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

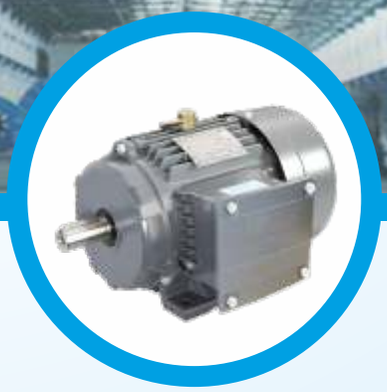
S9 Duty with non-periodic load and speed variations

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

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 ± 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.					
		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
.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
.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
.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
.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
.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
.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
.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
.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
.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
.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
.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
.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
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
1.1C42080C3R	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
1.5C4290SA3R	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
1.5C4290SC3R	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
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
2.2C4290LC3R	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
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
3.7C4210LC3R	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
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
5.5C4211MC3R	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
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
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
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
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
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
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
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
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
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
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
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
075C4228SC3T	280S	75	130	93.4	0.85	49.4	75	130	49.4	75	130	49.4	70	121	46.0
090C4228MC3T	280M	90	156	93.7	0.85	59.2	90	156	59.2	90	156	59.2	84	146	55.3
110C4231SC3T	315S	110	190	94.0	0.85	72.1	110	190	72.1	110	190	72.1	102	176	67.0
132C4231MC3T	315M	132	225	94.3	0.86	86.5	132	225	86.5	132	225	86.5	125	213	81.9
160C4231LC3T	315L	160	270	94.6	0.87	104.8	160	270	104.8	160	270	104.8	150	253	98.3
180C4231LC3T	315L	180	305	94.7	0.86	117.9	180	305	117.9	180	305	117.9	168	285	110.0
200C4231LC3T	315L	200	342	94.8	0.86	131.0	200	342	131.0	200	342	131.0	185	316	121.2
250C4235LC3T	355L	250	410	95.0	0.89	163.6	250	410	163.6	250	410	163.6	232	380	151.9
315C4235LC3T	355L	315	517	95.1	0.89	206.2	315	517	206.2	315	517	206.2	295	284	193.1
355C4235LC3T	355L	355	586	95.1	0.89	232.8	355	586	232.8	355	586	232.4	330	545	216.0

