MITSUBISHI ELECTRIC

Changes for the Better

INDUSTRIAL VENTILATORS






Made in Japan

Mitsubishi Electric Quality

Mitsubishi Electric offers the ideal ventilation

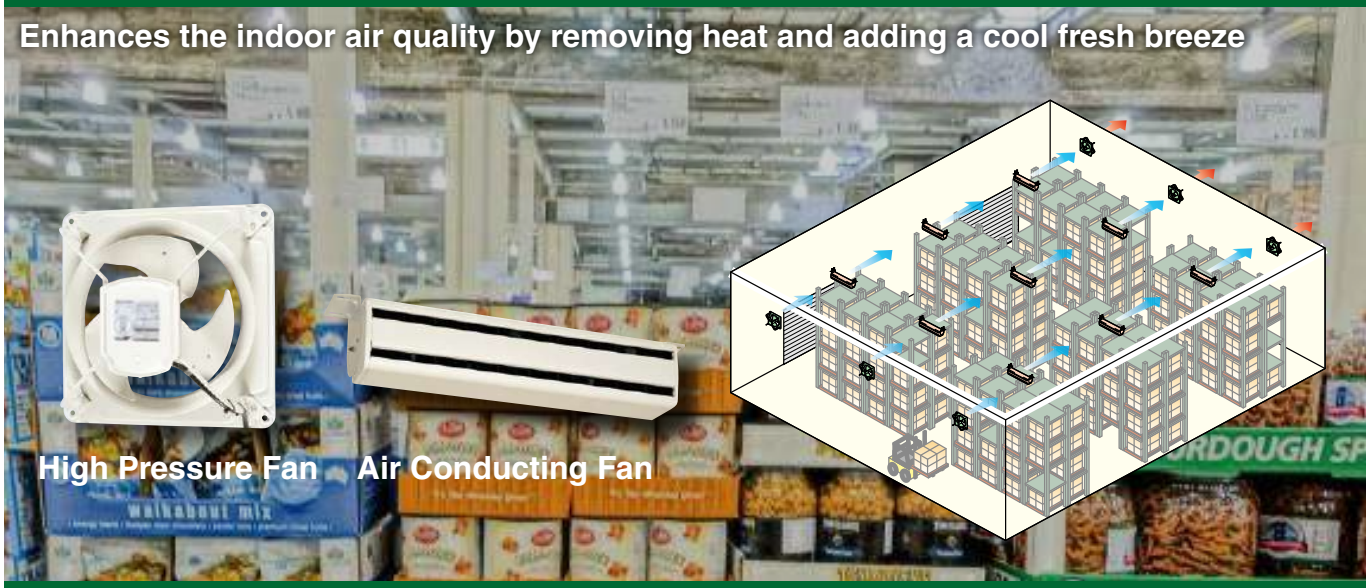
For factories

Effectively creates a safe and comfortable environment by replacing the indoor stale air with fresh outside air

High Pressure Fan Air Conducting Fan

For warehouses

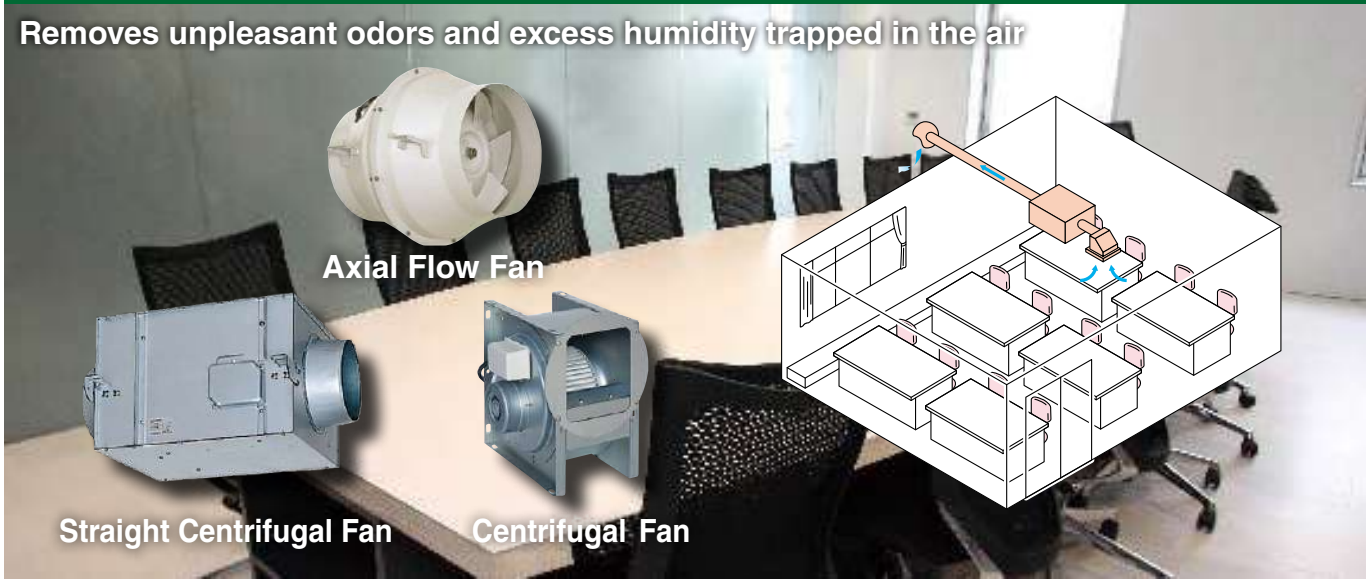
Enhances the indoor air quality by removing heat and adding a cool fresh breeze



High Pressure Fan Air Conducting Fan

For offices and commercial buildings

Removes unpleasant odors and excess humidity trapped in the air



Axial Flow Fan

Straight Centrifugal Fan Centrifugal Fan

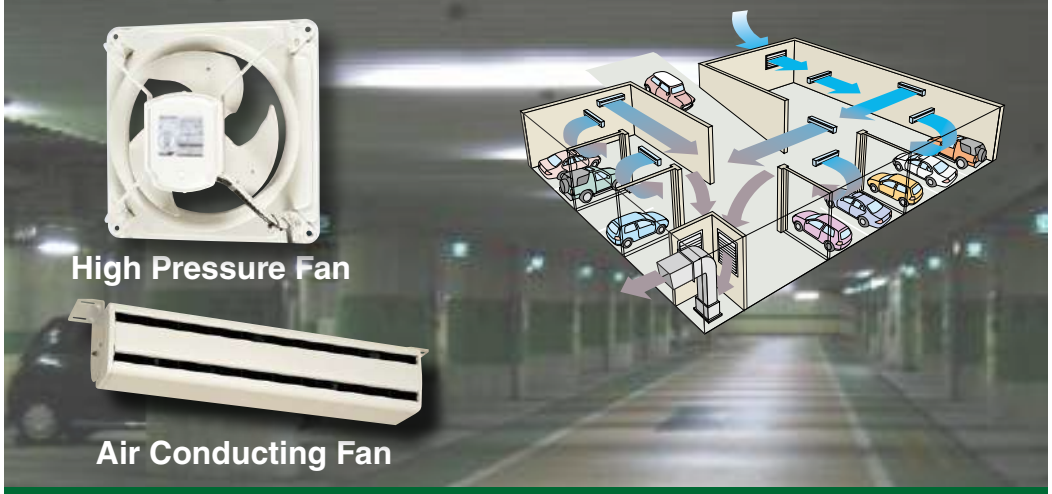
solution for a wide variety of applications

For shops and restaurants

Reduces the load on air-conditioning and prevents the intrusion of insects by creating an invisible curtain of wind

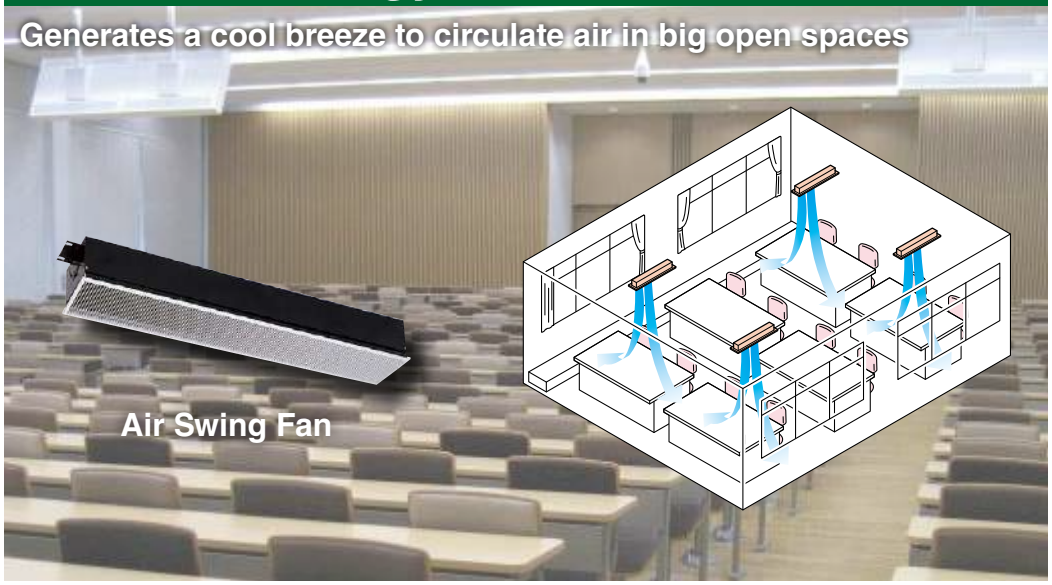
For carparks

Assists with the extraction of vehicle emissions while saving installation space



For halls and gymnasiums

Generates a cool breeze to circulate air in big open spaces



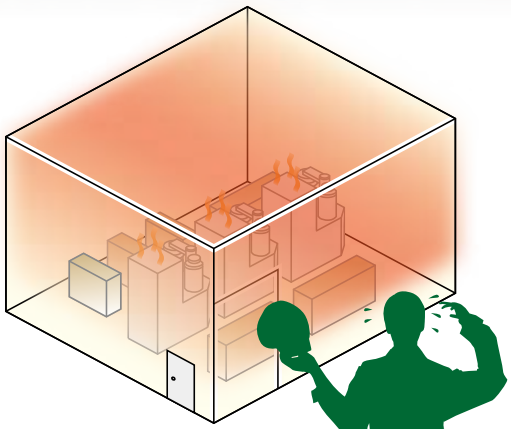
The need for ventilation in factories

Clean fresh air keeps workers healthy

Many factory jobs produce various kinds of gases, dust, and fumes that are often hazardous to factory workers. Providing well-planned mechanical ventilation is extremely important to prevent exposure to these hazardous substances and provide conditions under which people can work comfortably and safely.

Cool fresh air keeps workers productive

Mechanical equipment and workers in the factory can be sources of heat particularly during the summer, creating a hot unbearable working environment even with air-conditioning. Mechanical ventilation contributes to keeping a comfortable indoor temperature and maximizing the productivity and morale of workers.



Effective ventilation methods

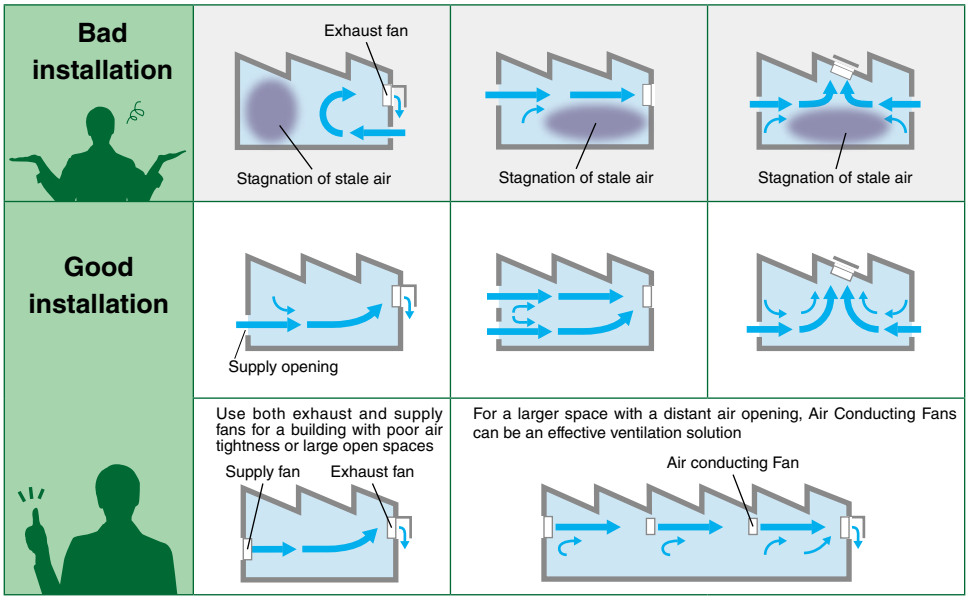
The ideal ventilation solution for factory is a combination of local exhaust ventilation and whole building ventilation. It is important to take local exhaust ventilation into consideration first, which removes most of the hazardous contaminants and heat at the source. Whole building ventilation then removes the remaining contaminants and provides fresh air.

