

THREE PHASE AC INDUCTION MOTORS AND DRIVES



Manufactured by :
KIRLOSKAR ELECTRIC CO. LTD.



Primo Series - Frame 63 to 160



FEATURES

- Energy Efficient and therefore are ideally suited for power intensive, process and other industries
- Class "F" insulation with class "B" temperature rise limit
- Suitable for DOL starting upto 100 frame and DOL / STAR-DELTA for 112 and above frames
- High Starting and pullout torques
- Low Noise level with 85 dB (A) at 1 metre and conform to IS:12065
- Low vibration levels conform to IS:12075
- Foot / Flange (Both 'B' & 'C' type) mounting with single / double shaft extension
- Suitable for flexible direct coupling or belt drives with Load GD^2 equal to motor Gd^2
- Diecast aluminium rotor is designed to withstand the severe forces encountered during starting. Special copper brazed rotors are proved for high speed applications
- Optimum fan design for better cooling and minimum energy consumption
- Rigidly sealed Terminal Box at RHS of the motor when viewed from Driving End (other positions can be offered against specific request)
- Terminal boxes are larger in size with improved aesthetics, sufficient electrical clearances and are sealed against ingress of moisture and dust. Boxes for frames 250 and above are tested for through fault level of 43.7KA for 0.25 secs. Terminal Box can be rotatable 360° in step of 90°
- Endshields on DE and NDE are identical and can be interchanged, if called for, minimizing the users inventory

COMPLIES TO

STANDARDS	IS	IEC	BS
Performance	325	34 - 1	EN 60034 - 1
Output & Dimension	1231 2223	72 - 1.2	4999 - 141 5000 - 10, 11
Degree of Protection	4691	34 - 5	EN 60034 - 5 4999 - 105
Method of Cooling	6362	34 - 6	EN 60034 - 6

INVERTER APPLICATIONS

- Motors are suitable for power intensive and process industries wherein these motors are generally powered through inverters
- Motors when powered through inverters gives the desired speed variation as demanded by the process, besides giving the benefit of conservation of energy to the user
- In the event to ventilation circuit failure or for certain application calling for Totally enclosed Non-ventilated surface cooled (IC 410) motors, Spectrum series motors can deliver about 60 to 70% of rated power output

APPLICATIONS

- Pumps
- Fans
- Compressors
- Crushers
- Machine Tools
- Material Handling
- Textile
- Cranes

SPECIFICATIONS

- Output : 0.09 kW 180kW
- Voltage : $415V \pm 10\%$
- Frequency : $50 \text{ Hz} \pm 5\%$
- Combined Variation : $\pm 10\%$
- Ambient : 50°C
- Duty : S1
- Insulation : Class "F"
- Protection : IP 55
- Enclosure : IC 411

