



EC High Static Pressure Centrifugal Fan Product Catalog



Wechat official account



Catalog

WOLONG ELECTRIC GROUP LTD.

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ABOUT ATB

Founded in 1919 by Mr. Gottlob Bauknecht near Stuttgart, Germany, ATB is a combination of the German drive technology (Antriebstechnik) and the initials of the founder's surname (Bauknecht). At the beginning of the 21st century, ATB had grown into the third largest motor manufacturing and sales group in Europe and it is one of the world's leading suppliers of industrial and household electric drive systems. ATB's product range is very wide, both motor and fan are involved, motors from 25W to 25MW products are all available, including standard solutions, ODM solutions, and design-to-order solutions (including complete drive systems for a wide range of applications).

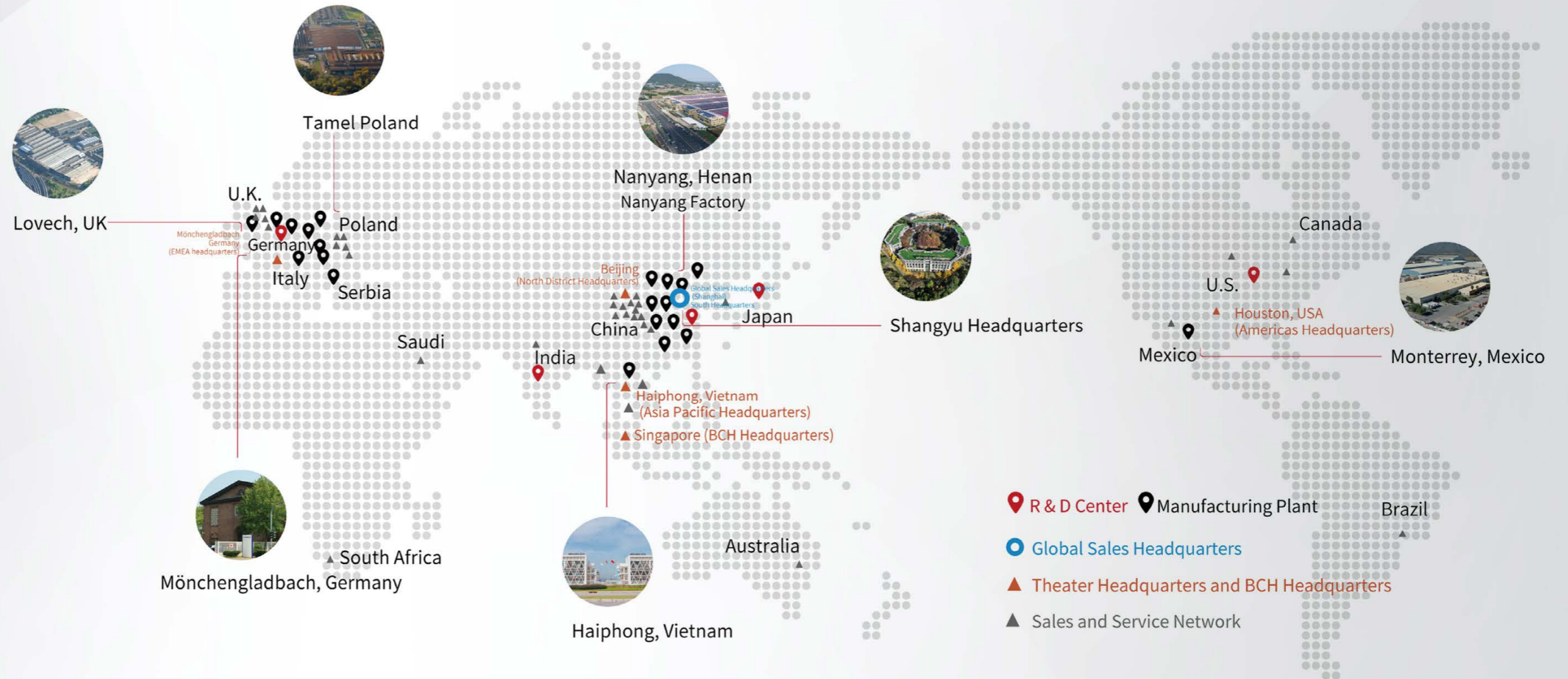
ATB, which joined in Wolong Group in 2011, has nine manufacturing sites worldwide, including Norwich, Nordenham, Mönchengladbach, Welzheim, Serbia, tarnów of Poland, Shangyu District of Zhejiang Province, Wuhan of Hubei Province and Nanyang of Henan province of China, with a total of more than 3,500 employees.

Wolong as the parent company holds most of the shares of ATB, ATB affiliated factories and brands have been fully integrated into the Wolong Group. Wolong Holding Group Co., Ltd., as a global leader in the field of motor and drive control enterprises, in line with the trend of green development, to build an intelligent manufacturing, solutions-based, covers Industrial Internet, industrial automation, energy management, real estate, mining, trade and other multi-plate business.

The EC fan consists of a high performance aerodynamics impeller, a high efficiency permanent magnet synchronous motor and a drive controller, it can realize intelligent control, Group Control Interconnection, life cycle management and so on through digital technology, and has long life and high reliability, help "Carbon peak" and "Carbon neutrality" to create greater social benefits, in line with the trend of development of the times.

