

SYMBIOSIS

Axial Flow Fans



Axial fans are suitable for large quantities of air at low pressures while producing very little noise. Axial fans have the following advantages:

- Lower price
- The impeller has adjustable blades which make it possible to adapt the fan to the requirements of the plant
- Reduced space requirements
- Shorter ducts, thus lowering the cost of the system

SYMBIOSIS a leading name in Air Movement Industry offers a wide range of AXIAL Flow Fans suitable for Industrial ventilation, Air Conditioning, Dust extraction and Fume extraction systems.

Custom built fans catering to the specific requirement of Steel Plant, Fertilizer Plant, Tea Industry, Mine, Ship, Power Plants, Chemical Plant etc. are also available.

SYMBIOSIS Axial Flow Fans

FEATURES

Axial Flow Fans are available in wide range of combination from 12" to 75" diameter fitted with Motors from 0.37 kW to 110 kW in 2 Pole, 4 Pole, 6 versions. Motors are suitable for 415 volts $\pm 10\%$, 50 Hz $\pm 5\%$, 3 Phase Power Supply, as per IS:325/1996, having ensuring better fitment and proper matching. Fans are available in single phase version also.

Axial Flow Fans are capable of handling upto 300000 m³/hr air delivery and static pressure up to 90MM WG. Further pressure can be developed with multiple staging of fans.



CONSTRUCTION

Fan Casing is made of heavy gauge MS Sheet (as per IS 1079 /2062) having robust construction. It has flanges at both ends for easy fixing on ducts/walls.

Impeller is made of Die Cast aluminium (LM-6 of BS 1490/IS 617 Gr. 4600) having aerofoil design with adjustable pitch angles. The solidity (No. of wings) is varied in order to use the most efficient part of the fan characteristics.

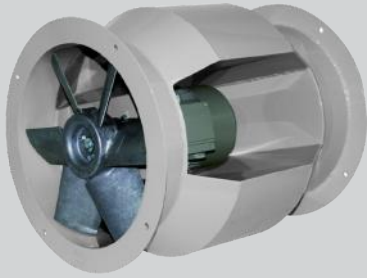
Axial Flow Fans are tested in accordance with IS-3588-1991. Standard fans are finished with synthetic enamel paint. Depending on application, fans can be supplied with casing made of stainless steel or zinc sprayed MS sheet. Epoxy / chlorinated rubber paint may also be provided.



CONSTRUCTION

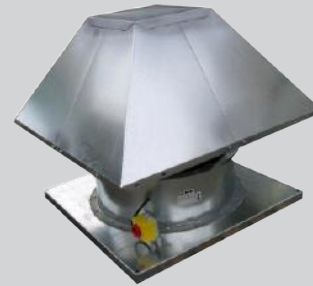
Fans are available both in Wall Mounted and Duct Mounted configuration. Fan selection chart and general arrangement dimensions are given in Table Following special application fans are also offered depending on application and end use.

SYMBIOSIS Bifurcated Fans



SYMBIOSIS Bifurcated Fans are available from sizes 19" to 75". These fans are used to handle hazardous air, where motors are kept outside the air stream.

SYMBIOSIS Roof Extractor Unit



SYMBIOSIS Roof Extractor Units are available from sizes 9" to 60", fitted with Hood and Bottom Plate. These units are used on the roof to extract and exhaust contaminated air.

SYMBIOSIS Flame Proof Fans



SYMBIOSIS Flame Proof Axial Fans are available from sizes 15" to 75" and are used extensively in Fire Hazard Areas.

SYMBIOSIS Bell Driven Fan



SYMBIOSIS Belt Driven Fans are available from sizes 19" to 75". Fans are driven by belt and pulley arrangement. The motor is located outside the air stream.

