Lhp
MOTORS DRIVES
Driven by Commitment

Lets nurture the **nature**,
so that we can have a **better future...**

www.lhpmotor.com

The Mentor Speaks

Hello Friends,

To succinctly narrate the important events of last year is difficult. However the salient timeline exposes the following.

LHP has been constantly growing by 15 to 20 % for the last few years. Even during the pandemic year (20-21) we have grown by 10%. With the new financial year (21-22) beginning with a high order input, we are sure to grow at a much higher rate this year too. To achieve this we have increased our capacity by restructuring the factory layout and addition of machinery and manpower to meet the growing requirements. Along with the addition, we keep upgrading our infrastructure and machinery to be inline with global standards.

Aligning ourselves to the revised BIS standard, IS 12615:2018 , since we were ready with the designs for IE2, IE3 and even IE4 motors we could immediately validate our BIS Licences for the same. Worth being mentioned, walking abreast of time, LHP completed the development of IE4 motors and offered complete range thereof. Many prudent customers have already switched over to ordering IE4 motors.

While the complete range of Flame-proof motors in IE2, IE3 and IE4 efficiencies was long put through, we have now acquired ATEX certification up to 500 kW (355 Frame) also with an intention to cater and reach out to overseas customers.

LHP has installed fully computerized, state of art test laboratory for determining motor efficiencies with actual stray loss measurement using instrumentation with 0.05% accuracy for achieving correlation factor above 0.95% as per requirement of latest international and Indian Standard specification. It consist of seven benches of different test capacities covering entire range upto 1000 kW / 450 frame with features of regeneration of power and mixed frequency testing. In this test setup integration (combined) tests of Ex protection motors with VFD supply is also possible for determination of temperature class of Ex motors.

Noteworthy again, LHP's 2nd generation Director Mr Aditya Thakre has a lion's share in achieving this extraordinary growth.

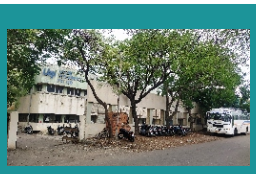
Friends, we are on a continual growth path by strengthening and increasing our dealer network, simultaneously reaching out to all the regions in the country by establishing new sales offices every year, enabling us to cater to all your standard and non-standard requirements.

With this brief preface I conclude and with good luck to the readers.

Sharad Krishna Thakre
Managing Director

Our Growth

LHP MOTORS DRIVES
Driven by Commitment



LHP Establishment and Industrial Motors manufacturing started.

1981

Award from Govt of Maharashtra for Outstanding Performance

1985

ISO 9001:1994 certification First SSI Company

1995

Rajiv Gandhi National Award winner from Bureau Of Indian Standards, Govt of India- first in SSI and motor industry

1997

Entered in Hazardous area motor manufacturing with statutory approvals form PESO / DGMS.

1998

National Award winner for Quality products from Ministry of Industries, Govt of India.

Quality System Recertified as per ISO9001:2000 Standard.

2000

Enlistment with EIL, BHEL, NTPC, Indian Railways, Indian Navy, Steel Plants, and entry in project business in various sectors. Quality System Recertified as per ISO9001:2008 Standard.

2006
2008

CE Mark certification for LHP Standard range of motors

2012

Enhancement of product range from 355L frame / 200 kw to 450Lframe / 1000kw.

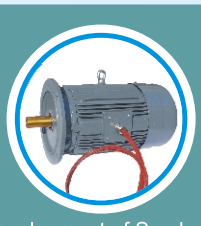
2016

Up gradation of motor test plants as per latest IEC 60034-2-1:2014 standards with actual stray load losses measurement.

2018

LHP is the proud recipient of BIS & IECEx/ATEX certification

2019



Development of Smoke Extraction Motors suitable for temp. class 250°C, 300°C & 400°C

2021

Contents

Contents

Applicable Standards

The motors manufactured conform to the following National standards and equivalent International standards.

National Standards	Title	IEC
IS : 15999 - Part 1	Rotating electrical machines rating and performance	IEC 60034-1
IS : 15999 - Part 2	Methods of determination of efficiency of rotating electrical machines	IEC 60034-2
IS : 12615	Line operated 3 Phase AC motors	IEC 60034-30
IS/IEC 60034-5	Degree of protection provided by enclosure for rotating electrical machinery	IEC 60034-5
IS : 6362	Designation of methods of cooling of rotating electrical machines	IEC 60034-6
IS : 2253	Designation for types of construction & mounting arrangements of rotating electrical machines.	IEC 60034-7
IS / IEC : 60034-8	Terminal marking & direction of rotation for rotating electrical machinery	IEC 60034-8
IS : 12065	Permissible limits of noise levels for rotating electrical machines	IEC 60034-9
IS : 12075	Mechanical vibration of rotating electrical machines with shaft height 56 mm & higher measurement, evaluation & limits of vibration severity.	IEC 60034-14
IS : 1231	Dimensions of three phase foot mounted induction motors	IEC 60072-1
IS : 2223	Dimensions of flange mounted induction motors	IEC 60072-1
IS : 8223	Dimensions and output series for rotating electrical machines	IEC 60072-2
IS : 1271	Thermal evaluation and classification of electrical insulation	IEC 60034-11
IS/IEC 60079-0	Explosive atmospheres - Part -0	IEC 60079-0
IS/IEC-60079-1	Explosive atmospheres equipment protection by flame-proof enclosures "d"	IEC 60079-1
IS/IEC : 60079-7	Explosive atmospheres : Equipment protection by increased safety "e"	IEC 60079-7
IS/IEC : 60079-15	Electrical apparatus for exclusive gas atmospheres : Construction, Test and marking of type of protection "nA" electrical apparatus	IEC 60079-15

Standard Motors : Output Summary

Frame output summary for LHP Three Phase Induction Motor

Pole-wise Frame Size										
Output (kW/HP)	Standard, Brake & Non-sparking Induction Motor				Crane Duty Motor		Flame Proof Motor			
	2 Pole	4 Pole	6 Pole	8 Pole	4 Pole	6 Pole	2 Pole	4 Pole	6 Pole	8 Pole
0.12/0.16	63	63	71	--	--	--	63	63	71	--
0.18/0.25	63	63	71	80	--	--	63	63	71	80
0.25/0.33	63	71	71	80	--	--	63	71	71	80
0.35/0.50	71	71	80	90S	71	71	71	71	80	90S
0.55/0.75	71	80	80	90L	71	80	71	80	80	90L
0.75/1.00	80	80	90S	100L	80	80	80	80	90S	100L
1.10/1.50	80	90S	90L	100L	80	90S	80	90S	90L	100L
1.50/2.00	90S	90L	100L	112M	90S	90L	90S	90L	100L	112M
2.20/3.00	90L	100L	112M	132S(112M)	90L	100L	90L	100L	112M	132S
3.70/5.00	100L	112M	132S	160M(132M)	100L	112M	100L	112M	132S	160M
5.50/7.50	132S(112M)	132S	132M	160M	112M	132S	132S	132S	132M	160M
7.50/10.00	132S	132M	160M	160L	132M	132M	132S	132M	160M	160L
9.30/12.50	(132M)	(160M)	(160L)	180L	(132M)	(160M)	(132M)	(160M)	(160L)	180L
11.00/15.00	160M	160M	160L	180L	160M	160M	160M	160M	160L	180L
15.00/20.00	160M	160L	180L	200L	160M	160L	160M	160L	180M	200L
18.50/25.00	160L	180M	200L	225S	160L	180L	160L	180M	200L	225S
22.00/30/00	180M	180L	200L	225M	180L	200L	180M	180L	200L	225M
30.00/40.00	200L	200L	225M	250M	200L	225M	200L	200L	225M	250M
37.00/50.00	200L	225S	250M	280S	225S	250M	200L	225S	250M	280S
45.00/60.00	225M	225M	280S	280M	225M	280S	225M	225M	280S	280M
55.00/75.00	250M	250M	280M	315M	250M	280M	250M	250M	280M	315S
75.00/100.00	280S	280S	315S	315M	280S	315S	280M	280S	315S	315M
90.00/120.00	280M	280M	315M	315L	280M	315M	280M	280M	315M	315L
110.00/150.00	315S	315S	315L	315L	315S	315M	315S	315S	315M	315L
125.00/170.00	315M	315M	315L	355L	315M	315L	315M	315M	--	--
132.00/180.00	315M	315M	355L	355L	315M	315L	315M	315M	315L	315L
150/200	315L	315L	355L	355L	315L	315L	315L	315L	315L	315L
160.00/215.00	315L	315L	355L	355L	315L	355L	315L	315L	--	--
180.00/240.00	315L	315L	355L	355L	315L	355L	315L	315L	--	--
200.00/270.00	315L	315L	355L	355L	315L	355L	--	--	--	--
225.00/300.00	355L	355L	355L	–	355L	355L	–	--	--	--
250.00/335.00	355L	355L	355L	355L/K	355L	355L	–	–	–	–
280/375	355L	355L	355L/K	355L/K	355L	355L	–	–	–	–
315.00/425.00	355L	355L	355L/K	355L/K	355L	–	–	–	–	–
355/475	355L/K	355L	355L/K	400L	355L	–	–	–	–	–
400/535	355L/K	355L/K	355L/K	400L	–	–	–	–	–	–
450/600	355L/K	355L/K	400L	400L	–	–	–	–	–	–
475/635	355L/K	355L/K	400L	450M	–	–	–	–	–	–
500/670	355L/K	355L/K	400L	450M	–	–	–	–	–	–
560/750	400L	400L	*400L	450M	–	–	–	–	–	–
630/845	400L	400L	450M	450L	–	–	–	–	–	–
710/950	--	400L	450M	–	–	–	–	–	–	–
800/1070	--	450M	450L	–	–	–	–	–	–	–
900/1205	--	450M	–	–	–	–	–	–	–	–
1000/1340	–	450L	–	–	–	–	–	–	–	–

Note : Frame wise ratings are as per IS standards except those ratings in bracket. These are as per LHP standard.

Vacuum pressure impregnation as a standard feature for every motor

Mechanical features for Standard IE2, IE3 & IE4 motors

Sr. No.	Features	Standard	Optional
1	Frames	Motor frames from 63 to 112 frame are made of Aluminum pressure die cast bodies & 132S to 450 frames are made of cast iron or M.S. fabricated.	Motors frames offered in Al. pressure die cast can be offered in cast iron & M.S. Fabricated also.
2	End Covers	63 to 112 frames are made of Aluminum pressure die cast. All end covers are with integral bearing housing bores.	63 to 112 frames can be offered in cast iron & M.S. Fabricated also..
3	Flanges- D Type/C Type	63 to 112 frames flanges are in Aluminum PDC/GDC. All flanges are with integral bearing housing bores. 100 to 450 frames flanges are in CI or M.S. fabricated.	63 to 112 frames flanges can be offered in CI & M.S. Fabricated. Any non-standard flanges can be offered as per customer's requirement.
4	Terminal Box	Construction : 63 to 112 frame - Aluminum PDC/GDC/Cast Iron 132 to 180 frame - Pressed sheet metal/Cast Iron/M.S. Fabricated 200 to 355 frame- Pressed sheet metal/Cast Iron/M.S. Fabricated	Terminal box with specific material & non-standard design can be offered on demand.
5	Cable Entry Position	All T. Boxes can be rotated in a step of 90° through 360° for desired direction of cable entry. As a standard assy. cable entry will be towards NDE (Fan cover side) or as per GAD submitted.	Any position as per customers requirement can be offered.
6	T.Box Position	Please see dimensional table for T.Box position.	As per customer's requirement.
7	Cable Gland	Cable Gland holes (cable entry) are metric threading. For sizes & no. of entries please refer to dimensional table.	Cable entry with other threading like PG type/B.S. Cond. type can be offered on demand.
8	Rotor	Entire range of motors is fitted with dynamically balanced aluminum die cast/copper brazed squirrel cage rotors.	Copper Rotor can be given on demand.
9	Balancing	Rotors are dynamically balanced with a half key in the shaft extension as per ISO:1940 Part II, Grade 2.5	As per customer's specific requirement.
10	Shaft	Motor shafts are made of Carbon Steel 40C8/45C8 as per IS:2073 OR as per BS 970 EN 8/EN8D and dimensions as per IS:1231 . All shafts have threaded center hole as per DIN-332 standard. Key & keyways on shaft are made as per IS:2048	Shaft with other material like AISI-400, AISI-300, En 24 with heat treatment can be offered. Non-std. keys & keyways can be offered.
11	Bearings	63 to 225M frame motors have double shielded deep groove ball bearing (single row). Pre-lubricated for life and 250 to 355L frames motors have open type deep groove ball Bearing on both end (See Table No. A) with re-greasing facility.	Angular Contact ball bearings, taper roller bearings, spherical roller bearings, cyl. roller bearings, Insulated bearings can be offered. In 63 to 225m frame open bearing can be given on demand.
12	Lubrication	63 to 112 frame motors are with medium temp. pregreased, 132 to 225 frame motors are with high temperature pre-greased bearings. Online greasing arrangement is provided for motors in 250 and above frames. with high temperature grease.	Motors with re-greasing arrangement in 100 to 225 frame can be offered as per customer's requirement.
13	V Ring Seals	63 to 225 frame are with V ring seals.	Motors with oil seals can be offered.
14	Oil Seals	250 to 450 frame are with Oil Seal or felt	63 to 225 frame motor with oil seal can be given
15	Mounting Arrangement as per IS/IEC 60072-1 & IEC 60072-2	63 to 225 frames motors are suitable for both vertical and horizontal mounting arrangement Foot mounting motors are suitable for : B3, B6, B7, B8, V5 & V6 Flange (D Type Flange) Mounting motors : B5, VI, V3, B35, V15 & V36 Flange (C Type Flange) Mounting motors : B14, V18, V19, B34, V58 & V69 250 to 450 frame std. motors are suitable for horizontal mounting only (B3,B6,B37,B8,B5 & B35) (Refer 1.6)	For vertical mounting motors in 250 to 450 frame contact LHPL.
16	Degree of Protection	IP : 55 as per IS/IEC 60034-5 (for more details refer Annex-I	IP :44, IP : 54, IP : 56, IP57, IP:65, IP:66, IP67, IP68 can be given
17	Noise Level	Noise level of motors conform to IS:12065 specifications. (See Table No. B)	Motors with low noise level can be offered on demand.

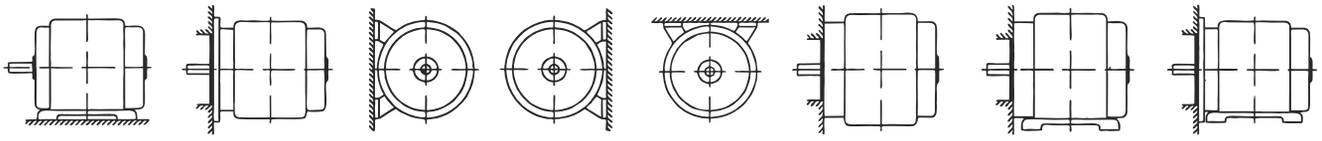
Mechanical features for Standard IE2, IE3 & IE4 motors

Table No.: 01

Sr. No.	Features	Standard		Optional
18	Vibration Level/Severity	Vibration levels are maintained as per normal class of IS : 12075. (See Table No. 5)		Precision class of vibration can be offered as per customer's requirement.
19	Paint (a)	Flame-proof , Non-sparking and Increased safety	Anti Corrosive Epoxy Paint of RAL 7015 Slate Grey Shade.	Other types of Colors & Shades also can be given as per standards.
	(b)	Cooling Tower motors	Anti Corrosive Epoxy Paint Blue M & P	
	(c)	Std. IE2 & All other types of motors	Anti Corrosive Polyurethine Paint of RAL 7015 Slate Grey Shade.	
	(d)	All premium eff. IE3 & IE4 motors	Anti Corrosive Polyurethine Paint of RAL 6024.	
20	Cooling	All motors are Totally Enclosed Fan Cooled (TEFC-IC411 as per IS:6362, IC4A1A1 as per IEC 60034-6). The cooling is effected by self driven, bi-directional centrifugal fan protected by fan cover. Following cooling types can be provided on demand. • Natural ventilation (TESC or TENV (IC410) • Forced cooling for frame sizes 71 and above (IC 416).		Any other types of cooling arrangements as per customer's requirement can be given.
21	Direction of Rotation	All motors are suitable for bi - directional rotation or as indicated in datasheets & GAD.		Unidirectional can be supplied.
22	Lifting arrangement	All motors with frame size 100 and above are provided with lifting hooks. When two or more hooks are provided, all hooks to be used simultaneously for lifting the motor.		----------
23	Packing	Motors up to 132 frame are packed in EPS and corrugated boxes. Wooden packing boxes or wooden pallets with corrugated box are provided for higher frame size. [sea worthy / export packing case for home market (without fumigation certificate) is also available on demand.]		Any multiple product packing as per customer's requirement can be given & for Export [sea worthy / export packing case for home market (without fumigation certificate) is also available on demand.] .

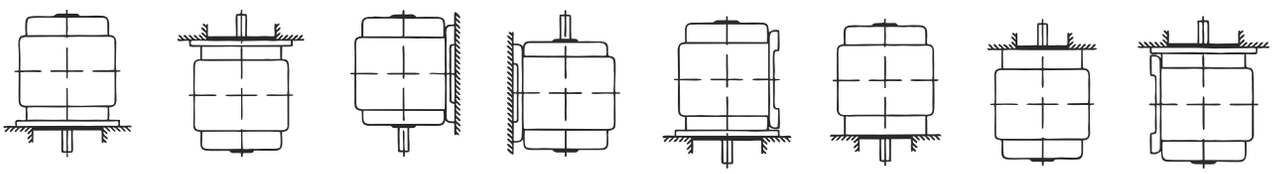
1.4 Mounting Positions -

Horizontal Mounting



B3 B5 B6 B7 B8 B14 B34 B35

Vertical Mounting



V1 V3 V5 V6 V15 V16 V19 V36

Mechanical features for Standard IE2, IE3 & IE4 motors

Table No.: 02 Frame wise bearing sizes
(for non flame-proof motors)

Frame Size	Bearing No.		
	Pole	DE	NDE
56	2 to 8	6201.2Z	6201.2Z
63-Al	2 to 8	6201.2Z	6201.2Z
63-Cl	2 to 8	6201.2Z	6201.2Z
71-Al	2 to 8	6203.2Z	6203.2Z
71-Cl	2 to 8	6203.2Z	6203.2Z
80-Al	2 to 8	6204.2Z	6204/6203.2Z
80-Cl	2 to 8	6204.2Z	6204/6203.2Z
90-Al	2 to 8	6205.2Z	6205
90-Cl	2 to 8	6205.2Z	6205
100-Al	2 to 8	6206.2Z	6206.2Z
100-Cl	2 to 8	6206.2Z	6206.2Z
112-Al	2 to 8	6306.2Z	6306.2Z
112-Cl	2 to 8	6306.2Z	6206.2Z
132	2	6208.2Z.C3	6208.2Z.C3
	4 to 8	6308.2Z.C3	6208.2Z.C3
160	2	6209.2Z.C3	6209.2Z.C3
	4 to 8	6309.2Z.C3	6209.2Z.C3
180	2	6210.2Z.C3	6210.2Z.C3
	4 to 8	6310.2Z.C3	6210.2Z.C3
200	2	6212.2Z.C3	6212.2Z.C3
	4 to 8	6312.2Z.C3	6212.2Z.C3
225	2	6213.2Z.C3	6213.2Z.C3
	4 to 8	6313.2Z.C3	6312.2Z.C3
250	2	6213.2Z.C3	6213.2Z.C3
	4 to 8	6314.2Z.C3	6214.2Z.C3
280	2	6316.C3	6316.C3
	4 to 8	6318.C3	6316.C3
315	2	6218.C3	6218.C3
	4 to 8	6319.C3	6218.C3
355	2	6218.C3	6218.C3
	4 to 8	6322.C3	6319.C3
400	2	6218.C3	6218.C3
	4 to 8	6324.C3	6322.C3
450	2	6322.C3	6322.C3
	4 to 8	6326.C3	6322.C3

Note : L10 bearing life is 40000 hrs. for directly coupled loads only through flexible couplings. For belt pulley drives applications contact LHP for selection of bearing.

Table No.: 03 Limiting Mean Sound Power Level Lw in dB (A) for air-borne noise emitted by rotating electrical machines as per IS:12065.

Protection		IP	IP	IP	IP	IP	IP
Enclosure		55	55	55	55	55	55
Ratings in kW		Rated Speed (rev./min.)					
Above	Up to	960 & below	961-1320	1321-1900	1901-2360	2361-3150	3150-3750
--	1.1	76	79	80	83	84	88
1.1	2.2	79	80	83	87	89	91
2.2	5.5	82	84	87	92	93	95
5.5	11	85	88	91	96	97	100
11	22	89	93	96	98	101	103
22	37	91	95	97	100	103	105
37	55	92	97	99	103	105	107
55	110	96	101	104	105	107	109
110	220	100	104	106	108	110	112
220	630	102	106	109	111	112	114

Table No.: 04 Diameter of shaft extension run out of motors

Over	Up to	Normal	Precision Class
0	10	0.030	0.015
10	18	0.035	0.018
18	30	0.040	0.021
30	50	0.050	0.025
50	80	0.060	0.030
80	120	0.070	0.035

Concentricity of spigot diameter and perpendicularily of mounting surface of flange with respect to shaft

Flange No.	Spigot Dia.	Normal Class	Precision Class
F65	50	0.080	0.040
F75	60	0.080	0.040
F85	70	0.080	0.040
F100	80	0.080	0.040
0115	95	0.080	0.040
F130	110	0.100	0.050
F165	130	0.100	0.050
F215	180	0.100	0.050
F265	230	0.100	0.050
F300	250	0.125	0.063
F350	300	0.125	0.063
F400	350	0.125	0.063
F500	450	0.125	0.063
F600	550	0.160	0.080

Mechanical features for Standard IE2, IE3 & IE4 motors

Table No.: 05 Vibration Levels (Refer IS:12075)

Shaft center HT, H in mm	63 to 132		160 to 225		Above 225	
Range of speed	600 to 1500	Above 1500 & up to 3000	600 to 1500	Above 1500 & up to 3000	600 to 1500	Above 1500 & up to 3000
class of vibration severity	RMS value of vibration velocity, mm/s					
Normal	1.8	1.8	1.8	1.8	2.8	4.5
Precision A	0.71	0.71	0.71	1.12	--	--
Precision B	0.45	0.45	0.45	0.71	--	--
Precision C	0.28	0.28	0.28	0.45	--	--

	Vibration Severity											
Shaft center Ht, H in mm	63 to 132				160 to 225				Above 225			
Pole Speed, rpm	8 750	6 1000	4 1500	2 3000	8 750	6 1000	4 1500	2 3000	8 750	6 1000	4 1500	2 3000
Class of vibration serverity	RMS value of vibration displacement, Microns											
Normal	64	48	32	16	64	48	32	25	100	75	50	42
Precision A	24	18	12	6	24	18	2	10	--	--	--	--
Precision B	16	12	8	4	16	12	8	6	--	--	--	--
Precision C	10	8	5	2.5	10	8	5	4	--	--	--	--

Table No.: 06 Maximum Cable entry hole cable O.D. In (mm) accommodation in Terminal Box for Standard Motors (Non FLP)

Frame Size	Max. Cable Entry Hole Size (non-flp)	Suitable Cable O.D. Range	Recommended Cable size cross sec. Area in mm^2
63	M20, 1No.	DIA. 7.0 - 14.0	6
71	M20, 1No.	DIA. 7.0 - 14.0	
80	M20, 1No.	DIA. 7.0 - 14.0	
90	M20, 2Nos.	DIA. 7.0 - 14.0	16
100	M32, 1No. & M20 1No.	M20- DIA. 7.0 - 14.0	
		M32- DIA. 10.0 - 21.0	
112	M32, 1No. & M20 1No.	M20- DIA. 7.0 - 14.0	35
		M32- DIA. 10.0 - 21.0	
132	M25 (2Nos.)	DIA. 9.0 - 16.0	
160	M25 FOR M.S. BOX (2 Nos.) & M50 FOR C.I. BOX (2Nos.)	M25- DIA. 9.0 - 16.0	
		M50- DIA. 21.0 - 34.5	
180	M25 For M.S. Box (2 Nos.) & M50 FOR C.I. Box (2Nos.)	M25- DIA. 9.0 - 16.0	95
		M50- DIA. 21.0 - 34.5	
200	M63, 2Nos.	DIA.- 30.0 - 44.5	
225	M63, 2Nos.	DIA.- 30.0 - 44.5	
250	M50, 2Nos. & M63, 1No.	M50- DIA. 21.0 - 34.5	185
		M63- DIA. 30.0 - 44.5	
280	M50, 2Nos. & M63, 1No.	M50- DIA. 21.0 - 34.5	
		M63- DIA. 30.0 - 44.5	
315	M63, 2Nos. & M80, 1No.	M63- DIA. 30.0 - 44.5	
		M80- DIA. 42.0 - 57.0	
355	M75, 2Nos.	M75- DIA. 60.5 - 66.0	300
355L/K	M75, 2Nos.	M75- DIA. 60.5 - 66.0	400
400M/L	M75, 4Nos.	M75- DIA. 60.5 - 66.0	400
450M/L	M75, 6Nos.	M75- DIA. 60.5 - 66.0	400

Note : Customer should specify exact cable OD in mm to select proper cable entry

Permissible radial/axial load for Standard Motors

The radial load for a given motor depends on the type and size of pulley/pinion chosen and type of driven machine. Radial load can be calculated using the following formula.

$$p = \frac{\alpha \times 973 \times kW}{RPM \times D/2} + W$$

Where, α = Belt Factor — 2 for V belts, 3for flat belts

kW = Output of the motor in kW.
RPM = Speed of the motor in Rev./Min.
D = Dia. of pulley in meters.
W = Weight of the pulley in kg.

It is recommended that the mounting of pulley/pinion be such that the load acts at the middle of extension of the shaft. For radial loads other than those recommended in Table No. 07, customers are advised to consult LHP for maximum allowable loads.

Table No. - 07
Permissible Radial and Axial load on Motor
(At the center of extension (Std.) including weight of the pulley)

Frame Size	Synchronous RPM & Radial Load in Kg.				Permissible Axial Load in Kg.	Recommended Pulley Size Dia.x Width (D x W) in mm.
	3000	1500	1000	750		
63	30	30	30	30	10	52 x 30
71	35	35	35	35	12	60 x 40
80	50	60	60	60	20	100 x 50
90	55	55	65	75	25	125 x 60
100	70	80	80	100	35	150 x 80
112	95	110	110	110	40	200 x 100
132	150	175	200	210	50	225 x 125
160	260	300	325	350	70	275 x 140
180	325	350	400	400	80	315 x 160
200	425	500	575	575	100	355 x 200
225	450	600	650	650	100	400 x 200
250	600	800	900	900	110	400 x 200
280	650	1600	1800	1800	120	450 x 250
315	700	1800	1900	2000	130	500 x 280
355	600	2000	1500	1600	150	550 x 300
400	590	1200	1390	1540	350	Refer to LHP
450	Refer to LHP					

Electrical Features

Sr. No.	Features	Standard	Optional
1.	Supply voltage and frequency	415 ± 10% and 50 Hz ± 5% with combined variations of ± 10%	Voltage up to 690V AC and frequency from 5Hz to 120 Hz
2.	Winding and insulation class	Core material is of low loss magnetic silicon steel. Winding wound with dual coat class 'H' copper wire and insulating material and vacuum impregnated with class 180 (H) impregnating resin.	High grade steel and insulation class H can be given on request. And Epoxy Gel coat can be provided on winding.
3.	Rotor	Aluminum die cast rotor dynamically balanced with half key to have low vibration.	Copper die-cast brazed Rotors can be given on request.
4.	Starts	Starting time 5 to 7 seconds for two consequent starts from hot condition.	Other requirement can be given on demand. Customer shall specify GD^2 of load, torque speed curve of equipment and method of starting.
5.	Duty	Continuous (S1)	Other duties S2 to S10 can be given on request
6.	Starting method	Up to 100 Frame - DOL Starting (3 Pin T. Block) From 112 & above Frame - Star Delta starting (6 pin T. Block) * However, motors above 132 Frame can be used for DOL starting by making suitable connection.	Up to 112 Frame - Start delta (6 pin T. Block)
7.	Earthing	Provided on frame and inside the terminal box	Can be given as per requirement.
8.	Overload	Withstood 160% of rated torque for 15 seconds. Withstood 150% of rated current for 120 mins.	Other requirement can be given on request.
9.	Service factor	1.0	Other service factor can be given on request
10.	Accessories	----	BTD, Thermistor/space heater, Thermotrip /Winding RTD'S can be given on request
11.	Overspeed	Designed to withstand 120% of rated torque speed for 2 min.	Other ranges can be offered on demand.
12.	Altitude	Designed for altitudes upto 1000 mtrs above MSL	Higher altitudes can also be offered on demand.

Permissible temperature rise :
Standard LHP motors are manufactured with class F insulation and temperature rise restricted to class B insulation.

Class of Insualtion	Max.permissible Temp. Limit °C	Max. Permissible Temp. rise for windings at Amb. Temp. in °C			
		40	45	50	60
B	130	80	75	70	60
F	155	105	100	95	85
H	180	125	120	115	105

Derating factors :
The rating of motor is reduced when ambt. temperature exceeds 50°C and/or the altitude of the site is more than 1000 meters above sea level.

Ambient temp.	% output of motor	Altitude above sea level meters	% output of motor
40°C	100%	1000	100%
45°C	100%	1500	95%
50°C	100%	2000	90%
55°C	85%	2500	84%
60°C	78%	3000	78%
65°C	70.5%	3500	75%
		4000	70%

Guidelines for Motors Protection fuse rating

The motors are to be provided with back up fuse protection of suitable ratings in addition to starters (D.O.L. or Star/Delta) being used to protect motors from overload and under voltage. The table given below gives general guidelines for selection of fuse ratings.

Table No. - 08 Fuse Rating

D.O.L. Starting

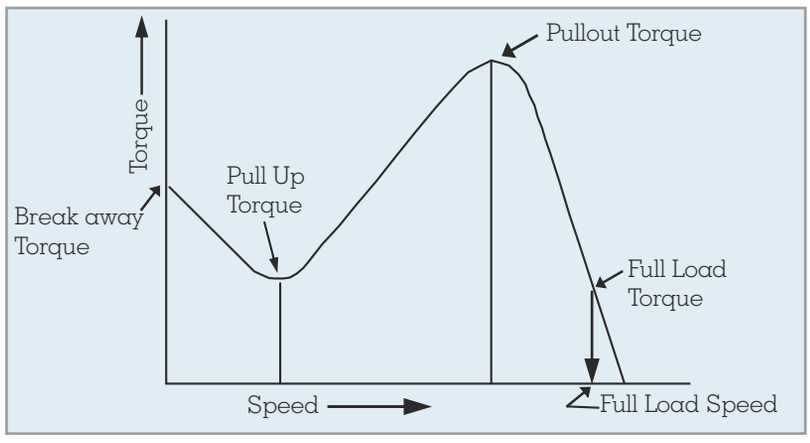
O/P Rating	KW	0.37	0.55	0.75	1.1	1.5	2.2	3.7	5.5	7.5	9.3	11	15	18.5	22	30	37	45	55	75	90
	HP	0.5	0.75	1	1.5	2	3	5	7.5	10	12.5	15	20	25	30	40	50	60	75	100	125
Average Value in AMPS		1	1.3	1.9	2.6	3.7	4.8	7.8	11.2	15	18	21	27	33	39	53	65	78	96	131	156
Fuse Rating		4	6	6	6	10	16	16	25	25	32/35	32/35	50	63	63	100	100	160	160	200	250
Bi-Metal Relay Range		0.5-1	1-2	1-2	1.5-3	2-4	3-6	6-12	6-12	10-16	18-24	18-24	16-32	24-45	24-45	32-63	50-90	50-90	70-110	90-135	140-170

Star-Delta Starting

O/P Rating	KW	2.2	3.7	5.5	7.5	9.3	11	15	18.5	22	30	37	45	55	75	90	110	132
	HP	3	5	7.5	10	12.5	15	20	25	30	40	50	60	75	100	125	150	180
Full Load Current																		
Line		4.8	7.8	11.2	15	18	21	27	33	39	53	65	78	96	131	156	185	220
Phase		2.8	4.5	6.5	9	11	12.7	16.8	20.2	23.2	30.6	37.5	46.4	54.5	74	88	107	127
Overload Relay Range Fuse Rating		1.5-3	3-6	4-8	6-12	6-12	10-16	18-24	18.24	12.24	16-32	24-45	32-63	32.63	50-90	80-100	70-110	90-135
		10	16	16	25	25	25	50	50	63	63	80	100	125	160	200	200	250

1. The abov eare recommended values for H.R.C. delayed action fuse for direct on line starting

Speed Torque Characteristics



If the voltage varies from its rated value within the permissible limits, the starting, pull-up and pull-out torques vary as the square of the voltage.

Starting time (Ta):

The time taken by the motor to achieve its rated speed with load connected. This Starting Time should be less than the Thermal Withstand Time of motor.

Calculation of Starting Time (Ta)

$$Ta = \frac{K \times \text{Total } GD^2}{\text{Output} \times (K1-K2)}$$

K = 24.66 for 2 pole motor
= 6.166 for 4 pole motor
= 2.74 for 6 pole motor
= 1.541 for 8 pole motor

Total GD^2 = Motor GD^2 + Load GD^2

Output in kW.

k1 = starting torque/full load torque

k2 = load torque x k3 / full load torque

k3 = 0.3 for fan & other centrifugal load
= 1 for constant torque

Starting Time (Ta) varies inversely as square of voltage

TWT & tE Calculation for safe & hazardous area motors

Rate of temperature rise

$$= \frac{K \times Tstg \times kW\ Rating}{W \times S}$$

$$= \frac{0.75 \times 2.0 \times 75}{23.6 \times 0.893}$$

= 5.3 °C/Sec

Tstg = Starting Torque in PU of FLT
K = Constant
S = Specific heat of rotor conductor in Joules/kg/°C
W = Weight of rotor material in kg

Thermal withstand time (Hot)

$$= \frac{Max\ Allowable\ Rotor\ Temperature - Operating\ Temperature}{Rate\ of\ temp\ rise}$$

$$= \frac{200 - 110}{5.3} = 16.9\ Sec.$$

Committed values of thermal withstand time at rated voltage are

200	tE/T3<	17	Sec
300	tE/T2<	36	Sec
450	tE/T1<	64	Sec

TWT FOR STATOR

lstg x j x 0.0065 x 0.85

6.57 6.27 α b

$\alpha j \hat{} 2b = 9.3756$

Class = 200 For T3
210 tE/T3/T2/T1< 10 Sec

Ref. : IS/IEC 60079-7:2015

j = Starting current density in Amps /mm^2
α = Coefficient in $K/(A/mm^2)^2 * S$
b = 0.85 reduction factor which takes into account the heat dissipation from impregnated windings

What is VVVF?

Background

Motors which are fed through VVVF drive supply are subjected to rapidly increasing voltage i.e.(high dv/dt). Due to coupling effect of the length of the supply cables coming from the drive, the peak voltage at the motor terminals can as high as 1170 V in case of 415V rates motors.

i.e. : $3 \times \sqrt{2} / \pi \times 415 \times 1.1 \times 3 = 1850V$

The rise of voltage is rapid and depends upon the switching frequencies of IGBT's. These are in the range of 100Hz to 16kHz. Due to the fast rise times of voltage, the voltage drop across 1^{st}. coil from terminals is very high and it can be almost 90% of the total phase voltage.

Standard insulation scheme with "Special vacuum impregnation process" is suitable for VVVF drive application up to supply voltage of 500V.

In some application with VVVF drive where the supply voltage is greater than 500V, the winding has to be designed to withstand additional protection in insulation. This insulation system is called as "Special Insulation Scheme". However this execution is limited for voltage up to 690V only ,the peak voltage at the motor terminals can as high as 1900 V in case of 690V rates motors.

i.e.: $3 \times \sqrt{2} / \pi \times 690 \times 1.1 \times 3 = 3070V$

What is a VVVF?

A VVVF is a variable frequency drive. It receives electrical energy from three phase or single phase ac supply. It converts the ac supply to a DC. Then through various switching techniques it inverts DC supply to a three phase variable frequency and variable voltage supply.

Load Characteristics

- When using a VVVF-motor in an application it is necessary to know torque and speed characteristics of the load.
- Typically there are three types of loads
- constant torque: conveyor , cranes , positive displacement pump are the example of constant torque application
- Variable torque: centrifugal pump , fan , blower, are the example of variable torque application
- Constant HP: winders , unwinders , drilling machine & certain mixers are the example of variable torque application

*Advantages of using of VVVF on Motors

- Speed & Torque control: Stator winding of an induction motor develops a rotating magnetic field. The rotating field rotates at constant speed called synchronous speed given by 120x frequency / no.of poles This field induces currents in the rotor which produce torque and rotor speeds up close to synchronous speed. As VVVF changes frequency it changes synchronous speed, hence speed of the rotor.
- Heavy load inertia starting (High GD^2) : Motor does not get heated up during starting. So there is no limit on number of starts and stops and also connected Gd^2.

What is VVVF?

Load Characteristics

- High starting torque & low starting current requirement: The current setting of VFD is to be adjusted as per starting torque desired. For example if starting torque of 150% is desired the current setting is to be adjusted to 250%.
- High efficiency at low speeds.
- High p.f. even at low speeds.
- Vfd motor replaces with advantage DC motors, and slip ring motors.

Major Issues with VVVF.

- It produces voltage spikes that may cause premature failure of windings.
- It produces harmonics that may spoil power quality & overheats motor winding.
- It produces a shaft current that erodes shafts and bearings.
- Motor heating at lower speeds of operation.

How to overcome major issues with VVVF ?

- To withstand voltage stresses insulation levels are improved by using dual coated class H (180^0C) enamel wires, by increasing thickness of insulation, by sealing electrical joints in the winding, by providing protective coating on overhang portion of winding.
- Harmonic effects are reduced by using suitable filters externally or inbuilt.
- Shaft currents are prevented by using insulated bearings in case of higher kW motors.
- If motor is run continuously at lower speeds and at rated torques either bigger frame is selected with deration or independent cooling motor is provided.

Can Standard Motors be used on VVVF?

- Yes, provided speed is not less than 60 % of rated speed or torque varies as square of speed as in case of fan loads.

Can Hazardous Area Motors be used on VVVF?

- Yes, combined temperature rise test required on motor and VVVF being used to determine temperature class of motor. Accordingly statutory approval to be obtained to specify operation range & type of application.

Please refer Lhp for such requirements.

Low voltage motors in variable speed operation

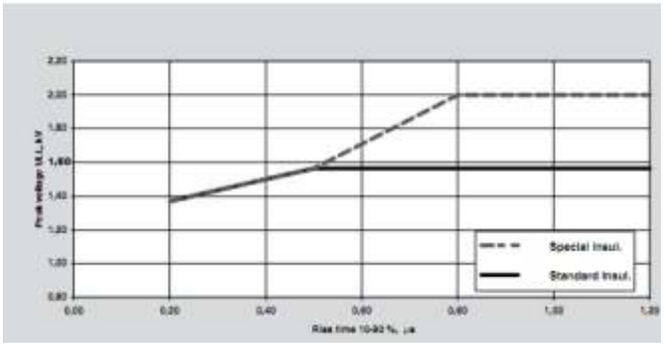
Motors used in frequency converter supply selected frequency converter must be followed to ensure safety and suitability of the motor.

Additional information may be required by Lhp to decide on the suitability for some machine types used in special applications or with special design modifications.

Winding insulation : -
Variable speed drives cause higher voltage stresses than the Conventional sinusoidal supply on the winding of the motor and therefore the winding insulation of the motor as well as the filter at the converter output must be dimensioned/Coupling according following instructions.

1) Phase to phase voltages

The maximum allowed phase to phase voltage peaks at the motor terminal as a function of the rise time of the pulse.



The highest curve "LHP Special Insulation" applies to motors with a special winding insulation for frequency converter supply.

2) Phase to ground voltages

The allowed phase to ground voltage peaks at motor terminals are:

1. Standard Insulation 1300 V peak.
2. Special Insulation 1800 V peak.

3) Selection of winding insulation for

Table No. 12

Motor Type	Nominal AC Line voltage	Motor insulation requirements
LHP Motors (manufactured from beginning of 1981)	V_N < 415 V	Standard insulation system.
	415 ≤ V_N ≥ 690 V	Standard insulation and dv/dt filters or special insulation system
Random Wound Motors	V_N < 415 V	Standard insulation system must withstand Vpk = 1300 V
	415 < V_N ≥ 500 V	If motor insulation system withstands Vpk = 1600 V and 0.2 µs rise time, a dv/dt filter is not needed. With a dv/dt filter at the output of the drive, motor insulation system must withstand Vpk= 1300 V.
	415 < V_N ≥ 600 V	Motor insulation system withstands Vpk = 1600 V, A dv/dt filter is must be used at output of the drive.
	600 < V_N ≥ 690 V	Motor insulation system must withstands Vpk = 1800 V, A dv/dt filter is must be used at output of the drive.
Form wound Motors	V_N ≥ 690 V	If motor insulation system withstands Vpk = 2000 V and 0.3 µs rise time , no dv/dt filter is needed

4) Selection of winding insulation with converters

The voltage stresses must be limited below accepted limits. Please contact the system supplier to ensure motor suitability . The influence of possible filters must be taken into account while dimensioning the motor.

5) Thermal protection

It is recommended to use PTC thermistors, connect those to the frequency converter by appropriate means.

6) Bearing currents

1. Insulated bearings or bearing constructions, common mode filters and suitable cabling and grounding methods must be used accordingly.

Nominal Power (Pn) and / or Frame size (IEC)	Preventive measures
Pn < 100 kW	No actions needed
Pn ≥ 100 kW OR IEC 315 ≤ Frame size ≤ IEC 355	Insulated non-drive end bearing
Pn ≥ 350 kW OR IEC 400 ≤ Frame size ≤ IEC 450	Insulated non-drive end bearing And Common mode filter at the converter

Insulated bearings which have aluminum oxide coated inner and/or outer bores or ceramic rolling elements, are recommended. Aluminum oxide coatings shall also be treated with a sealant to prevent dirt and humidity penetrating into the porous coating. For the exact type of bearing insulation, see the motor's rating plate. Changing the bearing type or insulation method without LHP's permission is prohibited.

2. Elimination of bearing currents with converters-

The user is responsible for protecting the motor and driven equipment from harmful bearing currents, but their effectiveness cannot be guaranteed in all cases.

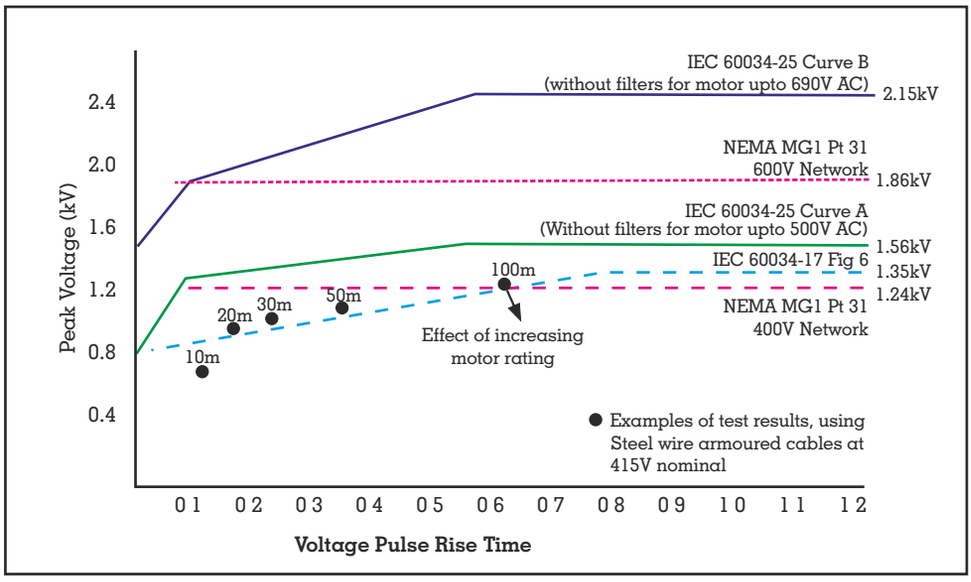


Figure 21 limit curves of admissible motor terminal peak voltage for a.c. Motors up to and including 500V a.c. (Curve A) and from >500V a.c. to 690V a.c. (Curve B)

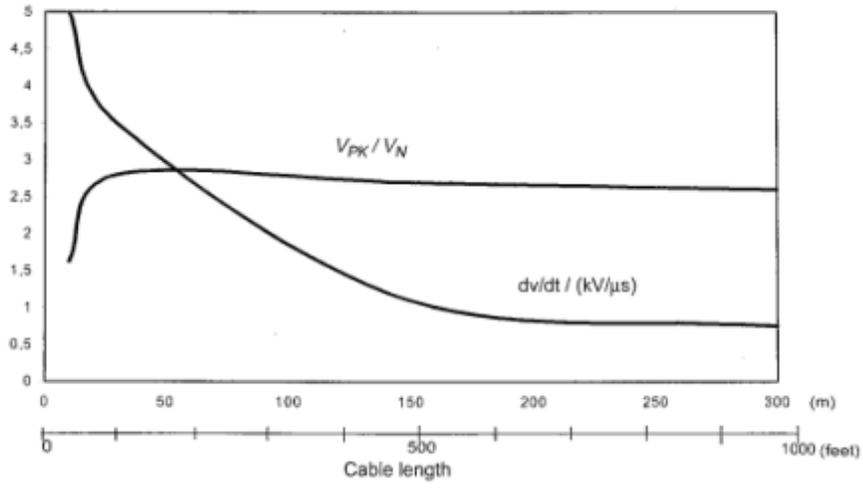
7) Cabling, grounding and EMC

To provide proper grounding and to ensure compliance with any applicable EMC requirements, motors above 30 kW shall be cabled by shielded symmetrical cables and EMC glands, i.e. cable glands providing 360° bonding. Also for smaller motors symmetrical and shielded cables are highly recommended.

Make the 360° grounding arrangement at all the cable entries. Twist the cable shields into bundles and connect to the nearest ground terminal/bus bar inside the terminal box, converter cabinet, etc.

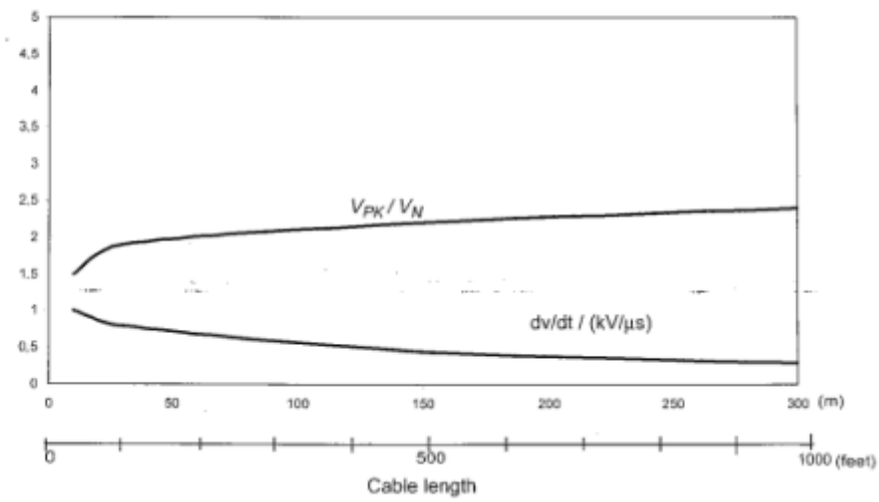
Without Filter

Below is a diagram of V_{PK} and *dv/dt* as a function of cable length when no dv/dt filter is used.



With dv/dt Filter

Below is a diagram of V_{PK} and *dv/dt* as a function of cable length with dv/dt filter at the output of the ACx 600.



For motors of frame size IEC 280 and upward, additional potential equalization between the motor frame and the driven equipment is needed, unless both are mounted on a common steel base. In this case, the high frequency conductivity of the connection provided by the steel base should be checked.

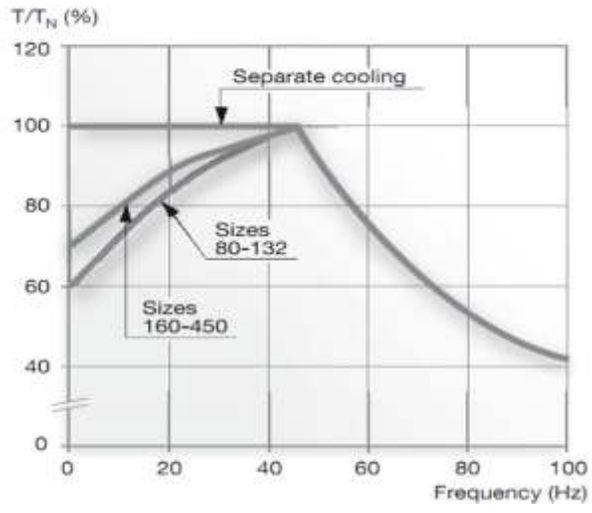
8) Operating speed-

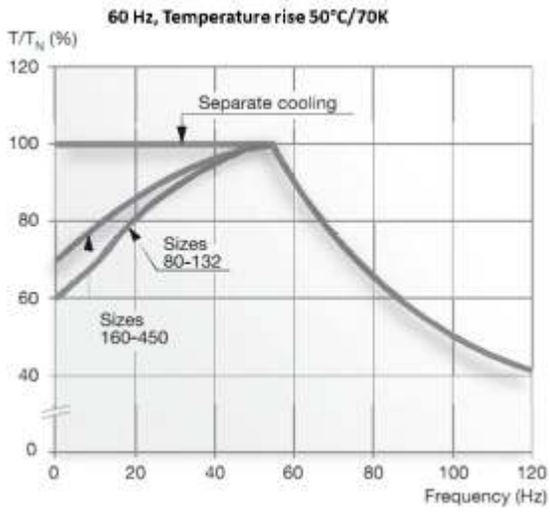
For speeds higher than the nominal speed stated on the motor's rating plate or in the respective product catalogue, ensure that either the highest permissible rotational speed of the motor or the critical speed of the whole application is not exceeded.

9) Dimensioning the motor for variable speed application -

1. General- The loadability curves (or load capacity curves) are based on nominal supply voltage. Operation in under or over voltage conditions may influence on the performance of the application.

2. Dimensioning with LHP motors





10. Rating plates -

The usage of Lhp's motors in variable speed applications do not usually require additional rating plates and the parameters required for commissioning the converter can be found from the main rating plate. However, in some special applications the motors can be equipped with additional rating plates for variable speed applications and those include following information:

1) Speed range
2) Power range
3) Voltage and current range
4) Type of torque (constant or quadratic)
5) Converter type and required minimum switching frequency

11. Commissioning the variable speed application -

The commissioning of the variable speed application must be done according to the instructions of the frequency converter and local laws and regulations. The requirements and limitations set by the application must also be taken into account.

All parameters needed for setting the converter must be taken from the motor rating plates. The most often needed parameters are:

- Motor nominal voltage
- Motor nominal current
- Motor nominal frequency
- Motor nominal speed
- Motor nominal power

Note: In case of missing or inaccurate information, do not operate the motor before ensuring correct settings!

LHP recommends using all the suitable protective features provided by the converter to improve the safety of the application. Converters usually provide features such as (names and availability of features depend on manufacturer and model of the converter):

- Minimum speed
- Maximum speed
- Acceleration and deceleration times
- Maximum current
- Maximum Torque
- Stall protection

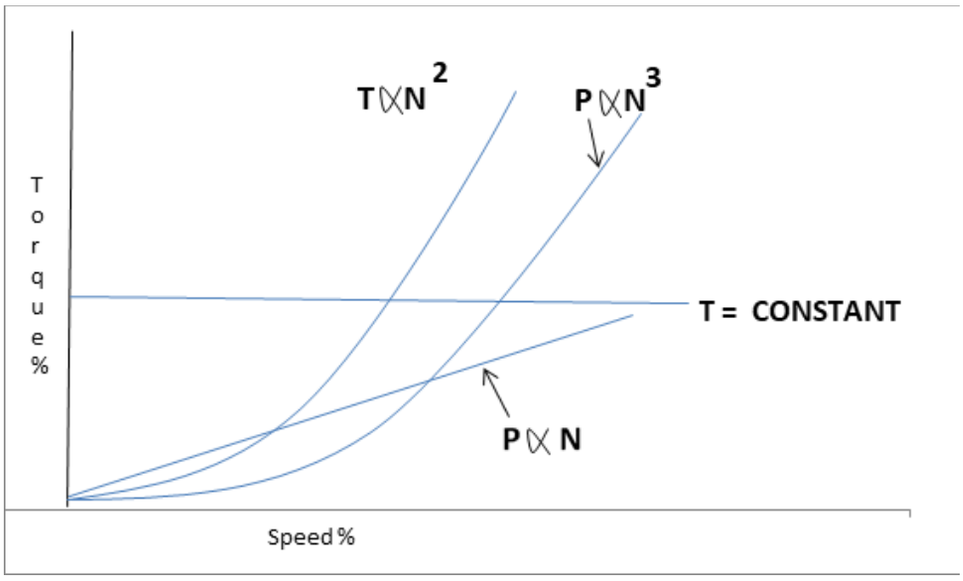
LHP motors suitability with VVVF parameters

Safe and Hazardous area Ex(ec), Ex(eb), Ex(db) & Ex db IIC,Ex tb IIIC , Ex d eb IIC, Ex ec IIC & Ex tc IIIC motors used with VVVF

Motor Parameters :-

1. Base voltage, kW& speed : As per customer requirement.

2. Load torque vs speed curve : As per customer requirement as below.



1. Duty details (Torque at different speeds & time duration) : As per customer requirement.

2. Application Variable torque like (Pump or Fan) or constant torque etc.:
   10% to 100% speed variation with temperature rise F/B or F/F or H/F etc.
3. Hazardous area zone1,zone2, zone21 and zone 22: Combined testing at rated torque is statutory requirement to determine temperature class.
4. Terminal voltage at site should be confirmed by customer / VVVF manufacturer / System integrator / Consultant or end user etc. Rated nominal voltage & frequency of the nameplate, variations are not applicable.

5. Accessories :
   Encoder : NDE side extension for encoder mounting on request.
   Thermistors / RTD / BTD : On request.
   Bearing insulation / End shield : On request, recommended from 315 frame onwards.

VVVF Parameters

1. THD of the drive output voltage : Up to 5% THD (as per IEEE519) .
2. Carrier or switching frequency : Maximum 5 kHz.
3. Rise time : ≥ 0.1 µ sec.
4. Individual drive or multi motor drive : Customer to specify.
5. Minimum time between pulses : ≥ 6 µ sec.
6. Minimum pulse duration : ≥ 6 µ sec.
7. Converter type : PWM or customer to specify.
8. Drive type, model no & rating : Customer to specify.
9. Details about pulse : (for e.g 32 or 48) Customer to specify.

LHP motors suitability with VVVF parameters

Safe and Hazardous area Ex(nA), Ex(e),Ex(eb),Ex(d) & Ex db IIC,Ex tb IIIC , Ex d eb IIC, Ex ec IIC & Ex tc IIIC motors used with VVVF

Installation Requirements :

1. Earthing : Special high frequency earthing (at customer's end).
2. Type of power cable : Shielded cables recommended (at customer's end).
3. Cable length between drive motor, along with peak voltage limit for motor insulation :

Safe up to 10 meters. (Equivalent length of shielded cable) , 5 meters for XLP or PVC cable.
For higher length, customer or his system integrator has to ensure by using sine filters/ dv/dt filters / chokes / lower switching frequencies such that;

A. Percentage drop in voltage in dv/dt filter or sine wave filter or chokes : Customer to specify. dv/dt filters or sine wave filter - Mandatory for high switching frequency (5kHz or more).

B. As per IEC 60034-18-41 : 2004 @ IEC 2004 page no. 37 clause B5 for 415V and 690V respectively,
Motor maximum peak to peak operating voltage will be,
For 415V : stress category C (severe)
Phase/phase maximum operating voltage = (3 x 2/x Uline x 1.1 x 3.0) = 1.85 kV Phase/ground maximum operating voltage = 0.7 x 1.85 = 1.30 Kv
For 690V : stress category C (severe)
Phase/phase maximum operating voltage = (3 x 2/ x Uline x 1.1 x 3.0) = 3.07 kV
Phase/ground maximum operating voltage = 0.7 x 3.07 = 2.15 Kv

dv/dt.- as per IEC TS 60034-25:2014@IEC 2014 page no. 71, consider in curve a for typical electrical machine,
for 415V motor dv/dt. = 2.75 x 0.415 x 1.1 = 1.26 kV/μ sec.
for 690V motor dv/dt. = 2.75 x 0.690 x 1.1 =2.09 kV/μ sec.

C. dv/dt values of drive : Customer to specify.

1. Motor Power factor correction capacitors : Not to be used.

2. Schematic diagram : Customer to submit.

Acceleration time / Deceleration time : Customer to specify (Required by testing laboratory).

LHP Energy Efficient Motors

Induction motors account for about 60 % of the electric energy consumed in industries. Looking at this, way back LHP has started concentrating on energy saving motor development.

Due to the increasing electrical energy demand, Global warming & increase in prices of fossil fuels, nowadays energy efficiency has become the dominant important.

The new regulations came into force in 01st January 2018 and require industrial users to move to IE2 or higher efficiency motors in India. As per this regulation (Quality control order) by Gov. of India, minimum energy performance standards for line operated 3phase induction motors in India shall be IE2 class.

LHP range of energy efficient motors are designed taking in to account Indian site conditions like quality of power supply, application, maintenance etc.
LHP has introduced the complete range of IE2, IE3 and IE4 motors as per latest IS/IEC standard with BIS certification.

New efficiency classes have been defined in IS:12615-2018 or IEC 60034-30-1:2014 for Induction motors with prefix IE = International Efficiency.

The comparison is as below

Old Nomenclature	New Nomenclature
---	IE 4
---	IE 3
EFF 1	IE 2
EFF 2	IE 1 (now withdrawn)
Stray losses assumed lump sum of 0.5%	Stray losses to be evaluated actually

Stray load losses are due to leakage fluxes induced by load current, non-uniform current distribution, mechanical air-gap imperfection...These losses can be reduced by design optimization and manufacturing method improvements.

As per earlier standard (Eff) stray load losses are to be assumed and efficiency determined. However in new standard (IE) stray load losses are to be evaluated actually by test. This evaluation required special testing facility. LHP has established this facility up to 1000kW.

LHP Energy Efficient Motors - IE2/IE3/IE4
Upto 1000kW

LHP Energy Efficient Motors

TEST PLANT - 1000kW

When motor is designed to achieve higher efficiency, we have to use materials of higher quality and quantity. Due to this cost of motor will increase compared to lower efficiency motor cost. However running cost of energy efficient motor will be less compared to lower efficiency motors. While purchasing the motor we have to consider both running as well as lifetime running cost. Generally motor life will be 20 years. If you compare life cost of motor with purchase price, you will find that purchase cost is hardly 1.5 to 2 % of life time cost of motor. (8 to 10 Hrs of running daily)

The investment is straight forward: install electric motors having the highest electrical energy efficiency commensurate with your needs. LHP Energy-efficient motors pay for themselves in a few years or sometimes even a few months, after which they will continue to pile up savings worth many times their purchase cost for as long as they remain in service. We should consider operating costs also, not just first cost when buying a new motor.

Applications:- These machines are suitable for Machine tools, Textile, Air conditioning, Diary Equipments, Packing machines, Material handling, Motorised geared units, Wood working and seasoning plants, Solvent extraction plant, Oil mills, Cement, sugar, steel plants apart from regular other continuous applications where high energy saving is essential.

Apart from energy saving other advantages of these motors are

- Short payback period.
- Enhance motor life.
- Less maintenance

Latest IS-12615 is based on the International Standard IEC 60034-30 which defines Efficiency Classification for single speed, three phase, induction motors.

LHP Energy Efficient Motors

Efficiency depends on the total energy losses in the motor. Energy losses in electric motors fall into four categories:

- Copper (Conductor) losses
- Magnetic core (Iron) losses
- Friction and windage losses, and
- Stray load losses.

In order to improve the efficiency, we have to reduce the losses in the above four categories. This is achieved by proper designing with change in quality and quantity of materials. Changes required depends on the amount of efficiency improvement required.

Weight difference-
As explained above, active material like copper and laminations volume is required to be increased to reduce the losses. This will increase the weight of the motor. (Increase depends on motor size and amount of improvement in efficiency required)

Bearing size difference in IE2/IE3/IE4 Motors-
For some critical ratings we have to use energy efficient bearing to reduce the friction loss. No difference in bearing life compared to standard motors.

Considerations for selection and usage of IE2, IE3,IE4 motors

Motor size
The load factor should be chosen between 65% and 100% so that the advantage of saving energy is achieved. If the motor is under-sized i.e. in a situation where the load factor is less than 65%, the desired energy saving may not be achieved. The efficiency under such condition standard motor efficiency curve will be in drooping nature, but energy efficient motors have flat efficiency curve, hence fall in efficiency is marginal. Thus energy saving is significant even in partial loads.

Operating speed
IE motors have less slip compared to standard motors. Hence, their operating speed is more. This may adversely affect the operating efficiency of the motor pump or the motor fan in case of centrifugal application.

Starting current
The resistance of IE motors is low as compared to standard motors. This results in a high starting current and inrush current. The connected system and control gears should be capable of handling the higher starting current.

Method of testing efficiency
The efficiency method used to evaluate the efficiency of IE motors is more stringent than the method used in case of standard motors. So there may be cases where standard motor's efficiency may appear to be closer to IE efficiency. However, in the actual usage IE motors consume less power.

VFD application
When IE motors are used in conjunction with VFDs, they result in energy saving irrespective of the type of load like intermittent loading, heavy starting duty, etc. Further, the higher inrush current is not encountered by the motor because the VFD modifies the starting current of the motor. It applies low voltage, low frequency supply at the time of starting.

LHP IE motors conform to IEC60034-30-1:2014 and 18:12615-2018

- Suitable for continuous process industries where high energy saving is essential
- Short payback period for replacement
- Enhanced motor life
- Less maintenance

Applications

- Machine tools
- Textiles
- Air conditioning
- Dairy equipments
- Packing machinery
- Material handling equipments
- Geared motors
- Wood seasoning plants
- Solvent extraction plants
- Edible oil factories
- Cement Plants
- Paper Mills
- Sugar Factory
- Steel plants
- Cooling Towers
- Indian Railway
- Indian Navy
- Mines
- Petrochemical
- Refineries
- Chemical Industries

Assessing cost effectiveness
Savings calculated as follows :

kW = Output of motor
E1 = Efficiency of standard motor
E2 = Efficiency of IE4 motors.
X = kW/E1 kW/E2
Savings = X * working hours * working days * Tariff.

If used VFD any reduction will accrue in efficiency.

Efficiency of motor depends on the quality of power supply. If VFD is used, Power supply through VFD will have harmonics. These harmonics will generate additional losses in the motor which will reduce the efficiency. Harmonics in the output of different makes of inverter are different (Depends on individual make design).

However as a general guidelines as per IS 12615-2018 When used with variable frequency drive, the efficiency of the motor can be lower. Hence these motors shall be tested on sinusoidal power supply for efficiency determination.

High Efficiency TEFC SC Motors - IE2

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE2 II-Pole, conforms to IS 12615:2018,IS/IEC 60034-1:2004, IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B22056A3T	0.12	0.16	56	0.42	2770	0.04	600	270	300	53.6	51.6	50.6	0.74	0.71	0.61	0.0007	5	10	20	42	125	0.028
.12B22056C3T	0.12	0.16	56	0.42	2770	0.04	600	270	300	53.6	51.6	50.6	0.74	0.71	0.61	0.0007	6	10	20	42	125	0.028
.18B22063A3T	0.18	0.25	63	0.57	2750	0.06	600	220	260	60.4	60.4	60.4	0.72	0.67	0.43	0.0008	6	10	20	42	125	0.032
.18B22063C3R	0.18	0.25	63	0.57	2750	0.06	600	220	260	60.4	60.4	60.4	0.72	0.67	0.43	0.0008	7	10	20	42	125	0.032
.25B22063A3T	0.25	0.33	63	0.75	2785	0.09	600	220	260	64.8	58.9	53.0	0.72	0.58	0.43	0.0009	6	10	20	42	125	0.036
.25B22063C3R	0.25	0.33	63	0.75	2785	0.09	600	220	260	64.8	58.9	53.0	0.72	0.58	0.43	0.0009	8	10	20	42	125	0.036
.37B22071A3T	0.37	0.50	71	1.00	2750	0.13	650	240	280	69.5	69.5	69.5	0.74	0.74	0.66	0.001	7	10	20	42	125	0.04
.37B22071C3R	0.37	0.50	71	1.00	2750	0.13	650	240	280	69.5	69.5	69.5	0.74	0.74	0.66	0.001	10	10	20	42	125	0.04
.55B22071A3T	0.55	0.75	71	1.40	2788	0.19	650	285	350	74.1	74.1	72.4	0.74	0.73	0.61	0.002	7	10	20	42	125	0.06
.55B22071C3R	0.55	0.75	71	1.40	2788	0.19	650	285	350	74.1	74.1	72.4	0.74	0.73	0.61	0.002	11	10	20	42	125	0.06
.75B22080A3T	0.75	1.0	80	1.70	2805	0.26	650	250	280	77.4	77.4	77.4	0.79	0.78	0.70	0.002	10	10	20	42	125	0.17
.75B22080C3R	0.75	1.0	80	1.70	2805	0.26	650	250	280	77.4	77.4	77.4	0.79	0.78	0.70	0.002	14	10	20	42	125	0.17
1.1B22080A3T	1.1	1.5	80	2.55	2860	0.37	650	270	300	79.6	79.6	79.0	0.75	0.73	0.60	0.003	11	10	20	42	125	0.26
1.1B22080C3R	1.1	1.5	80	2.55	2860	0.37	650	270	300	79.6	79.6	79.0	0.75	0.73	0.60	0.003	15	10	20	42	125	0.26
1.5B2290SA3R	1.5	2.0	90S	3.25	2825	0.52	650	230	270	81.3	80.8	80.3	0.79	0.78	0.65	0.007	17	10	20	42	125	0.28
1.5B2290SC3R	1.5	2.0	90S	3.25	2825	0.52	650	230	270	81.3	80.8	80.3	0.79	0.78	0.65	0.007	25	10	20	42	125	0.28
2.2B2290LA3R	2.2	3.0	90L	4.70	2835	0.76	700	230	270	83.2	83.0	82.5	0.78	0.72	0.60	0.008	19	10	20	42	125	0.28
2.2B2290LC3R	2.2	3.0	90L	4.70	2835	0.76	700	230	270	83.2	83.0	82.5	0.78	0.72	0.60	0.008	27	10	20	42	125	0.28
3.0B2210LA3R	3.0	4.0	100L	6.00	2867	1.02	700	240	280	84.6	84.2	83.8	0.84	0.81	0.76	0.026	21	8	16	33	100	0.47
3.0B2210LC3R	3.0	4.0	100L	6.00	2867	1.02	700	240	280	84.6	84.2	83.8	0.84	0.81	0.76	0.026	30	8	16	33	100	0.47
3.7B2210LA3R	3.7	5.0	100L	7.20	2870	1.26	700	285	300	85.5	85.5	84.0	0.84	0.77	0.63	0.026	22	8	16	33	100	0.47
3.7B2210LC3R	3.7	5.0	100L	7.20	2870	1.26	700	285	300	85.5	85.5	84.0	0.84	0.77	0.63	0.026	30	8	16	33	100	0.47
4.0B2211MA3R	4.0	5.5	112M	7.50	2865	1.36	700	170	210	85.8	85.8	84.8	0.86	0.85	0.80	0.033	36	8	16	33	100	0.59
4.0B2211MC3R	4.0	5.5	112M	7.50	2865	1.36	700	170	210	85.8	85.8	84.8	0.86	0.85	0.80	0.033	40	8	16	33	100	0.59
5.5B2213SC3R	5.5	7.5	132S	11.0	2927	1.83	700	200	250	87.0	85.0	82.0	0.80	0.78	0.68	0.044	61	8	16	33	100	2.35
7.5B2213SC3R	7.5	10	132S	14.0	2925	2.50	700	220	260	88.1	87.3	85.5	0.85	0.82	0.78	0.088	68	8	16	33	100	3.28
9.3B2216MC3R	9.3	12.5	160M	16.6	2935	3.09	700	180	220	88.9	88.9	86.8	0.88	0.86	0.84	0.100	102	10	22	42	125	5.49
011B2216MC3R	11	15.0	160M	20.0	2931	3.66	700	190	230	89.4	89.0	88.5	0.86	0.84	0.80	0.128	118	10	22	42	125	6.49
015B2216MC3R	15	20	160M	27.0	2945	4.96	700	220	250	90.3	89.0	88.0	0.86	0.84	0.82	0.140	144	10	22	42	125	9.33
185B2216LC3R	18.5	25	160L	33.0	2941	6.12	700	185	225	90.9	89.9	88.0	0.86	0.84	0.82	0.244	149	10	22	42	125	15.0
022B2218MC3R	22	30	180M	37.0	2943	7.28	700	230	270	91.3	90.3	89.3	0.91	0.88	0.86	0.244	181	10	22	42	125	16.0
030B2220LC3T	30	40	200L	54.0	2966	9.85	700	290	320	92.0	91.0	90.0	0.84	0.80	0.70	0.720	260	12	27	50	150	31.0
037B2220LC3T	37	50	200L	63.0	2952	12.21	700	250	280	92.5	92.0	91.0	0.89	0.87	0.81	1.240	280	12	27	50	150	42.0
045B2222MC3T	45	60	225M	74.0	2965	14.78	700	230	270	92.9	91.0	90.0	0.91	0.89	0.87	1.360	350	12	27	50	150	53.0
055B2225MC3T	55	75	250M	94.0	2965	18.07	700	180	220	93.2	92.2	91.2	0.87	0.85	0.82	2.240	465	12	27	50	150	64.0
075B2228SC3T	75	100	280S	127.0	2971	24.59	700	175	215	93.8	93.0	92.0	0.88	0.86	0.81	2.840	660	15	33	63	188	73.0
090B2228MC3T	90	120	280M	147.0	2960	29.61	700	160	200	94.1	93.1	91.1	0.91	0.89	0.87	3.280	720	15	33	63	188	84.0
110B2231SC3T	110	150	315S	184.0	2979	35.97	700	170	200	94.3	92.9	91.3	0.88	0.85	0.84	6.500	910	15	33	63	188	80.0
125B2231MC3T	125	170	315M	202.0	2982	40.83	700	185	225	94.5	93.2	91.2	0.91	0.88	0.84	8.700	1080	15	33	63	188	84.0
132B2231MC3T	132	180	315M	214.0	2980	43.14	700	185	225	94.6	93.2	91.2	0.91	0.88	0.84	8.700	1100	15	33	63	188	84.0
150B2231LC3T	150	201	315L	240.0	2980	49.03	700	185	225	94.7	93.3	91.3	0.92	0.88	0.84	10.01	1210	15	33	63	188	101.0

P.T.O...

High Efficiency TEFC SC Motors - IE2

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE2 II-Pole, conforms to IS 12615:2018,IS/IEC 60034-1:2004, IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T ∝ 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
160B2231LC3T	160	215	315L	260.0	2985	52.21	700	200	240	94.8	93.4	91.4	0.90	0.86	0.82	11.68	1240	15	33	63	188	108.0
180B2231LC3T	180	240	315L	293.0	2888	60.71	700	200	240	94.9	93.5	91.4	0.90	0.86	0.82	14.36	1300	15	33	63	188	127.0
200B2231LC3T	200	270	315L	325.0	2990	65.15	700	200	240	95.0	93.6	91.6	0.90	0.86	0.82	15.96	1330	15	33	63	188	142.0
250B2235LC3T	250	335	355L	411.0	2980	81.71	700	170	220	95.0	94.5	92.7	0.89	0.84	0.75	17.60	1740	15	33	63	188	158.0
315B2235LC3T	315	425	355L	518.0	2980	102.96	700	170	220	95.0	94.6	92.8	0.89	0.84	0.75	19.20	1890	15	33	63	188	177.0
355B2235KC3T	355	475	355L/K	584.0	2980	116.03	700	170	250	95.0	94.6	93.0	0.89	0.87	0.82	22.40	2490	15	33	63	188	-
375B2235KC3T	375	503	355L/K	617.0	2980	122.57	700	170	250	95.0	94.6	93.0	0.89	0.88	0.83	24.20	2635	15	33	63	188	-
400B2235KC3T	400	536	355L/K	658.0	2980	130.74	700	170	250	95.0	94.6	93.0	0.89	0.88	0.83	26.00	2706	15	33	63	188	-
450B2235KC3T	450	603	355L/K	732.0	2981	147.03	700	170	250	95.0	94.6	93.0	0.90	0.88	0.83	28.60	2848	15	33	63	188	-
500B2235KC3T	500	670	355L/K	814.0	2982	163.31	700	170	250	95.0	94.7	93.1	0.90	0.88	0.83	31.30	2990	15	33	63	188	-
560B2240LM3T	560	750	400M/L	911.0	2983	182.85	700	170	250	95.0	94.8	92.9	0.90	0.88	0.80	51.30	2880	18	40	63	188	-
630B2240LM3T	* 630	845	400M/L	1025.0	2983	205.00	700	170	250	95.0	94.8	93.0	0.90	0.88	0.80	57.30	3260	18	40	63	188	-

*Temperature rise limited to class "F" (95K)

Note : - Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame and 400 frame fabricated. 355 & 400 frame size will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

High Efficiency TEFC SC Motors - IE2

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K) Line operated with DOL starting, Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE2 IV-Pole, conforms to IS 12615:2018, IS/IEC 60034-1:2004, IEC 60034-1:2010, Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B42063A3T	0.12	0.16	63	0.41	1380	0.08	550	200	250	59.1	58.0	56.0	0.69	0.56	0.42	0.0010	5	15	30	42	125	0.26
.12B42063C3R	0.12	0.16	63	0.41	1380	0.08	550	200	250	59.1	58.0	56.0	0.69	0.56	0.42	0.0010	6	15	30	42	125	0.26
.18B42063A3T	0.18	0.25	63	0.60	1325	0.13	550	215	265	64.7	64.7	64.7	0.65	0.62	0.48	0.0016	6	15	30	42	125	0.40
.18B42063C3R	0.18	0.25	63	0.60	1325	0.13	550	215	265	64.7	64.7	64.7	0.65	0.62	0.48	0.0016	7	15	30	42	125	0.40
.25B42071A3T	0.25	0.33	71	0.75	1404	0.17	550	240	280	68.5	67.9	61.5	0.68	0.64	0.48	0.0024	8	10	20	42	125	0.24
.25B42071C3R	0.25	0.33	71	0.75	1404	0.17	550	240	280	68.5	67.9	61.5	0.68	0.64	0.48	0.0024	11	10	20	42	125	0.24
.37B42071A3T	0.37	0.50	71	1.0	1400	0.26	600	230	260	72.7	71.7	70.5	0.70	0.65	0.50	0.0047	8	10	20	42	125	0.40
.37B42071C3R	0.37	0.50	71	1.0	1400	0.26	600	230	260	72.7	71.7	70.5	0.70	0.65	0.50	0.0047	11	10	20	42	125	0.40
.55B42080A3T	0.55	0.75	80	1.5	1410	0.38	600	250	280	77.1	75.6	73.6	0.68	0.68	0.55	0.0073	9	10	20	42	125	0.38
.55B42080C3R	0.55	0.75	80	1.5	1410	0.38	600	250	280	77.1	75.6	73.6	0.68	0.68	0.55	0.0073	15	10	20	42	125	0.38
.75B42080A3T	0.75	1.0	80	1.8	1420	0.51	600	200	240	79.6	75.0	73.0	0.73	0.69	0.62	0.0072	11	10	20	42	125	0.47
.75B42080C3R	0.75	1.0	80	1.8	1420	0.51	600	200	240	79.6	75.0	73.0	0.73	0.69	0.62	0.0072	16	10	20	42	125	0.47
1.1B4290SA3R	1.1	1.5	90S	2.5	1415	0.76	600	250	280	81.4	81.0	79.0	0.75	0.68	0.52	0.012	14	10	20	42	125	0.56
1.1B4290SC3R	1.1	1.5	90S	2.5	1415	0.76	600	250	290	81.4	81.0	79.0	0.75	0.68	0.52	0.012	24	10	20	42	125	0.56
1.5B4290LA3R	1.5	2.0	90L	3.2	1405	1.04	600	270	300	82.8	82.0	81.3	0.79	0.70	0.57	0.016	17	10	20	42	125	0.77
1.5B4290LC3R	1.5	2.0	90L	3.2	1405	1.04	600	270	300	82.8	82.0	81.3	0.79	0.70	0.57	0.016	27	10	20	42	125	0.77
2.2B4210LA3R	2.2	3.0	100L	4.8	1430	1.50	700	220	260	84.3	84.3	83.3	0.76	0.75	0.63	0.021	20	8	16	33	100	1.24
2.2B4210LC3R	2.2	3.0	100L	4.8	1430	1.50	700	220	260	84.3	84.3	83.3	0.76	0.75	0.63	0.021	28	8	16	33	100	1.24
3.0B4210LA3R	3.0	4.0	100L	6.3	1430	2.04	700	240	290	85.5	85.0	82.4	0.77	0.70	0.60	0.023	24	8	16	33	100	1.70
3.0B4210LC3R	3.0	4.0	100L	6.3	1430	2.04	700	240	290	85.5	85.0	82.4	0.77	0.70	0.60	0.023	34	8	16	33	100	1.70
3.7B4211MA3R	3.7	5.0	112M	7.3	1435	2.51	700	250	290	86.3	85.5	84.9	0.82	0.77	0.67	0.053	30	8	16	33	100	2.17
3.7B4211MC3R	3.7	5.0	112M	7.3	1435	2.51	700	250	290	86.3	85.5	84.9	0.82	0.77	0.67	0.053	48	8	16	33	100	2.17
4.0B4211MA3R	4.0	5.5	112M	7.3	1430	2.72	700	220	260	86.6	85.0	84.0	0.88	0.85	0.80	0.090	36	8	16	33	100	2.35
4.0B4211MC3R	4.0	5.5	112M	7.3	1430	2.72	700	220	260	86.6	85.0	84.0	0.88	0.85	0.80	0.090	48	8	16	33	100	2.35
5.5B4213SC3R	5.5	7.5	132S	11.0	1455	3.68	700	220	260	87.7	86.7	85.0	0.79	0.76	0.68	0.060	69	8	16	33	100	6.78
7.5B4213MC3R	7.5	10	132M	14.6	1450	5.04	700	230	280	88.7	88.0	87.9	0.81	0.79	0.75	0.088	74	8	16	33	100	9.01
9.3B4216MC3R	9.3	12.5	160M	17.5	1452	6.24	700	220	250	89.3	88.8	88.0	0.83	0.81	0.72	0.141	107	10	22	42	125	10.2
011B4216MC3R	11	15	160M	20.0	1460	7.34	700	200	250	89.8	89.8	89.8	0.85	0.83	0.74	0.208	120	10	22	42	125	15.9
015B4216LC3R	15	20	160L	28.0	1463	9.99	700	190	230	90.6	89.8	88.8	0.82	0.78	0.74	0.286	145	10	22	42	125	44.0
185B4218MC3R	18.5	25	180M	34.0	1460	12.34	700	240	270	91.2	90.5	90.0	0.83	0.80	0.72	0.460	163	10	22	42	125	45.0
022B4218LC3R	22	30	180L	39.0	1470	14.58	700	220	260	91.6	90.9	90.8	0.86	0.84	0.77	0.480	186	10	22	42	125	54.0
030B4220LC3T	30	40	200L	52.0	1466	19.93	700	210	250	92.3	91.7	91.0	0.87	0.84	0.77	1.600	265	12	27	50	150	80.0
037B4222SC3T	37	50	225S	65.0	1473	24.47	700	220	260	92.7	92.2	91.6	0.85	0.84	0.78	1.440	330	12	27	50	150	183.0
045B4222MC3T	45	60	225M	79.0	1470	29.82	700	170	225	93.1	92.5	91.0	0.85	0.84	0.79	1.600	360	12	27	50	150	194.0
055B4225MC3T	55	75	250M	96.0	1483	36.12	700	170	210	93.5	93.2	92.4	0.85	0.84	0.76	2.240	472	12	27	50	150	279.0
075B422SSC3T	75	100	280S	129.0	1484	49.23	700	190	230	94.0	93.6	92.2	0.86	0.82	0.76	4.200	662	15	33	63	188	321.0
090B4228MC3T	90	120	280M	150.0	1480	59.23	700	220	260	94.2	94.1	93.4	0.89	0.87	0.82	5.320	730	15	33	63	188	463.0
110B4231SC3T	110	150	315S	195.0	1486	72.10	700	200	250	94.5	93.0	91.3	0.83	0.81	0.75	11.700	930	15	33	63	188	265.0
125B4231MC3T	125	170	315M	221.0	1487	81.88	700	200	250	94.6	93.1	91.4	0.83	0.81	0.75	13.300	1090	15	33	63	188	301.0
132B4231MC3T	132	180	315M	227.0	1487	86.46	700	200	250	94.7	94.0	93.5	0.85	0.83	0.79	14.000	1116	15	33	63	188	317.0
150B4231LC3T	150	200	315L	259.0	1486	98.32	700	200	250	94.9	93.4	92.8	0.85	0.82	0.76	15.000	1250	15	33	63	188	434.0

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High Efficiency TEFC SC Motors - IE2

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K) Line operated with DOL starting, Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE2 IV-Pole, conforms to IS 12615:2018, IS/IEC 60034-1:2004, IEC 60034-1:2010, Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
160B4231LC3T	160	215	315L	273.0	1486	104.87	700	200	250	94.9	93.8	93.0	0.86	0.85	0.83	16.000	1290	15	33	63	188	434.0
200B4231LC3T	200	270	315L	346.0	1488	130.91	700	220	260	95.1	94.5	93.3	0.85	0.80	0.74	16.000	1360	15	33	63	188	569.0
250B4235LC3T	250	335	355L	430.0	1488	163.64	700	200	250	95.1	94.0	93.0	0.85	0.80	0.74	16.180	1830	15	33	63	188	713.0
315B4235KC3T	315	425	355L	542.0	1488	206.19	700	200	220	95.1	94.6	93.0	0.85	0.80	0.74	20.390	1930	15	33	63	188	891.0
355B4235LC3T	355	475	355L	611.0	1488	232.37	700	220	250	95.1	94.5	93.1	0.85	0.83	0.73	25.700	2025	15	33	63	188	1113.0
375B4235LC3T	375	503	355L	645.0	1488	245.46	700	220	250	95.1	94.9	93.5	0.85	0.83	0.73	27.150	1964	15	33	63	188	1390.0
400B4235KC3T	400	536	355L/K	688.0	1488	261.83	700	210	250	95.1	94.6	93.2	0.85	0.83	0.73	30.600	2516	15	33	63	188	-
450B4235KC3T	450	603	355L/K	774.0	1488	294.56	700	210	250	95.1	94.6	93.2	0.85	0.83	0.73	33.700	2600	15	33	63	188	-
500B4235KC3T	500	670	355L/K	851.0	1488	327.28	700	210	240	95.1	94.6	93.2	0.86	0.84	0.74	36.800	2800	15	33	63	188	-
560B4240LM3T	560	750	400M/L	942.0	1492	365.58	700	200	250	95.1	94.6	93.2	0.87	0.85	0.78	63.000	3100	15	33	63	188	-
630B4240LM3T	630	845	400M/L	1059	1492	411.27	700	200	250	95.1	94.6	93.2	0.87	0.85	0.78	70.500	3200	15	33	63	188	-
710B4240LM3T	* 710	952	400M/L	718.0	1492	463.49	700	200	250	95.1	94.6	93.2	0.87	0.85	0.78	70.500	3000	15	33	63	188	-
800B4245MM3T	800	1072	450M/L	809.0	1492	522.25	700	210	250	95.1	94.6	93.2	0.87	0.84	0.76	120.000	4300	15	33	63	188	-
900B4245MM3T	900	1206	450M/L	915.0	1492	587.53	700	210	250	95.1	94.6	93.2	0.87	0.84	0.76	132.000	4500	15	33	63	188	-
00AB4245LM3T	1000	1340	450M/L	1011.0	1492	652.82	700	210	250	95.1	94.6	93.2	0.87	0.84	0.76	160.000	5650	15	33	63	188	-

*Temperature rise limited to class "F"(95K)

Note : - Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame and 400 frame fabricated. 355 & 400 frame size will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

High Efficiency TEFC SC Motors - IE2

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K)Line operated with DOL starting,Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l;Duty S1,efficiency class IE2 VI-Pole, conforms to IS 12615:2018,IS/IEC 60034-1:2004,IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B62063A3T	0.12	0.16	63	0.73	860	0.14	600	160	200	50.6	49.6	48.1	0.45	0.40	0.31	0.0015	6	10	20	42	125	0.354
.12B62063C3R	0.12	0.16	63	0.73	860	0.14	600	160	200	50.6	49.6	48.1	0.45	0.40	0.31	0.0015	9	10	20	42	125	0.354
.18B62071A3T	0.18	0.25	71	0.63	915	0.19	600	160	200	56.6	55.6	45.2	0.70	0.58	0.41	0.0022	7	10	20	42	125	0.590
.18B62071C3R	0.18	0.25	71	0.63	915	0.19	600	160	200	56.6	55.6	45.2	0.70	0.58	0.41	0.0022	9	10	20	42	125	0.590
.25B62071A3T	0.25	0.33	71	0.79	915	0.27	600	160	200	61.6	61.6	50.2	0.71	0.60	0.50	0.0031	8	10	20	42	125	0.960
.25B62071C3R	0.25	0.33	71	0.79	915	0.27	600	160	200	61.6	61.6	50.2	0.71	0.60	0.50	0.0031	11	10	20	42	125	0.960
.37B62080A3T	0.37	0.50	80	1.2	900	0.40	600	170	200	67.6	67.6	64.5	0.63	0.56	0.43	0.0060	9	10	20	42	125	1.42
.37B62080C3R	0.37	0.50	80	1.2	900	0.40	600	170	200	67.6	67.6	64.5	0.63	0.56	0.43	0.0060	15	10	20	42	125	1.42
.55B62080A3T	0.55	0.75	80	1.5	930	0.58	600	180	220	73.1	71.4	67.6	0.69	0.64	0.48	0.0080	11	10	20	42	125	2.11
.55B62080C3R	0.55	0.75	80	1.5	930	0.58	600	180	220	73.1	71.4	67.6	0.69	0.64	0.48	0.0080	16	10	20	42	125	2.11
.75B6290SA3R	0.75	1.0	90S	2.0	925	0.79	600	190	240	75.9	71.5	68.7	0.69	0.62	0.55	0.0110	15	10	20	42	125	2.46
.75B6290SC3R	0.75	1.0	90S	2.0	925	0.79	600	190	240	75.9	71.5	68.7	0.69	0.62	0.55	0.0110	25	10	20	42	125	2.46
1.1B6290LA3R	1.1	1.5	90L	2.9	918	1.17	600	180	220	78.1	74.4	73.6	0.68	0.61	0.49	0.0150	18	10	20	42	125	3.86
1.1B6290LC3R	1.1	1.5	90L	2.9	918	1.17	600	180	220	78.1	74.4	73.6	0.68	0.61	0.49	0.0150	27	10	20	42	125	3.86
1.5B6210LA3R	1.5	2.0	100L	3.6	945	1.55	600	210	250	79.8	78.2	75.3	0.73	0.61	0.48	0.0260	21	10	20	42	125	5.68
1.5B6210LC3R	1.5	2.0	100L	3.6	945	1.55	600	210	250	79.8	78.2	75.3	0.73	0.61	0.48	0.0260	33	10	20	42	125	5.68
2.2B6211MA3R	2.2	3.0	112M	5.1	950	2.26	700	200	240	81.8	81.8	80.5	0.74	0.69	0.55	0.0700	32	10	20	42	125	6.51
2.2B6211MC3R	2.2	3.0	112M	5.1	950	2.26	700	200	240	81.8	81.8	80.5	0.74	0.69	0.55	0.0700	42	10	20	42	125	6.51
3.0B6211MA3R	3.0	4.0	112M	6.9	950	3.08	700	190	240	83.3	82.8	81.8	0.72	0.66	0.55	0.0950	33	10	20	42	125	9.10
3.0B6211MC3R	3.0	4.0	112M	6.9	950	3.08	700	190	240	83.3	82.8	81.8	0.72	0.66	0.55	0.0950	43	10	20	42	125	9.10
3.7B6213SC3R	3.7	5.0	132S	8.0	949	3.80	700	200	240	84.3	82.0	81.4	0.76	0.74	0.70	0.1000	65	10	20	42	125	11.7
4.0B6213SC3R	4.0	5.5	132S	8.8	955	4.08	700	190	230	84.6	84.0	83.5	0.75	0.69	0.58	0.1020	75	10	20	42	125	11.7
5.5B6213MC3R	5.5	7.5	132M	11.7	960	5.58	700	190	230	86.0	85.4	82.6	0.76	0.70	0.59	0.1080	80	10	20	42	125	15.1
7.5B6216MC3R	7.5	10	160M	15.4	965	7.57	700	200	240	87.2	86.7	83.5	0.78	0.71	0.61	0.2880	110	10	22	42	125	25.8
9.3B6216LC3R	9.3	12.5	160L	19.5	968	9.36	700	210	250	88.1	87.5	86.1	0.75	0.71	0.65	0.3720	122	10	22	42	125	28.2
011B6216LC3R	11	15	160L	21.4	962	11.14	700	200	240	88.7	87.7	87.0	0.81	0.78	0.62	0.640	130	10	22	42	125	33.3
015B6218LC3R	15	20	180L	30.0	975	14.98	700	250	290	89.7	89.3	89.0	0.78	0.74	0.63	1.260	195	10	22	42	125	47.0
185B6220LC3T	18.5	25	200L	35.0	970	18.58	700	170	210	90.4	90.0	87.6	0.81	0.78	0.62	1.260	222	12	27	50	150	95.0
022B6220LC3T	22	30	200L	43.0	975	21.98	700	185	230	90.9	90.4	88.0	0.79	0.75	0.63	1.570	235	12	27	50	150	168.0
030B6222MC3T	30	40	225M	54.0	980	29.82	700	220	260	91.7	91.0	88.5	0.84	0.80	0.68	1.600	355	12	27	50	150	247.0
037B6225MC3T	37	50	250M	68.0	980	36.77	700	200	240	92.2	91.6	88.7	0.82	0.77	0.67	5.680	475	12	27	50	150	254.0
045B6228SC3T	45	60	280S	82.0	989	44.32	700	210	240	92.7	91.6	88.7	0.82	0.80	0.70	7.920	685	15	33	63	188	393.0
055B6228MC3T	55	75	280M	98.0	985	54.39	700	250	290	93.1	93.0	92.9	0.84	0.83	0.76	7.920	705	15	33	63	188	603.0
075B6231SC3T	75	100	315S	140.0	993	73.56	700	220	250	93.7	91.6	91.4	0.80	0.73	0.62	17.900	975	15	33	63	188	675.0
090B6231MC3T	90	120	315M	157.0	988	88.72	700	200	250	94.0	93.1	91.1	0.85	0.81	0.75	21.000	990	15	33	63	188	965.0
110B6231MC3T	110	150	315M	195.0	992	108.00	700	200	250	94.3	93.9	92.5	0.83	0.78	0.69	25.800	1093	15	33	63	188	958.0
125B6231MC3T	125	170	315M	220.0	990	122.98	700	210	250	94.5	94.0	92.8	0.84	0.82	0.75	34.750	1120	15	33	63	188	1261.0
132B6231LC3T	132	180	315L	232.0	990	129.87	700	200	250	94.6	94.0	92.8	0.84	0.82	0.79	36.500	1130	15	33	63	188	1328.0
150B6235KC3T	150	201	355L	269.0	991	147.43	700	210	250	94.7	94.0	93.0	0.82	0.80	0.72	41.000	1693	15	33	63	188	1468.0
160B6235LC3T	160	215	355L	277.0	991	157.26	700	160	210	94.8	94.0	93.0	0.85	0.80	0.72	44.000	1693	15	33	63	188	1608.0
180B6235KC3T	180	240	355L	326.0	991	176.91	700	210	250	94.9	94.0	93.5	0.81	0.73	0.60	49.450	1740	15	33	63	188	1760.0

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High Efficiency TEFC SC Motors - IE2

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K)Line operated with DOL starting,Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l;Duty S1,efficiency class IE2 VI-Pole, conforms to IS 12615:2018,IS/IEC 60034-1:2004,IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
200B6235LC3T	200	270	355L	355.0	991	196.57	700	210	250	95.0	95.0	94.0	0.83	0.78	0.70	54.100	1790	15	33	63	188	1925.0
250B6235LC3T	250	335	355L	436.0	991	245.71	700	140	180	95.0	94.4	93.5	0.84	0.78	0.70	55.500	1917	15	33	63	188	1976.0
315B6235KC3T	315	425	355L/K	536.0	991	309.60	700	200	250	95.0	94.5	94.0	0.86	0.84	0.78	56.900	2563	15	33	63	188	-
355B6235KC3T	355	475	355L/K	619.0	991	348.91	650	200	250	95.0	94.8	93.4	0.84	0.80	0.70	66.000	2717	15	33	63	188	-
375B6235KC3T	375	503	355L/K	654.0	991	368.57	650	200	250	95.0	94.9	93.5	0.84	0.80	0.70	67.850	2764	15	33	63	188	-
400B6235KC3T	400	536	355L/K	697.0	991	393.14	650	200	250	95.0	94.9	93.5	0.84	0.80	0.70	69.700	2930	15	33	63	188	-
450B6240LM3T	450	603	400M/L	775.0	992	441.83	650	190	250	95.0	94.9	93.5	0.85	0.80	0.70	77.000	2810	15	33	63	188	-
500B6240LM3T	500	670	400M/L	861.0	992	490.93	650	190	250	95.0	94.9	93.5	0.85	0.80	0.70	86.000	3000	15	33	63	188	-
560B6240LM3T	*560	750	400M/L	965.0	992	550.39	650	190	250	95.0	94.9	93.5	0.85	0.80	0.70	86.000	3000	15	33	63	188	-
630B6245MM3T	630	845	450M/L	1098.0	992	618.57	650	190	250	95.0	94.9	93.5	0.84	0.79	0.70	180.00	4300	15	33	63	188	-
710B6245MM3T	710	952	450M/L	744.0	993	696.41	650	190	250	95.0	94.9	93.5	0.84	0.79	0.70	200.00	4400	15	33	63	188	-
800B6245LM3T	800	1072	450M/L	839.0	993	784.69	650	190	250	95.0	94.3	92.8	0.84	0.79	0.70	236.00	5600	15	33	63	188	-

*Temperature rise limited to class "F"(95K)

Note:
Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication.710KW and above voltage is 690V ± 10%. All performance figures are subject to IS/IEC 60034-1 tolerances.132frame to 355 frame Cast iron frame,400 and 450 frame fabricated. 355,400 & 450 frame size will have uni directional for CW rotation as viewed from DE. For CCW direction please explicitly specify in the order.

