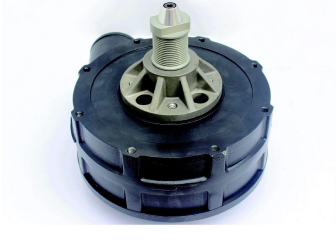
HIGH SPEED CENTRIFUGAL BLOWER

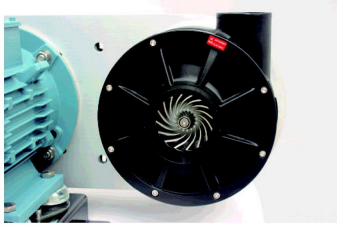
Compared with other type blowers, the advantages of high speed centrifugal blower lie in quick air flow speed along with high pressure and huge amount of air flow.

Having adopted the world's leading fluid dynamics principle, and inspired by airplane turbo system, high speed centrifugal blower is featured by super low energy consumption, huge pressure and great air flow. Therefore this centrifugal blower can reach 13,000 to 284, 00 RPM at rotating speed.

Advantages

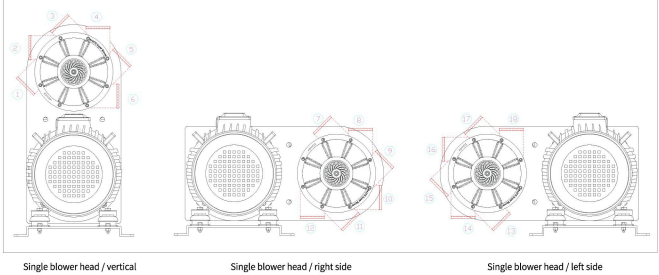
- Driven by European IE2/E3 standard ABB high efficiency motor.
- Oil free operation, makes the air flow clean and without pollution.
- Excellent driving structure (impeller speed can reach 13000~28400r/min).
- Anti-corrosion Teflon coating, makes blowers can work in acidic and corrosive environment.
- Genuine SKF&NSK bearing applied to achieve higher speed and greater reliability.
- Specially designed fluid system, energy efficiency ratio can reach more than 70% (2 times higher than that of other high pressure blower).
- Super huge airflow and excellent energy-saving ability (improve 2-3 times production efficiency and save more than 60% electricity power).





When installing and using the blower, you must consider the on-site space and arrange the piping and wiring reasonably. In order to facilitate the layout design and installation of the customer, the super blower provides a flexible air outlet position for customers to choose, so please specify the position of the air outlet when ordering.