Cases requiring whole building ventilation

- Where heat, humidity, gases, and contaminants are generated over a wide area.
- Where leaks from local exhaust ventilation need to be removed
- Where humidity stagnating in the ceiling needs to be removed to prevent condensation

Matters for consideration in selecting installation locations

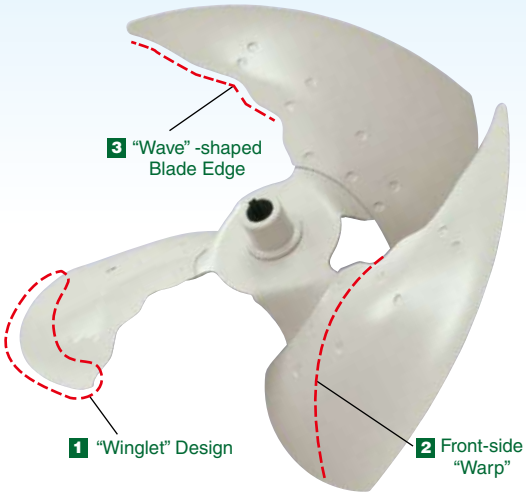
- Install at a high position as stale air is warm and tends to rise
- Install on the leeward side in the case there is a constant airflow inside or outside
- The position of the supply air opening is important to efficiently ventilate a wide space
- In case the source of contaminant is limited to a specific area, install a ventilator near that area with an additional local exhaust ventilator
- Install at a position that allows easy maintenance and inspection



High Pressure Fan

Advanced blade designs realize a new quieter generation of Mitsubishi Electric Ventilators

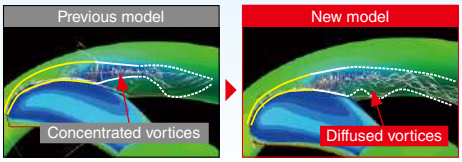
NEW MODEL



NEW "TripleW" Noise-reducing Technology

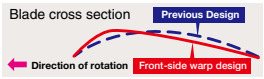
1 "Winglet" Design

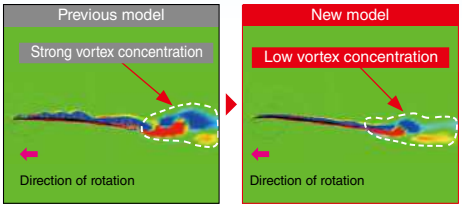
Specially designed winglets disperse noise-causing vortices



2 Front-side "Warp"

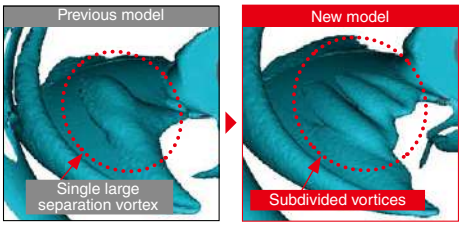
The curvature radius has been optimized to minimize trailing-edge vortices





3 "Wave" -shaped Blade Edge

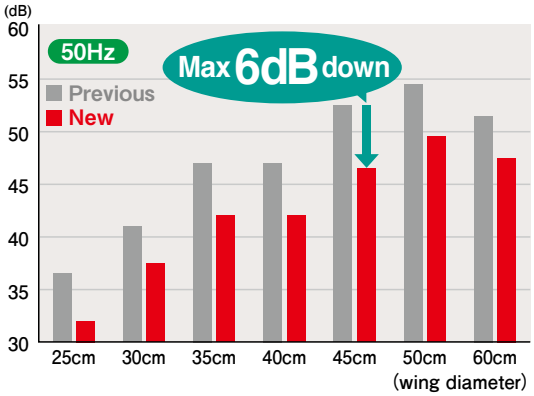
The wave-shaped edge breaks down the separation vortex into smaller, controlled vortices

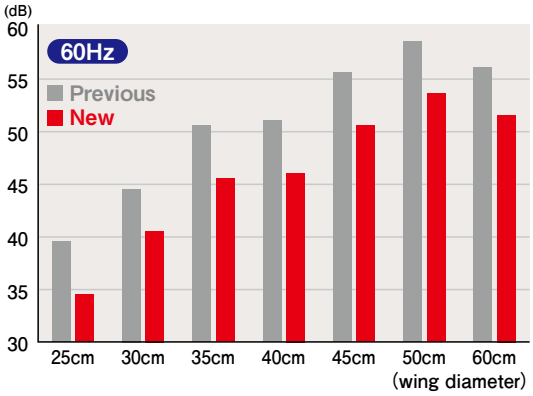


Noise-reducing Technology

NEW "Triple W" Noise-reducing Technology

Noise comparison (Single phase: 220V, Three phase: 400V) Exhaust air





All model more than 3.5dB
Max 6dB
Compared with previous model*1
Low noise

*1: Comparison of new model and previous model

Increased Reliablility

Three times greater reliability compared to previous models.

By introducing a new heat-resistant urethane-type grease, the motor axis has become approximately three times more reliable than previous models.

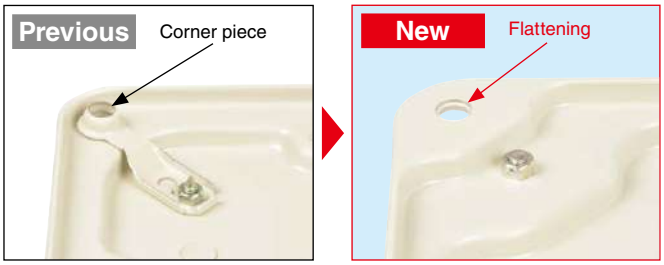
*2: 50°C continuous operation

Expected life time of bearing design
10,000hr (Previous) → 30,000hr*2 (New)

Easier installation

Flattened Corner

By eliminating the corner piece, installing the fan with nuts has become easier.



NEW

EWF-25 to 45-E

(Exhaust Type)

- High static pressure
- Large air volume design
- Low noise operation

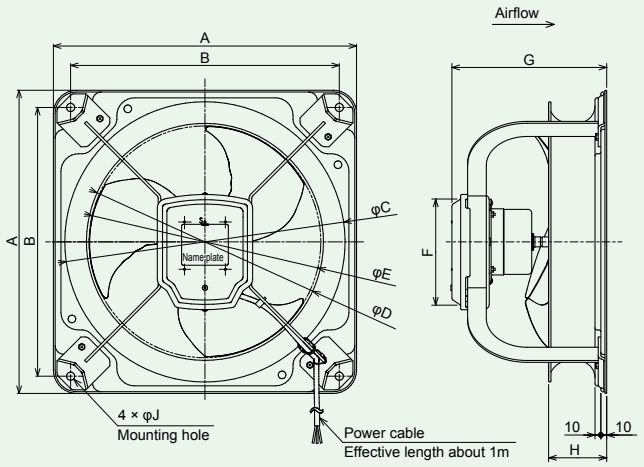
*For exhaust use only.
*This series cannot be used for supply (the direction of the vanes cannot be changed). For supply-use models, please refer to pg7.
*Operating conditions: Ambient temperature is -15°C to +50°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, or damage.
*Do not install the unit in a freezer or a place where freezing may occurs.
*Avoid turning on and off of the unit more than 50 times a day.
*Switching of speeds is not available with this series.
*Do not install the indoor models outdoor where it will be exposed to direct rain.
*Outdoor models can be used in a place where it will be directly exposed to rain. However,rust could shorten the service life.
*Do not connect the unit to inverter (Insulation breakdown may occur due to the surge from the inverter)

Applicable for

PlantRooms | Warehouses | Factories | Buildings | Stores

■Dimensions
EWF-25 to 45-E

*The appearance may slightly differ depending on the model.



Unit : mm

■Dimensions

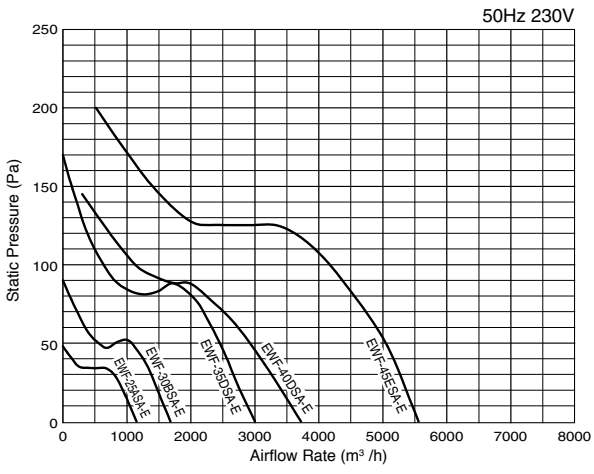
MODEL	A	B	C	D	E	F	G	H	J	Power cable
EWF-25ASA-E	370	330	310	266	260	153	201	65	φ10	X
EWF-30BSA-E	420	380	359	306	300	153	197	69	φ10	X
EWF-35DSA-E	470	434	419	356	350	181	259	93	φ10	X
EWF-40DSA-E	520	460	480	406	400	181	266	99	φ14	X
EWF-45ESA-E	620	560	540	456	450	211	307	111	φ14	X

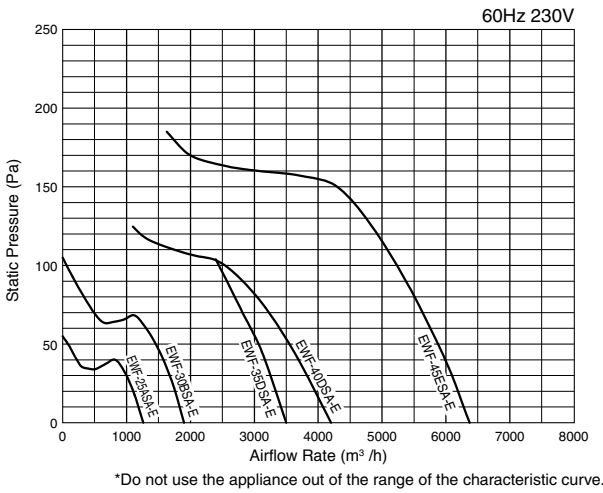
X : Vinyl cabtyre cable 3 conductors x AWG18

■Specifications

MODEL	Power Supply [V]	Frequency [Hz]	Number of poles	Power Consumption [W]	Current [A]	Airflow Rate [m³/ h]	Noise [dB]	Weight [kg]	Indoor or Outdoor
EWF-25ASA-E	Single-phase 220-240	50	4	42-48	0.21-0.23	1150	32	3.9	Indoor use
		60		46-52	0.21-0.22	1260	34.5-35		
EWF-30BSA-E		50	4	59-68.5	0.32-0.36	1680	37.5	5.7	
		60		67.5-74	0.31-0.32	1900	40.5-41		
EWF-35DSA-E		50	4	125-138	0.70-0.75	3000	42	9.4	
		60		170-178	0.80	3500	45.5		
EWF-40DSA-E		50	4	128-138	0.64	3720	42	12.1	
		60		175-190	0.80	4200	46		
EWF-45ESA-E		50	4	253-275	1.33-1.38	5560	46.5	19	
		60		350-360	1.60-1.50	6370	50.5		

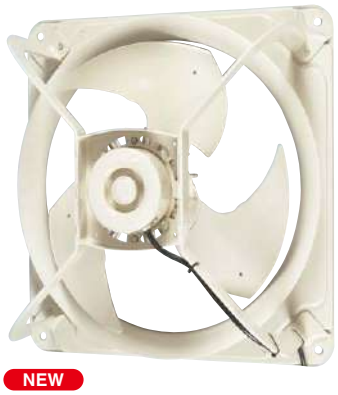
P-Q Characteristic

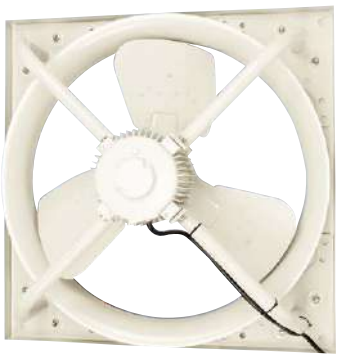




*Do not use the appliance out of the range of the characteristic curve.

The printed color of the products are slightly different from those of the actual products.
Due to continuing improvement, above specifications may be subject to change without notice.





NEW

EWF-45 to 50-E
EWG-60-E
(Exhaust Type)

KG-70 to 80-E
EJ-105-E
(Exhaust Type)

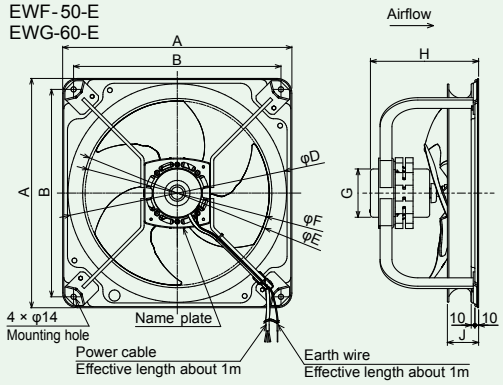
*45-60cm models are for exhaust use only (the direction of the vanes cannot be changed). For supply-use models, please refer to pg7.
*Operating conditions: Ambient temperature is -15°C to +50°C (for 105cm model, -30°C to +50°C), and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, or damage.
*Do not install the unit in a freezer or a place where freezing may occurs.
*Avoid turning on and off of the unit more than 50 times a day.
*Switching of speeds is not available with this series.
*Outdoor models can be used in a place where it will be directly exposed to rain. However,rust could shorten the service life.
*Do not connect the unit to inverter (Insulation breakdown may occur due to the surge from the inverter)

Applicable for

Plant Rooms | Warehouses | Factories | Buildings | Stores

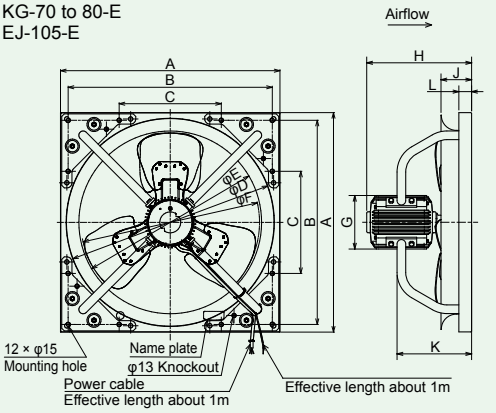
KG-70GTF3-E and KG-80HTF3-E can be used as "supply type" , by changing the direction of the vane and wiring connection. Please refer to the manual how to change.
(Please refer to Pg7 for the specification and P-Q characteristic)

■Dimensions *The appearance may slightly differ depending on the model.
EWF-45-E
EWF-50-E
EWG-60-E



Unit : mm

■Dimensions *The appearance may slightly differ depending on the model.
KG-70 to 80-E
EJ-105-E



Unit : mm

■Dimensions

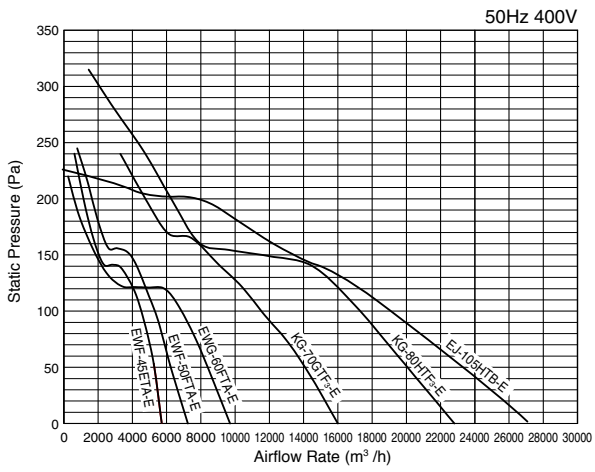
MODEL	A	B	C	D	E	F	G	H	J	K	L	Power cable	Earth wire
EWF-45ETA-E	620	560	-	540	456	450	φ131	312	111	-	-	X	AWG18
EWF-50FTA-E	620	560	-	590	511	500	φ131	292	84	-	-	X	AWG18
EWG-60FTA-E	710	650	-	703	607	600	φ163	345	119	-	-	X	AWG18
KG-70GTF3-E	860	800	400	816	716	700	φ210	412	120	292	50	Y	AWG18
KG-80HTF3-E	950	900	400	910	816	800	φ230	451	120	332	55	Y	AWG18
EJ-105HTB-E	1280	1210	750	1270	1070	1050	φ255	547	200	437	50	Z	-

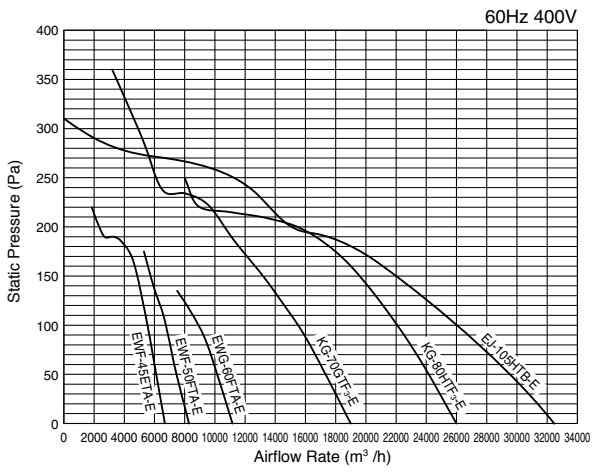
X : Vinyl cabtyre cable 3 conductors x 0.75mm²
Y : Vinyl cabtyre cable 3 conductors x 2.0mm²
Z : 4 conductors x 2.5mm²