Spectrum Series - Frame 180 to 315



PRIMO SERIES - FRAME 63 TO 160
PERFORMANCE CHART (IEC) FOR TEFV 3 PHASE CAGE MOTORS

415 +10% 50HZ +5% COMBINED VARIATION +10% 50° AMBIENT, CLASS F INSULATION IP 55/IC 411, TEMPERATURE RISE = 70K

	Frame	Output (kW)	F.L.S. (rpm)	F.L.C. (A)	L.R.C. (PU)	L.R.T. (PU)	P.O.T. (PU)	Efficiency %			Power Factor			GD ² Kgm ²	Stall Time Sec	
								FL	3/4 FL	1/2 FL	FL	3/4FL	1/2 FL		Cold	Hot
2 P O L E	63	0.12	2750	0.34	5.0	2.50	2.75	64.0	57.0	49.0	0.76	0.65	0.50	0.00081	20	12
	63	0.18	2750	0.52	4.5	2.50	2.75	64.0	58.0	50.0	0.76	0.65	0.50	0.00081	20	12
	63	0.25	2720	0.68	4.5	2.50	2.75	67.0	60.0	52.0	0.76	0.65	0.50	0.00081	20	12
	71	0.37	2780	0.92	6.0	2.75	2.75	70.0	70.0	67.0	0.80	0.77	0.67	0.00260	20	12
	71	0.55	2780	1.437	5.0	2.75	2.75	70.0	70.0	67.0	0.80	0.69	0.60	0.00260	2	12
	80	0.75	2800	1.61	6.0	2.75	2.75	77.0	77.0	74.0	0.84	0.78	0.66	0.00270	20	12
	80	1.10	2820	2.37	6.0	2.75	2.75	77.0	77.0	74.0	0.84	0.79	0.66	0.00360	20	12
	90.S	1.50	2820	3.10	6.0	2.75	3.00	81.0	81.0	79.0	0.84	0.78	0.65	0.00520	18	10
	90 L	2.20	2830	4.50	6.0	3.00	3.00	81.0	81.0	79.0	0.84	0.78	0.65	0.00680	18	10
	100L	3.70	2830	7.10	6.0	2.50	2.50	84.0	84.0	81.0	0.86	0.82	0.73	0.00100	18	10
	132S	5.50	2900	10.00	7.5	2.75	2.75	85.7	83.0	81.0	0.90	0.88	0.82	0.04300	18	10
	132S	7.50	2900	13.30	7.5	2.75	3.00	87.0	85.0	81.0	0.90	0.89	0.82	0.05200	18	10
	160M	11.0	2935	19.30	6.5	2.75	2.75	88.4	86.0	82.0	0.90	0.88	0.83	0.18000	18	10
	160M	15.0	2935	6.5	2.75	2.75	98	89.4	88.0	84.0	0.90	0.88	0.81	0.23000	18	10
	160L	18.5	2935	31.80	6.5	3.00	3.00	90.0	98.0	88.0	0.90	0.87	0.87	0.26000	18	10
	4 P O L E	63	0.12	1350	0.45	3.0	2.75	3.00	58.0	55.0	50.0	0.64	0.51	0.40	0.00079	30
63		0.18	1350	0.68	3.0	2.75	3.00	58.0	55.0	50.0	0.64	0.51	0.40	0.00079	30	15
71		0.25	1390	0.69	4.0	2.50	2.75	70.0	68.0	62.0	0.72	0.60	0.45	0.00260	30	15
71		0.37	1390	1.02	4.0	2.50	3.00	70.0	68.0	62.0	0.72	0.60	0.45	0.00260	30	15
80		0.55	1390	1.32	5.0	2.50	2.75	75.0	75.0	72.0	0.77	0.68	0.53	0.00390	30	15
80		0.75	1390	1.80	5.0	2.75	3.00	75.0	75.0	72.0	0.77	0.68	0.53	0.00530	30	15
90S		1.10	1400	2.45	5.0	2.50	2.60	77.0	77.0	75.0	0.81	0.73	0.61	0.00900	25	12
90L		1.50	1400	3.30	5.0	2.50	2.75	78.5	77.0	75.0	0.81	0.73	0.62	0.01200	25	12
100L		2.20	1400	4.70	5.5	2.50	2.75	81.0	78.0	74.0	0.81	0.75	0.62	0.01600	20	11
112M		3.70	1430	7.50	6.0	2.75	3.00	84.0	84.0	79.0	0.82	0.77	0.65	0.03700	20	11
132S		5.50	1440	11.00	6.0	2.75	3.00	85.7	84.0	81.0	0.82	0.77	0.65	0.08900	18	10
132M		7.50	1440	14.30	6.0	2.75	3.00	87.0	85.0	83.0	0.84	0.77	0.65	0.11600	18	10
160M		11.0	1450	21.00	6.5	2.20	2.30	88.4	88.0	85.0	0.83	0.79	0.70	0.27000	15	09
160L		15.0	1450	28.10	6.5	2.20	2.40	89.4	88.0	85.0	0.83	0.78	0.69	0.33000	15	09
6 P O L E	80	0.37	910	1.20	3.0	2.0	2.30	65.0	64.0	57.0	0.67	0.57	0.43	0.00770	36	19
	80	0.55	910	1.61	3.0	2.0	2.30	68.0	64.0	58.0	0.70	0.59	0.45	0.00990	36	19
	90S	0.75	910	1.95	4.0	2.0	2.30	72.0	70.0	65.0	0.75	0.65	0.55	0.01650	33	13
	90L	1.10	920	2.80	4.0	2.0	2.30	74.0	70.0	65.0	0.75	0.65	0.55	0.01800	33	13
	100L	1.50	925	3.71	5.0	2.0	2.30	76.0	75.0	74.0	0.74	0.67	0.54	0.03600	30	11
	112M	2.20	940	5.10	5.0	2.5	2.75	80.0	79.0	74.0	0.75	0.67	0.54	0.06100	30	11
	132S	3.70	950	7.70	6.0	2.0	2.50	84.0	83.0	81.0	0.80	0.74	0.62	0.11600	30	11
	132M	5.50	950	7.70	6.0	2.0	2.50	84.0	83.0	81.0	0.80	0.74	0.62	0.11600	30	11
	160M	7.50	960	14.60	6.0	2.2	2.50	86.0	86.0	85.0	0.83	0.78	0.65	0.39000	27	10
	160L	11.00	960	21.20	6.0	2.2	2.50	87.5	86.0	85.0	0.84	0.78	0.65	0.50000	27	10
8 P O L E	90S	0.37	670	1.30	3.5	1.8	2.0	62.0	52.0	47.0	0.65	0.52	0.41	0.01400	45	20
	90L	0.55	670	1.80	3.5	1.8	2.0	67.0	60.0	57.0	0.63	0.50	0.39	0.01800	45	20
	100L	0.75	690	2.00	3.5	1.8	1.8	70.0	65.0	58.0	0.73	0.61	0.44	0.02700	45	20
	100L	1.10	690	2.91	3.5	1.7	1.9	72.0	70.0	65.0	0.73	0.61	0.44	0.03500	45	20
	112M	1.50	700	3.76	4.5	1.9	2.0	75.0	75.0	72.0	0.74	0.61	0.45	0.06100	45	20
	132S	2.20	710	5.40	5.0	1.7	2.2	77.0	74.0	70.0	0.74	0.63	0.47	0.10600	30	15
	160M	3.70	710	8.25	5.0	1.7	1.9	81.0	79.0	72.0	0.77	0.72	0.61	0.35000	30	15
	160M	5.50	710	12.00	5.0	1.8	2.0	83.0	83.0	83.0	0.77	0.72	0.61	0.44000	30	15
	160L	7.50	710	16.10	5.0	1.8	1.8	84.0	83.0	83.0	0.77	0.72	0.61	0.58000	30	15