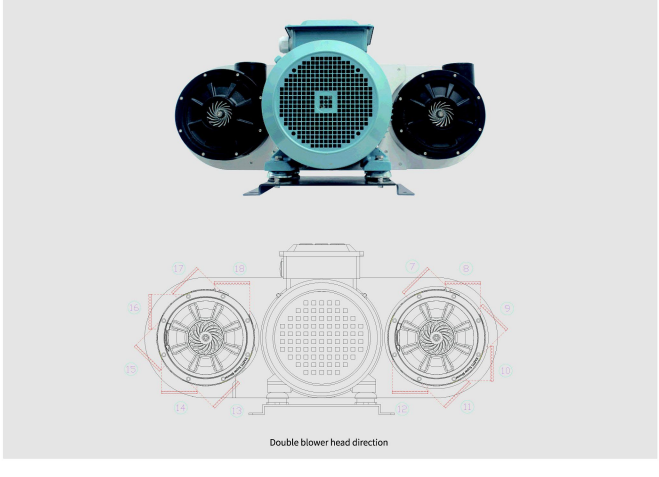
Air Outlet Position



Single blower head / vertical

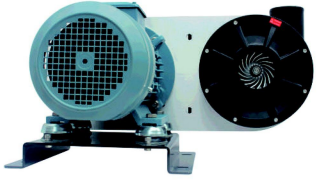
Single blower head / right side

Single blower head / left side

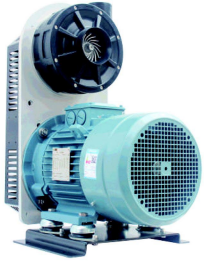


Double blower head direction

HIGH SPEED CENTRIFUGAL BLOWER AT–70



Horizontal Type

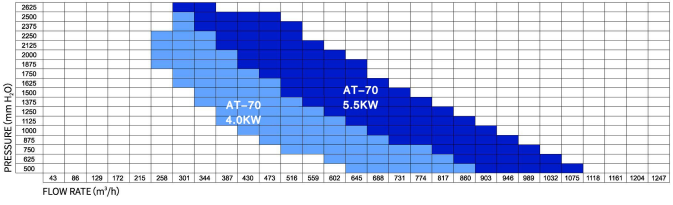


Vertical Type

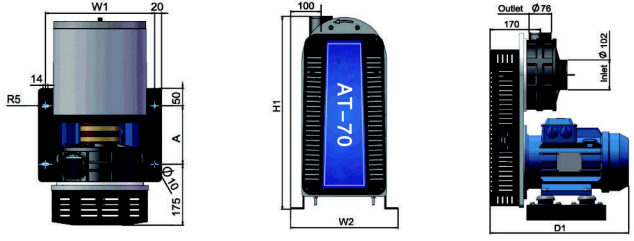
TECHNICAL PARAMETER

Technical Standard	IEC/NEMA
Power	4.0KW~5.5KW
Air Flow	120-1200m³/h
Pressure	180mbar (18.0KPa)
Vacuum	160mbar (16.0KPa)
Weight	66-93Kg
Ambient Temperature	-12°C-40°C
Air Temperature Range	＜52°C(Water Cooling＜150°C)
Design Patterns	Single Blower Head

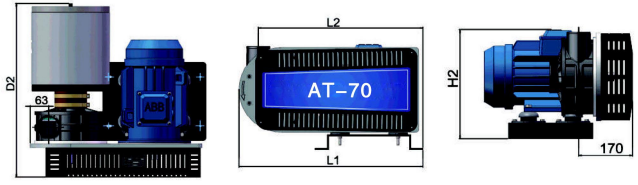
PERFORMANCE PARAMETER



VERTICAL INSTALLATION SIZE

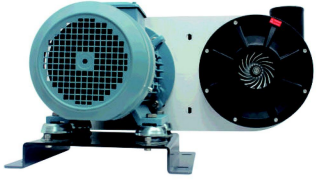


HORIZONTAL INSTALLATION SIZE

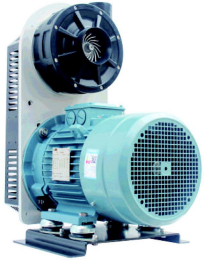


MODEL	AT–70	
Power	4.0Kw	5.5Kw
W1	314mm	340mm
W2	354mm	380mm
D1	470mm	520mm
D2	595mm	600mm
H1	635mm	663mm
H2	345mm	387mm
L1	605mm	665mm
L2	504mm	590mm
A	168mm	168mm

HIGH SPEED CENTRIFUGAL BLOWER AT–85



Horizontal Type

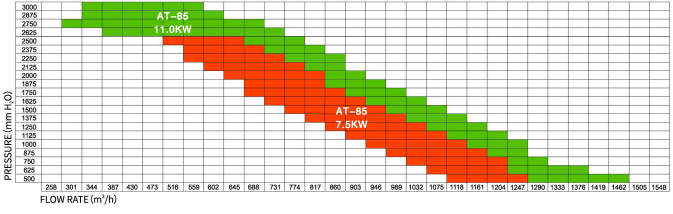


Vertical Type

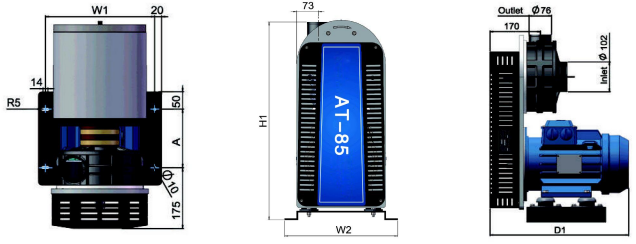
TECHNICAL PARAMETER

Technical Standard	IEC/NEMA
Power	7.5KW~11.0KW
Air Flow	144-1444m³/h
Pressure	259mbar(25.9KPa)
Vacuum	224mbar(22.4KPa)
Weight	75-135Kg
Ambient Temperature	-12°C-40°C
Air Temperature Range	＜52°C(Water Cooling＜150°C)
Design Patterns	Single Blower Head

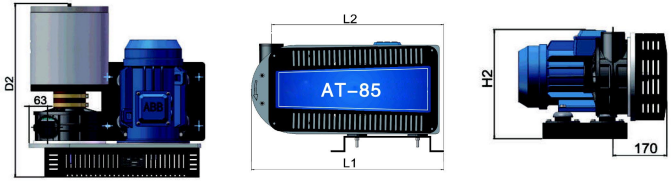
PERFORMANCE PARAMETER



VERTICAL INSTALLATION SIZE

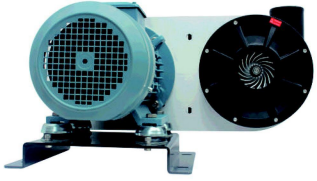


HORIZONTAL INSTALLATION SIZE

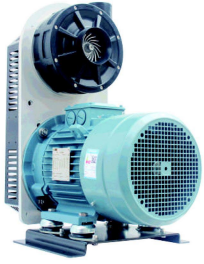


MODEL	AT–85	
Power	7.5Kw	11Kw
W1	340mm	378mm
W2	380mm	482mm
D1	560mm	596mm
D2	600mm	635mm
H1	663mm	718mm
H2	387mm	495mm
L1	665mm	715mm
L2	590mm	615mm
A	168mm	238mm

