



AC SF RANGE MOTORS

Frames: 100, 112, 132, 160, 180
Power: 3.7 kW to 150 kW

- ◆ Integrated Electric Co Pvt Ltd, manufactures square frame A.C.Motors for variable speed drives applications.
- ◆ Designed to achieve high output to weight ratio in a compact frame sizes offering considerable space saving.
- ◆ Rotors have low inertia which helps in achieving good dynamic response.
- ◆ Ideal replacement for DC motors in most industrial applications
- ◆ Operates both in constant Torque as well as constant HP regions.
- ◆ Speeds beyond 3000rpm is possible depending on the application requirements.
- ◆ All standard designs are with 4 pole
- ◆ 600, 750, 1000 and 1500 rpm are the standard base rpm's offered and correspond to base frequency settings of 21, 26, 34.6 and 52Hz.
- ◆ IP-23 IC-06 – Force cooling provided, which offers continuous cooling even at lower operating speed below the base speed.
- ◆ Carona resistance copper wire is used to ensure trouble free life and withstand voltage spikes from the AC Drive.
- ◆ Vacuum pressure impregnation for stator winding
- ◆ Class "F" insulation scheme
- ◆ Maximum torque in excess of 200% to handle overloads
- ◆ Encoder mounting facility at the non – drive end.
- ◆ B35 mounting by default.

Technical Specifications

Mounting	B35(Foot cum Flange)
Frequency	As per table
Voltage	400volts +/- 10%
Combined Variations	+/- 10%
Insulation	Class "F"
Ambient Temperature	50 Deg C
Cooling	IC-06 for 112 to 180 IC-416 for 100 frames
Duty	S1
Protection	IP23 for 112 to 180 IP54 for 100 frames

Typical Applications

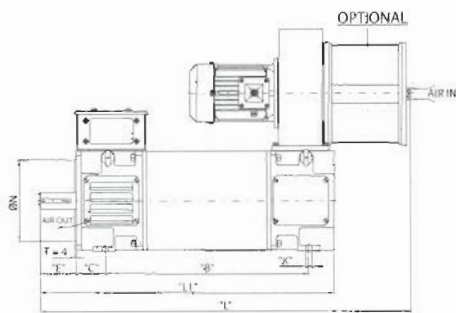
Printing and Packaging
 Wire Drawing
 Extruders and Blow film making
 Conveyors
 Steel and Rolling mills
 Textile



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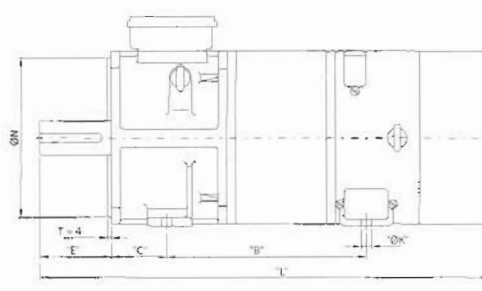
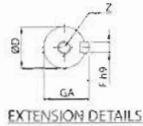
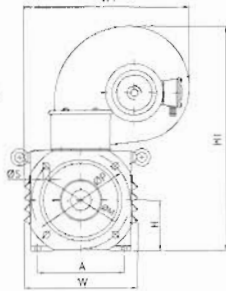
Bengaluru, India





Tolerances:
 ØD=Ø38 to Ø48 ISO k6
 ØD=Ø55 to Ø65 ISO m6
 F-ISO h9
 H=+0.0/-0.5
 N-ISO j6

ALL DIMENSIONS ARE IN mm
 PROTECTION: IP 23
 COOLING: IC 06



Tolerances:
 ØD=Ø38 to Ø48 ISO k6
 ØD=Ø55 to Ø65 ISO m6
 F-ISO h9
 H=+0.0/-0.5
 N-ISO j6

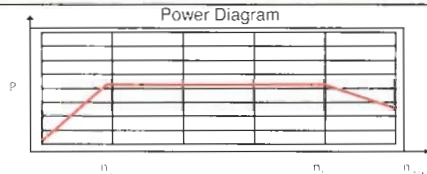
ALL DIMENSIONS ARE IN mm
 PROTECTION: IP 54
 COOLING: IC 416

IEL OVERALL DIMENSIONS

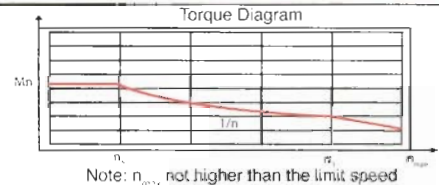
FRAME SIZE	A	C	ØD	E	F	GA	H	ØK	ØM	ØP	ØS	W	W1	H1	Z
100	160	63	38	80	10	41	100	12	180	215	15	190	-	236	M12
112	190	63	38	80	10	41	112	12	180	215	15	250	445	500	M12
132	216	89	42	110	12	45.3	132	12	250	300	19	291	475	655	M16
160	254	97	55	110	16	59	160	14	300	350	19	345	495	720	M20
180	279	121	65	140	18	69	180	14	300	350	19	385	495	755	M20