All performances subject to IEC34-1/IS:325 tolerance



SPECTRUM SERIES - FRAME 180 TO 315

PERFORMANCE CHART (IEC) FOR TEFV 3 PHASE CAGE MOTORS

415 + 10% 50HZ + 5% COMBINED VARIATION + 10% 50L AMBIENT, CLASS F INSULATION IP 55/IC 411, TEMPERATURE RISE = 70K

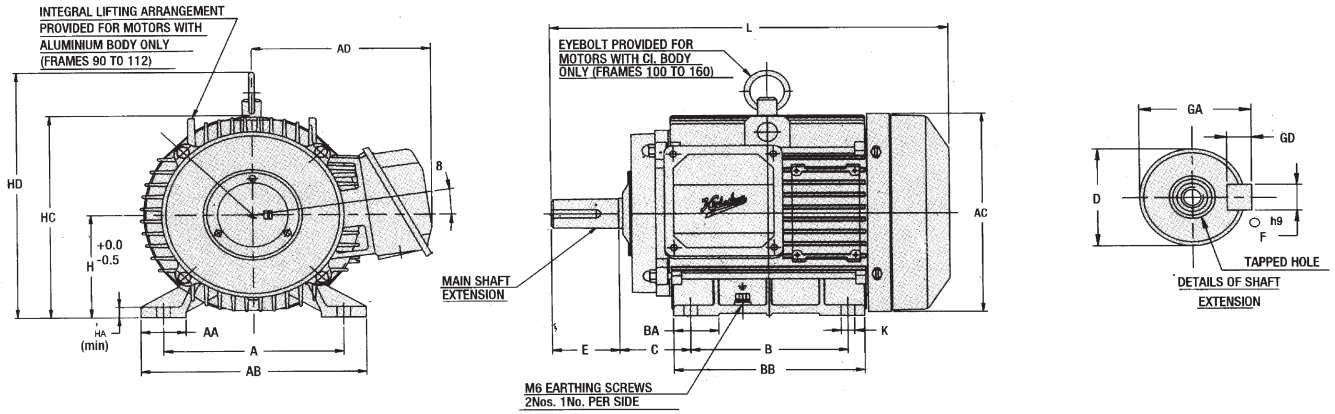
	Frame	Output (kW)	Rated Speed rpm	FLC A	LRC PU	LRT (PU)	Pot (PU)	% SLIP at Pot	Efficiency %			Power Factor			GD ² Kgm ²	Stall Withstand Time . Sec.	
									FL	3/4 FL	1/2 FL	FL	3/4FL	1/2 FL		Cold	Hot
2	180 M	22	2945	37.5	6.5	1.8	2.5	10.0	91.0	90.0	88.0	0.90	0.88	0.86	0.40	20	15
	200 L	30	2955	50.2	7.5	2.2	2.5	10.0	91.40	90.0	88.0	0.91	0.88	.84	0.75	20	15
P O L E	225M	45	2955	61.5	7.5	2.2	2.5	10.0	92.0	90.0	88.0	0.91	0.90	0.83	0.85	20	15
	225M	45	2965	73.6	7.0	2.2	2.5	10.0	92.5	90.0	88.0	0.92	0.88	0.83	2.3	25	20
	250M	55	2964	91	6.0	1.6	2.8	7.5	93.0	93.0	90.0	0.90	0.88	0.80	3.3	30	20
	280S	75	2970	124	6.0	1.6	2.8	6.5	93.6	93.6	91.0	0.90	0.89	0.80	6.5	35	25
	280M	90	2968	148	6.0	1.6	2.8	6.0	93.9	93.9	91.5	0.9	0.88	0.80	7.4	35	25
	315 S	110	2966	181	6.0	1.6	2.4	5.5	94.0	94.0	91.5	0.90	0.87	0.80	8.0	35	25
	315M	125	2967	204	6.0	1.8	2.6	5.5	94.50	94.5	92.0	0.90	0.88	0.80	9.0	35	25
	315M	135	2970	221	6.0	1.7	2.6	5.5	94.50	94.5	92.0	0.90	0.88	0.80	9.5	35	25
	315L	150	2974	243	6.0	2.0	2.8	5.5	94.50	94.5	93.0	0.91	0.09	0.85	12.0	35	25
	315L	160	2972	258	6.0	2.0	2.6	5.5	95.0	95.0	93.0	0.91	0.90	0.85	12.0	35	25
	315L	180**	2973	290	6.0	2.0	2.7	5.0	95.0	95.0	93.5	0.91	0.90	0.85	13.0	35	25
4	180M	18.5	1470	33	6.5	2.20	2.50	10.0	91.0	90.5	90.0	0.87	0.82	0.75	0.62	20	15
	180L	22	1470	38.5	6.5	2.10	2.50	10.0	91.5	91.0	90.0	0.87	0.83	0.75	0.72	20	15
P O L E	200L	30	1475	50.4	6.5	2.2	2.75	10.0	92.0	91.0	90.0	0.87	0.81	0.77	1.7	20	15
	225S	37	1475	62.2	7.5	2.30	2.50	10.0	92.0	91.5	90.0	0.90	0.86	0.77	2.3	25	20
	225M	45	1475	75.2	7.5	2.5	2.75	10.0	92.5	91.5	90.0	0.90	0.86	0.77	2.5	25	20
	250M	55	1478	94	6.0	2.0	2.50	7.5	93.5	93.5	92.0	0.87	0.84	0.76	4.4	40	25
	280S	75	1482	128	6.0	2.0	2.50	6.0	93.8	93.8	92.0	0.87	0.84	0.76	7.8	50	25
	280M	90	1482	151	6.0	2.0	2.50	6.5	94.2	94.2	92.5	0.88	0.86	0.80	9.6	50	25
	315S	110	1482	186	6.0	2.0	2.50	6.0	94.5	94.5	93.0	0.87	0.84	0.76	13.0	60	30