HIGH SPEED CENTRIFUGAL BLOWER AT–100



Horizontal Type

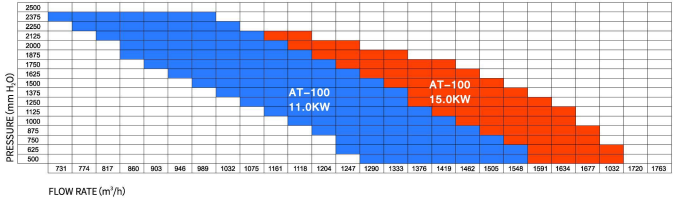


Vertical Type

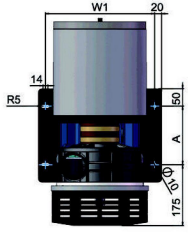
TECHNICAL PARAMETER

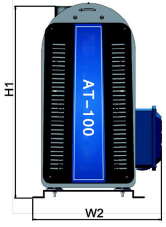
Technical Standard	IEC/NEMA
Power	11.0KW~15.0KW
Air Flow	170-1700m³/h
Pressure	241mbar (24.1KPa)
Vacuum	220mbar (22.0KPa)
Weight	88-165Kg
Ambient Temperature	-12°C-40°C
Air Temperature Range	＜52°C(Water Cooling＜150°C)
Design Patterns	Single Blower Head

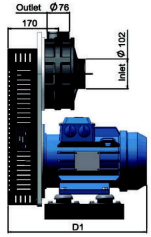
PERFORMANCE PARAMETER



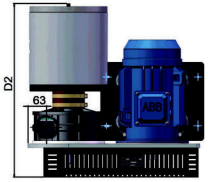
VERTICAL INSTALLATION SIZE

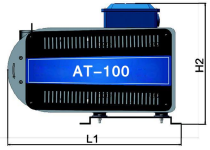


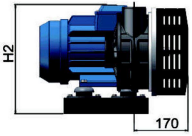




HORIZONTAL INSTALLATION SIZE

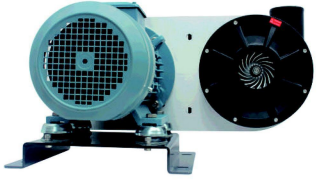




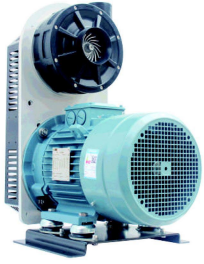


MODEL	AT–100	
Power	11.0Kw	15.0Kw
W1	378mm	378mm
W2	482mm	482mm
D1	596mm	596mm
D2	635mm	635mm
H1	718mm	718mm
H2	495mm	495mm
L1	715mm	715mm
L2	615mm	615mm
A	238mm	238mm

HIGH SPEED CENTRIFUGAL BLOWER AT–150



Horizontal Type

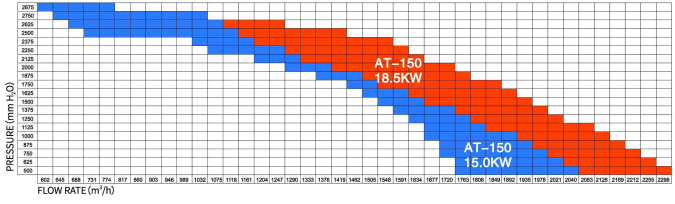


Vertical Type

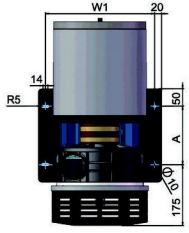
TECHNICAL PARAMETER

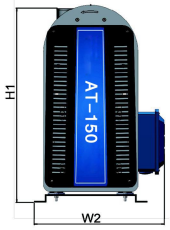
Technical Standard	IEC/NEMA
Power	15.0KW~18.5KW
Air Flow	255-2124m³/h
Pressure	290mbar (29.0KPa)
Vacuum	270mbar (27.0KPa)
Weight	98-185Kg
Ambient Temperature	-12°C-40°C
Air Temperature Range	＜52°C(Water Cooling＜150°C)
Design Patterns	Single Blower Head

