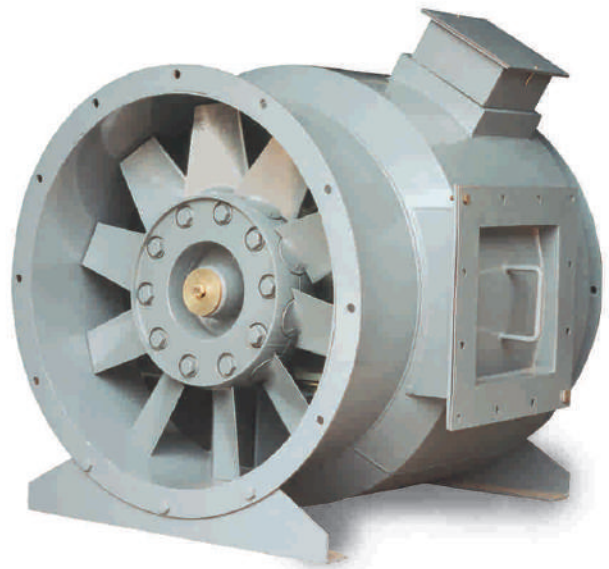




## Axial Flow Fan And Centrifugal Fan



*Fans for the Long Run!*

MARATHON Electric the Pioneer and acknowledged leader in Air Technology offers a wide range of AXIAL Flow and Centrifugal 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 (Thermal and Nuclear) Chemical Plant etc. are also available.

## AXIAL FLOW FAN

### 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, which are in-house manufactured ensuring better fitment and proper matching. Fans are available in single phase version also.



*Duct mounted Fan*

Axial Flow Fans are capable of handling upto 300000 m<sup>3</sup>/hr air delivery and static pressure upto 120 MM 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.

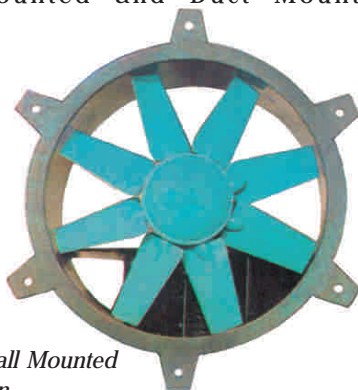
Impeller is made of Die Cast aluminium (LM-6 of BS 1490/IS 617 Gr. 4600) having aerofoil design with adjustable pitch angles. The solidity (No. of wings) is varied in order to use the most efficient part of the fan characteristics.

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.

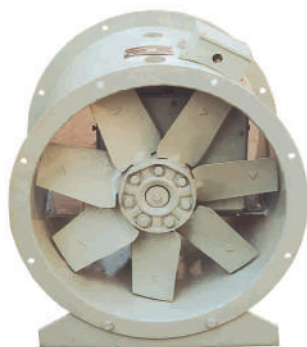
Fans are available both in Wall Mounted and Duct Mounted



*Wall Mounted Fan*

configuration. Fan selection chart (full solidity in 12" to 60", Full/half solidity in 75") and general arrangement dimensions are given in Table -1 & 2 respectively. Following special application fans are also offered depending on application and end use.

### Bifurcated Fans :



MARATHON Electric 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.

### Flame Proof Fans :



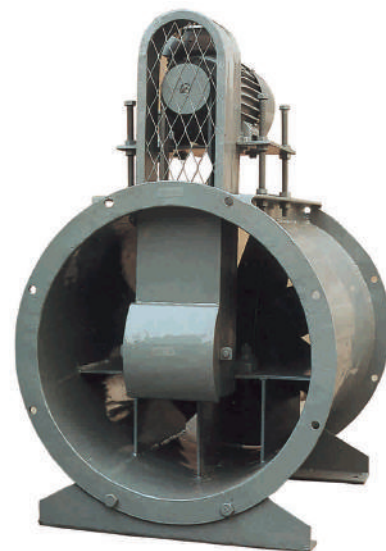
MARATHON Electric Flame Proof Axial Fans are available from sizes 15" to 75" and are used extensively in Fire Hazard Areas.

### Roof Extractor Unit :



MARATHON Electric Roof Extractor Units are available from sizes 19" to 60", fitted with Hood and Bottom Plate. These units are used on the roof to extract and exhaust contaminated air.

