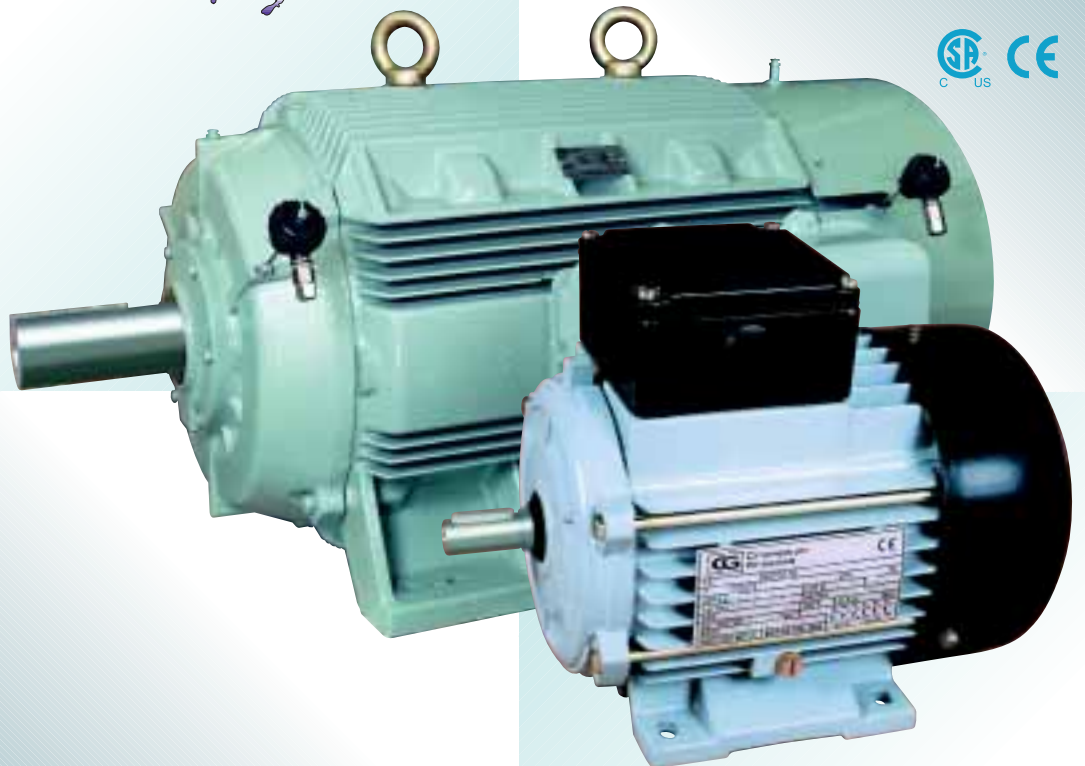




The Efficient
**Industrial
Motors**
*Power Behind
The Drive*



**Energy Efficient
LT, TEFC, SCR Motors
Frame 63 to 355**



**CG Crompton
Greaves**

..... Since 1937

LT INDUSTRIAL MOTORS



Automatic Winding Machine,
STATOMAT - Germany



Endshield Burnishing



VPI Plant

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RANGE

Output	Upto 400 kW
Frames	IEC (63 to 355) and AD - Al. Pressure Diecast D/ND - Cast Iron NEMA (143 to 405) EAD - Al. Pressure Diecast END - Cast Iron
Enclosures	Totally Enclosed Fan Cooled (TEFC), Totally Enclosed (TE), Drip Proof (DP), Flameproof (Type 'd'), Increased safety (Type 'e'), Non Sparking (Type 'N'), Pressurised Type (Type 'p')
Rotor	Squirrel cage (SCR) Slipring (SR)
Mounting	Foot Mounting (B3, B6, B7, B8, V5, V6) Flange Mounting (B5, V1, V3) Face Mounting (B14, V18, V19)

Voltage (Mean)	100V to 660V
Frequency (Mean)	5 Hz to 75 Hz
Protection	Up to IP56
Duty	S1 to S9
Vibration Level	Min. 5 microns
Ambient	-39°C to +65°C
Insulation Class	Class F



Automatic Winding Machine, OLMC - Italy



Test Plant, BENNING - Germany



Trickle Impregnation

LT, TEFC, SCR MOTORS FRAME 63 TO 355

Enclosure	Frames	Mounting
TEFC/TE	63 to 355LX	B3, B5, B6, B7, B8, B34, B35, V1, V3, V5, V6, V36, V18
DP	160 to 315MX	B3, B5, B35, V1, V3, V15, V36
Type 'd'	80 to 315L	B3, B5, B35, V1, V3, V15, V36 B14, B34 (Only for frame 80 and 160 to 180) V18, V19 (Only for frame 80)
Type 'e'	90S to 315L	B3, B5, B6, B7, B8, B14, B35, B34, V1, V3, V15, V36, V18, V19
Type 'N'	90S to 315L	B3, B5, B14, B35, V1, V3, V5, V6, V15, V36
Type 'p'	90L to 315L	B3, B5, B35, V1, V3, V5, V6, V15, V36

Frames	Rotor	Enclosure	Output kW (S1 duty, 50/60 Hz)			
			2P	4P	6P	8P
AD63/ND355LX	SCR	TEFC	0.18-400	0.18-400	0.37-275	0.37-225
C160/C315MX	SCR	SPDP	9.3-250	9.3-250	7.5-185	3.7-132
NC100/NC132	SCR	DV	2.2-30	2.2-30	1.5-18.5	3.7-15
E80/E315L	SCR	FLP	0.37-200	0.37-200	0.37-160	0.37-132
DW112/NDW355LX	SR	TEFC	-	2.2-250	2.2-160	1.5-132
CW160/CW315MX	SR	SPDP	-	7.5-225	5.5-160	3.7-132
EW250/EW315L	SR	FLP	-	26-160	18.5-132	15-100

The TEFC, squirrel cage motors are prime movers to the industry, commercial establishments and agriculture. They are sturdy, reliable and energy efficient drives for all types of equipment. A wide range, manufactured at state-of-the-art Plant, ISO 9001 certified by BVQI, UK, covers all applications.

CONSTRUCTION

Frames AD are powder coated high-grade diecast aluminium and frames D/ND are painted high-grade cast iron. These are machined to close tolerances for perfect alignment, fit and rigid construction.

Terminal boxes of frames upto 132M are of diecast aluminium. The terminal box can be turned through 360° in steps of 90°, except for frames AD80, which has terminal box integral with body, having cable entry on either side. An O-ring is provided between the terminal box and cover for frames upto 132M. Terminal boxes for frames D/ND160 and above are of cast iron having flanged joints with suitable gaskets and are with conduit entries having BS threading, and where required, with metric or special Pg threading suitable for German Pg glands.

Standard cast iron motors are supplied with terminal box on right side looking from driving end, optionally on top, on request. All aluminium frames have terminal box on top as standard practice.

Polypropylene fans are provided for frames upto 180 and cast iron or aluminium fans for all higher frames. The fans are suitable for both directions of rotation, unless otherwise specified.

The fan covers are sheet steel.

All motors in frame 160 and above have drain holes at their lowest position.

STANDARDS CONFORMANCE

The motors conform to IEC 34, IEC 72, BS 4999, BS 5000, BS 3979 and BS4999 standards.

The motors meet EN 60034, EN 55014, EN 50082-1/2, EN 61000-3-2, VDE 0839 Teil 82-2, VDE 0875 Teil 14 standards and carry **CE** mark, for Europe.

Motors are also offered to CSA C22.2 No. 100-95 and UL 1004 for safety and carry **CSA** mark, for Canada and U.S.A.

The standard TEFC, SCR, 50Hz motors are with EFF2 (Improved) level efficiencies as per CEMEP Agreement with EU for Energy Efficient Motors. Motors with EFF1 (High) level efficiencies are offered on request.

TEST FACILITIES

Fully calibrated Test Plant, validated by CSA, Canada by cross testing, is equipped with modern test facilities for design verification, type tests and routine tests.

- Fully Automatic Test Plant with integrated Power Analyzer – both from Benning, Germany.
- Torque Transducers from Dr. Staiger Mohilo, Germany up to 3000 NM.
- Additional Power Analyzer from Voltech, U.K.
- Stable Power Supply from Inverter Driven M. G. Sets for reliable testing.

