poles

Fig. 1

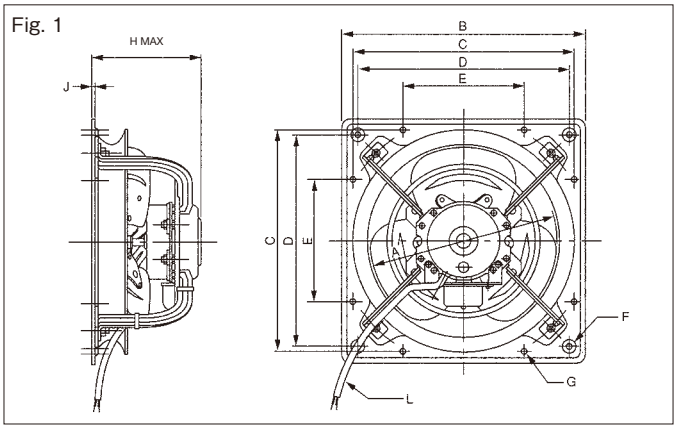
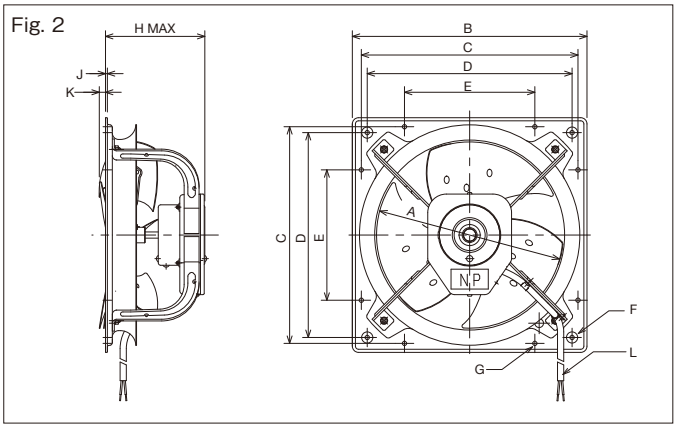


Fig. 2



※Dimensions vary slightly depending on the model.

Specifications

(Unit: mm)

Fig.	Model	A	B	C	D	E	F	G	H	J	K	L
1	PF-8BSD	200	276	246	240	162	4-φ7	8-φ7	148.5	3	/	2PNCT×2core×0.75mm²×1m
1	PF-10BSD	250	327	298	285	165	4-φ7	8-φ7	148.5	3	/	2PNCT×2core×0.75mm²×1m
2	PF-12BS1G	300	378	349	330	210	4-φ7	8-φ7	160	3	/	VCT×2core×0.75mm²×1m
2	PF-12BS2G	300	378	349	330	210	4-φ7	8-φ7	160	3	/	VCT×2core×0.75mm²×1m
2	PF-12BT2G	300	378	349	330	210	4-φ7	8-φ7	160	3	/	VCT×3core×0.75mm²×1m
2	PF-14BS1G	350	467	434	400	250	4-φ12	8-φ12	194	3	/	VCT×2core×0.75mm²×1m
2	PF-14BS2G	350	467	434	400	250	4-φ12	8-φ12	194	3	/	VCT×2core×0.75mm²×1m
2	PF-14BT2G	350	467	434	400	250	4-φ12	8-φ12	194	3	/	VCT×3core×0.75mm²×1m
2	PF-16BS1G	400	518	485	450	280	4-φ12	8-φ12	198	3	/	VCT×2core×0.75mm²×1m
2	PF-16BS2G	400	518	485	450	280	4-φ12	8-φ12	198	3	/	VCT×2core×0.75mm²×1m
2	PF-16BT2G	400	518	485	450	280	4-φ12	8-φ12	198	3	/	VCT×3core×0.75mm²×1m
2	PF-16BT2F	400	518	485	450	280	4-φ12	8-φ12	224	3	0	2PNCT×3core×1.25mm²×1m

impeller diameter of 40 cm to 60 cm, six poles

Fig. 1

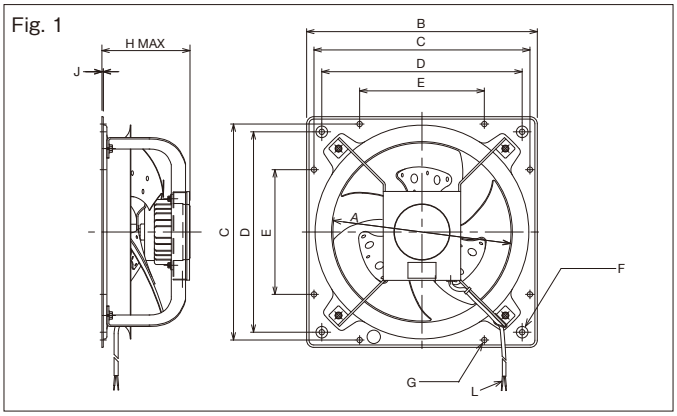
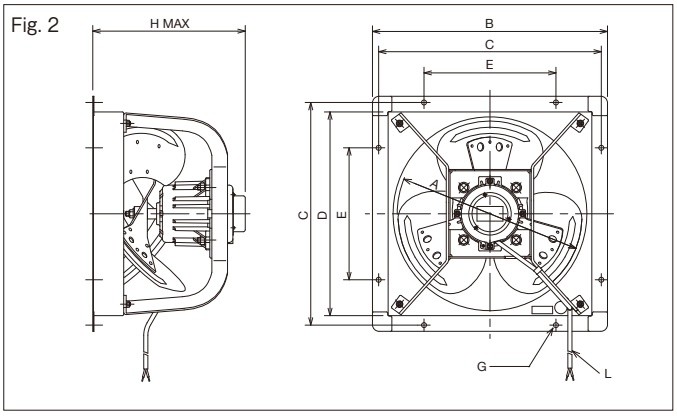


Fig. 2



※Dimensions vary slightly depending on the model.

Specifications

(Unit: mm)

Fig.	Model	A	B	C	D	E	F	G	H	J	L
1	6PF-16BS1G	400	518	485	450	280	4-φ12	8-φ12	198	3	VCT×2core×0.75㎟×1m
1	6PF-16BS2G	400	518	485	450	280	4-φ12	8-φ12	198	3	VCT×2core×0.75㎟×1m
1	6PF-16BT2G	400	518	485	450	280	4-φ12	8-φ12	198	3	VCT×3core×0.75㎟×1m
2	PF-18BS1A	450	570	540	494	320	/	8-φ12	380	/	2PNCT×2core×1.25㎟×1m
2	PF-18BS2A	450	570	540	494	320	/	8-φ12	380	/	2PNCT×2core×1.25㎟×1m
2	PF-18BT2A	450	570	540	494	320	/	8-φ12	350	/	2PNCT×3core×1.25㎟×1m
1	PF-20BS1G	500	659	620	563	355	/	8-φ15	395	/	2PNCT×2core×1.25㎟×1m
1	PF-20BS2G	500	659	620	563	355	/	8-φ15	395	/	2PNCT×2core×1.25㎟×1m
1	PF-20BT2G	500	659	620	563	355	/	8-φ15	365	/	2PNCT×3core×1.25㎟×1m
1	PF-24BT2G	600	760	720	664	400	/	8-φ15	380	/	2PNCT×3core×1.25㎟×1m

Assembly drawing [Exhaust type]

※For intake type, please contact us.

impeller diameter of 60 cm, eight poles, impeller diameter of 75 cm to 120 cm

Fig. 1

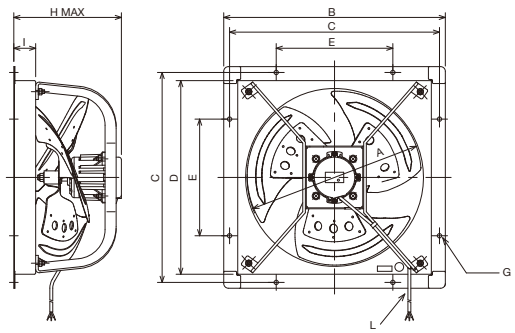


Fig. 2

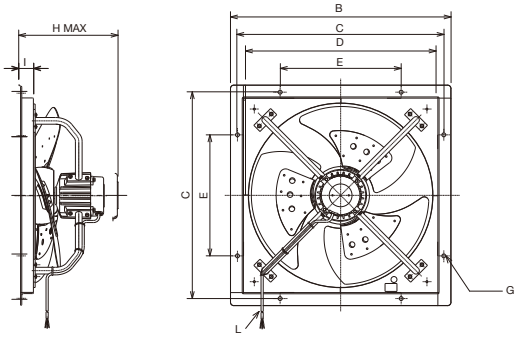
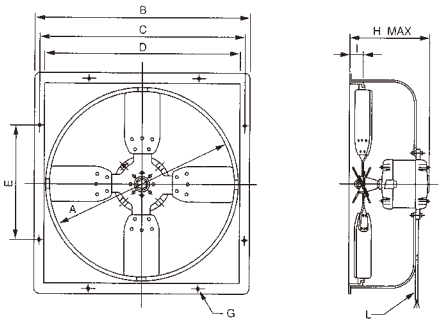


Fig. 3



※Dimensions vary slightly depending on the model.

Dimensions

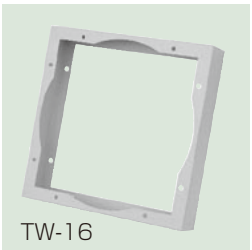
(Unit: mm)

Fig.	Model	A	B	C	D	E	F	G	I	L
1	8PF-24BT2G	600	760	720	664	400	8-φ15	380	75	2PNCT×3core×1.25mm²×1m
1	PF-30BT2G	750	955	900	825	508	8-φ20	450	65	2PNCT×3core×2mm²×1m
2	PF-36BT2G	900	1110	1040	980	610	8-φ20	440	65	2PNCT×3core×2mm²×1m
3	8PF-36BT2	900	1110	1040	980	610	8-φ20	415	65	2PNCT×3core×2mm²×1m
2	PF-42BT2G	1050	1262	1207	1132	656	8-φ20	560	65	2PNCT×3core×3.5mm²×1m
3	PF-48B	1200	1475	1425	1345	800	8-φ20	540	/	2PNCT×3core×5.5mm²×3m

Special Accessory

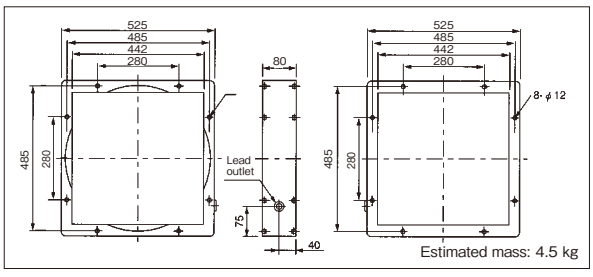
Intake attachment

Be sure to use it when using the PF-16AT2F (intake type pressure fan) in combination with a motor-driven shutter.

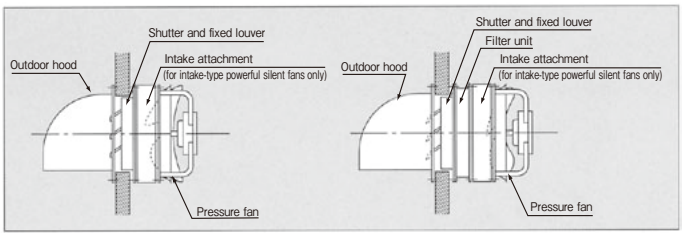


※Please note that the photo shows a typical example and that it may partly differ from the real item.

External Dimensions Diagram



Example of Combination



Outdoor Type (Exhaust / Intake) Impeller Diameter: 25 to 120 cm

※Please note that the photo shows typical examples and that they may partly differ from real items.

Applications

For installation at places with high humidity and outdoors

Feature

These pressure fans are equipped with outdoor motors suited for conditions of high humidity.

Notes on Installation

- Any model with the impeller diameter of 35 cm or more has a drain hole underneath the motor. (For installing the fan with the motor shaft positioned horizontal), make sure that the drain hole faces downwards. When using it outdoor or under conditions of high humidity, remove the drain hole cap facing downwards. When using it in any dusty place or when water comes into the fan, keep the cap attached and detach it occasionally to perform an inspection.
- It is standard to install the fan with the shaft positioned horizontally. If it is installed in a non-standard manner (e.g. in an attitude in which the shaft faces downwards), be sure to specify it at the time of placing an order. Installation of any fan designed to be installed in the standard manner in an attitude in which it faces downward may cause failure.

Specifications

Airflow direction	Model	Impeller diameter (cm)	Number of poles (P)	Power supply (V)	Rated output (W)	Air volume(m^3/h)		Power consumption (W)		Allowable current (A)		Starting current (A)		Noise(dB(A))		Estimated mass (kg)
						50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Exhaust type	WP-10B	25	4	100 single phase	20	570	690	31	37	0.7	0.7	0.9	0.8	45	49	5.5
				200 single phase						0.35	0.35	0.5	0.4			
	WP-12B	30		100 single phase	50	1446	1704	66	83	1.2	1.5	2.8	3	51	55	8.5
				200 single phase						0.6	0.75	1.4	1.5			
	WP-14BS1G	35		100 single phase	100	2660	3150	142	144	3.2	3	8.3	7.9	43.5	47	9.4
	WP-14BS2G			200 single phase						1.6	1.5	4.3	4.2			
	WP-14BT2G			200 three phase				102	122	1.25	1.15	4.1	3.9			
	WP-16BS1G	40		100 single phase	200	4080	4680	188	240	3.5	3.45	8.3	7.9	46	50	11
	WP-16BS2G			200 single phase				200	250	1.8	1.8	4.3	4.2			
	WP-16BT2G			200 three phase		4022	4543	162	227	1.2	1.2	4.1	3.9			
	6WP-16BS1G		6	100 single phase	100	2880	3340	86	101	1.4	1.6	2.8	2.6	40	44	10.8
	6WP-16BS2G			200 single phase				98	116	0.72	0.84	1.6	1.6			
	6WP-16BT2G			200 three phase				114	118	0.9	0.9	2.2	2.1			
	WP-18BS1A	45		100 single phase	250	5010	5838	230	340	5.5	7.5	11	11	54	58	23.5
	WP-18BS2A			200 single phase						2.7	3.7	6.5	5.9			
	WP-18BT2A			200 three phase		5034	5802	210	310	2.3	3.0	6.5	5.7			23
	WP-20BS1G	50		100 single phase	400	6200	7020	300	450	7.0	7.2	11	11	49	53	25
	WP-20BS2G			200 single phase						3.5	3.6	6.5	5.9			
	WP-20BT2G			200 three phase		6120	7140	270	410	2.6	2.8	6.5	5.7			24.6
	WP-24BT2G	60			750	9420	11160	460	690	4.2	4.2	12	10	51	55.5	33
	8WP-24BT2G		8		400	7060	8360	250	330	3.0	3.0	5.8	4.6	45	49.5	
	WP-30BT2G	75	6		1500	19500	19500	1500	1640	7.7	6.7	33	29	62	64	77.5
	WP-36BT2G	90			2200	27000	27000	1720	2050	9.0	9.0	38	34	69	73	86
	WP-42BT2G	105	8			36000	36000	2050	2450	14.0	12.5	42	35	67	71	118
	WP-48B	120	10		3700	42000	42000	3200	3200	20	17	74	63	75	76	153

- The output, air volume and noise figures mentioned above represent the values in the state of operation under free air conditions.
- The air volume has been measured in the JIS C 9603-compliant orifice chamber method, except for the models with the impeller diameter range from 90 cm to 120 cm, for which the JIS B 8330-compliant suction pipe method was employed.
- The noise figure represents the average of the values measured at three points that are 1.5 meters distant from one another. The value in actual operation varies depending on the installation method and the duct form.
- The allowable current figure represents the critical point of operation. Use it for reference at the time of selecting a motor breaker.
- Make sure that the product is operated at any place where no corrosive or explosive gas or no steam is generated.
- Be sure to install and use the fan in an environment with the temperature ranging from -10 deg. C to +40 deg. C, the humidity of 100% or less and the altitude of 1,000 m or less.

