FOCUS ON EC FAN ONLY

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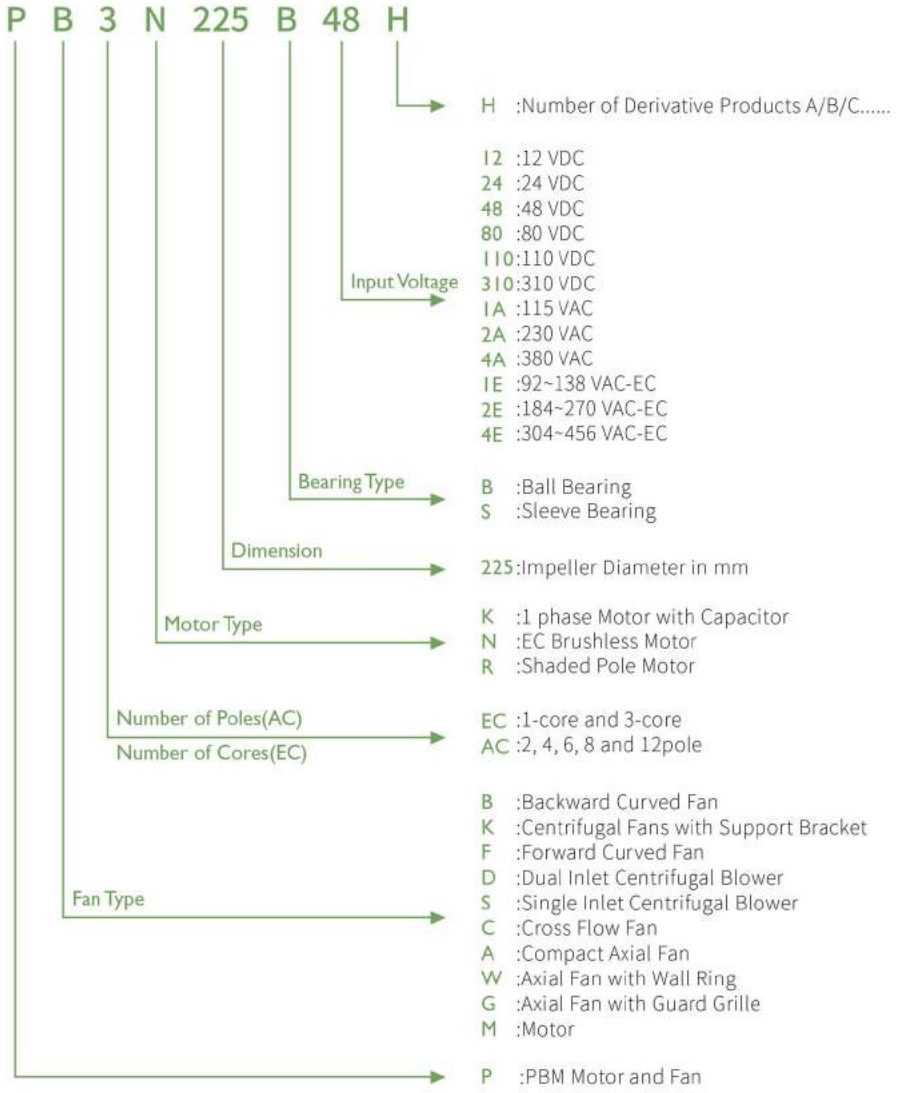
PBM MOTOR AND FAN(SUZHOU) CO.,LTD

Axial Fan Backward & Forward Curved Centrifugal Fan Blower

Version 2022

www.pbmmf.com

Part Number System



CONTENTS

About us

Company Profile

PBM is a China mainland EC(Electronically Commutated) brushless motor manufacturing and technology consulting company offering an extensive range of EC motors, fans and intelligent ventilation solutions for air-moving precisely and constantly with maintenance-free throughout the life cycle of products in last decades.

R&D and Technical Support

Our R&D and technical support team commits to combine interactively external motor technology, integrated electronic control circuit and aerodynamic design of fan impeller that satisfied customers' requirements in different applications by innovative fan solutions, with leading experiment equipment, meters, tools in laboratory for motor reliability and fan air performance testing. We are pursuing extremely compact brushless permanent magnet synchronous external rotor motor to drive various impeller types and sizes: diagonal axial, backward and forward curved centrifugal, radial, single inlet and dual inlet blower, tangential, cross flow, from minimum 30mm to 560mm diameter with airflow maximum to 12,000CMH cubic meter per hour (equal to approx. 7,000CFM cubic feet per minutes). Maximum motor input power goes to 1.5KW (equal to 2 horsepower) at rotor diameter 138mm.

Production and Quality Control

Economical efficient supply chain guarantees our manufacturing team and quality management team could constantly offer stable products within promised competitive lead time. We continuously invest on semi-automatic or automatic motor and fan assembly lines, equipment, fixtures and jigs to enhance our cost advantage production capability. Not only adopted in ISO9001 Quality Management System ISO 14000 Environment Management System and ISO 45001 Occupational Health and Safety Management system,but also adopted in a long-term Eco-friendly and People-oriented sustainable development of company for last 10 years.

Marketing and Sales

Hundreds of worldwide ventilation, refrigeration, air purification, home appliance, companies from more than fifty countries are adopting PBM EC green-tech motorized fans in their product units and systems that were protecting natural environment and indoor environment of our home to be sustainable green and clean. Our agent and distributor network and online service team covered popular EC fan markets to ensure prompt technical support.

Vision and Mission

Focus on EC fan only and protect our world with intelligent energy efficient motor and fan solutions are our goal in an attempt to make tomorrow a greener & healthier world.

EC Fans' Technical Features Overview

Intelligent EC Fan Technology Introduction

PBM series EC (Electronically Commuted) Fans combine interactively external motor technology, integrated electronic control circuit and aerodynamic design of fan impeller that satisfied customers' requirements in different applications and industries by innovative air-moving solutions.

We are pursuing Ultra-low Energy Consumption fans by extremely compact brushless permanent magnet synchronous external rotor motor to drive various of aerodynamic optimized impeller and scroll-housing types and sizes: diagonal axial, backward and forward curved centrifugal, radial, single inlet and dual inlet blower, tangential, cross flow.

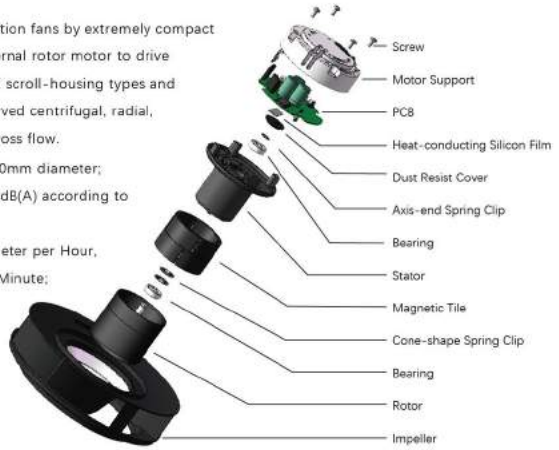
Impeller Sizes: From minimum 30mm to 630mm diameter;

Sound Level: From 31dB(A) to maximum 89dB(A) according to different rotation speed;

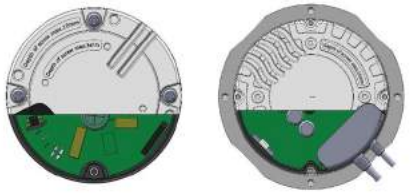
Air Flow: Maximum to 16,300CMH, Cubic Meter per Hour, equal to approx. 9,593CFM , Cubic Feet per Minute;

Air Pressure: Maxim 1,700Pa, equal to 173.5mm H2O and to 6.82 inH₂O;

Power: Maximum motor input power goes to 3.1KW (equal to 4.2hp, horsepower) at motor diameter 138mm.



Eco-friendly EC Motor Technology Introduction



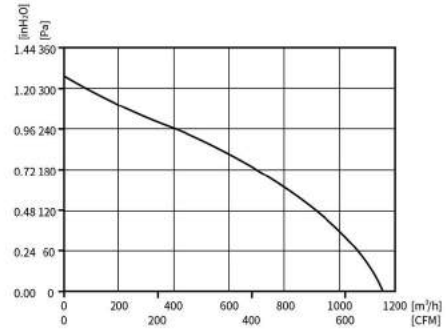
EC=Electronically Commutated

EC brushless permanent magnet synchronous external rotor motor compact with integrated electronic controller built-in for fan applications.

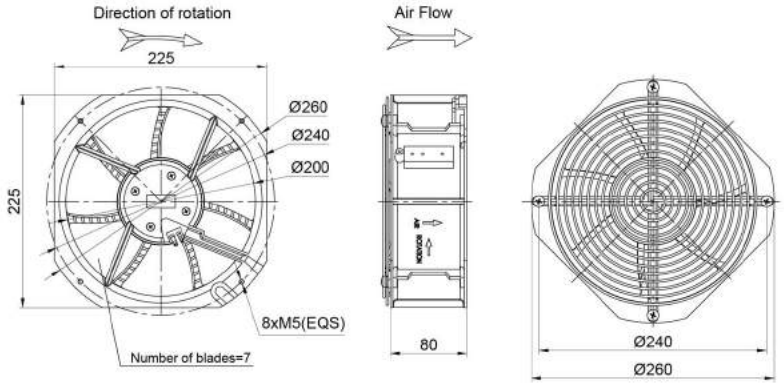
- Variable speed setting by 0~10V DC or PWM signal input;
- AC(1~ or 3~phase) public power grid supply connects to motor directly without transformer, voltage stabilizer with silicon rectifier; no surge current by soft-start and PFC circuit integrated;
- Motor efficiency goes up to Maximum 91% for energy-saving and emissions-reducing;
- Low noise by sine wave 3-core brushless commutation motor design with oblique magnetization;
- Always rotation in the correct direction;
- Operating at either 50Hz and 60Hz; 184~270 VAC 1~;
- Operating at a wide voltage range; 304~456 VAC 3~;
- Operating temperature rise is much cooler in electric motors for longer lifespan.

EC-AC Series

EC Axial Fan Ø200x80mm

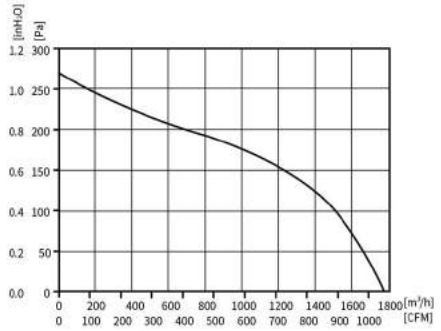


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.89KG	E1

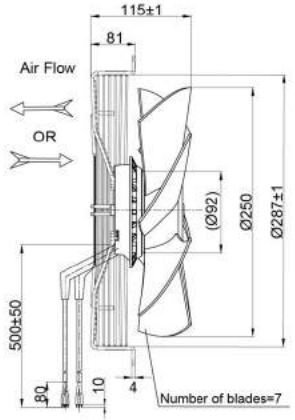


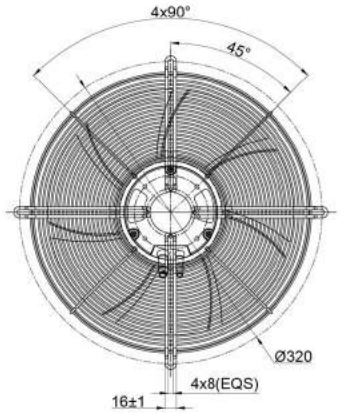
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PA3N200B2EH	BE72EC	BALL	230	50/60	0.6	70	3200	1160	320	68

EC Axial Fan Ø250x115mm



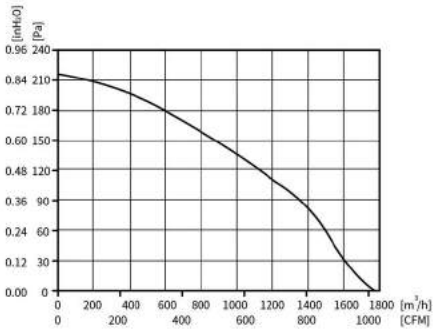
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2.34KG	E2



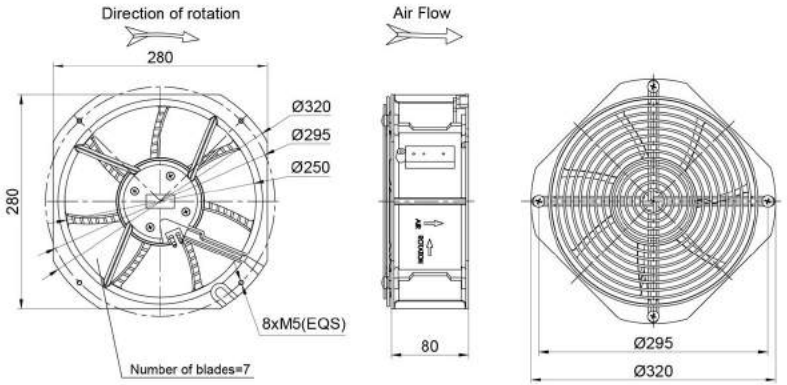


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PG3N250B2EM	BE92EC	BALL	230	50/60	1.25	180	3000	1722	268	75

EC Axial Fan Ø250x80mm

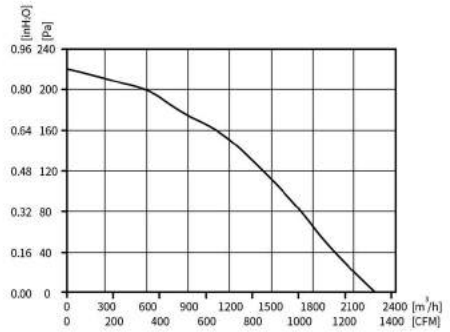


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2.45KG	E2

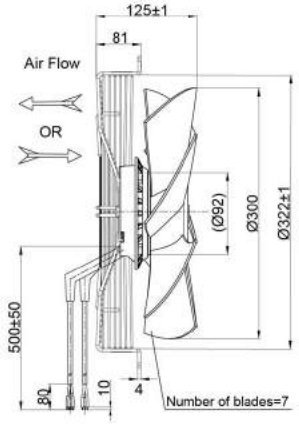


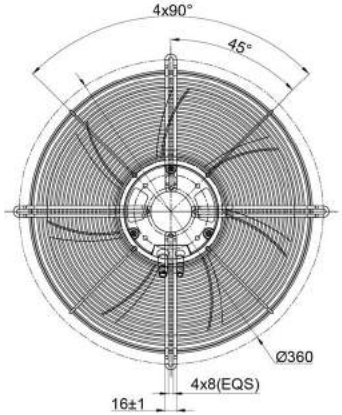
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PA3N250B2EH	BE92EC	BALL	230	50/60	0.7	80	2650	1760	215	64

EC Axial Fan Ø300x125mm



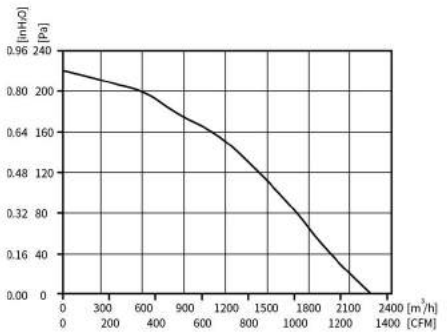
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2.65KG	E2



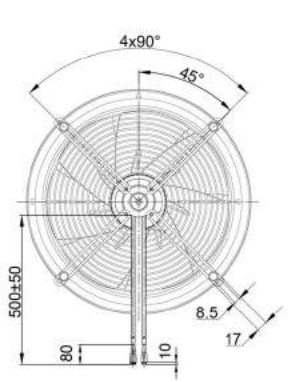


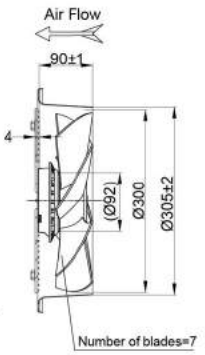
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PG3N300B2EM	BE92EC	BALL	230	50/60	0.7	95	2000	2267	214	71

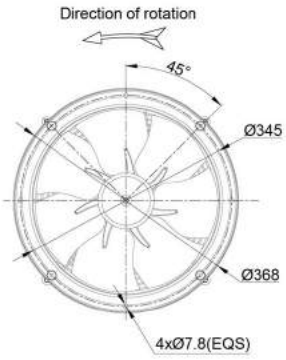
EC Axial Fan Ø300x90mm



Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	3.5KG	E2

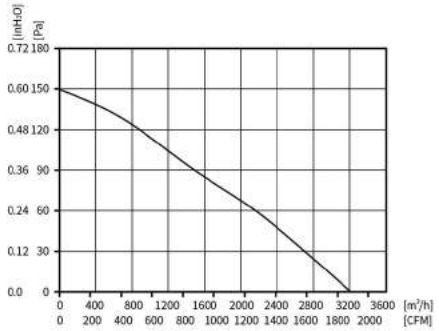




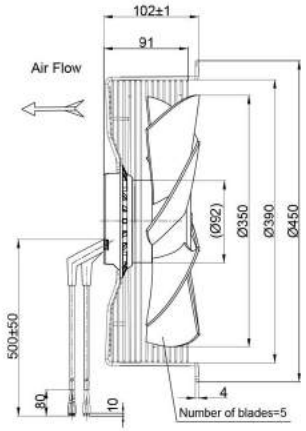


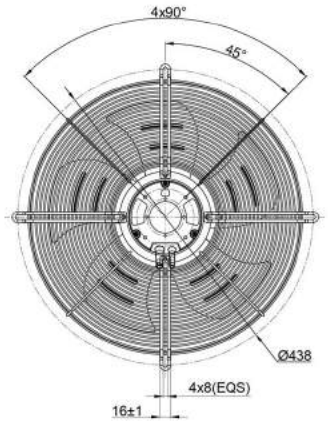
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PW3N300B2EH	BE92EC	BALL	230	50/60	0.7	95	2000	2267	214	71

EC Axial Fan Ø350x100mm



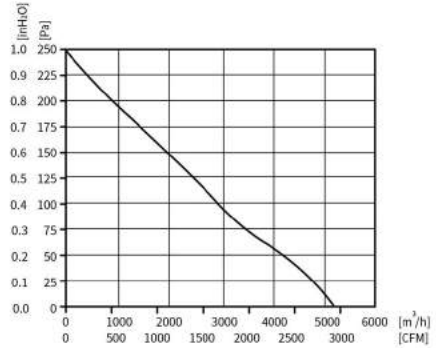
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	5.5KG	E2



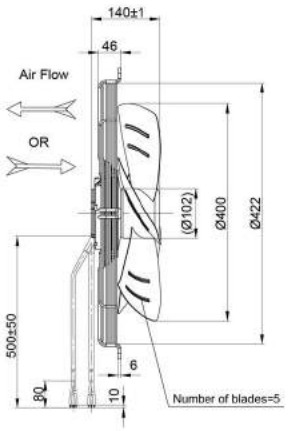


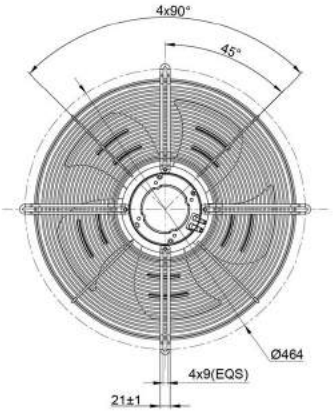
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PG3N350B2EP	BE92EC	BALL	230	50/60	1.58	230	1580	3210	150	63

EC Axial Fan Ø400x140mm



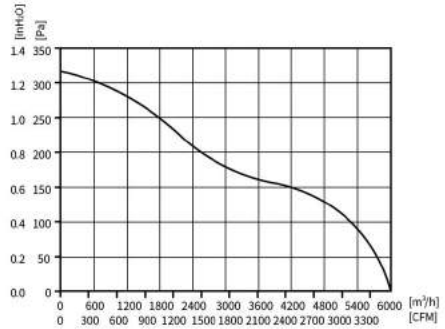
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	5.9KG	E4



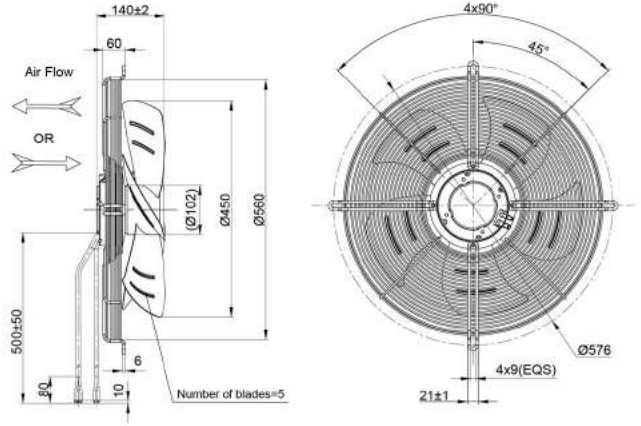


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PG3N400B2EH	BE102EC	BALL	230	50/60	3.2	400	1700	5200	250	67