### Belt Driven Fan :



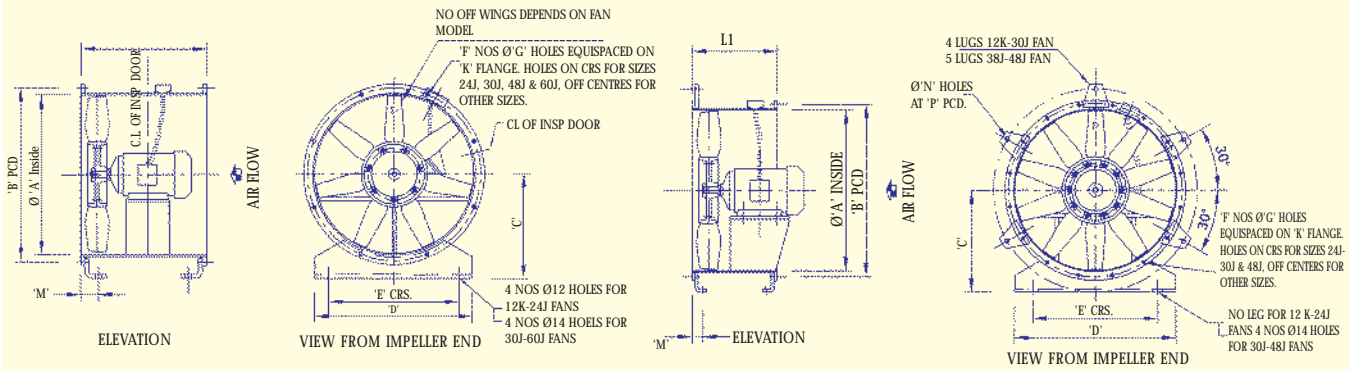
MARATHON Electric Belt Driven Fans are available from sizes 19" to 75". Fans are driven by belt and pulley arrangement. The motor is located outside the air stream.

### Accessories :

Following (optional) accessories are also available.

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

Table 1



**LONG CASING DUCT MOUNTED**

**SHORT CASING WALL MOUNTED**

FAN MODEL	MOTOR RATING	L	L1	A	B	C	D	E	F	G	K	M	N	P
12K/K37-P2	0.37 kW 2 POLE	380	225	305	349	203	305	273	8	10	40x6	36	14	440
12K/K55-P2	0.55 kW 2 POLE													
15J/K37-P4	0.37 kW 4 POLE	380	225	381	425	241	381	343	8	11	40x6	36	14	530
15J/K55-P2	0.55 kW 2 POLE													
15J/K75-P2	0.75 kW 2 POLE													
15J/1K1-P2	1.1 kW 2 POLE													
15J/1K5-P2	1.5 kW 2 POLE	406												
19J/K37-P4	0.37 kW 4 POLE	406	225	483	541	311	483	438	8	14	40x6	36	14	640
19J/K75-P4	0.75 kW 4 POLE													
19J/1K5-P2	1.5 kW 2 POLE	420												
19J/2K2-P2	2.2 kW 2 POLE	450												
19J/3K7-P2	3.7 kW 2 POLE	520												
24J/K37-P6	0.37 kW 6 POLE	406	225	610	668	381	610	559	12	14	40x6	36	18	770
24J/K55-P4	0.55 kW 6 POLE													
24J/K75-P4	0.75 kW 4 POLE													
24J/1K1-P4	1.1 kW 4 POLE													
24J/1K5-P4	1.5 kW 4 POLE													
24J/2K2-P4	2.2 kW 4 POLE													
30J/K55-P6	0.55 kW 6 POLE	430	225	762	821	483	762	711	12	14	40x6	36	18	920
30J/K75-P6	0.75 kW 6 POLE													
30J/1K1-P6	1.1 kW 6 POLE	450												
30J/1K5-P6	1.5 kW 6 POLE	480	280											
30J/1K5-P4	1.5 kW 4 POLE	450	225											
30J/2K2-P4	2.2 kW 4 POLE	480												
30J/3K7-P4	3.7 kW 4 POLE	524	280											
30J/5K5-P4	5.5 kW 4 POLE													
38J/1K5-P6	1.5 kW 6 POLE	510	280	965	1035	597	965	914	16	18	65x6	36	18	1160
38J/2K2-P6	2.2 kW 6 POLE													
38J/3K7-P6	3.7 kW 6 POLE													
38J/5K5-P6	5.5 kW 6 POLE													
38J/5K5-P4	5.5 kW 4 POLE													
38J/7K5-P4	7.5 kW 4 POLE													
38J/11K-P4	11 kW 4 POLE	760	305											
38J/15K-P4	15 kW 4 POLE											41		
38J/18K5-P4	18.5 kW 4 POLE	870	-											
48J/5K5-P6	5.5 kW 6 POLE	640	305	1219	1289	737	1220	1143	20	18	65x6	41	22	1480
48J/7K5-P6	7.5 kW 6 POLE													
48J/11K-P6	11 kW 6 POLE													
48J/15K-P6	15 kW 6 POLE													
48J/18K5-P6	18.5 kW 6 POLE	910	500								76			
48J/18K5-P4	18.5 kW 4 POLE	870										41		
48J/22K-P4	22 kW 4 POLE	870												
48J/30K-P4	30 kW 4 POLE	910												
48J/37K-P4	37 kW 4 POLE	1000	-									76		
48J/45K-P4	45 kW 4 POLE													
60J/18K5-P6	18.5 kW 6 POLE	920	-											
60K/22K-P6	22 kW 6 POLE	920	-											
60J/30K-P6	30 kW 6 POLE	1000	-	1526	1626	921	1524	1422	24	18	65x8	78	-	-
60J/37K-P6	37 kW 6 POLE	1060	-											
60J/45K-P6	45 kW 6 POLE	-	-											
60J/55K-P6	55 kW 6 POLE	-	-											