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	0.089	0.12	0.45	0.089	1300	300	200	250	0.0014	5	15	33	63	188	T6
0.12	0.45	0.089	0.12	0.45	0.089	1300	300	200	250	0.0014	7	15	33	63	188	T6
0.18	0.62	0.13	0.18	0.62	0.13	1300	310	200	250	0.0014	5	15	33	63	188	T6
0.18	0.62	0.13	0.18	0.62	0.13	1300	310	200	250	0.001	7	15	33	63	188	T6
0.25	0.75	0.18	0.25	0.75	0.18	1305	330	210	260	0.002	6	15	33	63	188	T6
0.25	0.75	0.18	0.25	0.75	0.18	1305	330	210	260	0.002	8	15	33	63	188	T6
0.37	1.00	0.27	0.37	1.00	0.27	1310	350	210	260	0.033	7	10	20	42	125	T6
0.37	1.00	0.27	0.37	1.00	0.27	1310	350	210	260	0.033	9	10	20	42	125	T6
0.55	1.6	0.41	0.55	1.6	0.41	1310	370	225	275	0.0033	8	10	20	42	125	T6
0.55	1.6	0.41	0.55	1.6	0.41	1310	370	225	275	0.0033	10	10	20	42	125	T6
0.75	1.8	0.55	0.75	1.8	0.55	1340	450	230	275	0.0061	11	10	20	42	125	T6
0.75	1.8	0.55	0.75	1.8	0.55	1340	450	230	275	0.0061	17	10	20	42	125	T6
1.1	3.1	0.80	1.1	3.1	0.80	1365	500	230	280	0.0072	12	10	20	42	125	T6
1.1	3.1	0.80	1.1	3.1	0.80	1365	500	230	280	0.0072	18	10	20	42	125	T6
1.5	3.9	1.10	1.5	3.9	1.10	1385	500	225	275	0.0120	14	10	20	42	125	T6
1.5	3.9	1.10	1.5	3.9	1.10	1385	500	225	275	0.0120	24	10	20	42	125	T6
2.2	5.0	1.60	2.2	5.0	1.60	1380	480	230	280	0.0160	20	10	20	42	125	T6
2.2	5.0	1.60	2.2	5.0	1.60	1380	480	230	280	0.0160	30	10	20	42	125	T6
3.7	8.0	2.60	3.7	8.0	2.60	1380	600	230	300	0.0260	25	8	16	33	100	T6
3.7	8.0	2.60	3.7	8.0	2.60	1380	600	230	300	0.0260	40	8	16	33	100	T6
5.5	12.4	3.80	5.5	12.4	3.80	1400	600	250	280	0.058	33	8	16	33	100	T5
5.5	12.4	3.80	5.5	12.4	3.80	1400	600	250	280	0.058	38	8	16	33	100	T5
7.5	14.8	5.20	7.5	14.8	5.20	1410	650	225	290	0.127	50	8	16	33	100	T5
9.3	18.1	6.40	9.3	18.1	6.40	1420	650	230	290	0.141	95	8	16	33	100	T5
11	22.0	7.40	11	22.0	7.40	1440	650	225	280	0.141	115	10	22	42	125	T4
13.2	25.0	8.90	12.1	23.0	8.20	1440	650	225	280	0.177	125	10	22	42	125	T4
13.8	27.0	9.30	13.8	27.0	9.30	1440	650	225	280	0.193	135	10	22	42	125	T4
17	33.0	11.5	17	33.0	11.5	1445	650	210	250	0.265	145	10	22	42	125	T4
22	39.0	14.7	20	35.5	13.3	1460	650	240	260	0.540	230	10	22	42	125	T4
28	49.0	18.6	26	45.0	17.3	1465	650	260	260	0.860	247	12	27	50	150	T5
32	57.0	21.2	30	54.0	19.9	1470	650	250	260	1.32	255	12	27	50	150	T5
37	66.0	24.5	34	61.0	22.5	1470	650	250	250	1.60	310	12	27	50	150	T5
48	84.0	31.7	45	78.0	29.7	1475	650	250	260	2.83	700	12	27	50	150	T5
67	116	44 .1	65	112	42.8	1480	650	230	260	5.00	790	15	33	63	188	T5
80	139	52.6	75	130	49.4	1480	650	230	260	6.00	855	15	33	63	188	T5
95	164	62.3	90	155	59.0	1485	650	230	260	8.7	950	15	33	63	188	T5
115	196	75.4	110	188	72 1	1486	650	230	260	10.2	1095	15	33	63	188	T5
138	233	90.4	132	223	86.5	1487	650	230	260	12.2	1150	15	33	63	188	T5
158	268	103.5	150	254	98.3	1487	650	230	260	13.4	1225	15	33	63	188	T5
180	308	117.9	175	299	114.6	1487	650	230	260	14.60	1300	15	33	63	188	T5
220	361	144.0	210	344	137.5	1488	650	225	260	23.3	1870	15	33	63	188	T4
280	460	183.3	270	443	176.7	1488	650	225	260	32.70	1870	15	33	63	188	T4
310	512	202.9	300	495	196.4	1488	650	220	250	38.20	1940	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

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 ± 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 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
.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	112 0.58	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 Gd² Kgm²	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	113 25	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

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

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 ± 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

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 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															
	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	Net Approx Wt. B3 Const. (Kg)	TWT Hot in sec.	TWT Cold in sec.	Th (min)	Tc (min)	Temp. Class
.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	0.34	0.9	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	0.34	0.9	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	17	33.0	11.5	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

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2. All performance figures are subject to IS/IEC 60034-1 tolerances.