FRAME SIZE	100S	100M	100L	112S	112M	112L	112P	112X	132M	132L	132P	132X	160S	160M	160L	160P	180S	180M	180L
B	218	253	303	284	329	379	399	444	400	420	455	505	550	585	650	680	537	612	682
L	538	593	643	651	696	746	766	811	840.5	860.5	895.5	945.5	989.5	1024.5	1089.5	1119.5	1043.5	1118.5	1188.5
L1	-	-	-	483	528	578	598	643	672.5	692.5	727.5	777.5	822	857	922	952	457	532	602

POWER TORQUE CHARACTERISTICS



Where,
 n_1 is the rated speed
 n_2 is the extended speed from base speed (field weakening mode)
 n_{max} is the maximum speed (upto 6000 rpm)



Note: n_{max} not higher than the limit speed

SELECTION & ORDERING DATA

400 Volts, IP 23, IC 06 / * IP 54, IC 416, 50Deg. Amb, Insulation Class 'F'

Type	100*				112					132				160				180		
Frame Size	S	M	L		S	M	L	P	X	M	L	P	X	S	M	L	P	S	M	L
Power [KW] @ 1500rpm	3.7	5.5	7.5		7.5	11	15	18.5	22	29	32	37	45	56	63	75	81	90	120	150
Torque [Nm]	24	35	48		48	70	96	118	140	185	204	236	287	357	401	478	516	573	764	956
Rotor inertia J [kgm ²]	0.009 to 0.02				0.02 to 0.13					0.09 to 0.16				0.25 to 0.4				0.50 to 0.90		

Frame	600 RPM - (21Hz)				750 RPM - (26Hz)				1000 RPM - (34.6Hz)				1500 RPM - (52Hz)			
	kW	Amps	Pf	%n	kW	Amps	Pf	%n	kW	Amps	Pf	%n	kW	Amps	Pf	%n
100S*	1.5	3.70	0.78	76.1	1.8	4.4	0.78	76.8	2.5	5.7	0.80	80.3	3.7	8.1	0.79	85.4
100M*	2.2	5.40	0.78	76.0	2.7	6.5	0.78	78.0	3.7	8.3	0.80	81.4	5.5	11.8	0.79	86.6
100L*	3.0	7.35	0.78	76.0	3.7	8.6	0.78	79.7	5.0	11.1	0.80	82.1	7.5	15.7	0.79	87.5
112S	3.0	7.40	0.78	75.9	3.7	8.7	0.79	79.5	5.0	10.8	0.81	83.3	7.5	15.6	0.80	87.5
112M	4.4	10.70	0.76	78.6	5.5	12.5	0.77	82.4	7.3	15.3	0.81	85.4	11.0	22.4	0.80	89.3
112L	6.0	13.40	0.81	80.0	7.5	16.7	0.78	83.7	10.0	21.4	0.78	86.9	15.0	30.3	0.80	90.2
112P	7.4	16.80	0.80	79.8	9.3	20.1	0.79	83.8	12.3	25.3	0.79	87.1	18.5	36.8	0.81	90.1
112X	9.0	20.80	0.77	80.1	11.0	24.5	0.77	84.1	14.5	30.9	0.78	87.6	22.0	44.0	0.80	90.5
132M	11.0	24.30	0.80	82.4	14.0	29.0	0.81	85.8	18.5	37.8	0.79	89.0	28.0	55.4	0.81	90.7
132L	12.5	27.70	0.78	84.2	16.0	32.9	0.82	85.9	21.0	41.6	0.82	85.5	32.0	63.9	0.79	91.3
132P	14.5	32.90	0.76	83.5	18.5	39.6	0.79	85.9	24.0	48.2	0.81	88.5	37.0	71.7	0.82	91.5
132X	17.2	36.90	0.81	83.5	21.5	44.8	0.80	86.3	28.8	58.1	0.81	88.9	43.0	82.4	0.82	91.5
160S	22.0	43.00	0.85	86.8	28.0	54.0	0.84	88.9	37.3	70.0	0.83	91.7	56.0	102.6	0.85	93.0
160M	25.0	49.50	0.84	87.6	31.0	59.3	0.85	88.7	42.0	78.9	0.84	91.9	63.0	116.0	0.84	93.3
160L	30.0	58.40	0.85	87.6	36.0	68.8	0.84	90.1	50.0	93.6	0.84	91.7	75.0	137.2	0.84	93.5
160P	33.0	64.20	0.85	87.6	41.0	78.7	0.84	90.0	54.0	102.6	0.85	91.5	81.0	148.6	0.84	93.7
180S	35.0	68.00	0.85	87.6	45.0	86.5	0.84	90.0	60.0	112.5	0.84	92.0	90.0	165.0	0.84	94.0
180M	46.0	89.00	0.85	88.0	60.0	114.3	0.84	91.6	80.0	151.0	0.84	92.0	120.0	220.0	0.84	94.0
180L	57.0	110.00	0.85	88.2	75.0	142.5	0.84	91.0	100.0	187.0	0.84	92.2	150.0	271.5	0.85	94.0



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