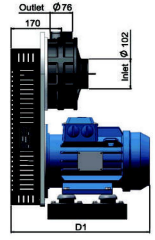
PERFORMANCE PARAMETER



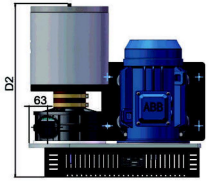
VERTICAL INSTALLATION SIZE

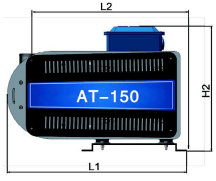


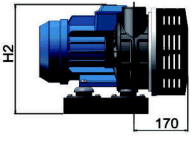




HORIZONTAL INSTALLATION SIZE

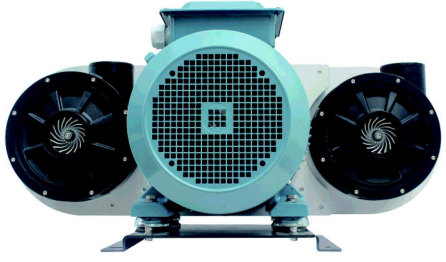






MODEL	AT–150	
Power	15.0Kw	18.5Kw
W1	378mm	378mm
W2	482mm	482mm
D1	596mm	640mm
D2	635mm	635mm
H1	718mm	718mm
H2	495mm	495mm
L1	715mm	715mm
L2	615mm	615mm
A	238mm	238mm

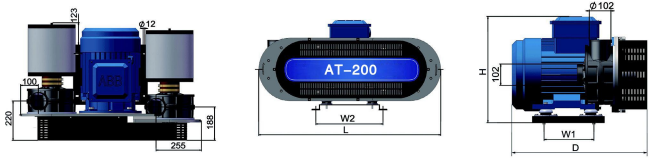
HIGH SPEED CENTRIFUGAL BLOWER AT-200



TECHNICAL PARAMETER

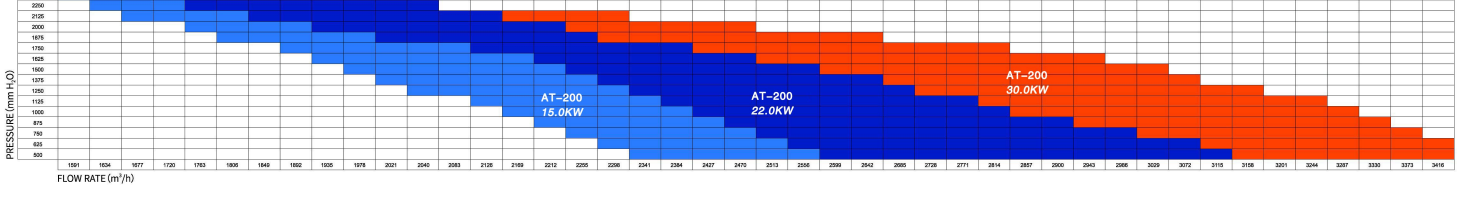
Technical Standard	IEC/NEMA
Power	15.0KW~30.0KW
Air Flow	340-3400m³/h
Pressure	241mbar (24.1KPa)
Vacuum	224mbar (22.4KPa)
Weight	138-198Kg
Ambient Temperature	-12°C-40°C
Air Temperature Range	＜52°C(Water Cooling＜150°C)
Design Patterns	Double Blower Head

INSTALLATION SIZE

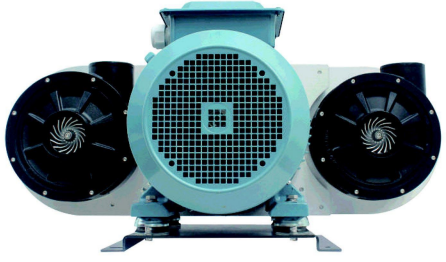


MODEL	AT-200		
Power	15.0Kw	22.0Kw	30.0Kw
W1	282mm	282mm	390mm
W2	378mm	403mm	491mm
D	660mm	660mm	768mm
H	495mm	515mm	555mm
L	1012mm	1012mm	1089mm