High Efficiency TEFC SC Motors - IE2

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K)Line operated with DOL starting, Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE2 VIII-Pole conforms to IS 12615:2018,IS/IEC 60034-1:2004,IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
12B82071A3T	0.12	0.16	71	0.55	655	0.18	500	180	220	39.8	39.8	39.8	0.76	0.60	0.49	0.0050	6	15	30	63	188	0.650
12B82071C3R	0.12	0.16	71	0.55	655	0.18	500	180	220	39.8	39.8	39.8	0.76	0.60	0.49	0.0050	8	15	30	63	188	0.650
18B82080A3T	0.18	0.25	80	0.80	675	0.26	520	180	240	49.9	49.7	49.5	0.63	0.56	0.47	0.0070	11	15	30	63	188	0.970
18B82080C3R	0.18	0.25	80	0.80	675	0.26	520	180	240	49.9	49.7	49.5	0.63	0.56	0.47	0.0070	17	15	30	63	188	0.970
25B82080A3T	0.25	0.33	80	1.15	660	0.37	520	180	230	50.6	46.6	39.6	0.54	0.50	0.38	0.0100	13	15	30	63	188	1.66
25B82080C3R	0.25	0.33	80	1.15	660	0.37	520	180	230	50.6	46.6	39.6	0.54	0.50	0.38	0.0100	19	15	30	63	188	1.66
37B8290SA3R	0.37	0.50	90S	1.23	640	0.56	550	250	295	56.1	55.6	55.1	0.75	0.60	0.44	0.0120	14	15	30	63	188	1.99
37B8290SC3R	0.37	0.50	90S	1.23	640	0.56	550	250	295	56.1	55.6	55.1	0.75	0.60	0.44	0.0120	24	15	30	63	188	1.99
55B8290LA3R	0.55	0.75	90L	1.90	695	0.77	550	190	230	61.7	61.7	61.7	0.65	0.52	0.40	0.0170	17	15	30	63	188	1.99
55B8290LC3R	0.55	0.75	90L	1.90	695	0.77	550	190	230	61.7	61.7	61.7	0.65	0.52	0.40	0.0170	31	15	30	63	188	1.99
75B8210LA3R	0.75	1.00	100L	2.4	700	1.04	550	180	220	66.2	66.0	64.0	0.65	0.55	0.46	0.0200	19	10	20	42	125	4.62
75B8210LC3R	0.75	1.00	100L	2.4	700	1.04	550	180	220	66.2	66.0	64.0	0.65	0.55	0.46	0.0200	37	10	20	42	125	4.62
1.1B8210LA3R	1.1	1.5	100L	3.0	700	1.53	550	180	220	70.8	70.8	70.0	0.72	0.58	0.46	0.0260	25	10	20	42	125	7.27
1.1B8210LC3R	1.1	1.5	100L	3.0	700	1.53	550	180	220	70.8	70.8	70.0	0.72	0.58	0.46	0.0260	40	10	20	42	125	7.27
1.5B8211MA3R	1.5	2.0	112M	3.9	690	2.12	550	180	220	74.1	73.5	71.5	0.72	0.65	0.55	0.0440	35	10	20	42	125	8.43
1.5B8211MC3R	1.5	2.0	112M	3.9	690	2.12	550	180	220	74.1	73.5	71.5	0.72	0.65	0.55	0.0440	47	10	20	42	125	8.43
2.2B8213SC3R	2.2	3.0	132S	6.0	700	3.06	600	180	230	77.6	77.6	77.0	0.65	0.57	0.46	0.0660	66	10	20	42	125	14.8
3.0B8213MC3R	3.0	4.0	132M	7.4	715	4.09	600	180	230	80.0	79.5	78.0	0.71	0.64	0.50	0.0700	80	10	20	42	125	42.0
3.7B8213MC3R	3.7	5.0	160M	8.1	710	5.08	600	250	280	81.4	81.0	80.5	0.78	0.74	0.65	0.2400	105	10	20	42	125	17.9
4.0B8216MC3R	4.0	5.5	160M	8.9	711	5.48	600	250	280	81.9	81.5	81.0	0.76	0.72	0.63	0.2600	110	10	20	42	125	19.6
5.5B8216MC3R	5.5	7.5	160M	13.0	720	7.44	600	180	230	83.8	82.5	79.5	0.70	0.68	0.63	0.2880	117	10	22	42	125	68.0
7.5B8216LC3R	7.5	10	160L	17.0	720	10.1	600	180	230	85.3	84.0	81.0	0.72	0.70	0.65	0.5700	125	10	22	42	125	68.0
9.3B8218LC3R	9.3	12.5	180L	21.0	720	12.6	600	190	240	86.3	85.3	83.8	0.71	0.63	0.52	0.6400	162	10	22	42	125	80.0
011B8218LC3R	11	15	180L	23.8	725	14.8	600	190	240	86.9	85.9	84.6	0.72	0.64	0.53	1.290	174	10	22	42	125	105.0
015B8220LC3T	15	20	200L	33.0	725	20.2	600	190	240	88.0	87.4	85.0	0.72	0.64	0.53	1.780	243	12	27	50	150	137.0
185B8222SC3T	18.5	25	225S	38.0	731	24.6	600	230	260	88.6	87.6	86.1	0.76	0.72	0.63	3.200	345	12	27	50	150	236.0
022B8222MC3T	22	30	225M	45.0	731	29.3	600	230	260	89.1	88.1	86.6	0.76	0.72	0.63	3.200	379	12	27	50	150	274.0
030B8225MC3T	30	40	250M	60.0	735	39.8	600	250	280	89.8	89.0	87.7	0.78	0.74	0.65	6.900	515	12	27	50	150	530.0
037B8228SC3T	37	50	280S	75.0	740	48.7	600	260	290	90.3	90.0	89.0	0.76	0.74	0.63	7.640	605	15	33	63	188	620.0
045B8228MC3T	45	60	280M	86.0	735	59.6	600	230	260	90.7	89.7	87.7	0.80	0.76	0.69	7.820	705	15	33	63	188	793.0
055B8231SC3T	55	75	315S	104.0	740	72.4	600	180	230	91.0	91.0	90.0	0.81	0.79	0.73	22.700	1025	15	33	63	188	937.0
075B8231MC3T	75	100	315M	144.0	740	98.7	600	160	210	91.6	90.6	89.6	0.79	0.77	0.69	34.300	1070	15	33	63	188	1283.0
090B8231LC3T	90	120	315L	173.0	740	118.5	600	160	210	91.9	91.0	89.6	0.79	0.77	0.69	34.300	1110	15	33	63	188	1526.0
110B8231LC3T	110	150	315L	210.0	740	144.8	600	180	240	92.3	92.3	90.3	0.78	0.74	0.66	50.600	1215	15	33	63	188	1857.0
125B8231LC3T	125	170	315L	241.0	740	164.5	600	190	250	92.5	92.0	91.0	0.78	0.73	0.65	53.100	1305	15	33	63	188	2055.0
132B8231LC3T	132	180	315L	235.0	740	173.7	600	170	210	92.6	91.6	90.6	0.84	0.80	0.71	55.600	1370	15	33	63	188	2253.0
150B8235LC3T	150	201	355L	300.0	740	197.4	600	150	210	92.9	92.0	91.0	0.75	0.70	0.56	59.600	1860	15	33	63	188	2431.0
160B8235LC3T	160	215	355L	297.0	740	210.6	600	140	210	93.0	92.0	90.5	0.81	0.67	0.63	64.000	1870	15	33	63	188	2593.0
180B8235LC3T	180	240	355L	344.0	740	236.9	600	140	210	93.3	92.3	91.8	0.78	0.66	0.55	68.000	1888	15	33	63	188	2917.0
200B8235LC3T	200	270	355L	374.0	740	263.2	600	140	210	93.5	93.1	91.9	0.80	0.75	0.66	72.000	2208	15	33	63	188	3241.0
250B8235KC3T	250	335	355L/K	470.0	740	326.8	600	140	205	93.5	93.1	91.9	0.79	0.77	0.69	76.000	2895	15	33	63	188	-

P.T.O...

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K)Line operated with DOL starting, Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE2 VIII-Pole conforms to IS 12615:2018,IS/IEC 60034-1:2004,IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
315B8235KC3T	315	425	355L/K	586.0	740	414.6	600	170	210	93.5	93.1	91.9	0.80	0.75	0.62	80.000	3025	15	33	63	188	-
355B8240LM3T	355	475	400M/L	677.0	740	467.3	600	180	220	93.5	93.2	92.0	0.78	0.74	0.68	86.000	2810	15	33	63	188	-
375B8240LM3T	375	503	400M/L	715.0	740	493.6	600	180	220	93.5	93.2	92.0	0.78	0.74	0.68	86.000	2905	15	33	63	188	-
400B8240LM3T	400	536	400M/L	763.0	740	526.5	600	180	220	93.5	93.2	92.0	0.78	0.74	0.68	90.000	3000	15	33	63	188	-
450B8240LM3T	* 450	603	400M/L	858.0	740	592.0	600	180	220	93.5	93.2	92.0	0.78	0.74	0.68	90.000	3000	15	33	63	188	-
500B8245MM3T	500	670	450M/L	954.0	741	657.2	600	180	250	93.5	93.2	92.0	0.78	0.76	0.70	110.000	4300	15	33	63	188	-
560B8245MM3T	560	750	450M/L	1068.0	741	736.1	600	180	250	93.5	93.3	92.1	0.78	0.76	0.70	130.000	4400	15	33	63	188	-
630B8245LM3T	630	845	450M/L	1201.0	741	828.1	600	180	250	93.5	93.3	92.1	0.78	0.76	0.70	180.000	5600	15	33	63	188	-

High Efficiency TEFC SC Large Motors(with DCCA) - IE2

Foot Mounted (B3), 3 Phase Squirrel Cage Induction motors suitable for 415 V±10% (upto 630kW),690 V±10% (710kW & above), 50 Hz±5%, Combined variation ±10%, Insulation class F with temperature rise limited to class B & F, Degree of protection IP55, Altitude upto 1000 mtrs above m.s.l., Ambient 50°C, Duty S1, Efficiency IE2, conforms to IS:12615-2011/IEC 60034-30-2008.

Technology :

DCCA is a combination of TEFC & CACA(Closed Air-Circulated Air) ventilation system in the large Induction motors. Here both internal as well as external circuits fluid media are Air. To control temperature rise with in the specified limit of class B/90K/F, this ventilation system is very useful, for large rating of 415V/690V upto 1200kW.

Applications: Conveyers, Mill, Compressor, Fan etc.

The advantages of this technology are:

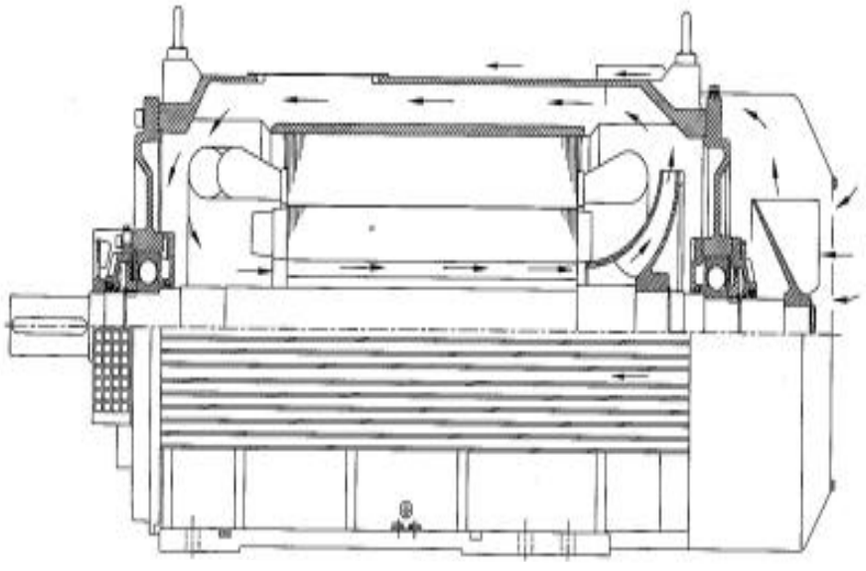
- Lower temperature rise of the winding
- Reduced temperature gradient between DE and NDE sides of the winding on account Of uniform distribution of heat
- Enchanced insulation life
- Increased motor reliability
- Reduced in motor size and as a result,higher outputs can be drawn From the same motor.

Voltage : 415V ±10% (up to 630kW) , 690V±10% (710 kW & above)
Frequency : 50Hz ±5%
Ambient : 50°C CV: ±10%
Duty : S1
Ins. Class : F or H
Temp. Rise : B /F

2 Pole - up to 630 kW
4 Pole – up to 1000 kW
6 Pole - up to 800 kW
8 Pole – up to 630 kW

Note :

Efficiency class 'IE2' will be punched on the nameplates as per IEC: 60034-30-1 for ratings upto 1000 kW for 2,4,6, Pole.
All performance values are subjected to tolerance as per IS:325 / IEC 60034-1.
Higher ratings can be offered on request in 4,6, and 8 polarity.
*Temperature rise limited to class F.
**Temperature rise limited to 90°C



Dual circuit cooling arrangement

Premium Efficiency "Supremo Series" TEFC Motors - IE3

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%, Combined variation 10%, Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K),Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l., Duty S1, Efficiency class IE-3, 2-Pole conforms to IS 12615 : 2018, IS / IEC 60034-1:2004, IEC 60034-1:2010. Efficiency testing according to IEC:60034-2-1:2014-06.

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B23056A3T	0.12	0.16	56	0.4	2770	0.04	650	200	250	60.8	60.0	56.7	0.70	0.64	0.55	0.00085	5	10	20	42	125	0.065
.12B23056C3T	0.12	0.16	56	0.4	2770	0.04	650	200	250	60.8	60.0	56.7	0.70	0.64	0.55	0.00085	6	10	20	42	125	0.065
.18B23063A3T	0.18	0.25	63	0.5	2790	0.06	650	200	250	65.9	65.0	60.1	0.72	0.64	0.55	0.0009	6	10	20	42	125	0.095
.18B23063C3T	0.18	0.25	63	0.5	2790	0.06	650	200	250	65.9	65.0	60.1	0.72	0.64	0.55	0.0009	7	10	20	42	125	0.095
.25B23063A3T	0.25	0.33	63	0.7	2800	0.09	650	200	250	69.7	68.9	65.6	0.73	0.70	0.63	0.0015	6	10	20	42	125	0.11
.25B23063C3T	0.25	0.33	63	0.7	2800	0.09	650	200	250	69.7	68.9	65.6	0.73	0.70	0.63	0.0015	8	10	20	42	125	0.11
.37B23071A3T	0.37	0.50	71	1.0	2810	0.13	700	200	250	73.8	73.0	69.7	0.72	0.70	0.64	0.0018	8	10	20	42	125	0.18
.37B23071C3T	0.37	0.50	71	1.0	2810	0.13	700	200	250	73.8	73.0	69.7	0.72	0.70	0.64	0.0018	11	10	20	42	125	0.18
.55B23071A3T	0.55	0.75	71	1.3	2810	0.19	700	220	295	77.8	77.0	73.7	0.78	0.73	0.65	0.00252	9	10	20	42	125	0.22
.55B23071C3T	0.55	0.75	71	1.3	2810	0.19	700	220	295	77.8	77.0	73.7	0.78	0.73	0.65	0.00252	13	10	20	42	125	0.22
.75B23080A3T	0.75	1.0	80	1.5	2850	0.26	700	225	275	80.7	79.5	76.6	0.86	0.76	0.61	0.00432	11	10	20	42	125	0.35
.75B23080C3T	0.75	1.0	80	1.5	2850	0.26	700	225	275	80.7	79.5	76.6	0.86	0.76	0.61	0.00432	15	10	20	42	125	0.35
1.1B23080A3T	1.1	1.5	80	2.4	2845	0.38	700	225	275	82.7	81.5	79.4	0.78	0.76	0.72	0.00432	12	10	20	42	125	0.45
1.1B23080A3T	1.1	1.5	80	2.4	2845	0.38	700	225	275	82.7	81.5	79.4	0.78	0.76	0.72	0.00432	17	10	20	42	125	0.45
1.5B2390SA3R	1.5	2.0	90S	3.1	2830	0.52	700	230	275	84.2	83.0	80.9	0.81	0.79	0.74	0.00876	19	10	20	42	125	0.55
1.5B2390SC3R	1.5	2.0	90S	3.1	2830	0.52	700	230	275	84.2	83.0	80.9	0.81	0.79	0.74	0.00876	26	10	20	42	125	0.55
2.2B2390LA3R	2.2	3.0	90L	4.2	2870	0.75	770	225	275	85.9	84.5	82.6	0.85	0.81	0.73	0.01068	19	10	20	42	125	0.75
2.2B2390LC3R	2.2	3.0	90L	4.2	2870	0.75	770	225	275	85.9	84.5	82.6	0.85	0.81	0.73	0.01068	27	10	20	42	125	0.75
3B2310LC3R	3.0	4.0	100L	5.8	2865	1.02	770	250	290	87.1	86.5	85.5	0.82	0.78	0.76	0.0200	30	8	16	33	100	0.8
3.7B2310LA3R	3.7	5.0	100L	7.1	2865	1.26	770	250	290	87.8	86.5	84.5	0.83	0.80	0.74	0.0264	22	8	16	33	100	1.4
3.7B2310LA3R	3.7	5.0	100L	7.1	2865	1.26	770	250	290	87.8	86.5	84.5	0.83	0.80	0.74	0.0264	31	8	16	33	100	1.4
4B2310LA3R	4.0	5.5	112M	7.7	2860	1.36	770	250	290	88.1	87.5	85.0	0.82	0.80	0.75	0.0305	28	8	16	33	100	1.5
5.5B2313SC3R	5.5	7.5	132S	10.2	2945	1.82	770	225	265	89.2	88.5	85.9	0.84	0.80	0.73	0.0624	71	8	16	33	100	2.2
7.5B2313SC3R	7.5	10.0	132S	13.6	2945	2.48	770	250	290	90.1	89.1	86.8	0.85	0.82	0.73	0.0816	78	8	16	33	100	3.1
9.3B2316MC3R	9.3	12.5	160M	16.4	2945	3.08	770	250	290	90.7	90.1	87.6	0.87	0.83	0.74	0.096	110	10	22	42	125	4.2
011B2316MC3R	11	15.0	160M	19.5	2950	3.63	770	250	290	91.2	90.5	87.9	0.86	0.84	0.75	0.204	131	10	22	42	125	5.4
015B2316MC3R	15	20.0	160M	25.8	2950	4.95	770	250	295	91.9	91.2	88.6	0.88	0.85	0.76	0.264	149	10	22	42	125	7.9
185B2316LC3R	18.5	25.0	160L	32.0	2945	6.12	770	250	290	92.4	91.7	89.4	0.87	0.85	0.76	0.336	157	10	22	42	125	9.2
022B2318MC3R	22	30.0	180M	36	2945	7.28	770	225	255	92.7	92.0	90.3	0.91	0.86	0.77	0.504	190	10	22	42	125	11.1
030B2320LC3T	30	40.0	200L	50.3	2955	9.89	770	250	280	93.3	92.5	91.5	0.89	0.87	0.76	0.768	260	12	27	50	150	16.8
037B2320LC3T	37	50.0	200L	60.4	2950	12.22	770	220	260	93.7	93.2	91.9	0.91	0.89	0.83	1.02	185	12	27	50	150	20.1
045B2322MC3T	45	60.0	225M	73	2965	14.78	770	220	265	94.0	93.8	92.3	0.91	0.87	0.78	1.092	363	12	27	50	150	26.5
055B2325MC3T	55	75.0	250M	90	2970	18.04	770	200	240	94.3	93.5	92.7	0.90	0.87	0.78	2.16	475	12	27	50	150	30.5
075B2328SC3T	75	100	280S	121	2970	24.60	770	195	255	94.7	94.0	93.1	0.91	0.86	0.77	7.956	710	15	33	63	188	38.9
090B2328MC3T	90	120	280M	145	2980	29.42	770	190	240	95.0	94.3	93.3	0.91	0.88	0.79	9.816	740	15	33	63	188	42.45
110B2331SC3T	110	150	315S	185	2980	35.95	770	195	250	95.2	94.4	93.8	0.87	0.84	0.79	13.86	950	15	33	63	188	54.2
125B2331MC3T	125	170	315M	201	2975	40.92	770	190	245	95.3	94.5	93.9	0.91	0.88	0.79	15.24	1090	15	33	63	188	61.8
132B2331MC3T	132	180	315M	212	2980	43.14	770	180	235	95.4	94.6	94.1	0.91	0.88	0.79	16.668	1110	15	33	63	188	65.4
160B2331LC3T	160	215	315L	262	2985	52.21	770	185	240	95.6	95.0	94.3	0.89	0.88	0.79	17.16	1260	15	33	63	188	82.9
180B2331LC3T	180	240	315L	288	2985	58.73	770	185	240	95.7	94.9	94.4	0.91	0.88	0.79	19.152	1350	15	33	63	188	94.1
200B2331LC3T	200	270	315L	326	2985	65.26	770	185	240	95.8	95.1	94.5	0.89	0.88	0.80	22.644	1390	15	33	63	188	103
250B2335LC3T	250	335	355M	403	2985	81.57	770	185	240	95.8	95.1	95.5	0.90	0.88	0.79	28.08	1850	15	33	63	188	129
315B2335LC3T	315	420	355L	514	2985	102.78	770	180	240	95.8	95.1	94.5	0.89	0.89	0.80	29.7	1970	15	33	63	188	165

Premium Efficiency "Supremo Series" TEFC Motors - IE3

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%, Combined variation 10%, Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K),Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l., Duty S1, Efficiency class IE-3, 4-Pole conforms to IS 12615 : 2018, IS / IEC 60034-1:2004, IEC 60034-1:2010. Efficiency testing according to IEC:60034-2-1:2014-06.

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B43063A3T	0.12	0.16	63	0.37	1360	0.09	600	200	250	64.8	64.0	60.7	0.69	0.64	0.55	0.0014	5	15	30	63	188	0.31
.12B43063C3T	0.12	0.16	63	0.37	1360	0.09	600	200	250	64.8	64.0	60.7	0.69	0.64	0.55	0.0014	6	15	30	63	188	0.31
.18B43063A3T	0.18	0.25	63	0.53	1360	0.13	600	200	250	69.9	69.1	65.8	0.68	0.64	0.55	0.0014	6	15	30	63	188	0.46
.18B43063C3T	0.18	0.25	63	0.53	1360	0.13	600	200	250	69.9	69.1	65.8	0.68	0.64	0.55	0.0014	7	15	30	63	188	0.46
.25B43071A3T	0.25	0.33	71	0.74	1400	0.17	600	200	260	73.5	72.7	69.4	0.64	0.62	0.57	0.0034	8	10	20	42	125	0.61
.25B43071C3T	0.25	0.33	71	0.74	1400	0.17	600	200	260	73.5	72.7	69.4	0.64	0.62	0.57	0.0034	11	10	20	42	125	0.61
.37B43071A3T	0.37	0.5	71	1.0	1400	0.26	650	245	295	77.3	76.5	73.2	0.70	0.68	0.65	0.00408	8	10	20	42	125	0.94
.37B43071C3T	0.37	0.5	71	1.0	1400	0.26	650	245	295	77.3	76.5	73.2	0.70	0.68	0.65	0.00408	11	10	20	42	125	0.94
.55B43080A3T	0.55	0.75	80	1.2	1410	0.38	650	245	300	80.8	79.8	76.7	0.79	0.75	0.62	0.00924	9	10	20	42	125	1.42
.55B43080C3T	0.55	0.75	80	1.2	1410	0.38	650	245	300	80.8	79.8	76.7	0.79	0.75	0.62	0.00924	15	10	20	42	125	1.42
.75B43080A3T	0.75	1.0	80	1.7	1415	0.52	650	235	295	82.5	81.7	80.8	0.75	0.71	0.63	0.01032	12	10	20	42	125	1.92
.75B43080C3T	0.75	1.0	80	1.7	1415	0.52	650	235	295	82.5	81.7	80.8	0.75	0.71	0.63	0.01032	16	10	20	42	125	1.92
1.1B4390SA3R	1.1	1.5	90S	2.4	1425	0.75	650	235	300	84.1	83.3	82.5	0.77	0.74	0.65	0.0168	17	10	20	42	125	2.8
1.1B4390SC3R	1.1	1.5	90S	2.4	1425	0.75	650	235	300	84.1	83.3	82.5	0.77	0.74	0.65	0.0168	26	10	20	42	125	2.8
1.5B4390LA3R	1.5	2.0	90L	3.2	1420	1.03	650	240	295	85.3	84.0	83.1	0.77	0.76	0.67	0.018	18	10	20	42	125	3.8
1.5B4390LC3R	1.5	2.0	90L	3.2	1420	1.03	650	240	295	85.3	84.0	83.1	0.77	0.76	0.67	0.018	28	10	20	42	125	3.8
2.2B4310LA3R	2.2	3.0	100L	4.6	1440	1.49	750	245	285	86.7	85.9	84.5	0.77	0.75	0.66	0.0348	25	8	16	33	100	5.5
2.2B4310LC3R	2.2	3.0	100L	4.6	1440	1.49	750	245	285	86.7	85.9	84.5	0.77	0.75	0.66	0.0348	33	8	16	33	100	5.5
3B4310LC3R	3.0	4.0	100L	6.3	1435	2.04	750	245	285	87.7	87.0	86.0	0.76	0.72	0.68	0.045	35	8	16	33	100	6.5
3.7B4311MA3R	3.7	5.0	112M	7.2	1445	2.49	750	245	285	88.4	87.6	86.8	0.81	0.76	0.67	0.0684	35	8	16	33	100	8.5
3.7B4311MC3R	3.7	5.0	112M	7.2	1445	2.49	750	245	285	88.4	87.6	86.8	0.81	0.76	0.67	0.0684	50	8	16	33	100	8.5
4B4311MC3R	4.0	5.5	112M	7.9	1450	2.69	750	245	285	88.6	87.5	86.5	0.80	0.78	0.72	0.095		8	16	33	100	9.5
5.5B4313SC3R	5.5	7.5	132S	11	1460	3.67	750	235	295	89.6	88.8	87.9	0.78	0.77	0.68	0.1116	74	8	16	33	100	12.8
7.5B4313MC3R	7.5	10.0	132M	14.4	1460	5.00	750	195	255	90.4	89.6	88.8	0.80	0.78	0.69	0.144	87	8	16	33	100	18.2
9.3B4316MC3R	9.3	12.5	160M	16.7	1460	6.20	750	195	255	91.0	90.0	89.1	0.85	0.83	0.77	0.204	118	10	22	42	125	22.7
011B4316MC3R	11	15.0	160M	20.2	1460	7.34	750	215	280	91.4	90.6	89.5	0.83	0.81	0.72	0.24	137	10	22	42	125	25.4
015B4316LC3R	15	20.0	160L	27.0	1460	10.01	750	220	280	92.1	91.3	90.4	0.84	0.82	0.73	0.312	150	10	22	42	125	38.5
185B4318MC3R	18.5	25.0	180M	33.1	1470	12.26	750	220	280	92.6	91.8	90.7	0.84	0.83	0.74	0.792	183	10	22	42	125	45.3
022B4318LC3R	22	30.0	180L	38.7	1470	14.58	750	215	275	93.0	92.2	91.2	0.85	0.81	0.72	1.008	198	10	22	42	125	52
030B4320LC3T	30	40.0	200L	52.5	1475	19.81	750	235	285	93.6	92.8	91.5	0.85	0.81	0.72	1.44	269	12	27	50	150	72
037B4322SC3T	37	50.0	225S	65.3	1475	24.43	750	225	270	93.9	93.1	92.1	0.84	0.82	0.73	1.8	348	12	27	50	150	91
045B4322MC3T	45	60.0	225M	79.1	1480	29.61	750	225	290	94.2	93.4	92.4	0.84	0.82	0.73	2.04	372	12	27	50	150	112
055B4325MC3T	55	75.0	250M	96.3	1480	36.20	750	215	280	94.6	93.8	92.5	0.84	0.83	0.74	3.84	484	12	27	50	150	135
075B4328SC3T	75	100	280S	129	1485	49.19	770	215	280	95.0	94.2	92.7	0.85	0.83	0.74	8.64	715	15	33	63	188	185
090B4328MC3T	90	120	280M	153	1485	59.03	770	220	280	95.2	94.4	93.2	0.86	0.84	0.75	9.96	745	15	33	63	188	223
110B4331SC3T	110	150	315S	187	1485	72.15	770	200	260	95.4	94.6	93.4	0.86	0.83	0.74	13.92	971	15	33	63	188	267
125B4331MC3T	125	170	315M	212	1485	81.99	770	195	250	95.5	94.7	93.5	0.86	0.83	0.74	15.12	1110	15	33	63	188	304
132B4331MC3T	132	180	315M	221	1485	86.58	770	195	250	95.6	94.8	93.6	0.87	0.84	0.75	16.8	1140	15	33	63	188	329
160B4331LC3T	160	215	315L	270	1490	104.59	770	220	275	95.8	95.0	93.8	0.86	0.85	0.76	27.9	1320	15	33	63	188	391
180B4331LC3T	180	240	315L	304	1485	118.06	770	220	275	95.9	95.1	93.9	0.86	0.85	0.76	28.8	1370	15	33	63	188	421
200B4331LC3T	200	270	315L	341	1485	131.18	770	200	255	96.0	95.2	94.1	0.85	0.85	0.76	30.7	1410	15	33	63	188	483
250B4335MC3T	250	340	355M	416	1485	163.97	770	195	250	96.0	95.2	94.3	0.87	0.85	0.76	38.1	1990	15	33	63	188	584
315B4335LC3T	315	430	355L	519	1485	206.61	770	195	245	96.0	95.2	94.4	0.88	0.86	0.77	48.3	1990	15	33	63	188	741
355B4335LC3T	355	475	355L/K	585	1487	232.53	770	210	250	96.0	95.1	94.5	0.88	0.86	0.78	53.13	2100	15	33	63	188	851
375B4335LC3T	375	500	355L/K	611	1487	245.63	770	210	250	96.0	95.0	94.5	0.89	0.86	0.78	58.44	2125	15	33	63	188	904

Premium Efficiency "Supremo Series" TEFC Motors - IE3

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%, Combined variation 10%, Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K),Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l., Duty S1, Efficiency class IE-3, 6-Pole conforms to IS 12615 : 2018, IS / IEC 60034-1:2004, IEC 60034-1:2010. Efficiency testing according to IEC:60034-2-1:2014-06.

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B63063A3T	0.12	0.16	63	0.53	880	0.13	650	190	230	57.7	56.9	53.6	0.55	0.51	0.42	0.0041	7	10	20	42	125	0.71
.12B63063C3T	0.12	0.16	63	0.53	880	0.13	650	190	230	57.7	56.9	53.6	0.55	0.51	0.42	0.0041	8	10	20	42	125	0.71
.18B63071A3T	0.18	0.25	71	0.68	890	0.20	650	190	230	63.9	63.1	59.8	0.58	0.54	0.45	0.0044	8	10	20	42	125	1.1
.18B63071C3T	0.18	0.25	71	0.68	890	0.20	650	190	230	63.9	63.1	59.8	0.58	0.54	0.45	0.0044	11	10	20	42	125	1.1
.25B63071A3T	0.25	0.35	71	0.84	900	0.27	650	190	230	68.6	67.8	64.5	0.60	0.56	0.47	0.0044	9	10	20	42	125	1.5
.25B63071C3T	0.25	0.35	71	0.84	900	0.27	650	190	230	68.6	67.8	64.5	0.60	0.56	0.47	0.0044	12	10	20	42	125	1.5
.37B63080A3T	0.37	0.5	80	1.08	950	0.38	650	190	230	73.5	72.7	70.2	0.65	0.61	0.52	0.0084	10	10	20	42	125	2.2
.37B63080C3T	0.37	0.5	80	1.08	950	0.38	650	190	230	73.5	72.7	70.2	0.65	0.61	0.52	0.0084	16	10	20	42	125	2.2
.55B63080A3T	0.55	0.75	80	1.5	935	0.57	650	195	250	77.2	76.4	73.9	0.67	0.63	0.54	0.01116	12	10	20	42	125	3.1
.55B63080C3T	0.55	0.75	80	1.5	935	0.57	650	195	250	77.2	76.4	73.9	0.67	0.63	0.54	0.01116	17	10	20	42	125	3.1
.75B6390SA3R	0.75	1.0	90S	1.9	935	0.78	650	195	250	78.9	78.1	75.6	0.68	0.64	0.55	0.0192	17	10	20	42	125	4.2
.75B6390SC3R	0.75	1.0	90S	1.9	935	0.78	650	195	250	78.9	78.1	75.6	0.68	0.64	0.55	0.0192	26	10	20	42	125	4.2
1.1B6390LA3R	1.1	1.5	90L	2.8	940	1.14	650	200	260	81.0	80.2	78.9	0.67	0.63	0.54	0.024	19	10	20	42	125	6.5
1.1B6390LC3R	1.1	1.5	90L	2.8	940	1.14	650	200	260	81.0	80.2	78.9	0.67	0.63	0.54	0.024	28	10	20	42	125	6.5
1.5B6310LA3R	1.5	2.0	100L	3.8	940	1.55	650	200	250	82.5	81.7	80.1	0.67	0.63	0.54	0.0384	25	10	20	42	125	9.1
1.5B6310LC3R	1.5	2.0	100L	3.8	940	1.55	650	200	250	82.5	81.7	80.1	0.67	0.63	0.54	0.0384	35	10	20	42	125	9.1
2.2B6311MA3R	2.2	3.0	112M	5.0	960	2.23	750	190	240	84.3	83.5	82.8	0.73	0.69	0.60	0.0864	34	10	20	42	125	12.5
2.2B6311MC3R	2.2	3.0	112M	5.0	960	2.23	750	190	240	84.3	83.5	82.8	0.73	0.69	0.60	0.0864	44	10	20	42	125	12.5
3B6313SC3R	3.0	4.0	132S	6.8	960	3.04	750	190	240	85.6	84.8	83.0	0.72	0.68	0.59	0.091		10	20	42	125	14
3.7B6313SC3R	3.7	5.0	132S	7.8	950	3.79	750	195	245	86.5	85.7	85.0	0.76	0.72	0.63	0.156	70	10	20	42	125	22.5
4B6313MC3R	4	5.0	132M	8.9	950	4.10	750	195	245	86.8	86.0	85.0	0.72	0.68	0.59	0.185	80	10	20	42	125	24
5.5B6313MC3R	5.5	7.5	132M	11.6	960	5.58	750	190	240	88.0	87.2	86.8	0.75	0.71	0.62	0.204	84	10	20	42	125	32.1
7.5B6316MC3R	7.5	10.0	160M	16.3	970	7.53	750	215	280	89.1	88.3	87.6	0.72	0.68	0.59	0.516	120	10	22	42	125	45.3
9.3B6316LC3R	9.3	12.5	160L	17.2	975	9.29	750	215	280	89.5	88.7	88.4	0.84	0.80	0.71	0.696	127	10	22	42	125	53.9
011B6316LC3R	11	15.0	160L	21.5	965	11.10	750	195	255	90.3	89.5	89.7	0.79	0.75	0.66	0.792	144	10	22	42	125	65.1
015B6318LC3R	15	20.0	180L	27.9	975	14.98	750	220	290	91.2	90.4	90.2	0.82	0.78	0.69	1.2	205	10	22	42	125	90.1
185B6320LC3T	18.5	25.0	200L	33.4	980	18.39	750	210	275	91.7	90.9	90.8	0.84	0.80	0.71	1.68	240	12	27	50	150	112
022B6320LC3T	22	30.0	200L	40.5	980	21.87	750	220	285	92.2	91.4	91.3	0.82	0.78	0.69	1.92	278	12	27	50	150	128
030B6322MC3T	30	40.0	225M	51.6	985	29.66	750	250	290	92.9	92.1	92.0	0.87	0.83	0.74	2.76	362	12	27	50	150	183
037B6325MC3T	37	50.0	250M	65	985	36.59	750	220	285	93.3	92.5	92.2	0.85	0.81	0.72	4.32	495	12	27	50	150	222
045B6328SC3T	45	60.0	280S	79.5	985	44.50	750	225	290	93.7	92.9	92.3	0.84	0.80	0.71	9.6	696	15	33	63	188	262
055B6328MC3T	55	75.0	280M	96.8	985	54.39	750	215	280	94.1	93.3	92.8	0.84	0.80	0.71	11.88	710	15	33	63	188	315
075B6331SC3T	75	100	315S	128	985	74.16	770	215	280	94.6	93.8	93.1	0.86	0.82	0.73	16.92	1030	15	33	63	188	405
090B6331MC3T	90	120	315M	155	985	88.99	770	195	255	94.9	94.1	93.5	0.85	0.81	0.72	20.4	1040	15	33	63	188	475
110B6331MC3T	110	150	315M	187	990	108.22	770	200	260	95.1	94.3	93.7	0.86	0.82	0.73	22.8	1105	15	33	63	188	595
125B6331LC3T	125	170	315L	212	990	122.98	770	200	260	95.2	94.4	93.8	0.86	0.82	0.73	24	1160	15	33	63	188	674
132B6331LC3T	132	180	315L	226	990	129.87	770	195	255	95.4	94.6	93.9	0.85	0.82	0.73	25.08	1170	15	33	63	188	780
160B6335LC3T	160	215	355L	271	990	157.41	770	200	260	95.6	94.8	94.1	0.86	0.81	0.72	30	1730	15	33	63	188	920
180B6335LC3T	180	240	355L	304	990	177.09	770	200	260	95.7	94.9	94.2	0.86	0.82	0.73	35	1800	15	33	63	188	1010
200B6335LC3T	200	270	355L	342	990	196.77	770	200	260	95.8	95.0	94.3	0.85	0.81	0.72	37.5	1830	15	33	63	188	1185
250B6335LC3T	250	340	355L	422	990	245.96	770	195	255	95.8	95.0	94.4	0.86	0.82	0.73	46.9	2072	15	33	63	188	1490

Premium Efficiency "Supremo Series" TEFC Motors - IE3

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%, Combined variation 10%, Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K),Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l., Duty S1, Efficiency class IE-3, 8-Pole conforms to IS 12615 : 2018, IS / IEC 60034-1:2004, IEC 60034-1:2010. Efficiency testing according to IEC:60034-2-1:2014-06.

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T ∝ 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B83071A3T	0.12	0.16	71	0.63	645	0.18	550	180	220	50.7	49.9	46.6	0.52	0.48	0.39	0.00492	8	15	30	63	188	1.15
.12B83071C3T	0.12	0.16	71	0.63	645	0.18	550	180	220	50.7	49.9	46.6	0.52	0.48	0.39	0.00492	10	15	30	63	188	1.15
.18B83080A3T	0.18	0.25	80	0.78	650	0.27	550	180	220	58.7	57.9	54.6	0.55	0.51	0.42	0.00528	11	15	30	63	188	1.75
.18B83080C3T	0.18	0.25	80	0.78	650	0.27	550	180	220	58.7	57.9	54.6	0.55	0.51	0.42	0.00528	18	15	30	63	188	1.75
.25B83080A3T	0.25	0.35	80	0.95	660	0.37	550	180	225	64.1	63.3	60.0	0.57	0.53	0.44	0.00528	12	15	30	63	188	2.6
.25B83080C3T	0.25	0.35	80	0.95	660	0.37	550	180	225	64.1	63.3	60.0	0.57	0.53	0.44	0.00528	18	15	30	63	188	2.6
.37B8390SA3R	0.37	0.5	90S	1.2	670	0.54	600	180	225	69.3	68.5	65.2	0.60	0.56	0.47	0.01008	19	15	30	63	188	3.5
.37B8390SC3R	0.37	0.5	90S	1.2	670	0.54	600	180	225	69.3	68.5	65.2	0.60	0.56	0.47	0.01008	29	15	30	63	188	3.5
.55B8390LA3R	0.55	0.75	90L	1.7	680	0.79	650	180	220	73.0	72.2	68.9	0.62	0.58	0.49	0.0134	20	15	30	63	188	5.1
.55B8390LC3R	0.55	0.75	90L	1.7	680	0.79	650	180	220	73.0	72.2	68.9	0.62	0.58	0.49	0.0134	30	15	30	63	188	5.1
.75B8310LA3R	0.75	1.0	100L	2.2	685	1.07	650	180	230	75.0	74.2	71.7	0.64	0.60	0.51	0.023	27	10	20	42	125	7.4
.75B8310LC3R	0.75	1.0	100L	2.2	685	1.07	650	180	230	75.0	74.2	71.7	0.64	0.60	0.51	0.023	42	10	20	42	125	7.4
1.1B8310LA3R	1.1	1.5	100L	3.0	685	1.56	650	190	235	77.7	76.9	74.4	0.66	0.62	0.53	0.0288	29	10	20	42	125	10.6
1.1B8310LC3R	1.1	1.5	100L	3.0	685	1.56	650	190	235	77.7	76.9	74.4	0.66	0.62	0.53	0.0288	44	10	20	42	125	10.6
1.5B8311MA3R	1.5	2.0	112M	3.8	690	2.12	650	180	225	79.7	78.9	76.4	0.69	0.65	0.56	0.046	40	10	20	42	125	14.2
1.5B8311MC3R	1.5	2.0	112M	3.8	690	2.12	650	180	225	79.7	78.9	76.4	0.69	0.65	0.56	0.046	49	10	20	42	125	14.2
2.2B8313SC3R	2.2	3.0	132S	5.3	705	3.04	700	180	230	81.9	81.1	78.6	0.71	0.67	0.58	0.104	80	10	20	42	125	21.9
3B8313MC3R	3.0	4.0	132M	7.4	705	4.14	700	180	230	83.5	82.7	80.2	0.68	0.64	0.55	0.150		10	20	42	125	25
3.7B8316MC3R	3.7	5.0	160M	8.5	720	5.01	700	220	265	84.5	83.7	81.2	0.72	0.68	0.59	0.187	110	10	22	42	125	36.4
4B8316MC3R	4.0	5.5	160M	9.9	720	5.41	700	190	240	84.8	84.0	81.5	0.66	0.62	0.53	0.200		10	22	42	125	40
5.5B8316MC3R	5.5	7.5	160M	12.0	720	7.44	700	190	240	86.2	85.4	82.9	0.74	0.70	0.61	0.245	120	10	22	42	125	54
7.5B8316LC3R	7.5	10.0	160L	16.4	720	10.15	700	190	245	87.3	86.5	84.0	0.73	0.69	0.60	0.619	140	10	22	42	125	73.4
9.3B8318LC3R	9.3	12.5	180L	19.6	720	12.58	700	190	240	88.1	87.3	84.8	0.75	0.71	0.62	0.835	170	10	22	42	125	90.1
011B8318LC3R	11	15.0	180L	23.0	725	14.78	700	200	245	88.6	87.8	85.3	0.75	0.71	0.62	0.95	180	10	22	42	125	105
015B8320LC3T	15	20.0	200L	30.6	730	20.01	700	180	220	89.6	88.8	86.3	0.76	0.72	0.63	1.44	250	12	27	50	150	142
185B8322SC3T	18.5	25.0	225S	37.6	730	24.68	700	190	230	90.1	89.3	87.9	0.76	0.72	0.63	2.016	295	12	27	50	150	175
022B8322MC3T	22	30.0	225M	43.9	730	29.35	700	205	245	90.6	89.8	88.4	0.77	0.73	0.64	2.304	330	12	27	50	150	202
030B8325MC3T	30	40.0	250M	57.9	730	40.03	700	210	250	91.3	90.5	89.1	0.79	0.75	0.66	3.312	545	12	27	50	150	303
037B8328SC3T	37	50.0	280S	71.0	730	49.37	700	190	235	91.8	91.0	89.6	0.79	0.75	0.66	5.184	1000	15	33	63	188	351
045B8328MC3T	45	60.0	280M	85.9	735	59.63	700	200	245	92.2	91.4	90.0	0.79	0.75	0.66	11.52	1000	15	33	63	188	458
055B8331SC3T	55	75.0	315S	103.4	735	72.88	700	210	240	92.5	91.7	90.3	0.80	0.76	0.67	14.26	940	15	33	63	188	559
075B8331MC3T	75	100	315M	138	735	99.39	700	200	240	93.1	92.3	90.9	0.81	0.77	0.68	20.3	1000	15	33	63	188	751
090B8331LC3T	90	120	315L	170	735	119.27	700	180	220	93.4	92.6	91.2	0.79	0.75	0.66	24.48	1180	15	33	63	188	950
110B8331LC3T	110	150	315L	202	735	145.77	700	180	225	93.7	92.9	91.8	0.81	0.77	0.68	27.36	1220	15	33	63	188	1115
125B8331LC3T	125	170	315L	231	740	164.53	700	180	225	94.0	93.2	92.1	0.80	0.76	0.67	28.8	1300	15	33	63	188	1253
132B8331LC3T	132	180	315L	240	740	173.74	700	200	240	94.3	93.5	92.4	0.81	0.77	0.68	30.1	1345	15	33	63	188	1328
160B8335LC3T	160	215	355L/K	290	740	210.59	700	185	230	94.6	93.8	92.7	0.81	0.77	0.68	36	2038	15	33	63	188	1607
180B8335LC3T	180	240	355L/K	331	740	236.92	700	185	230	94.6	93.8	92.7	0.80	0.76	0.67	42	2038	15	33	63	188	1803
200B8335LC3T	200	270	355L/K	363	740	263.24	700	185	230	94.6	93.8	92.7	0.81	0.77	0.68	45	2368	15	33	63	188	2003
250B8335LC3T	250	340	355L/K	454	740	329.05	700	180	225	94.6	93.8	92.7	0.81	0.77	0.68	56.28	3095	15	33	63	188	2459

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K)Line operated with DOL starting, Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3 II-Pole, conforms to IS/IEC 60034-1:2004,IEC 60034-1:2010 and IS 12615:2018 , Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
355B2335KC3T	355	475	355L/K	586	2981	115.99	770	170	250	95.8	95.4	93.8	0.88	0.86	0.81	22.40	2040	15	33	63	188	Please Contact nearest Sales office
375B2335KC3T	375	503	355L/K	619	2981	122.53	770	170	250	95.8	95.4	93.8	0.88	0.87	0.82	24.20	2100	15	33	63	188	
400B2335KC3T	400	536	355L/K	660	2981	130.69	770	170	250	95.8	95.4	93.8	0.88	0.87	0.82	26.00	2160	15	35	63	188	
450B2335KC3T	450	603	355L/K	734	2982	146.98	770	170	250	95.8	95.4	93.8	0.89	0.87	0.82	28.60	2280	15	35	63	188	
500B2335KC3T	500	670	355L/K	816	2983	163.26	770	170	250	95.8	95.5	94.0	0.89	0.87	0.82	31.30	2380	15	35	63	188	
560B2340LM3T	560	750	400M/L	914	2984	182.79	770	170	250	95.8	95.6	94.2	0.89	0.87	0.79	51.30	2880	18	40	63	188	
630B2340LM3T	* 630	845	400M/L	1028	2984	205.64	770	170	250	95.8	95.6	94.3	0.89	0.87	0.79	57.30	3260	18	40	63	188	

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
400B4335KC3T	400	536	355L/K	690	1489	261.65	770	210	250	96.0	95.5	94.1	0.84	0.82	0.73	30.60	2160	15	33	63	188	Please Contact nearest Sales office
450B4335KC3T	450	603	355L/K	776	1489	294.36	770	210	250	96.0	95.5	94.1	0.84	0.82	0.73	33.70	2270	15	33	63	188	
500B4335KC3T	500	670	355L/K	843	1489	327.07	770	210	240	96.0	95.5	94.1	0.86	0.83	0.74	36.80	2380	15	33	63	188	
560B4340LM3T	560	750	400M/L	944	1493	365.33	770	200	250	96.0	95.5	94.1	0.86	0.84	0.78	63.00	2810	15	33	63	188	
630B4340LM3T	630	845	400M/L	1062	1493	411.00	770	200	250	96.0	95.6	94.2	0.86	0.84	0.78	70.50	3000	15	33	63	188	
710B4340LM3T	*710	952	400M/L	720	1493	463.19	770	200	250	96.0	95.6	94.2	0.86	0.84	0.78	70.50	3000	15	33	63	188	
800B4345MM3T	800	1072	450M/L	811	1493	521.90	770	210	250	96.0	95.7	94.2	0.86	0.83	0.76	120.00	4300	15	33	63	188	
900B4345MM3T	900	1206	450M/L	912	1493	587.14	770	210	250	96.0	95.7	94.3	0.86	0.83	0.76	132.00	4500	15	33	63	188	
00AB4345LM3T	1000	1340	450M/L	1014	1493	652.38	770	210	250	96.0	95.7	94.3	0.86	0.83	0.76	160.00	5650	15	33	63	188	

Note:- Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication.All performance figures are subject to IS/IEC 60034-1 tolerances.355 frame Cast iron frame and 400 frame fabricated.Efficiency testing according to IEC:60034-2-1, 355 & 400 frame size will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

Premium Efficiency "Supremo Series" TEFC Motors - IE3 - DCCA

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K)Line operated with DOL starting, Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3 VI-Pole, conforms to IS/IEC 60034-1:2004,IEC 60034-1:2010 and IS 12615:2018 , Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
315B6335KC3T	315	425	355L/K	538.0	992	309.28	770	200	250	95.8	95.3	93.8	0.85	0.83	0.78	56.90	1980	15	33	63	188	Please Contact nearest Sales office
355B6335KC3T	355	475	355L/K	621.0	992	348.56	770	200	250	95.8	95.3	93.8	0.83	0.79	0.70	66.00	2280	15	33	63	188	
375B6335KC3T	375	503	355L/K	656.0	992	368.20	770	200	250	95.8	95.3	93.8	0.83	0.79	0.70	67.85	2345	15	33	63	188	
400B6335KC3T	400	536	355L/K	700.0	992	392.74	770	200	250	95.8	95.4	93.9	0.83	0.79	0.70	69.70	2410	15	33	63	188	
450B6340LM3T	450	603	400M/L	778.0	993	441.39	770	190	250	95.8	95.4	93.9	0.84	0.79	0.70	77.00	2810	15	33	63	188	
500B6340LM3T	500	670	400M/L	864.0	993	490.43	770	190	250	95.8	95.4	93.9	0.84	0.79	0.70	86.00	3000	15	33	63	188	
560B6340LM3T	*560	750	400M/L	968.0	993	549.28	770	190	250	95.8	95.4	93.9	0.84	0.79	0.70	86.00	3000	15	33	63	188	
630B6345MM3T	630	845	450M/L	1102.0	993	617.95	770	190	250	95.8	95.5	94.0	0.83	0.78	0.70	180.00	4300	15	33	63	188	
710B6345MM3T	710	952	450M/L	747.0	994	695.71	770	190	250	95.8	95.5	94.0	0.83	0.78	0.70	200.00	4400	15	33	63	188	
800B6345LM3T	800	1072	450M/L	842.0	994	783.90	770	190	250	95.8	95.5	94.0	0.83	0.78	0.70	236.00	5600	15	33	63	188	

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
250B8335KC3T	250	335	355L/K	471	741	328.6	700	140	205	94.6	94.2	93.0	0.78	0.76	0.68	76	3285	15	33	63	188	Please Contact nearest Sales office
315B8335KC3T	315	425	355L/K	586	741	414.0	700	170	210	94.6	94.2	93.0	0.79	0.74	0.68	80	4135	15	33	63	188	
355B8340LM3T	355	475	400M/L	678	741	466.6	700	180	220	94.6	94.2	93.0	0.77	0.73	0.67	86	2810	15	33	63	188	
375B8340LM3T	375	503	400M/L	716	741	492.9	700	180	220	94.6	94.3	93.1	0.77	0.73	0.67	86	2905	15	33	63	188	
400B8340LM3T	400	536	400M/L	764	741	525.8	700	180	220	94.6	94.3	93.1	0.77	0.73	0.67	90	3000	15	33	63	188	
450B8340LM3T	* 450	603	400M/L	859	741	591.5	700	180	220	94.6	94.3	93.1	0.77	0.73	0.67	90	3000	15	33	63	188	
500B8345MM3T	500	670	450M/L	955	742	656.3	700	180	250	94.6	94.3	93.1	0.77	0.75	0.69	110	4300	15	33	63	188	
560B8345MM3T	560	750	450M/L	1070	742	735.1	700	180	250	94.6	94.4	93.2	0.77	0.75	0.69	130	4400	15	33	63	188	
630B8345LM3T	630	845	450M/L	1203	742	827.0	700	180	250	94.6	94.4	93.2	0.77	0.75	0.69	180	5600	15	33	63	188	

Super Premium Efficiency "Ultimo Series" TEFC Motors - IE4

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%, Combined variation 10%, Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K),Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l., Duty S1, Efficiency class IE-4, 2-Pole conforms to IS 12615 : 2018, IS / IEC 60034-1:2004, IEC 60034-1:2010. Efficiency testing according to IEC:60034-2-1:2014-06.

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B2456A3T	0.12	0.16	56	0.37	2770	0.04	730	200	250	66.5	65.7	62.4	0.68	0.64	0.55	0.00094	**	10	20	42	125	0.065
.12B2456A3T	0.12	0.16	56	0.37	2770	0.04	730	200	250	66.5	65.7	62.4	0.68	0.64	0.55	0.00094	**	10	20	42	125	0.065
.18B24063A3T	0.18	0.25	63	0.52	2790	0.06	730	200	250	70.8	70.0	66.7	0.68	0.64	0.55	0.00099	**	10	20	42	125	0.095
.18B24063A3T	0.18	0.25	63	0.52	2790	0.06	730	200	250	70.8	70.0	66.7	0.68	0.64	0.55	0.00099	**	10	20	42	125	0.095
.25B24063A3T	0.25	0.35	63	0.62	2800	0.09	730	200	250	74.3	73.5	70.2	0.76	0.72	0.63	0.00165	**	10	20	42	125	0.110
.25B24063A3T	0.25	0.35	63	0.62	2800	0.09	730	200	250	74.3	73.5	70.2	0.76	0.72	0.63	0.00165	**	10	20	42	125	0.110
.37B24071A3T	0.37	0.50	71	0.84	2800	0.13	780	200	250	78.1	77.3	74.0	0.78	0.74	0.65	0.00198	**	10	20	42	125	0.180
.37B24071A3T	0.37	0.50	71	0.84	2800	0.13	780	200	250	78.1	77.3	74.0	0.78	0.74	0.65	0.00198	**	10	20	42	125	0.180
.55B24071A3T	0.55	0.75	71	1.2	2810	0.19	780	220	265	81.5	80.7	78.1	0.78	0.74	0.65	0.00277	**	10	20	42	125	0.220
.55B24071A3T	0.55	0.75	71	1.2	2810	0.19	780	220	265	81.5	80.7	78.1	0.78	0.74	0.65	0.00277	**	10	20	42	125	0.220
.75B24080A3T	0.75	1.0	80	1.5	2830	0.26	780	225	265	83.5	82.7	80.1	0.84	0.80	0.71	0.00475	**	10	20	42	125	0.350
.75B24080A3T	0.75	1.0	80	1.5	2830	0.26	780	225	265	83.5	82.7	80.1	0.84	0.80	0.71	0.00475	**	10	20	42	125	0.350
1.1B24080A3T	1.1	1.5	80	2.1	2845	0.38	780	225	275	85.2	84.4	81.8	0.85	0.81	0.72	0.00475	**	10	20	42	125	0.450
1.1B24080C3T	1.1	1.5	80	2.1	2845	0.38	780	225	275	85.2	84.4	81.8	0.85	0.81	0.72	0.00475	**	10	20	42	125	0.450
1.5B2490SA3R	1.5	2.0	90S	2.8	2855	0.51	780	220	260	86.5	85.7	83.1	0.87	0.83	0.74	0.00964	**	10	20	42	125	0.550
1.5B2490SC3R	1.5	2.0	90S	2.8	2855	0.51	780	220	260	86.5	85.7	83.1	0.87	0.83	0.74	0.00964	**	10	20	42	125	0.550
2.2B2490LA3R	2.2	3.0	90L	4.0	2865	0.75	890	235	275	88.0	87.2	84.6	0.86	0.82	0.73	0.01175	**	10	20	42	125	0.8
2.2B2490LC3R	2.2	3.0	90L	4.0	2865	0.75	890	235	275	88.0	87.2	84.6	0.86	0.82	0.73	0.01175	**	10	20	42	125	0.8
3B2410LA3R	3.0	4.0	100L	5.6	2865	1.02	890	250	275	89.1	88.3	85.7	0.84	0.80	0.71	0.02400	**	8	16	33	100	1.0
3.7B2410LA3R	3.7	5.0	100L	6.7	2865	1.26	890	250	290	89.7	88.9	86.3	0.86	0.82	0.73	0.02904	**	8	16	33	100	1.4
4B2411MC3R	4.0	5.5	112M	7.4	2870	1.36	890	250	290	90.0	89.2	86.6	0.84	0.80	0.71	0.04500	**	8	16	33	100	1.8
5.5B2413SC3R	5.5	7.5	132S	9.8	2860	1.87	890	210	250	90.9	90.1	87.5	0.86	0.82	0.73	0.06864	**	8	16	33	100	2.2
7.5B2413SC3R	7.5	10.0	132S	13.2	2945	2.48	890	250	290	91.7	90.9	88.3	0.86	0.82	0.73	0.08976	**	8	16	33	100	3.1
9.3B2416MC3R	9.3	12.5	160M	16.1	2945	3.08	890	250	290	92.2	91.4	88.8	0.87	0.83	0.74	0.10560	**	10	22	42	125	4.2
011B2416MC3R	11	15.0	160M	18.8	2940	3.64	890	250	290	92.6	91.8	89.2	0.88	0.84	0.75	0.22440	**	10	22	42	125	5.4
015B2416MC3R	15	20.0	160M	25.1	2945	4.96	890	250	295	93.3	92.5	90.7	0.89	0.85	0.76	0.29040	**	10	22	42	125	7.9
185B2416LC3R	18.5	25.0	160L	30.9	2945	6.12	890	250	290	93.7	92.9	91.1	0.89	0.85	0.76	0.36960	**	10	22	42	125	9.2
022B2418MC3R	22	30.0	180M	36.2	2950	7.26	890	175	225	94.0	93.2	91.4	0.90	0.86	0.77	0.55440	**	10	22	42	125	11.1
030B2420LC3T	30	40.0	200L	49.1	2955	9.89	890	240	280	94.5	93.7	91.9	0.90	0.86	0.77	0.84480	**	12	27	50	150	16.8
037B2420LC3T	37	50.0	200L	59.7	2955	12.20	890	210	250	94.8	94.0	92.2	0.91	0.87	0.78	1.12200	**	12	27	50	150	20.1
045B2422MC3T	45	60.0	225M	72.4	2965	14.78	890	210	255	95.0	94.2	92.4	0.91	0.87	0.78	1.20120	**	12	27	50	150	26.5
055B2425MC3T	55	75.0	250M	88.2	2970	18.04	890	200	245	95.3	94.5	92.7	0.91	0.87	0.78	2.37600	**	12	27	50	150	30.5
075B2428SC3T	75	100	280S	121	2970	24.60	890	195	255	95.6	94.8	93.0	0.90	0.86	0.77	8.75160	**	15	33	63	188	38.9
090B2428MC3T	90	120	280M	144	2975	29.47	890	190	240	95.8	95.0	93.2	0.91	0.87	0.78	10.80	**	15	33	63	188	42.5
110B2431SC3T	110	150	315S	173	2980	35.95	890	195	250	96.0	95.2	94.1	0.92	0.88	0.79	15.25	**	15	33	63	188	54.2
125B2431MC3T	125	170	315M	199	2980	40.86	890	190	245	96.2	95.4	94.3	0.91	0.87	0.78	16.76	**	15	33	63	188	61.8
132B2431MC3T	132	180	315M	207	2980	43.14	890	180	235	96.3	95.5	94.4	0.92	0.88	0.79	18.33	**	15	33	63	188	65.4
160B2431LC3T	160	215	315L	251	2985	52.21	890	185	240	96.3	95.5	94.4	0.92	0.88	0.79	18.88	**	15	33	63	188	82.9
180B2431LC3T	180	240	315L	285	2985	58.73	890	185	240	96.5	95.7	94.6	0.91	0.87	0.78	21.07	**	15	33	63	188	94.1
200B2431LC3T	200	270	315L	313	2985	65.26	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	24.91	**	15	33	63	188	103
250B2435LC3T	250	340	355M	392	2985	81.57	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	30.89		15	33	63	188	129

Note:-Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 355 Frame & above all are with unidirectional fan for CW rotation as viewed from DE. For CCW direction please explicitly specify in the order. 132 frame to 355 frame Cast iron frame.

1) All frames can be offered with terminal box on TOP / LHS/RHS on request. 2) Vacuum pressure impregnation as a standard feature for every motor.

Super Premium Efficiency "Ultimo Series" TEFC Motors - IE4

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%, Combined variation 10%, Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K),Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l., Duty S1, Efficiency class IE-4, 4-Pole conforms to IS 12615 : 2018, IS / IEC 60034-1:2004, IEC 60034-1:2010. Efficiency testing according to IEC:60034-2-1:2014-06.

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B44063A3T	0.12	0.16	63	0.35	1360	0.09	650	200	245	69.8	69.0	65.7	0.68	0.64	0.55	0.0015	**	15	30	63	188	0.31
.12B44063C3T	0.12	0.16	63	0.35	1360	0.09	650	200	245	69.8	69.0	65.7	0.68	0.64	0.55	0.0015	**	15	30	63	188	0.31
.18B44063A3T	0.18	0.25	63	0.49	1360	0.13	650	200	250	74.7	73.9	70.6	0.68	0.64	0.55	0.0020	**	15	30	63	188	0.5
.18B44063C3T	0.18	0.25	63	0.49	1360	0.13	650	200	250	74.7	73.9	70.6	0.68	0.64	0.55	0.0020	**	15	30	63	188	0.5
.25B44071A3T	0.25	0.35	71	0.64	1365	0.18	650	200	245	77.9	77.1	73.8	0.70	0.66	0.57	0.0037	**	10	20	42	125	0.6
.25B44071C3T	0.25	0.35	71	0.64	1365	0.18	650	200	245	77.9	77.1	73.8	0.70	0.66	0.57	0.0037	**	10	20	42	125	0.6
.37B44071A3T	0.37	0.5	71	0.89	1365	0.26	700	245	295	81.1	80.3	77.0	0.71	0.67	0.58	0.0045	**	10	20	42	125	0.9
.37B44071C3T	0.37	0.5	71	0.89	1365	0.26	700	245	295	81.1	80.3	77.0	0.71	0.67	0.58	0.0045	**	10	20	42	125	0.9
.55B44080A3T	0.55	0.75	80	1.2	1410	0.38	700	245	300	83.9	83.1	80.6	0.75	0.71	0.62	0.0102	**	10	20	42	125	1.4
.55B44080C3T	0.55	0.75	80	1.2	1410	0.38	700	245	300	83.9	83.1	80.6	0.75	0.71	0.62	0.0102	**	10	20	42	125	1.4
.75B44080A3T	0.75	1.0	80	1.6	1420	0.51	700	235	295	85.7	84.9	82.4	0.76	0.72	0.63	0.0114	**	10	20	42	125	1.9
.75B44080C3T	0.75	1.0	80	1.6	1420	0.51	700	235	295	85.7	84.9	82.4	0.76	0.72	0.63	0.0114	**	10	20	42	125	1.9
1.1B4490SA3R	1.1	1.5	90S	2.2	1420	0.75	700	235	300	87.2	86.4	83.9	0.78	0.74	0.65	0.0185	**	10	20	42	125	2.8
1.1B4490SC3R	1.1	1.5	90S	2.2	1420	0.75	700	235	300	87.2	86.4	83.9	0.78	0.74	0.65	0.0185	**	10	20	42	125	2.8
1.5B4490LA3R	1.5	2.0	90L	3.0	1435	1.02	700	240	295	88.2	87.4	84.9	0.80	0.76	0.67	0.0198	**	10	20	42	125	3.8
1.5B4490LC3R	1.5	2.0	90L	3.0	1435	1.02	700	240	295	88.2	87.4	84.9	0.80	0.76	0.67	0.0198	**	10	20	42	125	3.8
2.2B4410LA3R	2.2	3.0	100L	4.2	1440	1.49	830	220	260	89.5	88.7	86.2	0.82	0.78	0.69	0.0383	**	8	16	33	100	5.5
2.2B4410LC3R	2.2	3.0	100L	4.2	1440	1.49	830	220	260	89.5	88.7	86.2	0.82	0.78	0.69	0.0383	**	8	16	33	100	5.5
3B4411MA3R	3.0	4.0	112M	5.8	1440	2.03	830	230	270	90.4	89.6	87.1	0.80	0.76	0.67	0.0520	**	8	16	33	100	6.5
3.7B4411MA3R	3.7	5.0	112M	7.1	1445	2.49	830	235	280	90.9	90.1	87.6	0.80	0.76	0.67	0.0752	**	8	16	33	100	8.5
3.7B4411MC3R	3.7	5.0	112M	7.1	1445	2.49	830	235	280	90.9	90.1	87.6	0.80	0.76	0.67	0.0752	**	8	16	33	100	8.5
4B4411MC3R	4.0	5.5	112M	7.6	1450	2.69	830	235	295	91.1	90.3	87.8	0.80	0.76	0.67	0.1000	**	8	16	33	100	10.0
5.5B4413SC3R	5.5	7.5	132S	10.3	1450	3.69	830	235	295	91.9	91.1	88.6	0.81	0.77	0.68	0.1228	**	8	16	33	100	12.8
7.5B4413MC3R	7.5	10.0	132M	14.6	1455	5.02	830	195	255	92.6	91.8	89.3	0.77	0.73	0.64	0.1584	**	8	16	33	100	18.2
9.3B4416MC3R	9.3	12.5	160M	17.0	1455	6.23	830	195	255	93.0	92.2	89.7	0.82	0.78	0.69	0.224	**	10	22	42	125	22.7
011B4416MC3R	11	15.0	160M	19.3	1460	7.34	830	215	280	93.3	92.5	90.7	0.85	0.81	0.72	0.264	**	10	22	42	125	25.4
015B4416LC3R	15	20.0	160L	25.8	1470	9.94	830	220	265	93.9	93.1	91.3	0.86	0.82	0.73	0.343	**	10	22	42	125	38.5
185B4418MC3R	18.5	25.0	180M	31.4	1470	12.26	830	220	265	94.2	93.4	91.6	0.87	0.83	0.74	0.871	**	10	22	42	125	45.3
022B4418LC3R	22	30.0	180L	38.1	1470	14.58	830	215	260	94.5	93.7	91.9	0.85	0.81	0.72	1.109	**	10	22	42	125	52
030B4420LC3T	30	40.0	200L	51.7	1475	19.81	830	235	275	94.9	94.1	92.3	0.85	0.81	0.72	1.584	**	12	27	50	150	72
037B4422SC3T	37	50.0	225S	62.9	1475	24.43	830	225	280	95.2	94.4	92.6	0.86	0.82	0.73	1.980	**	12	27	50	150	91
045B4422MC3T	45	60.0	225M	76.3	1480	29.61	830	225	280	95.4	94.6	92.8	0.86	0.82	0.73	2.244	**	12	27	50	150	112
055B4425MC3T	55	75.0	250M	91.9	1480	36.20	830	215	255	95.7	94.9	93.1	0.87	0.83	0.74	4.22	**	12	27	50	150	135
075B4428SC3T	75	100	280S	125	1485	49.19	890	215	280	96.0	95.2	93.4	0.87	0.83	0.74	9.50	**	15	33	63	188	185
090B4428MC3T	90	120	280M	148	1485	59.03	890	220	280	96.1	95.3	93.5	0.88	0.84	0.75	10.96	**	15	33	63	188	223
110B4431SC3T	110	150	315S	183	1485	72.15	890	200	245	96.3	95.5	93.7	0.87	0.83	0.74	15.31	**	15	33	63	188	267
125B4431MC3T	125	170	315M	207	1485	81.99	890	195	255	96.4	95.6	94.5	0.87	0.83	0.74	16.63	**	15	33	63	188	304
132B4431MC3T	132	180	315M	216	1485	86.58	890	195	250	96.6	95.8	94.7	0.88	0.84	0.75	18.48	**	15	33	63	188	329
160B4431LC3T	160	215	315L	259	1485	104.94	890	220	280	96.6	95.8	94.7	0.89	0.85	0.76	30.69	**	15	33	63	188	391
180B4431LC3T	180	240	315L	291	1485	118.06	890	220	275	96.7	95.9	94.8	0.89	0.85	0.76	31.68	**	15	33	63	188	421
200B4431LC3T	200	270	315L	323	1485	131.18	890	200	260	96.7	95.9	94.8	0.89	0.85	0.76	33.77	**	15	33	63	188	483
250B4435MC3T	250	340	355M	404	1485	163.97	890	195	250	96.7	95.9	94.8	0.89	0.85	0.76	41.91	**	15	33	63	188	584
315B4435LC3T	315	430	355L	504	1485	206.61	890	195	245	96.7	95.9	94.8	0.90	0.86	0.77	53.13	**	15	33	63	188	741
355B4435LC3T	355	475	355L/K	580	1487	232.53	890	195	245	96.7	95.9	94.8	0.88	0.84	0.75	58.44		15	33	63	188	851
375B4435LC3T	375	500	355L/K	606	1487	245.63	890	200	250	96.7	95.9	94.8	0.89	0.85	0.76	64.28		15	33	63	188	904

Super Premium Efficiency "Ultimo Series" TEFC Motors - IE4

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%, Combined variation 10%, Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K),Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l., Duty S1, Efficiency class IE-4, 6-Pole conforms to IS 12615 : 2018, IS / IEC 60034-1:2004, IEC 60034-1:2010. Efficiency testing according to IEC:60034-2-1:2014-06.

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B64063A3T	0.12	0.16	63	0.43	880	0.13	700	190	230	64.9	64.1	60.8	0.60	0.56	0.47	0.00451	**	10	20	42	125	0.71
.12B64063C3T	0.12	0.16	63	0.43	880	0.13	700	190	230	64.9	64.1	60.8	0.60	0.56	0.47	0.00451	**	10	20	42	125	0.71
.18B64071A3T	0.18	0.25	71	0.58	890	0.20	700	190	230	70.1	69.3	66.0	0.62	0.58	0.49	0.00484	**	10	20	42	125	1.10
.18B64071C3T	0.18	0.25	71	0.58	890	0.20	700	190	230	70.1	69.3	66.0	0.62	0.58	0.49	0.00484	**	10	20	42	125	1.10
.25B64071A3T	0.25	0.35	71	0.75	900	0.27	700	190	230	74.1	73.3	70.0	0.63	0.59	0.50	0.00484	**	10	20	42	125	1.50
.25B64071C3T	0.25	0.35	71	0.75	900	0.27	700	190	230	74.1	73.3	70.0	0.63	0.59	0.50	0.00484	**	10	20	42	125	1.50
.37B64080A3T	0.37	0.5	80	1.02	920	0.39	730	190	230	78.0	77.2	73.9	0.65	0.61	0.52	0.00924	**	10	20	42	125	2.20
.37B64080C3T	0.37	0.5	80	1.02	920	0.39	730	190	230	78.0	77.2	73.9	0.65	0.61	0.52	0.00924	**	10	20	42	125	2.20
.55B64080A3T	0.55	0.75	80	1.4	930	0.58	730	195	250	80.9	80.1	77.6	0.67	0.63	0.54	0.012276	**	10	20	42	125	3.10
.55B64080C3T	0.55	0.75	80	1.4	930	0.58	730	195	250	80.9	80.1	77.6	0.67	0.63	0.54	0.012276	**	10	20	42	125	3.10
.75B6490SA3R	0.75	1.0	90S	1.8	930	0.79	730	195	250	82.7	81.9	79.4	0.70	0.66	0.57	0.02112	**	10	20	42	125	4.20
.75B6490SC3R	0.75	1.0	90S	1.8	930	0.79	730	195	250	82.7	81.9	79.4	0.70	0.66	0.57	0.02112	**	10	20	42	125	4.20
1.1B6490LA3R	1.1	1.5	90L	2.6	920	1.16	730	200	260	84.5	83.7	81.2	0.70	0.66	0.57	0.0264	**	10	20	42	125	6.50
1.1B6490LC3R	1.1	1.5	90L	2.6	920	1.16	730	200	260	84.5	83.7	81.2	0.70	0.66	0.57	0.0264	**	10	20	42	125	6.50
1.5B6410LA3R	1.5	2.0	100L	3.4	925	1.58	730	200	260	85.9	85.1	82.6	0.71	0.67	0.58	0.04224	**	10	20	42	125	9.10
1.5B6410LC3R	1.5	2.0	100L	3.4	925	1.58	730	200	260	85.9	85.1	82.6	0.71	0.67	0.58	0.04224	**	10	20	42	125	9.10
2.2B6411MA3R	2.2	3.0	112M	4.9	950	2.26	830	190	240	87.4	86.6	84.1	0.71	0.67	0.58	0.09504	**	10	20	42	125	13
2.2B6411MC3R	2.2	3.0	112M	4.9	950	2.26	830	190	240	87.4	86.6	84.1	0.71	0.67	0.58	0.09504	**	10	20	42	125	13
3B6413SC3R	3.0	4.0	132S	6.7	950	3.08	830	190	240	88.6	87.8	85.3	0.70	0.66	0.57	0.12	**	10	20	42	125	16
3.7B6413SC3R	3.7	5.0	132S	8.0	950	3.79	830	195	245	89.3	88.5	86.0	0.72	0.68	0.59	0.1716	**	10	20	42	125	23
4B6413MC3R	4	5.5	132M	8.6	950	4.10	830	190	240	89.5	88.7	86.2	0.72	0.68	0.59	0.19	**	10	20	42	125	27
5.5B6413MC3R	5.5	7.5	132M	11.3	960	5.58	830	190	240	90.5	89.7	87.2	0.75	0.71	0.62	0.2244	**	10	20	42	125	32
7.5B6416MC3R	7.5	10.0	160M	14.7	965	7.57	830	215	280	91.3	90.5	88.0	0.78	0.74	0.65	0.5676	**	10	22	42	125	45
9.3B6416LC3R	9.3	12.5	160L	18.0	965	9.39	830	215	280	91.9	91.1	89.3	0.78	0.74	0.65	0.7656	**	10	22	42	125	54
011B6416LC3R	11	15.0	160L	21.0	965	11.10	830	195	254	92.3	91.5	89.7	0.79	0.75	0.66	0.8712	**	10	22	42	125	65
015B6418LC3R	15	20.0	180L	27.4	975	14.98	830	220	286	92.9	92.1	90.3	0.82	0.78	0.69	1.32	**	10	22	42	125	90
185B6420LC3T	18.5	25.0	200L	33.2	980	18.39	830	210	273	93.4	92.6	90.8	0.83	0.79	0.70	1.848	**	12	27	50	150	112
022B6420LC3T	22	30.0	200L	38.9	980	21.87	830	220	286	93.7	92.9	91.1	0.84	0.80	0.71	2.112	**	12	27	50	150	128
030B6422MC3T	30	40.0	225M	52.1	980	29.82	830	250	290	94.2	93.4	91.6	0.85	0.81	0.72	3.036	**	12	27	50	150	183
037B6425MC3T	37	50.0	250M	64.1	985	36.59	830	220	286	94.5	93.7	92.5	0.85	0.81	0.72	4.752	**	12	27	50	150	222
045B6428SC3T	45	60.0	280S	78.6	985	44.50	830	225	290	94.8	94.0	92.8	0.84	0.80	0.71	10.56	**	15	33	63	188	262
055B6428MC3T	55	75.0	280M	95.8	985	54.39	830	215	280	95.1	94.3	93.1	0.84	0.80	0.71	13.068	**	15	33	63	188	315
075B6431SC3T	75	100	315S	127	985	74.16	890	215	280	95.4	94.6	93.4	0.86	0.82	0.73	18.612	**	15	33	63	188	405
090B6431MC3T	90	120	315M	152	985	88.99	890	195	245	95.6	94.8	93.6	0.86	0.82	0.73	22.44	**	15	33	63	188	475
110B6431MC3T	110	150	315M	186	985	108.77	890	200	250	95.8	95.0	93.8	0.86	0.82	0.73	25.1	**	15	33	63	188	595
125B6431LC3T	125	170	315L	208	990	122.98	890	200	250	95.9	95.1	93.9	0.87	0.83	0.74	26.4	**	15	33	63	188	674
132B6431LC3T	132	180	315L	220	990	129.87	890	195	255	96.0	95.2	94.0	0.87	0.83	0.74	27.6	**	15	33	63	188	780
160B6435LC3T	160	215	355L	269	990	157.41	890	200	250	96.2	95.4	94.2	0.86	0.82	0.73	33.0	**	15	33	63	188	920
180B6435LC3T	180	240	355L	301	990	177.09	890	200	260	96.6	95.8	94.6	0.86	0.82	0.73	38.5	**	15	33	63	188	1,010
200B6435LC3T	200	270	355L	331	990	196.77	890	200	260	96.6	95.8	94.6	0.87	0.83	0.74	41.3		15	33	63	188	1,185
250B6435LC3T	250	340	355L	409	990	245.96	890	195	245	96.6	95.8	94.6	0.88	0.84	0.75	51.6		15	33	63	188	1,490

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%, 50Hz ± 5%, Combined variation 10%, Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K),Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l., Duty S1, Efficiency class IE-4, 8-Pole conforms to IS 12615 : 2018, IS / IEC 60034-1:2004, IEC 60034-1:2010. Efficiency testing according to IEC:60034-2-1:2014-06.

