Apex Series
a green solution...

Smart solutions.
Strong relationships

SUPER PREMIUM EFFICENCY LV MOTORS

IE4 EFFICIENCY CLASS



murugappa



Our other optional features

- Non standard shaft material, diameter & extension
- Front bearing locking arrangement
- SS Hardware, canopy, water flinger, non standard
- Paint & paint shade, cable gland
- Provision for hollow shaft encoder mounting High tem perature grease
- Reduced & special grades of vibration as per IS 12075 can be provided on request
- Space heater for 280 frame & above
- VPI for 280 Frame and above
- FLP range we covered E80 to E400 frame
- We have Approvals –UL, CE, ICEX, CSA, PESO, DGMS, BASEEFA

NABL and CSA certified test Lab.



Certificate of Qualification

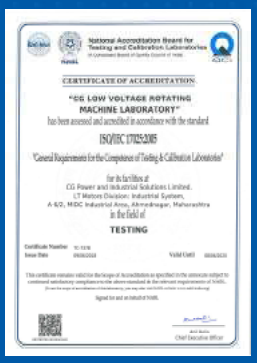
This is to certify that
CG Power and Industrial Solutions Ltd.
LT Motors Division, A-6/2 MIDC Industrial Area Ahmednagar 414111, India

has been qualified by CSA Group Testing & Certification Inc. as a Testing Facility for
CATEGORY PROGRAM FOR CERTIFICATION
Based on ISO/IEC 17025:2005

Issued Date: January 3, 2018
Expiry Date: January 2, 2021

Saibal Mukhopadhaya
Operations Manager

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CERTIFICATE OF ACCREDITATION

"CG LOW VOLTAGE ROTATING MACHINE LABORATORY"

has been assessed and accredited in accordance with the standard

ISO/IEC 17025:2005

"General Requirements for the Competence of Testing & Calibration Laboratories"

for its facilities at

CG Power and Industrial Solutions Limited,
LT Motors Division: Industrial System,
A-6/2, MIDC Industrial Area, Ahmednagar, Maharashtra

in the field of

TESTING

PRODUCT PORTFOLIO & PERFORMANCE DATA

IE4 Motors: Energy Efficient Motors

Introduction

Out of our commitment towards high energy efficiency and top notch performance, CG presents the next and latest generation of a green solution... Apex series IE4 motor-Super premium efficiency motor.

It complies with new efficiency requirements of IEC 60034-30-1:2014 with highest efficiency and lowest payback period. Our super premium efficiency motor delivers highest efficiency ever which ensures even lower payback period over the life cycle of motor. By maximizing the output especially in continuous duty applications, due to energy efficiency, our Apex series IE4 motor offers a way to curb energy consumption without limiting your growth and hence reduces CO_2 emissions.

Why should you consider buying Apex series IE4 motors?

» **Highest efficiency:** Super premium efficiency of Apex series motor leads to more energy savings and reduces carbon emission.

» **Tested in India's only CSA approved lab:** To keep regular check on instrumentation accuracy and testing procedure to ensure guaranteed efficiency our 7 test labs with 0.2 class instrumentation and torque transducers are approved by CSA under CPC program

» **Early payback:** By maximizing energy savings you get quicker return on investments

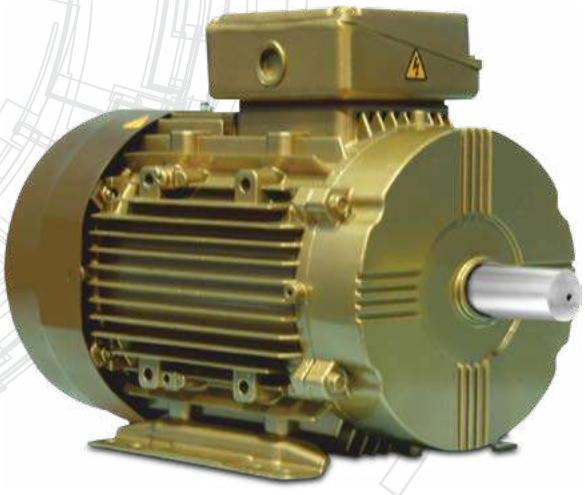
» **Same output/Frame ratio:** Lower efficiency motors can be replaced easily with Apex series IE4 motors as frame size is same

» **More reliable:** Less bearing temperature ensures the extended life of motor. Hence Apex series motors are definitely a long term secured solution for the future.

» **Low operating cost**

Applications of Conventional Motor

» Conveyors belts
» Presses
» Textile machines
» Elevators
» Centrifugal machines
» Pumps Fans
» Mills
» Others



IE4 Motors:

Energy Efficient Motors

Apex Series
a green solution...



ENERGY SAVING

IE4 Motors:

Energy Efficient Motors







PRODUCT PORTFOLIO & PERFORMANCE DATA

Performance Data for Apex Series Motors Complying to IE4 Class of IEC 60034-30-1:2014/ IS 12615:2018

Voltage	415 V +/- 10%	Type	Squirrel cage (SCR)	Ambient	50 Deg C
Frequency	50 Hz +/- 5%	Duty	S1	Temp rise (R)	70 Deg C
Combined	+/- 10% (absolute sum)	Insulation	Class 'F' with Class 'B' temp. rise	Degree of Protection	IP55