■Specifications

MODEL	Power Supply [V]	Frequency [Hz]	Number of poles	Power Consumption [W]	Current [A]	Airflow Rate [m³/ h]	Noise [dB]	Weight [kg]	Indoor or Outdoor
EWF-45ETA-E	Three Phase 380-440	50	4	250-270	0.66-0.75	5700	47.5	17.3	Outdoor use Indoor use
		60		360-380	0.71-0.72	6700	52.5		
EWF-50FTA-E		50	4	330-355	0.78-0.82	7240	49.5	19.4	
		60		510-530	0.91	8280	53.5-54		
EWG-60FTA-E		50	6	375-410	1.00-1.15	9700	47.5	25	
		60		590-610	1.15	11160	51.5		
KG-70GTF3-E		50	6	710-800	2.60-3.10	16000	62.5	52	
		60		1040-1100	2.50-2.70	19000	67		
KG-80HTF3-E		50	6	1020-1060	2.65-2.90	22800	66.5	62.5	
		60		1570-1650	3.05	26000	71		
EJ-105HTB-E	Three-phase 380-415	50	10	1170-1240	5.1-5.5	27300	59	139.0	
	Three-phase 400-440	60		1735-1790	4.9-4.9	32700	63		

P-Q Characteristic





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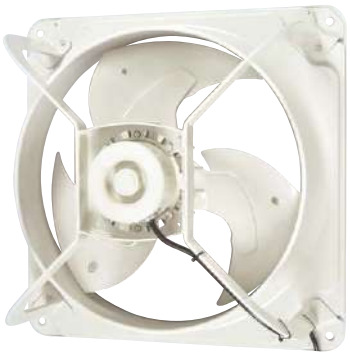


NEW

EWF-25 to 50-Q-E
EWG-60-Q-E

(Supply Type)

*25-60cm models are for supply use only (the direction of the vanes cannot be changed). For exhaust-use models, please refer to pg5-6.
*Operating conditions: Ambient temperature is -15°C to +50°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, or damage.
*Do not install the unit in a freezer or a place where freezing may occurs.
*Avoid turning on and off of the unit more than 50 times a day.
*Switching of speeds is not available with this series.
*Do not install the indoor models outdoor where it will be exposed to direct rain.
*Outdoor models can be used in a place where it will be directly exposed to rain. However,rust could shorten the service life.
*Do not connect the unit to inverter (Insulation breakdown may occur due to the surge from the inverter)

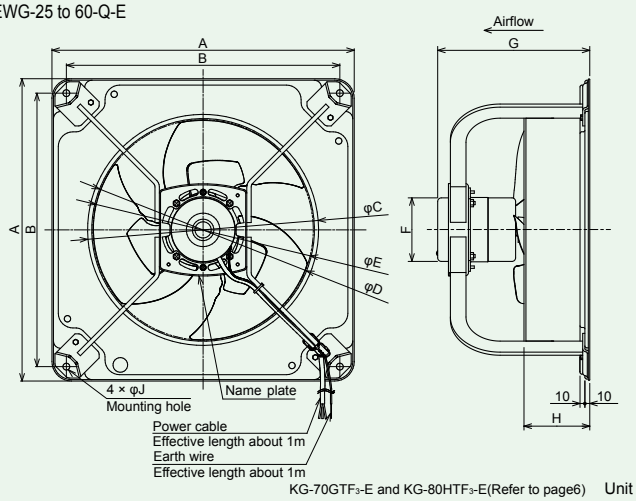
Applicable for

Plant Rooms | Warehouses | Factories | Buildings | Stores

■**Dimensions**

*The appearance may slightly differ depending on the model.

EWF/EWG-25 to 60-Q-E



KG-70GTF3-E and KG-80HTF3-E(Refer to page6) Unit : mm

■**Dimensions**

MODEL	A	B	C	D	E	F	G	H	J	Power cable	Earth wire
EWF-25ASA-Q-E	370	330	283	266	260	153	201	110	10	A	-
EWF-30BSA-Q-E	420	380	323	306	300	153	197	110	10	A	-
EWF-35DSA-Q-E	470	434	373	356	350	181	259	130	10	A	-
EWF-40DSA-Q-E	520	460	423	406	400	181	266	135	14	A	-
EWF-45ESA-Q-E	620	560	473	456	450	211	307	135	14	A	-
EWF-45ETA-Q-E	620	560	473	456	450	φ131	312	135	14	B	AWG18
EWF-50FTA-Q-E	620	560	528	511	500	φ131	292	155	14	B	AWG18
EWG-60FTA-Q-E	710	650	624	607	600	φ163	345	175	14	B	AWG18

A : Vinyl cabtyre cable 3 conductors x AWG18
B : Vinyl cabtyre cable 3 conductors x 0.75mm²

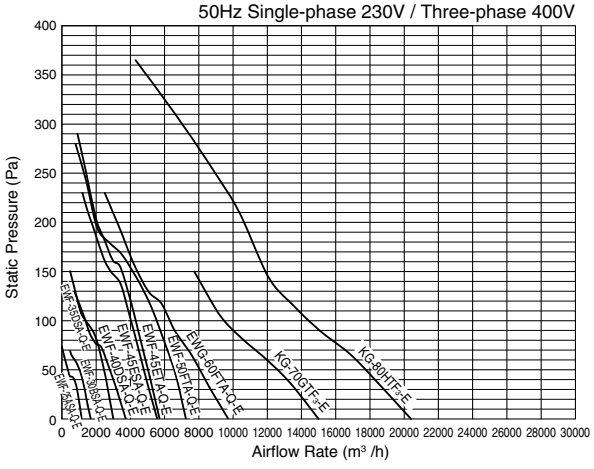
■**Specifications**

MODEL	Power Supply [V]	Frequency [Hz]	Number of poles	Power Consumption [W]	Current [A]	Airflow Rate [m³/ h]	Noise [dB]	Weight [kg]	Indoor or Outdoor
EWF-25ASA-Q-E	Single-phase 220-240	50	4	39.5-45.5	0.19	1150	38	4.3	Indoor use
		60		49-55	0.23	1260	42		
EWF-30BSA-Q-E		50	4	71.5-85	0.47-0.53	1680	44.5	5.8	
		60		74-82	0.40-0.42	1900	48		
EWF-35DSA-Q-E		50	4	122-130	0.62	3000	48.5	9.5	
		60		170-180	0.75	3500	53		
EWF-40DSA-Q-E		50	4	120-127	0.62	3720	50.5	12.1	
		60		162-170	0.75-0.72	4200	54.5		
EWF-45ESA-Q-E		50	4	240-260	1.23	5560	56	18.3	
		60		355	1.60-1.50	6370	60.5		
EWF-45ETA-Q-E	Three-phase 380-440	50	4	235-260	0.62-0.70	5700	56.5	17.8	Outdoor use Indoor use
		60		345-365	0.68	6700	61		
EWF-50FTA-Q-E		50	4	320-340	0.84-0.93	7240	57.5	19.7	
		60		490-500	0.90	8280	61.5		
EWG-60FTA-Q-E		50	6	400-430	54-54.5	9700	54-54.5	27.1	
		60		590-625	59.5	11160	59.5		
KG-70GTF3-E "Supply type"		50	6	810-900	2.70-3.20	15000	66.5	52	
		60		1220-1270	2.70-2.90	18000	72		
KG-80HTF3-E "Supply type"		50	6	1100-1130	2.70-2.85	20400	71	62.5	
		60		1710-1800	3.2	24000	75		

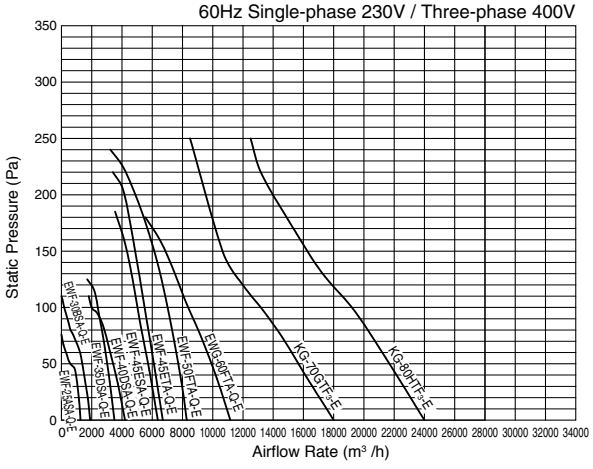
KG-70GTF3-E and KG-80HTF3-E can be used as “supply type” , by changing the direction of the vane and wiring connection. Please refer to the manual how to change.

P-Q Characteristic

50Hz Single-phase 230V / Three-phase 400V



60Hz Single-phase 230V / Three-phase 400V



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Optional Parts

Shutter (Wind Pressure Type)

NEW

PS-25 to 105SHA-E

*Operating conditions: Ambient temperature is -10°C to +50°C, and a relative humidity of 90% or less at normal temperature.
*Do not install this product where it will be exposed to direct rain.
*This product is only for exhaust air. For supply air usage, use the grille instead. (Failure to heed this warning might damage the shutter.)
*Refer to the list in pg9 for the combination use with the fan.

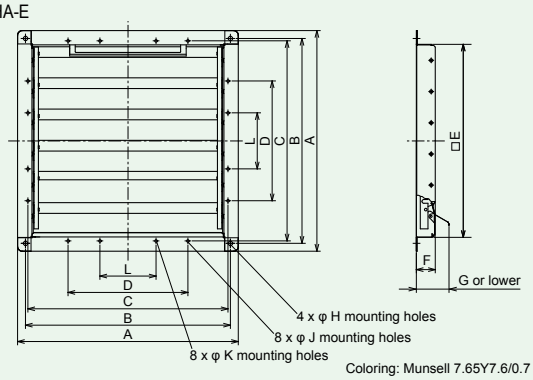
Applicable for

Plant Rooms | Warehouses | Factories | Buildings | Stores

■**Dimensions**

*The appearance may slightly differ depending on the model.

PS-25 to 105SHA-E

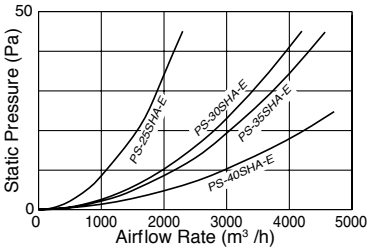


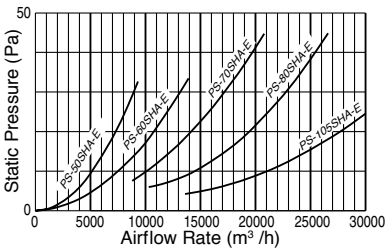
Coloring: Munsell 7.65Y7.6/0.7 Unit : mm

■**Dimensions**

MODEL	A	B	C	D	E	F	G	H	J	K	L	Number of blades	Weight [kg]
PS-25SHA-E	360	330	314	160	272	60	105	10	8	-	-	3	1.4
PS-30SHA-E	410	380	364	200	322	60	110	10	8	-	-	3	1.7
PS-35SHA-E	458	434	434	250	373	60	105	12	8	-	-	4	2.0
PS-40SHA-E	510	460	460	260	425	60	110	14	8	-	-	4	2.8
PS-50SHA-E	610	560	560	280	526	60	110	14	8	-	-	5	4.0
PS-60SHA-E	700	650	650	380	616	60	110	14	8	-	-	6	6.0
PS-70SHA-E	830	800	800	400	738	85	125	15	15	-	-	7	10.0
PS-80SHA-E	930	900	900	500	838	85	125	15	15	15	400	8	12.0
PS-105SHA-E	1240	1210	1210	750	1148	85	125	15	15	-	-	11	18.0

Pressure Loss Curve





Grille

NEW

PS-25 to 60SK-E

*Operating conditions: Ambient temperature is -30°C to +80°C, and a relative humidity of 90% or less at normal temperature.
*This product is available for both exhaust and supply usage.
*If grille is used as a natural air inlet, use grille larger than the fan blade size or use two or more grilles.
*Refer to the list in pg9 for the combination use with the fan.

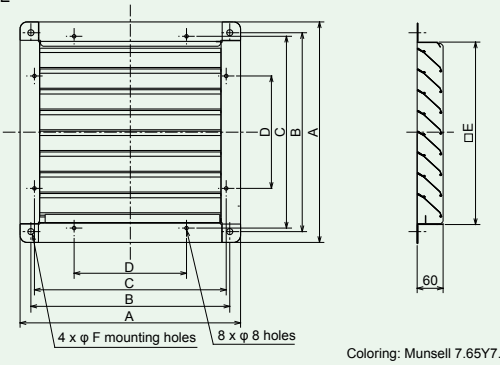
Applicable for

Plant Rooms | Warehouses | Factories | Buildings | Stores

■**Dimensions**

*The appearance may slightly differ depending on the model.

PS-25 to 60SK-E

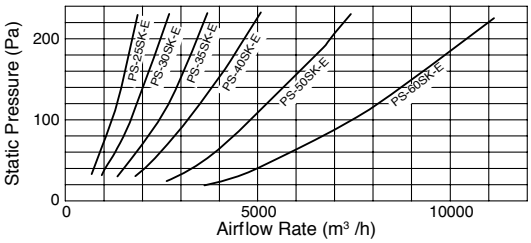


Coloring: Munsell 7.65Y7.6/0.7 Unit : mm

■**Dimensions**

MODEL	A	B	C	D	E	F	Number of blades	Weight [kg]
PS-25SK-E	360	330	314	160	273	10	5	1.7
PS-30SK-E	410	380	364	200	323	10	6	2.0
PS-35SK-E	458	434	434	250	371	12	7	2.6
PS-40SK-E	510	460	460	260	423	14	8	3.0
PS-50SK-E	610	560	560	280	524	14	10	4.5
PS-60SK-E	700	650	650	380	614	14	11	5.5

Pressure Loss Curve



The printed color of the products are slightly different from those of the actual products.
Due to continuing improvement, above specifications may be subject to change without notice.

Optional Parts

Wire Guard (Made of Steel Wire)

Coloring: Munsell 7.65Y7.6/0.7

*This product is used to protect the fan. Do not use this product for any other purpose.
*For your safety, install the fan to the location where it is more than 2.3m above the floor even when the wire guard is installed.
*Refer to the list in pg9 for the combination use with the fan.

