KDK Company, Division of PES
4017, Takaki-cho, Kasugsi, Aichi, Japan
http://kdk.jp

CATALOG NO: K-AMCA012
June 2025

KDK
SINCE 1909
JAPAN

KDK Ventilation Fans & Air Moving Equipment

Ventilation Fans & Air Moving Equipment

Refined Air Quality Solutions

Index

About KDK

KDK was founded in 1909, with more than a century old history. By making a commitment to our business philosophy, we strive toward contributing to society through our air and wind technologies.

With the aims of offering the premium product and solution through good distributions and services, we will continue to maintain a leading position in the industry by utilizing advantages of our core competencies. With innovative technology and value-added approach, we are committed to make a reliable and quality product with excellent design and high safety standard in meeting the expectations of our customers all over the world.

Milestone

1909
- KDK (Kawakita Denki Kigyousha) was founded

1913
- Mass production of Typhoon Type Electric Fan

1918
- Registration of KDK Trademark
- Starting of export business

1919
- Kawakita Denki Co. was established in Shanghai

1933
- Chuou Denki Co., Ltd. was established in Osaka

1956
- Osaka Denki Seiki Co., Ltd was established

1960
- Registration of new KDK Trademark

1962
- Renamed the company to Matsushita Seiko Co., Ltd

1981
- Set up International Fan Manufacturing Co., Ltd [IFCO] in Hong Kong

1989
- IFCO was renamed as Matsushita Seiko Hong Kong International Manufacturing co., Ltd [HIMCO]

1993
- Set up Shunde Matsushita Seiko Co., Ltd [SHUMCO] in China. It was renamed as Guangdong Matsushita Seiko Co., Ltd. [GDMESC] in 2003 and further changed to PESGD in 2006

1995
- Established Beijing Great Wall Matsushita Seiko Air Conditioning Equipment Co., Ltd. [BGMAC] which was renamed as PESGD-BJ in 2005

1999
- Established Oversea Marketing Headquarter in HIMCO

2003
- Matsushita Seiko Co. Ltd. was renamed as Matsushita Ecology Systems Co., Ltd. and further changed to KDK Company, Division of PES in 2008

2009
- The 100th Anniversary of KDK

2016
- Further expanded a brand-new product line of water pump for better living environment

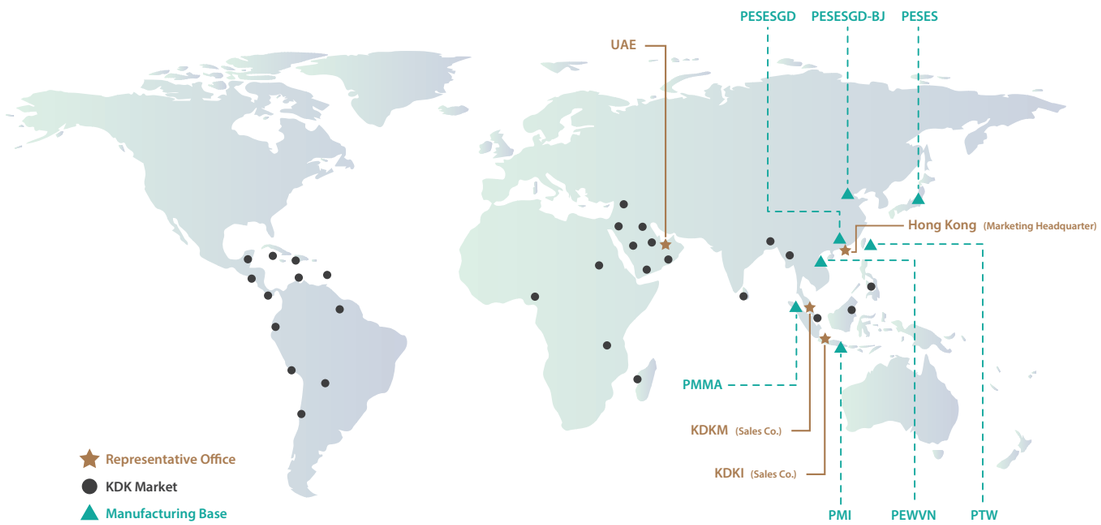
2019
- The 110th Anniversary of KDK

2021
- PEWVN (Panasonic Electric Works Vietnam Co. Ltd.) was set up in Vietnam

2024
- The 115th Anniversary of KDK

Market Map

For a century, KDK has established its business in various countries, building its reputation and brand value in the minds of its customers. Moving forward, in addition to continuous development in existing markets, we will explore new business in potential markets throughout other fast-growing regions.



Distributor List

Country	Distributor
Iraq	Al Khait Alabydh Co
Jordan	Mohammad M Juma & Sons Co.
Kuwait	Salem M. Al-Nisf Electrical Co. W.L.L.
Oman	Mohsin Haider Darwish L.L.C.
Qatar	United Cooperation General Trading L.L.C.
Saudi Arabia	Abdulaziz & Sulaiman Saleh Al-Hakbany Sons Trading Co Haitham Est. for Trading
United Arab Emirates	Electra Abu Dhabi L.L.C. Electra Dubai
Yemen	Al Haj Mohamed Ali Sowaid & Sons
Nigeria	Polysonic Nigeria Ltd.
Sudan	Central Advanced Digitech Co.
Tanzania	Multi Cable Ltd.

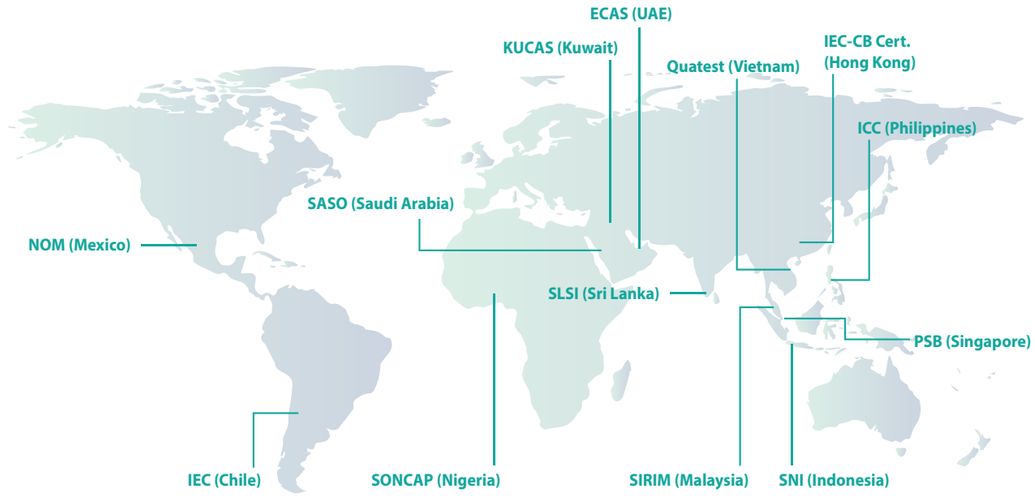
Product Certification

To ensure safety, KDK products are designed and manufactured according to either the standards of JIS (Japan Industrial Standard) or IEC (International Electrotechnical Commission). Test certificates are awarded by recognized test laboratories that further prove the reliability of our products.

CB Test Certificate

CB Test Certificate is issued to products in compliance with the applicable requirement of IEC standard under CB Scheme (Certification Bodies' Scheme) set by IEC .

Beside the international standard of JIS and IEC, different safety certifications are also acquired to fulfill the requirement in different countries.



Certification Acquired

Furthermore, the performance of Panasonic products are qualified by external authority.

AMCA Mark, USA

AMCA (Air Movement And Control Association International. Inc.) of The United States for ventilation products

2024 Product Highlight

KDK Ventilation Fans

Empowering Every Moment Around the Clock.
Bringing 24-Hour Comfort, 365 Days of Fresh Air Excellence.

- Reduce CO_2 Emission
- Alleviate Global Warming
- Reduce Electric Bill Expenditure

Constant Performance by Intelligent Technology

Fan is able to perform at constant airflow regardless of elbows in pipe.

Fan speed automatically increased to ensure the desired airflow.

Fan is able to perform as rated.

- DC Motor
- Energy Saving
- Fresh Air

24JRB / 24JAB

Motor Type	DC Motor Model	AC Motor Model
Model	24JRB	24CUH
Static Pressure [Pa]	0	0
Air Volume [m^3/h]	160	140
Power Consumption at 0 Pa [W]	7	13.5
Energy Efficiency [m^3/h / Watt]	22.9	10.3

Power consumption comparison between DC motor series and non-DC motor series
Note: Values measured at 220V 60Hz.

High Air Volume Ceiling Mount Type Ventilation Fan

The Quiet Solution for Fresh Air

24CXH

- Quiet Operation
- Effective Air Exhaust

Powerful Exhaustion

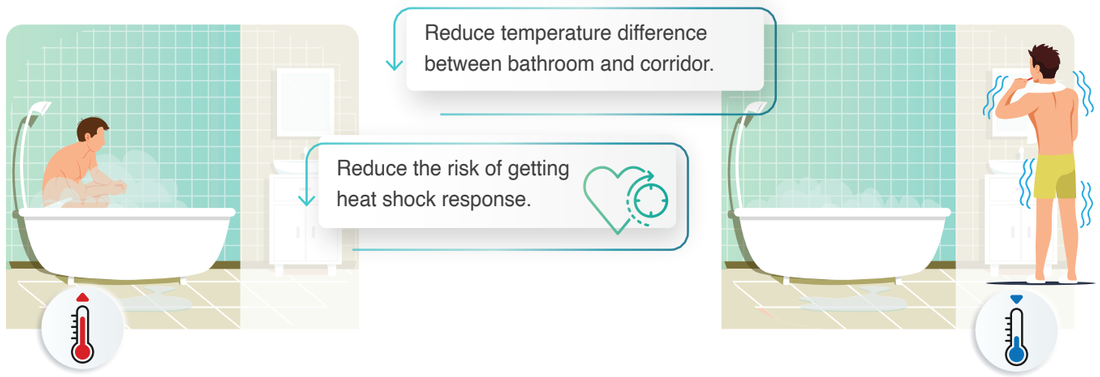
Air volume up to
255 CMH
*Values measured at 220V 60Hz

KDK Thermo Ventilator

30BUC

Embrace warmth, shielded from cold shocks, for cozy comfort every chilly day.

- Ventilation
- Circulation
- Heating
- Clothes Drying



IAQ

INDOOR AIR QUALITY

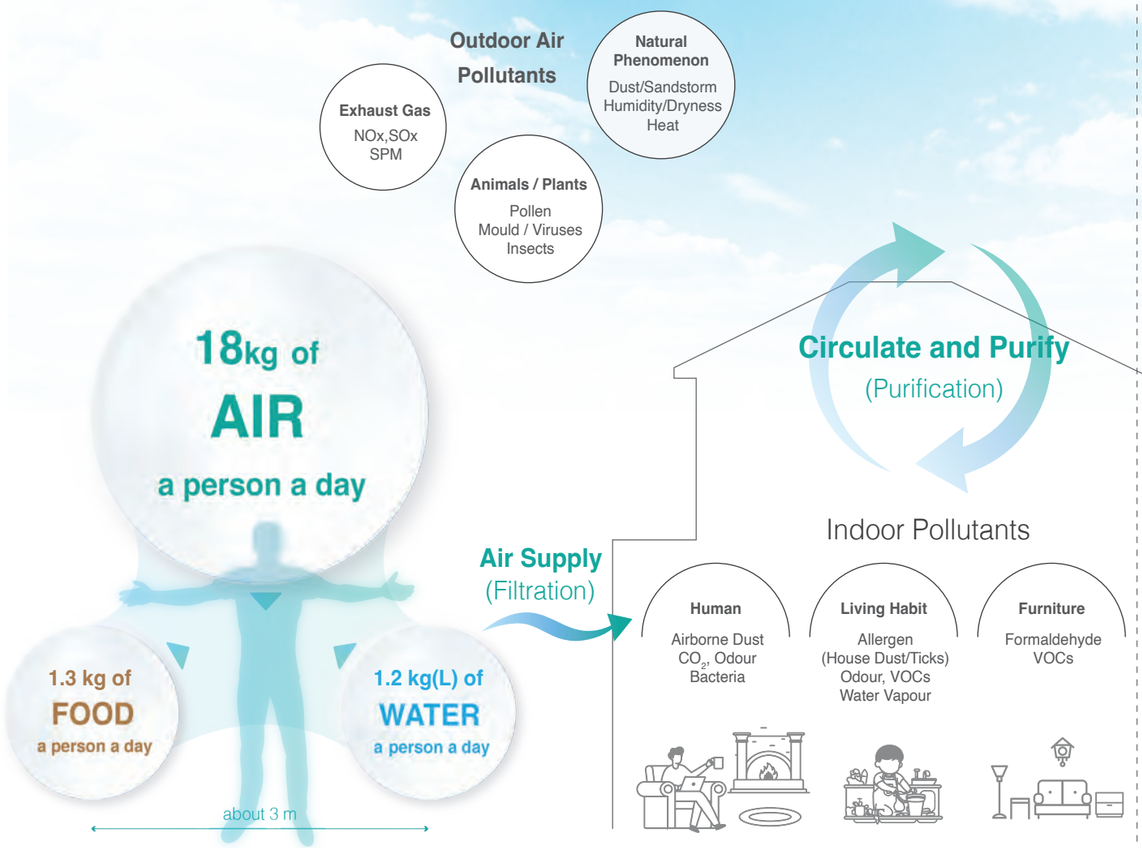
Air Supply
Air Exhaust
Air Circulation

3 core KDK solutions to enhance indoor air quality

The Importance of Indoor Air Quality

We care about the food we eat and
the water that we drink, but what about AIR?

It is important to take care of the ONE thing we consume the most…



*1 “Air and Humans – From a Physiological Viewpoint” (1999) by UCHIYAMA Iwao (National Institute of Public Health of Japan)
*2 “Heat Stroke Environmental Health Manual (2009)” from the Ministry of the Environment, Government of Japan
*3 “Basic Data Sheet of Agriculture, Forestry, and Fisheries, Statistics Regarding The Food Self-Sufficiency Rate” from Ministry of Agriculture, Forestry and Fisheries of Japan

Ventilation

Air Supply

Prevent entrance of unwanted substances

- Energy Recovery Ventilator
- Ventilation Fan (reversible type)

Air Exhaust

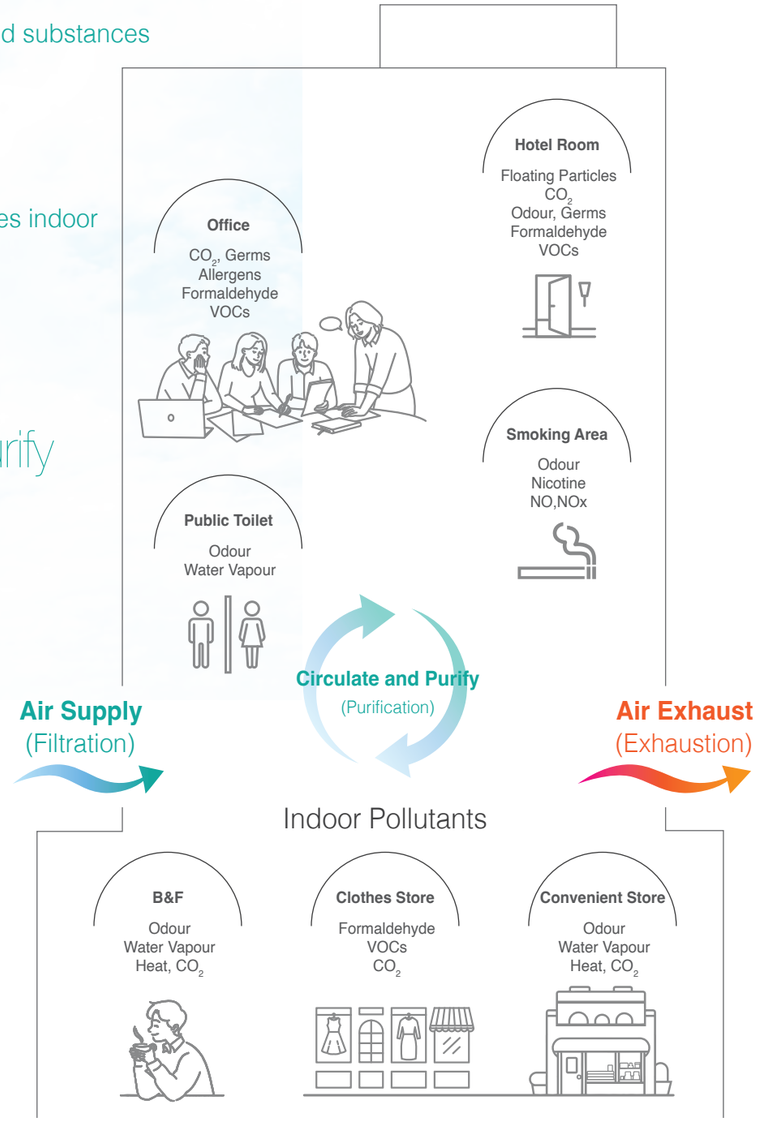
Reduce unwanted substances indoor

- Ventilation Fan
- Range hood
- Thermo Ventilator
- Energy Recovery Ventilator

Circulate and Purify

Ventilate and purify air

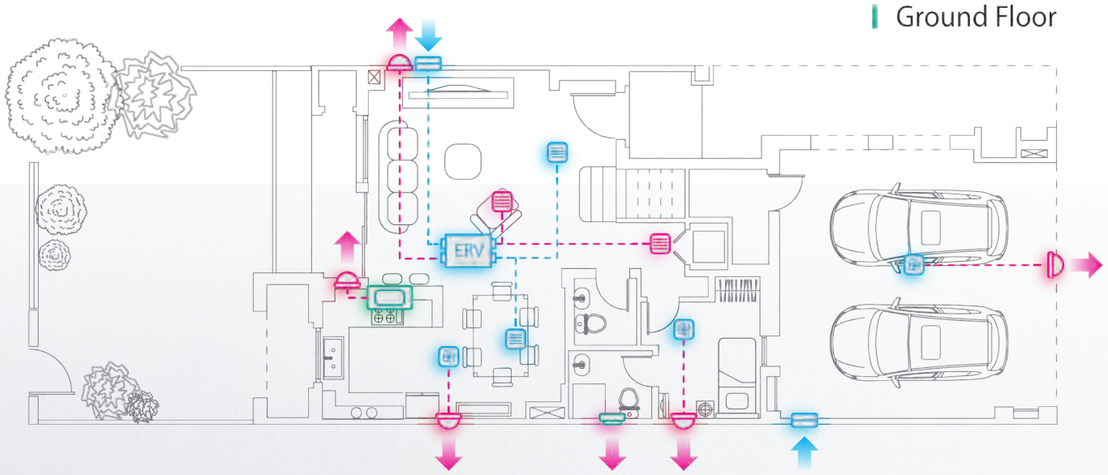
- Ceiling Fan
- Electric Fan



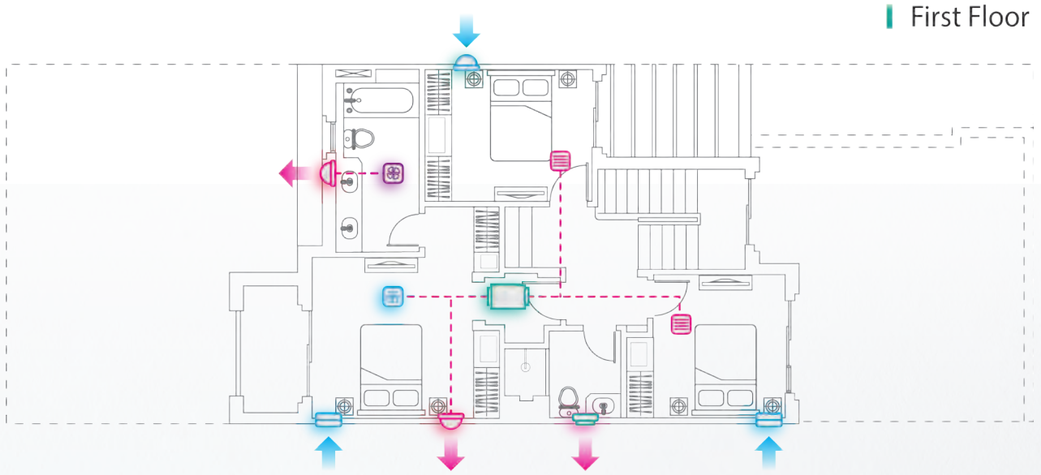
Redefining Your Indoor Environment

Installation Simulation (2-storey villa as example)

Ground Floor



First Floor



- Ceiling Mount Type Ventilation Fan
- Wall Mount Type Ventilation Fan
- Cabinet Fan (In-line Fan)
- Energy Recovery Ventilator (ERV)
- Thermo Ventilator
- Range Hood
- Intake Grille
- Exhaust Grille
- Vent Cap / Pipe Hood
- Intake
- Exhaust

Product Summary

Product	Series		Model	DC Motor	Super Low Noise Level	Fire Resistant	Voltage/ Frequency	Air Volume [CFM]	Consumption [W]	RPM	Page
Ceiling Mount Type Ventilation Fan	DC Motor Series		24JRB	✓	-	-	220V/60Hz	88	10	853	023
							240V/50Hz	88	10	853	
			24JAB	✓	-	-	220V/60Hz	88	10	839	024
							240V/50Hz	88	10	839	
	Super Quiet Series		17CUH	-	✓	-	220V/60Hz	44	10	664	025
							240V/50Hz	51	10	728	
			24CUH	-	✓	-	220V/60Hz	83	13	585	026
							240V/50Hz	89	13	614	
			24CDH	-	✓	-	240V/50Hz	106	17	782	
			24CHH	-	✓	-	220V/60Hz	109	22	791	
							240V/50Hz	117	21	861	
			24CXH	-	✓	-	220V/60Hz	150	29	950	027
							240V/50Hz	147	29	940	
			27CHH	-	✓	-	220V/60Hz	182	33	570	028
							240V/50Hz	198	37	609	
			32CDH	-	✓	-	220V/60Hz	226	48	580	029
							240V/50Hz	257	56	675	
	Standard Series		38CDG/	-	-	-	220V/60Hz	344	98	626	030
							240V/50Hz	387		737	
			38CDG 05	-	-	-	240V/50Hz	387	118	737	
			38CHG	-	-	-	220V/50H (Hi)	471	122	790	031
							220V/50H (Lo)	309	89	540	
							220V/60Hz (Hi)	465	138	760	
							220V/60Hz (Lo)	294	90	509	
							230V/50Hz (Hi)	471	122	775	
							230V/50Hz (Lo)	277	84	485	
							240V/50Hz (Hi)	491	132	807	
							240V/50Hz (Lo)	288	90	50	
	Metal Series		24CMUA	-	-	✓	220V/60Hz	55	13	495	032
							240V/50Hz	55	14	562	
			24CMHA	-	-	✓	220V/60Hz	94	25	681	
							240V/50Hz	108	27	753	
			27CMHA	-	-	✓	220V/60Hz	208	46	615	033
							240V/50Hz	240	46	669	

Product	Series		Model	Silent Stream Fan	Auto Shutter	Louver	Voltage/ Frequency	Air Volume [CFM]	Consumption [W]	RPM	Page
Wall Mount Type Ventilation Fan	Metallic Series		20ASB	-	✓	-	220V/60Hz	330	25.5	1,358	037
							240V/50Hz	296	22.4	1,252	
			20ASB 05	-	✓	-	240V/50Hz	296	22.4	1,252	
			25ASB	-	✓	-	220V/60Hz	522	35.5	1,277	
							240V/50Hz	486	35.1	1,194	
			25ASB 05	-	✓	-	240V/50Hz	486	35.1	1,194	
			30ASB	-	✓	-	220V/60Hz	637	39.8	1,088	
							240V/50Hz	706	38.1	1,175	
			30ASB 05	-	✓	-	240V/50Hz	706	38.1	1,175	
	Automatic Shutter Series		15AAQA	-	✓	-	220V/60Hz	157	20.6	1,533	038
							240V/50Hz	154	20.1	1,453	
			20AUA	✓	✓	-	220V/60Hz	370	23.5	1,430	039
							240V/50Hz	339	23	1,303	
			25AUA	✓	✓	-	220V/60Hz	542	33.2	1,387	
							240V/50Hz	542	31	1,262	
			30AUA	✓	✓	-	220V/60Hz	655	35.3	938	
							240V/50Hz	696	34.8	964	
			20AUH	-	✓	-	220V/60Hz	355	32.4	1,410	040
			25AUH	-	✓	-	220V/60Hz	514	37.8	1,200	
			30AUH 11	-	✓	-	220V/60Hz	572	37.0	866	
			20ALA	✓	✓	✓	220V/60Hz	334	23.5	1,398	041
							240V/50Hz	301	23	1,278	
			25ALA	✓	✓	✓	220V/60Hz	471	33.2	1,224	
							240V/50Hz	482	32.1	1,217	
			30ALA	✓	✓	✓	220V/60Hz	510	35.3	876	
							240V/50Hz	572	35.3	896	

Product Summary

Product	Series		Model	Silent Stream Fan	Auto Shutter	Louver	Voltage/ Frequency	Air Volume [CFM]	Consumption [W]	Page
Wall Mount Type Ventilation Fan	Plastic Series		10BAQ1	-	-	✓	220V/50Hz	45	15	043
							220V/60Hz	43	17	
							230V/50Hz	47	16	
							240V/50Hz	50	17.5	
	Bathroom Series		10EGKB	-	-	✓	220V/50Hz	45	4.3	045
							230V/50Hz	45	4.6	
							240V/50Hz	45	5.0	
			15EGKB	-	-	✓	220V/50Hz	95	5.7	
							230V/50Hz	97	6.1	
							240V/50Hz	97	6.5	
			10EGSB	-	-	✓	220V/50Hz	45	4.3	046
							220V/60Hz	51	4.7	
							230V/50Hz	45	4.6	
							240V/50Hz	45	5.0	
			15EGSB	-	-	✓	220V/50Hz	91	5.7	
							220V/60Hz	106	6.1	
							230V/50Hz	94	6.1	
							240V/50Hz	97	6.5	

Product	Series		Model	Electrically Operated Shutter	Auto Shutter	Cord-operated Shutter	Voltage/ Frequency	Air Volume [CFM]	Consumption [W]	RPM	Page
Window Mount Type Ventilation Fan	Electric Shutter Series		15WHCT	✓	-	-	220V/60Hz	127	14.6	2,440	050
							240V/50Hz	127	16	2,537	
			20WHCT	✓	-	-	220V/60Hz	250	24.4	1,517	
							240V/50Hz	230	23.4	1,333	
	Automatic Shutter Series		15WAA/ 15WAAMN	-	✓	-	220V/60Hz	124	19.6	2,021	052
							240V/50Hz	127	18.2	2,062	
			20WAA/ 20WAAMN	-	✓	-	220V/60Hz	250	18.4	1,385	
							240V/50Hz	230	18.6	1,375	
	Cord-operated Shutter Series		15WUD/ 15WUDMN	-	-	✓	220V/60Hz	105	9.7	1,425	054
							240V/50Hz	124	10.3	1,722	
			20WUD/ 20WUDMN	-	-	✓	220V/60Hz	188	19.2	980	
							240V/50Hz	221	18.5	1,096	

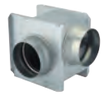
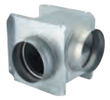
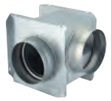
Product Summary

Product	Series		Model	Reversible	Durable Powder Coating	Shutter	Metal Large Blade Assembly	Voltage/ Frequency	Air Volume [CFM]	Consumption [W]	RPM	Page
Industrial Ventilation Fan	Shutter Series		40KAQA	-	✓	✓	✓	220V/ 50Hz	1,105	47	1,230 - 1,370	056
								230V/ 50Hz	1,130	52	1,250 - 1,390	
								240V/ 50Hz	1,155	59	1,270 - 1,410	
								230V/ 60Hz	1,254	67	1,400 - 1,540	
	High Pressure Series		25GSE	✓	✓	Optional	-	220V/ 60Hz	788	61	1,570	057
								240V/ 50Hz	701	48	1,400	
			30GSE	✓	✓	Optional	-	220V/ 60Hz	1,308	129	1,460	
								240V/ 50Hz	1,177	106	1,315	
			35GSE	✓	✓	Optional	-	220V/ 60Hz	1,850	178	1,640	
								240V/ 50Hz	1,615	130	1,435	
			40GSE	✓	✓	Optional	-	220V/ 60Hz	2,677	294	1,550	058
								240V/ 50Hz	2,135	164	1,440	
			45GSC	✓	✓	Optional	-	220V/ 60Hz	3,278	346	1,563	059
								240V/ 50Hz	2,854	277	1,430	
			50GSC	✓	✓	Optional	-	220V/ 60Hz	3,884	347	1,080	
								240V/ 50Hz	3,354	293	968	
			60GSC	✓	✓	Optional	-	220V/ 60Hz	5,038	384	1,088	
								240V/ 50Hz	4,402	289	980	
			45GTC	✓	✓	Optional	-	220V/ 50Hz	3,249	220	1,450	060
								220V/ 60Hz	3,779	330	1,690	
			50GTC	✓	✓	Optional	-	220V/ 50Hz	4,097	320	1,400	
								220V/ 60Hz	4,715	475	1,590	
			60GTC	✓	✓	Optional	-	220V/ 50Hz	5,544	310	940	
								220V/ 60Hz	6,427	450	1,070	

Product	Series		Model	Twin Flow Fan	Noise Absorption Material	Single Phase	Three Phase	Voltage/ Frequency	Air Volume [CFM]	Consumption [W]	RPM	Page
Cabinet Fan	Standard Series		12NSB	✓	✓	✓	-	220V/ 60Hz	114	26	1,460	065
								240V/ 50Hz	102	27	1,342	
			15NSB	✓	✓	✓	-	220V/ 60Hz	200	45	1,520	
								240V/ 50Hz	193	47	1,373	
			18NSB	✓	✓	✓	-	220V/ 60Hz	274	80	1,470	066
								240V/ 50Hz	281	84	1,342	
			18NFB	✓	✓	✓	-	220V/ 60Hz	417	128	1,420	
								240V/ 50Hz	429	135	1,327	
			20NSB	✓	✓	✓	-	220V/ 60Hz	469	170	1,380	067
								240V/ 50Hz	517	175	1,328	
			23NLB	✓	✓	✓	-	220V/ 60Hz	655	350	1,400	
								240V/ 50Hz	688	347	1,342	
			25NSB	✓	✓	✓	-	220V/ 60Hz	940	460	1,380	068
								240V/ 50Hz	963	481	1,305	
			25NFB	✓	✓	✓	-	220V/ 60Hz	1,016	680	1,420	
								240V/ 50Hz	1,057	537	1,330	
	Three Phase Series		25SWC	✓	✓	-	✓	380V/ 50Hz	2,354	940	1,375	069
								380V/ 60Hz	2,648	1,450	1,530	
			25SMC	✓	✓	-	✓	380V/ 50Hz	3,060	1,180	1,345	
								380V/ 60Hz	3,237	1,750	1,470	
			28NXC	✓	✓	-	✓	380V/ 50Hz	1,530	600	1,295	070
								380V/ 60Hz	1,560	840	1,380	

Product Summary

Product		Model	External Rotor Motor	Fan Blades	Voltage/ Frequency	Air Volume [CFM]	Consumption [W]	RPM	Page
In-line Centrifugal Fan		10MMA	✓	Plastic	240V/50Hz	150	57	2,606	073
		12MMA	✓	Plastic	240V/50Hz	185	58	2,580	
		15MMA	✓	Plastic	240V/50Hz	388	97	2,495	
		16MMA	✓	Plastic	240V/50Hz	429	128	2,311	
		20MMA	✓	Plastic	240V/50Hz	536	174	2,535	
		25MMA	✓	Plastic	240V/50Hz	550	165	2,643	074
		31MMA	✓	Metal	240V/50Hz	950	238	2,519	075

Product		Model	Single Phase	Adjustable Outlet Direction	Page
Mini Sirocco Fan		10CGB	✓	✓	079
		12CGB	✓	✓	
		14CGB	✓	✓	
		16CGB	✓	✓	
		17CGB	✓	✓	
		19CGB	✓	✓	
		21CGB	✓	✓	

Product		Model	Counter-flow Heat-exchange	Bypass Ventilation	Interlock with Air Conditioning	Voltage/ Frequenc	Direction	RPM	Page
Energy Recovery Ventilator		E25DZUA	✓	✓	✓	220V/60Hz	OA-SA	1,448	091
							RA-EA	1,378	
		E35DZUA	✓	✓	✓	220V/60Hz	OA-SA	1,425	092
							RA-EA	1,402	
		E50DZUA	✓	✓	✓	220V/60Hz	OA-SA	1,501	093
							RA-EA	1,452	

Product		Model	Ventilation	Circulation	Heating	Clothes Drying	Voltage/ Frequency	Air Volume [CMH]	Air Volume [CFM]	Page
Thermo Ventilator		30BUC	✓	✓	✓	✓	220V/60Hz	160	94	097

Product	Twin Motor Series	Model	2-speed Selection	Slim Design	Voltage/ Frequency	Air Volume [CMH]	Air Volume [CFM]	RPM	Page
Range Hood		90HQUA	✓	✓	220V/50Hz (Hi)	785	462	993	101
					220V/50Hz (Lo)	484	285	570	
					220V/60Hz (Hi)	779	459	905	
					220V/60Hz (Lo)	464	273	594	
					240V/50Hz (Hi)	775	456	911	
					240V/50Hz (Lo)	523	308	-	

Product	Standard Series	Model	Quick Response Sensor	Lamp Super alleru-buster Filter	ON/OFF Switch for Heater	Safety Check Indicator	Voltage/ Frequency	Air Velocity [m/s]	Page
Hand Dryer		T09AC	✓	✓	✓	✓	220V/50Hz	90 - 110	105
							220V/60Hz	90 - 110	
							230V/50Hz	90 - 110	
							230V/60Hz	90 - 110	
		T09BC	✓	✓	✓	✓	220V/50Hz	90 - 110	
							220V/60Hz	90 - 110	
							230V/50Hz	90 - 110	
							230V/60Hz	90 - 110	

Product Summary

Product	Type	Series		Model	Cross Flow Fan	Sirocco Fan	Meta Blade Bush	Air Deflection Plate	2-speed Selection	Remote Control	Door Contact Sensor	Push Button Switch	Page
Air Curtains	Cross Flow Type	Remote Control Series		3009GA	✓	-	✓	✓	✓	✓	-	-	109
				4009GA	✓	-	✓	✓	✓	✓	-	-	
				3012GA	✓	-	✓	✓	✓	✓	-	-	
				4012GA	✓	-	✓	✓	✓	✓	-	-	
				3015GA	✓	-	✓	✓	✓	✓	-	-	
				4015GA	✓	-	✓	✓	✓	✓	-	-	
		Sensor Series		3009DA	✓	-	✓	✓	✓	-	✓	-	110
				4009DA	✓	-	✓	✓	✓	-	✓	-	
				3012DA	✓	-	✓	✓	✓	-	✓	-	
				4012DA	✓	-	✓	✓	✓	-	✓	-	
				3015DA	✓	-	✓	✓	✓	-	✓	-	
				4015DA	✓	-	✓	✓	✓	-	✓	-	
		Standard Series		3009UA	✓	-	✓	✓	✓	-	-	✓	111
				4009UA	✓	-	✓	✓	✓	-	-	✓	
				3012UA	✓	-	✓	✓	✓	-	-	✓	
				4012UA	✓	-	✓	✓	✓	-	-	✓	
				3015UA	✓	-	✓	✓	✓	-	-	✓	
				4015UA	✓	-	✓	✓	✓	-	-	✓	
	Sirocco Type	900 Series		08ESK	-	✓	-	✓	✓	-	-	✓	113
				10ESK	-	✓	-	✓	✓	-	-	✓	
				12ESK	-	✓	-	✓	✓	-	-	✓	
				14ESK	-	✓	-	✓	✓	-	-	✓	
		1200 Series		08ELK	-	✓	-	✓	✓	-	-	✓	114
				10ELK	-	✓	-	✓	✓	-	-	✓	
				12ELK	-	✓	-	✓	✓	-	-	✓	
				14ELK	-	✓	-	✓	✓	-	-	✓	

Product	Series		Model	Remote Control	Regulator Control	Pull Switch	3-speed Selection	5-speed Selection	OFF Timer	Metal Blades	360° Oscillation	Page
Celling Fan	Remote Control Seriesa		U56PR	✓	-	-	✓	-	✓	✓	-	117
	Regulator Control Series		T48XC	-	✓	-	-	✓	-	✓	-	118
			T56XC	-	✓	-	-	✓	-	✓	-	
			T48XG	-	✓	-	-	✓	-	✓	-	119
			T56XG	-	✓	-	-	✓	-	✓	-	
			X48XC	-	✓	-	-	✓	-	✓	-	120
			X56XC	-	✓	-	-	✓	-	✓	-	
			X48XG	-	✓	-	-	✓	-	✓	-	121
			X56XG	-	✓	-	-	✓	-	✓	-	
Electric Fan	Orbital Fan		M40R	-	✓	-	-	✓	-	✓	✓	122
	Wall Fan		M30C	-	-	✓	✓	-	-	-	-	123
			M40C	-	-	✓	✓	-	-	✓	-	
			M40M	✓	-	-	✓	-	✓	-	-	124
			YU50X	-	-	✓	✓	-	✓	✓	-	125

Ceiling Mount Type Ventilation Fan

24 Hours Ventilation

Long Life

Highly Efficient

Super Low Noise

Easy Installation

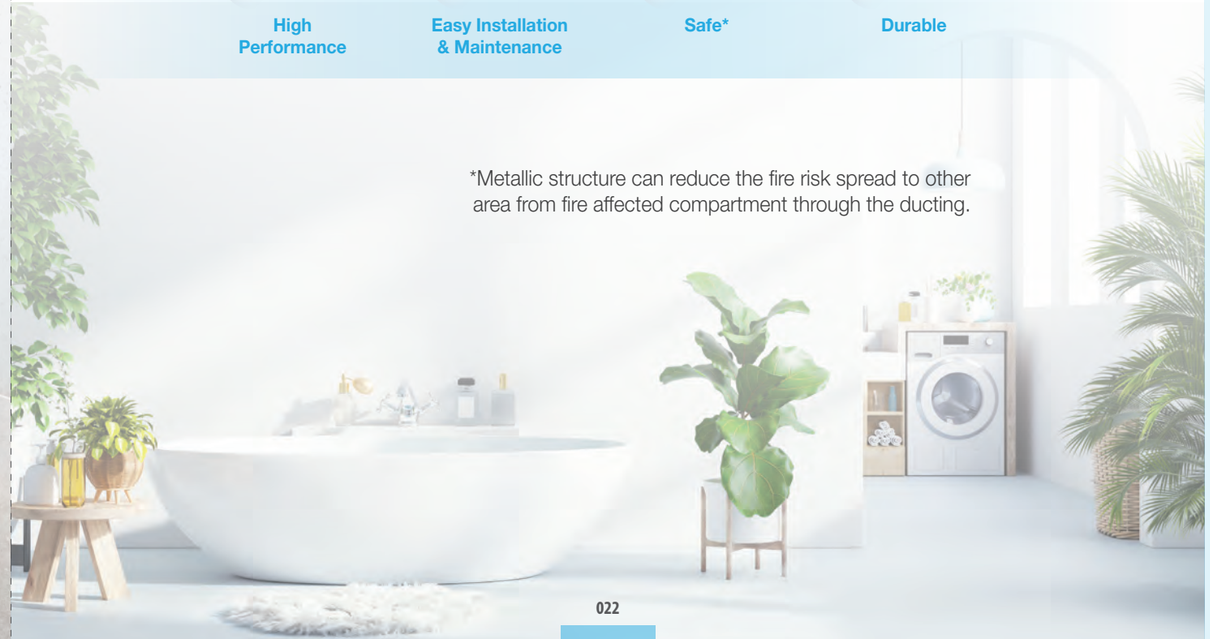
High Performance

Easy Installation & Maintenance

Safe*

Durable

*Metallic structure can reduce the fire risk spread to other area from fire affected compartment through the ducting.



DC Motor Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

24JRB

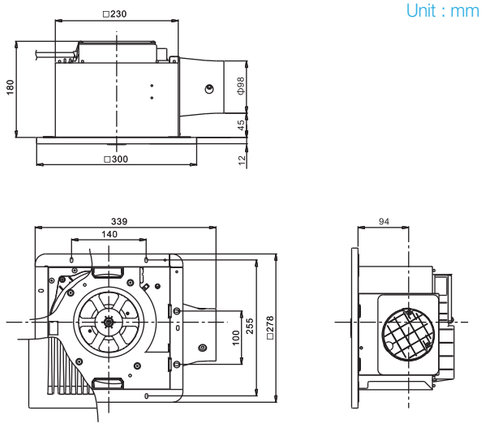
24-Hour Ventilation

Duct Type Ø100mm

- DC (Direct Current) motor
- Auto operation by motion sensor
- Constant airflow
- Automated air volume adjustment
- Delay timer (15 minutes)
- Resonance–Noise–Absorption Structure
- Motor insulation Class E
- IP protection: IPX2

Dimension

Unit : mm



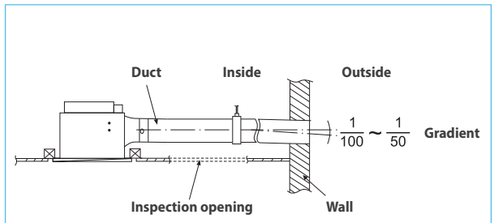
KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certifies that the Ceiling Mount Type Ventilation Fan – DC Motor Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

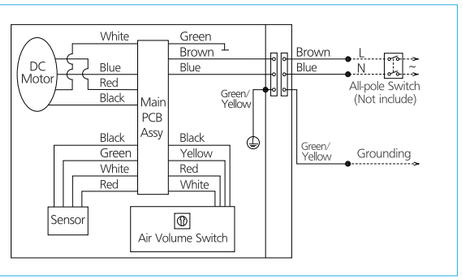
Model	Voltage [V]	Frequency [Hz]	Speed	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)								RPM	Watts*	Watts**
				Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.625		FOR AMCA	FOR IEC
24JRB	220	60	Hi	CFM	88	88	88	88	63	34	5	853	10	8
				Sones	0.7	1.0	1.0	1.3	1.7	1.8	3.1			
	240	50	Hi	CFM	88	88	88	88	63	34	5			
				Sones	0.7	1.0	1.0	1.3	1.7	1.8	3.1			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Installation Example



Wiring Diagram



DC Motor Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

24JAB

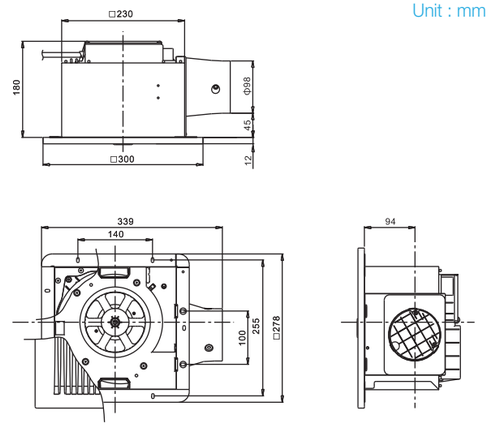
24-Hour Ventilation

Duct Type Ø100mm

- DC (Direct Current) motor
- Constant airflow
- Automated air volume adjustment
- Delay timer (15 minutes)
- Resonance–Noise–Absorption Structure
- Motor insulation Class E
- IP protection: IPX2

Dimension

Unit : mm



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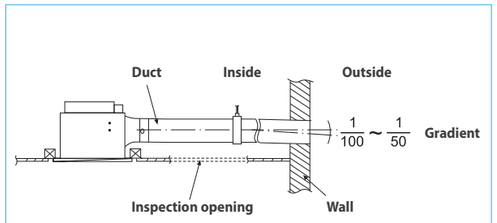
Specification

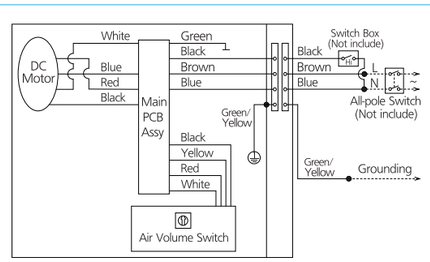
Model	Voltage [V]	Frequency [Hz]	Speed	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)								RPM	Watts*	Watts**
				Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.625		FOR AMCA	FOR IEC
24JAB	220	60	Hi	CFM	88	88	88	88	63	34	5	839	10	8
				Sones	0.6	0.9	1.0	1.4	1.6	1.9	3.2			
	240	50	Hi	CFM	88	88	88	88	63	34	5			
				Sones	0.6	0.9	1.0	1.4	1.6	1.9	3.2			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Installation Example



Wiring Diagram



Super Quiet Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

17CUH

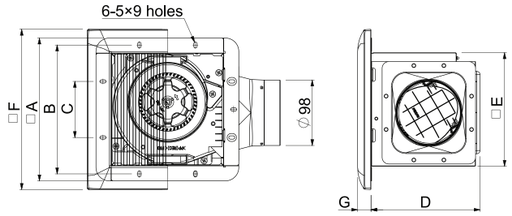
24-Hour Ventilation

Duct Type: Ø100mm

Dimension

Unit : mm

A	B	C	D	E	F	G	Duct Size
214	194	84	164	170	240	20	Ø100



- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Effective control of air turbulence with taper blade
- Curve-shaped backdraft shutter
- Super low noise
- Motor insulation Class B
- IP protection: IPX2

Panasonic Electric Works Vietnam Co., Ltd. certifies that the Ceiling Mount Type Ventilation Fan – Super Quiet Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

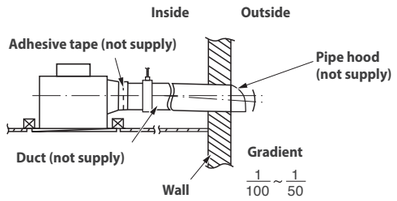
Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)				RPM	Watts*	Watts**
			Inches of H_2O	0	0.1	0.125		FOR AMCA	FOR IEC
17CUH	220	60	CFM	44	32	29	664	10	10
			Sones	0.3	0.5	0.6			
	240	50	CFM	51	43	40	728	10	9.5
			Sones	0.3	0.4	0.5			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.

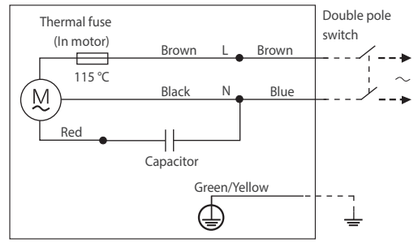
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.

** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Installation Example



Wiring Diagram



Super Quiet Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

24CUH / 24CDH / 24CHH

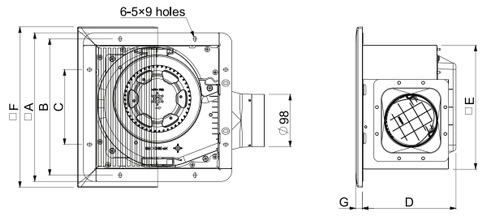
24-Hour Ventilation

Duct Type: Ø100mm

Dimension

Unit : mm

A	B	C	D	E	F	G	Duct Size
278	255	140	175	233	300	13	Ø100



- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Effective control of air turbulence with taper blade
- Curve-shaped backdraft shutter
- Super low noise
- Motor insulation Class B
- IP protection: IPX2

Panasonic Electric Works Vietnam Co., Ltd. certifies that the Ceiling Mount Type Ventilation Fan – Super Quiet Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

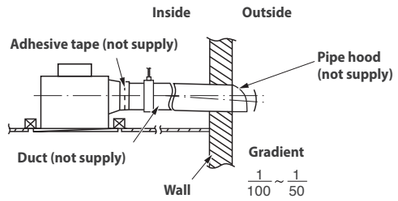
Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)						RPM	Watts*	Watts**
			Inches of H_2O	0	0.1	0.125	0.25	0.375		FOR AMCA	FOR IEC
24CUH	220	60	CFM	83	73	68	46	-	585	13	13.5
			Sones	0.4	0.5	0.6	1.3	-			
	240	50	CFM	89	77	75	51	-	614	13	12
			Sones	0.5	0.7	0.7	1.4	-			
24CDH	240	50	CFM	106	93	89	65	-	782	17	16.5
			Sones	0.9	0.9	0.9	1.6	-			
24CHH	220	60	CFM	109	99	96	75	48	791	22	20.5
			Sones	1.0	0.9	1.0	1.3	2.2			
	240	50	CFM	117	109	96	73	33	861	21	19.5
			Sones	1.2	1.2	1.2	1.3	1.8			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.

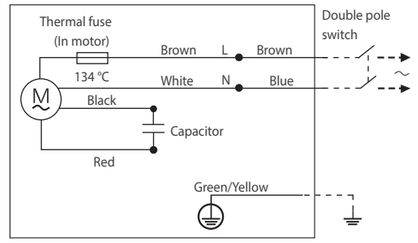
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.

** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Installation Example



Wiring Diagram



Super Quiet Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

24CXH

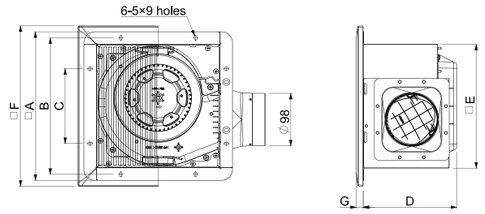
24-Hour Ventilation

Duct Type: Ø100mm

Dimension

Unit : mm

A	B	C	D	E	F	G	Duct Size
278	255	140	175	233	300	13	Ø100



- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Effective control of air turbulence with taper blade
- Curve-shaped backdraft shutter
- Super low noise
- Motor insulation Class B
- IP protection: IPX2

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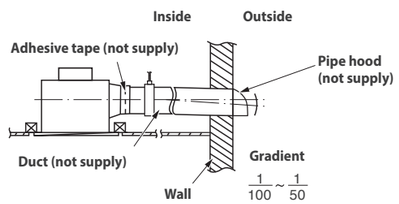
Specification

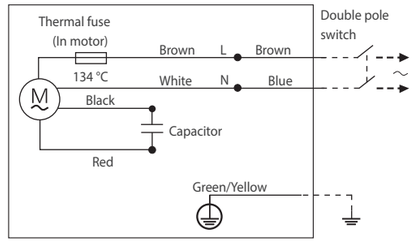
Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)						RPM	Watts*	Watts**
			Inches of H_2O	0	0.1	0.125	0.25	0.375		FOR AMCA	FOR IEC
24CXH	220	60	CFM	140	128	125	106	78	988	31	29
			Sones	1.8	2.2	2.2	2.6	2.8			
	240	50	CFM	137	122	117	86	32	984	31	29
			Sones	2.2	2.2	2.3	2.2	2.9			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Installation Example



Wiring Diagram



Super Quiet Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

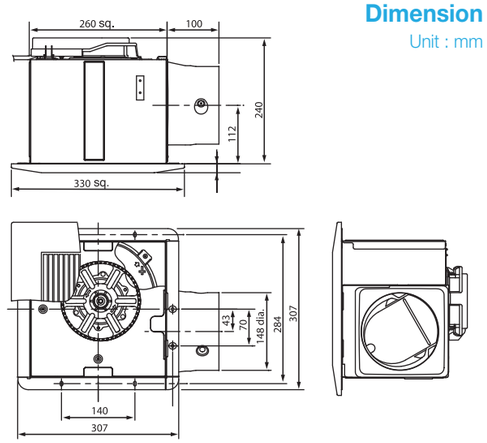
27CHH

24-Hour Ventilation

Duct Type: Ø150mm

Dimension

Unit : mm



- Super low noise
- Long life ball bearing motor
- Effective control of air turbulence with taper blade
- Resonance-Noise-Absorption Structure
- Pre-installed power cord
- 2 speed selectable
- Motor insulation Class E
- IP protection: IPX2

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Specification

Model	Voltage [V]	Frequency [Hz]	Speed	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)							RPM	Watts*	Watts**
				Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5		FOR AMCA	FOR IEC
27CHH	220	60	Hi	CFM	182	162	156	118	78	37	570	33	33
				Sones	1.1	1.2	1.3	1.7	2.2	2.5			
	240	50	Hi	CFM	198	179	172	126	78	18	609	37	34
				Sones	1.4	1.5	1.6	1.8	2.3	2.5			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.
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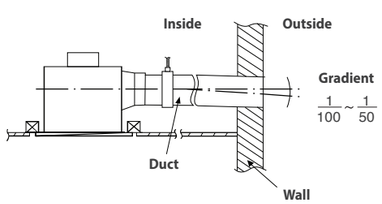
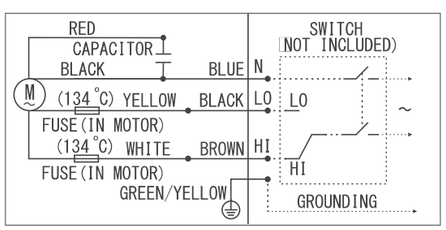
Installation Example



Wiring Diagram



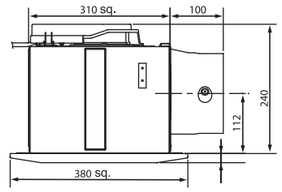
Super Quiet Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

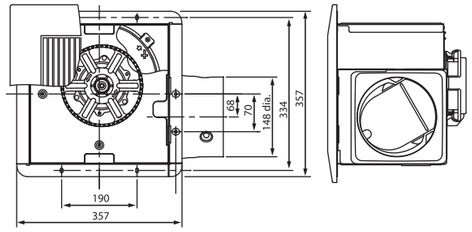
32CDH

24-Hour Ventilation

Duct Type Ø150mm



Dimension
Unit : mm



- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Effective control of air turbulence with taper blade
- Curve-shaped backdraft shutter
- Super low noise
- Motor insulation Class E
- IP protection: IPX2

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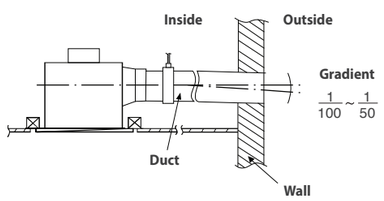
Specification

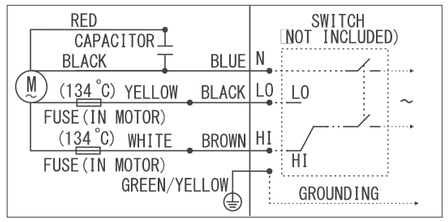
Model	Voltage [V]	Frequency [Hz]	Speed	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)								RPM	Watts*	Watts**
				Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.625		FOR AMCA	FOR IEC
32CDH	220	60	Hi	CFM	226	202	196	163	127	91	53	580	48	48
				Sones	1.2	1.3	1.4	1.7	2.2	2.7	3.3			
	240	50	Hi	CFM	257	236	230	192	147	99	53	675	56	50
				Sones	1.6	1.7	1.8	1.9	2.5	3.0	3.6			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Installation Example



Wiring Diagram



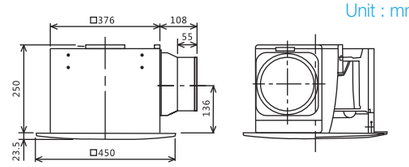
Standard Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

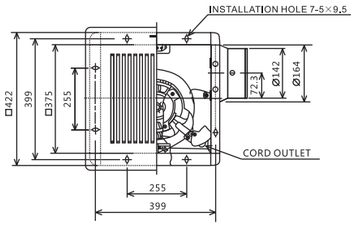
38CDG / 38CDG 05

24-Hour Ventilation

Duct Type Ø150mm



Dimension
Unit : mm



- High-Low speed selectable
- Condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- High performance sirocco fan
- Motor insulation Class E

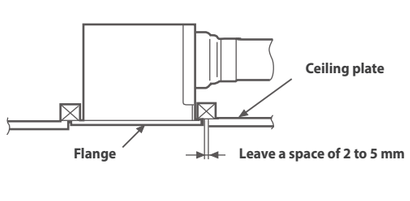
KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certifies that the Ceiling Mount Type Ventilation Fan – Standard Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

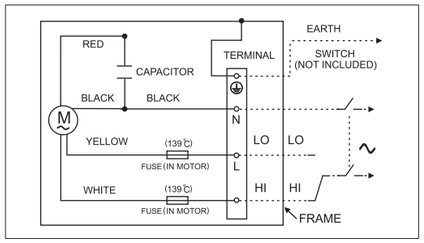
Model	Voltage [V]	Frequency [Hz]	Speed	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)										RPM	Watts*	Watts**
				Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.625	0.75	0.875		FOR AMCA	FOR IEC
38CDG	220	60	Hi	CFM	344	323	317	290	261	230	197	163	126	626	98	98
				Sones	3.1	3.2	3.2	3.3	3.6	4.1	4.5	5.7	5.7			
38CDG 05 38CDG	240	50	Hi	CFM	387	367	362	336	305	259	212	165	108	737	118	104
				Sones	4.0	4.1	4.2	4.3	4.4	4.7	5.3	5.7	6.2			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Installation Example



Wiring Diagram



Standard Series

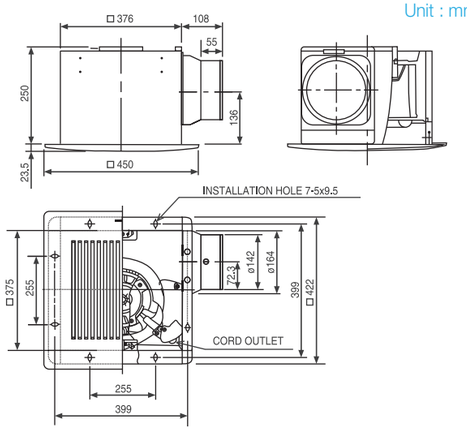
Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

38CHG

24-Hour Ventilation

Duct Type Ø150mm

Dimension
Unit : mm



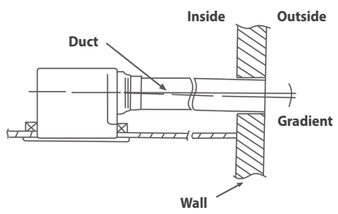
- Condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Effective control of air turbulence with taper blade
- Reverse flow prevention shutter
- 2 speed selectable
- Motor insulation Class E
- IP protection: IPX2

Specification

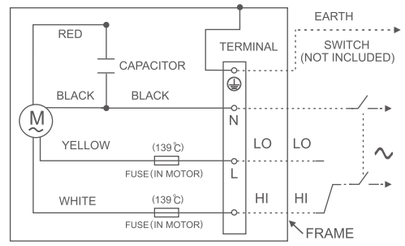
Model	Voltage [V]	Frequency [Hz]		Air Volume [CMH]	Air Volume [CFM]	Consumption [W]	RPM	Noise [dB(A)]	Weight [kg]	Installation Space [mm]	Duct Size [mm]
38CHG	220	50	Hi	800	471	122	790	49.5	10.4	385 x 385	Ø150
			Lo	525	309	89	540	39.5			
		60	Hi	790	465	138	760	49			
			Lo	500	294	90	509	39			
	230	50	Hi	800	471	122	775	49			
			Lo	470	277	84	485	37			
	240	50	Hi	835	491	132	807	50			
			Lo	490	288	90	504	38			

Note: RPM data is for reference only, values may vary subject to different conditions
Test Condition
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Installation Example



Wiring Diagram



Metal Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

24CMUA / 24CMHA

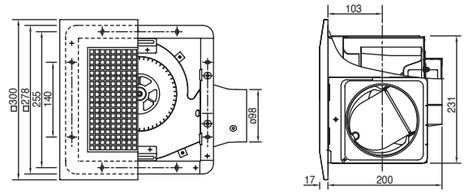
Fire Resistant

24-Hour Ventilation

Duct Type Ø100mm

Fire Resistant

Dimension
Unit : mm



- All-metal structure design
- Well-lubricated ball bearing for long life operation
- Metallic components to improve fire resistance
- Reverse flow prevention shutter
- Motor insulation Class E
- IP protection: IPX2

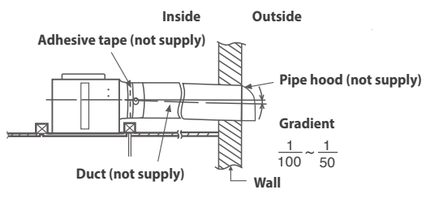
KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certifies that the Ceiling Mount Type Ventilation Fan – Metal Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

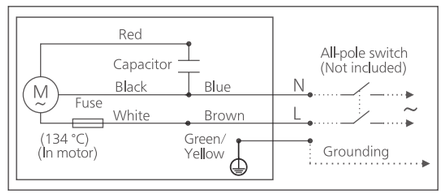
Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O) Inches of H_2O	0	0.1	0.125	0.25	0.375	RPM	Watts* FOR AMCA	Watts** FOR IEC
24CMUA	220	60	CFM	55	40	37	20	-	495	13	12
			Sones	0.3	0.7	0.8	1.6				
	240	50	CFM	55	44	41	24	-	562	14	13
			Sones	0.3	0.8	1.0	1.4				
24CMHA	220	60	CFM	94	85	83	72	54	681	25	23
			Sones	1.0	1.4	1.5	1.9	2.3			
	240	50	CFM	108	98	95	77	44	753	27	25
			Sones	1.4	1.8	1.9	2.1	2.2			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Installation Example



Wiring Diagram



Metal Series

Usage: Bathroom | Toilet | Living Room / Corridor / Office / Retail Store

27CMHA

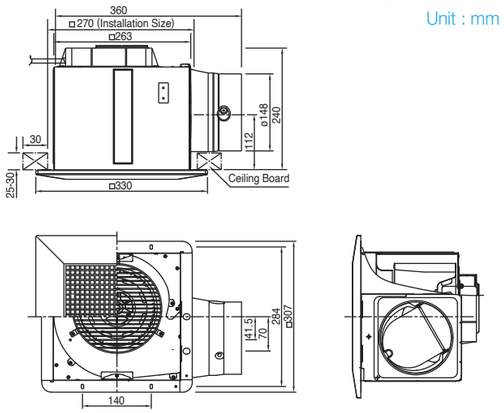
Fire Resistant

24-Hour Ventilation

Duct Type Ø148mm

Dimension

Unit : mm



- All-metal structure design
- Well-lubricated ball bearing for long life operation
- Metallic components within air stream provides extra safety against fire
- Reverse flow prevention shutter
- Motor insulation Class E
- IP protection: IPX2

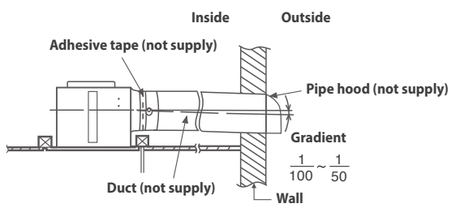
KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certifies that the Ceiling Mount Type Ventilation Fan – Metal Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

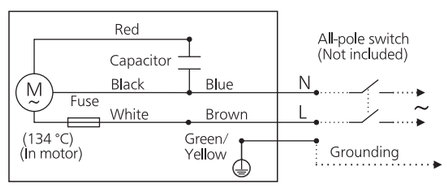
Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)							RPM	Watts*	Watts**
			Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5			
27CMHA	220	60	CFM	208	184	178	144	108	79	615	46	43
			Sones	1.6	1.7	1.7	2.3	3.2	3.5			
	240	50	CFM	219	194	188	150	110	70	669	46	43
			Sones	1.9	1.9	2.0	2.4	3.4	3.1			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Installation Example



Wiring Diagram



Wall Mount Type Ventilation Fan

24 Hours Ventilation

Contemporary

Safe

Low-Noise

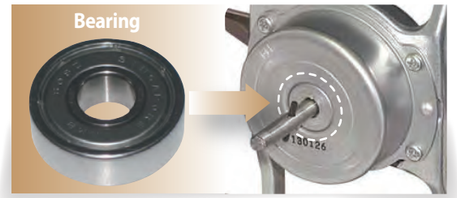
Scan for more information

Features

Smart Design

The new flat design creates a feeling of floating upon installation on wall. Meanwhile, slim louver is designed for the louver series. Such minimalistic elements integrate seamlessly with the interior space.

Only applicable for model:
20AUA/25AUA/30AUA
20ALA/25ALA/30ALA



Half Pitch Motor & Bearing

All models adopt half pitch capacitor induction motor and long life bearing that prolongs the product durability, with average 30,000 hours life. They also enable energy saving by reducing power consumption down to average 13%.

Thermal Fuse Equipped

All motors are equipped with thermal fuses which would stop when they are overheated. It can prevent further temperature rise and minimize the risk of fire hazard.

Silent Stream Fan

Only applicable for model:
20AUA/25AUA/30AUA
20ALA/25ALA/30ALA

Silent Stream Fan

New Blade design applies advanced aerodynamic principle that optimizes the blade shape.

3D Sickle Blade

New Blade design adopts an increased blade size and airfoil curve optimization. It can increase the air volume by the adjusted blade shape which can match the airflow. Furthermore, it can lower the noise by evening the airflow velocity with the silent wing.

*Features above are only applicable to some of the models

Metallic Series

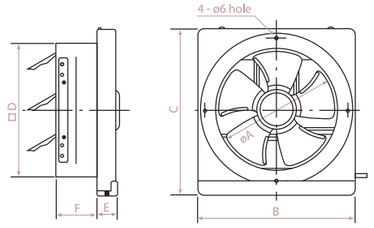
Usage: Bathroom | Toilet | Office / Retail Store

20ASB / 25ASB / 30ASB
20ASB 05 / 25ASB 05 / 30ASB 05

Metallic Structure

Dimension
Unit : mm

Model	A	B	C	D	E	F
20ASB/20ASB 05	200	300	312	240	50	90
25ASB/25ASB 05	250	350	362	290	45	90
30ASB/30ASB 05	300	400	412	340	45	90



- Condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- High performance propeller fan adopted
- Automatic shutter
- Powder painted metallic orifice, blade and oil cup
- Detachable oil cup
- Motor insulation Class E
- IP protection: IPX4 (outside)

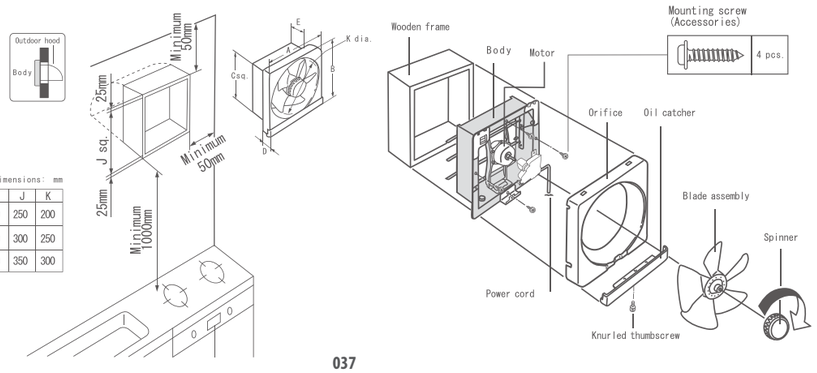
KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certifies that the Wall Mount Type Ventilation Fan – Metallic Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)				RPM	Watts*	Watts**
			Inches of H_2O	0	0.025	0.05		FOR AMCA	FOR IEC
20ASB	220	60	CFM	330	259	183	1,358	25.5	21.5
			Sones	1.7	1.9	3.9			
	240	50	CFM	296	198	151	1,252	22.4	19.5
			Sones	1.5	1.7	3.2			
20ASB 05	240	50	CFM	296	198	151	1,252	22.4	19.5
			Sones	1.5	1.7	3.2			
25ASB	220	60	CFM	522	414	240	1,277	35.5	30.5
			Sones	1.9	1.6	2.2			
	240	50	CFM	486	434	314	1,194	35.1	29.5
			Sones	2.0	2.0	2.4			
25ASB 05	240	50	CFM	486	434	314	1,194	35.1	29.5
			Sones	2.0	2.0	2.4			
30ASB	220	60	CFM	637	400	85	1,088	39.8	34.5
			Sones	2.0	2.7	2.2			
	240	50	CFM	706	620	498	1,175	38.1	34
			Sones	2.9	2.3	2.2			
30ASB 05	240	50	CFM	706	620	498	1,175	38.1	34
			Sones	2.9	2.3	2.2			

Performance certified is for installation type A: Free inlet, Free outlet with partition.Performance ratings include the effects of a backdraft damper. The speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Installation



Dimensions: mm

Model No.	A	B	C	D	E	J	K
20ASB 20ASB 05	300	312	240	50	90	250	200
25ASB 25ASB 05	350	362	290	45	90	300	250
30ASB 30ASB 05	400	412	340	45	90	350	300

Automatic Shutter Series

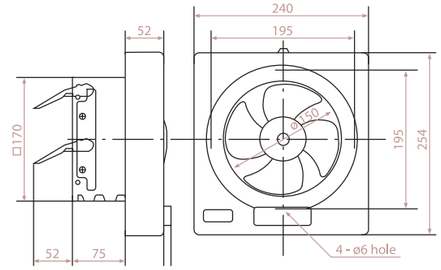
Usage: Bathroom | Toilet | Office / Retail Store

15AAQ1

Metallic Structure

Orifice Equipped with Oil Cup

Dimension
Unit : mm



- Condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- High performance propeller fan adopted
- Automatic shutter with plastic cushions
- Orifice equipped with oil cup
- Motor insulation Class E
- IP protection: IPX4 (outside)

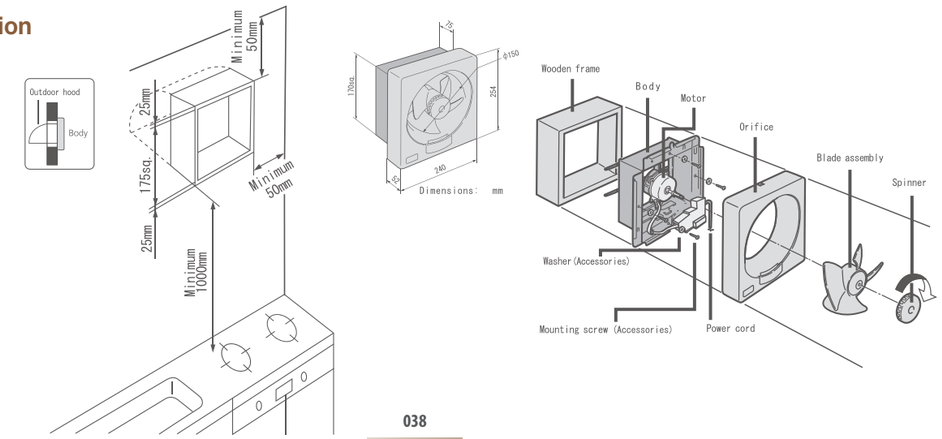
KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certifies that the Wall Mount Type Ventilation Fan – Automatic Shutter Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)				RPM	Watts*	Watts**
			inches of H_2O	0	0.025	0.05		FOR AMCA	FOR IEC
15AAQ1	220	60	CFM	157	122	65	1,533	20.6	19
			Sones	2.5	1.9	2.3			
	240	50	CFM	154	120	63	1,453	20.1	19
			Sones	1.7	1.4	2.1			

Performance certified is for installation type A: Free inlet, Free outlet with partition.Performance ratings include the effects of a backdraft damper. The speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Installation



Automatic Shutter Series

Usage: Bathroom | Toilet | Office / Retail Store

20AUA / 25AUA / 30AUA

Silent Stream Fan

Flat Surface Design

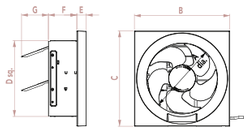
Automatic Shutter

Silent Stream Fan

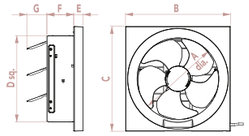
Dimension

Unit : mm

Model	A	B	C	D	E	F	G
20AUA	223	302	302	240	30	90	85
25AUA	273	352	352	290	32	90	67
30AUA	317	402	402	340	32	90	83



20AUA



25AUA / 30AUA

- Flat surface design
- Silent stream fan
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Automatic shutter
- Motor insulation Class B
- IP protection: IPX4 (outside)

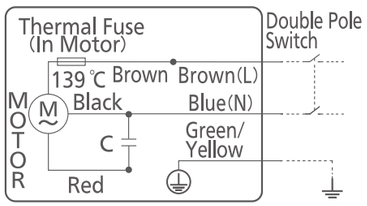
KDK Company, Division of PES and Panasonic Electric Works Vietnam Co., Ltd. certify that the Wall Mount Type Ventilation Fan – Automatic Shutter Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			Inches of H_2O	0	0.02	0.04	0.06		FOR AMCA	FOR IEC
20AUA	220	60	CFM	370	328	274	227	1,430	23.5	22
			Sones	2.1	2.1	2.2	2.5			
	240	50	CFM	339	295	257	200	1,303	23	21.5
			Sones	2.0	2.1	2.0	4.5			
25AUA	220	60	CFM	542	504	460	361	1,387	33.2	31
			Sones	2.4	2.3	1.9	2.5			
	240	50	CFM	542	493	443	394	1,252	31	29
			Sones	3.6	3.2	3.0	3.1			
30AUA	220	60	CFM	655	567	456	242	938	35.3	33
			Sones	2.0	1.6	1.9	2.4			
	240	50	CFM	696	580	491	340	964	34.8	32.5
			Sones	2.0	1.8	1.6	2.2			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of a backdraft shutter for Model AUA. The speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating is only for AMCA test method and it is at the statistic pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method.

Wiring Diagram



Automatic Shutter Series

Usage: Bathroom | Toilet | Office / Retail Store

20AUH / 25AUH / 30AUH 11

Advanced Blade Design

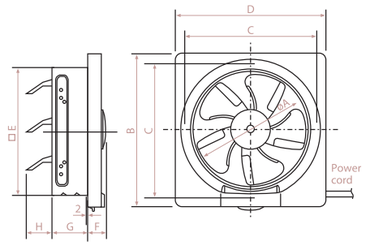
Automatic Shutter

Single Speed

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H
20AUH	200	306	260	302	240	52	90	80
25AUH	250	356	310	352	290	38	90	63
30AUH 11	300	406	360	402	340	38	90	78



- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Propeller fan incorporated with advanced blade design (except 30AUH 11)
- Automatic shutter
- Motor insulation Class E
- IP protection: IPX4 (outside)

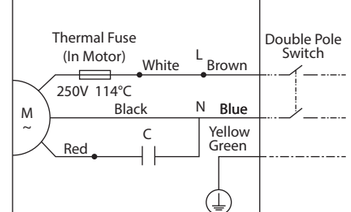
KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certifies that the Wall Mount Type Ventilation Fan – Automatic Shutter Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)				RPM	Watts*	Watts**
			inches of H_2O	0	0.025	0.05		FOR AMCA	FOR IEC
20AUH	220	60	CFM	355	314	196	1,410	32.4	28.5
			Sones	2.5	2.5	1.7			
25AUH	220	60	CFM	514	426	290	1,200	37.8	33
			Sones	1.8	1.5	1.8			
30AUH 11	240	60	CFM	572	453	235	856	37.0	33
			Sones	1.0	1.7	2.6			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of a backdraft damper. The speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Wiring Diagram



Automatic Shutter Louver Series

Usage: Bathroom | Toilet | Office / Retail Store

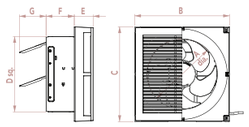
20ALA / 25ALA / 30ALA

Louver for Safety Protection
Silent Stream Fan
Automatic Shutter

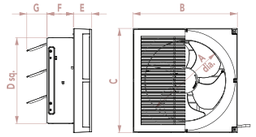
Silent Stream Fan

Dimension
Unit : mm

Model	A	B	C	D	E	F	G
20ALA	223	302	302	240	60	90	85
25ALA	273	352	352	290	62	90	67
30ALA	317	402	402	340	62	90	83



20ALA



25ALA / 30ALA

- Slim louver design
- Silent stream fan
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Automatic shutter
- Motor insulation Class B
- IP protection: IPX4 (outside)

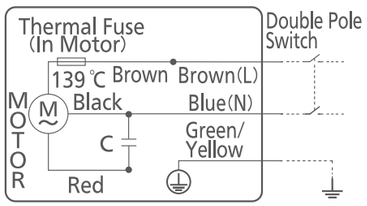
KDK Company, Division of PES and Panasonic Electric Works Vietnam Co., Ltd. certify that the Wall Mount Type Ventilation Fan – Automatic Shutter Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			Inches of H_2O	0	0.02	0.04	0.06		FOR AMCA	FOR IEC
20ALA	220	60	CFM	334	296	256	197	1,398	23.5	22
			Sones	2.8	2.7	3.1	3.9			
	240	50	CFM	301	274	234	175	1,278	23	21.5
			Sones	2.5	2.5	2.7	2.8			
25ALA	220	60	CFM	471	411	350	250	1,224	33.2	31
			Sones	3.4	3.2	2.9	3.0			
	240	50	CFM	482	438	389	328	1,217	32.1	30
			Sones	4.2	4.1	3.8	3.8			
30ALA	220	60	CFM	510	446	372	219	867	35.3	33
			Sones	2.5	2.0	3.0	2.1			
	240	50	CFM	571	494	411	263	896	35.3	32.5
			Sones	3.1	2.6	2.5	3.3			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of inlet grille and backdraft shutter for Model ALA. The speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating is only for AMCA test method and it is at the statistic pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method.

Wiring Diagram



Automatic Shutter Louver Series

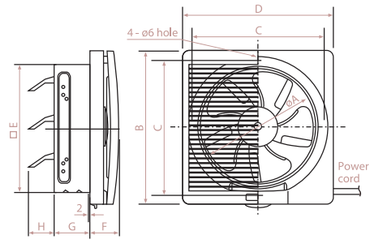
Usage: Bathroom | Toilet | Office / Retail Store

20ALH / 25ALH / 30ALF 11

Louver for Safety Protection
Advanced Blade Design
Single Speed

Dimension
Unit : mm

Model	A	B	C	D	E	F	G	H
20ALH	200	306	260	302	240	68	90	80
25ALH	250	356	310	352	290	63	90	63
30ALF 11	300	406	360	402	340	63	90	78



- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Propeller fan incorporated with advanced blade design (except 30ALF 11)
- Automatic shutter
- Motor insulation Class E
- IP protection: IPX4 (outside)

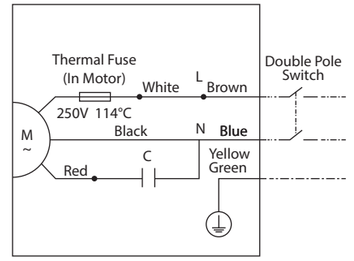
KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certifies that the Wall Mount Type Ventilation Fan – Automatic Shutter Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)				RPM	Watts*	Watts**
			inches of H_2O	0	0.025	0.05		FOR AMCA	FOR IEC
20ALH	220	60	CFM	328	280	170	1,385	32.8	28.5
			Sones	3.5	3.2	3.4			
25ALH	220	60	CFM	420	372	232	1,097	37.5	33
			Sones	2.7	2.7	4.6			
30ALF 11	220	60	CFM	447	288	154	746	37.1	33
			Sones	2.0	2.7	2.2			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of an inlet grill and backdraft damper. The speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Wiring Diagram



Automatic Shutter Louver Series

Usage: Bathroom | Toilet | Office / Retail Store

10BAQ1

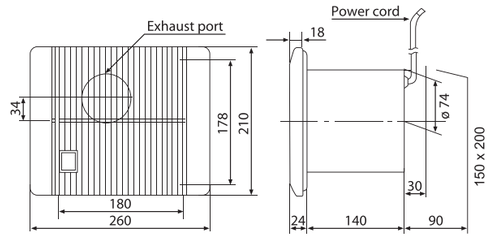
Powerful Sirocco Fan

Louver for Safety Protection

Long Life Operation

Dimension

Unit : mm



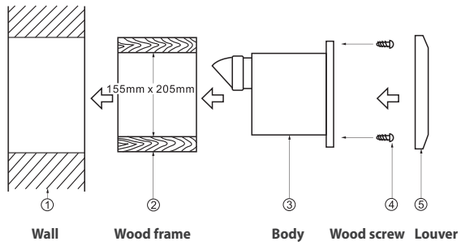
- Condenser motor with thermal cut-off
- Lubricated sintered brush for long life operation
- Highly efficient sirocco fan
- Blind shutter louver to enhance privacy and safety
- Plastic frame, blade and louver
- Motor insulation Class E
- IP protection: IPX4 (outside)

Specification

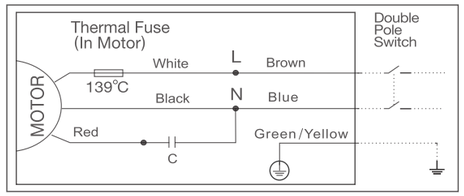
Model	Voltage [V]	Frequency [Hz]	Air Volume [CMH]	Air Volume [CFM]	Consumption [W]	RPM	Noise [dB(A)]	Weight [kg]	Installation Space [mm]
10BAQ1	220	50	76.3	45	15	1,250	40.1	1.7	155 x 205
		60	72.9	43	17	1,200	39.8		
	230	50	80.3	47	16	1,300	41.2		
	240	50	84.9	50	17.5	1,385	42		

Note: RPM data is for reference only, values may vary subject to different conditions
Test Condition
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Installation



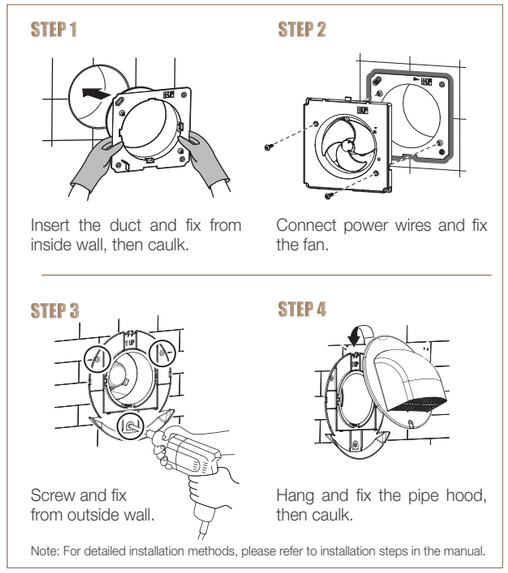
Wiring Diagram



Feature of Bathroom Series

Easy Installation - Pipe Hood Series

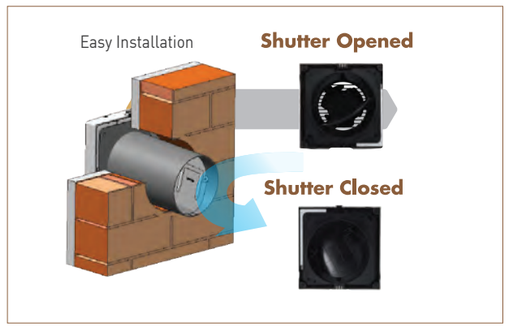
With the supplied accessories, it only takes a few steps to complete the installation.



Back Draft Shutter

Shutter Series (For Vertical Shaft) only

Wind from outside may come indoor through the duct when the fan is not operating. The back draft shutter is designed to cover the duct hole to block wind and water.



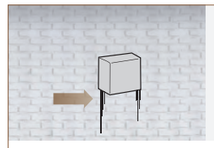
All Accessories Included

The product comes bundled with all required accessories. It conveniently saves the hassle of seeking necessary accessories around.

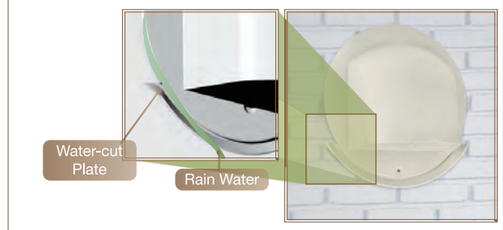
Trace-Prevention

Pipe Hood Series Only

When it rains, rainwater dripping along the side of pipe hood may cause trace marks on wall. The exclusively designed duct ring catches and drains the water away to avoid forming trace marks.



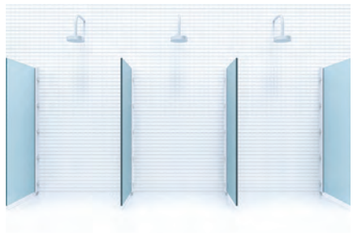
With a standard pipe hood, rain water may cause trace mark on the wall.



The water-cut plate catches the rain and drains it without leaving trace mark on the wall.

Bathroom

Toilet



Shower Room

Bathroom Series

Usage: Bathroom Toilet

10EGKB / 15EGKB

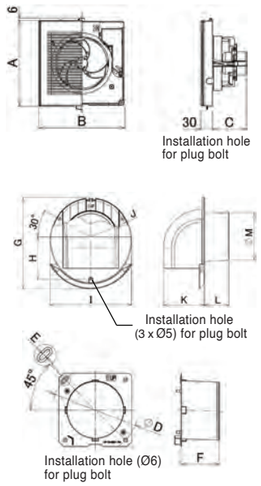
Advanced Blade Design
Easy Installation
Pipe Hood Equipped

- Pipe hood series
- Powerful exhaust of excessive moisture and odour
- Prevent rain water trace by water-cut plate at duct ring
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Motor insulation Class E
- IP protection: IPX4 (outside)

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H	I	J	K	L	M
10EGKB	170	170	83	177	6	100	250	107	220	99	99	82	118
15EGKB	220	220	86	231	6	100	310	142	270	123	138	82	161

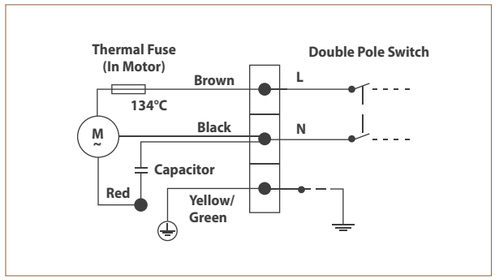


Specification

Model	Voltage [V]	Frequency [Hz]	Air Volume [CMH]	Consumption [W]	RPM	Noise [dB(A)]	Weight [kg]	Wall Installation		Ceiling Installation
								Hole Size [mm]	Wall Thickness [mm]	Hole Size [mm]
10EGKB	220	50	76	4.3	2,660	33	1.0	Ø130~140	100~150	Ø130~140
	230	50	77	4.6	2,675	33				
	240	50	77	5.0	2,690	33				
15EGKB	220	50	162	5.7	2,265	36	1.3	Ø175~185	100~150	Ø175~185
	230	50	165	6.1	2,330	37				
	240	50	165	6.5	2,390	37				

Note: RPM data is for reference only, values may vary subject to different conditions
Test Condition
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram



Bathroom Series

Usage: Bathroom Toilet

10EGSB / 15EGSB

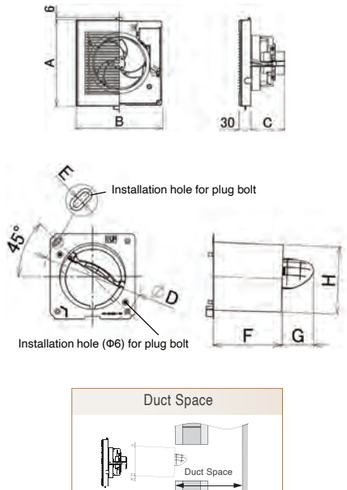
Advanced Blade Design
Automatic Shutter
Shutter Equipped

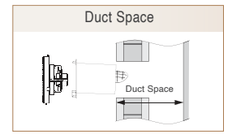
- Shutter series (for vertical shaft)
- Powerful exhaust of excessive moisture and odour
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Motor insulation Class E
- IP protection: IPX4 (outside)

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H
10EGSB	170	170	83	177	6	145	45	111
15EGSB	220	220	86	231	6	155	74	155



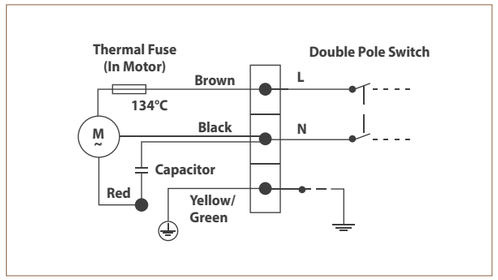


Specification

Model	Voltage [V]	Frequency [Hz]	Air Volume [CMH]	Consumption [W]	RPM	Noise [dB(A)]	Weight [kg]	Wall Installation		Ceiling Installation
								Hole Size [mm]	Duct Space [mm]	Hole Size [mm]
10EGSB	220	50	76	4.3	2,665	35	0.8	Ø120-125	>205	Ø130~140
		60	87	4.7	3,140	37.5				
	230	50	77	4.6	2,670	35				
	240	50	77	5.0	2,685	35				
15EGSB	220	50	155	5.7	2,130	36	1.0	Ø165-170	>240	Ø175~185
		60	180	6.1	2,470	40				
	230	50	160	6.1	2,230	37				
	240	50	165	6.5	2,240	37				

Note: RPM data is for reference only, values may vary subject to different conditions
Test Condition
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Wiring Diagram



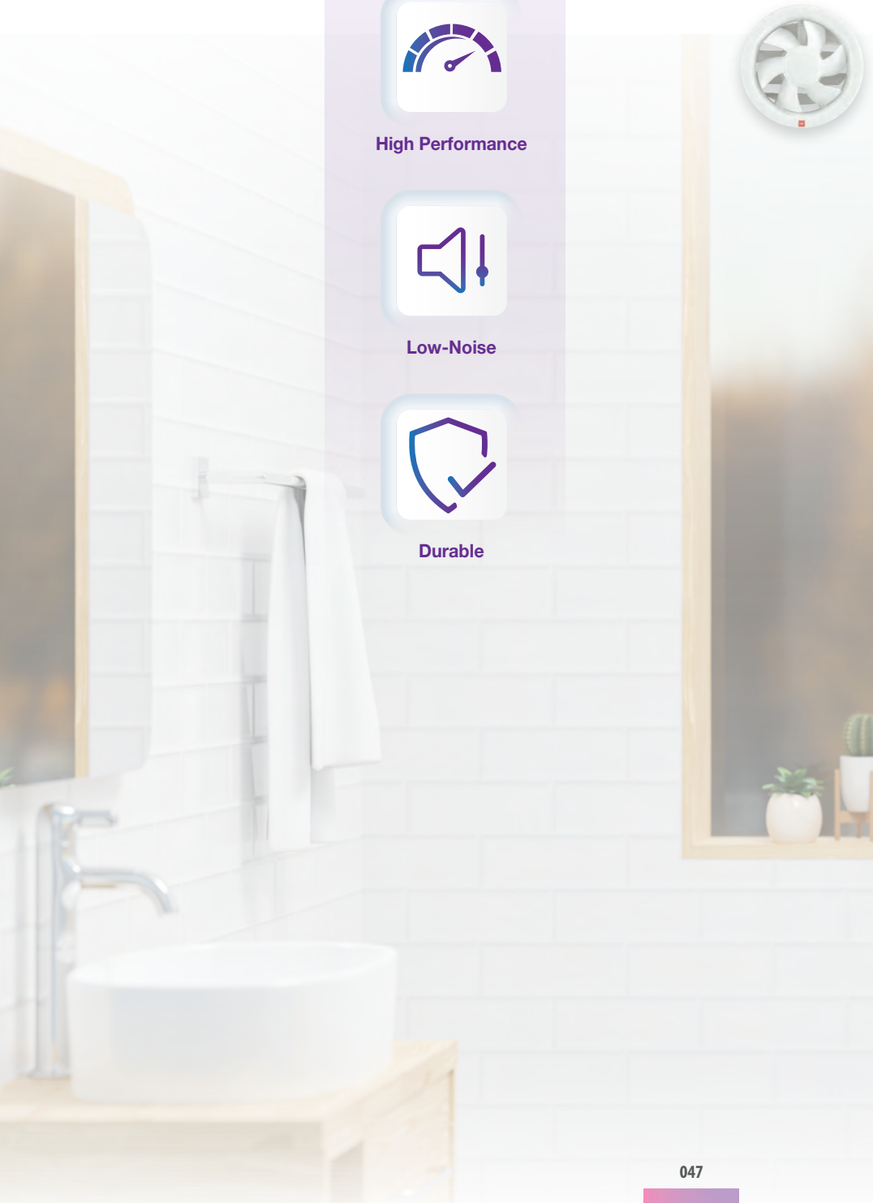
Window Mount Type Ventilation Fan

24 Hours Ventilation

High Performance

Low-Noise

Durable



Scan for more information

Electric Shutter Series

Able to maintain airtightness

Automatic Shutter Series

Able to maintain airtightness

Cord-operated Shutter Series

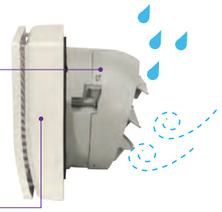
Can be easily installed in any glass window

Features of Electric Shutter Series

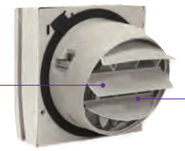
Rain proof and wind resistible

Hood structure for prevention of rain water ingression

High static pressure blade can prevent ingression of rain and wind during operation

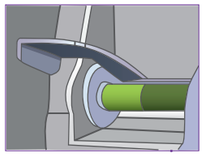


The newly designed shutter can keep out entry of rain water effectively



Bent End Structure of the shutter can block the backflow of outside wind

Easy installation



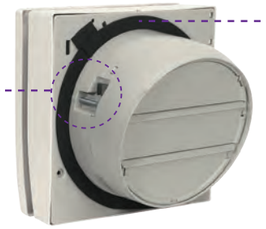
Mounting Bracket

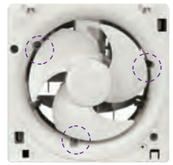
Unique design of mounting bracket can fix the fan on glass plate with simple process

Packing

No Gasket / No Silicon Seal

Attached packing is tightly closed to the glass plate that gets rid of water leakage to indoor



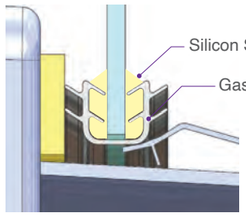


e.g. 15WHCT

Orifice is not necessary to detach for installation.