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12B84071A3T	0.12	0.16	71	0.52	645	0.18	600	180	220	62.3	61.5	58.2	0.52	0.48	0.39	0.005412	**	15	30	63	188	1.2
.12B84071C3T	0.12	0.16	71	0.52	645	0.18	600	180	220	62.3	61.5	58.2	0.52	0.48	0.39	0.005412	**	15	30	63	188	1.2
.18B84080A3T	0.18	0.25	80	0.68	650	0.27	600	180	220	67.2	66.4	63.1	0.55	0.51	0.42	0.005808	**	15	30	63	188	1.8
.18B84080C3T	0.18	0.25	80	0.68	650	0.27	600	180	220	67.2	66.4	63.1	0.55	0.51	0.42	0.005808	**	15	30	63	188	1.8
.25B84080A3T	0.25	0.35	80	0.86	660	0.37	600	180	225	70.8	70.0	66.7	0.57	0.53	0.44	0.005808	**	15	30	63	188	2.6
.25B84080C3T	0.25	0.35	80	0.86	660	0.37	600	180	225	70.8	70.0	66.7	0.57	0.53	0.44	0.005808	**	15	30	63	188	2.6
.37B8490SA3R	0.37	0.5	90S	1.2	670	0.54	650	180	225	74.3	73.5	70.2	0.60	0.56	0.47	0.011088	**	15	30	63	188	3.5
.37B8490SC3R	0.37	0.5	90S	1.2	670	0.54	650	180	225	74.3	73.5	70.2	0.60	0.56	0.47	0.011088	**	15	30	63	188	3.5
.55B8490LA3R	0.55	0.75	90L	1.6	680	0.79	650	180	220	77.0	76.2	72.9	0.62	0.58	0.49	0.01474	**	15	30	63	188	5.1
.55B8490LC3R	0.55	0.75	90L	1.6	680	0.79	650	180	220	77.0	76.2	72.9	0.62	0.58	0.49	0.01474	**	15	30	63	188	5.1
.75B8410LA3R	0.75	1.0	100L	2.1	685	1.07	650	180	230	78.4	77.6	75.1	0.64	0.60	0.51	0.0253	**	10	20	42	125	7.4
.75B8410LC3R	0.75	1.0	100L	2.1	685	1.07	650	180	230	78.4	77.6	75.1	0.64	0.60	0.51	0.0253	**	10	20	42	125	7.4
1.1B8410LA3R	1.1	1.5	100L	2.9	685	1.56	650	190	235	80.8	80.0	77.5	0.66	0.62	0.53	0.03168	**	10	20	42	125	10.6
1.1B8410LC3R	1.1	1.5	100L	2.9	685	1.56	650	190	235	80.8	80.0	77.5	0.66	0.62	0.53	0.03168	**	10	20	42	125	10.6
1.5B8411MA3R	1.5	2.0	112M	3.7	690	2.12	650	180	225	82.6	81.8	79.3	0.69	0.65	0.56	0.0506	**	10	20	42	125	14.2
1.5B8411MC3R	1.5	2.0	112M	3.7	690	2.12	650	180	225	82.6	81.8	79.3	0.69	0.65	0.56	0.0506	**	10	20	42	125	14.2
2.2B8413SC3R	2.2	3.0	132S	5.1	705	3.04	780	180	230	84.5	83.7	81.2	0.71	0.67	0.58	0.1144	**	10	20	42	125	21.9
3B8413SC3R	3.0	4.0	132S	6.8	700	4.17	780	190	230	85.9	85.1	82.6	0.71	0.67	0.58	0.16	**	10	20	42	125	25.0
3.7B8416MC3R	3.7	5.0	160M	8.2	720	5.01	780	210	255	86.8	86.0	83.5	0.72	0.68	0.59	0.2057	**	10	22	42	125	36.4
4B8416MC3R	4.0	5.5	160M	8.9	720	5.41	780	200	240	87.1	86.3	83.8	0.72	0.68	0.59	0.235	**	10	22	42	125	40.0
5.5B8416MC3R	5.5	7.5	160M	11.7	720	7.44	780	190	230	88.3	87.5	85.0	0.74	0.70	0.61	0.2695	**	10	22	42	125	54.0
7.5B8416LC3R	7.5	10.0	160L	15.6	720	10.15	780	190	230	89.3	88.5	86.0	0.75	0.71	0.62	0.6809	**	10	22	42	125	73.4
9.3B8418LC3R	9.3	12.5	180L	19.2	720	12.58	780	190	230	89.9	89.1	86.6	0.75	0.71	0.62	0.9185	**	10	22	42	125	90.1
011B8418LC3R	11	15.0	180L	22.3	725	14.78	780	200	245	90.4	89.6	88.0	0.76	0.72	0.63	1.045	**	10	22	42	125	105
015B8420LC3T	15	20.0	200L	30.1	730	20.01	780	180	225	91.2	90.4	88.8	0.76	0.72	0.63	1.584	**	12	27	50	150	142
185B8422SC3T	18.5	25.0	225S	36.9	730	24.68	780	190	235	91.7	90.9	89.3	0.76	0.72	0.63	2.2176	**	12	27	50	150	175
022B8422MC3T	22	30.0	225M	42.6	730	29.35	780	210	250	92.1	91.3	89.7	0.78	0.74	0.65	2.5344	**	12	27	50	150	202
030B8425MC3T	30	40.0	250M	57.0	730	40.03	780	210	250	92.7	91.9	90.3	0.79	0.75	0.66	3.6432	**	12	27	50	150	303
037B8428SC3T	37	50.0	280S	70.0	730	49.37	780	200	245	93.1	92.3	90.7	0.79	0.75	0.66	5.7024	**	15	33	63	188	351
045B8428MC3T	45	60.0	280M	84.8	735	59.63	780	215	255	93.4	92.6	91.0	0.79	0.75	0.66	12.672	**	15	33	63	188	458
055B8431SC3T	55	75.0	315S	100.8	735	72.88	780	205	245	93.7	92.9	91.3	0.81	0.77	0.68	15.686	**	15	33	63	188	559
075B8431MC3T	75	100	315M	137	735	99.39	780	200	240	94.2	93.4	91.8	0.81	0.77	0.68	22.33	**	15	33	63	188	751
090B8431LC3T	90	120	315L	164	735	119	780	180	220	94.4	93.6	92.5	0.81	0.77	0.68	26.928	**	15	33	63	188	950
110B8431LC3T	110	150	315L	200	735	146	780	180	220	94.7	93.9	92.8	0.81	0.77	0.68	30.096	**	15	33	63	188	1,115
125B8431LC3T	125	170	315L	223	740	165	780	180	220	94.9	94.1	93.0	0.82	0.78	0.69	31.68	**	15	33	63	188	1,253
132B8431LC3T	132	180	315L	236	740	174	780	200	240	95.0	94.2	93.1	0.82	0.78	0.69	33.11	**	15	33	63	188	1,328
160B8435LC3T	160	215	355L	285	740	211	780	185	230	95.1	94.3	93.2	0.82	0.78	0.69	39.6	**	15	33	63	188	1,607
180B8435LC3T	180	240	355L	320	740	237	780	185	230	95.4	94.6	93.5	0.82	0.78	0.69	46.2	**	15	33	63	188	1,803
200B8435LC3T	200	270	355L	356	740	263	780	185	230	95.4	94.6	93.5	0.82	0.78	0.69	49.5		15	33	63	188	2,003
250B8435LC3T	250	340	355L	439	740	329	780	180	220	95.4	94.6	93.5	0.83	0.79	0.70	61.908		15	33	63	188	2,459

Note:-Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 355 Frame & above all are with unidirectional fan for CW rotation as viewed from DE. For CCW direction please explicitly specify in the order. 132 frame to 355 frame Cast iron frame.

Note : - 1) All frames can be offered with terminal box on TOP / LHS/RHS on request. 2) Vacuum pressure impregnation as a standard feature for every motor.

Super Premium Efficiency "Ultimo Series" TEFC Motors - IE4 - DCCA

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K) Line operated with DOL starting, Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, conforms to IS/IEC 60034-1:2004, IEC 60034-1:2010 and IS 12615:2018 , Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
355B2435KC3T	355	475	355L/K	582.0	2981	115.99	890	170	250	96.5	96.1	94.5	0.88	0.86	0.81	22.40	**	15	33	63	188	Please Contact nearest Sales office
375B2435KC3T	375	503	355L/K	614.0	2981	122.53	890	170	250	96.5	96.1	94.5	0.88	0.87	0.82	44.20	**	15	33	63	188	
400B2435KC3T	400	536	355L/K	655.0	2981	130.69	890	170	250	96.5	96.1	94.5	0.88	0.87	0.82	26.00	**	15	35	63	188	
450B2435KC3T	450	603	355L/K	729.0	2982	146.98	890	170	250	96.5	96.1	94.5	0.89	0.87	0.82	28.60	**	15	35	63	188	
500B2435KC3T	500	670	355L/K	810.0	2983	163.26	890	170	250	96.5	96.2	94.7	0.89	0.87	0.82	31.30	**	15	35	63	188	
560B2440LM3T	560	750	400M/L	907.0	2984	182.79	890	170	250	96.5	96.2	94.7	0.89	0.87	0.79	51.30	**	18	40	63	188	
630B2440LM3T	* 630	845	400M/L	1021.0	2984	205.64	890	170	250	96.5	96.2	94.7	0.89	0.87	0.79	57.30	**	18	40	63	188	

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
400B4435KC3T	400	536	355L/K	677.0	1489	261.65	890	210	250	96.7	96.2	94.8	0.85	0.82	0.73	30.60	**	15	33	63	188	Please Contact nearest Sales office
450B4435KC3T	450	603	355L/K	762.0	1489	294.36	890	210	250	96.7	96.2	94.8	0.85	0.82	0.73	33.70	**	15	33	63	188	
500B4435KC3T	500	670	355L/K	836.0	1489	327.07	890	210	440	96.7	96.2	94.8	0.86	0.83	0.74	36.80	**	15	33	63	188	
560B4440LM3T	560	750	400M/L	926.0	1493	365.33	890	200	250	96.7	96.2	94.8	0.87	0.84	0.78	63.00	**	15	33	63	188	
630B4440LM3T	630	845	400M/L	1044.0	1493	411.00	890	200	250	96.7	96.3	94.9	0.87	0.84	0.78	70.50	**	15	33	63	188	
710B4440LM3T	* 710	952	400M/L	706.0	1493	463.19	890	200	250	96.7	96.3	94.9	0.87	0.84	0.78	70.50	**	15	33	63	188	
800B4445MM3T	800	1072	450M/L	796.0	1493	521.90	890	210	250	96.7	96.3	94.9	0.87	0.83	0.76	120.00	**	15	33	63	188	
900B4445MM3T	900	1206	450M/L	895.0	1493	587.14	890	210	250	96.7	96.4	95.0	0.87	0.83	0.76	132.00	**	15	33	63	188	
00AB4445LM3T	1000	1340	450M/L	995.0	1493	652.38	890	210	250	96.7	96.4	95.0	0.87	0.83	0.76	160.00	**	15	33	63	188	

Super Premium Efficiency "Ultimo Series" TEFC Motors - IE4 - DCCA

3 Phase Squirrel Cage Induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C, Rise:70K) Line operated with DOL starting,Degree of protection IP-55,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, conforms to IS/IEC 60034-1:2004,IEC 60034-1:2010 and IS 12615:2018 , Efficiency testing according to IEC:60034-2-1:2014-06

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
315B6435KC3T	315	445	355L/K	534.0	992	309.28	890	200	250	96.6	96.1	94.6	0.85	0.83	0.78	56.90	**	15	33	63	188	Please Contact nearest Sales office
355B6435KC3T	355	475	355L/K	616.0	992	348.56	890	200	250	96.6	96.1	94.6	0.83	0.79	0.70	66.00	**	15	33	63	188	
375B6435KC3T	375	503	355L/K	651.0	992	368.20	890	200	250	96.6	96.1	94.6	0.83	0.79	0.70	67.85	**	15	33	63	188	
400B6435KC3T	400	536	355L/K	694.0	992	392.74	890	200	250	96.6	96.1	94.6	0.83	0.79	0.70	69.70	**	15	33	63	188	
450B6440LM3T	450	603	400M/L	772.0	993	441.39	890	190	250	96.6	96.2	94.7	0.84	0.79	0.70	77.00	**	15	33	63	188	
500B6440LM3T	500	670	400M/L	857.0	993	490.43	890	190	250	96.6	96.2	94.7	0.84	0.79	0.70	86.00	**	15	33	63	188	
560B6440LM3T	* 560	750	400M/L	960.0	993	549.28	890	190	250	96.6	96.2	94.7	0.84	0.79	0.70	86.00	**	15	33	63	188	
630B6445MM3T	630	845	450M/L	1093.0	993	617.95	890	190	250	96.6	96.2	94.7	0.83	0.78	0.70	180.00	**	15	33	63	188	
710B6445MM3T	710	952	450M/L	741.0	994	695.71	890	190	250	96.6	96.3	94.8	0.83	0.78	0.70	200.00	**	15	33	63	188	
800B6445LM3T	800	1072	450M/L	835.0	994	783.90	890	190	250	96.6	96.3	94.8	0.83	0.78	0.70	236.00	**	15	33	63	188	

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
250B8435KC3T	250	335	355L/K	467.0	741	328.6	780	140	205	95.4	95.0	93.8	0.78	0.76	0.68	76.00	**	15	33	63	188	Please Contact nearest Sales office
315B8435KC3T	315	445	355L/K	581.0	741	414.0	780	170	210	95.4	95.0	93.8	0.79	0.74	0.68	80.00	**	15	33	63	188	
355B8440LM3T	355	475	400M/L	672.0	741	466.6	780	180	220	95.4	95.0	93.8	0.77	0.73	0.67	86.00	**	15	33	63	188	
375B8440LM3T	375	503	400M/L	710.0	741	492.9	780	180	220	95.4	95.0	93.8	0.77	0.73	0.67	86.00	**	15	33	63	188	
400B8440LM3T	400	536	400M/L	758.0	741	525.8	780	180	220	95.4	95.1	93.9	0.77	0.73	0.67	90.00	**	15	33	63	188	
450B8440LM3T	* 450	603	400M/L	852.0	741	591.5	780	180	220	95.4	95.1	93.9	0.77	0.73	0.67	90.00	**	15	33	63	188	
500B8445MM3T	500	670	450M/L	974.0	742	656.3	780	180	250	95.4	95.1	93.9	0.77	0.75	0.69	110.00	**	15	33	63	188	
560B8445MM3T	560	750	450M/L	1061.0	742	735.1	780	180	250	95.4	95.1	93.9	0.77	0.75	0.69	130.00	**	15	33	63	188	
630B8445LM3T	630	845	450M/L	1193.0	742	827.0	780	180	250	95.4	95.1	93.9	0.77	0.75	0.69	180.00	**	15	33	63	188	

*Temperature rise limited to class "F"(95K)

Note :- Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication.All performance figures are subject to IS/IEC 60034-1 tolerances.355 frame Cast iron frame, 400 and 450 frame fabricated. Efficiency testing according to IEC:60034-2-1, 355,400 & 450 frame size will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

Maximum lead Gd^2 for variable torque application motor suitability as per below table.

2				4				6				8			
KW	Frame Size	Max GD^2 kgm^2	Max load GD^2 kgm^2	KW	Frame Size	Max GD^2 kgm^2	Max load GD^2 kgm^2	KW	Frame Size	Max GD^2 kgm^2	Max load GD^2 kgm^2	KW	Frame Size	Max GD^2 kgm^2	Max load GD^2 kgm^2
1.1	90	0.007	0.28	0.75	90	0.012	0.38	0.55	90	0.011	3.35	0.37	90	0.015	4
1.5	90	0.008	0.38	1.1	90	0.015	0.56	0.75	90	0.015	4.52	0.55	100	0.020	4.58
2.2	100	0.026	0.40	1.5	100	0.02	0.23	1.1	100	0.026	6.08	0.75	100	0.026	4.78
3.7	132	0.044	1.84	2.2	100	0.026	2.55	1.5	100	0.026	6.64	1.1	112	0.044	7
5.5	132	0.052	1.55	3.7	132	0.06	4.20	2.2	132	0.060	10.5	1.5	132	0.060	11.5
7.5	132	0.072	1.60	5.5	132	0.088	7.86	3.7	132	0.088	11.7	2.2	132	0.108	14.6
9.3	160	0.116	7.00	7.5	160	0.167	6.10	5.5	160	0.288	21.4	3.7	160	0.288	28.8
11	160	0.128	5.02	9.3	160	0.028	6.00	7.5	160	0.326	33.7	5.5	160	0.372	37.5
15	160	0.152	5.12	11	160	0.252	9.19	9.3	160	0.372	37.4	7.5	180	0.640	56
18.5	180	0.240	12.0	15	180	0.400	37.0	11	180	0.640	39.0	9.3	180	1.680	71
22	200	0.600	14.0	18.5	180	0.480	43.0	15	200	1.260	82.0	11	200	1.680	86
30	200	0.720	30.0	22	200	1.000	57.0	18.5	200	1.600	127	15	200	1.780	118
37	225	1.240	37.0	30	200	1.160	77.0	22	225	2.840	150	18.5	225	3.320	205
45	225	1.360	45.0	37	225	1.440	152	30	225	3.320	206	22	225	3.600	239
55	250	2.240	53.0	45	225	1.680	185	37	250	5.680	305	30	250	6.900	441
75	280	3.280	63.0	55	250	2.800	263	45	280	7.920	435	37	280	7.640	541
90	280	3.800	75.0	75	280	4.440	321	55	280	10.20	531	45	280	7.820	659
110	315	7.500	65.0	90	280	5.320	286	75	315	17.90	551	55	315	22.70	777
132	315	8.700	79.0	110	315	14.00	193	90	315	21.00	778	75	355	26.30	1064
160	355	14.60	91.0	132	315	16.40	304	110	355	33.00	944	90	355	44.60	1264
200	355	17.20	115	160	355	29.40	335	132	355	36.00	1067	110	355	50.60	1538
				200	355	34.90	421	160	355	45.80	1291	132	355	55.60	1850
				250	355	38.00	497								

Thermal withstand time

Standard TEFC Motors operation at rated voltage and frequency

Pole	2		4		6		8	
Frame	Hot (Sec)	Cold (Sec)	Hot (Sec)	Cold (Sec)	Hot (Sec)	Cold (Sec)	Hot (Sec)	Cold (Sec)
63	10	20	15	30	10	20	15	30
71	10	20	10	20	10	20	15	30
80	10	20	10	20	10	20	15	30
90	10	20	10	20	10	20	15	30
100	8	16	8	16	10	20	10	20
112	8	16	8	16	10	20	10	20
132	8	16	8	16	10	20	10	20
160	10	22	10	22	10	22	10	22
180	10	22	10	22	10	22	10	22
200	12	27	12	27	12	27	12	27
225	12	27	12	27	12	27	12	27
250	12	27	12	27	12	27	12	27
280	15	33	15	33	15	33	15	33
315	15	33	15	33	15	33	15	33
355	15	33	15	33	15	33	15	33

Note

Cold - Ambient Temp. 50°C

Hot - Maximum permissible Temp. 120°C

Limiting Temperature - Upto 185°C for Class "B" Insulation

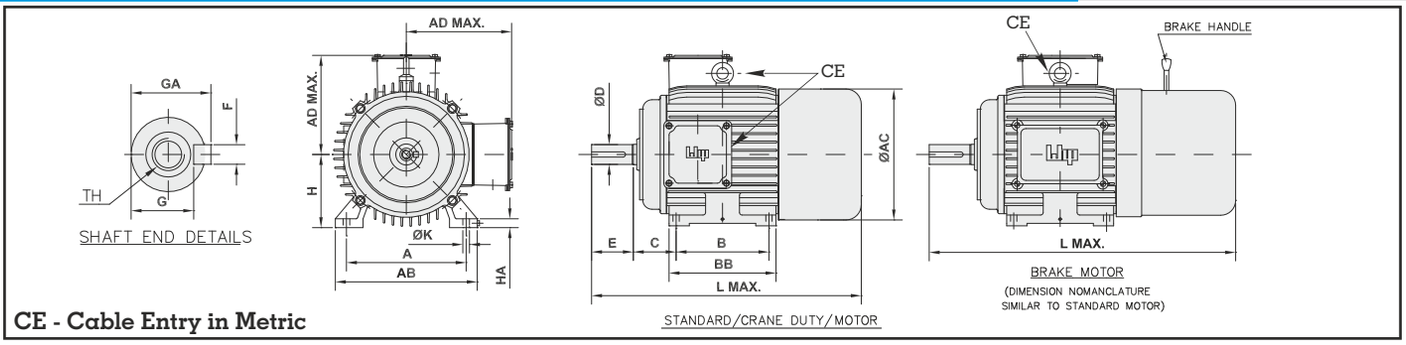
- Upto 210°C for Class "F" Insulation

Heating Time Constant & Cooling Time Constant

Pole	2		4		6		8	
Frame	Th (min)	Tc (min)	Th (min)	Tc (min)	Th (min)	Tc (min)	Th (min)	Tc (min)
63	42	125	63	188	42	125	63	188
71	42	125	42	125	42	125	63	188
80	42	125	42	125	42	125	63	188
90	42	125	42	125	42	125	63	188
100	33	100	33	100	42	125	42	125
112	33	100	33	100	42	125	42	125
132	33	100	33	100	42	125	42	125
160	42	125	42	125	42	125	42	125
180	42	125	42	125	42	125	42	125
200	50	150	50	150	50	150	50	150
225	50	150	50	150	50	150	50	150
250	50	150	50	150	50	150	50	150
280	63	188	63	188	63	188	63	188
315	63	188	63	188	63	188	63	188
355	63	188	63	188	63	188	63	188

General arrangement Drawing/Dimensions - Foot Mounted (B3)

Standard, Brake & Crane & Hoist Duty Motors as per IS : 1231



CE - Cable Entry in Metric

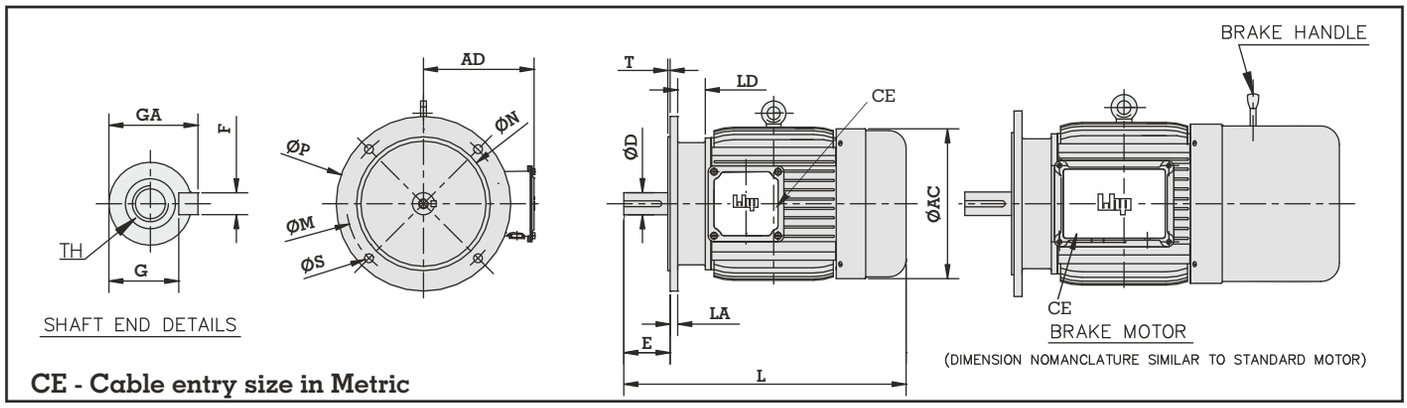
Table No. - 09

Frame Size	CONT.	H	C	A	AB	HA	ØK	B	BB	AD MAX	ØAC	ØD	E	F	G	GA	TH	L MAX		CE X Nos.	For Brake Motor			For 1Ø Motor		T.Box Position
																		IE 2	IE3/IE4		AD	L		AD	L	
																						IE2	IE3/IE4			
63	CI	63	40	100	120	8	7	80	100	110	116	11j6	23	4	8.5	12.5	M5	223	223	M16-2	125	290	290	--	--	RHS
63	AL PDC	63	40	100	118	8	7	80	97	105	116	11j6	23	4	8.5	12.5	M5	223	223	M16-2	120	290	290	--	--	TOP
71	CI	71	45	112	132	9	7	90	112	110	140	14j6	30	5	11.0	16.0	M5	270	270	M16-2	125	329	340	--	--	RHS
71	AL PDC	71	45	112	133	9	7	90	110	115	140	14j6	30	5	11.0	16.0	M5	270	270	M16-2	130	329	340	119	302	TOP
80	CI	80	50	125	151	10	10	100	124	120	158	19j6	40	6	15.5	21.5	M6	290	290	M25-2	120	380	375	120	360	RHS
80	AL PDC	80	50	125	153	12	10	100	125	135	158	19j6	40	6	15.5	21.5	M6	290	290	M25-2	155	380	375	114	347	TOP
90S	CI	90	56	140	170	10	10	100	127	165	178	24j6	50	8	20.0	27.0	M8	355	355	M25-2	165	430	430	--	--	RHS
90S	AL PDC	90	56	140	184	14	10	100	130	160	178	24j6	50	8	20.0	27.0	M8	355	355	M25-2	160	430	430	--	--	RHS
90L	CI	90	56	140	170	10	10	125	150	165	178	24j6	50	8	20.0	27.0	M8	380	380	M25-2	165	453	453	165	386	RHS
90L	AL PDC	90	56	140	185	13	10	125	155	160	178	24j6	50	8	20.0	27.0	M8	380	380	M25-2	160	453	453	--	--	RHS
100L	CI	100	63	160	197	13	12	140	170	165	195	28j6	60	8	24.0	31.0	M10	405	405	M32-2	165	490	490	165	430	RHS
100L	AL PDC	100	63	160	194	11	12	140	167	165	195	28j6	60	8	24.0	31.0	M10	405	405	M32-2	165	490	510	--	--	RHS
112M	CI	112	70	190	230	15	12	140	170	190	224	28j6	60	8	24.0	31.0	M10	445	445	M32-2	175	520	520	--	--	RHS
112M	AL PDC	112	70	190	225	12	12	140	172	190	224	28j6	60	8	24.0	31.0	M10	445	445	M32-2	179	530	530	--	--	RHS
132S	CI	132	89	216	256	16	12	140	167	205	257	38k6	80	10	33.0	41.0	M12	480	520	M32-2	185	585	625	--	--	RHS
132M	CI	132	89	216	256	16	12	178	205	205	257	38k6	80	10	33.0	41.0	M12	520	560	M32-2	185	625	655	--	--	RHS
132M(N)	CI	132	89	216	256	16	12	178	245	205	257	38k6	80	10	33.0	41.0	M12	560	580	M32-2	185	665	665	--	--	RHS
160M	CI	160	108	254	304	26	15	210	260	260	312	42k6	110	12	37.0	45.0	M16	630	680	M40-2	260	760	850	--	--	RHS
160L	CI	160	108	254	310	26	15	254	304	260	312	42k6	110	12	37.0	45.0	M16	690	700	M40-2	260	803	850	--	--	RHS
180M	CI	180	121	279	340	26	15	241	318	256	357	48k6	110	14	42.5	51.5	M16	720	750	M40-2	270	842	895	--	--	RHS
180L	CI	180	121	279	340	26	15	279	318	256	357	48k6	110	14	42.5	51.5	M16	725	750	M40-2	270	842	900	--	--	RHS
200L	CI	200	133	318	385	35	19	305	350	300	380	55m6	110	16	49.0	59.0	M20	800	850	M50-2	313	963	1020	--	--	TOP
225S(2P)	CI	225	149	356	440	35	19	286	370	340	448	55m6	110	16	49.0	59.0	M20	860	860	M50-2	--	--	--	--	--	TOP
225S(4,6,8 P)	CI	225	149	356	440	35	19	286	370	340	448	60m6	140	18	53.0	64.0	M20	890	890	M50-2	--	--	--	--	--	TOP
225M(2P)	CI	225	149	356	440	35	19	311	370	340	448	55m6	110	16	49.0	59.0	M20	890	890	M50-2	--	--	--	--	--	TOP
225M(4,6,8 P)	CI	225	149	356	440	35	19	311	370	340	448	60m6	140	18	53.0	64.0	M20	890	960	M50-2	--	--	--	--	--	TOP
250M (2P)	CI	250	168	406	500	43	24	349	425	450	510	60m6	140	18	53.0	64.0	M20	1015	1050	M50-2	--	--	--	--	--	TOP
250M (4,6,8 P)	CI	250	168	406	500	43	24	349	425	450	510	65m6	140	18	58.0	69.0	M20	1015	1050	M50-2	--	--	—	--	--	TOP
280S (2P)	CI	280	190	457	540	43	24	368	460	480	570	65m6	140	18	58.0	69.0	M20	1100	1200	M50-2	--	--	--	--	--	TOP
280S(4,6,8 P)	CI	280	190	457	540	43	24	368	460	480	570	75m6	140	20	67.5	79.5	M20	1100	1200	M50-2	--	--	--	--	--	TOP
280M (2 P)	CI	280	190	457	540	43	24	419	515	480	570	65m6	140	18	58.0	69.0	M20	1155	1200	M50-2	--	--	--	--	--	TOP
280M (4,6,8 P)	CI	280	190	457	540	43	24	419	515	480	570	75m6	140	20	67.5	79.5	M20	1155	1200	M50-2	--	--	--	--	--	TOP
315S (2 P)	CI	315	216	508	620	50	28	406	546	525	658	65m6	140	18	58.0	69.0	M20	1165	1165	M50-2	--	--	--	--	--	TOP
315S (4,6,8 P)	CI	315	216	508	620	50	28	406	546	525	658	80m6	170	22	71.0	85.0	M20	1195	1195	M50-2	--	--	--	--	--	TOP
315M (2 P)	CI	315	216	508	620	50	28	457	640	525	658	65m6	140	18	58.0	69.0	M20	1320	1320	M50-2	--	--	–	--	--	TOP
315M (4,6,8 P)	CI	315	216	508	620	50	28	457	640	525	658	80m6	170	22	71.0	85.0	M20	1350	1350	M50-2	--	--	--	--	--	TOP
315L (2 P)	CI	315	216	508	620	50	28	508	640	525	658	65m6	140	18	58.0	69.0	M20	1320	1320	M50-2	--	--	--	--	--	TOP
315L (4,6,8 P)	CI	315	216	508	620	50	28	508	640	525	658	80m6	170	22	71.0	85.0	M20	1350	1350	M50-2	--	--	--	--	--	TOP
355S (2 P)	CI	355	254	610	730	51	28	500	780	650	775	80m6	170	22	71.0	85.0	M20	1580	1590	M63-2	--	--	--	--	--	TOP
355S (4,6,8 P)	CI	355	254	610	730	51	28	500	780	650	775	100m6	210	28	90.0	106.0	M24	1620	1630	M63-2	--	--	--	--	--	TOP
355M (2P)	CI	355	254	610	730	51	28	560	780	650	775	80m6	170	22	71.0	85.0	M20	1580	1590	M63-2	--	--	--	--	--	TOP
355M (4,6,8 P)	CI	355	254	610	730	51	28	560	780	650	775	100m6	210	28	90.0	106.0	M24	1620	1630	M63-2	--	--	–	--	--	TOP
355L (2 P)	CI	355	254	610	730	51	28	630	780	650	775	80m6	170	22	71.0	85.0	M20	1580	1590	M63-2	--	--	--	--	--	TOP
355L (4,6,8 P)	CI	355	254	610	730	51	28	630	780	650	775	100m6	210	28	90.0	106.0	M24	1620	1630	M63-2	--	--	–	--	--	TOP

Note : For Standard Motor refer dimensions of IE2 Motor.

General arrangement Drawing/Dimensions - Flange Mounted (B5)

Standard, Brake & Crane & Hoist Duty Motors (B-5 Mounting) as per IS:2223



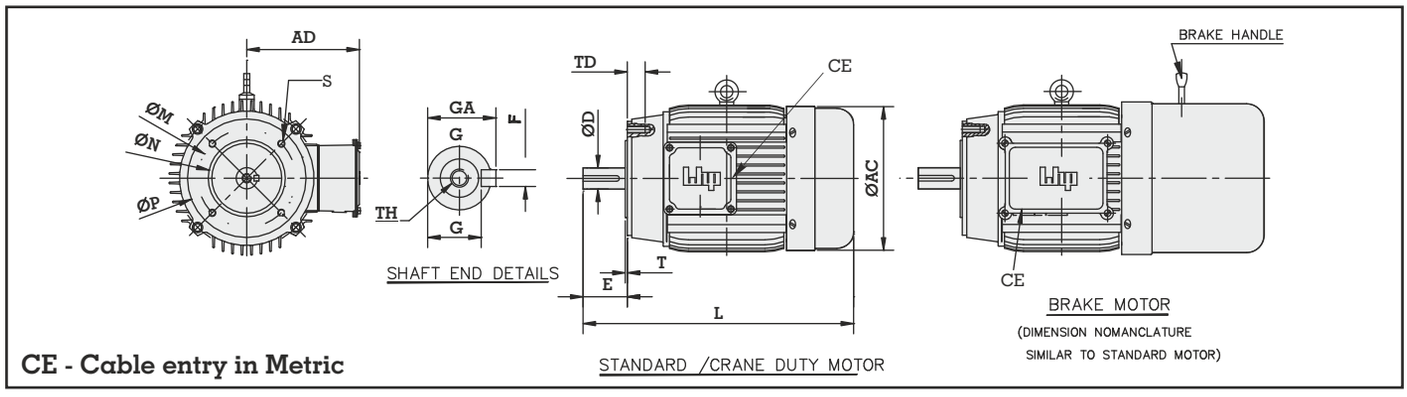
CE - Cable entry size in Metric

Table No. - 10

Frame Size	Cont.	Flange No.	ØM ±0.3	j6 ØN	ØP	ØS X NO.	T	LA	LD	AD MAX	ØAC	ØD	E	F	G	GA	TH	L MAX		CE X Nos.	For Brake Motor			For Single Phase Motor	
																					AD	L Max			
																		IE 2	IE3/IE4		Max	IE 2	IE3/IE4	AD	L
63	CI	F115B	115	95	140	10 X 4	3	10	10	110	116	11j6	23	4	8.5	12.5	M5	223	223	M16-2	125	290	290	---	---
63	AL.PDC	F115B	115	95	140	10 X 4	3	10	10	105	116	11j6	23	4	8.5	12.5	M5	223	223	M16-2	120	290	290	---	---
71	CI	F130B	130	110	160	10 X 4	3.5	10	10	110	140	14j6	30	5	11	16	M5	275	315	M16-2	125	330	370	---	---
71	AL.PDC	F130B	130	110	160	10 X 4	3.5	10	20	115	140	14j6	30	5	11	16	M5	270	310	M16-2	130	325	365	119	302
80	CI	F165B	165	130	200	12 X 4	3.5	11	16	120	158	19j6	40	6	15.5	21.5	M6	290	290	M25-2	120	375	375	120	---
80	AL.PDC	F165B	165	130	200	12 X 4	3.5	11	16	135	158	19j6	40	6	15.5	21.5	M6	290	290	M25-2	155	375	410	114	348
90S	CI	F165B	165	130	200	12 X 4	3.5	11	22	165	178	24j6	50	8	20	27	M8	355	355	M25-2	165	430	430	---	---
90S	AL.PDC	F165B	165	130	200	12 X 4	3.5	11	22	160	178	24j6	50	8	20	27	M8	355	355	M25-2	160	430	430	---	---
90L	CI	F165B	165	130	200	12 X 4	3.5	11	22	165	178	24j6	50	8	20	27	M8	380	380	M25-2	165	453	453	165	395
90L	AL.PDC	F165B	165	130	200	12 X 4	3.5	11	22	160	178	24j6	50	8	20	27	M8	380	380	M25-2	160	453	453	---	---
100L	CI	F215B	215	180	250	15 X 4	4	12	20	165	195	28j6	60	8	24	31	M10	405	405	M32-2	165	490	490	165	430
100L	AL.PDC	F215B	215	180	250	15 X 4	4	14	30	165	195	28j6	60	8	24	31	M10	405	405	M32-2	165	490	490	165	430
112M	CI	F215B	215	180	250	15 X 4	4	12	23	190	224	28j6	60	8	24	31	M10	445	445	M32-2	189	520	520	---	---
112M	AL.PDC	F215B	215	180	250	15 X 4	4	12	18	190	224	28j6	60	8	24	31	M10	445	445	M32-2	179	530	530	---	---
132S	CI	F265B	265	230	300	15 X 4	4	13	47	205	260	38k6	80	10	33	41	M12	480	520	M32-2	202	585	625	---	---
132M	CI	F265B	265	230	300	15 X 4	4	13	47	205	260	38k6	80	10	33	41	M12	520	560	M32-2	202	625	665	---	---
132M (N)	CI	F265B	265	230	300	15 X 4	4	13	47	205	260	38k6	80	10	33	41	M12	560	580	M32-2	202	665	665	---	---
160M	CI	F300B	300	250	350	19 X 4	5	14	54	260	312	42k6	110	12	37	45	M16	650	710	M40-2	260	800	850	850	---
160L	CI	F300B	300	250	350	19 X 4	5	14	54	260	312	42k6	110	12	37	45	M16	710	810	M40-2	260	850	850	850	---
180M/L	CI	F300B	300	250	350	19 X 4	5	14	72	270	360	48k6	110	14	42.5	51.5	M16	730	825	M40-2	270	850	900	900	---
200L	CI	F350B	350	300	400	19 X 4	5	16	71	340	381	55m6	110	16	49	59	M20	800	900	M50-2	--	--	--	---	---
225S/M (2P)	CI	F400B	400	350	450	19 X 8	5	16	71	340	448	55m6	110	16	49	59	M20	860	860	M50-2	--	--	--	---	---
225S/M (4,6,8P)	CI	F400B	400	350	450	19 X 8	5	16	71	340	448	60m6	140	18	53	64	M20	890	960	M50-2	--	--	--	---	---
250M (2P)	CI	F500B	500	450	550	19 X 8	5	19	65	450	510	60m6	140	18	53	64	M20	1015	1050	M50-2	--		--	---	---
250M (4,6,8P)	CI	F500B	500	450	550	19 X 8	5	19	65	450	510	65m6	140	18	58	69	M20	1015	1015	M50-2	--	--	--	---	---
280S/M (2P)	CI	F500B	500	450	550	19 X 8	5	22	50	480	570	65m6	140	18	58	69	M20	1155	1200	M50-2	--	--	--	---	---
280S/M (4,6,8P)	CI	F500B	500	450	550	19 X 8	5	22	50	480	570	75m6	140	20	67.5	79.5	M20	1155	1200	M50-2	–	–	–	—	—
315S (2P)	CI	F600B	600	550	660	24 X 8	6	22	50	520	658	65m6	140	18	58	69	M20	1125	1290	M50-2	–	–	–	–	–
315S (4,6,8P)	CI	F600B	600	550	660	24 X 8	6	22	50	520	658	80m6	170	22	71	85	M20	1155	1390	M50-2	–	–	–	–	–
315S/M/L (2P)	CI	F600B	600	550	660	24 X 8	6	22	50	520	658	65m6	140	18	58	69	M20	1290	1290	M50-2	–	–	–	—	—
315S/M/L (4,6,8P)	CI	F600B	600	550	660	24 X 8	6	22	50	520	658	80m6	170	22	71	85	M20	1310	1390	M50-2	--	--	--	---	---
355S/M/L (2P)	CI	F740B	740	680	800	24 X 8	6	25	45	625	745	80m6	170	22	71	85	M20	1600	1730	M63-2	--	--	--	---	---
355S/M/L (4,6,8P)	CI	F740B	740	680	800	24 X 8	6	25	45	625	745	100m6	210	28	90	106	M24	1620	1750	M63-2	--	--	--	---	---

General arrangement Drawing/Dimensions - Face Mounted (B14)

Standard, Brake & Crane & Hoist Duty Motors as per IS : 2223



CE - Cable entry in Metric

Table No. - 11

Frame Size	Cont.	Flange No.	ØM ± 0.3	ØN j6	ØP	S	TD	T	AD MAX	ØAC	ØD	E	F	G	GA	TH	L MAX		CE X Nos.	For Brake Motor			For 1Ø Motor	
																					L			
																	IE2	IE3/IE4		AD	IE2	IE3/IE4	AD	L
63	CI	F75C	75	60	90	M5	6	2.5	110	116	11j6	23	4	8.5	12.5	M5	223	223	M16-2	125	290	290	--	--
63	AL.PDC	F75C	75	60	90	M5	6	2.5	105	116	11j6	23	4	8.5	12.5	M5	223	223	M16-2	120	290	290	--	--
71	CI	F85C	85	70	105	M6	8	2.5	110	140	14j6	30	5	11	16	M5	275	315	M16-2	125	330	370	--	--
71	AL.PDC	F85C	85	70	107	M6	8	2.5	115	140	14j6	30	5	11	16	M5	270	310	M16-2	130	325	365	119	302
80	CI	F100C	100	80	120	M6	8	3	120	158	19j6	40	6	15.5	21.5	M6	290	290	M25-2	120	375	415	--	--
80	AL.PDC	F100C	100	80	120	M6	8	3	135	158	19j6	40	6	15.5	21.5	M6	290	290	M25-2	155	375	410	--	--
90S	CI	F115C	115	95	140	M8	10	3	165	178	24j6	50	8	20	27	M8	355	355	M25-2	165	450	430	--	--
90S	AL.PDC	F115C	115	95	140	M8	10	3	160	178	24j6	50	8	20	27	M8	355	355	M25-2	160	430	430	--	--
90L	CI	F115C	115	95	140	M8	10	3	165	178	24j6	50	8	20	27	M8	380	435	M25-2	165	453	453	165	395
90L	AL.PDC	F115C	115	95	140	M8	10	3	160	178	24j6	50	8	20	27	M8	380	400	M25-2	160	453	453	--	--
100L	CI	F130C	130	110	160	M8	10	3.5	165	195	28j6	60	8	24	31	M10	405	405	M32-2	165	490	490	165	430
100L	AL.PDC	F130C	130	110	160	M8	10	3.5	165	195	28j6	60	8	24	31	M10	405	405	M32-2	165	490	490	165	430
112M	CI	F130C	130	110	160	M8	10	3.5	190	224	28j6	60	8	24	31	M10	445	445	M32-2	171	520	520	--	--
112M	AL.PDC	F130C	130	110	160	M8	10	3.5	190	224	28j6	60	8	24	31	M10	445	445	M32-2	179	530	530	--	--
132S	CI	F165C	165	130	196	M12	14	3.5	205	260	38k6	80	10	33	41	M12	480	520	M32-2	205	585	625	--	--
132M	CI	F165C	165	130	196	M12	14	3.5	205	260	38k6	80	10	33	41	M12	520	560	M32-2	205	625	665	--	--
132M(N)	CI	F165C	165	130	196	M12	14	3.5	205	260	38k6	80	10	33	41	M12	560	580	M32-2	205	665	665	--	--

Hazardous Area Motors - General Technical Information

Hazardous Areas

Hazardous areas are defined as areas where explosive atmosphere is present, or may be expected to be present, in quantities such as to require special precautions for the construction, installation and use of equipment.

The decision as to whether an area is hazardous as per the relevant regulations and specifications rests entirely with the user or in case of doubt, with the competent inspecting authority.

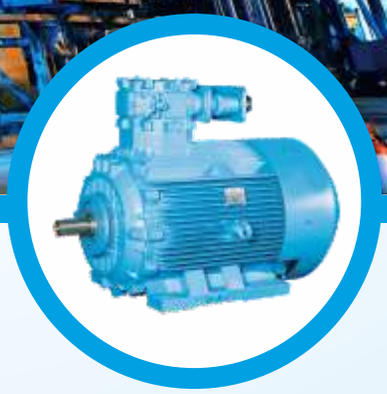
IS 5572:2009 & IEC 60079-10-1:2015 classifies the hazardous areas into three zones, depending on the frequency and duration for which dangerous concentrations are likely to be present.

Classification of Hazardous Areas (Gases ,Vapors & Dust) & selection of Electrical Equipment.

Classification of these zones and selection of electrical equipment is as under.

Table No. 12

Zone	Classification of area as per ref. Std. IS 5572 /IEC 60079-10-1:2015/EN60079-10-1:2015	Selection of electrical equipment as based on ref. std. IS 5571/ IEC 60079-10-2:2015
Zone '0'	An area in which Hazardous atmosphere is continuously present	Generally, use of electrical equipment is to be avoided. But when this is not practicable, intrinsically safe or pressurized electrical equipment to be used.
Zone '1'	Hazardous atmosphere is likely to be present under normal operating conditions.	For this area, electrical equipment used, must be in flame proof enclosure type Ex(d) conforming to IS/IEC 60079-1.
Zone '2'	In this area hazardous atmosphere is likely to be present only under abnormal operating conditions and for a short period.	Apparatus with type of protection Ex (e) in accordance with I EC 60079-7 may be used without any special enclosure. Apparatus having type of protection Ex ec in accordance with IS/IEC 60079-7 are also permitted for use.



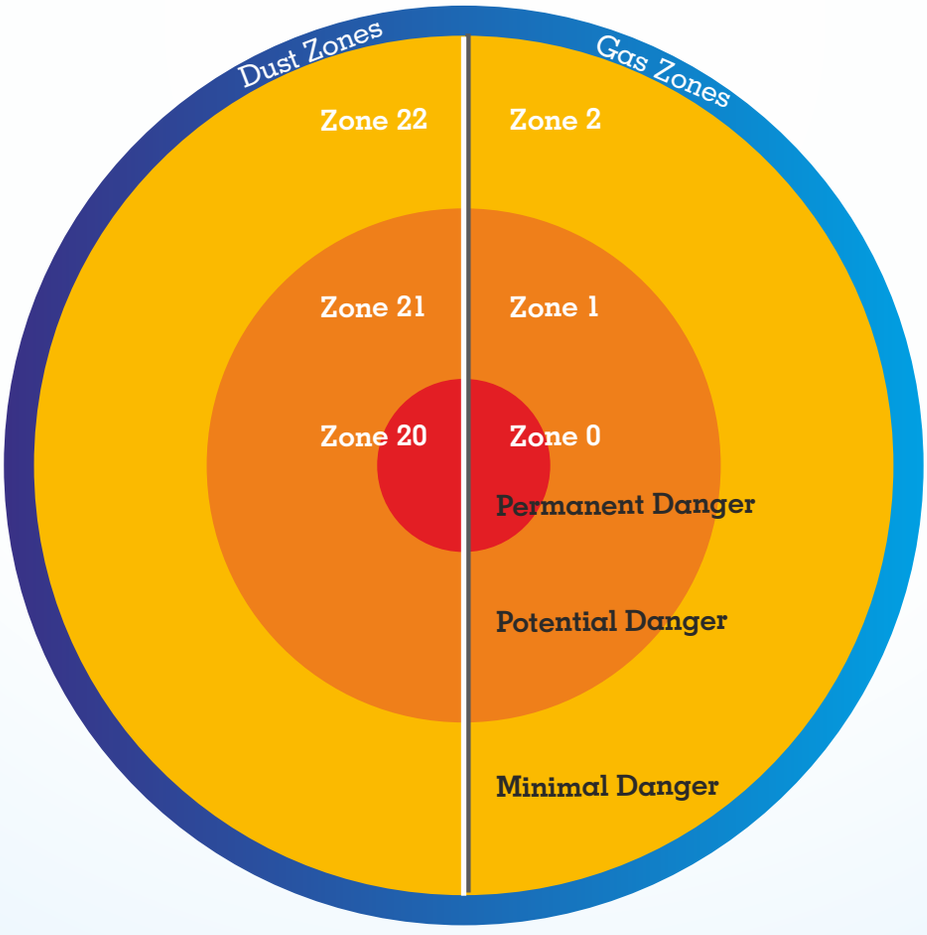
HAZARDOUS AREA MOTORS

Upto 355 Frame

Hazardous Area Motors - General Technical Information

Table No. 12

Dust Zone	Classification of area as per ref. Standard IEC 60079-10-2:2015	Selection of electrical equipment as based on ref. standard IS 5571:2009/ IS/IEC 61241/ IEC 61241
Zone '20'	A hazardous atmosphere formed by dust cloud in air is present: • Continuously or • For long periods or • Frequently • Dust layer may be formed.	Generally, use of electrical equipment is to be avoided. But when this is not practicable, intrinsically safe or pressurized electrical equipment with enhanced IP Protection to be used.
Zone '21'	• A hazardous atmosphere formed by dust cloud in air is likely to occur in normal operation, but not frequently and only for short periods. • Layers or combustible dust will in general be present	For this area, electrical equipment used, must be in flame proof enclosure type Ex(d) conforming to IS/IEC 60079-1 with enhanced IP Protection min IP6X
Zone '22'	• A hazardous atmosphere formed by dust cloud in air is not likely to occur in normal operation and if so then for a short period only, either • Accumulations and layers of combustible dust are present.	Apparatus with type of protection Ex (e) in accordance with IEC 60079-7 may be used without any special enclosure. Apparatus having type of protection Ex ec in accordance with IS/IEC 60079-7 are also permitted for use. IP Shall be min IP6X



Hazardous Area Motors - General Technical Information

Table No. 13 - Reference Standards

All motors comply with following standards.

IS/IEC 60079-0 IEC 60079-0 EN 60079-0	Electrical apparatus for Explosive gas atmosphere-part 0 general requirements.
IS/IEC 60079-1 IEC 60079-1 EN 60079-1	Explosive atmosphere Equipment protection by flame proof enclosures "d"
IS/IEC 60079-7 IEC 60079-7 EN 60079-7	Explosive atmosphere Equipment protection by increased safety "e"
IS/IEC 60079-31 IEC 60079-31 EN 60079-31	Equipment dust ignition protection by enclosure "t"
IS 5572 IEC 60079-10-1	Classification of Hazardous areas (other than mining) having flammable gases and vapors for electrical installations.
IEC 60079-10-2	Explosive atmospheres . Part 10-2: Classification of areas Explosive dust atmospheres.
IS 5571 IEC 60079-14	Guide for selection and installation of electrical equipment for hazardous areas (other than mines)
IS 12615 IEC 60034-30-1	Line operated three phase AC Motors (ie code) "efficiency classes and performance specification"
IS 4029	Guide for testing three phase induction motors (For Standard TEFC SCR Motors)
IS 15999 - (Part2/Sec1) IEC 60034-2-1	Standard Methods for determining Losses and Efficiency from Tests. (For IE2 Series Motors)
IS 15999 - Part 1 IS/IEC 60034-1 IEC 60034-1	Rotating Electrical Machines-Rating & Performance
IS/IEC 60034-5 IEC 60034-5	Degree of protection provided by the integral design of Rotating Electrical Machines (IP code) : classification
IS/IEC 60034-5	Degree of protection provided by the integral design of Rotating Electrical Machines (IP code) : classification
IS 6362 / IEC 60034-6	Designation of method of cooling for Rotating Electrical Machines/Method of cooling (IC code)
IS 12065 / IEC 60034-9	Permissible limits of noise level for Rotating Electrical Machines
IS 12075 IEC 60034-14	Mechanical Vibration of Rotating Electrical Machines

Hazardous Area Motors - General Technical Information

LHP MOTORS DRIVES
Driven by Commitment

TYPES OF PROTECTION ELECTRICAL EQUIPMENT

There are nine types of protection for electrical equipment, which are in compliance with the IS/ IEC/ EN 60079-0.- General requirement. This standard contains requirements that apply to more than one type of protection. Each of the types of protection is also designated by a letter which is included in the marking of the equipment specified in IS/ IEC / EN 60079-0 which also guides the marking required for ATEX IEC Ex and national / international requirement.

LHP Manufacturer below type of protection motors.

"FLAMEPROOF" Ex db IEC 60079-1

Enclosure in which the parts which can ignite an explosive gas atmosphere are placed and which can withstand the pressure developed during an internal explosion of an explosive mixture, and which prevents the transmission of the explosion to the explosive gas atmosphere surrounding the enclosure

Equipment is suitable for installation in Zone 1.

TYPE OF PROTECTION "INCREASED SAFETY" Ex 'eb' IEC 60079-7

Type of protection applied to electrical equipment or Ex Components in which additional measures are applied so as to give increased security against the possibility of excessive temperatures and against the occurrence of arcs and sparks.

Equipment is suitable for installation in Zone 2.

TYPE OF PROTECTION "INCREASED SAFETY" Ex 'ec' IEC 60079-7

(Formerly "NON-SPARKING")

Type of protection applied to electrical equipment such that, in normal operation and in certain specified regular expected occurrences, it is not capable of igniting a surrounding explosive gas atmosphere.

Former marking of "nA" has been replaced by marking "ec". Even if the other technical aspects on the product are unchanged and comply with the revised requirements, a change in the marking will be required.

Equipment is suitable for installation in Zone 2 only (whereas all the other types of protection have versions for use in at least Zone 1, if not other Zones as well).

PROTECTION BY ENCLOSURE FOR EXPLOSIVE DUST ATMOSPHERES" Ex t IEC 60079-31

Type of protection for explosive dust atmospheres where electrical equipment is provided with an enclosure providing dust ingress protection and a means to limit surface temperatures.

Like gas, combustible dust shall not enter in an enclosure. To meet this requirement, increased ingress Protection is to be provided to enclosure..

LHP is having three types of Hazardous Area Motors in full range : - For Gas & Vapor Hazardous area

Flame-proof Motors - Ex 'db'
- Flameproof Motors with Increased Safety T.Box Motors-Ex'db eb'
- Increased Safety Motors - (Ex 'ec')
- Increased Safety Motors - (Ex 'eb')

For Dust Hazardous area
- Flame-proof Motors - Ex 'tb' , '
- Flameproof Motors with Increased Safety T. Box Motors - Ex 'tb'
- Increased Safety Motors - Ex 'tc'

Salient Features

Temperature class :

As per specification IEC 60079-0, the surface temperature is classified based on gas ignition temperature. The surface temperature shall not exceed the gas ignition temperature during motor in service operation. In case of flameproof Ex 'db',' db eb' motor only external surface temperature shall be considered and for Increased safety Ex 'ec' and Increased Safety motors Ex 'eb' external as well as internal temperature considered.

Classification of maximum surface temperatures for Group II electrical equipment

Temperature Class	Maximum surface temperature ^{0}C
T1	450
T2	300
T3	200
T4	135
T5	100
T6	85

Temperature class wrt max ambient temperature for LHP Flameproof Ex 'd', 'db eb',

Frame Size	*Temperature class **Max. Ambient temp. ^{0}C		
	*T6/T85 ^{0}C	*T5/T100 ^{0}C	*T4/T135 ^{0}C
AD 63	**50	**60	–
AD 71	**50	**60	–
AD 80	**50	**60	–
AD 90S/L	**50	**60	–
AD 100L	**50	**60	–
AD 112M	**40	**50	**60
AD 132S/M	**40	**50	**60
AD 160M/L	–	–	**60
AD 180M/L	–	–	**60
AD 200L	–	**50	**60
AD 225S/M	–	**50	**60
AD 250M	–	**50	**60
AD 280S/M	–	**50	**60
AD 315S/M/L	–	**50	**60

Temperature class wrt max ambient temperature of 50°C for LHP Increased safety Ex 'ec' and Increased Safety Ex 'eb' motors is T3.

Hazardous Area Motors - General Technical Information

Statutory and regulatory Approvals / Certifications:-
Hazardous Motors needs mandatorily statutory and regulatory authorities approval before put in market. These statutory and regulatory authorities approves the equipment based on the test reports from their approved test laborites.

Testing laboratories for Indian approvals
- Electronics Regional Test Laboratory, Kolkata
- Karandikar Laboratory Pvt. Ltd, Mumbai
- Central Institute of Mining and Fuel Research, Dhanbad

Indian Statutory and regulatory Approvals / Certifications based on the test report issued by above test laboratories.
- Bureau of Indian Standards, Delhi
- Petroleum and Explosives Safety Organization (PESO), Nagpur
- Directorate General of Mines Safety (DGMS), Dhanbad.

International Statutory approvals

- IEC Ex / CE ATEX certification for complete range of Flame-Proof Ex 'db' & Increased safety Ex 'ec' motors from BASSEFA UK.

LHP Hazardous area motors, gas/ dust group, zone and selection guide
For correct selection of equipment in hazardous area, a area classification by experts shall be done based on the hazardous gas or vapour (IEC 60079-10- 1 standard) or by a hazardous dust (IEC 60079-10-2 e standard)
Zones 20, 21 and 22 are the corresponding areas for a dust hazard, but additionally take account of layers of dust that may be moved up to form a cloud.

SELECTION AND INSTALLATION IEC 60079-14
Based on the Area classification, appropriate equipment must be selected, so that the best protected equipment is used in Zone 0 or Zone 20, but the minimum protected equipment is used only in Zone 2 or Zone 22

Gas / Dust Group	Zone	EPL	Permitted Ex motor type	Eg Marking
I	No zone	Mb	Flameproof Ex 'db'	Ex db I T3 Mb (T amb=-20 ≤ Ta ≤ +60)°C
IIA/IIB	1	Gb	Flameproof Ex 'db'	Ex db IIB T4 Gb (T amb=-20 ≤ Ta ≤ +60)°C
IIA/IIB	2	Gc	Flameproof Ex 'db eb' Increased Safety Ex' eb' Non sparking Ex 'nA', Ex 'ec'	Ex db eb IIB T3 Gc (T amb=-20 ≤ Ta ≤ +60)°C Ex eb IIB T3 Gc (T amb=-20 ≤ Ta ≤ +60)°C Ex ec IIB T3 Gc (T amb=-20 ≤ Ta ≤ +60)°C
IIC	1	Gb	Flameproof Ex 'db'	Ex db IIC T4 Gb (T amb=-20 ≤ Ta ≤ +60)°C
IIC	2	Gc	Flameproof Ex 'db eb' Increased Safety Ex' eb' Non sparking Ex 'nA', Ex 'ec'	Ex db eb IIC T3 Gc (T amb=-20 ≤ Ta ≤ +60)°C Ex eb IIC T3 Gc (T amb=-20 ≤ Ta ≤ +60)°C Ex ec IIC T3 Gc (T amb=-20 ≤ Ta ≤ +60)°C
IIIA/IIIB	21/22	Db	Flameproof Ex 'tb'	Ex tb IIIB T 135°C Db (T amb=-20 ≤ Ta ≤ +60)°C
IIIA/IIIB	21/22	Dc	Non sparking Ex 'tc'	Ex tc IIIB T135°C Dc IP66 (T amb=-20≤Ta≤+60)°C
IIIC	21/22	Db	Flameproof Ex 'tb'	Ex tb IIIC T 135°C Db (T amb=-20 ≤ Ta ≤ +60)°C
IIIC	21/22	Dc	Non sparking Ex 'tc'	Ex tb IIIC T135°C Db (T amb=-20 ≤ Ta ≤ +60)°C

Hazardous area motors operation on VVVF Power supply.
As per National and International specification IS: 5571 - Guide for selection and installation of Electrical equipment in hazardous area- other than mines and IEC 60079-14 Explosive atmosphere- part 14- Electrical installation, Design, selection and erection , combined testing of motor and invertor shall be conducted to determine temperature class of motor. This test is required due to

- High harmonics from invertor resulting increase in temperature
- Speed variation affecting cooling of motor surface

Statutory authority approval is required for such motors before installation of motor and invertor in field.
In addition to above user shall take precaution for
- Installation of filters / reactor at invertor output to reduce the peak voltages at motor input terminals due to large cable length between motor and invertor and high switching frequency. System integrator shall ensure the peak voltage at motor terminal shall be < 1.12 KV max.
- Use of insulated bearings or insulated bearing housings in end shield to prevent bearing failures specially in motors above 280 frame sizes.

Hazardous Area Motors - General Technical Information

Table No. 14 - Frame wise Bearing sizes

Frame	Bearing No.	
Size	DE	NDE
63	6201 ZZ	6201 ZZ
71	6203 ZZ	6203 ZZ
80	6204 ZZ	6204 ZZ
90S/L	6205 ZZ	6205 ZZ
100L	6206 ZZ	6206 ZZ
112M	6306 ZZ	6206 ZZ
132S/M	6308 ZZ C3	6208 ZZ C3
160M/L	6309 ZZ C3	6309 ZZ C3
180M/L	6310 ZZ C3	6310 ZZ C3
200L	6312 ZZ C3	6312 ZZ C3
225S/M	6313 ZZ C3	6313 ZZ C3
250M	6314 C3	6314 C3
280S/M	6318 C3	6415 C3
315S/M/L	6319 C3	6319 C3

Table No. 15 - Maximum Cable entry hole cable O.D. In (mm) accommodation in Terminal Box for Flame-proof Motors

Frame Size	Max. Cable Entry Hole Size (FLP)	Suitable Cable O.D. Range (FLP)	Recommended Cable size cross sec. Area in mm^2
63	M25, 1No. or M20, 2 Nos.	M25-DAI. 22.5 - 25.5	6
		M20- DIA. 18.5 - 19.5	
71	M25, 1No. or M20, 2 Nos.	M25-DAI. 22.5 - 25.5	
		M20- DIA. 18.5 - 19.5	
80	M25, 2Nos.	DIA. 22.5 - 25.5	
90	M25, 2Nos.	DIA. 22.5 - 25.5	16
100	M25, 2Nos.	DIA. 22.5 - 25.5	
112	M40, 2Nos.	DIA. 26 - 29	35
132	M40, 2Nos.	DIA. 26 - 29	
160	M40, 2Nos.	DIA. 26 - 29	
180	M40, 2Nos.	DIA. 45.5 - 51	95
200	M50, 2Nos.	DIA. 45.5 - 51	
225	M50, 2Nos.	DIA. 45.5 - 51	
250	M63, 2Nos. or M80, 1No.	M63- DIA. 51.9 - 59	185
		M80- DIA. 65.5 - 77	
280	M63, 2Nos. or M80, 1No.	M63- DIA. 51.9 - 59	
		M80- DIA. 65.5 - 77	
315	M63, 2Nos. or M80, 1No.	M63- DIA. 51.9 - 59	
		M80- DIA. 65.5 - 77	

Note : Customer should specify exact cable OD in mm to select proper cable entry.

Energy Efficiency TEFC SC Motors - IE2 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC, PESO, ATEX & IECEx, (Ex d motor & Ex e terminal box)

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%, Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K), Degree of protection IP-55 & IP-66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE2,II-Pole conforms to IS 12615:2018, IS/IEC 60034-1:2004, IEC 60034-1:2010,IS/IEC 60079-0:2011, IS/IEC 60079-1:2007, IS/IEC 60034-5:2000, IS/IEC 60079-7-2015,IS/IEC60079-31:2008,EN 60079-0:2012 + A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC 60034-30-2008,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA,Temperature class as per table of IE2

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D22063C3T	0.12	0.16	63	0.42	2770	0.04	600	270	300	53.6	51.6	50.6	0.74	0.71	0.61	0.0007	12	10	20	42	125	0.028	T6
.18D22063C3T	0.18	0.25	63	0.57	2750	0.06	600	220	260	60.4	60.4	60.4	0.72	0.67	0.43	0.0008	12	10	20	42	125	0.032	T6
.25D22063C3T	0.25	0.33	63	0.75	2785	0.09	600	220	260	64.8	58.9	53.0	0.72	0.58	0.43	0.0009	12	10	20	42	125	0.036	T6
.37D22071C3T	0.37	0.50	71	1.00	2750	0.13	650	240	280	69.5	69.5	69.5	0.74	0.74	0.66	0.001	16	10	20	42	125	0.04	T6
.55D22071C3T	0.55	0.75	71	1.40	2788	0.19	650	285	350	74.1	74.1	72.4	0.74	0.73	0.61	0.002	17	10	20	42	125	0.06	T6
.75D22080C3T	0.75	1.0	80	1.70	2805	0.26	650	250	280	77.4	77.4	77.4	0.79	0.78	0.70	0.002	24	10	20	42	125	0.17	T6
1.1D22080C3T	1.1	1.5	80	2.55	2860	0.37	650	270	300	79.6	79.6	79.0	0.75	0.73	0.60	0.003	24	10	20	42	125	0.26	T6
1.5D2290SC3T	1.5	2.0	90S	3.25	2825	0.52	650	230	270	81.3	80.8	80.3	0.79	0.78	0.65	0.007	32	10	20	42	125	0.28	T6
2.2D2290LC3T	2.2	3.0	90L	4.70	2835	0.76	700	230	270	83.2	83.0	82.5	0.78	0.72	0.60	0.008	36	10	20	42	125	0.28	T6
3.0D2210LC3T	3.0	4.0	100L	6.00	2867	1.02	700	240	280	84.6	84.2	83.8	0.84	0.81	0.76	0.026	50	8	16	33	100	0.47	T6
3.7D2210LC3T	3.7	5.0	100L	7.20	2870	1.26	700	285	300	85.5	85.5	84.0	0.84	0.77	0.63	0.026	52	8	16	33	100	0.47	T6
4.0D2211MC3T	4.0	5.5	112M	7.50	2865	1.36	700	170	210	85.8	85.8	84.8	0.86	0.85	0.80	0.033	68	8	16	33	100	0.59	T5
5.5D2213SC3T	5.5	7.5	132S	11.0	2927	1.83	700	200	250	87.0	85.0	82.0	0.80	0.78	0.68	0.044	99	8	16	33	100	2.35	T5
7.5D2213SC3T	7.5	10	132S	14.0	2925	2.50	700	220	260	88.1	87.3	85.5	0.85	0.82	0.78	0.088	106	8	16	33	100	3.28	T5
9.3D2216MC3T	9.3	12.5	160M	16.6	2935	3.09	700	180	220	88.9	88.9	86.8	0.88	0.86	0.84	0.100	153	10	22	42	125	5.49	T4
011D2216MC3T	11	15.0	160M	20.0	2931	3.66	700	190	230	89.4	89.0	88.5	0.86	0.84	0.80	0.128	155	10	22	42	125	6.49	T4
015D2216MC3T	15	20	160M	27.0	2945	4.96	700	220	250	90.3	89.0	88.0	0.86	0.84	0.82	0.140	170	10	22	42	125	9.33	T4
185D2216LC3T	18.5	25	160L	33.0	2941	6.12	700	185	225	90.9	89.9	88.0	0.86	0.84	0.82	0.244	184	10	22	42	125	15.0	T4
022D2218MC3T	22	30	180M	37.0	2943	7.28	700	230	270	91.3	90.3	89.3	0.91	0.88	0.86	0.244	245	10	22	42	125	16.0	T4
030D2220LC3T	30	40	200L	54.0	2966	9.85	700	290	320	92.0	91.0	90.0	0.84	0.80	0.70	0.720	295	12	27	50	150	31.0	T5
037D2220LC3T	37	50	200L	63.0	2952	12.21	700	250	280	92.5	92.0	91.0	0.89	0.87	0.81	1.240	310	12	27	50	150	42.0	T5
045D2222MC3T	45	60	225M	74.0	2965	14.78	700	230	270	92.9	91.0	90.0	0.91	0.89	0.87	1.360	410	12	27	50	150	53.0	T5
055D2225MC3T	55	75	250M	94.0	2965	18.07	700	180	220	93.2	92.2	91.2	0.87	0.85	0.82	2.240	545	12	27	50	150	64.0	T5
075D2228SC3T	75	100	280S	127.0	2971	24.59	700	175	215	93.8	93.0	92.0	0.88	0.86	0.81	2.840	740	15	33	63	188	73.0	T5
090D2228MC3T	90	120	280M	147.0	2960	29.61	700	160	200	94.1	93.1	91.1	0.91	0.89	0.87	3.280	780	15	33	63	188	84.0	T5
110D2231SC3T	110	150	315S	184.0	2979	35.97	700	170	200	94.3	92.9	91.3	0.88	0.85	0.84	6.500	1050	15	33	63	188	80.0	T5
125D2231MC3T	125	170	315M	202.0	2982	40.83	700	185	225	94.5	93.2	91.2	0.91	0.88	0.84	8.700	1090	15	33	63	188	84.0	T5
132D2231MC3T	132	180	315M	214.0	2980	43.14	700	185	225	94.6	93.2	91.2	0.91	0.88	0.84	8.700	1240	15	33	63	188	84.0	T5
150D2231LC3T	150	201	315L	240.0	2980	49.03	700	185	225	94.7	93.3	91.3	0.92	0.88	0.84	10.01	1280	15	33	63	188	101.0	T5
160D2231LC3T	160	215	315L	260.0	2985	52.21	700	200	240	94.8	93.4	91.4	0.90	0.86	0.82	11.68	1305	15	33	63	188	108.0	T5
180D2231LC3T	180	240	315L	293.0	2888	60.71	700	200	240	94.9	93.5	91.4	0.90	0.86	0.82	14.36	1360	15	33	63	188	127.0	T5
200D2231LC3T	200	270	315L	325.0	2990	65.15	700	200	240	95.0	93.6	91.6	0.90	0.86	0.82	15.96	1400	15	33	63	188	142.0	T5
250D2235LC3T	250	335	355L	411.0	2982	81.66	700	170	220	95.0	94.5	92.7	0.89	0.84	0.75	17.60	1865	15	33	63	188	158.0	T4
315D2235LC3T	315	425	355L	518.0	2982	102.89	700	170	220	95.0	94.6	92.8	0.89	0.84	0.75	19.20	1953	15	33	63	188	177.0	T4
355D2235KC3T	355	475	355L/K	584.0	2982	115.95	700	170	250	95.0	94.6	93.0	0.89	0.87	0.82	22.40	3150	15	33	63	188	-	T4
375D2235KC3T	375	503	355L/K	617.0	2982	122.48	700	170	250	95.0	94.6	93.0	0.89	0.88	0.83	24.20	3250	15	33	63	188	-	T4
400D2235KC3T	400	536	355L/K	658.0	2982	130.65	700	170	250	95.0	94.6	93.0	0.89	0.88	0.83	26.00	3375	15	33	63	188	-	T4
450D2235KC3T	450	603	355L/K	732.0	2982	146.98	700	170	250	95.0	94.6	93.0	0.90	0.88	0.83	28.60	3500	15	33	63	188	-	T4
500D2235KC3T	500	670	355L/K	814.0	2982	163.31	700	170	250	95.0	94.7	93.1	0.90	0.88	0.83	31.30	3600	15	33	63	188	-	T4

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0 : 2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or Group IIB equipment.

Energy Efficiency TEFC SC Motors - IE2 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC, PESO, ATEX & IECEx, (Ex d motor & Ex e terminal box)

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE2,IV-Pole conforms to IS 12615:2018,IS/IEC 60034-1:2004,IEC 60034-1:2010,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000,IS/IEC 60079-7-2015,IS/IEC60079-31:2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,,IEC60034-30-2008,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA,Temperature class as per table of IE2

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
12D42063C3T	0.12	0.16	63	0.41	1380	0.08	550	200	250	59.1	58.0	56.0	0.69	0.56	0.42	0.0010	12	15	30	42	125	0.26	T6
18D42063C3T	0.18	0.25	63	0.60	1325	0.13	550	215	265	64.7	64.7	64.7	0.65	0.62	0.48	0.0016	12	15	30	42	125	0.40	T6
25D42071C3T	0.25	0.33	71	0.75	1404	0.17	550	240	280	68.5	67.9	61.5	0.68	0.64	0.48	0.0024	17	10	20	42	125	0.24	T6
37D42071C3T	0.37	0.50	71	1.0	1400	0.26	600	230	260	72.7	71.7	70.5	0.70	0.65	0.50	0.0047	17	10	20	42	125	0.40	T6
55D42080C3T	0.55	0.75	80	1.5	1410	0.38	600	250	280	77.1	75.6	73.6	0.68	0.68	0.55	0.0073	23	10	20	42	125	0.38	T6
75D42080C3T	0.75	1.0	80	1.8	1420	0.51	600	200	240	79.6	75.0	73.0	0.73	0.69	0.62	0.0072	24	10	20	42	125	0.47	T6
1.1D4290SC3T	1.1	1.5	90S	2.5	1415	0.76	600	250	290	81.4	81.0	79.0	0.75	0.68	0.52	0.012	36	10	20	42	125	0.56	T6
1.5D4290LC3T	1.5	2.0	90L	3.2	1405	1.04	600	270	300	82.8	82.0	81.3	0.79	0.70	0.57	0.016	36	10	20	42	125	0.77	T6
2.2D4210LC3T	2.2	3.0	100L	4.8	1430	1.50	700	220	260	84.3	84.3	83.3	0.76	0.75	0.63	0.021	48	8	16	33	100	1.24	T6
3.0D4210LC3T	3.0	4.0	100L	6.3	1430	2.04	700	240	290	85.5	85.0	82.4	0.77	0.70	0.60	0.023	50	8	16	33	100	1.70	T6
3.7D4211MC3T	3.7	5.0	112M	7.3	1435	2.51	700	250	290	86.3	85.5	84.9	0.82	0.77	0.67	0.053	67	8	16	33	100	2.17	T5
4.0D4211MC3T	4.0	5.5	112M	7.3	1430	2.72	700	220	260	86.6	85.0	84.0	0.88	0.85	0.80	0.090	68	8	16	33	100	2.35	T5
5.5D4213SC3T	5.5	7.5	132S	11.0	1455	3.68	700	220	260	87.7	86.7	85.0	0.79	0.76	0.68	0.060	100	8	16	33	100	6.78	T5
7.5D4213MC3T	7.5	10	132M	14.6	1450	5.04	700	230	280	88.7	88.0	87.9	0.81	0.79	0.75	0.088	108	8	16	33	100	9.01	T5
9.3D4216MC3T	9.3	12.5	160M	17.5	1452	6.24	700	220	250	89.3	88.8	88.0	0.83	0.81	0.72	0.141	165	10	22	42	125	10.2	T4
011D4216MC3T	11	15	160M	20.0	1460	7.34	700	200	250	89.8	89.8	89.8	0.85	0.83	0.74	0.208	168	10	22	42	125	15.9	T4
015D4216LC3T	15	20	160L	28.0	1463	9.99	700	190	230	90.6	89.8	88.8	0.82	0.78	0.74	0.286	180	10	22	42	125	44.0	T4
185D4218MC3T	18.5	25	180M	34.0	1460	12.34	700	240	270	91.2	90.5	90.0	0.83	0.80	0.72	0.460	225	10	22	42	125	45.0	T4
022D4218LC3T	22	30	180L	39.0	1470	14.58	700	220	260	91.6	90.9	90.8	0.86	0.84	0.77	0.480	255	10	22	42	125	54.0	T4
030D4220LC3T	30	40	200L	52.0	1466	19.93	700	210	250	92.3	91.7	91.0	0.87	0.84	0.77	1.600	320	12	27	50	150	80.0	T5
037D4222SC3T	37	50	225S	65.0	1473	24.47	700	220	260	92.7	92.2	91.6	0.85	0.84	0.78	1.440	375	12	27	50	150	183.0	T5
045D4222MC3T	45	60	225M	79.0	1470	29.82	700	170	225	93.1	92.5	91.0	0.85	0.84	0.79	1.600	418	12	27	50	150	194.0	T5
055D4225MC3T	55	75	250M	96.0	1483	36.12	700	170	210	93.5	93.2	92.4	0.85	0.84	0.76	2.240	545	12	27	50	150	279.0	T5
075D4228SC3T	75	100	280S	129.0	1484	49.23	700	190	230	94.0	93.6	92.2	0.86	0.82	0.76	4.200	746	15	33	63	188	321.0	T5
090D4228MC3T	90	120	280M	150.0	1480	59.23	700	220	260	94.2	94.1	93.4	0.89	0.87	0.82	5.320	795	15	33	63	188	463.0	T5
110D4231SC3T	110	150	315S	195.0	1486	72.10	700	200	250	94.5	93.0	91.3	0.83	0.81	0.75	11.700	1105	15	33	63	188	265.0	T5
125D4231MC3T	125	170	315M	221.0	1487	81.88	700	200	250	94.6	93.1	91.4	0.83	0.81	0.75	13.300	1220	15	33	63	188	301.0	T5
132D4231MC3T	132	180	315M	227.0	1487	86.46	700	200	250	94.7	94.0	93.5	0.85	0.83	0.79	14.000	1290	15	33	63	188	317.0	T5
150D4231LC3T	150	200	315L	259.0	1486	98.32	700	200	250	94.9	93.4	92.8	0.85	0.82	0.76	15.000	1350	15	33	63	188	434.0	T5
160D4231LC3T	160	215	315L	274.0	1486	104.87	700	200	250	94.9	93.8	93.0	0.86	0.85	0.83	16.000	1410	15	33	63	188	434.0	T5
200D4231LC3T	200	270	315L	346.0	1488	130.91	700	220	260	95.1	94.5	93.3	0.85	0.80	0.75	16.000	1480	15	33	63	188	569.0	T5
250D4235LC3T	250	335	355L	430.0	1490	163.42	700	200	250	95.1	94.0	93.0	0.85	0.82	0.76	16.180	1950	15	33	63	188	713.0	T4
315D4235KC3T	315	425	355L	542.0	1488	206.19	700	200	220	95.1	94.6	93.0	0.85	0.82	0.74	20.390	2060	15	33	63	188	891.0	T4
355D4235LC3T	355	475	355L	611.0	1488	232.37	700	220	250	95.1	94.5	93.1	0.85	0.82	0.75	25.700	3150	15	33	63	188	1113.0	T4
375D4235LC3T	375	503	355L	645.0	1488	245.46	700	220	250	95.1	94.9	93.5	0.85	0.82	0.75	27.150	3250	15	33	63	188	1390.0	T4
400D4235KC3T	400	536	355L/K	688.0	1488	261.83	700	210	250	95.1	94.6	93.2	0.85	0.82	0.73	30.600	3375	15	33	63	188	-	T4
450D4235KC3T	450	603	355L/K	774.0	1488	294.56	700	210	250	95.1	94.6	93.2	0.85	0.82	0.73	33.700	3500	15	33	63	188	-	T4
500D4235KC3T	500	670	355L/K	851.0	1488	327.28	700	210	240	95.1	94.6	93.2	0.86	0.83	0.74	36.800	3600	15	33	63	188	-	T4

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0 : 2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or Group IIB equipment.

Energy Efficiency TEFC SC Motors - IE2 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC, PESO, ATEX & IECEx, (Ex d motor & Ex e terminal box)

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE2,VI-Pole conforms to IS 12615:2018,IS/IEC 60034-1:2004,IEC 60034-1:2010,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000,IS/IEC 60079-7-2015,IS/IEC60079-31:2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA, Temperature class as per table.

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D62063C3T	0.12	0.16	63	0.73	860	0.14	600	160	200	50.6	49.6	48.1	0.45	0.40	0.31	0.0015	13	10	20	42	125	0.354	T6
.18D62071C3T	0.18	0.25	71	0.63	915	0.19	600	160	200	56.6	55.6	45.2	0.70	0.58	0.41	0.0022	16	10	20	42	125	0.590	T6
.25D62071C3T	0.25	0.33	71	0.79	915	0.27	600	160	200	61.6	61.6	50.2	0.71	0.60	0.50	0.0031	17	10	20	42	125	0.960	T6
.37D62080C3T	0.37	0.50	80	1.2	900	0.40	600	170	200	67.6	67.6	64.5	0.63	0.56	0.43	0.0060	23	10	20	42	125	1.42	T6
.55D62080C3T	0.55	0.75	80	1.5	930	0.58	600	180	220	73.1	71.4	67.6	0.69	0.64	0.48	0.0080	24	10	20	42	125	2.11	T6
.75D6290SC3T	0.75	1.0	90S	2.0	925	0.79	600	190	240	75.9	71.5	68.7	0.69	0.62	0.55	0.0110	32	10	20	42	125	2.46	T6
1.1D6290LC3T	1.1	1.5	90L	2.9	918	1.17	600	180	220	78.1	74.4	73.6	0.68	0.61	0.49	0.0150	37	10	20	42	125	3.86	T6
1.5D6210LC3T	1.5	2.0	100L	3.6	945	1.55	600	210	250	79.8	78.2	75.3	0.73	0.61	0.48	0.0260	47	10	20	42	125	5.68	T6
2.2D6211MC3T	2.2	3.0	112M	5.1	950	2.26	700	200	240	81.8	81.8	80.5	0.74	0.69	0.55	0.0700	68	10	20	42	125	6.51	T5
3.0D6211MC3T	3.0	4.0	112M	6.9	950	3.08	700	190	240	83.3	82.8	81.8	0.72	0.66	0.55	0.0950	70	10	20	42	125	9.10	T5
3.7D6213SC3T	3.7	5.0	132S	8.0	949	3.80	700	200	240	84.3	82.0	81.4	0.76	0.74	0.70	0.1000	97	10	20	42	125	11.7	T5
4.0D6213SC3T	4.0	5.5	132S	8.8	955	4.08	700	190	230	84.6	84.0	83.5	0.75	0.69	0.58	0.1020	101	10	20	42	125	11.7	T5
5.5D6213MC3T	5.5	7.5	132M	11.7	960	5.58	700	190	230	86.0	85.4	82.6	0.76	0.70	0.59	0.1080	110	10	20	42	125	15.1	T5
7.5D6216MC3T	7.5	10	160M	15.4	965	7.57	700	200	240	87.2	86.7	83.5	0.78	0.71	0.61	0.2880	120	10	22	42	125	25.8	T4
9.3D6216LC3T	9.3	12.5	160L	19.5	968	9.36	700	210	250	88.1	87.5	86.1	0.75	0.71	0.65	0.3720	140	10	22	42	125	28.2	T4
011D6216LC3T	11	15	160L	21.4	962	11.14	700	200	240	88.7	87.7	87.0	0.81	0.78	0.62	0.640	174	10	22	42	125	33.3	T4
015D6218LC3T	15	20	180L	30.0	975	14.98	700	250	290	89.7	89.3	89.0	0.78	0.74	0.63	1.260	230	10	22	42	125	47.0	T4
185D6220LC3T	18.5	25	200L	35.0	970	18.58	700	170	210	90.4	90.0	87.6	0.81	0.78	0.62	1.260	280	12	27	50	150	95.0	T5
022D6220LC3T	22	30	200L	43.0	975	21.98	700	185	230	90.9	90.4	88.0	0.79	0.75	0.63	1.570	332	12	27	50	150	168.0	T5
030D6222MC3T	30	40	225M	54.0	980	29.82	700	220	260	91.7	91.0	88.5	0.84	0.80	0.68	1.600	409	12	27	50	150	247.0	T5
037D6225MC3T	37	50	250M	68.0	980	36.77	700	200	240	92.2	91.6	88.7	0.82	0.77	0.67	5.680	525	12	27	50	150	254.0	T5
045D6228SC3T	45	60	280S	82.0	989	44.32	700	210	240	92.7	91.6	88.7	0.82	0.80	0.70	7.920	755	15	33	63	188	393.0	T5
055D6228MC3T	55	75	280M	98.0	985	54.39	700	250	290	93.1	93.0	92.9	0.84	0.83	0.76	7.920	1000	15	33	63	188	603.0	T5
075D6231SC3T	75	100	315S	140.0	993	73.56	700	220	250	93.7	91.6	91.4	0.80	0.73	0.62	17.900	1050	15	33	63	188	675.0	T5
090D6231MC3T	90	120	315M	157.0	988	88.72	700	200	250	94.0	93.1	91.1	0.85	0.81	0.75	21.000	1090	15	33	63	188	965.0	T5
110D6231MC3T	110	150	315M	195.0	992	108.00	700	200	250	94.3	93.9	92.5	0.83	0.78	0.69	25.800	1140	15	33	63	188	958.0	T5
125D6231MC3T	125	170	315M	220.0	990	122.98	700	210	250	94.5	94.0	92.8	0.84	0.82	0.75	34.750	1260	15	33	63	188	1261.0	T5
132D6231LC3T	132	180	315L	232.0	990	129.87	700	200	250	94.6	94.0	92.8	0.84	0.82	0.79	36.500	1310	15	33	63	188	1328.0	T5
150D6235KC3T	150	201	355L	269.0	990	147.58	700	210	250	94.7	94.0	93.0	0.82	0.80	0.72	41.000	2280	15	33	63	188	1468.0	T4
160D6235LC3T	160	215	355L	277.0	991	157.26	700	160	210	94.8	94.0	93.0	0.85	0.80	0.72	44.000	2300	15	33	63	188	1608.0	T4
180D6235KC3T	180	240	355L	326.0	991	176.91	700	210	250	94.9	94.0	93.5	0.81	0.73	0.60	49.450	2330	15	33	63	188	1760.0	T4
200D6235LC3T	200	270	355L	355.0	991	196.57	700	210	250	95.0	95.0	94.0	0.83	0.78	0.70	54.100	2370	15	33	63	188	1925.0	T4
250D6235LC3T	250	335	355L	436.0	994	244.97	700	140	180	95.0	94.4	93.5	0.84	0.78	0.70	55.500	2410	15	33	63	188	1976.0	T4
315D6235KC3T	315	425	355L/K	536.0	990	309.91	700	200	250	95.0	94.5	94.0	0.86	0.84	0.78	56.900	3500	15	33	63	188	-	T4
355D6235KC3T	355	475	355L/K	619.0	992	348.56	650	200	250	95.0	94.8	93.4	0.84	0.80	0.70	66.000	3600	15	33	63	188	-	T4
375D6235KC3T	375	503	355L/K	654.0	992	368.20	650	200	250	95.0	94.9	93.5	0.84	0.80	0.70	67.850	3700	15	33	63	188	-	T4
400D6235KC3T	400	536	355L/K	697.0	992	392.74	650	200	250	95.0	94.9	93.5	0.84	0.80	0.70	69.700	3800	15	33	63	188	-	T4

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.
2) Clause no. 4.2 of IEC 60079-0 : 2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or Group IIB equipment.