Applicable for

■Dimensions

MODEL	Weight [kg]
G-25EC-E	0.4
G-30EC-E	0.5
G-35EC-E	0.6
G-40EC-E	0.8
G-50EC-E	1.3
G-60EC-E	1.6
G-70SB-E	2.6
G-80SB$_1$-E	2.9
G-105EB-E	4.6

NEW

G-25 to 60EC-E
G-70SB-E
G-80SB$_1$-E
G-105EB-E

Optional Parts table for each High Pressure Fan

High pressure fan	The diameter of fan (cm)	Shutter	Grille	Wire Guard
EWF-25ASA-E	25	PS-25SHA-E	PS-25SK-E	G-25EC-E
EWF-25ASA-Q-E		N/A		
EWF-30BSA-E	30	PS-30SHA-E	PS-30SK-E	G-30EC-E
EWF-30BSA-Q-E		N/A		
EWF-35DSA-E	35	PS-35SHA-E	PS-35SK-E	G-35EC-E
EWF-35DSA-Q-E		N/A		
EWF-40DSA-E	40	PS-40SHA-E	PS-40SK-E	G-40EC-E
EWF-40DSA-Q-E		N/A		
EWF-45ESA-E	45	PS-50SHA-E	PS-50SK-E	G-50EC-E
EWF-45ESA-Q-E		N/A		
EWF-45ETA-E		PS-50SHA-E		
EWF-45ETA-Q-E		N/A		
EWF-50FTA-E	50	PS-50SHA-E		
EWF-50FTA-Q-E		N/A		
EWG-60FTA-E	60	PS-60SHA-E	PS-60SK-E	G-60EC-E
EWG-60FTA-Q-E		N/A		
KG-70GTF$_3$-E	70	PS-70SHA-E	N/A	G-70SB-E
KG-70GTF$_3$-E (Supply type)		N/A		
KG-80HTF$_3$-E	80	PS-80SHA-E	N/A	G-80SB$_1$-E
KG-80HTF$_3$-E (Supply type)		N/A		
EJ-105HTB-E	105	PS-105SHA-E	N/A	G-105EB-E

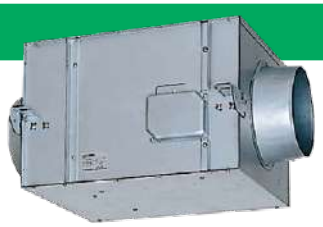
The printed color of the products are slightly different from those of the actual products.
Due to continuing improvement, above specifications may be subject to change without notice.

Straight Centrifugal Fan

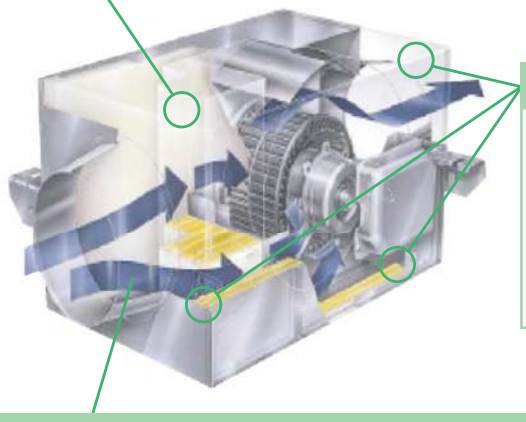
Features of the Mitsubishi Electric Straight Centrifugal Fan

Ceiling Recessed Type

Low noise operation has been achieved using the new Split Silencer. Also, its compact and light weight design allows easy installation for applications with limited installation space.



New Split Silencer



Increased strength

The frames are clamped tightly together.

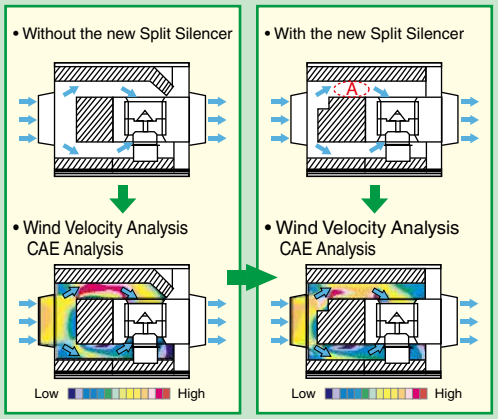
Improvement on Air Duct

Low noise operation
Operation noise as low as 45dB (for models with air volume under 1000 m^3/h)

Compact and light weight design
Designed with a height less than 350mm and a weight less than 25kg while maintaining high strength

Improvement on Air Duct

The new Split Silencer increases air duct efficiency.



The operation noise and unit size have been minimized by air duct improvements. Especially, A-area's velocity has been decreased drastically contributing to reduction of operation noise.

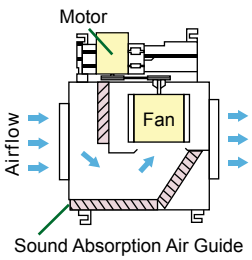
Floor Standing Type

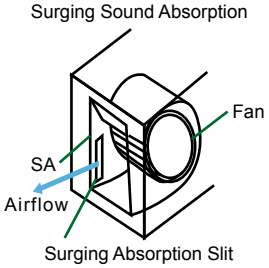
The Surging Absorption Slit and Sound Absorption Air Guide are keys to achieve low noise operation.

Low Noise

The Sound Absorption Guide equipped inside of the silencer box contributes to the reduction of operation noise by creating a smoother flow of air and absorbing noise.
The Surging Absorption Slit on inlet of the unit is to reduce unpleasant noise caused by the surging of air.

Cross-Section View

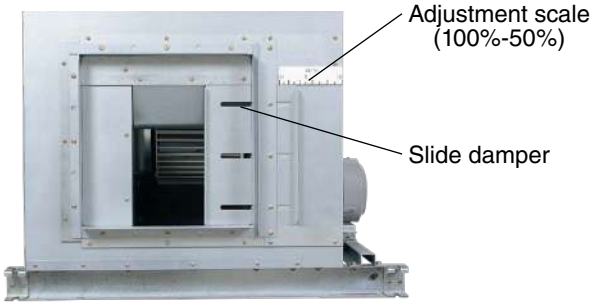


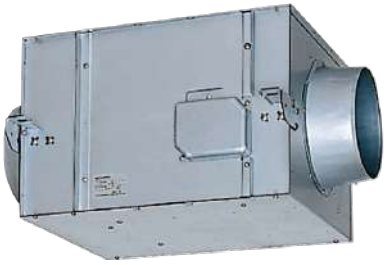


Adjustable Air Volume

The equipped slide damper can be used for adjusting the air volume range between 50 and 100%, allowing more precise air volume control.

Damper Fixing Screws





BFS-30 to 100SA-E

(Single phase)

- High static pressure
- Large air volume design
- Low noise operation

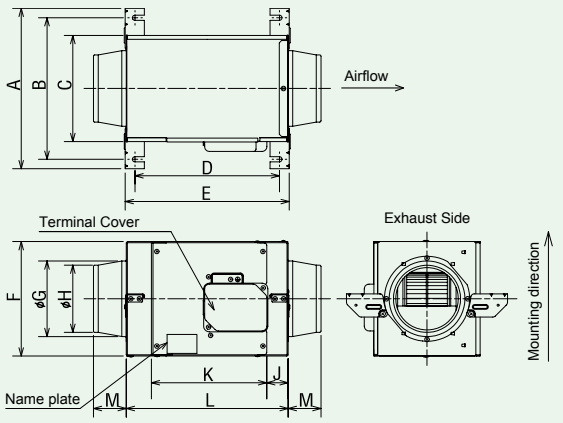
*Operating conditions: The temperatures of both ambient and transfer air are -10°C to +40°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, and damage.

Applicable for

Buildings | Stores | Condominiums | office | Hotels | Hospitals

■**Dimensions**

*The appearance may slightly differ depending on the model.



Unit : mm

■**Dimensions**

Model	A	B	C	D	E	F	G	H	J	K	L	M
BFS-30SA-E	339	299	224	305	346	240	160	142	45	243	340	70
BFS-40SA-E	369	329	254	360	401	270	160	142	52	287	395	70
BFS-50SA-E	439	399	324	385	426	270	208	192	52	287	420	85
BFS-65SA-E	474	434	359	460	501	320	208	192	51	382	495	85
BFS-80SA-E	504	464	389	460	501	320	208	192	51	382	495	85
BFS-90SA-E	504	464	389	485	526	320	208	192	51	382	520	85
BFS-100SA-E	504	464	389	485	526	320	208	192	51	382	520	85

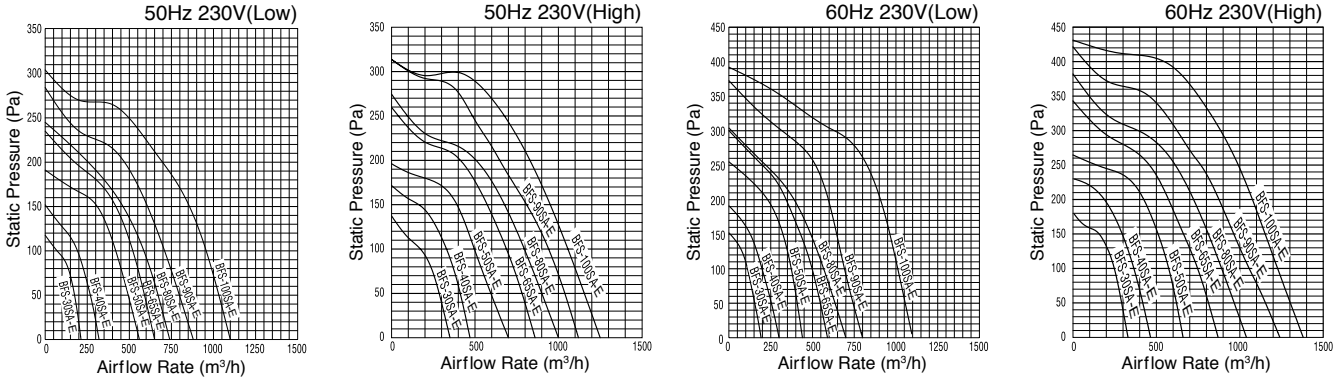
■**Specifications(50Hz)**

Model	Power Supply [V]	Fan speed	Current [A]	Power Consumption [W]	Airflow Rate [m³/ h]	Static Pressure [Pa]	Noise [dB]		Weight [kg]
							Casing Side	Suction Side	
BFS-30SA-E	Single-phase 220-240	High	0.17-0.18	37-42	292-300	39	26	36.5	7
		Low	0.14-0.15	29-35	186-212	18	21.5	27	
BFS-40SA-E		High	0.25-0.26	55-63	395-400	59	26.5	36.5	9
		Low	0.22-0.23	47-54	289-325	30	23	30	
BFS-50SA-E		High	0.37-0.38	80-86	500-500	98	29	39	11
		Low	0.3-0.3	64-69	450-450	80	25.5	35	
BFS-65SA-E		High	0.50-0.52	102-119	614-650	118	32	37	15
		Low	0.32-0.34	70-81	505-546	83	27.5	32.5	
BFS-80SA-E		High	0.58-0.60	126-139	800-800	98	32.5	37.5	15.5
		Low	0.44-0.45	96-104	650-650	64	29	33.5	
BFS-90SA-E		High	0.74-0.74	161-177	900-900	118	33.5	39.5	17.5
		Low	0.53-0.53	116-127	760-778	80	31	36.5	
BFS-100SA-E		High	0.87-0.89	189-207	1000-1000	127	37	42.5	19
		Low	0.76-0.78	168-182	945-973	107	35.5	41.5	

■**Specifications(60Hz)**

Model	Power Supply [V]	Fan speed	Current [A]	Power Consumption [W]	Airflow Rate [m³/ h]	Static Pressure [Pa]	Noise [dB]		Weight [kg]
							Casing Side	Suction Side	
BFS-30SA-E	Single-phase 220-240	High	0.20-0.21	43-50	292-300	39	27	38.5	7
		Low	0.15-0.17	29-35	171-196	15	21	26	
BFS-40SA-E		High	0.29-0.31	63-73	395-400	69	28	38	9
		Low	0.23-0.25	48-56	274-300	30	23	29.5	
BFS-50SA-E		High	0.42-0.43	93-100	500-500	157	30	39.5	11
		Low	0.33-0.34	70-79	380-380	91	25	34	
BFS-65SA-E		High	0.67-0.70	136-153	650-650	157	34.5	38	15
		Low	0.39-0.41	84-96	513-516	88	27	32	
BFS-80SA-E		High	0.69-0.69	151-166	768-800	157	35.5	38	15.5
		Low	0.47-0.50	103-120	580-615	84	29	33.5	
BFS-90SA-E		High	0.92-0.94	196-215	900-900	186	36	41.5	17.5
		Low	0.60-0.63	131-150	695-731	108	31	36	
BFS-100SA-E		High	1.2-1.2	246-268	1000-1000	245	39.5	44.5	19
		Low	0.99-1.0	211-230	941-941	173	37.5	43	

P-Q Characteristic



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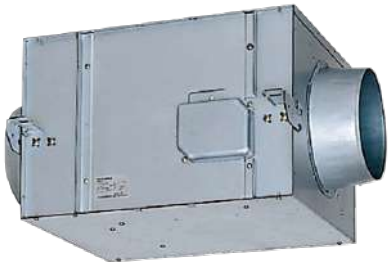


BFS-100 to 180TA-E

(Three phase)

- High static pressure
- Large air volume design
- Low noise operation

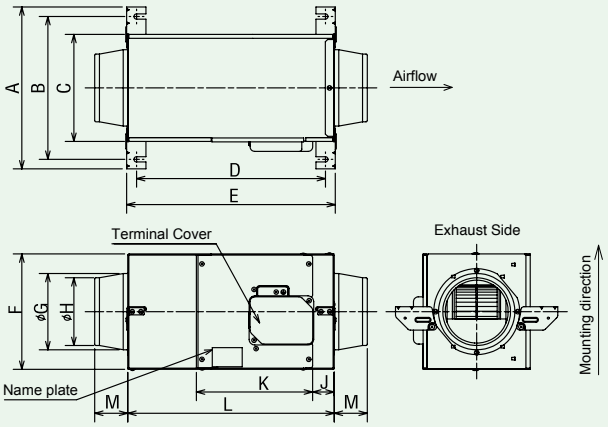
*Operating conditions: The temperatures of both ambient and transfer air are -10°C to +40°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, and damage.