	315M	125	1484	211	6.0	2.0	2.50	5.5	94.7	94.7	93.0	0.87	0.85	0.80	14.0	60	30
	315M	135	1483	225	6.0	2.0	2.50	5.5	95.0	95.0	93.0	0.88	0.86	0.80	14.5	60	30
	315L	150	1484	250	6.0	2.0	2.50	5.5	95.0	95.0	93.0	0.88	0.86	0.81	16.5	60	30
	315L	160	1483	267	6.0	2.0	2.50	5.5	95.0	95.0	93.0	0.88	0.86	0.81	16.5	60	30
	315L	190**	1483	299	6.0	2.0	2.50	5.5	95.2	95.2	93.5	0.88	0.87	0.81	18.0	60	30
	315L	200	1484	332	6.0	2.0	2.50	5.5	95.2	95.2	93.0	0.88	0.86	0.80	22.0	60	30
	6	180L	15	970	29	6.0	1.8	2.0	15.0	89.0	89.0	88.5	0.82	0.78	0.74	0.75	20
200L		18.5	970	34	6.0	2.0	2.4	15.0	90.5	90.5	88.5	0.84	0.80	0.72	1.50	20	15
P O L E	200L	22	970	40.3	6.0	2.0	2.5	15.0	90.5	90.0	88.5	0.84	0.80	0.72	1.75	20	15
	225M	30	970	53.3	6.0	2.0	2.2	15.0	91.0	90.5	88.5	0.86	0.83	0.78	2.50	20	15
	250M	37	983	65	6.0	1.8	2.7	8.0	92.3	923	90.8	0.86	0.82	0.74	5.10	50	30
	280S	45	985	79	6.0	2.2	2.5	7.5	92.5	92.5	91.0	0.86	0.82	0.74	8.00	60	35
	280M	55	985	96	6.0	2.2	2.5	7.5	93.0	930	91.5	0.86	0.82	0.74	9.30	60	35
	315S	75	988	130	6.0	2.3	2.8	7.0	93.5	93.5	91.5	0.86	0.82	0.74	15.50	60	35
	315M	90	988	155	6.0	2.3	2.8	7.0	94.0	94.0	92.5	0.86	0.82	0.74	17.50	60	35
	315M	110	988	186	6.0	2.2	2.7	7.0	94.5	94.5	93.0	0.87	0.84	0.76	20.00	60	35
	315L	125	987	212	6.0	2.2	2.7	7.0	94.5	94.5	93.0	0.87	0.84	0.76	22.00	60	35
	315L	135**	988	229	6.0	2.2	2.5	7.0	94.5	94.5	93.0	0.87	0.84	0.76	23.50	60	35
	315L	150	987	257	6.0	2.0	2.5	7.0	94.5	94.5	93.0	0.86	0.83	0.75	27.00	50	30
8	180L	11	725	23.5	6.0	1.8	2.0	20.0	88.0	88.0	87.0	0.74	0.68	0.57	0.75	20	15
	200L	15	730	30	6.0	1.8	2.0	20.0	89.0	89.0	88.0	0.78	.074	0.64	1.65	20	15
P O L E	225L	18.5	735	37	6.0	1.8	2.0	20.0	90.0	90.0	88.0	0.78	0.74	0.64	2.3	20	15
	225M	22	735	44	6.0	1.8	2.0	20.0	90.0	90.0	88.0	0.78	0.74	0.64	2.5	20	15
	250M	30	736	59	5.5	1.7	2.5	8.5	91.5	90.5	87.0	0.78	0.70	0.58	5.8	80	40
	280S	37	738	73	6.0	2.0	2.4	7.5	92.0	91.0	88.0	0.77	0.70	0.57	9.5	80	40
	280M	45	740	89	6.0	2.0	2.5	7.5	92.0	91.0	88.0	0.77	0.70	0.57	11.5	80	40
	315S	55	740	106	6.0	2.0	2.5	6.5	92.5	91.5	88.5	0.78	0.72	0.60	15.5	90	50
	315M	75	740	152	6.0	2.0	2.5	7.0	92.8	92.3	89.0	0.74	0.67	0.56	18.5	90	50
	315L	90	740	182	6.0	2.1	2.5	7.0	93.0	92.80	89.0	0.75	0.68	0.57	23.5	90	50
	315L	110**	738	219	6.0	2.0	2.3	7.5	93.3	93.3	90.5	0.75	0.68	0.57	26.0	90	50