Notes :

- [1] All dimensions are in mm subject to tolerance as per IS 2102. [2] Power Supply 415 V ± 10%, 3 PH, 50 Hz ± 5%, AC [3] Motor Degree of protection : IP-55
- [4] Motor Class of Insulation : 'F' (temp limited to class 'B') [5] Painting Specification - 1 Coat of primer & 1 coat of synthetic enamel paint of colour D. A. Grey

## SELECTION CHART – STANDARD AXIAL FLOW FAN

**Table 2**

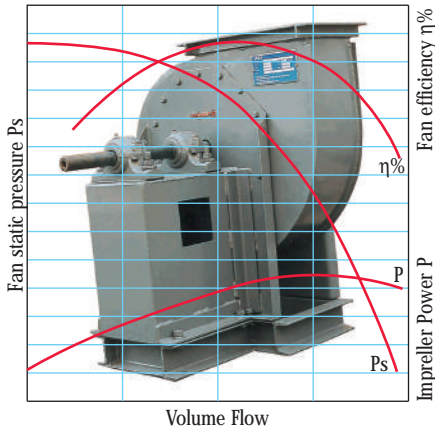
Sl. No.	Fan Model	Fan dia in mm	Motor rating kw/pole	Motor F/S in rpm	Free air m3/hr	Volume flow in m3/hr at different Static pressure in mmwg														
						5	10	15	20	25	30	35	40	50	60	70	80	90	100	110
1	12K/K37-P2	305	0.37/2	2800	2300	-	2000	1750	1400	-	-	-	-	-	-	-	-	-	-	-
2	12K/K37-P2	305	0.37/2	2800	3900	-	3200	3000	2650	-	-	-	-	-	-	-	-	-	-	-
3	12K/K55-P2	305	0.55/2	2800	4400	-	3850	3650	3300	-	-	-	-	-	-	-	-	-	-	-
4	15J/K37-P4	381	0.37/4	1440	1750	1400	850	-	-	-	-	-	-	-	-	-	-	-	-	-
5	15J/K37-P4	381	0.37/4	1440	4500	3700	3100	-	-	-	-	-	-	-	-	-	-	-	-	-
6	15J/K55-P2	381	0.55/2	2850	4500	-	4100	3900	3700	3300	3000	2600	-	-	-	-	-	-	-	-
7	15J/K75-P2	381	0.75/2	2850	5600	-	5300	5100	5000	4600	4300	3700	-	-	-	-	-	-	-	-
8	15J/1K1-P2	381	1.1/2	2850	7200	-	6700	6500	6200	5700	5400	5000	-	-	-	-	-	-	-	-
9	15J/1K5-P2	381	1.5/2	2850	8500	-	8000	7850	7300	7100	6800	6300	-	-	-	-	-	-	-	-
10	19J/K37-P4	483	0.37/4	1440	6750	6000	5500	4400	-	-	-	-	-	-	-	-	-	-	-	-
11	19J/K75-P4	483	0.75/4	1440	8600	8000	7500	6200	-	-	-	-	-	-	-	-	-	-	-	-
12	19J/1K5-P2	483	1.5/2	2900	7500	-	-	-	6500	6200	6000	5800	5200	4500	3500	-	-	-	-	-
13	19J/2K2-P2	483	2.2/2	2900	11500	-	-	-	10000	9800	9500	9000	8600	7500	6500	-	-	-	-	-
14	19J/3K7-P2	483	3.7/2	2900	15300	-	-	-	14200	13850	13600	13100	12700	11700	10500	-	-	-	-	-
