

CRANE DUTY MOTORS



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.

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 as 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

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 equivalent kw as per IEMA standard clause no 15.2, Equivalent Kw = rated Kw / 1.4



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



MOTORS DRIVES
Driven by Commitment

Ex d,Ex db IIC, Ex tb IIC,PESO, ATEX & IECEx Motors With DOL Starting Fr. 63 to 355L/K

3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V $\pm$ 10%,50Hz $\pm$ 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 + 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 6 Pole Motors

Ordering code	60 Starts / hr.					150 Starts / hr.									
	Frame	kW	Current Amps.	Equivalent SI duty Kw efficiency	40% CDF PF FL (P.U)	Torque Kg-fm	kW	Current Amps.	60% CDF Torque Kg-fm	40% CDF kW	Current Amps.	60% CDF Torque Kg-fm	40% CDF kW	Current Amps.	60% CDF Torque Kg-fm
12C620263AA3T	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
12C620263CB3R	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
18C620071AA3T	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
18C620071RR3R	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
25C620071AA3T	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
25C620071RR3R	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
37C620071AA3T	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
37C620071CB3R	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
55C620080AA3T	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
55C620080CB3R	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
75C620080AA3T	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
75C620080CB3R	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
11C620290AA3R	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
11C620290CB3R	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
15C620290AA3R	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
15C620290CB3R	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
22C62010LAA3R	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
22C62010LCB3R	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
37C62011MAA3R	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
37C62011MCB3R	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
55C62013SCA3R	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
55C62013SCB3R	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
93C62016AAC3R	160M	9.3	21.0	86.8	0.70	9.70	9.3	21.0	9.70	8.0	18.0	8.30	9.1	21.0	8.30
93C62016LCB3R	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
013C62016LCB3R	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
017C62018LCB3R	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
022C62020CB3T	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
030C62022MCB3T	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
037C6225MCB3T	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
045C62026SCB3T	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
052C62028MCB3T	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
070C62031SCB3T	315S	70	123	92.9	0.85	69.2	65	114	64.3	70	123	69.2	65	114	64.3
065C62031MCB3T	315M	65	151	93.3	0.83	84.1	80	142	79.1	85	151	84.1	80	142	79.1
107C62031CB3T	315L	102	176	93.7	0.85	100.6	95	166	93.7	102	176	101.0	95	166	93.7
125C62031LCB3T	315L	125	217	94.0	0.85	123.2	120	208	118.3	125	217	123.0	120	208	118.3
150C62031CB3T	315L	150	260	94.3	0.85	147.9	142	246	140.0	150	260	146.0	142	246	140.0
168C62035CB3T	355L	168	294	94.4	0.84	165.3	160	280	157.4	168	294	165.0	160	280	157.4
185C62035CB3T	355L	185	396	94.6	0.83	182.0	175	308	172.2	185	396	182.0	175	308	172.2
235C62035CB3T	355L	235	414	94.8	0.83	231.2	225	396	221.4	235	414	231.2	225	396	221.4
280C62035CB3T	355L	280	493	95.0	0.83	275.5	265	466	260.7	280	493	275.5	265	466	260.7