EC Axial Fan Ø450x140mm

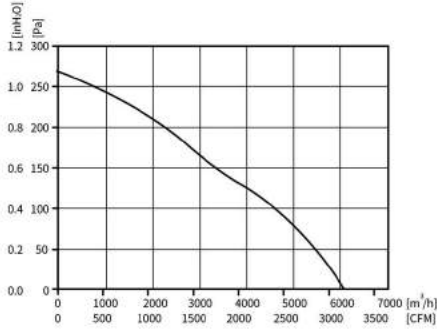


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	6.3KG	E4

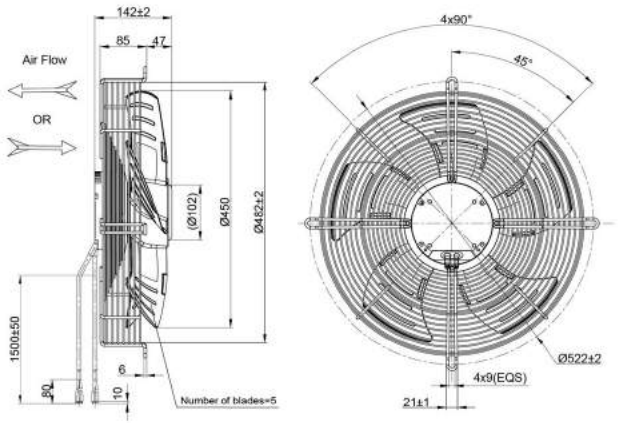


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PG3N450B2EM	BE102EC	BALL	230	50/60	2.7	400	1750	6001	316	76

EC Axial Fan Ø450x142mm

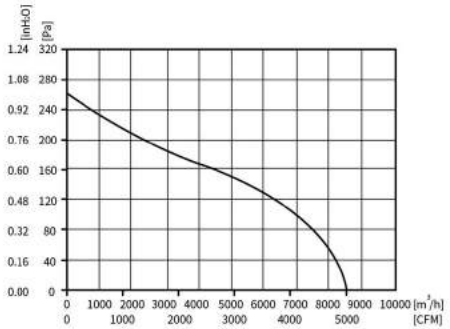


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	6.8KG	E4

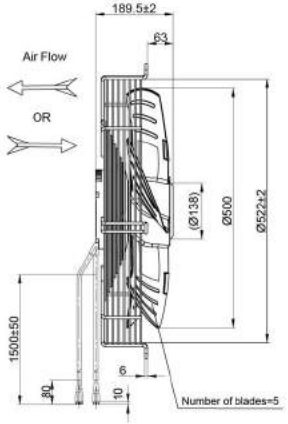


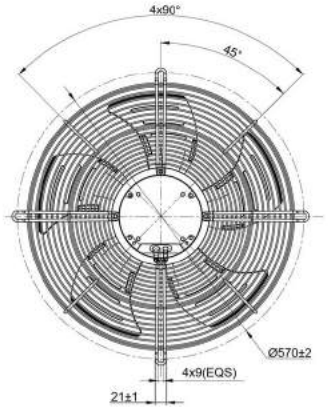
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PG3N450B2EP	BE102EC	BALL	230	50/60	1.8	400	1700	6080	270	70

EC Axial Fan Ø500x182mm



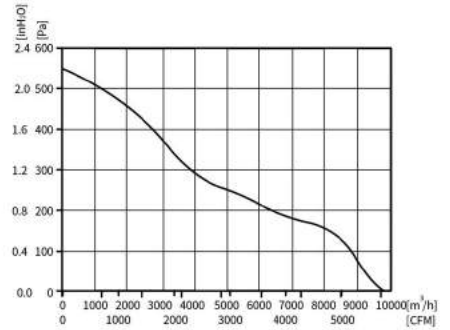
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP54	F	-25℃~+60℃	12.5KG	E5



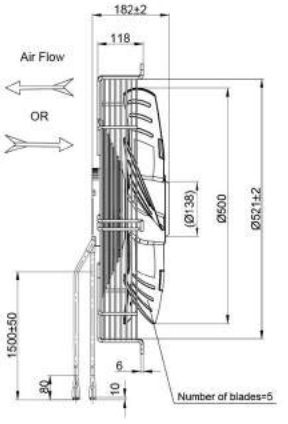


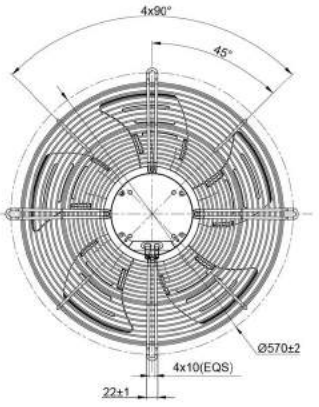
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PG3N500B2EM	BE138EC	BALL	230	50/60	2.9	600	1450	8500	260	71

EC Axial Fan Ø500x182mm



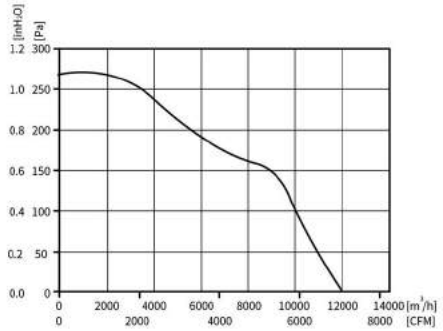
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	13.5KG	E6



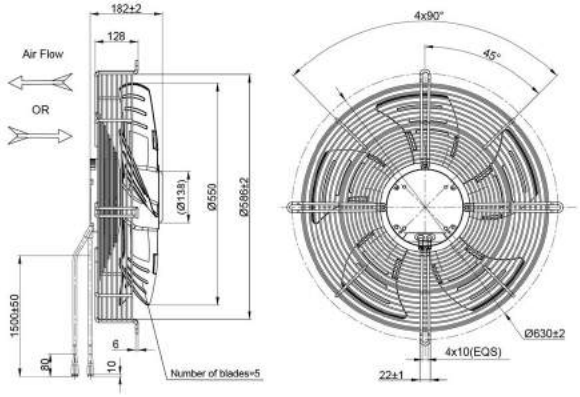


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PG3N500B4EM	BE138EC	BALL	380	50/60	1.5	850	1690	9630	550	78

EC Axial Fan Ø550x182mm

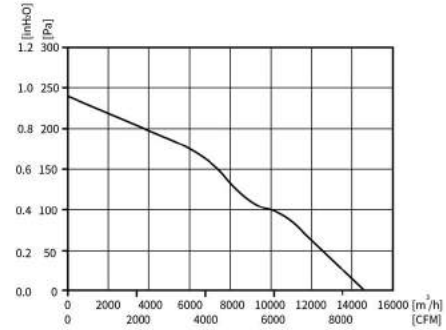


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	14.8KG	E6

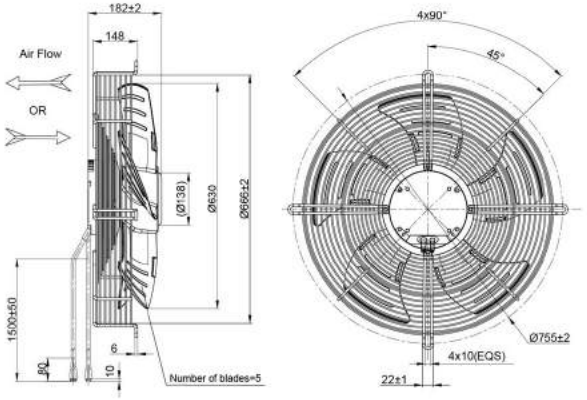


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PG3N550B4EM	BE138EC	BALL	380	50/60	1.65	950	1690	12000	270	78

EC Axial Fan Ø630x182mm

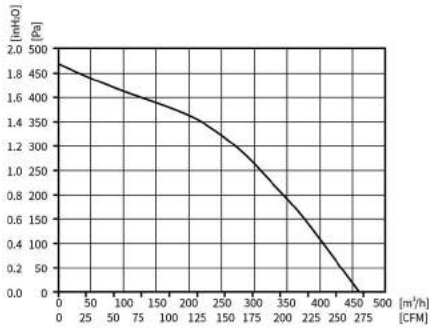


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	16.2KG	E6

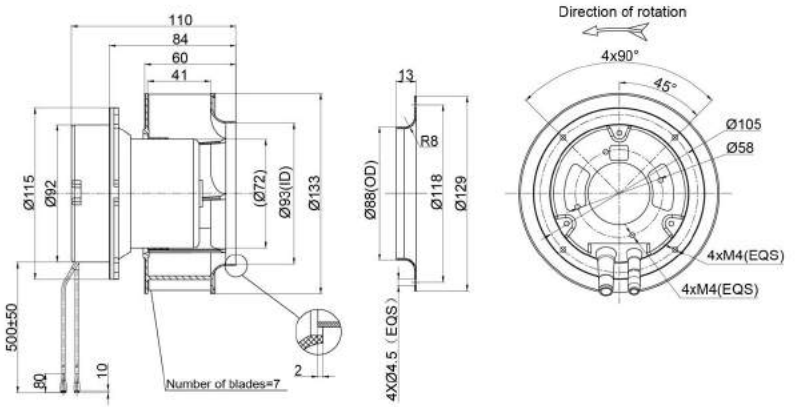


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PG3N630B4EM	BE138EC	BALL	380	50/60	1.3	800	1150	14500	240	69

EC Centrifugal Fan Backward Curved Ø133x110mm

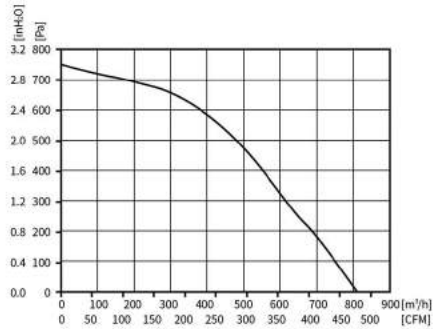


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.06KG	E1

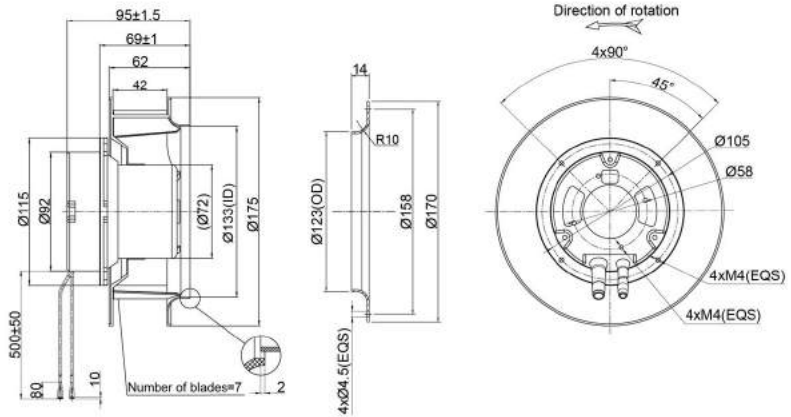


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N133B2EH	BE72EC	BALL	230	50/60	0.33	48	4480	460	475	75

EC Centrifugal Fan Backward Curved Ø175x95mm

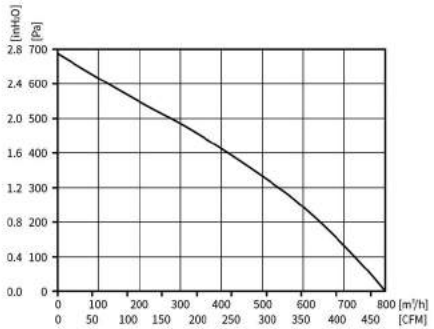


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.35KG	E1

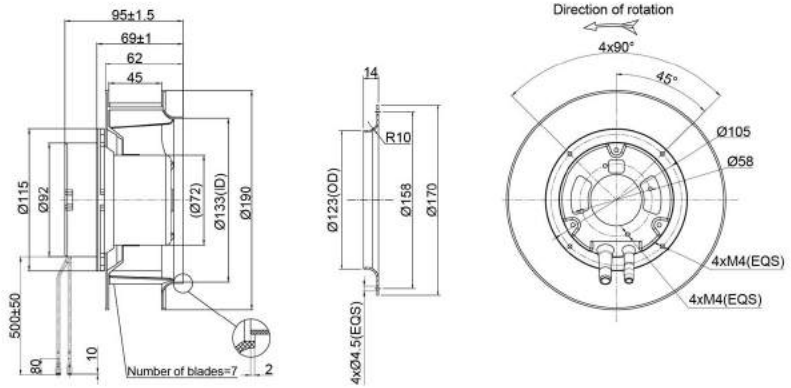


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N175B2EH	BE72EC	BALL	230	50/60	0.85	105	4460	810	744	76

EC Centrifugal Fan Backward Curved Ø190x95mm

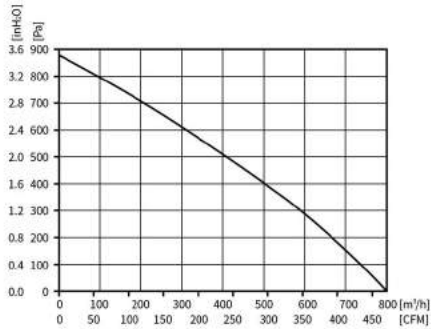


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.45KG	E1

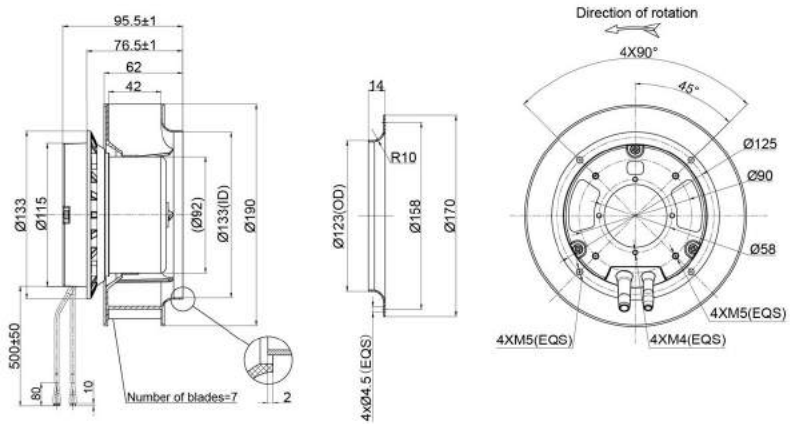


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N190B2EM	BE72EC	BALL	230	50/60	0.7	93	3570	795	686	72

EC Centrifugal Fan Backward Curved Ø190x95.5mm

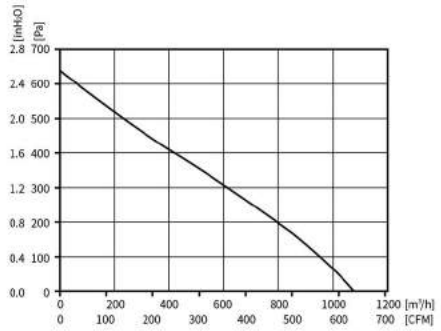


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10 VDC/PWM	IP44	B	-25℃~+60℃	1.45KG	E2

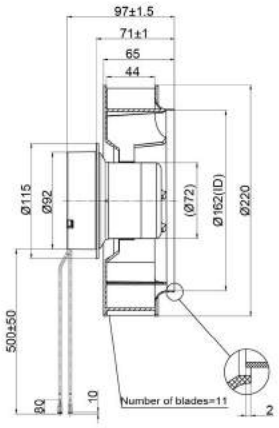


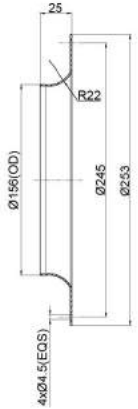
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N190B2EH	BE92EC	BALL	230	50/60	1	140	4000	800	882	74

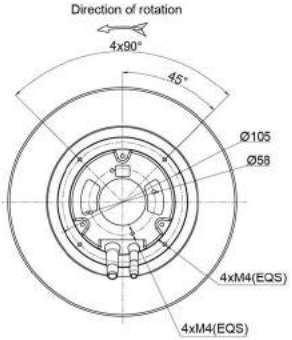
EC Centrifugal Fan Backward Curved Ø220x97mm



Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.68KG	E1

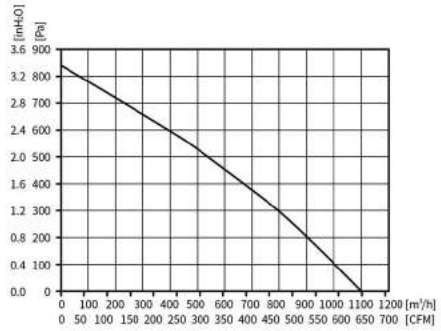




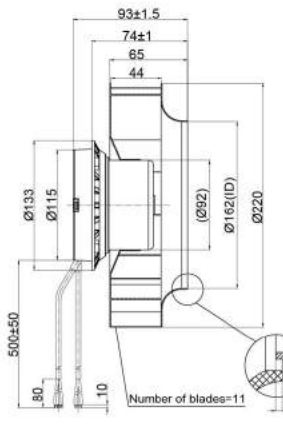


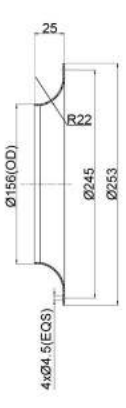
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N220B2EM	BE72EC	BALL	230	50/60	0.8	95	3060	1080	648	71

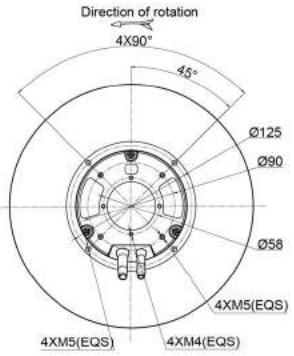
EC Centrifugal Fan Backward Curved Ø220x93mm



Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2.5KG	E2

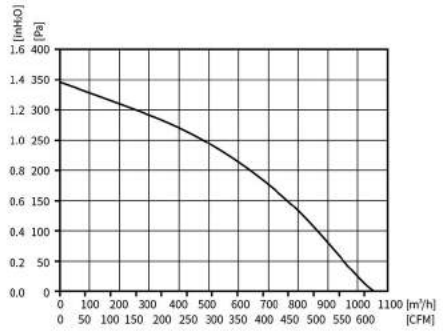




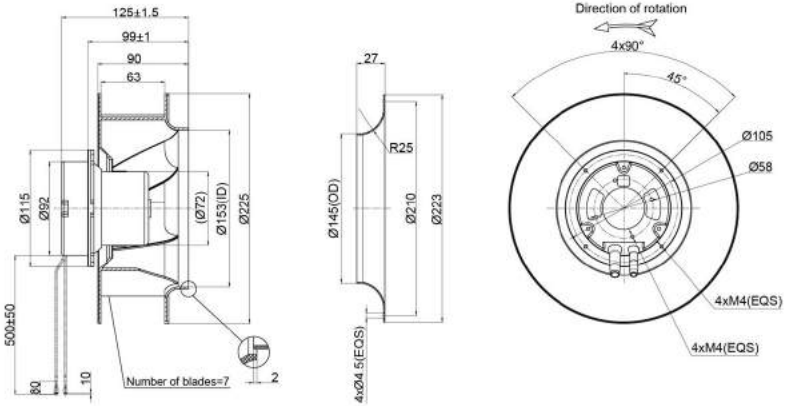


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N220B2EH	BE92EC	BALL	230	50/60	1.18	170	3600	1100	840	76

EC Centrifugal Fan Backward Curved Ø225x125mm



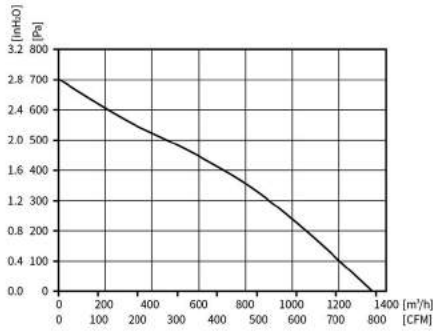
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.74KG	E1