Simply fix the fan on glass plate by screws at front.

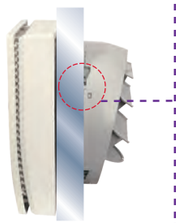
Pervious Setting Method

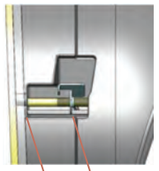


Both gasket & silicon seal are not required for 15WHCT/20WHCT

High adaptability

New mounting design allows the fan to be fixed on glass plate of thickness from 3mm up to 25mm with ease

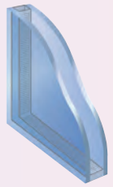




Applicable Glass Thickness 3mm-25mm

Double glass

Often called insulated glass that consists of two panes of glass set apart to allow airspace in. This airspace acts as a buffer which obstructs the transfer of heat from one side of the glass to the other.



Bathroom

Toilet

Office

Electric Shutter Series

Usage: Batheroom | Toilet | Office / Retail Store

15WHCT / 20WHCT

Louver for Protection

Rain proof and wind resistible

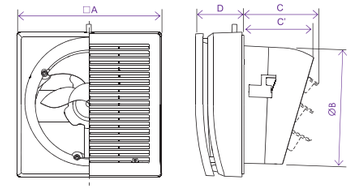
Prevent Rain and Wind

- Electrically operated shutter
- Advanced design hood structure to prevent rain and wind
- Suitable for window glass with thickness from 3mm to 25mm
- Simple and easy installation, no need of any silicon seal or gasket
- Motor insulation Class E
- IP protection: IPX4 (outside)

Dimension

Unit : mm

Model	A	B	C	C'	D
15WHCT	224	182	117	111	72
20WHCT	288	243	120	117	74



KDK Company, Division of PES and Panasonic Electric Works Vietnam Co., Ltd. certify that the window mount series models shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

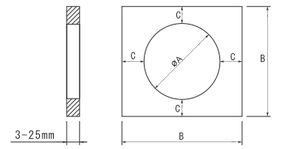
Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			inches of H_2O	0	0.05	0.1	0.15		FOR AMCA	FOR IEC
15WHCT	220	60	CFM	127	94	63	31	2,440	14.6	13
			Sones	3.0	3.6	3.5	3.9			
	240	50	CFM	127	95	68	50	2,537	16	15
			Sones	2.3	2.7	3.5	2.8			
20WHCT	220	60	CFM	250	188	127	78	1,517	24.4	22
			Sones	3	3.9	4.5	4.2			
	240	50	CFM	230	147	103	53	1,333	23.4	22
			Sones	2.8	3.8	3.4	4			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of inlet grille and shutter. The Speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free Inlet hemispherical sone levels.

* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.

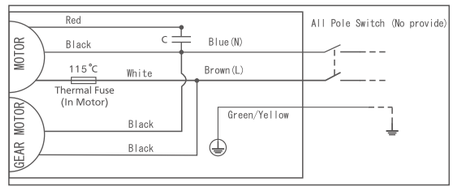
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Installation Example



Model No.	A	B	C
15WHCT	186~188mm	390mm Min	100mm Min
20WHCT	247~250mm	450mm Min	100mm Min

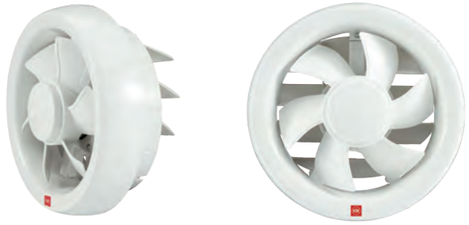
Wiring Diagram



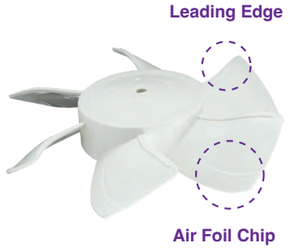
Features of Automatic Shutter Series

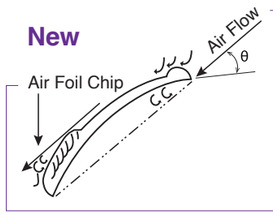
Auto Shutter

The backdraft shutters will be opened by air pressure during operation and closed automatically for air-tightness when the fan is switched off.



Advanced Blade Design



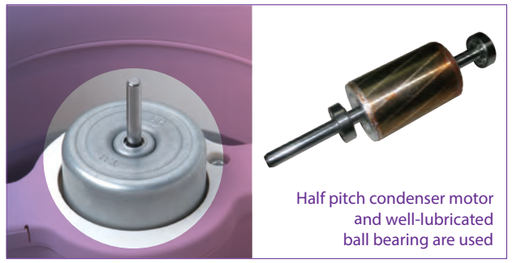


Leading Edge forms no obstacle to airflow that streamlines airflow from every direction

Air Foil Chip is to reduce turbulence at rear edge, and the curvature of front edge is improved for smooth airflow that minimizes fan noise as well.

Half pitch condenser motor with well-lubricated ball bearing

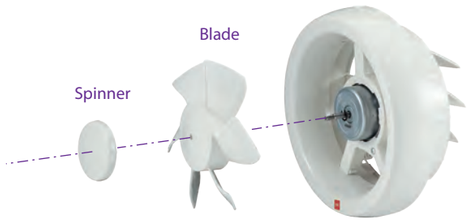
- Low power consumption (50% down VS previous model)
- Low noise level (6% down VS previous model)
- Long life up to 40,000 hours (1.5 time VS previous model)
- Comply with IPX4 (outside)



Half pitch condenser motor and well-lubricated ball bearing are used

Easy Maintenance

The blade can be detached by simply loosening the spinner, that facilitates the periodical maintenance.



Bathroom

Toilet

Office

Automatic Shutter Series

Usage: Batheroom | Toilet | Office / Retail Store

15WAA / 15WAAMN
20WAA / 20WAAMN

Automatic Shutter

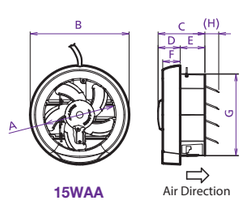
Advanced Blade Design

Easy Maintenance

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H(MAX)
15WAA	150	212	100	47	53	38	175	(30)
20WAA	206	290	122	76	46	59	237	(36)



- Automatic shutter
- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Propeller fan incorporated with advanced blade design
- Removable blade for easy maintenance
- Motor insulation Class E
- IP protection: IPX4 (outside)

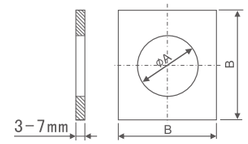
KDK Company, Division of PES and Panasonic Electric Works Vietnam Co., Ltd. certify that the Window Mount Type Ventilation Fan – Automatic Shutter Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			inches of H_2O	0	0.02	0.04	0.06		FOR AMCA	FOR IEC
15WAA 15WAAMN	220	60	CFM	124	109	91	79	2,021	19.6	18
			Sones	3.6	4.5	4.1	4			
	240	50	CFM	127	109	93	78	2,062	18.2	16
			Sones	2.3	4.5	4.1	3.8			
20WAA 20WAAMN	220	60	CFM	250	147	124	94	1,385	18.4	17
			Sones	3	3.8	3.5	3.3			
	240	50	CFM	230	153	141	131	1,375	18.6	17.5
			Sones	2.8	3.3	3.4	3.4			

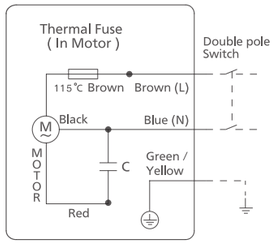
Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of backdraft shutter. The Speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free Inlet hemispherical sone levels.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Installation Example



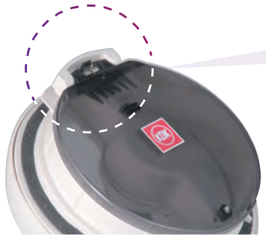
Model	A	B
15WAA / 15WAAMN	186 - 188mm	⩾ 250mm
20WAA / 20WAAMN	247 - 250mm	⩾ 300mm

Wiring Diagram



Features of Cord-Operated Shutter Series

Strengthened Shutter Structure

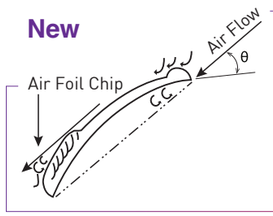


- Durable
- Sustainable to strong wind

Metallic shutter axis is used as the supporter for movement of shutter that provides a better endurance.

Advanced Blade Design

New



Leading Edge forms no obstacle to airflow that streamlines airflow from every direction

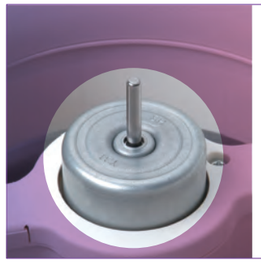
Air Foil Chip is to reduce turbulence at rear edge, and the curvature of front edge is improved for smooth airflow that minimizes fan noise as well.

Easy Maintenance

The blade can be detached by simply loosening the spinner, that facilitates the periodical maintenance.

Half pitch condenser motor with well-lubricated ball bearing

- Low power consumption (50% down VS previous model)
- Low noise level (6% down VS previous model)
- Long life up to 40,000 hours (1.5 time VS previous model)
- Comply with IPX4 (outside)



Half pitch condenser motor and well-lubricated ball bearing are used

Bathroom

Toilet

Office

Cord-Operated Shutter Series

Usage: Batheroom | Toilet | Office / Retail Store

15WUD / 15WUDMN
20WUD / 20WUDMN

Cord-operated Shutter

Advanced Blade Design

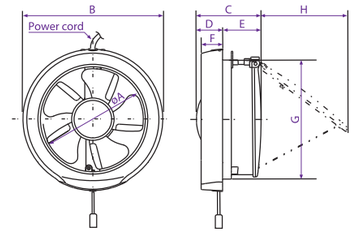
Metallic Shutter Axis

- Half pitch condenser motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Propeller fan incorporated with advanced blade design
- Shutter operated by pull cord
- Metallic shutter axis
- Motor insulation Class E
- IP protection: IPX4 (outside)

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H
15WUD	150	210	97	43	54	37	177	149
20WUD	200	271	98	36	62	36	237	201



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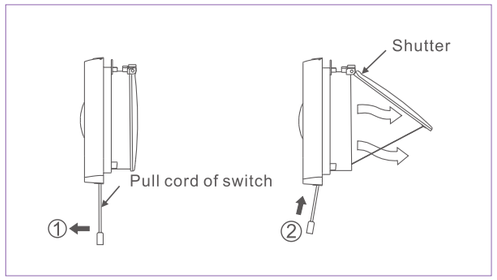
Specification

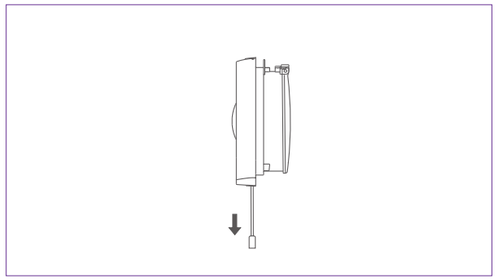
Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			inches of H_2O	0	0.01	0.02	0.03		FOR AMCA	FOR IEC
15WUD 15WUDMN	220	60	CFM Sones	105 0.9	94 0.9	79 2.2	66 2.4	1,425	9.7	8.9
	240	50	CFM Sones	124 1.4	115 1.6	104 1.8	94 3.7	1,722	10.3	9.5
			inches of H_2O	0	0.02	0.03	0.04			
20WUD 20WUDMN	220	60	CFM Sones	188 0.8	129 1.2	112 1.8	88 1.4	980	19.2	17.9
	240	50	CFM Sones	221 1.8	168 1.6	141 2.2	118 2.0	1,096	18.5	17.2

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of backdraft shutter. The Speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free Inlet hemispherical sone levels.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

How to Turn On



How to Turn Off

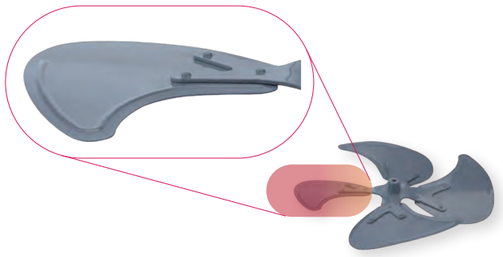


Industrial Type Ventilation Fan

High Performance

Low-Noise

Durable



Fans with 3D Wave-shaped Cross Section Blade*

*The 3D wave-shaped blade only applicable to some of the models

Scan for more information

Shutter Series

Usage: Factory | Warehouse | Retail Store | Commercial Kitchen

40KAQA

High Pressure

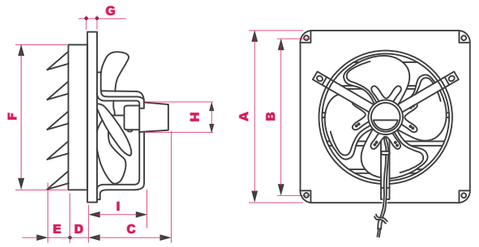
Rust Resistant

Shutter

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H	I
40KAQA	510	480	215	40	55	434	10	126	130



- With shutter
- Durable powder coating for rust resistance
- High performance condenser motor with thermal cut-off
- Operable at an ambient temperature range from -10°C to +50°C
- Motor insulation Class E
- IP protection: IPX4 (outside)

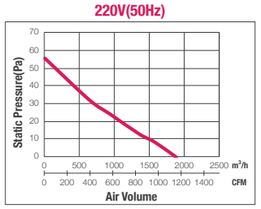
Specification

Voltage [V]	Frequency [Hz]	Air Volume [CMH]	Air Volume [CFM]	Current [A]	Input [W]	Noise [dB(A)]	RPM	Weight [kg]	Installation Space W x L [mm]
220	50	1,880	1,105	0.260	47.0	51.0	1,230 ~ 1,370	6.4	444 x 444
230		1,920	1,130	0.270	52.0	51.0	1,250 ~ 1,390		
240		1,960	1,155	0.290	59.0	51.0	1,270 ~ 1,410		
230	60	2,130	1,254	0.310	67.0	52.5	1,400 ~ 1,540		

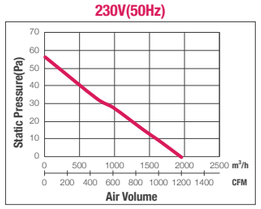
Note: RPM data is for reference only. Values may vary depending on different conditions.
1.The value of power consumption, air volume and noise are specified at the static pressure of 0 Pa.
2.The value of air volume is the mean value which is measured by our company.
3.The value of noise level is measured at 1m apart from the left, the right and the front of product, then get the average of three values.
4.The value of noise level is A weight average sound pressure level, the mean value is measured by our company.

Performance Data

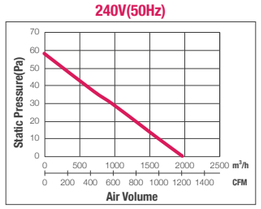
220V(50Hz)



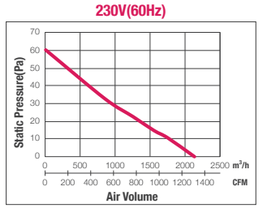
230V(50Hz)



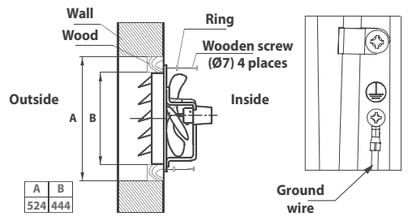
240V(50Hz)



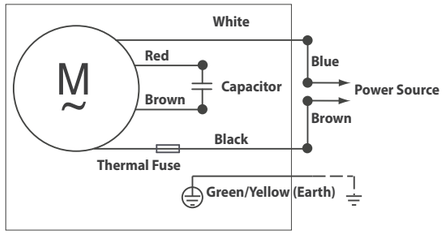
230V(60Hz)



Installation



Wiring Diagram



High Pressure Series

Usage: Factory | Warehouse | Retail Store | Commercial Kitchen

25GSE / 30GSE / 35GSE

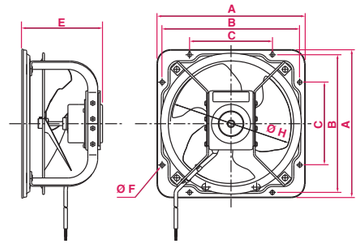
Single Phase
Reversible
Optional Shutter

- Bell mouth construction with distinctive wave-shaped blade
- Durable powder coating
- Operable at an ambient temperature range from -10℃ to +50℃
- Possible to install horizontally or vertically
- Motor insulation Class E
- IP protection: IPX4 (outside)

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H
25GSE	327	298	165	-	171	10	-	250
30GSE	378	349	210	-	200	10	-	300
35GSE	467	434	250	-	235	12	-	350



KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certify that the Industrial Ventilation Fan – High Pressure Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

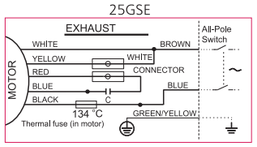
Specification

Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)								RPM	Watts*	Watts**
			Inches of H_2O	0	0.05	0.075	0.1	0.125	0.25	0.375		FOR AMCA	FOR IEC
25GSE	220	60	CFM	788	742	715	686	647	-	-	1,570	61	57
			Sones	4.9	4.7	4.5	4.5	4.6	-	-			
	240	50	CFM	701	657	633	600	585	187	-	1,400	48	44
			Sones	3.8	3.6	3.6	3.5	3.6	8.6	-			
30GSE	220	60	CFM	1,308	1,247	1,217	1,184	1,153	772	-	1,460	129	119
			Sones	9.0	9.0	9.1	9.0	9.1	9.4	-			
	240	50	CFM	1,177	1,119	1,090	1,058	1,026	561	243	1,315	106	98
			Sones	5.5	5.5	5.6	5.6	5.8	11.1	12.0			
35GSE	220	60	CFM	1,850	1,788	1,752	1,712	1,669	1,456	600	1,640	178	161
			Sones	11.9	11.6	12.0	12.4	13.6	14.6	13.4			
	240	50	CFM	1,615	1,548	1,506	1,458	1,411	1,147	390	1,435	130	122
			Sones	8.6	8.2	8.2	8.0	8.0	12.6	13.4			

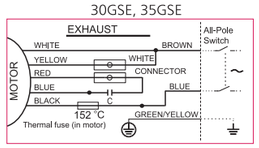
Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels. Speed (RPM) shown is nominal. Performance is based on actual speed of test.
*the Watts rating is only for AMCA test method and it is at the statistic pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method.

Wiring Diagram

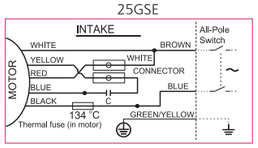
25GSE



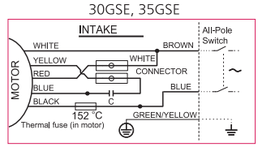
30GSE, 35GSE



25GSE



30GSE, 35GSE



High Pressure Series

Usage: Factory | Warehouse | Retail Store | Commercial Kitchen

40GSE

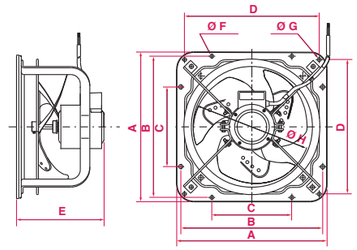
Single Phase
Reversible
Optional Shutter

- Bell mouth construction with distinctive wave-shaped blade
- Durable powder coating
- Operable at an ambient temperature range from -10℃ to +50℃
- Possible to install horizontally or vertically
- Motor insulation Class B
- IP protection: IPX4 (outside)

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H
40GSE	518	485	280	460	274	12	12	400



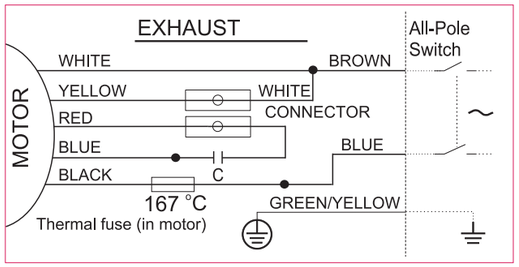
KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certify that the Industrial Ventilation Fan – High Pressure Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

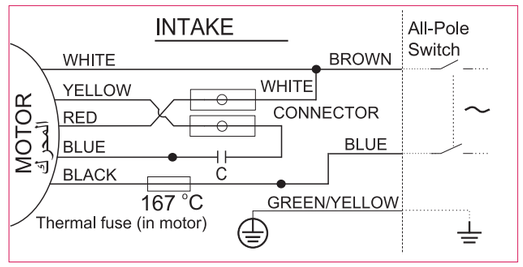
Specification

Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)								RPM	Watts*	Watts**
			Inches of H_2O	0	0.05	0.075	0.1	0.125	0.25	0.375		FOR AMCA	FOR IEC
40GSE	220	60	CFM	2,677	2,581	2,535	2,488	2,440	2,170	2,050	1,550	294	270
			Sones	20.0	20.0	19.7	19.4	19.3	18.9	19.9			
	240	50	CFM	2,135	2,067	2,035	2,000	1,965	1,800	1,480	1,440	164	151
			Sones	9.0	8.5	8.7	8.7	8.7	13.0	14.2			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels. Speed (RPM) shown is nominal. Performance is based on actual speed of test.
*the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Wiring Diagram





High Pressure Series

Usage: Factory | Warehouse | Retail Store | Commercial Kitchen

45GSC / 50GSC / 60GSC

Single Phase

Reversible

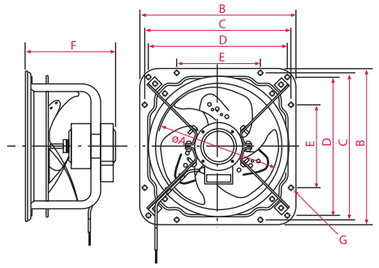
Optional Shutter

- Bell mouth construction with distinctive wave-shaped blade
- Durable powder coating
- Operable at an ambient temperature range from -10℃ to +50℃
- Possible to install horizontally or vertically
- Motor insulation Class E

Dimension

Unit : mm

Model	A	B	C	D	E	F	G
45GSC	450	570	540	-	320	297	12
50GSC	500	659	620	560	355	315	15
60GSC	620	760	720	650	400	320	15



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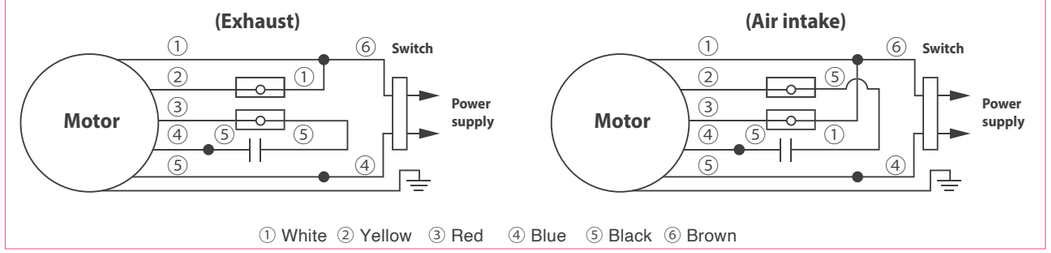
Specification

Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			Inches of H_2O	0	0.2	0.3	0.4		FOR AMCA	FOR IEC
45GSC	220	60	CFM	3,278	3,131	3,001	2,795	1,563	346	325
			Sones	10	10.4	10.6	10.8			
	240	50	CFM	2,854	2,648	2,454	2,030	1,430	277	241
			Sones	7.8	7.7	7.8	9.4			
50GSC	220	60	CFM	3,884	3,443	3,090	2,501	1,080	347	326
			Sones	10.9	11.3	11.5	11.8			
	240	50	CFM	3,354	2,854	2,266	912	968	293	271
			Sones	11.7	13.8	14.5	15.4			
60GSC	220	60	CFM	5,038	4,349	3,943	3,560	1,088	384	361
			Sones	10.1	9.8	9.5	10.1			
	240	50	CFM	4,402	3,855	3,366	2,972	980	289	263
			Sones	10.3	8.6	8.5a	11.5			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings do not include the effects of appurtenances (accessories). The Speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating is only for AMCA test method and it is at the statistic pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method.

Wiring Diagram



High Pressure Series

Usage: Factory | Warehouse | Retail Store | Commercial Kitchen

45GTC / 50GTC / 60GTC

Three Phase

Reversible

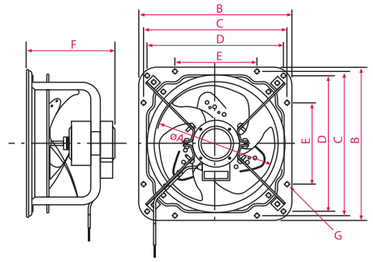
Optional Shutter

- Bell mouth construction with distinctive wave-shaped blade
- Durable powder coating
- Operable at an ambient temperature range from -10℃ to +50℃
- Possible to install horizontally or vertically
- Motor insulation Class E

Dimension

Unit : mm

Model	A	B	C	D	E	F	G
45GTC	450	570	540	-	320	297	12
50GTC	500	659	620	560	355	304	15
60GTC	620	760	720	650	400	320	15

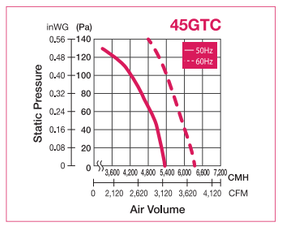


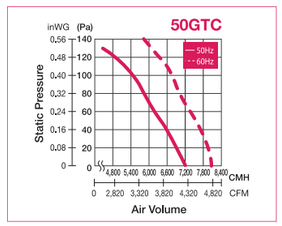
Specification

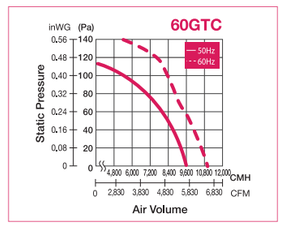
Model	Voltage		Air Volume		Consumption	RPM	Noise	Weight
	[V]	[Hz]	[CMH]	[CFM]	[W]		[dB(A)]	[kg]
45GTC	380	50	5,520	3,249	220	1,450	52	18.5
		60	6,420	3,779	330	1,690	56	
50GTC	380	50	6,960	4,097	320	1,400	54	28.5
		60	8,010	4,715	475	1,590	58	
60GTC	380	50	9,420	5,544	310	940	49	34
		60	10,920	6,427	450	1,070	53	

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of an inlet grill and backdraft damper. The speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

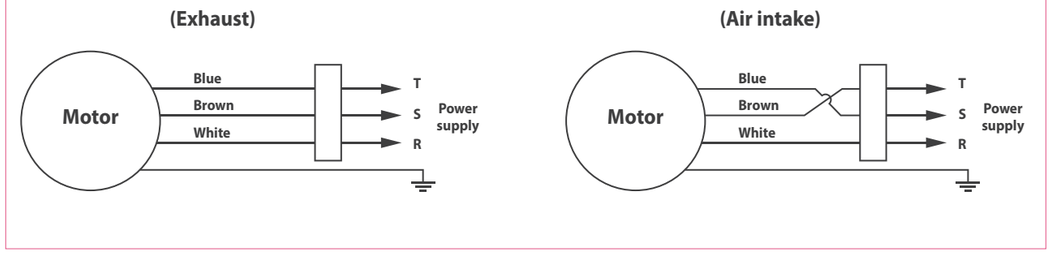
Performance Data





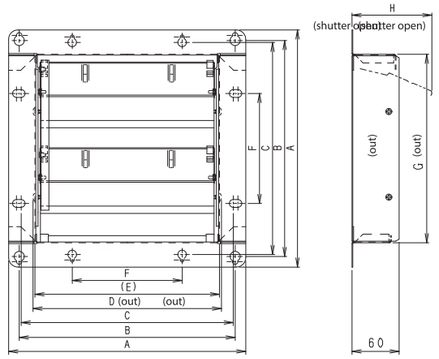


Wiring Diagram



Optional Accessories

25GASC / 30GASC / 35GASC
40GASC / 45GASC / 50GASC / 55GASC

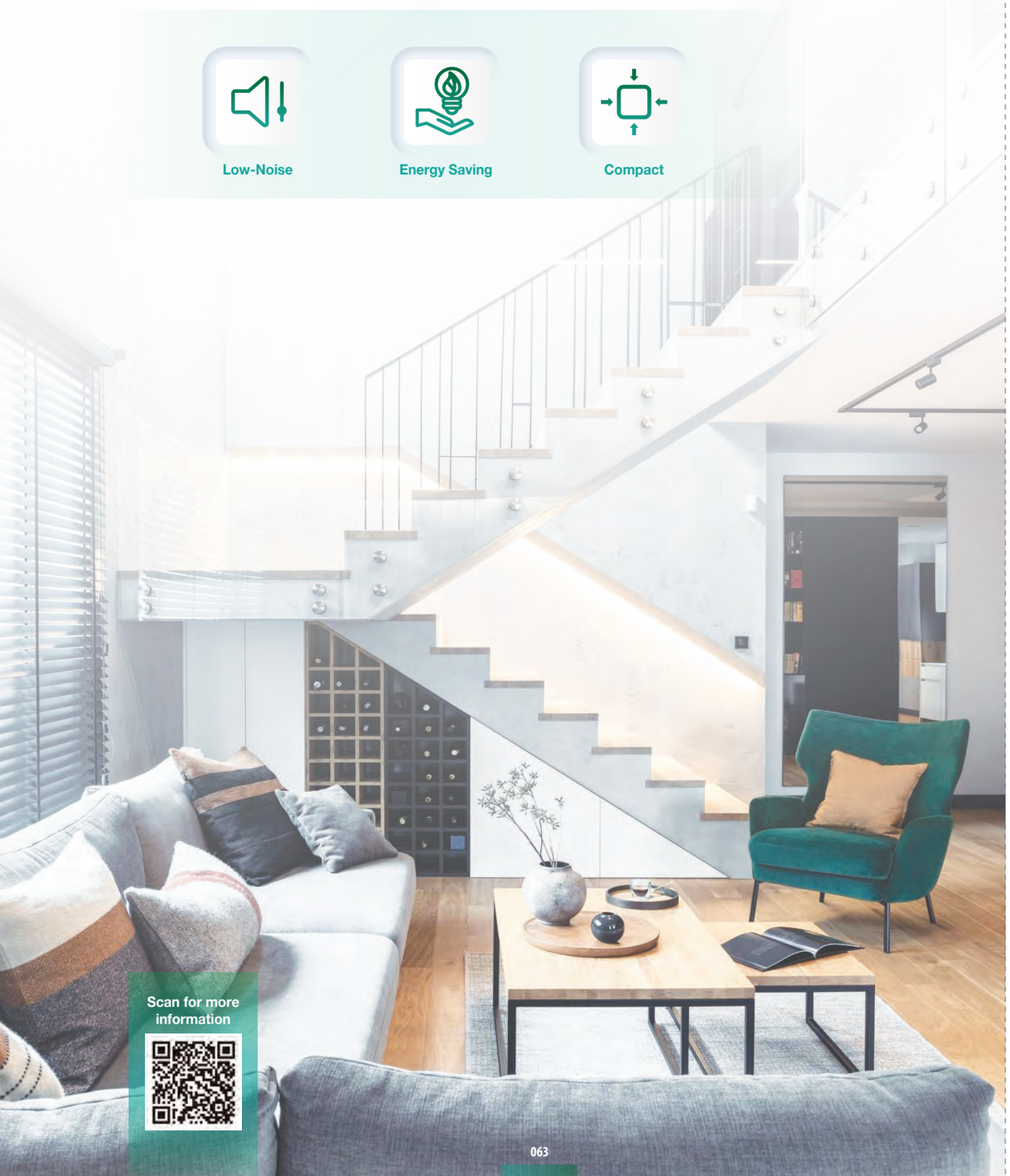


- Auto shutter for High Pressure Series
- Steel material
- Durable powder coating
- Available for wall mounting

Dimension Unit : mm

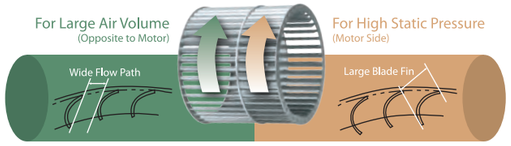
Model	Size	A	B	C	D	E	F	G	H	No. of Shutter	Applicable for
25GASC	25cm/10”	330	303	298	268	263	165	268	137	2	25GSE
30GASC	30cm/12”	381	354	349	319	314	210	319	122	3	30GSE
35GASC	35cm/14”	468	433	434	389	384	250	389	137	3	35GSE
40GASC	40cm/16”	519	484	485	440	435	280	440	122	4	40GSE
45GASC	45cm/18”	574	539	540	492	487	320	492	137	5	45GSC,45GTC
50GASC	50cm/20”	660	625	620	545	540	355	545	122	5	50GSC,50GTC
55GASC	60cm/24”	760	725	720	662	657	440	662	122	6	60GSC,60GTC

Cabinet Fan (In-line Fan)



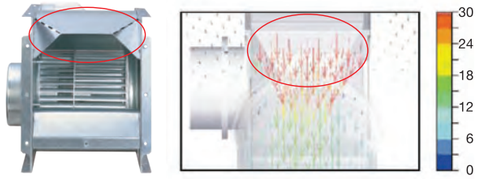
Low-noise Design

The newly developed twin flow fan achieves a better airflow inside the fan casiang. It is divided into two portions which can generate large air volume and high static pressure respectively.



Tapered Scroll

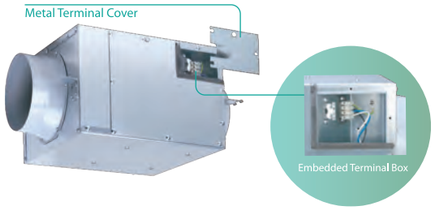
Wind velocity varies according to the shape of the casing. The tapered scroll at the casing minimizes turbulence induced by uneven wind velocity inside the casing.



Internal Wind Velocity Distribution – Airflow Analysis

Embedded Terminal Box

Terminal box is embedded into the product frame. The wiring to power supply is covered with metal enclosure that enhances the durability and safety level.

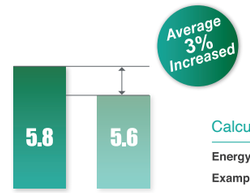


High Static Pressure

The distinctive design of twin flow fan and fan casing enable operation with high static pressure, which is approximate 10% average increased when compared with previous models. This increases the flexibility in your planning of ventilating system.

Energy Saving

The new structure design improves fan performance by increasing energy efficiency by 3%. In addition, energy saving is assured by reducing motor power consumption significantly.



Calculation based on 220V 60Hz

Energy Efficiency = Air Volume /Power Consumption

Example: Model No. 18NSB

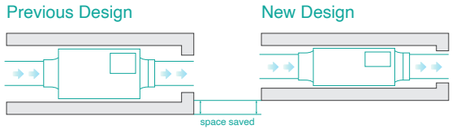
Air Volume	**= 490 CMH (Hi)**
Power Consumption	**= 73 W**
Energy Efficiency	**= 490 CMH/73W**
	= 6.7

Noise Reduction

With the twin flow fan and fan casing structure, the new models minimize the transmission of noise and reduce it by 6% while maintaining aair volume. This technology creates a more tranquil and pleasant environment.

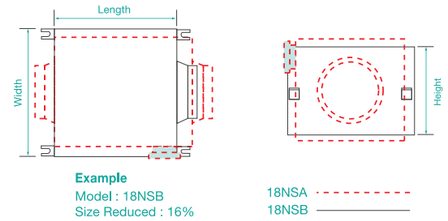
Easy Installation

A slim, compact and light body allows easy installation in narrow ceiling space, when compared with previous models.



Compact Size

With the newly designed structure, the product size is reduced by 9%, which increases the flexibility in installation.



Standard Series

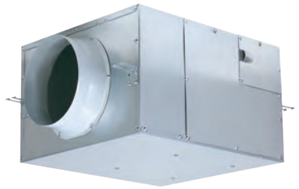
Usage: Living Room | Shopping Mall | Restaurant

12NSB / 15NSB

Sirocco Fan

Low Noise Design

Compact Size

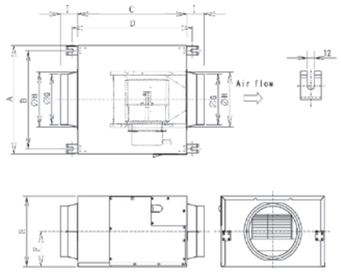


- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class E
- IP protection: IPX2

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H	I
12NSB	290	250	291	335	184	92	97	112	51
15NSB	290	250	302	346	206	103	145	163	60



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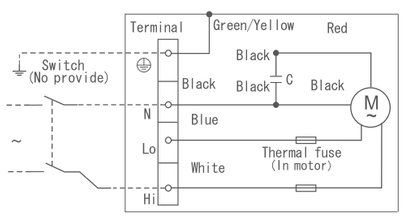
Specification

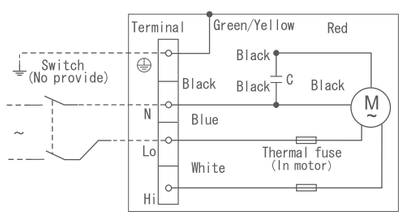
Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)										RPM	Watts*	Watts**
			inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5		FOR AMCA	FOR IEC
12NSB	220	60	CFM	114	105	102	87	65	-	-	-	-	-	1,460	26	23
			Sones	1.5	1.4	1.4	1.3	1.4	-	-	-	-	-			
	240	50	CFM	102	90	86	67	39	-	-	-	-	-	1,342	27	22
			Sones	2.0	1.7	1.6	1.4	1.5	-	-	-	-	-			
15NSB	220	60	CFM	200	183	177	149	118	83	-	-	-	-	1,520	45	42
			Sones	2.7	2.5	2.4	2.3	2.2	2.0	-	-	-	-			
	240	50	CFM	193	177	172	139	94	20	-	-	-	-	1,373	47	37
			Sones	3.7	3.4	3.2	2.6	2.5	2.8	-	-	-	-			

Performance certified is for installation type D: Ducted inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM) shown is nominal.
Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA International Standard 301.
Values shown are for installation Type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Wiring Diagram



High Notch



Low Notch

Standard Series

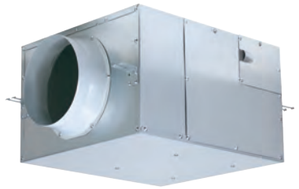
Usage: Living Room | Shopping Mall | Restaurant

18NSB / 18NFB

Sirocco Fan

Low Noise Design

Compact Size

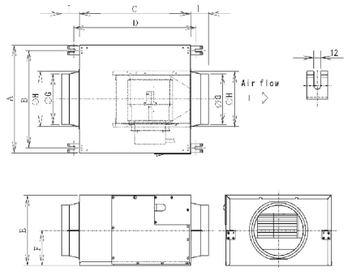


- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class E
- IP protection: IPX2

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H	I
18NSB	316	276	338	382	232	116	145	163	60
18NFB	376	336	397	441	254	127	195	211	70



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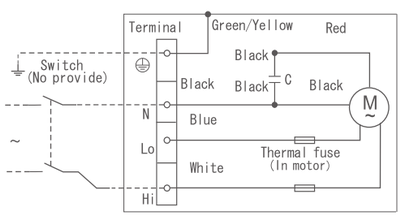
Specification

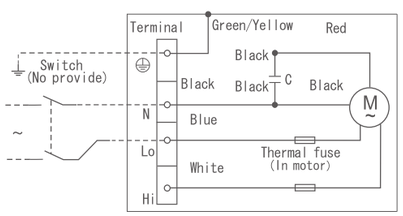
Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)										RPM	Watts*	Watts**
			inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5		FOR AMCA	FOR IEC
18NSB	220	60	CFM	274	261	258	241	222	196	137	-	-	-	1,470	80	73
			Sones	3.3	3.1	3.0	2.9	2.7	2.6	2.7	-	-	-			
	240	50	CFM	281	263	259	232	200	163	34	-	-	-	1,342	84	68
			Sones	4.8	4.4	4.4	3.8	3.4	3.0	2.9	-	-	-			
18NFB	220	60	CFM	417	399	395	373	347	318	237	-	-	-	1,420	128	119
			Sones	4.0	3.9	3.9	3.9	3.6	3.5	3.4	-	-	-			
	240	50	CFM	429	406	400	381	344	290	78	-	-	-	1,327	135	104
			Sones	5.6	5.4	5.4	5.1	4.6	4.3	4.2	-	-	-			

Performance certified is for installation type D: Ducted inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM) shown is nominal.
Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA International Standard 301.
Values shown are for installation Type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Wiring Diagram



High Notch



Low Notch

Standard Series

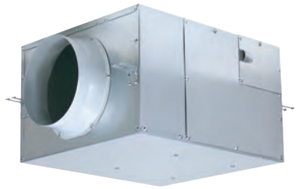
Usage: Living Room | Shopping Mall | Restaurant

20NSB / 23NLB

Sirocco Fan

Low Noise Design

Compact Size

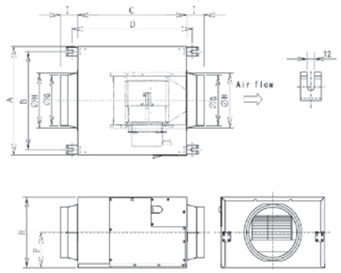


- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class E
- IP protection: IPX2

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H	I
20NSB	416	376	441	485	272	136	195	211	70
23NLB	468	424	469	513	298	149	195	211	70



KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certify that the Cabinet Fan – Standard Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)										RPM	Watts*	Watts**
			inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5		FOR AMCA	FOR IEC
20NSB	220	60	CFM	469	459	456	444	433	413	354	275	-	-	1,380	170	159
			Sones	4.0	4.0	3.9	3.8	3.9	4.0	4.1	4.2	-	-			
	240	50	CFM	517	500	495	464	424	382	265	110	-	-	1,328	175	135
			Sones	6.0	5.8	5.8	5.4	5.1	4.8	4.5	4.5	-	-			
23NLB	220	60	CFM	655	642	640	625	611	597	555	505	440	-	1,400	350	310
			Sones	6.0	6.0	5.9	5.9	5.7	5.7	5.8	5.8	5.8	-			
	240	50	CFM	688	670	664	642	614	579	493	388	199	-	1,342	347	260
			Sones	8.8	8.6	8.4	8.1	8.0	7.6	7.2	6.7	6.6	-			

Performance certified is for installation type D: Ducted inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM) shown is nominal.
Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA International Standard 301.
Values shown are for installation Type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
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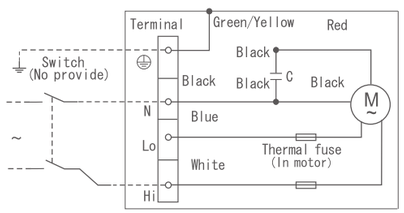
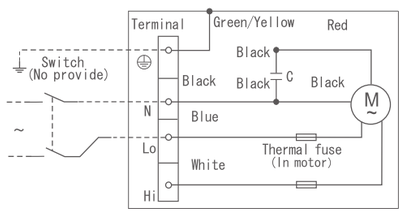
Wiring Diagram



High Notch



Low Notch

Standard Series

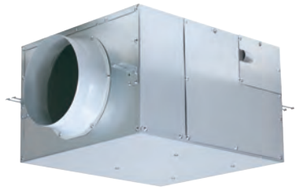
Usage: Living Room | Shopping Mall | Restaurant

25NSB / 25NFB

Sirocco Fan

Low Noise Design

Compact Size

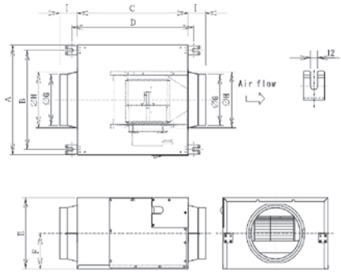


- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class E
- IP protection: IPX2

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H	I
25NSB	494	450	505	549	334	167	240	255	85
25NFB	494	450	505	549	334	167	240	255	85



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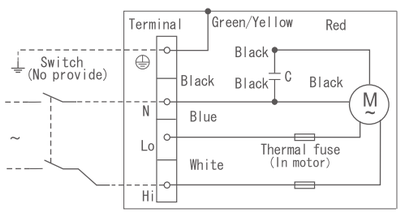
Specification

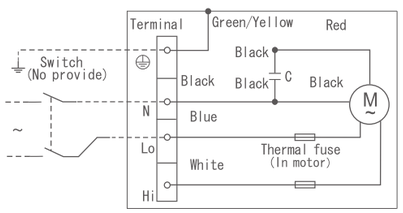
Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)										RPM	Watts*	Watts**
			inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5		FOR AMCA	FOR IEC
25NSB	220	60	CFM	940	924	919	899	877	857	790	710	610	502	1,380	460	425
			Sones	7.1	7.1	7.1	7.0	6.8	6.8	6.7	6.7	6.7	6.9			
	240	50	CFM	963	938	935	906	868	822	719	567	395	-	1,305	481	370
			Sones	10.1	9.8	9.7	9.3	9.2	8.8	8.0	7.5	8.2	-			
25NFB	220	60	CFM	1,016	1,000	995	975	954	933	875	803	710	590	1,420	680	520
			Sones	8.2	8.2	8.2	8.2	7.9	7.9	7.8	7.6	7.5	7.5			
	240	50	CFM	1,057	1,048	1,040	1,010	972	922	811	660	473	-	1,330	537	430
			Sones	12.1	11.9	11.5	11.1	10.6	9.8	8.7	8.7	10.3	-			

Performance certified is for installation type D: Ducted inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM) shown is nominal.
Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft (1.5m) in a hemispherical free field calculated per AMCA International Standard 301.
Values shown are for installation Type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Wiring Diagram



High Notch



Low Notch

Standard Series

Usage: Living Room | Shopping Mall | Restaurant

25SWC / 25SMC

Sirocco Fan

Low Noise Design

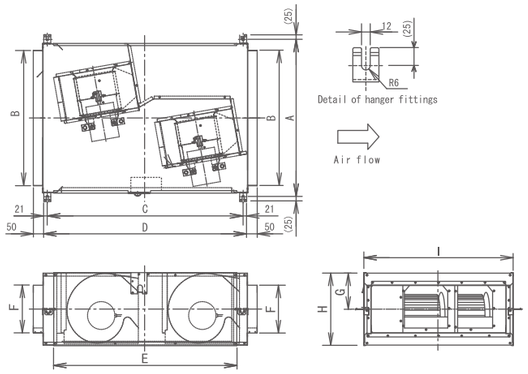
Compact Size

- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class F
- IP protection: IPX2

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H	I
25SWC	809	496	1,010	1,052	942	246	185	370	766
25SMC	809	696	1,010	1,052	942	246	185	370	766

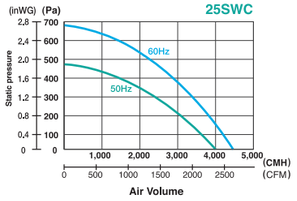


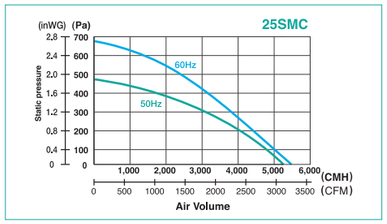
Specification

Model	Phase	Voltage [V]	Frequency [Hz]	Consumption [W]	RPM	Air Volume [CMH]	Air Volume [CFM]	Noise [dB(A)]	Weight [kg]	Duct Size [mm]	Impeller Diameter [mm]
25SWC	3	380	50	940	1,375	4,000	2,354	43	60	250 x 250	250
			60	1,450	1,530	4,500	2,648	45			
25SMC	3	380	50	1,180	1,345	5,200	3,060	45	60	250 x 700	250
			60	1,750	1,470	5,500	3,237	46			

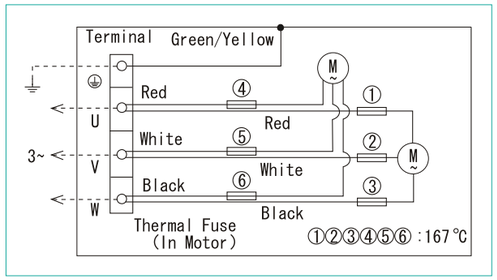
Note:
The value in specification tables are representative characteristic value at 380V 50/60Hz.
RPM data is for reference only. Values may vary subject to different conditions.