**Temperature Rise = 80K

All performances subject to IEC34-1/IS:325 tolerance

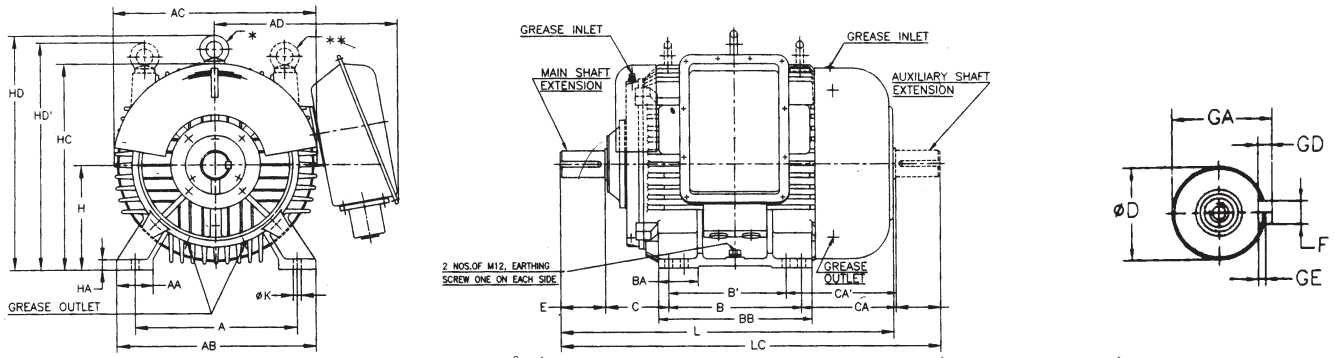


PRIMO SERIES DIMENSIONAL DETAILS



SL.NO.	FRAME	A	B	C	ØD	E	F	H	ØK	L	AA	AB	ØAC	AD	BB	GA	GD	HA	HC	BA	HD
1.	PRIMO 63	100	80	40	11j6	23	4	63	7	210	25	125	123	110	96	12.5	4	8	124	23	-
2.	PRIMO 71	112	90	45	14j6	30	5	71	7	233	25	137	140	120	106	16	5	8	158	30	-
3.	PRIMO 80	125	100	50	19j6	40	6	80	10	270	30	155	156	130	120	21.5	6	10	158	30	-
4.	PRIMO 90S	140	100	56	24j6	50	8	90	10	293	35	175	176	140	120	27	7	10	178	30	-
5.	PRIMO 90L		145																		
6.	PRIMO 100L	160	140	63	28j6	60	8	100	12	360	40	200	193	152	170	31	7	10	197	40	239
7.	PRIMO 112M	190	140	70	28j6	60	8	112	12	385	40	230	218	170	180	31	7	10	221	40	261
8.	PRIMO 132S	216	140	89	38k6	80	10	132	12	442	40	256	260	192	180	41	8	12	262	40	308
9.	PRIMO 132M		218																		
10.	PRIMO 160M	254	210	108	42k6	110	12	160	15	596	60	314	310	250	270	45	8	14	315	60	360
11.	PRIMO 160L		314																		