ROTOR

The shaft is of high grade rolled steel, with drilled and tapped hole provided at driving end as standard practice.

Rotors are dynamically balanced to comply with the "Normal" requirements of IEC 34. "Precision Class" can be offered, if required.

BEARINGS

For frames up to ND225, bearings with metallic seal (type ZZ) or rubber seal (type RS) are provided.

CONNECTIONS

All motors are with stud type terminals in the terminal box.

50 Hz motors upto 2.2 kW are with three terminals for DOL starting and motors above 2.2 kW, are with six terminals for star-delta starting. Please refer to notes for 60 Hz motors. An additional earthing terminal is inside the terminal box.

ACCESSORIES

Thermistors and/or Space Heaters (Frame 132 and above) can be offered on request.

Type C (up to frame 180) and D Flanges are available for changing mounting at site to B5, B14, B35 etc.

SPECIAL FEATURES

Special features such as non-standard shaft, dual voltage design, anticorrosive protection, high ambient running, class H insulation, different duty rating etc. can be provided to meet specific requirements. Details are available on request.

The motors are offered for up to 660 Volts and for 220/380/440 Volts with 12 leads, 50/60 Hz AC supply.

The following dual voltage motors are also offered to customer specific requirements.

- Voltage Ratio 1:1.732 with 6 leads.
- Voltage Ratio 1:2 with 9 leads.
- Voltage Ratio 1:1.732:2 with 12 leads.

Additionally, special frame sizes to suit South African and Australian requirements are also available. For any other features, please refer with details.

PERFORMANCE DATA, 50Hz

Voltage : 415 V, 50 Hz, 3 Phase AC
Enclosure : Totally Enclosed Fan Cooled (TEFC)
Degree of Protection : IP55

Rating : Continuous Duty, S1
Insulation Class : 'F'
Voltage Variation : ± 10%
Frequency Variation : ± 5%

Combined Variation : ± 10%
Ambient : 45°C
Temperature Rise : max.75°C by resistance metod

OUTPUT		P O L E	FRAME SIZE	FL RPM	FL AMPS	FLT Kg-m	EFFICIENCY (%)			POWER FACTOR			DOL STG.		POT %FLT	GD ² KgM ²	NET WEIGHT Kg.
kW	HP						FL	3/4 LOAD	1/2 LOAD	FL	3/4 LOAD	1/2 LOAD	STG. T %FLT	STG. C %FLC			
0.18	0.25	2	AD63	2700	0.50	0.06	64.0	62.0	58.0	0.79	0.68	0.59	300	500	350	0.001	5.6
		4	AD63	1330	0.50	0.13	64.0	62.0	58.0	0.76	0.73	0.60	200	400	250	0.003	5.6
		6	AD71	900	0.55	0.19	65.0	64.0	60.0	0.68	0.60	0.50	200	400	250	0.004	7.0
		8	AD80	670	1.0	0.26	52.0	46.0	36.0	0.50	0.42	0.32	200	400	250	0.011	10
0.25	0.33	2	AD63	2700	0.65	0.09	68.0	67.0	63.0	0.79	0.72	0.60	275	500	325	0.001	5.6
		4	AD71	1350	0.75	0.18	62.0	61.0	55.0	0.76	0.73	0.60	225	400	275	0.004	7.0
		6	AD71	890	1.2	0.27	50.0	45.0	40.0	0.60	0.50	0.40	200	400	250	0.004	7.0
		6	AD80	950	1.0	0.25	61.0	55.0	46.0	0.68	0.58	0.47	200	400	250	0.011	10
8	AD80	670	1.4	0.35	52.0	46.0	36.0	0.50	0.42	0.32	200	400	250	0.011	10		
0.37	0.50	2	AD71	2820	0.95	0.13	68.0	67.0	63.0	0.79	0.72	0.60	275	500	325	0.002	7.0
		4	AD71	1400	0.90	0.26	77.0	76.0	74.0	0.76	0.73	0.60	225	600	275	0.004	7.0
		6	AD/ND80	910	1.05	0.40	69.0	68.0	66.0	0.71	0.63	0.52	210	400	260	0.011	10/17
		8	AD/ND90S	680	1.40	0.53	65.0	64.0	60.0	0.57	0.50	0.40	170	400	220	0.015	13/22
0.55	0.75	2	AD/ND80	2820	1.30	0.19	73.0	72.0	68.0	0.81	0.73	0.62	250	600	300	0.003	10/17
		4	AD/ND80	1410	1.25	0.38	77.0	76.0	74.0	0.78	0.75	0.64	200	500	250	0.007	10/17
		6	AD/ND80	910	1.55	0.59	69.0	68.0	66.0	0.71	0.63	0.52	210	400	260	0.011	10/17
		8	AD/ND90L	680	1.75	0.79	69.0	68.0	64.0	0.63	0.54	0.45	150	400	200	0.021	13/22
0.75	1.00	2	AD/ND80	2820	1.65	0.26	77.0	76.0	74.0	0.81	0.73	0.62	300	600	350	0.003	10/17
		4	AD/ND80	1410	1.75	0.52	77.0	76.0	74.0	0.78	0.75	0.64	200	500	250	0.007	10/17
		6	AD/ND90S	935	2.00	0.78	73.0	71.0	69.0	0.72	0.65	0.58	200	400	250	0.015	13/22
		8	AD/ND100L	700	2.55	1.04	70.0	69.0	64.0	0.58	0.51	0.41	200	400	250	0.030	19/32
1.10	1.50	2*	AD/ND80	2820	2.35	0.38	79.0	78.0	76.0	0.82	0.77	0.70	225	600	275	0.004	10/17
		4	AD/ND90S	1415	2.50	0.76	78.0	76.0	74.0	0.78	0.75	0.64	200	500	250	0.014	13/22
		6	AD/ND90L	935	2.85	1.15	74.0	73.0	70.0	0.72	0.65	0.58	200	400	250	0.021	16/25
		8	AD/ND100L	700	3.30	1.53	72.5	71.0	68.0	0.63	0.54	0.44	175	400	225	0.034	19/35
1.50	2.00	2	AD/ND90S	2830	3.20	0.52	80.0	79.0	77.0	0.82	0.77	0.70	225	600	275	0.006	13/22
		4	AD/ND90L	1415	3.20	1.03	80.0	79.0	77.0	0.81	0.78	0.71	200	500	250	0.019	16/25
		6	AD/ND100L	935	3.80	1.56	76.0	75.0	73.0	0.72	0.65	0.58	200	400	250	0.030	19/32
		8	AD/ND112M	700	4.00	2.09	77.0	77.0	75.0	0.68	0.60	0.52	190	400	240	0.057	29/45
2.20	3.00	2	AD/ND90L	2830	4.60	0.76	81.0	80.0	78.0	0.82	0.77	0.70	300	600	350	0.008	16/25
		4	AD/ND100L	1440	4.60	1.49	82.0	81.0	79.0	0.82	0.78	0.72	200	600	250	0.030	19/32
		6	AD/ND112M	935	5.30	2.29	77.0	76.0	73.0	0.75	0.70	0.60	200	500	250	0.048	29/42
		8	ND132S	710	5.40	3.02	77.5	76.5	73.0	0.73	0.68	0.61	180	450	230	0.174	68.0
3.0	4.0	2	AD100L	2865	6.0	1.01	82.0	81.0	78.0	0.85	0.80	0.72	250	700	300	0.022	19
		4	AD100L	1425	6.4	2.05	81.0	80.0	78.0	0.82	0.76	0.68	200	600	250	0.034	22
		6	AD132S	940	6.5	3.1	84.0	83.0	80.0	0.79	0.75	0.68	200	500	250	0.174	46
		8	AD132M	700	7.6	4.17	78.0	75.0	70.0	0.70	0.66	0.60	170	500	220	0.214	53
3.70	5.00	2	AD/ND100L	2875	7.60	1.25	83.0	82.0	80.0	0.82	0.77	0.70	250	650	300	0.022	19/36
		4	AD/ND112M	1440	7.60	2.50	84.0	83.0	81.0	0.81	0.76	0.69	200	600	250	0.052	29/42
		6	ND132S	950	7.70	3.79	85.0	84.0	82.0	0.79	0.73	0.63	200	600	250	0.174	68.0
		8	ND132M	710	8.60	5.08	80.0	80.0	78.0	0.75	0.70	0.60	180	600	230	0.214	79.0
8	ND160M	710	8.0	5.08	83.0	83.0	81.0	0.74	0.70	0.62	150	500	200	0.46	125		
4.0	5.5	2	AD112M	2865	7.5	1.35	83.0	82.0	79.0	0.88	0.84	0.75	250	650	300	0.030	27
		4	AD112M	1430	8.5	2.72	85.0	84.0	81.0	0.81	0.76	0.69	200	600	250	0.057	29
		6	AD132M	945	8.5	4.12	84.0	83.0	80.0	0.79	0.75	0.68	200	550	250	0.214	53
		8	ND160M	710	8.0	5.48	83.0	83.0	81.0	0.74	0.70	0.62	150	500	200	0.46	121
5.50	7.50	2	AD/ND112M	2880	10.10	1.86	85.0	84.0	82.0	0.89	0.85	0.80	250	650	300	0.034	29/45
		2*	ND112MX	2860	11.0	1.87	83.0	82.0	79.0	0.87	0.83	0.76	250	650	300	0.034	45
		4	ND132S	1450	10.10	3.69	86.0	85.0	83.0	0.88	0.85	0.75	250	600	300	0.131	68.0
		6	ND132M	950	11.30	5.64	85.0	84.0	82.0	0.80	0.75	0.68	200	600	250	0.214	79.0
6	ND160M	970	11.0	5.52	86.0	86.0	84.0	0.80	0.76	0.68	200	550	250	0.46	125		
8	ND160M	710	12.0	7.55	85.0	85.0	83.0	0.74	0.70	0.62	150	500	200	0.46	125		