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 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 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
.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	0.27	0.2	0.8	0.27	0.25	0.9	0.27	0.2	0.8	0.27
.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
.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
.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
.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
.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
.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
.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
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
1.1C6290LC3R	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
1.5C6290LA3R	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	0.58	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	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
065C6228MC3T	280M	65	117	92.8	0.83	65.3	61	110	65.3	65	117	65.3	61	110	61.3
075C6231SC3T	315S	75	130	93.1	0.86	74.5	68.2	118	74.5	75	130	74.5	68.2	118	74.5
090C6231SC3T	315S	90	158	93.4	0.84	89.4	85	150	89.4	90	158	89.4	85	150	84.5
105C6231MC3T	315M	105	184	93.7	0.84	104.4	100	175	104.4	105	184	104.4	100	175	99.4
110C6231MC3T	315M	110	190	93.8	0.86	109.3	100	172	109.3	110	190	109.3	100	172	109.3
125C6231MC3T	315M	125	219	94.0	0.84	124.2	120	210	124.2	125	219	124.2	120	210	119.3
132C6231LC3T	315L	132	225	94.1	0.86	144.5	120	204	144.5	132	225	144.5	120	204	144.5
150C6231LC3T	315L	150	263	94.3	0.84	148.8	142	249	148.8	150	263	148.8	142	249	140.8
180C6231LC3T	315L	180	316	94.5	0.84	178.5	170	300	178.5	180	316	178.5	170	300	168.6
200C6235LC3T	355L	200	346	94.7	0.85	197.8	182	315	197.8	200	346	197.8	182	315	197.8
220C6235LC3T	355L	220	383	94.8	0.84	217.5	210	366	217.5	220	383	217.5	210	366	217.5
275C6235LC3T	355L	275	479	95.0	0.84	271.9	262	456	271.9	275	479	271.9	262	456	259.1
325C6235KC3T	355L/K	325	566	95.0	0.84	321.4	310	540	321.4	325	566	321.4	310	540	306.5