SPECTRUM SERIES DIMENSIONAL DETAILS



**Temperature Rise = 80°C (All performances subject to IEC 60034-1 / IS:325 tolerances)

FRAME	POLES	A	AA	AB	AC	AD	B	B'	BA	BB	C	CA	CA'	D	E	F	GA	GD	GE	H	HA	HC	HD	HD'	K	L	LC
SC180M	2,4,6&8	279	64	330	357	357	241	-	64	292	121	205	-	48	110	14	51.5	9	5.5	180	19	362	415	-	15	679	787
SC180L	2,4,6&8	279	64	330	357	357	279	-	64	330	121	205	0	48	110	14	51.5	9	5.5	180	19	362	415	-	15	717	825
SC200L	2,4,6&8	318	90	390	413	380	305	-	80	355	133	225	-	55	110	16	59	10	6	200	25	410	495	-	19	775	833
SC225S	2	356	76	444	470	408	286	-	70	331	149	253	-	55	110	16	59	10	6	225	25	463	544	-	19	800	908
SC225S	4,6&8	356	76	444	470	408	286	-	70	331	149	253	-	60	140	18	64	11	7	225	25	463	544	-	19	830	968
SC225M	2	356	76	444	470	408	311	-	70	356	149	253	-	55	110	16	59	10	6	225	25	463	544	-	19	825	933
SC225M	4,6&8	356	76	444	470	408	311	-	70	356	149	253	-	60	140	18	64	11	7	225	25	463	544	-	19	855	933
SC250S	2	406	90	500	535	510	-	311	125	419	168	-	311	60	140	18	64	11	7	250	32	522	605	-	24	920	1070
SC250S	4,6&8	406	90	500	535	510	-	311	124	419	168	-	311	65	140	18	69	11	7	250	32	522	605	-	24	920	1070
SC250M	2	406	90	500	535	510	349	-	125	419	168	273	-	60	140	18	64	11	7	250	32	522	605	-	24	920	1070
SC250M	4,6&8	406	90	500	535	510	349	-	125	419	168	273	-	65	140	18	69	11	7	250	32	522	605	-	24	920	1070
SC280S	2	457	100	550	580	530	368	-	100	439	190	297	-	65	140	18	69	11	7	280	35	575	660	-	24	985	1135
SC280S	4,6&8	457	100	550	580	530	368	-	100	439	190	297	-	75	140	20	79.5	12	7.5	280	35	575	660	-	24	985	1135
SC280M	2	457	100	550	580	530	419	-	100	490	190	296	-	65	140	18	69	11	7	280	35	575	660	-	24	1035	1185
SC280M	4,6&8	457	100	550	580	530	419	-	100	490	190	296	-	75	140	20	79.5	12	7.5	280	35	575	660	-	24	1035	1185
SC315S	2	508	120	630	640	645	-	406	150	537	216	-	403	65	140	18	69	11	7	315	40	640	-	705	28	1155	1305
SC315S	4,6&8	508	120	630	640	645	-	406	150	537	216	-	403	80	170	22	85	14	9	315	40	640	-	705	28	1185	1365
SC315M	2	508	120	630	640	645	457	-	150	537	216	352	-	65	140	18	69	11	7	315	40	640	-	705	28	1155	1305
SC315M	4,6&8	508	120	630	640	645	457	-	150	537	216	352	-	80	170	22	85	14	9	315	40	640	-	705	28	1185	1365
SC315L	2	508	120	630	640	645	-	508	170	656	216	-	421	65	140	18	69	11	7	315	40	640	-	705	28	1275	1425
SC315L	4,6&8	508	120	630	640	645	-	508	170	656	216	-	421	80	170	22	85	14	9	315	40	640	-	705	28	1305	1485





AC Drives

Range : 0.75 to 630 kW

INTRODUCTION

True Genius TG-600 series AC Drives are high performance Vector controlled inverters, adopting modular design based on dual CPU control. Three types of control methodology are built into the drive software, which are selectable through parameters, based on the application requirement, viz., V/f control, Sensor less Vector control and the Closed loop Vector control.

Closed loop Torque Control is easily achieved through using the PG card option to detect the motor speed and adjust the output torque in time according to the changing load demand.

Special feature of Automatic adjustment of Carrier frequency if enabled, ensures quiet operation by adjusting the carrier frequency automatically in accordance with the changing load and temperature.