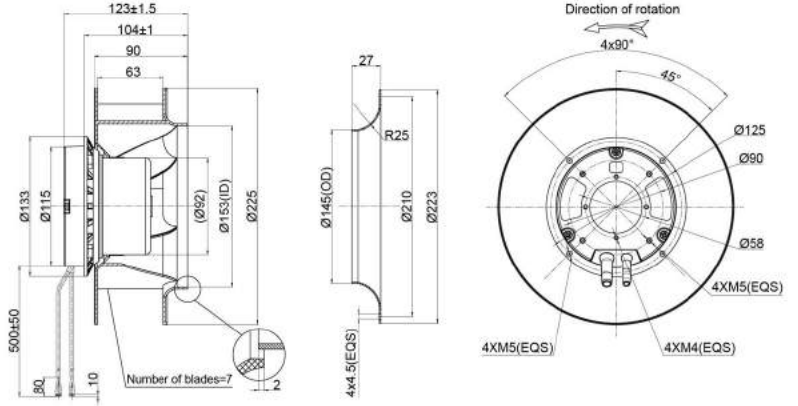
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N225B2EM	BE72EC	BALL	230	50/60	0.4	55	2200	1065	347	66

PBM MOTOR AND FAN

EC Centrifugal Fan Backward Curved Ø225x123mm



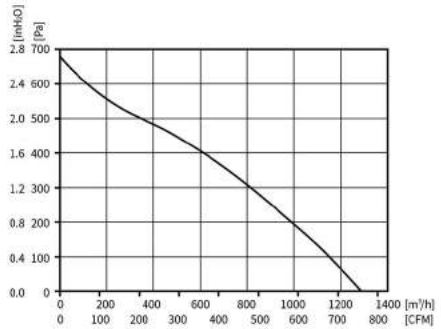
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2.8KG	E2



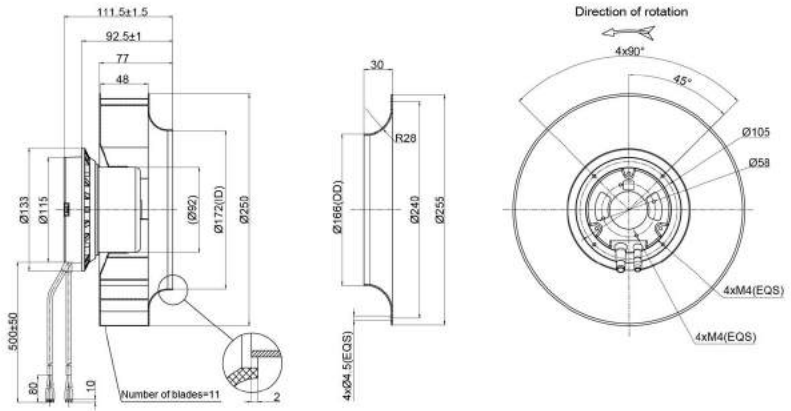
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N225B2EH	BE92EC	BALL	230	50/60	1.04	135	3020	1340	705	71

Backward Curved Centrifugal Fans

EC Centrifugal Fan Backward Curved Ø250x111.5mm

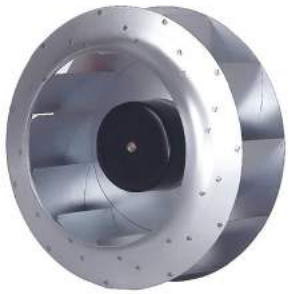


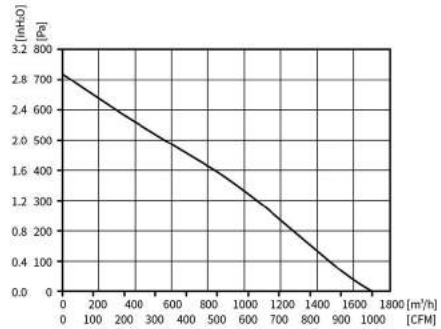
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2.15KG	E2



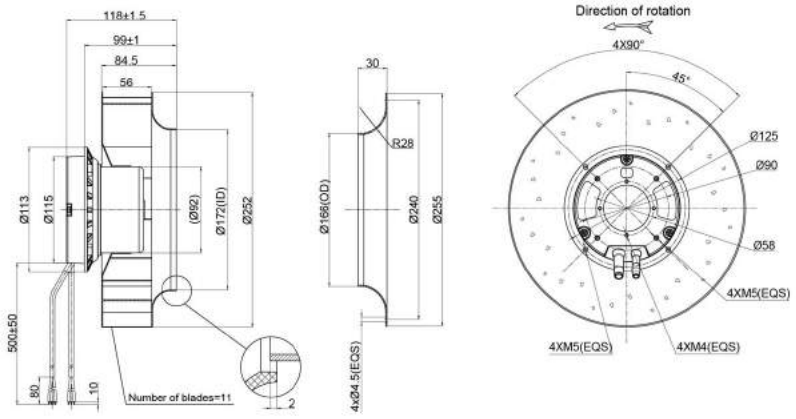
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N250B2EL	BE92EC	BALL	230	50/60	0.9	123	2760	1290	690	71

EC Centrifugal Fan Backward Curved Ø250x118mm





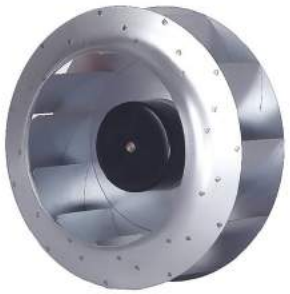
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2.77KG	E2

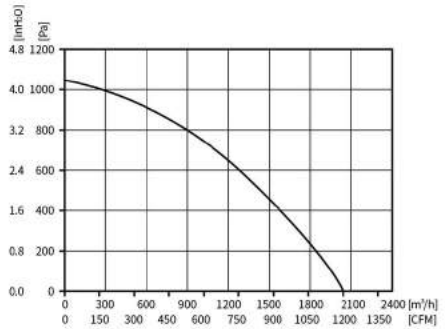


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N250B2EM	BE92EC	BALL	230	50/60	1.13	155	2780	1700	716	75

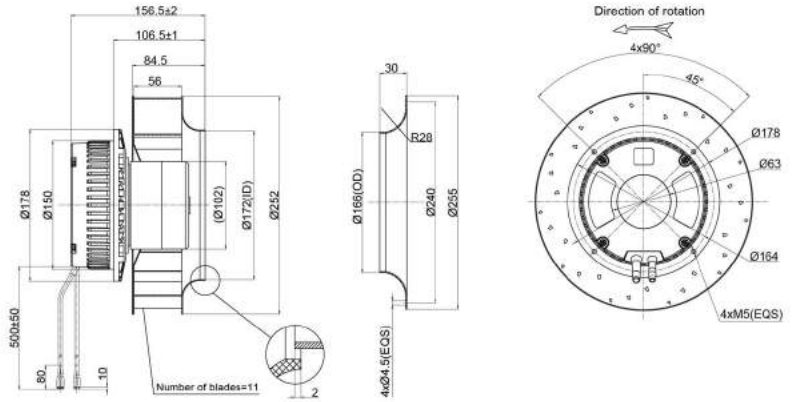
Backward Curved Centrifugal Fans

EC Centrifugal Fan Backward Curved Ø250x156.5mm



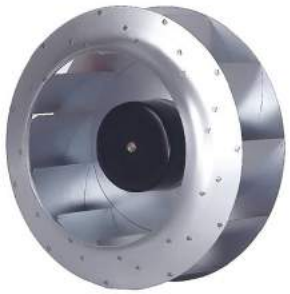


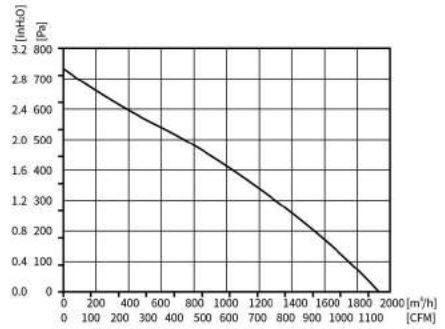
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	4.2KG	E3



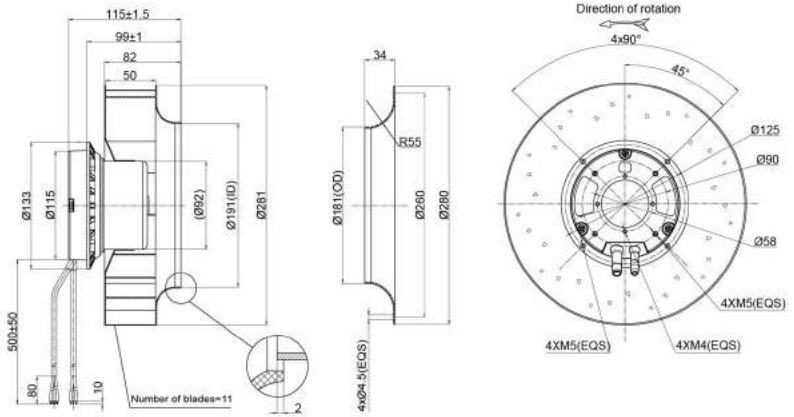
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N250B2EH	BE102EC	BALL	230	50/60	1.72	387	3550	2060	1030	80

EC Centrifugal Fan Backward Curved Ø280x115mm



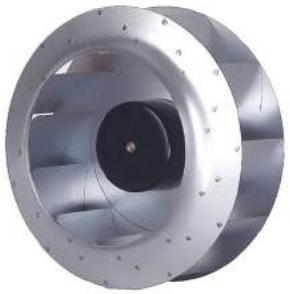


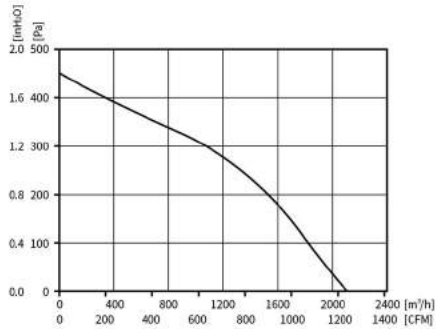
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	4.2KG	E2



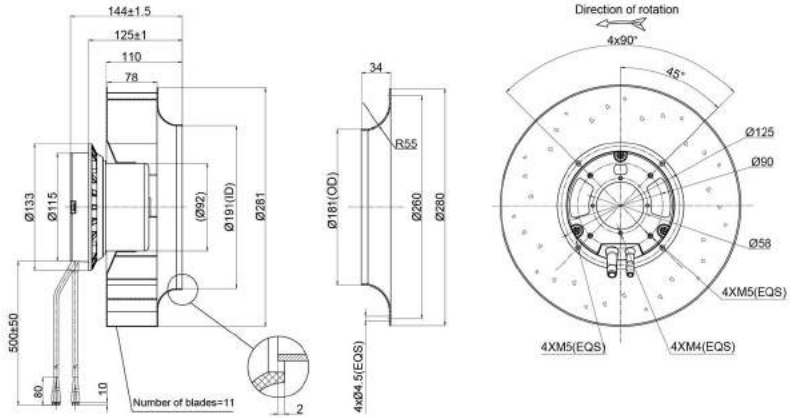
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N280B2EN	BE92EC	BALL	230	50/60	1.7	230	2700	1930	740	74

EC Centrifugal Fan Backward Curved Ø280x144mm



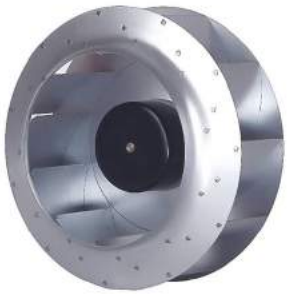


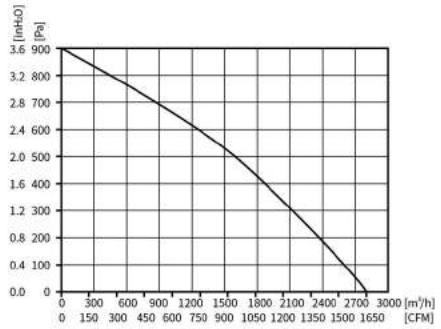
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	3.05KG	E2



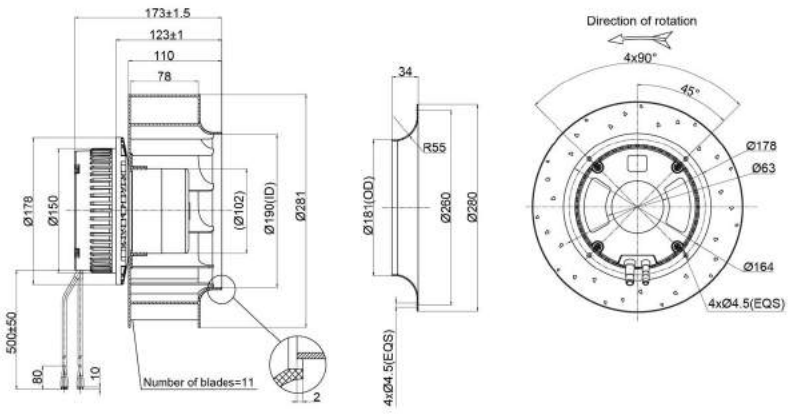
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N280B2EM	BE92EC	BALL	230	50/60	0.9	120	2000	2100	460	72

EC Centrifugal Fan Backward Curved Ø280x173mm



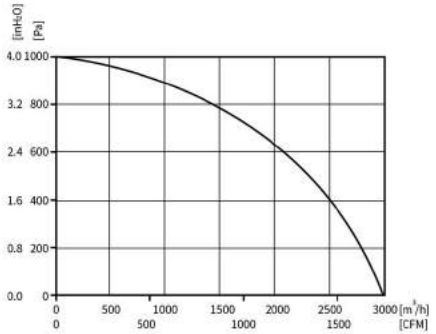


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	5.3KG	E3

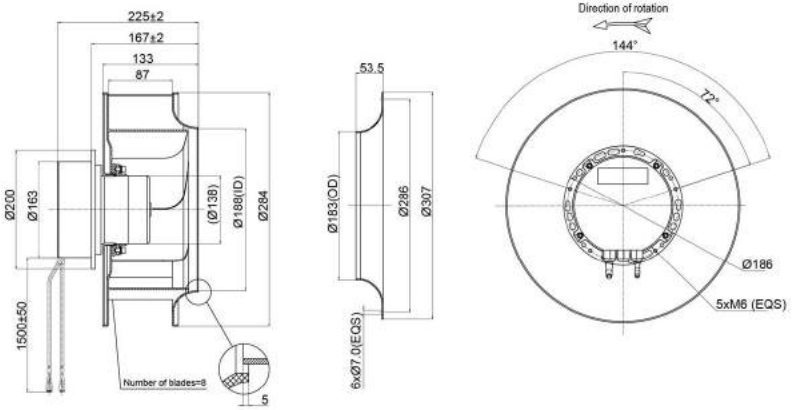


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N280B2EH	BE102EC	BALL	230	50/60	1.75	390	2760	2800	895	80

EC Centrifugal Fan Backward Curved Ø280x225mm

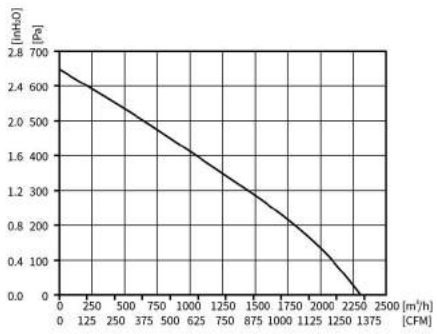


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	6.7KG	E6

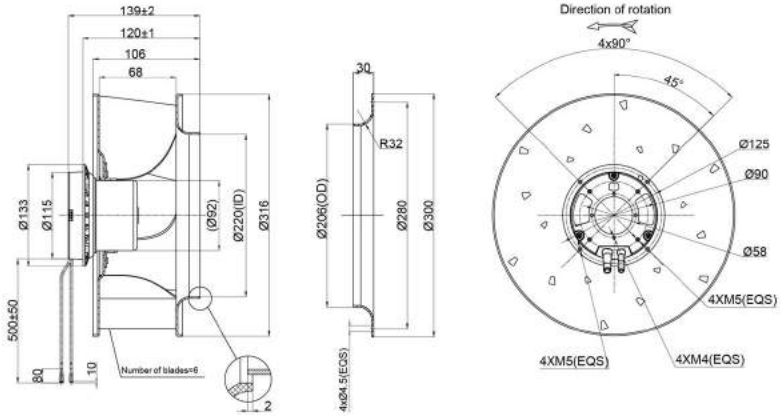


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N280B4EU	BE138EC	BALL	380	50/60	1.1	780	2850	2950	1000	82

EC Centrifugal Fan Backward Curved Ø310x139mm



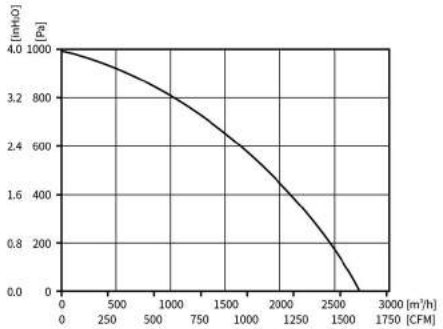
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	3.1KG	E2



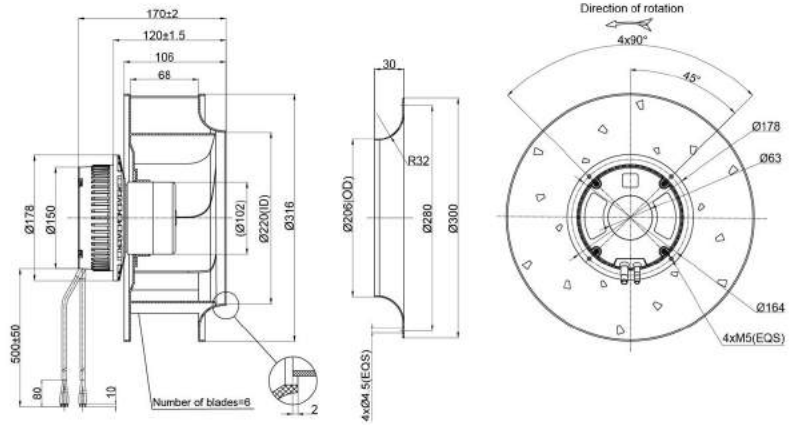
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N310B2EM	BE92EC	BALL	230	50/60	1.15	167	2050	2310	640	68

Backward Curved Centrifugal Fans

EC Centrifugal Fan Backward Curved Ø310x170mm

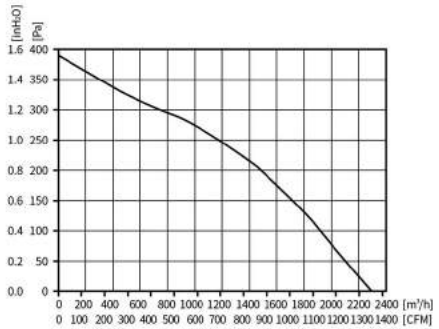


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	4.4KG	E3

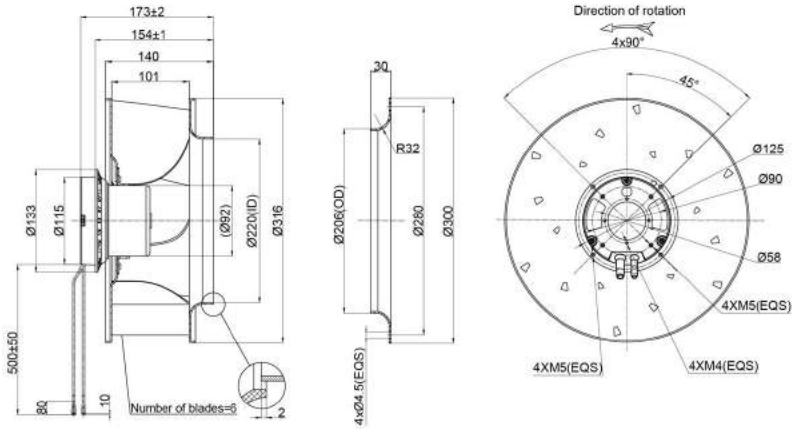


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N310B2EU	BE102EC	BALL	230	50/60	1.8	420	2680	2740	992	78

EC Centrifugal Fan Backward Curved Ø310x173mm

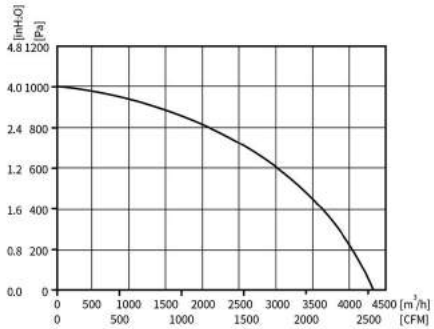


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	3.2KG	E2

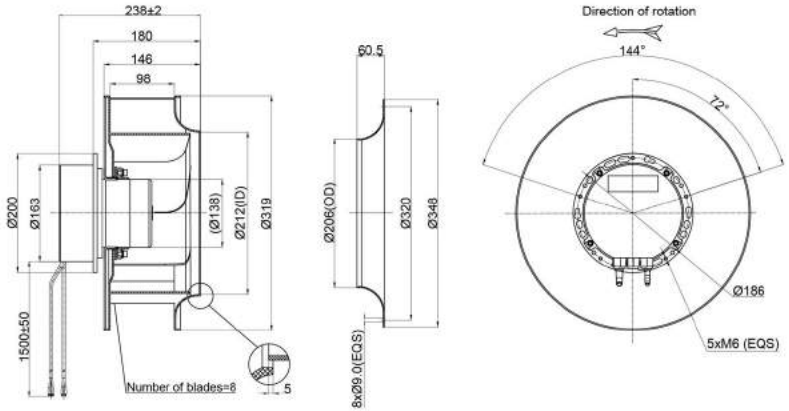


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N310B2EL	BE92EC	BALL	230	50/60	0.95	135	1630	2300	394	64