PERFORMANCE PARAMETER



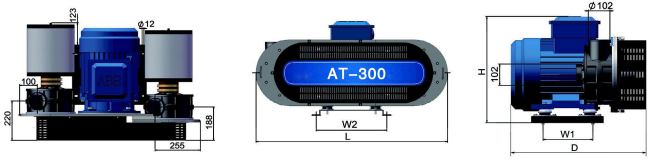
HIGH SPEED CENTRIFUGAL BLOWER AT–300



TECHNICAL PARAMETER

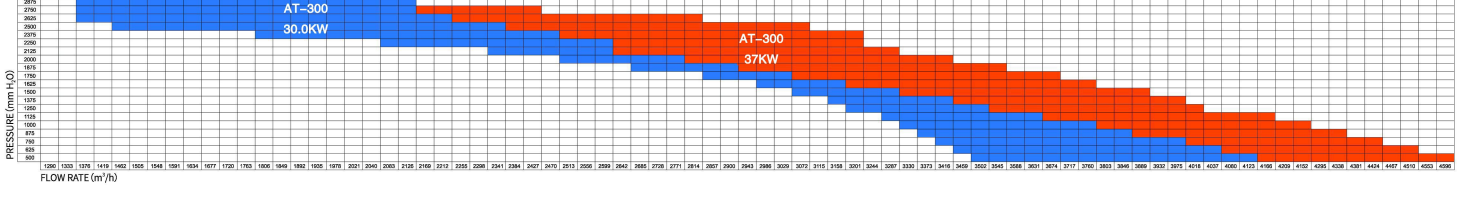
Technical Standard	IEC/NEMA
Power	30.0KW~37.0KW
Air Flow	510-4248m³/h
Pressure	290mbar (29.0KPa)
Vacuum	270mbar (27.0KPa)
Weight	145-223Kg
Ambient Temperature	-12°C-40°C
Air Temperature Range	＜52°C(Water Cooling＜150°C)
Design Patterns	Double Blower Head

INSTALLATION SIZE

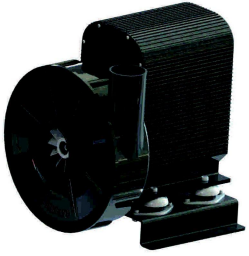


MODEL	AT–300	
Power	30.0Kw	37.0Kw
W1	390mm	390mm
W2	491mm	491mm
D	768mm	768mm
H	555mm	555mm
L	1089mm	1089mm

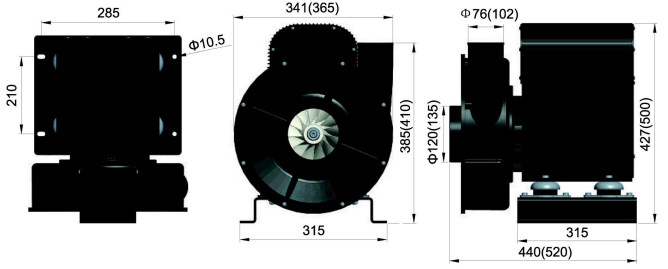
PERFORMANCE PARAMETER



Explorer Series Super Blowers offer unmatched efficiency. It is made of advanced aerodynamic technology and designed by theory of three-dimensional flowing. We have redesigned the impeller and flow channel to save more than 30% of power compared with other high efficiency centrifugal blowers. At the same time, it has the following characteristics.



INSTALLATION SIZE



TECHNICAL PARAMETER

Technical Standard	Explorer
Power	3.0KW~22KW
Air Flow	450-2800m³/h
Pressure	380mbar (38.0KPa)
Vacuum	350mbar (35.0KPa)
Weight	42-56Kg
Ambient Temperature	-12°C-40°C
Air Temperature Range	<150°C
Design Patterns	Single Blower Head

Advantages

■ Higher Efficiency (Up to 85%)

Under the same energy consumption and pressure, the air flow of the Explorer Super Blower is 30% more than other high speed centrifugal blower.

■ Lower Energy Consumption

The EXPLORER -85 7.5KW can replace the 11KW.That means you'll save more than 25000 kilowatt per year.

■ Longer Service Life

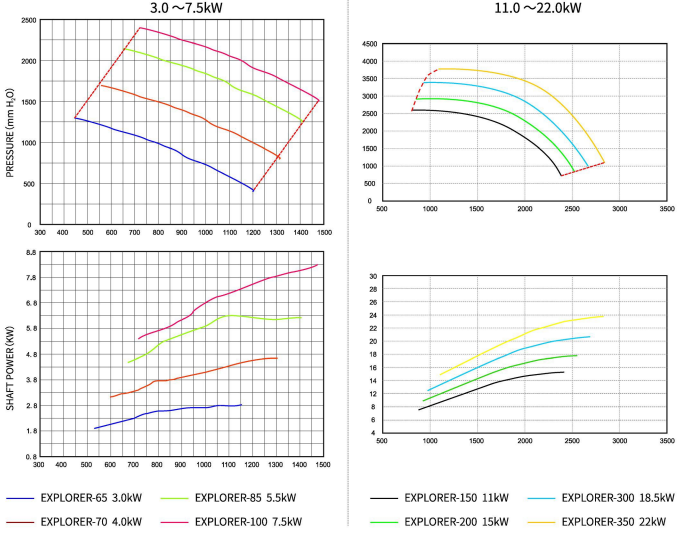
Drive directly by high speed motor inverter, no other spare parts such as belts , tensioner, etc., with higher stability and longer service life.

■ Wider Applicability

The size and weight are only half of the belt drive series high speed centrifugal blower, which is more convenient to install and transport. You can choose European standard IE3 or IE4 blushless magnet high efficiency motor. The special model can bearing temperatures of 200°C and the inhalation steam still operate smoothly.