300 Starts / hr.																
kW	60% CDF		40% CDF		Torque kg-fm	Speed RPM	With DOL Starting Current % of Rated Current	Starting Torque % of Rated Torque	Pull out Torque kg-fm	Net Approx B3 Coast (kg)	TWT Cold in sec.	TWT Hot in sec.	Th (min)	Tc (min)	Temp. Class	
	Current Amps.	Torque kg-fm	Current Amps.	Torque kg-fm												
0.12	0.45	0.15	0.12	0.45	0.15	800	350	190	240	0.0025	6	15	30	63	188	75
0.12	0.45	0.15	0.12	0.45	0.15	800	350	190	240	0.0025	8	15	30	63	188	75
0.18	0.70	0.21	0.18	0.70	0.21	800	350	190	240	0.0030	8	15	30	63	188	75
0.18	0.70	0.21	0.18	0.70	0.21	800	350	190	240	0.0030	10	15	30	63	188	75
0.25	0.90	0.30	0.25	0.90	0.30	800	350	190	240	0.0034	8	10	20	42	125	75
0.25	0.90	0.30	0.25	0.90	0.30	800	350	190	240	0.0034	10	10	20	42	125	75
0.37	1.4	0.45	0.37	1.4	0.45	800	300	170	190	0.0038	8	10	20	42	125	75
0.37	1.4	0.45	0.37	1.4	0.45	800	300	170	190	0.0038	10	10	20	42	125	75
0.55	2.0	0.65	0.55	2.0	0.65	830	350	190	220	0.0060	10	10	20	42	125	75
0.55	2.0	0.65	0.55	2.0	0.65	830	350	190	220	0.0060	16	10	20	42	125	75
0.75	2.7	0.85	0.75	2.7	0.85	880	350	225	250	0.0084	12	10	20	42	125	75
0.75	2.7	0.85	0.75	2.7	0.85	880	350	225	250	0.0084	18	10	20	42	125	75
1.1	3.0	1.20	1.1	3.0	1.20	900	400	230	260	0.0160	13	10	20	42	125	75
1.1	3.0	1.20	1.1	3.0	1.20	900	400	230	260	0.0160	23	10	20	42	125	75
1.5	4.2	1.60	1.5	4.2	1.62	900	400	230	275	0.0160	20	10	20	42	125	75
1.5	4.2	1.60	1.5	4.2	1.62	900	400	230	275	0.0160	30	10	20	42	125	75
2.2	6.5	2.30	2.2	6.5	2.30	950	450	113.25	275	0.029	25	10	20	42	125	75
2.2	6.5	2.30	2.2	6.5	2.30	950	450	225	275	0.029	40	10	20	42	125	75
3.7	9.1	3.90	3.7	9.1	3.92	920	500	225	275	0.065	49	10	20	42	125	75
3.7	9.1	3.90	3.7	9.1	3.92	920	500	225	275	0.065	57	10	20	42	125	75
5.5	13.5	5.80	5.5	13.5	5.80	925	550	230	275	0.153	62	10	20	42	125	75
6.5	16.3	6.80	6.5	16.3	6.80	925	550	230	275	0.193	75	10	20	42	125	75
9.3	21.0	9.70	8.0	18.1	8.30	935	600	230	275	0.276	170	10	22	42	125	74
11	24.0	11.5	10.2	22.3	10.6	935	600	230	275	0.34	180	10	22	42	125	74
13	29.0	13.5	12	27.0	12.5	935	600	225	275	0.40	210	10	22	42	125	74
16	35.0	16.2	15	31.0	15.2	960	600	230	280	0.52	230	10	22	42	125	74
20	38.0	20.1	18.5	35.1	18.6	970	600	230	250	1.2	310	12	27	50	150	75
28	51.3	28.1	26	47.7	26.1	970	600	230	250	2.1	360	12	27	50	150	75
34	60.2	34.0	30.1	30.0	30.0	975	600	230	250	3.51	720	12	27	50	150	75
40	70.2	40.0	37	65.0	37.0	975	600	230	250	5.11	910	15	33	63	188	75
48	85.5	47.7	45	80.0	44.7	980	600	220	250	6.16	975	15	33	63	188	75
65	115	64.3	60	106	59.3	985	600	230	250	10.7	975	15	33	63	188	75
80	142	79.1	75	133	74.2	985	600	230	250	12.4	955	15	33	63	188	75
95	166	93.7	90	157	88.7	988	600	230	250	15.5	1050	15	33	63	188	75
120	208	118.3	110	191	108.4	998	600	230	250	18.0	1110	15	33	63	188	75
142	246	140.0	132	229	130.1	988	600	220	250	21.5	1160	15	33	63	188	75
160	280	157.4	150	263	147.6	990	600	220	250	28.7	1693	15	33	63	188	74
175	308	172.2	160	282	157.4	990	600	220	250	28.7	1728	15	33	63	188	74
225	396	221.4	210	370	206.6	990	600	220	250	35.5	1917	15	33	63	188	74
265	466	260.7	240	422	236.2	990	600	220	250	43.3	2563	15	33	63	188	74