Specifications

Airflow direction	Model	Impeller diameter (cm)	Number of poles (P)	Power supply (V)	Rated output (W)	Air volume(m³/h)		Power consumption (W)		Allowable current (A)		Starting current (A)		Noise(dB(A))		Estimated mass (kg)
						50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Intake type	WP-10A	25	4	100 single phase	20	402	498	31	37	0.7	0.7	0.9	0.8	45	49	5.5
				200 single phase						0.35	0.35	0.5	0.4			
	WP-12A	30		100 single phase	50	720	840	66	83	1.2	1.5	2.8	3	51	55	8.5
				200 single phase						0.6	0.75	1.4	1.5			
	WP-14AS1D	35		100 single phase	100	2484	2898	164	186	3.0	3.2	8.3	7.9	54	57	9.4
	WP-14AS2D			200 single phase						1.6	1.7	4.3	4.2			
	WP-14AT2D			200 three phase		2538	2904	120	160	1.15	1.1	4.1	3.9			
	WP-16AS1D	40		100 single phase	200	3528	4008	210	270	3.15	3.4	8.3	7.9	55	59	10.5
	WP-16AS2D			200 single phase				204	260	1.7	1.7	4.3	4.2			
	WP-16AT2D			200 three phase		3600	4140	184	263	1.14	1.14	4.1	3.9			
	6WP-16AS1D		6	100 single phase	100	2442	2832	90	107	1.5	1.6	2.8	2.6	45	49	10.5
	6WP-16AS2D			200 single phase				102	120	0.75	0.75	1.6	1.6			
	6WP-16AT2D			200 three phase		2466	3048	114	123	0.86	0.86	2.2	2.1			
	WP-18AS1A	45		100 single phase	250	3906	4530	250	370	5.8	6.7	11	11	56	60	23.5
	WP-18AS2A			200 single phase						2.9	3.4	6.5	5.9			
	WP-18AT2A			200 three phase		3920	4600	230	340	2.3	3.0	6.5	5.7			23
	WP-20AS1A	50		100 single phase	400	5280	6120	270	400	6.5	6.8	11	11	58	61	24.5
	WP-20AS2A			200 single phase						3.2	3.4	6.5	5.9			
	WP-20AT2A			200 three phase		5220	6000	250	340	2.7	3.0	6.5	5.7			24.3
	WP-24AT2G	60			750	6360	7380	490	710	4.1	4.1	12	10	55.5	59	33
	8WP-24AT2G		8		400	5420	6280	270	360	3.0	2.8	5.8	4.6	48.5	52	
	WP-30AT2G	75	6		1500	15000	15000	1380	1600	7.4	7.8	33	29	68	69	81
	WP-30AT2					19500	19500	1580	1400	7.0	6.8	33	29	72	73	73.5
	WP-36AT2	90			2200	27000	27000	1720	2200	8.6	9.0	31	28	77	80	76
	WP-42AT2	105	8			34200	34200	2500	2260	11.4	10.3	42	35	74	76	103
	WP-48A	120	10		3700	42000	42000	3200	3200	20	17	74	63	75		153

- The output, air volume and noise figures mentioned above represent the values in the state of operation under free air conditions.
- The air volume has been measured in the JIS C 9603-compliant orifice chamber method, except for the models with the impeller diameter range from 90 cm to 120 cm, for which the JIS B 8330-compliant suction pipe method was employed.
- The noise figure represents the average of the values measured at three points that are 1.5 meters distant from one another. The value in actual operation varies depending on the installation method and the duct form.
- The allowable current figure represents the critical point of operation. Use it for reference at the time of selecting a motor breaker.
- Make sure that the product is operated at any place where no corrosive or explosive gas or no steam is generated.
- Be sure to install and use the fan in an environment with the temperature ranging from -10 deg. C to +40 deg. C, the humidity of 100% or less and the altitude of 1,000 m or less.

Special Specifications

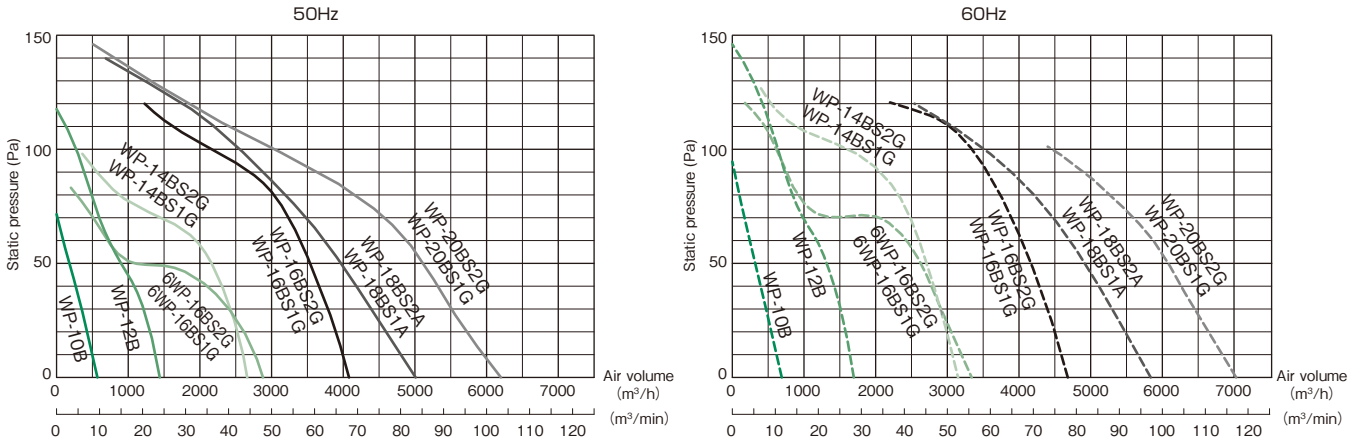
Impeller diameter (cm)	Airflow direction	Special order features					
		Different voltage	Heat resistance of 60 deg ℃	Heat resistance of 80 deg ℃	Acid-resistant (salt-resistant) coating	Specified color	MFP
25	Exhaust	○	○	×	○	○	○
	Intake	○	○	×	○	○	○
30	Exhaust	○	○	×	○	○	○
	Intake	○	○	×	○	○	○
35	Exhaust	※	○	×	○	○	○
	Intake	※	○	×	○	○	○
40	Exhaust	※	○	×	○	○	○
	Intake	※	○	×	○	○	○
45	Exhaust	※	○	×	○	○	○
	Intake	※	○	×	○	○	○
50	Exhaust	※	○	×	○	○	○
	Intake	※	○	×	○	○	○
60	Exhaust	○	○	×	○	○	○
	Intake	○	○	×	○	○	○
75	Exhaust	○	○	×	○	○	○
	Intake	○	○	×	○	○	○
90	Exhaust	○	○	×	○	○	○
	Intake	○	○	×	○	○	○
105	Exhaust	○	○	×	○	○	○
	Intake	○	○	×	○	○	○
120	Exhaust	○	○	×	○	○	○
	Intake	○	○	×	○	○	○

※400 volt-class available in three phase only

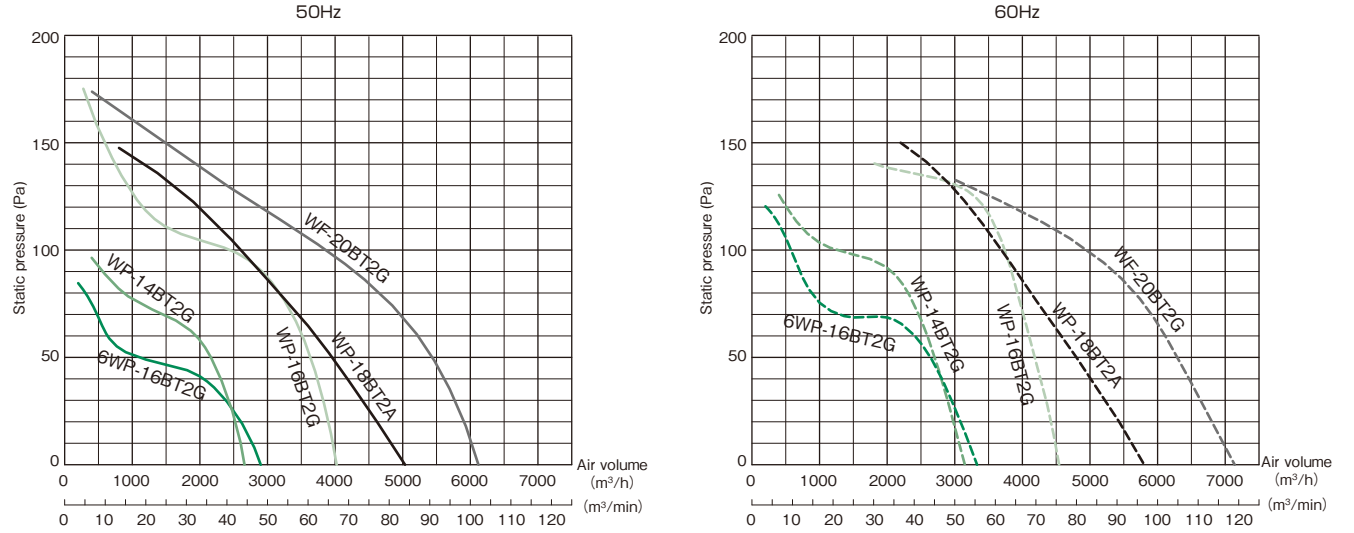
Selection Diagrams

[Exhaust type]

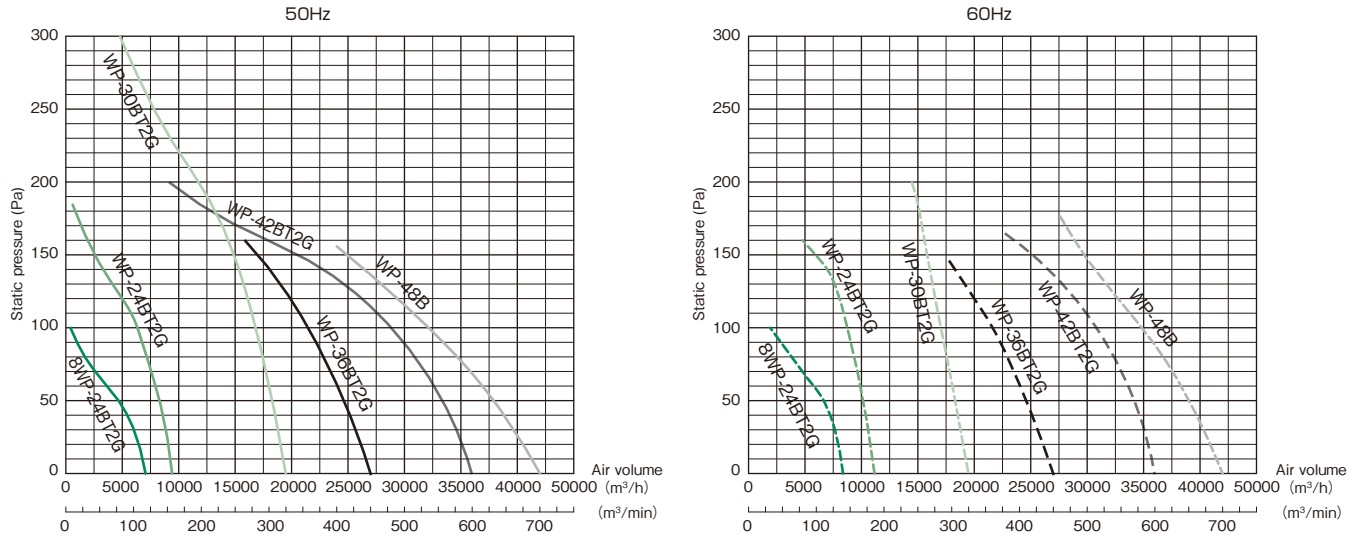
Single phase, impeller diameter of 25 cm to 50 cm



Three phase, impeller diameter of 35 cm to 50 cm



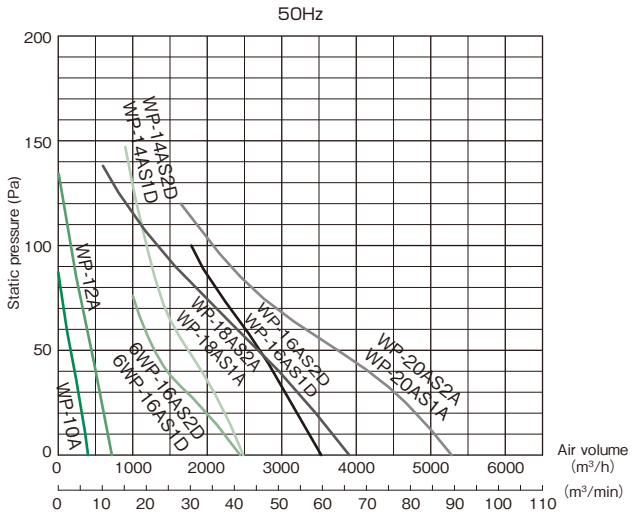
Three phase, impeller diameter of 60 cm to 105 cm

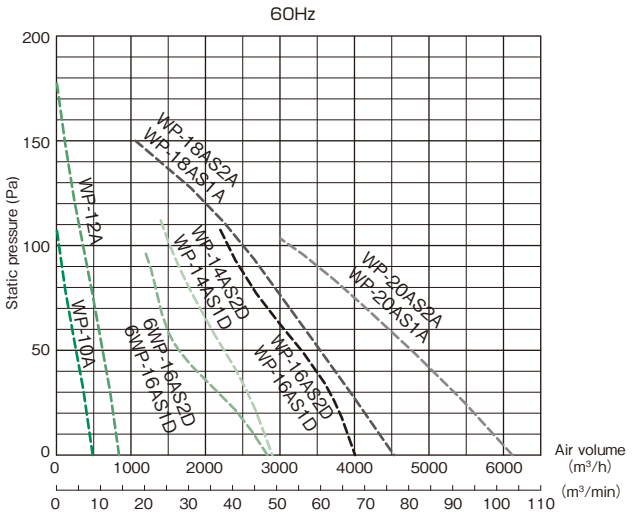


Selection Diagrams

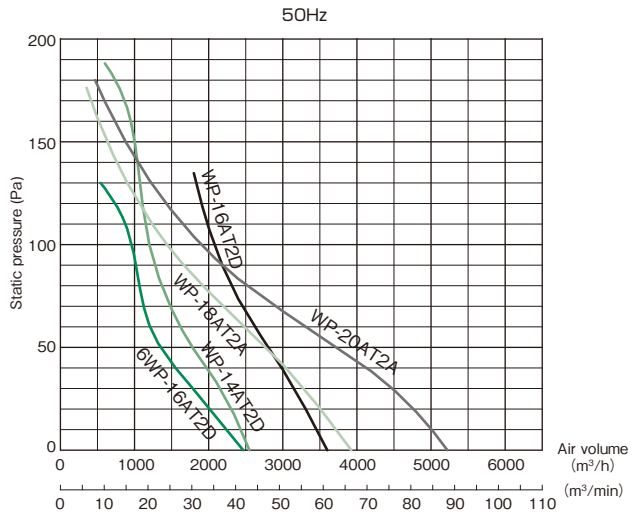
[Intake type]

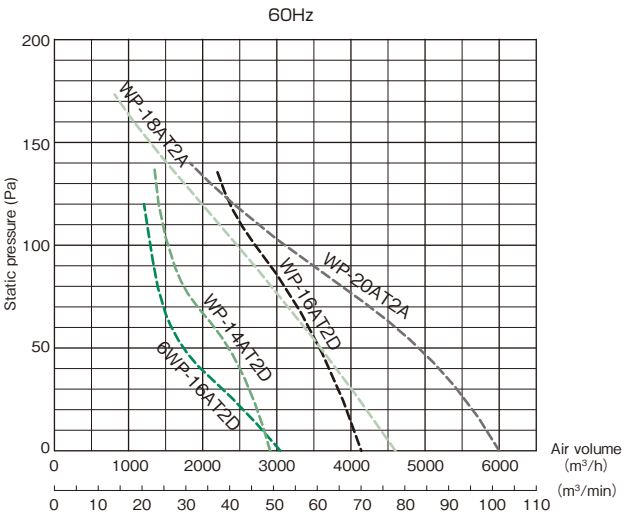
Single phase, impeller diameter of 25 cm to 50 cm



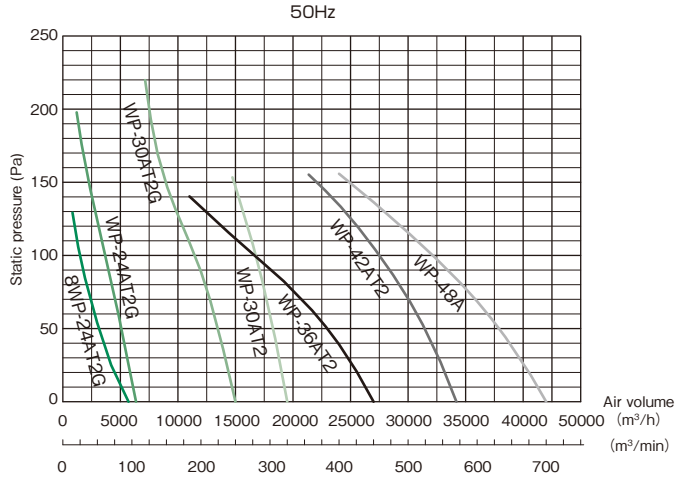


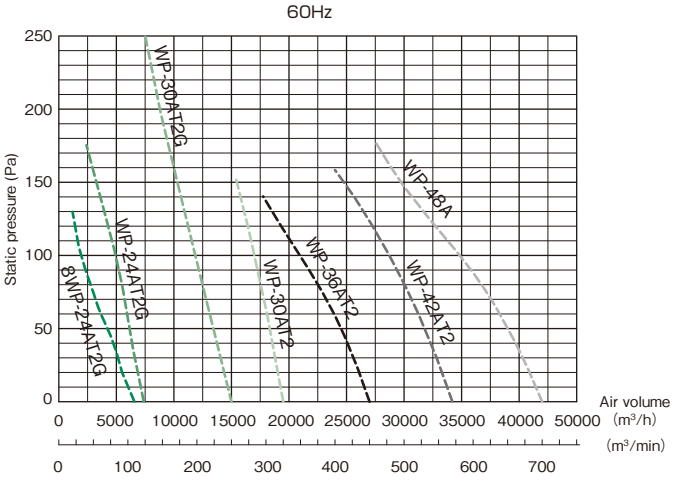
Three phase, impeller diameter of 35 cm to 50 cm





Three phase, impeller diameter of 60 cm to 120 cm





Assembly drawing [Exhaust type]

※For external dimensions of the intake type, please contact us.