SUPER PREMIUM EFFICIENCY – IE4 2 Pole / 3000 RPM

RATED POWER		FRAME	Current	FL	FL	Efficiency %			Power Factor			D.O.L STARTING			Gd^2
kW	HP	-	415V	SPEED RPM	KG-M	FL	3/4 L	1/2 L	FL	3/4 L	1/2 L	STT %FLT	SCC %FLC	POT %FLT	kgm^2
0.75	1	PC80	1.4	2825	0.26	83.5	83.5	83.1	0.88	0.84	0.75	200	650	250	0.0044
1.1	1.5	PC80	2.1	2870	0.37	85.2	85.2	84.5	0.85	0.8	0.7	300	700	350	0.0067
1.5	2	PC90S	3.2	2920	0.5	86.5	85.9	82.6	0.75	0.68	0.58	300	850	350	0.0067
2.2	3	PC90L	4.1	2850	0.75	88	87	86	0.84	0.75	0.62	275	750	350	0.0087
3.7	5	PC100L	6.4	2870	1.26	89.7	88.6	87.6	0.9	0.87	0.8	250	700	300	0.0315
5.5	7.5	PC132S	9.4	2890	1.85	90.9	90.3	90	0.9	0.86	0.8	160	650	200	0.103
7.5	10	PC132S	13	2885	2.53	91.7	91.1	90.8	0.9	0.86	0.8	300	800	350	0.128
11	15	PC160M	19	2935	3.65	92.6	92.2	91.8	0.89	0.85	0.82	250	700	300	0.195
15	20	PC160M	25	2945	4.96	93.3	93.3	92.8	0.9	0.88	0.86	250	700	300	0.279
18.5	25	PC160L	31	2940	6.13	93.7	93	92.5	0.9	0.88	0.82	227	700	275	0.299
22	30	PC180M	36	2945	7.28	94	93.5	93	0.91	0.89	0.87	230	700	280	0.463
30	40	PC200L	49	2960	9.87	94.5	94.3	93.4	0.9	0.85	0.8	225	700	250	1.028
37	50	PC200L	60	2960	12.18	94.8	94.5	93.7	0.9	0.85	0.8	220	700	275	1.1
45	60	PC225M	73	2955	14.83	95	94	93.5	0.9	0.86	0.82	225	700	275	1.793
55	75	PC250M	86	2975	18.01	95.3	95.3	94.3	0.93	0.9	0.88	270	700	300	3.666
75	100	PC280S	121	2975	24.55	95.6	95.6	94.6	0.9	0.86	0.78	200	700	250	6.655
90	120	PC280M	142	2975	29.47	95.8	95.8	94.8	0.92	0.89	0.8	175	700	225	7.175
110	150	PC315S	177	2985	35.89	96	96	95	0.9	0.85	0.81	250	770	300	10.029
132	180	PC315M	217	2980	43.14	96.2	96.2	95.2	0.88	0.86	0.82	200	700	250	11.114
160	215	PC315L	257	2985	52.21	96.3	96.3	95.3	0.9	0.85	0.81	200	770	250	12.333
200	270	PC315L	320	2985	65.26	96.5	96.5	95.5	0.9	0.85	0.81	200	770	250	13.147

PRODUCT PORTFOLIO & PERFORMANCE DATA

Performance Data for Apex Series Motors Complying to IE4 Class of IEC 60034-30-1:2014/ IS 12615:2018

Voltage	415 V +/- 10%	Type	Squirrel cage (SCR)	Ambient	50 Deg C
Frequency	50 Hz +/- 5%	Duty	S1	Temp rise (R)	70 Deg C
Combined	+/- 10% (absolute sum)	Insulation	Class 'F' with Class 'B' temp. rise	Degree of Protection	IP55

SUPER PREMIUM EFFICIENCY – IE4 4 Pole / 1500 RPM

RATED POWER		FRAME	Current	FL	FL	Efficiency %			Power Factor			D.O.L STARTING			Gd^2
kW	HP	-	415V	SPEED RPM	KG-M	FL	3/4 L	1/2 L	FL	3/4 L	1/2 L	STT %FLT	SCC %FLC	POT %FLT	kgm^2
0.75	1	PC80	1.8	1425	0.51	85.7	84.3	81.1	0.7	0.58	0.48	225	700	275	0.0149
1.1	1.5	PC90S	2.5	1435	0.75	87.2	86.8	85.7	0.7	0.63	0.5	200	600	250	0.0175
1.5	2	PC90L	3.3	1455	1	88.2	87.5	85.2	0.7	0.63	0.48	300	750	350	0.0223
2.2	3	PC100L	4.4	1450	1.48	89.5	89.3	88.2	0.8	0.7	0.6	300	750	350	0.0661
3.7	5	PC112M	7.4	1455	2.48	90.9	90.5	89	0.8	0.73	0.6	160	600	200	0.0997
5.5	7.5	PC132S	10.4	1465	3.66	91.9	91.6	90.5	0.8	0.8	0.75	200	500	250	0.226
7.5	10	PC132M	14	1470	4.97	92.6	92.3	91.9	0.8	0.75	0.62	250	700	300	0.272
11	15	PC160M	20	1470	7.29	93.3	92.8	92	0.8	0.8	0.72	200	600	250	0.467
15	20	PC160L	29	1475	9.91	93.9	93.6	93	0.8	0.72	0.6	225	700	275	0.632
18.5	25	PC180M	34	1470	12.26	94.2	93.5	92	0.8	0.75	0.64	180	700	225	0.851
22	30	PC180L	40	1480	14.48	94.5	94.3	93.4	0.8	0.75	0.63	225	750	275	0.95
30	40	PC200L	52	1480	19.74	94.9	94.2	93.5	0.8	0.82	0.76	275	550	325	1.978
37	50	PC225S	63	1480	24.35	95.2	95	94.5	0.9	0.82	0.74	180	700	225	3.755
45	60	PC225M	76	1480	29.61	95.4	95	94.5	0.9	0.82	0.74	180	700	225	3.762
55	75	PC250M	90	1485	36.07	95.7	95.4	94.7	0.9	0.83	0.75	275	750	350	7.224
75	100	PC280S	128	1485	49.19	96.0	95.8	95.0	0.9	0.8	0.7	225	700	275	11.862
90	120	PC280M	153	1485	59.03	96.1	95.7	95.0	0.9	0.8	0.7	225	700	275	12.401
110	150	PC315S	187	1485	72.15	96.3	95.9	95.2	0.9	0.8	0.7	225	700	275	14.378
132	180	PC315M	209	1488	86.4	96.4	95.9	95.3	0.9	0.8	0.7	225	700	275	15.186
160	215	PC315L	258	1488	104.73	96.6	96.2	95.4	0.9	0.9	0.88	160	700	225	26.152
200	270	PC315L	313	1488	130.91	96.7	96.4	95.5	0.9	0.9	0.88	160	700	225	28