■ Unparalleled Control Systems

PERFORMANCE PARAMETER



MODEL DESCRIPTION

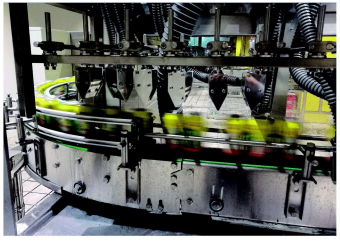
RTSUS - A - C - H -R/S/T

- R/S/T: inlet position (R: air inlet at end; S: air inlet on the side; T: air inlet at the top)
- H means air knives' opening-gap width
- C means air knives' valid length
- A means inlet size
- RTSUS means stainless steel air knives

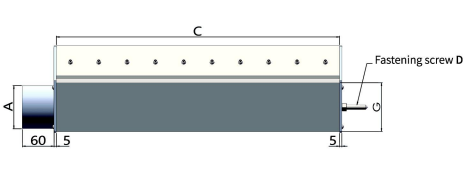
Learnt from German workmanship and manufactured by German machines, stainless steel air knives are featured by high precision, strong hardness, high pressure-resistance and great temperature-resistance. The air knives are widely used in all kinds of blowing off system and air knives drying system .They are also widely applied for ultrasonic cleaning, glass cleaning machines, and dehydration and drying of circuit board, electroplate, film, coating, nonferrous metal board/wire/sheet and other related materials and industries. Moreover, they are also utilized in the barrierless isolation of harmful gases, dust, hot and cold air, drying after printing, heating and thawing of food and medicine, and high temperature sterilization.

Advantages

- Made by SUS304 stainless steel or medical grade 316 stainless steel with stronger hardness and higher pressure-resistance.
- Specially designed structure with less air friction, makes the air flow more stable and precision can reach ± 5%.
- Adjustable opening-gap width ranges from 0.3 to 3mm.Customized air knives length up to 6 meters.
- Optional inlet specification and positions to meet different kinds of bolt or hose connections, which makes the installation much easier.
- It can withstand the highest air speed of 400m / s, the highest temperature resistance up to 250 °C , the highest pressure resistance up to 5kgf / cm².
- Can be used with high speed centrifugal blowers, high pressure blowers.



INSTALLATION SIZE



MODEL	A	B	C	D	E	F	G	H
RTSUS-32/38-C-H	32/38	104	100-2400	M8*50	50	25	49	0.3-5
RTSUS-45/51-C-H	45/51	120	100-2400	M8*50	60	28	63	0.3-5
RTSUS-63-C-H	63	142	100-2400	M8*50	77	38	82	0.5-5
RTSUS-76-C-H	76	155	100-2400	M8*50	89	45	86	0.5-5
RTSUS-89-C-H	89	188	100-2400	M10*50	104	52	112	1-5
RTSUS-102-C-H	102	220	100-2400	M10*50	120	60	125	1-8

INSTRUCTIONS

1. Model description of the stainless steel air knife. Eg, Model RTSUS-76-500-0.8-R-1 means that the air inlet of one end is 76mm, the valid length of the air knife is 500mm, and the width of the opening-gap is 0.8mm.

2. Inlet has 3 options as R, S, T. (R1 means air inlet at one end,R2 means air inlet at both ends. S means air inlet on the side, one air inlet on the side is S1, the two air inlets on the side are S2, and so on. T means air inlet at the top,T1 means there is an air inlet at the top, T2 means there are two air inlets at the top, and so on.)

3. C means the valid length of the air knife, not including the thickness of the end caps on both ends of the air knife. As mentioned in the above example, the 500mm air knives valid length is excluding end caps of both ends. Actually, the installation length is 510mm.

NOTICE:

※Do not use too rough or too hard things to rub the knife edge to avoid damage to the knife edge or block airflow.

※When shipped from the factory, the width of the opening-gap of the air knife has been calibrated according to custom requirements. If you want to change the width, please send it to the original manufacturer or professional to adjust to avoid the weakening of product performance caused by improper operation.

MODEL DESCRIPTION

RTKED - A - C - H - R1- E1/E2

- E1: standard type
- E2: mini type

Inlet position (R1: air inlet At One End) (R2: air inlet At Both Ends)

H means Air Knife Opening-gap

C means air knives' valid length

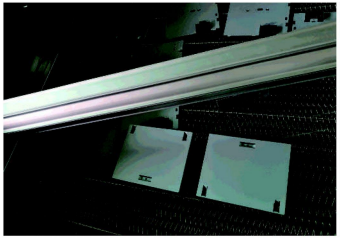
A means inlet size

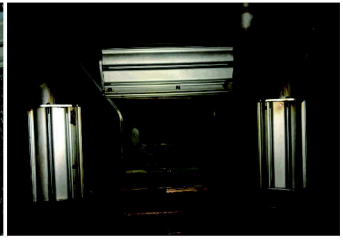
RTKED means coanda effect air knives

Based on Coanda effect and Air Entrainment theory and manufactured by Germany workmanship and machines, Coanda Effect air knives are featured by continuous, uninterrupted and big amount of air flow, which are widely used in all kinds of air rinsing systems and drying systems, ultrasonic cleaning, glass cleaning, blowing off water and other liquid from circuit board, electroplate, film, coating, nonferrous metal board/wire/sheet and other related materials. Moreover,they are also utilized in the barrierless isolation of harmful gases, dust, hot and cold air, drying after printing, heating and thawing of food and medicine, and high temperature sterilization.