FEATURES

- **SIMPLE PLC PROGRAMMING**
Ensures 16 step speed control, without the usage of Multi-step speed programming.
- **PID CONTROL**
Precise control of the application in accordance with the changing load/output pattern.
- **MOTOR AUTO TUNING**
Ensures precise control and fast response to cater the output requirement.
- **S-CURVE**
Ensures smooth acceleration and deceleration for applications like lifts, elevators etc.
- **MULTIPLE V/F CURVE SETTING**
Enables to suit the drive for various applications both constant torque & variable torque, employing only V/f control.
- **AVR FUNCTION**
Whenever this function is enabled, the drive output voltage does not change in accordance with the input voltage or DC Bus voltage and is maintained constant within the output capacity range.
- **ENERGY SAVING**
Whenever this function is enabled, the drive will adjust the output voltage in accordance with the load by detecting the output load current there by saving Energy automatically (fan and pump loads).
- **PARAMETER Copy**
This enables uploading/downloading of parameters to external LCD display unit thereby reducing the commissioning time taken for identical machines.
- **SERIAL COMMUNICATION**
Standard RS-485 communication with MOD Bus RTU protocol as option.

SELECTION CHART

DRIVE MODEL TG 600	P75	IP5	2P2	3P7	5P5	7P5	011	015	018	022	030	037	045	055
Motor Output (kW)	0.75	1.5	2.2	3.7	5.5	7.5	11	15	18.5	22	30	37	45	55
Rated Current	2.5	3.7	5	9	13	17	25	32	37	45	60	75	90	110
Output KVA @ 415V	1.8	2.6	3.6	6.5	9.3	12.2	18.0	23.0	26.6	32.3	43.0	54.0	64.6	79.0
Nett Weight (kg)	3.8					6.5			21			45		
Dimension (H*W*D) in mm	250*160*180					320*220*180			467*290*215			577*375*270*		

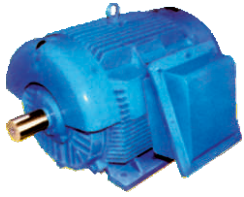
DRIVE MODEL TG 600	075	090	110	132	160	185	200	220	250	280	315	350	400	500	560	630
Motor Output (kW)	75	90	110	132	160	185	200	220	250	280	315	350	400	500	560	630
Rated Current	150	176	210	250	300	340	380	415	470	520	600	640	690	860	950	1110
Output KVA @ 415V	108.0	126.5	151.0	180.0	215.6	244.4	273.0	298.3	337.8	373.8	431.2	460.0	496.0	618.0	683.0	791.0
Nett Weight (kg)	75			150			220			650						
Dimension (H*W*D) in mm	755*460*330			1180*490*390			1264*750*400			1471*1505*400						

TECHNICAL SPECIFICATION

Input	Input Voltage Range	3 phase, 415V AC $\pm 15\%$
	Input Frequency Range	47-63 Hz
Output	Output Voltage Range	3 phase, 415V AC (Same as input voltage)
	Output Frequency Range	0-600 Hz
External Interface	Programmable Digital Input	Six Channel inputs. One is the high-speed pulse input (HDI1). Another four channel inputs can be extended by optional 110 card
	Programmable Analog Input	AI1; 0-10V, AI2; 0-10V or 0-20mA, optional 1/0 extension card can offer another two inputs; AI3; 10v-10V, AI4; 0-10V or 0-20mA.
	Programmable Open Circuit Collector Output	One channel output, optional 1/0 extension card can offer another one (Open circuit collector output or high-speed pulse output).
	Relay Output	Two channel outputs, optional 1/0 extension card can offer another one
	Analog Output	One channel output, optional 1/0 extension card can offer another one, 0/4-20mA or 0/2-10V selectable.
Technology Features	Control Mode	Sensorless Vector Control, Vector Control with PG, V/f Control.
	Overload Capacity	150% rated current for 60 sec. 200% rated current for 2 see, (Vector control)
	Starting Torque	Sensorless Vector Control: 0.5Hz 1150%, Vector Control: 0Hz / 180%
	Speed-Adjust Ratio	Sensorless Vector Control: 1 : 100, Vector Control with PG: 1 : 1000.
	Speed Accuracy	Sensorless Vector Control: $\pm 0.5\%$ of maximum speed, Vector Control: $\pm 0.02\%$ of maximum speed.
	Carrier Frequency	1.0KHz ~ 16.0 KHz. It can be adjusted automatically according to the features of temperature and load.
Function Features	Frequency - Setting Mode: Digital Setting, Analog Setting, Pulse Frequency Setting, Serial Communication Setting, Multi-Speed, Simple PLC Setting and PID Setting etc. The switch between the defining combination and the defining mode can be realized.	
	Torque-Control Function offers multimode torque setting.	
	PID Control Function offers precise process control.	
	Simple PLC & Multi-segments Speed Control Function offers 16 segments speed Control.	
	Traverse Control Function	
	Length and Time Control Function.	
	Non-Stop Function while instantaneous power failure	
	Speed trace Function (Catch-on fly) offers smooth start of the running motor.	
	QUICK I JOG Function offers Multi-function shortcut key defined by user.	
	Automatic Voltage Adjust Function offers to maintain the output voltage constant automatically when mains voltage fluctuating.	
Up to 29 functions for failure protection offers protection against Over current, over voltage, under voltage, over temperature, input I output phase failure, drive I motor load, IGBT failure, etc		