PRODUCT PORTFOLIO & PERFORMANCE DATA

Performance Data for Apex Series Motors Complying to IE4 Class of IEC 60034-30-1:2014/ IS 12615:2018

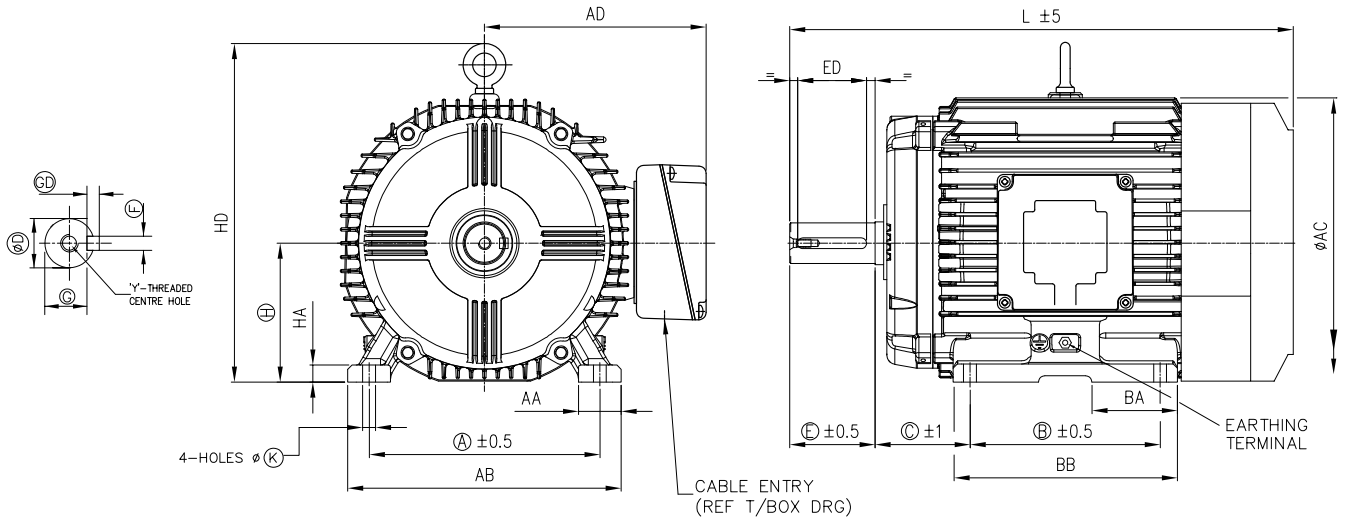
Voltage	415 V +/- 10%	Type	Squirrel cage (SCR)	Ambient	50 Deg C
Frequency	50 Hz +/- 5%	Duty	S1	Temp rise (R)	70 Deg C
Combined	+/- 10% (absolute sum)	Insula-tion	Class 'F' with Class 'B' temp. rise	Degree of Protection	IP55

SUPER PREMIUM EFFICIENCY – IE4 6 Pole / 1000 RPM

RATED POWER		FRAME	Current	FL	FL	Efficiency %			Power Factor			D.O.L STARTING			Gd^2
kW	HP	-	415V	SPEED RPM	KG-M	FL	3/4 L	1/2 L	FL	3/4 L	1/2 L	STT %FLT	SCC %FLC	POT %FLT	kgm^2
0.75	1	PC90S	1.9	950	0.77	82.7	82	80	0.7	0.58	0.45	200	500	250	0.0191
1.1	1.5	PC90L	2.7	935	1.15	84.5	83.8	81.8	0.7	0.58	0.45	200	600	250	0.0255
1.5	2	PC100L	3.7	940	1.55	85.9	84.5	82.4	0.7	0.59	0.5	200	500	250	0.045
2.2	3	PC112M	5.3	950	2.26	87.4	86.8	84	0.7	0.65	0.5	150	700	200	0.094
3.7	5	PC132M	7.9	970	3.72	89.3	88.5	87	0.7	0.66	0.54	150	600	200	0.2581
5.5	7.5	PC132M	12	965	5.55	90.5	89.8	87.5	0.7	0.64	0.51	200	600	250	0.2896
7.5	10	PC160M	16	980	7.45	91.3	90.8	89.6	0.7	0.64	0.53	170	500	200	0.4977
11	15	PC160L	22	978	10.96	92.3	91.9	91.2	0.8	0.73	0.7	180	600	250	0.636
15	20	PC180L	29	985	14.83	92.9	92	91.3	0.8	0.74	0.64	200	700	250	1.355
18.5	25	PC200L	34	985	18.29	93.4	92.8	91	0.8	0.77	0.68	160	600	200	2.0412
22	30	PC200L	42	988	21.69	93.7	93	92.5	0.8	0.75	0.71	150	600	200	2.2925
30	40	PC225M	57	990	29.52	94.2	93.9	92.5	0.8	0.7	0.6	160	600	200	3.7633
37	50	PC250M	67	990	36.4	94.5	94.3	93.5	0.8	0.77	0.68	160	600	200	6.539
45	60	PC280S	80	990	44.27	94.8	94.5	93.8	0.8	0.77	0.72	170	600	210	12.812
55	75	PC280M	96	990	54.11	95.1	94.8	94.1	0.8	0.8	0.75	200	700	250	14.137
75	100	PC315S	129	990	73.79	95.4	95.1	94.3	0.9	0.82	0.74	160	650	200	24.272
90	120	PC315M	155	990	88.55	95.6	95.3	94.5	0.9	0.82	0.74	225	700	275	25.125
110	150	PC315L	186	990	108.22	95.8	95.6	94.8	0.9	0.82	0.74	160	650	200	29.851
132	180	PC315L	222	990	129.87	96.0	95.8	95	0.9	0.82	0.74	160	650	200	30.125
160	215	PC315L	269	990	157.41	96.2	95.9	95.2	0.9	0.82	0.74	160	650	200	32.985