Energy Efficiency TEFC SC Motors - IE2 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC, PESO, ATEX & IECEx, (Ex d motor & Ex e terminal box)

Driven by Commitment

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE2,VIII-Pole conforms to IS 12615:2018, IS/IEC 60034-1:2004,IEC 60034-1:2010,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000,IS/IEC 60079-7-2015,IS/IEC60079-31:2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA,Temperature class as per table of IE2.

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (PU.)	3/4L (PU.)	1/2L (PU.)								
.12D82071C3T	0.12	0.16	71	0.55	655	0.18	500	180	220	39.8	39.8	39.8	0.76	0.60	0.49	0.0050	16	15	30	63	188	0.650	T6
.18D82080C3T	0.18	0.25	80	0.80	675	0.26	520	180	240	49.9	49.7	49.5	0.63	0.56	0.47	0.0070	23	15	30	63	188	0.970	T6
.25D82080C3T	0.25	0.33	80	1.15	660	0.37	250	180	230	50.6	46.6	39.6	0.54	0.50	0.38	0.0100	25	15	30	63	188	1.66	T6
.37D8290SS3T	0.37	0.50	90S	1.23	640	0.56	550	250	295	56.1	55.6	55.1	0.75	0.60	0.44	0.0120	34	15	30	63	188	1.99	T6
.55D8290LC3T	0.55	0.75	90L	1.90	695	0.77	550	190	230	61.7	61.7	61.7	0.65	0.52	0.40	0.0170	37	15	30	63	188	1.99	T6
.75D8210LC3T	0.75	1.00	100L	2.4	700	1.04	550	180	220	66.2	66.0	64.0	0.65	0.55	0.46	0.0200	48	10	20	42	125	4.62	T6
1.1D8210LC3T	1.1	1.5	100L	3.0	700	1.53	550	180	220	70.8	70.8	70.0	0.72	0.58	0.46	0.0260	55	10	20	42	125	7.27	T6
1.5D8211MC3T	1.5	2.0	112M	3.9	690	2.12	550	180	220	74.1	73.5	71.5	0.72	0.65	0.55	0.0440	70	10	20	42	125	8.43	T5
2.2D8213SC3T	2.2	3.0	132S	6.0	700	3.06	600	180	230	77.6	77.6	77.0	0.65	0.57	0.46	0.0660	110	10	20	42	125	14.8	T5
3.0D8213MC3T	3.0	4.0	132M	7.4	715	4.09	475	180	230	80.0	79.5	78.0	0.71	0.64	0.50	0.0700	130	10	20	42	125	42.0	T5
3.7D8213MC3T	3.7	5.0	160M	8.1	710	5.08	600	250	280	81.4	81.0	80.5	0.78	0.74	0.65	0.2400	120	10	20	42	125	17.9	T4
4.0D8216MC3T	4.0	5.5	160M	8.9	711	5.48	600	250	280	81.9	81.5	81.0	0.76	0.72	0.63	0.2600	130	10	20	42	125	19.6	T4
5.5D8216MC3T	5.5	7.5	160M	13.0	720	7.44	600	180	230	83.8	82.5	79.5	0.70	0.68	0.63	0.2880	145	10	22	42	125	68.0	T4
7.5D8216LC3T	7.5	10	160L	17.0	720	10.1	600	180	230	85.3	84.0	81.0	0.72	0.70	0.65	0.5700	155	10	22	42	125	68.0	T4
9.3D8218LC3T	9.3	12.5	180L	21.0	720	12.6	600	190	240	86.3	85.3	83.8	0.71	0.63	0.52	0.6400	210	10	22	42	125	80.0	T4
011D8218LC3T	11	15	180L	23.8	725	14.8	600	190	240	86.9	85.9	84.6	0.72	0.64	0.53	1.290	220	10	22	42	125	105.0	T4
015D8220LC3T	15	20	200L	33.0	725	20.2	600	190	240	88.0	87.4	85.0	0.72	0.64	0.53	1.780	292	12	27	50	150	137.0	T5
185D8222SC3T	18.5	25	225S	38.0	731	24.6	600	230	260	88.6	87.6	86.1	0.76	0.72	0.63	3.200	350	12	27	50	150	236.0	T5
022D8222MC3T	22	30	225M	45.0	731	29.3	600	230	260	89.1	88.1	86.6	0.76	0.72	0.63	3.200	380	12	27	50	150	274.0	T5
030D8225MC3T	30	40	250M	60.0	735	39.8	600	250	280	89.8	89.0	87.7	0.78	0.74	0.65	6.900	920	12	27	50	150	530.0	T5
037D8228SC3T	37	50	280S	75.0	740	48.7	600	260	290	90.3	90.0	89.0	0.76	0.74	0.63	7.640	1060	15	33	63	188	620.0	T5
045D8228MC3T	45	60	280M	86.0	735	59.6	600	230	260	90.7	89.7	87.7	0.80	0.76	0.69	7.820	1060	15	33	63	188	793.0	T5
055D8231SC3T	55	75	315S	104.0	740	72.4	600	180	230	91.0	91.0	90.0	0.81	0.79	0.73	22.700	1350	15	33	63	188	937.0	T5
075D8231MC3T	75	100	315M	144.0	740	98.7	600	160	210	91.6	90.6	89.6	0.79	0.77	0.69	34.300	1485	15	33	63	188	1283.0	T5
090D8231LC3T	90	120	315L	173.0	740	118.5	600	160	210	91.9	91.0	89.6	0.79	0.77	0.69	34.300	1510	15	33	63	188	1526.0	T5
110D8231LC3T	110	150	315L	210.0	740	144.8	600	180	240	92.3	92.3	90.3	0.78	0.74	0.66	50.600	1525	15	33	63	188	1857.0	T5
125D8231LC3T	125	170	315L	241.0	740	164.5	600	190	250	92.5	92.0	91.0	0.78	0.73	0.65	53.100	1525	15	33	63	188	2055.0	T5
132D8231LC3T	132	180	315L	235.0	740	173.7	600	170	210	92.6	91.6	90.6	0.84	0.80	0.71	55.600	1560	15	33	63	188	2253.0	T5
150D8235LC3T	150	201	355L	300.0	745	196.1	600	150	210	92.9	92.0	91.0	0.75	0.70	0.56	59.600	3000	15	33	63	188	2431.0	T4
160D8235LC3T	160	215	355L	297.0	745	209.2	600	140	210	93.0	92.0	90.5	0.81	0.67	0.63	64.000	3100	15	33	63	188	2593.0	T4
180D8235LC3T	180	240	355L	344.0	745	235.3	600	140	210	93.3	92.3	91.8	0.78	0.66	0.55	68.000	3200	15	33	63	188	2917.0	T4
200D8235LC3T	200	270	355L	374.0	745	261.5	600	140	210	93.5	93.1	91.9	0.80	0.75	0.66	72.000	3300	15	33	63	188	3241.0	T4
250D8235KC3T	250	335	355L/K	470.0	745	326.8	600	140	205	93.5	93.1	91.9	0.79	0.77	0.69	76.000	3400	15	33	63	188	-	T4
315D8235KC3T	315	425	355L/K	586.0	745	411.8	650	170	210	93.5	93.1	91.9	0.80	0.75	0.62	80.000	3500	15	33	63	188	-	T4

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0 : 2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or Group IIB equipment.

Energy Efficiency TEFC SC Motors - IE2 Flame proof Ex d I - Brake Motors IIA ,IIB OR IIC

3 Phase Squirrel Cage Flame proof induction motors suitable for 415V or 550V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE2 conforms to IS 12615:2018,IS/IEC 60034-1:2004, IEC 60034-1:2010, IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IEC 60034-30-2008,Efficiency testing according to IEC 60034-2-1:2014-06.

Performance Table

Ordering code	kW	HP	Frame	
2 Pole				
.12T22063C3T	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
.18T22063C3R	0.18	0.25	63	
.25T22063C3R	0.25	0.33	63	
.37T22071C3R	0.37	0.50	71	
.55T22071C3R	0.55	0.75	71	
.75T22080C3R	0.75	1.0	80	
1.1T22080C3R	1.1	1.5	80	
1.5T2290SC3R	1.5	2.0	90S	
2.2T2290LC3R	2.2	3.0	90L	
3.0T2210LC3R	3.0	4.0	100L	
3.7T2210LC3R	3.7	5.0	100L	
4.0T2211MC3R	4.0	5.5	112M	
5.5T2213SC3R	5.5	7.5	132S	
7.5T2213SC3R	7.5	10	132S	
9.3T2216MC3R	9.3	12.5	160M	
011T2216MC3R	11	15.0	160M	
015T2216MC3R	15	20	160M	
185T2216LC3R	18.5	25	160L	
022T2218MC3R	22	30	180M	

Ordering code	kW	HP	Frame	
4 Pole				
.12T42063C3R	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
.18T42063C3R	0.18	0.25	63	
.25T42071C3R	0.25	0.33	71	
.37T42071C3R	0.37	0.50	71	
.55T42080C3R	0.55	0.75	80	
.75T42080C3R	0.75	1.0	80	
1.1T4290SC3R	1.1	1.5	90S	
1.5T4290LC3R	1.5	2.0	90L	
2.2T4210LC3R	2.2	3.0	100L	
3.0T4210LC3R	3.0	4.0	100L	
3.7T4211MC3R	3.7	5.0	112M	
4.0T4211MC3R	4.0	5.5	112M	
5.5T4213SC3R	5.5	7.5	132S	
7.5T4213MC3R	7.5	10	132M	
9.3T4216MC3R	9.3	12.5	160M	
011T4216MC3R	11	15	160M	
015T4216LC3R	15	20	160L	
185T4218MC3R	18.5	25	180M	
022T4218LC3R	22	30	180L	

Ordering code	kW	HP	Frame	
6 Pole				
.12T62063C3R	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
.18T62071C3R	0.18	0.25	71	
.25T62071C3R	0.25	0.33	71	
.37T62080C3R	0.37	0.50	80	
.55T62080C3R	0.55	0.75	80	
.75T6290SC3R	0.75	1.0	90S	
1.1T6290LC3R	1.1	1.5	90L	
1.5T6210LC3R	1.5	2.0	100L	
2.2T6211MC3R	2.2	3.0	112M	
3.0T6211MC3R	3.0	4.0	112M	
3.7T6213SC3R	3.7	5.0	132S	
4.0T6213SC3R	4.0	5.5	132S	
5.5T6213MC3R	5.5	7.5	132M	
7.5T6216MC3R	7.5	10	160M	
9.3T6216LC3R	9.3	12.5	160L	
011T6216LC3R	11	15	160L	
015T6218LC3R	15	20	180L	

Ordering code	kW	HP	Frame	
8 Pole				
.12T82071C3R	0.12	0.16	71	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
.18T82080C3R	0.18	0.25	80	
.25T82080C3R	0.25	0.33	80	
.37T8290SC3R	0.37	0.50	90S	
.55T8290LC3R	0.55	0.75	90L	
.75T8210LC3R	0.75	1.00	100L	
1.1T8210LC3R	1.1	1.5	100L	
1.5T8211MC3R	1.5	2.0	112M	
2.2T8213SC3R	2.2	3.0	132S	
3.0T8213MC3R	3.0	4.0	132M	
3.7T8213MC3R	3.7	5.0	160M	
4.0T8216MC3R	4.0	5.5	160M	
5.5T8216MC3R	5.5	7.5	160M	
7.5T8216LC3R	7.5	10	160L	
9.3T8218LC3R	9.3	12.5	180L	
011T8218LC3R	11	15	180L	

Note : - Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances.

Energy Efficiency TEFC SC Motors - IE2 Flame proof Ex dI DGMS (Coal Mines) Certifiede Motors

3 Phase Squirrel Cage Flame proof DGMS Certifide induction motors suitable for 415V or 550 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 ,altitude upto 1000 mtrs. above m.s.l,Duty S1,efficiency class IE2 conforms to IS 12615:2018,IS/IEC 60034-1:2004,IEC 60034-1:2010,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000,IEC 60034-30-2008,Efficiency testing according to IEC 60034-2-1:2014-06

Performance Table

Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame	
2 Pole					**4 Pole**					**6 Pole**					**8 Pole**				
12P22063C3T	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .	12P42063C3R	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .	12P62063C3R	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .	12P82071C3R	0.12	0.16	71	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
18P22063C3R	0.18	0.25	63		18P42063C3R	0.18	0.25	63		18P62071C3R	0.18	0.25	71		18P82080C3R	0.18	0.25	80	
25P22063C3R	0.25	0.33	63		25P42071C3R	0.25	0.33	71		25P62071C3R	0.25	0.33	71		25P82080C3R	0.25	0.33	80	
37P22071C3R	0.37	0.50	71		37P42071C3R	0.37	0.50	71		37P62080C3R	0.37	0.50	80		37P8290SC3R	0.37	0.50	90S	
55P22071C3R	0.55	0.75	71		55P42080C3R	0.55	0.75	80		55P62080C3R	0.55	0.75	80		55P8290LC3R	0.55	0.75	90L	
75P22080C3R	0.75	1.0	80		75P42080C3R	0.75	1.0	80		75P6290SC3R	0.75	1.0	90S						
1.1P22080C3R	1.1	1.5	80		1.1P4290SC3R	1.1	1.5	90S		1.1P6290LC3R	1.1	1.5	90L						
1.5P2290SC3R	1.5	2.0	90S		1.5P4290LC3R	1.5	2.0	90L											
2.2P2290LC3R	2.2	3.0	90L																
3.0P2210LC3R	3.0	4.0	100L		2.2P4210LC3R	2.2	3.0	100L		1.5P6210LC3R	1.5	2.0	100L		75P8210LC3R	0.75	1.00	100L	
3.7P2210LC3R	3.7	5.0	100L		3.0P4210LC3R	3.0	4.0	100L		2.2P6211MC3R	2.2	3.0	112M		1.1P8210LC3R	1.1	1.5	100L	
4.0P2211MC3R	4.0	5.5	112M		3.7P4211MC3R	3.7	5.0	112M		3.0P6211MC3R	3.0	4.0	112M		1.5P8211MC3R	1.5	2.0	112M	
5.5P2213SC3R	5.5	7.5	132S		4.0P4211MC3R	4.0	5.5	112M		3.7P6213SC3R	3.7	5.0	132S		2.2P8213SC3R	2.2	3.0	132S	
7.5P2213SC3R	7.5	10	132S		5.5P4213SC3R	5.5	7.5	132S		4.0P6213SC3R	4.0	5.5	132S		3.0P8213MC3R	3.0	4.0	132M	
9.3P2216MC3R	9.3	12.5	160M		7.5P4213MC3R	7.5	10	132M		5.5P6213MC3R	5.5	7.5	132M		3.7P8213MC3R	3.7	5.0	160M	
011P2216MC3R	11	15.0	160M		9.3P4216MC3R	9.3	12.5	160M		7.5P6216MC3R	7.5	10	160M		4.0P8216MC3R	4.0	5.5	160M	
015P2216MC3R	15	20	160M		011P4216MC3R	11	15	160M		9.3P6216LC3R	9.3	12.5	160L		5.5P8216MC3R	5.5	7.5	160M	
185P2216LC3R	18.5	25	160L		015P4216LC3R	15	20	160L		011P6216LC3R	11	15	160L		7.5P8216LC3R	7.5	10	160L	
022P2218MC3R	22	30	180M		185P4218MC3R	18.5	25	180M		015P6218LC3R	15	20	180L		9.3P8218LC3R	9.3	12.5	180L	
030P2220LC3T	30	40	200L		022P4218LC3R	22	30	180L		185P6220LC3T	18.5	25	200L		011P8218LC3R	11	15	180L	
037P2220LC3T	37	40	200L		030P4220LC3T	30	40	200L		022P6220LC3T	22	30	200L		015P8220LC3T	15	20	200L	
045P2222MC3T	45	50	225S		037P4222SC3T	37	50	225S		030P6222MC3T	30	40	225M		185P8222SC3T	18.5	25	225S	
055P2225MC3T	55	60	225M		045P4222MC3T	45	60	225M		037P6225MC3T	37	50	250M		022P8222MC3T	22	30	225M	
075P2228SC3T	75	75	250M		055P4225MC3T	55	75	250M		045P6228SC3T	45	60	280S		030P8225MC3T	30	40	250M	
090P2228MC3T	90	100	280S		075P4228SC3T	75	100	280S		055P6228MC3T	55	75	280M		037P8228SC3T	37	50	280S	
110P2231SC3T	110	120	280M		090P4228MC3T	90	120	280M		075P6231SC3T	75	100	315S		045P8228MC3T	45	60	280M	
125P2231MC3T	125	150	315S		110P4231SC3T	110	150	315S		090P6231MC3T	90	120	315M		055P8231SC3T	55	75	315S	
132P2231MC3T	132	170	315M		125P4231MC3T	125	170	315M		110P6231MC3T	110	150	315M		075P8231MC3T	75	100	315M	
150P2231LC3T	150	180	315M		132P4231MC3T	132	180	315M		125P6231MC3T	125	170	315M		090P8231LC3T	90	120	315L	
160P2231LC3T	160	200	315L		150P4231LC3T	150	200	315L		132P6231LC3T	132	180	315L		110P8231LC3T	110	150	315L	
180P2231LC3T	180	215	315L		160P4231LC3T	160	215	315L							125P8231LC3T	125	170	315L	
200P2231LC3T	200	270	315L		200P4231LC3T	200	270	315L							132P8231LC3T	132	180	315L	

Note : - Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e terminal box.)

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3, 2-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D23063C3T	0.12	0.25	63	0.4	2790	0.04	650	200	250	60.8	60.0	56.7	0.70	0.64	0.55	0.0009	12	10	20	42	125	0.045	T6
.18D23063C3T	0.18	0.25	63	0.5	2790	0.06	650	200	250	65.9	65.0	61.2	0.72	0.64	0.55	0.0009	12	10	20	42	125	0.095	T6
.25D23063C3T	0.25	0.33	63	0.7	2800	0.09	650	200	250	69.7	68.9	65.6	0.73	0.70	0.63	0.0015	12	10	20	42	125	0.11	T6
.37D23071C3T	0.37	0.50	71	1.0	2800	0.13	700	200	250	73.8	73.0	69.7	0.72	0.70	0.64	0.0018	16	10	20	42	125	0.18	T6
.55D23071C3T	0.55	0.75	71	1.3	2810	0.19	700	220	295	77.8	77.0	73.7	0.75	0.71	0.65	0.00252	17	10	20	42	125	0.22	T6
.75D23080C3T	0.75	1.0	80	1.5	2850	0.26	700	225	275	80.7	79.5	76.6	0.86	0.76	0.61	0.00432	24	10	20	42	125	0.35	T6
1.1D23080C3T	1.1	1.5	80	2.4	2845	0.38	700	225	275	82.7	81.5	79.4	0.78	0.76	0.72	0.00432	25	10	20	42	125	0.45	T6
1.5D2390SC3T	1.5	2.0	90S	3.1	2830	0.52	700	230	275	84.2	83.0	80.9	0.81	0.79	0.74	0.00876	33	10	20	42	125	0.55	T6
2.2D2390LC3T	2.2	3.0	90L	4.2	2870	0.75	770	225	275	85.9	84.5	82.6	0.85	0.81	0.73	0.01068	37	10	20	42	125	0.75	T6
3D2310LC3T	3.0	4.0	100L	5.8	2865	1.02	770	250	290	87.1	86.5	85.5	0.82	0.78	0.76	0.0200		8	16	33	100	0.8	
3.7D2310LC3T	3.7	5.0	100L	7.1	2865	1.26	770	250	290	87.8	86.5	84.5	0.83	0.80	0.74	0.0264	52	8	16	33	100	1.4	T6
4D2311MC3T	4.0	5.5	112M	7.7	2860	1.36	770	250	290	88.1	87.5	85.0	0.82	0.80	0.75	0.0305	70	8	16	33	100	1.5	
5.5D2313SC3T	5.5	7.5	132S	10.2	2930	1.83	770	225	265	89.2	88.5	85.9	0.84	0.80	0.73	0.0624	106	8	16	33	100	2.2	T5
7.5D2313SC3T	7.5	10.0	132S	13.6	2945	2.48	770	250	290	90.1	89.1	86.8	0.85	0.82	0.73	0.0816	114	8	16	33	100	3.1	T5
9.3D2316MC3T	9.3	12.5	160M	16.4	2945	3.08	770	250	290	90.5	90.1	87.6	0.87	0.83	0.74	0.096	156	10	22	42	125	4.2	T4
011D2316MC3T	11	15.0	160M	19	2940	3.64	770	250	290	91.2	90.5	87.9	0.88	0.84	0.75	0.204	168	10	22	42	125	5.4	T4
015D2316MC3T	15	20.0	160M	25.8	2950	4.95	770	250	295	91.9	91.2	88.6	0.88	0.85	0.76	0.264	172	10	22	42	125	7.9	T4
185D2316LC3T	18.5	25.0	160L	32.0	2945	6.12	770	250	290	92.4	91.7	89.4	0.87	0.85	0.76	0.336	186	10	22	42	125	9.2	T4
022D2318MC3T	22	30.0	180M	36	2945	7.28	770	175	225	92.7	92.0	90.3	0.91	0.86	0.77	0.504	260	10	22	42	125	11.1	T4
030D2320LC3T	30	40.0	200L	50.3	2955	9.89	770	250	280	93.3	92.5	91.5	0.89	0.87	0.76	0.768	310	12	27	50	150	16.8	T5
037D2320LC3T	37	50.0	200L	60.4	2950	12.22	770	220	260	93.7	93.2	91.9	0.91	0.89	0.83	1.02	330	12	27	50	150	20.1	T5
045D2322MC3T	45	60.0	225M	73	2965	14.78	770	220	265	94.0	93.8	92.3	0.91	0.87	0.78	1.092	430	12	27	50	150	26.5	T5
055D2325MC3T	55	75.0	250M	90	2970	18.04	770	200	240	94.3	93.5	92.7	0.90	0.87	0.78	2.16	615	12	27	50	150	30.5	T5
075D2328SC3T	75	100	280S	121	2970	24.60	770	195	255	94.7	94.0	93.1	0.91	0.86	0.77	7.956	780	15	33	63	188	38.9	T5
090D2328MC3T	90	120	280M	145	2980	29.42	770	190	240	95.0	94.3	93.3	0.91	0.88	0.79	9.816	795	15	33	63	188	42.45	T5
110D2331SC3T	110	150	315S	187	2980	35.95	770	195	250	95.2	94.4	93.8	0.86	0.84	0.79	13.86	1080	15	33	63	188	54.2	T5
125D2331MC3T	125	170	315M	201	2975	40.92	770	190	245	95.3	94.5	93.9	0.91	0.88	0.79	15.24	1140	15	33	63	188	61.8	T5
132D2331MC3T	132	180	315M	212	2980	43.14	770	180	235	95.4	94.6	94.1	0.91	0.88	0.79	16.668	1250	15	33	63	188	65.4	T5
160D2331LC3T	160	215	315L	262	2985	52.21	770	185	240	95.6	95.0	94.3	0.89	0.88	0.79	17.16	1325	15	33	63	188	82.9	T5
180D2331LC3T	180	240	315L	288	2985	58.73	770	185	240	95.7	94.9	94.4	0.91	0.88	0.79	19.152	1410	15	33	63	188	94.1	T5
200D2331LC3T	200	270	315L	326	2985	65.26	770	185	240	95.8	95.1	94.5	0.89	0.88	0.80	22.644	1460	15	33	63	188	103	T5
250D2335LC3T	250	335	355M	403	2985	81.57	770	185	240	95.8	95.1	95.5	0.90	0.88	0.79	28.08	1930	15	33	63	188	129	T4
315D2335LC3T	315	420	355L	514	2985	102.78	770	180	240	95.8	95.1	94.5	0.89	0.89	0.80	29.7	2030	15	33	63	188	165	T4

Note:- 1) Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e terminal box.)

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3, 4-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D43063C3T	0.12	0.16	63	0.37	1360	0.09	600	200	250	64.8	64.0	60.7	0.69	0.64	0.55	0.0014	12	15	30	63	188	0.31	T6
.18D43063C3T	0.18	0.25	63	0.53	1360	0.13	600	200	250	69.9	69.1	65.8	0.68	0.64	0.55	0.0014	12	15	30	63	188	0.46	T6
.25D43071C3T	0.25	0.35	71	0.74	1400	0.17	600	200	260	73.5	72.7	69.4	0.64	0.62	0.57	0.0034	17	10	20	42	125	0.61	T6
.37D43071C3T	0.37	0.5	71	1.0	1400	0.26	650	245	295	77.3	76.5	73.2	0.70	0.67	0.58	0.00408	17	10	20	42	125	0.94	T6
.55D43080C3T	0.55	0.75	80	1.2	1410	0.38	650	245	300	80.8	79.8	76.7	0.79	0.75	0.62	0.00924	24	10	20	42	125	1.42	T6
.75D43080C3T	0.75	1.0	80	1.7	1415	0.52	650	235	295	82.5	81.7	80.8	0.73	0.71	0.63	0.01032	24	10	20	42	125	1.92	T6
1.1D4390SC3T	1.1	1.5	90S	2.4	1415	0.76	650	235	300	84.1	83.3	82.5	0.76	0.74	0.65	0.0168	36	10	20	42	125	2.8	T6
1.5D4390LC3T	1.5	2.0	90L	3.2	1420	1.03	650	240	295	85.3	84.0	83.1	0.77	0.76	0.67	0.018	38	10	20	42	125	3.8	T6
2.2D4310LC3T	2.2	3.0	100L	4.6	1440	1.49	750	245	285	86.7	85.9	84.5	0.77	0.75	0.66	0.0348	50	8	16	33	100	5.5	T6
3D4310LC3T	3.0	4.0	100L	6.3	1435	2.04	750	245	285	87.7	87.0	86.0	0.76	0.72	0.68	0.045	52	8	16	33	100	6.5	
3.7D4311MC3T	3.7	5.0	112M	7.2	1445	2.49	750	245	285	88.4	87.6	86.8	0.81	0.76	0.67	0.0684	68	8	16	33	100	8.5	T5
4D4311MC3T	4.0	5.5	112M	7.9	1450	2.69	750	245	285	88.6	87.5	86.5	0.80	0.78	0.72	0.095	72	8	16	33	100	9.5	
5.5D4313SC3T	5.5	7.5	132S	11	1450	3.69	750	235	295	89.6	88.8	87.9	0.78	0.77	0.68	0.1116	108	8	16	33	100	12.8	T5
7.5D4313MC3T	7.5	10.0	132M	14.4	1460	5.00	750	195	255	90.4	89.6	88.8	0.80	0.78	0.69	0.144	116	8	16	33	100	18.2	T5
9.3D4316MC3T	9.3	12.5	160M	16.7	1460	6.20	750	195	255	91.0	90.0	89.1	0.85	0.83	0.77	0.204	174	10	22	42	125	22.7	T4
011D4316MC3T	11	15.0	160M	20.2	1460	7.34	750	215	280	91.4	90.6	89.5	0.83	0.81	0.72	0.24	178	10	22	42	125	25.4	T4
015D4316LC3T	15	20.0	160L	27.0	1460	10.01	750	220	280	92.1	91.3	90.4	0.84	0.82	0.73	0.312	184	10	22	42	125	38.5	T4
185D4318MC3T	18.5	25.0	180M	33.1	1470	12.26	750	220	280	92.6	91.8	90.7	0.84	0.83	0.74	0.792	252	10	22	42	125	45.3	T4
022D4318LC3T	22	30.0	180L	38.7	1470	14.58	750	215	275	93.0	92.2	91.2	0.85	0.81	0.72	1.008	204	10	22	42	125	52	T4
030D4320LC3T	30	40.0	200L	52	1475	19.81	750	235	285	93.6	92.8	91.5	0.85	0.81	0.72	1.44	365	12	27	50	150	72	T5
037D4322SC3T	37	50.0	225S	65.3	1475	24.43	750	225	270	93.9	93.1	92.1	0.84	0.82	0.73	1.8	400	12	27	50	150	91	T5
045D4322MC3T	45	60.0	225M	79.1	1480	29.61	750	225	290	94.2	93.4	92.4	0.84	0.82	0.73	2.04	430	12	27	50	150	112	T5
055D4325MC3T	55	75.0	250M	96.3	1480	36.20	750	215	280	94.6	93.8	92.5	0.84	0.83	0.74	3.84	600	12	27	50	150	135	T5
075D4328SC3T	75	100	280S	129	1485	49.19	770	215	280	95.0	94.2	92.7	0.85	0.83	0.74	8.64	791	15	33	63	188	185	T5
090D4328MC3T	90	120	280M	153	1485	59.03	770	220	280	95.2	94.4	93.2	0.86	0.84	0.75	9.96	810	15	33	63	188	223	T5
110D4331SC3T	110	150	315S	187	1485	72.15	770	200	260	95.4	94.6	93.4	0.86	0.83	0.74	13.92	1150	15	33	63	188	267	T5
125D4331MC3T	125	170	315M	212	1485	81.99	770	195	250	95.5	94.7	93.5	0.86	0.83	0.74	15.12	1220	15	33	63	188	304	T5
132D4331MC3T	132	180	315M	221	1485	86.58	770	195	250	95.6	94.8	93.6	0.87	0.84	0.75	16.8	1300	15	33	63	188	329	T5
160D4331LC3T	160	215	315L	270	1490	104.59	770	220	275	95.8	95.0	93.8	0.86	0.85	0.76	27.9	1410	15	33	63	188	391	T5
180D4331LC3T	180	240	315L	304	1485	118.06	770	220	275	95.9	95.1	93.9	0.86	0.85	0.76	28.8	1450	15	33	63	188	421	T5
200D4331LC3T	200	270	315L	341	1485	131.18	770	200	255	96.0	95.2	94.1	0.85	0.85	0.76	30.7	1510	15	33	63	188	483	T5
250D4335MC3T	250	340	355M	416	1485	163.97	770	195	250	96.0	95.2	94.3	0.87	0.85	0.76	38.1	2020	15	33	63	188	584	T4
315D4335LC3T	315	430	355L	519	1485	206.61	770	195	245	96.0	95.2	94.4	0.88	0.86	0.77	48.3	2130	15	33	63	188	741	T4

Note:- 1) Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e terminal box.)

Driven by Commitment

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3, 6-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D63063C3T	0.12	0.16	63	0.53	880	0.13	650	190	230	57.7	56.9	53.6	0.55	0.51	0.42	0.0041	13	10	20	42	125	0.71	T6
.18D63071C3T	0.18	0.25	71	0.68	890	0.20	650	190	230	63.9	63.1	59.8	0.58	0.54	0.45	0.0044	17	10	20	42	125	1.1	T6
.25D63071C3T	0.25	0.35	71	0.84	900	0.27	650	190	230	68.6	67.8	64.5	0.60	0.56	0.47	0.0044	17	10	20	42	125	1.5	T6
.37D63080C3T	0.37	0.5	80	1.08	950	0.38	650	190	230	73.5	72.7	70.2	0.65	0.61	0.52	0.0084	24	10	20	42	125	2.2	T6
.55D63080C3T	0.55	0.75	80	1.5	935	0.57	650	195	250	77.2	76.4	73.9	0.67	0.63	0.54	0.01116	25	10	20	42	125	3.1	T6
.75D6390SC3T	0.75	1.0	90S	1.9	935	0.78	650	195	250	78.9	78.1	75.6	0.68	0.64	0.55	0.0192	36	10	20	42	125	4.2	T6
1.1D6390LC3T	1.1	1.5	90L	2.8	940	1.14	650	200	260	81.0	80.2	78.9	0.67	0.63	0.54	0.024	38	10	20	42	125	6.5	T6
1.5D6310LC3T	1.5	2.0	100L	3.8	940	1.55	650	200	250	82.5	81.7	80.1	0.67	0.63	0.54	0.0384	50	10	20	42	125	9.1	T6
2.2D6311MC3T	2.2	3.0	112M	5.0	960	2.23	750	190	240	84.3	83.5	82.8	0.72	0.68	0.59	0.0864	73	10	20	42	125	12.5	T5
3D6313SC3T	3.0	4.0	132S	6.8	960	3.04	750	190	240	85.6	84.8	82.8	0.72	0.68	0.59	0.091		10	20	42	125	14	
3.7D6313SC3T	3.7	5.0	132S	7.8	970	3.72	750	195	245	86.5	85.7	85.0	0.76	0.72	0.63	0.156	105	10	20	42	125	22.5	T5
4D6313MC3T	4.0	5.5	132M	8.9	950	4.10	750	195	245	86.8	86.0	85.0	0.72	0.68	0.59	0.185		10	20	42	125	24	
5.5D6313MC3T	5.5	7.5	132M	11.6	960	5.58	750	190	240	88.0	87.2	86.8	0.75	0.71	0.62	0.204	115	10	20	42	125	32.1	T5
7.5D6316MC3T	7.5	10.0	160M	16.3	970	7.53	750	215	280	89.1	88.3	87.6	0.72	0.68	0.59	0.516	160	10	22	42	125	45.3	T4
9.3D6316LC3T	9.3	12.5	160L	17.2	975	9.29	750	215	280	89.5	88.7	88.4	0.84	0.80	0.71	0.696	165	10	22	42	125	53.9	T4
011D6316LC3T	11	15.0	160L	21.5	965	11.10	750	195	255	90.3	89.5	89.7	0.79	0.75	0.66	0.792	180	10	22	42	125	65.1	T4
015D6318LC3T	15	20.0	180L	27.9	975	14.98	750	220	290	91.2	90.4	90.2	0.82	0.78	0.69	1.2	245	10	22	42	125	90.1	T4
185D6320LC3T	18.5	25.0	200L	33.4	980	18.39	750	210	275	91.7	90.9	90.8	0.84	0.80	0.71	1.68	310	12	27	50	150	112	T5
022D6320LC3T	22	30.0	200L	40.5	980	21.87	750	220	285	92.2	91.4	91.3	0.82	0.78	0.69	1.92	345	12	27	50	150	128	T5
030D6322MC3T	30	40.0	225M	51.6	985	29.66	750	250	290	92.9	92.1	92.0	0.87	0.83	0.74	2.76	450	12	27	50	150	183	T5
037D6325MC3T	37	50.0	250M	65	985	36.59	750	220	285	93.3	92.5	92.2	0.85	0.81	0.72	4.32	590	12	27	50	150	222	T5
045D6328SC3T	45	60.0	280S	79.5	985	44.50	750	225	290	93.7	92.9	92.3	0.84	0.80	0.71	9.6	770	15	33	63	188	262	T5
055D6328MC3T	55	75.0	280M	96.8	985	54.39	750	215	280	94.1	93.3	92.8	0.84	0.80	0.71	11.88	840	15	33	63	188	315	T5
075D6331SC3T	75	100	315S	128	985	74.16	770	215	280	94.6	93.8	93.1	0.86	0.82	0.73	16.92	1030	15	33	63	188	405	T5
090D6331MC3T	90	120	315M	155	985	88.99	770	195	255	94.9	94.1	93.5	0.85	0.81	0.72	20.4	1185	15	33	63	188	475	T5
110D6331MC3T	110	150	315M	187	990	108.22	770	200	260	95.1	94.3	93.7	0.86	0.82	0.73	22.8	1385	15	33	63	188	595	T5
125D6331LC3T	125	170	315L	212	990	122.98	770	200	260	95.2	94.4	93.8	0.86	0.82	0.73	24	1415	15	33	63	188	674	T5
132D6331LC3T	132	180	315L	226	990	129.87	770	195	255	95.4	94.6	93.9	0.85	0.82	0.73	25.08	1425	15	33	63	188	780	T5
160D6335LC3T	160	215	355L	271	990	157.41	770	200	260	95.6	94.8	94.1	0.86	0.81	0.72	30	3065	15	33	63	188	920	T4
180D6335LC3T	180	240	355L	304	990	177.09	770	200	260	95.7	94.9	94.2	0.86	0.82	0.73	35	3165	15	33	63	188	1010	T4
200D6335LC3T	200	270	355L	342	990	196.77	770	200	260	95.8	95.0	94.3	0.85	0.81	0.72	37.5	3200	15	33	63	188	1185	T4
250D6335LC3T	250	340	355L	422	990	245.96	770	195	255	95.8	95.0	94.4	0.86	0.82	0.73	46.9	3250	15	33	63	188	1490	T4

Note:- 1) Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e terminal box.)

Driven by Commitment

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3, 8-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D83071C3T	0.12	0.16	71	0.6	645	0.18	550	180	220	50.7	49.9	46.6	0.52	0.48	0.39	0.00492	17	15	30	63	188	1.15	T6
.18D83080C3T	0.18	0.25	80	0.8	650	0.27	550	180	220	58.7	57.9	54.6	0.55	0.51	0.42	0.00528	26	15	30	63	188	1.75	T6
.25D83080C3T	0.25	0.35	80	1.0	660	0.37	550	180	225	64.1	63.3	60.0	0.57	0.53	0.44	0.00528	28	15	30	63	188	2.6	T6
.37D83080C3T	0.37	0.5	90S	1.2	670	0.54	600	180	225	69.3	68.5	65.2	0.60	0.56	0.47	0.01008	37	15	30	63	188	3.5	T6
.55D83080C3T	0.55	0.75	90L	1.7	680	0.79	650	180	220	73.0	72.2	68.9	0.62	0.58	0.49	0.0134	40	15	30	63	188	5.1	T6
.75D8390SC3T	0.75	1.0	100L	2.2	685	1.07	650	180	230	75.0	74.2	71.7	0.64	0.60	0.51	0.023	66	10	20	42	125	7.4	T6
1.1D8390LC3T	1.1	1.5	100L	3.0	685	1.56	650	190	235	77.7	76.9	74.4	0.66	0.62	0.53	0.0288	66	10	20	42	125	10.6	T6
1.5D8310LC3T	1.5	2.0	112M	3.8	690	2.12	650	180	225	79.7	78.9	76.4	0.69	0.65	0.56	0.046	73	10	20	42	125	14.2	T5
2.2D8311MC3T	2.2	3.0	132S	5.3	705	3.04	700	180	230	81.9	81.1	78.6	0.71	0.67	0.58	0.104	102	10	20	42	125	21.9	T5
3D8313MC3T	3.0	4.0	132M	7.4	705	4.14	700	180	230	83.5	82.7	80.2	0.68	0.64	0.55	0.150		10	20	42	125	25	
3.7D8313SC3T	3.7	5.0	160M	8.5	720	5.01	700	220	265	84.5	83.7	81.2	0.72	0.68	0.59	0.187	150	10	22	42	125	36.4	T4
4D8316MC3T	4.0	5.5	160M	9.9	720	5.41	700	190	240	84.8	84.0	81.5	0.66	0.62	0.53	0.200		10	22	42	125	40	
5.5D8313MC3T	5.5	7.5	160M	12.0	720	7.44	700	190	240	86.2	85.4	82.9	0.74	0.70	0.61	0.245	170	10	22	42	125	54	T4
7.5D8316MC3T	7.5	10.0	160L	16.4	720	10.15	700	190	245	87.3	86.5	84.0	0.73	0.69	0.60	0.619	180	10	22	42	125	73.4	T4
9.3D8316LC3T	9.3	12.5	180L	19.6	720	12.58	700	190	240	88.1	87.3	84.8	0.75	0.71	0.62	0.835	240	10	22	42	125	90.1	T4
011D8316LC3T	11	15.0	180L	23.0	725	14.78	700	200	245	88.6	87.8	85.3	0.75	0.71	0.62	0.95	260	10	22	42	125	105	T4
015D8318LC3T	15	20.0	200L	30.6	730	20.01	700	180	220	89.6	88.8	86.3	0.76	0.72	0.63	1.44	315	12	27	50	150	142	T5
185D8320LC3T	18.5	25.0	225S	37.6	730	24.68	700	190	230	90.1	89.3	87.9	0.76	0.72	0.63	2.016	370	12	27	50	150	175	T5
022D8320LC3T	22	30.0	225M	43.9	730	29.35	700	205	245	90.6	89.8	88.4	0.77	0.73	0.64	2.304	405	12	27	50	150	202	T5
030D8322MC3T	30	40.0	250M	57.9	730	40.03	700	210	250	91.3	90.5	89.1	0.79	0.75	0.66	3.312	1012	12	27	50	150	303	T5
037D8325MC3T	37	50.0	280S	71.0	730	49.37	700	190	235	91.8	91.0	89.6	0.79	0.75	0.66	5.184	1166	15	33	63	188	351	T5
045D8328SC3T	45	60.0	280M	85.9	735	59.63	700	200	245	92.2	91.4	90.0	0.79	0.75	0.66	11.52	1166	15	33	63	188	458	T5
055D8328MC3T	55	75.0	315S	103.4	735	72.88	700	210	240	92.5	91.7	90.3	0.80	0.76	0.67	14.26	1150	15	33	63	188	559	T5
075D8331SC3T	75	100	315M	138	735	99.39	700	200	240	93.1	92.3	90.9	0.81	0.77	0.68	20.3	1185	15	33	63	188	751	T5
090D8331MC3T	90	120	315L	170	735	119.27	700	180	220	93.4	92.6	91.2	0.79	0.75	0.66	24.48	1385	15	33	63	188	950	T5
110D8331MC3T	110	150	315L	202	735	145.77	700	180	225	93.7	92.9	91.8	0.81	0.77	0.68	27.36	1425	15	33	63	188	1115	T5
125D8331LC3T	125	170	315L	231	740	164.53	700	180	225	94.0	93.2	92.1	0.80	0.76	0.67	28.8	1520	15	33	63	188	1253	T5
132D8331LC3T	132	180	315L	240	740	173.74	700	200	240	94.3	93.5	92.4	0.81	0.77	0.68	30.1	1565	15	33	63	188	1328	T5
160D8335LC3T	160	215	355L	290	740	210.59	700	185	230	94.6	93.8	92.7	0.81	0.77	0.68	36	3200	15	33	63	188	1607	T4
180D8335LC3T	180	240	355L	331	740	236.92	700	185	230	94.6	93.8	92.7	0.80	0.76	0.67	42	3250	15	33	63	188	1803	T4

Note:- 1) Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Flame proof - DCCA

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e terminal box.)

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-66 ,altitude upto 1000 mtrs. above m.s.l; Duty S1,efficiency class IE3,conforms to IS 12615:2018, IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60079-7-2015.IS/IEC 60034-5:2000, IS/IEC 60079-31:2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0, IEC 60079-1:2014-06 Ed-7.0, IEC 60079-31:2013 Ed-2,Gas and Dust,IEC 60034-30-2008,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA,Temperature class as per table of IE2

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)						
355L2335KC3T	355	475	355L/K	586.0	2981	115.99	770	170	250	95.8	95.4	93.8	0.88	0.86	0.81	22.40	2040	15	33	Please Contact nearest Sales office	T4
375L2335KC3T	375	503	355L/K	619.0	2981	122.53	770	170	250	95.8	95.4	93.8	0.88	0.87	0.82	24.20	2100	15	33		T4
400L2335KC3T	400	536	355L/K	660.0	2981	130.69	770	170	250	95.8	95.4	93.8	0.88	0.87	0.82	26.00	2160	15	35		T4
450L2335KC3T	450	603	355L/K	734.0	2982	146.98	770	170	250	95.8	95.4	93.8	0.89	0.87	0.82	28.60	2280	15	35		T4
500L2335KC3T	500	670	355L/K	816.0	2983	163.26	770	170	250	95.8	95.5	94.0	0.89	0.87	0.82	31.30	2380	15	35		T4

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
400L4435KC3T	400	536	355L/K	677.0	1489	261.65	890	210	250	96.7	96.2	94.8	0.85	0.82	0.73	30.60	2160	15	33	63	188	Please Contact nearest Sales office	T4
450L4435KC3T	450	603	355L/K	762.0	1489	294.36	890	210	250	96.7	96.2	94.8	0.85	0.82	0.73	33.70	2270	15	33	63	188		T4
500L4435KC3T	500	670	355L/K	836.0	1489	327.07	890	210	240	96.7	96.2	94.8	0.86	0.83	0.74	36.80	2380	15	33	63	188		T4

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
315L6435KC3T	315	425	355L/K	534.0	992	309.28	890	200	250	96.6	96.1	94.6	0.85	0.83	0.78	56.90	1980	15	33	63	188	Please Contact nearest Sales office	T4
355L6435KC3T	355	475	355L/K	616.0	992	348.56	890	200	250	96.6	96.1	94.6	0.83	0.79	0.70	66.00	2280	15	33	63	188		T4
375L6435KC3T	375	503	355L/K	651.0	992	368.20	890	200	250	96.6	96.1	94.6	0.83	0.79	0.70	67.85	2345	15	33	63	188		T4
400L6435KC3T	400	536	355L/K	694.0	992	392.74	890	200	250	96.6	96.1	94.6	0.83	0.79	0.70	69.70	2410	15	33	63	188		t4

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
250L8435KC3T	250	335	355L/K	467.0	742	328.2	780	140	205	95.4	95.0	93.8	0.78	0.76	0.68	76.00	3285	15	33	63	188	Please Contact nearest Sales office	T4
315L8435KC3T	315	425	355L/K	581.0	742	413.5	780	170	210	95.4	95.0	93.8	0.79	0.74	0.68	80.00	4135	15	33	63	188		T4

Note : 1) Note : - Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.
2) Clause no. 4.2 of IEC 60079-0 : 2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or Group IIB equipment.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Flame proof

Ex - dI Motors with DGMS (Coal Mines) Certificate

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors with DGMS certificate suitable for 550 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3, 2-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12P23063C3T	0.12	0.25	63	0.30	2770	0.04	650	200	250	60.8	60.0	56.7	0.70	0.64	0.55	0.0009	13	10	20	42	125	0.045	T6
.18P23063C3T	0.18	0.25	63	0.40	2790	0.06	650	200	250	65.9	65.0	61.1	0.72	0.64	0.55	0.0009	13	10	20	42	125	0.095	T6
.25P23063C3T	0.25	0.33	63	0.52	2800	0.09	650	200	250	69.7	68.9	65.6	0.73	0.70	0.63	0.0015	14	10	20	42	125	0.11	T6
.37P23071C3T	0.37	0.50	71	0.71	2800	0.13	700	200	250	73.8	73.0	69.7	0.74	0.70	0.64	0.0018	15	10	20	42	125	0.18	T6
.55P23071C3T	0.55	0.75	71	0.99	2810	0.19	700	220	295	77.8	77.0	73.7	0.75	0.71	0.65	0.00252	15	10	20	42	125	0.22	T6
.75P23080C3T	0.75	1.0	80	1.23	2830	0.26	700	225	275	80.7	79.5	76.6	0.79	0.75	0.69	0.00432	19	10	20	42	125	0.35	T6
1.1P23080C3T	1.1	1.5	80	1.75	2845	0.38	700	225	275	82.7	81.5	79.4	0.80	0.79	0.72	0.00432	20	10	20	42	125	0.45	T6
1.5P2390SC3T	1.5	2.0	90S	2.31	2855	0.51	700	230	275	84.2	83.0	80.9	0.81	0.79	0.74	0.00876	26	10	20	42	125	0.55	T6
2.2P2390LC3T	2.2	3.0	90L	3.28	2865	0.75	770	225	275	85.9	84.5	82.6	0.82	0.81	0.73	0.01068	31	10	20	42	125	0.75	T6
3P2310LC3T	3.0	4.0	100L	4.41	2865	1.02	770	250	290	87.1	86.5	85.5	0.82	0.78	0.76	0.0200		8	16	33	100	0.8	
3.7P2310LC3T	3.7	5.0	100L	5.33	2865	1.26	770	250	290	87.8	86.5	84.5	0.83	0.80	0.74	0.0264	36	8	16	33	100	1.4	T6
4P2311MC3T	4.0	5.5	112M	5.81	2860	1.36	770	250	290	88.1	87.5	85.0	0.82	0.80	0.75	0.0305		8	16	33	100	1.5	
5.5P2313SC3T	5.5	7.5	132S	7.71	2860	1.87	770	225	265	89.2	88.5	85.9	0.84	0.80	0.73	0.0624	76	8	16	33	100	2.2	T5
7.5P2313SC3T	7.5	10.0	132S	10.28	2945	2.48	770	250	290	90.1	89.1	86.8	0.85	0.82	0.73	0.0816	84	8	16	33	100	3.1	T5
9.3P2316MC3T	9.3	12.5	160M	12.37	2945	3.08	770	250	290	90.7	90.1	87.6	0.87	0.83	0.74	0.096	95	10	22	42	125	4.2	T4
011P2316MC3T	11	15.0	160M	14.55	2940	3.64	770	250	290	91.2	90.5	87.9	0.87	0.84	0.75	0.204	144	10	22	42	125	5.4	T4
015P2316MC3T	15	20.0	160M	19.47	2945	4.96	770	250	295	91.9	91.2	88.6	0.88	0.85	0.76	0.264	165	10	22	42	125	7.9	T4
185P2316LC3T	18.5	25.0	160L	24.16	2945	6.12	770	250	290	92.4	91.7	89.4	0.87	0.85	0.76	0.336	173	10	22	42	125	9.2	T4
022P2318MC3T	22	30.0	180M	27.68	2950	7.26	770	225	250	92.7	92.0	90.3	0.90	0.86	0.77	0.504	210	10	22	42	125	11.1	T4
030P2320LC3T	30	40.0	200L	37.93	2955	9.89	770	250	280	93.3	92.5	91.5	0.89	0.86	0.77	0.768	309	12	27	50	150	16.8	T5
037P2320LC3T	37	50.0	200L	46.06	2955	12.20	770	220	260	93.7	93.2	91.9	0.90	0.87	0.78	1.02	339	12	27	50	150	20.1	T5
045P2322MC3T	45	60.0	225M	55.22	2965	14.78	770	220	265	94.0	93.8	92.3	0.91	0.87	0.78	1.092	458	12	27	50	150	26.5	T5
055P2325MC3T	55	75.0	250M	68.03	2970	18.04	770	200	240	94.3	93.5	92.7	0.90	0.87	0.78	2.16	719	12	27	50	150	30.5	T5
075P2328SC3T	75	100	280S	92.37	2970	24.60	770	195	255	94.7	94.0	93.1	0.90	0.86	0.77	7.956	850	15	33	63	188	38.9	T5
090P2328MC3T	90	120	280M	109	2975	29.47	770	190	240	95.0	94.3	93.3	0.91	0.88	0.79	9.816	897	15	33	63	188	42.45	T5
110P2331SC3T	110	150	315S	135	2980	35.95	770	195	250	95.2	94.4	93.8	0.90	0.88	0.79	13.86	1331	15	33	63	188	54.2	T5
125P2331MC3T	125	170	315M	151	2980	40.86	770	190	245	95.3	94.5	93.9	0.91	0.88	0.79	15.24	1416	15	33	63	188	61.8	T5
132P2331MC3T	132	180	315M	160	2980	43.14	770	180	235	95.4	94.6	94.1	0.91	0.88	0.79	16.668	1513	15	33	63	188	65.4	T5
160P2331LC3T	160	215	315L	195	2985	52.21	770	185	240	95.6	95.0	94.3	0.90	0.88	0.79	17.16	1634	15	33	63	188	82.9	T5
180P2331LC3T	180	240	315L	217	2985	58.73	770	185	240	95.7	94.9	94.4	0.91	0.88	0.79	19.152	1687	15	33	63	188	94.1	T5
200P2331LC3T	200	270	315L	241	2985	65.26	770	185	240	95.8	95.1	94.5	0.91	0.89	0.80	22.644	1804	15	33	63	188	103	T5
250P2335LC3T	250	335	355M	304	2985	81.57	770	185	240	95.8	95.1	95.5	0.90	0.88	0.79	28.08	2310	15	33	63	188	129	T4
315P2335LC3T	315	420	355L	388	2985	102.78	770	180	240	95.8	95.1	94.5	0.89	0.89	0.80	29.7	2640	15	33	63	188	165	T4

Note:- 1) Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

3) Coal mines 100L to 315 Frame, Except 112 Frame.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Flame proof

Ex - dI Motors with DGMS (Coal Mines) Certificate

Driven by Commitment

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors with DGMS certificate suitable for 550 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3, 4-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12P43063C3T	0.12	0.16	63	0.28	1360	0.09	600	200	250	64.8	64.0	60.7	0.69	0.64	0.55	0.0014	13	15	30	63	188	0.31	T6
.18P43063C3T	0.18	0.25	63	0.40	1360	0.13	600	200	250	69.9	69.1	65.8	0.68	0.64	0.55	0.0014	14	15	30	63	188	0.46	T6
.25P43071C3T	0.25	0.35	71	0.52	1365	0.18	600	200	260	73.5	72.7	69.4	0.69	0.66	0.57	0.0034	16	10	20	42	125	0.61	T6
.37P43071C3T	0.37	0.5	71	0.72	1365	0.26	650	245	295	77.3	76.5	73.2	0.70	0.67	0.58	0.00408	16	10	20	42	125	0.94	T6
.55P43080C3T	0.55	0.75	80	0.99	1410	0.38	650	245	300	80.8	79.8	76.7	0.72	0.70	0.62	0.00924	21	10	20	42	125	1.42	T6
.75P43080C3T	0.75	1.0	80	1.31	1420	0.51	650	235	295	82.5	81.7	80.8	0.73	0.71	0.63	0.01032	22	10	20	42	125	1.92	T6
1.1P4390SC3T	1.1	1.5	90S	1.81	1420	0.75	650	235	300	84.1	83.3	82.5	0.76	0.74	0.65	0.0168	26	10	20	42	125	2.8	T6
1.5P4390LC3T	1.5	2.0	90L	2.40	1435	1.02	650	240	295	85.3	84.0	83.1	0.77	0.76	0.67	0.018	31	10	20	42	125	3.8	T6
2.2P4310LC3T	2.2	3.0	100L	3.46	1440	1.49	750	245	285	86.7	85.9	84.5	0.77	0.75	0.66	0.0348	41	8	16	33	100	5.5	T6
3P4310LC3T	3.0	4.0	100L	4.72	1435	2.04	750	245	285	87.7	87.0	86.0	0.76	0.72	0.68	0.045		8	16	33	100	6.5	
3.7P4311MC3T	3.7	5.0	112M	5.42	1445	2.49	750	245	285	88.4	87.6	86.8	0.81	0.76	0.67	0.0684	57	8	16	33	100	8.5	T5
4P4311MC3T	4.0	5.5	112M	5.92	1450	2.69	750	245	285	88.6	87.5	86.5	0.80	0.78	0.72	0.095		8	16	33	100	9.5	
5.5P4313SC3T	5.5	7.5	132S	7.96	1450	3.69	750	235	295	89.6	88.8	87.9	0.81	0.77	0.68	0.1116	78	8	16	33	100	12.8	T5
7.5P4313MC3T	7.5	10.0	132M	10.62	1455	5.02	750	195	255	90.4	89.6	88.8	0.82	0.78	0.69	0.144	92	8	16	33	100	18.2	T5
9.3P4316MC3T	9.3	12.5	160M	13.11	1455	6.23	750	195	255	90.8	90.0	89.1	0.82	0.78	0.69	0.204	131	10	22	42	125	22.7	T4
011P4316MC3T	11	15.0	160M	15.22	1460	7.34	750	215	280	91.4	90.6	89.5	0.83	0.81	0.72	0.24	154	10	22	42	125	25.4	T4
015P4316LC3T	15	20.0	160L	20.35	1470	9.94	750	220	280	92.1	91.3	90.4	0.84	0.82	0.73	0.312	176	10	22	42	125	38.5	T4
185P4318MC3T	18.5	25.0	180M	24.97	1470	12.26	750	220	280	92.6	91.8	90.7	0.84	0.83	0.74	0.792	209	10	22	42	125	45.3	T4
022P4318LC3T	22	30.0	180L	29.21	1470	14.58	750	215	275	93.0	92.2	91.2	0.85	0.81	0.72	1.008	254	10	22	42	125	52	T4
030P4320LC3T	30	40.0	200L	39.12	1475	19.81	750	235	285	93.6	92.8	91.5	0.86	0.81	0.72	1.44	295	12	27	50	150	72	T5
037P4322SC3T	37	50.0	225S	49.24	1475	24.43	750	225	270	93.9	93.1	92.1	0.84	0.82	0.73	1.8	319	12	27	50	150	91	T5
045P4322MC3T	45	60.0	225M	59.70	1480	29.61	750	225	290	94.2	93.4	92.4	0.84	0.82	0.73	2.04	405	12	27	50	150	112	T5
055P4325MC3T	55	75.0	250M	70.97	1480	36.20	750	215	280	94.6	93.8	92.5	0.86	0.83	0.74	3.84	756	12	27	50	150	135	T5
075P4328SC3T	75	100	280S	96.36	1485	49.19	770	215	280	95.0	94.2	92.7	0.86	0.83	0.74	8.64	842	15	33	63	188	185	T5
090P4328MC3T	90	120	280M	114	1485	59.03	770	220	280	95.2	94.4	93.2	0.87	0.84	0.75	9.96	906	15	33	63	188	223	T5
110P4331SC3T	110	150	315S	142	1485	72.15	770	200	260	95.4	94.6	93.4	0.85	0.83	0.74	13.92	1392	15	33	63	188	267	T5
125P4331MC3T	125	170	315M	160	1485	81.99	770	195	250	95.5	94.7	93.5	0.86	0.83	0.74	15.12	1452	15	33	63	188	304	T5
132P4331MC3T	132	180	315M	169	1485	86.58	770	195	250	95.6	94.8	93.6	0.86	0.84	0.75	16.8	1482	15	33	63	188	329	T5
160P4331LC3T	160	215	315L	206	1485	104.94	770	220	275	95.8	95.0	93.8	0.85	0.85	0.76	27.9	1694	15	33	63	188	391	T5
180P4331LC3T	180	240	315L	229	1485	118.06	770	220	275	95.9	95.1	93.9	0.86	0.85	0.76	28.8	1760	15	33	63	188	421	T5
200P4331LC3T	200	270	315L	251	1485	131.18	770	200	255	96.0	95.2	94.1	0.87	0.85	0.76	30.7	1815	15	33	63	188	483	T5
250P4335MC3T	250	340	355M	314	1485	163.97	770	195	250	96.0	95.2	94.3	0.87	0.85	0.76	38.1	2255	15	33	63	188	584	T4
315P4335LC3T	315	430	355L	391	1485	206.61	770	195	245	96.0	95.2	94.4	0.88	0.86	0.77	48.3	2420	15	33	63	188	741	T4

Note:- 1) Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

3) Coal mines 100L to 315 Frame, Except 112 Frame.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Flame proof

Ex - dI Motors with DGMS (Coal Mines) Certificate

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors with DGMS certificate suitable for 550 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3, 6-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12P63063C3T	0.12	0.16	63	0.40	880	0.13	650	190	230	57.7	56.9	53.6	0.55	0.51	0.42	0.0041	13	10	20	42	125	0.71	T6
.18P63071C3T	0.18	0.25	71	0.51	890	0.20	650	190	230	63.9	63.1	59.8	0.58	0.54	0.45	0.0044	13	10	20	42	125	1.1	T6
.25P63071C3T	0.25	0.35	71	0.64	900	0.27	650	190	230	68.6	67.8	64.5	0.60	0.56	0.47	0.0044	14	10	20	42	125	1.5	T6
.37P63080C3T	0.37	0.5	80	0.81	920	0.39	650	190	230	73.5	72.7	70.2	0.65	0.61	0.52	0.0084	15	10	20	42	125	2.2	T6
.55P63080C3T	0.55	0.75	80	1.12	930	0.58	650	195	250	77.2	76.4	73.9	0.67	0.63	0.54	0.01116	22	10	20	42	125	3.1	T6
.75P6390SC3T	0.75	1.0	90S	1.47	930	0.79	650	195	250	78.9	78.1	75.6	0.68	0.64	0.55	0.0192	22	10	20	42	125	4.2	T6
1.1P6390LC3T	1.1	1.5	90L	2.04	920	1.16	650	200	260	81.0	80.2	78.9	0.70	0.66	0.57	0.024	34	10	20	42	125	6.5	T6
1.5P6310LC3T	1.5	2.0	100L	2.69	925	1.58	650	200	250	82.5	81.7	80.1	0.71	0.67	0.58	0.0384	46	10	20	42	125	9.1	T6
2.2P6311MC3T	2.2	3.0	112M	3.80	950	2.26	750	190	240	84.3	83.5	82.8	0.72	0.68	0.59	0.0864	62	10	20	42	125	12.5	T5
3P6313SC3T	3.0	4.0	132S	5.11	960	3.04	750	190	240	85.6	84.8	83.0	0.72	0.68	0.59	0.091		10	20	42	125	14	
3.7P6313SC3T	3.7	5.0	132S	6.07	950	3.79	750	195	245	86.5	85.7	85.0	0.74	0.70	0.61	0.156	83	10	20	42	125	22.5	T5
4P6313MC3T	4.0	5.5	132M	6.72	950	4.10	750	195	245	86.8	86.0	85.0	0.72	0.68	0.59	0.185		10	20	42	125	24	
5.5P6313MC3T	5.5	7.5	132M	8.75	960	5.58	750	190	240	88.0	87.2	86.8	0.75	0.71	0.62	0.204	88	10	20	42	125	32.1	T5
7.5P6316MC3T	7.5	10.0	160M	11.63	965	7.57	750	215	280	89.1	88.3	87.6	0.76	0.72	0.63	0.516	133	10	22	42	125	45.3	T4
9.3P6316LC3T	9.3	12.5	160L	14.10	965	9.39	750	215	280	89.9	89.1	88.4	0.77	0.73	0.64	0.696	161	10	22	42	125	53.9	T4
011P6316LC3T	11	15.0	160L	16.19	965	11.10	750	195	255	90.3	89.5	89.7	0.79	0.75	0.66	0.792	174	10	22	42	125	65.1	T4
015P6318LC3T	15	20.0	180L	21.06	975	14.98	750	220	290	91.2	90.4	90.2	0.82	0.78	0.69	1.2	231	10	22	42	125	90.1	T4
185P6320LC3T	18.5	25.0	200L	26.15	980	18.39	750	210	275	91.7	90.9	90.8	0.81	0.77	0.68	1.68	304	12	27	50	150	112	T5
022P6320LC3T	22	30.0	200L	30.55	980	21.87	750	220	285	92.2	91.4	91.3	0.82	0.78	0.69	1.92	308	12	27	50	150	128	T5
030P6322MC3T	30	40.0	225M	40.36	980	29.82	750	250	290	92.9	92.1	92.0	0.84	0.80	0.71	2.76	450	12	27	50	150	183	T5
037P6325MC3T	37	50.0	250M	49.56	985	36.59	750	220	285	93.3	92.5	92.2	0.84	0.80	0.71	4.32	757	12	27	50	150	222	T5
045P6328SC3T	45	60.0	280S	59.31	985	44.50	750	225	290	93.7	92.9	92.3	0.85	0.81	0.72	9.6	871	15	33	63	188	262	T5
055P6328MC3T	55	75.0	280M	73.04	985	54.39	750	215	280	94.1	93.3	92.8	0.84	0.80	0.71	11.88	975	15	33	63	188	315	T5
075P6331SC3T	75	100	315S	96.77	985	74.16	770	215	280	94.6	93.8	93.1	0.86	0.82	0.73	16.92	1192	15	33	63	188	405	T5
090P6331MC3T	90	120	315M	117.1	985	88.99	770	195	255	94.9	94.1	93.5	0.85	0.81	0.72	20.4	1377	15	33	63	188	475	T5
110P6331MC3T	110	150	315M	141.2	985	108.77	770	200	260	95.1	94.3	93.7	0.86	0.82	0.73	22.8	1447	15	33	63	188	595	T5
125P6331LC3T	125	170	315L	160.3	990	122.98	770	200	260	95.2	94.4	93.8	0.86	0.82	0.73	24	1694	15	33	63	188	674	T5
132P6331LC3T	132	180	315L	170.9	990	129.87	770	195	255	95.4	94.6	93.9	0.85	0.82	0.73	25.08	1716	15	33	63	188	780	T5
160P6335LC3T	160	215	355L	204.3	990	157.41	770	200	260	95.6	94.8	94.1	0.86	0.81	0.72	30	2541	15	33	63	188	920	T4
180P6335LC3T	180	240	355L	229.6	990	177.09	770	200	260	95.7	94.9	94.2	0.86	0.82	0.73	35	2668	15	33	63	188	1010	T4
200P6335LC3T	200	270	355L	257.8	990	196.77	770	200	260	95.8	95.0	94.3	0.85	0.81	0.72	37.5	2801	15	33	63	188	1185	T4
250P6335LC3T	250	340	355L	318.5	990	245.96	770	195	255	95.8	95.0	94.4	0.86	0.82	0.73	46.9	2942	15	33	63	188	1490	T4

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2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

3) Coal mines 100L to 315 Frame, Except 112 Frame.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Flame proof

Ex - dI Motors with DGMS (Coal Mines) Certificate

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors with DGMS certificate suitable for 550 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3, 8-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
0.12P83071C3T	0.12	0.16	71	0.5	645	0.18	550	180	220	50.7	49.9	46.6	0.52	0.48	0.39	0.00492	13	15	30	63	188	1.15	T6
0.18P83080C3T	0.18	0.25	80	0.6	650	0.27	550	180	220	58.7	57.9	54.6	0.55	0.51	0.42	0.00528	15	15	30	63	188	1.75	T6
0.25P83080C3T	0.25	0.35	80	0.7	660	0.37	550	180	225	64.1	63.3	60.0	0.57	0.53	0.44	0.00528	20	15	30	63	188	2.6	T6
0.37P8390SC3R	0.37	0.5	90S	0.9	670	0.54	600	180	225	69.3	68.5	65.2	0.60	0.56	0.47	0.01008	22	15	30	63	188	3.5	T6
0.55P8390LC3R	0.55	0.75	90L	1.3	680	0.79	650	180	220	73.0	72.2	68.9	0.62	0.58	0.49	0.0134	34	15	30	63	188	5.1	T6
0.75P8310LC3R	0.75	1.0	100L	1.6	685	1.07	650	180	230	75.0	74.2	71.7	0.64	0.60	0.51	0.023	46	10	20	42	125	7.4	T6
1.1P8310LC3R	1.1	1.5	100L	2.3	685	1.56	650	190	235	77.7	76.9	74.4	0.66	0.62	0.53	0.0288	51	10	20	42	125	10.6	T6
1.5P8311MC3R	1.5	2.0	112M	2.9	690	2.12	650	180	225	79.7	78.9	76.4	0.69	0.65	0.56	0.046	62	10	20	42	125	14.2	T5
2.2P8313SC3R	2.2	3.0	132S	4.0	705	3.04	700	180	230	81.9	81.1	78.6	0.71	0.67	0.58	0.104	100	10	20	42	125	21.9	T5
3P8313MC3R	3.0	4.0	132M	5.5	705	4.14	700	180	230	83.5	82.7	80.2	0.68	0.64	0.55	0.150		10	20	42	125	25	
3.7P8316MC3R	3.7	5.0	160M	6.4	720	5.01	700	220	265	84.5	83.7	81.2	0.72	0.68	0.59	0.187	106	10	22	42	125	36.4	T4
4P8316MC3R	4.0	5.5	160M	7.5	720	5.41	700	190	240	84.8	84.0	81.5	0.66	0.62	0.53	0.200		10	22	42	125	40	
5.5P8316MC3R	5.5	7.5	160M	9.1	720	7.44	700	190	240	86.2	85.4	82.9	0.74	0.70	0.61	0.245	160	10	22	42	125	54	T4
7.5P8316LC3R	7.5	10.0	160L	12.4	720	10.15	700	190	245	87.3	86.5	84.0	0.73	0.69	0.60	0.619	193	10	22	42	125	73.4	T4
9.3P8318LC3R	9.3	12.5	180L	14.8	720	12.58	700	190	240	88.1	87.3	84.8	0.75	0.71	0.62	0.835	209	10	22	42	125	90.1	T4
011P8318LC3R	11	15.0	180L	17.4	725	14.78	700	200	245	88.6	87.8	85.3	0.75	0.71	0.62	0.95	277	10	22	42	125	105	T4
015P8320LC3T	15	20.0	200L	23.1	730	20.01	700	180	220	89.6	88.8	86.3	0.76	0.72	0.63	1.44	365	12	27	50	150	142	T5
185P8322SC3T	18.5	25.0	225S	28.4	730	24.68	700	190	230	90.1	89.3	87.9	0.76	0.72	0.63	2.016	370	12	27	50	150	175	T5
022P8322MC3T	22	30.0	225M	33.1	730	29.35	700	205	245	90.6	89.8	88.4	0.77	0.73	0.64	2.304	540	12	27	50	150	202	T5
030P8325MC3T	30	40.0	250M	43.7	730	40.03	700	210	250	91.3	90.5	89.1	0.79	0.75	0.66	3.312	908	12	27	50	150	303	T5
037P8328SC3T	37	50.0	280S	53.6	730	49.37	700	190	235	91.8	91.0	89.6	0.79	0.75	0.66	5.184	1045	15	33	63	188	351	T5
045P8328MC3T	45	60.0	280M	64.9	735	59.63	700	200	245	92.2	91.4	90.0	0.79	0.75	0.66	11.52	1170	15	33	63	188	458	T5
055P8331SC3T	55	75.0	315S	78.0	735	72.88	700	210	240	92.5	91.7	90.3	0.80	0.76	0.67	14.26	1430	15	33	63	188	559	T5
075P8331MC3T	75	100	315M	104.4	735	99.39	700	200	240	93.1	92.3	90.9	0.81	0.77	0.68	20.3	1652	15	33	63	188	751	T5
090P8331LC3T	90	120	315L	128.0	735	119.27	700	180	220	93.4	92.6	91.2	0.79	0.75	0.66	24.48	1736	15	33	63	188	950	T5
110P8331LC3T	110	150	315L	152.1	735	145.77	700	180	225	93.7	92.9	91.8	0.81	0.77	0.68	27.36	2033	15	33	63	188	1115	T5
125P8331LC3T	125	170	315L	174.5	740	164.53	700	180	225	94.0	93.2	92.1	0.80	0.76	0.67	28.8	2059	15	33	63	188	1253	T5
135P8331LC3T	132	180	315L	181.4	740	173.74	700	200	240	94.3	93.5	92.4	0.81	0.77	0.68	30.1	3049	15	33	63	188	1328	T5
160P8335LC3T	160	215	355L	219.2	740	210.59	700	185	230	94.6	93.8	92.7	0.81	0.77	0.68	36	3202	15	33	63	188	1607	T4
180P8335LC3T	180	240	355L	249.7	740	236.92	700	185	230	94.6	93.8	92.7	0.80	0.76	0.67	42	3361	15	33	63	188	1803	T4

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2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

3) Coal mines 100L to 315 Frame, Except 112 Frame.

Premium Efficiency "Supremo Series" TEFC SC Brake Motors - IE3 Flame proof,

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e terminal box)

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE3, conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table

Ordering code	kW	HP	Frame	
2 Pole				
.12A23063C3T	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
.18A23063C3T	0.18	0.25	63	
.25A23063C3T	0.25	0.33	63	
.37A23071C3T	0.37	0.50	71	
.55A23071C3T	0.55	0.75	71	
.75A23080C3T	0.75	1.0	80	
1.1A23080C3T	1.1	1.5	80	
1.5A2390SC3T	1.5	2.0	90S	
2.2A2390LC3T	2.2	3.0	90L	
3.7A2310LC3T	3.7	5.0	100L	
5.5A2313SC3T	5.5	7.5	132S	
7.5A2313SC3T	7.5	10	132S	
9.3A2316MC3T	9.3	12.5	160M	
011A2316MC3T	11	15.0	160M	
015A2316MC3T	15	20	160M	
185A2316LC3T	18.5	25	160L	
022A2318MC3T	22	30	180M	

Ordering code	kW	HP	Frame	
4 Pole				
.12A43063C3T	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
.18A43063C3T	0.18	0.25	63	
.25A43071C3T	0.25	0.33	71	
.37A43071C3T	0.37	0.50	71	
.55A43080C3T	0.55	0.75	80	
.75A43080C3T	0.75	1.0	80	
1.1A4390SC3T	1.1	1.5	90S	
1.5A4390LC3T	1.5	2.0	90L	
2.2A4310LC3T	2.2	3.0	100L	
3.7A4311MC3T	3.7	5.0	112M	
5.5A4313SC3T	5.5	7.5	132S	
7.5A4313MC3T	7.5	10	132M	
9.3A4316MC3T	9.3	12.5	160M	
011A4316MC3T	11	15	160M	
015A4316LC3T	15	20	160L	
185A4318MC3T	18.5	25	180M	
022A4318LC3T	22	30	180L	

Ordering code	kW	HP	Frame	
6 Pole				
.12A63063C3T	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
.18A63071C3T	0.18	0.25	71	
.25T62071C3R	0.25	0.33	71	
.37T62080C3R	0.37	0.50	80	
.55T62080C3R	0.55	0.75	80	
.75T6290SC3R	0.75	1.0	90S	
1.1T6290LC3R	1.1	1.5	90L	
1.5T6210LC3R	1.5	2.0	100L	
2.2T6211MC3R	2.2	3.0	112M	
3.7T6213SC3R	3.7	5.0	132S	
5.5T6213MC3R	5.5	7.5	132M	
7.5T6216MC3R	7.5	10	160M	
9.3T6216LC3R	9.3	12.5	160L	
011T6216LC3R	11	15	160L	
015T6218LC3R	15	20	180L	

Ordering code	kW	HP	Frame	
8 Pole				
0.12D83071C3T	0.12	0.16	71	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
0.18D83080C3T	0.18	0.25	80	
0.25D83080C3T	0.25	0.33	80	
0.37D8390SC3T	0.37	0.50	90S	
0.55D8390LC3T	0.55	0.75	90L	
0.75D8310LC3T	0.75	1.00	100L	
1.1D8310LC3T	1.1	1.5	100L	
1.5D8311MC3T	1.5	2.0	112M	
2.2D8313SC3T	2.2	3.0	132S	
3.7D8316MC3T	3.7	5.0	160M	
5.5D8316MC3T	5.5	7.5	160M	
7.5D8316LC3T	7.5	10	160L	
9.3D8318LC3T	9.3	12.5	180L	
011D8318LC3T	11	15	180L	

Note : - Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances.

Super Premium Efficiency "Ultimo Series" TEFC SC Motors - IE4 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e Terminal Box.)

Lhp MOTORS DRIVES Driven by Commitment

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, 2-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D24063C3T	0.12	0.16	63	0.37	2770	0.04	730	200	250	66.5	65.7	62.4	0.68	0.64	0.55	0.00094	**	10	20	42	125	0.065	T6
.18D2463C3T	0.18	0.25	63	0.52	2790	0.06	730	200	250	70.8	70.0	66.7	0.68	0.64	0.55	0.00099	**	10	20	42	125	0.095	T6
.25D24063C3T	0.25	0.35	63	0.62	2800	0.09	730	200	250	74.3	73.5	70.2	0.76	0.72	0.63	0.00165	**	10	20	42	125	0.110	T6
.37D24071C3T	0.37	0.50	71	0.84	2800	0.13	780	200	250	78.1	77.3	74.0	0.78	0.74	0.65	0.00198	**	10	20	42	125	0.180	T6
.55D24071C3T	0.55	0.75	71	1.2	2810	0.19	780	220	265	81.5	80.7	78.1	0.78	0.74	0.65	0.00277	**	10	20	42	125	0.220	T6
.75D24080C3T	0.75	1.0	80	1.5	2830	0.26	780	225	265	83.5	82.7	80.1	0.84	0.80	0.71	0.00475	**	10	20	42	125	0.350	T6
1.1D24080C3T	1.1	1.5	80	2.1	2845	0.38	780	225	275	85.2	84.4	81.8	0.85	0.81	0.72	0.00682	**	10	20	42	125	0.450	T6
1.5D2490SC3T	1.5	2.0	90S	2.8	2855	0.51	780	220	260	86.5	85.7	83.1	0.87	0.83	0.74	0.00964	**	10	20	42	125	0.550	T6
2.2D2490LC3T	2.2	3.0	90L	4.0	2865	0.75	890	235	275	88.0	87.2	84.6	0.86	0.82	0.73	0.01175	**	10	20	42	125	0.8	T6
3D2410LC3T	3.0	4.0	100L	5.6	2865	1.02	890	250	275	89.1	88.3	85.7	0.84	0.80	0.71	0.02400	**	8	16	33	100	1.0	
3.7D2410LC3T	3.7	5.0	100L	6.7	2865	1.26	890	250	290	89.7	88.9	86.3	0.86	0.82	0.73	0.02904	**	8	16	33	100	1.4	T6
4D2411MC3T	4.0	5.5	112M	7.4	2870	1.36	890	250	290	90.0	89.2	86.6	0.84	0.80	0.71	0.04500	**	8	16	33	100	1.8	
5.5D2413SC3T	5.5	7.5	132S	9.8	2860	1.87	890	210	250	90.9	90.1	87.5	0.86	0.82	0.73	0.06864	**	8	16	33	100	2.2	T5
7.5D2413SC3T	7.5	10.0	132S	13.2	2945	2.48	890	250	290	91.7	90.9	88.3	0.86	0.82	0.73	0.08976	**	8	16	33	100	3.1	T5
9.3D2416MC3T	9.3	12.5	160M	16.1	2945	3.08	890	250	290	92.2	91.4	88.8	0.87	0.83	0.74	0.10560	**	10	22	42	125	4.2	T4
011D2416MC3T	11	15.0	160M	18.8	2940	3.64	890	250	290	92.6	91.8	89.2	0.88	0.84	0.75	0.22440	**	10	22	42	125	5.4	T4
015D2416MC3T	15	20.0	160M	25.1	2945	4.96	890	250	295	93.3	92.5	90.7	0.89	0.85	0.76	0.29040	**	10	22	42	125	7.9	T4
185D2416LC3T	18.5	25.0	160L	30.9	2945	6.12	890	250	290	93.7	92.9	91.1	0.89	0.85	0.76	0.36960	**	10	22	42	125	9.2	T4
022D2418MC3T	22	30.0	180M	36.2	2950	7.26	890	175	225	94.0	93.2	91.4	0.90	0.86	0.77	0.55440	**	10	22	42	125	11.1	T4
030D2420LC3T	30	40.0	200L	49.1	2955	9.89	890	240	280	94.5	93.7	91.9	0.90	0.86	0.77	0.84480	**	12	27	50	150	16.8	T5
037D2420LC3T	37	50.0	200L	59.7	2955	12.20	890	210	250	94.8	94.0	92.2	0.91	0.87	0.78	1.12200	**	12	27	50	150	20.1	T5
045D2422MC3T	45	60.0	225M	72.4	2965	14.78	890	210	255	95.0	94.2	92.4	0.91	0.87	0.78	1.20120	**	12	27	50	150	26.5	T5
055D2425MC3T	55	75.0	250M	88.2	2970	18.04	890	200	245	95.3	94.5	92.7	0.91	0.87	0.78	2.37600	**	12	27	50	150	30.5	T5
075D2428SC3T	75	100	280S	121	2970	24.60	890	195	255	95.6	94.8	93.0	0.90	0.86	0.77	8.75160	**	15	33	63	188	38.9	T5
090D2428MC3T	90	120	280M	144	2975	29.47	890	190	240	95.8	95.0	93.2	0.91	0.87	0.78	10.80	**	15	33	63	188	42.5	T5
110D2431SC3T	110	150	315S	173	2980	35.95	890	195	250	96.0	95.2	94.1	0.92	0.88	0.79	15.25	**	15	33	63	188	54.2	T5
125D2431MC3T	125	170	315M	199	2980	40.86	890	190	245	96.2	95.4	94.3	0.91	0.87	0.78	16.76	**	15	33	63	188	61.8	T5
132D2431MC3T	132	180	315M	207	2980	43.14	890	180	235	96.3	95.5	94.4	0.92	0.88	0.79	18.33	**	15	33	63	188	65.4	T5
160D2431LC3T	160	215	315L	251	2985	52.21	890	185	240	96.3	95.5	94.4	0.92	0.88	0.79	18.88	**	15	33	63	188	82.9	T5
180D2431LC3T	180	240	315L	285	2985	58.73	890	185	240	96.5	95.7	94.6	0.91	0.87	0.78	21.07	**	15	33	63	188	94.1	T5
200D2431LC3T	200	270	315L	313	2985	65.26	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	24.91	**	15	33	63	188	103	T5
250D2435LC3T	250	340	355M	392	2985	81.57	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	30.89	**	15	33	63	188	129	T4
315D2435LC3T	315	430	355L	494	2985	102.78	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	32.57	**	15	33	63	188	165	T4

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Super Premium Efficiency "Ultimo Series" TEFC SC Motors - IE4 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e Terminal Box.)

Driven by Commitment

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, 4-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D44063C3T	0.12	0.16	63	0.35	1360	0.09	650	200	245	69.8	69.0	65.7	0.68	0.64	0.55	0.0018	**	15	30	63	188	0.30	T6
.18D44063C3T	0.18	0.25	63	0.49	1360	0.13	650	200	250	74.7	73.9	70.6	0.68	0.64	0.55	0.0020	**	15	30	63	188	0.46	T6
.25D44071C3T	0.25	0.35	71	0.64	1365	0.18	650	200	245	77.9	77.1	73.8	0.70	0.66	0.57	0.0037	**	10	20	42	125	0.61	T6
.37D44071C3T	0.37	0.5	71	0.89	1365	0.26	700	245	295	81.1	80.3	77.0	0.71	0.67	0.58	0.0045	**	10	20	42	125	0.94	T6
.55D44080C3T	0.55	0.75	80	1.2	1410	0.38	700	245	300	83.9	83.1	80.6	0.75	0.71	0.62	0.0102	**	10	20	42	125	1.42	T6
.75D44080C3T	0.75	1.0	80	1.6	1420	0.51	700	235	295	85.7	84.9	82.4	0.76	0.72	0.63	0.0114	**	10	20	42	125	1.92	T6
1.1D4490SC3T	1.1	1.5	90S	2.2	1420	0.75	700	235	300	87.2	86.4	83.9	0.78	0.74	0.65	0.0185	**	10	20	42	125	2.80	T6
1.5D4490LC3T	1.5	2.0	90L	3.0	1435	1.02	700	240	295	88.2	87.4	84.9	0.80	0.76	0.67	0.0198	**	10	20	42	125	3.80	T6
2.2D4410LC3T	2.2	3.0	100L	4.2	1440	1.49	830	220	260	89.5	88.7	86.2	0.82	0.78	0.69	0.0383	**	8	16	33	100	5.50	T6
3D4411MC3T	3.0	4.0	112M	5.8	1440	2.03	830	230	270	90.4	89.6	87.1	0.80	0.76	0.67	0.0520	**	8	16	33	100	6.5	
3.7D4411MC3T	3.7	5.0	112M	7.1	1445	2.49	830	235	280	90.9	90.1	87.6	0.80	0.76	0.67	0.0752	**	8	16	33	100	8.50	T5
4D4411MC3T	4.0	5.5	112M	7.6	1450	2.69	830	235	295	91.1	90.3	87.8	0.80	0.76	0.67	0.1000	**	8	16	33	100	10.0	
5.5D4413SC3T	5.5	7.5	132S	10.3	1450	3.69	830	235	295	91.9	91.1	88.6	0.81	0.77	0.68	0.1228	**	8	16	33	100	12.80	T5
7.5D4413MC3T	7.5	10.0	132M	13.7	1455	5.02	830	195	255	92.6	91.8	89.3	0.82	0.78	0.69	0.1584	**	8	16	33	100	18.20	T5
9.3D4416MC3T	9.3	12.5	160M	17.0	1455	6.23	830	195	255	92.9	92.1	89.6	0.82	0.78	0.69	0.224	**	10	22	42	125	22.7	T4
011D4416MC3T	11	15.0	160M	19.3	1460	7.34	830	215	280	93.3	92.5	90.7	0.85	0.81	0.72	0.264	**	10	22	42	125	25.4	T4
015D4416LC3T	15	20.0	160L	25.8	1470	9.94	830	220	265	93.9	93.1	91.3	0.86	0.82	0.73	0.343	**	10	22	42	125	38.5	T4
185D4418MC3T	18.5	25.0	180M	31.4	1470	12.26	830	220	265	94.2	93.4	91.6	0.87	0.83	0.74	0.871	**	10	22	42	125	45.3	T4
022D4418LC3T	22	30.0	180L	38.1	1470	14.58	830	215	260	94.5	93.7	91.9	0.85	0.81	0.72	1.109	**	10	22	42	125	52	T4
030D4420LC3T	30	40.0	200L	51.7	1475	19.81	830	235	275	94.9	94.1	92.3	0.85	0.81	0.72	1.584	**	12	27	50	150	72	T5
037D4422SC3T	37	50.0	225S	62.9	1475	24.43	830	225	280	95.2	94.4	92.6	0.86	0.82	0.73	1.980	**	12	27	50	150	91	T5
045D4422MC3T	45	60.0	225M	76.3	1480	29.61	830	225	280	95.4	94.6	92.8	0.86	0.82	0.73	2.244	**	12	27	50	150	112	T5
055D4425MC3T	55	75.0	250M	91.9	1480	36.20	830	215	255	95.7	94.9	93.1	0.87	0.83	0.74	4.22	**	12	27	50	150	135	T5
075D4428SC3T	75	100	280S	125	1485	49.19	890	215	280	96.0	95.2	93.4	0.87	0.83	0.74	9.50	**	15	33	63	188	185	T5
090D4428MC3T	90	120	280M	148	1485	59.03	890	220	280	96.1	95.3	93.5	0.88	0.84	0.75	10.96	**	15	33	63	188	223	T5
110D4431SC3T	110	150	315S	183	1485	72.15	890	200	245	96.3	95.5	93.7	0.87	0.83	0.74	15.31	**	15	33	63	188	267	T5
125D4431MC3T	125	170	315M	207	1485	81.99	890	195	255	96.4	95.6	94.5	0.87	0.83	0.74	16.63	**	15	33	63	188	304	T5
132D4431MC3T	132	180	315M	216	1485	86.58	890	195	250	96.6	95.8	94.7	0.88	0.84	0.75	18.48	**	15	33	63	188	329	T5
160D4431LC3T	160	215	315L	259	1485	104.94	890	220	280	96.6	95.8	94.7	0.89	0.85	0.76	30.69	**	15	33	63	188	391	T5
180D4431LC3T	180	240	315L	291	1485	118.06	890	220	275	96.7	95.9	94.8	0.89	0.85	0.76	31.68	**	15	33	63	188	421	T5
200D4431LC3T	200	270	315L	323	1485	131.18	890	200	260	96.7	95.9	94.8	0.89	0.85	0.76	33.77	**	15	33	63	188	483	T5
250D4435MC3T	250	340	355M	404	1485	163.97	890	195	250	96.7	95.9	94.8	0.89	0.85	0.76	41.91		15	33	63	188	584	T4
315D4435LC3T	315	430	355L	504	1485	206.61	890	195	245	96.7	95.9	94.8	0.90	0.86	0.77	53.13		15	33	63	188	741	T4

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Super Premium Efficiency "Ultimo Series" TEFC SC Motors - IE4 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e Terminal Box.)