Fig. 1

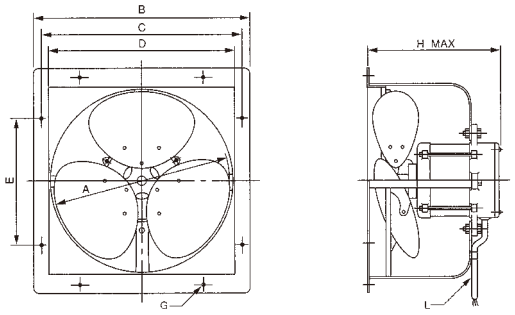


Fig. 2

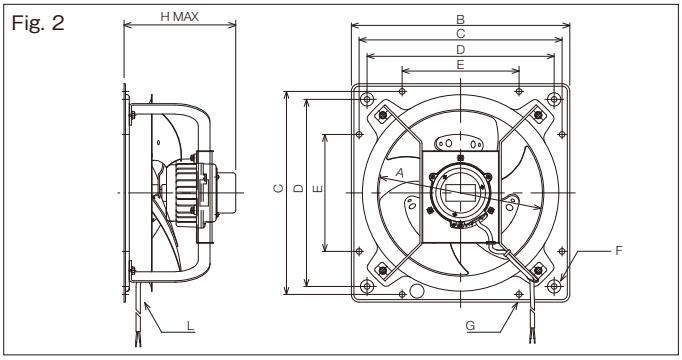


Fig. 3

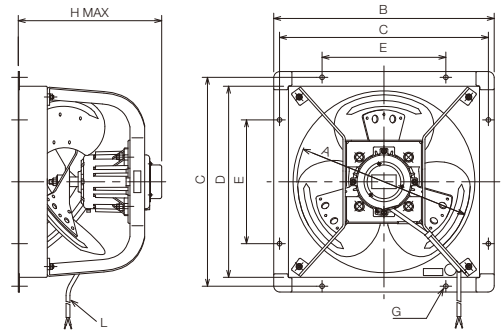


Fig. 4

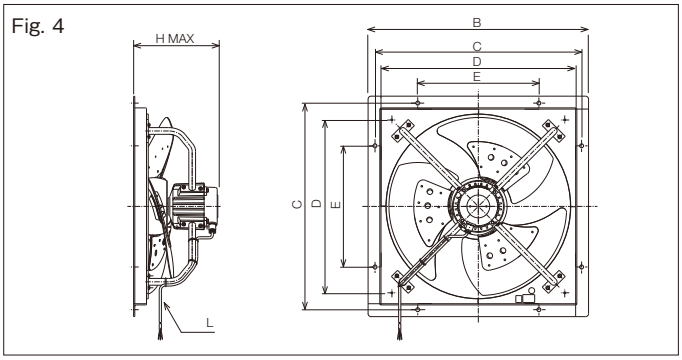
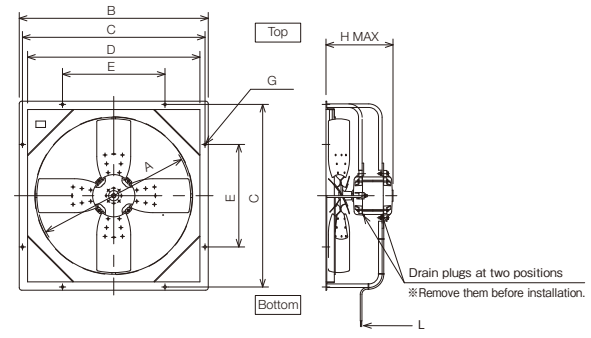


Fig. 5



- Any model with a impeller diameter of 35 cm or more has a drain hole underneath the motor. (For installing the fan with the motor shaft positioned horizontal), make sure that the drain hole faces downwards. When using it outdoors or under conditions of high humidity, remove the drain hole cap facing downwards. When using it in any dusty place or when water comes into the fan, keep the cap attached and detach it occasionally to perform an inspection.
- It is standard to install the fan with the shaft positioned horizontally. If it is installed in a non-standard manner (e.g. in an attitude in which the shaft faces downwards), be sure to specify it at the time of placing an order. Installation of any fan designed to be installed in the standard manner in an attitude in which it faces downward may cause failure.

※The form may vary slightly depending on the model.

Dimensions

(Unit: mm)

Fig.	Model	A	B	C	D	E	F	G	H	L
1	WP-10B	250	327	298	267	165	/	8-φ8.5	215	2PNCT×2core×0.75mm²×1m
1	WP-12B	300	378	349	318	210	/	8-φ8.5	255	2PNCT×2core×0.75mm²×1m
2	WP-14BS1G	350	467	434	400	250	4-φ12	8-φ12	239	2PNCT×2core×0.75mm²×1m
2	WP-14BS2G	350	467	434	400	250	4-φ12	8-φ12	239	2PNCT×2core×0.75mm²×1m
2	WP-14BT2G	350	467	434	400	250	4-φ12	8-φ12	197	2PNCT×3core×0.75mm²×1m
2	WP-16BS1G	400	518	485	450	280	4-φ12	8-φ12	244	2PNCT×2core×0.75mm²×1m
2	WP-16BS2G	400	518	485	450	280	4-φ12	8-φ12	244	2PNCT×2core×0.75mm²×1m
2	WP-16BT2G	400	518	485	450	280	4-φ12	8-φ12	202	2PNCT×3core×0.75mm²×1m
2	6WP-16BS1G	400	518	485	450	280	4-φ12	8-φ12	244	2PNCT×2core×0.75mm²×1m
2	6WP-16BS2G	400	518	485	450	280	4-φ12	8-φ12	244	2PNCT×2core×0.75mm²×1m
2	6WP-16BT2G	400	518	485	450	280	4-φ12	8-φ12	202	2PNCT×3core×0.75mm²×1m
3	WP-18BS1A	450	570	540	494	320	/	8-φ12	380	2PNCT×2core×1.25mm²×1m
3	WP-18BS2A	450	570	540	494	320	/	8-φ12	380	2PNCT×2core×1.25mm²×1m
3	WP-18BT2A	450	570	540	494	320	/	8-φ12	350	2PNCT×3core×1.25mm²×1m
3	WP-20BS1G	500	659	620	563	355	/	8-φ15	395	2PNCT×2core×1.25mm²×1m
3	WP-20BS2G	500	659	620	563	355	/	8-φ15	395	2PNCT×2core×1.25mm²×1m
3	WP-20BT2G	500	659	620	563	355	/	8-φ15	365	2PNCT×3core×1.25mm²×1m
3	WP-24BT2G	600	760	720	664	400	/	8-φ15	380	2PNCT×3core×1.25mm²×1m
3	8WP-24BT2G	600	760	720	664	400	/	8-φ15	380	2PNCT×3core×1.25mm²×1m
4	WP-30BT2G	750	955	900	825	508	/	8-φ20	450	2PNCT×3core×2mm²×1m
4	WP-36BT2G	900	1110	1040	980	610	/	8-φ20	440	2PNCT×3core×2mm²×1m
4	WP-42BT2G	1050	1262	1207	1132	656	/	8-φ20	560	2PNCT×3core×3.5mm²×1m
5	WP-48B	1200	1475	1425	1345	800	/	8-φ20	540	2PNCT×3core×5.5mm²×3m

Applications

For factories, warehouses and workshops where explosive gas is generated.

Feature

The fans in this family are ideal for ventilation of any space where explosive gas is generated.

Standard Specifications

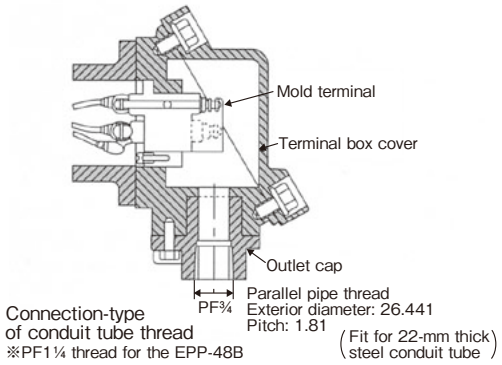
●Conforming to the JIS C 0905 and the test requirements formulated by the National Institute of Industrial Safety under the Ministry of Labour. Applicable under conditions with explosion class 2 or lower and ignitability of G4 or lower.

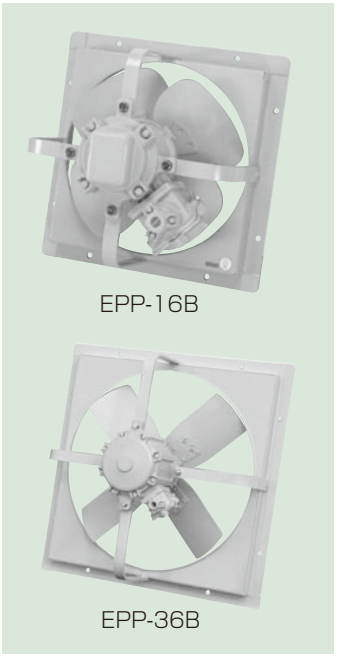
●Explosion class and ignitability

Ignitability / Explosion class	G1 Exceeding 450 deg. C	G2 Exceeding 300 deg. C and not exceeding 450 deg. C	G3 Exceeding 200 deg. C and not exceeding 300 deg. C	G4 Exceeding 135 deg. C and not exceeding 200 deg. C
1	●Acetone ●Ammonia ●Carbon monoxide ●Ethane ●Acetic acid ●Ethyl acetate ●Toluene ●Propane ●Benzene ●Methanol ●Methane	●Ethanol ●Isopentyl acetate ●i-Butanol ●Butane ●Isopentyl acetate	●Gasoline ●Hexane	●Acetaldehyde ●Ethyl Ether
2	●Coal gas	●Ethylene		

<Reference> Explosion Class: Defined in the JIS standards according to the minimum size of the clearance that causes flame propagation in the explosion test with the standard container into three classes, among which Class 3 is the most dangerous, followed by Class 2 and then by Class 1.
Ignitability: Defined in the JIS standard according to the ignition point into five groups, among which Group 5 (G5) is the highest and G1 is the lowest.

●Equipped with a terminal box with a pressure stud retraction system




EPP-16B

EPP-36B

※Please note that the photo shows a typical example and that it may partly differ from the real item.

Specifications

Airflow direction	Model	Impeller diameter (cm)	Number of poles (P)	Power supply (V)	Rated output (W)	Air volume(m³/h) 50Hz	Air volume(m³/h) 60Hz	Power consumption (W) 50Hz	Power consumption (W) 60Hz	Allowable current (A) 50Hz	Allowable current (A) 60Hz	Starting current (A) 50Hz	Starting current (A) 60Hz	Noise(dB(A)) 50Hz	Noise(dB(A)) 60Hz	Estimated mass (kg)
Exhaust type	EPP-8B	20	4	100 single phase	20	408	492	28	31	0.7	0.7	0.9	0.81	38	42	14.5
	EPP-10B	25		100 single phase	20	570	690	30	35	0.7	0.7	0.9	0.81	45	49	15
				200 single phase	20	570	690	30	35	0.35	0.35	0.45	0.41	45	49	15
	EPP-12B	30		100 single phase	50	1020	1200	45	50	1.1	1.1	2.6	2.6	51	55	21
				200 single phase	50	1020	1200	45	50	0.55		1.3	1.1	51	55	21
				200 three phase	75			55	60	0.6	0.52	2	1.8			
	EPP-14B	35		100 single phase	100	2820	2760	130	130	2.4	2	7.2	6.8	54	61	27
				200 single phase	100	2820	2760	130	130	1.2	1	3.6	3.4	54	61	27
				200 three phase				135	135	0.74	0.61	2.8	2.6			
	EPP-16B	40		100 single phase	200	4140	4140	240	260	3.2	3	7.6	7.4	60	63	37
				200 single phase	200	4140	4140	240	260	1.1	1.5	3.8	3.7	60	63	37
				200 three phase						1.22	1.04	4.7	4.3			
	6EPP-16B		6	100 single phase	100	2880	2880	100	100	1.9	1.8	2.3	2.2	48	54	
				200 single phase	100	2880	2880	100	100	0.95	0.9	1.2	1.2	48	54	
				200 three phase						0.72	0.64	2	1.8			
	EPP-18B	45		100 single phase	250	4380	4380	220	220	5.4	5	15	14	55	56	45
				200 single phase	250	4380	4380	220	220	2.2	2	7.5	7	55	56	45
				200 three phase				190	190	1.4	1.3	5	4.5			
	EPP-20B	50		100 single phase	400	6240	6240	340	340	7	6	18	16	58	60	57
				200 single phase	400	6240	6240	340	340	3.5	3	9	8	58	60	57
				200 three phase				300	300	2.15	2	7.5	6.8			
	EPP-24B	60	6	200 three phase	750	11400	11400	770	750	3.7	3.4	15	13	66	67	13
	8EPP-24B		8		400	8700	8700	360	400	2.7	2.7	5	4.5	59	59	
	EPP-30B	75	6		1500	19500	19500	1600	1600	7.5	6.8	25	21	72	73	95
	EPP-36B	90			2200	27600	27600	2000	2400	9.5	8.8	40	35	77	80	140
	EPP-42B	105	8			34800	34800	2200	2000	11	10	48	42	74	77	165
	EPP-48B	120	10		3700	42000	42000	3200	3200	22	20	86	74	75	76	220

· The output, air volume and noise figures mentioned above represent the values during operation under free air conditions.
· The air volume has been measured using the JIS C 9603-compliant orifice chamber method, except for models with a impeller diameter range from 90 cm to 120 cm, for which the JIS B 8330-compliant suction pipe method was employed.
· The noise figure represents the average of the values measured at three points that are 1.5 meters distant from one another. The value in actual operation varies depending on the installation method and the duct form.
· The allowable current figure represents the critical point of operation. Use it for reference at the time of selecting a motor breaker.
· Make sure that the product is operated at any place where no corrosive or explosive gas or no steam is generated.
· Be sure to install and use the fan in an environment with the temperature ranging from -10 deg. C to +40 deg. C, the humidity of 85% or less and the altitude of 1,000 m or less.