PERFORMANCE DATA, 50Hz

OUTPUT		P O L E	FRAME SIZE	FL RPM	FL AMPS	FLT Kg-m	EFFICIENCY (%)			POWER FACTOR			DOL STG.		POT %FLT	GD ² KgM ²	NET WEIGHT Kg.		
							FL	3/4 LOAD	1/2 LOAD	FL	3/4 LOAD	1/2 LOAD	STG. T %FLT	STG. C %FLC					
kW	HP																		
7.50	10.00	2	ND132S	2890	13.80	2.53	85.0	84.0	82.0	0.89	0.85	0.80	275	650	325	0.062	68.0		
		2	ND160M	2910	14.0	2.51	85.0	84.0	82.0	0.88	0.86	0.78	225	600	275	0.13	125		
		4	ND132M	1455	13.60	5.02	87.0	86.0	84.0	0.88	0.85	0.75	275	600	325	0.161	79.0		
		4	ND160M	1460	14.0	5.00	87.0	87.0	85.0	0.85	0.81	0.73	225	600	275	0.31	125		
		6	ND160M	975	15.0	7.49	87.5	87.0	85.0	0.80	0.76	0.68	200	550	250	0.46	125		
		8	ND160L	710	16.0	10.29	85.0	85.0	83.0	0.76	0.72	0.64	150	500	200	0.64	148		
9.3	12.5	2*	AD132M	2890	16.70	3.13	87.0	86.0	84.0	0.89	0.85	0.80	275	600	325	0.076	79.0		
		2	ND160M	2920	17.0	3.10	87.0	87.0	85.0	0.88	0.86	0.78	250	650	300	0.13	125		
		4	ND160M	1460	17.0	6.20	88.5	88.5	86.5	0.84	0.81	0.73	175	600	225	0.31	125		
		6	ND160L	975	18.0	9.29	87.5	87.0	84.0	0.80	0.76	0.68	200	550	250	0.59	148		
		8	ND180M	720	20.0	12.58	86.0	86.0	84.0	0.74	0.70	0.60	175	500	225	0.99	174		
		11	15	2	ND160M	2920	20.0	3.67	88.0	88.0	86.0	0.88	0.86	0.78	250	650	300	0.13	125
4	ND160M			1460	21.0	7.34	89.0	89.0	86.0	0.82	0.79	0.70	200	600	250	0.36	125		
6	ND160L			975	22.0	10.99	88.0	87.5	86.0	0.80	0.76	0.68	200	550	250	0.64	148		
8	ND180L			720	24.0	14.88	87.0	87.0	85.0	0.74	0.70	0.60	175	500	225	1.16	210		
15	20			2	ND160M	2920	26.0	5.00	89.5	89.5	87.5	0.88	0.86	0.79	250	650	300	0.17	125
				4	ND160L	1460	27.0	10.01	90.0	90.0	88.0	0.85	0.83	0.75	200	600	250	0.47	148
		6	ND180L	975	29.0	14.98	90.0	90.0	88.0	0.79	0.73	0.66	225	600	275	1.16	210		
		8	ND200L	725	33.0	20.15	88.5	88.5	86.5	0.71	0.65	0.55	225	500	275	2.14	282		
		18.5	25	2	ND160L	2920	32.0	6.17	90.0	90.0	88.0	0.88	0.86	0.79	275	650	325	0.21	148
				4	ND180M	1475	33.0	12.22	92.0	92.0	90.0	0.84	0.80	0.72	200	600	250	0.81	174
6	ND200L			975	34.0	18.48	91.1	91.1	89.9	0.84	0.82	0.73	200	550	250	1.69	282		
8	ND225S			725	39.0	24.85	89.0	89.0	87.0	0.75	0.71	0.63	175	500	225	3.24	345		
22	30			2	ND180M	2930	41.0	7.31	91.0	91.0	89.0	0.83	0.80	0.72	225	600	275	0.44	164
				4	ND180L	1475	40.0	14.53	92.0	92.0	90.0	0.84	0.80	0.72	200	600	250	0.95	210
		6	ND200L	975	40.0	21.98	91.5	91.5	90.1	0.84	0.82	0.78	200	550	250	2.04	282		
		8	ND225M	725	46.0	29.56	89.0	89.0	87.0	0.75	0.71	0.63	175	550	225	3.61	375		
		30	40	2	ND200L	2950	51.0	9.91	91.5	91.5	90.0	0.90	0.89	0.87	200	600	250	0.80	282
				4	ND200L	1475	51.0	19.81	92.0	92.0	90.2	0.89	0.86	0.78	250	600	300	1.62	282
6	ND225M			980	53.0	29.82	92.0	92.0	90.5	0.85	0.82	0.73	200	550	250	3.61	375		
8	ND250M			735	61.0	39.76	90.5	90.5	88.5	0.75	0.71	0.63	175	550	225	4.82	473		
37	50			2	ND200L	2950	62.0	12.22	92.0	92.0	90.0	0.90	0.89	0.87	200	600	250	0.89	282
				4	ND225S	1480	63.0	24.35	92.5	92.5	91.6	0.89	0.86	0.78	250	600	300	2.64	345
		6	ND250M	980	66.0	36.77	93.0	93.0	92.0	0.84	0.81	0.72	250	600	300	4.82	473		
		8*	ND250M	735	76.0	49.03	90.5	90.5	88.5	0.75	0.71	0.63	200	500	250	4.82	500		
		8	ND280S	735	75.0	49.03	91.5	91.5	89.5	0.75	0.71	0.63	200	500	250	8.01	600		
		45	60	2	ND225M	2955	72.0	14.83	92.0	92.0	90.0	0.94	0.92	0.88	225	650	275	1.87	375
4	ND225M			1480	76.0	29.61	93.0	93.0	91.5	0.89	0.86	0.78	250	600	300	3.13	375		
6*	ND250m			980	76.0	44.72	93.0	93.0	91.9	0.84	0.81	0.72	250	600	300	4.82	500		
6	ND280S			980	79.0	44.72	93.0	93.0	91.9	0.85	0.82	0.73	250	550	300	8.01	600		
8	ND280M			725	91.0	60.46	92.0	92.0	90.5	0.75	0.71	0.63	175	500	225	9.89	670		
55	75			2	ND250M	2955	88.0	18.13	92.5	92.5	90.5	0.94	0.92	0.88	175	600	225	2.79	473
		4	ND250M	1475	92.0	36.32	93.5	93.5	92.0	0.89	0.86	0.82	200	600	250	3.45	473		
		6	ND280M	980	95.0	54.66	93.5	93.5	92.5	0.86	0.82	0.74	175	600	225	9.89	670		
		8*	ND280M	735	110.0	72.88	92.5	92.5	91.0	0.75	0.71	0.63	175	600	225	9.89	700		
		8	ND315S	740	113.0	72.39	93.0	93.0	91.5	0.73	0.66	0.56	250	550	300	14.12	900		
		75	100	2*	ND250M	2955	88.0	24.72	93.0	93.0	91.3	0.94	0.92	0.88	175	600	225	2.79	500
2	ND280S			2975	124.0	24.55	93.5	93.5	92.0	0.90	0.86	0.78	225	600	275	7.14	600		
4*	ND250M			1475	125.0	49.53	93.5	93.5	92.0	0.89	0.86	0.82	200	600	250	3.80	520		
4	ND280S			1480	123.0	49.36	94.0	94.0	2.5	0.90	0.88	0.84	250	600	300	7.21	600		
6*	ND280M			980	129.0	74.54	93.8	93.8	92.5	0.86	0.82	0.74	175	600	225	9.89	700		
6	ND315S			987	129.0	74.01	94.0	94.0	92.5	0.86	0.82	0.74	250	600	300	14.12	900		
90	120	2	ND280M	2975	148.0	29.47	94.0	94.0	92.5	0.90	0.86	0.78	225	600	275	8.18	670		
		4	ND280M	1480	147.0	59.23	94.5	94.5	92.5	0.90	0.88	0.84	250	600	300	8.26	670		
		6	ND315M	987	155.0	88.81	94.2	94.2	93.5	0.86	0.82	0.74	250	600	300	17.00	950		
		8*	ND315M	740	171.0	118.46	94.0	94.0	92.0	0.78	0.74	0.66	250	600	300	16.99	1130		
		8	ND315L	740	178.0	118.46	94.0	94.0	92.0	0.75	0.72	0.68	250	600	300	29.85	1160		