EC Centrifugal Fan Backward Curved Ø310x238mm



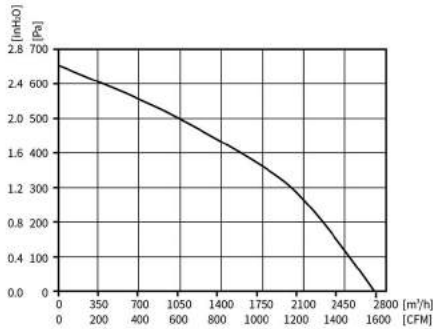
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	5.6KG	E6



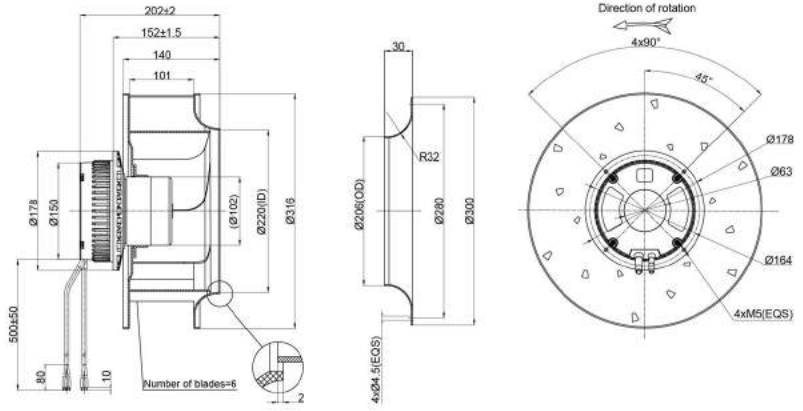
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N310B4EU	BE138EC	BALL	380	50/60	1.64	980	2600	4300	1000	74

PBM MOTOR AND FAN

EC Centrifugal Fan Backward Curved Ø310x170mm



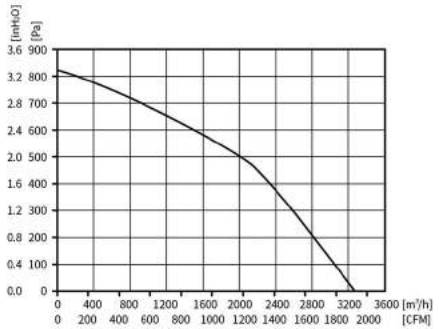
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	4.7KG	E3



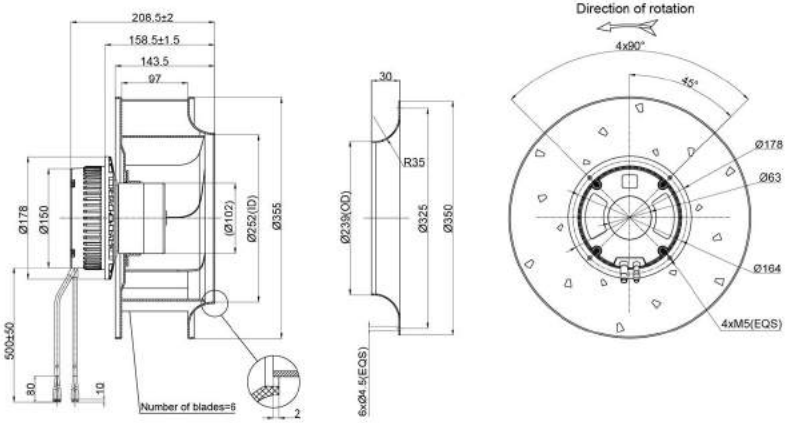
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N310B2EH	BE102EC	BALL	230	50/60	1.5	350	2300	2690	660	73

Backward Curved Centrifugal Fans

EC Centrifugal Fan Backward Curved Ø355x209mm

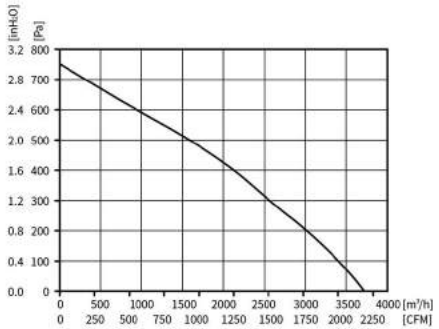


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	5.2KG	E3

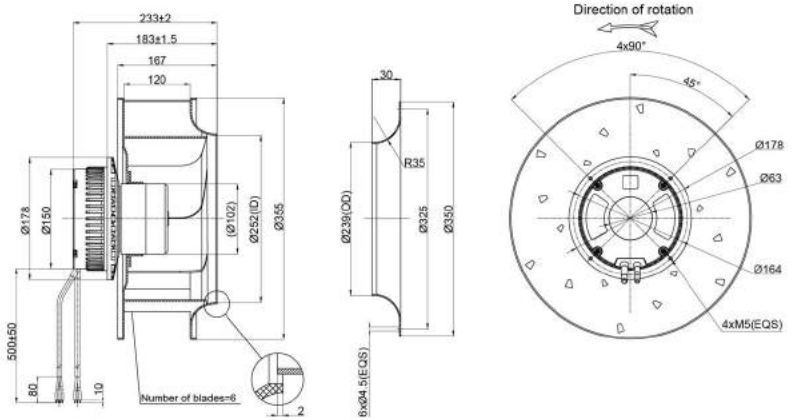


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N355B2EH	BE102EC	BALL	230	50/60	1.6	357	2050	3270	820	76

EC Centrifugal Fan Backward Curved Ø355x233mm

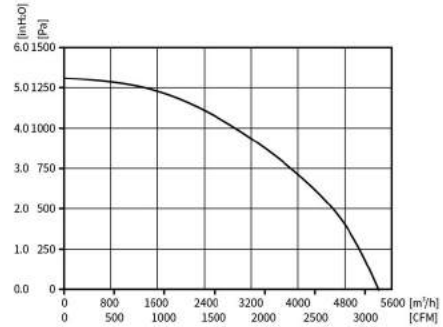


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	5.7KG	E3

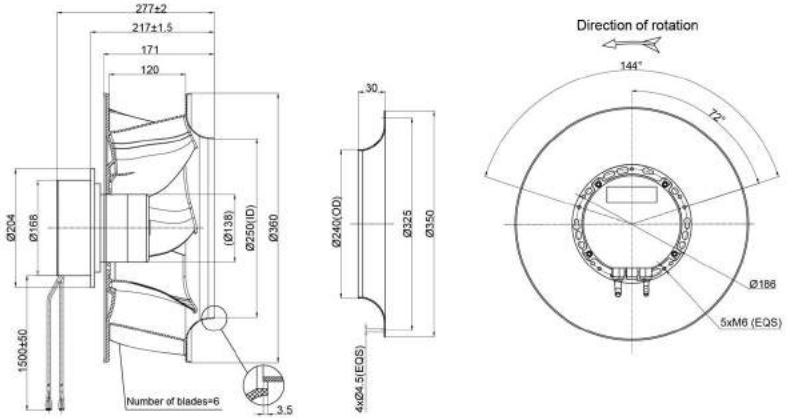


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N355B2EL	BE102EC	BALL	230	50/60	2.02	467	1930	3720	740	73

EC Centrifugal Fan Backward Curved Ø355x277mm

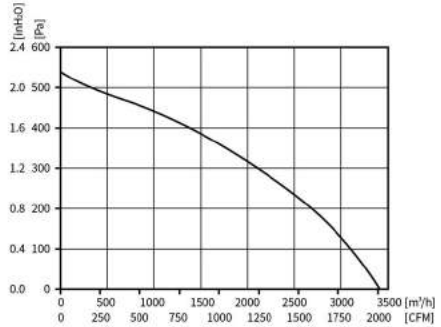


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	6.8KG	E7

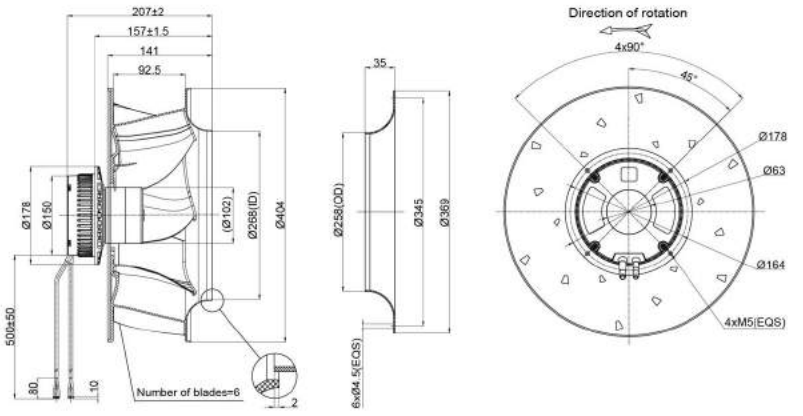


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N355B4EM	BE138EC	BALL	380	50/60	2.8	1500	2500	5400	1300	89

EC Centrifugal Fan Backward Curved Ø400x207mm



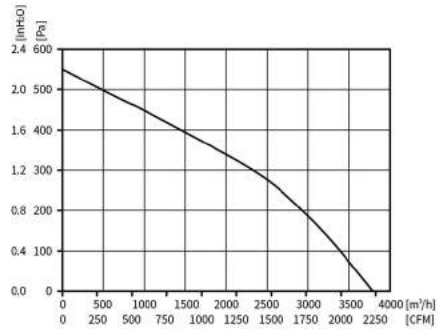
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	6.1KG	E3



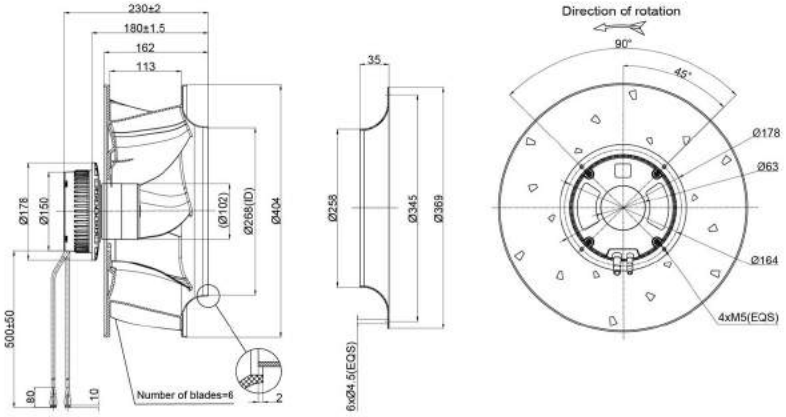
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N400B2EM	BE102EC	BALL	230	50/60	1.3	280	1500	3410	545	72

Backward Curved Centrifugal Fans

EC Centrifugal Fan Backward Curved Ø400x230mm

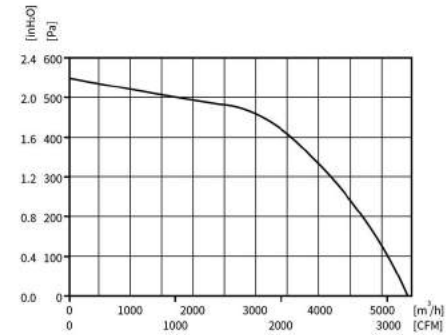


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	7.4KG	E3

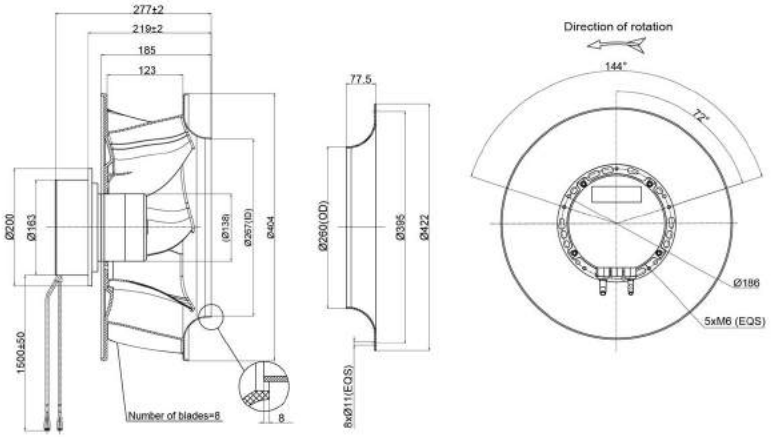


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N400B2EX	BE102EC	BALL	230	50/60	1.3	300	1360	3800	560	72

EC Centrifugal Fan Backward Curved Ø400x277mm

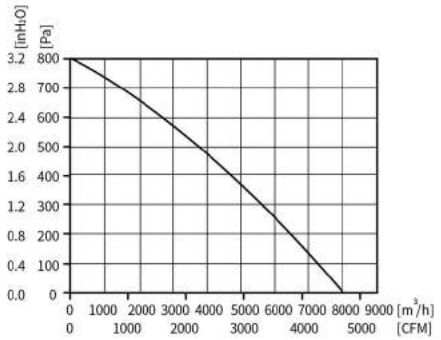


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	6.4KG	E6

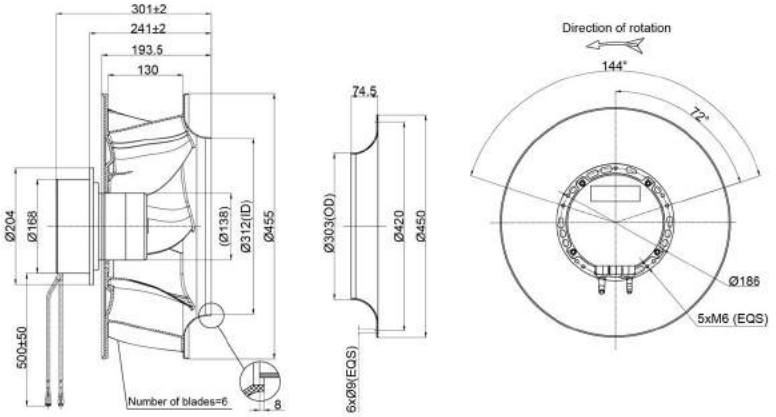


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PB3N400B4EL	BE138EC	BALL	380	50/60	1.2	720	1580	5400	530	73

EC Centrifugal Fan Backward Curved Ø450x301mm

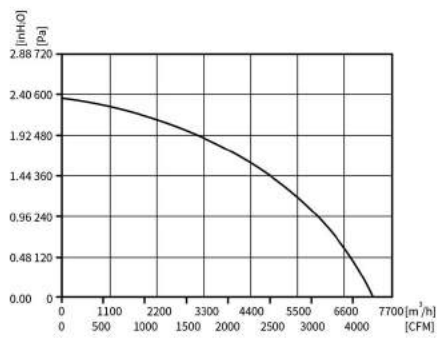


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	6.6KG	E5

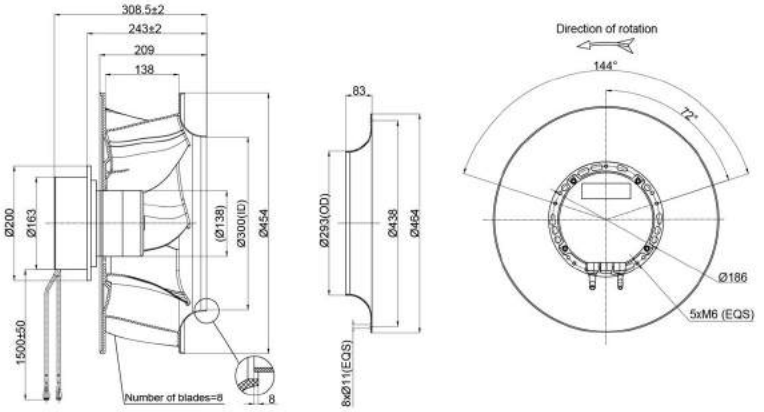


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N450B2EL	BE138EC	BALL	230	50/60	4.3	1030	1700	8050	800	76

EC Centrifugal Fan Backward Curved Ø450x308.5mm

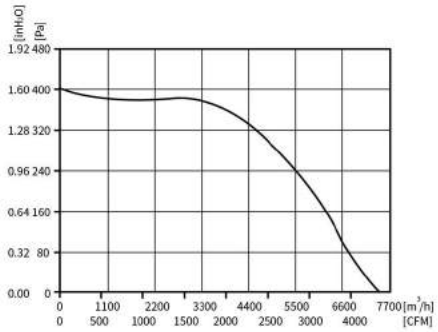


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	7.7KG	E5

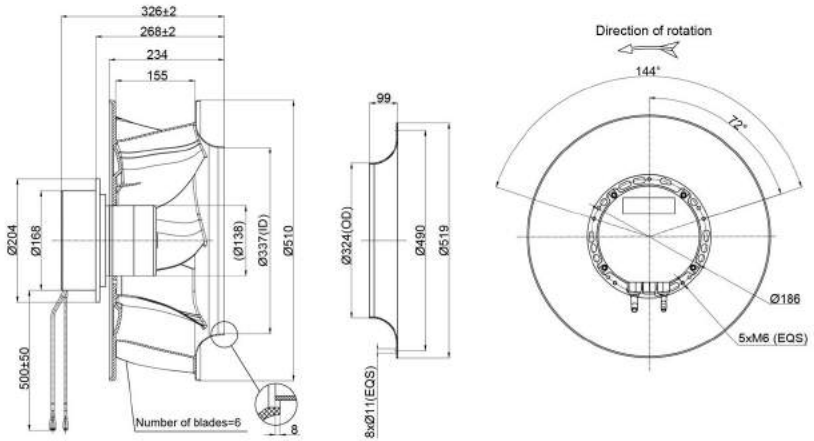


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N450B2EH	BE138EC	BALL	230	50/60	3.3	700	1450	7100	580	84

EC Centrifugal Fan Backward Curved Ø500x328mm

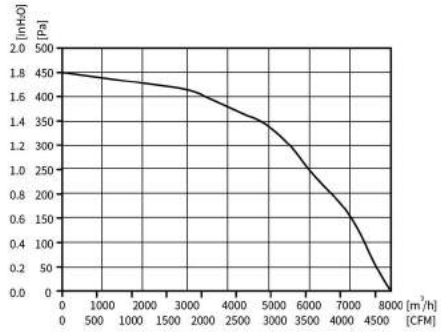


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	8.2KG	E5

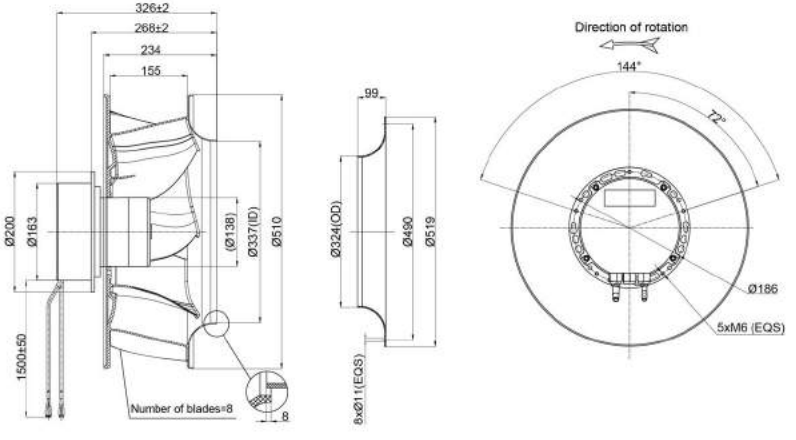


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N500B2EL	BE138EC	BALL	230	50/60	3.2	1125	710	7400	400	66

EC Centrifugal Fan Backward Curved Ø500x326mm



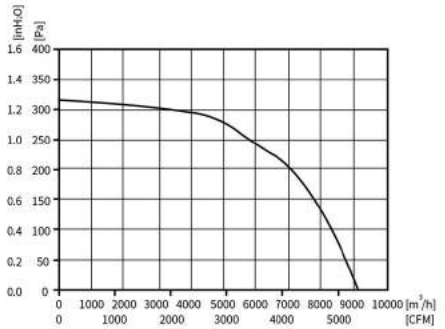
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	9.1KG	E6