15	24J/K37-P6	610	0.37/6	940	4900	4000	2200	-	-	-	-	-	-	-	-	-	-	-	-	-
16	24J/K55-P6	610	0.55/6	940	11000	8700	8000	-	-	-	-	-	-	-	-	-	-	-	-	-
17	24J/K75-P4	610	0.75/4	1440	10000	-	9000	8300	7000	-	-	-	-	-	-	-	-	-	-	-
18	24J/1K1-P4	610	1.1/4	1440	13500	-	12000	10000	9800	-	-	-	-	-	-	-	-	-	-	-
19	24J/1K5-P4	610	1.5/4	1440	15500	-	13600	13000	11300	-	-	-	-	-	-	-	-	-	-	-
20	24J/2K2-P4	610	2.2/4	1440	17000	-	16500	15500	14000	-	-	-	-	-	-	-	-	-	-	-
21	24K/5K5-P2	610	5.5/2	2950	19500	-	-	-	18000	17900	17800	17100	16500	15500	14500	13500	12300	11000	-	-
22	24K/7K5-P2	610	7.5/2	2950	22500	-	-	-	21500	21250	21000	20500	20000	19000	185000	17500	16000	14500	-	-
23	24K/11K-P2	610	11/2	2950	28500	-	-	-	27000	26750	26500	26000	25500	24500	23000	22000	21000	20000	-	-
24	30J/K55-P6	762	0.55/6	940	10500	9500	8000	6000	-	-	-	-	-	-	-	-	-	-	-	-
25	30J/K75-P6	762	0.75/6	940	15000	13500	11750	9000	-	-	-	-	-	-	-	-	-	-	-	-
26	30J/1K1-P6	762	1.1/6	940	18000	17000	15000	12000	-	-	-	-	-	-	-	-	-	-	-	-
27	30J/1K5-P6	762	1.5/6	940	21500	20000	18000	15800	-	-	-	-	-	-	-	-	-	-	-	-
28	30J/1K5-P4	762	1.5/4	1450	14000	-	13000	12000	11300	10250	9000	8000	-	-	-	-	-	-	-	-
29	30J/2K2-P4	762	2.2/4	1450	18500	-	17000	15800	15000	14000	12800	11000	-	-	-	-	-	-	-	-
30	30J/3K7-P4	762	3.7/4	1450	22000	-	20500	19800	18500	17800	16500	14500	-	-	-	-	-	-	-	-
31	30J/5K5-P4	762	5.5/4	1450	34000	-	32000	31000	29000	27500	26000	24000	-	-	-	-	-	-	-	-
32	38J/1K5-P6	965	1.5/6	960	19500	-	17000	15250	13000	9800	-	-	-	-	-	-	-	-	-	-
33	38J/2K2-P6	965	2.2/6	960	25000	-	21500	19500	18000	14800	-	-	-	-	-	-	-	-	-	-
34	38J/3K7-P6	965	3.7/6	960	36500	-	33500	31500	29500	26500	-	-	-	-	-	-	-	-	-	-