PERFORMANCE DATA, 50Hz

OUTPUT		P O L E	FRAME SIZE	FL RPM	FL AMPS	FLT Kg-m	EFFICIENCY (%)			POWER FACTOR			DOL STG.		POT %FLT	GD ² KgM ²	NET WEIGHT Kg.
kW	HP						FL	3/4 LOAD	1/2 LOAD	FL	3/4 LOAD	1/2 LOAD	STG. T %FLT	STG. C %FLC			
110	150	2*	ND315S	2965	173.0	36.13	94.0	94.0	92.5	0.94	0.91	0.84	200	600	250	6.63	900
		4*	ND280M	1480	180.0	72.39	94.3	94.3	92.3	0.90	0.86	0.78	250	600	300	8.26	700
		4	ND315S	1488	176.0	72.00	94.5	94.5	92.0	0.92	0.88	0.80	225	600	275	11.62	900
		6	ND315M	987	188.0	108.55	94.5	94.5	93.5	0.86	0.82	0.74	250	600	300	18.98	950
		8*	ND315M	740	209.0	131.62	94.0	94.0	92.0	0.78	0.74	0.66	200	250	250	29.85	1200
		8	ND315L	740	217.0	144.78	94.0	94.0	92.0	0.75	0.72	0.68	250	600	300	29.85	1160
132	180	2	ND315M	2965	208.0	43.36	94.0	94.0	92.5	0.94	0.90	0.82	200	600	250	7.97	950
		4	ND315M	1488	210.0	86.40	95.0	95.0	94.0	0.92	0.88	0.80	225	600	275	13.98	950
		6	ND315L	985	226.0	130.53	94.5	94.5	93.5	0.86	0.82	0.74	250	600	300	29.85	1160
		8	ND315L	740	259.0	173.74	94.5	94.5	92.5	0.75	0.72	0.68	225	600	275	29.85	1160
150	200	2	ND315L	2975	235.0	49.11	94.5	94.5	92.5	0.94	0.92	0.90	175	600	225	16.37	1160
		4	ND315M	1488	239.0	98.19	95.0	95.0	94.0	0.92	0.88	0.80	225	600	275	15.61	950
		6	ND315L	990	257.0	147.58	94.5	94.5	93.5	0.86	0.82	0.74	250	600	300	29.85	1160
		8	ND355L	740	296.0	197.43	94.0	93.0	91.0	0.75	0.72	0.68	150	600	200	33.16	2150
160	215	2*	ND315L	2975	249.0	52.38	95.0	94.5	93.5	0.94	0.92	0.90	175	600	225	16.37	1160
		4*	ND315M	1490	254.0	104.59	95.3	95.0	94.0	0.92	0.88	0.80	225	600	275	13.98	1130
		4	ND315L	1490	260.0	104.59	95.3	95.3	94.0	0.90	0.86	0.78	200	600	250	24.97	1160
		6	ND315L	990	274.0	157.41	94.5	94.5	93.5	0.86	0.82	0.74	250	600	300	29.85	1160
		8	ND355L	740	316.0	210.59	94.0	93.0	91.0	0.75	0.72	0.68	175	600	225	36.73	2150
180	240	2	ND315L	2975	280.0	58.93	95.0	94.5	93.5	0.94	0.92	0.90	200	600	250	16.37	1160
		4	ND315L	1490	293.0	117.66	95.0	95.0	94.0	0.90	0.88	0.84	225	600	275	24.97	1160
		6	ND355L	990	315.0	177.09	94.5	93.5	91.0	0.84	0.81	0.72	225	600	275	33.16	2150
		8	ND355LX	745	353.0	235.33	94.5	94.5	92.5	0.75	0.72	0.68	135	500	185	61.40	2100
200	270	2	ND315L	2975	310.0	65.48	95.5	95.5	94.0	0.94	0.92	0.90	200	600	250	16.37	1160
		4	ND315L	1490	324.0	130.74	95.5	95.5	94.0	0.90	0.88	0.84	225	600	275	24.97	1160
		6	ND355LX	991	351.0	196.57	94.5	93.5	91.0	0.84	0.81	0.72	150	600	200	55.26	2150
		8	ND355LX	745	403.0	261.48	94.5	94.5	92.5	0.73	0.66	0.56	135	500	185	61.40	2150
225	302	2	ND355L	2980	341.0	73.54	95.5	95.5	94.0	0.96	0.92	0.88	175	600	225	25.70	2150
		4	ND355L	1490	372.0	147.08	95.5	95.5	94.0	0.88	0.86	0.82	185	600	235	35.57	2150
		6	ND355LX	991	394.0	221.14	94.5	94.5	92.0	0.84	0.81	0.73	150	600	200	61.40	2150
		8	ND355LX	745	454.0	294.16	94.5	94.5	92.5	0.73	0.66	0.56	135	500	185	61.40	2150
250	335	2	ND355LX	2980	379.0	81.71	95.5	95.0	93.5	0.96	0.92	0.88	175	650	225	25.70	2150
		4	ND355L	1490	413.0	163.42	95.7	95.7	94.5	0.88	0.86	0.82	185	600	235	35.57	2150
		6	ND355LX	993	434.0	245.22	95.5	95.0	94.0	0.84	0.81	0.73	150	600	200	61.40	2150
275	369	2	ND355LX	2980	417	89.88	95.5	95.0	93.5	0.96	0.92	0.88	175	650	225	25.70	2150
		4	ND355LX	1490	454	179.76	95.7	95.7	94.5	0.88	0.86	0.82	185	600	235	35.57	2150
		6	ND355LX	990	477.0	270.56	95.5	95.0	94.0	0.84	0.81	0.73	150	65	200	39.52	2150
315	425	2	ND355LX	2980	478.0	102.96	95.5	95.5	94.0	0.96	0.92	0.88	200	600	250	30.70	2150
		4	ND355LX	1492	496.0	205.64	96.0	96.0	94.5	0.92	0.90	0.88	175	600	225	39.52	2150

NOTE : All performance figures are subject to tolerances as per IEC

FL - Full Load, STG = Starting, C - Current, T - Torque, DOL - Direct on line, S/D - Star/Delta

* With class 'F' temperature rise. (90° C rise)