ACCESSORIES

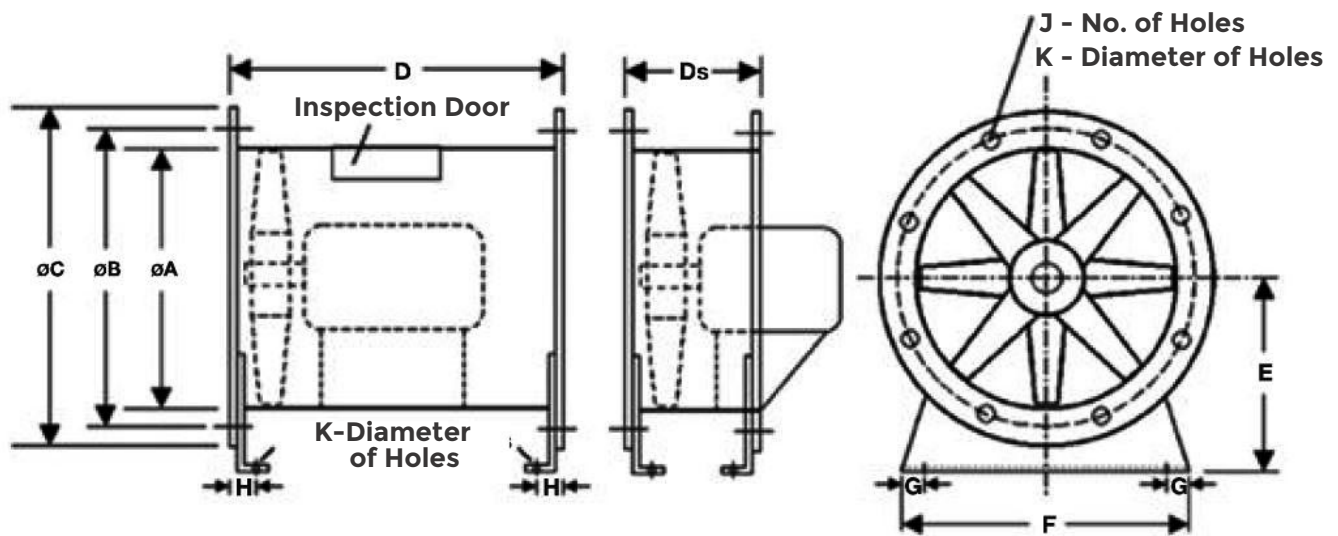
Following (optional) accessories are also available.

- Louvre Shutter
- Wall Cowl and Bird Screen
- Filter / Filter Frame with adapter cone
- Dampers



SYMBIOSIS

"Go with the Flow"