Specifications

Airflow direction	Model	Impeller diameter (cm)	Number of poles (P)	Power supply (V)	Rated output (W)	Air volume(m³/h)		Power consumption (W)		Allowable current (A)		Starting current (A)		Noise(dB(A))		Estimated mass (kg)
						50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	
Intake type	EPP-10A	25	4	100 single phase	20	402	486	35	45	0.7	0.7	0.9	0.81	45	49	15
				200 single phase						0.35	0.35	0.45	0.41			
	EPP-12A	30		200 three phase	75	720	840	60	65	0.6	0.52	2	1.8	51	55	21
	EPP-14A	35		100 single phase	100	2100	2040	130	130	2.4	2	7.2	6.8	54	61	27
				200 single phase						1.2	1	36	3.4			
				200 three phase				135	135	0.74	0.61	2.8	2.6			
	EPP-16A	40		100 single phase	200	3300	3300	240	260	3.2	3	7.6	7.4	60	63	37
				200 single phase						1.7	1.5	3.8	3.7			
				200 three phase			3000			1.22	1.04	4.7	4.3			
	6EPP-16A		6	100 single phase	100	2040	2040	100	100	1.9	1.8	2.3	2.2	48	54	
				200 single phase						0.95	0.9	1.2	1.2			
				200 three phase						0.72	0.64	2	1.8			
	EPP-18A	45			250	3484	3484	190	190	1.4	1.3	5	4.5	55	56	45
	EPP-20A	50			400	4980	4980	300	300	2.15	2	7.5	8.8	58	60	57

- The output, air volume and noise figures mentioned above represent the values in the state of operation under free air conditions.
- The air volume has been measured in the JIS C 9603-compliant orifice chamber method.
- The noise figure represents the average of the values measured at three points that are 1.5 meters distant from one another. The value in actual operation varies depending on the installation method and the duct form.
- The allowable current figure represents the critical point of operation. Use it for reference at the time of selecting a motor breaker.
- Make sure that the product is operated at any place where no corrosive or explosive gas or no steam is generated.
- Be sure to install and use the fan in an environment with the temperature ranging from -10 deg. C to +40 deg. C, the humidity of 100% or less and the altitude of 1,000 m or less.

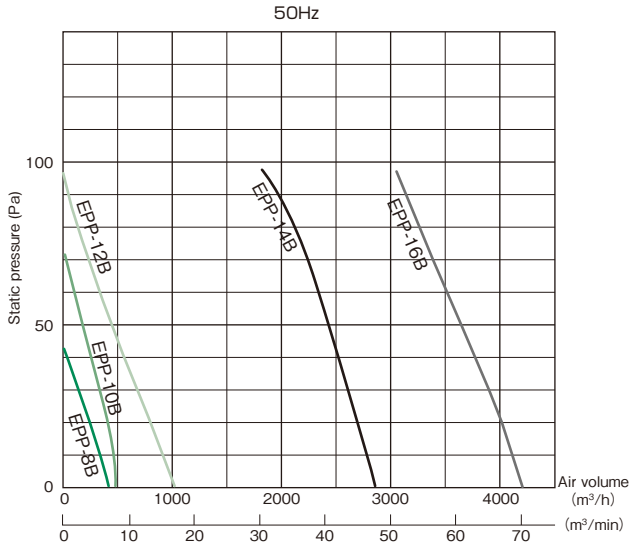
Special Specifications

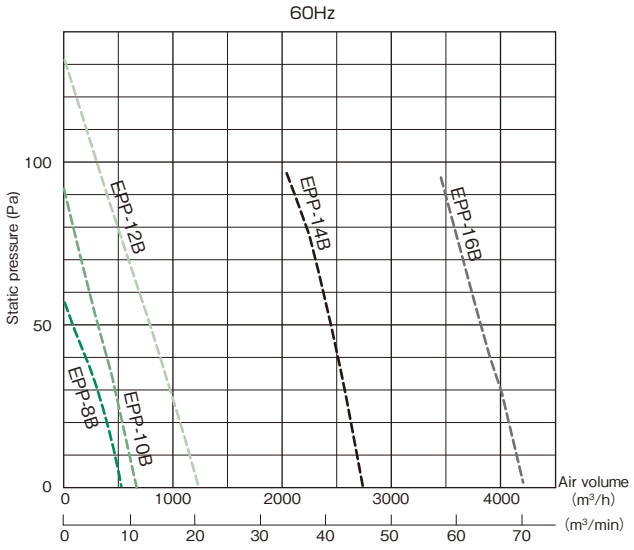
Impeller diameter (cm)	Airflow direction	Special order features					
		Different voltage	Heat resistance of 60 deg ℃	Heat resistance of 80 deg ℃	Acid-resistant (salt-resistant) coating	Specified color	MFP
20	Exhaust	×	×	×	○	○	×
25	Exhaust	×	×	×	○	○	×
	Intake	×	×	×	○	○	×
30	Exhaust	○	×	×	○	○	×
	Intake	○	×	×	○	○	×
35	Exhaust	○	×	×	○	○	×
	Intake	○	×	×	○	○	×
40	Exhaust	○	×	×	○	○	×
	Intake	○	×	×	○	○	×
45	Exhaust	○	×	×	○	○	×
	Intake	○	×	×	○	○	×
50	Exhaust	○	×	×	○	○	×
	Intake	○	×	×	○	○	×
60	Exhaust	○	×	×	○	○	×
75	Exhaust	○	×	×	○	○	×
90	Exhaust	○	×	×	○	○	×
105	Exhaust	○	×	×	○	○	×
120	Exhaust	○	×	×	○	○	×

Selection Diagrams

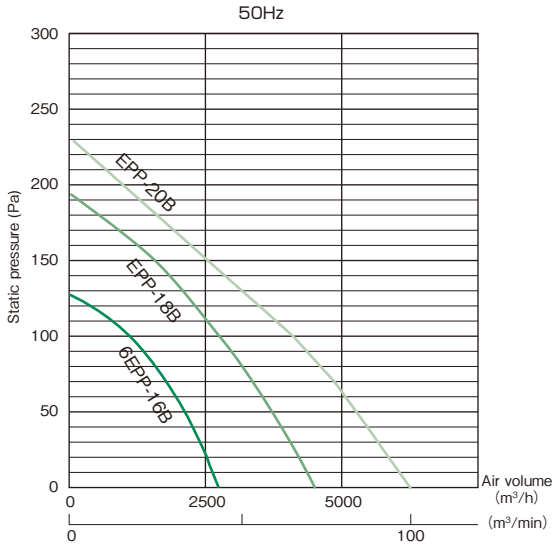
［Exhaust type］

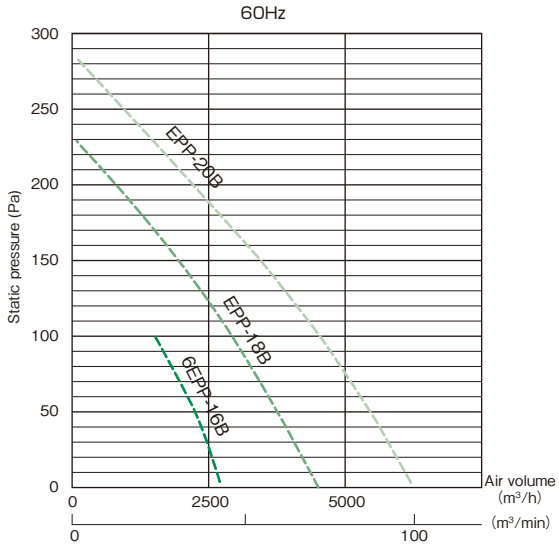
Single phase, impeller diameter of 20 cm to 40 cm, four poles



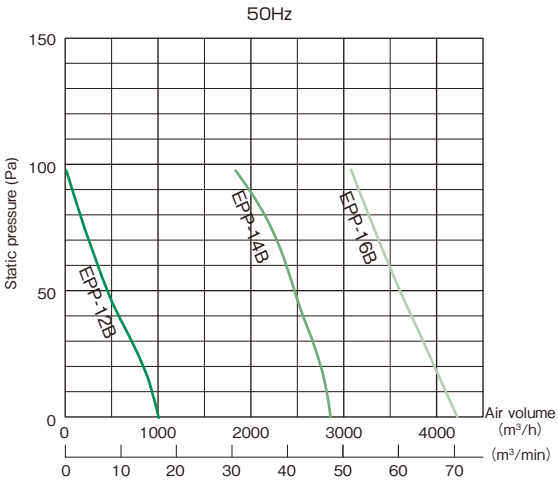


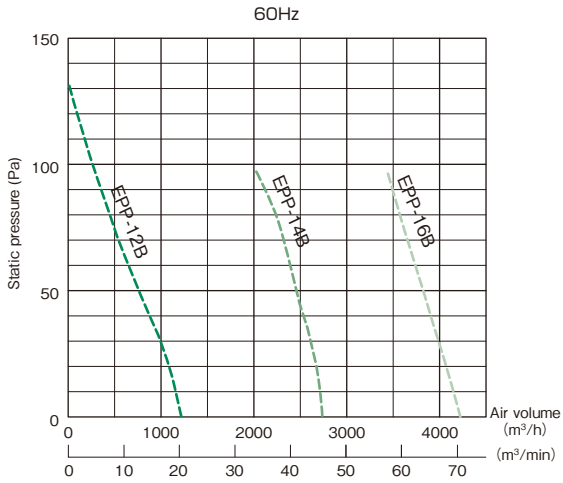
Single phase, impeller diameter of 40 cm to 50 cm, six poles





Three phase, impeller diameter of 30 cm to 40 cm, four poles

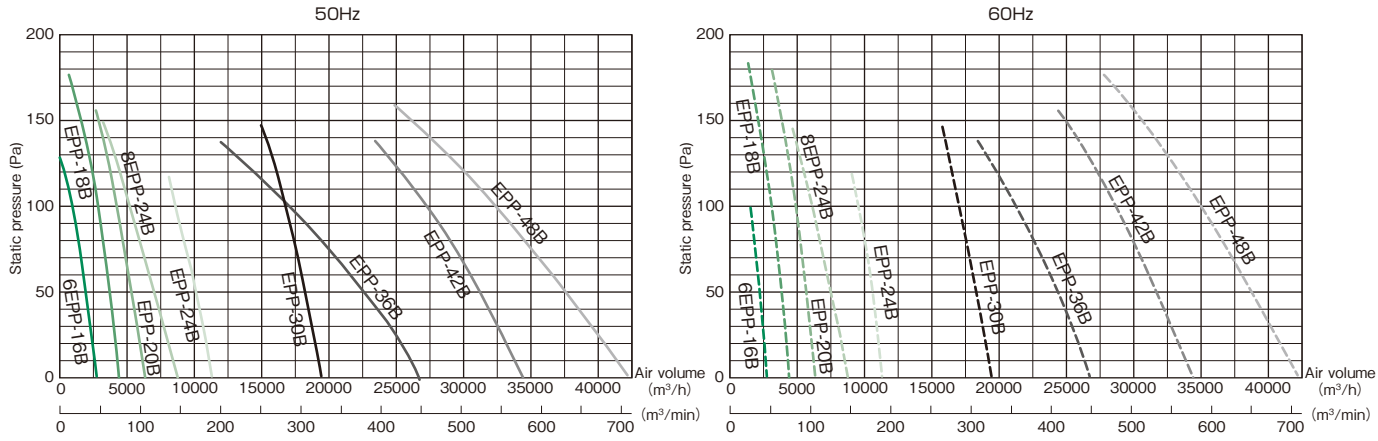




Selection Diagrams

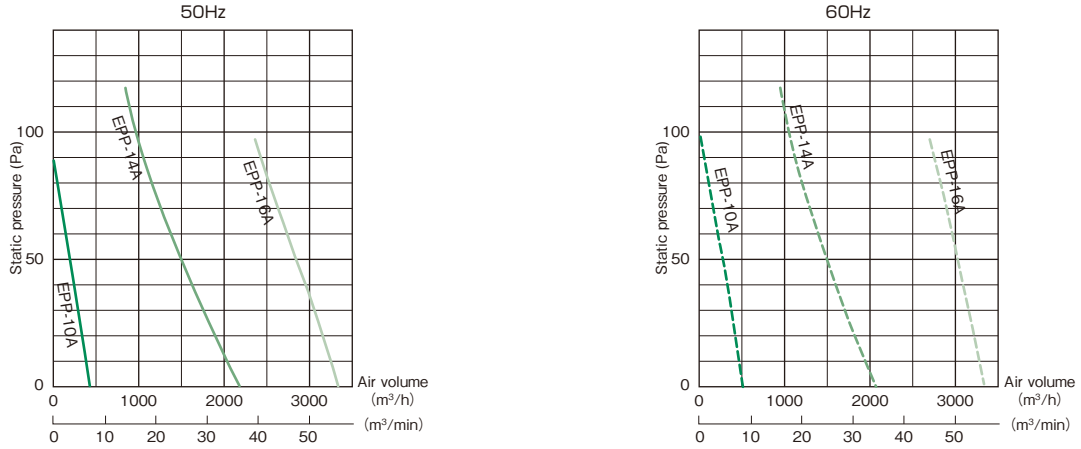
[Exhaust type]

Three phase, impeller diameter: 40 cm, six or eight poles, blade diameter: 45 to 120 cm

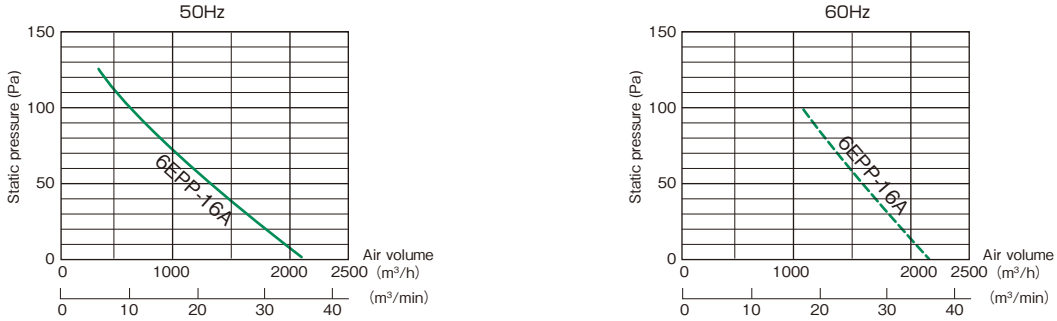


[Intake type]

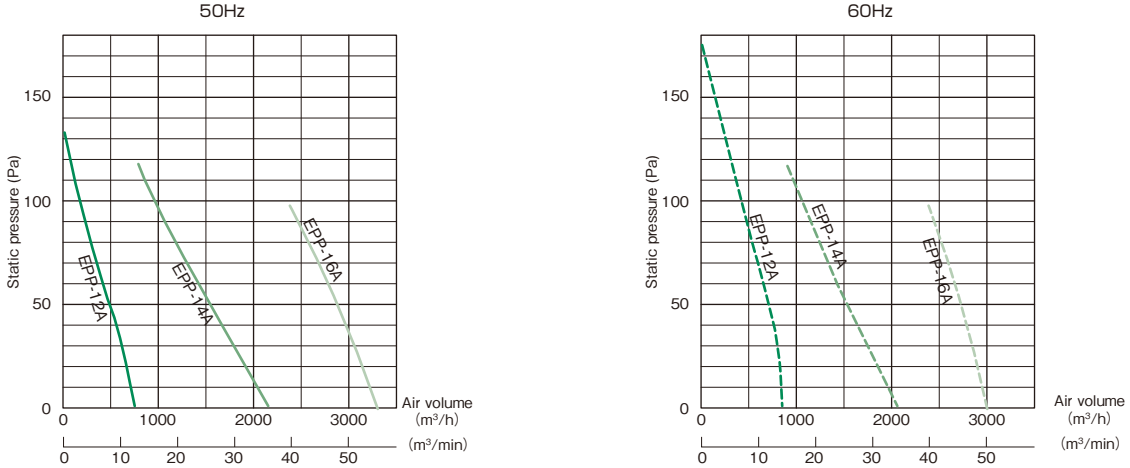
Single phase, impeller diameter of 25 cm to 40 cm, four poles