PERFORMANCE DATA, 60Hz

Supply : 220/380/440 V, 60 Hz,
3 Phase AC

Rating : Continuous Duty,S1

Combined Variation : ± 10%

Insulation Class : F

Ambient : 45°C

Enclosure : TEFC

Voltage Variation : ± 10%

Temprature Rise : max.75°C by
resistance metod

Degree of Protection : IP55

Frequency Variation : ± 5%

OUTPUT		P O L E	FRAME SIZE	FL RPM	FL AMPS 220 V	FLT Kg m	EFFICIENCY (%)			POWER FACTOR			DOL STG.		POT %FLT	GD ² KgM ²	NET WEIGHT Kg.
kW	HP						FL	3/4 LOAD	1/2 LOAD	FL	3/4 LOAD	1/2 LOAD	STG. T %FLT	STG. C %FLC			
0.18	0.25	2	AD63	3240	0.95	0.05	64.0	62.0	58.0	0.79	0.68	0.59	300	500	350	0.001	5.6
0.18		4	AD63	1600	1.00	0.11	64.0	62.0	58.0	0.76	0.73	0.60	200	400	250	0.003	5.6
0.18		6	AD71	1080	1.10	0.16	65.0	64.0	60.0	0.68	0.60	0.50	200	400	250	0.004	7
0.18		8	AD/ND80	805	1.80	0.22	52.0	46.0	36.0	0.50	0.42	0.32	210	400	260	0.011	10/17
0.25	0.33	2	AD63	3240	1.25	0.08	67.0	66.0	62.0	0.78	0.71	0.60	275	500	325	0.001	5.6
0.25		4	AD63	1600	1.35	0.15	64.0	62.0	58.0	0.76	0.73	0.60	200	400	250	0.003	5.6
0.25		6	AD71	1080	1.50	0.23	65.0	64.0	60.0	0.68	0.60	0.50	200	400	250	0.004	7
0.25		8	AD/ND80	805	2.50	0.30	52.0	46.0	36.0	0.50	0.42	0.32	200	400	250	0.011	10/17
0.30	0.40	2	AD63	3240	1.50	0.09	67.0	66.0	62.0	0.78	0.71	0.60	275	500	325	0.001	5.6
0.30		4	AD71	1680	1.40	0.17	75.0	74.0	72.0	0.76	0.73	0.60	225	600	275	0.004	7
0.30		6	AD71	1080	1.80	0.27	65.0	64.0	60.0	0.68	0.60	0.50	200	400	250	0.004	7
0.30		8	AD/ND80	815	2.30	0.36	60.0	54.0	48.0	0.57	0.50	0.40	170	400	220	0.011	10/17
0.37	0.50	2	AD63	3240	1.80	0.11	68.0	67.0	63.0	0.79	0.72	0.60	275	550	325	0.001	5.6
0.37		4	AD71	1680	1.70	0.21	77.0	76.0	74.0	0.76	0.73	0.60	225	600	275	0.004	7
0.37		6	AD/ND80	1090	2.00	0.33	69.0	68.0	66.0	0.71	0.63	0.52	210	400	260	0.011	10/17
0.37		8	AD/ND90S	815	2.60	0.44	65.0	64.0	60.0	0.57	0.50	0.40	170	400	220	0.015	13/22
0.45	0.60	2	AD71	3380	2.20	0.13	67.0	66.0	62.0	0.79	0.72	0.60	275	600	325	0.002	7
0.45		4	AD71	1680	2.00	0.26	77.0	76.0	74.0	0.76	0.73	0.60	225	600	275	0.004	7
0.45		6	AD/ND80	1090	2.40	0.40	69.0	68.0	66.0	0.71	0.63	0.52	210	400	260	0.011	10/17
0.45		8	AD/ND90S	815	3.20	0.54	65.0	64.0	60.0	0.57	0.50	0.40	170	400	220	0.015	13/22
0.55	0.75	2	AD71	3380	2.70	0.16	67.0	66.0	62.0	0.79	0.72	0.60	275	600	325	0.002	7
0.55		4	AD71	1680	2.50	0.32	77.0	76.0	74.0	0.76	0.73	0.60	225	600	275	0.004	7
0.55		6	AD/ND80	1090	3.00	0.49	69.0	68.0	66.0	0.71	0.63	0.52	210	400	260	0.011	10/17
0.55		8	AD/ND90L	815	3.30	0.66	69.0	68.0	64.0	0.63	0.54	0.45	150	400	200	0.021	13/22
0.68	0.90	2	AD71	3380	3.30	0.20	68.0	67.0	63.0	0.79	0.72	0.60	275	600	325	0.002	7
0.68		4	AD/ND80	1690	3.00	0.39	76.0	75.0	73.0	0.78	0.75	0.64	200	500	250	0.007	10/17
0.68		6	AD/ND80	1090	3.70	0.61	69.0	68.0	66.0	0.71	0.63	0.52	210	400	260	0.011	10/17
0.68		8	AD/ND90L	815	4.10	0.81	69.0	68.0	64.0	0.63	0.54	0.45	150	400	200	0.021	13/22
0.75	1.00	2	AD71	3380	3.70	0.22	68.0	67.0	63.0	0.79	0.72	0.60	275	600	325	0.002	7
0.75		4	AD/ND80	1690	3.30	0.43	77.0	76.0	74.0	0.78	0.75	0.64	200	500	250	0.007	10/17
0.75		6	AD/ND90S	1120	3.80	0.65	73.0	71.0	69.0	0.72	0.65	0.58	200	400	250	0.015	13/22
0.75		8	AD/ND90L	815	4.50	0.90	69.0	68.0	64.0	0.63	0.54	0.45	150	400	200	0.021	13/22
0.90		4	AD/ND80	1690	3.90	0.52	77.0	76.0	74.0	0.78	0.75	0.64	200	500	250	0.007	10/17
0.90		6	AD/ND90S	1120	4.60	0.78	73.0	72.0	69.0	0.71	0.63	0.58	200	430	250	0.015	13/22
0.90		8	AD/ND100L	840	5.20	1.04	72.0	71.0	68.0	0.63	0.54	0.45	175	400	225	0.030	19/32
1.10	1.50	2	AD/ND80	3385	4.50	0.32	79.0	78.0	76.0	0.82	0.77	0.70	225	600	275	0.003	10/17
1.10		4	AD/ND80	1690	5.00	0.63	77.0	76.0	74.0	0.78	0.75	0.64	200	500	250	0.007	10/17
1.10		6	AD/ND90S	1120	5.50	0.96	73.0	72.0	69.0	0.71	0.63	0.58	200	430	250	0.015	13/22
1.10		8	AD/ND100L	840	6.50	1.28	72.0	71.0	68.0	0.63	0.54	0.44	175	400	225	0.034	19/35
1.35	1.80	2	AD/ND80	3385	5.50	0.39	79.0	78.0	76.0	0.82	0.77	0.70	225	600	275	0.004	10/17
1.35		4	AD/ND90S	1700	6.00	0.77	78.0	76.0	74.0	0.78	0.75	0.64	200	500	250	0.014	13/22
1.35		6	AD/ND90L	1120	6.50	1.17	74.0	73.0	70.0	0.72	0.65	0.58	200	400	250	0.021	16/25
1.50	2.00	2	AD/ND80	3385	6.00	0.43	79.0	78.0	76.0	0.82	0.77	0.70	225	600	275	0.004	10/17
1.50		4	AD/ND90S	1700	6.00	0.86	80.0	79.0	77.0	0.81	0.78	0.71	200	500	250	0.014	13/22
1.50		6	AD/ND100L	1120	7.00	1.30	76.0	75.0	73.0	0.72	0.65	0.58	200	400	250	0.030	19/32
1.50		8	AD/ND112M	840	7.50	1.74	77.0	77.0	75.0	0.68	0.60	0.52	190	400	240	0.057	29/45
1.80	2.40	2	AD/ND90S	3385	7.50	0.52	80.0	79.0	77.0	0.82	0.77	0.70	225	600	275	0.006	13/22
1.80		4	AD/ND90L	1700	7.50	1.03	80.0	79.0	77.0	0.81	0.78	0.71	200	500	250	0.019	16/25
1.80		6	AD/ND100L	1120	8.50	1.57	76.0	75.0	73.0	0.72	0.65	0.58	200	400	250	0.030	19/32
1.80		8	AD/ND112M	840	9.00	2.09	77.0	77.0	75.0	0.68	0.60	0.52	190	400	240	0.057	60
2.20	3.00	2	AD/ND90S	3395	9.00	0.63	80.0	79.0	77.0	0.82	0.77	0.70	225	600	275	0.006	13/22
2.20		4	AD/ND90L	1700	9.00	1.26	80.0	79.0	77.0	0.81	0.78	0.71	200	500	250	0.019	16/25
2.20		6	ND100L	1120	10.50	1.91	76.0	75.0	73.0	0.72	0.65	0.58	200	400	250	0.030	19/32
2.20		8	AD/ND132S	850	10.00	2.52	77.5	76.5	73.0	0.73	0.68	0.61	180	450	230	0.174	68