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, 6-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D64063C3T	0.12	0.16	63	0.43	880	0.13	700	190	230	64.9	64.1	60.8	0.60	0.56	0.47	0.00451	**	10	20	42	125	0.71	T6
.18D64071C3T	0.18	0.25	71	0.58	890	0.20	700	190	230	70.1	69.3	66.0	0.62	0.58	0.49	0.00484	**	10	20	42	125	1.10	T6
.25D64071C3T	0.25	0.35	71	0.75	900	0.27	700	190	230	74.1	73.3	70.0	0.63	0.59	0.50	0.00484	**	10	20	42	125	1.50	T6
.37D64080C3T	0.37	0.5	80	1.02	920	0.39	730	190	230	78.0	77.2	73.9	0.65	0.61	0.52	0.00924	**	10	20	42	125	2.20	T6
.55D84080C3T	0.55	0.75	80	1.4	930	0.58	730	195	250	80.9	80.1	77.6	0.67	0.63	0.54	0.012276	**	10	20	42	125	3.10	T6
.75D8490SC3T	0.75	1.0	90S	1.8	930	0.79	730	195	250	82.7	81.9	79.4	0.70	0.66	0.57	0.02112	**	10	20	42	125	4.20	T6
1.1D8490LC3T	1.1	1.5	90L	2.6	920	1.16	730	200	260	84.5	83.7	81.2	0.70	0.66	0.57	0.0264	**	10	20	42	125	6.50	T6
1.5D8410LC3T	1.5	2.0	100L	3.4	925	1.58	730	200	260	85.9	85.1	82.6	0.71	0.67	0.58	0.04224	**	10	20	42	125	9.10	T6
2.2D8411MC3T	2.2	3.0	112M	4.9	950	2.26	830	190	240	87.4	86.6	84.1	0.71	0.67	0.58	0.09504	**	10	20	42	125	13	T5
3D8413SC3T	3	4.0	132S	6.7	950	3.08	830	190	240	88.6	87.8	85.3	0.70	0.66	0.57	0.12	**	10	20	42	125	16	
3.7D8413SC3T	3.7	5.0	132S	8.0	950	3.79	830	195	245	89.3	88.5	86.0	0.72	0.68	0.59	0.1716	**	10	20	42	125	23	T5
4D8413MC3T	4	5.5	132M	8.6	950	4.10	830	190	240	89.5	88.7	86.2	0.72	0.68	0.59	0.19	**	10	20	42	125	27	
5.5D8413MC3T	5.5	7.5	132M	11.3	960	5.58	830	190	240	90.5	89.7	87.2	0.75	0.71	0.62	0.2244	**	10	20	42	125	32	T5
7.5D8416MC3T	7.5	10.0	160M	14.7	965	7.57	830	215	280	91.3	90.5	88.0	0.78	0.74	0.65	0.5676	**	10	22	42	125	45	T4
9.3D8416LC3T	9.3	12.5	160L	18.0	965	9.39	830	215	280	91.9	91.1	89.3	0.78	0.74	0.65	0.7656	**	10	22	42	125	54	T4
011D8416LC3T	11	15.0	160L	21.0	965	11.10	830	195	254	92.3	91.5	89.7	0.79	0.75	0.66	0.8712	**	10	22	42	125	65	T4
015D8418LC3T	15	20.0	180L	27.4	975	14.98	830	220	286	92.9	92.1	90.3	0.82	0.78	0.69	1.32	**	10	22	42	125	90	T4
185D8420LC3T	18.5	25.0	200L	33.2	980	18.39	830	210	273	93.4	92.6	90.8	0.83	0.79	0.70	1.848	**	12	27	50	150	112	T5
022D6420LC3T	22	30.0	200L	38.9	980	21.87	830	220	286	93.7	92.9	91.1	0.84	0.80	0.71	2.112	**	12	27	50	150	128	T5
030D6422MC3T	30	40.0	225M	52.1	980	29.82	830	250	290	94.2	93.4	91.6	0.85	0.81	0.72	3.036	**	12	27	50	150	183	T5
037D6425MC3T	37	50.0	250M	64.1	985	36.59	830	220	286	94.5	93.7	92.5	0.85	0.81	0.72	4.752	**	12	27	50	150	222	T5
045D6428SC3T	45	60.0	280S	78.6	985	44.50	830	225	290	94.8	94.0	92.8	0.84	0.80	0.71	10.56	**	15	33	63	188	262	T5
055D6428MC3T	55	75.0	280M	95.8	985	54.39	830	215	280	95.1	94.3	93.1	0.84	0.80	0.71	13.068	**	15	33	63	188	315	T5
075D6431SC3T	75	100	315S	127	985	74.16	890	215	280	95.4	94.6	93.4	0.86	0.82	0.73	18.612	**	15	33	63	188	405	T5
090D6431MC3T	90	120	315M	152	985	88.99	890	195	245	95.6	94.8	93.6	0.86	0.82	0.73	22.44	**	15	33	63	188	475	T5
110D6431MC3T	110	150	315M	186	985	108.77	890	200	250	95.8	95.0	93.8	0.86	0.82	0.73	25.1	**	15	33	63	188	595	T5
125D6431LC3T	125	170	315L	208	990	122.98	890	200	250	95.9	95.1	93.9	0.87	0.83	0.74	26.4	**	15	33	63	188	674	T5
132D6431LC3T	132	180	315L	220	990	129.87	890	195	255	96.0	95.2	94.0	0.87	0.83	0.74	27.6	**	15	33	63	188	780	T5
160D6435LC3T	160	215	355L	269	990	157.41	890	200	250	96.2	95.4	94.2	0.86	0.82	0.73	33.0	**	15	33	63	188	920	T4
180D6435LC3T	180	240	355L	301	990	177.09	890	200	260	96.6	95.8	94.6	0.86	0.82	0.73	38.5	**	15	33	63	188	1,010	T4
200D6435LC3T	200	270	355L	331	990	196.77	890	200	260	96.6	95.8	94.6	0.87	0.83	0.74	41.3	**	15	33	63	188	1,185	T4
250D6435LC3T	250	340	355L	409	990	245.96	890	195	245	96.6	95.8	94.6	0.88	0.84	0.75	51.6	**	15	33	63	188	1,490	T4

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Super Premium Efficiency "Ultimo Series" TEFC SC Motors - IE4 Flame proof

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e Terminal Box.)

Driven by Commitment

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, 8-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12D84071C3T	0.12	0.16	71	0.52	645	0.18	600	180	220	62.3	61.5	58.2	0.52	0.48	0.39	0.005412	**	15	30	63	188	1.2	T6
.18D84080C3T	0.18	0.25	80	0.68	650	0.27	600		220	67.2	66.4	63.1	0.55	0.51	0.42	0.005808	**	15	30	63	188	1.8	T6
.25D84080C3T	0.25	0.35	80	0.86	660	0.37	600	180	225	70.8	70.0	66.7	0.57	0.53	0.44	0.005808	**	15	30	63	188	2.6	T6
.37D8490SC3T	0.37	0.5	90S	1.2	670	0.54	650	180	225	74.3	73.5	70.2	0.60	0.56	0.47	0.011088	**	15	30	63	188	3.5	T6
.55D8490LC3T	0.55	0.75	90L	1.6	680	0.79	650	180	220	77.0	76.2	72.9	0.62	0.58	0.49	0.01474	**	15	30	63	188	5.1	T6
.75D8410LC3T	0.75	1.0	100L	2.1	685	1.07	650	180	230	78.4	77.6	75.1	0.64	0.60	0.51	0.0253	**	10	20	42	125	7.4	T6
1.1D8410LC3T	1.1	1.5	100L	2.9	685	1.56	650	190	235	80.8	80.0	77.5	0.66	0.62	0.53	0.03168	**	10	20	42	125	10.6	T6
1.5D8411MC3T	1.5	2.0	112M	3.7	690	2.12	650	180	225	82.6	81.8	79.3	0.69	0.65	0.56	0.0506	**	10	20	42	125	14.2	T5
2.2D8413SC3T	2.2	3.0	132S	5.1	705	3.04	780	180	230	84.5	83.7	81.2	0.71	0.67	0.58	0.1144	**	10	20	42	125	21.9	T5
3D8413SC3T	3.0	4.0	132S	6.8	700	4.17	780	190	230	85.9	85.1	82.6	0.71	0.67	0.58	0.16	**	10	20	42	125	25.0	
3.7D8416MC3T	3.7	5.0	160M	8.2	720	5.01	780	210	255	86.8	86.0	83.5	0.72	0.68	0.59	0.2057	**	10	22	42	125	36.4	T4
4D8416MC3T	4.0	5.5	160M	8.9	720	5.41	780	200	240	87.1	86.3	83.8	0.72	0.68	0.59	0.235	**	10	22	42	125	40.0	
5.5D8416MC3T	5.5	7.5	160M	11.7	720	7.44	780	190	230	88.3	87.5	85.0	0.74	0.70	0.61	0.2695	**	10	22	42	125	54.0	T4
7.5D8416LC3T	7.5	10.0	160L	15.6	720	10.15	780	190	230	89.3	88.5	86.0	0.75	0.71	0.62	0.6809	**	10	22	42	125	73.4	T4
9.3D8418LC3T	9.3	12.5	180L	19.2	720	12.58	780	190	230	89.8	89.0	86.5	0.75	0.71	0.62	0.9185	**	10	22	42	125	90.1	T4
011D8418LC3T	11	15.0	180L	22.3	725	14.78	780	200	245	90.4	89.6	88.0	0.76	0.72	0.63	1.045	**	10	22	42	125	105	T4
015D8420LC3T	15	20.0	200L	30.1	730	20.01	780	180	225	91.2	90.4	88.8	0.76	0.72	0.63	1.584	**	12	27	50	150	142	T5
185D8422SC3T	18.5	25.0	225S	36.9	730	24.68	780	190	235	91.7	90.9	89.3	0.76	0.72	0.63	2.2176	**	12	27	50	150	175	T5
022D8422MC3T	22	30.0	225M	42.6	730	29.35	780	210	250	92.1	91.3	89.7	0.78	0.74	0.65	2.5344	**	12	27	50	150	202	T5
030D8425MC3T	30	40.0	250M	57.0	730	40.03	780	210	250	92.7	91.9	90.3	0.79	0.75	0.66	3.6432	**	12	27	50	150	303	T5
037D8428SC3T	37	50.0	280S	70.0	730	49.37	780	200	245	93.1	92.3	90.7	0.79	0.75	0.66	5.7024	**	15	33	63	188	351	T5
045D8428MC3T	45	60.0	280M	84.8	735	59.63	780	215	255	93.4	92.6	91.0	0.79	0.75	0.66	12.672	**	15	33	63	188	458	T5
055D8431SC3T	55	75.0	315S	100.8	735	72.88	780	205	245	93.7	92.9	91.3	0.81	0.77	0.68	15.686	**	15	33	63	188	559	T5
075D8431MC3T	75	100	315M	137	735	99.39	780	200	240	94.2	93.4	91.8	0.81	0.77	0.68	22.33	**	15	33	63	188	751	T5
090D8431LC3T	90	120	315L	164	735	119	780	180	220	94.4	93.6	92.5	0.81	0.77	0.68	26.928	**	15	33	63	188	950	T5
110D8431LC3T	110	150	315L	200	735	146	780	180	220	94.7	93.9	92.8	0.81	0.77	0.68	30.096	**	15	33	63	188	1,115	T5
125D8431LC3T	125	170	315L	223	740	165	780	180	220	94.9	94.1	93.0	0.82	0.78	0.69	31.68	**	15	33	63	188	1,253	T5
132D8431LC3T	132	180	315L	236	740	174	780	200	240	95.0	94.2	93.1	0.82	0.78	0.69	33.11	**	15	33	63	188	1,328	T5
160D8435LC3T	160	215	355L	285	740	211	780	185	230	95.1	94.3	93.2	0.82	0.78	0.69	39.6	**	15	33	63	188	1,607	T4
180D8435LC3T	180	240	355L	320	740	237	780	185	230	95.4	94.6	93.5	0.82	0.78	0.69	46.2	**	15	33	63	188	1,803	T4
200D8435LC3T	200	270	355L	356	740	263	780	185	230	95.4	94.6	93.5	0.82	0.78	0.69	49.5	**	15	33	63	188	2,003	T4

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Super Premium Efficiency "Ultimo series" TEFC SC Motors - IE4 Flame proof- DCCA

Ex db IIC & Ex tb IIIC (Gas & Dust), PESO, ATEX & IECEx, & Ex d eb IIC (Ex d motor & Ex e terminal box)

LHP MOTORS DRIVES
Driven by Commitment

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-66 ,altitude upto 1000 mtrs. above m.s.l; Duty S1,efficiency class Ie4, conforms to IS 12615:2018, IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60079-7-2015.IS/IEC 60034-5:2000, IS/IEC 60079-31:2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0, IEC 60079-1:2014-06 Ed-7.0, IEC 60079-31:2013 Ed-2,Gas and Dust,IEC 60034-30-2008,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA,Temperature class as per table of IE2

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)						
355L2435KC3T	355	475	355L/K	582.0	2981	115.99	890	170	250	96.5	96.1	94.5	0.88	0.86	0.81	22.40	**	15	33	Please Contact nearest Sales office	T4
375L2435KC3T	375	503	355L/K	614.0	2981	122.53	890	170	250	96.5	96.1	94.5	0.88	0.87	0.82	24.20	**	15	33		T4
400L2435KC3T	400	536	355L/K	655.0	2981	130.69	890	170	250	96.5	96.1	94.5	0.88	0.87	0.82	26.00	**	15	35		T4
450L2435KC3T	450	603	355L/K	729.0	2982	146.98	890	170	250	96.5	96.1	94.5	0.89	0.87	0.82	28.60	**	15	35		T4
500L2435KC3T	500	670	355L/K	810.0	2983	163.26	890	170	250	96.5	96.2	94.7	0.89	0.87	0.82	31.30	**	15	35		T4

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
400L4435KC3T	400	536	355L/K	690.0	1489	261.65	770	210	250	96.0	95.5	94.1	0.84	0.82	0.73	30.60	**	15	33	63	188	Please Contact nearest Sales office	T4
450L4435KC3T	450	603	355L/K	776.0	1489	294.36	770	210	250	96.0	95.5	94.1	0.84	0.82	0.73	33.70	**	15	33	63	188		T4
500L4435KC3T	500	670	355L/K	843.0	1489	327.07	770	210	240	96.0	95.5	94.1	0.86	0.83	0.74	36.80	**	15	33	63	188		T4

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
315L6335KC3T	315	425	355L/K	538	992	309.28	770	200	250	95.8	95.3	93.8	0.85	0.83	0.78	56.90	**	15	33	63	188	Please Contact nearest Sales office	T4
355L6335KC3T	355	475	355L/K	621	992	348.56	770	200	250	95.8	95.3	93.8	0.83	0.79	0.70	66.00	**	15	33	63	188		T4
375L6335KC3T	375	503	355L/K	656	992	368.20	770	200	250	95.8	95.3	93.8	0.83	0.79	0.70	67.85	**	15	33	63	188		T4
400L6335KC3T	400	536	355L/K	700	992	392.74	770	200	250	95.8	95.4	93.9	0.83	0.79	0.70	69.70	**	15	33	63	188		t4

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
250L8335KC3T	250	335	355L/K	471.0	741	328.6	700	140	205	94.6	94.2	93.0	0.78	0.76	0.68	76.00	**	15	33	63	188	Please Contact nearest Sales office	T4
315L8335KC3T	315	425	355L/K	586.0	741	414.0	700	170	210	94.6	94.2	93.0	0.79	0.74	0.68	80.00	**	15	33	63	188		T4

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2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Super Premium Efficiency "Ultimo Series" TEFC SC Motors - IE4 Flame proof

Ex - dI Motors with DGMS (Coal Mines) Certificate

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors with DGMS certificate suitable for 550 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, 2-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
0.12P24063C3T	0.12	0.16	63	0.28	2770	0.04	730	200	250	66.5	65.7	62.4	0.68	0.64	0.55	0.00094	**	10	20	42	125	0.065	T6
0.18P2463C3T	0.18	0.25	63	0.39	2790	0.06	730	200	250	70.8	70.0	66.7	0.68	0.64	0.55	0.00099	**	10	20	42	125	0.095	T6
.25P24063C3T	0.25	0.35	63	0.46	2800	0.09	730	200	250	74.3	73.5	70.2	0.76	0.72	0.63	0.00165	**	10	20	42	125	0.110	T6
.37P24071C3T	0.37	0.50	71	0.64	2800	0.13	780	200	250	78.1	77.3	74.0	0.78	0.74	0.65	0.00198	**	10	20	42	125	0.180	T6
.55P24071C3T	0.55	0.75	71	0.91	2810	0.19	780	220	265	81.5	80.7	78.1	0.78	0.74	0.65	0.00277	**	10	20	42	125	0.220	T6
.75P24080C3T	0.75	1.0	80	1.12	2830	0.26	780	225	265	83.5	82.7	80.1	0.84	0.80	0.71	0.00475	**	10	20	42	125	0.350	T6
1.1P24080C3T	1.1	1.5	80	1.59	2845	0.38	780	225	275	85.2	84.4	81.8	0.85	0.81	0.72	0.00682	**	10	20	42	125	0.450	T6
1.5P2490SC3R	1.5	2.0	90S	2.09	2855	0.51	780	220	260	86.5	85.7	83.1	0.87	0.83	0.74	0.00964	**	10	20	42	125	0.550	T6
2.2P2490LC3R	2.2	3.0	90L	3.05	2865	0.75	890	235	275	88.0	87.2	84.6	0.86	0.82	0.73	0.01175	**	10	20	42	125	0.8	T6
3P2410LC3R	3.0	4.0	100L	4.21	2865	1.02	890	250	275	89.1	88.3	85.7	0.84	0.80	0.71	0.02400	**	8	16	33	100	1.0	
3.7P2410LC3R	3.7	5.0	100L	5.03	2865	1.26	890	250	290	89.7	88.9	86.3	0.86	0.82	0.73	0.02904	**	8	16	33	100	1.4	T6
4P2411MC3R	4	5.5	112M	5.55	2870	1.36	890	250	290	90.0	89.2	86.6	0.84	0.80	0.71	0.04500	**	8	16	33	100	1.8	
5.5P2413SC3R	5.5	7.5	132S	7.39	2860	1.87	890	210	250	90.9	90.1	87.5	0.86	0.82	0.73	0.06864	**	8	16	33	100	2.2	T5
7.5P2413SC3R	7.5	10.0	132S	9.98	2945	2.48	890	250	290	91.7	90.9	88.3	0.86	0.82	0.73	0.08976	**	8	16	33	100	3.1	T5
9.3P2416MC3R	9.3	12.5	160M	12.18	2945	3.08	890	250	290	92.1	91.3	88.7	0.87	0.83	0.74	0.10560	**	10	22	42	125	4.2	T4
011P2416MC3R	11	15.0	160M	14.17	2940	3.64	890	250	290	92.6	91.8	89.2	0.88	0.84	0.75	0.22440	**	10	22	42	125	5.4	T4
015P2416MC3R	15	20.0	160M	18.96	2945	4.96	890	250	295	93.3	92.5	90.7	0.89	0.85	0.76	0.29040	**	10	22	42	125	7.9	T4
185P2416LC3R	18.5	25.0	160L	23.29	2945	6.12	890	250	290	93.7	92.9	91.1	0.89	0.85	0.76	0.36960	**	10	22	42	125	9.2	T4
022P2418MC3R	22	30.0	180M	27.30	2950	7.26	890	175	225	94.0	93.2	91.4	0.90	0.86	0.77	0.55440	**	10	22	42	125	11.1	T4
030P2420LC3T	30	40.0	200L	37.03	2955	9.89	890	240	280	94.5	93.7	91.9	0.90	0.86	0.77	0.84480	**	12	27	50	150	16.8	T5
037P2420LC3T	37	50.0	200L	45.02	2955	12.20	890	210	250	94.8	94.0	92.2	0.91	0.87	0.78	1.12200	**	12	27	50	150	20.1	T5
045P2422MC3T	45	60.0	225M	54.64	2965	14.78	890	210	255	95.0	94.2	92.4	0.91	0.87	0.78	1.20120	**	12	27	50	150	26.5	T5
055P2425MC3T	55	75.0	250M	66.57	2970	18.04	890	200	245	95.3	94.5	92.7	0.91	0.87	0.78	2.37600	**	12	27	50	150	30.5	T5
075P2428SC3T	75	100	280S	91.50	2970	24.60	890	195	255	95.6	94.8	93.0	0.90	0.86	0.77	8.75160	**	15	33	63	188	38.9	T5
090P2428MC3T	90	120	280M	108.37	2975	29.47	890	190	240	95.8	95.0	93.2	0.91	0.87	0.78	10.80	**	15	33	63	188	42.5	T5
110P2431SC3T	110	150	315S	130.74	2980	35.95	890	195	250	96.0	95.2	94.1	0.92	0.88	0.79	15.25	**	15	33	63	188	54.2	T5
125P2431MC3T	125	170	315M	149.89	2980	40.86	890	190	245	96.2	95.4	94.3	0.91	0.87	0.78	16.76	**	15	33	63	188	61.8	T5
132P2431MC3T	132	180	315M	156.40	2980	43.14	890	180	235	96.3	95.5	94.4	0.92	0.88	0.79	18.33	**	15	33	63	188	65.4	T5
160P2431LC3T	160	215	315L	189.58	2985	52.21	890	185	240	96.3	95.5	94.4	0.92	0.88	0.79	18.88	**	15	33	63	188	82.9	T5
180P2431LC3T	180	240	315L	215.17	2985	58.73	890	185	240	96.5	95.7	94.6	0.91	0.87	0.78	21.07	**	15	33	63	188	94.1	T5
200P2431LC3T	200	270	315L	236.48	2985	65.26	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	24.91	**	15	33	63	188	103	T5
250P2435LC3T	250	340	355M	295.60	2985	81.57	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	30.89	**	15	33	63	188	129	T4
315P2435LC3T	315	430	355L	372.45	2985	102.78	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	32.57	**	15	33	63	188	165	T4

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Super Premium Efficiency "Ultimo Series" TEFC SC Motors - IE4 Flame proof

Ex - dI Motors with DGMS (Coal Mines) Certificate

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors with DGMS certificate suitable for 550 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, 4-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12P44063C3T	0.12	0.16	63	0.27	1360	0.09	650	200	245	69.8	69.0	65.7	0.68	0.64	0.55	0.0018	**	15	30	63	188	0.30	T6
.18P44063C3T	0.18	0.25	63	0.37	1360	0.13	650	200	250	74.7	73.9	70.6	0.68	0.64	0.55	0.0018	**	15	30	63	188	0.46	T6
.25P44071C3T	0.25	0.35	71	0.48	1365	0.18	650	200	245	77.9	77.1	73.8	0.70	0.66	0.57	0.0037	**	10	20	42	125	0.61	T6
.37P44071C3T	0.37	0.5	71	0.67	1365	0.26	700	245	295	81.1	80.3	77.0	0.71	0.67	0.58	0.0045	**	10	20	42	125	0.94	T6
.55P44080C3T	0.55	0.75	80	0.92	1410	0.38	700	245	300	83.9	83.1	80.6	0.75	0.71	0.62	0.0102	**	10	20	42	125	1.42	T6
.75P44080C3T	0.75	1.0	80	1.21	1420	0.51	700	235	295	85.7	84.9	82.4	0.76	0.72	0.63	0.0114	**	10	20	42	125	1.92	T6
1.1P4490SC3R	1.1	1.5	90S	1.70	1420	0.75	700	235	300	87.2	86.4	83.9	0.78	0.74	0.65	0.0185	**	10	20	42	125	2.80	T6
1.5P4490LC3R	1.5	2.0	90L	2.23	1435	1.02	700	240	295	88.2	87.4	84.9	0.80	0.76	0.67	0.0198	**	10	20	42	125	3.80	T6
2.2P4410LC3R	2.2	3.0	100L	3.15	1440	1.49	830	220	260	89.5	88.7	86.2	0.82	0.78	0.69	0.0383	**	8	16	33	100	5.50	T6
3P4411MC3R	3.0	4.0	112M	4.35	1440	2.03	830	230	270	90.4	89.6	87.1	0.80	0.76	0.67	0.0520	**	8	16	33	100	6.5	
3.7P4411MC3R	3.7	5.0	112M	5.34	1445	2.49	830	235	280	90.9	90.1	87.6	0.80	0.76	0.67	0.0752	**	8	16	33	100	8.50	T5
4P4411MC3R	4.0	5.5	112M	5.76	1450	2.69	830	235	295	91.1	90.3	87.8	0.80	0.76	0.67	0.1000	**	8	16	33	100	10.0	
5.5P4413SC3R	5.5	7.5	132S	7.76	1450	3.69	830	235	295	91.9	91.1	88.6	0.81	0.77	0.68	0.1228	**	8	16	33	100	12.80	T5
7.5P4413MC3R	7.5	10.0	132M	10.37	1455	5.02	830	195	255	92.6	91.8	89.3	0.82	0.78	0.69	0.1584	**	8	16	33	100	18.20	T5
9.3P4416MC3R	9.3	12.5	160M	12.80	1455	6.23	830	195	255	93.0	92.2	89.7	0.82	0.78	0.69	0.224	**	10	22	42	125	22.7	T4
011P4416MC3R	11	15.0	160M	14.56	1460	7.34	830	215	280	93.3	92.5	90.7	0.85	0.81	0.72	0.264	**	10	22	42	125	25.4	T4
015P4416LC3R	15	20.0	160L	19.50	1470	9.94	830	220	265	93.9	93.1	91.3	0.86	0.82	0.73	0.343	**	10	22	42	125	38.5	T4
185P4418MC3R	18.5	25.0	180M	23.70	1470	12.26	830	220	265	94.2	93.4	91.6	0.87	0.83	0.74	0.871	**	10	22	42	125	45.3	T4
022P4418LC3R	22	30.0	180L	28.75	1470	14.58	830	215	260	94.5	93.7	91.9	0.85	0.81	0.72	1.109	**	10	22	42	125	52	T4
030P4420LC3T	30	40.0	200L	39.04	1475	19.81	830	235	275	94.9	94.1	92.3	0.85	0.81	0.72	1.584	**	12	27	50	150	72	T5
037P4422SC3T	37	50.0	225S	47.44	1475	24.43	830	225	280	95.2	94.4	92.6	0.86	0.82	0.73	1.980	**	12	27	50	150	91	T5
045P4422MC3T	45	60.0	225M	57.58	1480	29.61	830	225	280	95.4	94.6	92.8	0.86	0.82	0.73	2.244	**	12	27	50	150	112	T5
055P4425MC3T	55	75.0	250M	69.34	1480	36.20	830	215	255	95.7	94.9	93.1	0.87	0.83	0.74	4.22	**	12	27	50	150	135	T5
075P4428SC3T	75	100	280S	94.26	1485	49.19	890	215	280	96.0	95.2	93.4	0.87	0.83	0.74	9.50	**	15	33	63	188	185	T5
090P4428MC3T	90	120	280M	111.72	1485	59.03	890	220	280	96.1	95.3	93.5	0.88	0.84	0.75	10.96	**	15	33	63	188	223	T5
110P4431SC3T	110	150	315S	137.82	1485	72.15	890	200	245	96.3	95.5	93.7	0.87	0.83	0.74	15.31	**	15	33	63	188	267	T5
125P4431MC3T	125	170	315M	156.46	1485	81.99	890	195	255	96.4	95.6	94.5	0.87	0.83	0.74	16.63	**	15	33	63	188	304	T5
132P4431MC3T	132	180	315M	163.00	1485	86.58	890	195	250	96.6	95.8	94.7	0.88	0.84	0.75	18.48	**	15	33	63	188	329	T5
160P4431LC3T	160	215	315L	195.36	1485	104.94	890	220	280	96.6	95.8	94.7	0.89	0.85	0.76	30.69	**	15	33	63	188	391	T5
180P4431LC3T	180	240	315L	219.55	1485	118.06	890	220	275	96.7	95.9	94.8	0.89	0.85	0.76	31.68	**	15	33	63	188	421	T5
200P4431LC3T	200	270	315L	243.94	1485	131.18	890	200	260	96.7	95.9	94.8	0.89	0.85	0.76	33.77	**	15	33	63	188	483	T5
250P4435MC3T	250	340	355M	304.93	1485	163.97	890	195	250	96.7	95.9	94.8	0.89	0.85	0.76	41.91	**	15	33	63	188	584	T4
315P4435LC3T	315	430	355L	379.94	1485	206.61	890	195	245	96.7	95.9	94.8	0.90	0.86	0.77	53.13	**	15	33	63	188	741	T4

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Super Premium Efficiency "Ultimo Series" TEFC SC Motors - IE4 Flame proof

Ex - dI Motors with DGMS (Coal Mines) Certificate

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors with DGMS certificate suitable for 550 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, 6-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12P64063C3T	0.12	0.16	63	0.32	880	0.13	700	190	230	64.9	64.1	60.8	0.60	0.56	0.47	0.00451	**	10	20	42	125	0.71	T6
.18P64071C3T	0.18	0.25	71	0.43	890	0.20	700	190	230	70.1	69.3	66.0	0.62	0.58	0.49	0.00484	**	10	20	42	125	1.10	T6
.25P64071C3T	0.25	0.35	71	0.56	900	0.27	700	190	230	74.1	73.3	70.0	0.63	0.59	0.50	0.00484	**	10	20	42	125	1.50	T6
.37P64080C3T	0.37	0.5	80	0.77	920	0.39	730	190	230	78.0	77.2	73.9	0.65	0.61	0.52	0.00924	**	10	20	42	125	2.20	T6
.55P64080C3T	0.55	0.75	80	1.07	930	0.58	730	195	250	80.9	80.1	77.6	0.67	0.63	0.54	0.012276	**	10	20	42	125	3.10	T6
.75P6490SC3R	0.75	1.0	90S	1.36	930	0.79	730	195	250	82.7	81.9	79.4	0.70	0.66	0.57	0.02112	**	10	20	42	125	4.20	T6
1.1P6490LC3R	1.1	1.5	90L	1.95	920	1.16	730	200	260	84.5	83.7	81.2	0.70	0.66	0.57	0.0264	**	10	20	42	125	6.50	T6
1.5P6410LC3R	1.5	2.0	100L	2.58	925	1.58	730	200	260	85.9	85.1	82.6	0.71	0.67	0.58	0.04224	**	10	20	42	125	9.10	T6
2.2P6411MC3R	2.2	3.0	112M	3.72	950	2.26	830	190	240	87.4	86.6	84.1	0.71	0.67	0.58	0.09504	**	10	20	42	125	13	T5
3P6413SC3R	3.0	4.0	132S	5.08	950	3.08	830	190	240	88.6	87.8	85.3	0.70	0.66	0.57	0.12	**	10	20	42	125	16	
3.7P6413SC3R	3.7	5.0	132S	6.04	950	3.79	830	195	245	89.3	88.5	86.0	0.72	0.68	0.59	0.1716	**	10	20	42	125	23	T5
4P6413MC3R	4.0	5.5	132M	6.52	950	4.10	830	190	240	89.5	88.7	86.2	0.72	0.68	0.59	0.19	**	10	20	42	125	27	
5.5P6413MC3R	5.5	7.5	132M	8.51	960	5.58	830	190	240	90.5	89.7	87.2	0.75	0.71	0.62	0.2244	**	10	20	42	125	32	T5
7.5P6416MC3R	7.5	10.0	160M	11.06	965	7.57	830	215	280	91.3	90.5	88.0	0.78	0.74	0.65	0.5676	**	10	22	42	125	45	T4
9.3P6416LC3R	9.3	12.5	160L	13.62	965	9.39	830	215	280	91.9	91.1	89.3	0.78	0.74	0.65	0.7656	**	10	22	42	125	54	T4
011P6416LC3R	11	15.0	160L	15.84	965	11.10	830	195	254	92.3	91.5	89.7	0.79	0.75	0.66	0.8712	**	10	22	42	125	65	T4
015P6418LC3R	15	20.0	180L	20.67	975	14.98	830	220	286	92.9	92.1	90.3	0.82	0.78	0.69	1.32	**	10	22	42	125	90	T4
185P6420LC3T	18.5	25.0	200L	25.05	980	18.39	830	210	273	93.4	92.6	90.8	0.83	0.79	0.70	1.848	**	12	27	50	150	112	T5
022P6420LC3T	22	30.0	200L	29.34	980	21.87	830	220	286	93.7	92.9	91.1	0.84	0.80	0.71	2.112	**	12	27	50	150	128	T5
030P6422MC3T	30	40.0	225M	39.33	980	29.82	830	250	290	94.2	93.4	91.6	0.85	0.81	0.72	3.036	**	12	27	50	150	183	T5
037P6425MC3T	37	50.0	250M	48.35	985	36.59	830	220	286	94.5	93.7	92.5	0.85	0.81	0.72	4.752	**	12	27	50	150	222	T5
045P6428SC3T	45	60.0	280S	59.32	985	44.50	830	225	290	94.8	94.0	92.8	0.84	0.80	0.71	10.56	**	15	33	63	188	262	T5
055P6428MC3T	55	75.0	280M	72.27	985	54.39	830	215	280	95.1	94.3	93.1	0.84	0.80	0.71	13.068	**	15	33	63	188	315	T5
075P6431SC3T	75	100	315S	95.96	985	74.16	890	215	280	95.4	94.6	93.4	0.86	0.82	0.73	18.612	**	15	33	63	188	405	T5
090P6431MC3T	90	120	315M	114.91	985	88.99	890	195	245	95.6	94.8	93.6	0.86	0.82	0.73	22.44	**	15	33	63	188	475	T5
110P6431MC3T	110	150	315M	140.15	985	108.77	890	200	250	95.8	95.0	93.8	0.86	0.82	0.73	25.1	**	15	33	63	188	595	T5
125P6431LC3T	125	170	315L	157.27	990	122.98	890	200	250	95.9	95.1	93.9	0.87	0.83	0.74	26.4	**	15	33	63	188	674	T5
132P6431LC3T	132	180	315L	165.91	990	129.87	890	195	255	96.0	95.2	94.0	0.87	0.83	0.74	27.6	**	15	33	63	188	780	T5
160P6435LC3T	160	215	355L	203.01	990	157.41	890	200	250	96.2	95.4	94.2	0.86	0.82	0.73	33.0	**	15	33	63	188	920	T4
180P6435LC3T	180	240	355L	227.44	990	177.09	890	200	260	96.6	95.8	94.6	0.86	0.82	0.73	38.5	**	15	33	63	188	1,010	T4
200P6435LC3T	200	270	355L	249.81	990	196.77	890	200	260	96.6	95.8	94.6	0.87	0.83	0.74	41.3	**	15	33	63	188	1,185	T4
250P6435LC3T	250	340	355L	308.71	990	245.96	890	195	245	96.6	95.8	94.6	0.88	0.84	0.75	51.6	**	15	33	63	188	1,490	T4

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Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Super Premium Efficiency "Ultimo Series" TEFC SC Motors - IE4 Flame proof

Ex - dI Motors with DGMS (Coal Mines) Certificate

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors with DGMS certificate suitable for 550 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, 8-Pole conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed	Temp. Class
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)								
.12P84071C3T	0.12	0.16	71	0.39	645	0.18	600	180	220	62.3	61.5	58.2	0.52	0.48	0.39	0.005412	**	15	30	63	188	1.2	T6
.18P84080C3T	0.18	0.25	80	0.51	650	0.27	600	180	220	67.2	66.4	63.1	0.55	0.51	0.42	0.005808	**	15	30	63	188	1.8	T6
.25P84080C3T	0.25	0.35	80	0.65	660	0.37	600	180	225	70.8	70.0	66.7	0.57	0.53	0.44	0.005808	**	15	30	63	188	2.6	T6
.37P8490SC3R	0.37	0.5	90S	0.87	670	0.54	650	180	225	74.3	73.5	70.2	0.60	0.56	0.47	0.011088	**	15	30	63	188	3.5	T6
.55P8490LC3R	0.55	0.75	90L	1.21	680	0.79	650	180	220	77.0	76.2	72.9	0.62	0.58	0.49	0.01474	**	15	30	63	188	5.1	T6
.75P8410LC3R	0.75	1.0	100L	1.57	685	1.07	650	180	230	78.4	77.6	75.1	0.64	0.60	0.51	0.0253	**	10	20	42	125	7.4	T6
1.1P8410LC3R	1.1	1.5	100L	2.17	685	1.56	650	190	235	80.8	80.0	77.5	0.66	0.62	0.53	0.03168	**	10	20	42	125	10.6	T6
1.5P8411MC3R	1.5	2.0	112M	2.76	690	2.12	650	180	225	82.6	81.8	79.3	0.69	0.65	0.56	0.0506	**	10	20	42	125	14.2	T5
2.2P8413SC3R	2.2	3.0	132S	3.85	705	3.04	780	180	230	84.5	83.7	81.2	0.71	0.67	0.58	0.1144	**	10	20	42	125	21.9	T5
3P8413SC3R	3.0	4.0	132S	5.08	950	3.08	830	190	240	88.6	87.8	85.3	0.70	0.66	0.57	0.12	**	10	20	42	125	16	
3.7P8416MC3R	3.7	5.0	160M	6.21	720	5.01	780	210	255	86.8	86.0	83.5	0.72	0.68	0.59	0.2057	**	10	22	42	125	36.4	T4
4P8413MC3R	4.0	5.5	132M	6.52	950	4.10	830	190	240	89.5	88.7	86.2	0.72	0.68	0.59	0.19	**	10	20	42	125	27	
5.5P8416MC3R	5.5	7.5	160M	8.84	720	7.44	780	190	230	88.3	87.5	85.0	0.74	0.70	0.61	0.2695	**	10	22	42	125	54.0	T4
7.5P8416LC3R	7.5	10.0	160L	11.76	720	10.15	780	190	230	89.3	88.5	86.0	0.75	0.71	0.62	0.6809	**	10	22	42	125	73.4	T4
9.3P8418LC3R	9.3	12.5	180L	14.50	720	12.58	780	190	230	89.8	89.0	86.5	0.75	0.71	0.62	0.9185	**	10	22	42	125	90.1	T4
011P8418LC3R	11	15.0	180L	16.81	725	14.78	780	200	245	90.4	89.6	88.0	0.76	0.72	0.63	1.045	**	10	22	42	125	105	T4
015P8420LC3T	15	20.0	200L	22.72	730	20.01	780	180	225	91.2	90.4	88.8	0.76	0.72	0.63	1.584	**	12	27	50	150	142	T5
185P8422SC3T	18.5	25.0	225S	27.87	730	24.68	780	190	235	91.7	90.9	89.3	0.76	0.72	0.63	2.2176	**	12	27	50	150	175	T5
022P8422MC3T	22	30.0	225M	32.15	730	29.35	780	210	250	92.1	91.3	89.7	0.78	0.74	0.65	2.5344	**	12	27	50	150	202	T5
030P8425MC3T	30	40.0	250M	43.00	730	40.03	780	210	250	92.7	91.9	90.3	0.79	0.75	0.66	3.6432	**	12	27	50	150	303	T5
037P8428SC3T	37	50.0	280S	52.81	730	49.37	780	200	245	93.1	92.3	90.7	0.79	0.75	0.66	5.7024	**	15	33	63	188	351	T5
045P8428MC3T	45	60.0	280M	64.02	735	59.63	780	215	255	93.4	92.6	91.0	0.79	0.75	0.66	12.672	**	15	33	63	188	458	T5
055P8431SC3T	55	75.0	315S	76.07	735	72.88	780	205	245	93.7	92.9	91.3	0.81	0.77	0.68	15.686	**	15	33	63	188	559	T5
075P8431MC3T	75	100	315M	103.18	735	99.39	780	200	240	94.2	93.4	91.8	0.81	0.77	0.68	22.33	**	15	33	63	188	751	T5
090P8431LC3T	90	120	315L	123.56	735	119	780	180	220	94.4	93.6	92.5	0.81	0.77	0.68	26.928	**	15	33	63	188	950	T5
110P8431LC3T	110	150	315L	150.53	735	146	780	180	220	94.7	93.9	92.8	0.81	0.77	0.68	30.096	**	15	33	63	188	1,115	T5
125P8431LC3T	125	170	315L	168.62	740	165	780	180	220	94.9	94.1	93.0	0.82	0.78	0.69	31.68	**	15	33	63	188	1,253	T5
132P8431LC3T	132	180	315L	177.87	740	174	780	200	240	95.0	94.2	93.1	0.82	0.78	0.69	33.11	**	15	33	63	188	1,328	T5
160P8435LC3T	160	215	355L	215.38	740	211	780	185	230	95.1	94.3	93.2	0.82	0.78	0.69	39.6	**	15	33	63	188	1,607	T4
180P8435LC3T	180	240	355L	241.54	740	237	780	185	230	95.4	94.6	93.5	0.82	0.78	0.69	46.2	**	15	33	63	188	1,803	T4
200P8435LC3T	200	270	355L	268.38	740	263	780	185	230	95.4	94.6	93.5	0.82	0.78	0.69	49.5	**	15	33	63	188	2,003	T4

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Super Premium Efficiency "Supremo Series" TEFC SC Brake Motors - IE4 Flame proof,

Ex db IIC & Ex tb IIIC (Gas & Dust) & Ex d eb IIC; PESO, ATEX & IECEx (Ex d motor & Ex e terminal box)

3 Phase Squirrel Cage flameproof Ex d, Ex de, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4, conforms to IS 12615:2018,IS/IEC 60079-0:2011,IS/IEC 60079-1:2015,IS/IEC 60019:2015,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS/IEC 60034-1:2004,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC-Ex,ATEX certified by BASEEFA.

Performance Table

Ordering code	kW	HP	Frame	
2 Pole				
.12A24063C3T	0.12	0.16	63	All performance Figures are same as Premium Efficiency"Flame Proof (Ex 'd')" TEFC Motors-IE3 .
.18A2463C3T	0.18	0.25	63	
.25A24063C3T	0.25	0.33	63	
.37A24071C3T	0.37	0.50	71	
.55A24071C3T	0.55	0.75	71	
.75A24080C3T	0.75	1.0	80	
1.1A24080C3T	1.1	1.5	80	
1.5A2490SC3T	1.5	2.0	90S	
2.2A2490LC3T	2.2	3.0	90L	
3.7A2410LC3T	3.7	5.0	100L	
5.5A2413SC3T	5.5	7.5	132S	
7.5A2413SC3T	7.5	10	132S	
9.3A2416MC3T	9.3	12.5	160M	
011A2416MC3T	11	15.0	160M	
015A2416MC3T	15	20	160M	
185A2416LC3T	18.5	25	160L	
022A2418MC3T	22	30	180M	

Ordering code	kW	HP	Frame	
4 Pole				
.12A44063C3T	0.12	0.16	63	All performance Figures are same as Premium Efficiency"Flame Proof (Ex 'd')" TEFC Motors-IE3 .
.18A44063C3T	0.18	0.25	63	
.25A44071C3T	0.25	0.33	71	
.37A44071C3T	0.37	0.50	71	
.55A44080C3T	0.55	0.75	80	
.75A44080C3T	0.75	1.0	80	
1.1A4490SC3T	1.1	1.5	90S	
1.5A4490LC3T	1.5	2.0	90L	
2.2A4410LC3T	2.2	3.0	100L	
3.7A4411MC3T	3.7	5.0	112M	
5.5A4413SC3T	5.5	7.5	132S	
7.5A4413MC3T	7.5	10	132M	
9.3A4416MC3T	9.3	12.5	160M	
011A4416MC3T	11	15	160M	
015A4416LC3T	15	20	160L	
185A4418MC3T	18.5	25	180M	
022A4418LC3T	22	30		

Ordering code	kW	HP	Frame	
6 Pole				
.12A64063C3T	0.12	0.16	63	All performance Figures are same as Premium Efficiency"Flame Proof (Ex 'd')" TEFC Motors-IE3 .
.18A64071C3T	0.18	0.25	71	
.25A64071C3T	0.25	0.33	71	
.37A64080C3T	0.37	0.50	80	
.55A64080C3T	0.55	0.75	80	
.75A6490SC3T	0.75	1.0	90S	
1.1A6490LC3T	1.1	1.5	90L	
1.5A6410LC3T	1.5	2.0	100L	
2.2A6411MC3T	2.2	3.0	112M	
3.7A6413SC3T	3.7	5.0	132S	
5.5A6413MC3T	5.5	7.5	132M	
7.5A6416MC3T	7.5	10	160M	
9.3A6416LC3T	9.3	12.5	160L	
011A6416LC3T	11	15	160L	
015A6418LC3T	15	20	180L	

Ordering code	kW	HP	Frame	
8 Pole				
.12A84071C3T	0.12	0.16	71	All performance Figures are same as Premium Efficiency"Flame Proof (Ex 'd')" TEFC Motors-IE3 .
.18A84080C3T	0.18	0.25	80	
.25A84080C3T	0.25	0.33	80	
.37A8490SC3T	0.37	0.50	90S	
.55A8490LC3T	0.55	0.75	90L	
.75A8410LC3T	0.75	1.00	100L	
1.1A8410LC3T	1.1	1.5	100L	
1.5A8411MC3T	1.5	2.0	112M	
2.2A8413SC3T	2.2	3.0	132S	
3.7A8416MC3T	3.7	5.0	160M	
5.5A8416MC3T	5.5	7.5	160M	
7.5A8416LC3T	7.5	10	160L	
9.3A8418LC3T	9.3	12.5	180L	
011A8418LC3T	11	15	180L	

Note:- 1) Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Energy Efficiency TEFC SC Motors - IE2 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE2 II-Pole, conforms to IS 12615:2018,IS/IEC 60034-1:2004, IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3.

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E22063C3R	0.12	0.16	63	0.42	2770	0.04	600	270	300	53.6	51.6	50.6	0.74	0.71	0.61	0.0007	6	13	20	42	125	Please Contact nearest sales office
.18E22063C3R	0.18	0.25	63	0.57	2750	0.06	600	220	260	60.4	60.4	60.4	0.72	0.67	0.43	0.0008	7	13	20	42	125	
.25E22063C3R	0.25	0.33	63	0.75	2785	0.09	600	220	260	64.8	58.9	53.0	0.72	0.58	0.43	0.0009	8	13	20	42	125	
.37E22071C3R	0.37	0.50	71	1.00	2750	0.13	650	240	280	69.5	69.5	69.5	0.74	0.74	0.66	0.001	11	12	20	42	125	
.55E22071C3R	0.55	0.75	71	1.40	2788	0.19	650	285	350	74.1	74.1	72.4	0.74	0.73	0.61	0.002	12	12	20	42	125	
.75E22080C3R	0.75	1.0	80	1.70	2805	0.26	650	250	280	77.4	77.4	77.4	0.79	0.78	0.70	0.002	15	10	20	42	125	
1.1E22080C3R	1.1	1.5	80	2.55	2860	0.37	650	270	300	79.6	79.6	79.0	0.75	0.73	0.60	0.003	17	10	20	42	125	
1.5E2290SC3R	1.5	2.0	90S	3.25	2825	0.52	650	230	270	81.3	80.8	80.3	0.79	0.78	0.65	0.007	23	9	20	42	125	
2.2E2290LC3R	2.2	3.0	90L	4.70	2835	0.76	700	230	270	83.2	83.0	82.5	0.78	0.72	0.60	0.008	29	9	20	42	125	
3.0E2210LC3R	3.0	4.0	100L	6.00	2867	1.02	700	240	280	84.6	84.2	83.8	0.84	0.81	0.76	0.026	39	12	16	33	100	
3.7E2210LC3R	3.7	5.0	100L	7.20	2870	1.26	700	285	300	85.5	85.5	84.0	0.84	0.77	0.63	0.026	40	12	16	33	100	
4.0E2211MC3R	4.0	5.5	112M	7.50	2865	1.36	700	170	210	85.8	85.8	84.8	0.86	0.85	0.80	0.033	48	12	16	33	100	
5.5E2213SC3R	5.5	7.5	132S	11.0	2927	1.83	700	200	250	87.0	85.0	82.0	0.80	0.78	0.68	0.044	58	13	16	33	100	
7.5E2213SC3R	7.5	10	132S	14.0	2925	2.50	700	220	260	88.1	87.3	85.5	0.85	0.82	0.78	0.088	78	13	16	33	100	
9.3E2216MC3R	9.3	12.5	160M	16.6	2935	3.09	700	180	220	88.9	88.9	86.8	0.88	0.86	0.84	0.100	125	8	22	42	125	
011E2216MC3R	11	15.0	160M	20.0	2931	3.66	700	190	230	89.4	89.0	88.5	0.86	0.84	0.80	0.128	135	8	22	42	125	
015E2216MC3R	15	20	160M	27.0	2945	4.96	700	220	250	90.3	89.0	88.0	0.86	0.84	0.82	0.140	155	8	22	42	125	
185E2216LC3R	18.5	25	160L	33.0	2941	6.12	700	185	225	90.9	89.9	88.0	0.86	0.84	0.82	0.244	160	8	22	42	125	
022E2218MC3R	22	30	180M	37.0	2943	7.28	700	230	270	91.3	90.3	89.3	0.91	0.88	0.86	0.244	210	8	22	42	125	
030E2220LC3T	30	40	200L	54.0	2966	9.85	700	290	320	92.0	91.0	90.0	0.84	0.80	0.70	0.720	281	8	27	50	150	
037E2220LC3T	37	50	200L	63.0	2952	12.21	700	250	280	92.5	92.0	91.0	0.89	0.87	0.81	1.240	308	8	27	50	150	
045E2222MC3T	45	60	225M	74.0	2965	14.78	700	230	270	92.9	91.0	90.0	0.91	0.89	0.87	1.360	416	10	27	50	150	
055E2225MC3T	55	75	250M	94.0	2965	18.07	700	180	220	93.2	92.2	91.2	0.87	0.85	0.82	2.240	748	10	27	50	150	
075E2228SC3T	75	100	280S	127.0	2971	24.59	700	175	215	93.8	93.0	92.0	0.88	0.86	0.81	2.840	858	10	33	63	188	
090E2228MC3T	90	120	280M	147.0	2960	29.61	700	160	200	94.1	93.1	91.1	0.91	0.89	0.87	3.280	913	10	33	63	188	
110E2231SC3T	110	150	315S	184.0	2979	35.97	700	170	200	94.3	92.9	91.3	0.88	0.85	0.84	6.500	1010	12	33	63	188	
125E2231MC3T	125	170	315M	202.0	2982	40.83	700	185	225	94.5	93.2	91.2	0.91	0.88	0.84	8.700	1115	12	33	63	188	
132E2231MC3T	132	180	315M	214.0	2980	43.14	700	185	225	94.6	93.2	91.2	0.91	0.88	0.84	8.700	1115	12	33	63	188	
150E2231LC3T	150	201	315L	240.0	2980	49.03	700	185	225	94.7	93.3	91.3	0.92	0.88	0.84	10.01	1115	12	33	63	188	
160E2231LC3T	160	215	315L	260.0	2985	52.21	700	200	240	94.8	93.4	91.4	0.90	0.86	0.82	11.68	1190	12	33	63	188	
180E2231LC3T	180	240	315L	293.0	2888	60.71	700	200	240	94.9	93.5	91.4	0.90	0.86	0.82	14.36	1265	12	33	63	188	
200E2231LC3T	200	270	315L	325.0	2990	65.15	700	200	240	95.0	93.6	91.6	0.90	0.86	0.82	15.96	1450	12	33	63	188	
250E2235LC3T	250	335	355L	411.0	2982	81.66	700	170	220	95.0	94.5	92.7	0.89	0.84	0.75	17.60	1890	9	33	63	188	
315E2235LC3T	315	425	355L	518.0	2982	102.89	700	170	220	95.0	94.6	92.8	0.89	0.84	0.75	19.20	1940	9	33	63	188	
355E2235KC3T	355	475	355L/K	584.0	2982	115.95	700	170	250	95.0	94.6	93.0	0.89	0.87	0.82	22.40	2490	9	33	63	188	
375E2235KC3T	375	503	355L/K	617.0	2982	122.48	700	170	250	95.0	94.6	93.0	0.89	0.88	0.83	24.20	2635	9	33	63	188	
400E2235KC3T	400	536	355L/K	658.0	2982	130.65	700	170	250	95.0	94.6	93.0	0.89	0.88	0.83	26.00	2706	9	33	63	188	
450E2235KC3T	450	603	355L/K	732.0	2982	146.98	700	170	250	95.0	94.6	93.0	0.90	0.88	0.83	28.60	2848	9	33	63	188	
500E2235KC3T	500	670	355L/K	814.0	2982	163.31	700	170	250	95.0	94.7	93.1	0.90	0.88	0.83	31.30	2990	9	33	63	188	

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Energy Efficiency TEFC SC Motors - IE2 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE2 IV-Pole, conforms to IS 12615:2018,IS/IEC 60034-1:2004, IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3.

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E42063C3R	0.12	0.16	63	0.41	1380	0.08	550	200	250	59.1	58.0	56.0	0.69	0.56	0.42	0.0010	7	19	30	42	125	Please Contact nearest sales office
.18E42063C3R	0.18	0.25	63	0.60	1325	0.13	550	215	265	64.7	64.7	64.7	0.65	0.62	0.48	0.0016	8	19	30	42	125	
.25E42071C3R	0.25	0.33	71	0.75	1404	0.17	550	240	280	68.5	67.9	61.5	0.68	0.64	0.48	0.0024	10	14	20	42	125	
.37E42071C3R	0.37	0.50	71	1.0	1400	0.26	600	230	260	72.7	71.7	70.5	0.70	0.65	0.50	0.0047	11	14	20	42	125	
.55E42080C3R	0.55	0.75	80	1.5	1410	0.38	600	250	280	77.1	75.6	73.6	0.68	0.68	0.55	0.0073	17	14	20	42	125	
.75E42080C3R	0.75	1.0	80	1.8	1420	0.51	600	200	240	79.6	75.0	73.0	0.73	0.69	0.62	0.0072	18	14	20	42	125	
1.1E4290SC3R	1.1	1.5	90S	2.5	1415	0.76	600	250	290	81.4	81.0	79.0	0.75	0.68	0.52	0.012	24	14	20	42	125	
1.5E4290LC3R	1.5	2.0	90L	3.2	1405	1.04	600	270	300	82.8	82.0	81.3	0.79	0.70	0.57	0.016	30	14	20	42	125	
2.2E4210LC3R	2.2	3.0	100L	4.8	1430	1.50	700	220	260	84.3	84.3	83.3	0.76	0.75	0.63	0.021	37	14	16	33	100	
3.0E4210LC3R	3.0	4.0	100L	6.3	1430	2.04	700	240	290	85.5	85.0	82.4	0.77	0.70	0.60	0.023	42	14	16	33	100	
3.7E4211MC3R	3.7	5.0	112M	7.3	1435	2.51	700	250	290	86.3	85.5	84.9	0.82	0.77	0.67	0.053	52	7	16	33	100	
4.0E4211MC3R	4.0	5.5	112M	7.3	1430	2.72	700	220	260	86.6	85.0	84.0	0.88	0.85	0.80	0.090	52	7	16	33	100	
5.5E4213SC3R	5.5	7.5	132S	11.0	1455	3.68	700	220	260	87.7	86.7	85.0	0.79	0.76	0.68	0.060	67	7	16	33	100	
7.5E4213MC3R	7.5	10	132M	14.6	1450	5.04	700	230	280	88.7	88.0	87.9	0.81	0.79	0.75	0.088	80	7	16	33	100	
9.3E4216MC3R	9.3	12.5	160M	17.5	1452	6.24	700	220	250	89.3	88.8	88.0	0.83	0.81	0.72	0.141	125	7	22	42	125	
011E4216MC3R	11	15	160M	20.0	1460	7.34	700	200	250	89.8	89.8	89.8	0.85	0.83	0.74	0.208	150	7	22	42	125	
015E4216LC3R	15	20	160L	28.0	1463	9.99	700	190	230	90.6	89.8	88.8	0.82	0.78	0.74	0.286	170	7	22	42	125	
185E4218MC3R	18.5	25	180M	34.0	1460	12.34	700	240	270	91.2	90.5	90.0	0.83	0.80	0.72	0.460	210	9	22	42	125	
022E4218LC3R	22	30	180L	39.0	1470	14.58	700	220	260	91.6	90.9	90.8	0.86	0.84	0.77	0.480	250	9	22	42	125	
030E4220LC3T	30	40	200L	52.0	1466	19.93	700	210	250	92.3	91.7	91.0	0.87	0.84	0.77	1.600	268	9	27	50	150	
037E4222SC3T	37	50	225S	65.0	1473	24.47	700	220	260	92.7	92.2	91.6	0.85	0.84	0.78	1.440	290	7	27	50	150	
045E4222MC3T	45	60	225M	79.0	1470	29.82	700	170	225	93.1	92.5	91.0	0.85	0.84	0.79	1.600	368	9	27	50	150	
055E4225MC3T	55	75	250M	96.0	1483	36.12	700	170	210	93.5	93.2	92.4	0.85	0.84	0.76	2.240	770	11	27	50	150	
075E4228SC3T	75	100	280S	129.0	1484	49.23	700	190	230	94.0	93.6	92.2	0.86	0.82	0.76	4.200	869	9	33	63	188	
090E4228MC3T	90	120	280M	150.0	1480	59.23	700	220	260	94.2	94.1	93.4	0.89	0.87	0.82	5.320	941	9	33	63	188	
110E4231SC3T	110	150	315S	195.0	1486	72.10	700	200	250	94.5	93.0	91.3	0.83	0.81	0.75	11.700	1045	8	33	63	188	
125E4231MC3T	125	170	315M	221.0	1487	81.88	700	200	250	94.6	93.1	91.4	0.83	0.81	0.75	13.300	1205	8	33	63	188	
132E4231MC3T	132	180	315M	227.0	1487	86.46	700	200	250	94.7	94.0	93.5	0.85	0.83	0.79	14.000	1205	8	33	63	188	
150E4231LC3T	150	200	315L	259.0	1486	98.32	700	200	250	94.9	93.4	92.8	0.85	0.82	0.76	15.000	1265	8	33	63	188	
160E4231LC3T	160	215	315L	274.0	1486	104.87	700	200	250	94.9	93.8	93.0	0.86	0.85	0.83	16.000	1265	8	33	63	188	
200E4231LC3T	200	270	315L	346.0	1488	130.91	700	220	260	95.1	94.5	93.3	0.85	0.80	0.75	16.000	1430	8	33	63	188	
250E4235LC3T	250	335	355L	430.0	1490	163.42	700	200	250	95.1	94.0	93.0	0.85	0.82	0.76	16.180	1870	8	33	63	188	
315E4235KC3T	315	425	355L	542.0	1488	206.19	700	200	220	95.1	94.6	93.0	0.85	0.82	0.74	20.390	1870	8	33	63	188	
355E4235LC3T	355	475	355L	611.0	1488	232.37	700	220	250	95.1	94.5	93.1	0.85	0.82	0.75	25.700	1940	8	33	63	188	
375E4235LC3T	375	503	355L	645.0	1488	245.46	700	220	250	95.1	94.9	93.5	0.85	0.82	0.75	27.150	1964	8	33	63	188	
400E4235KC3T	400	536	355L/K	688.0	1488	261.83	700	210	250	95.1	94.6	93.2	0.85	0.82	0.73	30.600	2516	8	33	63	188	
450E4235KC3T	450	603	355L/K	774.0	1488	294.56	700	210	250	95.1	94.6	93.2	0.85	0.82	0.73	33.700	2658	8	33	63	188	
500E4235KC3T	500	670	355L/K	851.0	1488	327.28	700	210	240	95.1	94.6	93.2	0.86	0.83	0.74	36.800	2800	8	33	63	188	

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Energy Efficiency TEFC SC Motors - IE2 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE2 VI-Pole, conforms to IS 12615:2018,IS/IEC 60034-1:2004, IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp. Class T3.

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E62063C3R	0.12	0.16	63	0.73	860	0.14	600	160	200	50.6	49.6	48.1	0.45	0.40	0.31	0.0015	9	14	20	42	125	Please Contact nearest sales office
.18E62071C3R	0.18	0.25	71	0.63	915	0.19	600	160	200	56.6	55.6	45.2	0.70	0.58	0.41	0.0022	10	14	20	42	125	
.25E62071C3R	0.25	0.33	71	0.79	915	0.27	600	160	200	61.6	61.6	50.2	0.71	0.60	0.50	0.0031	11	14	20	42	125	
.37E62080C3R	0.37	0.50	80	1.2	900	0.40	600	170	200	67.6	67.6	64.5	0.63	0.56	0.43	0.0060	16	14	20	42	125	
.55E62080C3R	0.55	0.75	80	1.5	930	0.58	600	180	220	73.1	71.4	67.6	0.69	0.64	0.48	0.0080	18	14	20	42	125	
.75E6290SC3R	0.75	1.0	90S	2.0	925	0.79	600	190	240	75.9	71.5	68.7	0.69	0.62	0.55	0.0110	23	14	20	42	125	
1.1E6290LC3R	1.1	1.5	90L	2.9	918	1.17	600	180	220	78.1	74.4	73.6	0.68	0.61	0.49	0.0150	30	14	20	42	125	
1.5E6210LC3R	1.5	2.0	100L	3.6	945	1.55	600	210	250	79.8	78.2	75.3	0.73	0.61	0.48	0.0260	35	14	20	42	125	
2.2E6211MC3R	2.2	3.0	112M	5.1	950	2.26	700	200	240	81.8	81.8	80.5	0.74	0.69	0.55	0.0700	52	14	20	42	125	
3.0E6211MC3R	3.0	4.0	112M	6.9	950	3.08	700	190	240	83.3	82.8	81.8	0.72	0.66	0.55	0.0950	60	14	20	42	125	
3.7E6213SC3R	3.7	5.0	132S	8.0	949	3.80	700	200	240	84.3	82.0	81.4	0.76	0.74	0.70	0.1000	41	9	20	42	125	
4.0E6213SC3R	4.0	5.5	132S	8.8	955	4.08	700	190	230	84.6	84.0	83.5	0.75	0.69	0.58	0.1020	53	9	20	42	125	
5.5E6213MC3R	5.5	7.5	132M	11.7	960	5.58	700	190	230	86.0	85.4	82.6	0.76	0.70	0.59	0.1080	85	9	20	42	125	
7.5E6216MC3R	7.5	10	160M	15.4	965	7.57	700	200	240	87.2	86.7	83.5	0.78	0.71	0.61	0.2880	125	11	22	42	125	
9.3E6216LC3R	9.3	12.5	160L	19.5	968	9.36	700	210	250	88.1	87.5	86.1	0.75	0.71	0.65	0.3720	150	11	22	42	125	
011E6216LC3R	11	15	160L	21.4	962	11.14	700	200	240	88.7	87.7	87.0	0.81	0.78	0.62	0.640	160	11	22	42	125	
015E6218LC3R	15	20	180L	30.0	975	14.98	700	250	290	89.7	89.3	89.0	0.78	0.74	0.63	1.260	210	9	22	42	125	
185E6220LC3T	18.5	25	200L	35.0	970	18.58	700	170	210	90.4	90.0	87.6	0.81	0.78	0.62	1.260	276	9	27	50	150	
022E6220LC3T	22	30	200L	43.0	975	21.98	700	185	230	90.9	90.4	88.0	0.79	0.75	0.63	1.570	280	9	27	50	150	
030E6222MC3T	30	40	225M	54.0	980	29.82	700	220	260	91.7	91.0	88.5	0.84	0.80	0.68	1.600	409	11	27	50	150	
037E6225MC3T	37	50	250M	68.0	980	36.77	700	200	240	92.2	91.6	88.7	0.82	0.77	0.67	5.680	792	11	27	50	150	
045E6228SC3T	45	60	280S	82.0	989	44.32	700	210	240	92.7	91.6	88.7	0.82	0.80	0.70	7.920	891	11	33	63	188	
055E6228MC3T	55	75	280M	98.0	985	54.39	700	250	290	93.1	93.0	92.9	0.84	0.83	0.76	7.920	963	11	33	63	188	
075E6231SC3T	75	100	315S	140.0	993	73.56	700	220	250	93.7	91.6	91.4	0.80	0.73	0.62	17.900	965	15	33	63	188	
090E6231MC3T	90	120	315M	157.0	988	88.72	700	200	250	94.0	93.1	91.1	0.85	0.81	0.75	21.000	1051	15	33	63	188	
110E6231MC3T	110	150	315M	195.0	992	108.00	700	200	250	94.3	93.9	92.5	0.83	0.78	0.69	25.800	1155	15	33	63	188	
125E6231MC3T	125	170	315M	220.0	990	122.98	700	210	250	94.5	94.0	92.8	0.84	0.82	0.75	34.750	1221	15	33	63	188	
132E6231LC3T	132	180	315L	232.0	990	129.87	700	200	250	94.6	94.0	92.8	0.84	0.82	0.79	36.500	1221	15	33	63	188	
150E6235KC3T	150	201	355L	269.0	990	147.58	700	210	250	94.7	94.0	93.0	0.82	0.80	0.72	41.000	1693	9	33	63	188	
160E6235LC3T	160	215	355L	277.0	991	157.26	700	160	210	94.8	94.0	93.0	0.85	0.80	0.72	44.000	1693	9	33	63	188	
180E6235KC3T	180	240	355L	326.0	991	176.91	700	210	250	94.9	94.0	93.5	0.81	0.73	0.60	49.450	1693	9	33	63	188	
200E6235LC3T	200	270	355L	355.0	991	196.57	700	210	250	95.0	95.0	94.0	0.83	0.78	0.70	54.100	1728	9	33	63	188	
250E6235LC3T	250	335	355L	436.0	994	244.97	700	140	180	95.0	94.4	93.5	0.84	0.78	0.70	55.500	1917	9	33	63	188	
315E6235KC3T	315	425	355L/K	536.0	990	309.91	700	200	250	95.0	94.5	94.0	0.86	0.84	0.78	56.900	2563	9	33	63	188	
355E6235KC3T	355	475	355L/K	619.0	992	348.56	650	200	250	95.0	94.8	93.4	0.84	0.80	0.70	66.000	2717	9	33	63	188	
375E6235KC3T	375	503	355L/K	654.0	992	368.20	650	200	250	95.0	94.9	93.5	0.84	0.80	0.70	67.850	2764	9	33	63	188	
400E6235KC3T	400	536	355L/K	697.0	992	392.74	650	200	250	95.0	94.9	93.5	0.84	0.80	0.70	69.700	2930	9	33	63	188	

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.

2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Energy Efficiency TEFC SC Motors - IE2 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE2 VIII-Pole, conforms to IS 12615:2018,IS/IEC 60034-1:2004, IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E82071C3R	0.12	0.16	71	0.55	655	0.18	500	180	220	39.8	39.8	39.8	0.76	0.60	0.49	0.0050	9	14	30	63	188	Please Contact nearest sales office
.18E82080C3R	0.18	0.25	80	0.80	675	0.26	500	180	240	49.9	49.7	49.5	0.63	0.56	0.47	0.0070	18	14	30	63	188	
.25E82080C3R	0.25	0.33	80	1.15	660	0.37	500	180	230	50.6	46.6	39.6	0.54	0.50	0.38	0.0100	20	14	30	63	188	
.37E8290SC3R	0.37	0.50	90S	1.23	640	0.56	500	250	295	56.1	55.6	55.1	0.75	0.60	0.44	0.0120	25	14	30	63	188	
.55E8290LC3R	0.55	0.75	90L	1.90	695	0.77	500	190	230	61.7	61.7	61.7	0.65	0.52	0.40	0.0170	31	14	30	63	188	
.75E8210LC3R	0.75	1.00	100L	2.4	700	1.04	500	180	220	66.2	66.0	64.0	0.65	0.55	0.46	0.0200	37	14	20	42	125	
1.1E8210LC3R	1.1	1.5	100L	3.0	700	1.53	500	180	220	70.8	70.8	70.0	0.72	0.58	0.46	0.0260	40	14	20	42	125	
1.5E8211MC3R	1.5	2.0	112M	3.9	690	2.12	500	180	220	74.1	73.5	71.5	0.72	0.65	0.55	0.0440	47	14	20	42	125	
2.2E8213SC3R	2.2	3.0	132S	6.0	700	3.06	500	180	230	77.6	77.6	77.0	0.65	0.57	0.46	0.0660	66	9	20	42	125	
3.0E8213MC3R	3.0	4.0	132M	7.4	715	4.09	500	180	230	80.0	79.5	78.0	0.71	0.64	0.50	0.0700	80	9	20	42	125	
3.7E8213MC3R	3.7	5.0	160M	8.1	710	5.08	500	250	280	81.4	81.0	80.5	0.78	0.74	0.65	0.2400	95	14	20	42	125	
4.0E8216MC3R	4.0	5.5	160M	8.9	711	5.48	500	250	280	81.9	81.5	81.0	0.76	0.72	0.63	0.2600	115	14	20	42	125	
5.5E8216MC3R	5.5	7.5	160M	13.0	720	7.44	500	180	230	83.8	82.5	79.5	0.70	0.68	0.63	0.2880	130	14	22	42	125	
7.5E8216LC3R	7.5	10	160L	17.0	720	10.1	500	180	230	85.3	84.0	81.0	0.72	0.70	0.65	0.5700	150	14	22	42	125	
9.3E8218LC3R	9.3	12.5	180L	21.0	720	12.6	500	190	240	86.3	85.3	83.8	0.71	0.63	0.52	0.6400	210	14	22	42	125	
011E8218LC3R	11	15	180L	23.8	725	14.8	500	190	240	86.9	85.9	84.6	0.72	0.64	0.53	1.290	230	14	22	42	125	
015E8220LC3T	15	20	200L	33.0	725	20.2	500	190	240	88.0	87.4	85.0	0.72	0.64	0.53	1.780	258	9	27	50	150	
185E8222SC3T	18.5	25	225S	38.0	731	24.6	500	230	260	88.6	87.6	86.1	0.76	0.72	0.63	3.200	345	11	27	50	150	
022E8222MC3T	22	30	225M	45.0	731	29.3	500	230	260	89.1	88.1	86.6	0.76	0.72	0.63	3.200	375	11	27	50	150	
030E8225MC3T	30	40	250M	60.0	735	39.8	500	250	280	89.8	89.0	87.7	0.78	0.74	0.65	6.900	831	11	27	50	150	
037E8228SC3T	37	50	280S	75.0	740	48.7	500	260	290	90.3	90.0	89.0	0.76	0.74	0.63	7.640	935	11	33	63	188	
045E8228MC3T	45	60	280M	86.0	735	59.6	500	230	260	90.7	89.7	87.7	0.80	0.76	0.69	7.820	1,029	11	33	63	188	
055E8231SC3T	55	75	315S	104.0	740	72.4	500	180	230	91.0	91.0	90.0	0.81	0.79	0.73	22.700	1,040	15	33	63	188	
075E8231MC3T	75	100	315M	144.0	740	98.7	500	160	210	91.6	90.6	89.6	0.79	0.77	0.69	34.300	1,177	15	33	63	188	
090E8231LC3T	90	120	315L	173.0	740	118.5	500	160	210	91.9	91.0	89.6	0.79	0.77	0.69	34.300	1221	15	33	63	188	
110E8231LC3T	110	150	315L	210.0	740	144.8	500	180	240	92.3	92.3	90.3	0.78	0.74	0.66	50.600	1340	15	33	63	188	
125E8231LC3T	125	170	315L	241.0	740	164.5	500	190	250	92.5	92.0	91.0	0.78	0.73	0.65	53.100	1435	15	33	63	188	
132E8231LC3T	132	180	315L	235.0	740	173.7	500	170	210	92.6	91.6	90.6	0.84	0.80	0.71	55.600	1507	15	33	63	188	
150E8235LC3T	150	201	355L	300.0	745	196.1	500	150	210	92.9	92.0	91.0	0.75	0.70	0.56	59.600	1888	9	33	63	188	
160E8235LC3T	160	215	355L	297.0	745	209.2	500	140	210	93.0	92.0	90.5	0.81	0.67	0.63	64.000	1888	9	33	63	188	
180E8235LC3T	180	240	355L	344.0	745	235.3	500	140	210	93.3	92.3	91.8	0.78	0.66	0.55	68.000	1888	9	33	63	188	
200E8235LC3T	200	270	355L	374.0	745	261.5	500	140	210	93.5	93.1	91.9	0.80	0.75	0.66	72.000	2208	9	33	63	188	
250E8235KC3T	250	335	355L/K	470.0	745	326.8	500	140	205	93.5	93.1	91.9	0.79	0.77	0.69	76.000	2895	9	33	63	188	
315E8235KC3T	315	425	355L/K	586.0	745	411.8	550	170	210	93.5	93.1	91.9	0.80	0.75	0.62	80.000	3025	9	33	63	188	

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2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Energy Efficiency TEFC SC Motors - IE3 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE3 2-Pole, conforms to IS 12615:2018 ,IS/IEC 60034-1:2004, IEC 60034-1:2010 and Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E23063C3T	0.12	0.25	63	0.4	2770	0.04	6.5	200	250	60.8	60.0	56.7	0.70	0.64	0.55	0.0009	7	10	20	42	125	0.095
.18E23063C3T	0.18	0.25	63	0.5	2790	0.06	6.5	200	250	65.9	65.0	61.4	0.72	0.64	0.55	0.0009	11	10	20	42	125	0.095
.25E23063C3T	0.25	0.33	63	0.7	2800	0.09	6.5	200	250	69.7	68.9	65.6	0.73	0.70	0.63	0.0015	11	10	20	42	125	0.11
.37E23071C3T	0.37	0.50	71	1.0	2810	0.13	7.0	200	250	73.8	73.0	69.7	0.72	0.70	0.64	0.0018	12	10	20	42	125	0.18
.55E23071C3T	0.55	0.75	71	1.3	2810	0.19	7.0	220	295	77.8	77.0	73.7	0.78	0.73	0.65	0.00252	14	10	20	42	125	0.22
.75E23080C3T	0.75	1.0	80	1.5	2850	0.26	7.0	225	275	80.7	79.5	76.6	0.86	0.75	0.69	0.00432	17	10	20	42	125	0.35
1.1E23080C3T	1.1	1.5	80	2.4	2845	0.38	7.0	225	275	82.7	81.5	79.4	0.78	0.76	0.72	0.00432	18	10	20	42	125	0.45
1.5E2390SC3R	1.5	2.0	90S	3.1	2830	0.52	7.0	230	275	84.2	83.0	80.9	0.81	0.79	0.74	0.00876	25	10	20	42	125	0.55
2.2E2390LC3R	2.2	3.0	90L	4.2	2870	0.75	7.7	225	275	85.9	84.5	82.6	0.85	0.81	0.73	0.01068	29	10	20	42	125	0.75
3E2310LC3R	3.0	4.0	100L	5.8	2865	1.02	7.7	250	290	87.1	84.5	82.6	0.82	0.81	0.73	0.0200		8	16	33	100	0.8
3.7E2310LC3R	3.7	5.0	100L	7.1	2865	1.26	7.7	250	290	87.8	86.5	84.5	0.83	0.80	0.74	0.0264	48	8	16	33	100	1.4
4E2310LC3R	4.0	5.5	112M	7.7	2860	1.36	7.7	250	290	88.1	86.5	84.5	0.82	0.80	0.74	0.0305		8	16	33	100	1.5
5.5E2313SC3R	5.5	7.5	132S	10.2	2930	1.83	7.7	225	265	89.2	88.5	85.9	0.84	0.80	0.73	0.0624	73	8	16	33	100	2.2
7.5E2313SC3R	7.5	10.0	132S	13.6	2945	2.48	7.7	250	290	90.1	89.1	86.8	0.85	0.82	0.73	0.0816	83	8	16	33	100	3.1
9.3E2316MC3R	9.3	12.5	160M	16.4	2945	3.08	7.7	250	290	90.7	90.1	87.6	0.87	0.83	0.74	0.096	122	10	22	42	125	4.2
011E2316MC3R	11	15.0	160M	19	2945	3.64	7.7	250	290	91.2	90.5	87.9	0.88	0.84	0.75	0.204	131	10	22	42	125	5.4
015E2316MC3R	15	20.0	160M	25.8	2950	4.95	7.7	250	295	91.9	91.2	88.6	0.88	0.85	0.76	0.264	121	10	22	42	125	7.9
185E2316LC3R	18.5	25.0	160L	32.0	2945	6.12	7.7	250	290	92.4	91.7	89.4	0.87	0.85	0.76	0.336	141	10	22	42	125	9.2
022E2318MC3R	22	30.0	180M	36	2945	7.28	7.7	225	255	92.7	92.0	90.3	0.91	0.86	0.77	0.504	188	10	22	42	125	11.1
030E2320LC3T	30	40.0	200L	50.3	2955	9.89	7.7	250	280	93.3	92.5	91.5	0.89	0.87	0.76	0.768	340	12	27	50	150	16.8
037E2320LC3T	37	50.0	200L	60.4	2955	12.20	7.7	220	260	93.7	93.2	91.9	0.91	0.89	0.83	1.02	370	12	27	50	150	20.1
045E2322MC3T	45	60.0	225M	73	2965	14.78	7.7	220	265	94.0	93.8	92.3	0.91	0.87	0.78	1.092	510	12	27	50	150	26.5
055E2325MC3T	55	75.0	250M	90	2970	18.04	7.7	200	240	94.3	93.5	92.7	0.90	0.87	0.78	2.16	770	12	27	50	150	30.5
075E2328SC3T	75	100	280S	121	2970	24.60	7.7	195	255	94.7	94.0	93.1	0.91	0.86	0.77	7.956	957	15	33	63	188	38.9
090E2328MC3T	90	120	280M	145	2980	29.42	7.7	190	240	95.0	94.3	93.3	0.91	0.88	0.79	9.816	957	15	33	63	188	42.45
110E2331SC3T	110	150	315S	187	2980	35.95	7.7	195	250	95.2	94.4	93.8	0.86	0.84	0.79	13.86	1075	15	33	63	188	54.2
125E2331MC3T	125	170	315M	201	2975	40.92	7.7	190	245	95.3	94.5	93.9	0.91	0.88	0.79	15.24	1144	15	33	63	188	61.8
132E2331MC3T	132	180	315M	212	2980	43.14	7.7	180	235	95.4	94.6	94.1	0.91	0.88	0.79	16.668	1166	15	33	63	188	65.4
160E2331LC3T	160	215	315L	262	2985	52.21	7.7	185	240	95.6	95.0	94.3	0.89	0.88	0.79	17.16	1295	15	33	63	188	82.9
180E2331LC3T	180	240	315L	288	2985	58.73	7.7	185	240	95.7	94.9	94.4	0.91	0.88	0.79	19.152	1330	15	33	63	188	94.1
200E2331LC3T	200	270	315L	326	2985	65.26	7.7	185	240	95.8	95.1	94.5	0.89	0.88	0.80	22.644	1408	15	33	63	188	103
250E2335LC3T	250	335	355M	403	2985	81.57	7.7	185	240	95.8	95.1	95.5	0.90	0.88	0.79	28.08	2107	15	33	63	188	129
315E2335LC3T	315	430	355L	514	2985	102.78	7.7	180	240	95.8	95.1	94.5	0.89	0.89	0.80	29.7	2272	15	33	63	188	165
355E2335LC3T	355	475	355L/K	573	2985	115.84	7.7	185	245	95.8	95.1	94.5	0.90	0.89	0.78	32.67	-	15	33	63	188	185
375E2335LC3T	375	500	355L/K	605	2985	122.36	7.7	180	240	95.8	95.0	94.5	0.90	0.89	0.78	35.94	-	15	33	63	188	196
400E2335LC3T	400	535	355L/K	645	2987	130.43	7.7	180	240	95.8	95.0	94.5	0.90	0.89	0.80	39.53	-	15	33	63	188	216
450E2335LC3T	450	600	355L/K	734	2987	146.74	7.7	185	245	95.8	95.1	94.5	0.89	0.88	0.81	43.48	-	15	33	63	188	245
500E2335LC3T	500	670	355L/K	807	2987	163.04	7.7	180	240	95.8	95.1	94.4	0.90	0.88	0.80	47.83	-	15	33	63	188	273

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2) All frames can be offered with terminal box on TOP / LHS/RHS on request.