Performance Data (380V 50/60Hz)





Wiring Diagram



Standard Series

Usage: Living Room | Shopping Mall | Restaurant

28NXC

Sirocco Fan

Low Noise Design

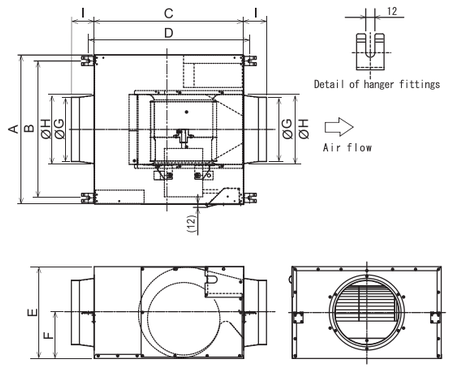
Compact Size

- Long life condenser motor with thermal cut-off
- Twin flow fan (sirocco fan)
- Fan casing with tapered scroll
- Embedded terminal box
- Noise absorption material adopted
- Motor insulation Class F
- IP protection: IPX2

Dimension

Unit : mm

Model	A	B	C	D	E	F	G	H	I
28NXC	554	510	557	601	342	171	240	255	85

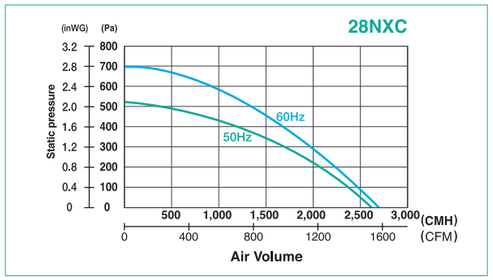


Specification

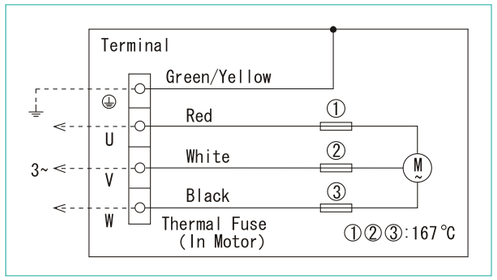
Model	Phase	Voltage [V]	Frequency [Hz]	Consumption [W]	RPM	Air Volume [CMH]	Air Volume [CFM]	Noise [dB(A)]	Weight [kg]	Duct Size [mm]	Impeller Diameter [mm]
28NXC	3	380	50	600	1,295	2,600	1,530	44	28	Ø250	280
			60	840	1,380	2,650	1,560	45			

Note:
The value in specification tables are representative characteristic value at 380V 50/60Hz.
RPM data is for reference only. Values may vary subject to different conditions.

Performance Data (380V 50/60Hz)



Wiring Diagram



In-line Centrifugal Fan

High Performance | Long Life | Low-Noise | Safe

Features

High Precision Engineering

Features a high-performance external rotor motor, integrated thermal protector, and premium ball bearings to ensure consistent and dependable operation.

Long Life

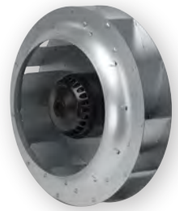
Long Operational Lifespan

Engineered for longevity, supporting continuous use for up to 40,000 hours.

Low Noise & Vibration

Double-sided dynamically balanced fan blades provide smooth, quiet, and vibration-free performance.

10MMA/12MMA/15MMA/ 16MMA/20MMA/25MMA



31MMA

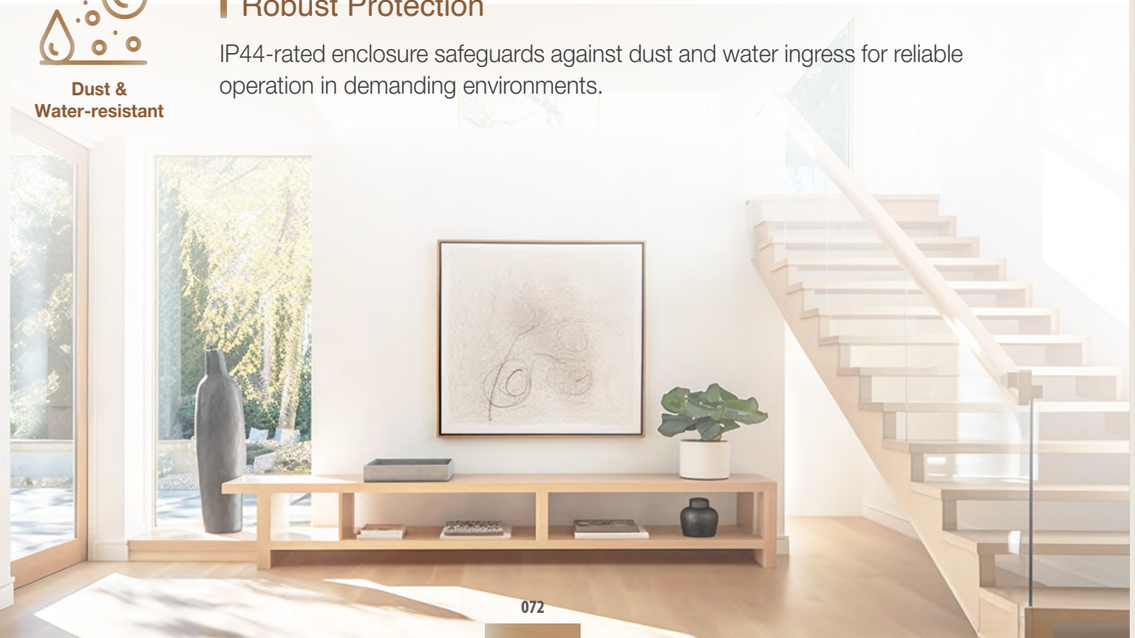
Optimized Airflow Design

Centrifugal structure with Class F insulation above for enhanced performance and safety.

Dust & Water-resistant

Robust Protection

IP44-rated enclosure safeguards against dust and water ingress for reliable operation in demanding environments.



In-line Centrifugal Fan

Usage: Commercial Residential

10MMA / 12MMA / 15MMA / 16MMA / 20MMA

Centrifugal Fan

Low Noise Design

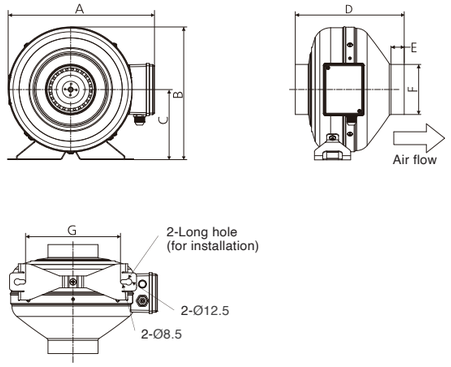
IP44 Protection

- Equipped with a high-performance external rotor motor
- Premium ball bearings
- Integrated thermal protector
- Long Operational Lifespan
- Low Noise & Vibration
- Optimized Airflow Design
- Motor Insulation Class F
- IP protection: IP44

Dimension

Unit : mm

Model	A	B	C	D	E	ØF	G	Duct Dimension
10MMA	285	258	137	213	26	97	196	Ø100
12MMA	285	258	137	203	26	123	196	Ø125
15MMA	375	348	181	266	25	147	267	Ø150
16MMA	375	348	181	260	25	157	267	Ø160
20MMA	375	348	181	245	25	197	267	Ø200



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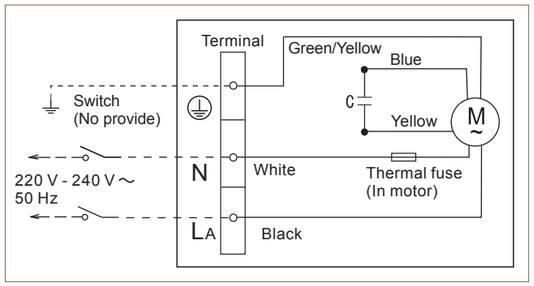
Specification

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)												RPM	Watts*	Watts**
			inches of H_2O	0.000	0.121	0.201	0.402	0.603	0.804	1.005	1.206	1.507	1.808	2.009	2.411		FOR AMCA	FOR IEC
10MMA	240	50	CFM	161	152	146	125	108	87	66	-	-	-	-	-	2,606	63	57
			Sones	8.8	8.5	8.4	8.0	7.5	7.2	6.9								
12MMA	240	50	CFM	197	178	169	144	121	100	74	49	-	-	-	-	2,580	63	58
			Sones	9.9	9.5	9.3	8.8	8.4	8.0	7.6	7.1							
15MMA	240	50	CFM	413	390	375	332	288	246	203	163	106	-	-	-	2,495	104	97
			Sones	11.1	10.9	10.8	10.5	10.2	10.2	10.2	10.9	10.6						
16MMA	240	50	CFM	487	462	440	390	337	294	250	212	146	-	-	-	2,311	136	128
			Sones	10.6	10.3	10.3	10.1	10.2	10.3	11.1	10.5	9.1						
20MMA	240	50	CFM	553	523	506	460	421	379	332	284	229	163	121	-	2,535	181	174
			Sones	11.2	10.9	10.8	10.2	9.9	9.6	9.7	10.2	12.2	12.5	12.9				

Performance certified is for installation type D: Ducted inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM) shown is nominal.
Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301.
Values shown are for installation type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction.
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Wiring Diagram



In-line Centrifugal Fan

Usage: Commercial Residential

25MMA

Centrifugal Fan

Low Noise Design

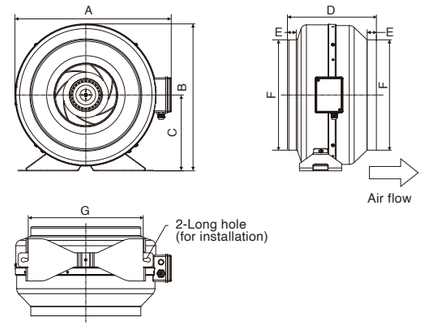
IP44 Protection

- Equipped with a high-performance external rotor motor
- Premium ball bearings
- Integrated thermal protector
- Long Operational Lifespan
- Low Noise & Vibration
- Optimized Airflow Design
- Motor Insulation Class F
- IP protection: IP44

Dimension

Unit : mm

A	B	C	D	E	ØF	G	Duct Dimension
375	348	181	219	25	247	267	Ø250



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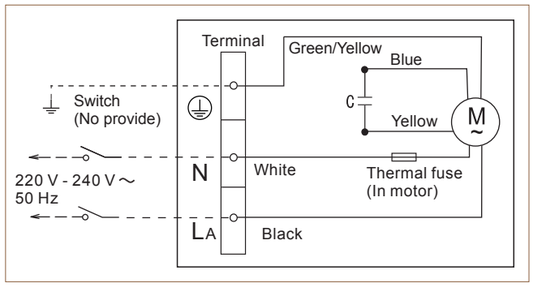
Specification

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)												RPM	Watts*	Watts**
			inches of H_2O	0.000	0.121	0.201	0.402	0.603	0.804	1.005	1.206	1.507	1.808	2.009	2.411		FOR AMCA	FOR IEC
25MMA	240	50	CFM	555	532	515	474	436	394	352	307	250	186	140	-	2,643	178	165
			Sones	11.7	11.2	11.1	10.5	10.1	9.7	9.3	9.1	10.0	12.3	13.3				

Performance certified is for installation type D: Ducted inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM) shown is nominal.
Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301.
Values shown are for installation type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction.
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Wiring Diagram



In-line Centrifugal Fan

Usage: Commercial Residential

31MMA

Centrifugal Fan

Low Noise Design

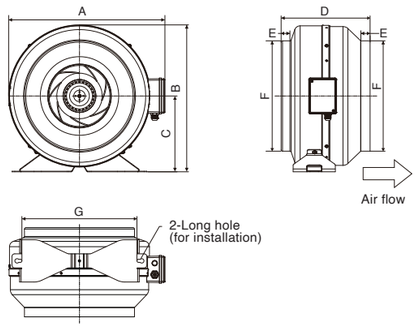
IP44 Protection

- Equipped with a high-performance external rotor motor
- Premium ball bearings
- Integrated thermal protector
- Long Operational Lifespan
- Low Noise & Vibration
- Optimized Airflow Design
- Motor Insulation Class H
- IP protection: IP44

Dimension

Unit : mm

A	B	C	D	E	ØF	G	Duct Dimension
445	416	215	255	26	313	327	Ø315



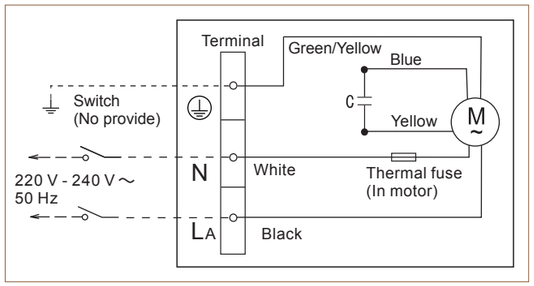
Panasonic Ecology Systems Guangdong Co., Ltd. certifies that the In-line Centrifugal Fan Series shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)												RPM	Watts*	Watts**
			inches of H_2O	0.000	0.121	0.201	0.402	0.603	0.804	1.005	1.206	1.507	1.808	2.009	2.411		FOR AMCA	FOR IEC
31MMA	240	50	CFM	953	908	883	805	709	601	504	438	366	307	263	159	2,519	246	238
			Sones	17.7	17.1	16.5	15.6	14.4	12.5	12.0	12.1	13.6	17.4	20.0	21.1			

Performance certified is for installation type D: Ducted inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM) shown is nominal.
Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301.
Values shown are for installation type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction.
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Wiring Diagram



Mini Sirocco Fan

High Performance

Durable

Easy Installation

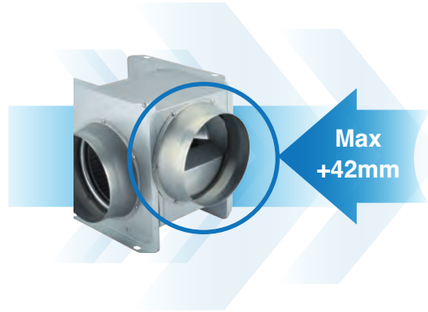
Mini Sirocco Fan

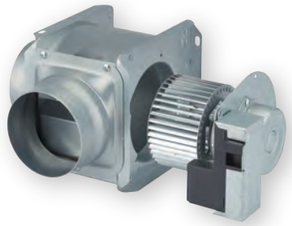
More Compact

With the optimal air passage design, the body size is compact. It enables easy installation in narrow and limited space environment.

Higher Duct Connectivity

After the improvement on the adapter design, the duct connectivity is enhanced with the extended adapter.



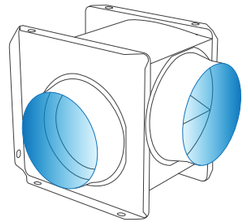


Simplified Maintenance

By unitizing the fan and motor as one single unit, the impeller can be replaced and cleaned without removing the duct. It facilitates more user-friendly maintenance.

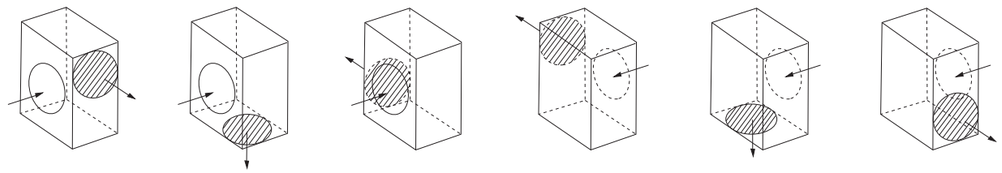
Easy Installation

The inlet and outlet of the sirocco fan are of the same size for easy connection to a ducted system. The fan can be mounted on the ceiling.



Adjustable Outlet Direction

With the mounting feet on the fan body, installation has become easier. Outlet direction is adjustable to fit vertical or horizontal position.



Various installing patterns satisfy different installation space

Mini Sirocco Fan

Usage: Locations where high air volume is needed

10CGB / 12CGB / 14CGB
16CGB / 17CGB / 19CGB / 21CGB

Optimal Air Passage

High Duct Connectivity

Easy Installation

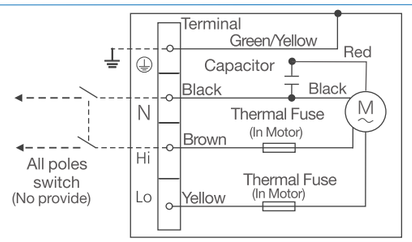
- Forward curve fan
- Galvanized steel
- Compact size for narrow space installation
- Extended adapter for higher connectivity
- Long life induction motor with thermal cut-off
- Well-lubricated ball bearing for long life operation
- Highly efficient sirocco fan designed for powerful airflow
- Outlet direction adjustable to vertical or horizontal position
- Motor IP rating:
  Class E for 10CGB, 12CGB, 14CGB, 16CGB, 17CGB & 19CGB
  Class F for 21CGB
- Insulation class: IPX2

Wiring Diagram

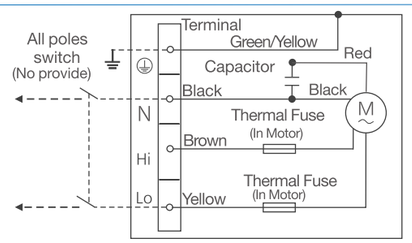
- Wiring connection when not use speed switch.

10/12/14/16/17/19/21CGB

High notch

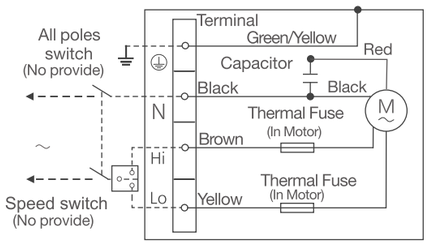


Low notch



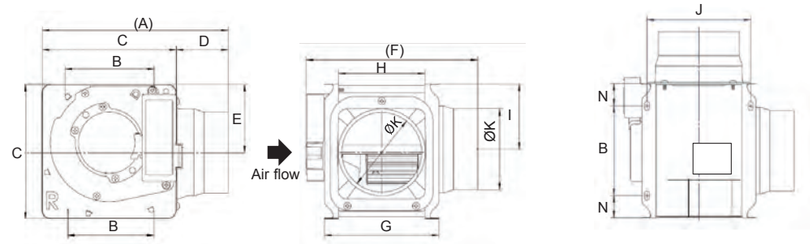
- Wiring connection when use speed switch.

10/12/14/16/17/19/21CGB

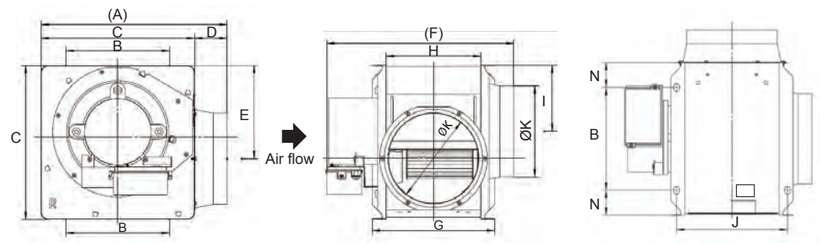


Dimensions Unit: mm

10CGB **12CGB / 14CGB** **16CGB** **17CGB / 19CGB**



21CGB



Model	A	B	C	D	E	F	G	H	I	J	K	N	Connector Duct Dimension (mm)
10CGB	226	109	163	63	83	207	138	104	79	126	98	27	Ø100
12CGB	269	145	209	60	112	236	170	136	101	158	146	32	Ø150
14CGB													
16CGB	330	196	270	60	170	264	189	155	117	177	146	37	Ø150
17CGB	400	222	330	71	200	332	263	203	142	239	195	55	Ø200
19CGB													
21CGB	400	222	330	71	200	403	263	203	142	239	195	55	Ø200

Specification

Model	Voltage [V]	Frequency [Hz]	Speed	Air Volume [CMH]	Consumption [W]	Noise Level [dB]		Net Weight [kg]
						Inlet	Side	
10CGB	220	50	Hi	154	15	41.0	28.0	1.9
			Lo	115	12	35.5	24.0	
		60	Hi	133	12	36.5	24.0	
			Lo	93	9	28.5	20.0	
	230	60	Hi	143	13	38.0	25.0	
			Lo	100	10	30.5	20.0	
	220-240	50	Hi	134-143	10-11	37.0-39.0	23.0-25.0	
			Lo	110-125	9-10	32.0-35.0	20.0-23.0	
12CGB	220	50	Hi	250	22	44.0	29.0	2.5
			Lo	175	16	32.0	19.0	
		60	Hi	225	25	42.5	29.0	
			Lo	145	18	32.0	21.0	
	230	60	Hi	242	27	44.0	30.0	
			Lo	153	19	34.0	21.5	
	220-240	50	Hi	233-262	23-28	44.5-46.5	29.0-32.0	
			Lo	156-175	19-23	33.0-36.0	18.0-20.0	
14CGB	220	50	Hi	332	35	50.0	34.0	2.8
			Lo	226	28	40.0	26.0	
		60	Hi	260	30	43.0	30.0	
			Lo	200	25	35.5	25.0	
	230	60	Hi	275	33	44.5	31.5	
			Lo	212	28	37.5	26.0	
	220-240	50	Hi	280-315	28-32	44.5-46.5	31.0-33.0	
			Lo	227-265	26-30	40.0-44.0	27.0-31.0	
16CGB	220	50	Hi	509	50	49.0	35.0	5.6
			Lo	405	43	43.5	30.0	
		60	Hi	483	57	48.0	32.0	
			Lo	372	44	41.0	27.0	
	230	60	Hi	503	61	49.0	34.5	
			Lo	393	48	42.5	29.0	
	220-240	50	Hi	509-542	50-56	49.0-51.5	35.0-38.0	
			Lo	405-450	43-48	43.5-46.0	30.0-32.0	

Specification

Model	Voltage [V]	Frequency [Hz]	Speed	Air Volume [CMH]	Consumption [W]	Noise Level [dB]		Net Weight [kg]
						Inlet	Side	
17CGB	220	50	Hi	791	86	50.0	36.0	10.1
			Lo	640	70	44.0	31.0	
		60	Hi	752	95	49.0	34.0	
			Lo	612	73	43.5	29.0	
	230	60	Hi	789	104	50.0	35.0	
			Lo	641	80	44.0	31.0	
	220-240	50	Hi	791-875	86-101	50.0-52.5	36.0-39.0	
			Lo	640-705	70-83	44.0-47.0	31.0-32.0	
19CGB	220	50	Hi	947	121	55.0	41.0	10.2
			Lo	857	105	51.5	37.0	
		60	Hi	885	127	52.0	39.0	
			Lo	760	107	48.0	37.0	
	230	60	Hi	931	140	53.5	40.0	
			Lo	791	117	49.5	36.5	
	220-240	50	Hi	919-997	113-130	52.0-54.0	40.0-42.0	
			Lo	804-880	99-115	50.0-52.0	38.0-40.0	
21CGB	220	50	Hi	1420	238	67.0	54.0	14.6
			Lo	1143	182	60.0	47.0	
		60	Hi	1500	328	68.0	57.0	
			Lo	1042	215	58.0	47.0	
	230	60	Hi	1550	342	69.0	57.5	
			Lo	1100	230	59.5	48.0	
	220-240	50	Hi	1420-1435	238-247	66.0-67.0	54.0-55.0	
			Lo	1143-1220	182-197	60.0-62.5	47.0-51.0	

Notes:
① The values of rated input, air volume and noise are specified at the static pressure of 0 Pa.
② The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 and -7 tolerance.
③ The values of noise level are measured at the 1.5m apart from the inspection panel of the fan body when ducts are connected on both inlet and outlet side. It is based on the assumption that the noise of fan body propagates to room inside.
④ The values of air volume are the mid-points of results measured by our company, with ±10% tolerance.

Accessories - Pipe Hood

MGX100K / MGX150K
MCX100K / MCX150K

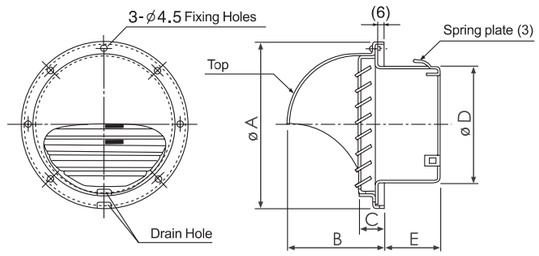
With Net (MGX)

Without Net (MCX)

Dimension

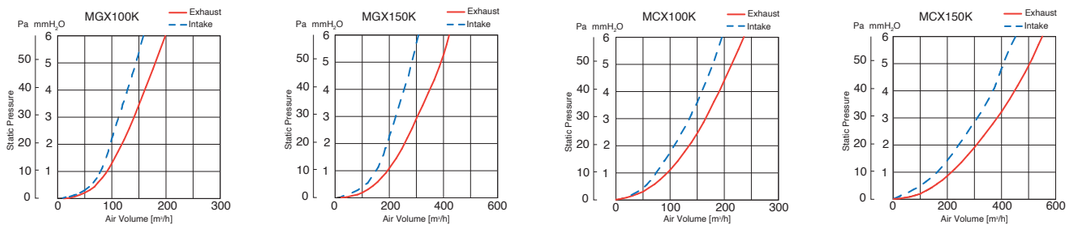
Unit : mm

Model	A	B	C	D	E
MGX100K	141	79	20	97	48
MGX150K	190	106	23	147	53
MCX100K	141	79	20	97	48
MCX150K	190	106	23	147	53



- High strength - adopt 0.5mm thickness SUS 304 Stainless steel
- Excellent anti-rust capability - hood part coated with metallic silver paint prevents oxidation of material
- Easy installation - 3pcs of spring clip facilitate duct/pipe connection
- 2.5x2.5mm net keep out ingress of small particles and insects from outside (MGX100K & MGX150K)
- It is recommended to use pipe hood with net at intake terminal while with-out net at exhaust

Performance Data



Specification

Model	Diameter of Applicable Pipe [mm]	Material	Dimension of Net [mm]
MGX100K	100	Stainless Steel	2.5 x 2.5
MGX150K	150	Stainless Steel	2.5 x 2.5
MCX100K	100	Stainless Steel	-
MCX150K	150	Stainless Steel	-

Accessories - Vent Cap

VGX100K / VGX150K
VCX100K / VCX150K

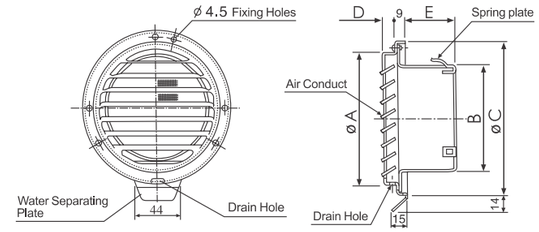
With Net (VGX)

Without Net (VCX)

Dimension

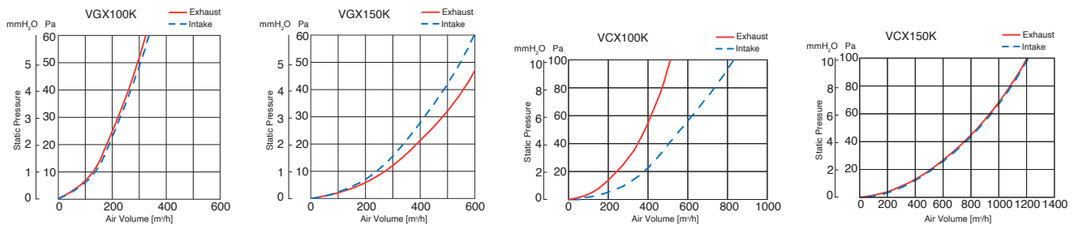
Unit : mm

Model	A	B	C	D	E
VGX100K	120	97	145	13	47
VGX150K	169	149	195	18	52
VCX100K	120	97	145	13	47
VCX150K	169	147	195	18	52



- High strength and excellent anti-rust capability - adopt 0.5mm thickness SUS 304 Stainless steel
- Easy installation - 3pcs of spring clip facilitate duct/pipe connection
- 2.5x2.5mm net keep out ingress of small particles and insects from outside (VGX100K & VGX150K)
- It is recommended to use pipe cap with net at intake terminal while with-out net at exhaust

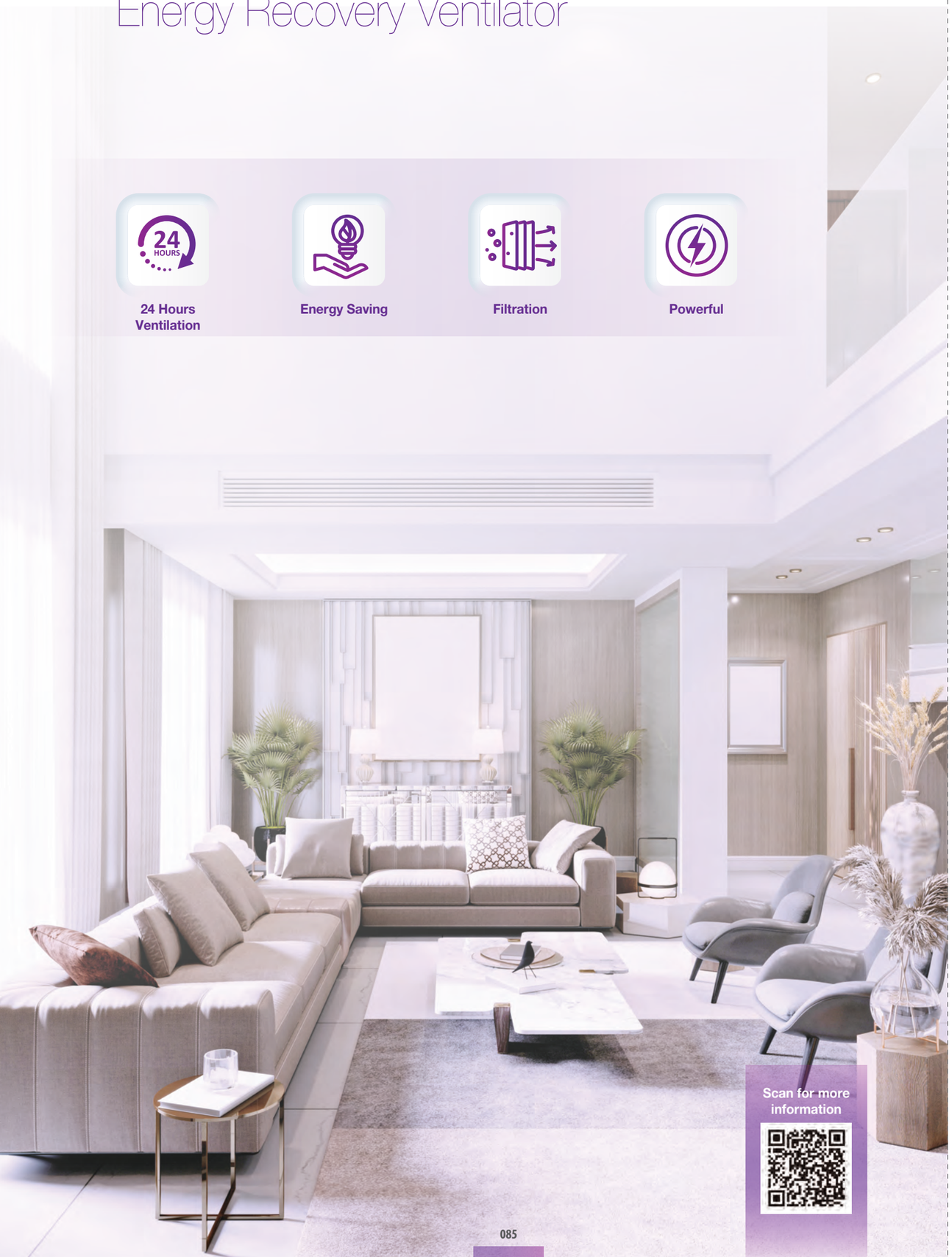
Performance Data



Specification

Model	Diameter of Applicable Pipe [mm]	Material	Dimension of Net [mm]
VGX100K	100	Stainless Steel	2.5 x 2.5
VGX150K	150	Stainless Steel	2.5 x 2.5
VCX100K	100	Stainless Steel	-
VCX150K	150	Stainless Steel	-

Energy Recovery Ventilator



24 Hours Ventilation

Energy Saving

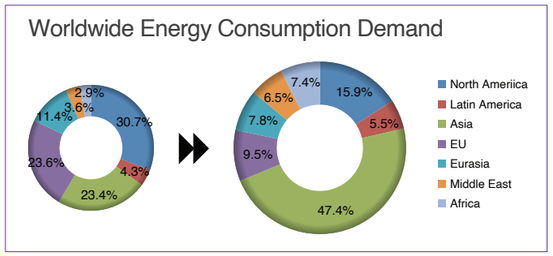
Filtration

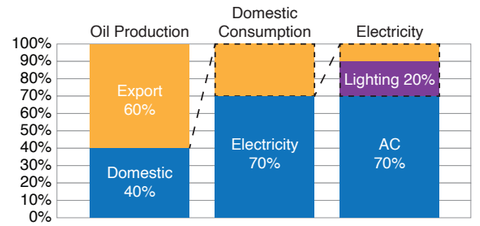
Powerful

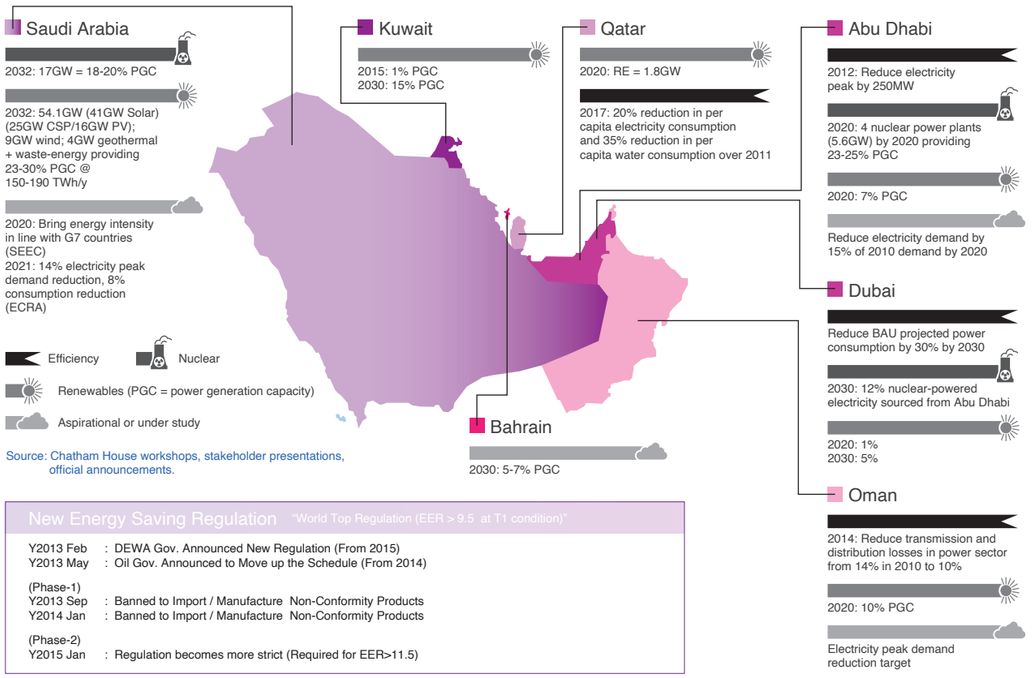
Scan for more information

Energy Consumption Demand

There is a significant increase in the energy consumption demand globally, which is illustrated as in below charts.







Source: Chatham House workshops, stakeholder presentations, official announcements.

New Energy Saving Regulation "World Top Regulation (EER > 9.5 at T1 condition)"

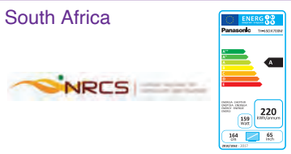
Y2013 Feb	:	DEWA Gov. Announced New Regulation (From 2015)
Y2013 May	:	Oil Gov. Announced to Move up the Schedule (From 2014)
(Phase-1)		
Y2013 Sep	:	Banned to Import / Manufacture Non-Conformity Products
Y2014 Jan	:	Banned to Import / Manufacture Non-Conformity Products
(Phase-2)		
Y2015 Jan	:	Regulation becomes more strict (Required for EER>11.5)

Energy Saving Label Regulation

Significant energy saving could be achieved by using energy efficient appliances which help reducing the emission of greenhouse gases and other air pollutants from the power plants. To further facilitate the public in choosing energy efficient appliances and to raise public awareness on energy saving, Energy Labelling Schemes have been introduced.

Jordan

South Africa



UAE

Egypt

Iran

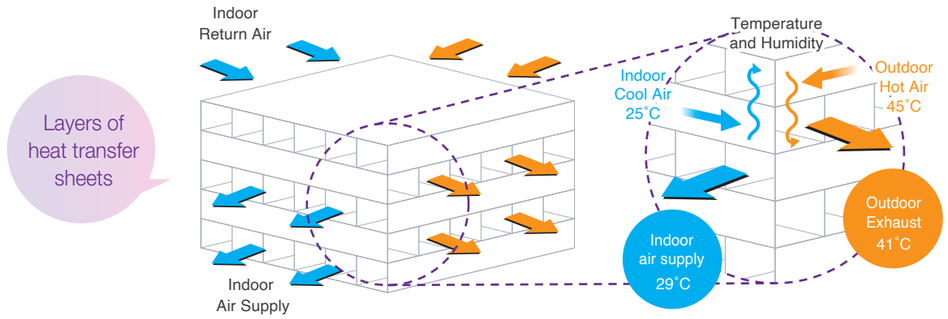
Saudi Arabia

Feature of Energy Recovery Ventilator

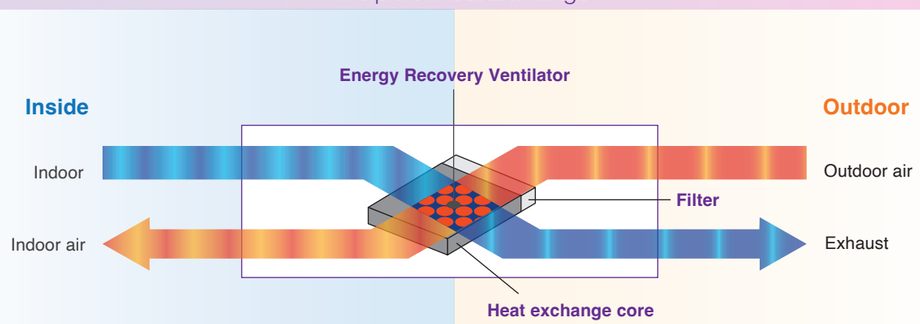
KDK Energy Recovery Ventilator is equipped with heat exchange core element. When outdoor fresh air and indoor foul air pass through the heat exchange core element, heat carried by the air is exchanged through air flow and heat conduction at the heat transfer sheets. Meanwhile, humidity exchange occurs from high humidity to low humidity as moisture is transferred due to the difference in pressure of water vapour.

Energy Saving

Inside of Heat Exchange Core (diagram)

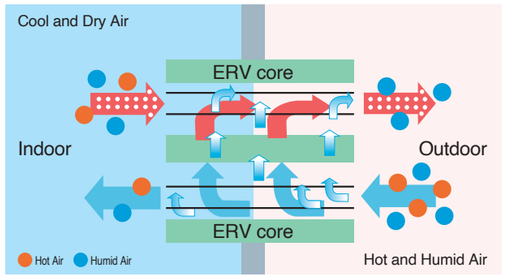


Principle of Heat Exchange



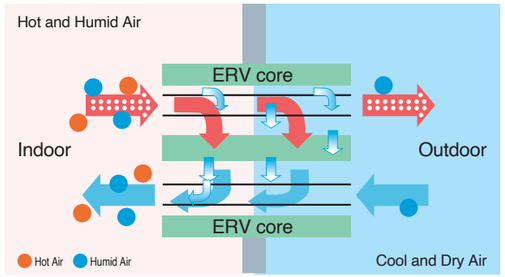
Summer

In summer, the indoor cool air discharged can be used to precool outdoor warm air before it gets delivered indoor and so reduces the cooling effort.



Winter

Whereas in winter, indoor warm air discharged can be used to preheat outdoor cool air before it is released indoor and so saves some energy of heating.



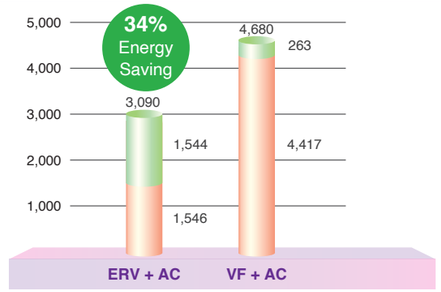
Cost Efficient

Highly efficient energy recovery reduces energy loss during ventilation, and hence achieves energy saving.

Long Term Energy Consumption Comparison

Comparison of the energy consumption over 180 days between using energy recovery ventilator and ventilating fan, in cooperation with air conditioning.

Power Consumption of Fan and Air Conditioning



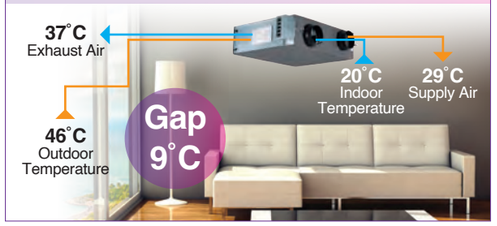
Based on the following condition

Simulation place: Aug Riyadh Saudi Arabia
Room Area = 210 m²
Room Height = 3 m
Required Air Volume = 315 CMH
A/C system running time : 2700h =15h/day*180day (May~Oct)
ERV : E35DZUA (2unit) 282W*2 = 564W
V-Fan : General (6unit) 48W*6 = 288W

Summer

By utilizing the returned indoor cool air to cool down the outdoor air before it enters indoor, the indoor cooling cost can be reduced.

Energy Recovery Ventilation + Air Conditioning



Normal Ventilation + Air Conditioning

Energy saving while holding down the air-conditioning cost

ERV can pre-cool (in summer) or pre-heat (in winter) the incoming air through the heat exchange mechanism with the outgoing air. This can largely save the cost of indoor air conditioning.

Keeping comfortable indoor temperature regardless the condition outdoor

When it is cold outside, the incoming air is preheated by the outgoing warmed air before entering indoor.

When it is hot outside, the incoming air is pre-cooled by the outgoing cooled air before entering indoor.

Aiding effective soundproof

Energy recovery ventilator operates in an airtight indoor environment while keeping high performance of ventilation. As a result, indoor sound like night music and video can be enjoyed without worrying sound leakage to the outside.

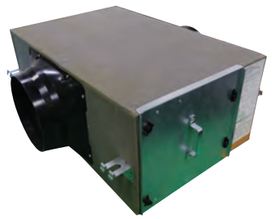
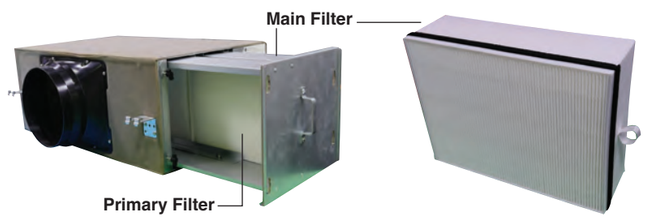
Likewise, airtight houses can effectively block the noise from outside entering indoor while energy recovery ventilator keeps up high performance of ventilation.

Filter Box Specially for Middle East Region to Bring You Clean Air

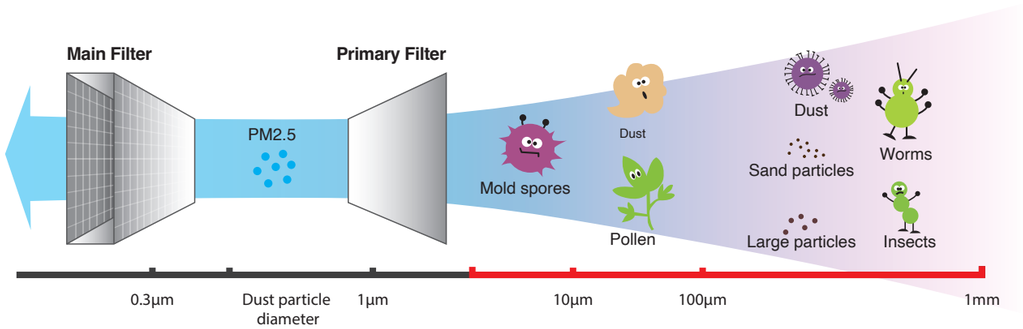
KDK filter box is part of the ERV designed to make the indoor spaces insect free, dustproof and pollen free, such that fresh air can be circulated.

There are two filters, Primary Filter and PM2.5 Filter in one box. Incoming air firstly passes through Primary Filter which filters large particles like sand and insect. Then the tiny and invisible particles are further trapped by PM2.5 Filter. The ERV can bring you clean, fresh and comfortable air with these two layers of filters.