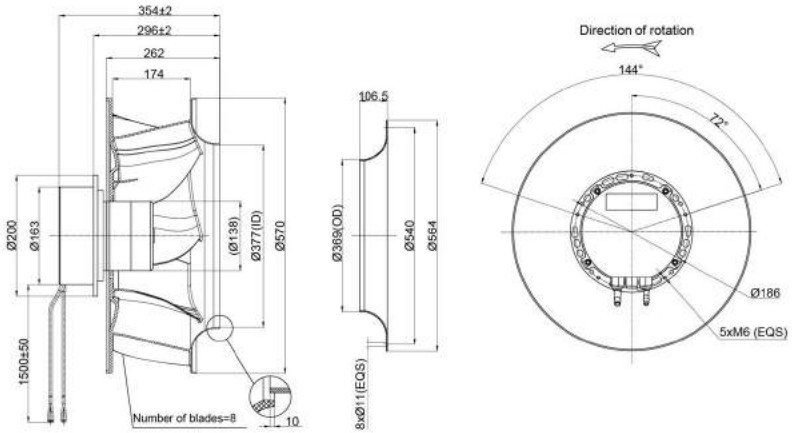
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N500B4EM	BE138EC	BALL	380	50/60	1.46	870	1100	8000	450	71

Backward Curved Centrifugal Fans

EC Centrifugal Fan Backward Curved Ø560x354mm

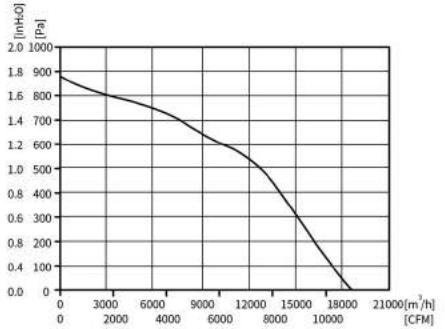


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	11.1KG	E6

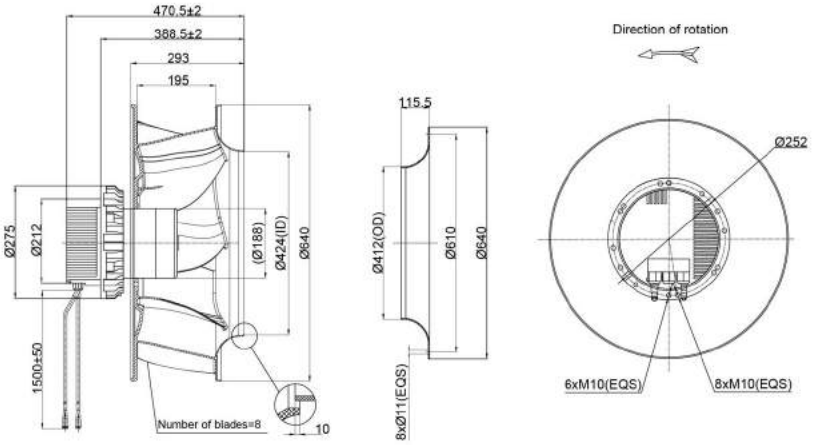


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N560B4EM	BE138EC	BALL	380	50/60	1.3	770	850	9100	320	69

EC Centrifugal Fan Backward Curved Ø630x376mm

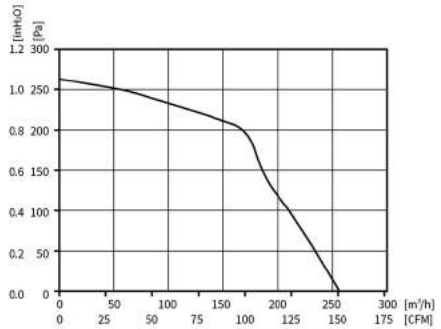


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	11.6KG	E6

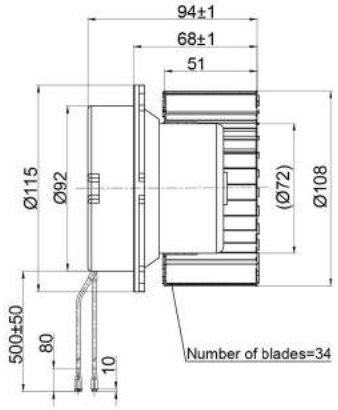


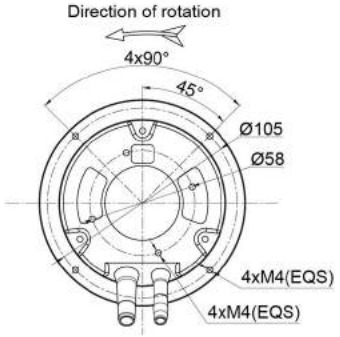
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PB3N630B4EM	BE188EC	BALL	380	50/60	4.4	2700	1250	18500	890	85

EC Centrifugal Fan Forward Curved Ø108x94mm



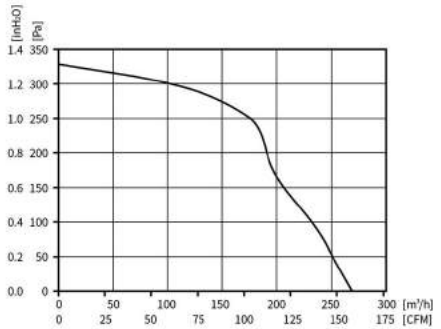
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1KG	E1



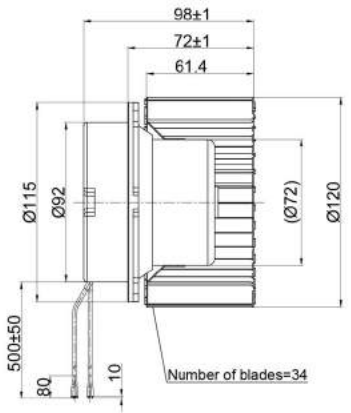


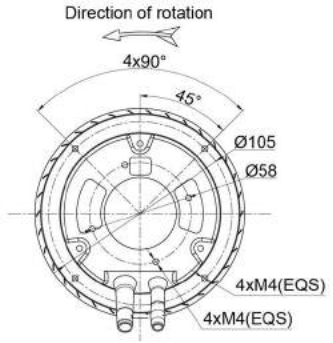
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PF3N108B2EM	BE72EC	BALL	230	50/60	0.43	48	2550	256	261	64

EC Centrifugal Fan Forward Curved Ø120x98mm



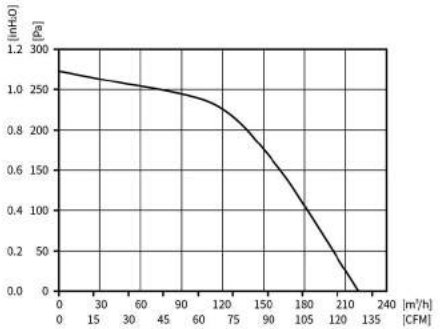
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.1KG	E1



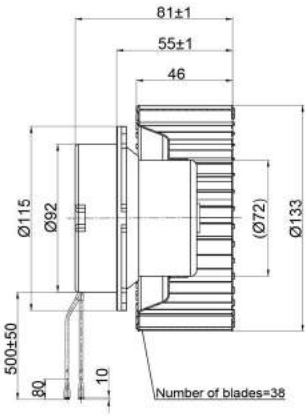


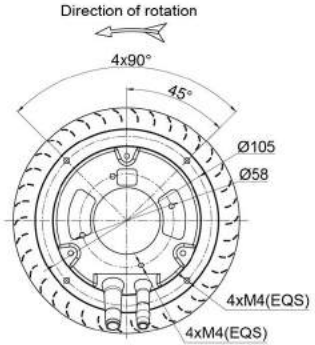
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PF3N120B2EH	BE72AC	BALL	230	50/60	0.53	61	2488	270	330	65

EC Centrifugal Fan Forward Curved Ø133x81mm



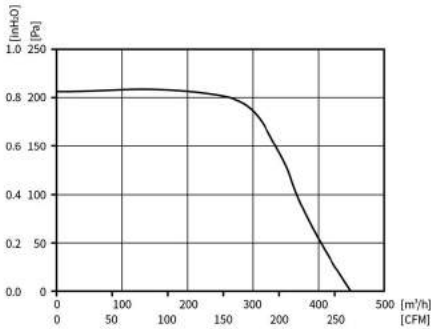
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.2KG	E1



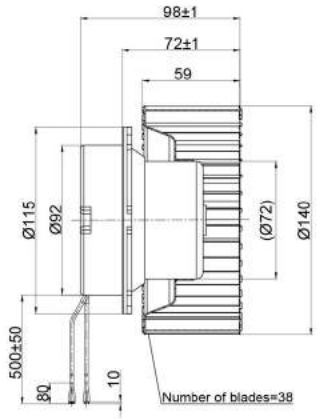


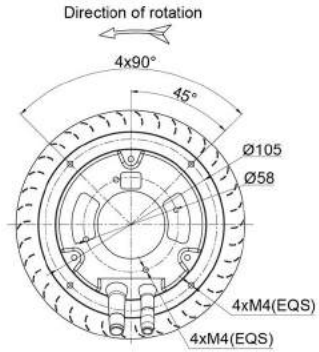
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PF3N133B2EM	BE72EC	BALL	230	50/60	0.3	38	1920	220	275	63

EC Centrifugal Fan Forward Curved Ø140x98mm



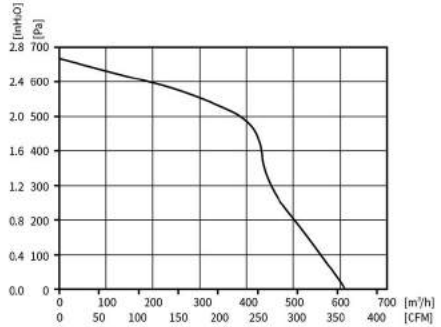
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.3KG	E1



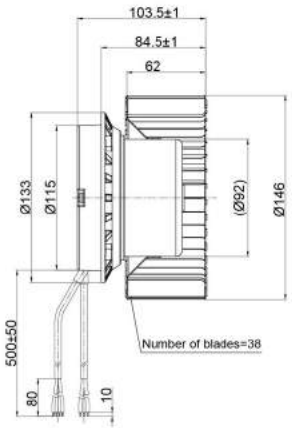


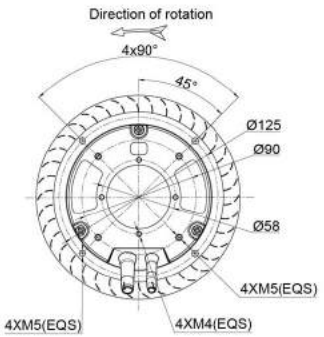
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PF3N140B2EH	BE72EC	BALL	230	50/60	0.55	64	1685	450	208	63

EC Centrifugal Fan Forward Curved Ø146x103.5mm



Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2KG	E2

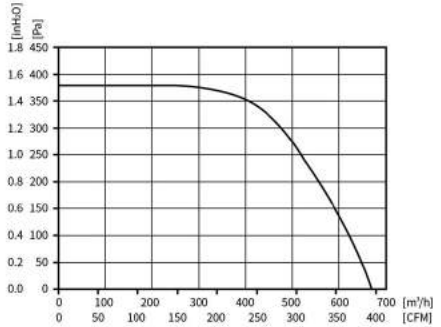




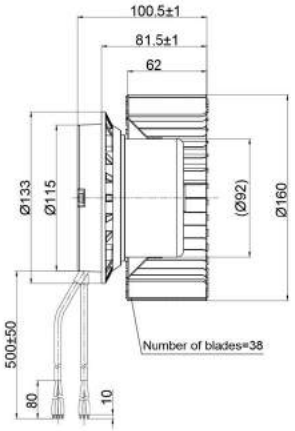
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PF3N146B2EH	BE92EC	BALL	230	50/60	1.3	175	2520	610	666	71

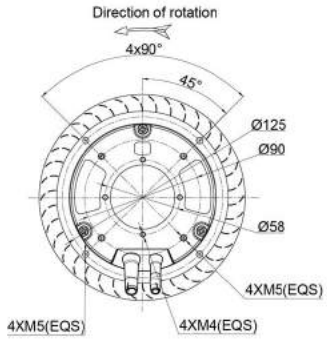
PBM MOTOR AND FAN

EC Centrifugal Fan Forward Curved Ø160x100.5mm



Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2.3KG	E2

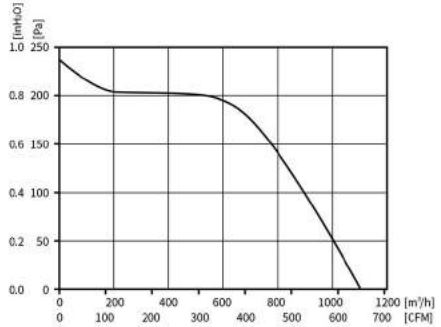




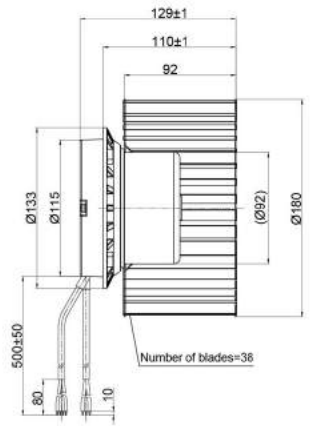
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PF3N160B2EH	BE92EC	BALL	230	50/60	1.28	177	2160	670	378	70

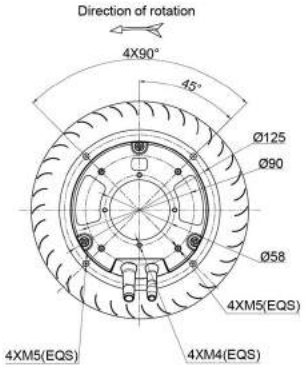
Forward Curved Centrifugal Fans

EC Centrifugal Fan Forward Curved Ø180x129mm



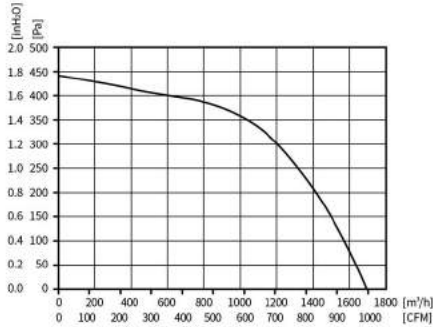
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	2.5KG	E2



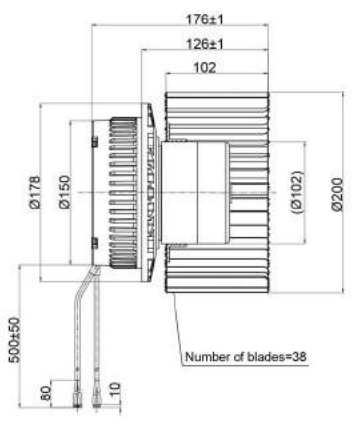


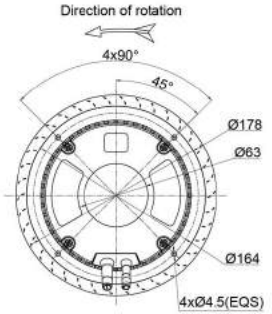
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PF3N180B2EM	BE92EC	BALL	230	50/60	1.2	168	2250	1100	237	60

EC Centrifugal Fan Forward Curved Ø200x176mm



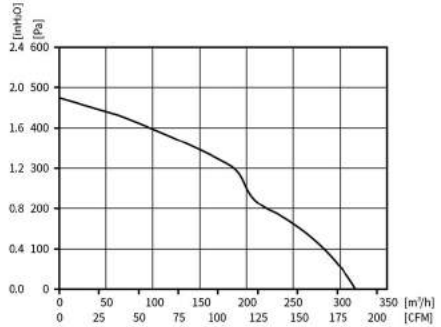
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	7.4KG	E3



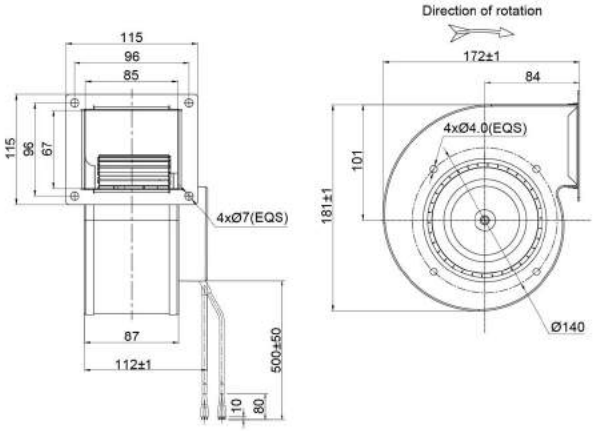


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M³/H	Pa	dB(A)
PF3N200B2EM	BE102EC	BALL	230	50/60	3.1	510	1800	1700	440	77

EC Blower Single Inlet ∅120mm

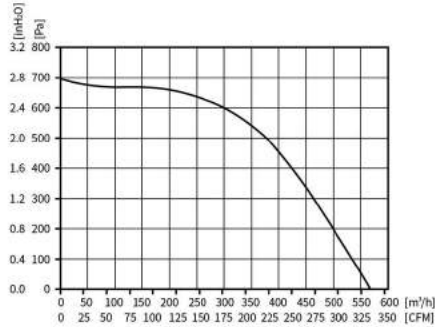


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	1.5KG	E1

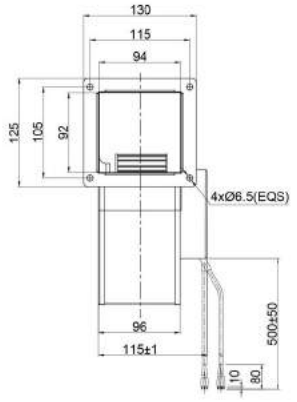


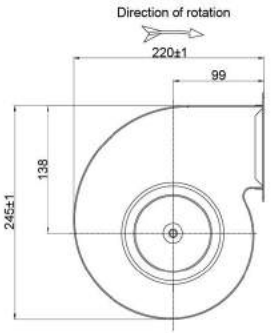
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PS3N120B2EM	BE72EC	BALL	230	50/60	0.4	55	2400	317	471	58

EC Blower Single Inlet ∅140mm



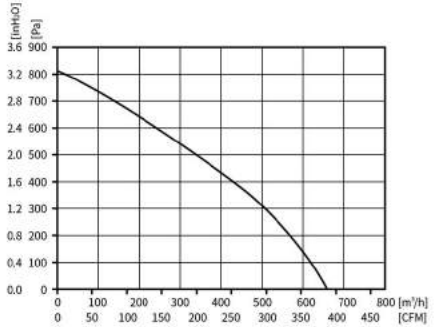
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	3.2KG	E2



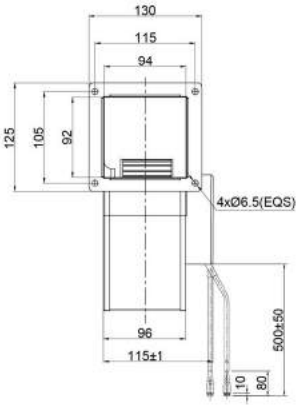


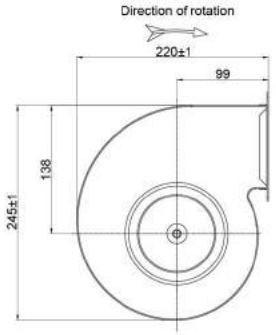
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PS3N140B2EM	BE92EC	BALL	230	50/60	1.2	170	2600	567.7	696	70

EC Blower Single Inlet ∅160mm



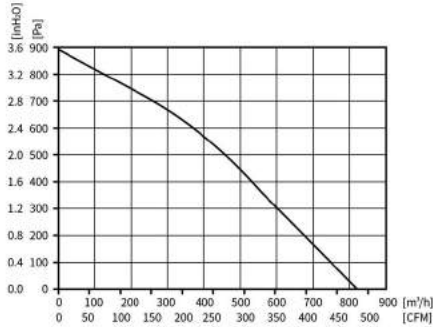
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	3.2KG	E2



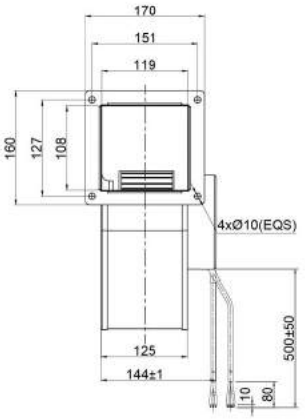


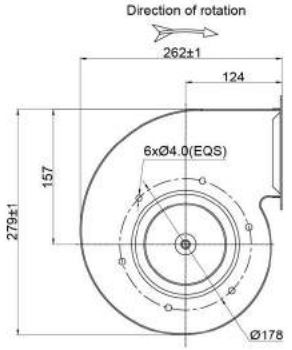
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PS3N160B2EM	BE92EC	BALL	230	50/60	1.2	170	1950	688	810	72