DIMENSION DRAWING

Super Premium Efficiency IE4 Series Motors – TEFC 3 Phase Squirrel Cage Induction Motors



2 POLE AND UP																				
Frame	A	B	C	H	AA	AB	BA	BB	K	D	E	ED	F	GD	G	Y	AD	AC	L	HD	HA
PC80	125	100	50	80.0 / 79.7	35	158	--	127	10.5 / 10.0	19.009 / 18.996	40	32	6.00 / 5.97	6.0 / 5.97	15.5 / 15.3	M6X16	127	162	278	160	10
PC90S	140	100	56	90.0 / 89.7	35	175	--	150	10.5 / 10.0	24.009 / 23.996	50	40	8.00 / 7.96	7.0 / 6.9	20.0 / 19.8	M8X19	135	180	322	232	12
PC90L	140	125	56	90.0 / 89.7	38	175	--	195	10.5 / 10.0	24.009 / 23.996	50	40	8.00 / 7.96	7.0 / 6.9	20.0 / 19.8	M8X19	135	190	365	232	12
PC100L	160	140	63	100.0 / 99.7	34	195	--	206	12.5 / 12.0	28.009 / 27.996	60	50	8.00 / 7.96	7.0 / 6.9	24.0 / 23.8	M10X22	170	220	415	262	12
PC112M	190	140	70	112.0 / 111.7	40	230	68	194	12.5 / 12.0	28.009 / 27.996	60	50	8.00 / 7.96	7.0 / 6.9	24.0 / 23.8	M10X22	180	240	410	285	16
PC132S	216	140	89	132.0 / 131.7	40	256	80	210	12.5 / 12.0	38.018 / 38.002	80	70	10.00 / 9.964	8.0 / 7.9	33.0 / 32.8	M12X28	200	285	485	320	18
PC132M	216	178	89	132.0 / 131.7	40	256	80	210	12.5 / 12.0	38.018 / 38.002	80	70	10.00 / 9.964	8.0 / 7.9	33.0 / 32.8	M12X28	200	285	485	320	18
PC160M	254	210	108	160.0 / 159.5	60	314	100	298	15.5 / 15.0	42.018 / 42.002	110	80	12.00 / 11.957	8.0 / 7.9	37.0 / 36.8	M16X32	280	334	650	380	22
PC160L	254	254	108	160.0 / 159.5	60	314	100	298	15.5 / 15.0	42.018 / 42.002	110	80	12.00 / 11.957	8.0 / 7.9	37.0 / 36.8	M16X32	280	334	650	380	22
PC180M	279	241	121	180.0 / 179.5	65	344	96	324	15.5 / 15.0	48.018 / 48.002	110	80	14.00 / 13.957	9.0 / 8.9	42.5 / 42.3	M16X32	305	384	720	430	22
PC180L	279	279	121	180.0 / 179.5	65	344	96	324	15.5 / 15.0	48.018 / 48.002	110	80	14.00 / 13.957	9.0 / 8.9	42.5 / 42.3	M16X32	305	384	720	430	22
PC200L	318	305	133	200.0 / 199.5	70	388	100	356	19.5 / 19.0	55.030 / 55.011	110	80	16.00 / 15.957	10.0 / 9.91	49.0 / 48.8	M20X40	340	440	790	485	25