Filter Box

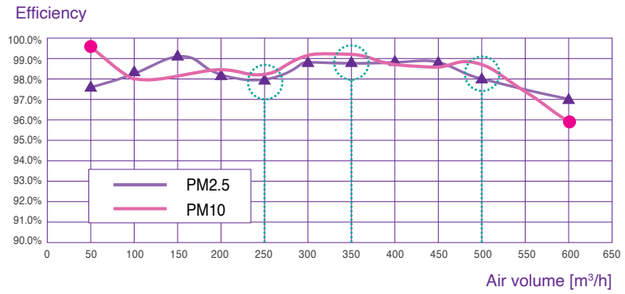
Filter Box Unit	Outside Air Filter
	Recommend to change every 2-4 months 

PM2.5 and PM10 Filter



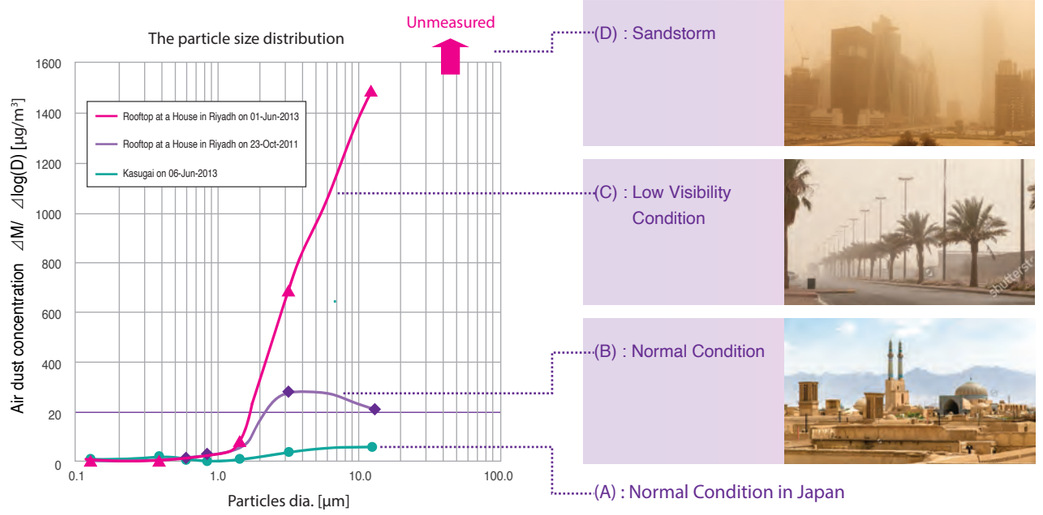
Filter Efficiency - Effectively capture PM2.5 and PM10 particles to deliver clean air to indoor

Model	Air Volume	PM 2.5	PM 10
E25DZUA	250	98%	98.2%
E35DZUA	350	99%	99.2%
E50DZUA	500	98%	98.8%



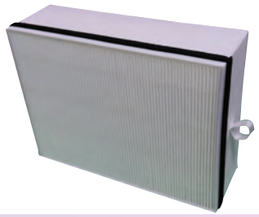
Dust Polluted Air in Riyadh

Comparison of the particle size distribution of air dust (At a House in Riyadh)



Field test result in Saudi Arabia

Sand dust carries large number of 2-10 micrometre particles. KDK ERV is well equipped with filter box specially designed for Middle East environment.

	
New, Clean PM 2.5 Filter	Dirty PM 2.5 Filter after 1 month field test

KDK PM 2.5 Filter has high efficiency to capture PM 2.5 and PM 10.
Field Test Period: 4th Nov 2014 – 15th Dec 2014

Ignition Loss Test* result in Saudi Arabia

Large particle can be effectively trapped by the filter. There are many pollutants can be obtained by filters.

Standard Pre-filter	Collection amount (g)	13.2	
	Moisture (%)	2.5	
	Inorganic matter (%)	60.7	

PM 2.5 Filter	Collection amount (g)	2.5	
	Moisture (%)	3.0	
	Inorganic matter (%)	61.7	

* Test Period: 2014/11/04~2014/12/15 Test Filter: FY-FBG25C

Standard Series

Usage: Living Room | Shopping Mall | Office

E25DZUA

Energy Exchange

Speedy Exhaust

Interlocking with A/C

- Counter-flow heat-exchange element adopted for compact size
- Ease of maintenance through a single inspection hole
- Equipped with Extra-High setting
- Bypass ventilation for speedy exhaust
- Interlocking with air conditioning
- Motor insulation Class E
- IP protection: IPX2

KDK Company, Division of PES and Panasonic Ecology Systems Guangdong Co., Ltd. certify that the Energy Recovery Ventilator shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Specification

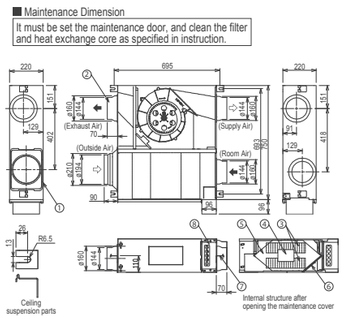
Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)												RPM	Watts*	Watts**
			Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5	1.75		FOR AMCA	FOR IEC
E25DZUA	220	60	CFM (OA-SA)	183	172	168	155	143	131	108	77	14	-	-	1,448	197	171
			CFM (RA-EA)	130	118	115.5	104	91	77	44	0	-	-	-	1,387	187	

Performance certified is for installation type D-Ducted inlet, Ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).*
Air performance ratings for gross supply airflow are from port 2. Air performance ratings for gross exhaust airflow are to port 3.
* The Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** The Watts rating is only for IEC test method and AMCA Certified Rating Seal does not apply to IEC test method watts.

Dimension Unit : mm

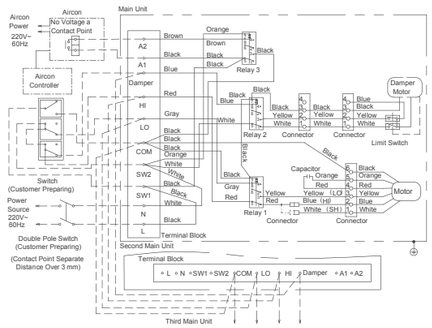
■ Maintenance Dimension

It must be set the maintenance door, and clean the filter and heat exchange core as specified in instruction.

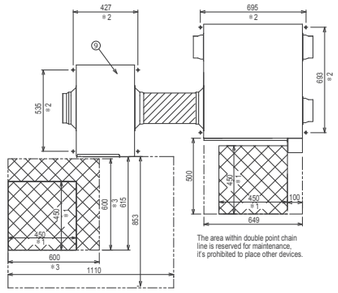


No.	Part name	Qty	Material
1	Frame	1	Galvanized Steel Sheet
2	Adapter	4	ABS
3	Impeller	2	PP
4	Fan Motor	1	/
5	Heat Exchange Core	1	Special Paper and Resin
6	Indoor Filter	1	/
7	Ceiling Suspension	4	Galvanized Steel Sheet
8	Switch Box	1	Galvanized Steel Sheet
9	Filter Box Unit	-	/

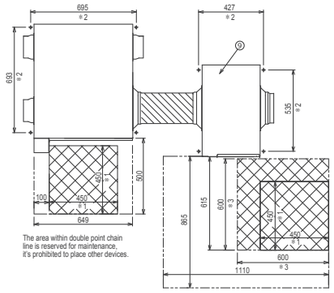
Wiring Diagram



Installation method for case 1



Installation method for case 2



Standard Series

Usage: Living Room | Shopping Mall | Office

E35DZUA

Energy Exchange

Speedy Exhaust

Interlocking with A/C

- Counter-flow heat-exchange element adopted for compact size
- Ease of maintenance through a single inspection hole
- Equipped with Extra-High setting
- Bypass ventilation for speedy exhaust
- Interlocking with air conditioning
- Motor insulation Class E
- IP protection: IPX2

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Specification

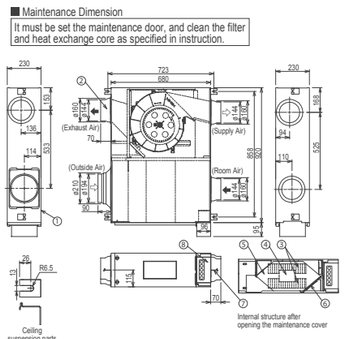
Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)												RPM	Watts*	Watts**
			Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5	1.75		FOR AMCA	FOR IEC
E35DZUA	220	60	CFM (OA-SA)	258	250	247	237	225	211	174	144	118	69	-	1,425	348	310
			CFM (RA-EA)	192	183	180	169	157	144	116	84	49	0	-	1,402	342	

Performance certified is for installation type D-Ducted inlet, Ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).*
Air performance ratings for gross supply airflow are from port 2. Air performance ratings for gross exhaust airflow are to port 3.
* The Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** The Watts rating is only for IEC test method and AMCA Certified Rating Seal does not apply to IEC test method watts.

Dimension Unit : mm

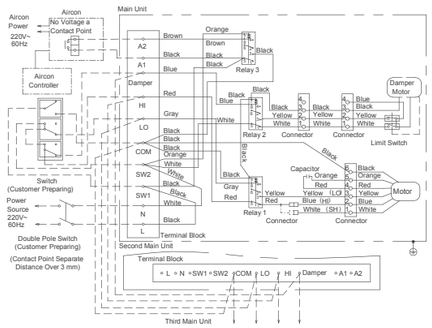
■ Maintenance Dimension

It must be set the maintenance door, and clean the filter and heat exchange core as specified in instruction.

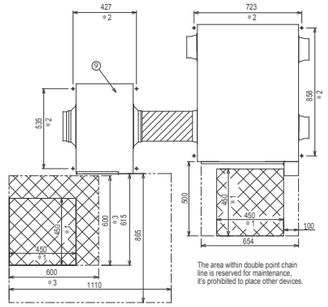


No.	Part name	Qty	Material
1	Frame	1	Galvanized Steel Sheet
2	Adapter	4	ABS
3	Impeller	2	PP
4	Fan Motor	1	/
5	Heat Exchange Core	1	Special Paper and Resin
6	Indoor Filter	1	/
7	Ceiling Suspension	4	Galvanized Steel Sheet
8	Switch Box	1	Galvanized Steel Sheet
9	Filter Box Unit	-	/

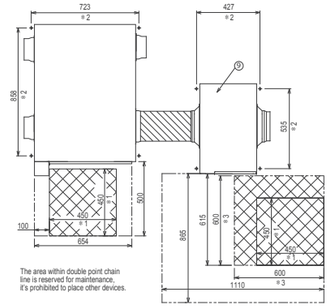
Wiring Diagram



Installation method for case 1



Installation method for case 2



Standard Series

Usage: Living Room | Shopping Mall | Office

E50DZUA

Energy Exchange

Speedy Exhaust

Interlocking with A/C

- Counter-flow heat-exchange element adopted for compact size
- Ease of maintenance through a single inspection hole
- Equipped with Extra-High setting
- Bypass ventilation for speedy exhaust
- Interlocking with air conditioning
- Motor insulation Class E
- IP protection: IPX2

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Specification

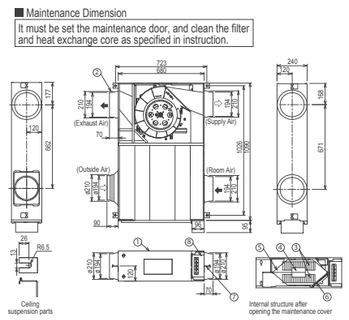
Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)											RPM	Watts*	Watts**
			Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5	1.75		FOR AMCA	FOR IEC
E50DZUA	220	60	CFM (OA-SA)	339	330	326	314	303	290	261	230	188	134	80	1,501	470	406
			CFM (RA-EA)	253	241	238	224	207	190	154	117	82	41	-	1,452	443	

Performance certified is for installation type D-Ducted inlet, Ducted outlet. Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).*
Air performance ratings for gross supply airflow are from port 2. Air performance ratings for gross exhaust airflow are to port 3.
* The Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** The Watts rating is only for IEC test method and AMCA Certified Rating Seal does not apply to IEC test method watts.

Dimension Unit : mm

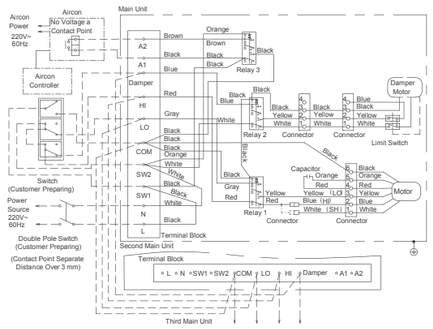
■ Maintenance Dimension

It must be set the maintenance door, and clean the filter and heat exchange core as specified in instruction.

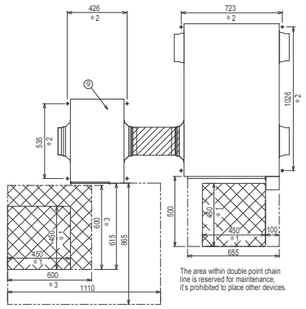


No.	Part name	Qty	Material
1	Frame	1	Galvanized Steel Sheet
2	Adapter	4	ABS
3	Impeller	2	PP
4	Fan Motor	1	/
5	Heat Exchange Core	2	Special Paper and Resin
6	Indoor Filter	1	/
7	Ceiling Suspension	4	Galvanized Steel Sheet
8	Switch Box	1	Galvanized Steel Sheet
9	Filter Box Unit	-	/

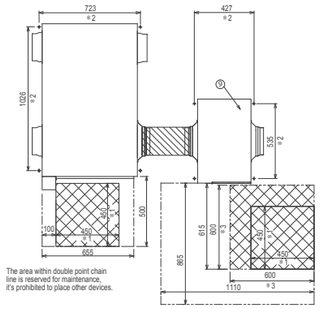
Wiring Diagram



Installation method for case 1



Installation method for case 2



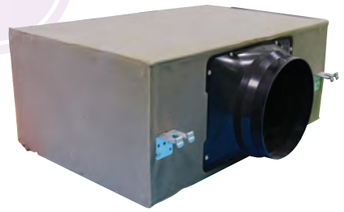
Accessory

EB90SA (Applicable to series DZUA)

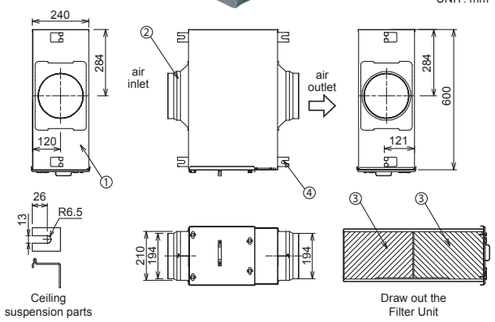
- Power : 220V / 60Hz
- Rate voltage : 3.6W
- Outter size : 86x86x40mm

Filter Box Unit

BE25DZUA For E25DZUA, E35DZUA

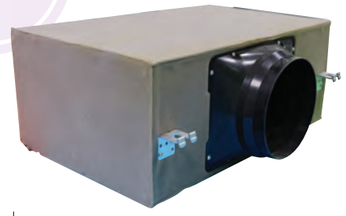


UNIT: mm

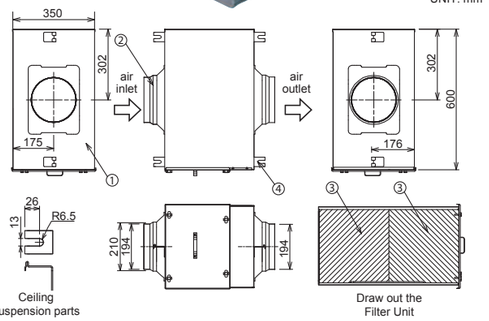


No.	Part name	Qty	Material
1	Frame	1	Galvanized Steel Sheet
2	Adapter	2	ABS
3	Outdoor filter	2	Nonwoven Fabric
4	Ceiling Suspension	4	Galvanized Steel Sheet

BE50DZUA For E50DZUA



UNIT: mm



No.	Part name	Qty	Material
1	Frame	1	Galvanized Steel Sheet
2	Adapter	2	ABS
3	Outdoor filter	2	Nonwoven Fabric
4	Ceiling Suspension	4	Galvanized Steel Sheet

Replacement Filter

Product name	Filter Model	Filter(s) Included	Applicable Model	Service life of the filter	Remarks
Replacement filter for Filter Box Unit	FP25DZUA	2	BE25DZUA	2-4 months	Clean monthly
	FP50DZUA	2	BE50DZUA		
Replacement filter for ERV	FB25DZUA	1	E25DZUA	6 months	
	FB35DZUA	1	E35DZUA		
	FB50DZUA	1	E50DZUA		

- The service life of the filters varys with service environment, and the filters should be replaced with the new one.
- The air volume and filter efficiency will drop to different levels because of different service environments and service time. If the whole area indicated by the arrow turns black, please replace the filter.

Thermo Ventilator

Scan for more information

Feature of Thermo Ventilator

Multi-functional

Ventilation - Exhaust foul smell and excessive moisture
Circulation - Provide circulation of air to avoid uncomfortable feeling due to stagnant air
Heating - Warm up the room for pleasant bathing
Clothes Drying - Enable to dry large sized garments and bedclothes.


Ventilation

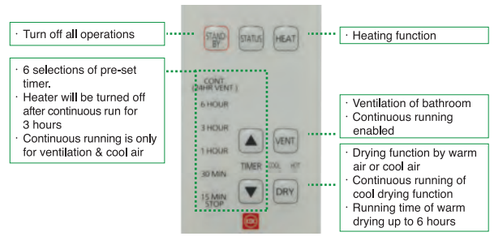

Circulation


Heating


Clothes Drying

Remote Control

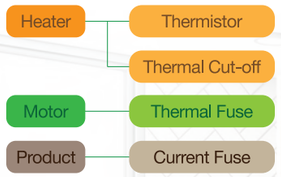
All functions can be operated through wireless remote control.



Filter Equipped

Equipped with dust filter to trap the dust.

Safety Protection



Multi-level safety structure protects you and yout property from any accidents

Easy Installation

Specially designed compact size allows easy installation on most households' ceilings.

Structure is improved for easy wiring as compared with previous model.

Ceiling Mount Series

Usage: Bathroom Toilet

30BUC

Multi-functional

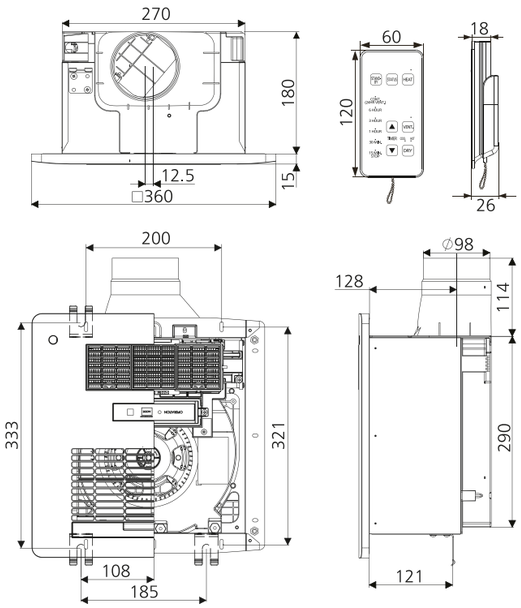
Wireless Remote

Compact Design

- Multi-function: Ventilation, Circulation, Heating and Clothes Drying
- PTC heating element for effective heating
- Multi-level safety protection
- 5-step off timer
- Motor insulation Class E
- IP protection: IPX2

Dimension

Unit : mm

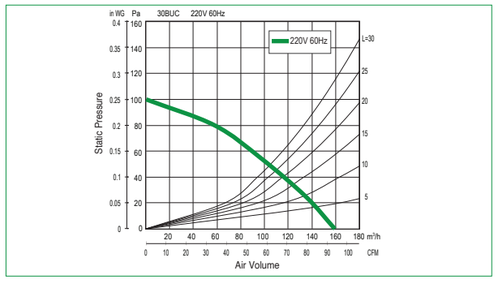


Specification

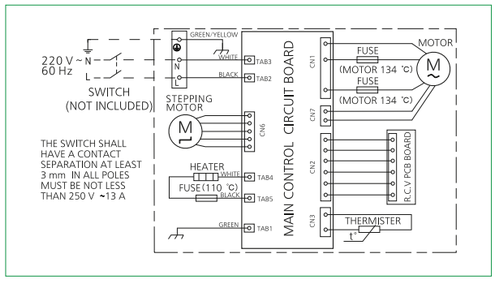
Model	Voltage		Air Volume		Consumption [W]				Noise [dB(A)]				Weight [kg]	Installation Space [mm]
	[V]	[Hz]	[CMH]	[CFM]	Heat	Vent	Dry Cool	Dry Hot	Heat	Vent	Dry Cool	Dry Hot		
30BUC	220	60	160	95	1,650	24	33	1,550	46	39	46	46	5.0	300 x 300

Test Condition
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Performance Data



Wiring Diagram

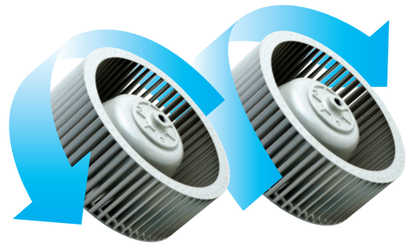


Range Hood

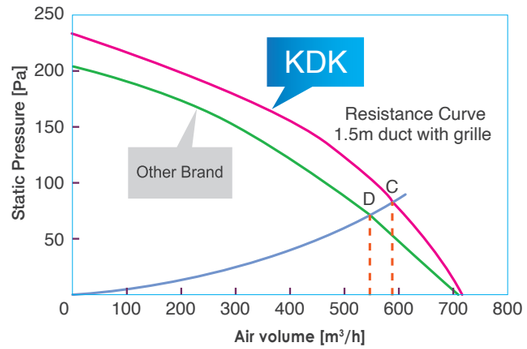
Feature of Range Hood

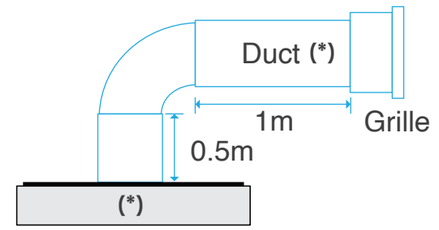
Sirocco Fan

The adopted sirocco fans can outperform the turbo fans while keeping the noise level low.



A typical range hood installation involves a long duct with at least one bending like the diagram below. Under a condition of adopting 1.5m long duct with a grille that results a static pressure of 80Pa, KDK range hood's air volume can reach 580 m³/h at Point C while some other brands can only reach 530 m³/h at Point D as illustrated in the graph on the left.





(*)Installation of Rangehood with 1.5m duct and grille.

Example

Comparison of Suction Power	Air Volume [m³/h]								
	without duct	5m duct		10m duct		15m duct		*1.5m duct grille	
KDK	720	650	89%	610	84%	560	77%	580 (C)	79%
Other Brand	720	610	85%	540	75%	480	67%	530 (D)	74%

Ceiling Mount Series

Usage: Kitchen

90HQUA

2-Speed Selection

Easy Maintenance

Slim Design

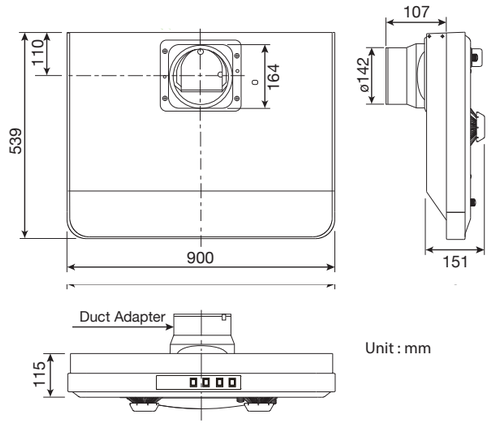
Dark Gray

Silver

- 2 motors with 2 sirocco fans adopted
- Individual control of motors with 2-speed selection
- Rocker switch
- Easy detachable for cleaning
- Slim designed main body with only 115mm thickness
- Colour option: silver / dark gray
- Motor insulation Class E

Dimension

Unit : mm



Unit : mm

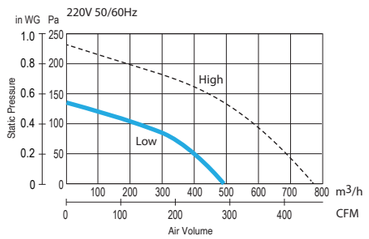
Rocker Switch

Specification

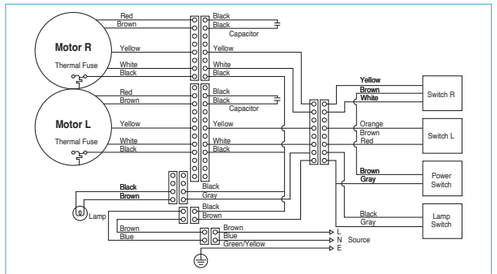
Model	Voltage			Air Volume		Consumption	RPM	Noise	Weight	Duct Size
	[V]	[Hz]		[CMH]	[CFM]	[W]		[dB(A)]	[kg]	[mm]
90HQUA	220	50	Hi	785	462	152	993	52	18.0	Ø150
			Lo	484	285	75	570	38		
		60	Hi	779	459	127	905	53		
			Lo	464	273	69	594	41		
	240	50	Hi	775	456	136	911	52.7		
			Lo	523	308	80	653	43		

Test Condition
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Performance Data



Wiring Diagram



Hand Dryer

Quick Drying

Anti-bacterial

Safe

Scan for more information

Feature of Hand Dryer

Safe Operation

- Eco Dry will stop after 60 seconds of continuous operation
- “Check” indicator will light up when the unit detects overheated

Quick Response Sensor

Automatic sensor operation, no physical contact is required to activate the unit

Heater ON/OFF Switch

Heater can be switched off for energy saving in hot season

Quick Drying with 3-way Airflow

Wide Nozzle

Blow off water droplets on the whole palm with wide airflow

Spot Nozzle

Dry fine water droplets by rubbing hands with spot airflow

2 kinds of nozzle, wide nozzle and spot nozzle, are equipped at front and rear of drying chamber respectively for efficient drying. The structure realizes quick drying in only 4~9 seconds

Super Alleru-buster Filter

The filter is equipped to ensure the air blow to your hand is clean

Anti-bacteria Material as it is installed

The product body is adopted with anti-bacteria material to prevent the growth of bacteria and germs in the warm and humid environment of wash-room

(T09AC only)

Drain Pan

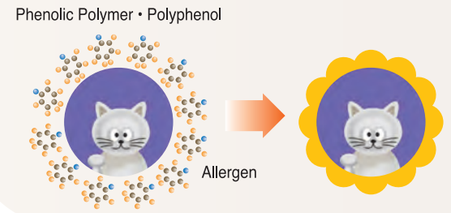
Drain pan can reduce water dripping on the floor to avoid slippery

Full Tank Indicator

Remind you for cleaning up

What is Super alleru-buster?

Super alleru-buster can inhibit up to several types of allergen



Testing Organization: The Osaka Municipal Technical Research Institute.
Testing Method: To measure the level of reduction in cat’s dandruff by Enzyme-linked Immuno Sorbent Assay.

Standard Series

Usage: Toilet

T09AC / T09BC

Anti-bacterial Body

Auto Sensor

IPX1 Protection

T09BC

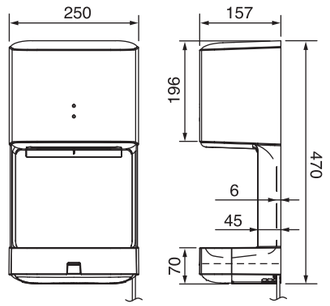
T09AC

- Powerful air velocity
- Automatic operation by infra-red motion sensor
- Super alleru-buster filter equipped
- Anti-bacteria material used on product body
- ON/OFF switch for heater
- Safety check indicator
- Auto stop after 60 seconds of continuous operation
- Motor insulation Class E
- IP protection: IPX1
- T09AC only: Drain pan and water tank equipped with full tank indicator

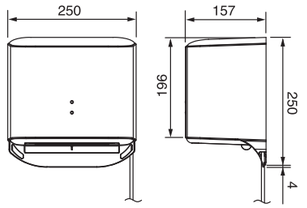
Dimension

Unit : mm

T09AC



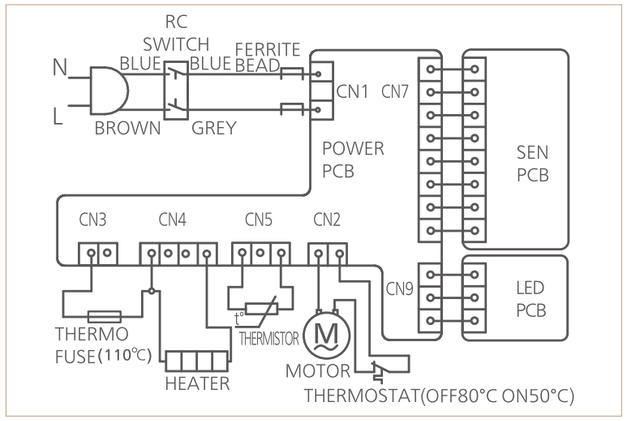
T09BC



Specification

Model	Voltage		Consumption [W]		Air Velocity	Noise	Weight
	[V]	[Hz]	Heater ON	Heater OFF	[m/s]	[dB(A)]	[kg]
T09AC	220	50/60	1,020	650	90-110	62	4.0
	230		1,070	700			
T09BC	220		1,020	650			3.5
	230		1,070	700			

Wiring Diagram



Air Curtain

Effective

Durable

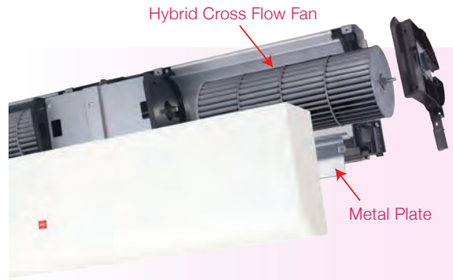
Easy Maintenance

Scan for more information

Feature of Cross Flow Type Air Curtain

Efficient Barrier Effect

- The Cross Flow Fan enables wide and uniform airflow distribution while keeping up the required air volume at a low noise level.
- Unique Auxiliary Air Inlet allows more air intake at lower front that enhances airflow output.

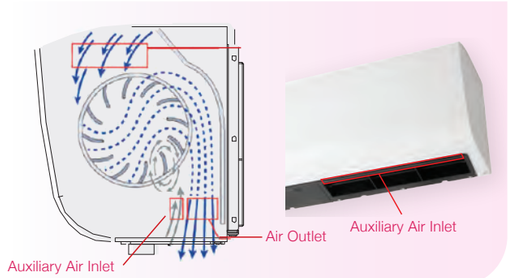


Highly Durable

- Resin with glass fiber material is used in the Hybrid Cross Flow Fan.
- Incorporated with the metal bush, the durability is prolonged significantly.

Easy Maintenance

- The Cross Flow Fan can generate air current between the fan and front cover. It forms the movement of dust that reduces dust accumulation on the fan blade.
- Simple structure allows convenient cleaning of the fan – just detach the front cover and metal plate to clean product interior.



Contemporary Design

Its modern and sleek outlook with the air inlet on top well fits to the contemporary interior, delivering a clean and neat image.

Convenient Control

- For remote controlled series, Stand-by and Hi/Lo speed can be simply switched by handheld remote control.
- For sensor series, it operates when the door is sensed open. It then automatically stops after 10 seconds once the door is sensed closed.

Cross Flow Type - Remote Control Series

Usage: Shopping Mall Retail Store

3009GA / 3012GA / 3015GA
4009GA / 4012GA / 4015GA

Wide and Uniform Airflow

Resin with Glass Fibre Fan Blade

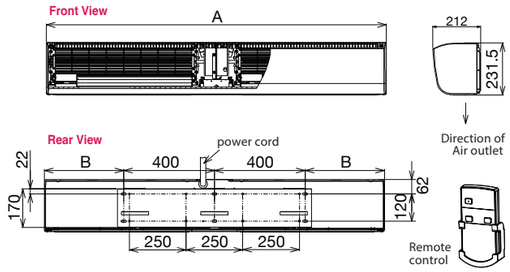
2-speed Selection

- Cross flow fan adopted for side and uniform airflow
- Thick air stream to provide high airflow momentum
- Fan blade made of resin with glass fibre and metal bush
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Soft touch switch panel with 2-speed selection
- Motor insulation Class B (4015GA: F)

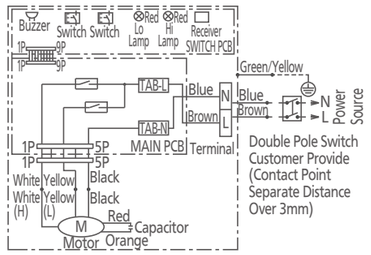
Dimension

Unit : mm

Model	3009GA / 4009GA	3012GA / 4012GA	3015GA / 4015GA
A	900	1,200	1,500
B	50	200	350



Wiring Diagram



Specification

Model	Voltage [V]	Voltage [Hz]		Air Volume [CMH]	Air Volume [CFM]	Consumption [W]	Current [A]	Outlet Velocity [m/s]	Noise [dB(A)]	Weight [kg]
3009GA	220	50	Hi	1,100	647	76	0.35	10.5	48.5	12.5
			Lo	920	541	70	0.32	8.5	45.0	
		60	Hi	1,100	647	92	0.42	10.5	49.5	
			Lo	900	530	78	0.36	8.5	45.0	
	240	50	Hi	1,150	677	86	0.37	10.5	50.5	
			Lo	960	565	80	0.35	9.0	47.5	
4009GA	220	50	Hi	1,340	789	110	0.50	12.0	54.5	13.5
			Lo	1,190	700	94	0.43	10.0	51.0	
		60	Hi	1,340	789	141	0.64	12.0	55.5	
			Lo	1,100	647	111	0.51	10.0	51.0	
	240	50	Hi	1,360	800	122	0.51	12.5	56.5	
			Lo	1,200	706	100	0.43	11.0	53.5	
3012GA	220	50	Hi	1,400	824	94	0.43	9.5	48.5	15.0
			Lo	1,270	747	85	0.40	8.0	45.0	
		60	Hi	1,400	824	109	0.51	9.5	48.5	
			Lo	1,250	736	94	0.46	8.0	45.0	
	240	50	Hi	1,500	883	107	0.46	10.0	50.5	
			Lo	1,320	777	95	0.43	9.0	47.0	
4012GA	220	50	Hi	1,700	1,001	126	0.59	12.0	52.5	16.0
			Lo	1,530	901	105	0.49	10.0	49.0	
		60	Hi	1,700	1,001	153	0.70	12.0	52.5	
			Lo	1,450	853	118	0.55	10.0	49.0	
	240	50	Hi	1,800	1,059	139	0.60	12.5	54.5	
			Lo	1,580	930	110	0.49	11.0	51.0	
3015GA	220	50	Hi	2,000	1,177	131	0.59	10.5	51.5	18.5
			Lo	1,800	1,059	110	0.50	9.5	48.0	
		60	Hi	2,000	1,177	150	0.68	10.5	51.5	
			Lo	1,750	1,030	118	0.54	9.5	48.0	
	240	50	Hi	2,100	1,236	145	0.60	11.0	53.5	
			Lo	1,850	1,089	115	0.50	10.0	50.5	
4015GA	220	50	Hi	2,450	1,442	177	0.81	13.0	56.0	18.5
			Lo	2,000	1,177	147	0.68	10.0	52.0	
		60	Hi	2,300	1,354	220	1.01	13.0	56.0	
			Lo	1,780	1,048	160	0.74	9.5	52.0	
	240	50	Hi	2,500	1,471	200	0.86	13.5	58.0	
			Lo	2,050	1,207	160	0.68	11.0	54.5	

Test Condition
Note : The parameters shown above are measured at ambient temperature of 20°C
- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value
- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage

Cross Flow Type - Sensor Series

Usage: Shopping Mall Retail Store

3009DA / 3012DA / 3015DA
4009DA / 4012DA / 4015DA

Wide and Uniform Airflow

Resin with Glass Fibre Fan Blade

2-speed Selection

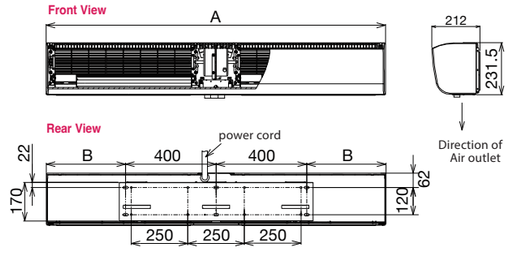
Door Contact Sensor

- Cross flow fan adopted for side and uniform airflow
- Thick air stream to provide high airflow momentum
- Fan blade made of resin with glass fibre and metal bush
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Soft touch switch panel with 2-speed selection
- Motor insulation Class B (4015DA: F)

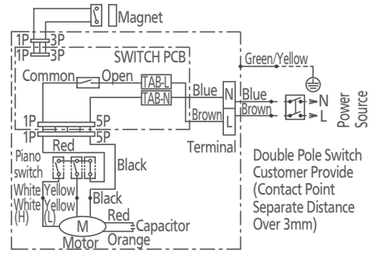
Dimension

Unit : mm

Model	3009DA / 4009DA	3012DA / 4012DA	3015DA / 4015DA
A	900	1,200	1,500
B	50	200	350



Wiring Diagram



Specification

Model	Voltage [V]	Voltage [Hz]		Air Volume [CMH]	Air Volume [CFM]	Consumption [W]	Current [A]	Outlet Velocity [m/s]	Noise [dB(A)]	Weight [kg]
3009DA	220	50	Hi	1,100	647	76	0.35	10.5	48.5	12.5
			Lo	920	541	70	0.32	8.5	45.0	
		60	Hi	1,100	647	92	0.42	10.5	49.5	
			Lo	900	530	78	0.36	8.5	45.0	
	240	50	Hi	1,150	677	86	0.37	10.5	50.5	
			Lo	960	565	80	0.35	9.0	47.5	
4009DA	220	50	Hi	1,340	789	110	0.50	12.0	54.5	13.5
			Lo	1,190	700	94	0.43	10.0	51.0	
		60	Hi	1,340	789	141	0.64	12.0	55.5	
			Lo	1,100	647	111	0.51	10.0	51.0	
	240	50	Hi	1,360	800	122	0.51	12.5	56.5	
			Lo	1,200	706	100	0.43	11.0	53.5	
3012DA	220	50	Hi	1,400	824	94	0.43	9.5	48.5	15.0
			Lo	1,270	747	85	0.40	8.0	45.0	
		60	Hi	1,400	824	109	0.51	9.5	48.5	
			Lo	1,250	736	94	0.46	8.0	45.0	
	240	50	Hi	1,500	883	107	0.46	10.0	50.5	
			Lo	1,320	777	95	0.43	9.0	47.0	
4012DA	220	50	Hi	1,700	1,001	126	0.59	12.0	52.5	16.0
			Lo	1,530	901	105	0.49	10.0	49.0	
		60	Hi	1,700	1,001	153	0.70	12.0	52.5	
			Lo	1,450	853	118	0.55	10.0	49.0	
	240	50	Hi	1,800	1,059	139	0.60	12.5	54.5	
			Lo	1,580	930	110	0.49	11.0	51.0	
3015DA	220	50	Hi	2,000	1,177	131	0.59	10.5	51.5	18.5
			Lo	1,800	1,059	110	0.50	9.5	48.0	
		60	Hi	2,000	1,177	150	0.68	10.5	51.5	
			Lo	1,750	1,030	118	0.54	9.5	48.0	
	240	50	Hi	2,100	1,236	145	0.60	11.0	53.5	
			Lo	1,850	1,089	115	0.50	10.0	50.5	
4015DA	220	50	Hi	2,450	1,442	177	0.81	13.0	56.0	18.5
			Lo	2,000	1,177	147	0.68	10.0	52.0	
		60	Hi	2,300	1,354	220	1.01	13.0	56.0	
			Lo	1,780	1,048	160	0.74	9.5	52.0	
	240	50	Hi	2,500	1,471	200	0.86	13.5	58.0	
			Lo	2,050	1,207	160	0.68	11.0	54.5	

Test Condition
Note : The parameters shown above are measured at ambient temperature of 20°C
- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value
- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage

Cross Flow Type - Standard Series

Usage: Shopping Mall | Retail Store

3009UA / 3012UA / 3015UA
4009UA / 4012UA / 4015UA

Wide and Uniform Airflow

Resin with Glass Fibre Fan Blade

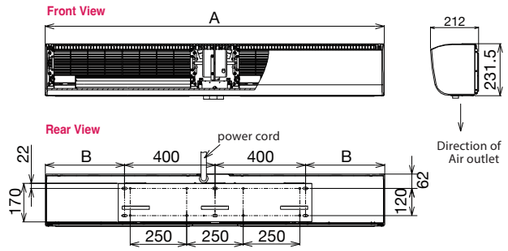
2-speed Selection

- Cross flow fan adopted for side and uniform airflow
- Thick air stream to provide high airflow momentum
- Fan blade made of resin with glass fibre and metal bush
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Soft touch switch panel with 2-speed selection
- Motor insulation Class B (4015UA: F)

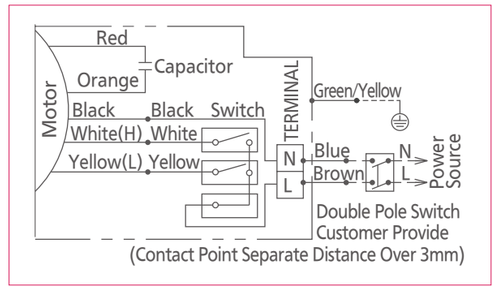
Dimension

Unit : mm

Model	3009UA	3012UA	3015UA
	4009UA	4012UA	4015UA
A	900	1,200	1,500
B	50	200	350



Wiring Diagram

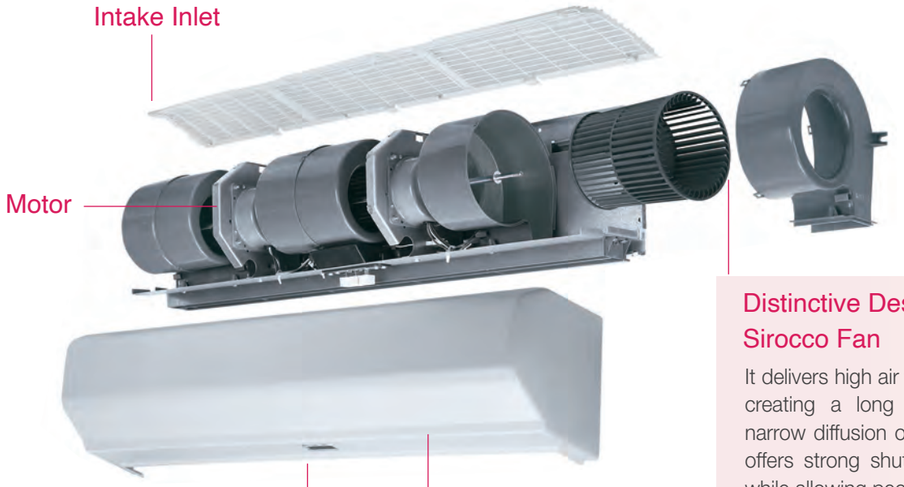


Specification

Model	Voltage [V]	Voltage [Hz]		Air Volume [CMH]	Air Volume [CFM]	Consumption [W]	Current [A]	Outlet Velocity [m/s]	Noise [dB(A)]	Weight [kg]
3009UA	220	50	Hi	1,100	647	76	0.35	10.5	48.5	12.5
			Lo	920	541	70	0.32	8.5	45.0	
		60	Hi	1,100	647	92	0.42	10.5	49.5	
			Lo	900	530	78	0.36	8.5	45.0	
	240	50	Hi	1,150	677	86	0.37	10.5	50.5	
			Lo	960	565	80	0.35	9.0	47.5	
4009UA	220	50	Hi	1,340	789	110	0.50	12.0	54.5	13.5
			Lo	1,190	700	94	0.43	10.0	51.0	
		60	Hi	1,340	789	141	0.64	12.0	55.5	
			Lo	1,100	647	111	0.51	10.0	51.0	
	240	50	Hi	1,360	800	122	0.51	12.5	56.5	
			Lo	1,200	706	100	0.43	11.0	53.5	
3012UA	220	50	Hi	1,400	824	94	0.43	9.5	48.5	15.0
			Lo	1,270	747	85	0.40	8.0	45.0	
		60	Hi	1,400	824	109	0.51	9.5	48.5	
			Lo	1,250	736	94	0.46	8.0	45.0	
	240	50	Hi	1,500	883	107	0.46	10.0	50.5	
			Lo	1,320	777	95	0.43	9.0	47.0	
4012UA	220	50	Hi	1,700	1,001	126	0.59	12.0	52.5	16.0
			Lo	1,530	901	105	0.49	10.0	49.0	
		60	Hi	1,700	1,001	153	0.70	12.0	52.5	
			Lo	1,450	853	118	0.55	10.0	49.0	
	240	50	Hi	1,800	1,059	139	0.60	12.5	54.5	
			Lo	1,580	930	110	0.49	11.0	51.0	
3015UA	220	50	Hi	2,000	1,177	131	0.59	10.5	51.5	18.5
			Lo	1,800	1,059	110	0.50	9.5	48.0	
		60	Hi	2,000	1,177	150	0.68	10.5	51.5	
			Lo	1,750	1,030	118	0.54	9.5	48.0	
	240	50	Hi	2,100	1,236	145	0.60	11.0	53.5	
			Lo	1,850	1,089	115	0.50	10.0	50.5	
4015UA	220	50	Hi	2,450	1,442	177	0.81	13.0	56.0	18.5
			Lo	2,000	1,177	147	0.68	10.0	52.0	
		60	Hi	2,300	1,354	220	1.01	13.0	56.0	
			Lo	1,780	1,048	160	0.74	9.5	52.0	
	240	50	Hi	2,500	1,471	200	0.86	13.5	58.0	
			Lo	2,050	1,207	160	0.68	11.0	54.5	

Test Condition
Note : The parameters shown above are measured at ambient temperature of 20°C
- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value
- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage

Feature of Sirocco Type Air Curtain



Distinctive Design of Sirocco Fan

It delivers high air velocity, yet creating a long reach and narrow diffusion of airflow. It offers strong shut out ability while allowing people passing through comfortably.

Two-Speed Function

ABS Resin Casing

ABS is a material highly resistant to rust and with high bending flexibility, that enables a sleek, simple design fitting to modern interiors.