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 DOL Starting Fr. 63 to 355L/K



3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V $\pm$ 10%, 50Hz $\pm$ 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/IEC 60079-31:2008, 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, IEC 60034-30:2008, 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.				300 Starts / hr.			
	Frame	kW	Current Amps.	Equivalent St duty (Kw efficiency)	PF FL (PU)	Torque Kg-fm	kW	Current Amps.	Torque Kg-fm	kW	Current Amps.	40% CDF
12C36201A3T	71	0.12	0.7	34.2	0.60	0.16	0.12	0.7	0.16	0.12	0.7	0.16
12C36201C3R	71	0.12	0.7	34.2	0.60	0.16	0.12	0.7	0.16	0.12	0.7	0.16
18C362080A3T	80	0.18	1.0	39.8	0.55	0.25	0.18	1.0	0.25	0.18	1.0	0.25
18C362080C3R	80	0.18	1.0	39.8	0.55	0.25	0.18	1.0	0.25	0.18	1.0	0.25
25C362080A3T	80	0.25	1.2	45.1	0.57	0.34	0.25	1.2	0.34	0.25	1.2	0.34
25C362080C3R	80	0.25	1.2	45.1	0.57	0.34	0.25	1.2	0.34	0.25	1.2	0.34
37C362080A3R	90S	0.37	1.4	51.1	0.64	0.50	0.37	1.4	0.50	0.37	1.4	0.50
37C362080C3R	90S	0.37	1.4	51.1	0.64	0.50	0.37	1.4	0.50	0.37	1.4	0.50
55C362080A3R	90S	0.55	2.2	56.8	0.58	0.80	0.45	1.8	0.60	0.45	1.8	0.60
55C362080C3R	90S	0.55	2.2	56.8	0.58	0.80	0.45	1.8	0.60	0.45	1.8	0.60
75C362080A3R	90L	0.75	2.8	61.2	0.57	1.10	0.75	2.8	1.10	0.75	2.8	1.10
75C362080C3R	90L	0.75	2.8	61.2	0.57	1.10	0.75	2.8	1.10	0.75	2.8	1.10
110C36210LA3R	100L	1.1	3.4	66.7	0.64	1.60	1.1	3.4	1.60	1.1	3.4	1.60
110C36210LC3R	100L	1.1	3.4	66.7	0.64	1.60	1.1	3.4	1.60	1.1	3.4	1.60
150C36210LA3R	100L	1.5	5.0	70.5	0.57	2.10	1.5	5.0	2.10	1.5	5.0	2.10
150C36210LC3R	100L	1.5	5.0	70.5	0.57	2.10	1.5	5.0	2.10	1.5	5.0	2.10
220C36211MA3R	112M	2.2	6.8	74.5	0.56	3.10	2.2	6.8	3.10	2.2	6.8	3.10
220C36211MC3R	112M	2.2	6.8	74.5	0.56	3.10	2.2	6.8	3.10	2.2	6.8	3.10
37C36216C3R	125M	3.7	8.8	79.0	0.72	5.10	3.7	8.8	5.10	3.7	8.8	5.10
55C36216MC3R	160M	5.5	12.0	81.8	0.78	7.50	5.5	12.0	7.50	5.5	12.0	7.50
75C36216LC3R	160L	7.5	16.0	83.6	0.76	10.3	6.5	13.9	8.90	6.5	13.9	8.90
93C36218MC3R	180M	9.3	20.0	84.8	0.75	12.8	8.5	18.5	11.7	8.5	18.5	11.7
011C36218LC3R	180L	11	23.0	85.5	0.77	15.1	9.3	19.4	12.8	9.3	19.5	12.8
015C36220LC3T	200L	15	28.8	86.8	0.82	20.3	13	25.0	17.6	13	25.0	17.6
185C36225C3T	225S	18.5	37.5	87.6	0.77	25.0	17	34.5	23.0	17	34.5	23.0
022C36225MC3T	225M	22	44.5	88.1	0.77	29.8	20	40.5	27.1	20	40.5	27.1
030C36225LC3T	250M	30	56.0	89.0	0.83	40.0	26	48.5	34.7	26	48.5	34.7
037C36228C3T	280S	37	71.0	89.5	0.80	49.4	34	65.2	45.4	34	65.0	45.4
045C36228LC3T	280M	45	90.0	90.0	0.77	60.0	40	76.0	53.4	40	76.0	53.4
055C36231SC3T	315S	55	106	90.4	0.76	72.9	50	96.2	66.3	50	96.0	66.3
075C36231MC3T	315M	75	148	91.0	0.77	99.4	67	132	88.8	67	132	88.8
090C36231MC3T	315M	90	175	91.3	0.78	119.3	80	156	106.0	80	156	106.0
110C36231LC3T	315L	110	214	91.7	0.77	145.8	100	195	132.5	100	195	132.5
130C36231LC3T	315L	132	257	92.0	0.77	174.9	125	243	165.6	125	244	165.6
160C36235LC3T	355L	160	300	92.4	0.80	210.6	150	281	197.4	150	281	197.4
180C36235LC3T	355L	180	337	92.6	0.80	236.9	170	318	223.8	170	318	223.8
185C36235LC3T	355L	185	347	92.6	0.79	243.5	175	328	230.3	175	328	230.3
210C36250C3T	355L	210	394	92.9	0.79	276.4	200	375	263.2	200	375	263.2