Sl. No.	Fan Model	Fan dia in mm	Motor rating kw/pole	Motor F/S in rpm	Free air m3/hr	Volume flow in m3/hr at different Static pressure in mmwg														
						5	10	15	20	25	30	35	40	50	60	70	80	90	100	110
35	38J/5K5-P6	965	5.5/6	960	45000	-	42000	39000	37000	34000	-	-	-	-	-	-	-	-	-	-
36	38J/5K5-P4	965	5.5/4	1475	30000	-	-	-	26000	25000	24500	23000	22000	18000	15000	-	-	-	-	-
37	38J/7K5-P4	965	7.5/4	1475	39000	-	-	-	35000	33000	32500	30500	30000	26000	22000	-	-	-	-	-
38	38J/11K-P4	965	11/4	1475	48000	-	-	-	46000	45000	44000	42500	41000	37500	32500	-	-	-	-	-
39	38J/15K-P4	965	15/4	1475	61000	-	-	-	56000	54500	54000	51500	51000	47000	44000	-	-	-	-	-
40	38J/18K5-P4	965	18.5/4	1475	68000	-	-	-	65000	63000	62000	60000	58500	54500	51000	-	-	-	-	-
41	48J/5K5-P6	1219	5.5/6	975	42000	-	-	-	36000	34500	30500	28000	22000	-	-	-	-	-	-	-
42	48J/7K5-P6	1219	7.5/6	975	55000	-	-	-	47000	45500	43000	39000	35000	-	-	-	-	-	-	-
43	48J/11K-P6	1219	11/6	975	72000	-	-	-	62000	59500	57000	52500	50000	-	-	-	-	-	-	-
44	48J/15K-P6	1219	15/6	975	83000	-	-	-	77000	74500	69000	67500	64000	-	-	-	-	-	-	-
45	48J/18K5-P6	1219	18.5/6	975	90000	-	-	-	85000	81000	75000	73000	70000	-	-	-	-	-	-	-
46	48J/18K5-P4	1219	18.5/4	1480	62000	-	-	-	-	-	-	-	-	50000	45000	41000	38000	35000	28000	-
47	48J/22K-P4	1219	22/4	1480	71000	-	-	-	-	-	-	-	-	59000	57000	54000	49000	44000	39000	-
48	48J/30K-P4	1219	30/4	1480	92000	-	-	-	-	-	-	-	-	80000	75000	70000	68000	62000	53000	-
49	48J/37K-P4	1219	37/4	1480	102000	-	-	-	-	-	-	-	-	88000	84000	80000	75000	71000	67000	-
50	48J/45K-P4	1219	45/4	1480	150000	-	-	-	-	-	-	-	-	102000	98000	95000	90000	85000	78000	-
51	60J/18K5-P6	1524	18.5/6	975	-	-	-	-	-	-	-	-	-	-	50000	40000	-	-	-	-
52	60J/22K-P6	1524	22/6	975	-	-	-	-	-	-	-	-	-	-	62000	50000	-	-	-	-
53	60J/30K-P6	1524	30/6	975	-	-	-	-	-	-	-	-	-	-	85000	69000	-	-	-	-
54	60J/37K-P6	1524	37/6	975	-	-	-	-	-	-	-	-	-	-	100000	90000	-	-	-	-
55	60J/45K-P6	1524	45/6	975	-	-	-	-	-	-	-	-	-	-	124000	108000	-	-	-	-
56	60J/55K-P6	1524	55/6	975	-	-	-	-	-	-	-	-	-	-	139000	127000	-	-	-	-
57	75J1/2/30K-P6	1905	30/6	975	-	-	-	-	-	-	-	-	-	110000	93000	80000	50000	-	-	-
58	75J1/2/37K-P6	1905	37/6	975	-	-	-	-	-	-	-	-	-	130000	115000	100000	60000	-	-	-
59	75J1/2/55K-P6	1905	55/6	975	-	-	-	-	-	-	-	-	-	180000	165000	150000	130000	-	-	-
60	75J/2/75K-P6	1905	75/6	975	-	-	-	-	-	-	-	-	-	218000	208000	188000	168000	-	-	-
61	75J/55K-P6	1905	55/6	975	-	-	-	-	-	-	-	-	-	-	-	-	-	105000	95000	85000
62	75J/75K-P6	1905	75/6	975	-	-	-	-	-	-	-	-	-	-	-	-	-	140000	115000	95000

NOTE :

1. Fan section is based on air at 20°C and density 1.2 kg/m<sup>3</sup>
2. Fan performance and tolerance as per IS 3588 – 1987.
3. For selection of Fans in other solidity (no of blades), or in intermediate performance point please refer to Regional/Branch Offices or Factory

## CENTRIFUGAL FAN



### Features

MARATHON Electric offers wide range of Centrifugal Fans with highly efficient impellers of type Backward Inclined, Backward Curved, Aerofoiled, Forward Curved and Straight Radial, depending upon application.