Length of unit	900mm (3 feet) 08ESK	1200mm (4 feet) 08ELK	900mm (3 feet) 10ESK	1200mm (4 feet) 10ELK	900mm (3 feet) 12ESK	1200mm (4 feet) 12ELK	900mm (3 feet) 14ESK	1200mm (4 feet) 14ELK
Air velocity chart (m/s) Maximum value at HI speed 50Hz								
Efficient distance	2.5m (8 feet)		3.0m (10 feet)		3.5m (12 feet)		4.0m (14 feet)	

Sirocco Type - 900 Series

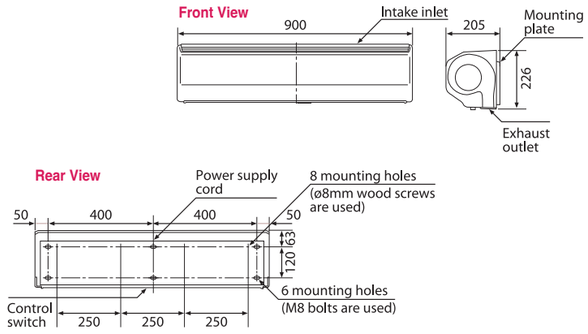
Usage: Shopping Mall Retail Store

08ESK / 10ESK
12ESK / 14ESK

Push Button Switch

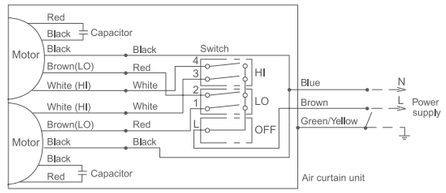
ABS Resin Casing

2-speed Selection



- Sirocco fan adopted for long reach and narrow diffusion of airflow
- ABS resin casing to provide better weather resistance
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Push button switch
- 2-speed selection
- Motor insulation Class E

Wiring Diagram



Specification

Model	Voltage			Air Volume		Consumption [W]	Current [A]	Outlet Velocity [m/s]	Noise [dB(A)]	Weight [kg]
	[V]	[Hz]		[CMH]	[CFM]					
08ESK	220	50	Hi	650	383	46	0.23	11.5	42	12.0
			Lo	580	341	42	0.21	10.3	39	
		60	Hi	690	406	57	0.28	12.1	43	
			Lo	560	330	49	0.25	9.9	38	
	240	50	Hi	680	400	51	0.24	11.9	43	
			Lo	620	365	47	0.23	10.9	41	
10ESK	220	50	Hi	750	441	72	0.40	13.0	46	12.0
			Lo	630	371	62	0.29	11.1	42	
		60	Hi	860	506	88	0.42	14.9	50	
			Lo	600	353	72	0.33	10.9	40	
	240	50	Hi	750	441	84	0.46	13.2	46	
			Lo	630	371	66	0.30	11.7	43	
12ESK	220	50	Hi	1,050	618	176	0.82	16.9	55	13.0
			Lo	960	565	155	0.69	15.8	50	
		60	Hi	990	583	202	0.94	16.1	54	
			Lo	940	553	170	0.75	15.3	49	
	240	50	Hi	1,120	659	200	0.86	17.9	57	
			Lo	1,040	612	169	0.75	16.8	54	
14ESK	220	50	Hi	1,340	789	257	1.14	21.9	62	13.0
			Lo	1,168	687	218	0.99	19.1	59	
		60	Hi	1,303	767	312	1.43	21.3	61	
			Lo	1,083	637	255	1.16	17.7	57	
	240	50	Hi	1,395	821	281	1.18	22.8	63	
			Lo	1,272	749	238	1.00	20.8	60	

Test Condition
Note : The parameters shown above are measured at ambient temperature of 20°C
- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value
- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage

Sirocco Type - 1200 Series

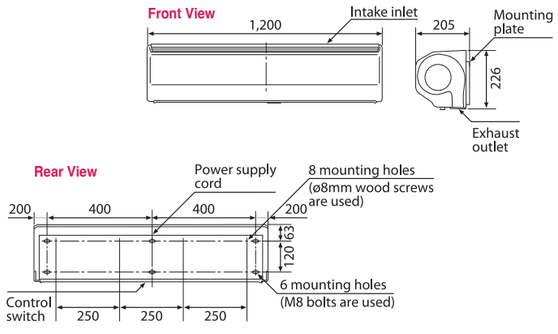
Usage: Shopping Mall Retail Store

08ELK / 10ELK
12ELK / 14ELK

Push Button Switch

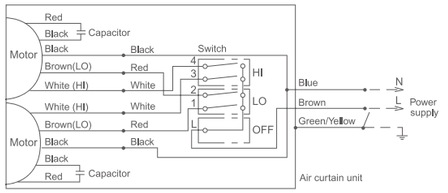
ABS Resin Casing

2-speed Selection



- Sirocco fan adopted for long reach and narrow diffusion of airflow
- ABS resin casing to provide better weather resistance
- Permanently-lubricated ball bearing equipped
- Air deflection plate for airflow direction adjustment
- Push button switch
- 2-speed selection
- Motor insulation Class E

Wiring Diagram



Specification

Model	Voltage			Air Volume		Consumption [W]	Current [A]	Outlet Velocity [m/s]	Noise [dB(A)]	Weight [kg]
	[V]	[Hz]		[CMH]	[CFM]					
08ELK	220	50	Hi	880	518	57	0.28	11.6	43	14.0
			Lo	800	471	53	0.27	10.6	41	
		60	Hi	940	553	74	0.36	12.4	45	
			Lo	790	465	62	0.32	10.5	40	
	240	50	Hi	920	541	65	0.29	12.1	44	
			Lo	850	500	59	0.28	11.2	42	
10ELK	220	50	Hi	1,000	589	96	0.54	13.1	46	14.0
			Lo	830	489	74	0.35	11.0	42	
		60	Hi	1,150	677	116	0.56	15.1	50	
			Lo	790	465	85	0.41	10.5	41	
	240	50	Hi	1,010	594	116	0.66	13.2	47	
			Lo	880	518	86	0.38	11.6	43	
12ELK	220	50	Hi	1,420	836	224	1.04	17.0	56	15.0
			Lo	1,320	777	200	0.90	15.8	51	
		60	Hi	1,340	789	258	1.21	16.2	55	
			Lo	1,290	759	220	1.04	15.4	50	
	240	50	Hi	1,510	889	252	1.10	17.9	58	
			Lo	1,410	830	218	0.98	16.7	56	
14ELK	220	50	Hi	1,867	1,099	333	1.52	22.5	63	15.0
			Lo	1,668	982	290	1.32	20.1	61	
		60	Hi	1,826	1,075	423	1.93	22.0	63	
			Lo	1,552	913	339	1.55	18.7	59	
	240	50	Hi	1,942	1,143	364	1.53	23.4	64	
			Lo	1,818	1,070	320	1.33	21.9	62	

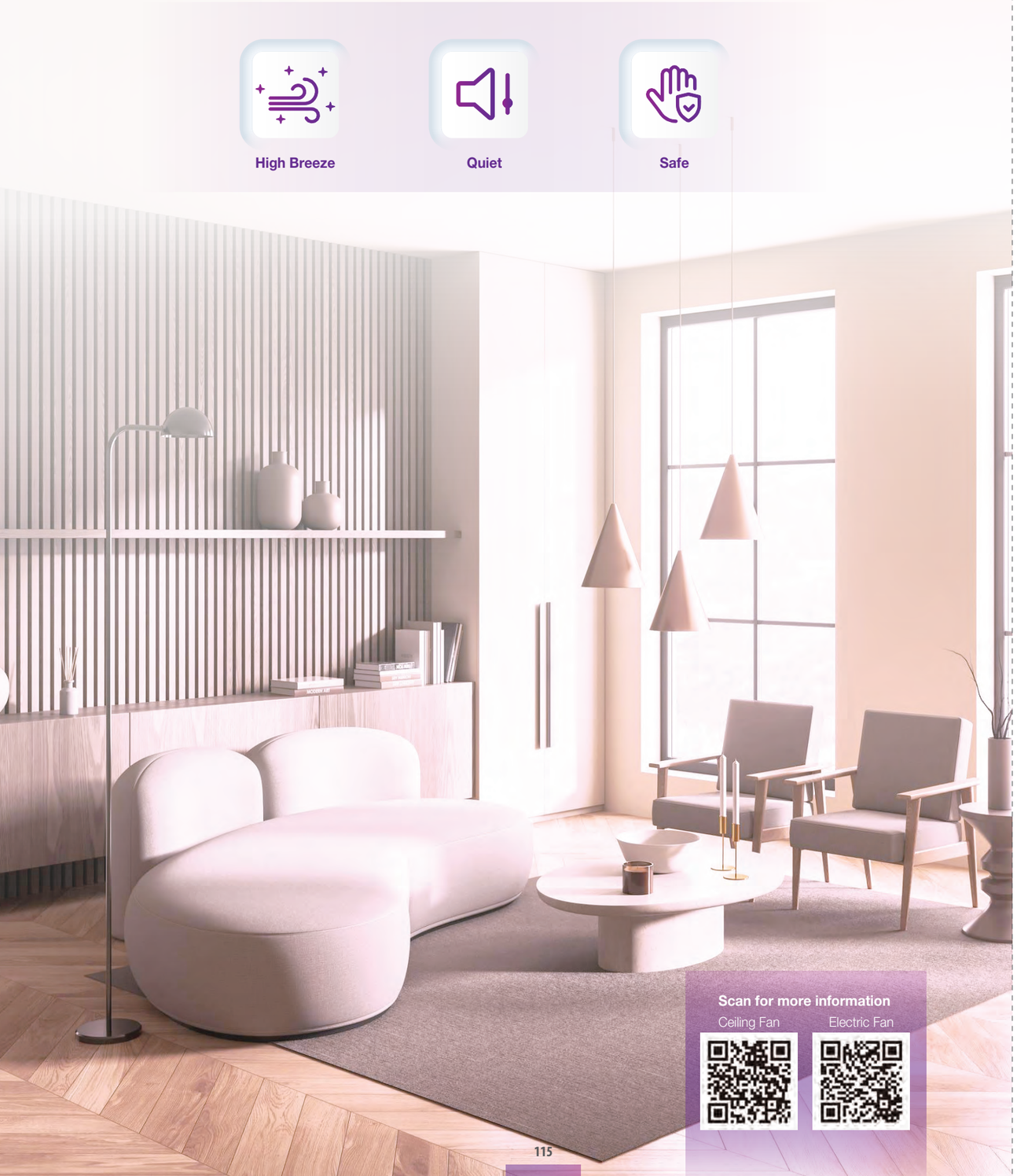
Test Condition
Note : The parameters shown above are measured at ambient temperature of 20°C
- The values of noise level are measured at 1.5 m apart from the product at angle of 45° below the air outlet at which is the maximum value
- The velocity is measured in test laboratory. It may vary depends on different environment in actual usage

Ceiling Fan / Electric Fan

High Breeze

Quiet

Safe



Scan for more information

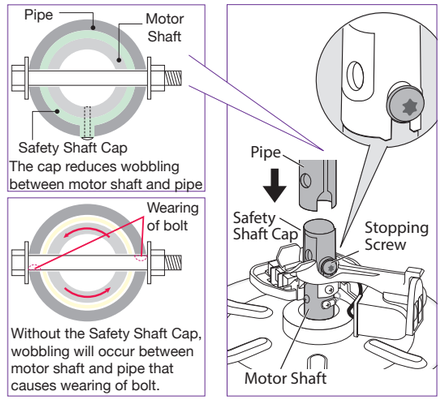
Ceiling Fan

Electric Fan

Safety Feature of Ceiling Fan

In pursuit of high quality of life, ceiling fans are expected with multiple functions and more value-added features. Safety and reliability have become the major concerns when selecting a ceiling fan.

Safety Shaft Cap



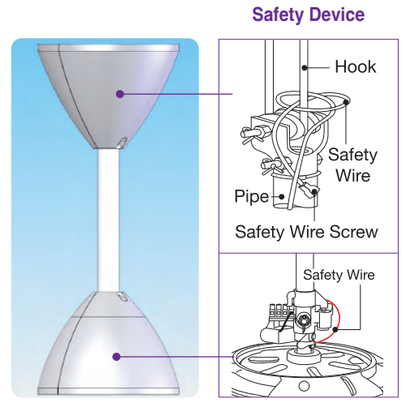
Problem

Improper movement causes friction between bolt, motor shaft and pipe that increases wear and tear and cause fracture.

Our solution

Safety Shaft Cap can reduce movement between bolt, motor shaft and pipe. This minimizes wearing of motor shaft and bolt, thus prevent falling of fan.

Safety Wire



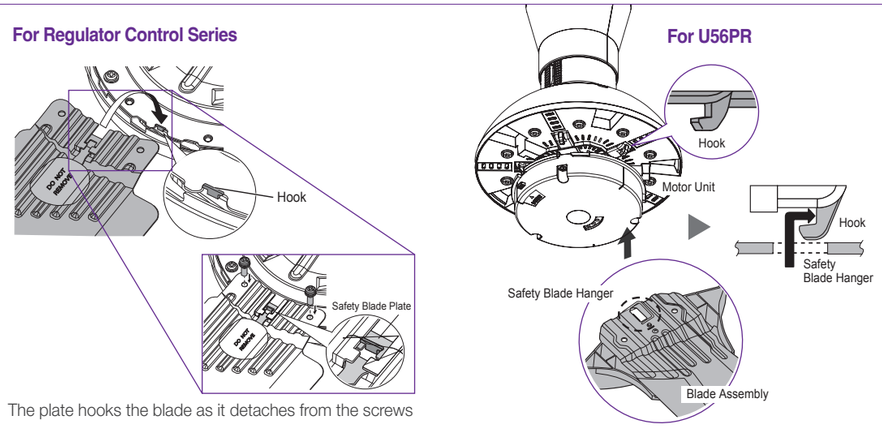
Problem

Fan motor may fall from the pipe rod accidently due to factors such as wearing of shaft, bolt etc.

Our solution

Safety wire helps to secure fan motor with ceiling hook. This prevents falling of motor in case it detaches from the pipe rod.

Safety Blade Plate / Hanger



The plate hooks the blade as it detaches from the screws

Problem

Blade may break and fall off from fan motor in case fatigue failure of material occurs.

Our solution

An exclusively designed fall prevention plate / hanger is equipped to hold blade to the motor in case of breakage. This mechanism secures against falling of blade.

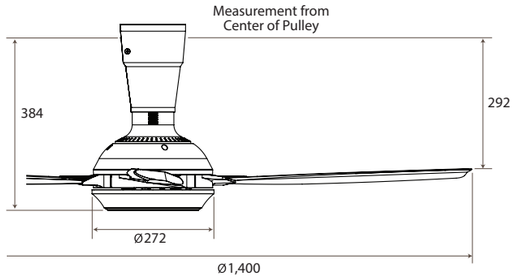
Remote Control Series

Usage: Living Room | Bedroom | Restaurant | Lobby

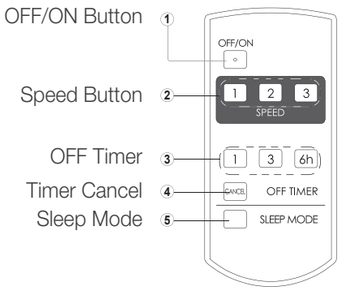
U56PR

Remote Control
Fall Prevention Measures
Metal Blades

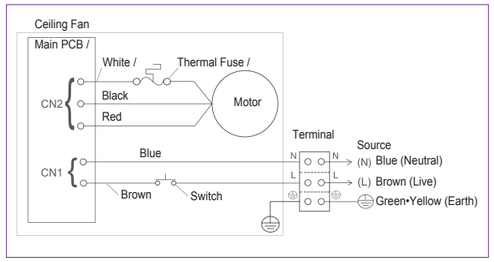
Dimension
Unit : mm



- 3-speed selection
- Off Timer with LED indicator (1, 3, 6 hours)
- Sleep mode
- Thermal fuse to prevent overheating
- Current fuse to secure against power surge
- Safety wire provided
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Motor insulation Class E
- Colour: White body with golden ring



Wiring Diagram



Specification

Model	Voltage [V]	Frequency [Hz]	*	Consumption [W]	RPM	Air Velocity [m/min]	Air Velocity [ft/min]	Air Volume [m³/min]	Air Volume [ft³/min]	Weight [kg]
U56PR	220	50	Hi	62	175	137	449	181	6,392	6.7
			Lo	20	87	-	-	-	-	
		60	Hi	74	182	146	479	194	6,851	
			Lo	21	89	-	-	-	-	
	230	50	Hi	66	182	146	479	194	6,851	
			Lo	19	89	-	-	-	-	
	240	50	Hi	73	188	153	502	204	7,204	
			Lo	20	94	-	-	-	-	

*Hi - Notch 3 / Lo - Notch 1

Regulator Control Series

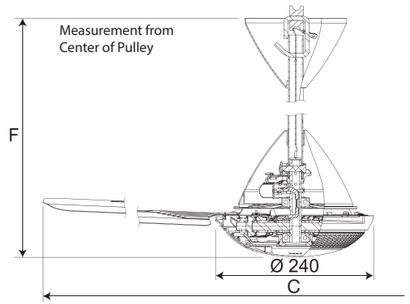
Usage: Living Room | Bedroom | Restaurant | Lobby

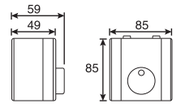
T48XC / T56XC

Slim Panel Regulator
Fall Prevention Measures
Metal Blades

Dimension
Unit : mm

Model	9 inch	12 inch	16 inch	18 inch	22 inch
Pipe Length	229	305	406	457	559
F	437	513	614	665	764

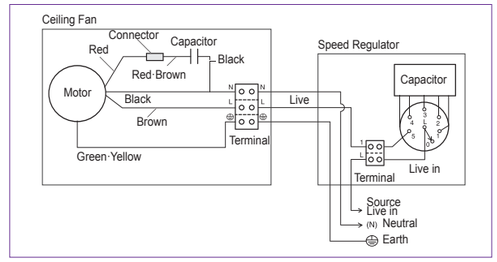




Model :	C
T48XG T48XGMN	Ø1,200
T56XG T56XGMN	Ø1,400

- 5-speed selection
- Thermal fuse to prevent overheating
- Safety wire provided
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Motor insulation Class E
- Colour option: Gray body with silver ring
  White body with golden ring

Wiring Diagram



Specification

Model	Voltage [V]	Frequency [Hz]	*	Consumption [W]	RPM	Air Velocity [m/min]	Air Velocity [ft/min]	Air Volume [m³/min]	Air Volume [ft³/min]	Weight [kg]
T48XC	220	50	Hi	45	285	160	525	155	5,474	5.3
			Lo	15	137	-	-	-	-	
		60	Hi	55	311	175	574	170	6,003	
			Lo	15	129	-	-	-	-	
	230	50	Hi	49	296	165	541	170	6,003	
			Lo	16	146	-	-	-	-	
	240	50	Hi	51	303	170	558	165	5,827	
			Lo	18	154	-	-	-	-	
T56XC	220	50	Hi	70	268	165	541	220	7,769	5.6
			Lo	14	103	-	-	-	-	
		60	Hi	76	268	170	558	225	7,946	
			Lo	17	106	-	-	-	-	
	230	50	Hi	75	275	170	558	225	7,946	
			Lo	15	109	-	-	-	-	
	240	50	Hi	76	273	165	541	220	7,769	
			Lo	17	115	-	-	-	-	

*Hi - Notch 5 / Lo - Notch 1

Regulator Control Series

Usage: Living Room | Bedroom | Restaurant | Lobby

T48XG / T56XG

Compact Regulator

Fall Prevention Measures

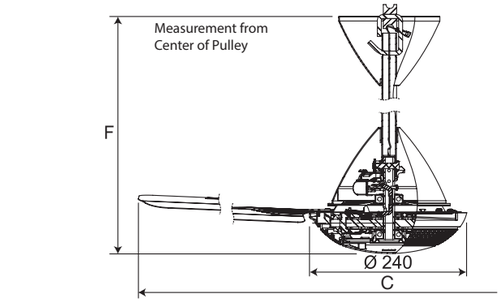
Metal Blades

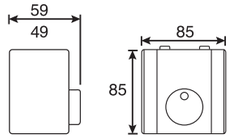
- 5-speed selection
- Thermal fuse to prevent overheating
- Safety wire provided
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Glossy diamond-pattern fan ring
- Motor insulation Class E
- Colour option: White body with golden ring
  Gray body with silver ring

Dimension

Unit : mm

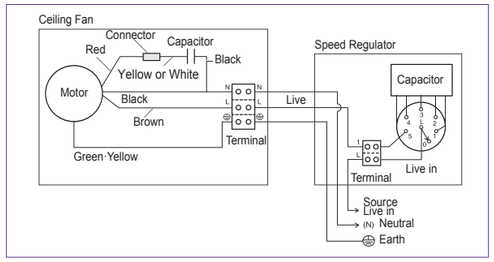
Model	9 inch	12 inch	16 inch	18 inch	22 inch
Pipe Length	229	305	406	457	559
F	437	513	614	665	764





Model :	C
T48XG	Ø1,200
T56XG	Ø1,400

Wiring Diagram



Specification

Model	Voltage [V]	Frequency [Hz]	*	Consumption [W]	RPM	Air Velocity		Air Volume		Weight [kg]
						[m/min]	[ft/min]	[m³/min]	[ft³/min]	
T48XG	220	50	Hi	45	285	160	525	155	5,474	5.3
			Lo	15	137	-	-	-	-	
		60	Hi	55	311	175	574	170	6,003	
			Lo	15	129	-	-	-	-	
	230	50	Hi	49	296	165	541	170	6,003	
			Lo	16	146	-	-	-	-	
	240	50	Hi	51	303	170	558	165	5,827	
			Lo	18	154	-	-	-	-	
T56XG	220	50	Hi	70	268	165	541	220	7,769	5.6
			Lo	14	103	-	-	-	-	
		60	Hi	76	268	170	558	225	7,946	
			Lo	17	106	-	-	-	-	
	230	50	Hi	75	275	170	558	225	7,946	
			Lo	15	109	-	-	-	-	
	240	50	Hi	76	273	165	541	220	7,769	
			Lo	17	115	-	-	-	-	

*Hi - Notch 5 / Lo - Notch 1

Regulator Control Series

Usage: Living Room | Bedroom | Restaurant | Lobby

X48XC / X56XC

Slim Panel Regulator

Fall Prevention Measures

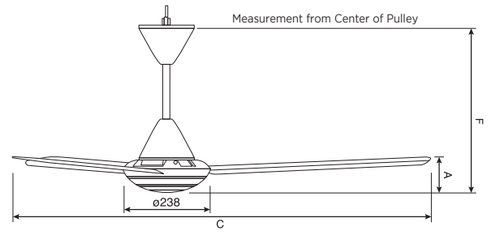
Metal Blades

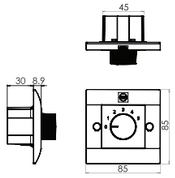
- 5-speed selection
- Thermal fuse to prevent overheating
- Safety wire provided
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Motor insulation Class E
- Colour: White body with silver ring

Dimension

Unit : mm

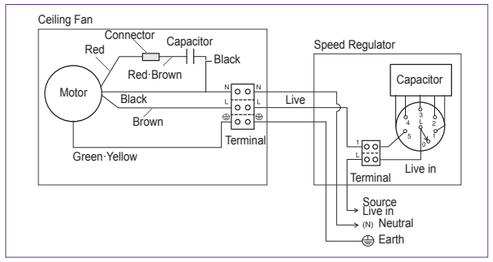
Model	9 inch	12 inch	16 inch	18 inch	22 inch
Pipe Length	229	305	406	457	559
F	437	513	614	665	764





Model :	A	C
X48XC	78.2	Ø1,200
X56XC	82.2	Ø1,400

Wiring Diagram



Specification

Model	Voltage [V]	Frequency [Hz]	*	Consumption [W]	RPM	Air Velocity		Air Volume		Weight [kg]
						[m/min]	[ft/min]	[m³/min]	[ft³/min]	
X48XC	220	50	Hi	45	285	160	525	155	5,474	5.3
			Lo	15	137	-	-	-	-	
		60	Hi	55	311	175	574	170	6,003	
			Lo	15	129	-	-	-	-	
	230	50	Hi	49	296	165	541	170	6,003	
			Lo	16	146	-	-	-	-	
	240	50	Hi	51	303	170	558	165	5,827	
			Lo	18	154	-	-	-	-	
X56XC	220	50	Hi	70	268	165	541	220	7,769	5.6
			Lo	14	103	-	-	-	-	
		60	Hi	76	268	170	558	225	7,946	
			Lo	17	106	-	-	-	-	
	230	50	Hi	75	275	170	558	225	7,946	
			Lo	15	109	-	-	-	-	
	240	50	Hi	76	273	165	541	220	7,769	
			Lo	17	115	-	-	-	-	

*Hi - Notch 5 / Lo - Notch 1

Regulator Control Series

Usage: Living Room | Bedroom | Restaurant | Lobby

X48XG / X56XG

Compact Regulator

Fall Prevention Measures

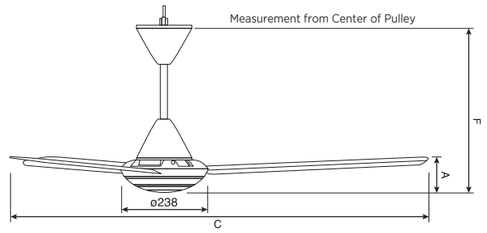
Metal Blades

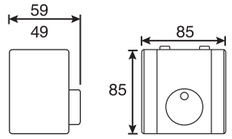
- 5-speed selection
- Thermal fuse to prevent overheating
- Safety wire provided
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Motor insulation Class E
- Colour: White body with silver ring

Dimension

Unit : mm

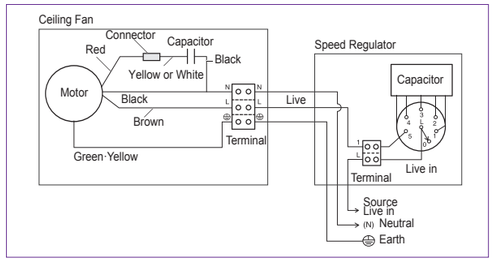
Model	9 inch	12 inch	16 inch	18 inch	22 inch
Pipe Length	229	305	406	457	559
F	437	513	614	665	764





Model :	C
X48XG	Ø1,200
X56XG	Ø1,400

Wiring Diagram



Specification

Model	Voltage [V]	Frequency [Hz]	*	Consumption [W]	RPM	Air Velocity		Air Volume		Weight [kg]
						[m/min]	[ft/min]	[m³/min]	[ft³/min]	
X48XG	220	50	Hi	45	285	160	525	155	5,474	5.3
			Lo	15	137	-	-	-	-	
		60	Hi	55	311	175	574	170	6,003	
			Lo	15	129	-	-	-	-	
	230	50	Hi	49	296	165	541	170	6,003	
			Lo	16	146	-	-	-	-	
	240	50	Hi	51	303	170	558	165	5,827	
			Lo	18	154	-	-	-	-	
X56XG	220	50	Hi	70	268	165	541	220	7,769	5.6
			Lo	14	103	-	-	-	-	
		60	Hi	76	268	170	558	225	7,946	
			Lo	17	106	-	-	-	-	
	230	50	Hi	75	275	170	558	225	7,946	
			Lo	15	109	-	-	-	-	
	240	50	Hi	76	273	165	541	220	7,769	
			Lo	17	115	-	-	-	-	

*Hi - Notch 5 / Lo - Notch 1

Cycle Fan

Usage: Living Room | Bedroom | Restaurant | School

M40R

360° Oscillation

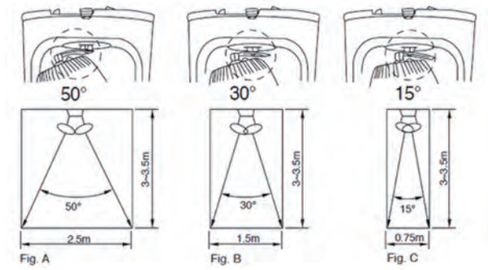
Regulator

Metal Blades

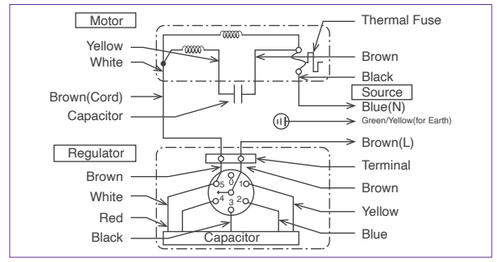
- 5-speed selection
- Oscillation over 360°
- Speed and ON/OFF controlled by regulator
- Easy adjustment for circulating angle (15°, 30°, 50°)
- Thermal fuse to prevent overheating
- Safety wire provided
- Permanently lubricated ball bearing equipped
- Painted metal blades
- Colour option: Blue
  Gray

Adjustment of Circulating Angle

The oscillation angle can be adjusted to 15, 30, 50 degrees.



Wiring Diagram



Specification

Model	Voltage [V]	Frequency [Hz]	*	Consumption [W]	RPM	Air Velocity		Air Volume		Weight [kg]
						[m/min]	[ft/min]	[m³/min]	[ft³/min]	
M40R	220	50	Hi	46.8 - 57.2	1,080 - 1,320	256	840	79	2,790	4.3
			Lo	22.5 - 27.5	690 - 850	-	-	-	-	
		60	Hi	57.7 - 70.5	1,160 - 1,410	277	909	86	3,037	
			Lo	26.6 - 32.5	710 - 860	-	-	-	-	

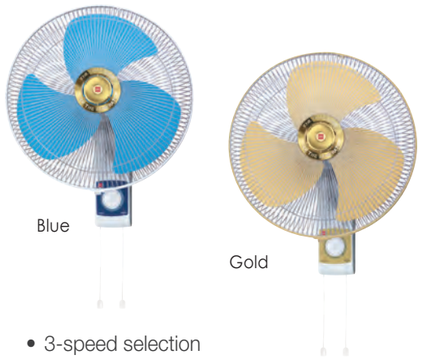
*Hi - Notch 5 / Lo - Notch 1

Wall Fan - Cord-Operated Series

Usage: Living Room | Bedroom | Restaurant | School

M30C / M40C

Pull Switch
Easy Angle Adjustment
3-speed Selection

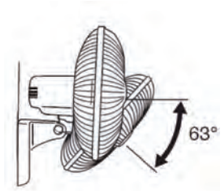


- 3-speed selection
- Speed and ON/OFF controlled by pull switch
- Speed and Oscillation change by pull cord
- Easy adjustment for tilt angle and oscillation angle
- Thermal fuse to prevent overheating
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Colour option: Blue (M30C and M40C)
  Gold (M40C only)

Adjustment of Tilt Angle and Oscillation Angle

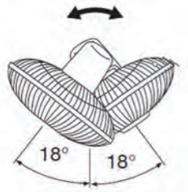
"One-touch" adjustment of tilt

The airflow can be adjusted upward or downward by simply moving the guard up or down as shown in the figure. Adjust the angle of the fan only after first confirming that it has stopped rotating.



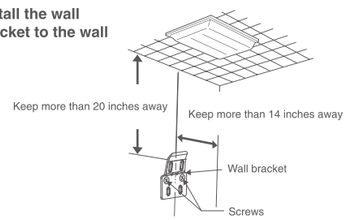
Double oscillation

To change the direction of the air flow, simply push the fan guard to the desired position.

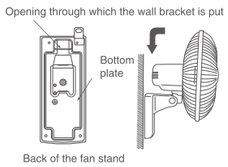


Installation

1 Install the wall bracket to the wall



2 Install the fan stand



Specification

Model	Voltage [V]	Frequency [Hz]	*	Consumption [W]	RPM	Air Velocity		Air Volume		Weight [kg]
						[m/min]	[ft/min]	[m³/min]	[ft³/min]	
M30C	220	50	Hi	34.0 - 41.6	1,124 - 1,374	215	705	45	1,589	3.4
			Lo	26.3 - 32.1	779 - 952	-	-	-	-	
		60	Hi	39.5 - 48.3	1,244 - 1,520	237	778	50	1,766	
			Lo	27.3 - 33.3	714 - 872	-	-	-	-	
M40C	220	50	Hi	42.5 - 51.9	1,097 - 1,341	226	741	63	2,225	4.4
			Lo	33.5 - 40.9	744 - 910	-	-	-	-	
		60	Hi	52.8 - 64.6	1,166 - 1,425	241	791	67	2,366	
			Lo	34.7 - 42.5	676 - 826	-	-	-	-	

*Hi - Notch 3 / Lo - Notch 1

Wall Fan - Remote Control Series

Usage: Living Room | Bedroom | Restaurant | School

M40M

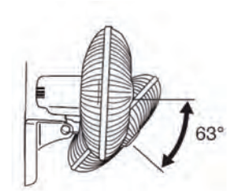
Remote Control
Easy Angle Adjustment
3-speed Selection

- 3-speed selection
- Remote control for speed, oscillation and off timer
- Soft touch switch panel with LED indicator
- Off timer (1, 3, 6 hours)
- Easy adjustment for tilt angle and oscillation angle
- Thermal fuse to prevent overheating
- Safety shaft cap to prevent fan falling
- Permanently lubricated ball bearing equipped
- Transparent plastic blade
- Colour option: Gray or Black

Adjustment of Tilt Angle and Oscillation Angle

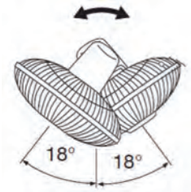
"One-touch" adjustment of tilt

The airflow can be adjusted upward or downward by simply moving the guard up or down as shown in the figure. Adjust the angle of the fan only after first confirming that it has stopped rotating.



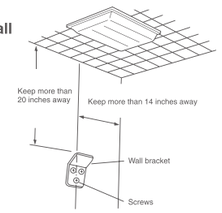
Double oscillation

To change the direction of the air flow, simply push the fan guard to the desired position.

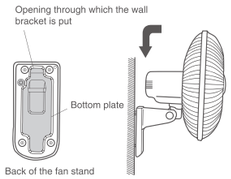


Installation

1 Install the wall bracket to the wall



2 Install the fan stand



Specification

Model	Voltage [V]	Frequency [Hz]	*	Consumption [W]	RPM	Air Velocity		Air Volume		Weight [kg]
						[m/min]	[ft/min]	[m³/min]	[ft³/min]	
M40M	220	50	Hi	46.8 - 57.2	1,055 - 1,289	228	748	63	2,225	4.4
			Lo	37.9 - 46.3	688 - 840	-	-	-	-	
		60	Hi	56.1 - 68.5	1,094 - 1,337	237	778	65	2,295	
			Lo	37.9 - 46.3	625 - 763	-	-	-	-	

*Hi - Notch 3 / Lo - Notch 1

Wall Fan - Big Wall Fan

Usage: Restaurant | School | Wet Market | Shopping Street

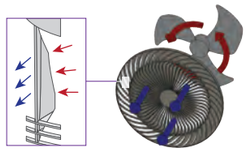
YU50X

Guide Vane Design
Aluminium Blades
3-speed Selection

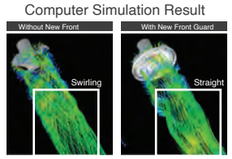
- Guide Vane design generates strong and focus air flow up to 10 m distance
- Aluminum blades for stronger air flow and durability
- Added angle adjust bolt for extra stability on the fan's knee joint
- Full automatic oscillation
- 3-speed ON/OFF pull switch
- New and modern Front Guard Design

New Guide Vane

Guide Vane shape is matched to intake flow, minimizing pressure loss.

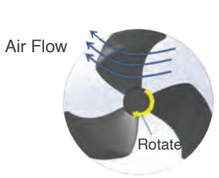


Computer Simulation Result

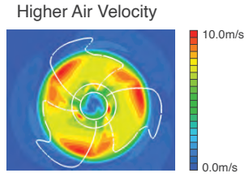


Guide Vane
Change swirling flow to straight restrain flow spreading

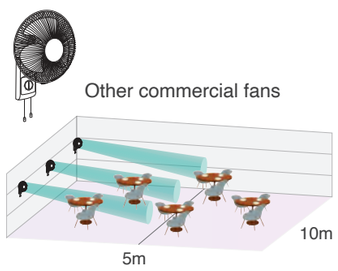
New Metal Blade Design

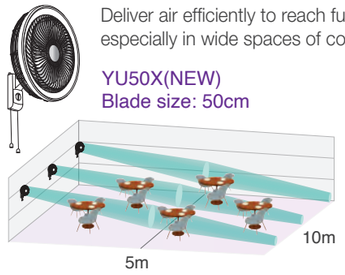


Higher Air Velocity



New Guide Vane and metal blade design bring larger air volume and higher air velocity to reach further distance.

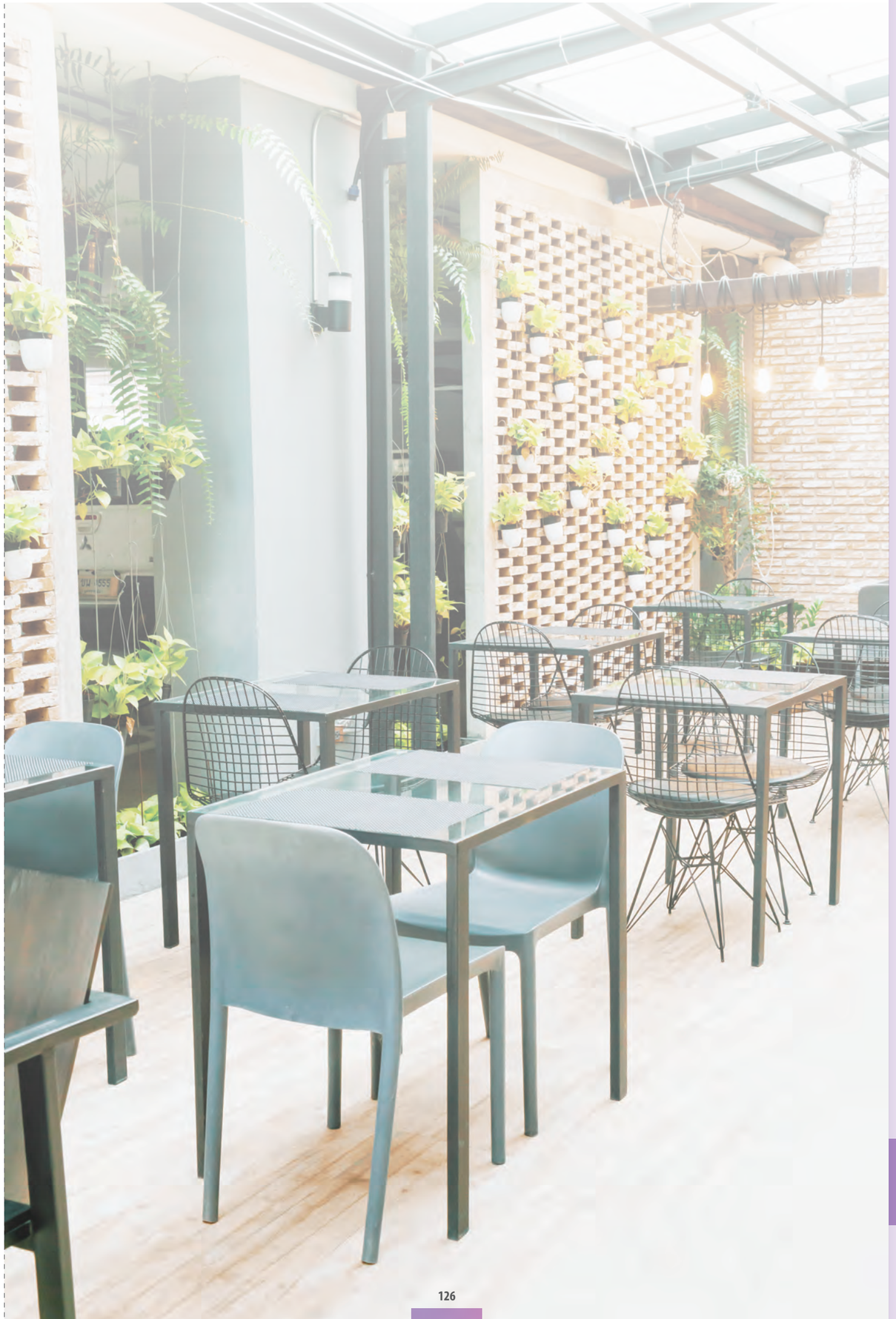




Specification

Model	Voltage [V]	Frequency [Hz]	*	Consumption [W]	RPM	Air Velocity		Air Volume		Weight [kg]
						[m/min]	[ft/min]	[m³/min]	[ft³/min]	
YU50X	220	50	Hi	63	1,230	280	919	100	3,531	4.4
			Lo	53	850	-	-	-	-	
	230		Hi	67	1,260	290	951	105	3,708	
			Lo	56	880	-	-	-	-	
	240		Hi	70	1,280	300	984	110	3,885	
			Lo	60	940	-	-	-	-	
	220	50	Hi	60	1,200	290	951	115	4,061	
			Lo	51	920	-	-	-	-	
	220	60	Hi	76	1,220	295	968	120	4,238	
			Lo	53	800	-	-	-	-	

*Hi - Notch 3 / Lo - Notch 1



Ventilation Product Specification Summary

Ceiling Mount Type Ventilation Fan (AMCA Certified)

Series	Model	Voltage [V]	Frequency [Hz]	Speed	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)										RPM	Watts* For AMCA	Watts** For ICE
					Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.625	0.75	0.875			
Super Quiet Series	17CUH	220	60	-	CFM	44	32	29	-	-	-	-	-	-	664	10	10
					Sones	0.3	0.5	0.6	-	-	-	-	-	-			
		240	50	-	CFM	51	43	40	-	-	-	-	-	-	728	10	9.5
					Sones	0.3	0.4	0.5	-	-	-	-	-	-			
	24CUH	220	60	-	CFM	83	73	68	46	-	-	-	-	-	585	13	13.5
					Sones	0.4	0.5	0.6	1.3	-	-	-	-	-			
		240	50	-	CFM	89	77	75	51	-	-	-	-	-	614	13	12
					Sones	0.5	0.7	0.7	1.4	-	-	-	-	-			
	24CDH	240	50	-	CFM	106	93	89	65	-	-	-	-	-	782	17	16.5
					Sones	0.9	0.9	0.9	1.6	-	-	-	-	-			
	24CHH	220	60	-	CFM	109	99	96	75	48	-	-	-	-	791	22	20.5
					Sones	1.0	0.9	1.0	1.3	2.2	-	-	-	-			
		240	50	-	CFM	117	109	96	73	33	-	-	-	-	861	21	19.5
					Sones	1.2	1.2	1.2	1.3	1.8	-	-	-	-			
	24CXH	220	60	-	CFM	140	128	125	106	78	-	-	-	-	988	31	29
					Sones	1.8	2.2	2.2	2.6	2.8	-	-	-	-			
		240	50	-	CFM	137	122	117	86	32	-	-	-	-	984	31	29
					Sones	2.2	2.2	2.3	2.2	2.9	-	-	-	-			
	27CHH	220	60	Hi	CFM	182	162	156	118	78	37	-	-	-	570	33	33
					Sones	1.1	1.2	1.3	1.7	2.2	2.5	-	-	-			
		240	50	Hi	CFM	198	179	172	126	78	18	-	-	-	609	37	34
					Sones	1.4	1.5	1.6	1.8	2.3	2.5	-	-	-			
	32CDH	220	60	Hi	CFM	226	202	196	163	127	91	53	-	-	580	48	48
					Sones	1.2	1.3	1.4	1.7	2.2	2.7	3.3	-	-			
		240	50	Hi	CFM	257	236	230	192	147	99	53	-	-	675	56	50
					Sones	1.6	1.7	1.8	1.9	2.5	3.0	3.6	-	-			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Ceiling Mount Type Ventilation Fan (AMCA Certified)

Series	Model	Voltage [V]	Frequency [Hz]	Speed	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)										RPM	Watts* For AMCA	Watts** For ICE
					Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.625	0.75	0.875			
DC Motor Series	24JRB	220	60	Hi	CFM	88	88	88	88	63	34	5	-	-	853	10	8
					Sones	0.7	1.0	1.0	1.3	1.7	1.8	3.1	-	-			
		240	50	Hi	CFM	88	88	88	88	63	34	5	-	-			
					Sones	0.7	1.0	1.0	1.3	1.7	1.8	3.1	-	-			
	24JAB	220	60	Hi	CFM	88	88	88	88	63	34	5	-	-	839	10	8
					Sones	0.6	0.9	1.0	1.4	1.6	1.9	3.2	-	-			
		240	50	Hi	CFM	88	88	88	88	63	34	5	-	-			
					Sones	0.6	0.9	1.0	1.4	1.6	1.9	3.2	-	-			
Metal Series	24CMUA	220	60	-	CFM	55	40	37	20	-	-	-	-	-	495	13	12
					Sones	0.3	0.7	0.8	1.6	-	-	-	-	-			
		240	50	-	CFM	55	44	41	24	-	-	-	-	-	562	14	13
					Sones	0.3	0.8	1.0	1.4	-	-	-	-	-			
	24CMHA	220	60	-	CFM	94	85	83	72	54	-	-	-	-	681	25	23
					Sones	1.0	1.4	1.5	1.9	2.3	-	-	-	-			
		240	50	-	CFM	108	98	95	77	44	-	-	-	-	753	27	25
					Sones	1.4	1.8	1.9	2.1	2.2	-	-	-	-			
	27CMHA	220	60	-	CFM	208	184	178	144	108	79	-	-	-	615	46	43
					Sones	1.6	1.7	1.7	2.3	3.2	3.5	-	-	-			
		240	50	-	CFM	219	194	188	150	110	70	-	-	-	669	46	43
					Sones	1.9	1.9	2.0	2.4	3.4	3.1	-	-	-			
Standard Series	38CDG	220	60	Hi	CFM	344	323	317	290	261	230	197	163	126	626	98	98
					Sones	3.1	3.2	3.2	3.3	3.6	4.1	4.5	5.7	5.7			
	38CDG 05 38CDG	240	50	Hi	CFM	387	367	362	336	305	259	212	165	108	737	118	107
					Sones	4.0	4.1	4.2	4.3	4.4	4.7	5.3	5.7	6.2			

Performance certified is for installation type B: Free inlet, Ducted outlet. Performance ratings include the effects of an inlet grille and backdraft shutter. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type B: Free inlet hemispherical sone levels.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Ventilation Product Specification Summary

Cabinet Fan (In-line Fan) (AMCA Certified)

Low Noise Type Cabinet Fan Model Comparison

Model	Voltage [V]	Frequency [Hz]	Speed	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)											RPM	Watts*	Watts**
				Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5		For AMCA	For ICE
12NSB	220	60	Hi	CFM	114	105	102	87	65	-	-	-	-	-	1,460	26	23
				Sones	1.5	1.4	1.4	1.3	1.4	-	-	-	-	-			
	240	50	Hi	CFM	102	90	86	67	39	-	-	-	-	-	1,342	27	22
				Sones	2.0	1.7	1.6	1.4	1.5	-	-	-	-	-			
15NSB	220	60	Hi	CFM	200	183	177	149	118	83	-	-	-	-	1,520	45	42
				Sones	2.7	2.5	2.4	2.3	2.2	2.0	-	-	-	-			
	240	50	Hi	CFM	193	177	172	139	94	20	-	-	-	-	1,373	47	37
				Sones	3.7	3.4	3.2	2.6	2.5	2.8	-	-	-	-			
18NSB	220	60	Hi	CFM	274	261	258	241	222	196	137	-	-	-	1,470	80	73
				Sones	3.3	3.1	3.0	2.9	2.7	2.6	2.7	-	-	-			
	240	50	Hi	CFM	281	263	259	232	200	163	34	-	-	-	1,342	84	68
				Sones	4.8	4.4	4.4	3.8	3.4	3.0	2.9	-	-	-			
18NFB	220	60	Hi	CFM	417	399	395	373	347	318	237	-	-	-	1,420	128	119
				Sones	4.0	3.9	3.9	3.9	3.6	3.5	3.4	-	-	-			
	240	50	Hi	CFM	429	406	400	381	344	290	78	-	-	-	1,327	135	104
				Sones	5.6	5.4	5.4	5.1	4.6	4.3	4.2	-	-	-			
20NSB	220	60	Hi	CFM	469	459	456	444	433	413	354	275	-	-	1,380	170	159
				Sones	4.0	4.0	3.9	3.8	3.9	4.0	4.1	4.2	-	-			
	240	50	Hi	CFM	517	500	495	464	424	382	265	110	-	-	1,328	175	135
				Sones	6.0	5.8	5.8	5.4	5.1	4.8	4.5	4.5	-	-			
23NLB	220	60	Hi	CFM	655	642	640	625	611	597	555	505	440	-	1,400	350	310
				Sones	6.0	6.0	5.9	5.9	5.7	5.7	5.8	5.8	5.8	-			
	240	50	Hi	CFM	688	670	664	642	614	579	493	388	199	-	1,342	347	260
				Sones	8.8	8.6	8.4	8.1	8.0	7.6	7.2	6.7	6.6	-			
25NSB	220	60	Hi	CFM	940	924	919	899	877	857	790	710	610	5.2	1,380	460	425
				Sones	7.1	7.1	7.1	7.0	6.8	6.8	6.7	6.7	6.7	6.9			
	240	50	Hi	CFM	963	938	935	906	868	822	719	567	395	-	1,305	481	370
				Sones	10.1	9.8	9.7	9.3	9.2	8.8	8.0	7.5	8.2	-			
25NFB	220	60	Hi	CFM	1,016	1,000	995	975	954	933	875	803	710	590	1,420	680	520
				Sones	8.2	8.2	8.2	8.2	7.9	7.9	7.8	7.6	7.5	7.5			
	240	50	Hi	CFM	1,057	1,048	1,040	1,010	972	922	811	660	473	-	1,330	537	430
				Sones	12.1	11.9	11.5	11.1	10.6	9.8	8.7	8.7	10.3	-			

Performance certified is for installation type D: Ducted inlet, Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction.
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Low Noise Type Cabinet Fan (Three Phase Series) Model Comparison (Non-AMCA Certified)

Model	Phase	Voltage [V]	Frequency [Hz]	Consumption [W]	RPM	Air Volume		Noise [dB(A)]	Weight [kg]	Duct Size [mm]	Impeller Diameter [mm]
						[CMH]	[CFM]				
25SWC	3	380	50	940	1,375	4,000	2,354	43	60	250 x 250	250
			60	1,450	1,530	4,500	2,648	45			
25SMC	3	380	50	1,180	1,345	5,200	3,060	45	60	250 x 700	250
			60	1,750	1,470	5,500	3,237	46			
28NXC	3	380	50	600	1,295	2,600	1,560	44	28	Ø250	280
			60	840	1,380	2,650	1,560	45			

Note:
The value in specification tables are representative characteristic value at 380V 50/60Hz.
RPM data is for reference only. Values may vary subject to different conditions.
The above Low Noise Type Cabinet Fan (Three Phase Series) Model are not licensed to bear the AMCA Certified Rating Seal.