Ordering code	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
.12C62063A3T	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	9.3	21.0	9.70	8	18.0	8.30	935	600	230	260	0.28	115	10	22	42	125	T4
011C6216LC3R	10	19.0	11.5	9.1	17.4	10.6	935	600	220	260	0.34	150	10	22	42	125	T4
013C6216LC3R	13	29.0	13.5	12	27.0	12.5	935	600	225	260	0.4	170	10	22	42	125	T4
015C6218LC3R	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	18	37.0	18.7	16.7	35.0	17.3	940	600	230	260	0.68	210	10	22	42	125	T4
021C6218LC3R	21	43.0	21.8	19	39.0	19.7	940	600	230	260	0.82	235	10	22	42	125	T4
022C6220LC3T	20	37.7	22.6	18.2	34.6	22.6	950	600	230	250	1.15	245	12	27	50	150	T4
026C6220LC3T	24	47.0	24.6	22	43.0	22.6	950	600	230	250	1.2	280	12	27	50	150	T5
030C6222MC3T	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	32	60.0	32.5	30	57.0	30.4	960	600	230	250	2.35	336	12	27	50	150	T5
039C6222MC3T	35	66.0	35.5	33	63.0	33.5	960	600	230	250	2.42	360	12	27	50	150	T5
046C6225MC3T	42	76.0	42.4	40	73.0	40.4	965	600	230	250	3.72	720	12	27	50	150	T5
052C6228SC3T	49	88.0	49.2	45	81.0	45.2	970	600	230	250	5.11	810	15	33	63	188	T5
055C6228MC3T	50	88.5	61.3	45.5	81.0	58.2	970	600	200	230	9.9	875	15	33	63	188	T5
065C6228MC3T	61	110	61.3	58	105	58.2	970	600	230	250	6.16	875	15	33	63	188	T5
075C6231SC3T	68.2	118	74.5	62	108	74.5	980	650	230	255	14.2	1000	15	33	63	188	T5
090C6231SC3T	85	150	84.5	80	142	79.5	980	600	230	250	10.7	1050	15	33	63	188	T5
105C6231MC3T	100	175	99.4	95	166	94.4	980	600	230	250	12.4	1180	15	33	63	188	T5
110C6231MC3T	100	172	109.3	90.9	158	109.3	980	650	230	255	19	1300	15	33	63	188	T5
125C6231MC3T	120	210	119.3	115	201	114.3	980	600	230	250	15.5	1350	15	33	63	188	T5
132C6231LC3T	120	204	144.5	109.1	187	144.5	890	650	230	280	30	1400	15	33	63	188	T5
150C6231LC3T	142	249	140.8	136	138	134.9	982	600	230	250	18	1525	15	33	63	188	T5
180C6231LC3T	170	300	168.6	160	282	158.7	982	600	230	250	21.5	1850	15	33	63	188	T5
200C6235LC3T	181.8	315	197.8	165.3	288	197.8	985	650	160	200	46.5	1728	15	33	63	188	T4
220C6235LC3T	210	366	207.7	200	349	197.8	985	600	220	250	28.7	1917	15	33	63	188	T4
275C6235LC3T	262	456	259.1	250	435	247.2	985	600	220	250	35.5	2075	15	33	63	188	T4
325C6235KC3T	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.						300 Starts / hr.																		
		40% CDF					60% CDF				40% CDF			60% CDF			60% CDF			40% CDF														
	Frame	kW	Current Amps.	Equivelent S1 duty Kw efficiency	P.F 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	With DOL Starting 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
.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	0.12	0.7	0.16	0.12	0.7	0.16	690	200	180	240	0.008	8	15	30	63	188	T6
.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	0.12	0.7	0.16	0.12	0.7	0.16	690	200	180	240	0.008	10	15	30	63	188	T6
.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	0.18	1.0	0.25	0.18	1.0	0.25	695	200	180	240	0.009	10	15	30	63	188	T6
.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	0.18	1.0	0.25	0.18	1.0	0.25	695	200	180	240	0.009	16	15	30	63	188	T6
.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	0.25	1.2	0.34	0.25	1.2	0.34	700	250	180	240	0.009	12	15	30	63	188	T6
.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	0.25	1.2	0.34	0.25	1.2	0.34	700	250	180	240	0.009	18	15	30	63	188	T6
.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	0.3	1.2	0.50	0.3	1.2	0.50	680	300	170	220	0.016	13	15	30	63	188	T6
.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	0.3	1.2	0.50	0.3	1.2	0.50	680	300	170	220	0.016	23	15	30	63	188	T6
.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	0.55	2.2	0.80	0.45	1.8	0.60	680	300	180	210	0.011	20	15	30	63	188	T6
.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	0.55	2.2	0.80	0.45	1.8	0.60	680	300	180	210	0.011	30	15	30	63	188	T6
.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	0.75	2.8	1.10	0.65	2.4	0.90	680	300	200	240	0.014	22	15	30	63	188	T6
.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	0.75	2.8	1.10	0.65	2.4	0.90	680	300	200	240	0.014	32	15	30	63	188	T6
1.1C8210LA3R	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	2.7	1.60	0.9	2.5	1.30	690	350	190	250	0.042	25	10	20	42	125	T6
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	2.7	1.60	0.9	2.5	1.30	690	350	190	250	0.042	39	10	20	42	125	T6
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	1.5	5.0	2.10	1.1	3.6	1.60	680	350	200	230	0.027	25	10	20	42	125	T6
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	1.5	5.0	2.10	1.1	3.6	1.60	680	350	200	230	0.027	39	10	20	42	125	T6
2.2C8211MA3R	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	2.2	6.8	3.10	1.5	4.6	2.10	700	400	200	230	0.060	47	10	20	42	125	T5