Applicable for

Buildings | Stores | Condominiums | office | Hotels | Hospitals

■ Dimensions

*The appearance may slightly differ depending on the model.



power code from terminal cover effective length : about 1m

Unit : mm

■ Dimensions

Model	A	B	C	D	E	F	G	H	J	K	L	M
BFS-100TA-E	504	464	389	485	526	320	208	192	51	382	520	85
BFS-120TA-E	480	440	365	515	556	350	258	242	70	400	550	85
BFS-150TA-E	490	450	375	530	571	350	258	242	70	400	565	85
BFS-180TA-E	570	530	455	610	651	350	258	242	70	400	645	85

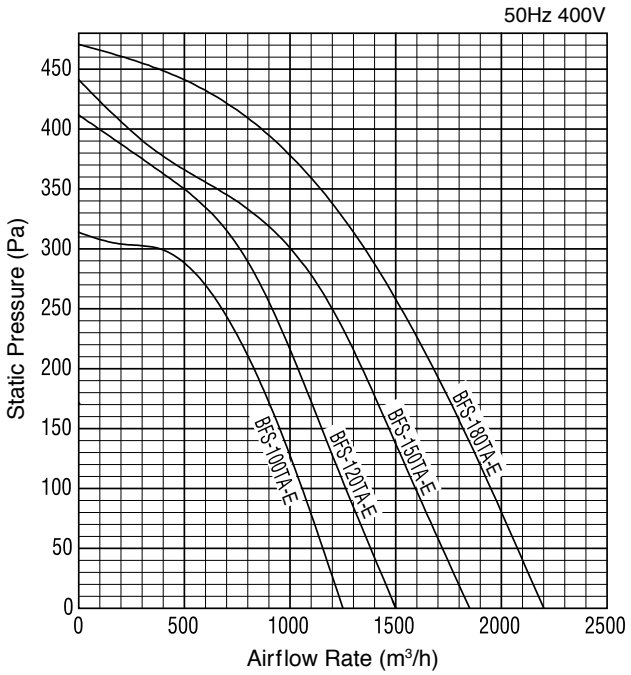
■ Specifications(50Hz)

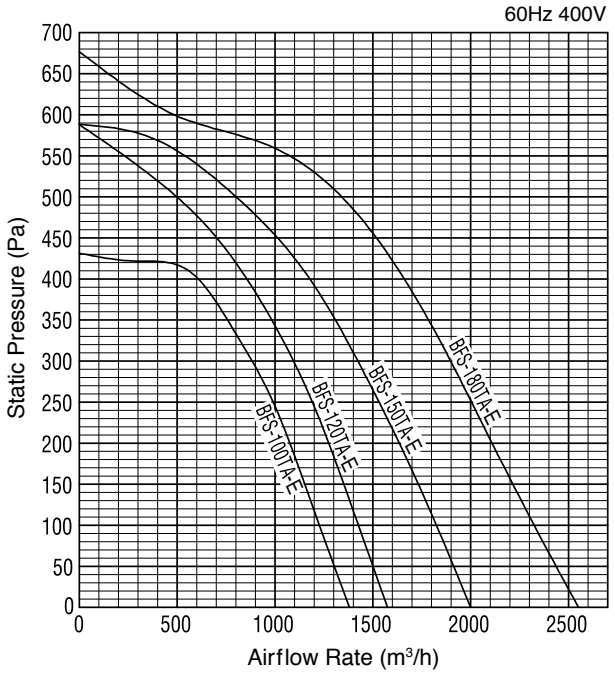
Model	Power Supply [V]	Current [A]	Power Consumption [W]	Airflow Rate [m³/ h]	Static Pressure [Pa]	Noise [dB]		Weight [kg]
						Casing Side	Suction Side	
BFS-100TA-E	Three-Phase 380-415	0.35-0.37	178-196	1000-1000	127	36	42	17.5
BFS-120TA-E		0.55-0.57	258-273	1170-1200	127	40	48	20
BFS-150TA-E		0.82-0.89	346-372	1500-1500	137	42	48	20
BFS-180TA-E		0.96-1.0	424-446	1750-1800	157	41	46	24

■ Specifications(60Hz)

Model	Power Supply [V]	Current [A]	Power Consumption [W]	Airflow Rate [m³/ h]	Static Pressure [Pa]	Noise [dB]		Weight [kg]
						Casing Side	Suction Side	
BFS-100TA-E	Three-Phase 400-440	0.43-0.44	258-266	1000-1000	245	37.5	43	17.5
BFS-120TA-E		0.63-0.63	337-363	1150-1200	245	41	48.5	20
BFS-150TA-E		0.87-0.88	445-462	1500-1500	265	44	48	20
BFS-180TA-E		1.0-1.0	541-568	1700-1800	343	41.5	45.5	24

P-Q Characteristic





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BFS-650, 1000TB-E

(Three phase)

- High static pressure
- Large air volume design
- Low noise operation
- For sale until the stock lasts

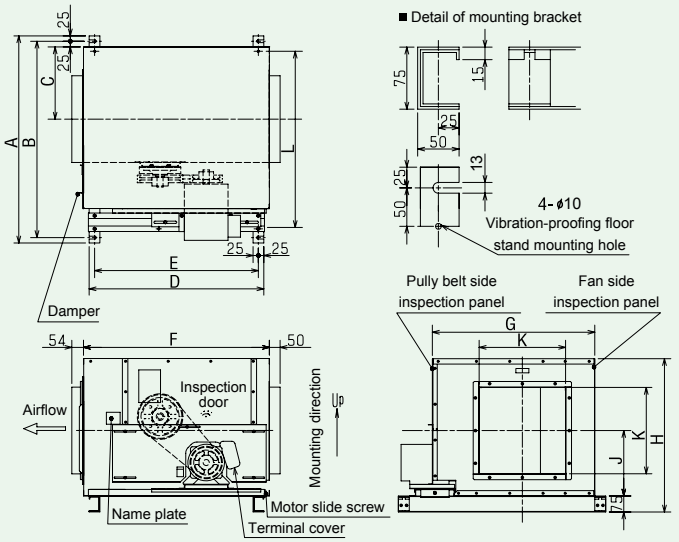
*Operating conditions: The temperatures of both ambient and transfer air are -10°C to +40°C, and a relative humidity of 80% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, and damage.

Applicable for

Buildings | Stores | Factories | Warehouses

■Dimensions

*The appearance may slightly differ depending on the model.



Unit : mm

■Dimensions

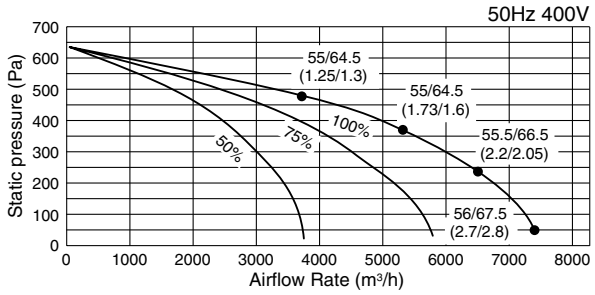
Model	A	B	C	D	E	F	G	H	J	K	L	V-belt
BFS-650TB-E	950	900	332	800	750	850	743	705	300	400	800	A, 44 inch
BFS-1000TB-E	1075	1025	361	990	940	1040	840	825	375	500	925	A, 52 inch

■Specifications

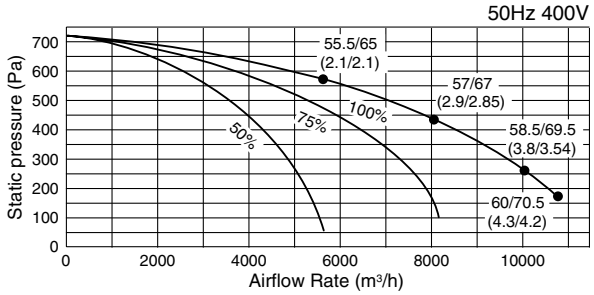
Model	Frequency [Hz]	Power Supply [V]	Current [A]	Power Consumption [W]	Airflow Rate [m³/ h]	Static Pressure [Pa]	Noise [dB]		Weight [kg]
							Casing Side	Suction Side	
BFS-650TB-E	Three-Phase 50	380-415	3.9-3.6	2200	6500	225	55.5	66.5	106
BFS-1000TB-E			6.8-6.2	3800	10000	265	58.5	69.5	160

P-Q Characteristic

BFS-650TB-E

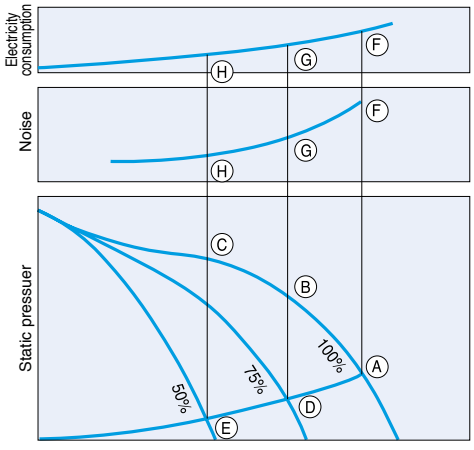


BFS-1000TB-E



*Do not use the appliance out of the range of the characteristic curve.

A correlation between air volume variation and characteristic



By closing the damper, the airflow rate can be reduced (A→D→E). This in turn reduces both the noise level and power consumption so that A=F becomes D=G or E=H. (The noise and power consumption characteristics will be the same as those values at point B and C)

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Fireproofing Type

V-15 to V-18ZMW-E
V-15 to V-18ZMWP-E

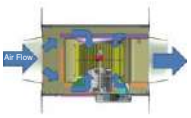
• Fireproofing Performance

Casing and impeller are manufactured in galvanized sheet steel.* The terminal box is covered with metal cover for enhancing the safety and the noise absorption material** is complied with BS476 Part 6 and Part 7.

*Impeller of V-18ZMW(P)-E are manufactured in aluminum.
**Sound absorption material is used in V-18ZMWP-E.

• Noise Reducing Design

The operation noise has been minimized by creating homogeneous air flow with causing air to flow from two directions and adopting sound absorption material.**

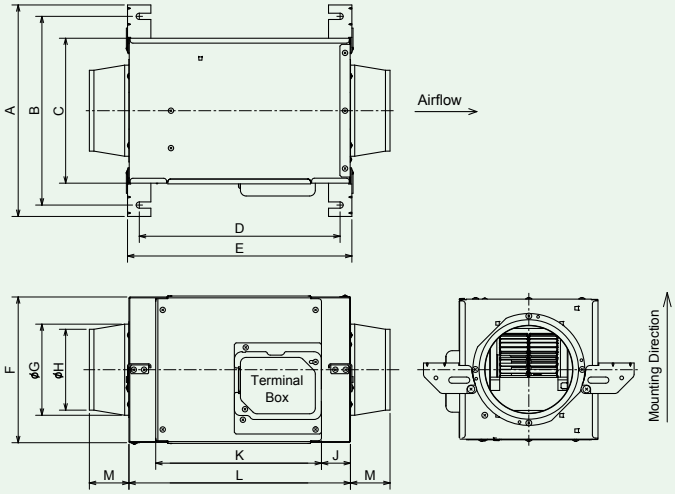


• Slim and Compact Design
• Two-speed Selectable
• Easy Maintenance and Installation

Applicable for

■**Dimensions**

*The appearance may slightly differ depending on the model.



Unit : mm

■**Dimensions**

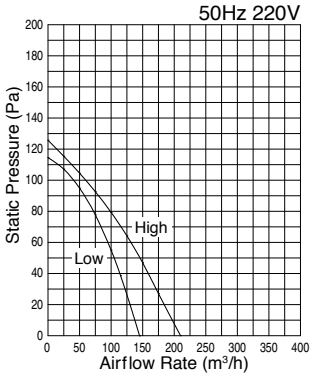
Model	A	B	C	D	E	F	G	H	J	K	L	M
V-15ZMW-E	339	299	223	299	340	226	110	98	43	234	335	60
V-15ZMWP-E	339	299	223	299	340	226	160	142	43	234	335	70
V-18ZMW-E	371	331	255	353	394	255	160	142	51	291	389	70
V-18ZMWP-E	435	395	319	395	436	255	208	192	51	291	431	85

■**Specifications**

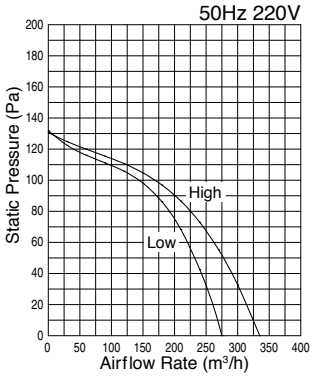
Model	Power Supply [V]	Frequency [Hz]	Fan speed	Current [A]	Power Consumption [W]	Airflow Rate [m³/ h]	Static Pressure [Pa]	Noise [dB]	Weight [kg]
V-15ZMW-E	Single-phase 220	50	High	0.11	25	210	0	21.5	6.0
			Low	0.10	16	145		17	
	Single-phase 240	50	High	0.12	29	215		22.5	
			Low	0.11	19	170		19	
V-15ZMWP-E	Single-phase 220	50	High	0.21	43	335		26.5	6.0
			Low	0.18	29	275		23	
	Single-phase 240	50	High	0.22	49	350		29	
			Low	0.19	35	305		26.5	
V-18ZMW-E	Single-phase 220	50	High	0.28	60	510		31	8.5
			Low	0.24	34	370		26	
	Single-phase 240	50	High	0.28	67	520		32.5	
			Low	0.24	39	400		28	
V-18ZMWP-E	Single-phase 220	50	High	0.47	99	770		32.5	9.5
			Low	0.45	78	650		30	
	Single-phase 240	50	High	0.47	109	780		33	
			Low	0.46	88	700		32	

P-Q Characteristic

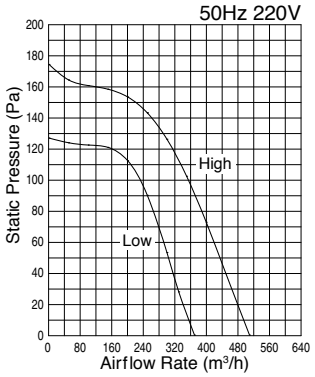
V-15ZMW-E



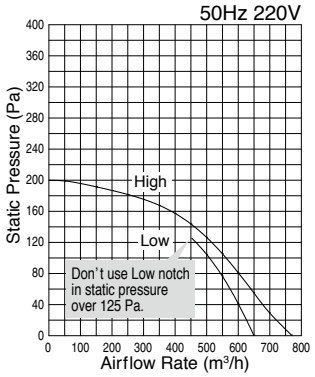
V-15ZMWP-E



V-18ZMW-E



V-18ZMWP-E



The printed color of the products are slightly different from those of the actual products.
Due to continuing improvement, above specifications may be subject to change without notice.

Centrifugal Fan

BF-12 to 23S-E-1
(Single phase)

BF-25,28T-E
(Three phase)

- Compact size
- Low noise operation

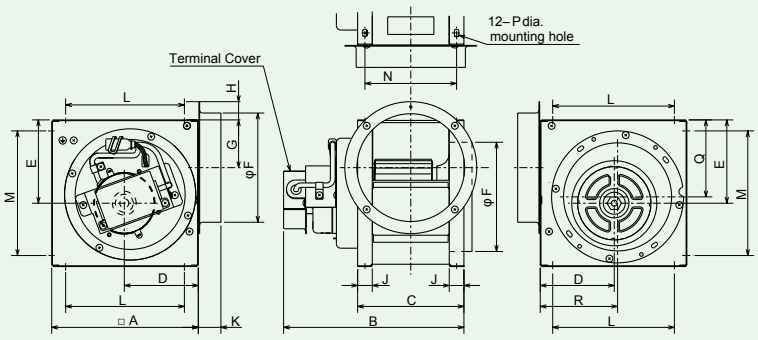
*Operating conditions: The temperatures of both ambient and transfer air are -10°C to +50°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, and damage.
*Do not install the unit in a place where it may directly exhaust oily smoke or steam, such as kitchen.
*Do not install the unit in a place where steam and corrosive gas are constantly generated as well as a place where the unit may be exposed to rain.

Applicable for

Buildings | Stores | Factories | Warehouses

■**Dimensions**

*The appearance may slightly differ depending on the model.



Measure on R, Q means the center of flange

BF-25T-E and BF-28T-E are power cable models. Effective length about 1m.