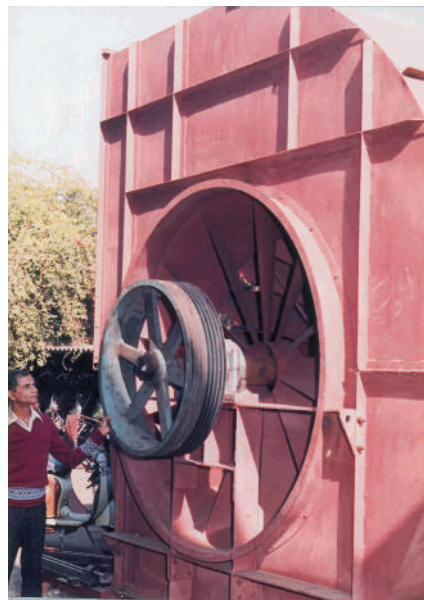
MARATHON Electric Centrifugal Fans are suitable for air delivery upto 300,000 M<sup>3</sup>/Hr and Static Pressure upto 800 MM WG. Fans are available both in single inlet single width (SISW) and in double inlet double width (DIDW) versions.

### Construction :

Centrifugal Fans are usually made of mild steel (IS 1079/2062) rigid casing with Inspection window and drain plug. The impeller is mounted on C-40 (IS

1570) shaft. Double Row Ball/Spherical roller Bearings are used for smooth operation. Fans are either belt driven or direct coupled. Direct driven Fans, with Impeller mounted directly on motor shaft, are also available.

- Standard Fans are painted with synthetic enamel paint.
- Other than mild steel, fans are offered in Stainless Steel and Aluminium Construction also, depending on application need.
- For High temperature (from 100°C to 350°C) application, Aluminium cooling disc is provided and the fan is painted with Heat Resistant Aluminium Paint.



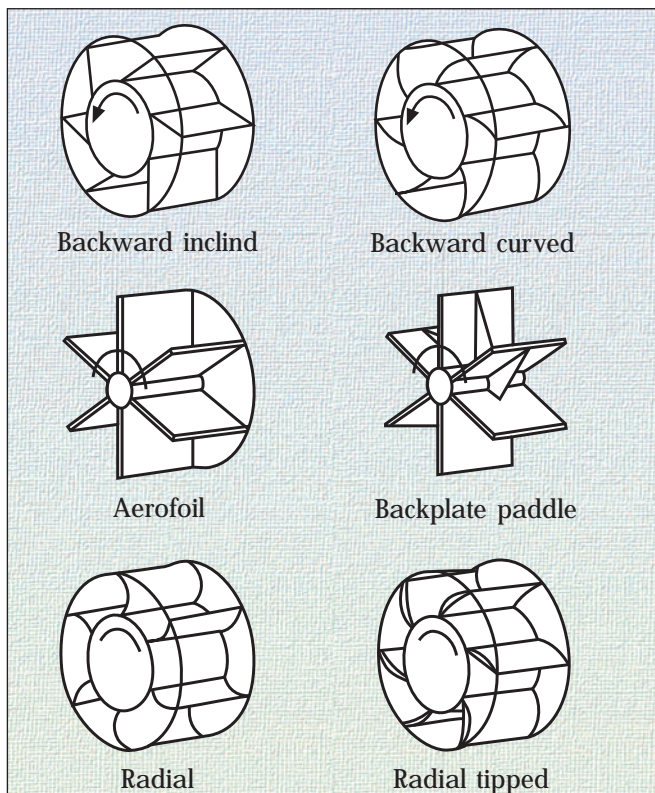
### Special features

Following Special Features are provided depending application need.

- Spark Proof Construction.
- FRP Coating.
- Zinc Sprayed.
- Epoxy Paint.
- Chlorinated rubber paint.