Single phase, impeller diameter of 40cm, six poles



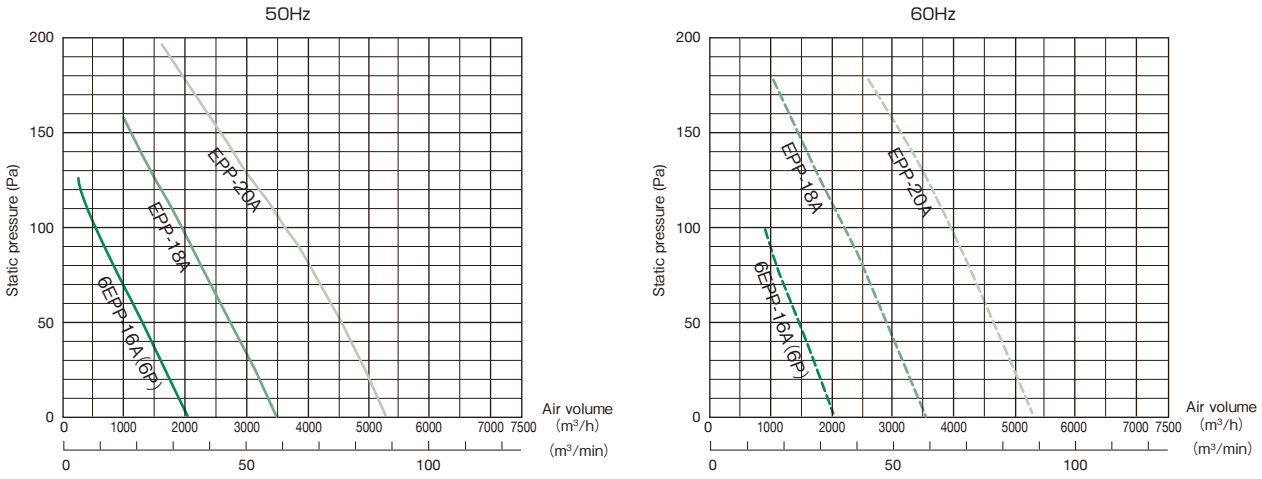
Three phase, impeller diameter of 30 cm to 40 cm, four poles



Selection Diagrams

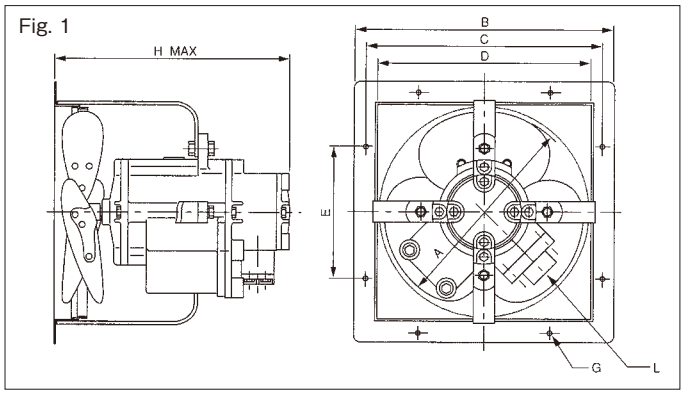
[Intake type]

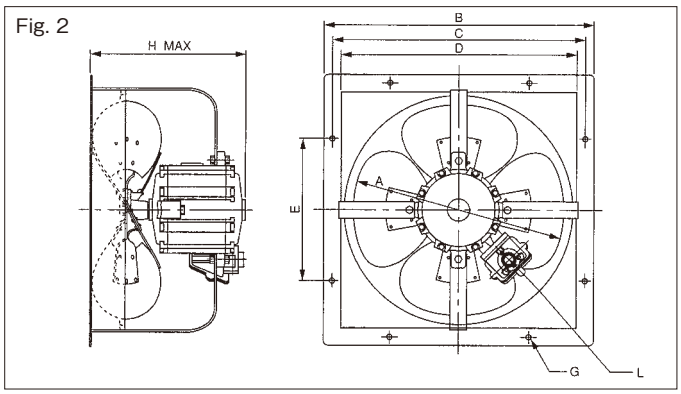
Three phase, impeller diameter of 40 cm to 50 cm, six poles



Assembly drawing [Exhaust type]

※For external dimensions of the intake type, please contact us.





Dimensions

(Unit: mm)

Fig.	Model	A	B	C	D	E	G	H	L
1	EPP-8B	200	276	246	220	162	8-φ7	310	PF-3/4
1	EPP-10B	250	327	298	267	165	8-φ8.5	315	PF-3/4
1	EPP-12B	300	378	349	318	210	8-φ8.5	325	PF-3/4
2	EPP-14B	350	467	434	387	250	8-φ11.5	355	PF-3/4
2	EPP-16B	400	518	485	438	280	8-φ11.5	365	PF-3/4
2	6EPP-16B	400	518	485	438	280	8-φ11.5	365	PF-3/4
2	EPP-18B	450	570	540	490	320	8-φ11.5	425	PF-3/4
2	EPP-20B	500	659	620	559	355	8-φ14.5	445	PF-3/4
2	EPP-24B	600	760	720	660	400	8-φ14.5	490	PF-3/4
2	8EPP-24B	600	760	720	660	400	8-φ14.5	490	PF-3/4
2	EPP-30B	750	955	900	825	508	8-φ20	510	PF-3/4
2	EPP-36B	900	1110	1040	980	610	8-φ20	475	PF-3/4
2	EPP-42B	1050	1262	1207	1132	656	8-φ20	495	PF-3/4
2	EPP-48B	1200	1475	1425	1345	800	8-φ20	600	PF-1 1/4

Standard Type

Model	Impeller diameter of compatible pressure fans	Airflow direction	Mounting frame	Fixed louver		Wind pressure shutter		Motor-driven shutter		Outdoor hood			
										Without net		With anti-insect net	
				Iron	SUS	Iron	SUS	Iron	SUS	Iron	SUS	Iron	SUS
PF	20 cm	Exhaust	TWBS-8	LB-8C	LBS-8C	PS-8C	PSS-8C	–	–	OF-8	OFS-8	OF-8NI	OFS-8NI
		Intake	TWBS–8	LB-8C	LBS-8C	–	–	–	–	–	–	–	–
	25 cm	Exhaust	TWBS–10	LB-10C	LBS-10C	PS-10C	PSS-10C	MS-10D	MSS-10D	OF-10	OFS-10	OF-10NI	OFS-10NI
		Intake	TWBS–10	LB-10C	LBS-10C	–	–	MS-10D	MSS-10D	–	–	–	–
	30 cm	Exhaust	TWBS–12	LB-12C	LBS-12C	PS-12C	PSS-12C	MS-12D	MSS-12D	OF-12	OFS-12	OF-12NI	OFS-12NI
		Intake	TWBS–12	LB-12C	LBS-12C	–	–	MS-12D	MSS-12D	–	–	–	–
	35 cm	Exhaust	TWBS–14	LB-14C	LBS-14C	PS-14C	PSS-14C	MS-14D	MSS-14D	OF-14	OFS-14	OF-14NI	OFS-14NI
		Intake	TWBS–14	LB-14C	LBS-14C	–	–	MS-14D	MSS-14D	–	–	–	–
	40 cm	Exhaust	TWBS–16	LB-16C	LBS-16C	PS-16C	PSS-16C	MS-16D	MSS-16D	OF-16	OFS-16	OF-16NI	OFS-16NI
		Intake	TWBS–16	LB-16C	LBS-16C	–	–	MS-16D	MSS-16D	–	–	–	–
	45 cm	Exhaust	TWBS–18	LB-18C	LBS-18C	PS-18C	PSS-18C	MS-18C	MSS-18C	OF-18	OFS-18	OF-18NI	OFS-18NI
		Intake	TWBS–18	LB-18C	LBS-18C	–	–	MS-18C	MSS-18C	–	–	–	–
	50 cm	Exhaust	TWBS–20	LB-20C	LBS-20C	PS-20C	PSS-20C	MS-20C	MSS-20C	OF-20	OFS-20	OF-20NI	OFS-20NI
		Intake	TWBS–20	LB-20C	LBS-20C	–	–	MS-20C	MSS-20C	–	–	–	–
	60 cm	Exhaust	TWBS–24	LB-24C	LBS-24C	PS-24C	PSS-24C	MS-24C	MSS-24C	OF-24	OFS-24	OF-24NI	OFS-24NI
		Intake	TWBS–24	LB-24C	LBS-24C	–	–	MS-24C	MSS-24C	–	–	–	–
	75 cm	Exhaust	TWBS–30	LB-30C	LBS-30C	PS-30C	PSS-30C	MS-30D	MSS-30D	OF-30	OFS-30	OF-30NI	OFS-30NI
		Intake	TWBS–30	LB-30C	LBS-30C	–	–	MS-30D	MSS-30D	–	–	–	–
	90 cm	Exhaust	TWBS–36	LB-36C	LBS-36C	PS-36C	PSS-36C	MS-36D	MSS-36D	OF-36	OFS-36	OF-36NI	OFS-36NI
		Intake	TWBS–36	LB-36C	LBS-36C	–	–	MS-36D	MSS-36D	–	–	–	–
	105 cm	Exhaust	TWBS–42	LB-42C	LBS-42C	PS-42C	PSS-42C	MS-42D	MSS-42D	OF-42	OFS-42	OF-42NI	OFS-42NI
		Intake	TWBS–42	LB-42C	LBS-42C	–	–	MS-42D	MSS-42D	–	–	–	–
	120 cm	Exhaust	–	LB-48	LBS-48	–	–	–	–	OF-48	OFS-48	OF-48NI	OFS-48NI
		Intake	–	LB-48	LBS-48	–	–	–	–	–	–	–	–

Note: Check the specifications of and models compatible with optional accessories prior to selection. Some products may not be used depending on the operating environment. They may not be combined with some special pressure fan models.

Model	Impeller diameter of compatible pressure fans	Airflow direction	Outdoor hood				Fireproof hood			Guard net			Filter unit
			With anti-bird net		For intake type (with rainwater gutter)		Without net	With anti-insect net	With anti-bird net				
			Iron	SUS	With anti-insect net	With anti-bird net	SUS	SUS	SUS	Iron	SUS	Front face net	
PF	20 cm	Exhaust	OF-8NB	OFS-8NB	–	–	–	–	–	GN-8D1	GNS-8D1	FGN-8	3FU-8A
		Intake	–	–	OFS-8ANI	OFS-8ANB	–	–	–	GN-8D1	GNS-8D1	FGN-8	3FU-8A
	25 cm	Exhaust	OF-10NB	OFS-10NB	–	–	–	–	–	GN-10D1	GNS-10D1	FGN-10	3FU-10A
		Intake	–	–	OFS-10ANI	OFS-10ANB	–	–	–	GN-10D1	GNS-10D1	FGN-10	3FU-10A
	30 cm	Exhaust	OF-12NB	OFS-12NB	–	–	FDS-12	FDS-12NI	FDS-12NB	GN-12D1	GNS-12D1	FGN-12	3FU-12A
		Intake	–	–	OFS-12ANI	OFS-12ANB	–	–	–	GN-12D1	GNS-12D1	FGN-12	3FU-12A
	35 cm	Exhaust	OF-14NB	OFS-14NB	–	–	FDS-14	FDS-14NI	FDS-14NB	GN-14G.G1	GNS-14G	FGN-14	3FU-14A
		Intake	–	–	OFS-14ANI	OFS-14ANB	–	–	–	GN-14G.G1	GNS-14G	FGN-14	3FU-14A
	40 cm	Exhaust	OF-16NB	OFS-16NB	–	–	FDS-16	FDS-16NI	FDS-16NB	GN-16G.G1	GNS-16G	FGN-16	3FU-16A
		Intake	–	–	OFS-16ANI	OFS-16ANB	–	–	–	GN-16G.G1	GNS-16G	FGN-16	3FU-16A
	45 cm	Exhaust	OF-18NB	OFS-18NB	–	–	FDS-18	FDS-18NI	FDS-18NB	GN-18A-3	GNS-18	FGN-18	3FU-18A
		Intake	–	–	OFS-18ANI	OFS-18ANB	–	–	–	GN-18A-3	GNS-18	FGN-18	3FU-18A
	50 cm	Exhaust	OF-20NB	OFS-20NB	–	–	FDS-20	FDS-20NI	FDS-20NB	GN-20A-3	GNS-20A	FGN-20	3FU-20A
		Intake	–	–	OFS-20ANI	OFS-20ANB	–	–	–	GN-20A-3	GNS-20A	FGN-20	3FU-20A
	60 cm	Exhaust	OF-24NB	OFS-24NB	–	–	FDS-24	FDS-24NI	FDS-24NB	GN-24A-3	GNS-24A	FGN-24	3FU-24A
		Intake	–	–	OFS-24ANI	OFS-24ANB	–	–	–	GN-24A-3	GNS-24A	FGN-24	3FU-24A
	75 cm	Exhaust	OF-30NB	OFS-30NB	–	–	FDS-30	FDS-30NI	FDS-30NB	GN-30S	GNS-30	FGN-30	3FU-30A/B
		Intake	–	–	OFS-30ANI	OFS-30ANB	–	–	–	GN-30S	GNS-30	FGN-30	3FU-30A/B
	90 cm	Exhaust	OF-36NB	OFS-36NB	–	–	FDS-36	FDS-36NI	FDS-36NB	GN-36S	GNS-36	FGN-36	3FU-36A/B
		Intake	–	–	OFS-36ANI	OFS-36ANB	–	–	–	GN-36S	GNS-36	FGN-36	3FU-36A/B
	105 cm	Exhaust	OF-42NB	OFS-42NB	–	–	FDS-42	FDS-42NI	FDS-42NB	GN-42SG	GNS-42	FGN-42	–
		Intake	–	–	OFS-42ANI	OFS-42ANB	–	–	–	GN-42SG	GNS-42	FGN-42	–
	120 cm	Exhaust	OF-48NB	OFS-48NB	–	–	–	–	–	GN-48	GNS-48	FGN-48	–
		Intake	–	–	OFS-48ANI	OFS-48ANB	–	–	–	GN-48	GNS-48	FGN-48	–

Note: Check the specifications of and models compatible with optional accessories prior to selection. Some products may not be used depending on the operating environment. They may not be combined with some special pressure fan models.

Outdoor Type

Model	Impeller diameter of compatible pressure fans	Airflow direction	Mounting frame	Fixed louver		Wind pressure shutter		Motor-driven shutter		Outdoor hood			
										Without net		With anti-insect net	
				Iron	SUS	Iron	SUS	Iron	SUS	Iron	SUS	Iron	SUS
WP	25 cm	Exhaust	TWBS–10	LB-10C	LBS-10C	–	–	–	–	OF-10	OFS-10	OF-10NI	OFS-10NI
		Intake	TWBS–10	LB-10C	LBS-10C	–	–	–	–	–	–	–	–
	30 cm	Exhaust	TWBS–12	LB-12C	LBS-12C	–	–	–	–	OF-12	OFS-12	OF-12NI	OFS-12NI
		Intake	TWBS–12	LB-12C	LBS-12C	–	–	–	–	–	–	–	–
	35 cm	Exhaust	TWBS-14	LB-14C	LBS-14C	–	–	–	–	OF-14	OFS-14	OF-14NI	OFS-14NI
		Intake	TWBS-14	LB-14C	LBS-14C	–	–	–	–	–	–	–	–
	40 cm	Exhaust	TWBS-16	LB-16C	LBS-16C	–	–	–	–	OF-16	OFS-16	OF-16NI	OFS-16NI
		Intake	TWBS-16	LB-16C	LBS-16C	–	–	–	–	–	–	–	–
	45 cm	Exhaust	TWBS-18	LB-18C	LBS-18C	–	–	–	–	OF-18	OFS-18	OF-18NI	OFS-18NI
		Intake	TWBS-18	LB-18C	LBS-18C	–	–	–	–	–	–	–	–
	50 cm	Exhaust	TWBS-20	LB-20C	LBS-20C	–	–	–	–	OF-20	OFS-20	OF-20NI	OFS-20NI
		Intake	TWBS-20	LB-20C	LBS-20C	–	–	–	–	–	–	–	–
	60 cm	Exhaust	TWBS-24	LB-24C	LBS-24C	–	–	–	–	OF-24	OFS-24	OF-24NI	OFS-24NI
		Intake	TWBS-24	LB-24C	LBS-24C	–	–	–	–	–	–	–	–
	75 cm	Exhaust	TWBS-30	LB-30C	LBS-30C	–	–	–	–	OF-30	OFS-30	OF-30NI	OFS-30NI
		Intake	TWBS-30	LB-30C	LBS-30C	–	–	–	–	–	–	–	–
	90 cm	Exhaust	TWBS-36	LB-36C	LBS-36C	–	–	–	–	OF-36	OFS-36	OF-36NI	OFS-36NI
		Intake	TWBS-36	LB-36C	LBS-36C	–	–	–	–	–	–	–	–
	105 cm	Exhaust	TWBS-42	LB-42C	LBS-42C	–	–	–	–	OF-42	OFS-42	OF-42NI	OFS-42NI
		Intake	TWBS-42	LB-42C	LBS-42C	–	–	–	–	–	–	–	–
	120 cm	Exhaust	–	LB-48	LBS-48	–	–	–	–	OF-48	OFS-48	OF-48NI	OFS-48NI
		Intake	–	LB-48	LBS-48	–	–	–	–	–	–	–	–

Note: Check the specifications of and models compatible with optional accessories prior to selection. Some products may not be used depending on the operating environment. They may not be combined with some special pressure fan models.