300 Starts / hr				40% CDF				With DOL Starting				No Approx		TWT		Tc	
kW	60% CDF		Torque Kg-fm	kW	Current Amps.	Torque Kg-fm	Speed RPM	Starting Current % of Rated	Starting Torque % of Rated	Pull out Torque % of Rated	Rotor Grts Kg-m ²	Br Const. (Kg)	TWT Cold in sec.	TWT Hot in sec.	Th (min)	Tc (min)	Temp. Class
	Current Amps.	Torque Kg-fm															
0.12	0.7	0.16	0.12	0.7	0.16	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	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	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	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	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	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	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	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	0.80	680	300	180	210	0.011	31	15	30	63	188	T6
0.55	2.2	0.80	0.45	1.8	0.60	0.80	680	300	180	210	0.011	31	15	30	63	188	T6
0.75	2.8	1.10	0.65	2.4	0.90	1.10	680	300	200	240	0.014	25	15	30	63	188	T6
0.75	2.8	1.10	0.65	2.4	0.90	1.10	680	300	200	240	0.014	35	15	30	63	188	T6
1.1	3.4	1.60	0.9	2.8	1.30	1.60	655	350	180	200	0.023	25	10	20	42	125	T6
1.1	3.4	1.60	0.9	2.8	1.30	1.60	655	350	180	200	0.023	39	10	20	42	125	T6
1.5	5.0	2.10	1.1	3.6	1.60	2.10	680	350	200	230	0.027	27	10	20	42	125	T6
1.5	5.0	2.10	1.1	3.6	1.60	2.10	680	350	200	230	0.027	41	10	20	42	125	T6
2.2	6.8	3.10	1.5	4.6	2.10	3.10	700	400	200	230	0.06	47	10	20	42	125	T5
2.2	6.8	3.10	1.5	4.6	2.10	3.10	700	400	200	230	0.06	56	10	20	42	125	T5
3.7	8.8	5.10	3	7.1	4.10	5.10	710	400	200	230	0.133	77	10	20	42	125	T5
5.5	12.0	7.50	4.5	9.8	6.20	7.10	550	210	240	0.289	115	10	20	42	125	14	
6.5	13.9	8.90	6	12.8	8.20	7.10	550	225	250	0.40	120	10	20	42	125	14	
8.5	18.5	11.7	7.5	16.5	10.3	7.10	550	225	250	0.62	125	10	20	42	125	14	
9.3	19.5	12.8	8.5	17.8	11.7	7.10	550	225	250	0.72	130	10	20	42	125	14	
13	25.0	17.6	11	21.1	14.9	720	550	230	230	1.32	258	12	27	50	150	15	
17	34.5	23.0	15	30.4	20.3	720	550	225	250	1.95	345	12	27	50	150	15	
20	40.5	27.1	18.5	37.4	25.0	720	550	225	240	2.41	360	12	27	50	150	15	
26	48.5	34.7	22	41.1	29.4	730	550	230	250	3.72	755	12	27	50	150	15	
34	65.0	45.4	30	57.6	40.0	730	550	225	240	5.83	850	15	33	63	188	15	
40	76.0	53.4	37	71.0	49.4	730	550	225	240	6.86	935	15	33	63	188	15	
50	96.0	66.3	45	88.0	59.6	735	600	225	240	10.7	945	15	33	63	188	15	
67	132	88.8	60	118	79.5	735	600	225	240	12.4	1070	15	33	63	188	15	
80	156	106.0	75	146	99.4	735	600	225	240	15.3	1110	15	33	63	188	15	
100	195	132.5	90	175	119.3	735	600	225	240	18.0	1215	15	33	63	188	15	
125	244	165.6	115	224	152.4	735	600	225	240	21.5	1370	15	33	63	188	15	
150	281	197.4	140	263	184.3	740	600	220	230	28.7	1888	15	33	63	188	14	
170	318	223.8	155	290	204.0	740	600	220	240	35.5	1950	15	33	63	188	14	
175	328	230.3	160	300	210.6	740	600	200	230	35.5	2020	15	33	63	188	14	
200	375	263.2	180	338	236.9	740	600	200	230	35.5	2150	15	33	63	188	14	