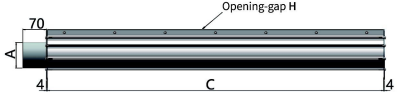
Advantages

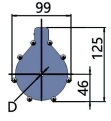
- Specially extruded air knives opening-gap, giving continuous and controllable air flow towards targets.
- Teardrop shape and improved air entrainment design, providing high speed, continuous and stable air flow.
- Anti-corrosion and anti-leakage end cover design. Customized air knives length up to 6 meters.
- Optional inlet specification and positions to fit different kinds of bolt or hose connections, which makes the installation much easier.
- It can withstand the highest air speed of 400m / s, the highest temperature resistance up to 250 °C, the highest pressure resistance up to 5kgf / cm^2.
- Can be used with high speed centrifugal blowers, high pressure blowers.



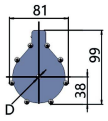


INSTALLATION SIZE





Standard type **E1**



mini type **E2**

MODEL	A	C	D	H	TYPE
RTKED-51-C-H	51	100-3000	M8	0.5-3	E1/E2
RTKED-63-C-H	63	100-3000	M8	0.5-3	E1/E2
RTKED-76-C-H	76	100-3000	M8	0.5-3	E1

INSTRUCTIONS

1. Model description of the Coanda effect air knife. Eg. Model RTKED -76-500-1.5-R1-E1 means that the air inlet at one end has a size of 76 mm, the valid length is 500 mm, and the width of the opening-gap is 1.5 mm. (E1 means standard type. The Coanda effect air knife can only enter the wind through both ends.)

2. The air inlet selection code is: R.(R1 means that the air knife enters the air at one end, and R2 means that the air knife enters the air at both ends.)

3. C means the valid length of the air knife, not including the thickness of the end caps on both ends of the air knife. As mentioned in the above example, the 500mm air knives valid length is excluding end caps of both ends. Actually, the installation length is 508mm.

4. The unique blade design of the Coanda effect air knife (one side high, one side low), the air knife drying effect is significantly improved. Therefore, it is important to distinguish the direction of the knife edge during installation. The lower side of the air knife edge faces the direction in which the workpiece needs to be blown dry.

STAINLESS STEEL HIGH SPEED NOZZLE

MODEL DESCRIPTION

RTHSN - A - C - B - R/S/T

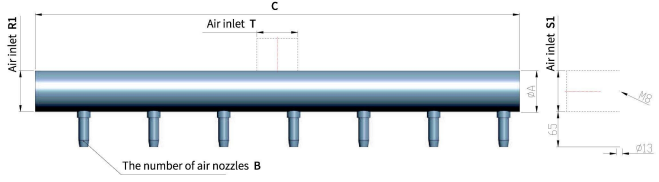
- Inlet position (R1: air inlet at one end) (R2: air inlet at both ends) (S: air inlet on the side) (T: air inlet at the top)
- B means the number of air nozzles
- C means the length of the main pipe
- A means diameter of the main pipe
- RTHSN means stainless steel high speed nozzles

The high speed nozzle is specially designed for occasions where the distance between the air outlet of the air knife and the surface of the workpiece that needs to be blown dry is longer than the standard distance of 13~40 cm. The high-speed air nozzles solves the problem that the air knife is difficult to blow dry the long-distance objects and complex groove surfaces, and reduces the waste of compressed air.

Advantages

- ■ Suitable for drying in various types of cleaning and conveying methods.
- ■ It can effectively cover the drying of multiple surfaces of the product, and the outlet flow rate is up to 200 m/s.
- ■ Suitable for drying complex products with grooves, blind holes and other special shapes.
- ■ Made of SUS304 stainless steel or medical grade 316 stainless steel and machined by CNC, the pressure loss is extremely low.
- ■ The effective distance can reach 40cm, which is more than twice the effective drying distance of the air knife.
- ■ Its supporting reciprocating machine swing system can achieve no blind zone drying, the effect is equivalent to manual air gun drying.