Model	Impeller diameter of compatible pressure fans	Airflow direction	Outdoor hood				Fireproof hood			Guard net			Filter unit
			With anti-bird net		For intake type (with rainwater gutter)		Without net	With anti-insect net	With anti-bird net				
			Iron	SUS	With anti-insect net	With anti-bird net	SUS	SUS	SUS	Iron	SUS	Front face net	
WP	25 cm	Exhaust	OF-10NB	OFS-10NB	–	–	–	–	–	GN-10	GNS-10	FGN-10	–
		Intake	–	–	OFS-10ANI	OFS-10ANB	–	–	–	GN-10	GNS-10	FGN-10	–
	30 cm	Exhaust	OF-12NB	OFS-12NB	–	–	FDS-12	FDS-12NI	FDS-12NB	GN-12D1	GNS-12D1	FGN-12	–
		Intake	–	–	OFS-12ANI	OFS-12ANB	–	–	–	GN-12D1	GNS-12D1	FGN-12	–
	35 cm	Exhaust	OF-14NB	OFS-14NB	–	–	FDS-14	FDS-14NI	FDS-14NB	GN-14G.G1	GNS-14G	FGN-14	–
		Intake	–	–	OFS-14ANI	OFS-14ANB	–	–	–	GN-14G.G1	GNS-14G	FGN-14	–
	40 cm	Exhaust	OF-16NB	OFS-16NB	–	–	FDS-16	FDS-16NI	FDS-16NB	GN-16G.G1	GNS-16G	FGN-16	–
		Intake	–	–	OFS-16ANI	OFS-16ANB	–	–	–	GN-16G.G1	GNS-16G	FGN-16	–
	45 cm	Exhaust	OF-18NB	OFS-18NB	–	–	FDS-18	FDS-18NI	FDS-18NB	GN-18A-3	GNS-18	FGN-18	–
		Intake	–	–	OFS-18ANI	OFS-18ANB	–	–	–	GN-18A-3	GNS-18	FGN-18	–
	50 cm	Exhaust	OF-20NB	OFS-20NB	–	–	FDS-20	FDS-20NI	FDS-20NB	GN-20A-3	GNS-20A	FGN-20	–
		Intake	–	–	OFS-20ANI	OFS-20ANB	–	–	–	GN-20A-3	GNS-20A	FGN-20	–
	60 cm	Exhaust	OF-24NB	OFS-24NB	–	–	FDS-24	FDS-24NI	FDS-24NB	GN-24A-3	GNS-24A	FGN-24	–
		Intake	–	–	OFS-24ANI	OFS-24ANB	–	–	–	GN-24A-3	GNS-24A	FGN-24	–
	75 cm	Exhaust	OF-30NB	OFS-30NB	–	–	FDS-30	FDS-30NI	FDS-30NB	GN-30S	GNS-30	FGN-30	–
		Intake	–	–	OFS-30ANI	OFS-30ANB	–	–	–	GN-30S	GNS-30	FGN-30	–
	90 cm	Exhaust	OF-36NB	OFS-36NB	–	–	FDS-36	FDS-36NI	FDS-36NB	GN-36S	GNS-36	FGN-36	–
		Intake	–	–	OFS-36ANI	OFS-36ANB	–	–	–	GN-36S	GNS-36	FGN-36	–
	105 cm	Exhaust	OF-42NB	OFS-42NB	–	–	FDS-42	FDS-42NI	FDS-42NB	GN-42SG	GNS-42	FGN-42	–
		Intake	–	–	OFS-42ANI	OFS-42ANB	–	–	–	GN-42SG	GNS-42	FGN-42	–
	120 cm	Exhaust	OF-48NB	OFS-48NB	–	–	–	–	–	GN-48	GNS-48	FGN-48	–
		Intake	–	–	OFS-48ANI	OFS-48ANB	–	–	–	GN-48	GNS-48	FGN-48	–

Note: Check the specifications of and models compatible with optional accessories prior to selection. Some products may not be used depending on the operating environment. They may not be combined with some special pressure fan models.

Pressure-resistant explosion-proof type

Model	Impeller diameter of compatible pressure fans	Airflow direction	Mounting frame	Fixed louver		Wind pressure shutter		Motor-driven shutter		Outdoor hood			
										Without net		With anti-insect net	
				Iron	SUS	Iron	SUS	Iron	SUS	Iron	SUS	Iron	SUS
EPP	20cm	Exhaust	TWBS- 8	LB- 8C	LBS- 8C	PS-8C	PSS-8C	–	–	OF- 8	OFS- 8	OF- 8NI	OFS- 8NI
	25 cm	Exhaust	TWBS-10	LB-10C	LBS-10C	PS-10C	PSS-10C	–	–	OF-10	OFS-10	OF-10NI	OFS-10NI
		Intake	TWBS-10	LB-10C	LBS-10C	–	–	–	–	–	–	–	–
	30 cm	Exhaust	TWBS-12	LB-12C	LBS-12C	PS-12C	PSS-12C	–	–	OF-12	OFS-12	OF-12NI	OFS-12NI
		Intake	TWBS-12	LB-12C	LBS-12C	–	–	–	–	–	–	–	–
	35 cm	Exhaust	TWBS-14	LB-14C	LBS-14C	PS-14C	PSS-14C	–	–	OF-14	OFS-14	OF-14NI	OFS-14NI
		Intake	TWBS-14	LB-14C	LBS-14C	–	–	–	–	–	–	–	–
	40 cm	Exhaust	TWBS-16	LB-16C	LBS-16C	PS-16C	PSS-16C	–	–	OF-16	OFS-16	OF-16NI	OFS-16NI
		Intake	TWBS-16	LB-16C	LBS-16C	–	–	–	–	–	–	–	–
	45 cm	Exhaust	TWBS-18	LB-18C	LBS-18C	PS-18C	PSS-18C	–	–	OF-18	OFS-18	OF-18NI	OFS-18NI
		Intake	TWBS-18	LB-18C	LBS-18C	–	–	–	–	–	–	–	–
	50 cm	Exhaust	TWBS-20	LB-20C	LBS-20C	PS-20C	PSS-20C	–	–	OF-20	OFS-20	OF-20NI	OFS-20NI
		Intake	TWBS-20	LB-20C	LBS-20C	–	–	–	–	–	–	–	–
	60cm	Exhaust	TWBS-24	LB-24C	LBS-24C	PS-24C	PSS-24C	–	–	OF-24	OFS-24	OF-24NI	OFS-24NI
	75cm	Exhaust	TWBS-30	LB-30C	LBS-30C	PS-30C	PSS-30C	–	–	OF-30	OFS-30	OF-30NI	OFS-30NI
	90cm	Exhaust	TWBS-36	LB-36C	LBS-36C	PS-36C	PSS-36C	–	–	OF-36	OFS-36	OF-36NI	OFS-36NI
	105cm	Exhaust	TWBS-42	LB-42C	LBS-42C	PS-42C	PSS-42C	–	–	OF-42	OFS-42	OF-42NI	OFS-42NI
	120cm	Exhaust	–	LB-48	LBS-48	–	–	–	–	OF-48	OFS-48	OF-48NI	OFS-48NI

Note: Check the specifications of and models compatible with optional accessories prior to selection. Some products may not be used depending on the operating environment. They may not be combined with some special pressure fan models.

Model	Impeller diameter of compatible pressure fans	Airflow direction	Outdoor hood				Fireproof hood			Guard net			Filter unit
			With anti-bird net		For intake type (with rainwater gutter)		Without net	With anti-insect net	With anti-bird net				
			Iron	SUS	With anti-insect net	With anti-bird net	SUS	SUS	SUS	Iron	SUS	Front face net	
EPP	20cm	Exhaust	OF- 8NB	OFS- 8NB	–	–	–	–	–	EGN- 8	–	FGN- 8	3FU- 8A
	25 cm	Exhaust	OF-10NB	OFS-10NB	–	–	–	–	–	EGN-10	–	FGN-10	3FU-10A
		Intake	–	–	OFS-10ANI	OFS-10ANB	–	–	–	EGN-10	–	FGN-10	3FU-10A
	30 cm	Exhaust	OF-12NB	OFS-12NB	–	–	FDS-12	FDS-12NI	FDS-12NB	EGN-12	–	FGN-12	3FU-12A
		Intake	–	–	OFS-12ANI	OFS-12ANB	–	–	–	EGN-12	–	FGN-12	3FU-12A
	35 cm	Exhaust	OF-14NB	OFS-14NB	–	–	FDS-14	FDS-14NI	FDS-14NB	EGN-14	–	FGN-14	3FU-14A
		Intake	–	–	OFS-14ANI	OFS-14ANB	–	–	–	EGN-14	–	FGN-14	3FU-14A
	40 cm	Exhaust	OF-16NB	OFS-16NB	–	–	FDS-16	FDS-16NI	FDS-16NB	EGN-16	–	FGN-16	3FU-16A
		Intake	–	–	OFS-16ANI	OFS-16ANB	–	–	–	EGN-16	–	FGN-16	3FU-16A
	45 cm	Exhaust	OF-18NB	OFS-18NB	–	–	FDS-18	FDS-18NI	FDS-18NB	EGN-18	–	FGN-18	3FU-18A
		Intake	–	–	OFS-18ANI	OFS-18ANB	–	–	–	EGN-18	–	FGN-18	3FU-18A
	50 cm	Exhaust	OF-20NB	OFS-20NB	–	–	FDS-20	FDS-20NI	FDS-20NB	EGN-20	–	FGN-20	3FU-20A
		Intake	–	–	OFS-20ANI	OFS-20ANB	–	–	–	EGN-20	–	FGN-20	3FU-20A
	60cm	Exhaust	OF-24NB	OFS-24NB	–	–	FDS-24	FDS-24NI	FDS-24NB	EGN-24	–	FGN-24	3FU-24A
	75cm	Exhaust	OF-30NB	OFS-30NB	–	–	FDS-30	FDS-30NI	FDS-30NB	EGN-30	–	FGN-30	3FU-30A/B
	90cm	Exhaust	OF-36NB	OFS-36NB	–	–	FDS-36	FDS-36NI	FDS-36NB	EGN-36	–	FGN-36	3FU-36A/B
	105cm	Exhaust	OF-42NB	OFS-42NB	–	–	FDS-42	FDS-42NI	FDS-42NB	EGN-42	–	FGN-42	–
	120cm	Exhaust	OF-48NB	OFS-48NB	–	–	–	–	–	EGN-48	–	FGN-48	–

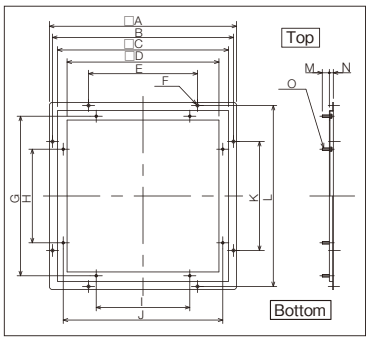
Note: Check the specifications of and models compatible with optional accessories prior to selection. Some products may not be used depending on the operating environment. They may not be combined with some special pressure fan models.

Stainless Steel

Mounting Frames

※Please note that the photo shows a typical example and that it may partly differ from the real item.

Dimensional outline drawing



Dimensions

(Unit: mm)

Compatible impeller diameter of pressure fan	Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	Plate thickness
20cm	TWBS-8	316	269	276	220	200	8-φ9	—	162	—	246	200	296	24	12	4-M6	1
25cm	TWBS-10	367	347	327	275	200	8-φ9	—	165	—	298	200	347	24	12	4-M6	1
30cm	TWBS-12	418	398	378	325	300	8-φ9	—	210	—	349	300	398	23	12	4-M6	2
35cm	TWBS-14	530	500	467	400	320	8-φ12	—	250	—	434	320	500	28	12	4-M10	2
40cm	TWBS-16	600	560	518	450	350	8-φ12	—	280	—	485	350	560	27.5	12	4-M10	2.5
45cm	TWBS-18	630	600	570	500	400	8-φ12	540	320	320	540	400	600	27.5	12	8-M10	2.5
50cm	TWBS-20	750	710	659	570	450	8-φ15	620	355	355	620	450	710	37	15	8-M12	3
60cm	TWBS-24	820	790	760	670	500	8-φ15	720	400	400	720	500	790	37	15	8-M12	3
75cm	TWBS-30	1020	990	955	840	600	8-φ20	900	508	508	900	600	990	47	26	8-M16	3
90cm	TWBS-36	1220	1180	1114	990	710	8-φ20	1040	610	610	1040	710	1180	46	26	8-M16	4
105cm	TWBS-42	1360	1320	1266	1150	800	8-φ20	1207	656	656	1207	800	1320	46	26	8-M16	4

※The frames do not come with any spring washers, taper washers or nuts.

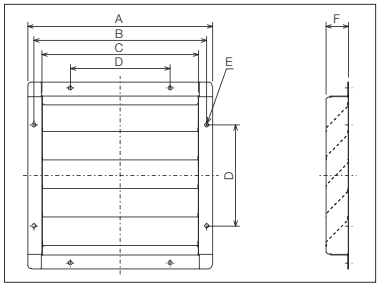
Steel Plate Stainless Steel

Fixed Louvers

Serving as a simplified method of blocking incoming winds or covering the air inlet at the time of installing a fan

※Please note that the photo shows a typical example and that it may partly differ from the real item.

Dimensional outline drawing



※The form varies depending on the model.

※It cannot be used where it is directly exposed to rainwater.

Dimensions

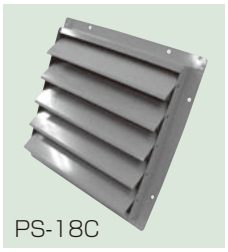
(Unit: mm)

Compatible impeller diameter of pressure fan	Model		A	B	C	D	E	F	Number of blades	Estimated mass (kg)
	Steel plate	Stainless steel								
20cm	LB-8C	LBS-8C	276	246	217	162	8-φ7	63	3	1.5
25cm	LB-10C	LBS-10C	327	298	268	165	8-φ7	63	4	1.9
30cm	LB-12C	LBS-12C	378	349	319	210	8-φ7	63	5	2.5
35cm	LB-14C	LBS-14C	467	434	389	250	8-φ12	75	5	4.3
40cm	LB-16C	LBS-16C	518	485	440	280	8-φ12	75	6	5.1
45cm	LB-18C	LBS-18C	570	540	492	320	8-φ12	75	6	5.7
50cm	LB-20C	LBS-20C	659	620	562	355	8-φ15	85	6	8.6
60cm	LB-24C	LBS-24C	760	720	663	400	8-φ15	85	7	12.4
75cm	LB-30C	LBS-30C	955	900	832	508	8-φ20	85	9	18
90cm	LB-36C	LBS-36C	1110	1040	980	610	8-φ20	85	9	24
105cm	LB-42C	LBS-42C	1262	1207	1132	656	8-φ20	85	10	28
120cm	LB-48	LBS-42	1475	1425	1345	800	8-φ20	130	13	52

Steel Plate Stainless Steel

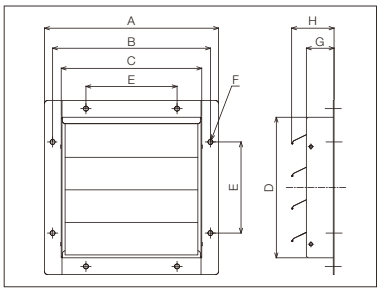
Wind Pressure Shutters

Helpful to blocking of incoming winds at the time of installing a fan



※Please note that the photo shows a typical example and that it may partly differ from the real item.

Dimensional outline drawing



※The form varies depending on the model.