4 POLE AND UP

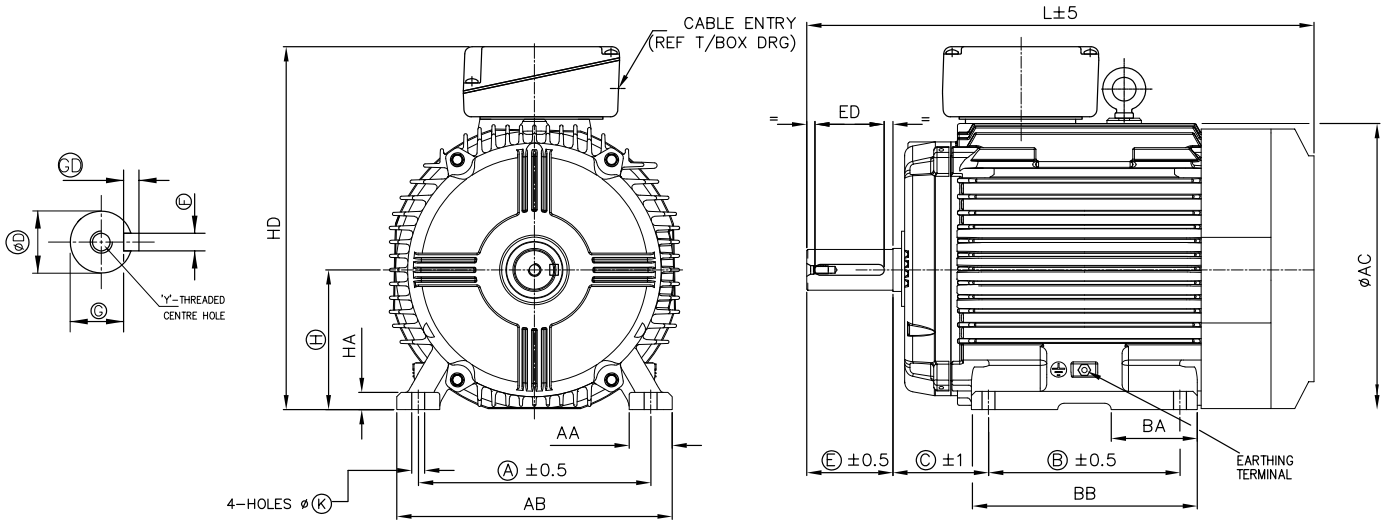
Frame	A	B	C	H	AA	AB	BA	BB	K	D	E	ED	F	GD	G	Y	AD	AC	L	HD	HA
PC225S	356	286	149	225.0 / 224.5	70	426	109	374	19.5 / 19.0	60.030 / 60.011	140	110	18.00 / 17.957	11.00 / 10.91	53.0 / 52.8	M20X40	393	490	887	540	25
PC225M	356	311	149	225.0 / 224.5	70	426	109	374	19.5 / 19.0	60.030 / 60.011	140	110	18.00 / 17.957	11.00 / 10.91	53.0 / 52.8	M20X40	393	490	887	540	25
PC250S	406	311	168	250.0 / 249.5	78	484	135	420	24.5 / 24.0	65.030 / 65.011	140	110	18.00 / 17.957	11.00 / 10.91	58.0 / 57.8	M20X40	425	535	980	604	35
PC250M	406	349	168	250.0 / 249.5	78	484	135	420	24.5 / 24.0	65.030 / 65.011	140	110	18.00 / 17.957	11.00 / 10.91	58.0 / 57.8	M20X40	425	535	980	604	35
PC280S	457	368	190	280.0 / 279.0	85	545	164	488	24.5 / 24.0	75.030 / 75.011	140	110	20.00 / 19.948	12.00 / 11.91	67.5 / 67.3	M20X40	530	585	1085	690	35
PC280M	457	419	190	280.0 / 279.0	85	545	164	488	24.5 / 24.0	75.030 / 75.011	140	110	20.00 / 19.948	12.00 / 11.91	67.5 / 67.3	M20X40	530	585	1085	690	35
PC315S	508	406	216	315.0 / 314.0	110	610	230	630	28.5 / 28.0	80.030 / 80.011	170	140	22.00 / 21.95	14.0 / 13.9	71.0 / 70.8	M20X40	527	658	1290	756	38
PC315M	508	457	216	315.0 / 314.0	110	610	230	630	28.5 / 28.0	80.030 / 80.011	170	140	22.00 / 21.95	14.0 / 13.9	71.0 / 70.8	M20X40	527	658	1290	756	38
PC315L	508	508	216	315.0/ 314.0	110	610	345	740	28.5 / 28.0	80.030 / 80.011	170	140	22.00 / 21.95	14.0 / 13.9	71.0 / 70.8	M20X40	540	655	1390	755	40

2 POLE

Frame	A	B	C	H	AA	AB	BA	BB	K	D	E	ED	F	GD	G	Y	AD	AC	L	HD	HA
PC225S	356	286	149	225.0 224.5	70	426	109	374	19.5 19.0	55.030 55.011	110	80	16.00 15.957	10.0 9.91	49.0 48.8	M20X40	465	490	860	555	25
PC225M	356	311	149	225.0 224.5	70	426	109	374	19.5 19.0	55.030 55.011	110	80	16.00 15.957	10.0 9.91	49.0 48.8	M20X40	465	490	860	555	25
PC250S	406	311	168	250.0 249.5	78	484	135	420	24.5 24.0	60.030 60.011	140	110	18.00 17.957	11.0 10.91	53.0 52.8	M20X40	495	535	970	630	35
PC250M	406	349	168	250.0 249.5	78	484	135	420	24.5 24.0	60.030 60.011	140	110	18.00 17.957	11.0 10.91	53.0 52.8	M20X40	495	535	970	630	35
PC280S	457	368	190	280.0 279.0	85	545	164	488	24.5 24.0	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	530	585	1085	690	35
PC280M	457	419	190	280.0 279.0	85	545	164	488	24.5 24.0	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	530	585	1085	690	35
PC315S	508	406	216	315.0 314.0	110	610	164	640	28.0 28.0	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	570	655	1260	755	35
PC315M	508	457	216	315.0 314.0	110	610	164	640	28.0 28.0	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	570	655	1260	755	35
PC315L	508	508	216	315.0 314.0	110	610	235	740	28.0 28.0	70.030 70.013	140	110	20.00 19.948	12.00 11.91	62.5 62.3	M20X40	570	655	1360	755	38

DIMENSION DRAWING

Super Premium Efficiency IE4 Series Motors – TEFC 3 Phase Squirrel Cage Induction Motors



2 POLE AND UP																			
Frame	A	B	C	H	AA	AB	BA	BB	K	D	E	ED	F	GD	G	Y	AC	L	HD	HA
PC80	125	100	50	80.0 / 79.7	35	158	--	127	10.0 / 10.5	19.009 / 18.996	40	32	6.00 / 5.97	6.0 / 5.97	15.5 / 15.3	M6X16	162	278	212	10
PC90S	140	100	56	90.0 / 89.7	35	175	--	150	10.0 / 10.5	24.009 / 23.996	50	40	8.00 / 7.96	7.0 / 6.9	20.0 / 19.8	M8X19	180	322	225	12
PC90L	140	125	56	90.0 / 89.7	38	175	--	195	10.0 / 10.5	24.009 / 23.996	50	40	8.00 / 7.96	7.0 / 6.9	20.0 / 19.8	M8X19	190	365	225	12
PC100L	160	140	63	100.0 / 99.7	34	195	--	206	12.0 / 12.5	28.009 / 27.996	60	50	8.00 / 7.96	7.0 / 6.9	24.0 / 23.8	M10X22	220	415	270	12
PC112M	190	140	70	112.0 / 111.7	40	230	68	194	12.0 / 12.5	28.009 / 27.996	60	50	8.00 / 7.96	7.0 / 6.9	24.0 / 23.8	M10X22	240	410	300	16
PC132S	216	140	89	132.0 / 131.7	40	256	80	210	12.0 / 12.5	38.018 / 38.002	80	70	10.00 / 9.964	8.0 / 7.9	33.0 / 32.8	M12X28	285	485	335	18
PC132M	216	178	89	132.0 / 131.7	40	256	80	210	12.0 / 12.5	38.018 / 38.002	80	70	10.00 / 9.964	8.0 / 7.9	33.0 / 32.8	M12X28	285	485	335	18
PC160L	254	254	108	160.0 / 159.5	60	314	100	298	15.0 / 15.5	42.018 / 42.002	110	80	12.00 / 11.957	8.0 / 7.9	37.0 / 36.8	M16X32	334	650	440	22
PC180L	279	279	121	180.0 / 179.5	65	344	96	324	15.0 / 15.5	48.018 / 48.002	110	80	14.00 / 13.957	9.0 / 8.9	42.5 / 42.3	M16X32	384	720	480	22
PC200L	318	305	133	200.0 / 199.5	70	388	100	356	19.5 / 19.0	55.030 / 55.011	110	80	16.00 / 15.957	10.0 / 9.91	49.0 / 48.8	M20X40	430	790	570	25