PERFORMANCE DATA, 60Hz

OUTPUT		P O L E	FRAME SIZE	FL RPM	FL AMPS 220 V	FLT Kg m	EFFICIENCY (%)			POWER FACTOR			DOL STG.		POT %FLT	GD ² KgM ²	NET WEIGHT Kg.
							FL	3/4 LOAD	1/2 LOAD	FL	3/4 LOAD	1/2 LOAD	STG. T %FLT	STG. C %FLC			
kW	HP																
2.70	3.60	2	AD/ND90L	3395	11.00	0.77	81.0	80.0	78.0	0.82	0.77	0.70	275	600	325	0.008	16/25
2.70		6	AD/ND112M	1120	12.00	2.35	77.0	76.0	73.0	0.75	0.70	0.60	200	500	250	0.048	29/42
2.70		8	ND132S	850	12.50	3.09	78.0	77.0	74.0	0.73	0.68	0.61	180	450	230	0.174	68
3.00	4.00	2	AD/ND90L	3395	12.00	0.86	81.0	80.0	78.0	0.82	0.77	0.70	275	600	325	0.008	16/25
3.00		4	AD/ND100L	1725	12.00	1.69	82.0	81.0	79.0	0.82	0.78	0.72	200	600	250	0.030	19/32
3.00		6	AD/ND112M	1120	13.50	2.61	77.0	76.0	73.0	0.75	0.70	0.60	200	500	250	0.048	29/42
3.00		8	AD/ND132M	850	13.50	3.44	79.0	78.0	76.0	0.75	0.70	0.60	180	600	230	0.214	79
3.70	5.00	2	AD/ND100L	3450	14.00	1.04	83.0	82.0	80.0	0.82	0.77	0.70	250	600	300	0.022	19/36
3.70		4	AD/ND100L	1725	14.50	2.09	82.0	81.0	79.0	0.82	0.78	0.72	200	600	250	0.030	19/32
3.70		6	AD/ND132S	1140	14.50	3.16	85.0	84.0	82.0	0.79	0.73	0.63	200	600	250	0.174	68
3.70		8	AD/ND132M	850	16.00	4.24	80.0	80.0	78.0	0.75	0.70	0.60	180	600	230	0.214	79
4.40	6.00	2	AD/ND112M	3450	15.50	1.24	84.0	83.0	81.0	0.89	0.85	0.80	250	650	300	0.034	29/45
4.40		4	AD/ND112M	1725	17.00	2.48	83.0	82.0	80.0	0.81	0.76	0.69	200	600	250	0.052	29/42
4.40		6	AD/ND132S	1140	17.00	3.76	85.0	84.0	82.0	0.79	0.73	0.63	200	600	250	0.174	68
4.92	6.60	2	AD/ND112M	3450	17.00	1.39	85.0	84.0	82.0	0.89	0.85	0.80	250	650	300	0.034	29/45
4.92		4	AD/ND112M	1725	19.00	2.78	84.0	83.0	81.0	0.81	0.76	0.69	200	600	250	0.052	29/42
4.92		8	ND160M	850	21.00	5.64	85.0	85.0	83.0	0.74	0.70	0.62	150	500	200	0.460	125
5.50	7.50	2	AD/ND112M	3450	19.00	1.55	85.0	84.0	82.0	0.89	0.85	0.80	250	650	300	0.034	29/45
5.50		4	AD/ND112M	1725	21.00	3.11	84.0	83.0	81.0	0.81	0.76	0.69	200	600	250	0.052	29/42
5.50		6	AD/ND132M	1140	21.00	4.70	85.0	84.0	82.0	0.80	0.75	0.68	200	600	250	0.214	79
5.50		8	ND160M	850	23.00	6.30	85.0	85.0	83.0	0.74	0.70	0.62	150	500	200	0.46	125
6.70	9.00	2	AD/ND132S	3470	23.00	1.88	85.0	84.0	82.0	0.89	0.85	0.80	250	650	300	0.062	68
6.70		4	AD/ND132S	1745	23.00	3.74	87.0	86.0	84.0	0.88	0.85	0.73	275	600	325	0.131	68
7.50	10.00	2	AD/ND132S	3470	26.00	2.11	85.0	84.0	82.0	0.89	0.85	0.80	250	650	300	0.062	68
7.50		4	AD/ND132S	1745	26.00	4.19	87.0	86.0	84.0	0.88	0.85	0.73	275	600	325	0.131	68
7.50		6	AD/ND132M	1140	29.00	6.41	85.0	84.0	82.0	0.80	0.75	0.68	200	600	250	0.214	79
7.50		8	ND160L	850	31.00	8.59	85.0	85.0	83.0	0.76	0.72	0.64	150	600	200	0.640	148
9.00	12.00	2	AD/ND132M	3470	31.00	2.53	87.0	86.0	84.0	0.89	0.85	0.80	275	600	325	0.076	79
9.00		4	AD/ND132M	1745	31.00	5.02	87.0	86.0	84.0	0.88	0.85	0.75	275	600	325	0.161	79
9.30	12.50	2	AD/ND132M	3465	32.00	2.61	87.0	86.0	84.0	0.89	0.85	0.80	275	600	325	0.076	79
9.30		4	AD/ND132M	1745	32.00	5.19	87.0	86.0	84.0	0.88	0.85	0.75	275	600	325	0.161	79
9.30		6	ND160M	1170	35.00	7.74	87.5	87.0	84.0	0.80	0.76	0.68	200	600	250	0.59	125
9.30		8	ND180M	860	38.00	10.53	86.0	86.0	84.0	0.74	0.70	0.60	175	600	225	0.99	174
11	15	2	AD/ND132M	3465	37.00	3.09	87.0	86.00	84.0	0.89	0.85	0.80	275	600	325	0.076	79
11		4	AD/ND132M	1745	38.00	6.14	87.0	86.00	84.0	0.88	0.85	0.75	275	600	325	0.161	79
11		6	ND160M	1170	41.00	9.16	87.5	87.50	86.0	0.80	0.76	0.68	200	600	250		125
11		8	ND180L	860	45.00	12.46	87.0	87.00	85.0	0.74	0.70	0.60	175	600	225	1.16	210
15	18.5	2	ND160M	3520	50.00	4.15	89.5	89.50	87.5	0.88	0.86	0.79	250	600	300	0.17	125
15		4	ND160M	1750	52.00	8.35	89.0	89.00	86.0	0.85	0.82	0.74	200	600	250	0.36	125
15		6	ND160L	1164	56.00	12.55	87.5	87.50	86.0	0.80	0.76	0.68	200	600	250	0.59	148
15		8	ND180L	860	59.00	16.99	87.0	87.00	85.0	0.77	0.73	0.65	175	600	225	1.16	210
18.5	25	2	ND160M	3520	62.00	5.12	89.5	89.50	87.5	0.88	0.86	0.79	275	750	325	0.13	125
18.5		4	ND160L	1760	63.00	10.24	90.0	90.00	88.0	0.86	0.82	0.74	200	600	250	0.47	148
18.5		6	ND180L	1164	68.00	15.48	88.0	87.00	85.0	0.81	0.77	0.66	225	600	275	1.18	210
18.5		8	ND200L	865	72.00	20.83	88.0	88.00	86.0	0.77	0.73	0.65	225	600	275	2.15	282
22	30	2	ND160L	3510	73.00	6.10	90.0	90.00	88.0	0.88	0.86	0.79	250	700	300	0.21	148
22		4	ND180M	1770	78.00	12.11	90.5	90.50	88.0	0.82	0.8	0.72	225	750	275	0.81	174
22		6	ND200L	1170	75.00	18.31	91.5	91.50	90.1	0.84	0.82	0.78	200	600	250	2.04	282
22		8	ND225M	870	87.00	24.63	89.0	89.00	87.0	0.75	0.71	0.63	175	600	225	3.61	375
30	40	2	ND200M	3540	96.00	8.25	91.5	91.50	90.0	0.90	0.89	0.87	200	600	250	0.8	282
30		4	ND200M	1770	96.00	16.51	92.0	92.00	90.2	0.89	0.86	0.78	250	600	300	1.62	282
30		6	ND200L	1170	103.0	24.97	91.5	91.50	90.1	0.84	0.82	0.78	225	600	275	2.04	282
30		8	ND225M	870	118.0	33.59	89.0	89.00	87.0	0.75	0.71	0.63	200	600	250	3.61	375
37		2	ND200L	3540	117.0	10.18	92.5	92.50	91.6	0.90	0.89	0.87	200	600	250	0.89	282
37		4	ND200L	1770	119.0	20.36	92.0	92.00	90.0	0.89	0.86	0.78	250	600	300	1.62	282
37		6	ND225M	1176	124.0	30.64	82.0	92.00	90.5	0.85	0.82	0.73	200	600	250	3.61	375
37		8	ND250M	882	143.0	40.86	90.5	90.50	88.5	0.75	0.71	0.63	175	600	225	4.82	473