Unit : mm

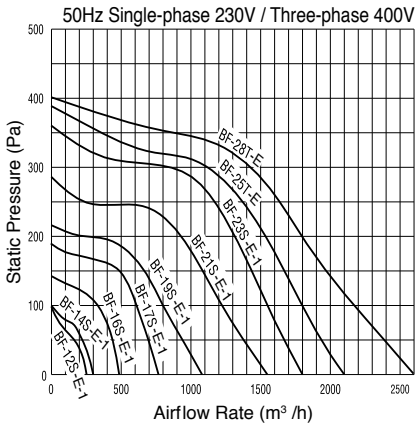
■**Dimensions**

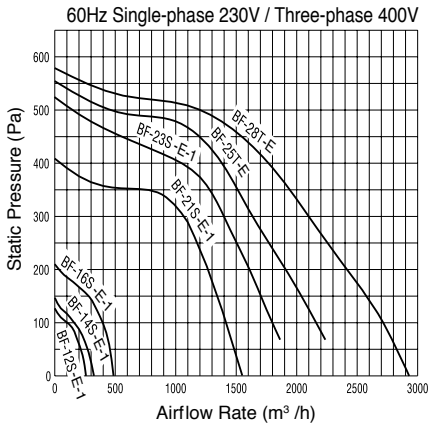
Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
BF-12S-E-1	200	246	145	101	113.7	149	65	25	20	30.8	162	170	125	10×6	105	105.5
BF-14S-E-1	200	246	145	101	113.7	149	65	25	20	30.8	162	170	125	10×6	105	105.5
BF-16S-E-1	250	246	170	126	142.3	149	60	30	20	30.8	190	190	150	10×6	142	125.5
BF-17S-E-1	300	232	185	151.5	170.5	199	85	30	22.5	30.8	240	240	165	16×10	170	151
BF-19S-E-1	300	268	185	151.5	170.5	199	85	30	22.5	30.8	240	240	165	16×10	170	151
BF-21S-E-1	330	294	210	166.6	187.6	199	75	40	25	30.8	250	250	190	20×12	186	166
BF-23S-E-1	380	313.8	225	192.1	217.6	249	105	35	25	30.8	300	300	205	20×12	214.5	192.5
BF-25T-E	380	309	225	192.1	217.6	249	105	35	25	30.8	300	300	205	20×12	214.5	192.5
BF-28T-E	395	319.2	250	200	228.7	249	93	47	25	30.8	320	320	230	20×12	223.4	199.6

■**Specifications**

Model	Power Supply [V]	Frequency [Hz]	Current [A]	Power Consumption [W]	Airflow Rate [m³/ h]	Static Pressure [Pa]	Noise [dB]		Weight [kg]
							Casing Side	Suction Side	
BF-12S-E-1	Single-phase 220-240	50	0.11-0.12	27-31	252	0	34.5	39.5	2.8
		60	0.12-0.13	26-31	258	0	35	40	
BF-14S-E-1		50	0.14-0.15	31-35	330	0	41	46	2.9
		60	0.18-0.19	37-43	330	0	42.5	47.5	
BF-16S-E-1		50	0.23-0.24	54-62	486	0	44.5	49	4.7
		60	0.26-0.28	56-67	486	0	43	47.5	
BF-17S-E-1		50	0.33-0.36	68-80	716	0	44	51	7.1
BF-19S-E-1		50	0.65-0.65	143-156	1080	0	51.5	58.5	9.6
BF-21S-E-1		50	1.15-1.13	235-249	1548	0	56.5	63	12.6
		60	1.61-1.57	343-371	1550	0	58	65	
BF-23S-E-1		50	1.51-1.48	331-358	1800	0	59	65.5	18.4
		60	1.92-1.99	416-465	1800	70	61	67.5	
BF-25T-E	Three-phase 380-415	50	0.96-0.99	445-464	2100	0	62.5	69	16
	Three-phase 400-440	60	1.17-1.16	667-704	2280	70	65	72	
BF-28T-E	Three-phase 380-415	50	1.2-1.19	645-657	2600	0	65	71.5	20.5
	Three-phase 400-440	60	1.17-1.16	1065-1077	2920	0	68.5	75	

P-Q Characteristic





*Do not use the appliance out of the range of the characteristic curve.

The printed color of the products are slightly different from those of the actual products.
Due to continuing improvement, above specifications may be subject to change without notice.

Axial Flow Fan

JF-30 to 250S-E-1
(Single phase)

JF-350 to 550T-E
(Three phase)

- High static pressure
- Large air volume design
- Low noise operation

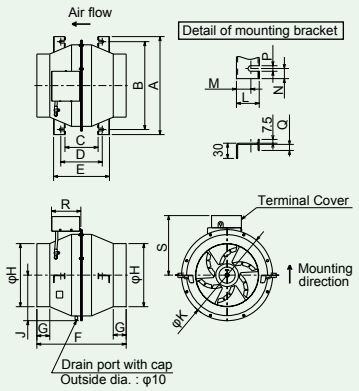
*Operating conditions: The temperatures of both ambient and transfer air are -10°C to +40°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, and damage.
*Do not install the unit vertically
*Do not install the unit in a place where it may be directly exhaust oily smoke or steam, such as kitchen.

Applicable for

Buildings | Stores | Factories | Warehouses

■ Dimensions
JF-30 to 250S-E-1

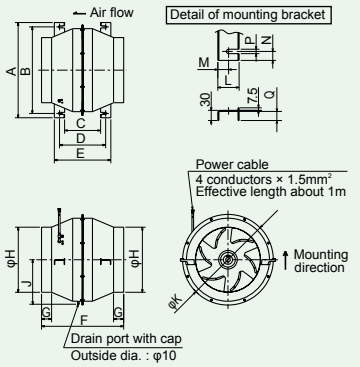
*The appearance may slightly differ depending on the model.



Unit : mm

■ Dimensions
JF-350 to 550T-E

*The appearance may slightly differ depending on the model.



Unit : mm

■ Dimensions

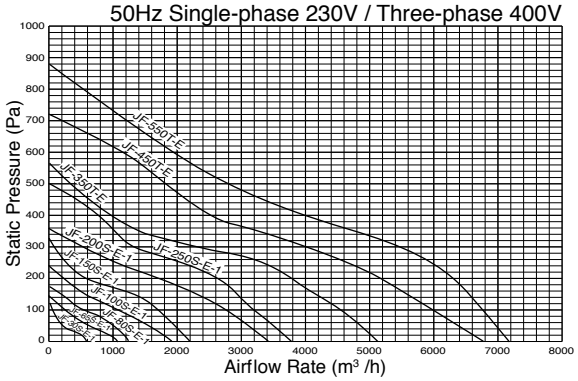
Model	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
JF-30S-E-1	340	300	80	113	170	280	50	200	151.2	300	45	28.5	20	11	12	85	210
JF-65S-E-1	389	349	128	161	218	350	51	250	179.4	360	45	28.5	20	11	12	116	235
JF-80S-E-1	389	349	128	161	218	350	51	250	179.4	360	45	28.5	20	11	12	116	235
JF-100S-E-1	450	410	144	177	234	400	55	300	209.8	430	45	28.5	20	11	12	116	272
JF-150S-E-1	450	410	144	177	234	400	55	300	209.8	430	45	28.5	20	11	12	116	272
JF-200S-E-1	543	490	136	198	261	434	48	323	252.3	515	62.8	31.8	26.5	13	26.8	116	319
JF-250S-E-1	543	490	136	198	261	434	48	323	252.3	515	62.8	31.8	26.5	13	26.8	116	319
JF-350T-E	583	530	218	280	343	500	62	400	272.5	555	62.8	31.8	26.5	13	26.8	-	-
JF-450T-E	713	660	256	318	381	600	57	500	337.3	685	62.8	31.8	26.5	13	26.8	-	-
JF-550T-E	713	660	256	318	381	600	57	500	337.3	685	62.8	31.8	26.5	13	26.8	-	-

■ Specifications

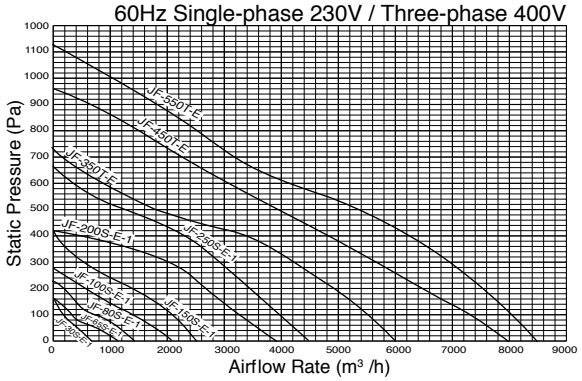
Model	Power Supply [V]	Frequency [Hz]	Current [A]	Power Consumption [W]	Airflow Rate [m³/ h]	Noise [dB]		Weight [kg]
						Casing Side	Suction Side	
JF-30S-E-1	Single-phase 220-240	50	0.22-0.25	47-57	590	38	50	4.5
		60	0.24-0.26	52-62	700	43	52	
JF-65S-E-1		50	0.18-0.20	40-46	1060	38	48	7.5
		60	0.23-0.25	51-59	1160	39	52	
JF-80S-E-1		50	0.34-0.36	62-69	1240	37	54.5	8.5
		60	0.39-0.40	83-91	1440	41	57.5	
JF-100S-E-1		50	0.43-0.45	94-100	1900	40	57	15
		60	0.59-0.62	130-141	2100	40.5	58	
JF-150S-E-1		50	0.74-0.81	134-148	2200	43	60.5	15
		60	0.84-0.89	186-195	2550	46.5	64.5	
JF-200S-E-1		50	0.79-0.81	176-190	3420	45	65	19
		60	1.20-1.30	267-290	3940	48	69.5	
JF-250S-E-1		50	1.40-1.30	315-327	3800	52	69	21
		60	2.20-2.00	475-480	4500	56	72	
JF-350T-E	Three-phase 380-415	50	1.00-1.20	508-528	5130	53	71	28.5
	Three-phase 400-440	60	1.30-1.40	805-823	6000	57	74.5	
JF-450T-E	Three-phase 380-415	50	1.30-1.40	680-700	6800	57	70.5	54
	Three-phase 400-440	60	1.90-1.70	1120-1130	8000	60	75.5	
JF-550T-E	Three-phase 380-415	50	1.60-1.70	750-790	7200	57	71	55.5
	Three-phase 400-440	60	2.00-2.10	1200-1250	8500	60	75.5	

P-Q Characteristic

50Hz Single-phase 230V / Three-phase 400V



60Hz Single-phase 230V / Three-phase 400V



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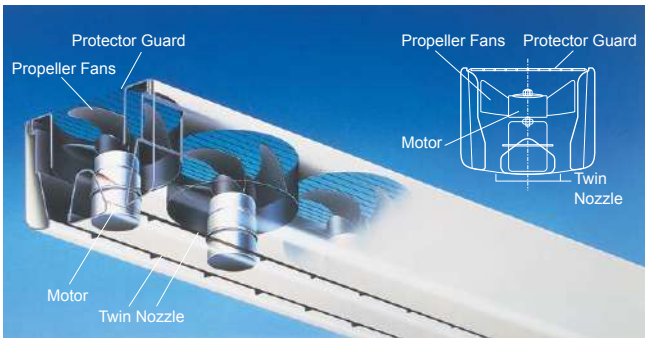
Due to continuing improvement, above specifications may be subject to change without notice.

Air Curtain

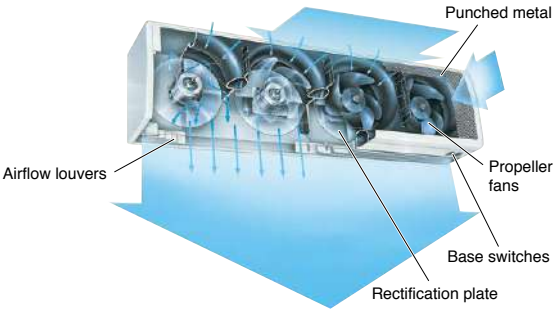
Features of the Mitsubishi Electric Air Curtain

Mitsubishi Electric Air Curtain creates an invisible curtain to help create a more pleasant indoor environment economically.

Standard Type



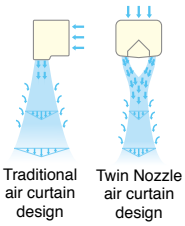
High-Power Type



Powerful yet quiet and energy-efficient

Twin Nozzle

A twin nozzle design combines two air currents into one streamlined, controlled current of air. Resistance to the influence of external airflow has been strengthened, greatly improving insulation against heat and cold.



Quiet Propeller Design

The aerodynamic technology applied to the Mitsubishi Electric quiet fan ensures large air volume while minimizing noise levels. The high-efficiency and long reliability of the fan equals large savings in operation costs.

Easy Maintenance

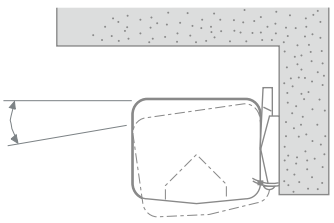
The use of axial fan (quiet propeller design) makes the unit easier to maintain. Critical parts such as the motor and fan are separate parts, making repairs easy.

Compact design

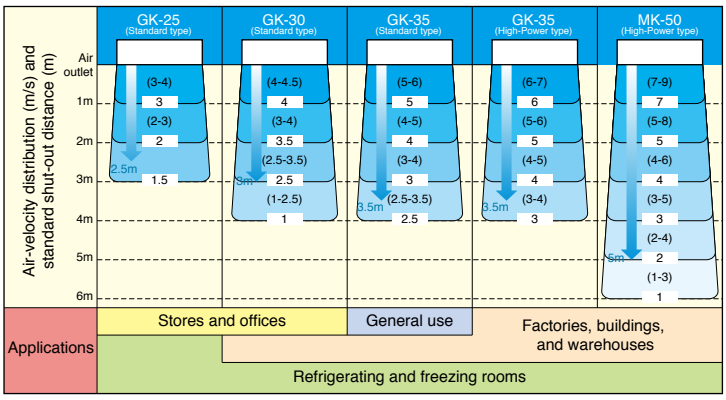
Compact and stylish it blends in readily with your interior design.