Industrial Type Ventilation Fan (AMCA Certified)

Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)										RPM	Watts*	Watts**
			Inches of H_2O	0	0.05	0.075	0.1	0.125	0.25	0.375	0.5	0.375		FOR AMCA	FOR IEC
25GSE	220	60	CFM	788	742	715	686	647	-	-	-	-	1,570	61	57
			Sones	4.9	4.7	4.5	4.5	4.6	-	-	-	-			
	240	50	CFM	701	657	633	600	585	187	-	-	-	1,400	48	44
			Sones	3.8	3.6	3.6	3.5	3.6	8.6	-	-	-			
30GSE	220	60	CFM	1,308	1,247	1,217	1,184	1,153	772	-	-	-	1,460	129	119
			Sones	9.0	9.0	9.1	9.0	9.1	9.4	-	-	-			
	240	50	CFM	1,177	1,119	1,090	1,058	1,026	561	243	-	-	1,315	106	98
			Sones	5.5	5.5	5.6	5.6	5.8	11.1	12.0	-	-			
35GSE	220	60	CFM	1,850	1,788	1,752	1,712	1,669	1,456	600	-	-	1,640	178	161
			Sones	11.9	11.6	12.0	12.4	13.6	14.6	13.4	-	-			
	240	50	CFM	1,615	1,548	1,506	1,458	1,411	1,147	390	-	-	1,435	130	122
			Sones	8.6	8.2	8.2	8.0	8.0	12.6	13.4	-	-			
40GSE	220	60	CFM	2,677	2,581	2,535	2,488	2,440	2,170	2,050	-	-	1,550	294	270
			Sones	20.0	20.0	19.7	19.4	19.3	18.9	19.9	-	-			
	240	50	CFM	2,135	2,067	2,035	2,000	1,965	1,800	1,480	-	-	1,440	164	151
			Sones	9.0	8.5	8.7	8.7	8.7	13.0	14.2	-	-			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels. Speed (RPM) shown is nominal. Performance is based on actual speed of test.
*the Watts rating is only for AMCA test method and it is at the statistic pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method.

Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			Inches of H_2O	0	0.2	0.3	0.4		FOR AMCA	FOR IEC
45GSC	220	60	CFM	3,278	3,131	3,001	2,795	1,563	346	325
			Sones	10	10.4	10.6	10.8			
	240	50	CFM	2,854	2,648	2,454	2,030	1,430	277	241
			Sones	7.8	7.7	7.8	9.4			
50GSC	220	60	CFM	3,884	3,443	3,090	2,501	1,080	347	326
			Sones	10.9	11.3	11.5	11.8			
	240	50	CFM	3,354	2,854	2,266	912	968	293	271
			Sones	11.7	13.8	14.5	15.4			
60GSC	220	60	CFM	5,038	4,349	3,943	3,560	1,088	384	361
			Sones	10.1	9.8	9.5	10.1			
	240	50	CFM	4,402	3,855	3,366	2,972	980	289	263
			Sones	10.3	8.6	8.5a	11.5			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings do not include the effects of appurtenances (accessories). The Speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating is only for AMCA test method and it is at the statistic pressure of 0 inch of H_2O.
**the Watts rating is only for IEC test method.

Industrial Type Ventilation Fan (Non-AMCA Certified)

Model	Phase	Voltage [V]	Frequency [Hz]	Consumption [W]	RPM	Air Volume		Noise [dB(A)]	Weight [kg]
						[CMH]	[CFM]		
45GTC	3	380	50	220	1,450	5,520	3,249	52	18.5
			60	330	1,690	6,420	3,779	56	
50GTC	3	380	50	320	1,400	6,960	4,097	54	28.5
			60	475	1,590	8,010	4,715	58	
60GTC	3	380	50	310	940	9,420	5,544	49	34
			60	450	1,070	10,920	6,427	53	

Model	Voltage [V]	Frequency [Hz]	Air Volume		Current [A]	Input [W]	Noise [dB(A)]	RPM	Weight [kg]	Installation Space W x L [mm]
			m^3/h	ft^3/min						
40KAQA	220	50	1,880	1,105	0.260	47.0	51.0	1,230 ~ 1,370	6.4	444 x 444
	230		1,920	1,130	0.270	52.0	51.0	1,250 ~ 1,390		
	240		1,960	1,155	0.290	59.0	51.0	1,270 ~ 1,410		
	230	60	2,130	1,254	0.310	67.0	52.5	1,400 ~ 1,540		

Note:
The value in specification tables are representative characteristic value at 220V, 50/60Hz.
RPM data is for reference only. Values may vary subject to different conditions.
The above Industrial Ventilating Fan Model are not licensed to bear the AMCA Certified Rating Seal.

Ventilation Product Specification Summary

Wall Mount Type Ventilation Fan (AMCA Certified)

Series	Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)				RPM	Watts*	Watts**
				inches of H_2O	0	0.025	0.05		FOR AMCA	FOR IEC
Metallic	20ASB	220	60	CFM Sones	330 1.7	259 1.9	183 3.9	1,358	25.5	21.5
		240	50	CFM Sones	296 1.5	198 1.7	151 3.2	1,252	22.4	19.5
	20ASB 05	240	50	CFM Sones	296 1.5	198 1.7	151 3.2	1,252	22.4	19.5
	25ASB	220	60	CFM Sones	522 1.9	414 1.6	240 2.2	1,277	35.5	30.5
		240	50	CFM Sones	486 2.0	434 2.0	314 2.4	1,194	35.1	29.5
	25ASB 05	240	50	CFM Sones	486 2.0	434 2.0	314 2.4	1,194	35.1	29.5
	30ASB	220	60	CFM Sones	637 2.0	400 2.7	85 2.2	1,088	39.8	34.5
		240	50	CFM Sones	706 2.9	620 2.3	498 2.2	1,175	38.1	34
	30ASB 05	240	50	CFM Sones	706 2.9	620 2.3	498 2.2	1,175	38.1	34
Automatic Shutter	15AAQ1	220	60	CFM Sones	157 2.5	122 1.9	65 2.3	1,533	20.6	19
		240	50	CFM Sones	154 1.7	120 1.4	63 2.1	1,453	20.1	19
	20AUH	220	60	CFM Sones	355 2.5	314 2.5	196 1.7	1,410	32.4	28.5
	25AUH	220	60	CFM Sones	514 1.8	426 1.5	290 1.8	1,200	37.8	33
	30AUH 11	220	60	CFM Sones	572 1.0	453 1.7	235 2.6	856	37.0	33
Automatic Shutter Louver	20ALH	220	60	CFM Sones	328 3.5	280 3.2	170 3.4	1,385	32.8	28.5
	25ALH	220	60	CFM Sones	420 2.7	372 2.7	232 4.6	1,097	37.5	33
	30ALH 11	220	60	CFM Sones	447 2.0	288 2.7	154 2.2	756	37.1	33

Series	Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
				inches of H_2O	0	0.02	0.04	0.06		FOR AMCA	FOR IEC
Automatic Shutter	20AUA	220	60	CFM Sones	370 2.1	328 2.1	274 2.2	227 2.5	1,430	23.5	22
		240	50	CFM Sones	339 2.0	295 2.1	257 2.0	200 2.7	1,303	23	21.5
	25AUA	220	60	CFM Sones	542 2.4	504 2.3	460 1.9	361 2.5	1,387	33.2	31
		240	50	CFM Sones	542 3.6	493 3.2	443 3.0	394 3.1	1,252	31	29
	30AUA	220	60	CFM Sones	655 2.0	567 1.6	456 1.6	242 2.4	938	35.3	33
		240	50	CFM Sones	696 2.0	580 1.8	491 1.6	340 2.2	964	34.8	32.5
Automatic Shutter Louver	20ALA	220	60	CFM Sones	334 2.8	296 2.7	256 3.1	197 3.9	1,398	23.5	22
		240	50	CFM Sones	301 2.5	274 2.5	234 2.7	175 2.8	1,278	23	21.5
	25ALA	220	60	CFM Sones	471 3.4	411 3.2	350 2.9	250 3.0	1,224	33.2	31
		240	50	CFM Sones	482 4.2	438 4.1	389 3.8	328 3.8	1,217	32.1	30
	30ALA	220	60	CFM Sones	510 2.5	446 1.9	372 2.0	219 2.1	876	35.3	33
		240	50	CFM Sones	571 3.1	494 2.6	411 2.5	263 3.3	896	35.3	32.5

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of backdraft shutter for all models and inlet grill for Model ALA, ALH, ALF 11. Performance ratings include the effects of inlet grille and backdraft shutter for Model ALA. The speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free inlet hemispherical sone levels.
*the Watts rating only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
**the Watts rating only for ICE test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Wall Mount Type Ventilation Fan (Non-AMCA Certified)

Model	Voltage [V]	Voltage [Hz]	Air Volume [CMH]	Consumption [W]	RPM	Noise [dB(A)]	Weight [kg]	Installation Space [mm]	Wall Thickness [mm]
10EGKB	220	50	76	4.3	2,660	33	1.0	Ø130~140	100-150
	230	50	77	4.6	2,675	33			
	240	50	77	5.0	2,690	33			
15EGKB	220	50	162	5.7	2,265	36	1.3	Ø175~185	100-150
	230	50	165	6.1	2,330	37			
	240	50	165	6.5	2,390	37			
10EGSB	220	50	76	4.3	2,665	35	0.8	Ø120~125	>205
		60	87	4.7	3,140	37.5			
	230	50	77	4.6	2,670	35			
	240	50	77	5.0	2,685	35			
15EGSB	220	50	155	5.7	2,130	36	1.0	Ø165~170	>240
		60	180	6.1	2,470	40			
	230	50	160	6.1	2,230	37			
	240	50	165	6.5	2,240	37			
10BAQ1	220	50	76.3	15	1,250	40.1	1.7	155 x 205	-
		60	72.9	17	1,200	39.8			
	230	50	80.3	16	1,300	41.2			
	240	50	84.9	17.5	1,385	42			

Note: RPM data is for reference only, values may vary subject to different conditions
Test Condition
- Air volume, electric characteristic and noise are specified at the static pressure of 0 Pa
- The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 to -7 dB tolerance
- The values of noise level are measured at 1 m apart from the side of fan body when ducts are connected on outlet side
- The values of air volume are the mid-points of results measured by our company, within ±10% tolerance

Ventilation Product Specification Summary

Window Mount Type Ventilation Fan (AMCA Certified)

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			inches of H_2O	0	0.05	0.1	0.15		FOR AMCA	FOR IEC
15WHCT	220	60	CFM	127	94	63	31	2,440	14.6	13
			Sones	3.0	3.6	3.5	3.9			
	240	50	CFM	127	95	68	50	2,537	16	15
			Sones	2.3	2.7	3.5	2.8			
20WHCT	220	60	CFM	250	188	127	78	1,517	24.4	22
			Sones	3	3.9	4.5	4.2			
	240	50	CFM	230	147	103	53	1,333	23.4	22
			Sones	2.8	3.8	3.4	4			

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			inches of H_2O	0	0.02	0.04	0.06		FOR AMCA	FOR IEC
15WAA 15WAAMN	220	60	CFM	124	109	91	79	2,021	19.6	18
			Sones	3.6	4.5	4.1	4			
	240	50	CFM	127	109	93	78	2,062	18.2	16
			Sones	2.3	4.5	4.1	3.8			
20WAA 20WAAMN	220	60	CFM	250	147	124	94	1,385	18.4	17
			Sones	3	3.8	3.5	3.3			
	240	50	CFM	230	153	141	131	1,375	18.6	17.5
			Sones	2.8	3.3	3.4	3.4			

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)					RPM	Watts*	Watts**
			inches of H_2O	0	0.01	0.02	0.03		FOR AMCA	FOR IEC
15WUD 15WUDMN	220	60	CFM	105	94	79	66	1,425	9.7	8.9
			Sones	0.9	0.9	2.2	2.4			
	240	50	CFM	124	115	104	94	1,722	10.3	9.5
			Sones	1.4	1.6	1.8	3.7			
			inches of H_2O	0	0.02	0.03	0.04			
20WUD 20WUDMN	220	60	CFM	188	129	112	88	980	19.2	17.9
			Sones	0.8	1.2	1.8	1.4			
	240	50	CFM	221	168	141	118	1,096	18.5	17.2
			Sones	1.8	1.6	2.2	2.0			

Performance certified is for installation type A: Free inlet, Free outlet with partition. Performance ratings include the effects of backdraft shutter for all models and inlet grill for Model 15WHCT and 20WHCT.The Speed (RPM) and Watts rating shown are at the static pressure of 0 inch of H_2O. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for installation type A: Free Inlet hemispherical sone levels.
* the Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Ratings Seal does not apply to IEC test method watts.

Energy Recovery Ventilator (AMCA Certified)

Model	Voltage [V]	Frequency [Hz]	CFM / SONE AT STATIC Pressure (ps-inches of H_2O)											RPM	Watts*	Watts**
			Inches of H_2O	0	0.1	0.125	0.25	0.375	0.5	0.75	1	1.25	1.5	1.75		FOR AMCA	FOR IEC
E25DZUA	220	60	CFM (OA-SA)	183	172	168	155	143	131	108	77	14	-	-	1,448	197	171
			CFM (RA-EA)	130	118	115.5	104	91	77	44	0	-	-	-	1,387	187	
E35DZUA	220	60	CFM (OA-SA)	258	250	247	237	225	211	174	144	118	69	-	1,425	348	310
			CFM (RA-EA)	192	183	180	169	157	144	116	84	49	0	-	1,402	342	
E50DZUA	220	60	CFM (OA-SA)	339	330	326	314	303	290	261	230	188	134	80	1,501	470	406
			CFM (RA-EA)	253	241	238	224	207	190	154	117	82	41	-	1,452	443	

Performance certified is for installation type D-Ducted inlet, Ducted outlet.Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances (accessories).*
Air performance ratings for gross supply airflow are from port 2. Air performance ratings for gross exhaust airflow are to port 3.
* The Watts rating is only for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** The Watts rating is only for IEC test method and AMCA Certified Rating Seal does not apply to IEC test method watts.

Main Body	Size (mm)	650 x 750 x 220	680 x 920 x 230	680 x 1090 x 240
	Weight	30	39	45
	OA Side Duct Diameter	Ø200		
	Duct Diameter RA/SA/EA	Ø150		

Up-Side Down Installation	Up-Side Down Installation

Filter Box	Duct Diameter	Ø200	
	Size (mm)	600 x 385 x 240	600 x 385 x 350

Ventilation Product Specification Summary

In-line Centrifugal Fan (AMCA Certified)

Model	Voltage [V]	Frequency [Hz]	CFM/SONE AT STATIC Pressure (ps-inches of H_2O)												RPM	Watts*	Watts**
			inches of H_2O	0.000	0.121	0.201	0.402	0.603	0.804	1.005	1.206	1.507	1.808	2.009	2.411		FOR AMCA	FOR IEC
10MMA	240	50	CFM	161	152	146	125	108	87	66	-	-	-	-	-	2,606	63	57
			Sones	8.8	8.5	8.4	8.0	7.5	7.2	6.9								
12MMA	240	50	CFM	197	178	169	144	121	100	74	49	-	-	-	-	2,580	63	58
			Sones	9.9	9.5	9.3	8.8	8.4	8.0	7.6	7.1							
15MMA	240	50	CFM	413	390	375	332	288	246	203	163	106	-	-	-	2,495	104	97
			Sones	11.1	10.9	10.8	10.5	10.2	10.2	10.2	10.9	10.6						
16MMA	240	50	CFM	487	462	440	390	337	294	250	212	146	-	-	-	2,311	136	128
			Sones	10.6	10.3	10.3	10.1	10.2	10.3	11.1	10.5	9.1						
20MMA	240	50	CFM	553	523	506	460	421	379	332	284	229	163	121	-	2,535	181	174
			Sones	11.2	10.9	10.8	10.2	9.9	9.6	9.7	10.2	12.2	12.5	12.9				
25MMA	240	50	CFM	555	532	515	474	436	394	352	307	250	186	140	-	2,643	178	165
			Sones	11.7	11.2	11.1	10.5	10.1	9.7	9.3	9.1	10.0	12.3	13.3				
31MMA	240	50	CFM	953	908	883	805	709	601	504	438	366	307	263	159	2,519	246	238
			Sones	17.7	17.1	16.5	15.6	14.4	12.5	12.0	12.1	13.6	17.4	20.0	21.1			

Performance certified is for installation type D: Ducted inlet, Ducted outlet.
Performance ratings do not include the effects of appurtenances (accessories). Speed (RPM) shown is nominal.
Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA International Standard 301.
Values shown are for installation type D: ducted inlet hemispherical sone levels. Ratings do not include the effect of duct end correction.
* the Watts rating is for AMCA test method and it is at the static pressure of 0 inch of H_2O.
** the Watts rating is only for IEC test method and the AMCA Certified Rating Seal does not apply to IEC test method watts.

Mini Sirocco Fan (Non-AMCA Certified)

Model	Voltage [V]	Frequency [Hz]	Speed	Air Volume [CMH]	Consumption [W]	Noise Level [dB]		Net Weight [kg]
						Inlet	Side	
10CGB	220	50	Hi	154	15	41.0	28.0	1.9
			Lo	115	12	35.5	24.0	
		60	Hi	133	12	36.5	24.0	
			Lo	93	9	28.5	20.0	
	230	60	Hi	143	13	38.0	25.0	
			Lo	100	10	30.5	20.0	
	220-240	50	Hi	134-143	10-11	37.0-39.0	23.0-25.0	
			Lo	110-125	9-10	32.0-35.0	20.0-23.0	
12CGB	220	50	Hi	250	22	44.0	29.0	2.5
			Lo	175	16	32.0	19.0	
		60	Hi	225	25	42.5	29.0	
			Lo	145	18	32.0	21.0	
	230	60	Hi	242	27	44.0	30.0	
			Lo	153	19	34.0	21.5	
	220-240	50	Hi	233-262	23-28	44.5-46.5	29.0-32.0	
			Lo	156-175	19-23	33.0-36.0	18.0-20.0	
14CGB	220	50	Hi	332	35	50.0	34.0	2.8
			Lo	226	28	40.0	26.0	
		60	Hi	260	30	43.0	30.0	
			Lo	200	25	35.5	25.0	
	230	60	Hi	275	33	44.5	31.5	
			Lo	212	28	37.5	26.0	
	220-240	50	Hi	280-315	28-32	44.5-46.5	31.0-33.0	
			Lo	227-265	26-30	40.0-44.0	27.0-31.0	
16CGB	220	50	Hi	509	50	49.0	35.0	5.6
			Lo	405	43	43.5	30.0	
		60	Hi	483	57	48.0	32.0	
			Lo	372	44	41.0	27.0	
	230	60	Hi	503	61	49.0	34.5	
			Lo	393	48	42.5	29.0	
	220-240	50	Hi	509-542	50-56	49.0-51.5	35.0-38.0	
			Lo	405-450	43-48	43.5-46.0	30.0-32.0	

Mini Sirocco Fan (Non-AMCA Certified)

Model	Voltage [V]	Frequency [Hz]	Speed	Air Volume [CMH]	Consumption [W]	Noise Level [dB]		Net Weight [kg]
						Inlet	Side	
17CGB	220	50	Hi	791	86	50.0	36.0	10.1
			Lo	640	70	44.0	31.0	
		60	Hi	752	95	49.0	34.0	
			Lo	612	73	43.5	29.0	
	230	60	Hi	789	104	50.0	35.0	
			Lo	641	80	44.0	31.0	
	220-240	50	Hi	791-875	86-101	50.0-52.5	36.0-39.0	
			Lo	640-705	70-83	44.0-47.0	31.0-32.0	
19CGB	220	50	Hi	947	121	55.0	41.0	10.2
			Lo	857	105	51.5	37.0	
		60	Hi	885	127	52.0	39.0	
			Lo	760	107	48.0	37.0	
	230	60	Hi	931	140	53.5	40.0	
			Lo	791	117	49.5	36.5	
	220-240	50	Hi	919-997	113-130	52.0-54.0	40.0-42.0	
			Lo	804-880	99-115	50.0-52.0	38.0-40.0	
21CGB	220	50	Hi	1420	238	67.0	54.0	14.6
			Lo	1143	182	60.0	47.0	
		60	Hi	1500	328	68.0	57.0	
			Lo	1042	215	58.0	47.0	
	230	60	Hi	1550	342	69.0	57.5	
			Lo	1100	230	59.5	48.0	
	220-240	50	Hi	1420-1435	238-247	66.0-67.0	54.0-55.0	
			Lo	1143-1220	182-197	60.0-62.5	47.0-51.0	

Notes:
① The values of rated input, air volume and noise are specified at the static pressure of 0 Pa.
② The values of noise level is A weighted average sound pressure level, the mean values are measured by our company, within +3 and -7 tolerance.
③ The values of noise level are measured at the 1.5m apart from the inspection panel of the fan body when ducts are connected on both inlet and outlet side. It is based on the assumption that the noise of fan body propagates to room inside.
④ The values of air volume are the mid-points of results measured by our company, with ±10% tolerance.

Reference Project

SAUDI ARABIA
Luxury Villas
1600 Villa - Sheik Zayed housing program- Phase 1-3
Window & Wall Mount Ventilation Fan, Sirocco Fan

SUDAN
Commercial Residential Building
Energy Recovery Ventilator

UAE
Residential Villas
519 villas
Window Mount Type Ventilation Fan

UAE
Luxury Villas
200 villas
Ducted Ventilation Products

UAE
Commercial Building
Window Mount Type Ventilation Fan

SAUDI ARABIA
Residential Villas
Local Housing Development
for Locals
Ducted Ventilation Products

QATAR
Residential Villas
42 Villas
Window Mount Type Ventilation Fan

UAE
Residential Building
Labor Camps Comples
Ceiling Fan, Window Mount &
Industrial Type Ventilation Fan

Reference Project

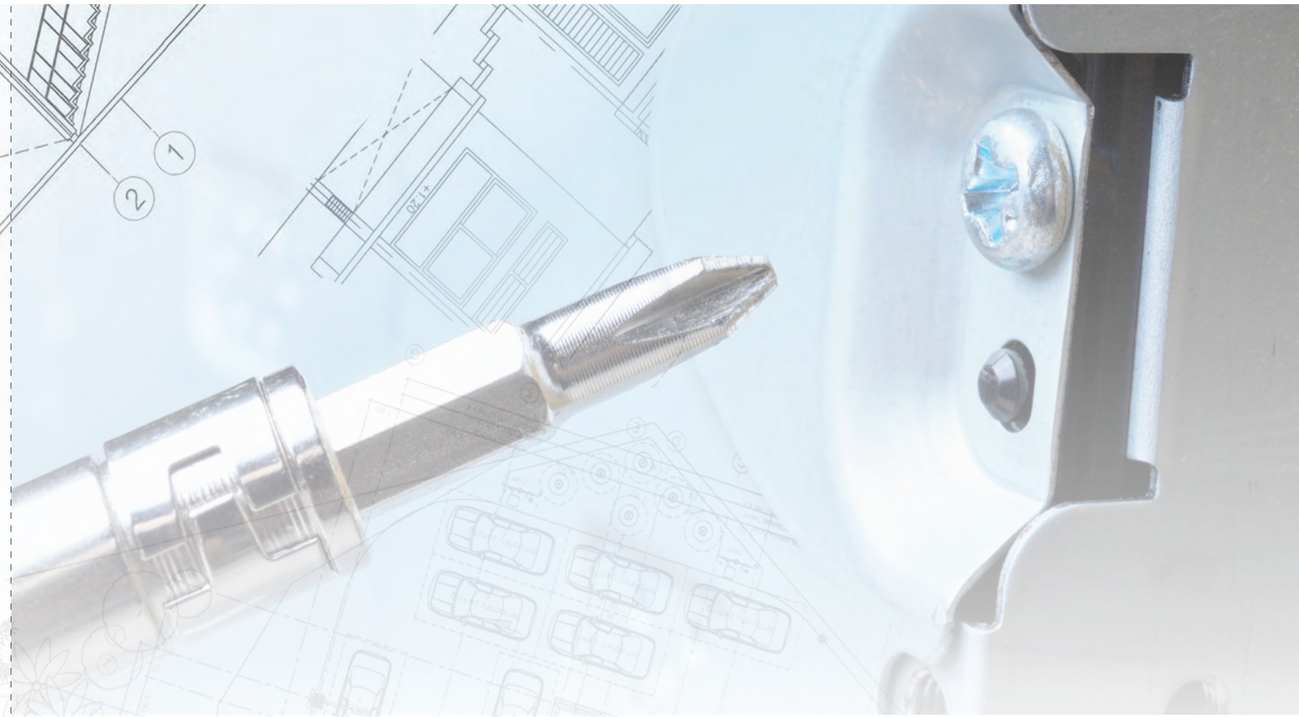
QATAR
Commercial Residential Building
Ceiling Fan, Wall Mount Louver
Type Ventilation Fan

QATAR
Residential Building
234 Apartments
Ceiling Mount Type Ventilation Fan

UAE
Residential Villas
220 Villas
Window & Wall Mount Type
Ventilation Fan

SAUDI ARABIA
Net Zero Energy Green House Model
Cabinet Fan, Wall Mount Louver Type
Ventilation Fan,
Energy Recovery Ventilator

Installation Method

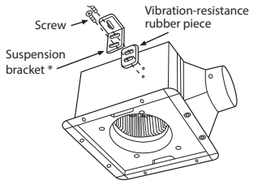


Ceiling Mount Type Ventilation Fan

Applicable Model:
24JRB / 24JAB / 17CUH / 24CUH / 24CDH / 24CHH / 24CXH / 27CHH / 32CDH
24CMUA/ 24CMHA/ 27CMHA/ 38CDG/ 38CDG 05/ 38CHG

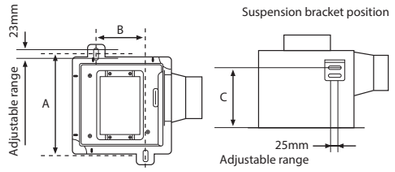
1A Installation with anchor bolts

1. Secure 1 set of suspension bracket (optional accessory) with screws.



The screw length should not exceed 8mm.

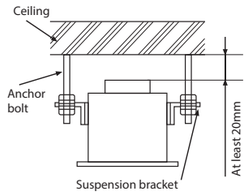
*2 sets of accessories are required for 32CDH



Model No.	A	B	C
17CUH	206	89	103
24CUH / 24CDH / 24CHH / 24CXH	266	131	112
24JRB / 24JAB	286	130	97
27CHH	296	160	158.5
32CDH	346	200	158.5
24CMUA/24CMHA	286	131	139
27CMHA	290	160	173
38CDG/38CDG05/ 38CHG	440	260	130

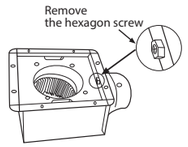
Unit : mm

2. Mount the fan body enclosure on the anchor bolts (M8-M10, not supplied).

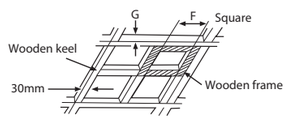


1B Installation with wooden joist

1. First remove the hexagon screw attaching the adapter assembly to the fan body.



2. Build a wooden frame horizontally from the keel. Note that the distance between the top of the fan body and the ceiling should be at least 20mm.

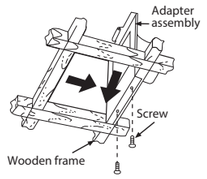


*Ceiling joist must be subjected to static load more than 5 times of the product weight.

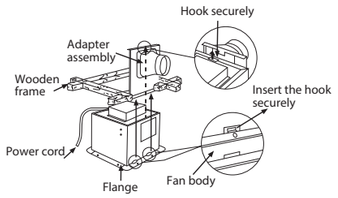
Model No.	F	B
17CUH	177	25-30
24CUH / 24CDH / 24CHH / 24CXH 24CMUA/24CMHA/ 27CMHA	240	25-30
24JRB / 24JAB	240	30-40
27CHH	270	25-30
32CDH	320	25-30
38CDG/38CDG05/ 38CHG	380	30

Unit : mm

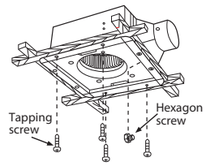
3. Attach the adapter assembly to the wooden frame as shown in the figure.



4. Insert the fan body in the wooden frame and connect it to the adapter assembly.



5. Firmly secure the fan body with four tapping screws and a hexagon screw.



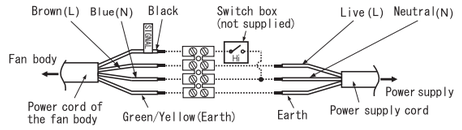
Ceiling Mount Type Ventilation Fan

2 Power Cord Connection

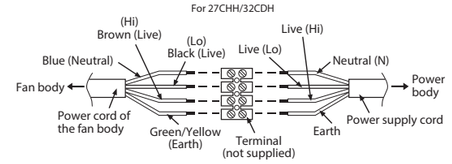
1. Connect the power cord to the power supply line according to the wiring diagram and the local electrical wiring rules of fixed wiring.

   Make sure all connections are fastened firmly after wiring is finished.

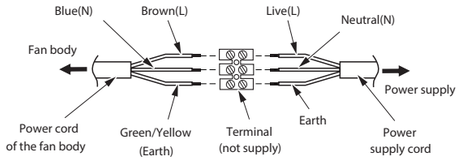
For 24JAB



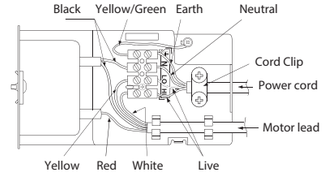
For 27CHH/32CDH



For 17CUH/24CUH/24CDH/24CHH/24CXH/24JRB/24CMUA/24CMHA/27CMHA

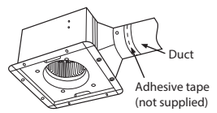


For 38CDG/38CDG 05/38CHG

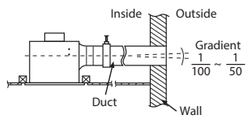


3 Duct Connection and Ceiling Plate Installation

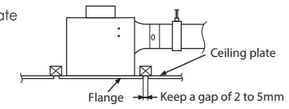
1. Insert the duct into the adapter assembly, and tighten it with adhesive tape (not supplied). (Suspend the duct from the ceiling to prevent any external force onto the fan body.)



Slope the duct downward and guide it through the wall to the outside. Be sure to prevent rainwater from falling in the duct from its outlet. (The minimum size of the hole opening on the wall is: Ø116mm for 17/24 model, Ø168mm for 27/32/38 model)



2. Install the ceiling plate. Note that the gap between the flange and the ceiling plate should be 2 to 5 mm.

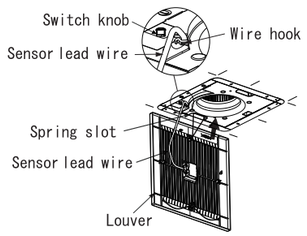


3. Install the pipe hood or vent cap (optional accessories) on the outer wall.

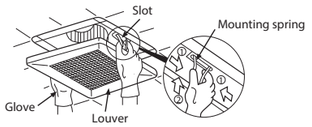
Model No.	Pipe Hood	Vent Cap
24JRB / 24JAB / 17CUH / 24CUH / 24CDH / 24CHH / 24CXH	MCX100K	VCX100K
27CHH / 32CDH / 38CDG / 38CDG 05 / 38CHG	MCX150K	VCX150K

4 Louver Installation

1. For 24JRB only
   Check the sensor lead wire is fixed in the wire hook. Keep the wire away from the air intake and fan blade.

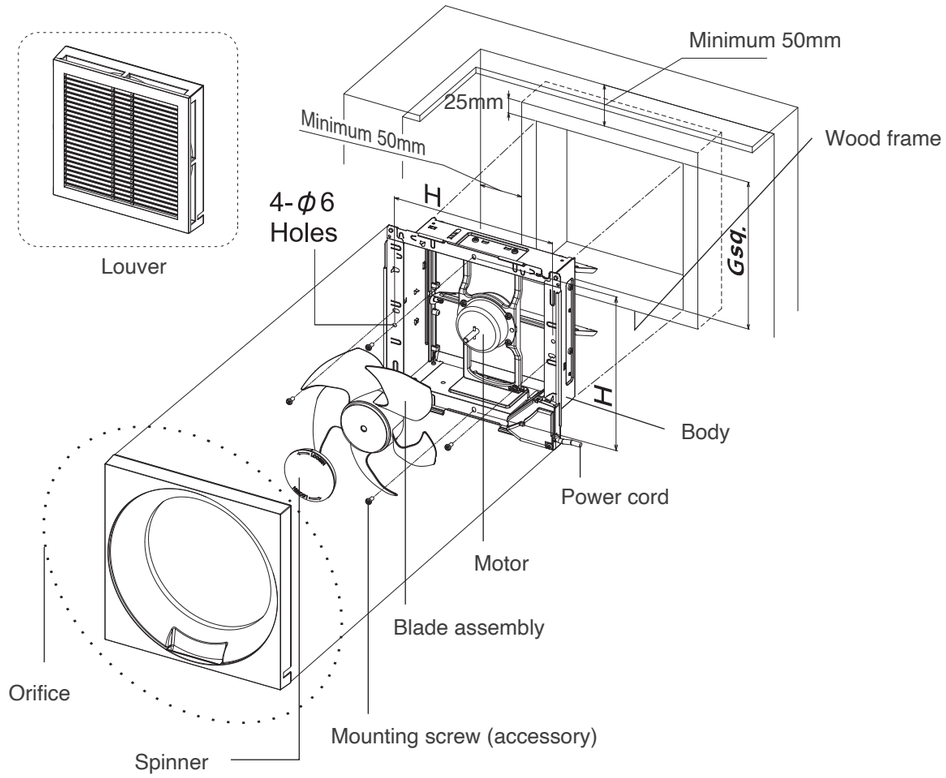


2. Insert the mounting spring into the slots and mount the louver to the fan body. (Please wear gloves during installation.)

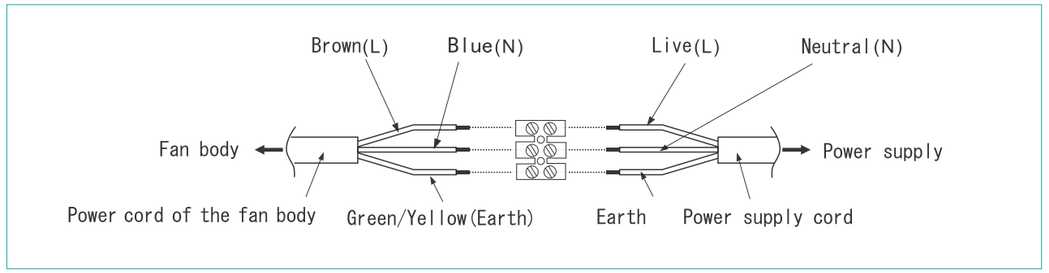


Wall Mount Type Ventilation Fan

Applicable Model:
AU model / AL model



- Connet the power cord to the power supply line according to the wiring diagram and the local electrical wiring rules of fixed wiring.
- Make sure all connections are fastened firmly after wiring is finished.
- It is required to use terminal (not supplied) that complies IEC 60998.
- The all connections should be accommodated in a suitable compartment.

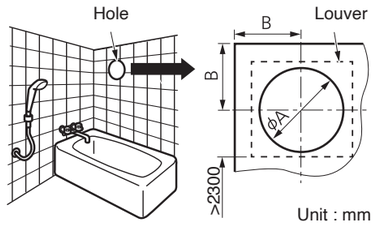


Wall Mount Type Ventilation Fan

Applicable Model:
10EGKB/15EGKB

1. Make appropriate hole in the wall for ducting.

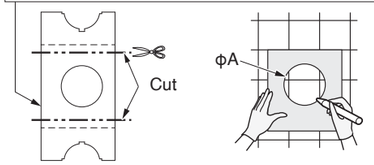
Position of hole. Bathroom side



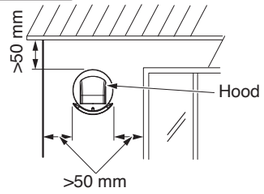
Unit : mm

Model	ϕA	B	Wall thickness
10EGKB	130~140	>125	100~150
15EGKB	175~185	>150	

Paper pattern (Corrugated paper for packing)

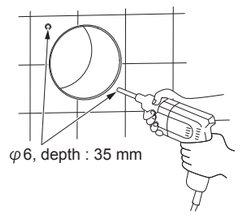


Outside



Note : It is noted that the wall does not collapse when making hole.
Do not install on the bumpy oe rotten wall.

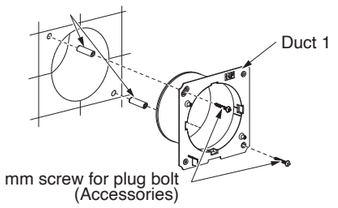
2. Drill holes for plug bolt.



3. Insert the duct 1 to the wall using two screws and plug bolt.

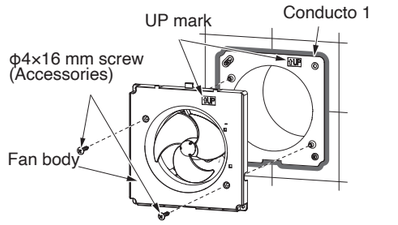
Plug bolt (Accessories)

Note : Use accessory plug bolt and screw.

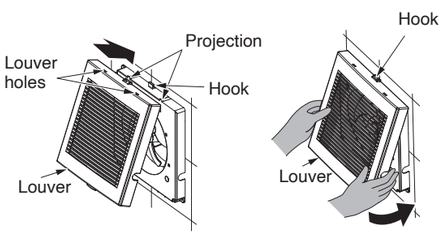


4. Insert the fan body to the duct 1.

Note : Make sure that use screw to fix the fan body. It may cause drop the fan body.

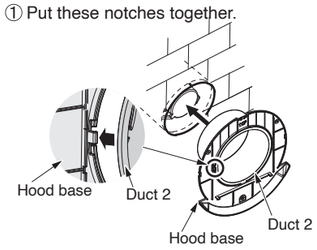


5. Install the louver



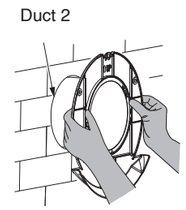
6. Hood installation (From outside wall)

① Put these notches together.

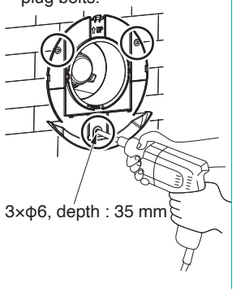


Note : Fit the duct 2 into the hood base when it come off.

② Insert the duct 2 from outside wall.

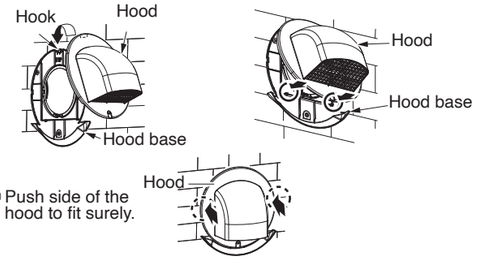


7. Drill three holes for plug bolts.



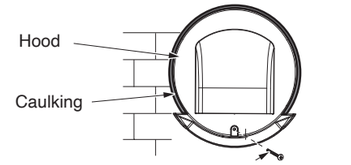
8. Hang and fix hood.

① Hang the hood into the hook. ② Fit the hood into the hood base.



9. Insert the hood to the wall seal with caulking around the hood.

Note : Make sure that use accessory screw to fix the hood. It may cause drop the hood.



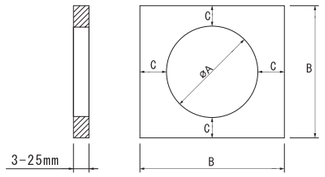
Window Mount Type Ventilation Fan

Applicable Model:
15WHCT/20WHCT

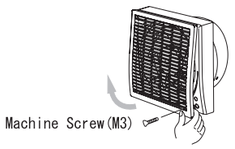
1. Make an installation hole on the window glass according to the dimensions shown in the table.
(Applicable to single-glass or double-glass, and the single block thickness of double-glass must be not less than 3mm.)

Model No.	A	B	C
15WHCT	186~188	390 Min.	100 Min.
20WHCT	247~250	450 Min.	100 Min.

Unit : mm

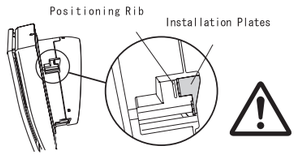


2. Remove the screw of louver and retain it, then pull the louver out of the lower-right corner.



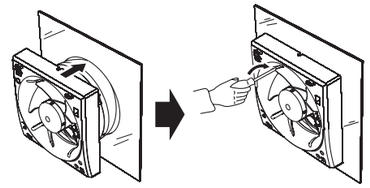
Louver can be pulled out only from the lower-right corner or it may be damaged.

3. Before installation, please ensure every installation plate is at the position as shown below.

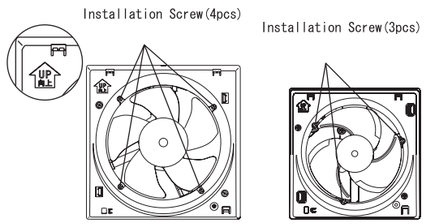


As shown in the diagram, the installation plates must be positioned in the slot between the frame and the hood. Its front edge should not exceed the positioning rib, or installation may fail.

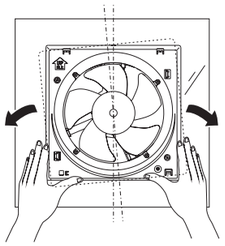
4. Keep the "UP" mark on the orifice on the top position. Insert the ventilation fan body into the installation hole completely. Be sure to keep the back of the body closed to the glass evenly, then twist each installation screw clockwise until the installation plates slightly compress the glass.



Please do not use the electric screwdriver which may damage the glass.

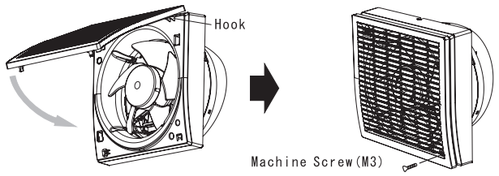


5. Rotate the body to adjust its horizontal and vertical direction. Then tighten each installation screw completely.



To ensure the installation strength, please make sure the tighten torque must be in the range of 90cN-m to 180cN-m. If the tighten torque is not large enough, it may result in rain water ingression through the gap; If the tighten torque is too large, it may damage the glass.

6. Hang the louver on the hook of orifice, rotate downward and insert it into the orifice. Fix the louver with the screw which was removed at installation step 2.

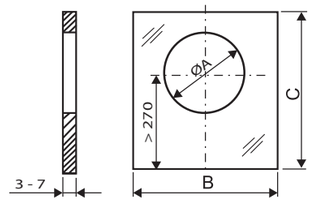


Must use the above specified screw to fix.
Otherwise it may damage the product or lead to installation failure.

Window Mount Type Ventilation Fan

Applicable Model:
15WUD/20WUD/15WAA/20WAA

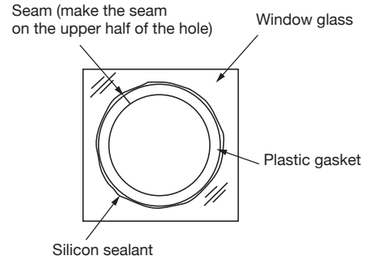
1. Make an installation hole on the window glass.



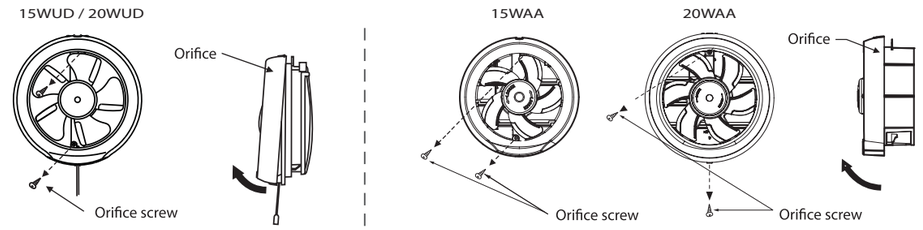
Unit : mm

Model No.	A	B	C
15WUD	186-188	≥250	≥400
20WUD	247-250	≥300	≥420
15WAA	186-188	≥250	≥250
20WAA	247-250	≥300	≥300

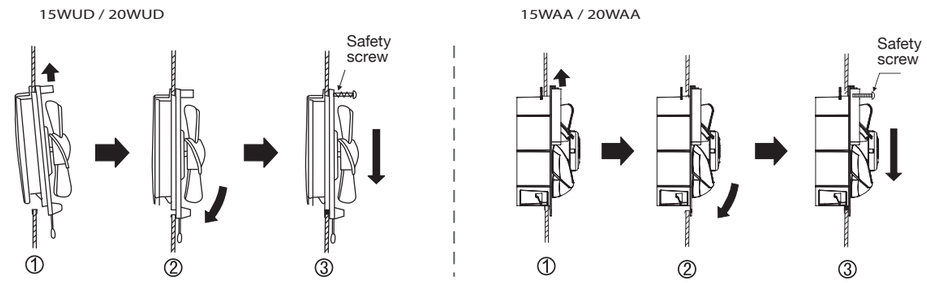
2. Set the plastic gasket on the hole that the seam is at upper half (either left or right side).
Seal the gap between the glass and gasket with silicon sealant to ensure airtightness.