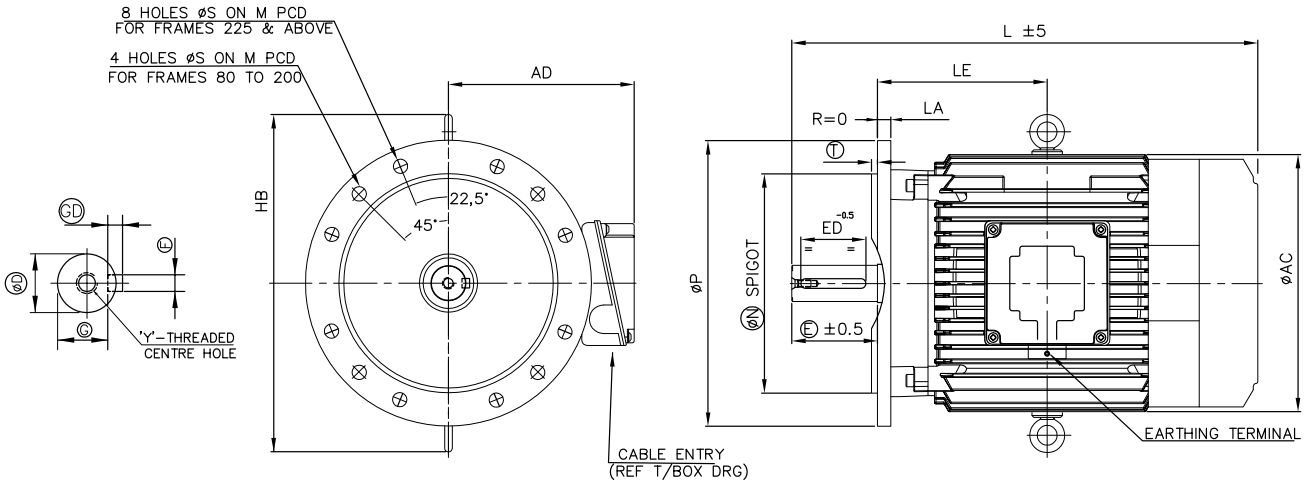
4 POLE AND UP																				
Frame	A	B	C	H	AA	AB	BA	BB	K	D	E	ED	F	GD	G	Y	AC	L	HD	HA
PC225M	356	311	149	225.0/ 224.5	70	426	109	374	19.5 / 19.0	60.030 / 60.011	140	110	18.00/ 17.957	11.0 / 10.91	53.0 / 52.8	M20X40	490	890	690	25
PC250M	406	349	168	250.0/ 249.5	78	484	135	420	24.5/ 24.0	65.030 / 65.011	140	110	18.00 / 17.957	11.0 / 10.91	58.0 / 57.8	M20X40	535	970	745	25
PC280M	457	419	190	280.0 / 279.5	85	545	164	488	24.5 / 24.0	75.030 / 75.011	140	110	20.00 / 19.94	12.0 / 11.9	67.5 / 67.0	M20X40	585	1085	755	35
PC315L	508	508	216	315.0 / 314.5	110	610	235	740	28.5 / 28.0	80.030 / 80.011	170	140	22.00 / 21.94	14.0 / 13.9	71.0 / 70.8	M20X40	658	1390	850	38

2 POLE																				
Frame	A	B	C	H	AA	AB	BA	BB	K	D	E	ED	F	GD	G	Y	AC	L	HD	HA
PC225S	356	286	149	225.0 224.5	70	426	109	374	19.5 19.0	55.030 55.011	110	80	16.00 15.957	10.0 9.91	49.0 48.8	M20X40	490	860	690	25
PC225M	356	311	149	225.0 224.5	70	426	109	374	19.5 19.0	55.030 55.011	110	80	16.00 15.957	10.0 9.91	49.0 48.8	M20X40	490	860	690	25
PC250S	406	311	168	250.0 249.5	78	484	135	420	24.5 24.0	60.030 60.011	140	110	18.00 17.957	11.0 10.91	53.0 52.8	M20X40	535	970	745	35
PC250M	406	349	168	250.0 249.5	78	484	135	420	24.5 24.0	60.030 60.011	140	110	18.00 17.957	11.0 10.91	53.0 52.8	M20X40	535	970	745	35
PC280S	457	368	190	280.0 279.0	85	545	164	488	24.5 24.0	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	585	1085	810	35
PC280M	457	419	190	280.0 279.0	85	545	164	488	24.5 24.0	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	585	1085	810	35
PC315S	508	406	216	315.0 314.0	110	610	164	640	28.5 28.0	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	655	1260	885	35
PC315M	508	457	216	315.0 314.0	110	610	164	640	28.5 28.0	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	655	1260	885	35
PC315L	508	508	216	315.0 314.0	110	610	235	740	28.5 28.0	70.030 70.011	140	110	20.00 19.948	12.00 11.91	62.5 62.3	M20X40	655	1360	885	38

We put all our energy into saving yours!