WOLONG GROUP

- ▼ 1984
Founded
- ▼ 18000
Employees
- ▼ 35.8 Billion RMB
Total assets
- ▼ 5
R & D Center
- ▼ 43 Billion RMB
2021 sales
- ▼ 39
Global Manufacturing Facility



COMPANY INTRODUCTION



Company panorama



Production line



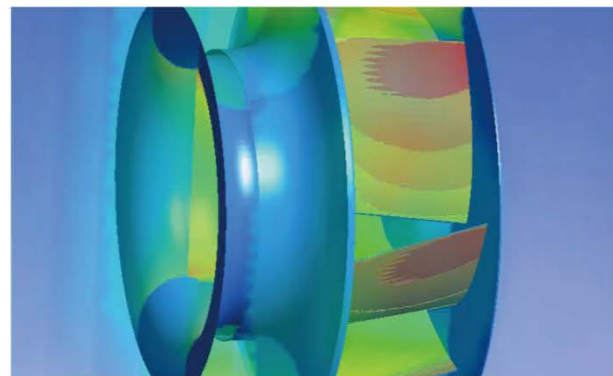
Fan performance test data acquisition system



Fan noise test anechoic chamber



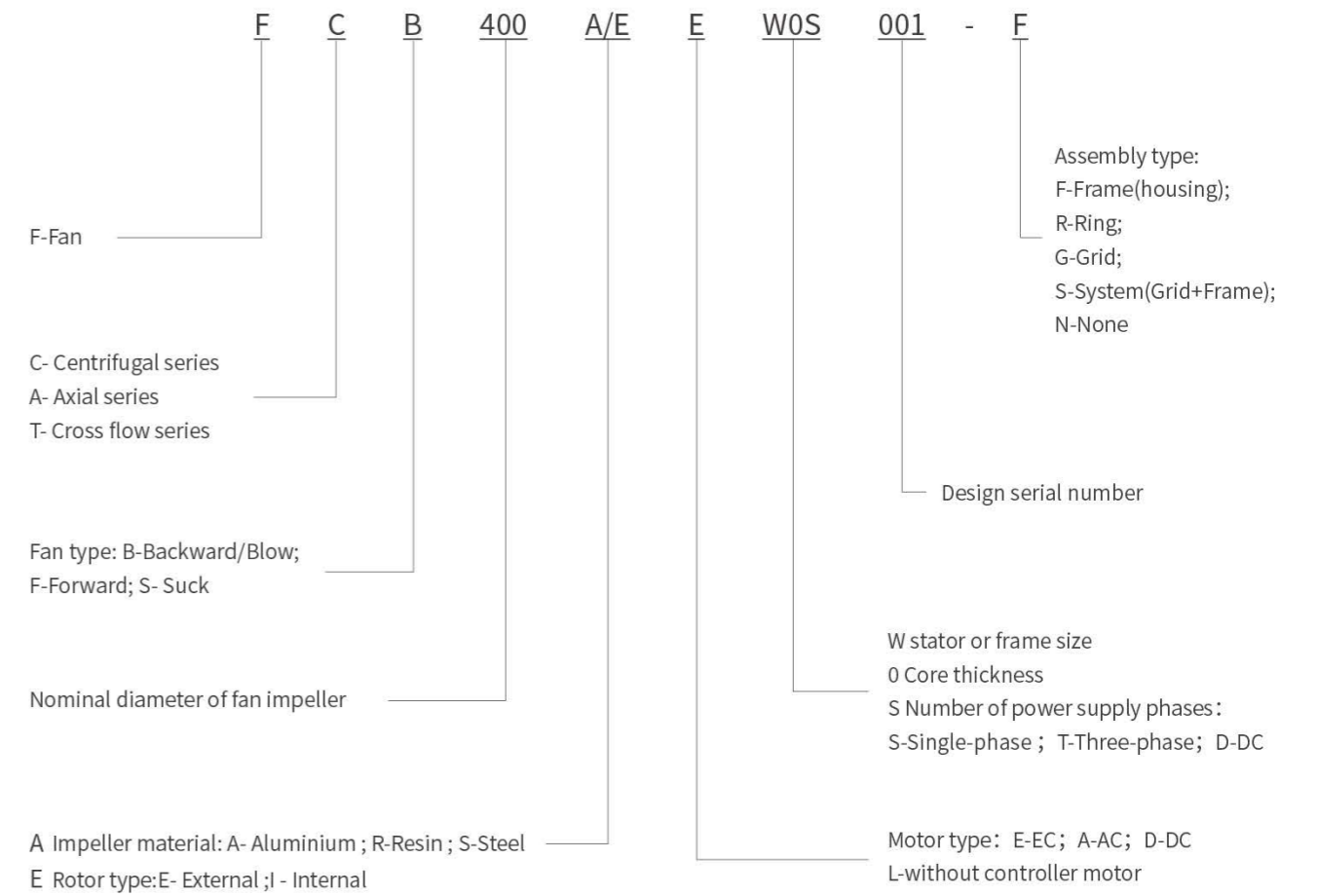
3D printer



Fluid Simulation Analysis

PRODUCT TYPE DESCRIPTION

EC fan Naming Rules



W stator or frame size						
External rotor	U	V	W	X	Y	Z
	059	074	084	114	156	200
Internal rotor	A	B	C	D	E	F
	EM42	EM48	EM56	EM112	EM132	EM160

EC HIGH STATIC PRESSURE CENTRIFUGAL FAN



EC high static pressure centrifugal fan is a fan with high efficiency, energy saving, safety and reliability, intelligent control, stepless speed regulation, online display, monitoring and maintenance-free, and simple and convenient installation. It adopts unique wing-shaped blades and excellent aerodynamic design, which can provide greater air volume and wind pressure, and is suitable for occasions with large air volume and high wind pressure. Mainly used in ventilation, air conditioning, refrigeration and other industries, the return on investment is short, and it is also a good choice for energy-saving renovation projects.