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	2.2	6.8	3.10	1.5	4.6	2.10	700	400	200	230	0.060	56	10	20	42	125	T5
3.7C8213SC3R	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	3.7	8.8	5.10	3	7.1	4.10	710	400	200	230	0.133	77	10	20	42	125	T5
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	5	10.5	7.50	4.2	9.7	6.90	710	500	200	260	0.460	115	10	22	42	125	T4
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	5.5	12.0	7.50	5	11.0	6.90	710	500	210	240	0.299	120	10	22	42	125	T4
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	6.5	14.4	8.90	6	13.3	8.20	710	500	210	240	0.344	125	10	22	42	125	T4
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	6.8	13.8	10.3	6.2	12.7	10.3	710	500	210	240	0.570	130	10	22	42	125	T4
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	7.8	17.4	10.7	7	15.6	9.60	710	550	200	230	0.400	155	10	22	42	125	T4
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	10	21.0	13.7	9.3	20.0	12.8	710	550	210	250	0.620	180	10	22	42	125	T4
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	10	20.1	15.1	9.1	18.5	15.1	710	550	210	250	1.290	210	10	22	42	125	T4
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	11.5	24.5	15.8	11	23.4	15.1	710	550	210	250	0.720	225	10	22	42	125	T4
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	13.6	26.4	20.4	12.4	24.3	20.4	715	550	210	250	1.700	258	12	27	50	150	T5
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	16	33.0	21.8	15	31.0	20.4	715	550	220	250	1.320	290	12	27	50	150	T5
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	16.8	32.2	25.0	15.3	29.5	25.0	720	550	210	220	2.300	345	12	27	50	150	T5
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	19.4	39.3	26.2	18.5	37.5	25.0	720	550	210	220	1.950	360	12	27	50	150	T5
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	20	38.3	29.8	18.2	35.1	29.8	720	550	200	260	2.600	375	12	27	50	150	T5
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	23	47.0	31.1	22	45.0	29.8	720	550	210	220	2.410	400	12	27	50	150	T5
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	27.3	51.7	40.3	24.8	47.4	40.3	725	550	200	260	4.400	755	12	27	50	150	T5
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	32	63.0	43.0	30	59.0	40.3	725	550	220	250	3.720	755	12	27	50	150	T5
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	33.6	64.2	49.4	30.6	58.9	49.4	730	550	210	260	8.000	850	15	33	63	188	T5
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	39	76.0	52.0	37	72.0	49.4	730	550	220	220	5.830	850	15	33	63	188	T5
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	40.9	81.6	59.6	37.2	75.0	59.6	735	550	210	240	9.900	935	15	33	63	188	T5
052C8228MC3T	280M	52	101	90.3	0.79	69.4	48	93.0	64.0	52	101	69.4	48	93.0	64.0	48	93.0	64.0	45	87.5	60.0	730	550	220	240	6.860	935	15	33	63	188	T5
055C8231SC3T	315S	55	105	90.4	0.80	72.9	50	95.5	72.9	55	105	72.9	50	95.5	72.9	50	95.5	72.9	45.5	87.6	72.9	735	600	210	240	14.200	805	15	33	63	188	T5
062C8231SC3T	315S	62	120	90.6	0.79	82.2	58	113	76.9	62	120	82.2	58	113	76.9	58	113	76.9	55	107	72.9	735	600	210	240	10.700	895	15	33	63	188	T5
075C8231MC3T	315M	75	165	91.0	0.69	99.4	80	155	106	75	165	112.6	80	155	106	80	155	106	75	145	99.4	735	600	210	240	12.400	910	15	33	63	188	T5
085C8231MC3T	315M	85	165	91.2	0.78	112.6	80	155	106	85	165	112.6	80	155	106	80	155	106	75	145	99.4	735	600	210	240	12.400	945	15	33	63	188	T5
100C8231MC3T	315M	100	193	91.5	0.78	132.5	95	184	125.9	100	193	132.5	95	184	125.9	95	184	125.9	90	175	119.3	735	600	210	240	15.500	1000	15	33	63	188	T5
110C8231LC3T	315L	110	207	91.7	0.80	145.8	100	188	145.8	110	207	145.8	100	188	145.8	100	188	145.8	90.9	173	145.8	735	600	220	280	30.000	1035	15	33	63	188	T5
122C8231LC3T	315L	122	234	91.9	0.78	161.7	116	222	153.7	122	234	161.7	116	222	153.7	116	223	153.7	110	211	145.8	735	600	210	240	18.000	1110	15	33	63	188	T5
132C8231LC3T	315L	132	247	92.0	0.80	174.9	120	225	174.9	132	247	174.9	120	225	174.9	120	225	174.9	109.1	206	174.9	735	600	250	280	33.300	1165	15	33	63	188	T5
145C8231LC3T	315L	145	278	92.2	0.78	192.1	138	265	182.9	145	278	192.1	138	265	182.9	138	265	182.9	132	254	174.9	735	600	210	240	21.500	1200	15	33	63	188	T5
175C8235LC3T	355L	175	332	92.5	0.79	230.3	168	319	221.1	175	332	230.3	168	319	221.1	168	319	221.1	160	304	210.6	740	600	210	240	28.700	1888	15	33	63	188	T4
200C8235LC3T	355L	200	399	92.8	0.75	263.2	181.8	363	221.1	200	399	230.3	182	363	221.1	181.8	363	221.1	165.3	333	210.6	740	600	185	200	37.500	1950	15	33	63	188	T4
220C8235LC3T	355L	220	417	93.0	0.78	289.6	210	398	276.4	220	417	289.6	210	398	276.4	210	398	276.4	200	380	263.2	740	600	200	230	35.500	2020	15	33	63	188	T4
250C8235KC3T	355L/K	250	480	93.2	0.77	329.1	235	452	309.3	250	480	329.1	235	452	309.3	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