Dimensions

(Unit: mm)

Compatible impeller diameter of pressure fan	Model		A	B	C	D	E	F	G	H	Number of blades	Estimated mass (kg)
	Steel plate	Stainless steel										
20cm	PS-8C	PSS-8C	276	246	220	217	162	8-φ7	63	95	2	1.5
25cm	PS-10C	PSS-10C	327	298	271	268	165	8-φ7	63	95	3	2.1
30cm	PS-12C	PSS-12C	378	349	322	319	210	8-φ7	63	95	3	2.8
35cm	PS-14C	PSS-14C	467	434	392	389	250	8-φ12	75	110	4	4.1
40cm	PS-16C	PSS-16C	518	485	443	440	280	8-φ12	75	110	4	4.9
45cm	PS-18C	PSS-18C	570	540	495	492	320	8-φ12	75	110	5	5.8
50cm	PS-20C	PSS-20C	659	620	565	562	355	8-φ15	85	120	5	8.2
60cm	PS-24C	PSS-24C	760	720	666	663	400	8-φ15	85	120	6	10.4
75cm	PS-30C	PSS-30C	955	900	833	830	508	8-φ20	85	140	8	17
90cm	PS-36C	PSS-36C	1110	1040	986	983	610	8-φ20	85	140	10	21
105cm	PS-42C	PSS-42C	1262	1207	1136	1133	656	8-φ20	85	140	11	25

※Check the behaviors of the wind pressure shutter after it is installed in a flat state.
※Use in in an environment with the temperature of -10 deg. C to +60 deg. C and the relative humidity of 90% or less.
※Do not use it where it would be directly exposed to rainwater.
※It is not compatible with any intake-type pressure fan.
※The shutter angle varies depending on the air volume of the pressure fan used together.
※Use a motor-driven shutter if the air volume is limited.
※Multi-pole pressure fans (with the number of poles specified in the model code) are designed upon order. Please contact us on a case-by-case basis.

Stainless Steel

Motor-Driven Shutters

Incorporating a high-performance drive motor to guarantee unfailing operations
For blocking incoming winds or in combination with the air inlet or an intake-type pressure fan

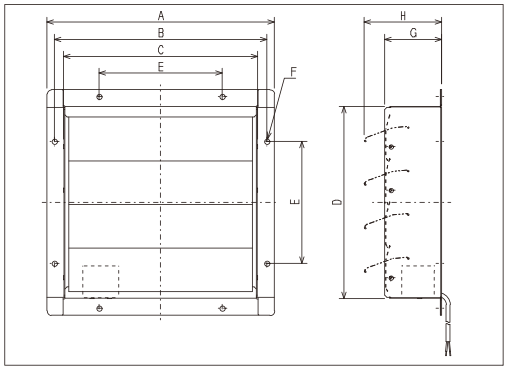
※Please note that the photo shows a typical example and that it may partly differ from the real item.

Specifications

Compatible impeller diameter of pressure fan	Model	Voltage (V)	Electric current (A)		Starting current (A)		Power consumption (A)		Opening time (secs.)		Closing time (secs.)	
			50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz	50Hz	60Hz
25cm ～ 40cm	MS(S)-10D～16D	100	0.1 or less				7 or less		8	7	Instant	
		200	0.07 or less				7 or less		8	7	Instant	
45cm ～ 60cm	MS(S)-18C～24C	100	0.43	0.30	0.45	0.35	18	13	6	5	6	5
		200	0.22	0.15	0.23	0.17	18	13	6	5	6	5
75cm ～ 105cm	MS(S)-30D～42D	200	0.81	0.47	0.82	0.52	57	36	5	4	5	4

※Check the behaviors of the wind pressure shutter after it is installed in a flat state.
※For models compatible with pressure fans with the impeller diameter ranging from 25 cm to 60 cm, use it in an environment with a temperature of -10 deg. C to +50 deg. C and relative humidity of 90% or less. For models compatible with pressure fans with a impeller diameter ranging from 75 cm to 105 cm, use it in an environment with a temperature of -10 deg. C to +50 deg. C and relative humidity of 85% or less.
※Any motor-driven shutter model compatible with pressure fans with the impeller diameter ranging from 75 cm to 105 cm has a thermal fuse inside the motor.
Do not open and close the motor-driven shutter five consecutive times or more or for one continuous minute or longer, or the built-in thermal fuse will be cut to prevent the motor from burning. In this event, the motor needs to be replaced.
※Do not use it where it would be directly exposed to rainwater.
※It may not be fastened together with an outdoor hood or a fireproof hood. If you wish to fasten it together with any such hood, please contact us separately.

Dimensional outline drawing



※The form varies depending on the model.

Dimensions

(Unit: mm)

Compatible impeller diameter of pressure fan	Model		A	B	C	D	E	F	G	H	Number of blades	Estimated mass (kg)
	Steel plate	Stainless steel										
25cm	MS-10D	MSS-10D	327	298	271	270	165	8-φ7	130	180	3	4.0
30cm	MS-12D	MSS-12D	378	349	322	321	210	8-φ7	130	190	3	4.5
35cm	MS-14D	MSS-14D	467	434	392	391	250	8-φ12	130	180	4	6.0
40cm	MS-16D	MSS-16D	518	485	443	442	280	8-φ12	130	190	4	6.5
45cm	MS-18C	MSS-18C	570	540	495	494	320	8-φ12	130	190	5	10.0
50cm	MS-20C	MSS-20C	659	620	565	564	355	8-φ15	130	190	5	11.5
60cm	MS-24C	MSS-24C	760	720	666	665	400	8-φ15	130	190	6	14.0
75cm	MS-30D	MSS-30D	955	900	833	831	508	8-φ20	185	245	8	26
90cm	MS-36D	MSS-36D	1110	1040	986	984	610	8-φ20	185	245	10	32
105cm	MS-42D	MSS-42D	1262	1207	1136	1134	656	8-φ20	185	245	11	37

■Example of Use of Operation Circuit

※Precautions

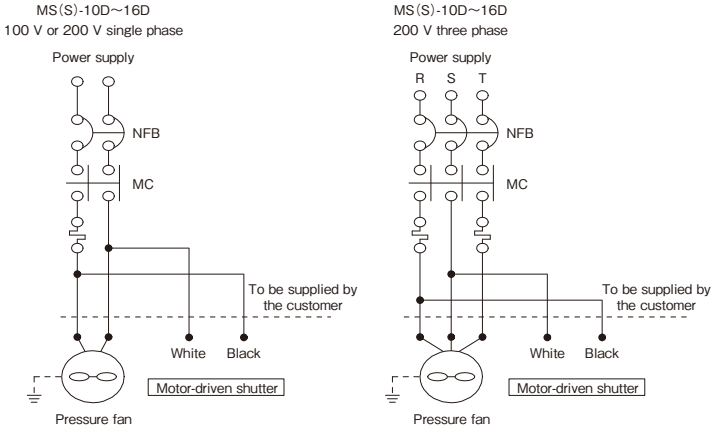
Please note the following.

Impeller diameter of compatible pressure fans	Precautions
25 cm to 105 cm	●Make sure that the power supply has the voltage specified on the rating plate. ●If more than one pressure fan is operated, give consideration to the power supply capacity and other factors.
45 cm to 105 cm	●While the motor-driven shutter is opening or closing, keep it powered on and never power it off. ●If the motor-driven shutter is powered off during the opening or closing operation, the motor-driven shutter will be stopped in a half-open state. To resume its operation, power it on again.
75 cm to 105 cm	●Do not operate the switch during the opening or closing operation. The motor-driven shutter is structured not to move on to the next operation unless the opening or closing operation is finished. If the switch is operated during the opening or closing operation, the shutter will be stopped in a half-open state. To restore its status, perform the switch operation again. ●The motor-driven shutter has a thermal fuse for motor protection embedded in the motor. Do not open and close the motor-driven shutter five consecutive times or more or for one continuous minute or longer, or the built-in thermal fuse may be cut to protect the motor. Once the thermal fuse is cut, the motor will no longer operate. In this event, replace the motor with a new one. ●Make sure that the pressure fan does not come into operation until the motor-driven motor becomes fully open.

※Examples of operation circuits for parallel operation of the motor-driven shutter and the pressure fan

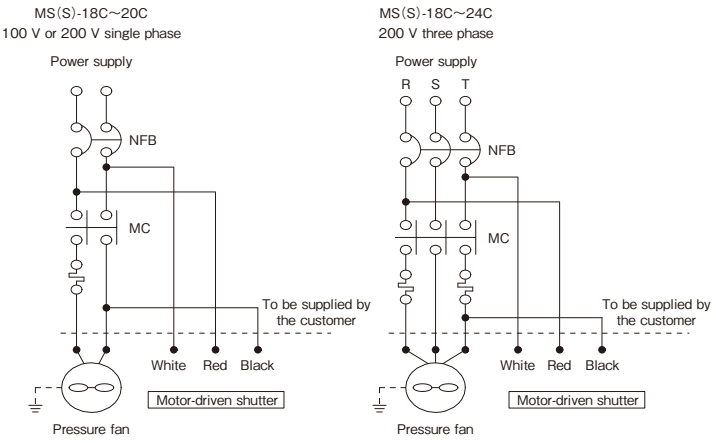
Circuits applicable to pressure fans with the impeller diameter of 25 cm to 40 cm

●When the power supply is applied, the motor-driven shutter is in the opening operation or in the open state. When the power is off, it is in the closing operation or in the closed state.



Circuits applicable to pressure fans with the impeller diameter of 45 cm to 60 cm

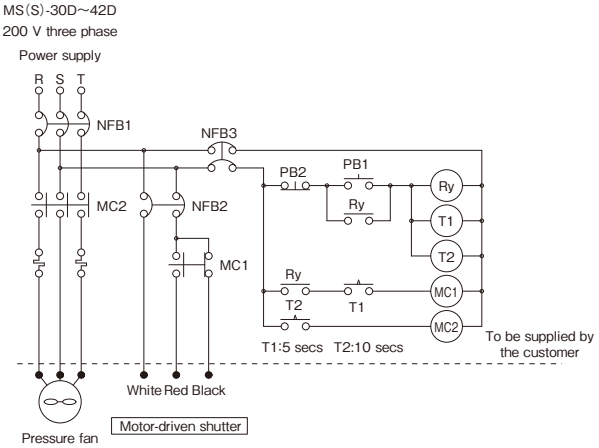
●These examples of circuits are for motor-driven shutters with built-in relays.



Circuits applicable to pressure fans with the impeller diameter of 75 cm to 105 cm

●Set the time on Timer T1 to five seconds to ensure that the pressure fan will not come into operation until the motor-driven shutter becomes fully open.

●After the power supply is disrupted for reason of power failure or others, restoration of power supply will put the shutter into the closing operation and then into the opening operation.
Set the time on Timer T2 to 10 seconds to ensure that the pressure fan will not come into operation until five seconds of closing operations and another five seconds of opening operations.



Steel Stainless Steel

Outdoor Hood

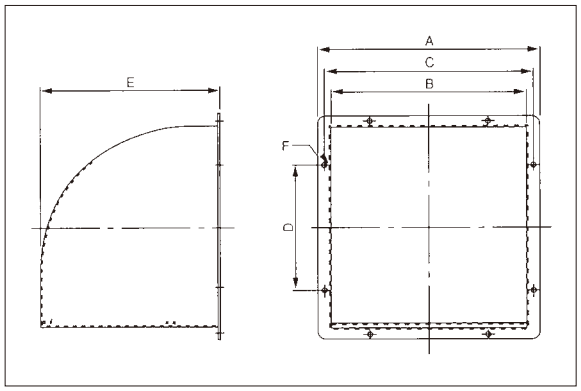
Blocking intrusion of not only winds and rain but insects and dust as well by attaching an anti-insect or anti-bird net

OFNS-12N

※Please note that the photo shows a typical example and that it may partly differ from the real item.

To place an order for an outdoor hood with an anti-insect net, please add "I" at the end of the model code. For an outdoor hood with an anti-bird net, please add "B" at the end of the model code.
Notes:
※Install the net at a place and at a height where it can be maintained from outdoors.
※If you wish to install the hood at a height or at a place where there may be strong outdoor winds, please contact us.
※Perform regular inspection and regular cleaning of the anti-insect or anti-bird net to keep it unclogged with dust.
※Although the hood is made of SUS304 stainless steel plate, which is highly resistant to rust, it is likely to rust in a salty or corrosive environment, such as a place with any strong acid, alkaline or corrosive substance constantly in wet state or a place exposed to any such substance. We also offer a model with acid- and salt-resistant coating and a model coated with fluorocarbon resin (produced upon order) so that you may use it in an environment as mentioned above.

Dimensional outline drawing



※The form varies depending on the model.

Dimensions

(Unit: mm)

Compatible impeller diameter of pressure fan	Model				A	B	C	D	E	F	Plate thickness	
	Steel		Stainless steel									
	Without net	With net	Without net	With net							Steel	Stainless steel
20cm	OF-8	OF-8N	OFS-8	OFS-8N	275	226	246	162	220	8-φ7	1.2	0.8
25cm	OF-10	OF-10N	OFS-10	OFS-10N	327	278	298	165	300	8-φ7	1.2	0.8
30cm	OF-12	OF-12N	OFS-12	OFS-12N	378	329	349	210	340	8-φ7	1.2	0.8
35cm	OF-14	OF-14N	OFS-14	OFS-14N	464	404	434	250	390	8-φ12	1.2	0.8
40cm	OF-16	OF-16N	OFS-16	OFS-16N	515	455	485	280	410	8-φ12	1.2	0.8
45cm	OF-18	OF-18N	OFS-18	OFS-18N	570	510	540	320	440	8-φ12	1.2	1.0
50cm	OF-20	OF-20N	OFS-20	OFS-20N	659	580	620	355	490	8-φ15	1.6	1.0
60cm	OF-24	OF-24N	OFS-24	OFS-24N	759	680	720	400	590	8-φ15	1.6	1.0
75cm	OF-30	OF-30N	OFS-30	OFS-30N	955	845	900	508	765	8-φ20	1.6	1.5
90cm	OF-36	OF-36N	OFS-36	OFS-36N	1110	995	1040	610	900	8-φ20	1.6	1.5
105cm	OF-42	OF-42N	OFS-42	OFS-42N	1262	1145	1207	656	1000	8-φ20	1.6	1.5
120cm	OF-48	OF-48N	OFS-48	OFS-48N	1475	1365	1425	800	1180	8-φ20	1.6	1.5

Stainless Steel

Fireproof Hood

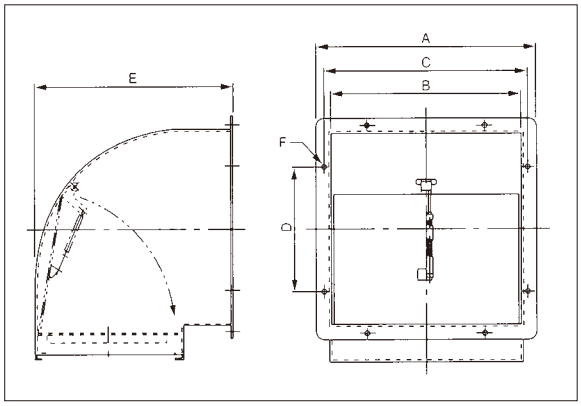
Incorporating a fire dumper to prevent spread of fire

FDS-12N

※Please note that the photo shows a typical example and that it may partly differ from the real item.

To place an order for an outdoor hood with an anti-insect net, please add "I" at the end of the model code. For an outdoor hood with an anti-bird net, please add "B" at the end of the model code.
Add / It cannot be attached together with a motor-driven shutter or a wind pressure shutter.
Notes:
※Install the net at a place and at a height where it can be maintained from outdoors.
※If you wish to install the hood at a height or at a place where there may be strong outdoor winds, please contact us.
※Perform regular inspection of the anti-insect or anti-bird net and the thermal fuse.
※Although the hood is made of SUS304 stainless steel plate, which is highly resistant to rust, it is likely to rust in a salty or corrosive environment, such as a place with any strong acid, alkaline or corrosive substance constantly in wet state or a place exposed to any such substance. We also offer a model with acid- and salt-resistant coating and a model coated with fluorocarbon resin (produced upon order) so that you may use it in an environment as mentioned above.