EC motor combines high-efficiency and advanced permanent magnet synchronous motor technology with frequency conversion speed regulation technology, and drives and controls an integrated external rotor motor, which has the characteristics of high efficiency, energy saving, compact structure and convenient installation. It provides 0-10V, RS485 and other control interfaces. Compared with traditional AC motors, EC motors are more efficient and can save energy consumption. At the same time, EC motor also has lower noise and vibration, and the operation is more stable.

It can carry out stepless speed regulation according to actual demand and realize accurate air volume control. At the same time, the fan is equipped with online display and monitoring function, which can monitor the running state and performance parameters of the fan in real time, which is convenient for users to monitor and manage remotely.

In addition, the fan is safe, reliable and maintenance-free. It adopts advanced fault self-diagnosis and protection functions, which can find and handle faults in time and ensure the safe operation of the fan. At the same time, the design and material selection of the fan also take into account the reliability and durability of long-term use, reducing the need for maintenance and repair.



HIGH STATIC PRESSURE CENTRIFUGAL FAN 450

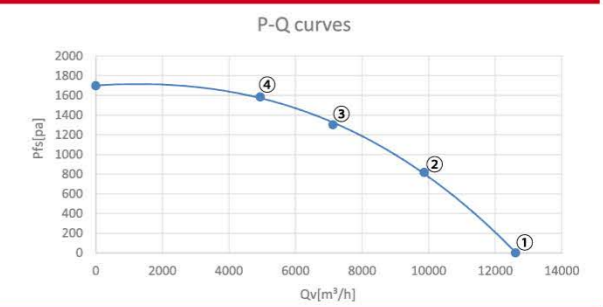
- Impeller Material: Sheet aluminium
- Protection class: IP55
- Insulation class: F
- Speed regulation mode: 0-10V/RS485
- Energy efficiency standards: ErP2015

Specification

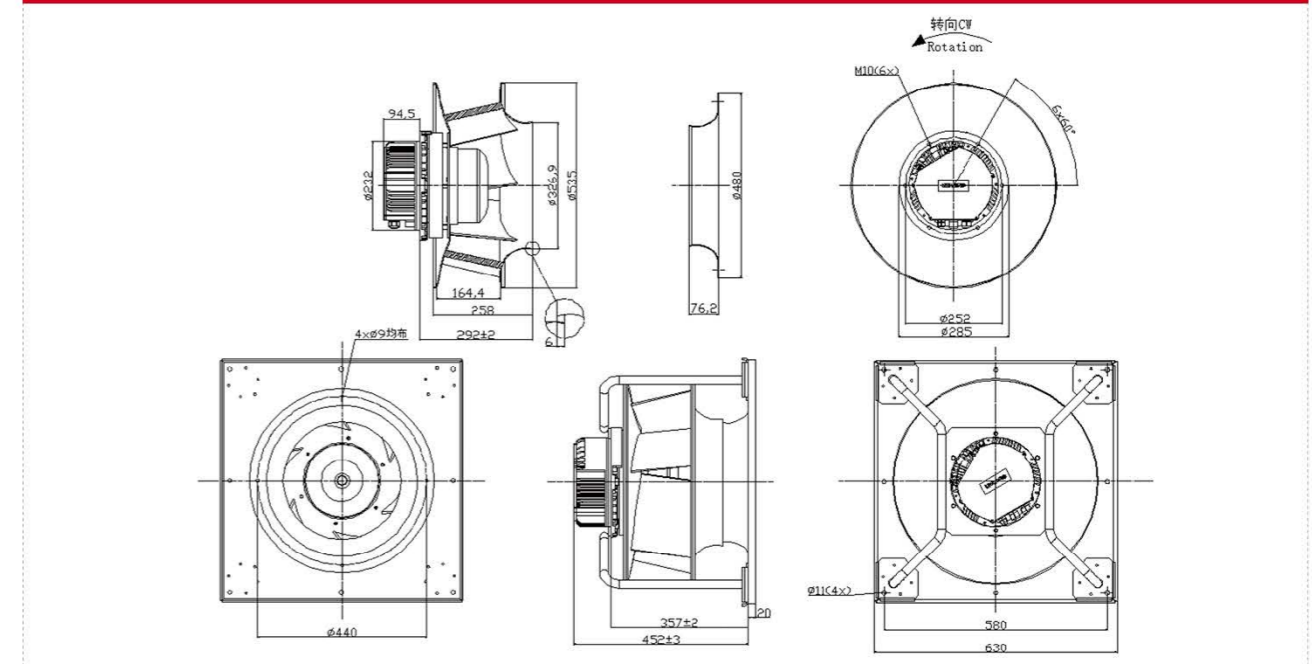
Type	Nominal voltage	Frequency	Speed	Rated Power	Current	LpA	Perm.amb.temp.
FCB450A/EEY1T301-S	[VAC]	[Hz]	[rpm]	[W]	[A]	[dB(A)]	[°C]
	3 ~ 380-480	50/60	2250	4505	7.19	72	-25°C ~ +40°C

P-Q Curves

	Speed	Power	Air flow	Static pressure
	r/min	W	m ³ /h	Pa
1	2250	3429	12612	0
2		4366	9867	818
3		4504	7125	1303
4		4054	4941	1586