Adjustable Airflow Angle

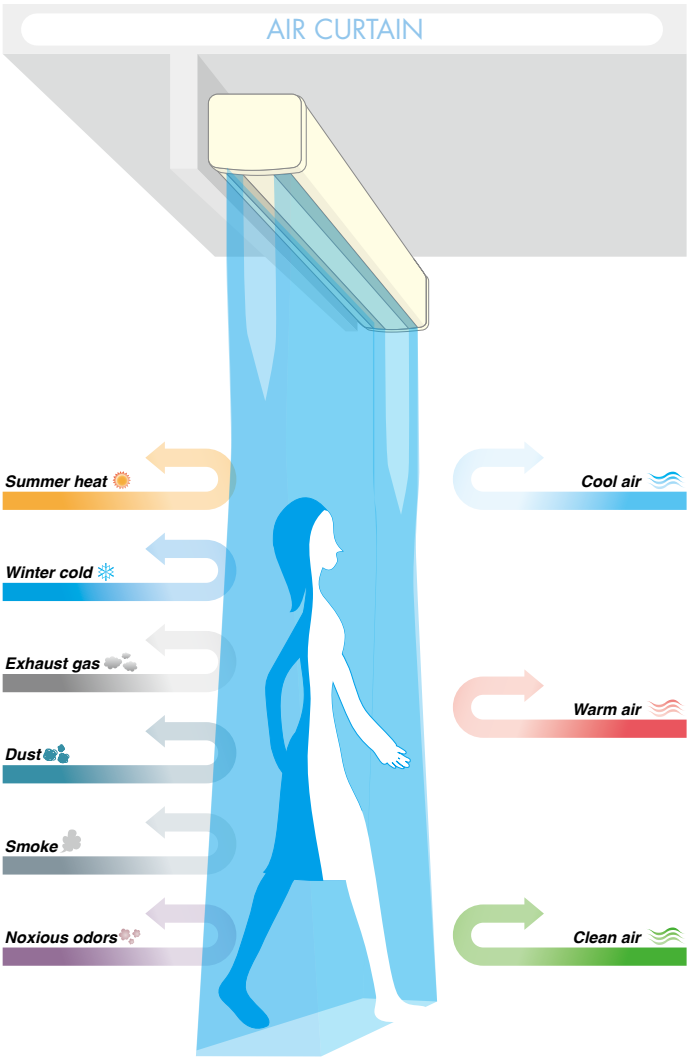
By adjusting the installation angle of the main unit, the airflow angle can be altered both internally and externally.



Air Velocity Distribution (m/s)



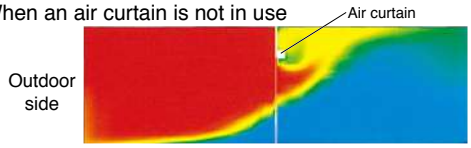
*The figure in ☐ indicates an average velocity (m/s) measured at the given distance.
*The figure in parentheses indicates the maximum velocity (m/s) measured in each area of one(1) meter.
*The velocities in a free space, free from an effect of differences between outdoors and indoors in pressure, temperature, or ambient wind, are measured and indicated.



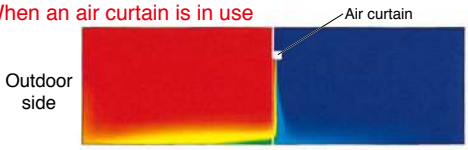
Temperature Insulation

Temperature Insulation Effectiveness 29°C 35°C

When an air curtain is not in use

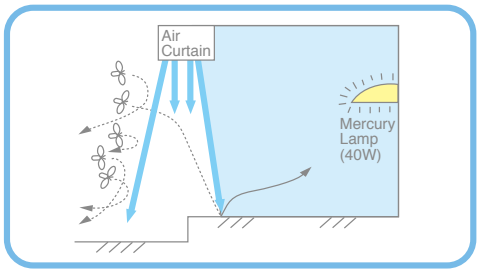


When an air curtain is in use



Our experiments have proved that the Air Curtain has effect on blocking 70-90% of outdoor heat or cold air when glass plates assumed to block 100% of it. (The effect may vary on the difference between indoor and outdoor temperatures, existence of outdoor wind, or expected blocking height.)

Insect*1 Shut-Out Test



This night time test ascertaines the effectiveness of Mitsubishi air curtains in shutting out insects. A 40W mercury lamp is placed inside an air curtain ejects from a 4cm-wide vent at a velocity of 8m/sec. The insect shut-out rate is 70-80%.

*1: Insects such as flies which have high flying power may ingress into the room from the vicinity of the floor face where wind velocity is comparatively low.

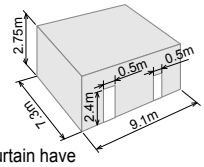
Economic Benefits

Not only does the installation of an air curtain help to maintain a constant comfortable indoor temperature, it saves energy too.
Install an automatic door to achieve even more economical operation and a more pleasant indoor environment.

<Assumptions for economic benefits calculations>

1.Environmental factors
(1)Floor space 66.4m²
(2)Temperature and humidity

(Assumptions)
This shop is housed in a two-story building. It is surrounded by other buildings on three sides: the back, the left and the right hand sides.



2.Both the air conditioner and the air curtain have the specifications and characteristics of 50Hz.

		Cooling mode	Heating mode
Temperature	Indoor	28°C	18°C
	Outdoor	32°C	0°C
Humidity	Indoor	70%	–
	Outdoor	60%	–

Cooling mode

Economic benefits of installing an air curtain. (Savings are calculated using an appropriate cooling load factor to keep room temperature constant at 28°C in a room measuring 66.4m² in area.)

Cooling load and air curtain-shut-out effect (kW)		Cooling load
Open plan premises The doors are kept open and an air curtain is not used	Energy loss due to other causes 8.5 / 20.5 / Energy loss from the door area	29 kW
Premises with an air curtain installed Premises installed with either an air curtain or an automatic door	8.5 / 4.1 / Energy saved 16.4	12.6 kW
Premises installed with both an air curtain and an automatic door	8.5 / 1 / Energy saved 19.5	9.5 kW

Heating mode

Economic benefits of installing an air curtain. (Savings are calculated using an appropriate heating load factor required to keep room temperature constant at 18°C for a room measuring 66.4m² in area.)

Heating load and air curtain shut-out effect (kW)		Heating load
Open plan premises The doors are kept open and an air curtain is not used	Energy loss due to other causes 8.7 / 37.8 / Energy loss from the door area	46.5 kW
Premises with an air curtain installed Premises installed with either an air curtain or an automatic door	8.7 / 11.3 / Energy saved 26.5	20 kW
Premises installed with both an air curtain and an automatic door	2.8 / 8.7 / Energy saved 35	11.5 kW

GK Standard Type

*Operating conditions: The temperatures of both ambient and transfer air are -10°C to +45°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, and damage.

Applicable for

Buildings | Stores | Factories | Warehouses

■ **Dimensions** Unit : mm

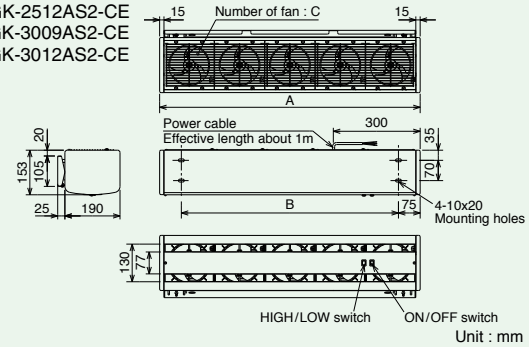
Model	A	B	C	D
GK-2509YS2-CE	900	750	5	-
GK-2512AS2-CE	1194	1044	6	-
GK-3009AS2-CE	900	750	5	-
GK-3012AS2-CE	1194	1044	6	-
GK-3509CS	910	610	5	210
GK-3512DS	1187	887	6	487

■ **Specifications**

Model	Power Supply	Fan Speed	Airflow Rate [m³/ h] (50/60Hz)	Current [A] (50/60Hz)	Power Consumption [W] (50/60Hz)	Air Velocity Max. [m/ sec] (50/60Hz)	Noise [dB] (50/60Hz)	Weight [kg]
NEW GK-2509YS2-CE	Single-phase, 50/60Hz 220-240/220V	High	1260-1340/1220	0.25-0.26/0.31	54-61/69	9.5/9.5	44.5-46/44	10.5
		Low	910-1100/820	0.22-0.24/0.24	48-57/53	7/7	38-41/35	
NEW GK-2512AS2-CE		High	1550-1620/1560	0.30-0.32/0.40	67-77/89	9.5/9.5	45-46/46	13.3
		Low	1160-1370/1000	0.25-0.28/0.29	55-66/64	7/7	37.5-42/36	
NEW GK-3009AS2-CE		High	1450-1470/1640	0.41-0.49/0.47	80-96/102	12/12	47-47.5/50	11
		Low	1200-1250/1060	0.34-0.35/0.36	71-80/77	8/8	43.5-45.5/40	
NEW GK-3012AS2-CE		High	1740-1760/1950	0.45-0.53/0.60	96-114/125	12/12	47.5-48.5/51	14
		Low	1460-1600/1220	0.38-0.40/0.43	84-96/95	8/8	46-47/42	
GK-3509CS-E2	Single-phase, 50Hz 220-240V	High	2100	0.87-0.94	191-223	13.5	58-58	22
		Low	1860	0.74-0.75	155-170	11	55.5-56	
GK-3512DS-E2		High	2640	1.05-1.13	227-267	13.5	58-58.5	28.5
		Low	2310	0.89-0.90	187-206	11	55.5-56.5	

■ **Dimensions**
GK-2509YS2-CE
GK-2512AS2-CE
GK-3009AS2-CE
GK-3012AS2-CE

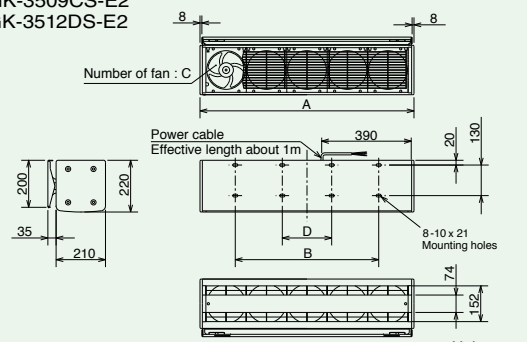
*The appearance may slightly differ depending on the model.



Unit : mm

■ **Dimensions**
GK-3509CS-E2
GK-3512DS-E2

*The appearance may slightly differ depending on the model.



Unit : mm

The printed color of the products are slightly different from those of the actual products. GK3509/3512 does not have switch.

GK High-Power Type

*Operating conditions: The temperatures of both ambient and transfer air are -10°C to +45°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, and damage.

Applicable for

Buildings | Stores | Factories | Warehouses

■ **Dimensions** Unit : mm

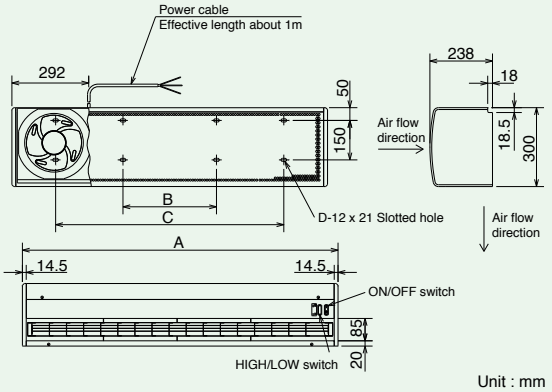
Model	A	B	C	D
GK-3506SA	600	-	287.5	4
GK-3509SA	900	76	588	8
GK-3512SA	1180	355.5	867.5	8

■ **Specifications**

Model	Power Supply	Fan Speed	Airflow Rate [m³/ h] (50Hz)	Current [A] (50Hz)	Power Consumption [W] (50Hz)	Air Velocity Max. [m/ sec] (50Hz)	Noise [dB] (50Hz)	Weight [kg]
GK-3506SA	Single-phase, 50Hz 220-240V	High	1440-1560	0.75-0.75	165-175	16-17.5	64.5-66.5	15.5
		Low	1190-1350	0.75-0.75	165-180	12-14	61-64	
GK-3509SA		High	2160-2340	1.1-1.1	250-265	16-17.5	66-68.5	20
		Low	1790-2030	1.1-1.1	250-270	12-14	63-66	
GK-3512SA		High	2880-3120	1.5-1.5	335-355	16-17.5	67.5-70	25
		Low	2380-2700	1.5-1.5	335-360	12-14	64.5-67.5	

■ **Dimensions**
GK-3506SA
GK-3509SA
GK-3512SA

*The appearance may slightly differ depending on the model.



Unit : mm

The printed color of the products are slightly different from those of the actual products.

MK High-Power Type

*Operating conditions: The temperatures of both ambient and transfer air are -10°C to +45°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, and damage.

Applicable for

Buildings | Stores | Factories | Warehouses

■ **Dimensions** Unit : mm

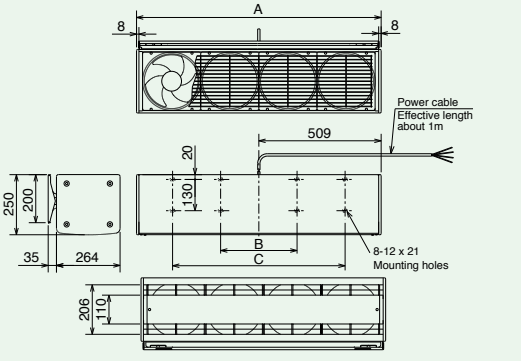
Model	A	B	C
MK-5010T-E	1018	318	718
MK-5012T-E	1260	560	960

■ **Specifications**

Model	Power Supply	Fan Speed	Airflow Rate [m³/ h] (50/60Hz)	Current [A] (50/60Hz)	Power Consumption [W] (50/60Hz)	Air Velocity Max. [m/ sec] (50/60Hz)	Noise [dB] (50/60Hz)	Weight [kg]
MK-5010T-E1	Three-phase, 50/60Hz 380-415/380V	50	3950	0.64-0.67	336-368	16	62	25.5
		60	4250	0.74	432	17	64	
MK-5012T-E1		50	5000	0.80-0.84	420-460	16	63.5	32
		60	5400	0.93	540	17	63.5	

■ **Dimensions**
MK-5010T-E1
MK-5012T-E1

*The appearance may slightly differ depending on the model.



Unit : mm

The printed color of the products are slightly different from those of the actual products.
Due to continuing improvement, above specifications may be subject to change without notice.

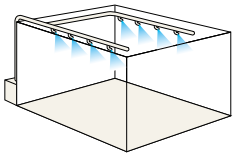
Air Conducting Fan

Features of the Mitsubishi Electric Air Conducting Fan

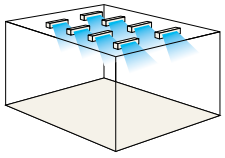
Low Initial Costs

The Mitsubishi Electric Air Conducting Fan eliminates the need for ducts, contributing to lower initial costs.

Duct system :
More equipment and Higher installation cost



Ductless system :
Less equipment and Lower installation cost



Simple Installation

Air Conducting Fan can be easily installed by simply mounting it to suspension bolts on the ceiling.
The angle of the air vent is adjustable at six levels.

Low Power Consumption

With the compact and highly-efficient motor, and also the axial fan (quiet propeller design) Air Conducting Fan saves a great deal of energy.

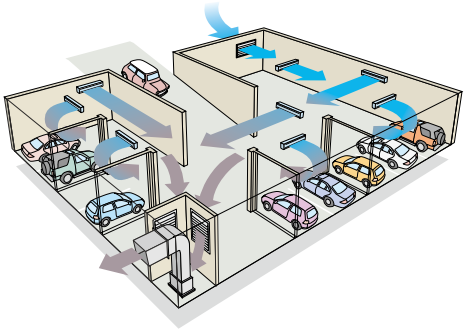
Quiet and Compact

The compact axial fan (quiet propeller design) reduces noise levels and yet still makes it possible to achieve a large airflow. The slim and lightweight design offers greater flexibility in installation design.