Energy Efficiency TEFC SC Motors - IE3 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE3 4-Pole, conforms to IS 12615:2018 ,IS/IEC 60034-1:2004, IEC 60034-1:2010 and Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E43063C3T	0.12	0.16	63	0.37	1360	0.09	6.0	200	250	64.8	64.0	60.7	0.69	0.64	0.55	0.0014	10	15	30	63	188	0.31
.18E43063C3T	0.18	0.25	63	0.53	1360	0.13	6.0	200	250	69.9	69.1	65.8	0.68	0.64	0.55	0.0014	10	15	30	63	188	0.46
.25E43071C3T	0.25	0.35	71	0.74	1400	0.17	6.0	200	260	73.5	72.7	69.4	0.64	0.62	0.57	0.0034	13	10	20	42	125	0.61
.37E43071C3T	0.37	0.5	71	1.0	1400	0.26	6.5	245	295	77.3	76.5	73.2	0.70	0.68	0.65	0.00408	14	10	20	42	125	0.94
.55E43080C3T	0.55	0.75	80	1.2	1410	0.38	6.5	245	300	80.8	79.8	76.7	0.79	0.75	0.62	0.00924	19	10	20	42	125	1.42
.75E43080C3T	0.75	1.0	80	1.7	1415	0.52	6.5	235	295	82.5	81.7	80.8	0.75	0.71	0.63	0.01032	20	10	20	42	125	1.92
1.1E4390SC3R	1.1	1.5	90S	2.4	1415	0.76	6.5	235	300	84.1	83.3	82.5	0.77	0.74	0.65	0.0168	26	10	20	42	125	2.8
1.5E4390LC3R	1.5	2.0	90L	3.2	1420	1.03	6.5	240	295	85.3	84.0	83.1	0.77	0.76	0.67	0.018	30	10	20	42	125	3.8
2.2E4310LC3R	2.2	3.0	100L	4.6	1440	1.49	7.5	245	285	86.7	85.9	84.5	0.77	0.75	0.66	0.0348	39	8	16	33	100	5.5
3E4310LC3R	3.0	4.00	100L	0.1	1435	2.04	7.5	245	285	87.7	85.9	84.5	87.0	86.0	0.76	0.045		8	16	33	100	6.5
3.7E4311MC3R	3.7	5.0	112M	7.2	1445	2.49	7.5	245	285	88.4	87.6	86.8	0.81	0.76	0.67	0.0684	61	8	16	33	100	8.5
4E4311MC3R	4.0	5.5	112M	7.9	1450	2.69	7.5	245	285	88.6	87.5	86.5	0.80	0.78	0.72	0.095		8	16	33	100	9.5
5.5E4313SC3R	5.5	7.5	132S	11	1460	3.67	7.5	235	295	89.6	88.8	87.9	0.78	0.77	0.68	0.1116	95	8	16	33	100	12.8
7.5E4313MC3R	7.5	10.0	132M	14.4	1460	5.00	7.5	195	255	90.4	89.6	88.8	0.80	0.78	0.69	0.144	103	8	16	33	100	18.2
9.3E4316MC3R	9.3	12.5	160M	16.7	1460	6.20	7.5	195	255	91.0	90.0	89.1	0.85	0.83	0.77	0.204	135	10	22	42	125	22.7
011E4316MC3R	11	15.0	160M	20.2	1460	7.34	7.5	215	280	91.4	90.6	89.5	0.83	0.81	0.72	0.24	160	10	22	42	125	25.4
015E4316LC3R	15	20.0	160L	27.0	1460	10.01	7.5	220	280	92.1	91.3	90.4	0.84	0.82	0.73	0.312	180	10	22	42	125	38.5
185E4318MC3R	18.5	25.0	180M	33.1	1470	12.26	7.5	220	280	92.6	91.8	90.7	0.84	0.83	0.74	0.792	215	10	22	42	125	45.3
022E4318LC3R	22	30.0	180L	38.7	1470	14.58	7.5	215	275	93.0	92.2	91.2	0.85	0.81	0.72	1.008	260	10	22	42	125	52
030E4320LC3T	30	40.0	200L	52	1475	19.81	7.5	235	285	93.6	92.8	91.5	0.85	0.81	0.72	1.44	295	12	27	50	150	72
037E4322SC3T	37	50.0	225S	65.3	1475	24.43	7.5	225	270	93.9	93.1	92.1	0.84	0.82	0.73	1.8	320	12	27	50	150	91
045E4322MC3T	45	60.0	225M	79.1	1480	29.61	7.5	225	290	94.2	93.4	92.4	0.84	0.82	0.73	2.04	405	12	27	50	150	112
055E4325MC3T	55	75.0	250M	96.3	1480	36.20	7.5	215	280	94.6	93.8	92.5	0.84	0.83	0.74	3.84	792	12	27	50	150	135
075E4328SC3T	75	100	280S	129	1485	49.19	7.7	215	280	95.0	94.2	92.7	0.85	0.83	0.74	8.64	979	15	33	63	188	185
090E4328MC3T	90	120	280M	153	1485	59.03	7.7	220	280	95.2	94.4	93.2	0.86	0.84	0.75	9.96	979	15	33	63	188	223
110E4331SC3T	110	150	315S	187	1485	72.15	7.7	200	260	95.4	94.6	93.4	0.86	0.83	0.74	13.92	1078	15	33	63	188	267
125E4331MC3T	125	170	315M	212	1485	81.99	7.7	195	250	95.5	94.7	93.5	0.86	0.83	0.74	15.12	1177	15	33	63	188	304
132E4331MC3T	132	180	315M	221	1485	86.58	7.7	195	250	95.6	94.8	93.6	0.87	0.84	0.75	16.8	1199	15	33	63	188	329
160E4331LC3T	160	215	315L	270	1490	104.59	7.7	220	275	95.8	95.0	93.8	0.86	0.85	0.76	27.9	1315	15	33	63	188	391
180E4331LC3T	180	240	315L	304	1485	118.06	7.7	220	275	95.9	95.1	93.9	0.86	0.85	0.76	28.8	1375	15	33	63	188	421
200E4331LC3T	200	270	315L	341	1485	131.18	7.7	200	255	96.0	95.2	94.1	0.85	0.85	0.76	30.7	1435	15	33	63	188	483
250E4335MC3T	250	340	355M	416	1485	163.97	7.7	195	250	96.0	95.2	94.3	0.87	0.85	0.76	38.1	1988	15	33	63	188	584
315E4335LC3T	315	430	355L	519	1485	206.61	7.7	195	245	96.0	95.2	94.4	0.88	0.86	0.77	48.3	2248	15	33	63	188	741
355B4335LC3T	355	475	355L/K	585	1487	232.53	7.7	210	250	96.0	95.1	94.5	0.88	0.86	0.78	53.13	-	15	33	63	188	851
375B4335LC3T	375	500	355L/K	611	1487	245.63	7.7	210	250	96.0	95.0	94.5	0.89	0.86	0.78	58.44	-	15	33	63	188	904
400B4335LC3T	400	535	355L/K	659	1487	262.00	7.7	210	250	96.0	95.0	94.5	0.88	0.85	0.80	64.28	-	15	33	63	188	994
450B4335LC3T	450	600	355L/K	733	1487	294.75	7.7	210	250	96.0	95.1	94.5	0.89	0.86	0.81	70.71	-	15	33	63	188	1101
500B4335LC3T	500	670	355L/K	823	1490	326.85	7.7	210	245	96.0	95.2	94.4	0.88	0.86	0.80	77.78	-	15	33	63	188	1208

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Energy Efficiency TEFC SC Motors - IE3 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE3 6-Pole, conforms to IS 12615:2018 ,IS/IEC 60034-1:2004, IEC 60034-1:2010 and Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E63063C3T	0.12	0.16	63	0.53	880	0.13	6.5	190	230	57.7	56.9	53.6	0.55	0.51	0.42	0.0041	10	10	20	42	125	0.71
.18E63071C3T	0.18	0.25	71	0.68	890	0.20	6.5	190	230	63.9	63.1	59.8	0.58	0.54	0.45	0.0044	13	10	20	42	125	1.1
.25E63071C3T	0.25	0.35	71	0.84	900	0.27	6.5	190	230	68.6	67.8	64.5	0.60	0.56	0.47	0.0044	13	10	20	42	125	1.5
.37E63080C3T	0.37	0.5	80	1.08	950	0.38	6.5	190	230	73.5	72.7	70.2	0.65	0.61	0.52	0.0084	20	10	20	42	125	2.2
.55E63080C3T	0.55	0.75	80	1.5	935	0.57	6.5	195	250	77.2	76.4	73.9	0.67	0.63	0.54	0.01116	22	10	20	42	125	3.1
.75E6390SC3R	0.75	1.0	90S	1.9	935	0.78	6.5	195	250	78.9	78.1	75.6	0.68	0.64	0.55	0.0192	26	10	20	42	125	4.2
1.1E6390LC3R	1.1	1.5	90L	2.8	940	1.14	6.5	200	260	81.0	80.2	78.9	0.67	0.63	0.54	0.024	30	10	20	42	125	6.5
1.5E6310LC3R	1.5	2.0	100L	3.8	940	1.55	6.5	200	250	82.5	81.7	80.1	0.67	0.63	0.54	0.0384	44	10	20	42	125	9.1
2.2E6311MC3R	2.2	3.0	112M	5.0	960	2.23	7.5	190	240	84.3	83.5	82.8	0.73	0.69	0.60	0.0864	50	10	20	42	125	12.5
3E6313SC3R	3.0	4.0	132S	6.8	960	3.04	7.5	190	240	85.6	84.8	83.0	0.72	0.68	0.59	0.091		10	20	42	125	14
3.7E6313SC3R	3.7	5.0	132S	7.8	970	3.72	7.5	195	245	86.5	85.7	85.0	0.76	0.72	0.63	0.156	78	10	20	42	125	22.5
4E6313MC3R	4.0	5.5	132M	8.9	950	4.10	7.5	195	245	86.8	86.0	85.0	0.72	0.68	0.59	0.185		10	20	42	125	24
5.5E6313MC3R	5.5	7.5	132M	11.6	960	5.58	7.5	190	240	88.0	87.2	86.8	0.75	0.71	0.62	0.204	92	10	20	42	125	32.1
7.5E6316MC3R	7.5	10.0	160M	16.3	970	7.53	7.5	215	280	89.1	88.3	87.6	0.72	0.68	0.59	0.516	135	10	22	42	125	45.3
9.3E6316LC3R	9.3	12.5	160L	17.2	975	9.29	7.5	215	280	89.50	88.7	88.4	0.84	0.80	0.71	0.696	165	10	22	42	125	53.9
011E6316LC3R	11	15.0	160L	21.5	965	11.10	7.5	195	255	90.3	89.5	89.7	0.79	0.75	0.66	0.792	180	10	22	42	125	65.1
015E6318LC3R	15	20.0	180L	27.9	975	14.98	7.5	220	290	91.2	90.4	90.2	0.82	0.78	0.69	1.2	235	10	22	42	125	90.1
185E6320LC3T	18.5	25.0	200L	33.4	980	18.39	7.5	210	275	91.7	90.9	90.8	0.84	0.80	0.71	1.68	305	12	27	50	150	112
022E6320LC3T	22	30.0	200L	40.5	980	21.87	7.5	220	285	92.2	91.4	91.3	0.82	0.78	0.69	1.92	310	12	27	50	150	128
030E6322MC3T	30	40.0	225M	51.6	985	29.66	7.5	250	290	92.9	92.1	92.0	0.87	0.83	0.74	2.76	450	12	27	50	150	183
037E6325MC3T	37	50.0	250M	65	985	36.59	7.5	220	285	93.3	92.5	92.2	0.85	0.81	0.72	4.32	814	12	27	50	150	222
045E6328SC3T	45	60.0	280S	79.5	985	44.50	7.5	225	290	93.7	92.9	92.3	0.84	0.80	0.71	9.6	1045	15	33	63	188	262
055E6328MC3T	55	75.0	280M	96.8	985	54.39	7.5	215	280	94.1	93.3	92.8	0.84	0.80	0.71	11.88	1045	15	33	63	188	315
075E6331SC3T	75	100	315S	128	985	74.16	7.7	215	280	94.6	93.8	93.1	0.86	0.82	0.73	16.92	1034	15	33	63	188	405
090E6331MC3T	90	120	315M	155	985	88.99	7.7	195	255	94.9	94.1	93.5	0.85	0.81	0.72	20.4	1098	15	33	63	188	475
110E6331MC3T	110	150	315M	187	990	108.22	7.7	200	260	95.1	94.3	93.7	0.86	0.82	0.73	22.8	1298	15	33	63	188	595
125E6331LC3T	125	170	315L	212	990	122.98	7.7	200	260	95.2	94.4	93.8	0.86	0.82	0.73	24	1325	15	33	63	188	674
132E6331LC3T	132	180	315L	226	990	129.87	7.7	195	255	95.4	94.6	93.9	0.85	0.82	0.73	25.08	1340	15	33	63	188	780
160E6335LC3T	160	215	355L	271	990	157.41	7.7	200	260	95.6	94.8	94.1	0.86	0.81	0.72	30	1870	15	33	63	188	920
180E6335LC3T	180	240	355L	304	990	177.09	7.7	200	260	95.7	94.9	94.2	0.86	0.82	0.73	35	1988	15	33	63	188	1010
200E6335LC3T	200	270	355L	342	990	196.77	7.7	200	260	95.8	95.0	94.3	0.85	0.81	0.72	37.5	2107	15	33	63	188	1185
250E6335LC3T	250	340	355L	422	990	245.96	7.7	195	255	95.8	95.0	94.4	0.86	0.82	0.73	46.9	2344	15	33	63	188	1490
315B6335LC3T	315	430	355L	532	990	309.91	7.7	195	255	95.8	94.9	94.4	0.86	0.82	0.73	59.1	-	15	33	63	188	1885
355B6335LC3T	355	475	355L/K	607	992	348.56	7.7	190	250	95.8	94.9	94.3	0.85	0.81	0.72	65.01	-	15	33	63	188	2135
375B6335LC3T	375	500	355L/K	648	992	368.20	7.7	190	250	95.8	95.0	94.5	0.84	0.80	0.71	71.51	-	15	33	63	188	2230
400B6335LC3T	400	535	355L/K	675	992	392.74	7.7	190	250	95.8	95.0	94.3	0.86	0.82	0.73	78.66	-	15	33	63	188	2390

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Energy Efficiency TEFC SC Motors - IE3 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE3 8-Pole, conforms to IS 12615:2018 ,IS/IEC 60034-1:2004, IEC 60034-1:2010 and Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E83071C3T	0.12	0.16	71	0.6	645	0.18	5.5	180	220	50.7	49.9	46.6	0.52	0.48	0.39	0.00492	13	15	30	63	188	1.15
.18E83080C3T	0.18	0.25	80	0.8	650	0.27	5.5	180	220	58.7	57.9	54.6	0.55	0.51	0.42	0.00528	18	15	30	63	188	1.75
.25E83080C3T	0.25	0.35	80	1.0	660	0.37	5.5	180	225	64.1	63.3	60.0	0.57	0.53	0.44	0.00528	20	15	30	63	188	2.6
.37E8390SC3R	0.37	0.5	90S	1.2	670	0.54	6.0	180	225	69.3	68.5	65.2	0.60	0.56	0.47	0.01008	25	15	30	63	188	3.5
.55E8390LC3R	0.55	0.75	90L	1.7	680	0.79	6.5	180	220	73.0	72.2	68.9	0.62	0.58	0.49	0.0134	32	15	30	63	188	5.1
.75E8310LC3R	0.75	1.0	100L	2.2	685	1.07	6.5	180	230	75.0	74.2	71.7	0.64	0.60	0.51	0.023	43	10	20	42	125	7.4
1.1E8310LC3R	1.1	1.5	100L	3.0	685	1.56	6.5	190	235	77.7	76.9	74.4	0.66	0.62	0.53	0.0288	44	10	20	42	125	10.6
1.5E8311MC3R	1.5	2.0	112M	3.8	690	2.12	6.5	180	225	79.7	78.9	76.4	0.69	0.65	0.56	0.046	46	10	20	42	125	14.2
2.2E8313SC3R	2.2	3.0	132S	5.3	705	3.04	7.0	180	230	81.9	81.1	78.6	0.71	0.67	0.58	0.104	103.5	10	20	42	125	21.9
3E8313MC3R	3.0	4.0	132M	7.4	705	4.14	7.0	180	230	83.5	82.7	80.2	0.68	0.64	0.55	0.150		10	20	42	125	25
3.7E8316MC3R	3.7	5.0	160M	8.5	720	5.01	7.0	220	265	84.5	83.7	81.2	0.72	0.68	0.59	0.187	115	10	22	42	125	36.4
4E8316MC3R	4.0	5.5	160M	9.9	720	5.41	7.0	190	240	84.8	84.0	81.5	0.66	0.62	0.53	0.200		10	22	42	125	40
5.5E8316MC3R	5.5	7.5	160M	12.0	720	7.44	7.0	190	240	86.2	85.4	82.9	0.74	0.70	0.61	0.245	160	10	22	42	125	54
7.5E8316LC3R	7.5	10.0	160L	16.4	720	10.15	7.0	190	245	87.3	86.5	84.0	0.73	0.69	0.60	0.619	200	10	22	42	125	73.4
9.3E8318LC3R	9.3	12.5	180L	19.6	720	12.58	7.0	190	240	88.1	87.3	84.8	0.75	0.71	0.62	0.835	220	10	22	42	125	90.1
011E8318LC3R	11	15.0	180L	23.0	725	14.78	7.0	200	245	88.6	87.8	85.3	0.75	0.71	0.62	0.95	265	10	22	42	125	105
015E8320LC3T	15	20.0	200L	30.6	730	20.01	7.0	180	220	89.6	88.8	86.3	0.76	0.72	0.63	1.44	365	12	27	50	150	142
185E8322SC3T	18.5	25.0	225S	37.6	730	24.68	7.0	190	230	90.1	89.3	87.9	0.76	0.72	0.63	2.016	370	12	27	50	150	175
022E8322MC3T	22	30.0	225M	43.9	730	29.35	7.0	205	245	90.6	89.8	88.4	0.77	0.73	0.64	2.304	540	12	27	50	150	202
030E8325MC3T	30	40.0	250M	57.9	730	40.03	7.0	210	250	91.3	90.5	89.1	0.79	0.75	0.66	3.312	858	12	27	50	150	303
037E8328SC3T	37	50.0	280S	71.0	730	49.37	7.0	190	235	91.8	91.0	89.6	0.79	0.75	0.66	5.184	1100	15	33	63	188	351
045E8328MC3T	45	60.0	280M	85.9	735	59.63	7.0	200	245	92.2	91.4	90.0	0.79	0.75	0.66	11.52	1100	15	33	63	188	458
055E8331SC3T	55	75.0	315S	103.4	735	72.88	7.0	210	240	92.5	91.7	90.3	0.80	0.76	0.67	14.26	1034	15	33	63	188	559
075E8331MC3T	75	100	315M	138	735	99.39	7.0	200	240	93.1	92.3	90.9	0.81	0.77	0.68	20.3	1100	15	33	63	188	751
090E8331LC3T	90	120	315L	170	735	119.27	7.0	180	220	93.4	92.6	91.2	0.79	0.75	0.66	24.48	1298	15	33	63	188	950
110E8331LC3T	110	150	315L	202	735	145.77	7.0	180	225	93.7	92.9	91.8	0.81	0.77	0.68	27.36	1342	15	33	63	188	1115
125E8331LC3T	125	170	315L	231	740	164.53	7.0	180	225	94.0	93.2	92.1	0.80	0.76	0.67	28.8	1430	15	33	63	188	1253
132E8331LC3T	132	180	315L	240	740	173.74	7.0	200	240	94.3	93.5	92.4	0.81	0.77	0.68	30.1	1480	15	33	63	188	1328
160E8335LC3T	160	215	355L	290	740	210.59	7.0	185	230	94.6	93.8	92.7	0.81	0.77	0.68	36	1988	15	33	63	188	1607
180E8335LC3T	180	240	355L	331	740	236.92	7.0	185	230	94.6	93.8	92.7	0.80	0.76	0.67	42	2470	15	33	63	188	1803
200E8335LC3T	200	270	355L	363	740	263.24	7.0	185	230	94.6	93.8	92.7	0.81	0.77	0.68	45	2670	15	33	63	188	2003
250E8335LC3T	250	340	355L/K	454	740	329.05	7.0	180	225	94.6	93.8	92.7	0.81	0.77	0.68	20.3		15	33	63	188	2459
315E8335LC3T	315	430	355L/K	579	740	414.61	7.0	185	235	94.6	93.8	92.7	0.80	0.76	0.67	24.48		15	33	63	188	3059

Note : 1) Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances. 132 frame to 355 frame Cast iron frame.

2) All frames can be offered with terminal box on TOP / LHS/RHS on request.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Increased safety - DCCA Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE3 conforms to IS 12615:2018,IS/IEC 60034-1:2004, IEC 60034-1:2010,Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
355E2335KC3T	355	475	355L/K	586.0	2981	115.99	770	170	250	95.8	95.4	93.8	0.88	0.86	0.81	22.40	2040	9	33	63	188	Please Contact nearest Sales office
375E2335KC3T	375	503	355L/K	619.0	2981	122.53	770	170	250	95.8	95.4	93.8	0.88	0.87	0.82	24.20	2100	9	33	63	188	
400E2335KC3T	400	536	355L/K	660.0	2981	130.69	770	170	250	95.8	95.4	93.8	0.88	0.87	0.82	26.00	2160	9	35	63	188	
450E2335KC3T	450	603	355L/K	734.0	2982	146.98	770	170	250	95.8	95.4	93.8	0.89	0.87	0.82	28.60	2280	9	35	63	188	
500E2335KC3T	500	670	355L/K	816.0	2983	163.26	770	170	250	95.8	95.5	94.0	0.89	0.87	0.82	31.30	2380	9	35	63	188	

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
400E4335KC3T	400	536	355L/K	690.0	1489	261.65	770	210	250	96.0	95.5	94.1	0.84	0.82	0.73	30.60	2160	8	33	63	188	Please Contact nearest Sales office
450E4335KC3T	450	603	355L/K	776.0	1489	294.36	770	210	250	96.0	95.5	94.1	0.84	0.82	0.73	33.70	2270	8	33	63	188	
500E4335KC3T	500	670	355L/K	843.0	1489	327.07	770	210	240	96.0	95.5	94.1	0.86	0.83	0.74	36.80	2380	8	33	63	188	

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
315E6335KC3T	315	425	355L/K	538.0	992	309.28	770	200	250	95.8	95.3	93.8	0.85	0.83	0.78	56.90	1980	9	33	63	188	Please Contact nearest Sales office
355E6335KC3T	355	475	355L/K	621.0	992	348.56	770	200	250	95.8	95.3	93.8	0.83	0.79	0.70	66.00	2280	9	33	63	188	
375E6335KC3T	375	503	355L/K	656.0	992	368.20	770	200	250	95.8	95.3	93.8	0.83	0.79	0.70	67.85	2345	9	35	63	188	
400E6335KC3	400	536	355L/K	700.0	992	392.74	770	200	250	95.8	95.4	93.9	0.83	0.79	0.70	69.70	2410	9	35	63	188	

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Th (Min)	Max.permissible load GD ^ 2 for T 0.4N ^ 2 in kgf-m ^ 2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
250E8335KC3T	250	335	355L/K	471.0	741	328.6	700	140	205	94.6	94.2	93.0	0.78	0.76	0.68	76.00	3285	9	33	63	188	Please Contact nearest Sales office
315E8335KC3T	315	425	355L/K	586.0	741	414.0	700	170	210	94.6	94.2	93.0	0.79	0.74	0.68	80.00	4135	9	33	63	188	

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.
2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Energy Efficiency TEFC SC Motors - IE4 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE4, II-Pole, conforms to IS 12615:2018 ,IS/IEC 60034-1:2004, IEC 60034-1:2010 and Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 2 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.18E24063C3T	0.18	0.25	63	0.52	2790	0.06	730	200	250	70.8	70.0	66.7	0.68	0.64	0.55	0.00099	**	10	20	42	125	0.095
.25E24063C3T	0.25	0.35	63	0.62	2800	0.09	730	200	250	74.3	73.5	70.2	0.76	0.72	0.63	0.00165	**	10	20	42	125	0.110
.37E24071C3T	0.37	0.50	71	0.84	2800	0.13	780	200	250	78.1	77.3	74.0	0.78	0.74	0.65	0.00198	**	10	20	42	125	0.180
.55E24071C3T	0.55	0.75	71	1.2	2810	0.19	780	220	265	81.5	80.7	78.1	0.78	0.74	0.65	0.00277	**	10	20	42	125	0.220
.75E24080C3T	0.75	1.0	80	1.5	2830	0.26	780	225	265	83.5	82.7	80.1	0.84	0.80	0.71	0.00475	**	10	20	42	125	0.350
1.1E24080C3T	1.1	1.5	80	2.1	2845	0.38	780	225	275	85.2	84.4	81.8	0.85	0.81	0.72	0.00475	**	10	20	42	125	0.450
1.5E2490SC3R	1.5	2.0	90S	2.8	2855	0.51	780	220	260	86.5	85.7	83.1	0.87	0.83	0.74	0.00964	**	10	20	42	125	0.550
2.2E2490LC3R	2.2	3.0	90L	4.0	2865	0.75	890	235	275	88.0	87.2	84.6	0.86	0.82	0.73	0.01175	**	10	20	42	125	0.8
3.7E2410LC3R	3.7	5.0	100L	6.7	2865	1.26	890	250	290	89.7	88.9	86.3	0.86	0.82	0.73	0.02904	**	8	16	33	100	1.4
5.5E2413SC3R	5.5	7.5	132S	9.8	2860	1.87	890	210	250	90.9	90.1	87.5	0.86	0.82	0.73	0.06864	**	8	16	33	100	2.2
7.5E2413SC3R	7.5	10.0	132S	13.2	2945	2.48	890	250	290	91.7	90.9	88.3	0.86	0.82	0.73	0.08976	**	8	16	33	100	3.1
9.3E2416MC3R	9.3	12.5	160M	16.1	2945	3.08	890	250	290	92.1	91.3	88.7	0.87	0.83	0.74	0.10560	**	10	22	42	125	4.2
011E2416MC3R	11	15.0	160M	18.8	2940	3.64	890	250	290	92.6	91.8	89.2	0.88	0.84	0.75	0.22440	**	10	22	42	125	5.4
015E2416MC3R	15	20.0	160M	25.1	2945	4.96	890	250	295	93.3	92.5	90.7	0.89	0.85	0.76	0.29040	**	10	22	42	125	7.9
185E2416LC3R	18.5	25.0	160L	30.9	2945	6.12	890	250	290	93.7	92.9	91.1	0.89	0.85	0.76	0.36960	**	10	22	42	125	9.2
022E2418MC3R	22	30.0	180M	36.2	2950	7.26	890	175	225	94.0	93.2	91.4	0.90	0.86	0.77	0.55440	**	10	22	42	125	11.1
030E2420LC3T	30	40.0	200L	49.1	2955	9.89	890	240	280	94.5	93.7	91.9	0.90	0.86	0.77	0.84480	**	12	27	50	150	16.8
037E2420LC3T	37	50.0	200L	59.7	2955	12.20	890	210	250	94.8	94.0	92.2	0.91	0.87	0.78	1.12200	**	12	27	50	150	20.1
045E2422MC3T	45	60.0	225M	72.4	2965	14.78	890	210	255	95.0	94.2	92.4	0.91	0.87	0.78	1.20120	**	12	27	50	150	26.5
055E2425MC3T	55	75.0	250M	88.2	2970	18.04	890	200	245	95.3	94.5	92.7	0.91	0.87	0.78	2.37600	**	12	27	50	150	30.5
075E2428SC3T	75	100	280S	121	2970	24.60	890	195	255	95.6	94.8	93.0	0.90	0.86	0.77	8.75160	**	15	33	63	188	38.9
090E2428MC3T	90	120	280M	144	2975	29.47	890	190	240	95.8	95.0	93.2	0.91	0.87	0.78	10.80	**	15	33	63	188	42.5
110E2431SC3T	110	150	315S	173	2980	35.95	890	195	250	96.0	95.2	94.1	0.92	0.88	0.79	15.25	**	15	33	63	188	54.2
125E2431MC3T	125	170	315M	199	2980	40.86	890	190	245	96.2	95.4	94.3	0.91	0.87	0.78	16.76	**	15	33	63	188	61.8
132E2431MC3T	132	180	315M	207	2980	43.14	890	180	235	96.3	95.5	94.4	0.92	0.88	0.79	18.33	**	15	33	63	188	65.4
160E2431LC3T	160	215	315L	251	2985	52.21	890	185	240	96.3	95.5	94.4	0.92	0.88	0.79	18.88	**	15	33	63	188	82.9
180E2431LC3T	180	240	315L	285	2985	58.73	890	185	240	96.5	95.7	94.6	0.91	0.87	0.78	21.07	**	15	33	63	188	94.1
200E2431LC3T	200	270	315L	313	2985	65.26	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	24.91	**	15	33	63	188	103
250E2435LC3T	250	340	355M	392	2985	81.57	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	30.89	**	15	33	63	188	129
315E2435LC3T	315	430	355L	494	2985	102.78	890	180	220	96.5	95.7	94.6	0.92	0.88	0.79	32.67	**	15	33	63	188	165

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2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Energy Efficiency TEFC SC Motors - IE4 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE4, IV-Pole, conforms to IS 12615:2018 ,IS/IEC 60034-1:2004, IEC 60034-1:2010 and Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 4 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E44063C3T	0.12	0.16	63	0.35	1360	0.09	650	200	245	69.8	69.0	65.7	0.68	0.64	0.55	0.0015	**	15	30	63	188	0.31
.18E44063C3T	0.18	0.25	63	0.49	1360	0.13	650	200	250	74.7	73.9	70.6	0.68	0.64	0.55	0.0015	**	15	30	63	188	0.5
.25E44071C3T	0.25	0.35	71	0.64	1365	0.18	650	200	245	77.9	77.1	73.8	0.70	0.66	0.57	0.0037	**	10	20	42	125	0.6
.37E44071C3T	0.37	0.5	71	0.89	1365	0.26	700	245	295	81.1	80.3	77.0	0.71	0.67	0.58	0.0045	**	10	20	42	125	0.9
.55E44080C3T	0.55	0.75	80	1.2	1410	0.38	700	245	300	83.9	83.1	80.6	0.75	0.71	0.62	0.0102	**	10	20	42	125	1.4
.75E44080C3T	0.75	1.0	80	1.6	1420	0.51	700	235	295	85.7	84.9	82.4	0.76	0.72	0.63	0.0114	**	10	20	42	125	1.9
1.1E4490SC3R	1.1	1.5	90S	2.2	1420	0.75	700	235	300	87.2	86.4	83.9	0.78	0.74	0.65	0.0185	**	10	20	42	125	2.8
1.5E4490LC3R	1.5	2.0	90L	3.0	1435	1.02	700	240	295	88.2	87.4	84.9	0.80	0.76	0.67	0.0198	**	10	20	42	125	3.8
2.2E4410LC3R	2.2	3.0	100L	4.2	1440	1.49	830	220	260	89.5	88.7	86.2	0.82	0.78	0.69	0.0383	**	8	16	33	100	5.5
3.7E4411MC3R	3.7	5.0	112M	7.1	1445	2.49	830	235	280	90.9	90.1	87.6	0.80	0.76	0.67	0.0752	**	8	16	33	100	8.5
5.5E4413SC3R	5.5	7.5	132S	10.3	1450	3.69	830	235	295	91.9	91.1	88.6	0.81	0.77	0.68	0.1228	**	8	16	33	100	12.8
7.5E4413MC3R	7.5	10.0	132M	13.7	1455	5.02	830	195	255	92.6	91.8	89.3	0.82	0.78	0.69	0.1584	**	8	16	33	100	18.2
9.3E4416MC3R	9.3	12.5	160M	17.0	1455	6.23	830	195	255	92.9	92.1	89.6	0.82	0.78	0.69	0.224	**	10	22	42	125	22.7
011E4416MC3R	11	15.0	160M	19.3	1460	7.34	830	215	280	93.3	92.5	90.7	0.85	0.81	0.72	0.264	**	10	22	42	125	25.4
015E4416LC3R	15	20.0	160L	25.8	1470	9.94	830	220	265	93.9	93.1	91.3	0.86	0.82	0.73	0.343	**	10	22	42	125	38.5
185E4418MC3R	18.5	25.0	180M	31.4	1470	12.26	830	220	265	94.2	93.4	91.6	0.87	0.83	0.74	0.871	**	10	22	42	125	45.3
022E4418LC3R	22	30.0	180L	38.1	1470	14.58	830	215	260	94.5	93.7	91.9	0.85	0.81	0.72	1.109	**	10	22	42	125	52
030E4420LC3T	30	40.0	200L	51.7	1475	19.81	830	235	275	94.9	94.1	92.3	0.85	0.81	0.72	1.584	**	12	27	50	150	72
037E4422SC3T	37	50.0	225S	62.9	1475	24.43	830	225	280	95.2	94.4	92.6	0.86	0.82	0.73	1.980	**	12	27	50	150	91
045E4422MC3T	45	60.0	225M	76.3	1480	29.61	830	225	280	95.4	94.6	92.8	0.86	0.82	0.73	2.244	**	12	27	50	150	112
055E4425MC3T	55	75.0	250M	91.9	1480	36.20	830	215	255	95.7	94.9	93.1	0.87	0.83	0.74	4.22	**	12	27	50	150	135
075E4428SC3T	75	100	280S	125	1485	49.19	890	215	280	96.0	95.2	93.4	0.87	0.83	0.74	9.50	**	15	33	63	188	185
090E4428MC3T	90	120	280M	148	1485	59.03	890	220	280	96.1	95.3	93.5	0.88	0.84	0.75	10.96	**	15	33	63	188	223
110E4431SC3T	110	150	315S	183	1485	72.15	890	200	245	96.3	95.5	93.7	0.87	0.83	0.74	15.31	**	15	33	63	188	267
125E4431MC3T	125	170	315M	207	1485	81.99	890	195	255	96.4	95.6	94.5	0.87	0.83	0.74	16.63	**	15	33	63	188	304
132E4431MC3T	132	180	315M	216	1485	86.58	890	195	250	96.6	95.8	94.7	0.88	0.84	0.75	18.48	**	15	33	63	188	329
160E4431LC3T	160	215	315L	259	1485	104.94	890	220	280	96.6	95.8	94.7	0.89	0.85	0.76	30.69	**	15	33	63	188	391
180E4431LC3T	180	240	315L	291	1485	118.06	890	220	275	96.7	95.9	94.8	0.89	0.85	0.76	31.68	**	15	33	63	188	421
200E4431LC3T	200	270	315L	323	1485	131.18	890	200	260	96.7	95.9	94.8	0.89	0.85	0.76	33.77	**	15	33	63	188	483
250E4435MC3T	250	340	355M	404	1485	163.97	890	195	250	96.7	95.9	94.8	0.89	0.85	0.76	41.91	**	15	33	63	188	584
315E4435LC3T	315	430	355L	504	1485	206.61	890	195	245	96.7	95.9	94.8	0.90	0.86	0.77	53.13	**	15	33	63	188	741

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.
2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Energy Efficiency TEFC SC Motors - IE4 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE4, VI-Pole, conforms to IS 12615:2018 ,IS/IEC 60034-1:2004, IEC 60034-1:2010 and Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 6 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD^2 Kgm^2	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E64063C3T	0.12	0.16	63	0.43	880	0.13	700	190	230	64.9	64.1	60.8	0.60	0.56	0.47	0.00451	**	10	20	42	125	0.71
.18E64071C3T	0.18	0.25	71	0.58	890	0.20	700	190	230	70.1	69.3	66.0	0.62	0.58	0.49	0.00484	**	10	20	42	125	1.10
.25E64071C3T	0.25	0.35	71	0.75	900	0.27	700	190	230	74.1	73.3	70.0	0.63	0.59	0.50	0.00484	**	10	20	42	125	1.50
.37E64080C3T	0.37	0.5	80	1.02	920	0.39	730	190	230	78.0	77.2	73.9	0.65	0.61	0.52	0.00924	**	10	20	42	125	2.20
.55E64080C3T	0.55	0.75	80	1.4	930	0.58	730	195	250	80.9	80.1	77.6	0.67	0.63	0.54	0.012276	**	10	20	42	125	3.10
.75E6490SC3R	0.75	1.0	90S	1.8	930	0.79	730	195	250	82.7	81.9	79.4	0.70	0.66	0.57	0.02112	**	10	20	42	125	4.20
1.1E6490LC3R	1.1	1.5	90L	2.6	920	1.16	730	200	260	84.5	83.7	81.2	0.70	0.66	0.57	0.0264	**	10	20	42	125	6.50
1.5E6410LC3R	1.5	2.0	100L	3.4	925	1.58	730	200	260	85.9	85.1	82.6	0.71	0.67	0.58	0.04224	**	10	20	42	125	9.10
2.2E6411MC3R	2.2	3.0	112M	4.9	950	2.26	830	190	240	87.4	86.6	84.1	0.71	0.67	0.58	0.09504	**	10	20	42	125	13
3.7E6413SC3R	3.7	5.0	132S	8.0	950	3.79	830	195	245	89.3	88.5	86.0	0.72	0.68	0.59	0.1716	**	10	20	42	125	23
5.5E6413MC3R	5.5	7.5	132M	11.3	960	5.58	830	190	240	90.5	89.7	87.2	0.75	0.71	0.62	0.2244	**	10	20	42	125	32
7.5E6416MC3R	7.5	10.0	160M	14.7	965	7.57	830	215	280	91.3	90.5	88.0	0.78	0.74	0.65	0.5676	**	10	22	42	125	45
9.3E6416LC3R	9.3	12.5	160L	17.9	965	9.39	830	215	280	92.7	91.9	90.1	0.78	0.74	0.65	0.7656	**	10	22	42	125	54
011E6416LC3R	11	15.0	160L	21.0	965	11.10	830	195	254	92.3	91.5	89.7	0.79	0.75	0.66	0.8712	**	10	22	42	125	65
015E6418LC3R	15	20.0	180L	27.4	975	14.98	830	220	286	92.9	92.1	90.3	0.82	0.78	0.69	1.32	**	10	22	42	125	90
185E6420LC3T	18.5	25.0	200L	33.2	980	18.39	830	210	273	93.4	92.6	90.8	0.83	0.79	0.70	1.848	**	12	27	50	150	112
022E6420LC3T	22	30.0	200L	38.9	980	21.87	830	220	286	93.7	92.9	91.1	0.84	0.80	0.71	2.112	**	12	27	50	150	128
030E6422MC3T	30	40.0	225M	52.1	980	29.82	830	250	290	94.2	93.4	91.6	0.85	0.81	0.72	3.036	**	12	27	50	150	183
037E6425MC3T	37	50.0	250M	64.1	985	36.59	830	220	286	94.5	93.7	92.5	0.85	0.81	0.72	4.752	**	12	27	50	150	222
045E6428SC3T	45	60.0	280S	78.6	985	44.50	830	225	290	94.8	94.0	92.8	0.84	0.80	0.71	10.56	**	15	33	63	188	262
055E6428MC3T	55	75.0	280M	95.8	985	54.39	830	215	280	95.1	94.3	93.1	0.84	0.80	0.71	13.068	**	15	33	63	188	315
075E6431SC3T	75	100	315S	127	985	74.16	890	215	280	95.4	94.6	93.4	0.86	0.82	0.73	18.612	**	15	33	63	188	405
090E6431MC3T	90	120	315M	152	985	88.99	890	195	245	95.6	94.8	93.6	0.86	0.82	0.73	22.44	**	15	33	63	188	475
110E6431MC3T	110	150	315M	186	985	108.77	890	200	250	95.8	95.0	93.8	0.86	0.82	0.73	25.1	**	15	33	63	188	595
125E6431LC3T	125	170	315L	208	990	122.98	890	200	250	95.9	95.1	93.9	0.87	0.83	0.74	26.4	**	15	33	63	188	674
132E6431LC3T	132	180	315L	220	990	129.87	890	195	255	96.0	95.2	94.0	0.87	0.83	0.74	27.6	**	15	33	63	188	780
160E6435LC3T	160	215	355L	269	990	157.41	890	200	250	96.2	95.4	94.2	0.86	0.82	0.73	33.0	**	15	33	63	188	920
180E6435LC3T	180	240	355L	301	990	177.09	890	200	260	96.6	95.8	94.6	0.86	0.82	0.73	38.5	**	15	33	63	188	1,010
200E6435LC3T	200	270	355L	331	990	196.77	890	200	260	96.6	95.8	94.6	0.87	0.83	0.74	41.3	**	15	33	63	188	1,185
250E6435LC3T	250	340	355L	409	990	245.96	890	195	245	96.6	95.8	94.6	0.88	0.84	0.75	51.6	**	15	33	63	188	1,490

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Energy Efficiency TEFC SC Motors - IE4 Increased safety Ex(e) & Ex(eb)

3 Phase Squirrel Cage Ex(e) & Ex(eb) Increased Safety Induction motors suitable for 415 V ± 10%, 50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:60K), Line operated with DOL starting, Degree of protection IP-55, altitude upto 1000 mtrs. above m.s.l, Duty S1, efficiency class IE4, 8-Pole, conforms to IS 12615:2018 ,IS/IEC 60034-1:2004, IEC 60034-1:2010 and Efficiency testing according to IEC:60034-2-1:2014-06,IS/IEC 60079-0:2011 ,IS/IEC 60079-7:2015,IS/IEC 60079-17,IS/IEC 60079-19,Zone 2 of Gas Group II, Temp.class T3

Performance Table for 8 Pole Motors

Ordering code	kW	HP	Frame	Rated Current Amps.	Rated Speed RPM	Rated Torque Kgm.	Starting Current % of Rtd Current	Starting Torque % of Rtd Torque	Pull out Torque % of Rtd Torque	Efficiency			Power Factor			Rotor GD² Kgm²	Approx Net Wt. (Kg) AL/CI	TWT Hot in sec.	TWT Cold in sec.	Th (Min)	Tc (Min)	Max.permissible load GD^2 for T 0.4N^2 in kgf-m^2 wrt motor speed
										FL	3/4L	1/2L	FL (P.U.)	3/4L (P.U.)	1/2L (P.U.)							
.12E84071C3T	0.12	0.16	71	0.52	645	0.18	600	180	220	62.3	61.5	58.2	0.52	0.48	0.39	0.005412	**	15	30	63	188	1.2
.18E84080C3T	0.18	0.25	80	0.68	650	0.27	600	180	220	67.2	66.4	63.1	0.55	0.51	0.42	0.005808	**	15	30	63	188	1.8
.25E84080C3T	0.25	0.35	80	0.86	660	0.37	600	180	225	70.8	70.0	66.7	0.57	0.53	0.44	0.005808	**	15	30	63	188	2.6
.37E8490SC3R	0.37	0.5	90S	1.2	670	0.54	650	180	225	74.3	73.5	70.2	0.60	0.56	0.47	0.011088	**	15	30	63	188	3.5
.55E8490LC3R	0.55	0.75	90L	1.6	680	0.79	650	180	220	77.0	76.2	72.9	0.62	0.58	0.49	0.01474	**	15	30	63	188	5.1
.75E8410LC3R	0.75	1.0	100L	2.1	685	1.07	650	180	230	78.4	77.6	75.1	0.64	0.60	0.51	0.0253	**	10	20	42	125	7.4
1.1E8410LC3R	1.1	1.5	100L	2.9	685	1.56	650	190	235	80.8	80.0	77.5	0.66	0.62	0.53	0.03168	**	10	20	42	125	10.6
1.5E8411MC3R	1.5	2.0	112M	3.7	690	2.12	650	180	225	82.6	81.8	79.3	0.69	0.65	0.56	0.0506	**	10	20	42	125	14.2
2.2E8413SC3R	2.2	3.0	132S	5.1	705	3.04	780	180	230	84.5	83.7	81.2	0.71	0.67	0.58	0.1144	**	10	20	42	125	21.9
3.7E8416MC3R	3.7	5.0	160M	8.2	720	5.01	780	210	255	86.8	86.0	83.5	0.72	0.68	0.59	0.2057	**	10	22	42	125	36.4
5.5E8416MC3R	5.5	7.5	160M	11.7	720	7.44	780	190	230	88.3	87.5	85.0	0.74	0.70	0.61	0.2695	**	10	22	42	125	54.0
7.5E8416LC3R	7.5	10.0	160L	15.6	720	10.15	780	190	230	89.3	88.5	86.0	0.75	0.71	0.62	0.6809	**	10	22	42	125	73.4
9.3E8418LC3R	9.3	12.5	180L	19.2	720	12.58	780	190	230	89.8	89.0	86.5	0.75	0.71	0.62	0.9185	**	10	22	42	125	90.1
011E8418LC3R	11	15.0	180L	22.3	725	14.78	780	200	245	90.4	89.6	88.0	0.76	0.72	0.63	1.045	**	10	22	42	125	105
015E8420LC3T	15	20.0	200L	30.1	730	20.01	780	180	225	91.2	90.4	88.8	0.76	0.72	0.63	1.584	**	12	27	50	150	142
185E8422SC3T	18.5	25.0	225S	36.9	730	24.68	780	190	235	91.7	90.9	89.3	0.76	0.72	0.63	2.2176	**	12	27	50	150	175
022E8422MC3T	22	30.0	225M	42.6	730	29.35	780	210	250	92.1	91.3	89.7	0.78	0.74	0.65	2.5344	**	12	27	50	150	202
030E8425MC3T	30	40.0	250M	57.0	730	40.03	780	210	250	92.7	91.9	90.3	0.79	0.75	0.66	3.6432	**	12	27	50	150	303
037E8428SC3T	37	50.0	280S	70.0	730	49.37	780	200	245	93.1	92.3	90.7	0.79	0.75	0.66	5.7024	**	15	33	63	188	351
045E8428MC3T	45	60.0	280M	84.8	735	59.63	780	215	255	93.4	92.6	91.0	0.79	0.75	0.66	12.672	**	15	33	63	188	458
055E8431SC3T	55	75.0	315S	100.8	735	72.88	780	205	245	93.7	92.9	91.3	0.81	0.77	0.68	15.686	**	15	33	63	188	559
075E8431MC3T	75	100	315M	137	735	99.39	780	200	240	94.2	93.4	91.8	0.81	0.77	0.68	22.33	**	15	33	63	188	751
090E8431LC3T	90	120	315L	164	735	119	780	180	220	94.4	93.6	92.5	0.81	0.77	0.68	26.928	**	15	33	63	188	950
110E8431LC3T	110	150	315L	200	735	146	780	180	220	94.7	93.9	92.8	0.81	0.77	0.68	30.096	**	15	33	63	188	1,115
125E8431LC3T	125	170	315L	223	740	165	780	180	220	94.9	94.1	93.0	0.82	0.78	0.69	31.68	**	15	33	63	188	1,253
132E8431LC3T	132	180	315L	236	740	174	780	200	240	95.0	94.2	93.1	0.82	0.78	0.69	33.11	**	15	33	63	188	1,328
160E8435LC3T	160	215	355L	285	740	211	780	185	230	95.1	94.3	93.2	0.82	0.78	0.69	39.6	**	15	33	63	188	1,607
180E8435LC3T	180	240	355L	320	740	237	780	185	230	95.4	94.6	93.5	0.82	0.78	0.69	46.2	**	15	33	63	188	1,803
200E8435LC3T	200	270	355L	356	740	263	780	185	230	95.4	94.6	93.5	0.82	0.78	0.69	49.5	**	15	33	63	188	2,003

Note : 1) Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances,355 frame will have uni directional for CW rotation as viewed from DE. for CCW direction please explicitly specify in the order.
2) Clause no. 4.2 of IEC 60079-0:2011 Equipment marked IIB is suitable for applications requiring Group IIA equipment. Similarly, equipment marked IIC is suitable for applications requiring Group IIA or group IIB equipment.

Energy Efficiency TEFC SC Motors - IE2 Non-sparking

Ex nA, Ex ec, IIC & Ex tc, IIIC, ATEX & IECEx

3 Phase Squirrel Cage Non-sparking Ex nA Ex ec & Ex tc induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66, altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4 conforms to IS 12615:2018, IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008, Efficiency testing according to IEC 60034-2-1:2014-06,EN 60079-0:2012+A11:2013,EN 60079-1:2015,EN 60079-31:2014,EN/IEC 60079-7:2015,IEC 60034-30-2008,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0, IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC Ex,ATEX certified by BASEEFA,Temperature class as per table of Ie2

Performance Table

Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame	
2 Pole					**4 Pole**					**6 Pole**					**8 Pole**				
12N22056C3T	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .	12N42063C3R	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .	12N62063C3R	0.12	0.16	63	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .	12N82071C3R	0.12	0.16	71	All performance Figures are same as High Efficiency TEFC SC Motors-IE2 .
18N22063C3R	0.18	0.25	63		18N42063C3R	0.18	0.25	63		18N62071C3R	0.18	0.25	71		18N82080C3R	0.18	0.25	80	
25N22063C3R	0.25	0.33	63		25N42071C3R	0.25	0.33	71		25N62071C3R	0.25	0.33	71		25N82080C3R	0.25	0.33	80	
37N22071C3R	0.37	0.50	71		37N42071C3R	0.37	0.50	71		37N62080C3R	0.37	0.50	80		37N8290SC3R	0.37	0.50	90S	
55N22071C3R	0.55	0.75	71		55N42080C3R	0.55	0.75	80		55N62080C3R	0.55	0.75	80		55N8290LC3R	0.55	0.75	90L	
75N22080C3R	0.75	1.0	80		75N42080C3R	0.75	1.0	80		75N6290SC3R	0.75	1.0	90S		75N8210LC3R	0.75	1.00	100L	
1.1N22080C3R	1.1	1.5	80		1.1N4290SC3R	1.1	1.5	90S		1.1N6290LC3R	1.1	1.5	90L		1.1N8210LC3R	1.1	1.5	100L	
1.5N2290SC3R	1.5	2.0	90S		1.5N4290LC3R	1.5	2.0	90L		1.5N6210LC3R	1.5	2.0	100L		1.5N8211MC3R	1.5	2.0	112M	
2.2N2290LC3R	2.2	3.0	90L		2.2N4210LC3R	2.2	3.0	100L		2.2N6211MC3R	2.2	3.0	112M		2.2N8213SC3R	2.2	3.0	132S	
3.0N2210LC3R	3.0	4.0	100L		3.0N4210LC3R	3.0	4.0	100L		3.0N6211MC3R	3.0	4.0	112M		3.0N8213MC3R	3.0	4.0	132M	
3.7N2210LC3R	3.7	5.0	100L		3.7N4211MC3R	3.7	5.0	112M		3.7N6213SC3R	3.7	5.0	132S		3.7N8213MC3R	3.7	5.0	160M	
4.0N2211MC3R	4.0	5.5	112M		4.0N4211MC3R	4.0	5.5	112M		4.0N6213SC3R	4.0	5.5	132S		4.0N8216MC3R	4.0	5.5	160M	
5.5N2213SC3R	5.5	7.5	132S		5.5N4213SC3R	5.5	7.5	132S		5.5N6213MC3R	5.5	7.5	132M		5.5N8216MC3R	5.5	7.5	160M	
7.5N2213SC3R	7.5	10	132S		7.5N4213MC3R	7.5	10	132M		7.5N6216MC3R	7.5	10	160M		7.5N8216LC3R	7.5	10	160L	
9.3N2216MC3R	9.3	12.5	160M		9.3N4216MC3R	9.3	12.5	160M		9.3N6216LC3R	9.3	12.5	160L		9.3N8218LC3R	9.3	12.5	180L	
011N2216MC3R	11	15.0	160M		011N4216MC3R	11	15	160M		011N6216LC3R	11	15	160L		011N8218LC3R	11	15	180L	
015N2216MC3R	15	20	160M		015N4216LC3R	15	20	160L		015N6218LC3R	15	20	180L		015N8220LC3T	15	20	200L	
185N2216LC3R	18.5	25	160L		185N4218MC3R	18.5	25	180M		185N6220LC3T	18.5	25	200L		185N8222SC3T	18.5	25	225S	
022N2218MC3R	22	30	180M		022N4218LC3R	22	30	180L		022N6220LC3T	22	30	200L		022N8222MC3T	22	30	225M	
030N2220LC3T	30	40	200L		030N4220LC3T	30	40	200L		030N6222MC3T	30	40	225M		030N8225MC3T	30	40	250M	
037N2220LC3T	37	50	200L		037N4222SC3T	37	50	225S		037N6225MC3T	37	50	250M		037N8228SC3T	37	50	280S	
045N2222MC3T	45	60	225M		045N4222MC3T	45	60	225M		045N6228SC3T	45	60	280S		045N8228MC3T	45	60	280M	
055N2225MC3T	55	75	250M		055N4225MC3T	55	75	250M		055N6228MC3T	55	75	280M		055N8231SC3T	55	75	315S	
075N2228SC3T	75	100	280S		075N4228SC3T	75	100	280S		075N6231SC3T	75	100	315S		075N8231MC3T	75	100	315M	
090N2228MC3T	90	120	280M		090N4228MC3T	90	120	280M		090N6231MC3T	90	120	315M		090N8231LC3T	90	120	315L	
110N2231SC3T	110	150	315S		110N4231SC3T	110	150	315S		110N6231MC3T	110	150	315M		110N8231LC3T	110	150	315L	
125N2231MC3T	125	170	315M		125N4231MC3T	125	170	315M		125N6231MC3T	125	170	315M		125N8231LC3T	125	170	315L	
132N2231MC3T	132	180	315M		132N4231MC3T	132	180	315M		132N6231LC3T	132	180	315L		132N8231LC3T	132	180	315L	
150N2231LC3T	150	201	315L		150N4231LC3T	150	200	315L		150N6235KC3T	150	201	355L		150N8235LC3T	150	201	355L	
160N2231LC3T	160	215	315L		160N4231LC3T	160	215	315L		160N6235LC3T	160	215	355L		160N8235LC3T	160	215	355L	
180N2231LC3T	180	240	315L		200N4231LC3T	200	270	315L		180N6235KC3T	180	240	355L		180N8235LC3T	180	240	355L	
200N2231LC3T	200	270	315L		250N4235LC3T	250	335	355L		200N6235LC3T	200	270	355L		200N8235LC3T	200	270	355L	
250N2235LC3T	250	335	355L		315N4235KC3T	315	425	355L		250N6235LC3T	250	335	355L		250N8235KC3T	250	335	355L/K	
315N2235LC3T	315	425	355L		355N4235LC3T	355	475	355L		315N6235KC3T	315	425	355L/K		315N8235KC3T	315	425	355L/K	
355N2235KC3T	355	475	355L/K		375N4235LC3T	375	503	355L		355N6235KC3T	355	475	355L/K		355N8240LM3T	355	475	400M/L	
375N2235KC3T	375	503	355L/K		400N4235KC3T	400	536	355L/K		375N6235KC3T	375	503	355L/K		375N8240LM3T	375	503	400M/L	
400N2235KC3T	400	536	355L/K		450N4235KC3T	450	603	355L/K		400N6235KC3T	400	536	355L/K		400N8240LM3T	400	536	400M/L	
450N2235KC3T	450	603	355L/K		500N4235KC3T	500	670	355L/K		450N6240LM3T	450	603	400M/L		450N8240LM3T	* 450	603	400M/L	
500N2235KC3T	500	670	355L/K		560N4240LM3T	560	750	400M/L		500N6240LM3T	500	670	400M/L						
560N2240LM3T	560	750	400M/L		630N4240LM3T	630	845	400M/L		560N6240LM3T	* 560	750	400M/L						
630N2240LM3T	* 630	845	400M/L		710N4240LM3T	* 710	952	400M/L											

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Non-sparking

Ex nA, Ex ec IIC & Ex tc IIIC,ATEX & IECEx

3 Phase Squirrel Cage Non-sparking Ex nA Ex ec & Ex tc induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l,Duty S1,efficiency class IE-3 conforms to IS 12615:2018,IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC 60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2015,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC Ex,ATEX certified by BASEEFA,Temperature class as per table.

Performance Table

Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame	
2 Pole					**4 Pole**					**6 Pole**					**8 Pole**				
12N23063C3T	0.12	0.16	63	All performance Figures are same as Premium Efficiency TEFC SC Motors-IE3 .	.12N43063C3T	0.12	0.16	63	All performance Figures are same as Premium Efficiency TEFC SC Motors-IE3 .	.12N63063C3T	0.12	0.16	63	All performance Figures are same as Premium Efficiency TEFC SC Motors-IE3 .	.12N83071C3T	0.12	0.16	71	All performance Figures are same as Premium Efficiency TEFC SC Motors-IE3 .
.18N23063C3T	0.18	0.25	63		.18N43063C3T	0.18	0.25	63		.18N63071C3T	0.18	0.25	71		.18N83080C3T	0.18	0.25	80	
.25N23063C3T	0.25	0.33	63		.25N43071C3T	0.25	0.33	71		.25N63071C3T	0.25	0.33	71		.25N83080C3T	0.25	0.33	80	
.37N23071C3T	0.37	0.50	71		.37N43071C3T	0.37	0.50	71		.37N63080C3T	0.37	0.50	80		.37N8390SC3R	0.37	0.50	90S	
.55N23071C3T	0.55	0.75	71		.55N43080C3T	0.55	0.75	80		.55N63080C3T	0.55	0.75	80		.55N8390LC3R	0.55	0.75	90L	
.75N23080C3T	0.75	1.0	80		.75N43080C3T	0.75	1.0	80		.75N6390SC3R	0.75	1.0	90S		.75N8310LC3R	0.75	1.00	100L	
1.1N23080C3T	1.1	1.5	80		1.1N4390SC3R	1.1	1.5	90S		1.1N6390LC3R	1.1	1.5	90L		1.1N8310LC3R	1.1	1.5	100L	
1.5N2390SC3R	1.5	2.0	90S		1.5N4390LC3R	1.5	2.0	90L		1.5N6310LC3R	1.5	2.0	100L		1.5N8311MC3R	1.5	2.0	112M	
2.2N2390LC3R	2.2	3.0	90L		2.2N4310LC3R	2.2	3.0	100L		2.2N6311MC3R	2.2	3.0	112M		2.2N8313SC3R	2.2	3.0	132S	
3.7N2310LC3R	3.7	5.0	100L		3.7N4311MC3R	3.7	5.0	112M		3.7N6313SC3R	3.7	5.0	132S		3.7N8316MC3R	3.7	5.0	160M	
5.5N2313SC3R	5.5	7.5	132S		5.5N4313SC3R	5.5	7.5	132S		5.5N6313MC3R	5.5	7.5	132M		5.5N8316MC3R	5.5	7.5	160M	
7.5N2313SC3R	7.5	10	132S		7.5N4313MC3R	7.5	10	132M		7.5N6316MC3R	7.5	10	160M		7.5N8316LC3R	7.5	10	160L	
9.3N2316MC3R	9.3	12.5	160M		9.3N4316MC3R	9.3	12.5	160M		9.3N6316LC3R	9.3	12.5	160L		9.3N8318LC3R	9.3	12.5	180L	
011N2316MC3R	11	15.0	160M		011N4316MC3R	11	15	160M		011N6316LC3R	11	15	160L		011N8318LC3R	11	15	180L	
015N2316MC3R	15	20	160M		015N4316LC3R	15	20	160L		015N6318LC3R	15	20	180L		015N8320LC3T	15	20	200L	
185N2316LC3R	18.5	25	160L		185N4318MC3R	18.5	25	180M		185N6320LC3T	18.5	25	200L		185N8322SC3T	18.5	25	225S	
022N2318MC3R	22	30	180M		022N4318LC3R	22	30	180L		022N6320LC3T	22	30	200L		022N8322MC3T	22	30	225M	
030N2320LC3T	30	40	200L		030N4320LC3T	30	40	200L		030N6322MC3T	30	40	225M		030N8325MC3T	30	40	250M	
037N2320LC3T	37	50	200L		037N4322SC3T	37	50	225S		037N6325MC3T	37	50	250M		037N8328SC3T	37	50	280S	
045N2322MC3T	45	60	225M		045N4322MC3T	45	60	225M		045N6328SC3T	45	60	280S		045N8328MC3T	45	60	280M	
055N2325MC3T	55	75	250M		055N4325MC3T	55	75	250M		055N6328MC3T	55	75	280M		055N8331SC3T	55	75	315S	
075N2328SC3T	75	100	280S		075N4328SC3T	75	100	280S		075N6331SC3T	75	100	315S		075N8331MC3T	75	100	315M	
090N2328MC3T	90	120	280M		090N4328MC3T	90	120	280M		090N6331MC3T	90	120	315M		090N8331LC3T	90	120	315L	
110N2331SC3T	110	150	315S		110N4331SC3T	110	150	315S		110N6331MC3T	110	150	315M		110N8331LC3T	110	150	315L	
125N2331MC3T	125	170	315M		125N4331MC3T	125	170	315M		125N6331LC3T	125	170	315M		125N8331LC3T	125	170	315L	
132N2331MC3T	132	180	315M		132N4331MC3T	132	180	315M		132N6331LC3T	132	180	315L		132N8331LC3T	132	180	315L	
160N2331LC3T	160	215	315L		160N4331LC3T	160	215	315L		160N6335LC3T	160	215	355L		160N8335LC3T	160	215	355L	
180N2331LC3T	180	240	315L		180N4331LC3T	180	240	315L		180N6335LC3T	180	240	355L		180N8335LC3T	180	240	355L	
200N2331LC3T	200	270	315L		200N4331LC3T	200	270	315L		200N6335LC3T	200	270	355L		200B8335LC3T	200	270	355L/K	
250N2335LC3T	250	335	355L		250N4335MC3T	250	335	355L		250N6335LC3T	250	335	355L		250B8335LC3T	250	340	355L/K	
315N2335LC3T	315	425	355L		315N4335LC3T	315	425	355L		315N6335LC3T	315	425	355L/K		315B8335LC3T	315	430	355L/K	
355N2335LC3T	355	475	355L/K		355N4335LC3T	355	475	355L/K		355N6335LC3T	355	475	355L/K		355B8340LC3T	355	475	400L	
375N2335LC3T	375	500	355L/K		375N4335LC3T	375	500	355L/K		375N6335LC3T	375	500	355L/K		375B8340LC3T	375	500	400L	
400N2335LC3T	400	535	355L/K		400N4335LC3T	400	535	355L/K		400N6335LC3T	400	535	355L/K		400B8340LC3T	400	535	400L	
450N2335LC3T	450	600	355L/K		450N4335LC3T	450	600	355L/K		450N6335LC3T	450	600	355L/K		450B8340LC3T	450	600	400L	
500N2335LC3T	500	670	355L/K		500N4335LC3T	500	670	355L/K		500N6335LC3T	500	670	355L/K		500B8345MC3T	500	670	450M	
560N2340LC3T	560	750	400L		560N4340LC3T	560	750	400L		560N6340LC3T	560	750	400L		560B8345MC3T	560	750	450M	
630N2340LC3T	630	845	400L		630N4340LC3T	630	845	400L		630N6340LC3T	630	845	400L		630B8345LC3T	630	845	450L	
					710N4340LC3T	710	950	400L		710N6340LC3T	710	950	400L		710B8345LC3T	710	950	450L	
					800N4345MC3T	800	1,075	450M		800N6345MC3T	800	1,075	450M						
					900N4345MC3T	900	1,200	450M		900N6345MC3T	900	1,200	450M						
					100N4345LC3T	1,000	1,340	450L		100N6345LC3T	1,000	1,340	450L						

Premium Efficiency "Supremo Series" TEFC SC Motors - IE3 Non-sparking - DCCA

Ex nA, Ex ec IIC & Ex tc IIIC,ATEX & IECEx

3 Phase Squirrel Cage Non-sparking Ex nA Ex ec & Ex tc induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66, altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4 conforms to IS 12615:2018, IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008, Efficiency testing according to IEC 60034-2-1:2014-06,EN 60079-0:2012+A11:2013,EN 60079-1:2015,EN 60079-31:2014,EN/IEC 60079-7:2015,IEC 60034-30-2008,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0, IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC Ex,ATEX certified by BASEEFA,Temperature class as per table of Ie2

Performance Table

Ordering code	kW	HP	Frame	Ordering code	kW	HP	Frame	Ordering code	kW	HP	Frame	Ordering code	kW	HP	Frame
2 Pole				**4 Pole**				**6 Pole**				**8 Pole**			
355N2335KC3T	355	475	355L/K	400N4335KC3T	400	536	355L/K	315N6335KC3T	315	425	355L/K	250N8335KC3T	250	335	355L/K
375N2335KC3T	375	503	355L/K	450N4335KC3T	450	603	355L/K	355N6335KC3T	355	475	355L/K	315N8335KC3T	315	425	355L/K
400N2335KC3T	400	536	355L/K	500N4335KC3T	500	670	355L/K	375N6335KC3T	375	503	355L/K				
450N2335KC3T	450	603	355L/K												
500N2335KC3T	500	670	355L/K												
500N2335KC3T	500	670	355L/K												

All performance Figures are same as Super Premium Efficiency 'Ultimo Series" TEFC Motors - IE3
For 400 frame rating Please contact nearest sales office

Note : - Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances.

Premium Efficiency "Supremo Series" TEFC SC Motors - IE4 Non-sparking

Ex nA, Ex ec IIC & Ex tc IIIC,ATEX & IECEx

3 Phase Squirrel Cage Non-sparking Ex nA Ex ec & Ex tc induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 to 66 ,altitude upto 1000 mtrs. above m.s.l,Duty S1,efficiency class IE-4 conforms to IS 12615:2018,IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0,IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC 60034-30-2008,EN 60079-0:2012+A11:2013,EN 60079-1:2015,EN 60079-31:2014,EN/IEC 60079-7:2015,Efficiency testing according to IEC 60034-2-1:2014-06 IEC Ex,ATEX certified by BASEEFA,Temperature class as per table.

Performance Table

Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame		Ordering code	kW	HP	Frame	
2 Pole					**4 Pole**					**6 Pole**					**8 Pole**				
.12N24063C3T	0.12	0.16	63	All performance Figures are same as Premium Efficiency TEFC SC Motors-IE3 .	.12N44063C3T	0.12	0.16	63	All performance Figures are same as Premium Efficiency TEFC SC Motors-IE3 .	.12N64063C3T	0.12	0.16	63	All performance Figures are same as Premium Efficiency TEFC SC Motors-IE3 .	.12N84071C3T	0.12	0.16	71	All performance Figures are same as Premium Efficiency TEFC SC Motors-IE3 .
.18N24063C3T	0.18	0.25	63		.18N44063C3T	0.18	0.25	63		.18N64071C3T	0.18	0.25	71		.18N84080C3T	0.18	0.25	80	
.25N24063C3T	0.25	0.33	63		.25N44071C3T	0.25	0.33	71		.25N64071C3T	0.25	0.33	71		.25N84080C3T	0.25	0.33	80	
.37N24071C3T	0.37	0.50	71		.37N44071C3T	0.37	0.50	71		.37N64080C3T	0.37	0.50	80		.37N8490SC3R	0.37	0.50	90S	
.55N24071C3T	0.55	0.75	71		.55N44080C3T	0.55	0.75	80		.55N64080C3T	0.55	0.75	80		.55N8490LC3R	0.55	0.75	90L	
.75N24080C3T	0.75	1.0	80		.75N44080C3T	0.75	1.0	80		.75N6490SC3R	0.75	1.0	90S		.75N8410LC3R	0.75	1.00	100L	
1.1N24080C3T	1.1	1.5	80		1.1N4490SC3R	1.1	1.5	90S		1.1N6490LC3R	1.1	1.5	90L		1.1N8410LC3R	1.1	1.5	100L	
1.5N2490SC3R	1.5	2.0	90S		1.5N4490LC3R	1.5	2.0	90L		1.5N6410LC3R	1.5	2.0	100L		1.5N8411MC3R	1.5	2.0	112M	
2.2N2490LC3R	2.2	3.0	90L		2.2N4410LC3R	2.2	3.0	100L		2.2N6411MC3R	2.2	3.0	112M		2.2N8413SC3R	2.2	3.0	132S	
3.7N2410LC3R	3.7	5.0	100L		3.7N4411MC3R	3.7	5.0	112M		3.7N6413SC3R	3.7	5.0	132S		3.7N8416MC3R	3.7	5.0	160M	
5.5N2413SC3R	5.5	7.5	132S		5.5N4413SC3R	5.5	7.5	132S		5.5N6413MC3R	5.5	7.5	132M		5.5N8416MC3R	5.5	7.5	160M	
7.5N2413SC3R	7.5	10	132S		7.5N4413MC3R	7.5	10	132M		7.5N6416MC3R	7.5	10	160M		7.5N8416LC3R	7.5	10	160L	
9.3N2416MC3R	9.3	12.5	160M		9.3N4416MC3R	9.3	12.5	160M		9.3N6416LC3R	9.3	12.5	160L		9.3N8418LC3R	9.3	12.5	180L	
011N2416MC3R	11	15.0	160M		011N4416MC3R	11	15	160M		011N6416LC3R	11	15	160L		011N8418LC3R	11	15	180L	
015N2416MC3R	15	20	160M		015N4416LC3R	15	20	160L		015N6418LC3R	15	20	180L		015N8420LC3T	15	20	200L	
185N2416LC3R	18.5	25	160L		185N4418MC3R	18.5	25	180M		185N6420LC3T	18.5	25	200L		185N8422SC3T	18.5	25	225S	
022N2418MC3R	22	30	180M		022N4418LC3R	22	30	180L		022N6420LC3T	22	30	200L		022N8422MC3T	22	30	225M	
030N2420LC3T	30	40	200L		030N4420LC3T	30	40	200L		030N6422MC3T	30	40	225M		030N8425MC3T	30	40	250M	
037N2420LC3T	37	50	200L		037N4422SC3T	37	50	225S		037N6425MC3T	37	50	250M		037N8428SC3T	37	50	280S	
045N2422MC3T	45	60	225M		045N4422MC3T	45	60	225M		045N6428SC3T	45	60	280S		045N8428MC3T	45	60	280M	
055N2425MC3T	55	75	250M		055N4425MC3T	55	75	250M		055N6428MC3T	55	75	280M		055N8431SC3T	55	75	315S	
075N2428SC3T	75	100	280S		075N4428SC3T	75	100	280S		075N6431SC3T	75	100	315S		075N8431MC3T	75	100	315M	
090N2428MC3T	90	120	280M		090N4428MC3T	90	120	280M		090N6431MC3T	90	120	315M		090N8431LC3T	90	120	315L	
110N2431SC3T	110	150	315S		110N4431SC3T	110	150	315S		110N6431MC3T	110	150	315M		110N8431LC3T	110	150	315L	
125N2431MC3T	125	170	315M		125N4431MC3T	125	170	315M		125N6431LC3T	125	170	315M		125N8431LC3T	125	170	315L	
132N2431MC3T	132	180	315M		132N4431MC3T	132	180	315M		132N6431LC3T	132	180	315L		132N8431LC3T	132	180	315L	
160N2431LC3T	160	215	315L		160N4431LC3T	160	215	315L		160N6435LC3T	160	215	355L		160N8435LC3T	160	215	355L	
180N2431LC3T	180	240	315L		180N4431LC3T	180	240	315L		180N6435LC3T	180	240	355L		180N8435LC3T	180	240	355L	
200N2431LC3T	200	270	315L		200N4431LC3T	200	270	315L		200N6435LC3T	200	270	355L		200N8435LC3T	200	270	355L	
250N2435LC3T	250	340	355M		250N4435MC3T	250	340	355L		250N6435LC3T	250	335	355L		250N8435LC3T	250	340	355L	
315N2435LC3T	315	430	355L		315N4435LC3T	315	430	355L		315N6435LC3T	315	430	355L		315N8435LC3T	315	430	355L	
355N2435LC3T	355	475	355L/K		355N4435LC3T	355	475	355L/K		355N6435LC3T	355	475	355L/K		355N8440LC3T	355	475	400L	
375N2435LC3T	375	500	355L/K		375N4435LC3T	375	500	355L/K		375N6435LC3T	375	500	355L/K		375N8440LC3T	375	500	400L	
400N2435LC3T	400	535	355L/K		400N4435LC3T	400	535	355L/K		400N6435LC3T	400	535	355L/K		400N8440LC3T	400	535	400L	
450N2435LC3T	450	600	355L/K		450N4435LC3T	450	600	400L		450N6435LC3T	450	600	355L/K		450N8440LC3T	450	600	400L	
500N2435LC3T	500	670	355L/K		500N4435LC3T	500	670	400L		500N6435LC3T	500	670	355L/K		500N8445MC3T	500	670	450M	
560N2440LC3T	560	750	400L		560N4440LC3T	560	750	400L		560N6440LC3T	560	750	400L		560N8445MC3T	560	750	450M	
630N2440LC3T	630	845	400L		630N4440LC3T	630	845	450M		630N6440LC3T	630	845	400L		630N8445LC3T	630	845	450L	
					710N4440LC3T	710	950	450M		710N6440LC3T	710	950	400L		710N8445LC3T	710	950	450L	
					800N4445MC3T	800	1075	450L		800N6445MC3T	800	1075	450M						
					900N4445MC3T	900	1200	450M		900N6445MC3T	900	1200	450M						
					100N4445LC3T	1000	1340	450L		100N6445LC3T	1000	1340	450L						

Premium Efficiency "Supremo Series" TEFC SC Motors - IE4 Non-sparking - DCCA

Ex nA, Ex ec IIC & Ex tc IIIC,ATEX & IECEx

3 Phase Squirrel Cage Non-sparking Ex nA Ex ec & Ex tc induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66, altitude upto 1000 mtrs. above m.s.l, Duty S1,efficiency class IE4 conforms to IS 12615:2018, IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008, Efficiency testing according to IEC 60034-2-1:2014-06,EN 60079-0:2012+A11:2013,EN 60079-1:2015,EN 60079-31:2014,EN/IEC 60079-7:2015,IEC 60034-30-2008,IEC 60034-1:2010,IEC 60079-0:2011 Ed-6.0, IEC 60079-1:2014-06 Ed-7.0,IEC 60079-31:2013 Ed-2,Gas and Dust,IEC Ex,ATEX certified by BASEEFA,Temperature class as per table of Ie2

Performance Table

Ordering code	kW	HP	Frame	Ordering code	kW	HP	Frame	Ordering code	kW	HP	Frame	Ordering code	kW	HP	Frame
2 Pole				**4 Pole**				**6 Pole**				**8 Pole**			
355N2435KC3T	355	475	355L/K	400N4435KC3T	400	536	355L/K	315N6435KC3T	315	425	355L/K	250N8435KC3T	250	335	355L/K
375N2435KC3T	375	503	355L/K	450N4435KC3T	450	603	355L/K	355N6435KC3T	355	475	355L/K	315N8435KC3T	315	425	355L/K
400N2435KC3T	400	536	355L/K	500N4435KC3T	500	670	355L/K	375N6435KC3T	375	503	355L/K				
450N2435KC3T	450	603	355L/K												
500N2435KC3T	500	670	355L/K												

All performance Figures are same as Super Premium Efficiency "ultimo Series" TEFC Motors - IE4
For 400 frame rating Please contact nearest sales office

Note : - Due to policy of continual development and improvement, the right is reserved to supply products which may differ slightly from those in this publication. All performance figures are subject to IS/IEC 60034-1 tolerances.

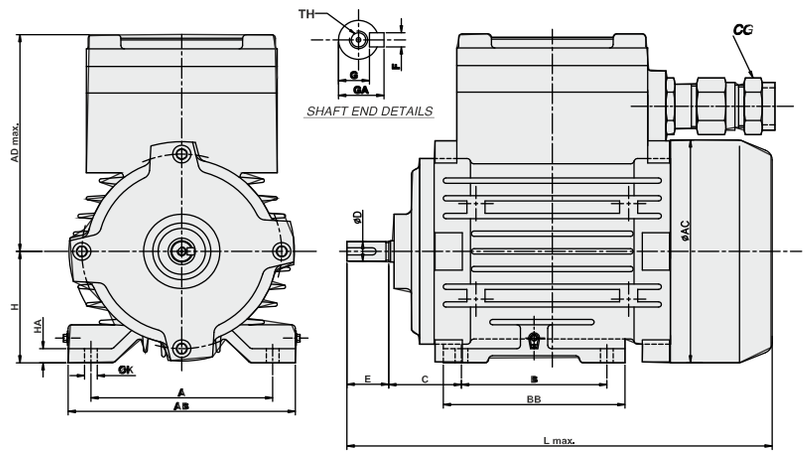
Dimensions of Foot Mounted Flame - Proof Motor (B3 MOUNTING As per IS : 1231)

Table No. 16

Frame Size	H 0.5	C	A	AB	HA	ØK	B	BB	AD MAX	AD* MAX	ØAC	ØD	E	F	G	GA	TH	L MAX IE2/IE3/IE4	L MAX For Brake Motor IE2/IE3/IE4	CG (METRIC) X NOS.
63	63	40	100	125	10	7	80	100	125	125	130	11j6	23	4	8.5	12.5	M5	250	350	M20 X 1
71	71	45	112	142	10	7	90	115	135	135	145	14j6	30	5	11.0	16.0	M5	285	372	M20 X 1
80	80	50	125	151	12	10	100	144	150	145	180	19j6	40	6	15.5	21.5	M6	310	420	M20 X 1
90S	90	56	140	180	12	10	100	180	200	243	195	24j6	50	8	20.0	27.0	M8	390	517	M20 X 1
90L	90	56	140	180	12	10	125	180	247	243	195	24j6	50	8	20.0	27.0	M8	390	517	M20 X 1
100L	100	63	160	208	13	12	140	200	215	215	217	28j6	60	8	24.0	31.0	M10	430	550	M20 X 1
112M	112	70	190	240	15	12	140	210	300	295	240	28j6	60	8	24.0	31.0	M10	480	620	M25 X 1
132S	132	89	216	265	16	12	140	290	320	315	272	38k6	80	10	33.0	41.0	M12	630	790	M25 X 2
132M	132	89	216	265	16	12	178	290	320	315	272	38k6	80	10	33.0	41.0	M12	630	790	M25 X 2
160M	160	108	254	314	18	15	210	314	319	320	316	42k6	110	12	37.0	45.0	M16	750	920	M40 X 2
160L	160	108	254	314	18	15	254	314	319	320	316	42k6	110	12	37.0	45.0	M16	750	920	M40 X 2
180M	180	121	279	340	26	15	241	340	415	360	358	48k6	110	14	42.5	51.5	M16	760	960	M40 X 2
180L	180	121	279	340	26	15	279	340	415	360	358	48k6	110	14	42.5	51.5	M16	760	960	M40 X 2
200L	200	133	318	380	25	19	305	410	390	390	381	55m6	110	16	49.0	59.0	M20	850	--	M40 X 2
225S (2P)	225	149	356	440	32	19	286	375	435		448	55m6	110	16	49.0	59.0	M20	860	--	M40 X 2
225S (4,6&8P)	225	149	356	440	32	19	286	375	435		448	60m6	140	18	53.0	64.0	M20	900	--	M40 X 2
225M (2P)	225	149	356	440	32	19	311	375	435		448	55m6	110	16	49.0	59.0	M20	860	--	M40 X 2
225M (4,6&8P)	225	149	356	440	32	19	311	375	435		448	60m6	140	18	53.0	64.0	M20	900	--	M40 X 2
250M (2P)	250	168	406	500	35	24	349	425	530	525	510	60m6	140	18	53.0	64.0	M20	1050	--	M50 X 2
250M (4,6&8P)	250	168	406	500	35	24	349	425	530	525	510	65m6	140	18	58.0	69.0	M20	1050	--	M50 X 2
280M (2P)	280	190	457	540	40	24	419	490	555		570	65m6	140	18	58.0	69.0	M20	1200	–	M50 X 2
280M (4,6&8P)	280	190	457	540	40	24	419	490	555		570	75m6	140	20	67.5	79.5	M20	1200	--	M50 X 2
315S (2P)	315	216	508	620	50	28	406	640	575		658	65m6	140	18	58.0	69.0	M20	1370	–	M50 X 2
315S (4,6&8P)	315	216	508	620	50	28	406	640	575		658	80m6	170	22	71.0	85.0	M20	1400	--	M50 X 2
315M (2P)	315	216	508	620	50	28	457	640	575		658	65m6	140	18	58.0	69.0	M20	1370	--	M50 X 2
315M (4,6&8P)	315	216	508	620	50	28	457	640	575		658	80m6	170	22	71.0	85.0	M20	1400	--	M50 X 2
315 (2P)	315	216	508	620	50	28	508	640	575		658	65m6	140	18	58.0	69.0	M20	1370	--	M50 X 2
315L (4,6&8P)	315	216	508	620	50	28	508	640	575		658	80m6	170	22	71.0	85.0	M20	1400	--	M50 X 2

* MARKED DIMENSION IS FOR GAS GROUP IIC APPLICATION MOTOR & OTHER DIMENSIONS ARE SAME AS ABOVE.
Note : Cable Gland size may be changed according to cable size as per customer requirement.

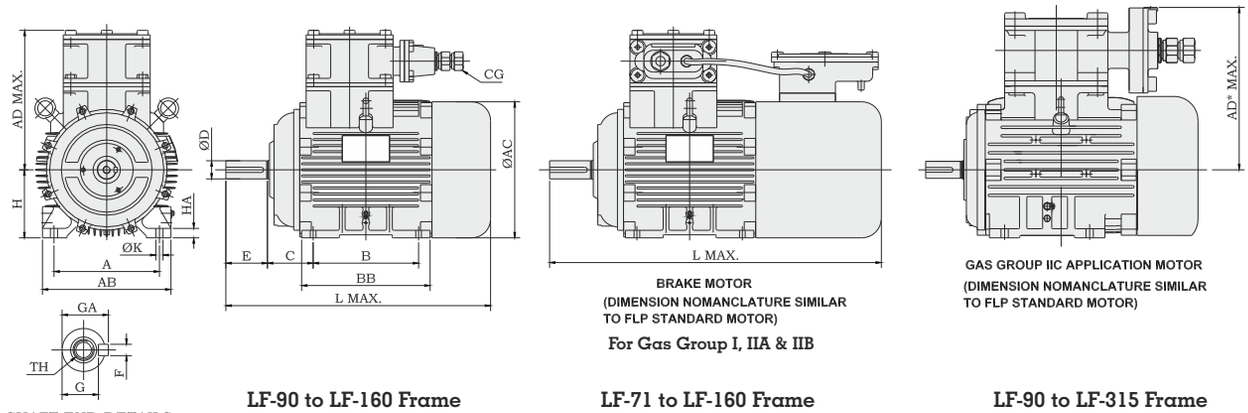
Note : Refer Table No. 16



LF 63 To 80 Frame Std. B3
Gas Group IIA, IIB & IIC

Dimensions of Foot Mounted Flame-Proof Motors (B-3 Mounting) as per IS : 1231

Note : Refer Table No. 16

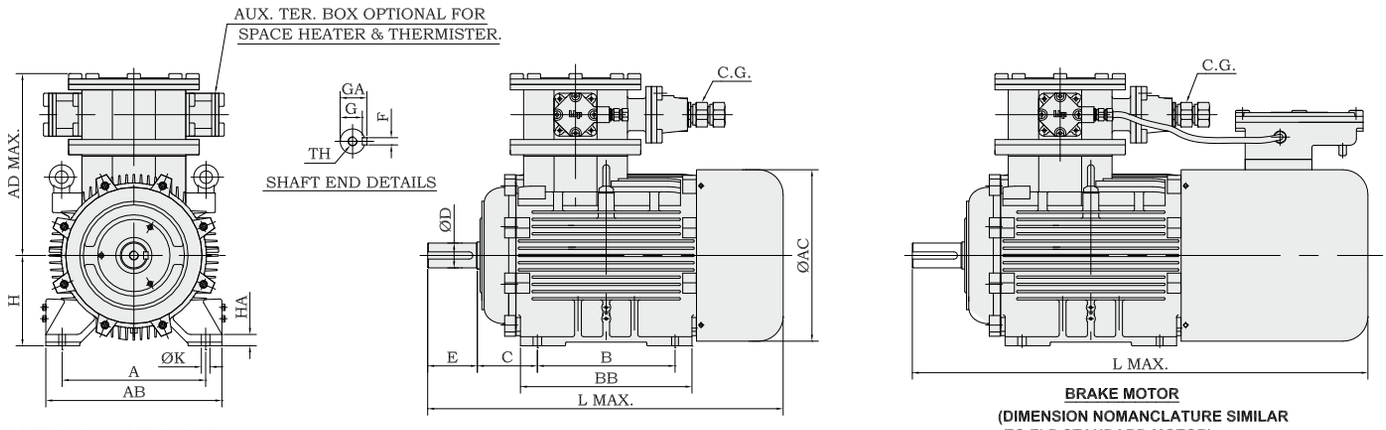


LF-90 to LF-160 Frame Gas Group I/IIA/IIB

LF-71 to LF-160 Frame Gas Group IIA/IIB

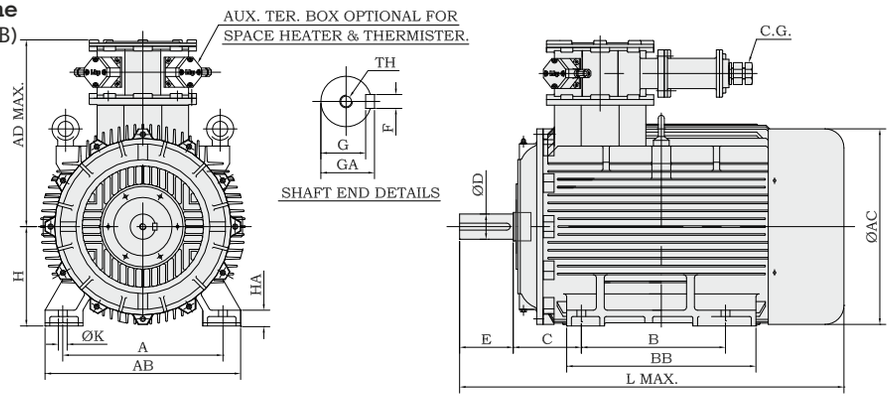
LF-90 to LF-315 Frame Gas Group IIC

Note : Refer Table No. 16



LF-180 to LF-225 Frame Gas Group I/IIA/IIB

LF-250 to LF-315 Frame
(For Gas Group I,IIA & IIB)



Note : Refer Table No. 16

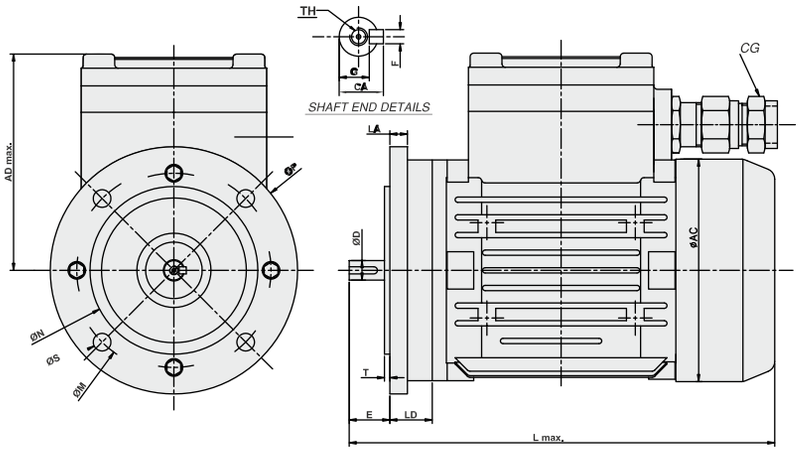
18.0 Dimensions For Flange Mounted Motors (B5 Mounting) as per IS-2223

Table No. 17

Frame Size	Flange No.	ØM ±0.3	ØN j6	ØP MIN	ØS X NO.	T	LA	LD	AD MAX	AD* MAX	ØAC	ØD	E	F	G	GA	TH	L MAX IE2/IE3/IE4	BRAKE MOTOR L MAX IE2/IE3/IE4	CG (METRIC) X NOS
63	F115B	115	95	140	10X4	3	10	–	125	125	130	11j6	23	4	8.5	12.5	M5	250	350	M20 X 1
71	F130B	130	110	160	10X4	3.5	10	19	135	135	145	14j6	30	5	11	16	M5	285	372	M20 X 1
80	F165B	165	130	200	12X4	3.5	10	16	150	145	180	19j6	40	6	15.5	21.5	M6	310	420	M20 X 1
90S/L	F165B	165	130	200	12X4	3.5	10	21	200	243	195	24j6	50	8	20	27	M8	390	517	M20 X 1
100L	F215B	215	180	250	15X4	4	11	26	215	215	217	28j6	60	8	24	31	M10	430	550	M20 X 1
112M	F215B	215	180	250	15X4	4	11	27	300	295	240	28j6	60	8	24	31	M10	480	620	M25 X 1
132S/M	F265B	265	230	300	15X4	4	12	34	320	315	272	38k6	80	10	33	41	M12	630	790	M25 X 2
160M/L	F300B	300	250	350	19X4	5	13	35	340	340	322	42k6	110	12	37	45	M16	730	950	M40 X 2
180M/L	F300B	300	250	350	19X4	5	13	55	425	425	378	48k6	110	14	42.5	51.5	M16	760	960	M40 X 2
200L	F350B	350	300	400	19X4	5	18	52	390	390	381	55m6	110	16	49	59	M20	850	---	M40 X 2
225S/M (2P)	F400B	400	350	450	19X8	5	16	48	435		448	55m6	110	16	49	59	M20	860	---	M40 X 2
225S/M (4,6&8P)	F400B	400	350	450	19X8	5	16	48	435		448	60m6	140	18	53	64	M20	900	---	M40 X 2
250M (2P)	F500B	500	450	550	19X8	5	22	55	530	525	510	60m6	140	18	53	64	M20	1050	---	M50 X 2
250M (4,6&8P)	F500B	500	450	550	19X8	5	22	55	530	525	510	65m6	140	18	58	69	M20	1050	---	M50 X 2
280S/M (2P)	F500B	500	450	550	19X8	5	22	50	555		570	65m6	140	18	58	69	M20	1200	---	M50 X 2
280S/M/L (4,6&8P)	F500B	500	450	550	19X8	5	22	50	555		570	75m6	140	20	67.5	79.5	M20	1200	---	M50 X 2
315S/M/L (2P)	F600B	600	550	660	24X8	6	22	45	602		658	65m6	140	18	58	69	M20	1340	---	M50 X 2
315S/M/L (4,6&8P)	F600B	600	550	660	24X8	6	22	45	602		680	80m6	170	22	71	85	M20	1370	---	M50 X 2

* MARKED DIMENSION IS FOR GAS GROUP IIC APPLICATION MOTOR & OTHER DIMENSIONS ARE SAME AS ABOVE.
Note : Cable Gland size may be changed according to cable size as per customer requirement.