Dimensions





HIGH STATIC PRESSURE CENTRIFUGAL FAN 450

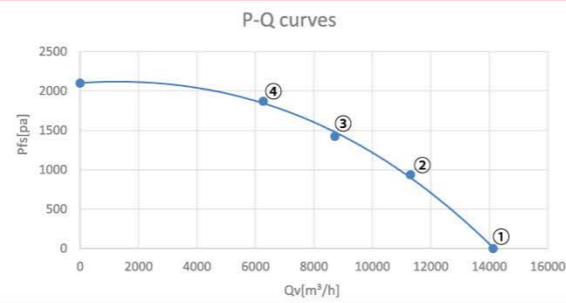
Impeller Material: Sheet aluminium
Protection class: IP55
Insulation class: F
Speed regulation mode: 0-10V/RS485
Energy efficiency standards: ErP2015

Specification

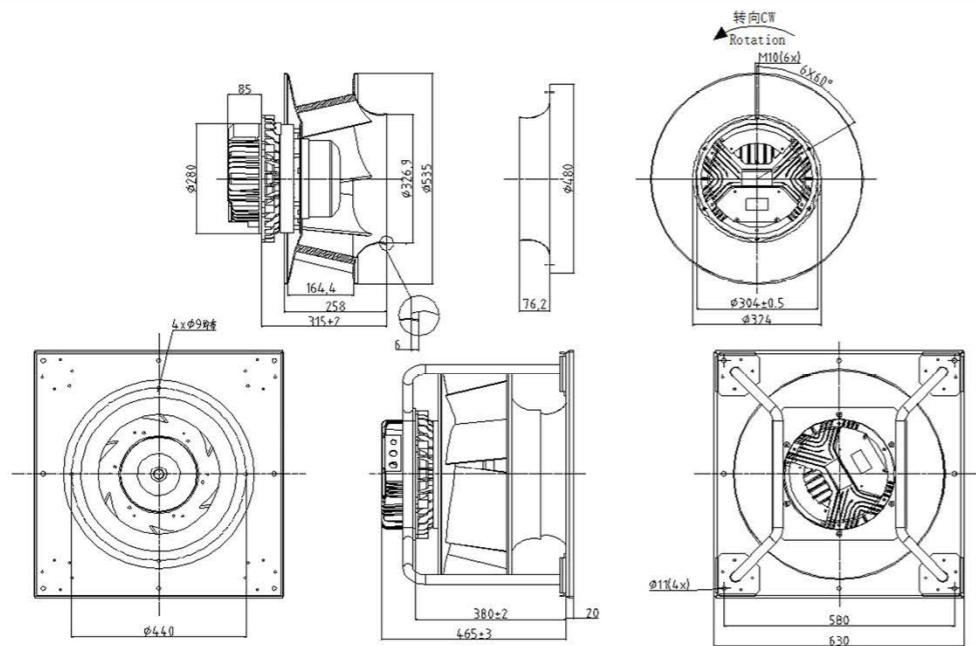
Type	Nominal voltage	Frequency	Speed	Rated Power	Current	LpA	Perm.amb.temp.
FCB450A/ EEY0T301-S	[VAC]	[Hz]	[rpm]	[W]	[A]	[dB(A)]	[°C]
	3 ~ 380-480	50/60	2500	5976	10.14	78	-25°C ~ +40°C

P-Q Curves

	Speed	Power	Air flow	Static pressure
	r/min	W	m³/h	Pa
1	2500	4570	14135	0
2		5852	11306	937
3		5976	8720	1424
4		5831	6268	1870



Dimensions



HIGH STATIC PRESSURE CENTRIFUGAL FAN 500

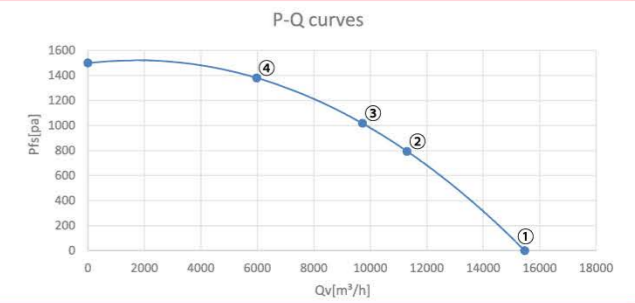
Impeller Material: Sheet aluminium
Protection class: IP55
Insulation class: F
Speed regulation mode: 0-10V/RS485
Energy efficiency standards: ErP2015

Specification

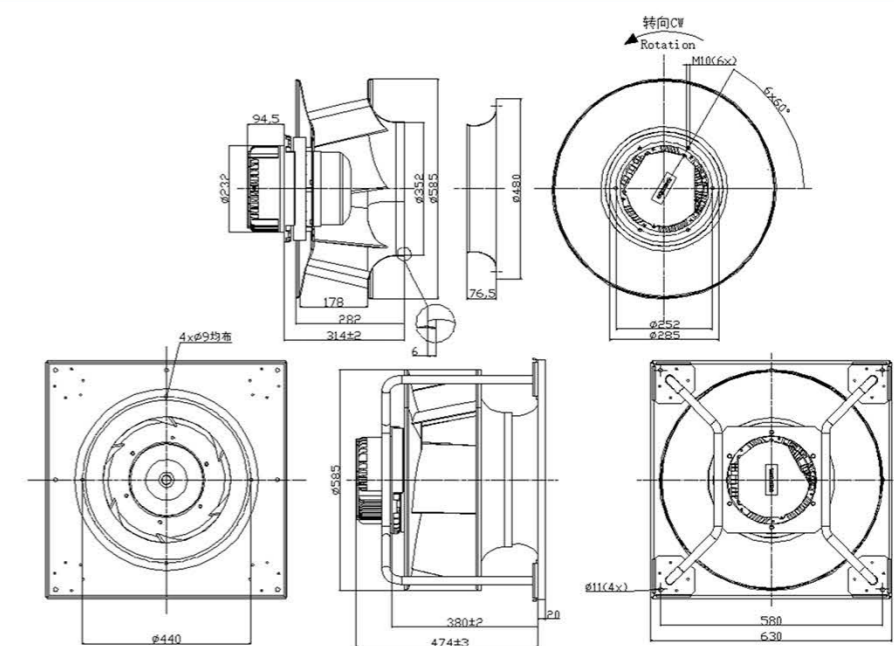
Type	Nominal voltage	Frequency	Speed	Rated Power	Current	LpA	Perm.amb.temp.
FCB500A/ EEY1T301-S	[VAC]	[Hz]	[rpm]	[W]	[A]	[dB(A)]	[°C]
	3 ~ 380-480	50/60	1950	4550	7.3	75	-25°C ~ +40°C