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 equivalent kw as per IEMA standard clause no 15.2, Equivalent Kw = rated Kw / 1.4



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



MOTORS DRIVES
Driven by Commitment

3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V $\pm$ 10%, 50Hz $\pm$ 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/IEC 60079-31:2008, IS 12615:2018, Efficiency testing 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

Performance Table for 4 Pole Motors

Ordering code	60 Starts / hr				150 Starts / hr				300 Starts / hr				Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque Kgfm	Current Amps	kW	Torque
---------------	----------------	--	--	--	-----------------	--	--	--	-----------------	--	--	--	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	-------------	--------------	----	--------

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

3 Phase Squirrel Cage safe area & flameproof Ex d, Ex db & Ex tb induction motors suitable for 415 V $\pm$ 10%, 50Hz $\pm$ 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/IEC 60079-31:2008, IS 12615:2018, Efficiency testing according to IEC 60034-2-1:2014-06, EN 60079-0:2012 & AII:2013, 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	Frame	60 Starts / hr.				150 Starts / hr.				300 Starts / hr.				600 Starts / hr.				No. Approx. Wt. kg	TWT Cold in sec.	TWT Hot in sec.	Th (min)	Tc (min)	Temp. Class																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		kW	Current Amps.	Equivalent SI duty Kw efficiency	PF FL (PDU)	Torque Kg-m	kW	Current Amps.	Torque Kg-m	kW	Current Amps.	Torque Kg-m	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.							kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.	Torque Kg-m	40% CDF	Current Amps.	kW	Current Amps.

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 $\pm$ 10%, 50Hz $\pm$ 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/IEC 60079-31:2008, 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, IEC 60034-30-2008, IEC 60034-1:2010 for Gas & Dust IEC-Ex, ATEX certified by BASEEFA.