DIMENSION DRAWING

Super Premium Efficiency IE4 Series Motors – TEFC 3 Phase Squirrel Cage Induction Motors



2 POLE AND UP																	
Frame	**D**	**E**	**ED**	**F**	**GD**	**G**	**Y**	**AD**	**AC**	**L**	**M Tol**	**N Tol**	**P**	**S**	**T**	**LA**	**LE**	**HB**
PC80	19.009 / 18.996	40	32	6.00 / 5.97	6.0 / 5.97	15.5 / 15.3	M6X16	127	162	278	165.3 / 164.7	130.014 / 129.989	200	12	3.5	12	105	--
PC90S	24.009 / 23.996	50	40	8.00 / 7.96	7.0 / 6.9	20.0 / 19.8	M8X19	135	180	322	165.3 / 164.7	130.014 / 129.989	200	12	3.5	12	140	140
PC90L	24.009 / 23.996	50	40	8.00 / 7.96	7.0 / 6.9	20.0 / 19.8	M8X19	135	190	365	165.3 / 164.7	130.014 / 129.989	200	12	3.5	12	140	140
PC100L	28.009 / 27.996	60	50	8.00 / 7.96	7.0 / 6.9	24.0 / 23.8	M10X22	170	220	415	215.3 / 214.7	180.014 / 179.989	250	14.5	4	14.5	95	150
PC112M	28.009 / 27.996	60	50	8.00 / 7.96	7.0 / 6.9	24.0 / 23.8	M10X22	180	240	410	215.3 / 214.7	180.014 / 179.989	250	15	4	12	153	346
PC132S	38.018 / 38.002	80	70	10.00 / 9.964	8.0 / 7.9	33.0 / 32.8	M12X28	200	285	485	265.3 / 264.7	230.016 / 229.987	300	15	4	14	178	366
PC132M	38.018 / 38.002	80	70	10.00 / 9.964	8.0 / 7.9	33.0 / 32.8	M12X28	200	285	485	265.3 / 264.7	230.016 / 229.987	300	15	4	14	178	366
PC160M	42.018 / 42.002	110	80	12.00 / 11.957	8.0 / 7.9	37.0 / 36.8	M16X32	280	334	650	300.5 / 299.5	250.016 / 249.987	350	19	5	15	235	440
PC160L	42.018 / 42.002	110	80	12.00 / 11.957	8.0 / 7.9	37.0 / 36.8	M16X32	280	334	650	300.5 / 299.5	250.016 / 249.987	350	19	5	15	235	440
PC180M	48.018 / 48.002	110	80	14.00 / 13.957	9.0 / 8.9	42.5 / 42.3	M16X32	305	384	720	300.5 / 299.5	250.016 / 249.987	350	19	5	15	260	500
PC180L	48.018 / 48.002	110	80	14.00 / 13.957	9.0 / 8.9	42.5 / 42.3	M16X32	305	384	720	300.5 / 299.5	250.016 / 249.987	350	19	5	15	260	500
PC200L	55.030/ 55.011	110	80	16.00 / 15.957	10.00/ 9.91	49.0 / 48.8	M20X40	324	420	783	350.5 / 349.5	300.018 / 299.982	400	19	5	16	286	525

4 POLE AND UP																	
Frame	D	E	ED	F	GD	G	Y	AD	AC	L	M Tol	N Tol	P	S	T	LA	LE	HB
PC225S/M	60.030/ 60.011	140	110	18.00 / 17.957	11.00/ 10.91	53.0 / 52.8	M20X40	465	490	890	400.5 / 399.5	350.018 / 349.982	450	19	5	18	305	550
PC250S/M	65.030 / 65.011	140	110	18.00 / 17.957	11.00/ 10.91	58.0 / 57.8	M20X40	495	535	970	500.5 / 499.5	450.020 / 449.980	550	19	5	22	349	670
PC280S/M	75.030 / 75.011	140	110	20.00 / 19.948	12.00/ 11.91	67.5 / 67.3	M20X40	530	585	1085	500.5 / 499.5	450.020 / 449.980	550	19	5	22	400	820
PC315S/M/L	90.035 / 90.011	170	140	25.00 / 24.948	14.00/ 13.91	81.0 / 80.8	M24X40	570	655	1390	601.0 / 599.0	550.022 / 549.978	660	24	6	25	530	880

2 POLE																	
Frame	D	E	ED	F	GD	G	Y	AD	AC	L	M Tol	N Tol	P	S	T	LA	LE	HB
PC225S/M	55.030 55.011	110	80	16.00 15.957	10.0 9.91	49.0 48.8	M20X40	465	490	890	400.5 399.5	350.018 349.982	450	19	5	18	305	550
PC250S/M	60.030 60.011	140	110	18.00 17.957	11.0 10.91	53.0 52.8	M20X40	495	535	970	500.0 499.5	450.020 449.980	550	19	5	20	339	670
PC280S/M	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	530	585	1085	500.0 499.5	450.020 449.980	550	19	5	22	400	820
PC315S/M/L	65.030 65.011	140	110	18.00 17.957	11.0 10.91	58.0 57.8	M20X40	530	590	1360	601.0 599.0	550.022 549.978	660	24	6	25	531	880

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IE4 MOTORS: Energy Efficient Motors Efficiency Comparison