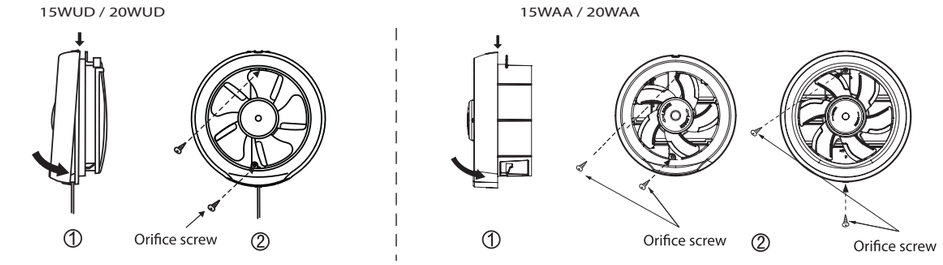
3. Loose the orifice screws (2 pcs) and remove the orifice.



4. While installing the fan, align the fan to top of the hole of window glass and push the buttom of the fan into the hole.
Then push the fan downward and tighten the safety screw afterward.



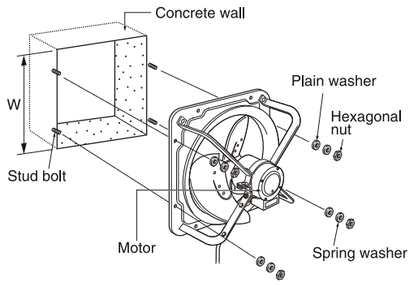
5. Set the orifice and fix with the orifice screws (2 pcs)



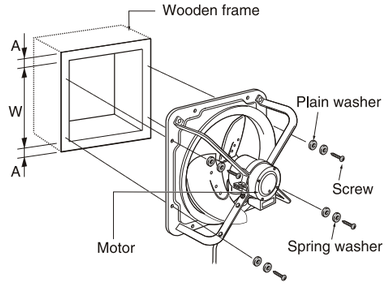
Industrial Type Ventilation Fan

Applicable Model:
High Pressure Series

Installation on concrete wall

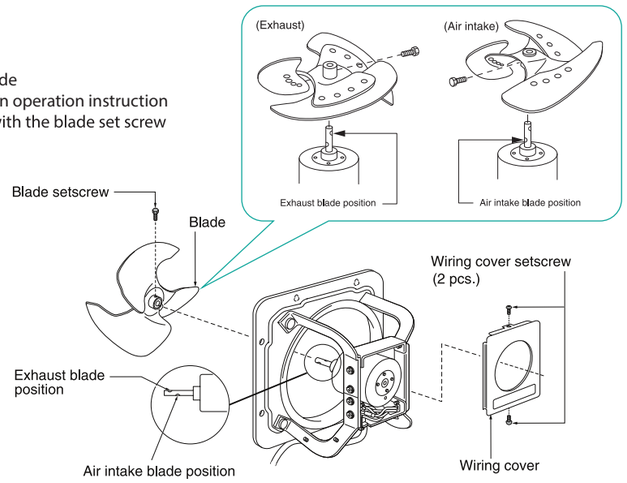


Installation on wooden frame

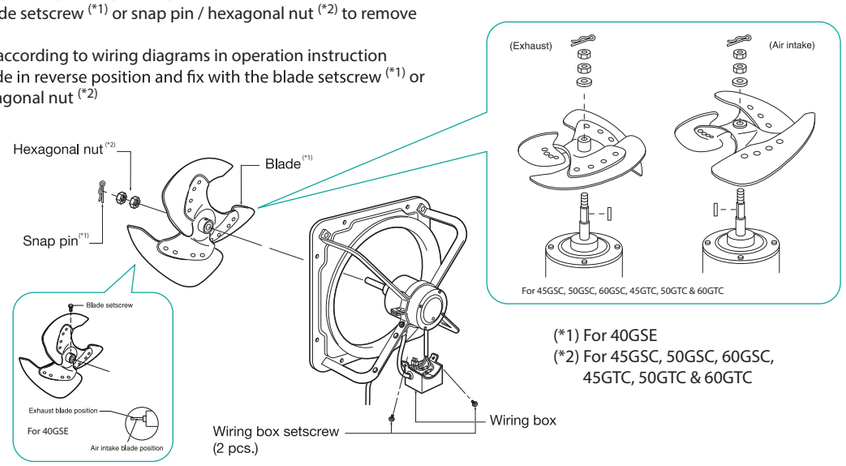


Setting of Reverse Airflow

For 25GSE, 30GSE and 35GSE
1) Loosen the blade setscrew to remove the blade
2) Set the wiring according to wiring diagrams in operation instruction
3) Mount the blade in reverse position and fix with the blade set screw



For 40GSE, 45GSC, 50GSC, 60GSC, 45GTC, 50GTC & 60GTC
1) Loosen the blade setscrew (*1) or snap pin / hexagonal nut (*2) to remove the blade
2) Set the wiring according to wiring diagrams in operation instruction
3) Mount the blade in reverse position and fix with the blade setscrew (*1) or snap pin / hexagonal nut (*2)



(*1) For 40GSE
(*2) For 45GSC, 50GSC, 60GSC, 45GTC, 50GTC & 60GTC

* Air volume of reverse airflow (intake) would vary subject to different models

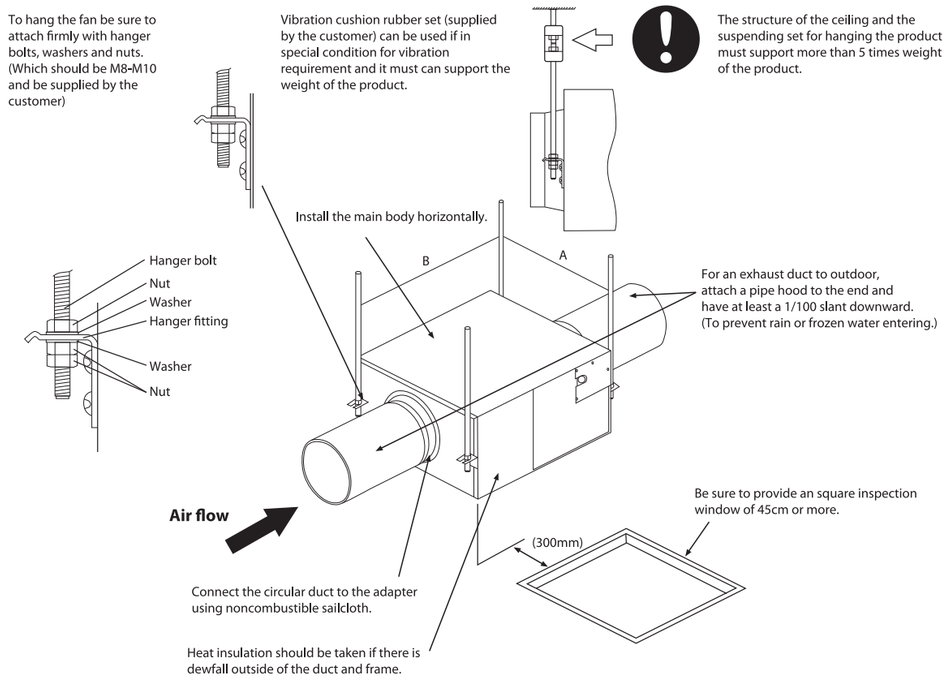
Low Noise Type Cabinet Fan (In-line Fan)

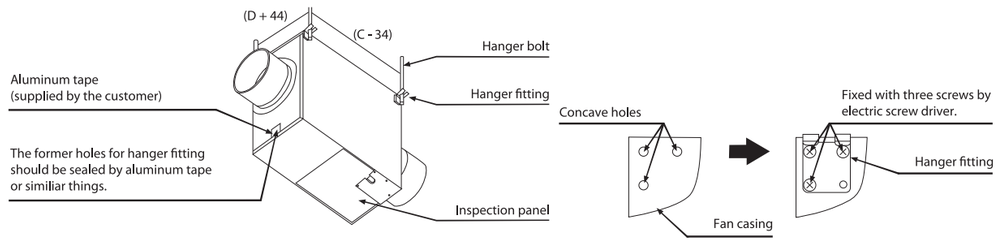
Applicable Model:
12NSB/15NSB/18NSB/18NFB/20NSB/23NLB/25NSB/25NFB

To hang the fan be sure to attach firmly with hanger bolts, washers and nuts. (Which should be M8-M10 and be supplied by the customer)

Vibration cushion rubber set (supplied by the customer) can be used if in special condition for vibration requirement and it must can support the weight of the product.

The structure of the ceiling and the suspending set for hanging the product must support more than 5 times weight of the product.





Hanger fitting positions for installing with the inspection panel facing down.

Hanger fitting screw positions.

Note: To install the fan with the inspection panel facing down, remove the attached four hanger fittings and re-attach them in the holes on the top and bottom surfaces (Use the screws you just removed). The former holes for installing the hanger fitting need be sealed.

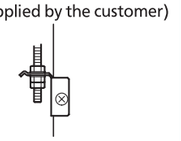
Model No.	A	B	C	D
12NSB	250	335	291	184
15NSB	250	346	302	206
18NSB	276	382	338	232
18NFB	336	441	397	254
20NSB	376	485	441	272
23NLB	424	513	469	298
25NSB	450	549	505	334
25NFB	450	549	505	334

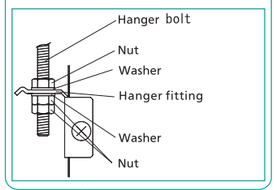
Unit : mm

Low Noise Type Cabinet Fan (In-line Fan)

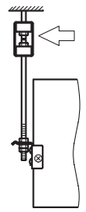
Applicable Model:
25SWC/25SMC

To hang the fan, be sure to attach firmly with hanger bolts, washers and nuts. (Which should be M10 and be supplied by the customer)





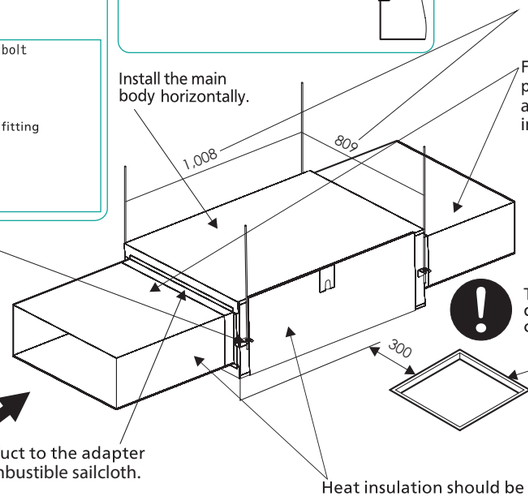
Vibration cushion rubber set (supplied by the customer) can be used if in special condition for vibration requirement and it must be able to support the weight of the product.



The structure of the ceiling and the suspending set for hanging the product must support more than 5 times weight of the product.

Install the main body horizontally.

For an exhaust duct to outdoor, attach a pipe hood to the end and keep at least a 1/100 slant downward. (To prevent ingress of rain or frozen water.)



The product must be connected the duct on two sides and the length of connect duct must be more than 1m.

Be sure to provide an square inspection window of 45 cm or more.

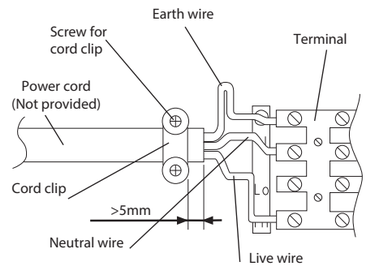
Air flow

Connect the duct to the adapter using non-combustible sailcloth.

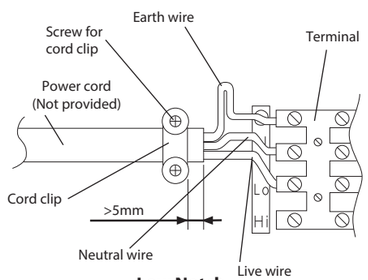
Heat insulation should be taken if there is dewfall outside of the duct and frame.

Wiring Connection

For 12NSB/15NSB/18NSB/18NFB/20NSB/23NLB/25NSB/25NFB

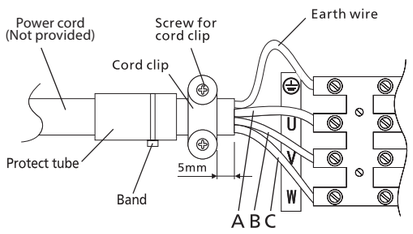


High Notch



Low Notch

For 25SWC / 25SMC



(A,B,C means the three phases wires of power cord)

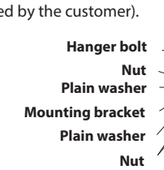
In-line Centrifugal Fan

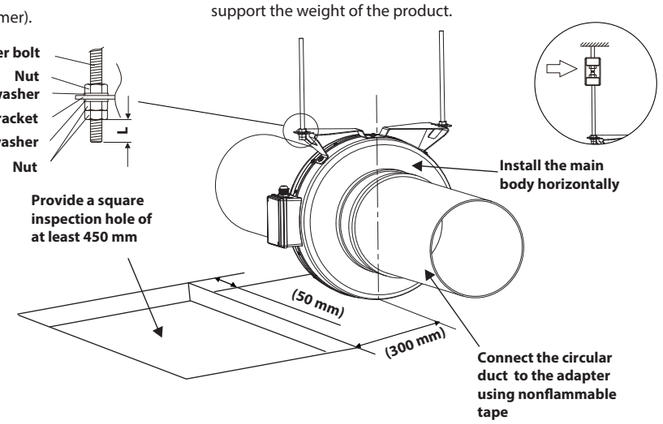
1. Installation method

- Follow the illustration below to install. Do not install facing directions other than what is shown in the illustration.

To hang the fan, be sure to attach firmly with hanger bolts, plain washers and nuts. (Which should be M8~M12 and be supplied by the customer).

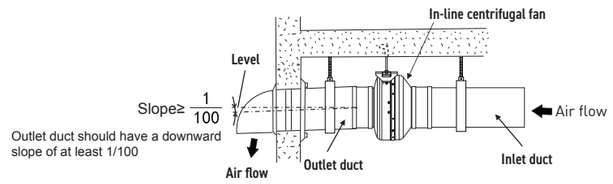
Vibration cushion rubber set (supplied by the customer) can be used if in special condition for vibration requirement and it must can support the weight of the product.





Hanger bolt, nuts, plain washers (No provide)	Dimension L
M8~M12	Bolt should reach 2-3 threads through the nut

Installation at the top of ceiling

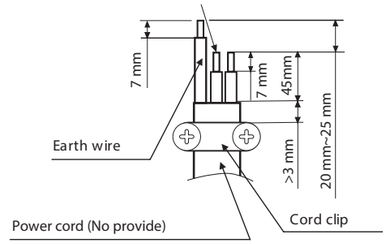


2. Wiring method

- Open the condenser box cover.
- Strip the wires according to the right illustration. The earth wire of the power cord must be 20~25 mm longer than other wire. Then bind the separated copper wires into a bundle and insert bundle into the terminal deeply.

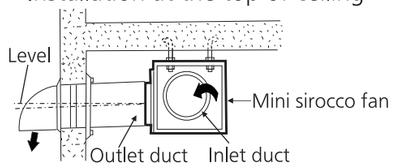
  Make sure the screw column of terminal securely presses on the copper wire and that the copper wire near insulation layer is not exposed. (To avoid danger, it should be installed by professionals and be sure to connect the earth wire.)
- Connect wires according to the following diagrams. Finally, mount the power cord with cord clip and install the condenser box cover.
- When two or more products are connected to one single switch in parallel, damage may occur to the motors. Therefore parallel connection are prohibited.

Wiring each wire to sheaves

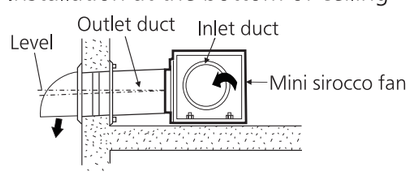


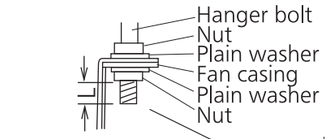
Mini Sirocco Fan

Installation at the top of ceiling

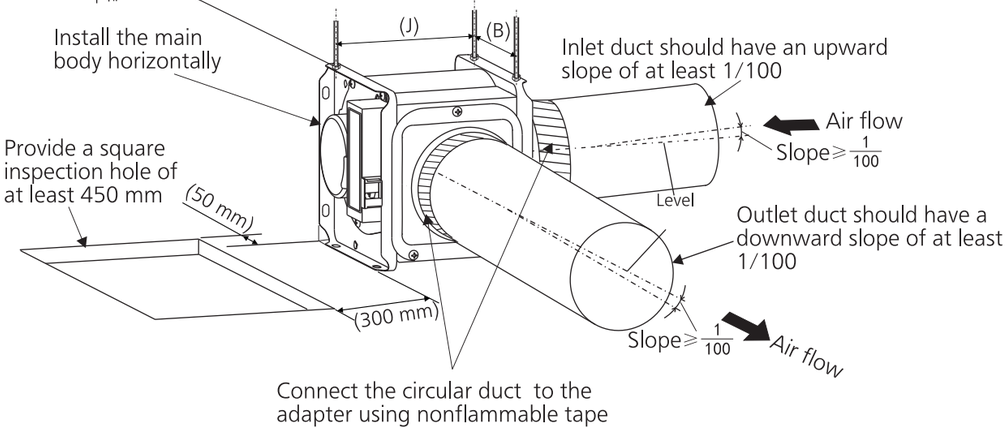


Installation at the bottom of ceiling

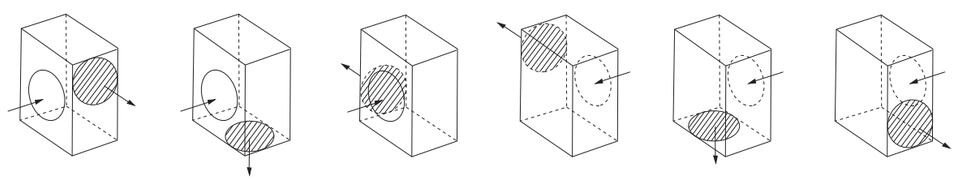




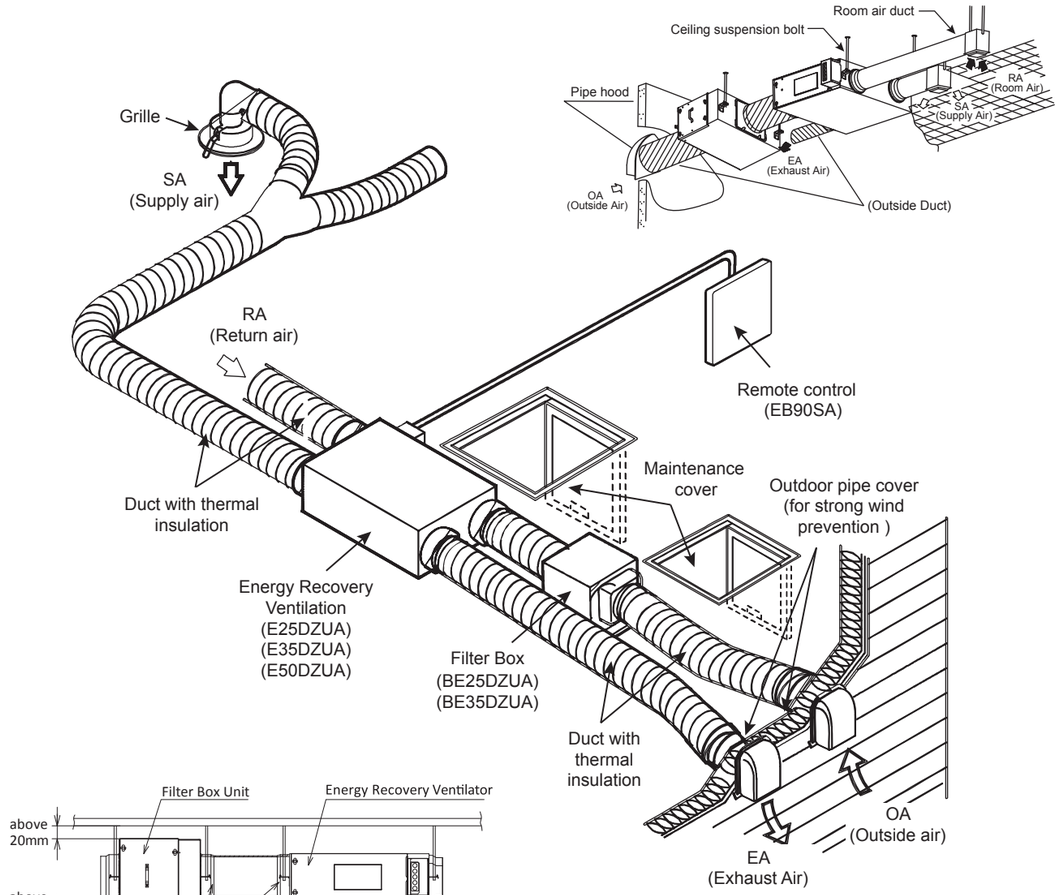
Model No.	Bolt, nuts, plain washers (No provide)	Dimension L
10/12/14/16CGB	M5	Bolt should reach 2-3 threads through the nut
17/19/21CGB	M10	

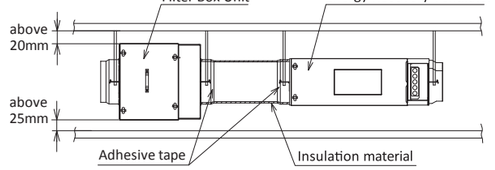


Available for various need of installation pattern.



Energy Recovery Ventilator

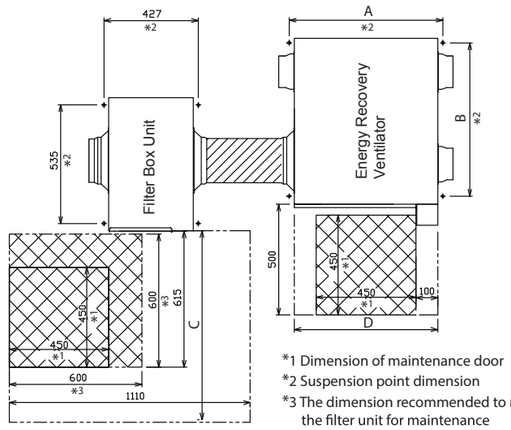




Unit : mm

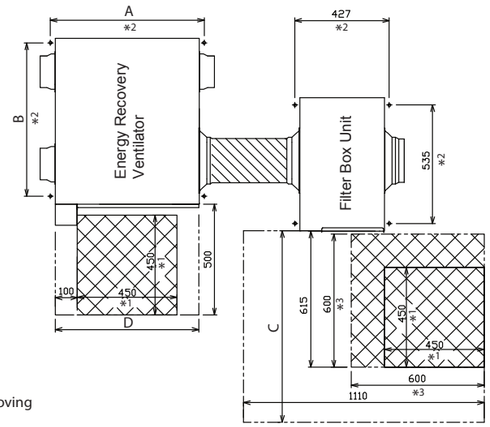
	A	B	C	D
E25DZUA	695	693	853	649
E35DZUA	723	858	865	654
E50DZUA	723	1026	865	655

Installation method for case 1



*1 Dimension of maintenance door
*2 Suspension point dimension
*3 The dimension recommended to removing the filter unit for maintenance

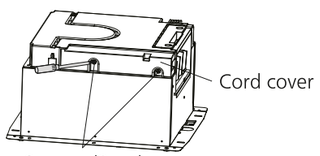
Installation method for case 2

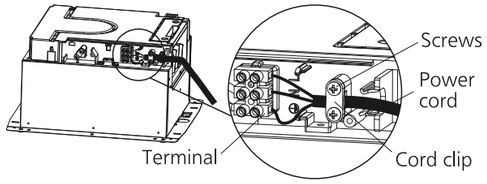


Thermo Ventilator

Applicable Model:
30BUC

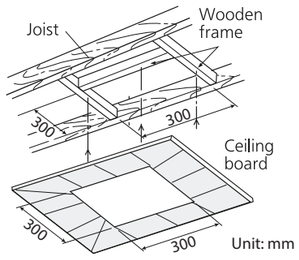
1. Open the cord cover and set the wiring

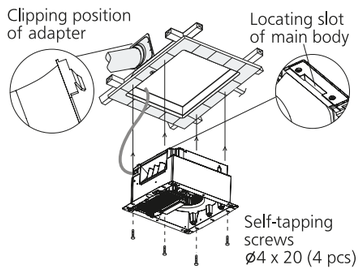


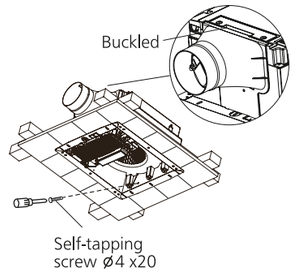


2. Install fan body in the ceiling

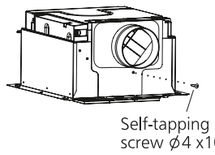
2.1 Installation with wooden joist

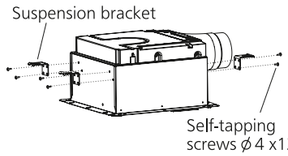


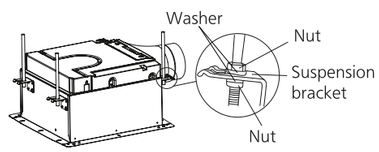




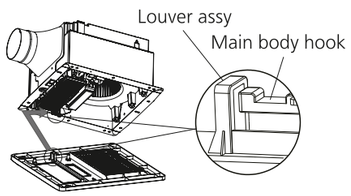
2.2 Installation with anchor bolts

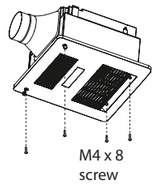


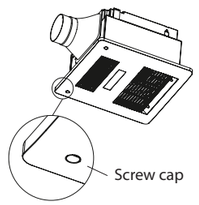




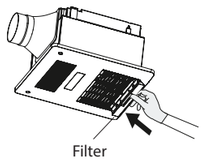
3. Set and tighten louver assembly with screws



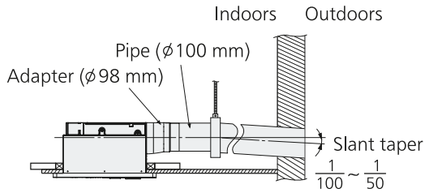




4. Set filter into the louver assembly

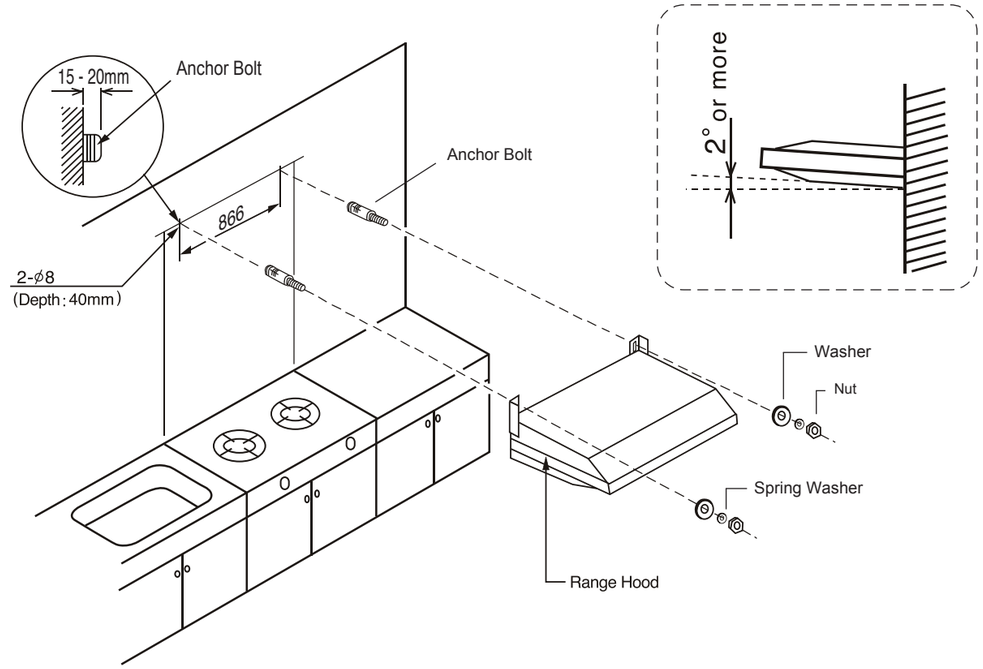


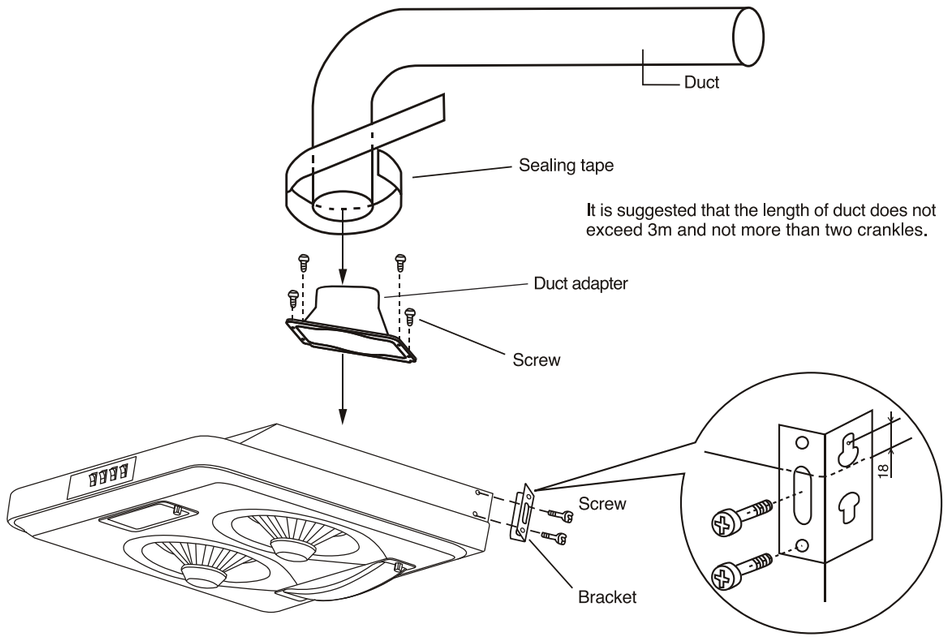
5. Connect duct pipe



Range Hood

Applicable Model:
90HQUA

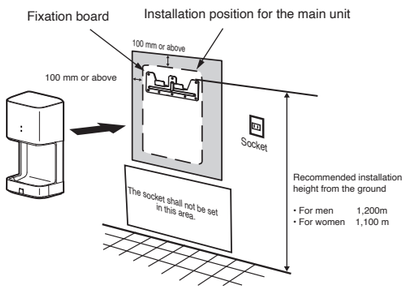


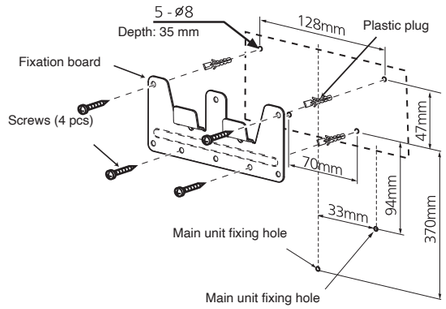


Hand Dryer

Applicable Model:
T09AC and T09BC

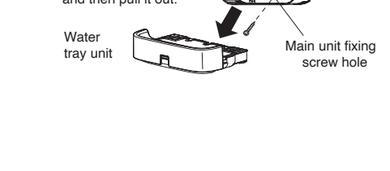
1. Install fixation board on the wall



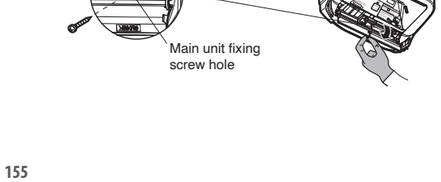


2. Adjust length and lead out direction of power cord

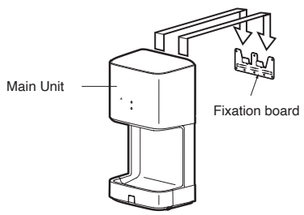
I. Remove the fixing screws on the back baffle plate of the main unit

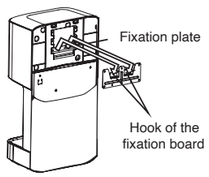


II . Adjust the length of power cord by winding according to below figure, and select the lead-out direction



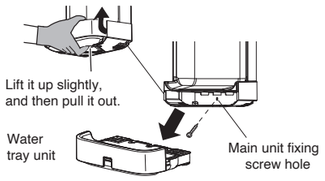
3. Set the main unit into the fixation board



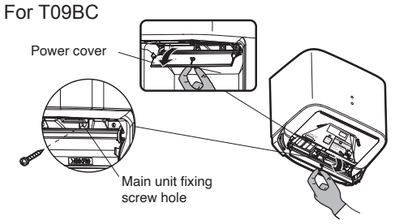


4. Fix the main unit with fixing screw

For T09AC



For T09BC

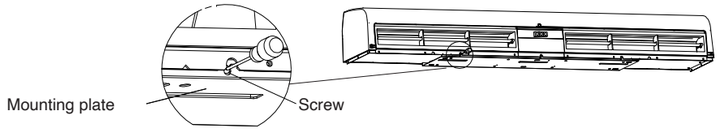


Air Curtain

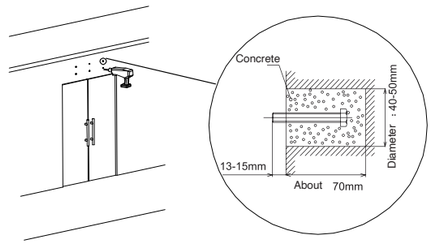
Applicable Model:
Cross Flow Type

1. Install mounting plate on the wall

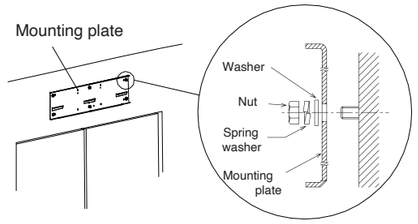
I. Remove the mounting plate from rear of the product



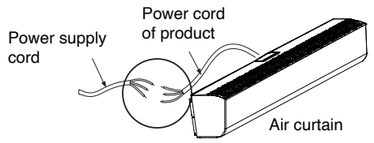
II. Set the bolts on the wall

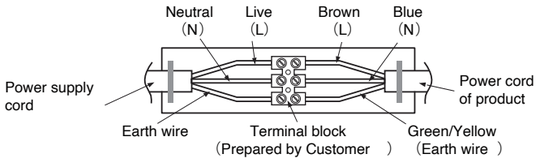


III . Fix the mounting plate with washers and nuts



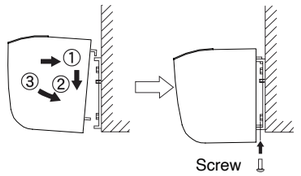
2. Wiring

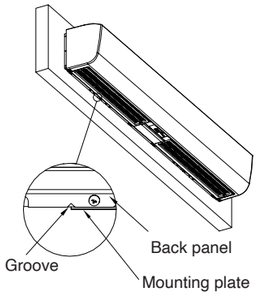




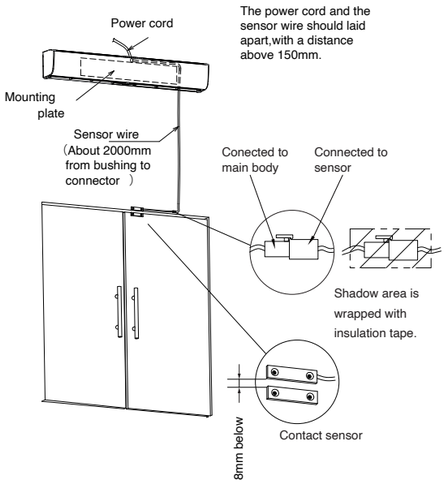
3. Install air curtain

I. Hook the air curtain on the mounting plate and tighten the screws (x3)





II. Fix the contact sensor (for Sensor Series only)

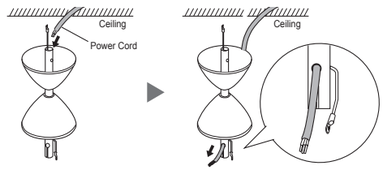


Ceiling Fan

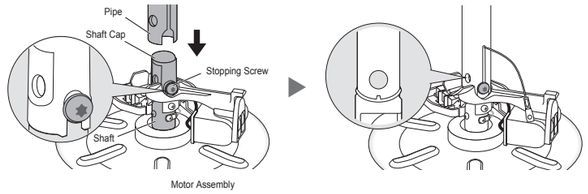
Applicable Model:
Regulator Control Series

(1) Assemble Pipe to Motor Assembly

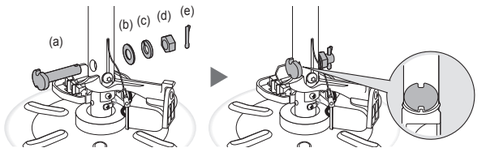
1. Pull power cord (from power supply) and insert into the Pipe hole.



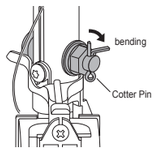
2. Ensure the Shaft Cap is set on the Motor Shaft and tighten with the Stopping Screw. Fit the Pipe to the Shaft Cap that the Pipe hole and the Motor Shaft hole are aligned.



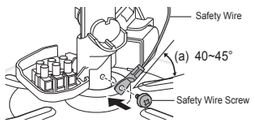
3. Fix the Pipe and Motor Assembly with a) Ellipse Bolt, b) P-R Washer, c) Spring Washer, d) Hexa Nut and e) Cotter Pin.



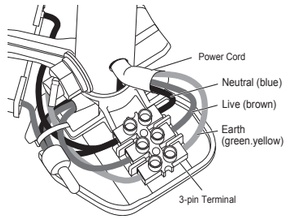
4. Bend the Cotter Pin.



5. Fix Safety Wire to the Motor Shaft with Safety Wire Screw.

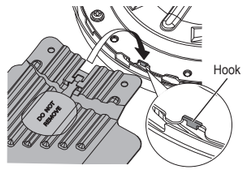


6. Connect the power cord to 3-pin Terminal.

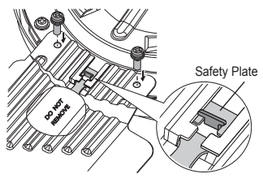


(2) Install Blade Assembly

1. Remove Blade Screws from Motor Assembly. Set the Blade towards the Cover Hook and ensure the Blade Safety Plate is in proper position.



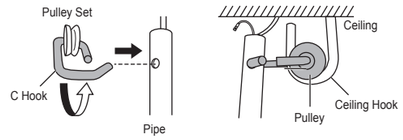
2. Tighten the Blade Screw firmly (2 screws per blade)



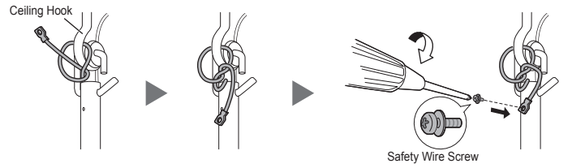
Ceiling Fan

(3) Install to the ceiling

1. Cross the C Hook of the Pulley Set to the Pipe and Place the Pulley on Ceiling Hook

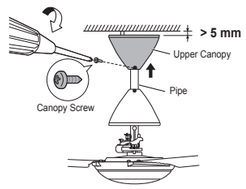


2. Loop the Safety Wire to the ceiling hook and fix to the Pipe with the Safety Wire Screw

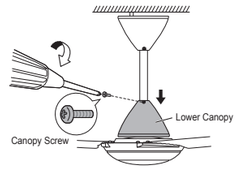


(4) Fix the Canopy

1. Adjust Upper Canopy position and fix to the Pipe with screw.

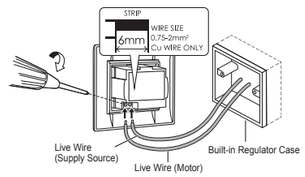


2. Pull down the Lower Canopy until it stop and fix to the Pipe with screw.

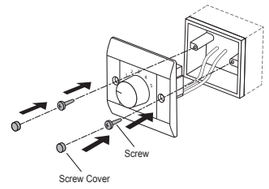


(5a) Install Speed Regulator (Slim Panel Regulator)

1. Insert the Live Wires (from supply source and Motor) into the 2 pin terminal of the regulator and tighten the terminal screw.

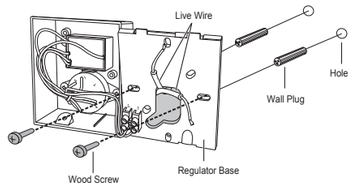


2. Set the Regulator to the wall regulator casing and fix with screws.

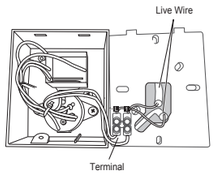


(5b) Install Speed Regulator (Box Regulator)

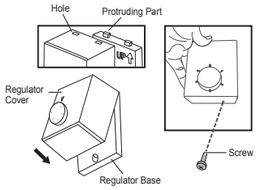
1. Insert the Live Wires through the hole of Regulator Base and fix the base with the screws.



2. Insert the Live Wire (from supply source and Motor) into the 2 pin terminal of the regulator and tighten the terminal screw



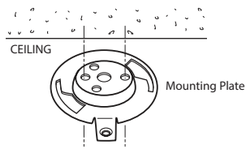
3. Set the Regulator cover by inserting the protruding parts of the Regulator Base into the holes of Regulator Cover and fix with the screw



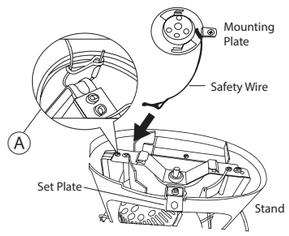
Orbital Fan

1. Install fan stand on the ceiling

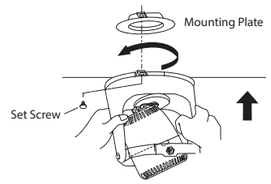
I. Install mounting plate on the ceiling with the bolts (x2)



II. Loop the safety wire around left arm of the stand and clip as Ⓐ

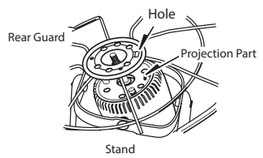


III. Set the stand to the mounting plate. Align the screw hole and tighten the set screw

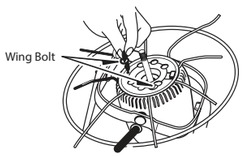


2. Assemble the fan

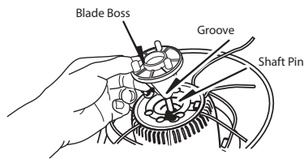
I. Set rear guard on the stand by aligning the projection part to the hole



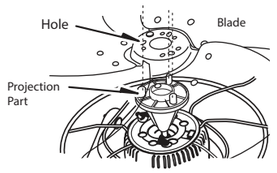
II. Fit rear guard on the stand with wing bolt (2 pcs)



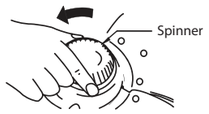
III. Insert blade boss to the shaft. Ensure the groove is correctly fit to the shaft pin



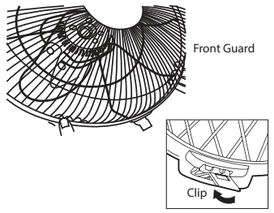
IV. Set the blade to the blade boss and align the projection part to the hole of blade



V. Tighten the spinner to fix the blade

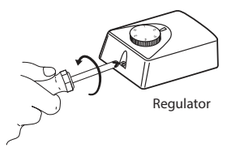


VI. Set front guard to the rear guard and clip.

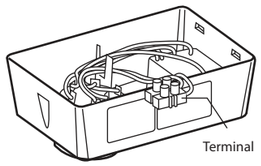


3. Install Regulator and Wiring

I. Open the regulator cover and mount the regulator base on the wall

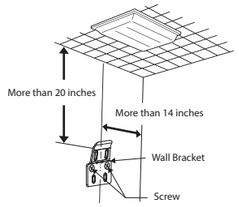


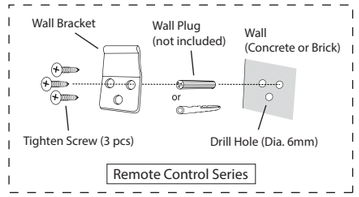
II. Set the wiring according to the wiring diagram and re-assemble the regulator cover

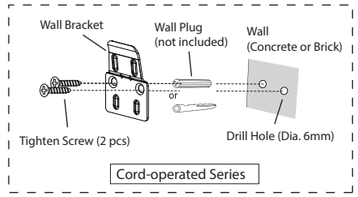


Wall Fan

1. Install wall bracket on the wall

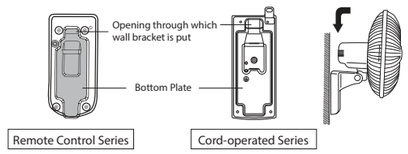






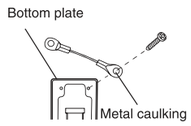
2. Install fan stand

Firmly install fan stand vertically onto the wall bracket, and ensure the stand is fully hooked



3-a. Install safety wire For Remote Control Series

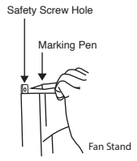
i. Fix safety wire on the bottom plate of the stand



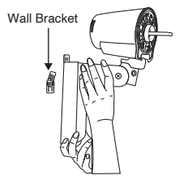
ii. Drill hole and insert wall plug. Fix the safety wire on the wall

3-b. Install safety screw For Cord-operated Series

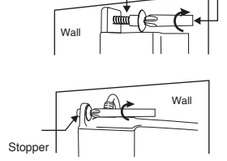
I. Mark the position of safety screw from the stand



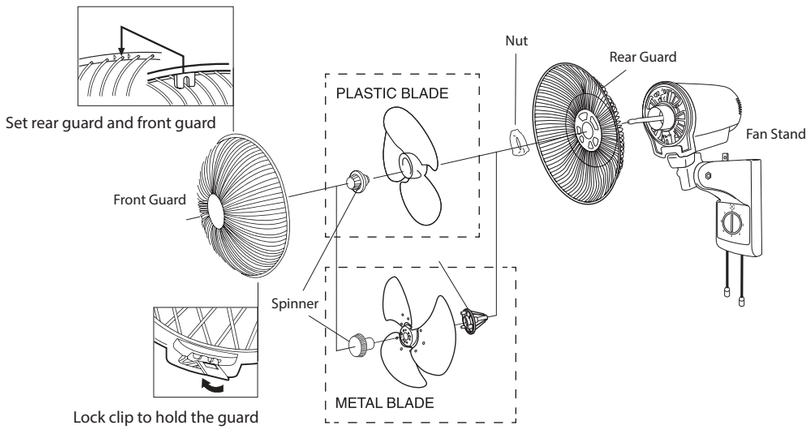
II. Take out the stand from wall bracket. Drill hole and insert wall plug



III. Tighten safety screw to fix the stand



4. Assemble the fan



Notes

Notes