Performance Table for 8 Pole Motors

Ordering code	60 Starts / hr.				90% CDF				40% CDF				150 Starts / hr.				60% CDF
	Frame	kW	Current Amps.	Equivalent SI duty factor efficiency	PF FL (FUD)	Torque Kg-m	kW	Current Amps.	Torque Kg-m	kW	Current Amps.	Torque Kg-m	kW	Current Amps.	Torque Kg-m		
12CB07143T	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		
12CB07103R	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		
18CB09043T	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		
18CB09043R	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		
25CB09043T	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		
25CB09043R	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		
37CB09043T	90S	0.37	1.3	51.1	0.71	0.50	0.37	1.3	0.50	0.37	1.3	0.50	0.37	1.3	0.50		
37CB09043R	90S	0.37	1.3	51.1	0.71	0.50	0.37	1.3	0.50	0.37	1.3	0.50	0.37	1.3	0.50		
55CB09043T	90S	0.55	2.2	56.8	0.58	0.80	0.45	1.8	0.80	0.55	2.2	0.80	0.45	1.8	0.80		
55CB09043R	90S	0.55	2.2	56.8	0.58	0.80	0.45	1.8	0.80	0.55	2.2	0.80	0.45	1.8	0.80		
75CB09043T	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		
75CB09043R	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		
11CB091043T	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		
11CB091043R	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		
15CB091043T	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		
15CB091043R	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		
22CB091043T	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		
22CB091043R	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		
37CB091353T	125S	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		
55CB0916M3R	160M	5.5	11.6	81.8	0.79	7.55	5.5	10.5	7.50	5.5	11.6	7.55	5	10.5	7.50		
63CB0916M3R	160M	6	13.0	82.3	0.76	8.23	5.5	12.0	7.90	6	13.0	8.23	5.5	12.0	7.90		
70CB0916M3R	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		
75CB0916M3R	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		
83CB0916M3R	160L	8.3	18.5	84.2	0.77	11.4	7.8	17.4	10.7	8.3	18.5	11.4	7.8	17.4	10.7		
106CB0918M3R	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		
011CB0918M3R	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		
125CB0918M3T	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		
015CB0920M3T	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		
017CB0920M3T	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		
185CB0922M3T	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		
205CB0922M3T	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		
022CB0922M3T	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		
245CB0922M3T	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		
030CB0925M3T	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		
034CB0925M3T	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		
037CB0925M3T	250S	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		
042CB0925M3T	280M	42	82.0	89.8	0.79	56.0	39	76.0	52.0	42	82.0	56.0	39	76.0	52.0		
045CB0926M3T	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		
052CB0928M3T	280M	52	101	90.3	0.79	69.4	48	93.0	64.0	52	101	69.4	48	93.0	64.0		
055CB0931M3T	315S	55	105	90.4	0.80	72.9	50	95.5	72.9	55	105	72.9	50	95.5	72.9		
062CB0931M3T	315S	62	120	90.6	0.79	82.2	58	113	76.9	62	120	82.2	58	113	76.9		
075CB0931M3T	315M	75	165	91.0	0.69	99.4	60	155	106	75	165	99.4	60	155	106		
085CB0931M3T	315M	85	165	91.2	0.78	112.6	65	165	112.6	85	165	112.6	65	165	112.6		
100CB0931M3T	315M	100	193	91.5	0.78	132.5	95	184	125.9	100	193	132.5	95	184	125.9		
110CB0931M3T	315L	110	207	91.7	0.80	145.8	100	198	145.8	110	207	145.8	100	198	145.8		
122CB0931M3T	315L	122	224	91.9	0.78	161.7	116	222	153.7	122	224	161.7	116	222	153.7		
132CB0931M3T	315L	132	247	92.0	0.80	174.9	120	225	174.9	132	247	174.9	120	225	174.9		
145CB0931M3T	315L	145	278	92.2	0.78	192.1	138	265	182.9	145	278	192.1	138	265	182.9		
175CB0931M3T	355L	175	332	92.5	0.79	230.3	168	319	221.1	175	332	230.3	168	319	221.1		
200CB0931M3T	355L	200	389	92.8	0.75	265.2	181.8	363	221.1	200	389	221.1	181	363	221.1		
220CB0931M3T	355L	220	417	93.0	0.78	295.6	210	398	276.4	220	417	295.6	210	398	276.4		
250CB0931M3T	355L/K	250	480	93.2	0.77	329.1	235	452	309.3	250	480	329.1	235	452	309.3		

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 equivalent kw as per IEMA standard clause no 15.2, Equivalent Kw = rated Kw / 1.4