P-Q Curves

	Speed	Power	Air flow	Static pressure
	r/min	W	m³/h	Pa
1	1950	3363	15472	0
2		4439	11301	793
3		4550	9727	1018
4		4007	5979	1380



Dimensions





HIGH STATIC PRESSURE CENTRIFUGAL FAN 500

Impeller Material: Sheet aluminium
 Protection class: IP55
 Insulation class: F
 Speed regulation mode: 0-10V/RS485
 Energy efficiency standards: ErP2015



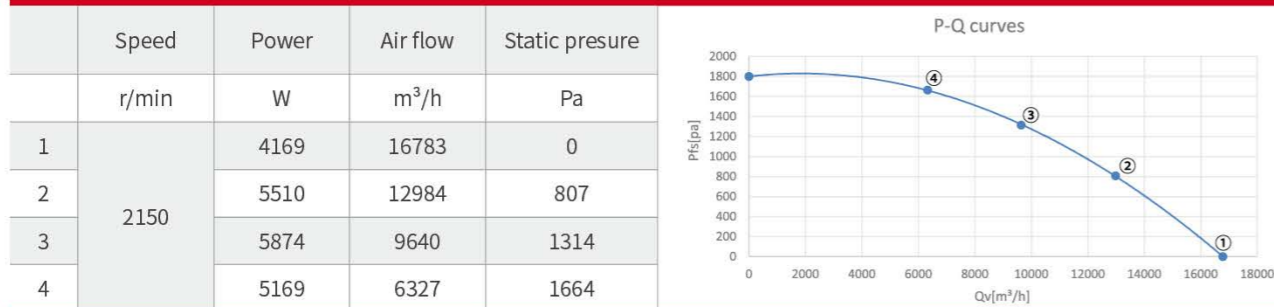
HIGH STATIC PRESSURE CENTRIFUGAL FAN 560

Impeller Material: Sheet aluminium
 Protection class: IP55
 Insulation class: F
 Speed regulation mode: 0-10V/RS485
 Energy efficiency standards: ErP2015

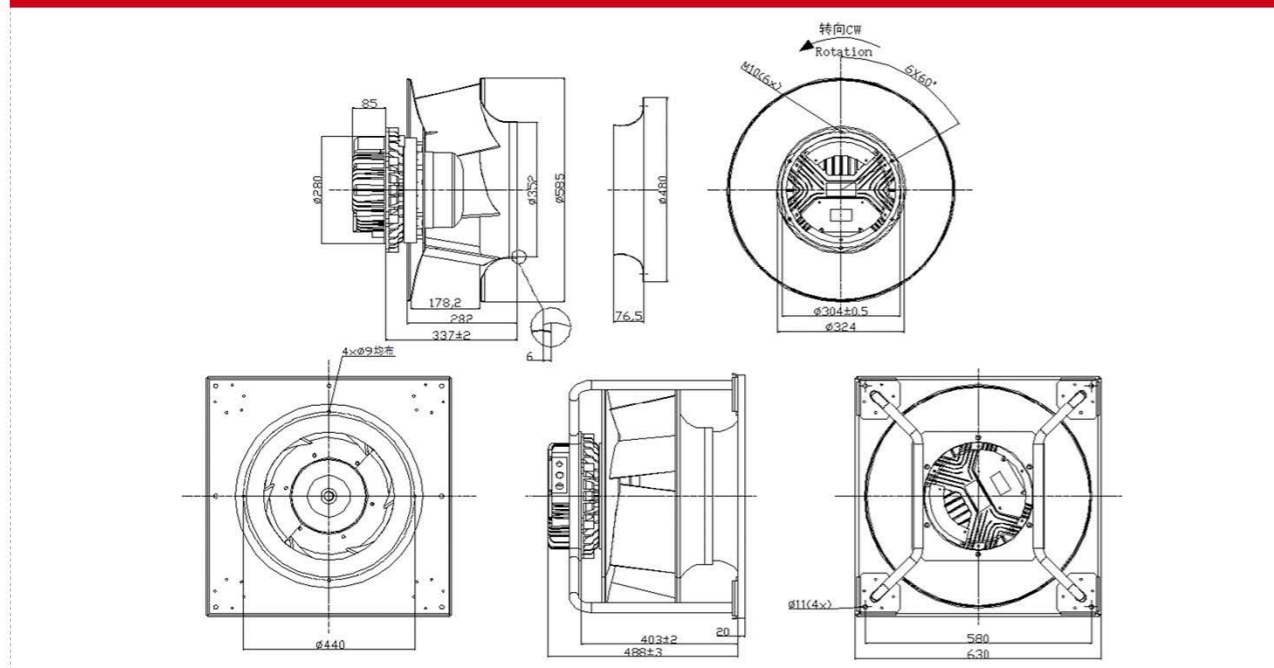
Specification

Type	Nominal voltage	Frequency	Speed	Rated Power	Current	LpA	Perm.amb.temp.
FCB500A/ EEY0T301-S	[VAC]	[Hz]	[rpm]	[W]	[A]	[dB(A)]	[°C]
	3 ~ 380-480	50/60	2150	5910	9.6	80	-25°C ~ +40°C