EC Blower Single Inlet ∅180mm



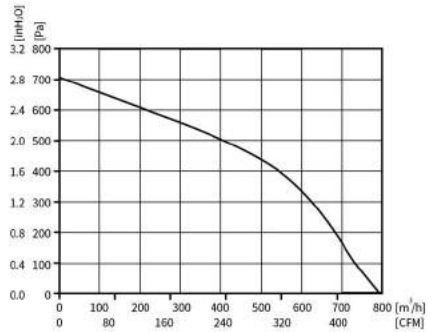
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	4.5KG	E2



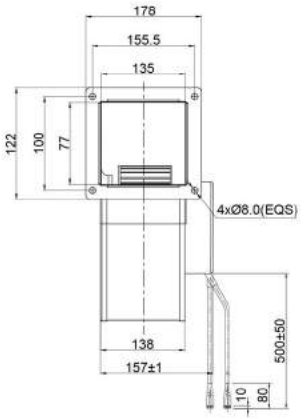


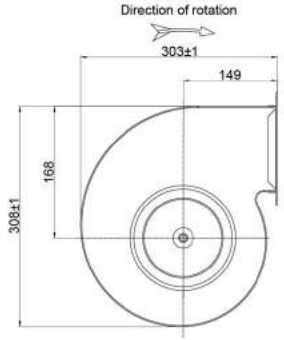
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PS3N180B2EM	BE92EC	BALL	230	50/60	1.2	170	1500	820	900	70

EC Blower Single Inlet Ø200mm



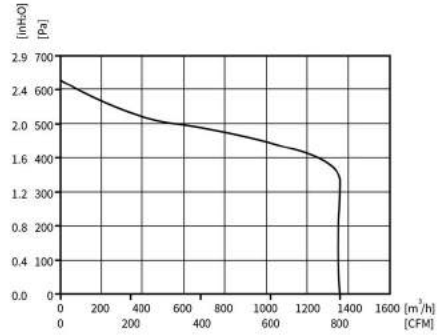
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	4.8KG	E2



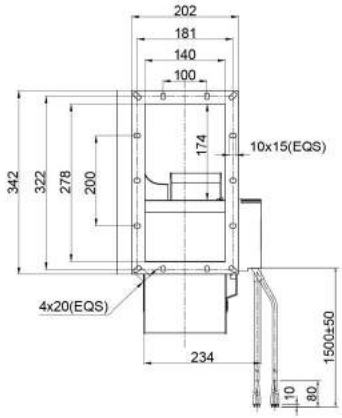


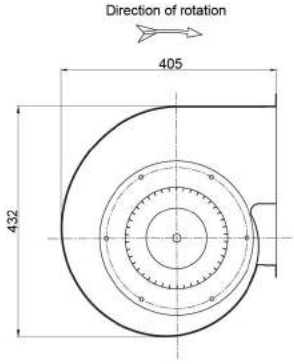
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PS3N200B2EM	BE92EC	BALL	230	50/60	1.5	220	1600	792	708	64

EC Blower Single Inlet Ø225mm



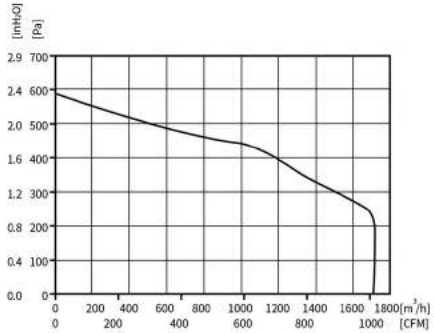
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	6.8KG	E4



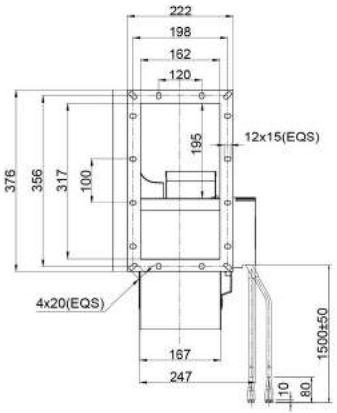


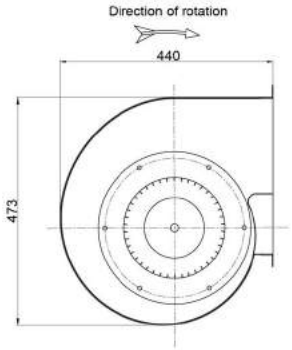
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PS3N225B2EM	BE102EC	BALL	230	50/60	1.1	230	1090	1360	620	55

EC Blower Single Inlet Ø250mm



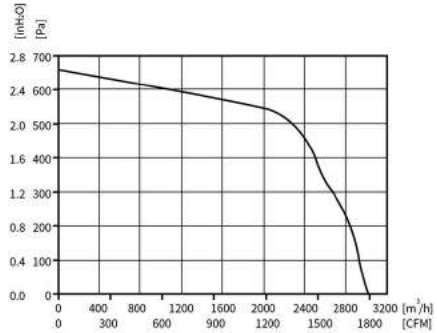
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	8.2KG	E4



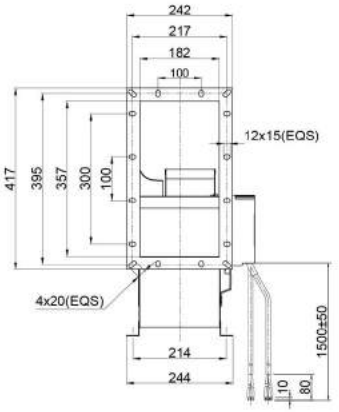


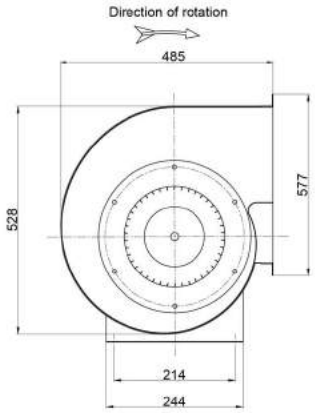
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PS3N250B2EM	BE102EC	BALL	230	50/60	1.1	230	840	1710	580	50

EC Blower Single Inlet Ø280mm



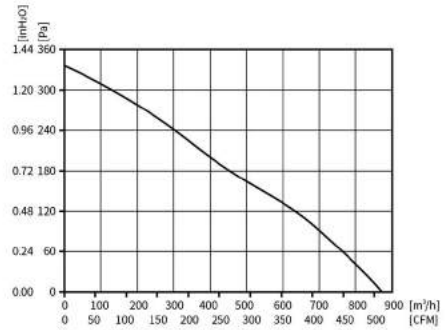
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	10.2KG	E6



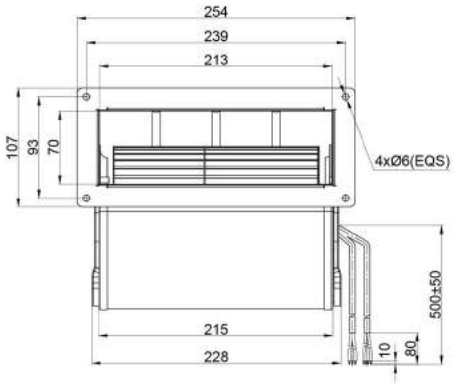


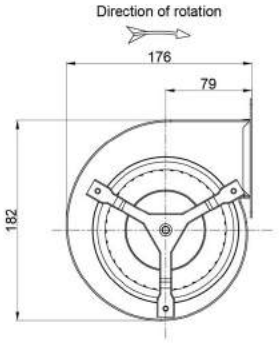
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PS3N280B4EM	BE138EC	BALL	380	50/60	1.6	950	1150	3000	650	79

EC Blower Dual Inlet Ø133x190mm



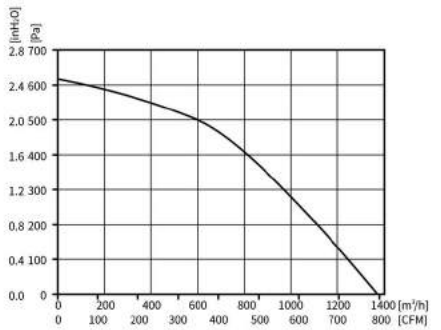
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	B	-25℃~+60℃	3KG	E1



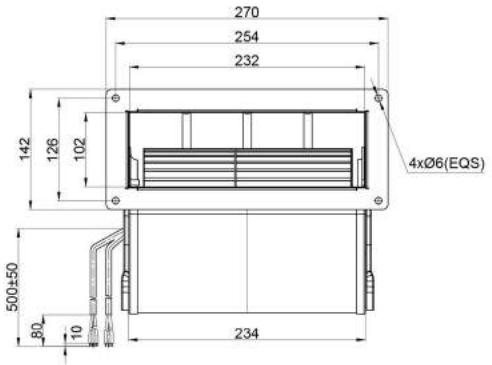


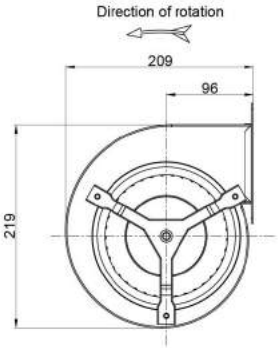
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PD3N133B2EM	BE72EC	BALL	230	50/60	0.9	120	1500	880	340	65

EC Blower Dual Inlet Ø146x190mm



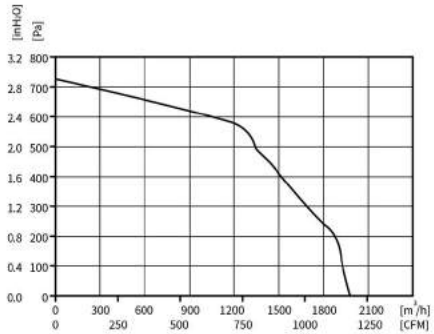
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10 VDC/PWM	IP44	B	-25℃~+60℃	4.5KG	E2



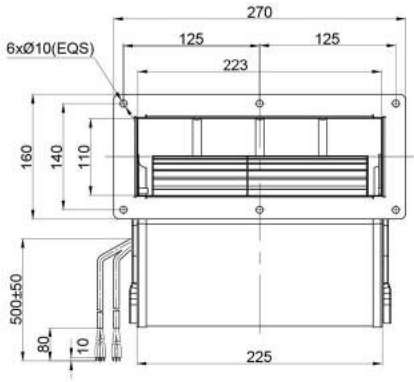


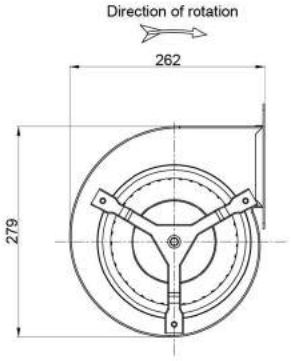
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PD3N146B2EH	BE92EC	BALL	230	50/60	1.4	190	1750	1340	620	72

EC Blower Dual Inlet Ø180x185mm



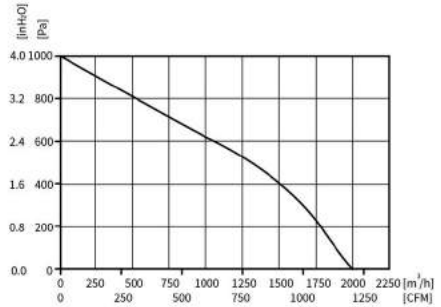
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	6.2KG	E4



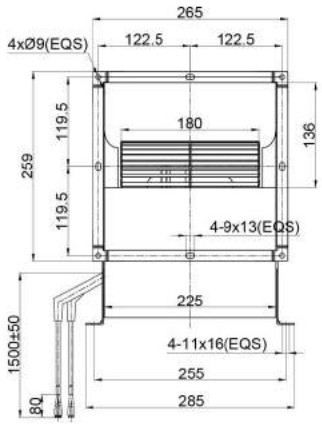


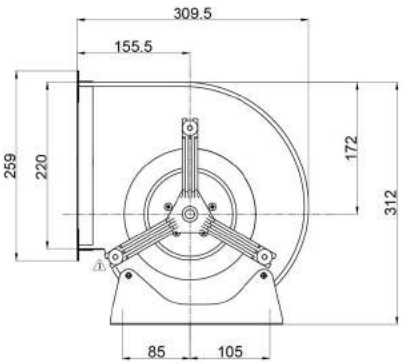
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PD3N180B2EM	BE102EC	BALL	230	50/60	1.9	400	1550	2000	710	74

EC Blower Dual Inlet Ø200x180mm



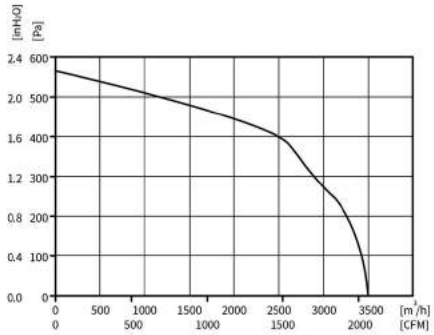
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	7.3KG	E4



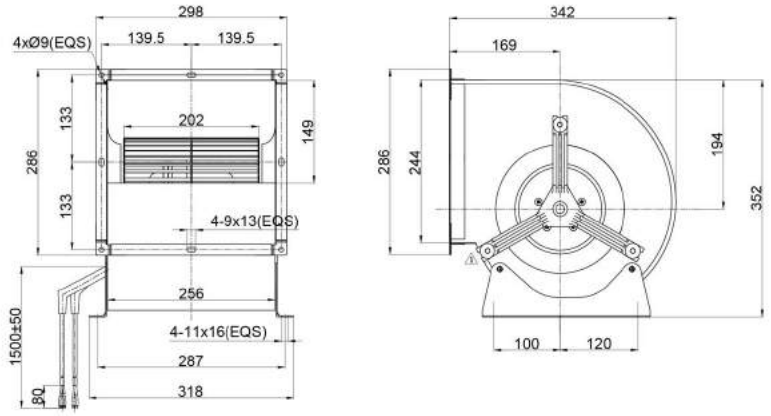


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PD3N200B2EM	BE102EC	BALL	230	50/60	1.36	300	1150	2000	1000	64

EC Blower Dual Inlet Ø225x202mm

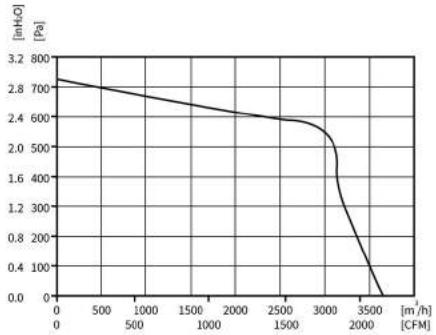


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	8.4KG	E6

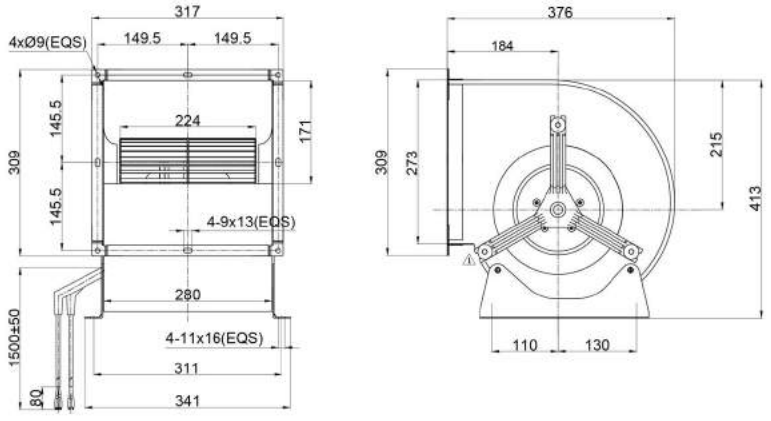


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PD3N225B4EM	BE138EC	BALL	380	50/60	1.8	1050	1450	3500	560	78

EC Blower Dual Inlet Ø250x224mm

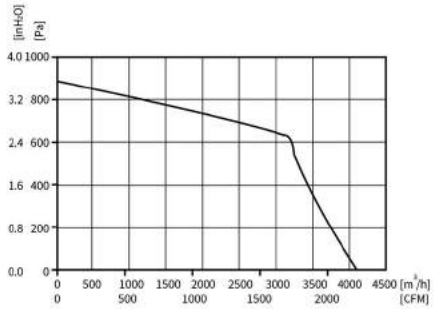


Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	9.2KG	E6

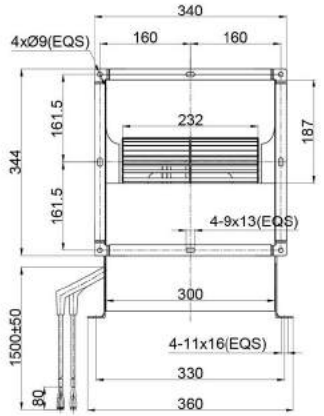


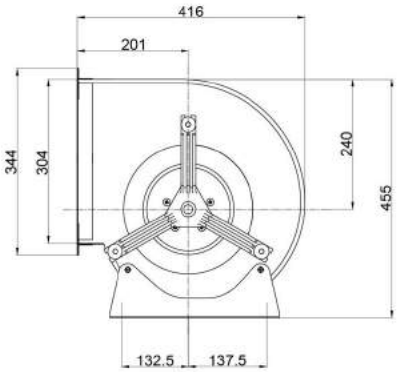
Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PD3N250B4EM	BE138EC	BALL	380	50/60	1.2	655	920	3640	720	74

EC Blower Dual Inlet Ø280x232mm



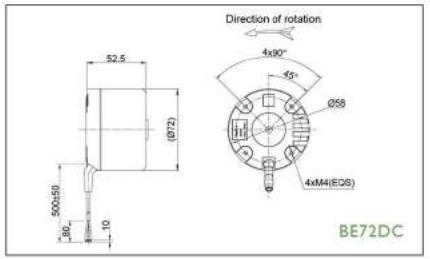
Motor Type	Speed Control	Protection Type	Insulation Class	Operating Temperature	Weight	Wiring Mode
EC BRUSHLESS EXTERNAL ROTOR MOTOR	0-10VDC/PWM	IP44	F	-25℃~+60℃	11.3KG	E6

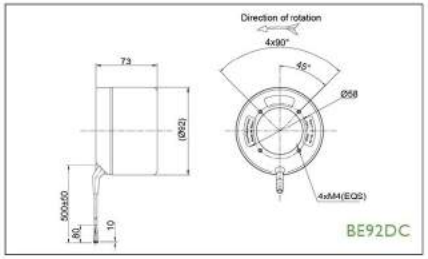


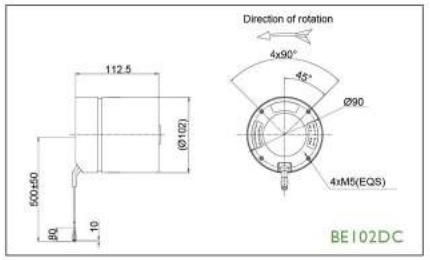


Model	Motor	Bearing System	Rated Voltage	Frequency	Rated Current	Rated Power	Rated Speed	Air Flow	Air Pressure	Sound Level
Part No.	Type	B/S	VAC	Hz	A	W	RPM	M^3/H	Pa	dB(A)
PD3N280B4EM	BE138EC	BALL	380	50/60	1.1	600	800	4100	890	72

EC-DC Motor

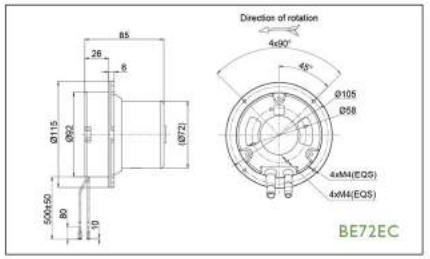


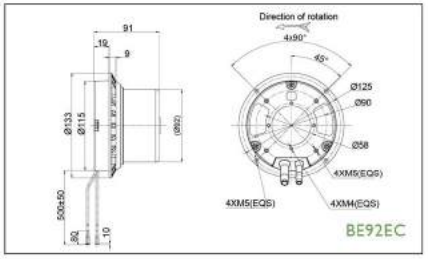


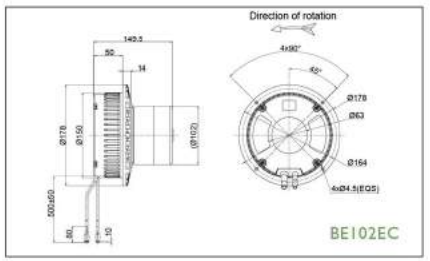


Motor	BE72DC120W	BE92DC230W	BE102DC480W
Voltage	48V	48V	48V
Current	2.5A	4.8A	10A
Power	120W	230W	480W
Speed	400~4450RPM	400~3300RPM	400~2200RPM
Operating Temperature	-25℃~+60℃	-25℃~+60℃	-25℃~+60℃
Wiring Mode	D1	D2	D3