Installation examples for large spaces

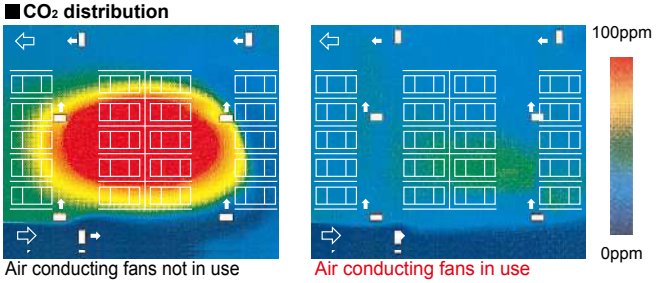
Mitsubishi Electric Air Conducting Fans are used as supporting equipment for ventilators and air-conditioners in moving exhaust gas in car parks and improving the efficiency of ventilation or air-conditioning in factories and warehouses.

Car Parks : Removing exhaust gas



Air Conducting Fans are particularly useful for moving and expelling stagnant, dirty exhaust gas and hot air that stagnates in the midsections of buildings with complicated floor plans.

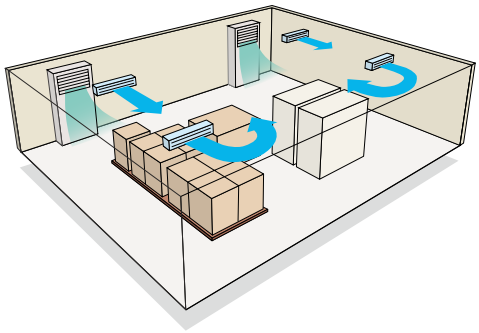
■CO_2 distribution



Air conducting fans not in use　　Air conducting fans in use

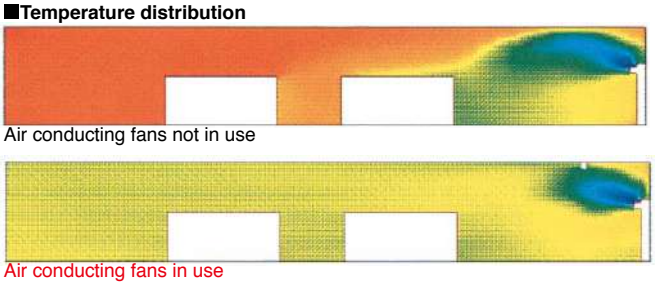
The airflow created by Air Conducting Fans allows fresh air to permeate all corners of a car park while at the same time reliably directing the vehicle exhaust gas toward the exhaust fans.

Warehouses and factories : Circulating Cool air



Since Air Conducting Fans help circulate air conditioned air, they improve the working environments by reducing temperature variations throughout large indoor spaces. They enhance effectiveness of cooling over a wider area, and the airflow they generate creates a refreshing breeze.

■Temperature distribution



Air conducting fans not in use
Air conducting fans in use

Using Air Conducting Fans help the air-conditioned air to reach all corners, improving comfort levels throughout the area.

AH-1006S-E
AH-1509S-E
AH-2009S-E
AH-3009S-E

*Operating conditions: Ambient temperature is -10°C to +45°C, and a relative humidity of 90% or less at normal temperature. Use outside of this range may result in burning, deform, irregular rotation, or damage.
*Do not install the unit in a place where oily smoke or dusts are constantly generated as well as a place where the unit may be exposed to corrosive gas or may be damaged by seawater.
*Do not install the unit within 30cm of each side of sprinklers.
*In case there are fire alarms, install the unit more than 1.5m away from the sensors to the nozzles of the unit.

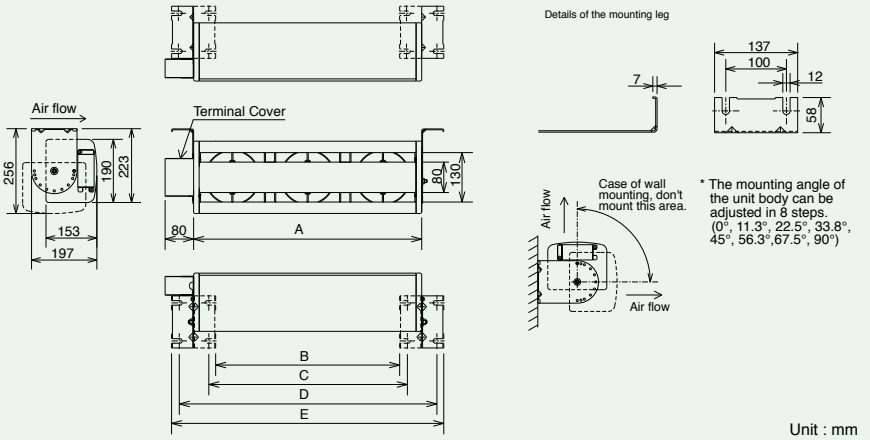
Applicable for

Car Parks | Factories | Warehouses | Gymnasiums | Halls | Stores | office

Dimensions

*The appearance may slightly differ depending on the model.

AH-1006S-E AH-1509S-E AH-2009S-E

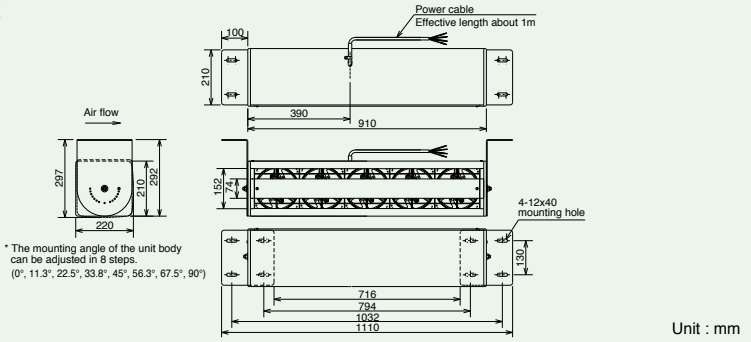


Unit : mm

Dimensions

*The appearance may slightly differ depending on the model.

AH-3009S-E



Unit : mm

Dimensions

Unit : mm

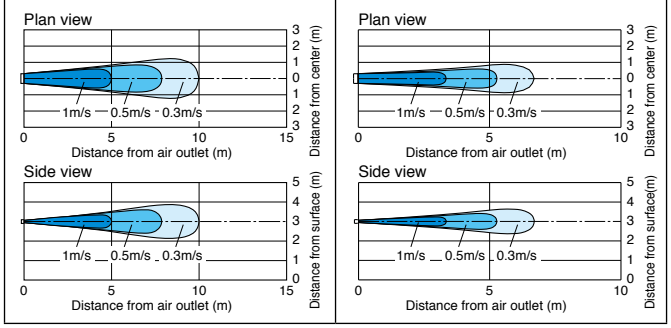
Model	A	B	C	D	E
AH-1006S-E	600	489	525	680	716
AH-1509S-E	900	789	825	980	1016
AH-2009S-E	900	789	825	980	1016

Specifications

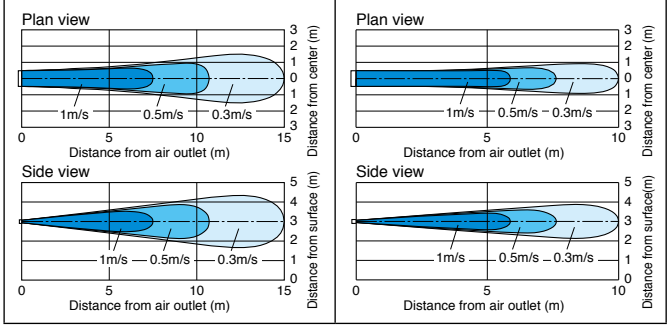
Model	Power Supply	Fan Speed	Power Consumption [W]	Current [A]	Airflow Rate [m³/ h]	Air Velocity [m/sec]	Noise [dB]	Weight [kg]
AH-1006S-E	Single-phase 50/60Hz 220-240/220V	High	30-34 / 35	0.14-0.15 / 0.17	700-750 / 700	6.5-6.9 / 6.5	42-44 / 43	7
		Low	28-32 / 31	0.13-0.13 / 0.15	570-620 / 540	5.3-5.7 / 5.0	39-40 / 39	
AH-1509S-E		High	55-62 / 64	0.26-0.26 / 0.3	1180-1270 / 1180	7.3-7.8 / 7.3	43.5-45 / 44	10.5
		Low	51.5-59 / 56	0.24-0.25 / 0.26	940-1040 / 870	5.8-6.4 / 5.4	39-41.5 / 36	
AH-2009S-E		High	90-105 / 102	0.43-0.47 / 0.47	1350-1400 / 1450	8.3-8.6 / 9.0	46.5-47.5 / 50	11
		Low	77-87 / 85	0.36-0.37 / 0.39	1130-1200 / 1060	7.0-7.4 / 6.5	44-46 / 43	
AH-3009S-E	Single-phase 50Hz 220-240V	High	191-223	0.87-0.94	2100	8.2	58-58	20.5
		Low	150-165	0.74-0.75	1860	7.3	55.5-56	

Air Velocity Distribution

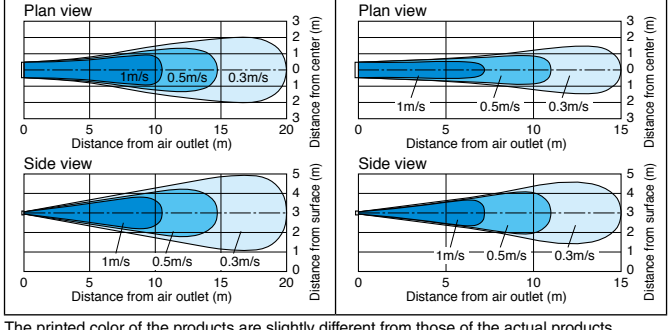
AH-1006S-E



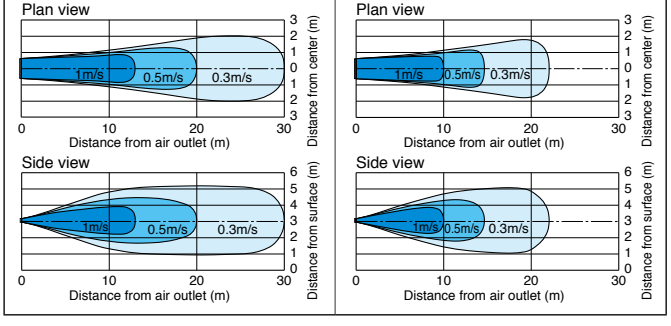
AH-1509S-E



AH-2009S-E



AH-3009S-E



The printed color of the products are slightly different from those of the actual products.
Due to continuing improvement, above specifications may be subject to change without notice.

Air Swing Fan

Ceiling concealed type

Provides a cool breeze in a wide area with swing operation

Creates airflow as long as 9m

* With AS-908CSA-HK

Connectable with an air conditioner duct

* Only with AS-908CSA-HK

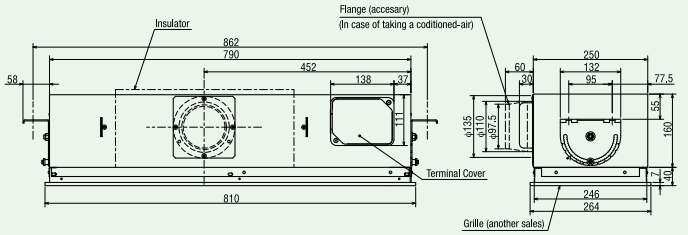
AS-908CSA-HK

*Operating conditions: Temperatures of both ambient air around the main unit and transfer air are 0˚C ~ +45˚C and 90% RH at the room temperature. Beyond this range, it could result in burning, deform, improper revolution or breakage.
*Air temperature to handle ducts is +15˚C ~ +55˚C.
*When ducts are used, if cool air is introduced through the ducts while operation is stopped, dew will be formed. It is recommended to install, for example, electric dampers on the air conditioning air intake ducts, which shut down cool air simultaneously with the stop of operation.
*Make sure to provide heat-insulating measures on the connection flanges and ducts for prevention of dewing.
*Control switch is not attached.

Applicable for

Halls | office | Stores | Buildings

■ **Dimensions**



* The grille is an optional item.

Unit : mm

■ **Specifications**

Model	Power Supply	Fan Speed	Power Consumption [W]	Current [A]	Airflow Rate [m³/h]	Noise [dB]	Weight[kg]
AS-908CSA-HK	Single phase 220V 50Hz	High	42	0.2	390	41	9
		Low	32	0.15	340	36.5	

The printed color of the products are slightly different from those of the actual products.

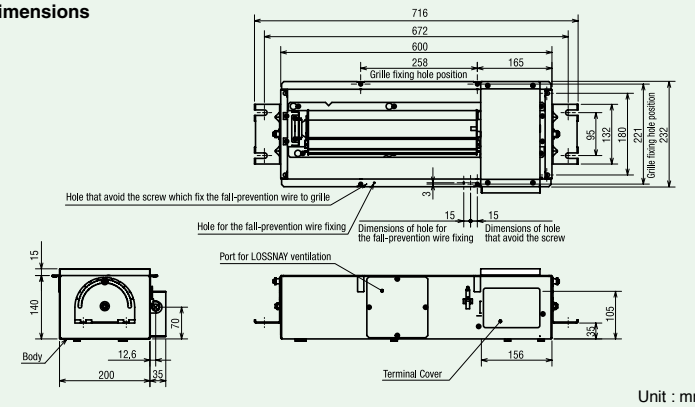
AS-606SA-HK

*Operating conditions: Temperatures of both ambient air around the main unit and transfer air are 0˚C ~ +45˚C and 90% RH at the room temperature. Beyond this range, it could result in burning, deform, improper revolution or breakage.
*Control switch is not attached.

Applicable for

Halls | office | Stores | Buildings

■ **Dimensions**



Unit : mm

■ **Specifications**

Model	Power Supply	Fan Speed	Power Consumption [W]	Current [A]	Airflow Rate [m³/h]	Noise [dB]	Staring Current [A]	Weight[kg]
AS-606SA-HK	Single phase 220V 50Hz	High	23	0.1	210	39	0.15	7
		Low	20	0.1	175	33		

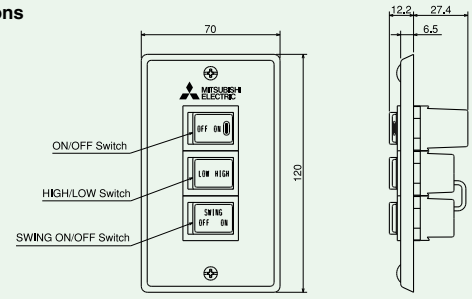
The printed color of the products are slightly different from those of the actual products.

FS-02ASW1-HK

• Rating 240V 4A

*Fan speed is adjustable at 2 notches for high and low.
*Swing can be set at ON or OFF.
*Blowout angle can be set at any position. (Stop the swing after adjusting at the most desirable direction.)
*Plural number of units can be operated.
*When operating more than one unit, the swing cannot be stopped at an optional position on individual unit. It is necessary to provide a control switch on each unit.

■ **Dimensions**



Unit : mm

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Due to continuing improvement, above specifications may be subject to change without notice.

MITSUBISHI ELECTRIC CORPORATION

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Y17-001 Jun.2017(MEE)