P-Q Curves



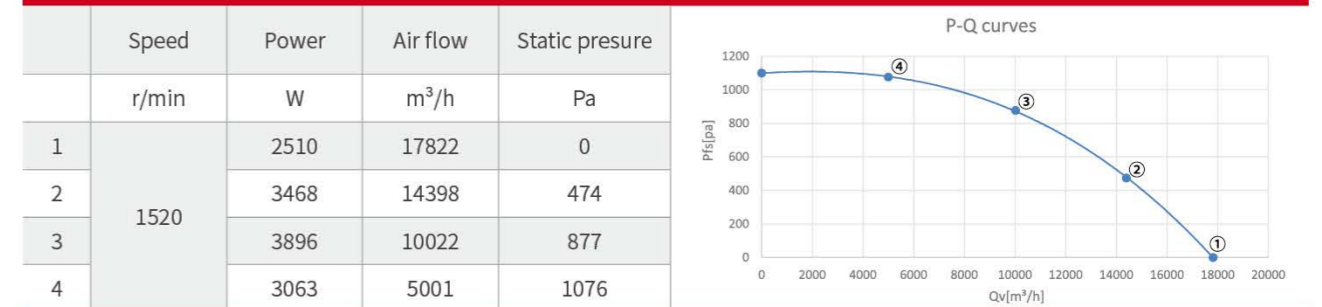
Dimensions



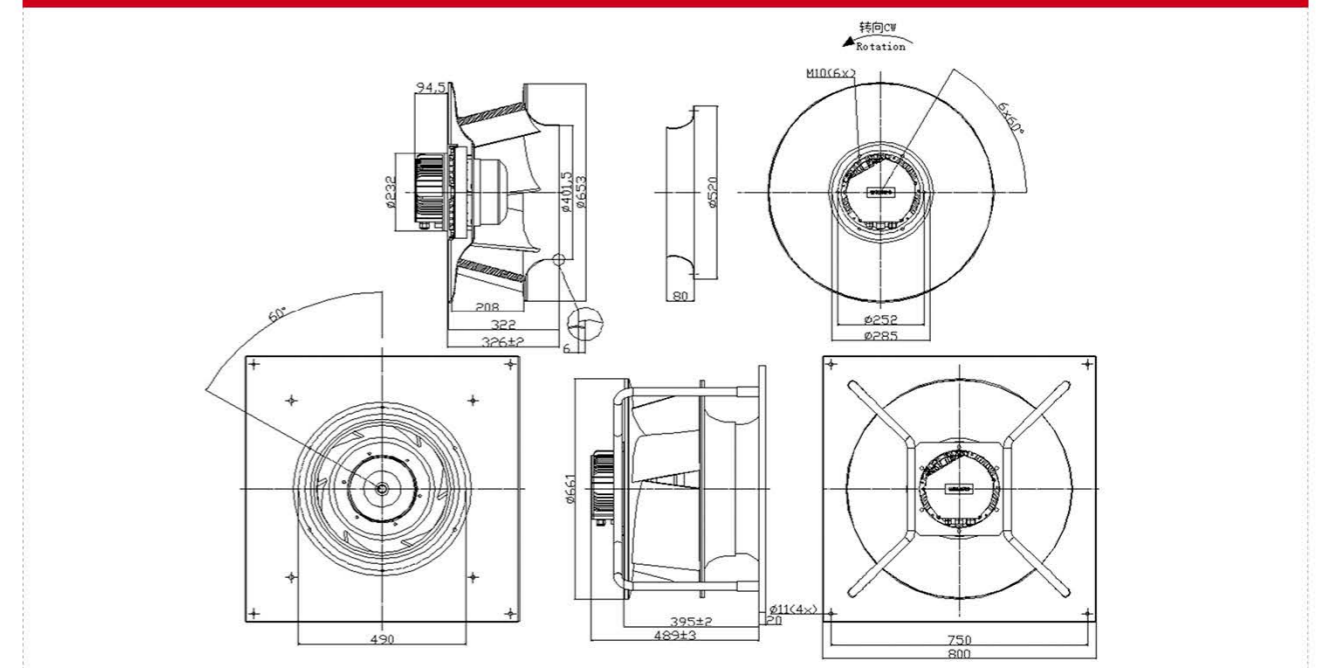
Specification

Type	Nominal voltage	Frequency	Speed	Rated Power	Current	LpA	Perm.amb.temp.
FCB560A/ EEY0T301-S	[VAC]	[Hz]	[rpm]	[W]	[A]	[dB(A)]	[°C]
	3 ~ 380-480	50/60	1520	3900	6.3	79	-25°C ~ +40°C