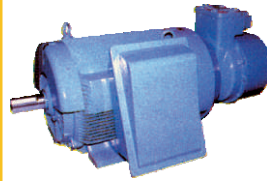


AC MOTORS - CAGE ROTOR



- › Range : 0.37 to 20000kw
- › Voltage : 0.38, 0.415/3.3/ 6.6kV
- › RPM : 3000/1500/1000/ 750 / 600
- › Insulation : Class "F"
- › Mounting : Horizontal/Vertical flange/
Foot cum flange
- › Enclosure : IP 22 / IP 55
- › Cooling : IC 01/411/511/611

AC MOTORS - WOUND ROTOR



- › Range : 7.5 to 20000kW
- › Voltage : 0.38/0.415/3.3/6.6kV
- › RPM : 1500/1000/ 750/600
- › Insulation : Class "F"
- › Mounting : Horizontal
- › Enclosure : IP22/IP55
- › Cooling : IC 01/411/511/611
- › Duty : S1

FLAME PROOF MOTORS



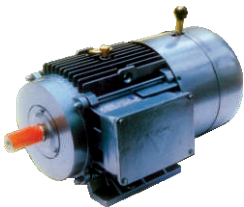
- › Range : 0.37 to 350 kW
- › Voltage : 380 & 415Volts
- › RPM : 3000/1500/1000/750
- › Insulation : Class "F"
- › Mounting : Horizontal/ Vertical flange
- › Enclosure : IP 55
- › Cooling : IC 411
- › Gas Groups : I, IIA & IIB

CRANE DUTY MOTORS



- › Range : 0.37 to 1000kW
- › Duty : S3, S4, S5
- › Starts/Hour : 6/150/300
- › CDF : 25%, 40%, 60%,100%
- › Type : Cage/ Slipring
- › Insulation : Class "F"
- › Enclosure : IP 55
- › Cooling : IC 411

BRAKE MOTORS



- › Range : 0.18 to 20kW
- › Voltages : 380 & 415Volts
- › RPM : 1500/1000/750
- › Insulation : Class "F"
- › Mounting : Horizontal/Vertical flange/
Foot cum flange
- › Enclosure : IP 55
- › Cooling : IC 411
- › AC/DC Brakes.

AC MILL DUTY MOTORS



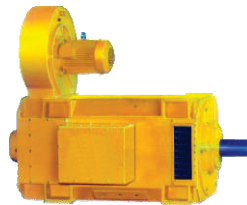
- › Range : 110 to 2000kW
- › Voltage : 0.415/3.3/6.6kV
- › RPM : 1000/750/600
- › Insulation : Class "F"
- › Mounting : Horizontal
- › Enclosure : IP 23
- › Cooling : IC 01
- › Applications : Steel Mills, Rolling Mills,
Sugar Mills, Paper Mills,
Cement, Fertilizer

SPECIAL MOTORS



- › Vertical Hollow Shaft Motors
- › Roller Table Motors
- › Increased Safety Motors
- › Non-Sparking Motors.
- › Textile and Loom Motors.
- › 60Hz Motors

DC MOTORS



- › Range : Up to 3000 kW
- › DC Voltage : 180 to 1000V
- › RPM : 1800/1000/600
- › Insulation : Class "F" / "H"
- › Mounting : Horizontal Foot / Vertical flange
- › Enclosure : IP 21/22/23/44
- › Cooling : IC 01/06/0041/ 0141/0666
- › Types : Laminated / Solid yoke
- › Duty : S1/ S4

WORM GEAR BOX



- › Worm Speed Reducers
- › Sizes : 1 $\frac{1}{2}$ - 14"
- › Reduction Ratios : 5:1 to 4900:1
- › Power : 0.25 to 140kW
- › Universal Mounting Modular Unit

GEARED MOTORS



- › Helical Gears
- › Range : 0.4 to 50kW
- › Speed : 0.25 to 280 RPM
- ›AGMA Class : I, II, III
- › Permanently Lubricated
- › Available with AC or DC motors, Flame proof
and Brake Motors

HELICAL SHAFT MOUNTED DRIVES



- › Helical Speed Reducers
- › 98% efficiency per stage
- › Seven sizes
- › Reduction ratios : 5:1, 13:1 & 20:1
- › Direct Mounting on shaft
- › Case Carburised & ground gears
- › Long life

CYCLOIDAL DRIVES



- › Cycloidal Speed Reducers
- › Reduction Ratios : 9:1 to 43645 : 1
- › Power : 0.18 to 75 kW
- › Mounting : Foot / Flange
- › Efficiency : >92% in Single Stage