EC-AC Motor

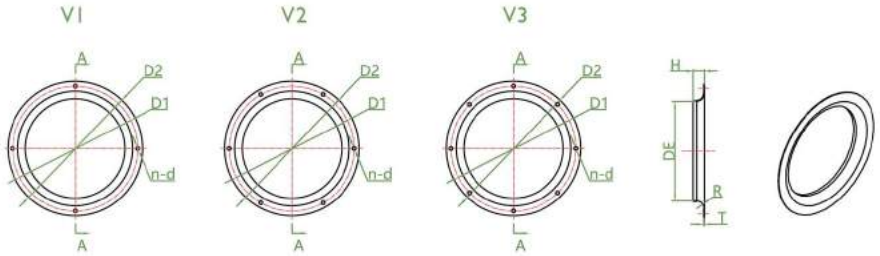






Motor	BE72EC120W	BE92EC230W	BE102EC600W
Voltage	230V	230V	230V
Frequency	50Hz	50Hz	50Hz
Current	1.0A	1.7A	4.3A
Power	120W	230W	600W
Speed	400~4480RPM	400~3600RPM	400~3550RPM
Operating Temperature	-25℃~+60℃	-25℃~+60℃	-25℃~+60℃
Wiring Mode	E1	E2	E3

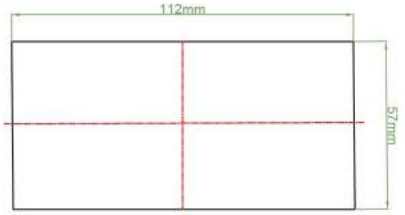
Inlet Rings



Inlet Rings for Backward Curved Centrifugal Fans

Part Number	Size	Vers.	DE	D1	D2	H	T	n-d
PB3N133Bxx	133	V1	Ø88	Ø118	Ø129	13	1.5	4xØ4.5
PB3N175Bxx	175	V1	Ø123	Ø158	Ø170	14	1.5	4xØ4.5
PB3N190Bxx	190	V1	Ø123	Ø158	Ø170	14	1.5	4xØ4.5
PB3N220Bxx	220	V1	Ø156	Ø245	Ø253	25	1.5	4xØ4.5
PB3N225Bxx	225	V1	Ø145	Ø210	Ø223	27	1.5	4xØ4.5
PB3N250Bxx	250	V1	Ø166	Ø240	Ø255	30	1.5	4xØ4.5
PB3N280Bxx	280	V1	Ø181	Ø260	Ø280	34	1.5	4xØ4.5
PB3N280Bxx	280	V2	Ø183	Ø286	Ø307	53.5	1.5	6xØ4.5
PB3N310Bxx	310	V1	Ø206	Ø280	Ø300	30	1.5	4xØ4.5
PB3N310Bxx	310	V3	Ø206	Ø320	Ø348	60.5	1.5	8xØ4.5
PB3N355Bxx	355	V1	Ø240	Ø325	Ø350	30	1.5	4xØ4.5
PB3N355Bxx	355	V2	Ø239	Ø325	Ø350	30	1.5	6xØ4.5
PB3N400Bxx	400	V2	Ø258	Ø345	Ø369	35	1.5	6xØ4.5
PB3N400Bxx	400	V3	Ø260	Ø395	Ø422	77.5	1.5	8xØ11
PB3N450Bxx	450	V2	Ø303	Ø420	Ø450	74.5	1.5	6xØ11
PB3N450Bxx	450	V3	Ø293	Ø438	Ø464	83	1.5	8xØ11
PB3N500Bxx	500	V3	Ø324	Ø490	Ø519	99	1.5	8xØ11
PB3N560Bxx	560	V3	Ø369	Ø540	Ø564	106.5	1.5	8xØ11
PB3N630Bxx	630	V3	Ø412	Ø610	Ø640	115.5	1.5	8xØ11

Fan Controller



1.Product Introduction

The fan controller is an external Modbus controller, which can realize single control and multiple centralized control. The controller has a built-in Mod-bus communication protocol to control the operation of the fan through the group control system. It is mostly used in FFU group control occasions.

2.The Main Function

The controller controls the fan speed through speed feedback, and uses the principle of speed closed-loop control to control the fan operation. Its main functions are:

- Control the start and stop and speed regulation of each fan through the host;
- Remote centralized control and fault diagnosis can be realized;
- Each control unit module has a settable ID address;
- The current speed and current ID number can be displayed;
- With alarm function.

3.Product Dimensions and Installation Requirements

The controller is powered by the fan without external power supply; the controller is equipped with 2P and 4P quick connect terminals for connection, making the connection simpler and more convenient. The product is designed as a panel installation method, which is convenient for installation and construction. See the figure below for the opening size: 112mm x 57mm

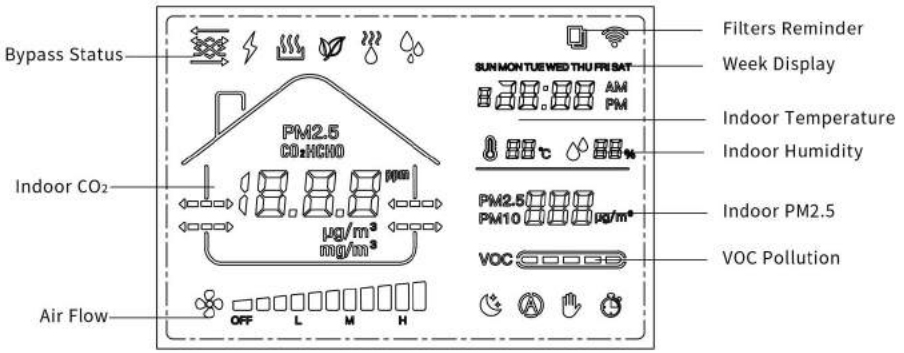
4.Product Application Areas

This product is mainly used in the field of FFU, which can make ordinary EC fans realize group control function, and can effectively solve the problem of group control of ordinary fans.

PS2 intelligent multi-functional touch screen controller

1.General description

PS2-PM2.5/CO_2 controller adopts in touch technology, which is flexible and convenient. There are sensors whichcan monitor the indoor temperature, humidity,PM2.5 and CO_2 concentration detection function.The output signal of controller can directly control the starting and RPM of the fresh air.
It can be widely used in residential, commercial and industrial conditions, and effectively improve the air quality, create a healthy, comfortable, efficient,environmental protection and energy-saving living environment.



Fan Selection Guide

In order to provide you with more considerate fan selection and technical solution services, please provide your demand information in the following table as much as possible:

Note: The Red * marked is required.		Date	
Project Name		* Client Name	
* Applied to Which Products or Industries		Special Working Conditions to be Reminded	
Fan Mounting Space Size (LxWxH)	mm	Motor Type	
* Blade Type and Materials		* Impeller Size (LxWxH)	mm

Is it possible to provide 《Fan Technical Requirements List》 or replaced fan specification or replaced fan brand & model number?

Fan's Key Technical Requirements	Key Parameters	P/Q	Replaced Fan Brand	Replaced Fan Model Number	Photo of Replaced Fan Name Plate

Key Technical Parameter Information For Fan Selection

* Rated Voltage (V)		Max. Current (A)		Frequency (HZ)	
Rated Power(W)		Motor Output Power (W)		Bearing Type	
* Max. Airflow (M³/H)		* Max. Air Pressure (Pa)		* Speed (RPM)	
Operation Point's Air Flow & Air Pressure		Max. Operating Temperature (℃)		Rotation or Air Flow Direction	
* Expected Sound Level (dBA)		Water and Dust Protection Class (IPXX)		Isulation Class	
Motor Operating Protections		Speed Control Type		Certificates	
Operating Voltage Range (V)		Wire Length and Connector Requirements		Wiring Mode	
Fan Efficiency (η)		Motor Efficiency (η)		Fan Operation Control	

Key Commercial Requirements

Total Quantity Demand		Quantity and Date for the First Order	
Quantity of Sample		Sample Demand Time	
Packing Demand		Type of Shipping	
* Recipient's Name and Mobile Number		* Detail Receiving Address	

Client's Other Requirements:
Such as: non-standard fan size (mm), special installation requirements, special working and operating environment, etc

PBM MOTOR AND FAN(SUZHOU) CO.,LTD
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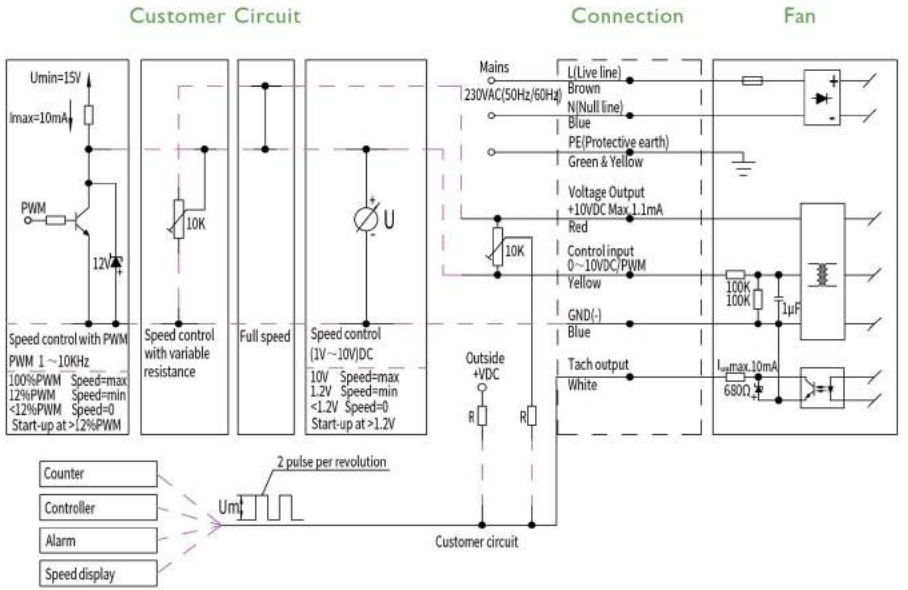
Phine:+86 512 6858 1674 E-mail:sales@pbmmf.com
Website:www.pbmmf.com

Wiring Diagram

IP44 EI-EC Motor 72(Nominal voltage 115/230VAC)



Line1(AC)	
	Brown= L(Live Line)
	Blue= N(Null Line)
	Green & Yellow=PE(Protective Earth)

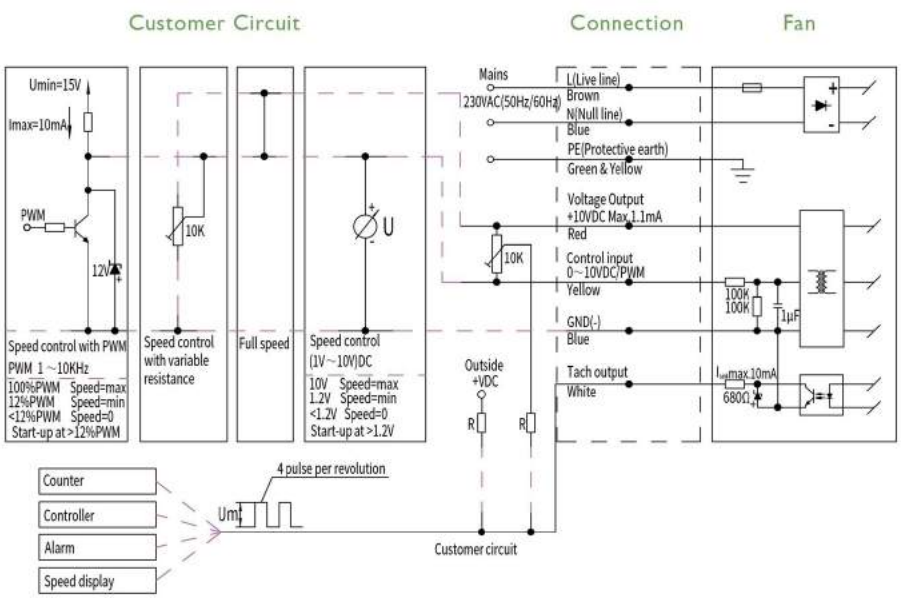
Line2(DC)	
	Red= Voltage Output +10VDC
	Yellow= 0-10VDC/PWM
	White= FG
	Blue= GND

Signal	Color	Assignment/Function
L	Brown	Mains 50/60 Hz,phase
N	Blue	Mains 50/60 Hz,neutral
PE	Green & Yellow	Protective Earth

Signal	Color	Assignment/Function
+10VDC	Red	Voltage Output +10VDC max.1.1mA
0-10VDC/PWM	Yellow	Control Input
Tach Output	White	Tach Output:2 puls per revolution
GND	Blue	GND

Wiring Diagram

IP44 E2-EC Motor 92(Nominal voltage 115/230VAC)



Line1(AC)	Brown= L(Live Line)
	Blue= N(Null Line)
	Green & Yellow=PE(Protective Earth)

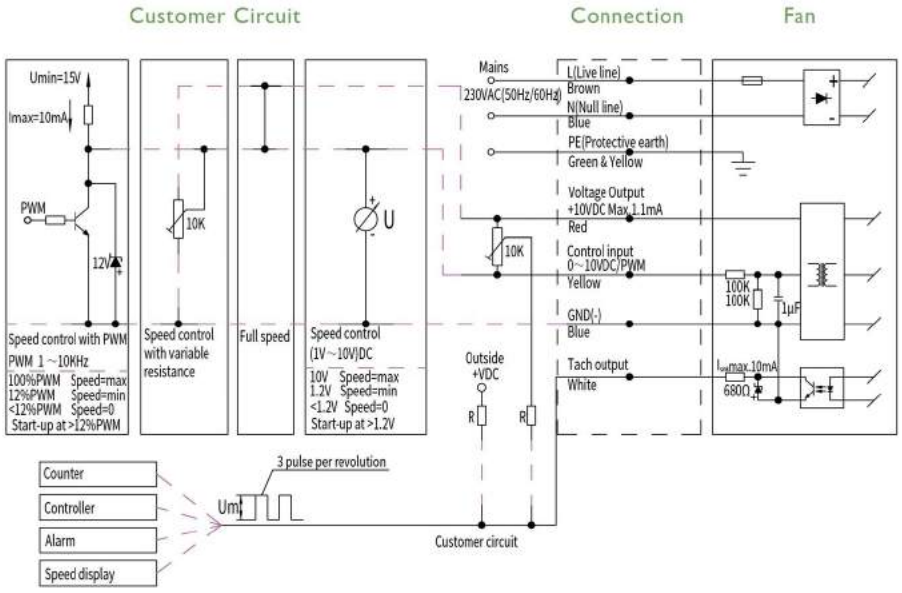
Line2(DC)	Red= Voltage Output +10VDC
	Yellow= 0-10VDC/PWM
	White= FG
	Blue= GND

Signal	Color	Assignment/Function
L	Brown	Mains 50/60 Hz,phase
N	Blue	Mains 50/60 Hz,neutral
PE	Green & Yellow	Protective Earth

Signal	Color	Assignment/Function
+10VDC	Red	Voltage Output +10VDC max.1.1mA
0-10VDC/PWM	Yellow	Control Input
Tach Output	White	Tach Output:4 puls per revolution
GND	Blue	GND

Wiring Diagram

IP44 E3-EC Motor 102(Nominal voltage 115/230VAC)



Line1(AC)	Brown= L(Live Line)
	Blue= N(Null Line)
	Green & Yellow=PE(Protective Earth)

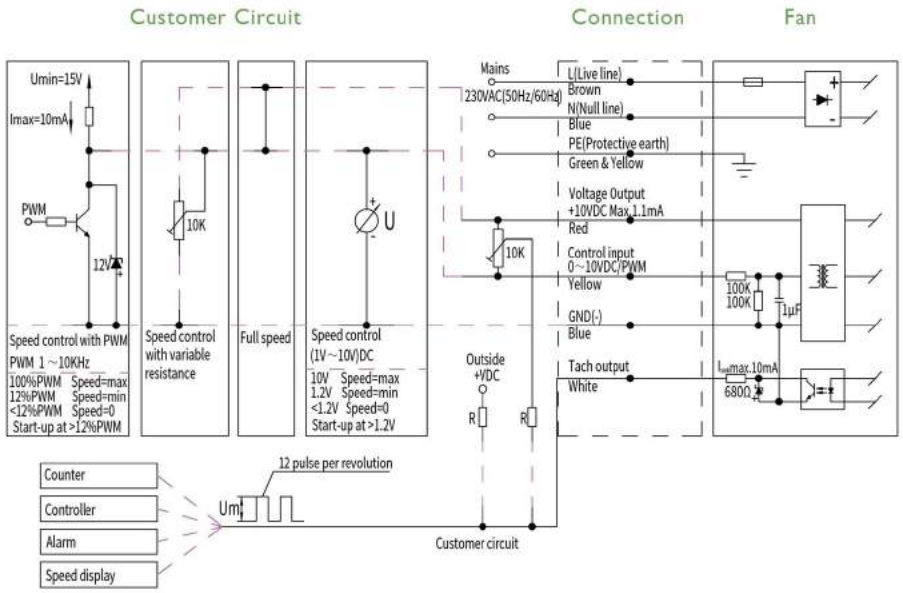
Line2(DC)	Red= Voltage Output +10VDC
	Yellow= 0-10VDC/PWM
	White= FG
	Blue= GND

Signal	Color	Assignment/Function
L	Brown	Mains 50/60 Hz,phase
N	Blue	Mains 50/60 Hz,neutral
PE	Green & Yellow	Protective Earth

Signal	Color	Assignment/Function
+10VDC	Red	Voltage Output +10VDC max.1.1mA
0-10VDC/PWM	Yellow	Control Input
Tach Output	White	Tach Output:3 puls per revolution
GND	Blue	GND

Wiring Diagram

IP44 E4-EC Motor 102(Nominal voltage 115/230VAC)



Line1(AC)	
	Brown= L(Live Line)
	Blue= N(Null Line)
	Green & Yellow=PE(Protective Earth)

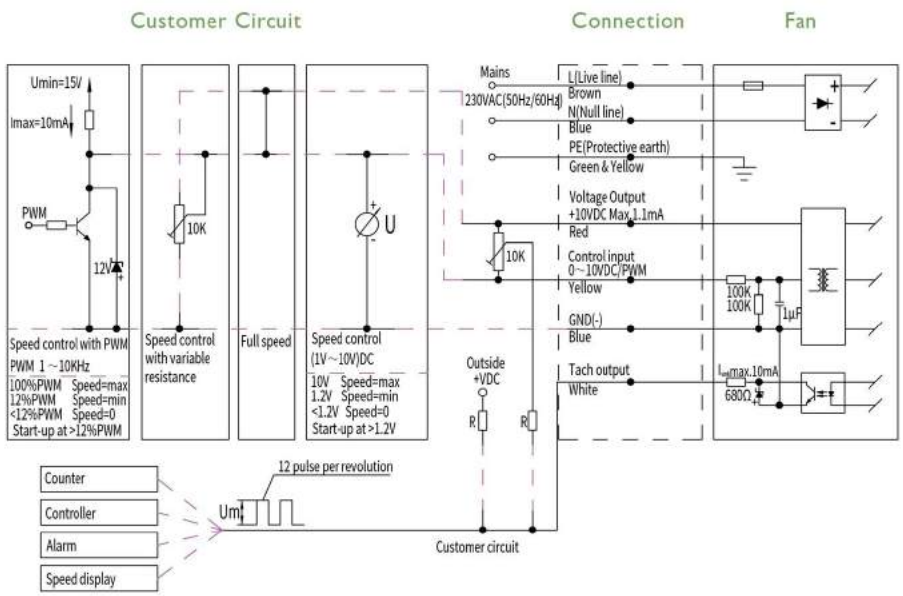
Line2(DC)	
	Red= Voltage Output +10VDC
	Yellow= 0-10VDC/PWM
	White= FG
	Blue= GND

Signal	Color	Assignment/Function
L	Brown	Mains 50/60 Hz.phase
N	Blue	Mains 50/60 Hz.neutral
PE	Green & Yellow	Protective Earth

Signal	Color	Assignment/Function
+10VDC	Red	Voltage Output +10VDC max.1.1mA
0-10VDC/PWM	Yellow	Control Input
Tach Output	White	Tach Output:12 puls per revolution
GND	Blue	GND

Wiring Diagram

IP44 E5-EC Motor 138(Nominal voltage 115/230VAC)