P-Q Curves



Dimensions





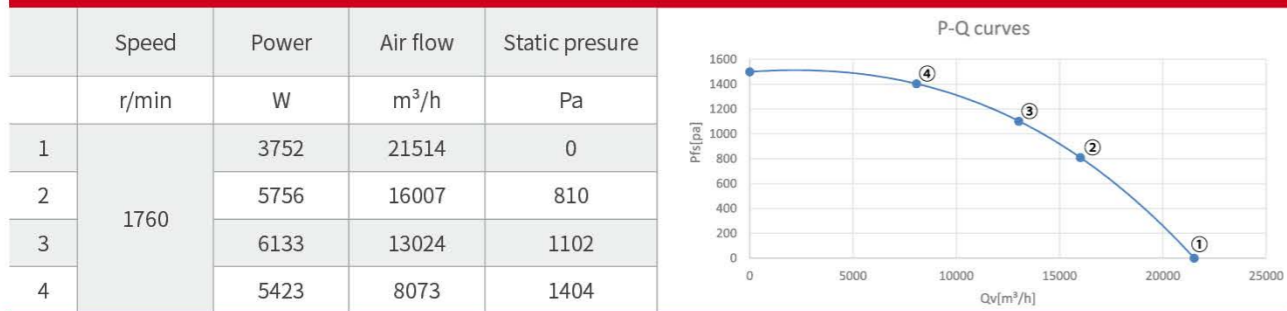
HIGH STATIC PRESSURE CENTRIFUGAL FAN 560

Impeller Material: Sheet aluminium
 Protection class: IP55
 Insulation class: F
 Speed regulation mode: 0-10V/RS485
 Energy efficiency standards: ErP2015

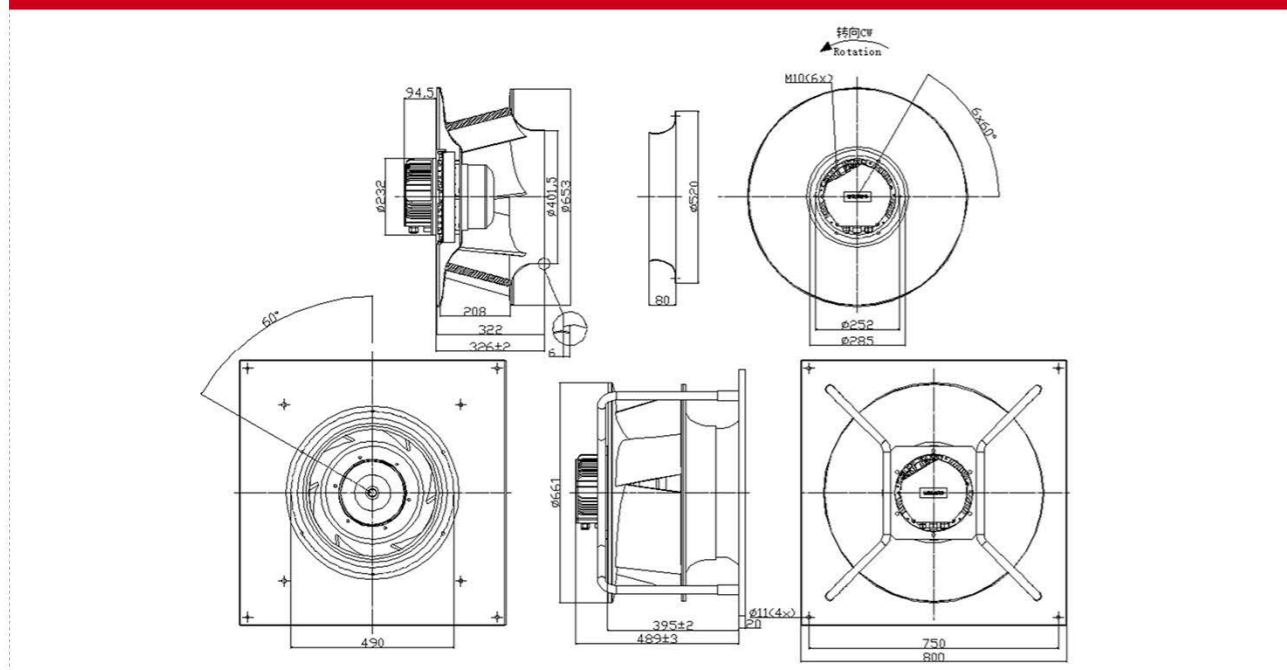
Specification

Type	Nominal voltage	Frequency	Speed	Rated Power	Current	LpA	Perm.amb.temp.
FCB560A/EEY3T301-S	[VAC] 3 ~ 380-480	[Hz] 50/60	[rpm] 1760	[W] 6133	[A] 10	[dB(A)] 85	[°C] -25°C ~ +40°C

P-Q Curves



Dimensions

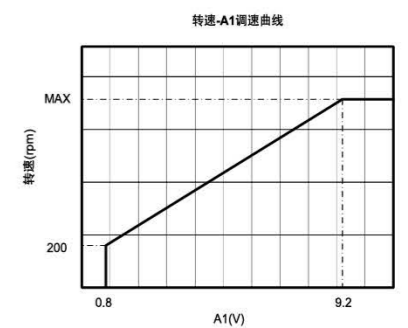
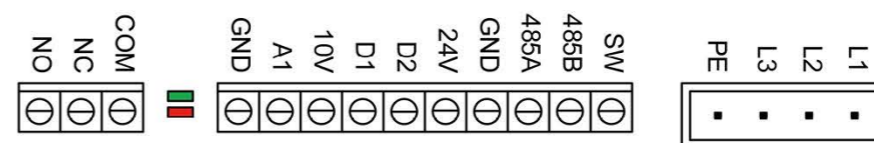