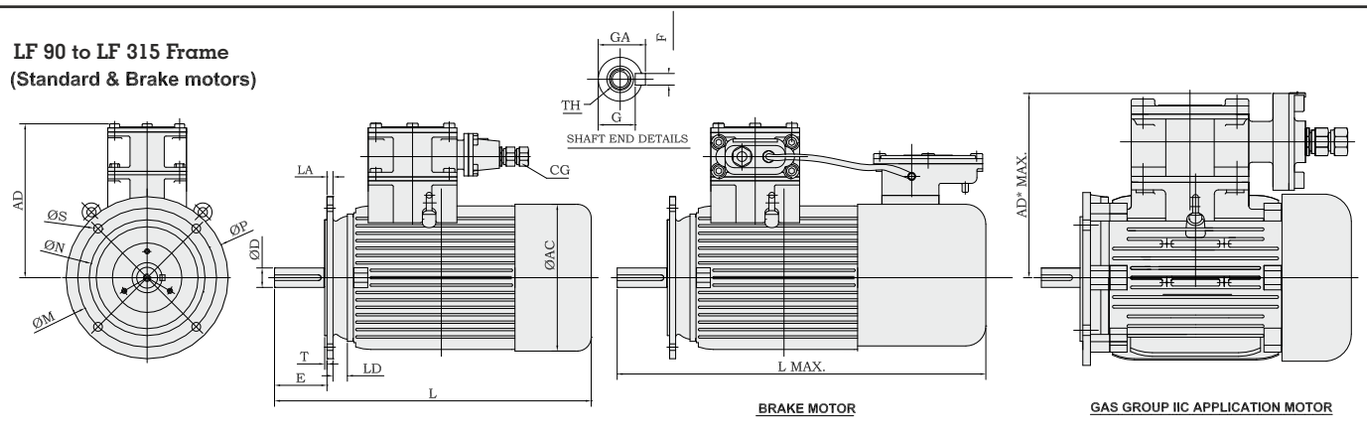
LF-63 to LF-80 Frame (IIA, IIB & IIC)



Note : Refer Table No. 17

18.0 Dimensions of Flange Mounted Flame-Proof Motors (B-5 Mounting) as per IS:2223

LF 90 to LF 315 Frame
(Standard & Brake motors)



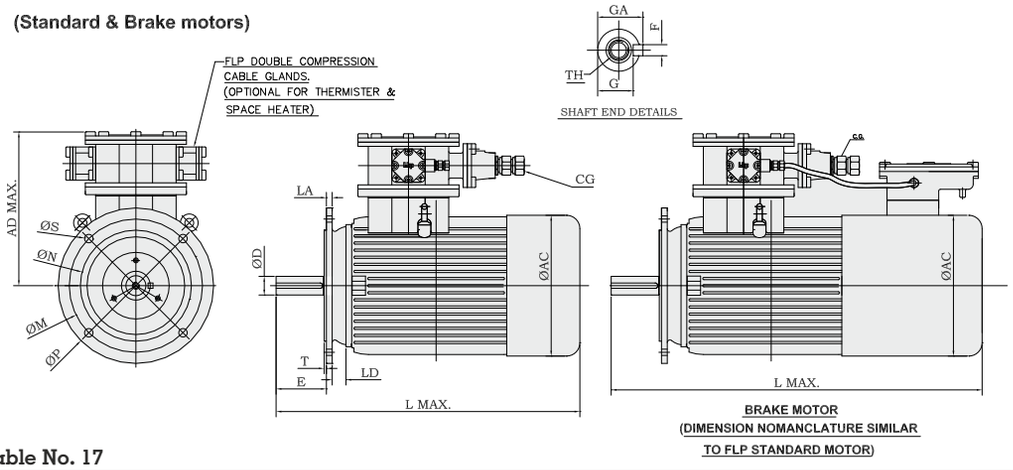
Note : Refer Table No. 17

LF-90 to LF-160 Frame
For Gas Group IIA & IIB

BRAKE MOTOR
(DIMENSION NOMANCLATURE SIMILAR TO FLP STANDARD MOTOR)
LF-71 to LF-160 Frame

GAS GROUP IIC APPLICATION MOTOR
(DIMENSION NOMANCLATURE SIMILAR TO FLP STANDARD MOTOR)
LF-90 to LF-315 Frame

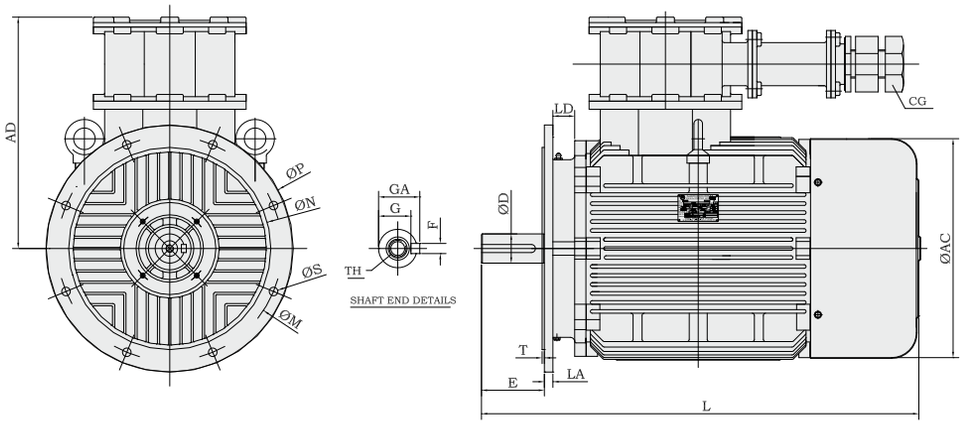
(Standard & Brake motors)



BRAKE MOTOR
(DIMENSION NOMANCLATURE SIMILAR TO FLP STANDARD MOTOR)

Note : Refer Table No. 17

LF-250 to LF-315 Frame
For Gas Group IIA & IIB



Note : Refer Table No. 17

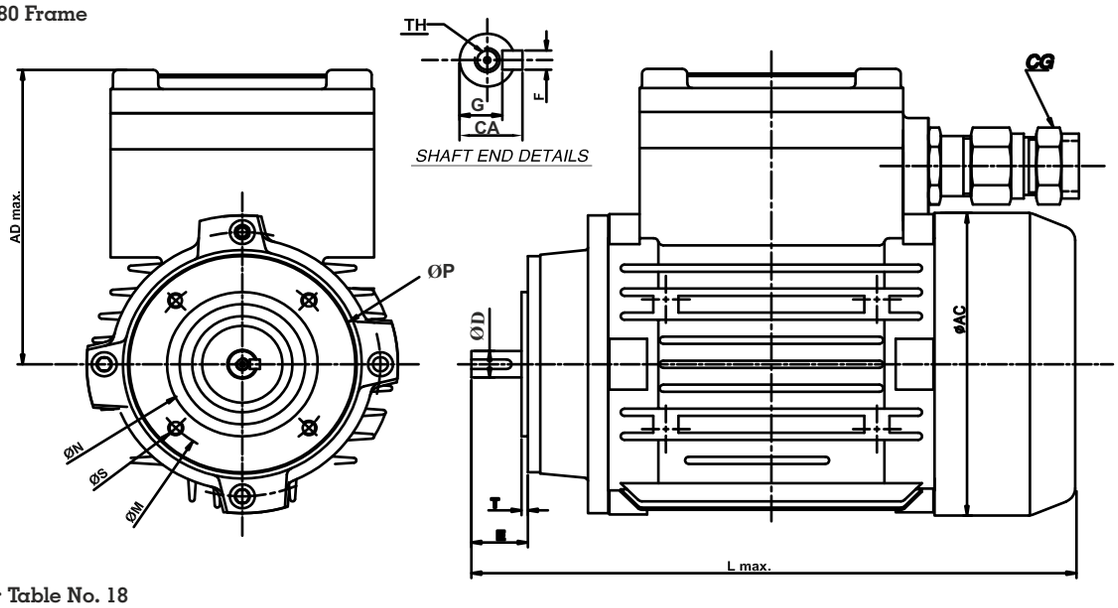
19.0 Dimensions of Face Mounted Flame-Proof Motors (B-14 Mounting) as per IS : 2223

Table No.18

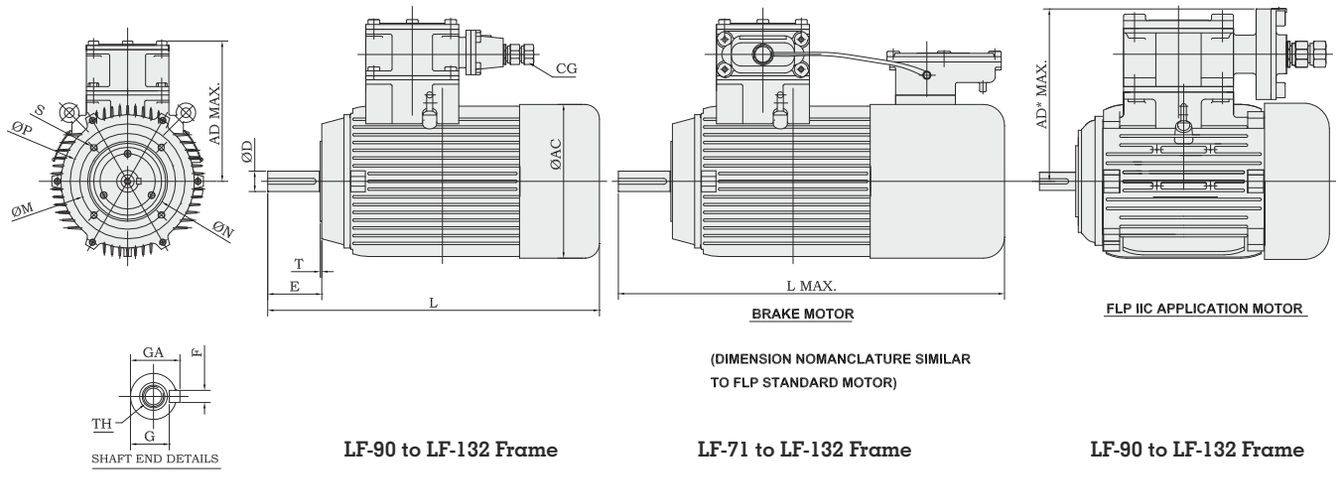
Frame Size	Flange No.	ØM 0.3	ØN j6	ØP MIN	S	T	AD MAX	AD* MAX	ØAC	OD	E	F	G	GA	TH	L MAX IE1/IE2/IE3	BRAKE MOTOR L MAX IE1/IE2/IE3	CG (METRIC) X NO.S
63	F75C	75	60	90	M5	2.5	125	125	130	11j6	23	4	8.5	12.5	M5	250	350	M20 X 1
71	F85C	85	70	105	M6	2.5	135	135	145	14j6	30	5	11	16	M5	285	375	M20 X 1
80	F100C	100	80	120	M6	3	150	145	180	19j6	40	6	15.5	21.5	M6	310	420	M20 X 1
90S/L	F115C	115	95	140	M8	3.5	200	243	195	24j6	50	8	20	27	M8	390	527	M20 X 1
100L	F130C	130	110	160	M8	3.5	215	215	217	28j6	60	8	24	31	M10	430	550	M20 X 1
112M	F130C	130	110	160	M8	3.5	300	295	240	28j6	60	8	24	31	M10	480	620	M25 X 1
132S/M	F165C	165	130	200	M12	3.5	320	315	272	38k6	80	10	33	41	M12	630	790	M25 X 2

* Marked dimension is for Gas Group IIC Application Motor & other dimensions are same as above.
Note : Cable Gland size may be changed according to cable size as per customer requirement.

LF-63 to LF-80 Frame



Note : Refer Table No. 18



LF-90 to LF-132 Frame | LF-71 to LF-132 Frame | LF-90 to LF-132 Frame

Note : Refer Below Table No. 18

A. Table No. 19 - Design and constructional features :

No.	Parameters	Standard Features	Optional Features
1	Construction : Motor Frame, End Shields, Flanges, Bearing cover	The components of these motors are made of cast Iron Aluminum having sufficient strength and dimensional stability.	The components fabricated from steel with necessary re-inforcement
2	Winding	Motors are designed with F class insulation & temp. rise is limited to the values specified in IS/IEC 600 79-15 Windings are impregnated with insulating varnish & baked. Overhang of the winding is treated with epoxy gel coat to give mechanical, electrical and thermal stability and strength	H class but temp. rise will be limited to B, F class with special insulating varnish/ impregnating resign with tropical & fungicidal treatment
3	Rotor	Rotors are made of die cast Aluminum with squirrel cage construction.	Copper die cast of brazed rotors
4	Output Rating / Poles	Please refer to table - 1	As per customers requirement
5	Eye bolts	Eye bolts are made of forged steel	S.S. / Alloy steel
6	Shaft	Shafts are made of carbon steel (40C8 grade IS 2073/EN-8 BS:970)	Shaft with other material like S.S./Alloy steel etc.
7	Shaft extension	Motors are supplied with standard extension on drive end as per IS : 1231 / IS : 2223 (Pls refer table 3,4,5)	Motors with both side extension / special extension.
8	Terminal box Assembly	Terminal box & cover are made of cast iron Aluminum T. Box can be rotated through 360^0 in steps of 90^0. Clearance & creepage distances are maintained as per IS / IEC : 60079-15 & IS : 6381. Terminal studs & its accessories are made from brass / s.s. and are nicket plated. Terminal blocks are made from DMC / Epoxy or HD Compressed type-II of IS : 3513 Part-I or P-120 grade Bakelite & are non-hygroscopic. Cable lugs of terminal connections are anti-loosening & are non-loosening & anti-vibration type.	Fabricated from steel. positions like LH. & RH. & Top. - T. studs & its accessories in special material T. blocks in porcelain or special insulating material.
9	Cable Entry	Cable entry will be in metric. For size & number of entries please refer table.	Other entries in BSC & PG type threads with other entry sizes/nos. The clearance & creepage distances
10	Dimensions	Mounting dimensions of motor frame, flangers & shafts are as per IS : 1231 / IS : 2223 (Pl. Refer Table 3,4,5)	Special dimensions with special flanges / frames.
11	Bearings	Motors are designed with single row double shielded deep groove ball bearings and are pre-greased with high temp. grease for life up to 225 frame. For 250 to 315 frame bearing are provided with greasing arrangement Bearing life is 40,000 Hrs.	Motors with other type of bearings (angular contact ball bearings, cylindrical/taper roller bearing etc.) Motors with online greasing arrangement.
12	Mounting & Mounting Position	Motors are offered with foot mounting, flange mounting with B type flange & flange mounting with C type flange mounting. Motors are suitable for horizontal (B3, B5, B6, B7, B8) & vertical (V1, V3, V5, V6, V18, V19) mounting position as per IS : 2253	Motors with special foot/flange for horizontal & vertical mounting
13	Fan	Fan is made from Cast iron / M. S.	Any special material as per requirement.
14	Fan cover	Fan cover is made of M.S. sheet metal pressed / welded.	Made from fabricated steel, S.S.
15	Supply voltage & frequency	Motors are designed for 415V 10% with 50HZ 5% supply	Other on request upto 660V
16	Performance	Performance of motors as mentioned in corresponding tables	Special requirement if any.
17	Duty	S1 (continuous)	Other duties - S1 to S9
18	Method of Starting	Motor up to 5 HP are suitable to DOL starting Motors above 5 HP are suitable for Star Delta connection	As per customer's requirement
19	Method of Cooling	Standard motors are Totally Enclosed Fan Cooled (TEFC)	Totally Enclosed Naturally Cooled (TENC) / Air Over Motors (AOM) or forced cooled with auxiliary blower

Non-sparking Motors Ex'ec' IE2, IE3)

Design and constructional features :

No.	Parameters	Standard Features	Optional Features
20	Surface Temp.	The surface temp. is limited to Lan T3 Temp clan (200°C) (Temp. calss T3) under normal operating condition to prevent thermal ignition in surrounding explosive atmosphere.	Other temp. class on request.
21	Noise & Vibration	Motors are with noise level maintained as per IS : 12065 & vibration level of normal class as per IS : 12075.	Motors with low noise level & precision class of vibration.
22	Protection	IP : 55 for Motor enclosure & T. Box	Superior protection as per IS : 4691.
23	Environment Condition	Amb. Temp. 45°C, Relative Humidity : 95% max.	Any special environment condition.
24	Space heater	On request.	Space heater & Thermistor provided with separate T Box for connection
25	Hardware	All hardware (fasteners0 are Zinc plated to prevent from corrosion.	Special hardware with special Material, grade, type & plating.
26	Drain hole	Drain hole with plug screw on end shields to remove condensate water for motor 180 & above frames.	-
27	Paint	Motors are painted with one coat of primer followed by two coasts of anti-corrosive paint.	Motors with special paint & shade.

Specifications	
1 Output Range	: 0.12/315 kW (0.16/425 HP)
2 Poles	: 2,4,6 & 8
3 Standard Specifications	
Voltage	: 415 V ± 10%
Frequency	: 50 Hz ±5%
Phase	: 3
Insulation Class	: F
Mounting	: Foot, Flange & face mounted
Ambient Temp.	: 45°C
Efficiency	: Std/IE1/IE2/IE3
Protection	: IP-55
Duty	: S1
Method of cooling	: TEFC
Mounting position	: B3, B5, B14, B34, B35 V1, V3, V5, V6, V18 & V19
Dimensions	: As per IS: 1231/IS-2223
Performance	: As per IS-325, IS/IEC 60034-1
Reference Standards	: IS/IEC 60079-15 (Ex 'nA')
Certification	: Tested by ERTL Kolkata Approved by PESO, Nagpur
Application	: Suitable for zone-2 classification of hazardous area

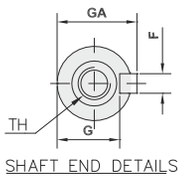
	Non-sparking (Type-'nA')							
	Pole-wise frame sizes							
Output (kW/HP)	2 Pole	4 Pole	6 Pole	8 Pole	2 Pole	4 Pole	6 Pole	8 Pole
0.12/0.16	71	71	71	-	63	63	71	71
0.18/0.25	71	71	71	80	63	63	71	80
0.25/0.33	71	71	71	80	63	71	71	80
0.37/0.50	71	71	80	90S	71	71	80	90S
0.55/0.75	71	80	80	90L	71	80	80	90L
0.75/1.00	80	80	90S	100L	80	80	90S	100L
1.10/1.50	80	90S	90L	100L	80	90S	90L	100L
1.50/2.00	90S	90L	100L	112M	90S	90L	100L	112M
2.20/3.00	90L	100L	112M	132S	90L	100L	112M	132S
3.70/5.0	100L	112M	132S	160M	100L	112M	132S	160M
5.50/7.50	132S	132S	132M	160M	132S	132S	132M	160M
7.50/10.00	132S	132M	160M	160L	132S	132M	160M	160L
9.30/12.50	132M	160M	160L	180M	132M	160M	160L	180M
11.00/15.00	160M	160M	160L	180L	160M	160M	160L	180L
15.00/20.00	160M	160L	200L	200L	160M	160L	200L	200L
18.50/25.00	160L	180M	200L	225S	160L	180M	200L	225S
22 / 30	180L	180L	225M	225M	180L	180L	225M	225M
30 / 40	200L	200L	225M	250M	200L	200L	225M	250M
37 / 50	225S	225S	250M	280S	200L	225S	250M	280S
45 / 60	250M	225M	280S	280M	225M	225M	280S	280M
55 / 75	250M	250M	280M	315S	250M	250M	280M	315S
75 / 100	280S	280S	315S	315S	280S	280S	315S	315S
90 /120	280M	280M	315M	315M	280M	280M	315M	315M
110 / 150	315S	315S	315M	315M	315S	315S	315M	315M
125 / 170	315M	315M	-	-	315M	315M	-	-
132 / 180	315M	315M	315L	315L	315M	315M	315L	315L
160 / 215	315L	315L	315L	315L	315L	315L	315L	315L
180 / 250	315L	315L	-	-	315L	315L	-	355L
200 / 270	315L	315L	-	-	315L	315L	355L	355L
235/300					355L	355L	355L	-
250/335					355L	355L	355L	-
315/425					355L	355L	-	-

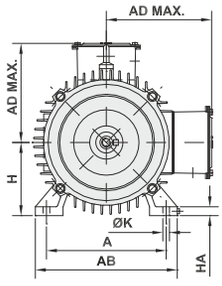
B. Performance Table for Non-sparking (IE1, IE2, IE2) motors
Please refer standard Motor (IE1, IE2, IE3) performance tables.
C. General arrangement - drawing & dimensions
Please refer Page Number 33,34,35.

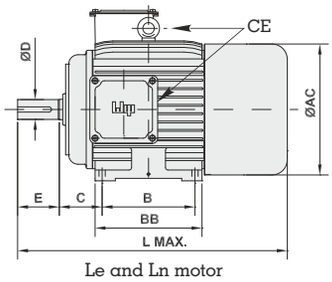
General arrangement Drawing/Dimensions - Foot Mounted (B3)

Non-sparking and Increased Safety Motors as per IS : 1231

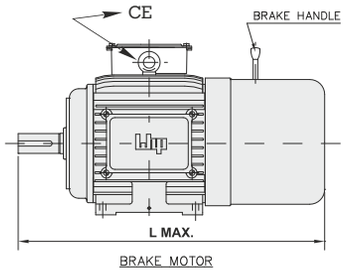
Refer Table No. 20







Le and Ln motor



Dimension Nomanclature
Similar to Le and Ln motor

CE - Cable Entry in Metric

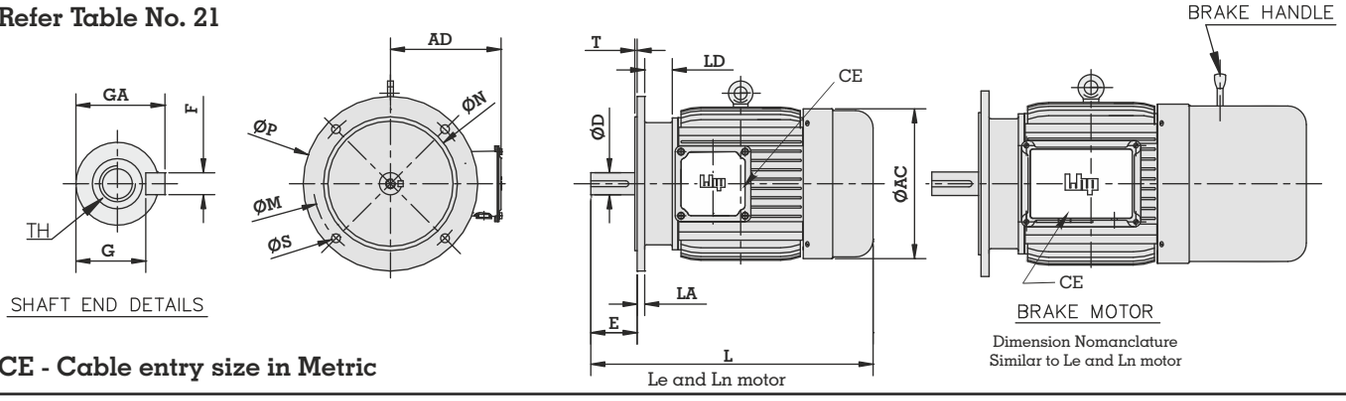
Table No. 20

Frame Size	CONT.	H	C	A	AB	HA	ØK	B	BB	AD MAX	ØAC	ØD	E	F	G	GA	TH	L MAX		CE X Nos.	T.Box Position
																		IE 2	IE3/IE4		
63	CI	63	40	100	120	8	7	80	100	136	116	11j6	23	4	8.5	12.5	M5	223	223	M20-1	RHS
63	AL PDC	63	40	100	118	8	7	80	97	130	116	11j6	23	4	8.5	12.5	M5	223	223	M20-1	TOP
71	CI	71	45	112	132	9	7	90	112	142	140	14j6	30	5	11.0	16.0	M5	270	270	M20-1	RHS
71	AL PDC	71	45	112	133	9	7	90	110	140	140	14j6	30	5	11.0	16.0	M5	270	270	M20-1	TOP
80	CI	80	50	125	151	10	10	100	124	140	158	19j6	40	6	15.5	21.5	M6	290	290	M20-1	RHS
80	AL PDC	80	50	125	153	12	10	100	125	150	158	19j6	40	6	15.5	21.5	M6	290	290	M20-1	TOP
90S	CI	90	56	140	170	10	10	100	127	165	178	24j6	50	8	20.0	27.0	M8	355	355	M20-1	RHS
90S	AL PDC	90	56	140	185	14	10	100	130	160	178	24j6	50	8	20.0	27.0	M8	355	355	M20-1	RHS
90L	CI	90	56	140	170	10	10	125	150	165	178	24j6	50	8	20.0	27.0	M8	380	380	M20-1	RHS
90L	AL PDC	90	56	140	185	13	10	125	146	145	178	24j6	50	8	20.0	27.0	M8	348	356	M20-1	RHS
100L	CI	100	63	160	197	13	12	140	170	165	195	28j6	60	8	24.0	31.0	M10	405	405	M20-1	RHS
100L	AL PDC	100	63	160	194	15	12	140	167	165	195	28j6	60	8	24.0	31.0	M10	405	405	M20-1	RHS
112M	CI	112	70	190	230	15	12	140	170	190	224	28j6	60	8	24.0	31.0	M10	445	445	M20-1	RHS
112M	AL PDC	112	70	190	225	12	12	140	172	190	224	28j6	60	8	24.0	31.0	M10	445	445	M20-1	RHS
132S	CI	132	89	216	256	16	12	140	167	205	257	38k6	80	10	33.0	41.0	M12	480	520	M20-2	RHS
132M	CI	132	89	216	256	16	12	178	205	205	257	38k6	80	10	33.0	41.0	M12	520	560	M20-2	RHS
132M(N)	CI	132	89	216	256	16	12	178	205	205	257	38k6	80	10	33.0	41.0	M12	560	580	M20-2	RHS
160M	CI	160	108	254	304	26	15	210	260	260	312	42k6	110	12	37.0	45.0	M16	630	672	M25-2	RHS
160L	CI	160	108	254	310	26	15	254	304	260	312	42k6	110	12	37.0	45.0	M16	690	690	M25-2	RHS
180M	CI	180	121	279	340	26	15	241	318	320	357	48k6	110	14	42.5	51.5	M16	730	750	M25-2	RHS
180L	CI	180	121	279	340	26	15	279	318	320	357	48k6	110	14	42.5	51.5	M16	750	800	M25-2	RHS
200L	CI	200	133	318	385	35	19	305	350	300	380	55m6	110	16	49.0	59.0	M20	800	850	M50-2	TOP
225S(2P)	CI	225	149	356	440	35	19	286	370	340	448	55m6	110	16	49.0	59.0	M20	860	860	M50-2	TOP
225S(4,6,8 P)	CI	225	149	356	440	35	19	286	370	340	448	60m6	140	18	53.0	64.0	M20	890	890	M50-2	TOP
225M(2P)	CI	225	149	356	440	35	19	311	370	340	448	55m6	110	16	49.0	59.0	M20	890	890	M50-2	TOP
225M(4,6,8 P)	CI	225	149	356	440	35	19	311	370	340	448	60m6	140	18	53.0	64.0	M20	890	960	M50-2	TOP
250M (2P)	CI	250	168	406	500	43	24	349	425	450	510	60m6	140	18	53.0	64.0	M20	1015	1050	M50-2	TOP
250M (4,6,8 P)	CI	250	168	406	500	43	24	349	425	450	510	65m6	140	18	58.0	69.0	M20	1015	1050	M50-2	TOP
280S (2P)	CI	280	190	457	540	43	24	368	460	480	570	65m6	140	18	58.0	69.0	M20	1100	1200	M50-2	TOP
280S(4,6,8 P)	CI	280	190	457	540	43	24	368	460	480	570	75m6	140	20	67.5	79.5	M20	1100	1200	M50-2	TOP
280M (2 P)	CI	280	190	457	540	43	24	419	515	480	570	65m6	140	18	58.0	69.0	M20	1155	1200	M50-2	TOP
280M (4,6,8 P)	CI	280	190	457	540	43	24	419	515	480	570	75m6	140	20	67.5	79.5	M20	1155	1200	M50-2	TOP
315S (2 P)	CI	315	216	508	620	50	28	406	546	525	658	65m6	140	18	58.0	69.0	M20	1165	1165	M50-2	TOP
315S (4,6,8 P)	CI	315	216	508	620	50	28	406	546	525	658	80m6	170	22	71.0	85.0	M20	1195	1195	M50-2	TOP
315M (2 P)	CI	315	216	508	620	50	28	457	640	525	658	65m6	140	18	58.0	69.0	M20	1320	1320	M50-2	TOP
315M (4,6,8 P)	CI	315	216	508	620	50	28	457	640	525	658	80m6	170	22	71.0	85.0	M20	1350	1350	M50-2	TOP
315L (2 P)	CI	315	216	508	620	50	28	508	640	525	658	65m6	140	18	58.0	69.0	M20	1320	1320	M50-2	TOP
315L (4,6,8 P)	CI	315	216	508	620	50	28	508	600	525	658	80m6	170	22	71.0	85.0	M20	1350	1350	M50-2	TOP
355S (2 P)	CI	355	254	610	730	51	28	500	780	650	775	80m6	170	22	71.0	85.0	M20	1580	1590	M63-2	TOP
355S (4,6,8 P)	CI	355	254	610	730	51	28	500	780	650	775	100m6	210	28	90.0	106.0	M24	1620	1630	M63-2	TOP
355M (2P)	CI	355	254	610	730	51	28	560	780	650	775	80m6	170	22	71.0	85.0	M20	1580	1590	M63-2	TOP
355M (4,6,8 P)	CI	355	254	610	730	51	28	560	780	650	775	100m6	210	28	90.0	106.0	M24	1620	1630	M63-2	TOP
355L (2 P)	CI	355	254	610	730	51	28	630	780	650	775	80m6	170	22	71.0	85.0	M20	1580	1590	M63-2	TOP
355L (4,6,8 P)	CI	355	254	610	730	51	28	630	780	650	775	100m6	210	28	90.0	106.0	M24	1620	1630	M63-2	TOP

General arrangement Drawing/Dimensions - Flange Mounted (B5)

Non-sparking and Increased Safety Motors as per IS:2223

Refer Table No. 21



CE - Cable entry size in Metric

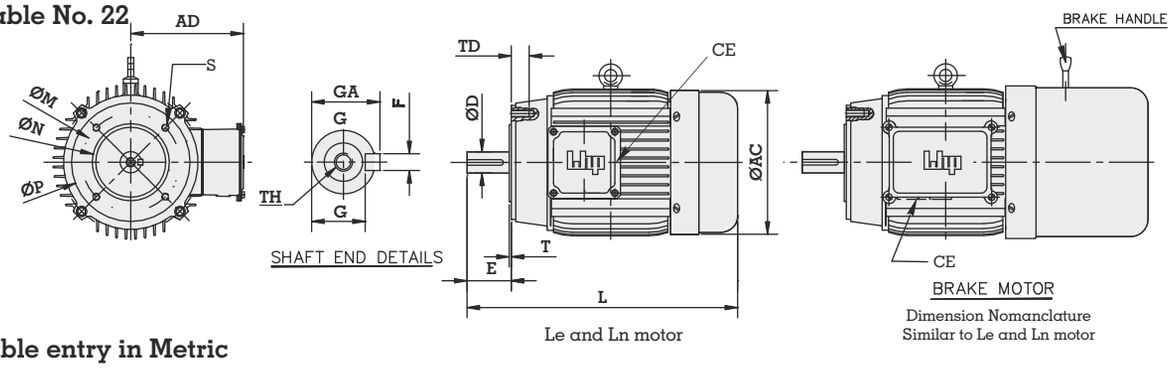
Table No. - 21

Frame Size	Cont.	Flange No.	ØM ±0.3	j6 ØN	ØP	ØS X NO.	T	LA	LD	AD MAX	ØAC	ØD	E	F	G	GA	TH	L MAX		CE X Nos.
																		IE2	IE3 & IE4	
63	CI	F115B	115	95	140	10 X 4	3	10	10	136	116	11j6	23	4	8.5	12.5	M5	223	223	M20-1
63	AL.PDC	F115B	115	95	140	10 X 4	3	10	10	130	116	11j6	23	4	8.5	12.5	M5	223	223	M20-1
71	CI	F130B	130	110	160	10 X 4	3.5	10	10	142	140	14j6	30	5	11	16	M5	275	315	M20-1
71	AL.PDC	F130B	130	110	160	10 X 4	3.5	10	20	140	140	14j6	30	5	11	16	M5	270	310	M20-1
80	CI	F165B	165	130	200	12 X 4	3.5	11	16	140	158	19j6	40	6	15.5	21.5	M6	290	290	M20-1
80	AL.PDC	F165B	165	130	200	12 X 4	3.5	11	16	150	158	19j6	40	6	15.5	21.5	M6	290	290	M20-1
90S	CI	F165B	165	130	200	12 X 4	3.5	11	22	165	178	24j6	50	8	20	27	M8	355	355	M20-1
90S	AL.PDC	F165B	165	130	200	12 X 4	3.5	11	22	160	178	24j6	50	8	20	27	M8	355	355	M20-1
90L	CI	F165B	165	130	200	12 X 4	3.5	11	22	165	178	24j6	50	8	20	27	M8	380	380	M20-1
90L	AL.PDC	F165B	165	130	200	12 X 4	3.5	11	22	160	178	24j6	50	8	20	27	M8	380	380	M20-1
100L	CI	F215B	215	180	250	15 X 4	4	12	20	165	195	28j6	60	8	24	31	M10	405	405	M20-1
100L	AL.PDC	F215B	215	180	250	15 X 4	4	14	30	165	195	28j6	60	8	24	31	M10	405	405	M20-1
112M	CI	F215B	215	180	250	15 X 4	4	12	23	190	224	28j6	60	8	24	31	M10	445	445	M20-1
112M	AL.PDC	F215B	215	180	250	15 X 4	4	12	18	190	224	28j6	60	8	24	31	M10	445	445	M20-1
132S	CI	F265B	265	230	300	15 X 4	4	13	47	205	260	38k6	80	10	33	41	M12	480	520	M20-2
132M	CI	F265B	265	230	300	15 X 4	4	13	47	205	260	38k6	80	10	33	41	M12	520	560	M20-2
132M (N)	CI	F265B	265	230	300	15 X 4	4	13	47	205	260	38k6	80	10	33	41	M12	560	580	M20-2
160M	CI	F300B	300	250	350	19 X 4	5	14	54	260	312	42k6	110	12	37	45	M16	650	710	M25-2
160L	CI	F300B	300	250	350	19 X 4	5	14	54	260	312	42k6	110	12	37	45	M16	720	810	M25-2
180M/L	CI	F300B	300	250	350	19 X 4	5	14	72	275	360	48k6	110	14	42.5	51.5	M16	750	830	M25-2
200L	CI	F350B	350	300	400	19 X 4	5	16	71	350	381	55m6	110	16	49	59	M20	800	900	M50-2
225S/M (2P)	CI	F400B	400	350	450	19 X 8	5	16	71	340	448	55m6	110	16	49	59	M20	860	860	M50-2
225S/M (4,6,8P)	CI	F400B	400	350	450	19 X 8	5	16	71	340	448	60m6	140	18	53	64	M20	890	960	M50-2
250M (2P)	CI	F500B	500	450	550	19 X 8	5	19	65	450	510	60m6	140	18	53	64	M20	1015	1050	M50-2
250M (4,6,8P)	CI	F500B	500	450	550	19 X 8	5	19	65	450	510	65m6	140	18	58	69	M20	1015	1050	M50-2
280S/M (2P)	CI	F500B	500	450	550	19 X 8	5	22	50	480	570	65m6	140	18	58	69	M20	1055	1200	M50-2
280S/M (4,6,8P)	CI	F500B	500	450	550	19 X 8	5	22	50	480	570	75m6	140	20	67.5	79.5	M20	1055	1200	M50-2
315S (2P)	CI	F600B	600	550	660	24 X 8	6	22	50	530	658	65m6	140	18	58	69	M20	1125	1400	M50-2
315S (4,6,8P)	CI	F600B	600	550	660	24 X 8	6	22	50	530	658	80m6	170	22	71	85	M20	1155	1390	M50-2
315S/M/L (2P)	CI	F600B	600	550	660	24 X 8	6	22	50	530	658	65m6	140	18	58	69	M20	1290	1400	M50-2
315S/M/L (4,6,8P)	CI	F600B	600	550	660	24 X 8	6	22	50	530	658	80m6	170	22	71	85	M20	1315	1390	M50-2
355S/M/L (2P)	CI	F740B	740	680	800	24 X 8	6	28	65	650	775	80m6	170	22	71	85	M20	1590	1590	M63-2
355S/M/L (4,6,8P)	CI	F740B	740	680	800	24 X 8	6	28	65	650	775	100m6	210	28	90	106	M24	1630	1630	M63-2

General arrangement Drawing/Dimensions - Face Mounted (B14)

Non Sparking and Increased Safety Motors as per IS : 2223

Refer Table No. 22



CE - Cable entry in Metric

Table No. 22

Frame Size	Cont.	Flange No.	ØM ± 0.3	ØN j6	ØP	S	TD	T	AD MAX	ØAC	ØD	E	F	G	GA	TH	L MAX		CE X Nos.
																	IE2	IE3 & IE4	
63	CI	F75C	75	60	90	M5	6	2.5	136	116	11j6	23	4	8.5	12.5	M5	223	223	M20-1
63	AL.PDC	F75C	75	60	90	M5	6	2.5	130	116	11j6	23	4	8.5	12.5	M5	223	223	M20-1
71	CI	F85C	85	70	105	M6	8	2.5	142	140	14j6	30	5	11	16	M5	275	315	M20-1
71	AL.PDC	F85C	85	70	107	M6	8	2.5	140	140	14j6	30	5	11	16	M5	270	310	M20-1
80	CI	F100C	100	80	120	M6	8	3	140	158	19j6	40	6	15.5	21.5	M6	290	290	M20-1
80	AL.PDC	F100C	100	80	120	M6	8	3	150	158	19j6	40	6	15.5	21.5	M6	290	290	M20-1
90S	CI	F115C	115	95	140	M8	10	3	160	178	24j6	50	8	20	27	M8	365	405	M20-1
90S	AL.PDC	F115C	115	95	140	M8	10	3	140	178	24j6	50	8	20	27	M8	360	400	M20-1
90L	CI	F115C	115	95	140	M8	10	3	160	178	24j6	50	8	20	27	M8	395	435	M20-1
90L	AL.PDC	F115C	115	95	140	M8	10	3	140	178	24j6	50	8	20	27	M8	360	400	M20-1
100L	CI	F130C	130	110	160	M8	10	3.5	165	195	28j6	60	8	24	31	M10	405	405	M20-1
100L	AL.PDC	F130C	130	110	160	M8	10	3.5	165	195	28j6	60	8	24	31	M10	405	405	M20-1
112M	CI	F130C	130	110	160	M8	10	3.5	190	224	28j6	60	8	24	31	M10	445	445	M20-1
112M	AL.PDC	F130C	130	110	160	M8	10	3.5	190	224	28j6	60	8	24	31	M10	445	445	M20-1
132S	CI	F165C	165	130	196	M12	14	3.5	205	260	38k6	80	10	33	41	M12	480	520	M20-2
132M	CI	F165C	165	130	196	M12	14	3.5	205	260	38k6	80	10	33	41	M12	520	560	M20-2
132M(N)	CI	F165C	165	130	196	M12	14	3.5	205	260	38k6	80	10	33	41	M12	560	580	M20-2

Crane Duty Motors - General Technical Information

Duty

The term duty defines the load cycle to which the machine is subjected, including, if applicable, starting, electric braking, no-load and rest de-energized periods, and including their durations and sequence in time. Duty considered as generic term, for example, can be classified as continuous duty, short-time duty or periodic duty. The percentage ratio between the period of loading and the total duration of the duty cycle is defined cyclic duration factor.

Declaration of duty

It is the responsibility of the purchaser to declare the duty. The purchaser may describe the duty by one of the following

a) Numerically, where the load does not vary or where it varies in a known manner;

b) As a time sequence graph of the variable quantities;

c) By selecting one of the duty type S1 to S10 that is no less onerous than the expected duty.

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Types of Duties

S1 Continuous running duty

S2 Short-time duty

S3 Intermittent periodic duty

S4 Intermittent periodic duty with starting

S5 Intermittent periodic duty with electric braking

S6 Continuous-operation periodic duty

S7 Continuous-operation periodic duty with electric braking

S8 Continuous-operation periodic duty with related load/speed changes

S9 Duty with non-periodic load and speed variations

S10 Duty with discrete constant loads and speeds

Diagrams of Duty Cycle

S1 Continuous running duty

For a motor suitable to this duty type, the rating at which the machine may be operated for an unlimited period is specified. The duty type S1 is a operation at a constant load maintained for sufficient time to allow the machine to reach thermal equilibrium. The appropriate abbreviation is S1.

CRANE DUTY MOTORS

Upto 355 Frame

Crane Duty Motors - General Technical Information

S2 Short-time duty
For a motor suitable to this duty type, the rating at which the machine, starting at ambient temperature, may be operated for a limited period is specified. This class of rating corresponds to the duty type whose appropriate abbreviation is S2. Operation at constant load for a given time, less than that required to reach thermal equilibrium, followed by a time de-energized and at rest of sufficient duration to re-establish the equilibrium between the machine temperature and that of the coolant temperature. The recommended values for the short time duty are 10, 30, 60 and 90 minutes.
The appropriate abbreviation is S2, followed by an indication of the duration of the duty
Example: S2 10 min
S3 Intermittent periodic duty
For a motor suitable to this duty type, the rating at which the machine may be operated in a sequence of duty cycles is specified. With this type of duty, the loading cycle does not allow the machine to reach thermal equilibrium
A sequence of identical duty cycle, each duty cycle consisting of a period of operation at constant load and a rest period, these periods being to attain thermal equilibrium during one duty cycle.in this duty type the starting current does not significantly affect the temperature-rise
The appropriate abbreviation is S3, followed by cycle duration factor.
Example: S3 25%
S4 Intermittent periodic duty with starting
A sequence of identical duty cycle; this includes a period of starting, a period of operation at constant load and rest period, which is too short to attain thermal equilibrium during one cycle. The starting affects temperature rise, as load GD2 is higher than rotor GD2 or no .of start/hour is high, in this duty the stopping of motor is obtained either by natural deceleration after disconnection of the electricity supply or by means of braking such a mechanical brake which does not cause additional heating of the windings
The appropriate abbreviation is S4, followed by the cycle duration factor, the moment of inertia of the motor (JM) and the moment of inertia of the load (Jext), both referred to motor shaft.
Example: S4 25% JM = 0.15 kgm2 Jext = 0.7 kgm2
S5 Intermittent periodic duty with electric braking
A sequence of identical duty cycle, each cycle consisting of a period starting, period of operation at constant load, a period of braking and a rest period. The operating and de-energized periods being too short to obtain thermal equilibrium during one duty cycle in this duty breaking is rapid and is carried out electrically.
The appropriate abbreviation is S5, followed by the cyclic duration factor, the moment of inertia of the motor (JM) and moment of inertia of the load (Jext) both referred to the motor shaft.
Example: S5 25% JM = 0.15 kgm2 Jext = 0.7 kgm2

S6 Continuous-operation periodic duty
A sequence of identical duty cycles, each cycle consisting of a time of operation at constant load and a time of operation at no-load. There is no time de-energized and at rest.
The appropriate abbreviation is S6, followed by the cyclic duration factor.
Example: S6 40%

S7 Continuous-operation periodic duty with electric braking
A sequence of identical duty cycles each consisting of a period of starting, a period of operating at constant load and a period of electrical braking. There is no rest and de-energized period.
The appropriate abbreviation is S7, followed by the moment of inertia of the motor (JM) and the moment of inertia of the load (Jext), both referred to the motor shaft
Example: S7 JM = 0.4 kgm2 Jext = 7.5 kgm2

S8 Continuous-operation periodic duty with related load/speed changes
A sequence of identical duty cycles, each cycle consisting of a time of operation at constant load corresponding to a predetermined speed of rotation, followed immediately by one or more times of operation at other constant load corresponding to different speed of rotation (carried out, for example, by means of a change in the number of poles in case of induction motors). There is no time de-energized and at rest
The appropriate abbreviation is S8, followed by the moment of inertia of the motor (JM) and the moment of inertia of the load (Jext). both referred to the motor shaft, together with the load, speed and cyclic duration factor for each speed condition.
Example: S8 JM = 0.5 kgm2 Jext = 6 kgm2

16 kW	740 RPM	30 %
25 kW	980 RPM	30%
40 kW	1460 RPM	30%

S9 Duty with non-periodic load and speed variations
A duty in which generally load and speed vary non-periodically within the permissible operating range. This duty includes frequently applied overloads that may greatly exceed the reference load
The appropriate abbreviation is S9

3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66 , Altitude upto 1000 mtrs. above m.s.l , Duty S3/S4,efficiency class IE-2,IV-Pole conforms to IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS 12615:2018,,Efficiency testing according to IEC 60034-2-1:2014-06, EN 60079-0:2012+AII:2013,EN 60079-1:2014, EN 60079-31:2014,EN/IEC 60079-7:2015 ,IEC60034-30-2008, IEC 60034-1:2010 for Gas & Dust IEC-Ex , ATEX certified by BASEEFA,

Performance Table for 4 Pole Motors

Ordering code		60 Starts / hr.								150 Starts / hr.						300 Starts / hr.																
		40% CDF					60% CDF			40% CDF			60% CDF			60% CDF			40% CDF			With DOL Starting					Net Approx Wt. B3 Const. (Kg)	TWT Hot in sec.	TWT Cold in sec.	Th (min)	Tc (min)	Temp. Class
	Frame	kW	Current Amps.	Equivelent S1 duty Kw efficiency	PF FL. (PU)	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	Speed RPM	Starting Current % of Rated Current	Starting Torque % of Rated Torque	Pull out Torque % of Rated Torque	Rotor GD^2 Kgm^2					
.12C42063A3T	63	0.12	0.45	53.3	0.63	0.09	0.12	0.45	0.089	0.12	0.45	0.09	0.12	0.45	0.089	0.12	0.45	0.089	0.12	0.45	0.089	1300	300	200	250	0.0014	5	15	33	63	188	T6
.12C42063C3R	63	0.12	0.45	53.3	0.63	0.09	0.12	0.45	0.089	0.12	0.45	0.09	0.12	0.45	0.089	0.12	0.45	0.089	0.12	0.45	0.089	1300	300	200	250	0.0014	7	15	33	63	188	T6
.18C42063A3T	63	0.18	0.62	60.0	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	1300	310	200	250	0.0014	5	15	33	63	188	T6
.18C42063C3R	63	0.18	0.62	60.0	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	1300	310	200	250	0.001	7	15	33	63	188	T6
.25C42063A3T	63	0.25	0.75	64.5	0.68	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	1305	330	210	260	0.002	6	15	33	63	188	T6
.25C42063C3R	63	0.25	0.75	64.5	0.68	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	1305	330	210	260	0.002	8	15	33	63	188	T6
.37C42071A3T	71	0.37	1.0	68.9	0.71	0.27	0.37	1.00	0.27	0.37	1.00	0.27	0.37	1.00	0.27	0.37	1.00	0.27	0.37	1.00	0.27	1310	350	210	260	0.033	7	10	20	42	125	T6
.37C42071C3R	71	0.37	1.0	68.9	0.71	0.27	0.37	1.00	0.27	0.37	1.00	0.27	0.37	1.00	0.27	0.37	1.00	0.27	0.37	1.00	0.27	1310	350	210	260	0.033	9	10	20	42	125	T6
.55C42071A3T	71	0.55	1.6	73.3	0.62	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	1310	370	225	275	0.0033	8	10	20	42	125	T6
.55C42071C3R	71	0.55	1.6	73.3	0.62	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	1310	370	225	275	0.0033	10	10	20	42	125	T6
.75C42080A3T	80	0.75	1.8	76.6	0.73	0.55	0.75	1.8	0.55	0.75	1.8	0.55	0.75	1.8	0.55	0.75	1.8	0.55	0.75	1.8	0.55	1340	450	230	275	0.0061	11	10	20	42	125	T6
.75C42080C3R	80	0.75	1.8	76.6	0.73	0.55	0.75	1.8	0.55	0.75	1.8	0.55	0.75	1.8	0.55	0.75	1.8	0.55	0.75	1.8	0.55	1340	450	230	275	0.0061	17	10	20	42	125	T6
1.1C42080A3T	80	1.1	3.1	79.8	0.61	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1365	500	230	280	0.0072	12	10	20	42	125	T6
1.1C42080C3R	80	1.1	3.1	79.8	0.61	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1365	500	230	280	0.0072	18	10	20	42	125	T6
1.5C4290SA3R	90S	1.5	3.9	81.3	0.65	1.10	1.5	3.9	1.10	1.5	3.9	1.10	1.5	3.9	1.10	1.5	3.9	1.10	1.5	3.9	1.10	1385	500	225	275	0.0120	14	10	20	42	125	T6
1.5C4290SC3R	90S	1.5	3.9	81.3	0.65	1.10	1.5	3.9	1.10	1.5	3.9	1.10	1.5	3.9	1.10	1.5	3.9	1.10	1.5	3.9	1.10	1385	500	225	275	0.0120	24	10	20	42	125	T6
2.2C4290LA3R	90L	2.2	5.0	82.9	0.73	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	1380	480	230	280	0.0160	20	10	20	42	125	T6
2.2C4290LC3R	90L	2.2	5.0	82.9	0.73	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	1380	480	230	280	0.0160	30	10	20	42	125	T6
3.7C4210LA3R	100L	3.7	8.0	85.0	0.75	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	1380	600	230	300	0.0260	25	8	16	33	100	T6
3.7C4210LC3R	100L	3.7	8.0	85.0	0.75	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	1380	600	230	300	0.0260	40	8	16	33	100	T6
5.5C4211MA3R	112M	5.5	12.4	86.5	0.70	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	1400	600	250	280	0.058	33	8	16	33	100	T5
5.5C4211MC3R	112M	5.5	12.4	86.5	0.70	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	1400	600	250	280	0.058	38	8	16	33	100	T5
7.5C4213SC3R	132S	7.5	14.8	87.6	0.79	5.20	7.5	14.8	5.20	7.5	14.8	5.20	7.5	14.8	5.20	7.5	14.8	5.20	7.5	14.8	5.20	1410	650	225	290	0.127	50	8	16	33	100	T5
9.3C4213MC3R	132M	9.3	18.1	88.3	0.80	6.40	9.3	18.1	6.40	9.3	18.1	6.40	9.3	18.1	6.40	9.3	18.1	6.40	9.3	18.1	6.40	1420	650	230	290	0.141	95	8	16	33	100	T5
011C4216MC3R	160M	11	22.0	88.8	0.77	7.40	11	22.0	7.40	11	22.0	7.40	11	22.0	7.40	11	22.0	7.40	11	22.0	7.40	1440	650	225	280	0.141	115	10	22	42	125	T4
132C4216MC3R	160M	13.2	25.0	89.3	0.81	8.90	12.1	23.0	8.20	13.2	25.0	8.90	12.1	23.0	8.20	13.2	25.0	8.90	12.1	23.0	8.20	1440	650	225	280	0.177	125	10	22	42	125	T4
015C4216MC3R	160M	15	30.0	89.7	0.77	10.1	15	30.0	10.1	15	30.0	10.1	15	30.0	10.1	13.8	27.0	9.30	13.8	27.0	9.30	1440	650	225	280	0.193	135	10	22	42	125	T4
185C4216LC3R	160L	18.5	36.0	90.3	0.78	12.5	18.5	36.0	12.5	18.5	36.0	12.5	18.5	36.0	12.5	17	33.0	11.5	17	33.0	11.5	1445	650	210	250	0.265	145	10	22	42	125	T4
022C4218LC3R	180L	22	39.0	90.8	0.86	14.7	22	39.0	14.7	22	39.0	14.7	22	39.0	14.7	22	39.0	14.7	20	35.5	13.3	1460	650	240	260	0.540	230	10	22	42	125	T4
030C4220LC3T	200L	30	52.0	91.5	0.87	19.9	30	52.0	19.9	30	52.0	19.9	30	52.0	19.9	28	49.0	18.6	26	45.0	17.3	1465	650	260	260	0.860	247	12	27	50	150	T5
037C4222SC3T	225S	37	64.0	92.0	0.87	24.5	37	64.0	24.5	37	64.0	24.5	34	58.8	22.5	32	57.0	21.2	30	54.0	19.9	1470	650	250	260	1.32	255	12	27	50	150	T5
045C4222MC3T	225M	45	78.0	92.4	0.86	29.8	45	78.0	29.8	45	78.0	29.8	40	69.3	26.5	37	66.0	24.5	34	61.0	22.5	1470	650	250	250	1.60	310	12	27	50	150	T5
055C4225MC3T	250M	55	97.0	92.8	0.84	36.3	55	97.0	36.3	55	97.0	36.3	52	92.0	34.3	48	84.0	31.7	45	78.0	29.7	1475	650	250	260	2.83	700	12	27	50	150	T5
075C4228SC3T	280S	75	130	93.4	0.85	49.4	75	130	49.4	75	130	49.4	70	121	46.0	67	116	44 .1	65	112	42.8	1480	650	230	260	5.00	790	15	33	63	188	T5
090C4228MC3T	280M	90	156	93.7	0.85	59.2	90	156	59.2	90	156	59.2	84	146	55.3	80	139	52.6	75	130	49.4	1480	650	230	260	6.00	855	15	33	63	188	T5
110C4231SC3T	315S	110	190	94.0	0.85	72.1	110	190	72.1	110	190	72.1	102	176	67.0	95	164	62.3	90	155	59.0	1485	650	230	260	8.7	950	15	33	63	188	T5
132C4231MC3T	315M	132	225	94.3	0.86	86.5	132	225	86.5	132	225	86.5	125	213	81.9	115	196	75.4	110	188	72.1	1486	650	230	260	10.2	1095	15	33	63	188	T5
160C4231LC3T	315L	160	270	94.6	0.87	104.8	160	270	104.8	160	270	104.8	150	253	98.3	138	233	90.4	132	223	86.5	1487	650	230	260	12.2	1150	15	33	63	188	T5
180C4231LC3T	315L	180	305	94.7	0.86	117.9	180	305	117.9	180	305	117.9	168	285	110.0	158	268	103.5	150	254	98.3	1487	650	230	260	13.4	1225	15	33	63	188	T5
200C4231LC3T	315L	200	342	94.8	0.86	131.0	200	342	131.0	200	342	131.0	185	316	121.2	180	308	117.9	175	299	114.6	1487	650	230	260	14.60	1300	15	33	63	188	T5
250C4235LC3T	355L	250	410	95.0	0.89	163.6	250	410	163.6	250	410	163.6	232	380	151.9	220	361	144.0	210	344	137.5	1488	650	225	260	23.3	1870	15	33	63	188	T4
315C4235LC3T	355L	315	517	95.1	0.89	206.2	315	517	206.2	315	517	206.2	295	284	193.1	280	460	183.3	270	443	176.7	1488	650	225	260	32.70	1870	15	33	63	188	T4
355C4235LC3T	355L	355	586	95.1	0.89	232.8	355	586	232.8	355	586	232.4	330	545	216.0	310	512	202.9	300	495	196.4	1488	650	220	250	38.20	1940	15	33	63	188	T4

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2. All performance figures are subject to IS/IEC 60034-1 tolerances.
3. 132 frame to 355 frame Cast iron frame.
4. Efficiency value determined by equivelent kw as per IEMA standard clause no 15.2,Equivelent Kw=rated Kw / 1.4

3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66 , Altitude upto 1000 mtrs. above m.s.l , Duty S3/S4,efficiency class IE-2,IV-Pole conforms to IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS 12615:2018,,Efficiency testing according to IEC 60034-2-1:2014-06, EN 60079-0:2012+AII:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015 ,IEC60034-30-2008, IEC 60034-1:2010 for Gas & Dust IEC-Ex , ATEX certified by BASEEFA,

Performance Table for 6 Pole Motors

Ordering code		60 Starts / hr.								150 Starts / hr.					
		40% CDF					60% CDF			40% CDF			60% CDF		
	Frame	kW	Current Amps.	Equivelent SI duty Kw efficiency	PF FL. (P.U)	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m
.12C62063A3T	63	0.12	0.45	46.2	0.73	0.15	0.12	0.45	0.15	0.12	0.45	0.15	0.12	0.45	0.15
.12C62063C3R	63	0.12	0.45	46.2	0.73	0.15	0.12	0.45	0.15	0.12	0.45	0.15	0.12	0.45	0.15
.18C62071A3T	71	0.18	0.70	50.6	0.63	0.21	0.18	0.70	0.21	0.18	0.70	0.21	0.18	0.70	0.21
.18C62071R3R	71	0.18	0.70	50.6	0.63	0.21	0.18	0.70	0.21	0.18	0.70	0.21	0.18	0.70	0.21
.25C62071A3T	71	0.25	0.90	55.7	0.63	0.30	0.25	0.90	0.30	0.25	0.90	0.30	0.25	0.90	0.30
.25C62071R3R	71	0.25	0.90	55.7	0.63	0.30	0.25	0.90	0.30	0.25	0.90	0.30	0.25	0.90	0.30
.37C62071A3T	71	0.37	1.4	62.3	0.53	0.45	0.37	1.4	0.45	0.37	1.4	0.45	0.37	1.4	0.45
.37C62071C3R	71	0.37	1.4	62.3	0.53	0.45	0.37	1.4	0.45	0.37	1.4	0.45	0.37	1.4	0.45
.55C62080A3T	80	0.55	2.0	68.4	0.52	0.65	0.55	2.0	0.65	0.55	2.0	0.65	0.55	2.0	0.65
.55C62080C3R	80	0.55	2.0	68.4	0.52	0.65	0.55	2.0	0.65	0.55	2.0	0.65	0.55	2.0	0.65
.75C62080A3T	80	0.75	2.7	72.6	0.51	0.85	0.75	2.7	0.85	0.75	2.7	0.85	0.75	2.7	0.85
.75C62080C3R	80	0.75	2.7	72.6	0.51	0.85	0.75	2.7	0.85	0.75	2.7	0.85	0.75	2.7	0.85
1.1C6290LA3R	90L	1.1	3.0	76.1	0.65	1.20	1.1	3.0	1.20	1.1	3.0	1.20	1.1	3.0	1.20
1.1C6290LC3R	90L	1.1	3.0	76.1	0.65	1.20	1.1	3.0	1.20	1.1	3.0	1.20	1.1	3.0	1.20
1.5C6290LA3R	90L	1.5	4.2	77.9	0.62	1.60	1.5	4.2	1.60	1.5	4.2	1.60	1.5	4.2	1.60
1.5C6290LC3R	90L	1.5	4.2	77.9	0.62	1.60	1.5	4.2	1.60	1.5	4.2	1.60	1.5	4.2	1.60
2.2C6210LA3R	100L	2.2	6.5	80.1	120.58	2.30	2.2	6.5	2.30	2.2	6.5	2.30	2.2	6.5	2.30
2.2C6210LC3R	100L	2.2	6.5	80.1	0.58	2.30	2.2	6.5	2.30	2.2	6.5	2.30	2.2	6.5	2.30
3.7C6211MA3R	112M	3.7	9.1	82.7	0.67	3.90	3 7	9.1	3.90	3.7	9.1	3.90	3 7	9.1	3.90
3.7C6211MC3R	112M	3.7	9.1	82.7	0.67	3.90	3 7	9.1	3.90	3.7	9.1	3.90	3 7	9.1	3.90
5.5C6213SC3R	132S	5.5	13.5	84.5	0.66	5.80	5.5	13.5	5.80	5.5	13.5	5.80	5.5	13.5	5.80
7.5C6213MC3R	132M	7.5	18.8	85.9	0.64	7.90	7.5	18.8	7.90	7.5	18.8	7.90	7.5	18.8	7.90
9.3C6216MC3R	160M	9.3	21.0	86.8	0.70	9.70	8.0	18.0	8.30	9.3	21.0	9.70	8.0	18.0	8.30
011C6216LC3R	160L	11	24.0	87.4	0.72	11.5	10.2	22.3	10.6	11	24.0	11.5	10.2	22.3	10.6
013C6216LC3R	160L	13	29.0	88.1	0.70	13.5	12	27.0	12.5	13	29.0	13.5	12	27.0	12.5
017C6218LC3R	180L	17	35.0	89.0	0.75	17.2	16	33.0	16.2	17	35.0	17.2	16	33.0	16.2
022C6220LC3T	200L	22	42.0	89.9	0.80	22.1	20	38.0	20 1	22	42.0	22.1	20	38.0	20 1
030C6222MC3T	225M	30	55.0	90.8	0.83	30.1	28	51.0	30.1	30	55.0	30.1	28	51.0	30.1
037C6225MC3T	250M	37	66.0	91.4	0.85	37.0	34	60.0	34.0	37	66.0	37.0	34	60.0	34.0
045C6228SC3T	280S	45	82.0	91.9	0.82	45.0	40	73.0	40.0	45	82.0	45.0	40	73.0	40.0
052C6228MC3T	280M	52	93.0	92.3	0.84	51.7	48	86.0	47.7	52	93.0	51.7	48	86.0	47.7
070C6231SC3T	315S	70	123	92.9	0.85	69.2	65	114	64.3	70	123	69.2	65	114	64.3
085C6231MC3T	315M	85	151	93.3	0.83	84.1	80	142	79.1	85	151	84.1	80	142	79.1
102C6231MC3T	315M	102	178	93.7	0.85	100.6	95	166	93.7	102	178	101.0	95	166	93.7
125C6231LC3T	315L	125	217	94.0	0.85	123.2	120	208	118.3	125	217	123.0	120	208	118.3
150C6231LC3T	315L	150	260	94.3	0.85	147.9	142	246	140.0	150	260	148.0	142	246	140.0
168C6235LC3T	355L	168	294	94.4	0.84	165.3	160	280	157.4	168	294	165.0	160	280	157.4
185C6235LC3T	355L	185	326	94.6	0.83	182.0	175	308	172.2	185	326	182.0	175	308	172.2
235C6235LC3T	355L	235	414	94.8	0.83	231.2	225	396	221.4	235	414	231.2	225	396	221.4
280C6235LC3T	355L	280	493	95.0	0.83	275.5	265	466	260.7	280	493	275.5	265	466	260.7

300 Starts / hr.														
60% CDF			40% CDF			With DOL Starting								
kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	Speed RPM	Starting Current % of Rated Current	Starting Torque % of Rated Torque	Pull out Torque % of Rated Torque	Rotor Gd^2 Kgm^2	Net Approx Wt. B3 Const. (Kg)	TWT Hot in sec.	TWT Cold in sec.	Th (min)	Tc (min)	Temp. Class
0.12	0.45	0.15	0.12	0.45	0.15	800	350	190	240	0.0025	6	15	30	63	188	T6
0.12	0.45	0.15	0.12	0.45	0.15	800	350	190	240	0.0025	8	15	30	63	188	T6
0.18	0.70	0.21	0.18	0.70	0.21	800	350	190	240	0.0030	8	15	30	63	188	T6
0.18	0.70	0.21	0.18	0.70	0.21	800	350	190	240	0.0030	10	15	30	63	188	T6
0.25	0.90	0.30	0.25	0.90	0.30	800	350	190	240	0.0034	8	10	20	42	125	T6
0.25	0.90	0.30	0.25	0.90	0.30	800	350	190	240	0.0034	10	10	20	42	125	T6
0.37	1.4	0.45	0.37	1.4	0.45	800	300	170	190	0.0038	8	10	20	42	125	T6
0.37	1.4	0.45	0.37	1.4	0.45	800	300	170	190	0.0038	10	10	20	42	125	T6
0.55	2.0	0.65	0.55	2.0	0.65	830	350	190	220	0.0060	10	10	20	42	125	T6
0.55	2.0	0.65	0.55	2.0	0.65	830	350	190	220	0.0060	16	10	20	42	125	T6
0.75	2.7	0.85	0.75	2.7	0.85	860	350	225	250	0.0084	12	10	20	42	125	T6
0.75	2.7	0.85	0.75	2.7	0.85	860	350	225	250	0.0084	18	10	20	42	125	T6
1.1	3.0	1.20	1 1	3.0	1.20	900	400	230	260	0.0160	13	10	20	42	125	T6
1.1	3.0	1.20	1 1	3.0	1.20	900	400	230	260	0.0160	23	10	20	42	125	T6
1.5	4.2	1.60	1.5	4.2	1.62	900	400	230	275	0.0160	20	10	20	42	125	T6
1.5	4.2	1.60	1.5	4.2	1.62	900	400	230	275	0.0160	30	10	20	42	125	T6
2.2	6.5	2.30	2.2	6.5	2.30	950	450	113225	275	0.029	25	10	20	42	125	T6
2.2	6.5	2.30	2.2	6.5	2.30	950	450	225	275	0.029	40	10	20	42	125	T6
3.7	9.1	3.90	3.7	9.1	3.92	920	500	225	275	0.065	49	10	20	42	125	T5
3.7	9.1	3.90	3.7	9.1	3.92	920	500	225	275	0.065	57	10	20	42	125	T5
5.5	13.5	5.80	5.5	13.5	5.80	925	550	230	275	0.153	62	10	20	42	125	T5
6.5	16.3	6.80	6.5	16.3	6.80	925	550	230	275	0.193	75	10	20	42	125	T5
9.3	21.0	9.70	8.0	18.1	8.30	935	600	230	275	0.276	170	10	22	42	125	T4
11	24.0	11.5	10.2	22.3	10.6	935	600	230	275	0.34	180	10	22	42	125	T4
13	29.0	13.5	12	27.0	12.5	935	600	225	275	0.40	210	10	22	42	125	T4
16	33.0	16.2	15	31.0	15.2	960	600	230	260	0.82	230	10	22	42	125	T4
20	38.0	20.1	18.5	35.1	18.6	970	600	230	250	1.2	310	12	27	50	150	T5
28	51.3	28.1	26	47.7	26.1	970	600	230	250	2.1	360	12	27	50	150	T5
34	60.2	34,0	30	53.1	30,0	975	600	230	250	3.51	720	12	27	50	150	T5
40	70.2	40.0	37	65.0	37.0	975	600	230	250	5.11	810	15	33	63	188	T5
48	85.5	47.7	45	80.0	44.7	980	600	230	250	6.16	875	15	33	63	188	T5
65	115	64.3	60	106	59,3	985	600	230	250	10.7	875	15	33	63	188	T5
80	142	79.1	75	133	74,2	985	600	230	250	12.4	955	15	33	63	188	T5
95	166	93.7	90	157	88.7	988	600	230	250	15.5	1050	15	33	63	188	T5
120	208	118.3	110	191	108.4	988	600	230	250	18.0	1110	15	33	63	188	T5
142	246	140.0	132	229	130.1	988	600	230	250	21.5	1150	15	33	63	188	T5
160	280	157.4	150	263	147.6	990	600	220	250	28.7	1693	15	33	63	188	T4
175	308	172.2	160	282	157.4	990	600	220	250	28.7	1728	15	33	63	188	T4
225	396	221.4	210	370	206.6	990	600	220	250	35.5	1917	15	33	63	188	T4
265	466	260.7	240	422	236.1	990	600	220	250	43.3	2563	15	33	63	188	T4

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3. 132 frame to 355 frame Cast iron frame.
4. Efficiency value determined by equivelent kw as per IEMA standard clause no 15.2,Equivelent Kw=rated Kw / 1.4

3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66 , Altitude upto 1000 mtrs. above m.s.l , Duty S3/S4,efficiency class IE-2,IV-Pole conforms to IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS 12615:2018,,Efficiency testing according to IEC 60034-2-1:2014-06, EN 60079-0:2012+AII:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015 ,IEC60034-30-2008, IEC 60034-1:2010 for Gas & Dust IEC-Ex , ATEX certified by BASEEFA,

Performance Table for 8 Pole Motors

Ordering code		60 Starts / hr.								150 Starts / hr.					
		40% CDF					60% CDF			40% CDF			60% CDF		
	Frame	kW	Current Amps.	Equivelent S1 duty Kw efficiency	PF FL. (PU)	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m
.12C82071A3T	71	0.12	0.7	34.2	0.60	0.16	0.12	0.7	0.16	0.1	0.7	0.16	0.12	0.7	0.16
.12C82071C3R	71	0.12	0.7	34.2	0.60	0.16	0.12	0.7	0.16	0.1	0.7	0.16	0.12	0.7	0.16
.18C82080A3T	80	0.18	1.0	39.8	0.55	0.25	0.18	1.0	0.25	0.2	1.0	0.25	0.18	1.0	0.25
.18C82080C3R	80	0.18	1.0	39.8	0.55	0.25	0.18	1.0	0.25	0.2	1.0	0.25	0.18	1.0	0.25
.25C82080A3T	80	0.25	1.2	45.1	0.57	0.34	0.25	1.2	0.34	0.3	1.2	0.34	0.25	1.2	0.34
.25C82080C3R	80	0.25	1.2	45.1	0.57	0.34	0.25	1.2	0.34	0.3	1.2	0.34	0.25	1.2	0.34
.37C8290SA3R	90S	0.37	1.4	51.1	0.64	0.50	0.37	1.4	0.50	0.4	1.4	0.50	0.37	1.4	0.50
.37C8290SC3R	90S	0.37	1.4	51.1	0.64	0.50	0.37	1.4	0.50	0.4	1.4	0.50	0.37	1.4	0.50
.55C8290SA3R	90S	0.55	2.2	56.8	0.58	0.80	0.45	1.8	0.60	0.6	2.2	0.80	0.45	1.8	0.60
.55C8290SC3R	90S	0.55	2.2	56.8	0.58	0.80	0.45	1.8	0.60	0.6	2.2	0.80	0.45	1.8	0.60
.75C8290LA3R	90L	0.75	2.8	61.2	0.57	1.10	0.75	2.8	1.10	0.8	2.8	1.10	0.75	2.8	1.10
.75C8290LC3R	90L	0.75	2.8	61.2	0.57	1.10	0.75	2.8	1.10	0.8	2.8	1.10	0.75	2.8	1.10
1.1C8210LA3R	100L	1.1	3.4	66.7	0.64	1.60	1.1	3.4	1.60	1.1	3.4	1.60	1.1	3.4	1.60
1.1C8210LC3R	100L	1.1	3.4	66.7	0.64	1.60	1.1	3.4	1.60	1.1	3.4	1.60	1.1	3.4	1.60
1.5C8210LA3R	100L	1.5	5.0	70.5	0.57	2.10	1.5	5.0	2.10	1.5	5.0	2.10	1.5	5.0	2.10
1.5C8210LC3R	100L	1.5	5.0	70.5	0.57	2.10	1.5	5.0	2.10	1.5	5.0	2.10	1.5	5.0	2.10
2.2C8211MA3R	112M	2.2	6.8	74.5	0.58	3.10	2.2	6.8	3.10	2.2	6.8	3.10	2.2	6.8	3.10
2.2C8211MC3R	112M	2.2	6.8	74.5	0.58	3.10	2.2	6.8	3.10	2.2	6.8	3.10	2.2	6.8	3.10
3.7C8213SC3R	132S	3.7	8.8	79.0	0.72	5.10	3.7	8.8	5.10	3.7	8.8	5.10	3.7	8.8	5.10
5.5C8216MC3R	160M	5.5	12.0	81.8	0.78	7.50	5.5	12.0	7.50	5.5	12.0	7.50	5.5	12.0	7.50
7.5C8216LC3R	160L	7.5	16.0	83.6	0.76	10.3	6.5	13.9	8.90	7.5	16.0	10.3	6.5	13.9	8.90
9.3C8218MC3R	180M	9.3	20.0	84.8	0.75	12.8	8.5	18.5	11.7	9.3	20.0	12.8	8.5	18.5	11.7
011C8218LC3R	180L	11	23.0	85.5	0.77	15.1	9.3	19.4	12.8	11	23.0	15.1	9.3	19.4	12.8
015C8220LC3T	200L	15	28.8	86.8	0.82	20.3	13	25.0	17.6	15	28.8	20.3	13	25.0	17.6
185C8222SC3T	225S	18.5	37.5	87.6	0.77	25.0	17	34.5	23.0	19	37.5	25.0	17	34.5	23.0
022C8222MC3T	225M	22	44.5	88.1	0.77	29.8	20	40.5	27.1	22	44.5	29.8	20	40.5	27.1
030C8225MC3T	250M	30	56.0	89.0	0.83	40.0	26	48.5	34.7	30	56.0	40.0	26	48.5	34.7
037C8228SC3T	280S	37	71.0	89.5	0.80	49.4	34	65.2	45.4	37	71.0	49.4	34	65.2	45.4
045C8228MC3T	280M	45	90.0	90.0	0.77	60.0	40	76.4	53.4	45	90.0	60.0	40	76.4	53.4
055C8231SC3T	315S	55	108	90.4	0.78	72.9	50	98.2	66.3	55	108	72.9	50	98.2	66.3
075C8231MC3T	315M	75	148	91.0	0.77	99.4	67	132	88.8	75	148	99.4	67	132	88.8
090C8231MC3T	315M	90	175	91.3	0.78	119.3	80	156	106.0	90	175	119.3	80	156	106.0
110C8231LC3T	315L	110	214	91.7	0.77	145.8	100	195	132.5	110	214	145.8	100	195	132.5
132C8231LC3T	315L	132	257	92.0	0.77	174.9	125	243	165.6	132	257	174.9	125	243	165.6
160C8235LC3T	355L	160	300	92.4	0.80	210.6	150	281	197.4	160	300	210.6	150	281	197.4
180C8235LC3T	355L	180	337	92.6	0.80	236.9	170	318	223.8	180	337	236.9	170	318	223.8
185C8235LC3T	355L	185	347	92.6	0.79	243.5	175	328	230.3	185	347	243.5	175	328	230.3
210C8235LC3T	355L	210	394	92.9	0.79	276.4	200	375	263.2	210	394	276.4	200	375	263.2

300 Starts / hr.													
60% CDF			40% CDF			With DOL Starting							
kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	Speed RPM	Starting Current % of Rated Current	Starting Torque % of Rated Torque	Pull out Torque % of Rated Torque	Rotor Gd^2 Kgm^2	Net Approx Wt. B3 Const. (Kg)	TWT Hot in sec.	TWT Cold in sec.	Th (min)	Tc (min)	Temp. Class
0.12	0.7	0.16	0.12	0.7	0.16	690	200	180	240	0.008	8	15	30	63	188	T6
0.12	0.7	0.16	0.12	0.7	0.16	690	200	180	240	0.008	10	15	30	63	188	T6
0.18	1.0	0.25	0.18	1.0	0.25	695	200	180	240	0.009	11	15	30	63	188	T6
0.18	1.0	0.25	0.18	1.0	0.25	695	200	180	240	0.009	17	15	30	63	188	T6
0.25	1.2	0.34	0.25	1.2	0.34	700	250	180	240	0.009	13	15	30	63	188	T6
0.25	1.2	0.34	0.25	1.2	0.34	700	250	180	240	0.009	19	15	30	63	188	T6
0.37	1.4	0.50	0.37	1.4	0.50	700	300	200	230	0.011	14	15	30	63	188	T6
0.37	1.4	0.50	0.37	1.4	0.50	700	300	200	230	0.011	24	15	30	63	188	T6
0.55	2.2	0.80	0.45	1.8	0.60	680	300	180	210	0.011	21	15	30	63	188	T6
0.55	2.2	0.80	0.45	1.8	0.60	680	300	180	210	0.011	31	15	30	63	188	T6
0.75	2.8	1.10	0.65	2.4	0.90	680	300	200	240	0.014	25	15	30	63	188	T6
0.75	2.8	1.10	0.65	2.4	0.90	680	300	200	240	0.014	35	15	30	63	188	T6
1.1	3.4	1.60	0.9	2.8	1.30	655	350	180	200	0.023	25	10	20	42	125	T6
1.1	3.4	1.60	0.9	2.8	1.30	655	350	180	200	0.023	39	10	20	42	125	T6
1.5	5.0	2.10	1.1	3.6	1.60	680	350	200	230	0.027	27	10	20	42	125	T6
1.5	5.0	2.10	1.1	3.6	1.60	680	350	200	230	0.027	41	10	20	42	125	T6
2.2	6.8	3.10	1.5	4.6	2.10	700	400	200	230	0.06	47	10	20	42	125	T5
2.2	6.8	3.10	1.5	4.6	2.10	700	400	200	230	0.06	56	10	20	42	125	T5
3.7	8.8	5.10	3	7.1	4.10	710	400	200	230	0.133	77	10	20	42	125	T5
5.5	12.0	7.50	4.5	9.8	6.20	710	500	210	240	0.299	115	10	20	42	125	T4
6.5	13.9	8.90	6	12.8	8.20	710	550	225	250	0.40	120	10	20	42	125	T4
8.5	18.5	11.7	7.5	16.5	10.3	710	550	225	250	0.62	125	10	20	42	125	T4
9.3	19.5	12.8	8.5	17.8	11.7	710	550	225	250	0.72	130	10	20	42	125	T4
13	25.0	17.6	11	21.1	14.9	720	550	230	230	1.32	258	12	27	50	150	T5
17	34.5	23.0	15	30.4	20.3	720	550	225	250	1.95	345	12	27	50	150	T5
20	40.5	27.1	18.5	37.4	25.0	720	550	225	250	2.41	360	12	27	50	150	T5
26	48.5	34.7	22	41.1	29.4	730	550	230	250	3.72	755	12	27	50	150	T5
34	65.0	45.4	30	57.6	40.0	730	550	225	240	5.83	850	15	33	63	188	T5
40	76.0	53.4	37	71.0	49.4	730	550	225	240	6.86	935	15	33	63	188	T5
50	98.0	66.3	45	88.0	59.6	735	600	225	240	10.7	945	15	33	63	188	T5
67	132	88.8	60	118	79.5	735	600	225	240	12.4	1070	15	33	63	188	T5
80	156	106.0	75	146	99.4	735	600	225	240	15.5	1110	15	33	63	188	T5
100	195	132.5	90	175	119.3	735	600	225	240	18.0	1215	15	33	63	188	T5
125	244	165.6	115	224	152.4	735	600	225	240	21.5	1370	15	33	63	188	T5
150	281	197.4	140	263	184.3	740	600	200	230	28.7	1888	15	33	63	188	T4
170	318	223.8	155	290	204.0	740	600	220	240	35.5	1950	15	33	63	188	T4
175	328	230.3	160	300	210.6	740	600	200	230	35.5	2020	15	33	63	188	T4
200	375	263.2	180	338	236.9	740	600	200	230	35.5	2150	15	33	63	188	T4

Note: - 1. Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication.
2. All performance figures are subject to IS/IEC 60034-1 tolerances.
3. 132 frame to 355 frame Cast iron frame.
4. Efficiency value determined by equivelent kw as per IEMA standard clause no 15.2,Equivelent Kw=rated Kw / 1.4

3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66 , Altitude upto 1000 mtrs. above m.s.l , Duty S3/S4,efficiency class IE-2,IV-Pole conforms to IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS 12615:2018,,Efficiency testing according to IEC 60034-2-1:2014-06, EN 60079-0:2012+AII:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015

Performance Table for 4 Pole Motors

Ordering code		60 Starts / hr.								150 Starts / hr.						300 Starts / hr.														
		40% CDF					60% CDF			40% CDF			60% CDF			60% CDF			40% CDF			With DOL Starting				Net Approx Wt. B3 Const. (Kg)	TWT Hot in sec.	TWT Cold in sec.	Th (min)	Tc (min)	Temp. Class
	Frame	kW	Current Amps.	Equivelent S1 duty Kw efficiency	PF FL (PU)	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	Speed RPM	Starting Current % of Rated Current	Starting Torque % of Rated Torque	Pull out Torque % of Rated Torque	Rotor Gd^2 Kgm^2					
.12C42063A3T	63	0.12	0.45	53.3	0.63	0.09	0.12	0.45	0.089	0.12	0.45	0.09	0.12	0.45	0.089	0.12	0.45	0.089	0.12	0.45	0.089	1300	300	200	250	0.0014	5	15	33	63	188	T6
.12C42063C3R	63	0.12	0.45	53.3	0.63	0.09	0.12	0.45	0.089	0.12	0.45	0.09	0.12	0.45	0.089	0.12	0.45	0.089	0.12	0.45	0.089	1300	300	200	250	0.0014	7	15	33	63	188	T6
.18C42063A3T	63	0.18	0.62	60.0	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	1300	310	200	250	0.0014	5	15	33	63	188	T6
.18C42063C3R	63	0.18	0.62	60.0	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	0.18	0.62	0.13	1300	310	200	250	0.001	7	15	33	63	188	T6
.25C42063A3T	63	0.25	0.75	64.5	0.68	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	1305	330	210	260	0.002	6	15	33	63	188	T6
.25C42063C3R	63	0.25	0.75	64.5	0.68	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	0.25	0.75	0.18	1305	330	210	260	0.002	8	15	33	63	188	T6
.37C42071A3T	71	0.37	1.0	68.9	0.71	0.28	0.34	0.9	0.28	0.37	1.0	0.28	0.34	0.9	0.28	0.34	0.9	0.28	0.31	0.8	0.28	1310	450	200	260	0.0034	7	10	20	42	125	T6
.37C42071C3R	71	0.37	1.0	68.9	0.71	0.28	0.34	0.9	0.28	0.37	1.0	0.28	0.34	0.9	0.28	0.34	0.9	0.28	0.31	0.8	0.28	1310	450	200	260	0.0034	9	10	20	42	125	T6
.55C42071A3T	71	0.55	1.6	73.3	0.64	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	1315	450	200	260	0.0034	8	10	20	42	125	T6
.55C42071C3R	71	0.55	1.6	73.3	0.64	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	0.55	1.6	0.41	1315	450	200	260	0.0034	10	10	20	42	125	T6
.75C42080A3T	80	0.75	1.8	76.6	0.73	0.55	0.68	1.6	0.55	0.75	1.8	0.55	0.68	1.6	0.55	0.68	1.6	0.55	0.62	1.5	0.55	1340	450	200	260	0.0061	11	10	20	42	125	T6
.75C42080C3R	80	0.75	1.8	76.6	0.73	0.55	0.68	1.6	0.55	0.75	1.8	0.55	0.68	1.6	0.55	0.68	1.6	0.55	0.62	1.5	0.55	1340	450	200	260	0.0061	17	10	20	42	125	T6
1.1C42080A3T	80	1.1	3.1	79.8	0.61	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1365	500	230	280	0.0072	12	10	20	42	125	T6
1.1C42080C3R	80	1.1	3.1	79.8	0.61	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1.1	3.1	0.80	1365	500	230	280	0.0072	18	10	20	42	125	T6
1.5C4290LA3R	90L	1.5	3.4	81.3	0.74	1.10	1.4	3.1	1.10	1.5	3.4	1.10	1.4	3.1	1.10	1.4	3.1	1.10	1.2	2.8	1.10	1385	560	190	240	0.0100	14	10	20	42	125	T6
1.5C4290LC3R	90L	1.5	3.4	81.3	0.74	1.10	1.4	3.1	1.10	1.5	3.4	1.10	1.4	3.1	1.10	1.4	3.1	1.10	1.2	2.8	1.10	1385	560	190	240	0.0100	24	10	20	42	125	T6
2.2C4290LA3R	90L	2.2	5.0	82.9	0.73	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	1390	480	230	280	0.0160	20	10	20	42	125	T6
2.2C4290LC3R	90L	2.2	5.0	82.9	0.73	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	2.2	5.0	1.60	1390	480	230	280	0.0160	30	10	20	42	125	T6
3.0C4210LA3R	100L	3.0	6.3	84.2	0.77	2.60	2.7	5.8	2.60	3.0	6.3	2.60	2.7	5.8	2.60	2.7	5.8	2.60	2.5	5.3	2.60	1390	590	200	250	0.0380	25	8	16	33	100	T6
3.0C4210LC3R	100L	3.0	6.3	84.2	0.77	2.60	2.7	5.8	2.60	3.0	6.3	2.60	2.7	5.8	2.60	2.7	5.8	2.60	2.5	5.3	2.60	1390	590	200	250	0.0380	40	8	16	33	100	T6
3.7C4210LA3R	100L	3.7	8.0	85.0	0.75	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	1380	600	230	300	0.0260	27	8	16	33	100	T6
3.7C4210LC3R	100L	3.7	8.0	85.0	0.75	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	3.7	8.0	2.60	1380	600	230	300	0.0260	42	8	16	33	100	T6
5.5C4211MA3R	112M	5.5	12.4	86.5	0.70	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	1400	600	250	280	0.058	33	8	16	33	100	T5
5.5C4211MC3R	112M	5.5	12.4	86.5	0.70	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	5.5	12.4	3.80	1400	600	250	280	0.058	38	8	16	33	100	T5
7.5C4213SC3R	132S	7.5	14.3	87.6	0.82	5.20	6.8	13.0	5.20	7.5	14.3	5.20	6.8	13.0	5.20	6.8	13.0	5.20	6.2	11.9	5.20	1410	650	200	250	0.12	50	8	16	33	100	T5
9.3C4213MC3R	132M	9.3	18.1	88.3	0.80	6.40	9.3	18.1	6.40	9.3	18.1	6.40	9.3	18.1	6.40	9.3	18.1	6.40	9.3	18.1	6.40	1420	650	230	290	0.143	95	8	16	33	100	T5
011C4216MC3R	160M	11	21.9	88.8	0.78	7.40	11	19.9	7.40	11	21.9	7.40	11	19.9	7.40	11	19.9	7.40	9.1	18.3	7.40	1440	600	200	250	0.2	115	10	22	42	125	T4
013C4216MC3R	160M	13	25.0	89.3	0.80	8.80	13	25.0	8.80	13	25.0	8.80	13	25.0	8.80	13	25.0	8.80	13	25.0	8.80	1440	650	225	280	0.177	125	10	22	42	125	T4
015C4216MC3R	160M	15	28.8	89.7	0.80	10.1	13.6	26.2	10.1	15	28.8	10.1	13.6	26.2	10.1	13.6	26.2	9.30	12.4	24.0	9.30	1440	600	225	270	0.26	135	10	22	42	125	T4
185C4216LC3R	160L	18.5	36.0	90.3	0.78	12.5	18.5	36.0	12.5	18.5	36.0	12.5	18.5	36.0	12.5	18.5	36.0	12.5	17	33.0	11.5	1445	650	210	250	0.265	145	10	22	42	125	T4
022C4218MC3R	180M	22	41.0	90.8	0.81	14.8	20.5	38.0	14.8	22	41.0	14.8	20.5	38.0	13.8	22	41.0	14.8	20.5	38.0	13.8	1450	650	225	250	0.460	210	10	22	50	150	T4
026C4218LC3R	180L	26	46.0	91.2	0.85	17.5	24	42.5	17.5	26	46.0	17.5	24	42.5	16.1	24	42.5	16.1	22	39.0	14.8	1450	650	225	250	0.54	235	10	22	50	150	T4
030C4220LC3T	200L	30	53.8	91.5	0.84	23.4	27.3	48.9	23.4	30	53.8	23.4	27.3	48.9	22.1	27.3	48.9	22.1	24.8	44.7	20.8	1455	600	225	270	1.19	247	12	27	50	150	T5
035C4220LC3T	200L	35	62.0	91.9	0.85	23.4	33	59.0	23.4	35	62.0	23.4	33	59.0	22.1	33	59.0	22.1	31	56.0	20.8	1455	650	230	260	0.86	252	12	27	50	150	T5
037C4222SC3T	225S	37	66.0	92.0	0.84	24.7	33.6	60.0	24.7	37	66.0	24.7	33.6	60.0	24.7	33.6	60.0	24.7	30.6	54.9	24.7	1460	600	230	280	1.46	255	12	27	50	150	T5
043C4222SC3T	225S	43	77.0	92.3	0.84	28.7	41	74.0	28.7	43	77.0	28.7	41	74.0	27.4	41	74.0	27.4	39	72.0	26.0	1460	650	230	260	1.32	280	12	27	50	150	T5
045C4222MC3T	225M	45	78.0	92.4	0.86	30.0	40.9	70.9	30.0	45	78.0	30.0	40.9	70.9	30.0	40.9	70.9	30.0	37.2	64.9	30.0	1460	600	230	280	1.71	310	12	27	50	150	T5
053C4222MC3T	225M	53	96.0	92.8	0.82	35.4	50	91,0	35.4	53	96.0	35.4	50	91,0	33,4	50	91.0	33.4	48	88.0	32.0	1460	650	230	250	1.6	350	12	27	50	150	T5
055C4225MC3T	250M	55	96.0	92.8	0.85	36.6	50	87.3	36.6	55	96.0	36.6	50	87.3	36.6	50	87.3	36.6	45.5	79.8	36.6	1465	650	230	260	3.2	700	12	27	50	150	T5
064C4225MC3T	250M	64	113	93.1	0.84	42.6	61	108	42.6	64	113	42.6	61	108	40.6	61	108	40.6	58	103	38.6	1465	650	230	260	2.83	700	12	27	50	150	T5
075C4228SC3T	280S	75	132	93.4	0.84	49.7	68.2	120	49.7	75	132	49.7	68.2	120	49.7	68.2	120	49.7	62	109	49.7	1470	650	230	260	7.21	790	15	33	63	188	T5
088C4228SC3T	280S	88	152	93.7	0.86	58.3	85	147	58.3	88	152	58.3	85	147	56.3	85	146	56.3	82	141	54.3	1470	650	230	260	5.00	790	15	33	63	188	T5
090C4228MC3T	280M	90	157	93.7	0.84	59.6	81.8	143	59.6	90	157	59.6	81.8	143	59.6	81.8	143	59.6	74.4	131	59.6	1470	650	230	260	8.25	855	15	33	63	188	T5
110C4228MC3T	280M	110	190	94.0	0.85	72.9	102	177	72.9	110	190	72.9	102	177	67.6	102	177	67.6	97	169	64.3	1470	650	230	260	6.35	855	15	33	63	188	T5
132C4231SC3T	315S	132	228	94.3	0.85	87.2	125	216	87.2	132	228	87.0	125	216	82.5	125	216	82.5	120	208	79.2	1475	650	230	260	8.7	930	15	33	63	188	T5
160C4231MC3T	315M	160	274	94.6	0.86	105.7	150	256	105.7	160	274	105.7	150	256	99.1	150	256	99.1	145	248	95.7	1475	650	230	260	10.2	980	15	33	63	188	T5
180C4231LC3T	315L	180	312	94.7	0.85	118.5	163.6	283	118.5	180	312	118.5	163.6	283	118.5	163.6	283	118.5	148.8	259	118.5	1480	650	230	260	29.3	1030	15	33	63	188	T5
185C4231LC3T	315L	185	317	94.7	0.85	121.8	178	305	121.8	185	317	121.8	178	305	117.1	178	305	117.1	170	292	111.9	1480	650	230	260	30	1105	15	33	63	188	T5
200C4231LC3T	315L	200	338	94.8	0.86	131.6	181.8	308	131.6	200	338	134.9	181.8	308	126.4	181.8	308	126.4	165.3	281	118.5	1480	650	230	260	31	1120	15	33	63	188	T5
205C4231LC3T	315L	205	350	94.8	0.86	134.9	192	328	134.9	205	350	134.9	192	328	126.4	192	328	126.4	180	307	118.5	1480	650	230	260	13.4	1150	15	33	63	188	T5
225C4231LC3T	315L	225	390	94.9	0.84	148.1	210	356	148.1	225	390	151.4	210	356	138.2	210	356	138.2	200	340	131.6	1480	650	230	260	14.6	1250	15	33	63	188	T5
230C4231LC3T	315L	230	390	95.0	0.86	151.4	210	356	151.4	230	390	151.4	210	356	138.2	210	356	138.2	200	340	131.6	1480	650	230	260	14.6	1250	15	33	63	188	T5
250C4235LC3T	355L	250	418	95.0	0.87	164.0	227.3	380	164.0	250	418	164.0	227.3	380	164.0	227.3	380	164.0	206.6	348	164.0	1485	650	180	230	38	1870	15	33	63	188	T4
285C4235LC3T	355L	285	480	95.1	0.87	186.9	270	455	186.9	285	480	186.9	270	455	177.1	270	455	177.1	260	438	170.5	1485	650	225	260	42	1870	15	33	63	188	T4
315C4235LC3T	355L	315	527	95.1	0.87	206.6	286.4	479	206.6	315	527	206.6	286.4	479	207.0	286.4	479	207.0	260.3	438	207.0	1485	650	180	230	48	1870	15	33	63	188	T4
350C4235LC3T	355L	350	590	95.1	0.87	229.6	335	565	229.6	350	590	229.6	335	565	219.7	335	565	219.7	315	531	206.6	1485	650	225	260	32.7	1920	15	33	63	188	T4
400C4235KC3T	355L/K	400	660	95.1	0.89	262.4	380	630	262.4	400	660	262.4	380	630	249.2	380	630	249.2	355	588	232.8	1485	650	220	250	38.2	2116	15	33	63	188	T4

Note: 1. -Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication.
2. All performance figures are subject to IS/IEC 60034-1 tolerances.