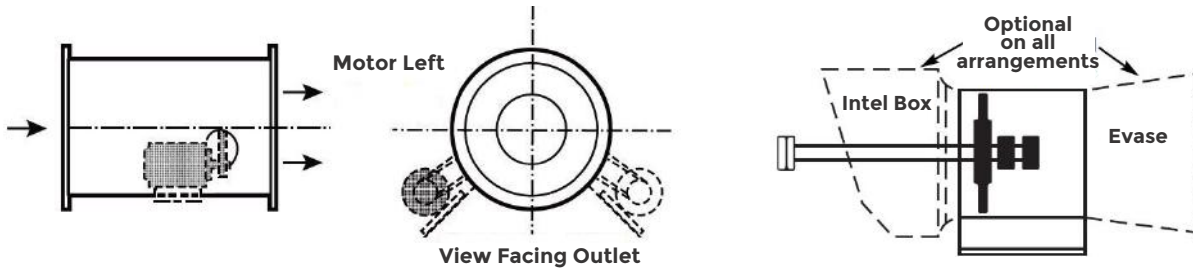
SYMBIOSIS DIRECT DRIVEN AXIAL FAN DIMENSIONS

Size	OA	OB	OC	D(max)	Ds	E	F	G	H	JK
315	315	355	395	375	225	200	315	40	40	8 10
400	400	450	480	375	225	250	400	50	45	8 12
450	450	500	530	520	250	280	450	50	45	8 12
500	500	560	594	520	250	315	500	50	45	12 12
560	560	620	654	520	250	355	560	50	45	12 12
630	630	690	724	780	350	400	630	50	45	12 12
710	710	770	804	780	350	450	710	50	45	16 12
800	800	860	894	780	350	510	800	50	45	16 12
900	900	970	1006	780	350	518	900	75	50	16 15
1000	1000	1070	1106	780	350	574	1000	75	50	16 15
1120	1120	1190	1258	980	400	710	1120	75	50	20 15
1250	1250	1320	1388	980	400	800	1250	75	50	20 15
1400	1400	1470	1538	980	400	900	1400	75	75	20 15
1600	1600	1680	1760	1120	400	1000	1600	75	75	24 20
1800	1800	1880	1960	1400	500	1100	1800	75	75	24 20
2000	2000	2080	2160	1400	500	1200	2000	100	100	24 20

DRIVE ARRANGEMENT FOR TUBULAR FANS

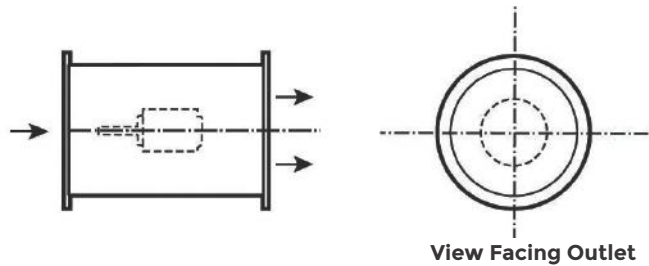
ARRANGEMENT 1

For belt drive. Impeller overhung on a shaft supported by bearings mounted within casing. Motor mounted independent of casing. Horizontal discharge.



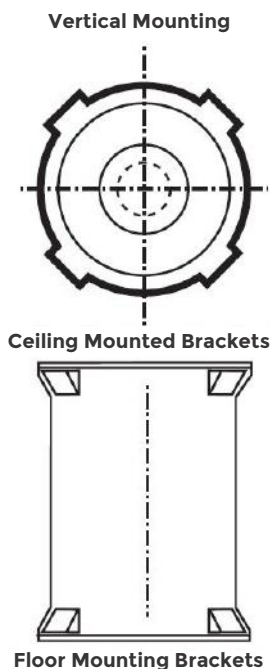
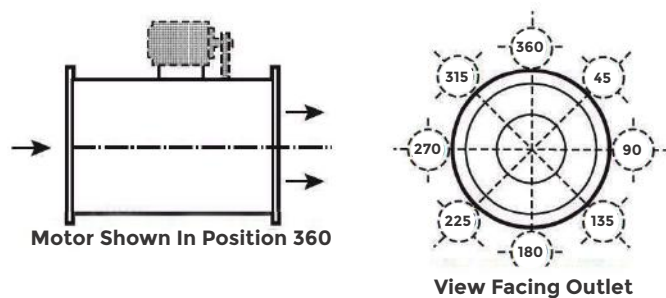
ARRANGEMENT 4

For direct drive. Impeller overhung on motor shaft. Motor supported within casing. For horizontal and vertical discharge. Duct mounting shown.



ARRANGEMENT 9

For belt drive. Impeller overhung on a shaft supported by bearings mounted within casing. Designed for mounting of motor on outside of casing in one of the standard locations shown. For horizontal and vertical discharge. Duct mounting shown.



The Arrow shown above designates the direction of airflow. Rotation of fans is determined by viewing from the fan outlet end.

Specify either up blast or down blast discharge for vertically mounted fans.

The locations of motors, supports, access doors, etc., are determined by viewing the outlet of the fan and resting location 180 on the floor as shown for Arrangement 9.

Arrangements 4 and 9 can be furnished with supports for floor, wall or ceiling mounting. The position of these supports determines which motor locations are available for motor placement. Generally motor locations 135, 180 and 225 are not available on floor, wall or inverted ceiling-mounted fans and motor locations 45, 90, 270 and 315 may not be available for ceiling-hung fans.

Another method of mounting vertical fans as shown in the view on the right. Specify fan to be furnished with ceiling-mounting brackets, floor-mounting brackets or both.



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