INSTALLATION SIZE



PRESSURE(mbar)	AIR FLOW OF EACH NOZZLE(m^3/h)
100	57
125	63
160	59
175	74

INSTRUCTIONS

1.Model description of stainless steel high speed air nozzle.Eg. Model RTHSN-76-2000-12-R1 means that the main pipe has a diameter of 76 mm, the main pipe has a total length of 2000 mm, the number of air nozzles is 12, and the air inlet is at one end.

2. The standard high-speed air nozzle is made of SUS304 stainless steel, and customers can also request SUS316 stainless steel (please specify when ordering)

3. The standard high-speed air nozzles are connected by a welding process and the air distribution main pipe. G3/4 screw thread can also be used for special customization. It is also possible to reduce or increase the number of air nozzles according to customer needs.

4. Sometimes for easy installation, the main pipe of the high-speed air nozzle can be connected with a quick joint or a 90° elbow. The specific design will be based on the design confirmation drawings provided by our company.

5. Electrical technology Co.,Ltd. can provide customers with 2D/3D dimensional design drawings if necessary.

SPIDER ARM AIR KNIVES

MODEL DESCRIPTION

RTSPD - A - C - B - D

D means number of air nozzles at the bottom
B means total number of nozzles on both sides
C means total length of air distributor
A means diameter of air distributor
RTSPD means spider arm air knife

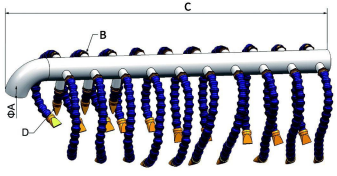
Spider arm Air Knife has been through many tests and trials. Its innovative design, not only improves the drying efficiency of bottling and canning production lines, but also reduce energy usage by as much as 80% compared with other air knives. Moreover,Raetts Spider Manifold air knives also solve the following problems occurred on the traditional bottling and canning production lines--two air knives usually head to head blow air, which offsets the air flow and even makes a “drying blind”zone .What's worse, the air knives will be far away from the bottles as they are blocked by the fence. Moreover, the normal air knives are hard to adjust. The invention of the Spider Arm Air Knife has solved the above problems.

Advantages

- Flex to any position, without any dead angle.
- Drying time for every bottle is 3 to 5 times longer than ever.
- Quickly adjust to different sizes of bottles.
- Can get very close to the bottle.
- Drying times for every bottle is 10 to 20 times more than ever.
- The stepped air nozzles cover the bottle from top to bottom, in accordance with the principle of hydrodynamics.
- Can be used with high speed centrifugal blower, high pressure blowers.

Spider Arm Air Knife uses high-speed centrifugal blower or high-pressure blower as its air source. The high-speed and high-pressure air generated passes through the main splitter and is split into the bottom and both sides of the high-speed air nozzles. It is named Spider Arm Air Knife because its shape resembles spiders.

INSTALLATION SIZE



MODEL	A	C	B	D
RTSPD-A-C-B-D	51	100-3000	4-20	2-4
RTSPD-A-C-B-D	63	100-3000	4-30	2-4
RTSPD-A-C-B-D	76	100-3000	4-50	2-6
RTSPD-A-C-B-D	102	100-3000	4-60	2-8

INSTRUCTIONS

1.Model description of spider arm air knife. Eg. Mode RTSPD-76-2000-44-3 means that the diameter of the air divider is 76mm, the total length of air knives is 2000mm,the number of air nozzles is 44 on both sides, the number of air nozzles at the bottom is 3.

2. When ordering, please kindly note that the valid length C of the spider arm air knife is including the elbow length, and the spider arm nozzle is 25*1.8mm in size.

3. Please clarify the length of nozzles very clearly like 100mm*3 pieces, 300mm*12 pieces, 400mm*12 pieces, 500mm*10 pieces *600mm*10 pieces, a total of 47 pieces.

4. The main body of the Spider Arm Air knife is welded by SUS304 stainless steel. The material of the air nozzle is polyoxymethylene (POM), which can be used in the temperature range of -50~110 °C for a long time without aging and deformation. It is durable and temperature–resistant.

5. The spider Arm Air Knives should be installed as a “multi-step” production lines, and from high to low face the direction of the bottle entering the air knife system.

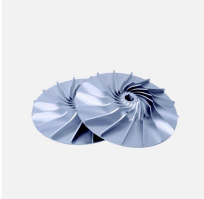
ACCESSORIES

Notices:

Air Systems are custom-engineered to maximize performance and drying efficiency. Proper installation and maintenance of your system are critical to system performance.

Air Filter

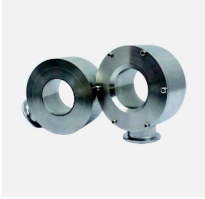
Blower Head



Impeller

Belt Pulley

Dividers



Air Wipe

Tensioner

Core Assembly Bearing

Transparent Hosing (anti-temp 100℃)

Silicon Hosing (anti-temp 200℃)

High Speed Belt

Silencer Case