3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66 , Altitude upto 1000 mtrs. above m.s.l , Duty S3/S4,efficiency class IE-2,IV-Pole conforms to IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS 12615:2018,,Efficiency testing according to IEC 60034-2-1:2014-06, EN 60079-0:2012+AII:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015 ,IEC60034-30-2008, IEC 60034-1:2010 for Gas & Dust IEC-Ex , ATEX certified by BASEEFA.

Performance Table for 6 Pole Motors

Ordering code		60 Starts / hr.								150 Starts / hr.						300 Starts / hr.																
		40% CDF					60% CDF			40% CDF			60% CDF			60% CDF			40% CDF			With DOL Starting					Net Approx Wt. B3 Const. (Kg)	TWT Hot in sec.	TWT Cold in sec.	Th (min)	Tc (min)	Temp. Class
	Frame	kW	Current Amps.	Equivelent S1 duty Kw efficiency	PF FL. (P.U)	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	Speed RPM	Starting Current % of Rated Current	Starting Torque % of Rated Torque	Pull out Torque % of Rated Torque	Rotor GD^2 Kgm^2					
.12C62063A3T	63	0.12	0.45	46.2	0.73	0.15	0.12	0.45	0.15	0.12	0.45	0.15	0.12	0.45	0.15	0.12	0.45	0.15	0.12	0.45	0.15	800	350	190	240	0.0025	6	15	30	63	188	T6
.12C62063C3R	63	0.12	0.45	46.2	0.73	0.15	0.12	0.45	0.15	0.12	0.45	0.15	0.12	0.45	0.15	0.12	0.45	0.15	0.12	0.45	0.15	800	350	190	240	0.0025	8	15	30	63	188	T6
.18C62071A3T	71	0.18	0.70	50.6	0.63	0.21	0.18	0.70	0.21	0.18	0.70	0.21	0.18	0.70	0.21	0.18	0.70	0.21	0.18	0.70	0.21	800	350	190	240	0.0030	8	15	30	63	188	T6
.18C62071R3R	71	0.18	0.70	50.6	0.63	0.21	0.18	0.70	0.21	0.18	0.70	0.21	0.18	0.70	0.21	0.18	0.70	0.21	0.18	0.70	0.21	800	350	190	240	0.0030	10	15	30	63	188	T6
.25C62071A3T	71	0.25	0.90	55.7	0.63	0.27	0.2	0.8	0.27	0.25	0.9	0.27	0.2	0.8	0.27	0.2	0.8	0.27	0.2	0.8	0.27	890	340	190	240	0.0036	8	15	30	63	188	T6
.25C62071C3R	71	0.25	0.90	55.7	0.63	0.27	0.2	0.8	0.27	0.25	0.9	0.27	0.2	0.8	0.27	0.2	0.8	0.27	0.2	0.8	0.27	890	340	190	240	0.0036	10	15	30	63	188	T6
.37C62071A3T	71	0.37	1.4	62.3	0.53	0.50	0.37	1.4	0.50	0.37	1.4	0.50	0.37	1.4	0.50	0.37	1.4	0.50	0.37	1.4	0.50	800	340	170	190	0.0038	8	15	30	63	188	T6
.37C62071C3R	71	0.37	1.4	62.3	0.53	0.50	0.37	1.4	0.50	0.37	1.4	0.50	0.37	1.4	0.50	0.37	1.4	0.50	0.37	1.4	0.50	800	340	170	190	0.0038	10	15	30	63	188	T6
.55C62080A3T	80	0.55	1.8	68.4	0.58	0.60	0.5	1.6	0.60	0.55	1.8	0.60	0.5	1.6	0.60	0.5	1.6	0.60	0.5	1.5	0.60	830	320	190	260	0.0060	10	15	30	63	188	T6
.55C62080C3R	80	0.55	1.8	68.4	0.58	0.60	0.5	1.6	0.60	0.55	1.8	0.60	0.5	1.6	0.60	0.5	1.6	0.60	0.5	1.5	0.60	830	320	190	260	0.0060	16	15	30	63	188	T6
.75C62080A3T	80	0.75	2.7	72.6	0.51	0.90	0.75	2.7	0.90	0.75	2.7	0.90	0.75	2.7	0.90	0.75	2.7	0.90	0.75	2.7	0.90	860	350	230	250	0.0084	12	15	30	63	188	T6
.75C62080C3R	80	0.75	2.7	72.6	0.51	0.90	0.75	2.7	0.90	0.75	2.7	0.90	0.75	2.7	0.90	0.75	2.7	0.90	0.75	2.7	0.90	860	350	230	250	0.0084	18	15	30	63	188	T6
1.1C6290LA3R	90L	1.1	2.9	76.1	0.68	1.20	1.0	2.7	1.20	1.1	2.9	1.20	1	2.7	1.20	1.00	2.70	1.20	0.90	2.50	1.20	900	400	200	280	0.02	13	15	30	63	188	T6
1.1C6290LC3R	90L	1.1	2.9	76.1	0.68	1.20	1.0	2.7	1.20	1.1	2.9	1.20	1	2.7	1.20	1.00	2.70	1.20	0.90	2.50	1.20	900	400	200	280	0.02	23	15	30	63	188	T6
1.5C6290LA3R	90L	1.5	4.2	77.9	0.62	1.60	1.5	4.2	1.60	1.5	4.2	1.60	1.5	4.2	1.60	1.5	4.2	1.60	1.5	4.2	1.60	900	400	230	275	0.0160	20	15	30	63	188	T6
1.5C6290LC3R	90L	1.5	4.2	77.9	0.62	1.60	1.5	4.2	1.60	1.5	4.2	1.60	1.5	4.2	1.60	1.5	4.2	1.60	1.5	4.2	1.60	900	400	230	275	0.0160	30	15	30	63	188	T6
2.2C6210LA3R	100L	2.2	6.5	80.1	0.58	2.30	2.2	6.5	2.30	2.2	6.5	2.30	2.2	6.5	2.30	2.2	6.5	2.30	2.2	6.5	2.30	950	450	230	275	0.029	25	10	20	42	125	T6
2.2C6210LC3R	100L	2.2	6.5	80.1	0.58	2.30	2.2	6.5	2.30	2.2	6.5	2.30	2.2	6.5	2.30	2.2	6.5	2.30	2.2	6.5	2.30	950	450	230	275	0.029	40	10	20	42	125	T6
3.7C6211MA3R	112M	3.7	9.1	82.7	0.67	3.90	3.7	9.1	3.90	3.7	9.1	3.90	3.7	9.1	3.90	3.7	9.1	3.90	3.7	9.1	3.90	920	500	230	275	0.065	49	10	20	42	125	T5
3.7C6211MC3R	112M	3.7	9.1	82.7	0.67	3.90	3.7	9.1	3.90	3.7	9.1	3.90	3.7	9.1	3.90	3.7	9.1	3.90	3.7	9.1	3.90	920	500	230	275	0.065	57	10	20	42	125	T5
5.5C6213SC3R	132S	5.5	11.5	84.5	0.77	5.80	5.0	10.5	5.80	5.5	11.5	5.80	5	10.5	5.80	5	10.5	5.80	4.5	9.6	5.80	925	550	230	275	0.17	62	10	20	42	125	T5
7.5C6213MC3R	132M	7.5	18.8	85.9	0.64	7.90	6.8	17.0	7.90	7.5	18.8	7.90	6.8	17.0	7.20	7.5	18.8	7.90	6.8	17.0	7.20	925	550	230	275	0.193	75	10	20	42	125	T5
9.3C6216MC3R	160M	9.3	21.0	86.8	0.70	9.70	8.0	18.1	9.70	9.3	21.0	9.70	8	18.1	8.30	9.3	21.0	9.70	8	18.0	8.30	935	600	230	260	0.28	115	10	22	42	125	T4
011C6216LC3R	160L	11	20.9	87.4	0.83	11.5	10	19.0	11.5	11	20.9	11.5	10	19.0	10.6	10	19.0	11.5	9.1	17.4	10.6	935	600	220	260	0.34	150	10	22	42	125	T4
013C6216LC3R	160L	13	29.0	88.1	0.70	13.5	12	27.0	13.5	13	29.0	13.5	12	27.0	12.5	13	29.0	13.5	12	27.0	12.5	935	600	225	260	0.4	170	10	22	42	125	T4
015C6218LC3R	180L	15	28.1	88.6	0.83	15.5	13.6	25.5	15.5	15	28.1	15.5	13.6	25.5	15.5	13.6	25.5	15.5	12.4	23.4	25.5	940	600	230	260	0.66	195	10	22	42	125	T4
018C6218LC3R	180L	18	37.0	89.2	0.75	18.7	16.7	35.0	18.7	18	37.0	18.7	16.7	35.0	17.3	18	37.0	18.7	16.7	35.0	17.3	940	600	230	260	0.68	210	10	22	42	125	T4
021C6218LC3R	180L	21	43.0	89.7	0.75	21.8	19	39.0	21.8	21	43.0	21.8	19	39.0	19.7	21	43.0	21.8	19	39.0	19.7	940	600	230	260	0.82	235	10	22	42	125	T4
022C6220LC3T	200L	22	41.5	89.9	0.81	22.6	20	37.7	22.6	22	41.5	22.6	20	37.7	22.6	20	37.7	22.6	18.2	34.6	22.6	950	600	230	250	1.15	245	12	27	50	150	T4
026C6220LC3T	200L	26	50.0	90.4	0.79	26.7	24	47.0	26.7	26	50.0	26.7	24	47.0	24.6	24	47.0	24.6	22	43.0	22.6	950	600	230	250	1.2	280	12	27	50	150	T5
030C6222MC3T	225M	30	54.7	90.8	0.83	30.4	27.3	49.7	30.4	30	54.7	30.4	27.3	49.7	30.4	27.3	49.7	30.4	24.8	45.5	30.4	960	600	210	250	2.3	310	12	27	50	150	T5
345C6222MC3T	225M	34.5	64.0	91.2	0.81	35.0	32	60.0	35.0	34.5	64.0	35.0	32	60.0	32.5	32	60.0	32.5	30	57.0	30.4	960	600	230	250	2.35	336	12	27	50	150	T5
039C6222MC3T	225M	39	73.0	91.5	0.80	39.6	35	66.0	39.6	39	73.0	39.6	35	66.0	35 5	35	66.0	35.5	33	63.0	33.5	960	600	230	250	2.42	360	12	27	50	150	T5
046C6225MC3T	250M	46	83.0	92.0	0.83	46.0	42	76.0	46.0	46	83.0	46.0	42	76.0	42.4	42	76.0	42.4	40	73.0	40.4	965	600	230	250	3.72	720	12	27	50	150	T5
052C6228SC3T	280S	52	93.0	92.3	0.84	52.2	49	88.0	52.2	52	93.0	52.2	49	88.0	49.2	49	88.0	49.2	45	81.0	45.2	970	600	230	250	5.11	810	15	33	63	188	T5
055C6228MC3T	280M	55	97.3	92.4	0.84	65.3	50	88.5	65.3	55	97.3	65.3	50	88.5	61.3	50	88.5	61.3	45.5	81.0	58.2	970	600	200	230	9.9	875	15	33	63	188	T5
065C6228MC3T	280M	65	117	92.8	0.83	65.3	61	110	65.3	65	117	65.3	61	110	61.3	61	110	61.3	58	105	58.2	970	600	230	250	6.16	875	15	33	63	188	T5
075C6231SC3T	315S	75	130	93.1	0.86	74.5	68.2	118	74.5	75	130	74.5	68.2	118	74.5	68.2	118	74.5	62	108	74.5	980	650	230	255	14.2	1000	15	33	63	188	T5
090C6231SC3T	315S	90	158	93.4	0.84	89.4	85	150	89.4	90	158	89.4	85	150	84.5	85	150	84.5	80	142	79.5	980	600	230	250	10.7	1050	15	33	63	188	T5
105C6231MC3T	315M	105	184	93.7	0.84	104.4	100	175	104.4	105	184	104.4	100	175	99.4	100	175	99.4	95	166	94.4	980	600	230	250	12.4	1180	15	33	63	188	T5
110C6231MC3T	315M	110	190	93.8	0.86	109.3	100	172	109.3	110	190	109.3	100	172	109.3	100	172	109.3	90.9	158	109.3	980	650	230	255	19	1300	15	33	63	188	T5
125C6231MC3T	315M	125	219	94.0	0.84	124.2	120	210	124.2	125	219	124.2	120	210	119.3	120	210	119.3	115	201	114.3	980	600	230	250	15.5	1350	15	33	63	188	T5
132C6231LC3T	315L	132	225	94.1	0.86	144.5	120	204	144.5	132	225	144.5	120	204	144.5	120	204	144.5	109.1	187	144.5	890	650	230	280	30	1400	15	33	63	188	T5
150C6231LC3T	315L	150	263	94.3	0.84	148.8	142	249	148.8	150	263	148.8	142	249	140.8	142	249	140.8	136	138	134.9	982	600	230	250	18	1525	15	33	63	188	T5
180C6231LC3T	315L	180	316	94.5	0.84	178.5	170	300	178.5	180	316	178.5	170	300	168.6	170	300	168.6	160	282	158.7	982	600	230	250	21.5	1850	15	33	63	188	T5
200C6235LC3T	355L	200	346	94.7	0.85	197.8	182	315	197.8	200	346	197.8	182	315	197.8	181.8	315	197.8	165.3	288	197.8	985	650	160	200	46.5	1728	15	33	63	188	T4
220C6235LC3T	355L	220	383	94.8	0.84	217.5	210	366	217.5	220	383	217.5	210	366	217.5	210	366	207.7	200	349	197.8	985	600	220	250	28.7	1917	15	33	63	188	T4
275C6235LC3T	355L	275	479	95.0	0.84	271.9	262	456	271.9	275	479	271.9	262	456	259.1	262	456	259.1	250	435	247.2	985	600	220	250	35.5	2075	15	33	63	188	T4
325C6235KC3T	355L/K	325	566	95.0	0.84	321.4	310	540	321.4	325	566	321.4	310	540	306.5	310	540	306.5	300	523	296.0	985	600	220	250	43.3	2563	15	33	63	188	T4

Note: 1. -Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication.
2. All performance figures are subject to IS/IEC 60034-1 tolerances.
3. 132 frame to 355 frame Cast iron frame.

TEFC 3 Ph. Sq. Cage Induction Motors Crane & Hoist Duty Safe and Flame proof

Ex d,Ex db IIC ,Ex tb IIIC, PESO, ATEX & IECEx Motors With Inverter (VVVF) Drives Fr. 63 to 355L/K

3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V ± 10%,50Hz ± 5%,Combined variation 10%,Insulation class F with temperature rise limited to class B (Amb:50°C,Rise:70K),Degree of protection IP-55 & IP-66 , Altitude upto 1000 mtrs. above m.s.l , Duty S3/S4,efficiency class IE-2,IV-Pole conforms to IS/IEC 60034-1:2004,IS/IEC 60079-0:2011,IS/IEC 60079-1:2007,IS/IEC 60034-5:2000, IS/IEC60079-31:2008,IS 12615:2018,,Efficiency esting according to IEC 60034-2-1:2014-06, EN 60079-0:2012+A11:2013,EN 60079-1:2014,EN 60079-31:2014,EN/IEC 60079-7:2015 ,IEC60034-30-2008, IEC 60034-1:2010 for Gas & Dust IEC-Ex , ATEX certified by BASEEFA.

Performance Table for 8 Pole Motors

Ordering code		60 Starts / hr.								150 Starts / hr.					
		40% CDF					60% CDF			40% CDF			60% CDF		
	Frame	kW	Current Amps.	Equivelent S1 duty Kw efficiency	PF FL (P.U)	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m
.12C82071A3T	71	0.12	0.7	34.2	0.60	0.16	0.12	0.7	0.16	0.12	0.7	0.16	0.12	0.7	0.16
.12C82071C3R	71	0.12	0.7	34.2	0.60	0.16	0.12	0.7	0.16	0.12	0.7	0.16	0.12	0.7	0.16
.18C82080A3T	80	0.18	1.0	39.8	0.55	0.25	0.18	1.0	0.25	0.18	1.0	0.25	0.18	1.0	0.25
.18C82080C3R	80	0.18	1.0	39.8	0.55	0.25	0.18	1.0	0.25	0.18	1.0	0.25	0.18	1.0	0.25
.25C82080A3T	80	0.25	1.2	45.1	0.57	0.34	0.25	1.2	0.34	0.25	1.2	0.34	0.25	1.2	0.34
.25C82080C3R	80	0.25	1.2	45.1	0.57	0.34	0.25	1.2	0.34	0.25	1.2	0.34	0.25	1.2	0.34
.37C8290SA3R	90S	0.37	1.3	51.1	0.71	0.50	0.3	1.2	0.50	0.37	1.3	0.50	0.3	1.2	0.50
.37C8290SC3R	90S	0.37	1.3	51.1	0.71	0.50	0.3	1.2	0.50	0.37	1.3	0.50	0.3	1.2	0.50
.55C8290SA3R	90S	0.55	2.2	56.8	0.58	0.80	0.45	1.8	0.60	0.55	2.2	0.80	0.45	1.8	0.60
.55C8290SC3R	90S	0.55	2.2	56.8	0.58	0.80	0.45	1.8	0.60	0.55	2.2	0.80	0.45	1.8	0.60
.75C8290LA3R	90L	0.75	2.8	61.2	0.57	1.10	0.75	2.8	1.10	0.75	2.8	1.10	0.75	2.8	1.10
.75C8290LC3R	90L	0.75	2.8	61.2	0.57	1.10	0.75	2.8	1.10	0.75	2.8	1.10	0.75	2.8	1.10
1.1C8210LA3R	100L	1.1	2.9	66.7	0.75	1.60	1.0	2.7	1.60	1.1	2.9	1.55	1	2.7	1.60
1.1C8210LC3R	100L	1.1	2.9	66.7	0.75	1.60	1.0	2.7	1.60	1.1	2.9	1.55	1	2.7	1.60
1.5C8210LA3R	100L	1.5	5.0	70.5	0.57	2.10	1.5	5.0	2.10	1.5	5.0	2.10	1.5	5.0	2.10
1.5C8210LC3R	100L	1.5	5.0	70.5	0.57	2.10	1.5	5.0	2.10	1.5	5.0	2.10	1.5	5.0	2.10
2.2C8211MA3R	112M	2.2	6.8	74.5	0.58	3.10	2.2	6.8	3.10	2.2	6.8	3.10	2.2	6.8	3.10
2.2C8211MC3R	112M	2.2	6.8	74.5	0.58	3.10	2.2	6.8	3.10	2.2	6.8	3.10	2.2	6.8	3.10
3.7C8213SC3R	132S	3.7	8.8	79.0	0.72	5.10	3.7	8.8	5.10	3.7	8.8	5.10	3.7	8.8	5.10
5.5C8216MC3R	160M	5.5	11.6	81.8	0.79	7.55	5.0	10.5	7.50	5.5	11.6	7.55	5	10.5	7.50
6.0C8216MC3R	160M	6	13.0	82.3	0.76	8.23	5.5	12.0	7.50	6	13.0	8.23	5.5	12.0	7.50
7.0C8216MC3R	160M	7	15.5	83.3	0.74	9.60	6.5	14.4	8.90	7	15.5	9.60	6.5	14.4	8.90
7.5C8216LC3R	160L	7.5	15.2	83.6	0.80	10.3	6.8	13.8	10.3	7.5	15.2	10.3	6.8	13.8	10.3
8.3C8216LC3R	160L	8.3	18.5	84.2	0.73	11.4	7.8	17.4	10.7	8.3	18.5	11.4	7.8	17.4	10.7
106C8218MC3R	180M	10.6	22.5	85.4	0.76	14.5	10	21.0	13.7	10.6	22.5	14.5	10	21.0	13.7
011C8218LC3R	180L	11	22.1	85.5	0.80	15.1	10	20.1	15.1	11	22.1	15.1	10	20.1	15.1
125C8218LC3R	180L	12.5	26.5	86.1	0.75	17.1	11.5	24.5	15.8	12.5	26.5	17.1	11.5	24.5	15.8
015C8220LC3T	200L	15	29.1	86.8	0.81	20.4	13.6	26.4	20.4	15	29.1	20.4	13.6	26.4	20.4
017C8220LC3T	200L	17	28.8	87.3	0.93	35.0	16	33.0	21.8	17	28.8	35.0	16	33.0	21.8
185C8222SC3T	225S	18.5	35.4	87.6	0.82	25.0	16.8	32.2	25.0	18.5	35.4	25.0	16.8	32.2	25.0
205C8222SC3T	225S	20.5	41.5	87.9	0.77	27.7	19.4	39.3	26.2	20.5	41.5	27.7	19.4	39.3	26.2
022C8222MC3T	225M	22	42.1	88.1	0.82	29.8	20	38.3	29.8	22	42.1	29.8	20	38.3	29.8
245C8222MC3T	225M	24.5	50.0	88.5	0.76	33.1	23	47.0	31.1	24.5	50.0	33.1	23	47.0	31.1
030C8225MC3T	250M	30	56.8	89.0	0.82	40.3	27.3	51.7	40.3	30	56.8	40.3	27.3	51.7	40.3
034C8225MC3T	250M	34	67.0	89.3	0.78	45.7	32	63.0	43.0	34	67.0	45.7	32	63.0	43.0
037C8228SC3T	280S	37	70.6	89.5	0.81	49.4	33.6	64.2	49.4	37	70.6	49.4	33.6	64.2	49.4
042C8228SC3T	280S	42	82.0	89.8	0.79	56.0	39	76.0	52.0	42	82.0	56.0	39	76.0	52.0
045C8228MC3T	280M	45	89.8	90.0	0.77	59.6	40.9	81.6	59.6	45	89.8	59.6	40.9	81.6	59.6
052C8228MC3T	280M	52	101	90.3	0.79	69.4	48	93.0	64.0	52	101	69.4	48	93.0	64.0
055C8231SC3T	315S	55	105	90.4	0.80	72.9	50	95.5	72.9	55	105	72.9	50	95.5	72.9
062C8231SC3T	315S	62	120	90.6	0.79	82.2	58	113	76.9	62	120	82.2	58	113	76.9
075C8231MC3T	315M	75	165	91.0	0.69	99.4	80	155	106	75	165	112.6	80	155	106
085C8231MC3T	315M	85	165	91.2	0.78	112.6	80	155	106	85	165	112.6	80	155	106
100C8231MC3T	315M	100	193	91.5	0.78	132.5	95	184	125.9	100	193	132.5	95	184	125.9
110C8231LC3T	315L	110	207	91.7	0.80	145.8	100	188	145.8	110	207	145.8	100	188	145.8
122C8231LC3T	315L	122	234	91.9	0.78	161.7	116	222	153.7	122	234	161.7	116	222	153.7
132C8231LC3T	315L	132	247	92.0	0.80	174.9	120	225	174.9	132	247	174.9	120	225	174.9
145C8231LC3T	315L	145	278	92.2	0.78	192.1	138	265	182.9	145	278	192.1	138	265	182.9
175C8235LC3T	355L	175	332	92.5	0.79	230.3	168	319	221.1	175	332	230.3	168	319	221.1
200C8235LC3T	355L	200	399	92.8	0.75	263.2	181.8	363	221.1	200	399	230.3	182	363	221.1
220C8235LC3T	355L	220	417	93.0	0.78	289.6	210	398	276.4	220	417	289.6	210	398	276.4
250C8235KC3T	355L/K	250	480	93.2	0.77	329.1	235	452	309.3	250	480	329.1	235	452	309.3

300 Starts / hr.															
60% CDF			40% CDF			With DOL Starting									
kW	Current Amps.	Torque Kgf-m	kW	Current Amps.	Torque Kgf-m	Speed RPM	Starting Current % of Rated Current	Starting Torque % of Rated Torque	Pull out Torque % of Rated Torque	Rotor Gd^2 Kgm^2	Net Approx Wt. B3 Const. (Kg)	TWT Hot in sec.	TWT Cold in sec.	Th (min)	Tc (min)	Temp. Class
0.12	0.7	0.16	0.12	0.7	0.16	690	200	180	240	0.008	8	15	30	63	188	T6
0.12	0.7	0.16	0.12	0.7	0.16	690	200	180	240	0.008	10	15	30	63	188	T6
0.18	1.0	0.25	0.18	1.0	0.25	695	200	180	240	0.009	10	15	30	63	188	T6
0.18	1.0	0.25	0.18	1.0	0.25	695	200	180	240	0.009	16	15	30	63	188	T6
0.25	1.2	0.34	0.25	1.2	0.34	700	250	180	240	0.009	12	15	30	63	188	T6
0.25	1.2	0.34	0.25	1.2	0.34	700	250	180	240	0.009	18	15	30	63	188	T6
0.3	1.2	0.50	0.3	1.1	0.50	680	300	170	220	0.016	13	15	30	63	188	T6
0.3	1.2	0.50	0.3	1.1	0.50	680	300	170	220	0.016	23	15	30	63	188	T6
0.55	2.2	0.80	0.45	1.8	0.60	680	300	180	210	0.011	20	15	30	63	188	T6
0.55	2.2	0.80	0.45	1.8	0.60	680	300	180	210	0.011	30	15	30	63	188	T6
0.75	2.8	1.10	0.65	2.4	0.90	680	300	200	240	0.014	22	15	30	63	188	T6
0.75	2.8	1.10	0.65	2.4	0.90	680	300	200	240	0.014	32	15	30	63	188	T6
1	2.7	1.60	0.9	2.5	1.30	690	350	190	250	0.042	25	10	20	42	125	T6
1	2.7	1.60	0.9	2.5	1.30	690	350	190	250	0.042	39	10	20	42	125	T6
1.5	5.0	2.10	1.1	3.6	1.60	680	350	200	230	0.027	25	10	20	42	125	T6
1.5	5.0	2.10	1.1	3.6	1.60	680	350	200	230	0.027	39	10	20	42	125	T6
2.2	6.8	3.10	1.5	4.6	2.10	700	400	200	230	0.060	47	10	20	42	125	T5
2.2	6.8	3.10	1.5	4.6	2.10	700	400	200	230	0.060	56	10	20	42	125	T5
3.7	8.8	5.10	3	7.1	4.10	710	400	200	230	0.133	77	10	20	42	125	T5
5	10.5	7.50	4.2	9.7	6.90	710	500	200	260	0.460	115	10	22	42	125	T4
5.5	12.0	7.50	5	11.0	6.90	710	500	210	240	0.299	120	10	22	42	125	T4
6.5	14.4	8.90	6	13.3	8.20	710	500	210	240	0.344	125	10	22	42	125	T4
6.8	13.8	10.3	6.2	12.7	10.3	710	500	210	240	0.570	130	10	22	42	125	T4
7.8	17.4	10.7	7	15.6	9.60	710	550	200	230	0.400	155	10	22	42	125	T4
10	21.0	13.7	9.3	20.0	12.8	710	550	210	250	0.620	180	10	22	42	125	T4
10	20.1	15.1	9.1	18.5	15.1	710	550	210	250	1.290	210	10	22	42	125	T4
11.5	24.5	15.8	11	23.4	15.1	710	550	210	250	0.720	225	10	22	42	125	T4
13.6	26.4	20.4	12.4	24.3	20.4	715	550	210	250	1.700	258	12	27	50	150	T5
16	33.0	21.8	15	31.0	20.4	715	550	220	250	1.320	290	12	27	50	150	T5
16.8	32.2	25.0	15.3	29.5	25.0	720	550	210	220	2.300	345	12	27	50	150	T5
19.4	39.3	26.2	18.5	37.5	25.0	720	550	210	220	1.950	360	12	27	50	150	T5
20	38.3	29.8	18.2	35.1	29.8	720	550	200	260	2.600	375	12	27	50	150	T5
23	47.0	31.1	22	45.0	29.8	720	550	210	220	2.410	400	12	27	50	150	T5
27.3	51.7	40.3	24.8	47.4	40.3	725	550	200	260	4.400	755	12	27	50	150	T5
32	63.0	43.0	30	59.0	40.3	725	550	220	250	3.720	755	12	27	50	150	T5
33.6	64.2	49.4	30.6	58.9	49.4	730	550	210	260	8.000	850	15	33	63	188	T5
39	76.0	52.0	37	72.0	49.4	730	550	220	220	5.830	850	15	33	63	188	T5
40.9	81.6	59.6	37.2	75.0	59.6	735	550	210	240	9.900	935	15	33	63	188	T5
48	93.0	64.0	45	87.5	60.0	730	550	220	240	6.860	935	15	33	63	188	T5
50	95.5	72.9	45.5	87.6	72.9	735	600	210	240	14.200	805	15	33	63	188	T5
58	113	76.9	55	107	72.9	735	600	210	240	10.700	895	15	33	63	188	T5
80	155	106	75	145	99.4	735	600	210	240	12.400	910	15	33	63	188	T5
80	155	106	75	145	99.4	735	600	210	240	12.400	945	15	33	63	188	T5
95	184	125.9	90	175	119.3	735	600	210	240	15.500	1000	15	33	63	188	T5
100	188	145.8	90.9	173	145.8	735	600	220	280	30.000	1035	15	33	63	188	T5
116	223	153.7	110	211	145.8	735	600	210	240	18.000	1110	15	33	63	188	T5
120	225	174.9	109.1	206	174.9	735	600	250	280	33.300	1165	15	33	63	188	T5
138	265	182.9	132	254	174.9	735	600	210	240	21.500	1200	15	33	63	188	T5
168	319	221.1	160	304	210.6	740	600	210	240	28.700	1888	15	33	63	188	T4
181.8	363	221.1	165.3	333	210.6	740	600	185	200	37.500	1950	15	33	63	188	T4
210	398	276.4	200	380	263.2	740	600	200	230	35.500	2020	15	33	63	188	T4
235	452	309.3	225	433	296.1	740	600	220	240	43.300	2563	15	33	63	188	T4

Note: - 1. Due to policy of continual development and improvement the right is reserved to supply products which may differ slightly from those in this publication.
2. All performance figures are subject to IS/IEC 60034-1 tolerances.
3. 132 frame to 355 frame Cast iron frame.
4. Efficiency value determined by equivelent kw as per IEMA standard clause no 15.2,Equivelent Kw=rated Kw / 1.4

Brake Motors - General Technical Information

Brake motors are used where the safe & effective stopping with very short time is desired. The fail safe type electromagnetic brake is mounted on rear side end shield of motor and it works on DC power supply. The braking is applied once the power supply is switched OFF.

LHP Brake motors are manufactured with rectifiers mounted in the motor terminal box which converts the AC power supply to DC for brake operations.

BRAKE WORKING PRINCIPLE:-

The brake consists of two plates in which one is fixed and other is spring loaded. The magnetic coil is located at spring loaded plate side. When the brake coil is energized the plate is pulled to coil side and rotating disc is released to rotate freely in between two plates.

When power supply is disconnected/ switched OFF, the coil de energizes and spring loaded plates stuck the rotating disc and brake is applied which prevents the rotation of disc.
Braking types are depends on the application. To select correct type and rating brake, the braking type shall be confirmed in enquiry.

BRAKING TORQUE:-

The torque depends on the load and power required to brake. For general application 150% of motor full load torque is sufficient. In special applications like cranes, hoists, the braking torque shall be min 2005 of motor full load torque.

RECTIFIER:-

Half wave rectifiers are used to convert AC Power supply to DC. Normally AC power supply is given from motor terminal. However independent AC power supply shall be used in case VVVF motors application.

Brake motors with VVVF operation:-

When brake motor operated with VVVF, the brake operation depends on the system design. The voltage across motor terminal vary with frequency variation. Hence the independent power supply shall be used for brake operation with synchronization with VVVF operation. Also DC Power supply form VVVF, can be used for brake operation.

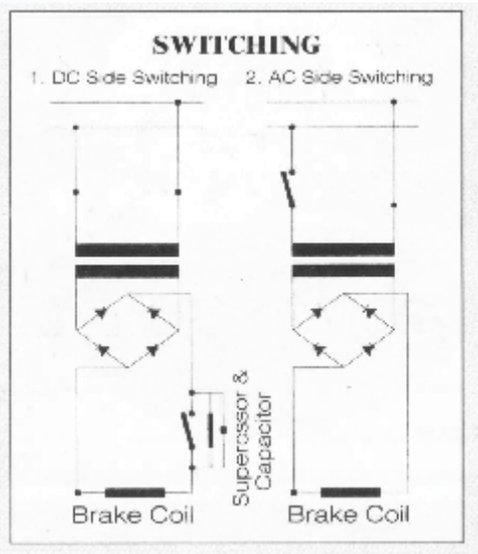
BRAKE MOTORS

Upto 355 Frame

Table No. 23 - For optimum performance we suggest to use following Rectifiers (Power supply)

Brake Coil Voltage	AC Input Voltage	Current Rating	Rectifier Type
190 VDC	415 VAC	1.5 Amp	EH 720 HHD
	230 VAC	1.5 Amp	EH 720 AD
96VDC	230 VAC	1.5 Amp	EH 720 CD
	110 VAC	1.5 Amp	EH 720 BD

All RECTIFIERS offered by us are with inbuilt DC switching protection circuit. Use of inferior quality & cheap Rectifiers may damage your costly brake coils.

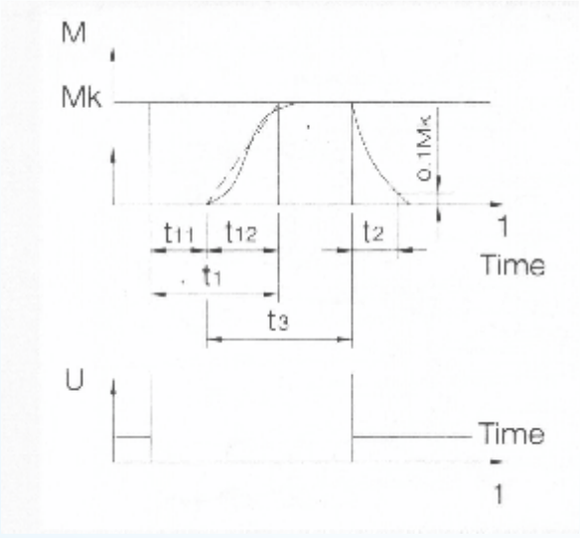


Switching

Brake coils are operated with DC voltage. Generally when braking time is not critical AC side switching is done. This method is often used with brake motors. Where brake is switched with motor contacts. Due to the inductance of the brake coil, engagement time can be 3-6 times longer than with DC switching. Therefore this arrangement is not suitable for hoist applications. For falling loads such as hoist, lift and cranes, also the high inertia loads, a brake motor to some extent regenerate the supply and hold off the brake. Here it is essential to switch on the DC side of the rectifier. DC side switching requires provision of universal spark suppressor and capacitor to protect the coil and switches against inductive voltages.

For normal rectifier converting AC to DC you can use separate universal spark suppressor and capacitor across the switch. Rectifier supplied by us are designed to include suppressor and capacitor suitable for DC switching.

Operating Times



t1 Engagement time
t2 Disengagement time
t11Delay time
t12 Rise time of brake torque
t3 Slipping time

Table No. 24

Brake Size	t11 ms	t12 ms	t1 ms	t2 ms
06	7	10	17	35
08	10	25	35	65
10	10	30	40	90
12	10	40	50	120
14	15	50	65	150
16	20	70	90	180
18	30	80	110	300
20	50	150	200	400
25	70	200	270	500

The engagement times are valid for switching on DC side. The table shows the delay during engagement t11, the rise time of brake torque t12 and the engagement time t1=t11+t12
Disengagement time is not influenced by DC or AC side switching. However it can be reduced by suitable excitation or over excitation.

For electrical performance please refer Page No.23 to 30.

Brake Selection Chart

2 Pole Brake Motor

KW	Frame Size	S.F. = 2	S.F. = 2.5	S.F. = 3
0.12	63	6	6	6
0.18	63	6	6	6
0.37	71	6	6	6
0.55	71	6	8	8
0.75	80	8	8	8
1.1	80	8	10	10
1.5	90S	10	10	10
2.2	90L	10	12	12
3.7	100L	12	12	14
5.5	132S	14	14	14
7.5	132S	14	14	16
9.3	132M	14	16	16
11	160M	16	16	18
15	160M	16	18	18
18.5	160L	18	18	20
22	180M	18	20	20
30	200L	20	20	25
37	200L	20	25	25
40	225M	25	25	31
55	250M	25	31	31
75	280S	31	31	40
90	280M	31	40	40

4 Pole Brake Motor

KW	Frame Size	S.F. = 2	S.F. = 2.5	S.F. = 3
0.12	63	6	6	6
0.18	63	6	6	6
0.37	71	8	8	8
0.55	80	8	10	10
0.75	80	10	10	10
1.1	90S	10	12	12
1.5	90L	12	12	12
2.2	100L	12	14	14
3.7	112M	14	14	16
5.5	132S	16	16	18
7.5	132M	16	18	18
9.3	160M	18	18	20
11	160M	18	20	20
15	160L	20	20	25
18.5	180M	20	25	25
22	180L	25	25	31
30	200L	25	31	31
37	225S	31	31	40
40	225M	31	40	40
55	250M	40	40	40
75	280S	40	40	50
90	280M	40	50	50

6 Pole Brake Motor

KW	Frame Size	S.F. = 2	S.F. = 2.5	S.F. = 3
0.12	71	6	6	6
0.18	71	6	8	8
0.37	80	8	10	10
0.55	80	10	10	10
0.75	90S	10	12	12
1.1	90L	12	12	12
1.5	100L	12	14	14
2.2	112M	14	14	16(FR132)
3.7	132S	16	16	18
5.5	132M	18	18	20(FR160)
7.5	160M	18	20	20
9.3	160L	20	20	25(FR180)
11	160L	20	25(FR180)	25(FR180)
15	180L	25	25	31
18.5	200L	25	31	31
22	200L	31	31	40(FR225)
30	225M	31	40	40
37	250M	40	40	40
40	280S	40	40	40
55	280M	40	50	50

*S.F. = Safety Factor

8 Pole Brake Motor

KW	Frame Size	S.F. = 2	S.F. = 2.5	S.F. = 3
0.18	80	8	8	8
0.37	90S	10	10	10
0.55	90L	10	12	12
0.75	100L	12	12	12
1.1	100L	12	14	14
1.5	112M	14	14	14
2.2	112M/132S	14	16(FR132)	16(FR132)
3.7	132M/160M	16	18	18
5.5	160M	18	20	20
7.5	160L	20	20	25(FR160)
9.3	180L	20	25	25
11	180L	25	25	31
15	200L	25	31	31

Note :-

1. S.F. 2 Brake to be selected for continuous duty (for light application)
2. S.F. 2.5 Brake to be selected for crane duty cross long travel application (for medium duty & intermittent application)
3. S.F. 3.0 Brake to be selected for crane duty hoisting / vertical lifting application (Heavy duty & intermittent application)
4. A.C. Brake can be given on demand.
5. Brakes above 255 frame can be given as per customer requirement.
6. Brakes are available with 24 VDC, 96 VDC & 190 VDC
7. Brakes are suitable for 50° C ambient.
8. Ambient above 60° C can be given on demand.
9. For dimensions of Brake Motor refer General Arrangement Drawing/ Dimensions Table for Std. and FLP motors.

Roller Table Motors - General Technical Information

LHP Roller Table Motors are designed taking into consideration the experience of users in steel plants over the years.

Applications

- In steel plants for conveying steel billets for processing through roller mills
- Suitable for Geared Motors operating with VVVF source

Applicable Standards

IPSS No: 1-03-007-14	Specification for ac Roller Table Motors
IEC 60034-1 / IS 5999-1	Specifications for 3 phase induction motors
IS -4691/IEC 60034-5	Degrees of protection provided by enclosure for rotating electrical machinery

Range	Torque : 1Kgm - 75kgm
Pole	4/6/8
Mounting	Standard / Special as per IPSS specifications
Frame	Up to 450L
Voltage	415V AC or (up to 690V)
Frequency	50Hz
Stalled rotor with stand time	Up to 15 minutes max or as per customer requirement
Insulation	H Class
Duty	S3, S4, S1,S5, S6, S7, S8 & S9
Frame with circular fines design	

ROLLER TABLE MOTORS
Up to 355 Frame

Application requirement

- Roller table motors are special driving elements for the steel rolling mill industry. Particularly in case of working and conveying roller tables, these motors are subject to extremely hard electrical and mechanical requirements.
- This fact results from the very different modes of operation and cases of load with their variants such as continuous duty, intermittent duty and short-time duty as well as starting duty, electrical braking duty and reversing duty.
- The motors must be suitable to operate under overloads conditions e.g. blockings caused through jammed rolled material. LHP roller table motors have proved functional efficiency and operational reliability.
- Starting from these experiences, LHP has developed various variants of roller table motors adapted to the conditions of the modern drive engineering.
- Generally, the motors are delivered in a robust grey cast iron version. Motors are provided with horizontal / vertical cooling ribs and in case of the heavy type series they are provided with ribs arranged across the axial direction. The housings have a high mechanical resistance and a very good thermal capacity. Motors connection box can be executed on the top, right or left based on requirements. Even terminal box can be arranged at the non-driving side end shield.
- The design torque in Nm given at the motor shaft is calculated by

  M = 9550 X (p/n) where P = design output in kW n = speed in RPM
- All LHP motors shall be suitable for ambient temperatures from –35° C up to +70° C.

Special stator winding :

- Motors are suitable for higher ambient temperature requirements. Motors shall be suitable for temperature rise to class B/ class F/ class H insulation based on the requirements
- LHP can supply motors with higher locked rotor withstand time at cold or hot conditions based on applications.
- Motor are with class F insulation as a standard and also can be supplied with class H insulation on request.
- Dual coat class H wires are used for roller table applications to suit high harmonics and peak voltage form invertors.
- Winding joints are strengthen by applying RTV silicon sealant.
- Motor have Vacuum pressure impregnation process with double dipping and baking process to ensure high grade of withstanding capacity.
- Motor frame : FG200 grade cast iron material as standard. MS fabricated construction
- End Shields : CI with FG200 grade or MS fabricated.
- Shaft : EN8 material. EN24 with heat treatment can be given.
- Terminal box : CI or MS.
- Motor shall have aluminum pressure die-casting.
- Motors can be provided with Surface cooled Totally enclosed fan cooled Separately force cooled arrangement
- LHP roller table motors are equipped with antifriction Double Groove, C3 clearance ball bearings upto 200 frame and open type bearings with re-greasing arrangement for frames 225 and above.
- The bearings have a nominal service life of at least 20,000 hours for maximum permissible load conditions. For motors without additional axial loading, the nominal service life is 40,000 hours for direct coupling.

Lubrication :

- Life time pre-lubricated for frames upto 200.
- Re-greasing arrangement for frames 225 and above.

Finish System

- Anticorrosive polyurethane paint. Epoxy paint can be provided.
- Standard color
- RAL 7015 Slate-grey

Motors shall be suitable for below overload conditions

- 1.5 times the rated current for 2 min.
- 1.6 times the rated torque for 15 Seconds

The following motor protection variants are available on request

- Motor protection with PTC temperature sensors in the stator winding
- Bimetallic temperature sensors in the stator winding.
- Resistance temperature detectors (RTDs) for monitoring the winding or bearing temperature on request
- Motors can be provided with space heaters on request.
- Motors with encoder can also be supplied on request.
- Motors with electromagnetic brake can be supplied if application demands.

Cooling Tower Motors - General Technical Information

Features of LHP Cooling tower motors

- Suitable for outdoor duty application and 100% humid and chemical environment.
- IP 55 Protection to prevents water ingress.
- Anticorrosive paint for better life
- Reliable bearing lifet L-10 100,000 hours
- Can be operated on VVVF for energy saving between 30 to 50 Hz frequency.
- Can eliminate the gear box, cooling system, shafts, couplings, bearings ,resulting in less maintenance.
- Low vibration and noise

Range	Up to 425 HP (315 kW)
R.P.M.	1500, 1000, 750
Pole	4/6/8
Mounting	B5 / Shaft downward position V1
Frame	71 to 355 L
Protection	IP 55
Insulation	F Class
Voltage	415 V, 380 V or as per requirment
Frequency	50 Hz or 60 Hz
Duty	S1
Paint	With Anti corrosive Epoxy paint

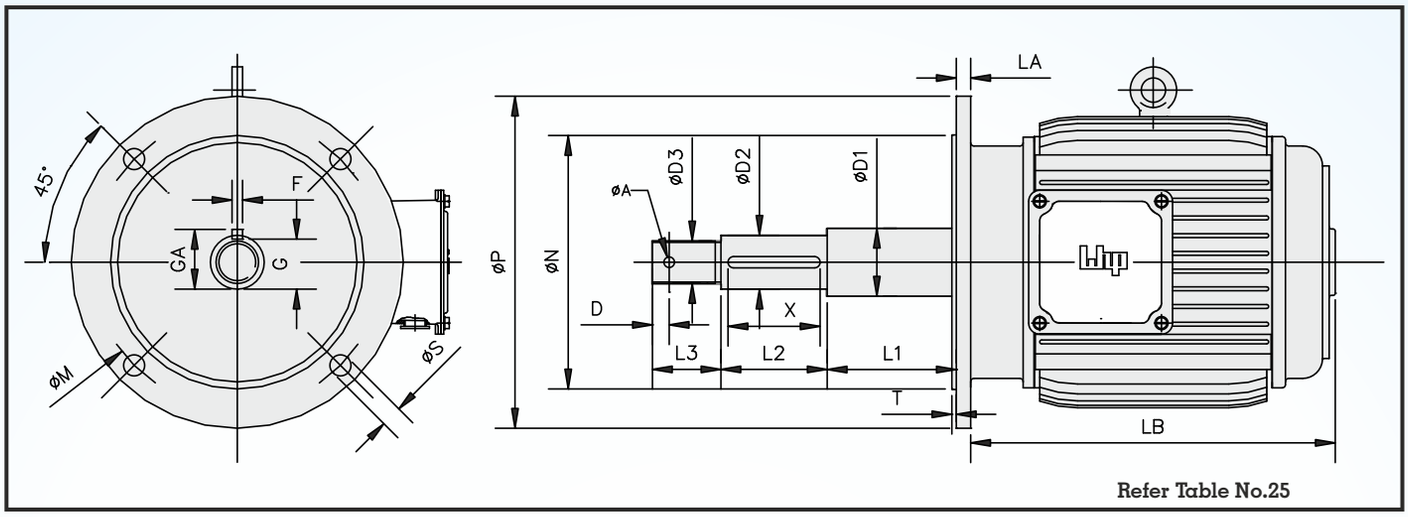
Applicable Standards

IS - 4722	Specifications for rotating electrical machine
IS 60034-1/ IS 15999-1	Specifications for 3 phase induction machine
IS/ IEC 60034 - 5	Degree of protection provided by enclosure for rotating electrical machines
IS/IEC 60034 2-1	Method of determination of efficiency of rotating electrical machines
IS - 2223 (IEC 72 - 1)	Dimensions of 3 phase flange mounted induction motors

COOLING TOWER MOTORS

Upto 355 Frame

Cooling Tower Motors - General arrangement Drawing/Dimensions



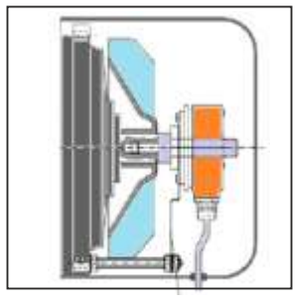
Refer Table No.25

Table No. - 25

Frame size	M	N	P	S X NO.	T	LA	LB	AD	F	G	GA	ØD1	L1	D2	L2	D3	L3	X	ØA	B
71	130	110	160	10X4	3.5	10	180	115	5	11	16	17	55	14^{j6}	25	M12	30	20	---	---
80	165	130	200	12X4	3.5	10	220	120	6	15.5	21.5	20	60	19^{j6}	50	M16	30	45	---	---
90S	165	130	200	12X4	3.5	12	240	160	8	24	31	30	60	28^{j6}	50	M24	50	45	5	8
90L	165	130	200	12X4	3.5	12	262	160	8	24	31	30	60	28^{j6}	50	M24	50	45	5	8
100L	215	180	250	15X4	4.0	12	280	165	8	24	31	30	60	28^{k6}	50	M24	50	45	5	8
112M	215	180	250	15X4	4.0	12	300	190	8	24	31	30	60	28^{k6}	50	M24	50	45	5	8
132S	265	230	300	15X4	4.0	12	316	205	10	33	41	40	90	38^{k6}	75	M30	50	65	5	8
132M	265	230	300	15X4	4.0	12	354	205	10	33	41	40	90	38^{k6}	75	M30	50	65	5	8
132M(N)	265	230	300	15X4	4.0	12	394	205	10	33	41	40	90	38^{k6}	75	M30	50	65	5	8
160M	300	250	350	19X4	5.0	13	420	260	12	37	45	45	90	42^{k6}	75	M30	50	70	5	8
160L	300	250	350	19X4	5.0	13	462	260	12	37	45	45	90	42^{k6}	75	M30	50	70	5	8
180M/L	300	250	350	19X4	5.0	13	520	270	14	42.5	51.5	50	100	48^{k6}	105	M30	50	90	5	8
200L	350	300	400	19X4	5.0	15	570	313	16	49	59	60	100	55^{m6}	105	M30	50	95	5	10
2255/M	400	350	450	19X8	5.0	16	605	370	18	53	64	65	100	60^{m6}	115	M30	50	100	5	10
250M	500	450	550	19X8	5.0	22	695	415	18	58	69	70	100	65^{m6}	115	M40	60	100	5	10
280S/M	500	450	550	19X8	5.0	22	785	430	20	67.5	79.5	90	120	75^{m6}	120	M40	60	100	5	10
315L	600	550	660	24X8	6.0	22	935	525	22	71	85	95	130	80^{m6}	120	M40	60	120	5	10

Encoder Motors

LHP Encoder motors serve applications where exact control of speed (RPM) direction of rotation, exact positioning are required . Hollow shaft encoders feature avoids misalignment and vibration problems during actual application which leads to increased reliability-



Applications :-

Examples - Conveyors, Windmills, Textiles, Packaging, Printing, Paper plants, Steel Plants, Machine Tools, automation, robotics. Encoder motors are vital for precise speed control, full torque availability at low speeds and positioning.

Motor Details

Range	Upto 315 Kw
Pole	2,4,6,8
Mounting	Foot (B3), Flange (B-5), Face (B-14), and combinations
Frame	63 to 355 L
Protection	IP 55
Ambient Temp.	50°C
Frequency range	100 to 60% of Rated Frequency.
Torque	upto 60% of Rated Frequency constant torque application.

Encoder Details

Type	Incremental with Hollow shaft
Max. Speed	6000 RPM
Operating Temperature	40 to 70 degrees C
Protection	IP 67
Type of connection	1m PVC Cable or Plug without mating connector
Resolution (PPR)	1024, 1500, 2000, 2048, 4096 and Max. Upto 5000
Out put	RS 422 / TTL / HTL
Input Voltage	5V or 10V - 30V

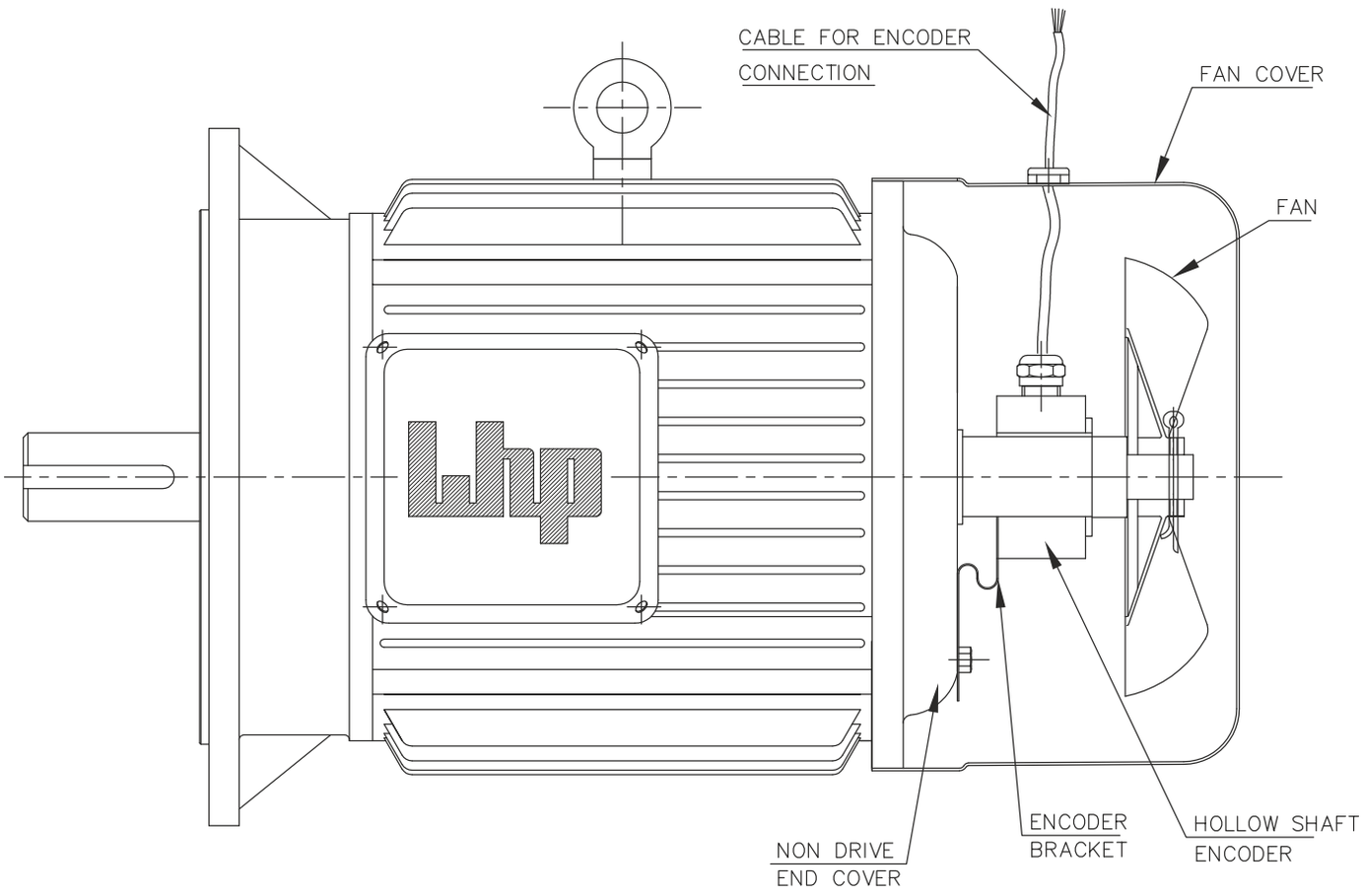
Encoder Motors

Salient features of Incremental encoders fitted to the LHP Motors

- ✓ The incremental encoders comes with a very sturdy bearing construction with its safety lock design.
- ✓ Very large interlocked bearings and large bearing span ensure critical stability with vibration and tolerance of installation errors.
- ✓ A solid die cast housing and radial shaft seal make the incremental encoder ideal for use along with motor in out door harsh applications.
- ✓ The encoders are integrated under the fan cowl.

General Drawing

MOTOR WITH HOLLOW SHAFT ENCODER



Note : For motor mounted with encoder, all dimensions will be as per Standard Induction Motor only except total length of motor. Total length will get increase depending on type of motor & encoder.

Motors for Electric Vehicle

Transportation is a must for socioeconomic development, but most of the transportation vehicles power source is IC engine which consumes fossil fuels which have an undesirable impact on environment.

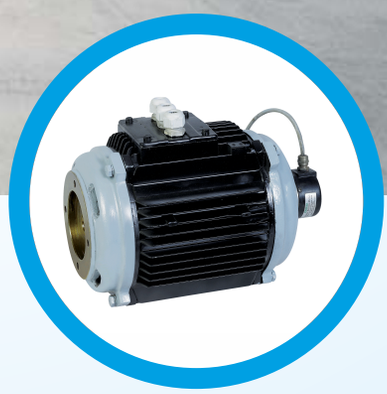
Pollution due to auto exhaust has assumed significant proportion in the developing countries like India, where its contribution is nearly 45 to 75 % of total air pollution in urban area.

In addition to environment impact, looking at fast depletion of traditional energy sources and rising fuel cost, it is essential that we should work on some alternative energy source to overcome these challenges.

Amongst different form of energy, electric energy is finding increasing application due to its cleanliness and ease of control. Today 80% of energy used is in the form of electric energy. For vehicles this energy is going to become most favored alternative energy.

There are two basic types of EVs: all-electric vehicles (AEVs) and plug-in hybrid electric vehicles (PHEVs). AEVs include Battery Electric Vehicles (BEVs) and Fuel Cell Electric Vehicles (FCEVs). In addition to charging from the electrical grid, both types are charged in part by regenerative braking, which generates electricity from some of the energy normally lost when braking. .

If this range is not sufficient, a plug-in electric vehicle (PHEV) may be a better choice. PHEVs run on electricity for shorter ranges (6 to 40 miles), then switch over to an internal combustion engine running on gasoline when the battery is depleted. The flexibility of PHEVs allows drivers to use electricity as often as possible while also being able to fuel up with gasoline if needed. Powering the vehicle with electricity from the grid reduces fuel costs, cuts petroleum consumption, and reduces tailpipe emissions compared with conventional vehicles. When driving distances are longer than the all-electric range, PHEVs act like hybrid electric vehicles, consuming less fuel and producing fewer emissions than similar conventional vehicles. Depending on the model, the internal combustion engine may also power the vehicle at other times, such as during rapid acceleration or when using heating or



MOTORS FOR ELECTRIC VEHICLE

Upto 30 kW

Motors for Electric Vehicle

air conditioning. PHEVs could also use hydrogen in a fuel cell, biofuels, or other alternative fuels as a back-up instead of gasoline.
There are two basic types of EVs: all-electric vehicles (AEVs) and plug-in hybrid electric vehicles (PHEVs). AEVs include Battery Electric Vehicles (BEVs) and Fuel Cell Electric Vehicles (FCEVs). In addition to charging from the electrical grid, both types are charged in part by regenerative braking, which generates electricity from some of the energy normally lost when braking. .

If this range is not sufficient, a plug-in electric vehicle (PHEV) may be a better choice. PHEVs run on electricity for shorter ranges (6 to 40 miles), then switch over to an internal combustion engine running on gasoline when the battery is depleted. The flexibility of PHEVs allows drivers to use electricity as often as possible while also being able to fuel up with gasoline if needed. Powering the vehicle with electricity from the grid reduces fuel costs, cuts petroleum consumption, and reduces tailpipe emissions compared with conventional vehicles. When driving distances are longer than the all-electric range, PHEVs act like hybrid electric vehicles, consuming less fuel and producing fewer emissions than similar conventional vehicles. Depending on the model, the internal combustion engine may also power the vehicle at other times, such as during rapid acceleration or when using heating or air conditioning. PHEVs could also use hydrogen in a fuel cell, biofuels, or other alternative fuels as a back-up instead of gasoline.

Advantages of electric vehicle:-

- Improved air quality
- Alternative energy
- Low operating cost
- Gearless operation (An Internal Combustion Engine does not develop peak torque until many thousand RPM. Once peak torque is reached, it starts to drop-off quickly. To overcome this narrow torque range, multi-speed transmissions are employed to create gear ratios that keep the engine spinning where it's most effective.)
- High efficiency (Less energy consumption)
- Electric motors are profoundly simple. The motor converts electricity into mechanical power and also acts as a generator, turning mechanical power into electricity(While braking/reducing vehicle speed).
- With an electric motor, instant torque is available at any RPM. The entire rotational force of the motor is available the instant the accelerator is pressed. particularly the torque available at low RPM, eliminates the need for gears

TYPES OF VEHICLE

Hybrid and Plug-In Electric Vehicles
Hybrid electric vehicles (HEVs), plug-in hybrid electric vehicles (PHEVs), and all-electric vehicles (EVs)also called electric drive vehicles collectivelyuse electricity either as their primary fuel or to improve the efficiency of conventional vehicle designs.

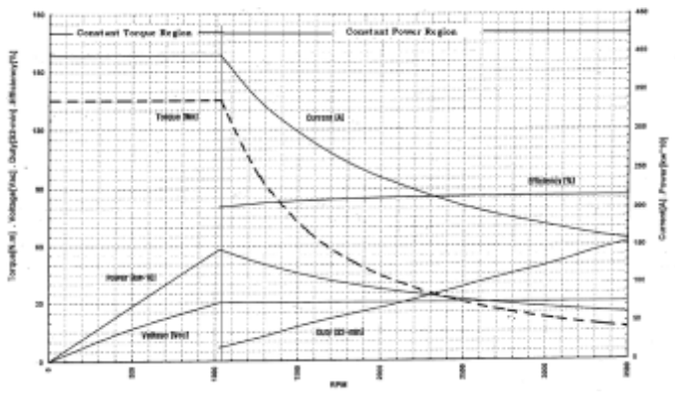
Hybrid Electric Vehicles
HEVs are powered by an internal combustion engine or other propulsion source that runs on conventional or alternative fuel and an electric motor that uses energy stored in a battery. The battery is charged through regenerative braking and by the internal combustion engine and is not plugged in to charge.

Plug-In Hybrid Electric Vehicles
PHEVs are powered by an internal combustion engine that can run on conventional or alternative fuel and an electric motor that uses energy stored in a battery. The vehicle can be plugged into an electric power source to charge the battery. Some PHEVs are also called extended range electric vehicles (EREVs).

All-Electric Vehicles
EVs use a battery to store the electric energy that powers the motor. EV batteries are charged by plugging the vehicle into an electric power source. EVs are sometimes referred to as battery electric vehicles (BEVs).

LHP RANGE OF ELECTRIC VEHICLE MOTORS
LHP is developing Induction Motors for all the three types of vehicles
Range
Rated power : 1.5 kW to 30 kW
(Max power 2 times the rated power)
Speed range : up to 7500 rpm
Battery Voltage : 24 to 132 Volts.
No of Poles : 4
Special feature: High acceleration, Small size, Low cost, High reliability.

-:Typical LHPL Motor Curve:-



Oil Immersed Motor

As one of the leading manufacturers of AC Sq. Cage Induction motors & Gear Motors in standard as well as customer specific (Non Standard) in India. We offer you a wide product range for almost every applications in many different branches of industry.

Innovative products and our sound technical Competence have made us a reliable partner from more than 40 years. We understand our customers' requirements & needs and provide them best solutions through fast & accurate product developments.

Our competitive engineering team's experience and orientation towards meeting the customer's non standard requirements & needs we provide the foundations for our ambitious strategies.

From our manufacturing units in Solapur (Maharashtra, India) as well as our Pan India & international Marketing & sales offices we deliver LHP products and service to many successful companies across India as well as world.

Hence, LHP is first choice for any specific customer's non std. requirements in Motors.

Special motor design for Oil immersed appliance for Hydraulic Power pack mfg industry.

This brochure provides the information about LHP special frameless Oil Immersed motors mainly used in the Hydraulic Power Pack manufacturing industry.

The salient technical features of this motors are-

* The frameless motor,
* Very rugged construction,
* Rating upto 7.5 kW ,
* Any RPM (Pole),
* Standard winging Insulation Class F,
* Very compact-space-saving design,
* Any mounting as per customer requirement can be given,
* Special shaft extension, foot or flange dimension can be given,
* MOC of Motor components can be given Cast Iron ,Al. PDC or GDC,
* It can be used in many different applications,
* Due to oil-immersed motor having better cooling,
* Motor's winding insulation is compatible with all types of Hydraulic as well as transformer oil grades,
* Maintainance free design,
* Very low noise & light weight design,
* Very reliable & safe working, state-of-the-art design features,
* For connection cable or flying leads can be provided,

Options variations can be given

- Any common voltages and frequencies,
- Any Specific motor power rating
- Insulation class H
- Special stator design & mounting
- Thermal monitoring by PTC resistor/bimetal switch
- Special flange for pump fitting,
- Shaft bush for pump coupling,
- Second shaft end and flange for connecting an additional pump
- Different shaft ends
- No motor bearing required on pump side(depending on mounting conditions)
- Custom-made fits, tolerances, and balances as required,

OIL IMMERSED MOTORS

Upto 7.5 kW

Inferno Series Smoke Extraction Motor

LHP presents Inferno Series - High performance Smoke and Heat Extraction Motors to ensure reliable operation during air ventilation under normal condition & smoke and heat extraction in the event of fire.

LHP inferno series comply with EN 12101-3 Standard & are manufactured to relevant international & national standards for electric motors.

Purpose of Inferno Series (Smoke and Heat Extraction Motors)

- Keep the escape and access routes visibly free from smoke.
- Facilitate fire-fighting operations by creating a smoke-free layer
- Delay and / or prevent back drought, flashover and escalation of fire
- Reduce thermal effects on structural components
- Reduce damage caused by decomposition of products and hot toxic gases

Overview

Emergency smoke removal systems are installed in a wide variety of building types including: shopping malls, factories, warehouses, theatres, atria and complex buildings, enclosed car parks, road and rail tunnels.

Their value in facilitating the evacuation of people from buildings, reducing damage and financial loss by preventing smoke logging, reducing roof temperatures, retarding the lateral spread of fire and allowing fire-fighters to locate the source of fire - is firmly established.

Temperature and time combinations

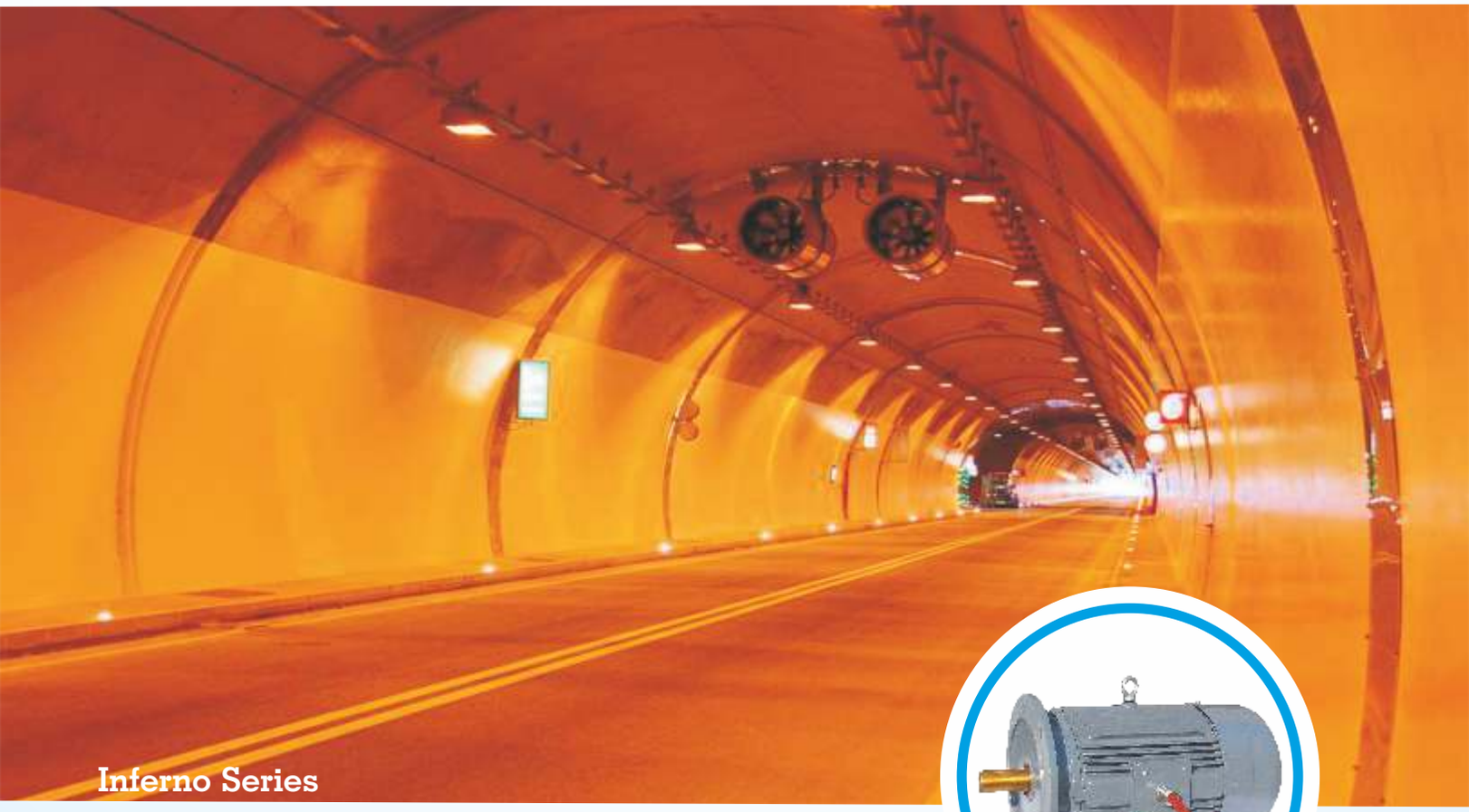
Inferno Series motor is capable to withstand heat of smoke and fumes produced by a fire for a number of specified temperature and time combinations. Motor designs are available for the two modes of operation:

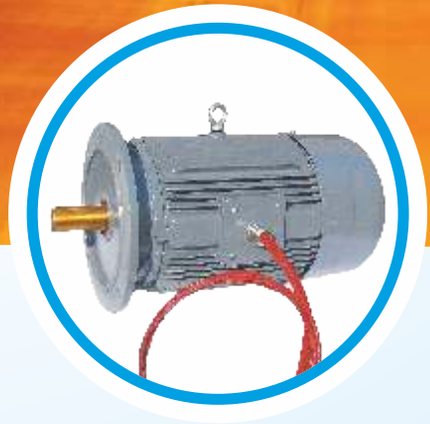
1. S1 duty, continuous running at normal ambient, plus once only S2 duty short time rating for emergency.
2. S2 duty short time rating for emergency.

When the emergency smoke and fume extraction system is activated, the motor operates for the period of time defined on Nameplate of motor.

EN 12101-3 classifies combinations of temperature and time as shown in the table below.

Class	Temperature	Minimum Functioning Period (in minutes)
F180	180	120
F200	200	120
F250	250	120
F300	300	60
F300	300	120
F400	400	120





SMOKE EXTRACTION MOTOR

Upto 200 kW (71 To 315 Frame)

20.00 Tolerance on Performance Values & Dimensions

The electrical performance data (for Standard, Crane & Flame-Pfoof motors) namely current, power factor, efficiency, full load speed and torque at full load, starting torque & pull out torque are given in the table, These values are subjected to the following tolerances Beside these, values are given for information & guidance.

Electrical Parameters

i.	Efficiency (n) : a) By summation of losses : Motors up to 50 kW Motors above 50 kW b) By input-Output test	 -15 percent of (1-n) -10 percent of (1-n) -15 percent of (1-n)
ii.	Total losses applicable to motors above 50 kW*	+ 10 percent of the total losses
iii.	Power factor (Cos Ø)	-1/6 of (1 Cos Ø) Min. 0.02 and Max. 0.07
iv.	Slip at full load and at working temperature	± 20 percent of the guaranteed slip
v.	Breakaway starting current of squirrel cage Induction motors with short-circuit rotor and with any specified starting apparatus.	± 20 percent of the guaranteed starting current (no negative tolerance)
vi.	Breakaway torque	- 15 percent to + 25 percent of the guaranteed torque (+ 25 percent may be exceeded by agreement)
vii.	Pull out toque	-10 percent of the guaranteed torque except that after allowing for this tolerance, the torque shall be not less than 1.6 or 1.5 times the rated torque

Mechanical Parameters

Dimensions		**Talerance**
Flame size	63 to 250	0.0 to - 0.5 mm
(H)	280 to 355	0.0 to - 1.0 mm
Diameter Ø of shaft exiension : (i) 11 to 28 mm (ii) 32 to 48 mm (iii) 55 mm and over		 j6 k6 m6
Diameter N of Flange spigot :		j6 up to F 740 B
Key width		h9
Width of drive shaft keyway (normal keying)		N9
Key Height : (i) Square section (ii) Rectangular section		 h9 h1 1

Shipping Specifications

For Three Phase Standard Induction Motors

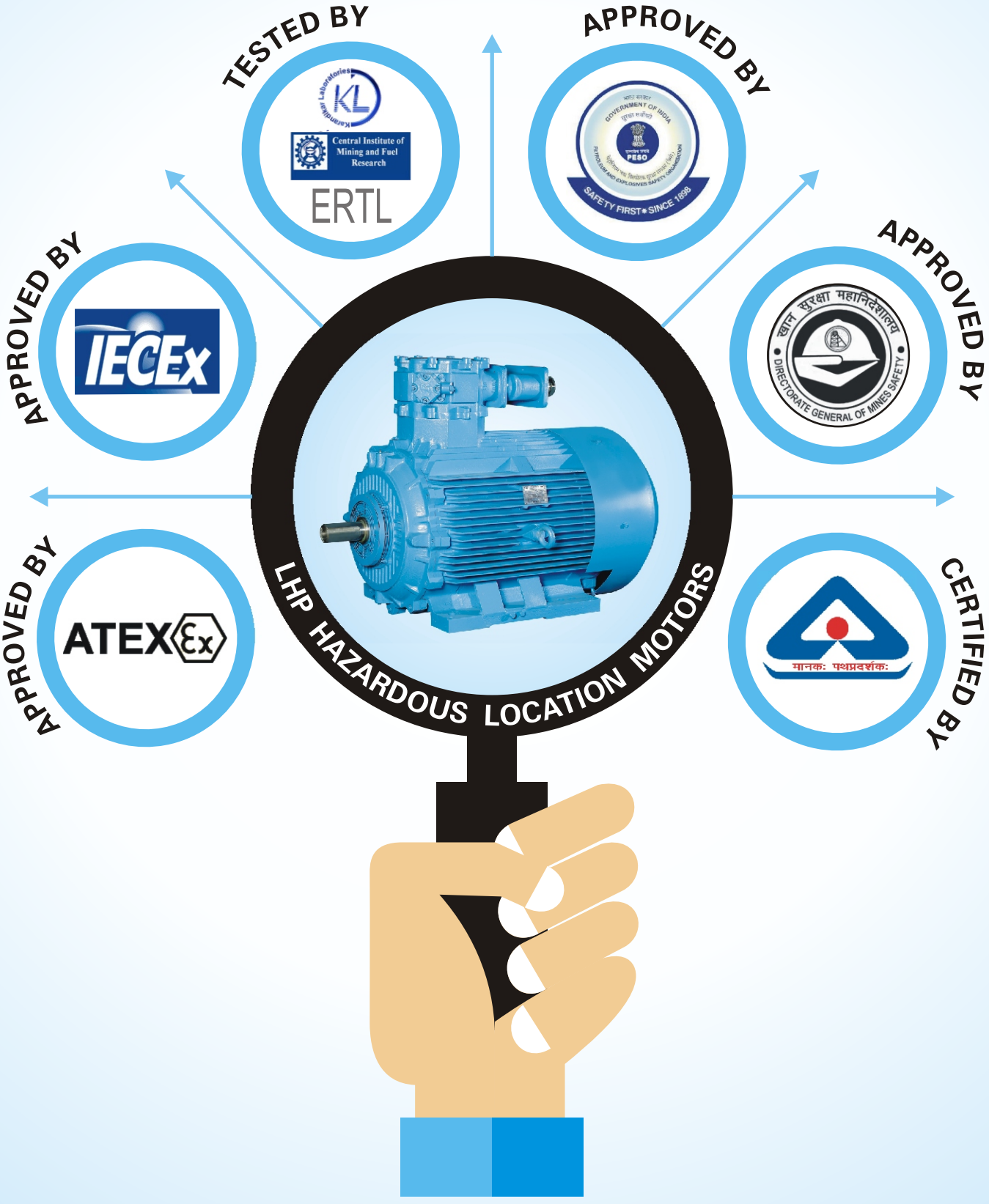
Fame Size	Type of Packing	L x B x HT. in mm (Max.)
63	Corrugated Box	245 x 180 x 195
71	Corrugated Box	280 x 195 x 220
80	Corrugated Box	230 x 250 x 250
90	Corrugated Box	425 x 250 x 305
100	Corrugated Box	480 x 320 x 295
112	Corrugated Box	650 x 395 x 480
132	Wooden Box	700 x 495 x 495
160	Wooden Box	875 x 650 x 610
180	Wooden Box	875 x 650 x 610
200/225	Wooden Box	940 x 790 x 790
250	Wooden Box	1170 x 920 x 920
280	Wooden Box	1320 x 970 x 970
315	Wooden Box	1475 x 965 x 1095
355	Wooden Box	2020 x 1225 x 1310

For Three Phase Flame - Proof Motors

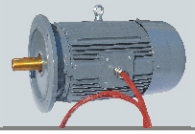
Fame Size	Type of Packing	L x B x HT. in mm (Max.)
80	Wooden Box	580 x 355 x 420
90	Wooden Box	650 x 395 x 480
100	Wooden Box	650 x 395 x 480
112	Wooden Box	700 x 495 x 585
132	Wooden Box	700 x 495 x 585
160	Wooden Box	940 x 790 x 790
180	Wooden Box	940 x 790 x 790
200	Wooden Box	940 x 790 x 790
225	Wooden Box	1070 x 940 x 790
250	Wooden Box	1475 x 965 x 1095
280	Wooden Box	1475 x 965 x 1095
315	Wooden Box	1475 x 965 x 1095

Note : For approximate gross weight of packed products, consider 10% for corrugated & 20% for wooden packing more weight than net weight which is given in individual product performance tables.

OUR STATUTORY



Product Range

Motor Type	Frame	Power (kW)	Picture
Standard Motors Single phase Three phase	 63 to 100 63 to 450	 0.18 to 1.5kW 0.12 to 1000kW	
IE2, IE3 & IE4 Motors	63 to 450	0.37 to 1000kW	
Brake Motors	63 to 250	0.12 to 65kW	
Crane & Hoist Duty Motors	71 to 355	0.37 to 315kW	
Flame-proof Motors IE2, IE3 & IE4 (Type Ex'db')	63 to 355	Up to 500kW	
Non-sparking Motors Ex 'ec' (IE2, IE3 & IE4)	63 to 355	0.12 to 500kW	
Increased Safety Motors Ex 'eb' (IE2, IE3 & IE4)	71 to 355	0.37 to 500kW	
Inverter Duty Motors	63 to 450	0.12 to 1000kW	
Roller Table Motors	100 to 355		
Smoke Extraction Motors	71 to 315	Upto 200kW	
Motors for fire pump	112 to 280	5.5 to 200kW	
Encoder Motors	63 to 450	0.12 to 1000kW	
Helical Gearmotors	Power:0.12 to 180kW Speed:0.35 to 560RPM Torque:Up to 60000NM		

Textile (loom) Motors	Marine Duty Motors	Railway Auxiliary Motors	Multi-speed Motors
			
As per requirenments	As per requirenments	As per requirenments	As per requirenments

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