Efficiency values defined in IEC 60034-30-1:2014/ IS 12615:2018

	IE1 (50Hz)				IE2 (50Hz)				IE3 (50Hz)				IE4 (50Hz)			
Rated Power (kW)	2-poles	4-poles	6-poles	8-poles	2-poles	4-poles	6-poles	8-poles	2-poles	4-poles	6-poles	8-poles	2-poles	4-poles	6-poles	8-poles
0.75	72.1	72.1	70	61.2	77.4	79.6	75.9	66.2	80.7	82.5	78.9	75	83.5	85.7	82.7	78.4
1.1	75	75	72.9	66.5	79.6	81.4	78.1	70.8	82.7	84.1	81	77.7	85.2	87.2	84.5	80.8
1.5	77.2	77.2	75.2	70.2	81.3	82.8	79.8	74.1	84.2	85.3	82.5	79.7	86.5	88.2	85.9	82.6
2.2	79.7	79.7	77.7	74.2	83.2	84.3	81.8	77.6	85.9	86.7	84.3	81.9	88	89.5	87.4	84.5
3	81.5	81.5	79.7	77	84.6	85.5	83.3	80	87.1	87.7	85.6	83.5	89.1	90.4	88.6	85.9
4	83.1	83.1	81.4	78.2	85.8	86.6	84.6	81.9	88.1	88.6	86.8	84.8	90	91.1	89.5	87.1
5.5	84.7	84.7	83.1	81.4	87	87.7	86	83.8	89.2	89.6	88	86.2	90.9	91.9	90.5	88.3
7.5	86	86	84.7	83.1	88.1	88.7	87.2	85.3	90.1	90.4	89.1	87.3	91.7	92.6	91.3	89.3
11	87.6	87.6	86.4	85	89.4	89.8	88.7	86.9	91.2	91.4	90.3	88.6	92.6	93.3	92.3	90.4
15	88.7	88.7	87.7	86.2	90.3	90.6	89.7	88	91.9	92.1	91.2	89.6	93.3	93.9	92.9	91.2
18.5	89.3	89.3	88.6	86.9	90.9	91.2	90.4	88.6	92.4	92.6	91.7	90.1	93.7	94.2	93.4	91.7
22	89.9	89.9	89.2	87.4	91.3	91.6	90.9	89.1	92.7	93	92.2	90.6	94	94.5	93.7	92.1
30	90.7	90.7	90.2	88.3	92	92.3	91.7	89.8	93.3	93.6	92.9	91.3	94.5	94.9	94.2	92.7
37	91.2	91.2	90.8	88.8	92.5	92.7	92.2	90.3	93.7	93.9	93.3	91.8	94.8	95.2	94.5	93.1
45	91.7	91.7	91.4	89.2	92.9	93.1	92.7	90.7	94	94.2	93.7	92.2	95	95.4	94.8	93.4
55	92.1	92.1	91.9	89.7	93.2	93.5	93.1	91	94.3	94.6	94.1	92.5	95.3	95.7	95.1	93.7
75	92.7	92.7	92.6	90.3	93.8	94	93.7	91.6	94.7	95	94.6	93.1	95.6	96	95.4	94.2
90	93	93	92.9	90.7	94.1	94.2	94	91.9	95	95.2	94.9	93.4	95.8	96.1	95.6	94.4
110	93.3	93.3	93.3	91.1	94.3	94.5	94.3	92.3	95.2	95.4	95.1	93.7	96	96.3	95.8	94.7
132	93.5	93.5	93.5	91.5	94.6	94.7	94.6	92.6	95.4	95.6	95.4	94	96.2	96.4	96	94.9
160	93.8	93.8	93.8	91.9	94.8	94.9	94.8	93	95.6	95.8	95.6	94.3	96.3	96.6	96.2	95.1
200	94	94	94	92.5	95	95.1	95	93.5	95.8	96	95.8	94.6	96.5	96.7	96.3	95.4
250	94	94	94	92.5	95	95.1	95	93.5	95.8	96	95.8	94.6	96.5	96.7	96.5	95.4
315	94	94	94	92.5	95	95.1	95	93.5	95.8	96	95.8	94.6	96.5	96.7	96.6	95.4
355	94	94	94	92.5	95	95.1	95	93.5	95.8	96	95.8	94.6	96.5	96.7	96.6	95.4
400	94	94	94	92.5	95	95.1	95	93.5	95.8	96	95.8	94.6	96.5	96.7	96.6	95.4
450	94	94	94	92.5	95	95.1	95	93.5	95.8	96	95.8	94.6	96.5	96.7	96.6	95.4
500-1000	94	94	94	92.5	95	95.1	95	93.5	95.8	96	95.8	94.6	96.5	96.7	96.6	95.4

Note:

1. It must be noted that efficiency values are only comparable if they are measured using the same method.
2. Any efficiency values between IE1 & IE2 values are to be considered as IE1 class for motors.
3. Any efficiency values between IE2 & IE3 values are to be considered as IE2 class for motors.
4. The full load efficiency of any individual motor when tested at rated voltage and frequency, shall not be less than the rated efficiency minus the tolerances in accordance with IEC 60034-1
5. Energy efficient cage induction motors are typically built with more active material i.e. longer core length and / or greater core diame ter in order to achieve the higher efficiency. For this reason, the starting performance of energy efficient motors differs somewhat from with lower efficiency. On average, the locked rotor current increases by 10-15% for motors from one energy efficiency class compared to motors of the next higher class with same output power. Individually, the difference depends on the construction principle of the motor and should be checked with the manufacturer when replacing motors in an existing installation. It must be ensured that the control protective device is properly seized and set up.
6. As per IEC60034-30: 2014 motors are specially designed for – special requirement of the driven machine (eg. Heavy starting duty, special torque stiffness and/or breakdown torque characteristics, large number of start/stop cycles, very low rotor inertia). Special characteristics of grind supply (eg.limited starting current, high tolerances of voltage and/or frequency). Special ambient conditions (eg. Very low ambient temperature, smoke extraction motors, high altitudes o installation) may not be able to achieve higher efficiency classifications.

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Aware & concerned about the environmental issue,
CG has developed special packing case in fabrication.

With this initiative more than

7200 trees are being saved every year

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