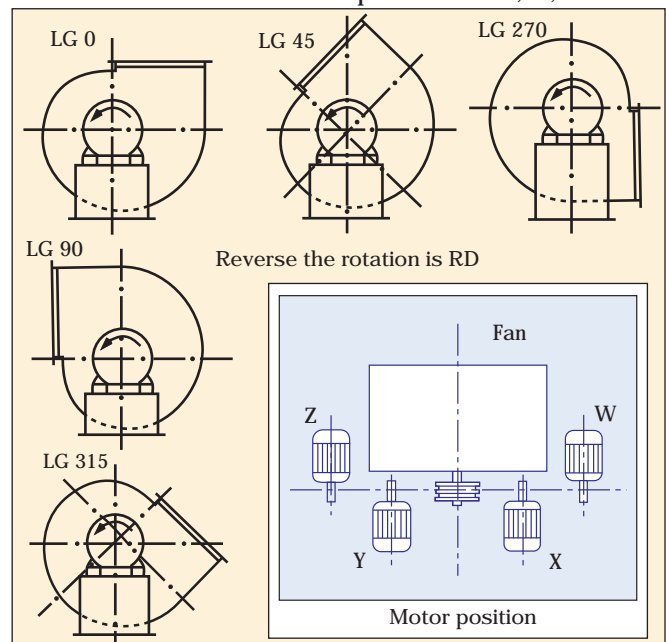
Following optional accessories are also available.

- Common base frame for Fan and Motor.
- V-belt drive set.
- Belt guard.
- Motor slide rail
- Foundation bolt
- Filter
- Filter frame with adapter cone.
- Inlet and outlet flexible connection.
- Inlet box
- Inlet and outlet dampers
- Antivibration mounting.



### Discharge Rotation :

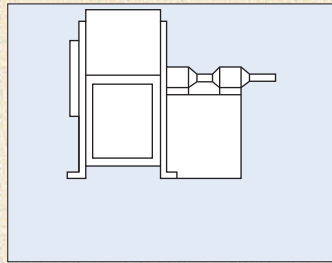
Fans are available in different discharge angles from 0° to 315° both in left hand and right hand rotation viewing from motor end with motor position as X, Y, W & Z.



**Arrangement :**

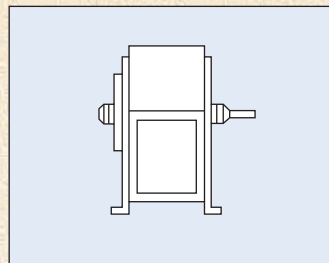
Fans are manufactured in five different drive arrangements depending upon application.

**Arrangement 1**  
Single inlet pedestal



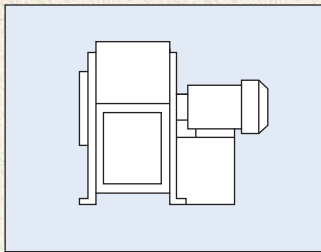
For belt drive. Impeller overhung. Two bearings on full-depth pedestal.

**Arrangement 3**  
Single inlet bearer bar



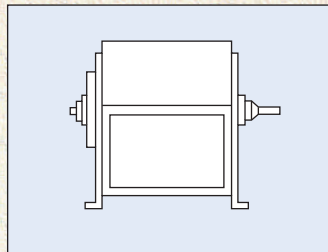
For belt drive. One bearing on each side of casing, supported by bearer bars.

**Arrangement 4**  
Single inlet direct drive and stool



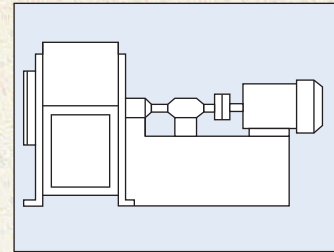
For direct drive. Impeller overhung on motor shaft. No bearings on fan. Motor feet supported by full-depth pedestal.

**Arrangement 6**  
Double inlet bearer bar



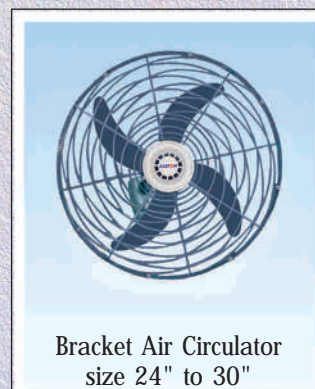
Double inlet, double width fan for belt drive. One bearing in each inlet, supported by bearer bars.

**Arrangement 7**  
Single inlet coupling



For coupling drive. Generally as arrangement 1 but pedestal extended to receive motor.

**Other products**





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