CENTRIFUGAL FAN TERMINAL FUNCTION DESCRIPTION AND CONNECTION DIAGRAM

Connector function instruction

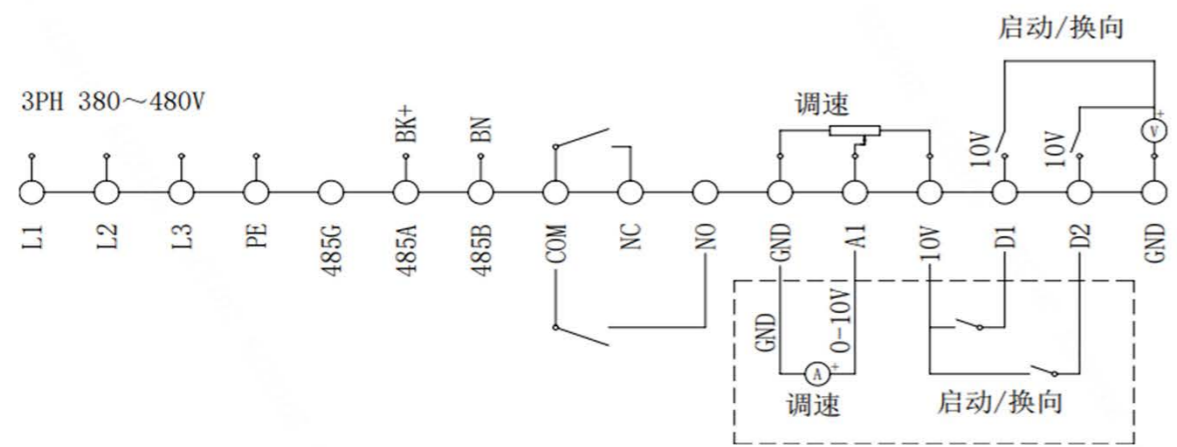
Connector	Item no.	Definition	Function	Application range	
CON1	L1	Three-phase power input 1	Power input	Voltage: 3~380-480VAC Frequency: 50/60Hz	
	L2	Three-phase power input2			
	L3	Three-phase power input3			
	PE	Protective grounding	Protective grounding	/	
CON2	GND	Signal ground	CON2 Signal input reference ground	/	
	A1	Analog input1	0-10V speed regulation (Speed regulation curve is shown in the figure "RPM-A1")	Voltage: 0-10VDC Input impedance: 51kΩ	
	10V	10V power output	Auxiliary power supply 10V	Max wattage: 600mW	
	D1	Digital input 1	Motor start enable signal(effective when using 0-10v)	Invalid input: <1VDC Valid input: 5-28VDC	
	D2	Digital input 2	Motor steering control signal (effective when using 0-10V speed regulation)	CCW: 5-28VDC	
	24V	24V power output	Auxiliary power supply 24V	Max wattage: 2.2KW	
	GND	Signal ground	CON2 Signal input reference ground	/	
	485A	RS485 A communication input	RS485 A communication input interface	/	
	485B	RS485 B communication input	RS485 B communication input interface		
	SW	Terminating	The 120 Ω resistance terminating is achieved by short-circuiting 485B and SW terminals		
	CON3	NO	Relay normally open contact	Normally open contact, closed after failure	6A 250VAC/30VDC
		NC	Relay normally open contact	Normally open contact, closed after failure	5A 250VAC/30VDC
COM		Common terminal	Common terminal of contact	The voltage resistance between the power supply and the control signal meets the reinforced insulation	
LED	Signal lamp	Green lamp flicker: motor running normal Red lamp flicker: motor running failure	/		

Connection diagram



Connector function instruction		
Number	Item no.	Function
1	L1	Power input 1
	L2	Power input 2
	L3	Power input 3
	PE	Protective grounding
2	COM	Fault signal output interface
	NO	
	NC	
3	10v DC	Internal 10V DC voltage
4	A1	Analog speed control input interface
5	D1	Motor start enable interface, high level start
6	D2	Steering conversion interface
7	485A	485 communication interface
	485B	
	485G	
8	GND	Signal input reference ground

Connection diagram



FAN CHECK LIST

Client name	
Project name	
Project duration	
Estimated annual usage	
Desired price	
Project timeline	
Referenced product description	
Fan type	<input type="checkbox"/> Axial <input type="checkbox"/> Centrifugal <input type="checkbox"/> Other
Motor type	<input type="checkbox"/> External rotor <input type="checkbox"/> Internal rotor
Power type	<input type="checkbox"/> 3-phase, 200-240V, 50/60Hz <input type="checkbox"/> 3-phase, 380-480V, 50/60Hz <input type="checkbox"/> 1-phase, 200-480V, 50/60Hz <input type="checkbox"/> 1-phase, 115V, 50/60Hz <input type="checkbox"/> Other
Performance requirements	
Air volume (m3/h)	
Static pressure (Pa)	
Impeller diameter: (mm)	
Lp(A) (dB(A))	
Speed mode	
Application industry	<input type="checkbox"/> Air conditioning refrigeration <input type="checkbox"/> Power Electronics <input type="checkbox"/> Fresh air purification <input type="checkbox"/> New energy <input type="checkbox"/> Agriculture and livestock <input type="checkbox"/> Rail transit <input type="checkbox"/> Other
Installation method	
Environmental conditions: (Indoor/Outdoor, Temperature, Humidity, Altitude, Dust, Salt Spray, Vibration)	
Protection class	
Fan installation method	
Wind direction (Blowing, Suction)	
Terminal box or cable outlet	
RAL Spray color RAL	
Certification requirements (CE, UL, CCC, GOST...)	
Other special requirements	