Dimensional outline drawing



Japan Testing Center for Construction Materials Test Results Numbers
Thermal fuse performance test at 72 deg. C: No. 60570
Thermal fuse performance test at 120 deg. C: No. 60624 (supplementary test)
Smoke leak test: No. 59766

※The form varies depending on the model.

Dimensions

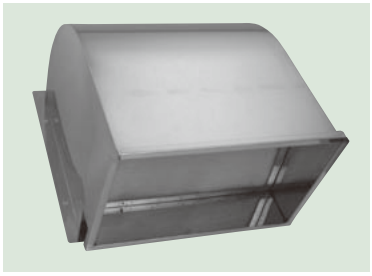
(Unit: mm)

Compatible impeller diameter of pressure fan	Model		A	B	C	D	E	F	Plate thickness
	Without net	With net							
30cm	FDS-12	FDS-12N	378	329	349	210	340	8-φ7	1.5
35cm	FDS-14	FDS-14N	464	404	434	250	400	8-φ12	1.5
40cm	FDS-16	FDS-16N	515	455	485	280	420	8-φ12	1.5
45cm	FDS-18	FDS-18N	570	510	540	320	450	8-φ12	1.5
50cm	FDS-20	FDS-20N	659	580	620	355	505	8-φ15	1.5
60cm	FDS-24	FDS-24N	759	680	720	400	615	8-φ15	1.5
75cm	FDS-30	FDS-30N	995	845	900	508	780	8-φ20	1.5
90cm	FDS-36	FDS-36N	1110	955	1040	610	885	8-φ20	1.5
105cm	FDS-42	FDS-42N	1262	1145	1207	656	925	8-φ20	1.5

Stainless Steel

Intake Outdoor Food (with rainwater gutter)

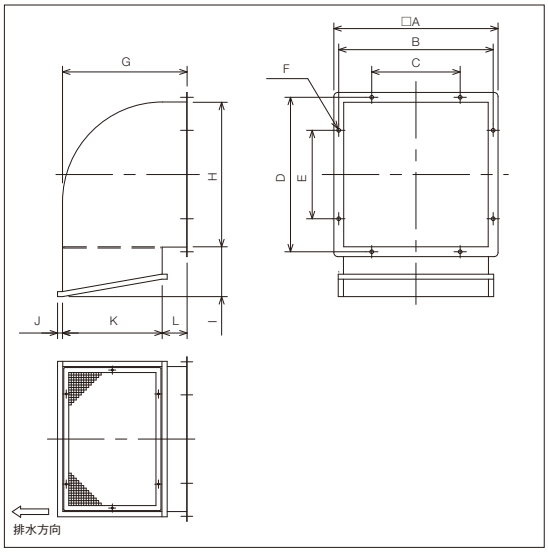
Blocking incoming rainwater and intrusion of insects and dust



※Please note that the photo shows a typical example and that it may partly differ from the real item.

※Install the net at a place and at a height where it can be maintained from outdoors.
※If you wish to install the hood at a height or at a place where there may be strong outdoor winds, please contact us.
※Perform regular inspection and regular cleaning of the anti-insect or anti-bird net to keep it unclogged with dust.
※Although the hood is made of SUS304 stainless steel plate, which is highly resistant to rust, it is likely to rust in a salty or corrosive environment, such as a place with any strong acid, alkaline or corrosive substance constantly in wet state or a place exposed to any such substance. We also offer a model with acid- and salt-resistant coating and a model coated with fluorocarbon resin (produced upon order) so that you may use it in an environment as mentioned above.
※Rainwater may intrude indoors depending on the place or state of installation or on weather conditions.

Dimensional outline drawing



※The form varies depending on the model.

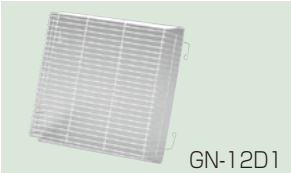
Dimensions

(Unit: mm)

Compatible impeller diameter of pressure fan	Model		A	B	C	D	E	F	G	H	I	J	K	L	Plate thickness
	With anti-insect net	With anti-bird net													
20cm	OFS-8ANI	OFS-8ANB	275	246	162	246	162	8-φ7	230	226	104	12	175	54	0.8
25cm	OFS-10ANI	OFS-10ANB	327	298	165	298	165	8-φ7	310	278	110	12	230	80	0.8
30cm	OFS-12ANI	OFS-12ANB	378	349	210	349	210	8-φ7	350	329	120	17	260	90	0.8
35cm	OFS-14ANI	OFS-14ANB	464	434	250	434	250	8-φ12	400	404	140	17	310	90	0.8
40cm	OFS-16ANI	OFS-16ANB	515	485	280	485	280	8-φ12	420	455	153	17	320	100	0.8
45cm	OFS-18ANI	OFS-18ANB	570	540	320	540	320	8-φ12	450	510	200	17	350	100	1.0
50cm	OFS-20ANI	OFS-20ANB	659	620	355	620	355	8-φ15	500	580	200	23	400	100	1.0
60cm	OFS-24ANI	OFS-24ANB	759	720	400	720	400	8-φ15	600	680	204	23	500	100	1.0
75cm	OFS-30ANI	OFS-30ANB	955	900	508	900	508	8-φ20	775	845	303	22	655	120	1.5
90cm	OFS-36ANI	OFS-36ANB	1110	1040	610	1040	610	8-φ20	910	995	302	22	760	150	1.5
105cm	OFS-42ANI	OFS-42ANB	1262	1207	656	1207	656	8-φ20	1010	1145	304	22	800	210	1.5
120cm	OFS-48ANI	OFS-48ANB	1475	1425	800	1425	800	8-φ20	1190	1365	300	20	990	200	1.5

Steel Plate Stainless Steel

Guard nets



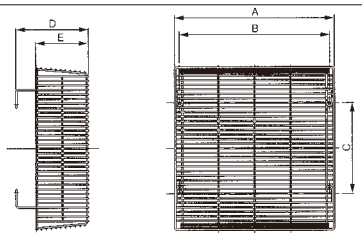
Guard nets prevent accidents of contacting the rotating part of the pressure fan. As they are designed exclusively for specific models of pressure fans, please choose the model matched with the fan model. Be sure to install a guard net if the pressure fan is installed at a height of 1.8 meters or less.

※Please note that the photo shows a typical example and that it may partly differ from the real item.

●Standard Net

Dimensional outline drawing

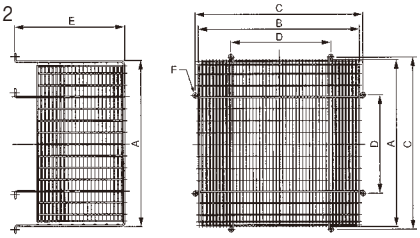
Fig. 1



※The form varies depending on the model.

Materials: Iron wire and stainless steel wire
Surface finish: PE coating N7 (No finish for the stainless steel models)

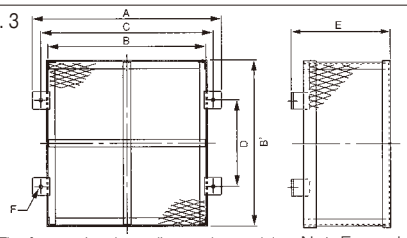
Fig. 2



※The form varies depending on the model.

Materials: Iron
Surface finish: PE coating N7

Fig. 3



※The form varies depending on the model. Net: Expand metal

Dimensions

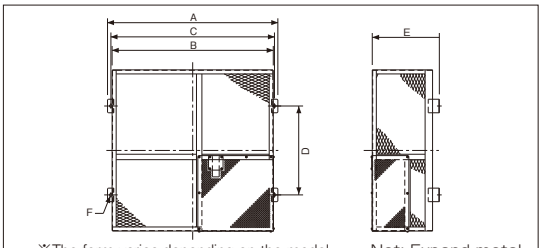
(Unit: mm)

Material	Compatible impeller diameter of pressure fan	Fig.	Model	A	B	B'	C	D	E	F
Steel	20cm	1	GN-8D1	264	246	—	162	170	119	—
	25cm	1	GN-10D1	316	298	—	165	170	119	—
		3	GN-10	327	284	310	298	165	245	4-ϕ7
	30cm	1	GN-12D1	372	349	—	210	175	119	—
		3	GN-12	378	335	360	349	210	265	4-ϕ7
	35cm	1	GN-14G	458	434	—	250	210	166	—
		1	GN-14G1	458	434	—	250	210	166	—
	40cm	1	GN-16G	509	485	—	280	225	176	—
		1	GN-16G1	509	485	—	280	225	176	—
	45cm	2	GN-18A-3	520	520	—	540	320	420	8-ϕ12
	50cm	2	GN-20A-3	592	592	—	620	355	425	8-ϕ15
	60cm	2	GN-24A-3	698	698	—	720	400	455	8-ϕ15
	75cm	3	GN-30S	951	870	870	900	508	470	4-ϕ20
	90cm	3	GN-36S	1090	1028	1028	1040	610	450	4-ϕ20
	105cm	3	GN-42SG	1257	1183	1183	1207	656	570	4-ϕ20
	120cm	3	GN-48	1372	1532	1532	1425	800	550	4-ϕ20
Stainless steel	25cm	1	GNS-10D1	316	298	—	165	170	119	—
	30cm	1	GNS-12D1	372	349	—	210	175	119	—
	35cm	1	GNS-14G	458	434	—	250	210	166	—
	40cm	1	GNS-16G	509	485	—	280	225	176	—
	50cm	1	GNS-20A	620	592	—	355	425	345	—

※For applicable models, refer to Compatibility Tables and Dimensional outline drawing.
※The GN-14G1 and the GN-16G1 each have a bypass hole for the motor.

●Explosion-Proof Net (Series E)

Dimensional outline drawing



※The form varies depending on the model. Net: Expand metal

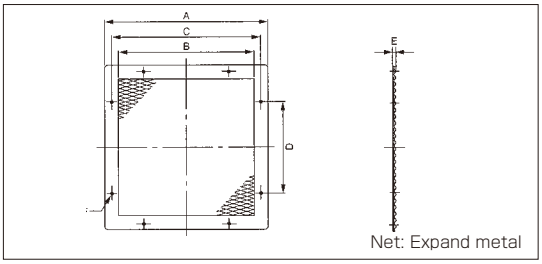
Dimensions

(Unit: mm)

Compatible impeller diameter of pressure fan	Model	A	B	C	D	E	F
20cm	EGN-8	270	270	246	162	210	4-ϕ7
25cm	EGN-10	327	327	298	165	211	4-ϕ9
30cm	EGN-12	378	378	349	210	236	4-ϕ9
35cm	EGN-14	467	467	434	250	355	4-ϕ12
40cm	EGN-16	518	518	485	280	365	4-ϕ12
45cm	EGN-18	570	570	540	320	430	4-ϕ12
50cm	EGN-20	659	659	620	355	445	4-ϕ15
60cm	EGN-24	760	760	720	400	480	4-ϕ15
75cm	EGN-30	951	951	900	508	505	4-ϕ20
90cm	EGN-36	1090	1090	1040	610	480	4-ϕ20
105cm	EGN-42	1257	1257	1207	656	495	4-ϕ20
120cm	EGN-48	1381	1381	1425	800	600	4-ϕ20

●Front Face Net (Series F)

Dimensional outline drawing



Net: Expand metal

Dimensions

(Unit: mm)

Compatible impeller diameter of pressure fan	Model	A	B	C	D	E	F
20cm	FGN-8	274	224	246	162	7	8-ϕ7
25cm	FGN-10	325	275	298	165	7	8-ϕ7
30cm	FGN-12	376	326	349	210	7	8-ϕ7
35cm	FGN-14	465	389	434	250	8	8-ϕ12
40cm	FGN-16	516	440	485	280	8	8-ϕ12
45cm	FGN-18	568	492	540	320	8	8-ϕ12
50cm	FGN-20	658	582	620	355	8	8-ϕ15
60cm	FGN-24	758	682	720	400	8	8-ϕ15
75cm	FGN-30	955	825	900	508	10	8-ϕ20
90cm	FGN-36	1110	980	1040	610	10	8-ϕ20
105cm	FGN-42	1262	1132	1207	656	10	8-ϕ20
120cm	FGN-48	1475	1345	1425	800	10	8-ϕ20

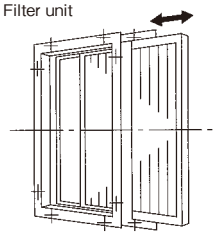
Filter Unit

Designed exclusively for pressure fans to guarantee smooth installation and easy maintenance

3FU-12A

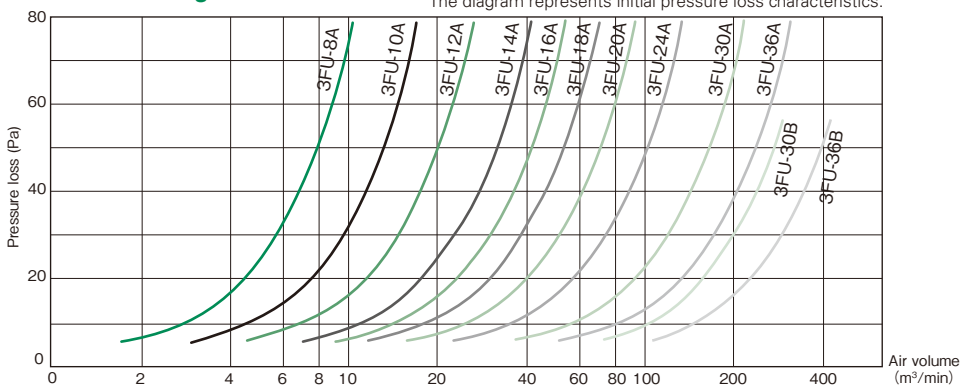
※Please note that the photo shows a typical example and that it may partly differ from the real item.

Filter Insertion Diagram



Selection Diagrams

The diagram represents initial pressure loss characteristics.

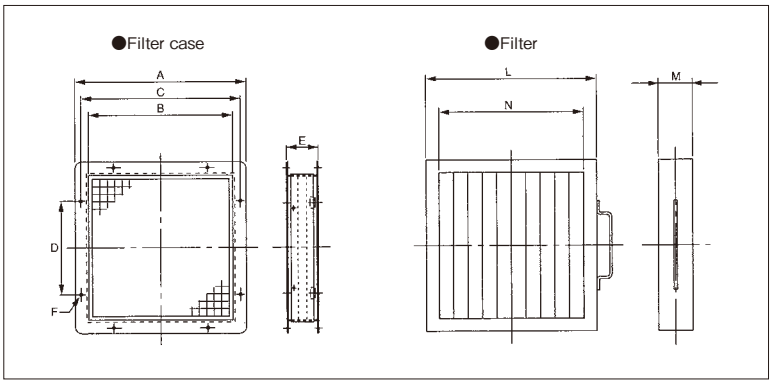


●Trapping Efficiency

3FS-8 to -36: Initial dust collection efficiency: 64% (at the wind speed of 2.5 m/s)

3FP-30 and -36: Initial dust collection efficiency: 28% (at the wind speed of 1.5 m/s)

External Dimension Diagram



Dimensions

(Unit: mm)

Filter unit	Compatible impeller diameter of pressure fan	Filter case							Filter			
Model		Model	A	B	C	D	E	F	Model	L	M	N
3FU-8A	20cm	FC-8	276	216	246	162	150	2×8-φ7	3FS-8	210	50	170
3FU-10A	25cm	FC-10	327	267	298	165	150	2×8-φ7	3FS-10	260	50	220
3FU-12A	30cm	FC-12	378	318	349	210	150	2×8-φ7	3FS-12	313	50	273
3FU-14A	35cm	FC-14	467	387	434	250	150	2×8-φ12	3FS-14	382	50	342
3FU-16A	40cm	FC-16	518	438	485	280	150	2×8-φ12	3FS-16	432	50	392
3FU-18A	45cm	FC-18	570	490	540	320	150	2×8-φ12	3FS-18	482	50	442
3FU-20A	50cm	FC-20	659	559	620	355	150	2×8-φ15	3FS-20	552	50	512
3FU-24A	60cm	FC-24	760	660	720	400	150	2×8-φ15	3FS-24	652	50	612
3FU-30A	75cm	FC-30	955	825	900	508	150	2×8-φ20	3FS-30	818	50	778
3FU-30B	75cm								3FP-30			
3FU-36A	90cm	FC-36	1110	980	1040	610	150	2×8-φ20	3FS-36	972	50	932
3FU-36B	90cm								3FP-36			

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