PERFORMANCE DATA, 60Hz

OUTPUT		P O L E	FRAME SIZE	FL RPM	FL AMPS 220 V	FLT Kg m	EFFICIENCY (%)			POWER FACTOR			DOL STG.		POT %FLT	GD ² KgM ²	NET WEIGHT Kg.
kW	HP						FL	3/4 LOAD	1/2 LOAD	FL	3/4 LOAD	1/2 LOAD	STG. T %FLT	STG. C %FLC			
45	60	2	ND225M	3545	136.0	12.36	92.5	92.50	91.5	0.94	0.92	0.88	225	650	275	1.87	375
45		4	ND225M	1775	143.0	24.69	93.0	93.00	91.5	0.89	0.86	0.78	225	600	275	3.13	375
45		6	ND250M	1176	151.0	37.27	93.0	93.00	91.9	0.84	0.81	0.72	250	600	300	4.82	473
45		8	ND250M	882	171.0	49.69	92.0	92.00	90.5	0.75	0.71	0.63	225	600	275	4.82	473
55	75	2	ND225M	3545	166.0	15.11	92.5	92.0	90.5	0.94	0.92	0.88	225	750	275	1.87	375
55		4	ND225M	1775	174.0	30.18	93.0	93.00	91.5	0.89	0.86	0.78	225	600	275	3.13	375
55		6	ND250M	1176	185.0	45.55	93.0	93.00	91.9	0.84	0.81	0.72	250	600	300	4.82	473
55		8	ND280M	882	207.0	60.74	93.0	93.00	91.0	0.75	0.71	0.60	175	600	225	9.89	670
75	100	2	ND250M	3545	225.0	20.61	93.0	93.00	91.0	0.94	0.92	0.88	175	600	225	2.79	473
75		4	ND250M	1770	237.0	41.27	93.5	93.00	91.0	0.89	0.86	0.82	200	600	250	3.45	473
75		6	ND280M	1176	245.0	62.12	93.5	93.50	92.5	0.86	0.82	0.74	175	600	225	9.89	670
75		8	ND280M	870	281.0	83.97	93.5	93.50	91.5	0.75	0.71	0.63	175	500	225	9.89	670
90	120	2	ND280S	3570	279.0	24.55	94.0	94.00	92.5	0.90	0.86	0.78	225	600	275	7.11	600
90		4	ND280S	1775	278.0	49.39	94.5	94.50	92.5	0.90	0.88	0.84	225	600	275	7.21	600
90		6	ND280M	1176	294.0	74.54	93.5	93.50	92.5	0.86	0.82	0.74	175	600	225	9.89	670
90		8	ND315M	888	361.0	98.72	93.5	93.50	91.5	0.70	0.67	0.60	200	600	250	18.98	950
110	150	2	ND280M	3570	341.0	30.01	94.0	94.00	92.0	0.90	0.86	0.78	225	750	275	8.18	670
110		4	ND280M	1775	340.0	60.36	94.5	94.50	92.5	0.90	0.88	0.84	225	600	275	8.26	670
110		6	ND315M	1185	355.0	90.41	94.5	94.50	93.5	0.86	0.82	0.74	250	600	300	17.0	950
110		8	ND315M	888	423.0	120.65	93.5	93.50	91.5	0.73	0.66	0.56	200	600	250	18.48	950
132	180	2	ND315S	3560	392.0	36.11	94.0	94.00	92.5	0.94	0.90	0.82	200	600	250	6.63	900
132		4	ND315S	1785	396.0	72.03	95.0	95.00	94.0	0.92	0.88	0.80	200	600	250	11.62	900
132		6	ND315M	1185	426.0	108.50	94.5	94.50	93.5	0.86	0.82	0.74	250	600	300	18.98	950
150	200	2	ND315M	3560	445.0	41.04	94.0	94.00	92.5	0.94	0.90	0.82	200	600	250	7.97	950
150		4	ND315M	1785	450.0	81.85	95.0	95.00	94.0	0.92	0.88	0.80	200	600	250	13.98	950
150		6	ND315M	1185	484.0	123.29	94.5	94.50	93.5	0.86	0.82	0.74	250	600	300	18.98	950
165	220	2	ND315M	3560	490.0	45.14	94.0	94.00	92.5	0.94	0.90	0.82	200	600	250	7.97	950
165		4	ND315M	1785	495.0	90.03	95.0	95.00	94.0	0.92	0.88	0.80	200	600	250	15.61	950
185	250	2	ND315M	3560	550.0	50.62	94.0	94.00	92.5	0.94	0.90	0.82	200	600	250	7.97	950
185		4	ND315M	1785	556.0	100.95	95.0	95.00	94.0	0.92	0.88	0.80	200	600	250	15.61	950
225	300	2	ND355L	3575	339.63	61.30	94.5	94.5	93	0.92	0.88	0.8	200	600	250	25.7	2150
225		4	ND355L	1785	353.2	122.77	95	95	93.5	0.88	0.86	0.82	175	600	225	30.57	2150
225		6	ND355LX	1190	371.98	184.16	94.5	94.5	93	0.84	0.81	0.73	160	600	225	44.6	2150
300	400	2	ND355LX	3575	450.46	81.73	95	95	93	0.92	0.88	0.8	200	600	250	30.7	2150
300		4	ND355LX	1790	470.93	163.24	95	95	93.5	0.88	0.86	0.82	175	600	225	36.5	2200
335	450	2	ND355LX	3575	513.65	91.27	95.1	95.1	93.5	0.9	0.86	0.78	150	600	200	35	2200
335		4	ND355LX	1790	524.22	182.28	95.3	95	92	0.88	0.86	0.82	150	600	200	40	2250
375	500	2	ND355LX	3575	573.77	102.17	95.3	95	92	0.9	0.86	0.78	150	600	200	36	2250
375		4	ND355LX	1790	599.2	204.05	95.5	95	92	0.86	0.82	0.74	150	600	200	42	2250
400	535	2	ND355LX	3575	6120.3	108.98	95.3	95	92	0.09	0.86	0.78	150	600	200	38	2250
400		4	ND355LX	1790	639.15	217.65	95.5	95	92	0.86	0.82	0.74	150	600	200	44	2250

NOTE : 1. The above data is subjected to tolerance as per IEC60034-1

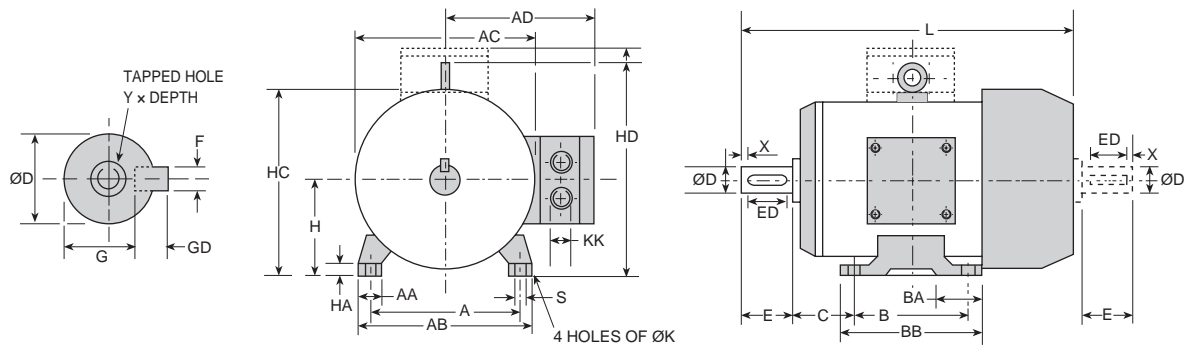
2. FL Amps @ 380 V = 0.577 x FL Amps 220 V.