Line1(AC)	
	Brown= L(Live Line)
	Blue= N(Null Line)
	Green & Yellow=PE(Protective Earth)

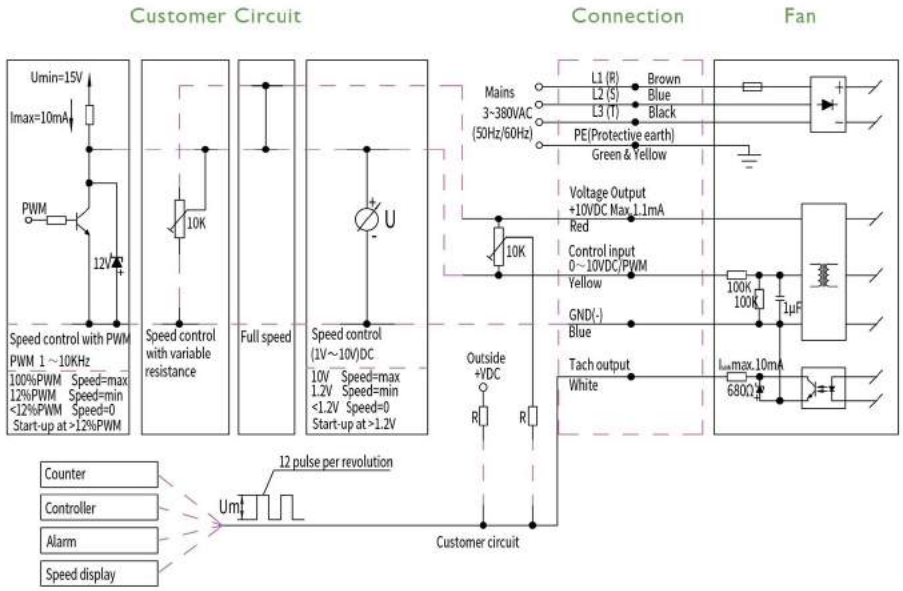
Line2(DC)	
	Red= Voltage Output +10VDC
	Yellow= 0-10VDC/PWM
	White= FG
	Blue= GND

Signal	Color	Assignment/Function
L	Brown	Mains 50/60 Hz.phase
N	Blue	Mains 50/60 Hz.neutral
PE	Green & Yellow	Protective Earth

Signal	Color	Assignment/Function
+10VDC	Red	Voltage Output +10VDC max.1.1mA
0-10VDC/PWM	Yellow	Control Input
Tach Output	White	Tach Output:12 puls per revolution
GND	Blue	GND

Wiring Diagram

IP44 E6-EC Motor 102/138/188(Nominal voltage 380VAC)



Line1 (AC)	
	Brown= L1
	Blue= L2
	Black=L3
	Green & Yellow=PE(Protective Earth)

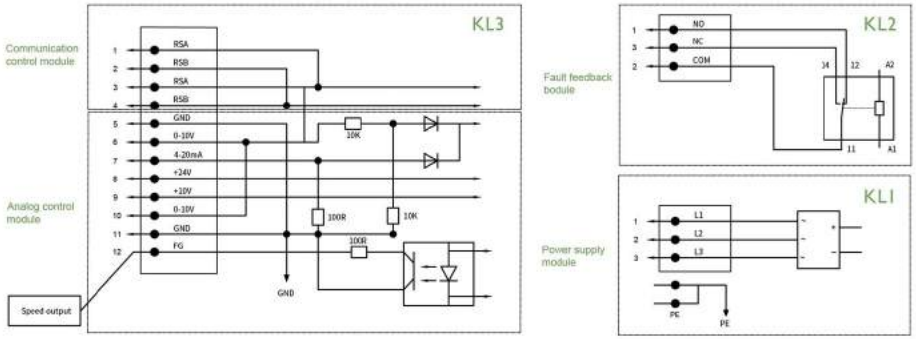
Line2(DC)	
	Red= Voltage Output +10VDC
	Yellow= 0-10VDC/PWM
	White= FG
	Blue= GND

Signal	Color	Assignment/Function
L1	Brown	Mains 50/60 Hz.R
L2	Blue	Mains 50/60 Hz.S
L3	Black	Mains 50/60 Hz.T
PE	Green & Yellow	Protective Earth

Signal	Color	Assignment/Function
+10VDC	Red	Voltage Output +10VDC max.1.1mA
0-10VDC/PWM	Yellow	Control Input
Tach output	White	Tach Output:*puls per revolution
GND	Blue	GND

Wiring Diagram

IP44 E7-EC Motor 102/138(380VAC) with Modbus

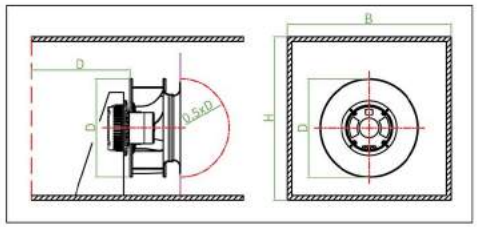


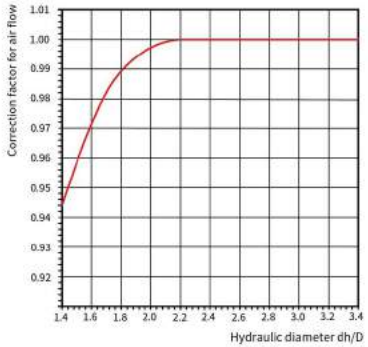
Electrical Connections with Modbus

Connector	Pin	Signal	Assignment/Function
KL1	1	L1	Mains supply connection.
	2	L2	Supply voltage:3~380~480VAC,50/60Hz.
	3	L3	
PE		PE	Earth connection,PE connection
KL2	1	NO	The relay is normally open,the fan is not powered and normally operation,open with COM,the fan is fails,closed with COM
	2	COM	Status relay,common connection,contact rating 250VAC/2A(AC1)
	3	NC	The relay is normally closed,the fan is not powered and normally operation,closed with COM,the fan is fails,open with COM
KL3	1	RSA	Bus connection RS485;RSA;MODBUS RTU.
	2	RSB	Bus connection RS485;RSA;MODBUS RTU
	3	RSA	Bus connection RS485;RSA;MODBUS RTU
	4	RSB	Bus connection RS485;RSA;MODBUS RTU
	5	GND	Single ground for control interface KL3.
	6	0-10V/PWM	Control input 0-10VDC/PWM;only usable as alternative to input 4-20mA.
	7	4-20mA	Analogue control input 4-20mA;only usable as alternative to input 0-10VDC/PWM
	8	+24V	Fixed voltage output 24VDC(±2V max.20mA);Power supply for ext.devices.
	9	+10V	Fixed voltage output 10VDC(±1V max.5mA);Power supply for ext.devices.
	10	0-10V/PWM	Control input 0-10VDC/PWM;only usable as alternative to input 4-20mA.
	11	GND	Single ground for control interface KL3.
	12	FG	Speed signal feedback.

Effects of installation space

When mounting our product in a rectangular box, air performance might be reduced.





dh = Hydraulic diameter

Formula: dh = 2 x B x H / (B + H)

B = Width of box

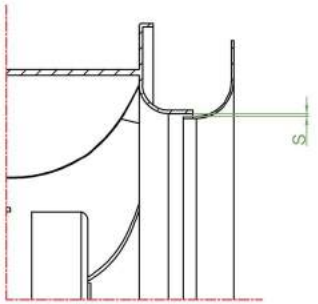
H = Height of box

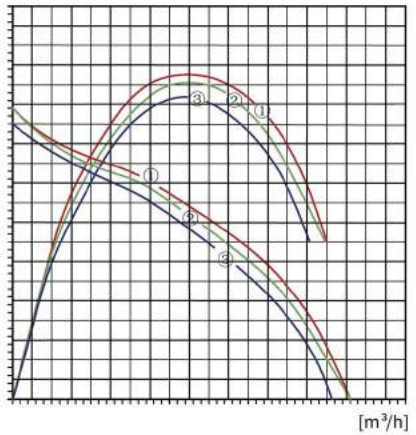
D = Outer diameter of the fan

Effects of centrifugal air gap change

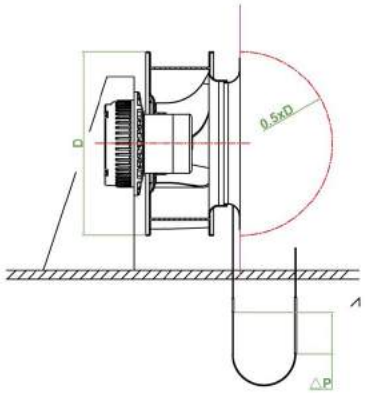
The centrifugal air gap between the inlet ring and the impeller cover affects centrifugal fan air flow and operation efficiency. Changes in the size of the inlet ring air gap affects the following curve:

①: s / D = 0.4% ②: s / D = 1.0% ③: s / D = 1.4%





Defining air flow rate for inlet rings with pressure relief



The differential pressure approach compares the static pressure before the inlet nozzle with the static pressure inside the inlet nozzle. Air flow can be calculated on the basis of the differential pressure (difference in pressure of the static pressures) in keeping with the following equation:

$$qv = k \cdot \sqrt{\Delta p} \qquad qv \text{ in } [m^3/h] \text{ and } \Delta p \text{ in } [Pa]$$

If constant air flow is to be controlled, then the nozzle pressure has to be kept constant:

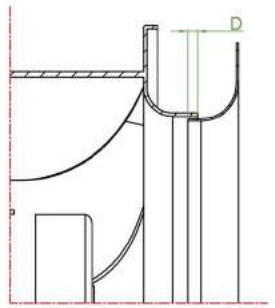
$$\Delta p = qv^2 : k^2$$

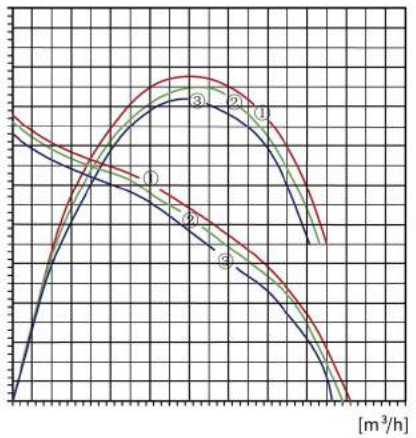
k takes into account the specific nozzle characteristics.
Differences in static pressure are measured in 1/4 measuring point(s) along the circumference of the inlet nozzle. Connection on the customer side is acomplished via a pre-mounted T tube connector. This tube connector is suited for pneumatic hoses with an internal diameter of 4 mm.

Effects of overlapping dimension

The axial overlap between the inlet ring and the impeller cover affects centrifugal fan air flow and operation efficiency. Overlap changes affect the following curve:

①x / D = 0.6% ②: x / D = 0% ③: x / D = -0.8%





PBM MOTOR AND FAN

Technical Support

Precision Noise Measuring

Measurement conditions for air and noise measurement

PBM products are measured under the following conditions:

- Axial and diagonal fans in direction of rotation "V" in full nozzle and without guard grille
- Backward curved centrifugal fans, free-running and with inlet nozzle
- Forward curved single and dual inlet centrifugal fans with housing

Noise measurements

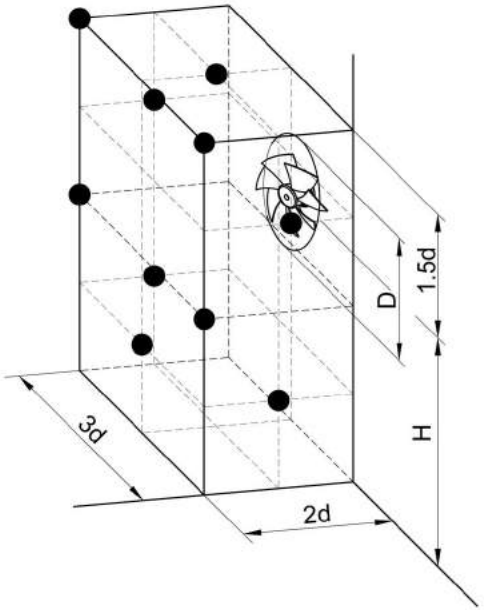
All noise measurements are carried out in low-reflective test rooms with reverberant floor. Thus the PBM acoustic test chambers meet the requirements of precision class 1 according to DIN EN ISO 3745. For noise measurement, the fans being tested are placed in a reverberant wall and operated at nominal voltage (for AC, also at nominal frequency) without additional attachments such as the guard grille.

Sound pressure level and sound level

All acoustic values are established according to ISO 13347, DIN 45635 and ISO 3744/3745 to accuracy class 2 and given in A-ratedform. When the sound pressure level (Lp) is measured, the microphone is on the intake side of the fan being tested, usually at a distance of 1 m on the fan axis.

To measure the sound power level (Lw), 10 microphones are distributed over an enveloping surface on the intake side of the fan being tested (see graphic). The sound power level measured can be roughly calculated from the sound pressure level by adding 7 dB.

Measuring configuration as per ISO 13347-3 respectively DIN 45635-38:10 measuring points



$d \geq D$

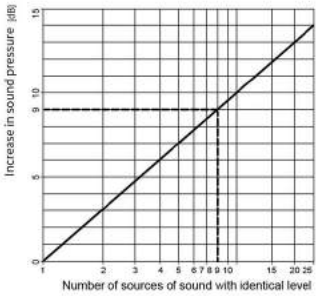
$H = 1.5d \ldots 4.5d$

Measurement area $S = 6d^2+7d(H+1.5d)$

Combined level of multiple same-level sound sources

Adding 2 noise sources with the same level results in a level increase of approx. 3 dB. The noise characteristics of multiple identical fans can be determined in advance based on the noise values specified in the data sheet. This is shown in the diagram opposite.

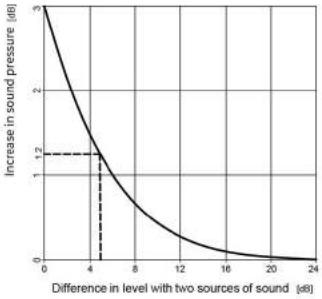
Example: 9 PCS PG3N400B2EH axial fans are on a condenser. According to the data sheet, the sound pres-sure level of a fan is approximately 67 dB(A). The level increase measured from the diagram is 9 dB. Thus the overall sound level of the installation can be expected to be 76 dB(A).



Combined level of two different-level sound sources

The acoustic performance of two different fans can be predetermined based on the sound levels given in the data sheet. This is shown in the diagram opposite.

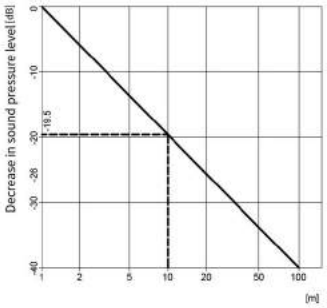
Example: There is an axial fan PG3N400B2EH with a sound pressure level of 67 dB(A) at the operating point and an axial fan PG3N300B2EM with 72 dB(A) in a ventilation unit. The level difference is 5 dB. The level increase can now be read in the diagram as approx. 1.2 dB. This means that the overall sound level of the unit can be expected to be 73.2 dB(A).



Distance laws

Sound power level is independent from distance to the sound source. In contrast to this, sound pressure level decreases the further away the noise source is. The adjacent diagram shows the decrease in level under far sound field conditions. Far sound field conditions apply whenever the distance between microphone and fan is big when compared to fan diameter and wavelength to be considered. For more information on far sound field, please consult the relevant literature on this complex topic. Per doubling of distance, the level in the far sound field decreases by 6 dB. In the near field of the fan, other correlations apply and the decrease in levels can be consider- ably smaller. The following example only applies to far sound field conditions and can vary strongly depending on the installation effects.

Example: An axial fan PG3N400B2EH, a sound pressure level of 67 dB(A) was measured at a distance of 1 m. According to the adjacent diagram, at a distance of 10 m we would get a reduction by 19.5 dB, i.e. a sound pressure level of 47.5 dB(A).



How to Choose Fans Correctly

All need to use is the electrical machinery and electronic products project engineer which the ventilator radiates, a specific system that radiates the needed amount of air flow is a must, the amount of air flow is decided by the understanding system power consumption and the ability of carrying off the enough quantity of heat. Try to prevent the system superheat situation. The fact demonstrated that the system service life can be reduced as a result of the cooling system insufficiency, therefore project engineer also should understand system sales volume and price, possibly because the system service life symbol user did not anticipate drops. If you' d like to choose the correct well ventilated module, the following goals need to be considered:

- Best air transport efficiency
- Smallest suitable size
- Lowest noise
- Smallest power consumption
- Biggest margin of safety and service life
- Reasonable total cost

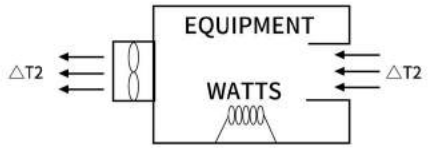
So following three steps to correctly choose radiation fan or the drum ventilator, help you achieve the above goals:

Total cooling demand, first must understand three key aspects by obtaining the cooling demand the quantity of heat that must be transformed(temperature DT). Counterbalance transformation quantity of heat wattage(W). The detachment quantity of heat needs amount of wind(CFM).

The total cooling demand regarding of system operating effectively is really important. The effective system operation must provide the Ideal operation condition, enables in all systems the module to display the biggest function and the longest service life.

The following available ways are generally used when choosing the ventilator motor:

- Figures out quantity of heat which the equipment interior produces
- Decided the equipment interior can permit temperature rise scope
- Amount of air flow needs which from the equation computation
- If the known system equipment interior heat dissipating capacity and the permission total temperature rise quantity, may obtain the amount of wind which is for the cooling equipment needs.



Following into basic hot transformation equation:

$H = Cp \times W \times \triangle T$

in which: H = Hot transformation quantity

Cp = Air specific heat

△T = In the equipment rises temperature

W = Air flow weight

We know (W = CFM x D) in which D = is mad the density after the substitution, We obtain,Conversion factors With the substitution sea level air specific heat and the density, may obtain following radiation equation:

CFM=3160 x KW / △T

Eg(a): The equipment Internal consumption electric power is 500W, the temperature difference is 20 degrees Fahrenheit, please see the computed result below:

$$Q=\frac{3.16 \times 500(W)}{20}=79CFM \quad \text{or} \quad Q=\frac{0.09 \times 500(W)}{20}=2.25m^3/Min$$

(b) The equipment internal consumption electric power is 500W, the temperature difference is 10 degrees centigrade:

$$Q=\frac{1.76 \times 500(W)}{20}=88CFM \quad \text{or} \quad Q=\frac{0.05 \times 500(W)}{20}=2.5m^3/Min$$

Amount of Wind Conversion Table

CMS	CMM	L/s	L/min	CMH	CFS	CFM
m^3/s	m^3/min	L/s	L/min	m^3/h	ft^3/s	ft^3/min
1	60	$1x10^3$	$6x10^4$	$3.6x10^3$	35.30	$2.118x10^3$
0.0167	1	460	$1x10^3$	60	0.5885	35.30
0.001	0.06	1	60	3.60	0.0353	2.12
$1.67x10^{-5}$	0.001	0.0167	1	0.06	$5.88x10^{-4}$	0.0353
$2.77x10^{-4}$	0.0167	0.277	16.7	1	$9.81x10^{-3}$	0.5885
0.0283	1.698	460	$1.69x10^3$	101.9	1	60
$4.7x10^{-4}$	0.0283	0.47	28.3	1.698	0.0167	1

Static pressure converslon table

Pa	Bar	Torr	kgf/cm^3	mmH_20	inHg	psi
N/m^2	Bar	mmHg	kgf/cm^3	mmH_2O	inHg	lb/in^2
1	$1x10^{-5}$	$7.501x10^{-3}$	$1.02x10^{-5}$	0.1021	$2.953x10^{-4}$	$1.45x10^{-4}$
$1x10^5$	1	750.10	1.02	$1.02x10^4$	29.53	14.50
133.30	$1.33x10^{-3}$	1	$1.359x10^{-3}$	13.61	0.03937	0.01934
$9.807x10^4$	0.9807	735.5	1	$1.001x10^4$	28.96	14.22
9.807	$9.807x10^{-5}$	0.07348	$9.96x10^{-5}$	1	$2.89x10^{-3}$	$1.42x10^{-3}$
$3.386x10^3$	0.03386	25.4	0.03453	345.6	1	0.4912
$6.895x10^3$	1.013	760	1.033	$1.034x10^4$	29.92	14.7

The following available ways are generally used when choosing the ventilator motor:

- Figures out quantity of heat which the equipment interior produces
- Decided the equipment interior can permit temperature rise scope
- Amount of air flow needs which from the equation computation
- If the known system equipment interior heat dissipating capacity and the permission total temperature rise quantity, may obtain the amount of air flow which is for the cooling equipment needs.