FL Amps @ 440 V = 0.5 x FL Amps 220 V.

3. Motors suitable for triple voltage shall be with 12 leads, Motor suitable for single voltage can be offered on request suitable for DOL /Star-Delta starting.

4. * With class 'F' temperature rise. (90° C rise)

DIMENSIONS, FOOT MOUNTING - B3

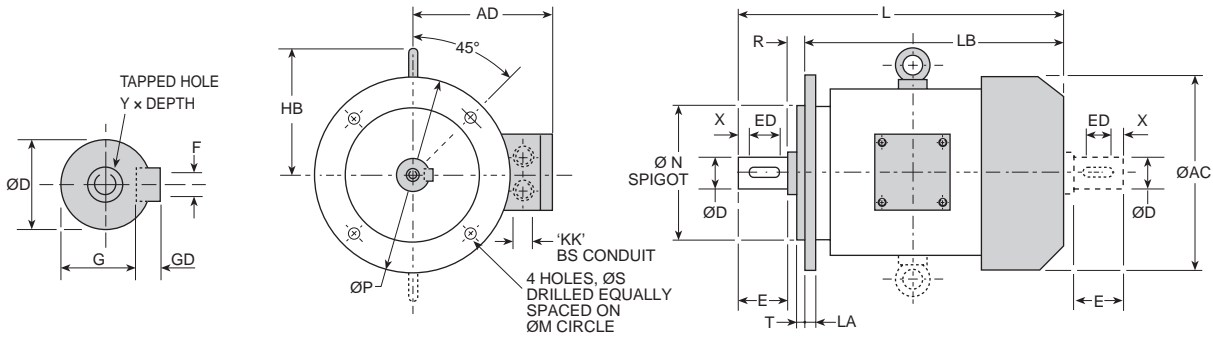


All dimensions in mm.

FRAME	FOOT FIXING										SHAFT AND KEY							OVERALL (MAX.)				
	A	B	C	H	AA	AB	BA	BB	ØK	HA	ØD	E	ED	F	G	GD	YxDepth	AD	AC	L	HD	KK
AD63	100	80	40	63	25	122	-	96	7	9	11	23	18	4	8.5	4	M4x10	NA	125	210	160	3/4"
AD71	112	90	45	71	25	136	-	110	7	9	14	30	25	5	11	5	M5x12.5	NA	145	250	175	3/4"
AD80	125	100	50	80	28	152	35	125	10	11	19	40	27	6	15.5	6	M6x16	NA	165	285	200	3/4"
AD90S	140	100	56	90	40	170	30	126	10	13	24	50	36	8	20	7	M8x19	NA	190	310	230	1"
AD90L		151						335														
AD100L	160	140	63	100	48	192	35	170	12	13	28	60	44	8	24	7	M10x22	NA	205	360	250	1"
ND100LX	160	140	63	100	36	192	45	170	12	13	28	60	44	8	24	7	M10x22	160	210	380	250	1"
AD112M	190	140	70	112	50	222	35	170	12	13	28	60	44	8	24	7	M10x22	NA	222	380	270	1"
ND112M	190	140	70	112	36	222	50	170	12	13	28	60	44	8	24	7	M10x22	170	230	390	275	1"
ND112MX	190	140	70	112	36	222	50	170	12	13	28	60	44	8	24	7	M10x22	170	230	405	275	1"
AD132S	216	140	89	132	35	250	68	210	12	5	38	80	60	10	33	8	M12x28	180	270	480	310	1"
ND132S	216	140	89	132	48	254	54	178	12	16	38	80	60	10	33	8	M12x28	190	270	470	320	1"
AD132M	216	178	89	132	35	250	68	210	12	5	38	80	60	10	33	8	M12x28	180	270	480	310	1"
ND132M	216	178	89	132	48	254	54	216	12	16	38	80	60	10	33	8	M12x28	190	270	510	320	1"
ND160M	254	210	108	160	73	308	76	254	15.5	22	42	110	80	12	37	8	M16x32	275	318	605	376	2 Nos.-1"
ND160L		298						15	650													
ND180M	279	241	121	180	84	348	95	286	15.5	22	48	110	80	14	42.5	9	M16x32	295	352	677	418	2 Nos.-1"
ND180L		323						15	715													
ND200L	318	305	133	200	66	381	115	356	19	25	55	110	80	16	49	10	M16x32	345	428	805	480	2 Nos.-1.5"
ND225S	356	286	149	225	70	425	102	375	19.5	25	60	140	110	18	53	11	M20x40	375	470	880	534	
ND225M		311							19.0													
ND250S	406	311	168	250	80	483	135	419	24.5	32	65	140	110	18	58	11	M20x40	405	500	940	598	2 Nos.-1.5"
ND250M		349							24													
ND280S	457	368	190	280	100	538	167	487	24.5	35	75	140	110	20	67.5	12	M20x40	430	536	1085	642	2 Nos.-1.5"
ND280M		419							24													
ND315S	508	406	216	315	110	597	164	533	28.5	38	80	170	140	22	71	14	M20x40	510	588	1230	725	2 Nos.-2"
ND315M		457							28													
ND315L	508	508	216	315	110	610	230	740	28.5	35	90.035	170	140	25	81	14	M24x50	570	655	1375	755	2 Nos.-2.5"
ND355L	610	630	254	355	110	710	250	880	28.5	40	100	210	160	28	90	16	M24x50	600	720	1570	827	2 Nos.-2.5"

1. In foot mounted AD frames, up to AD112M the terminal box is on top and eye bolt is not provided. 2. Eye bolt is suitably located on the motor body and a second eye bolt is provided as necessary. 3. In frames 200 and above, an auxiliary terminal box is provided for space heater and thermistors, when specified. 4. Please call for certified drawings for specific contractual details. 5. 'HD' indicates height up to eyebolt or terminal box, as applicable and whichever is higher. 6. Dimension 'X' is 2.5mm in frame AD63 and 71. In all other frames, it is zero i.e. the keyway is open. 7. One cable entry shall be for DOL starting and two for star /delta starting and multispeed motors. 8. Compression type cable glands can be fitted when specified. 9. KK is the conduit entry diameter. 10. Please refer to page 7 for shaft dimensions of 2 pole, 225 and higher frame motors.

DIMENSIONS, FLANGE MOUNTING - B5

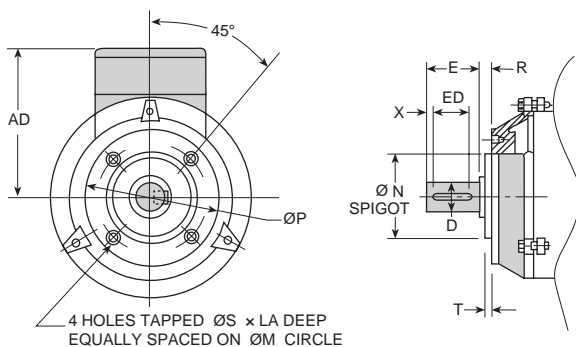


All dimensions in mm.

FRAME	FLANGE			FIXING				SHAFT AND KEY							OVERALL (MAX.)												
	ØM	ØN	ØP	R	ØS	T	LA	ØD	E	ED	F	G	GD	YxDepth	AD	AC	L	LB	HB	KK							
AD63D	115	95	140	0	10	3	9	11	23	18	4	8.5	4	M4x10	100	125	220	197	NA	3/4"							
AD71D	130	110	160	0	10	3.5	9	14	30	25	5	11	5	M5x12.5	105	145	250	220	NA	3/4"							
AD80D	165	130	200	0	12	3.5	10	19	40	27	6	15.5	6	M6x16	120	165	285	245	NA	3/4"							
AD90SD	165	130	200	0	12	3.5	10	24	50	36	8	20	7	M8x19	140	190	310	260	NA	1"							
AD90LD																	335	285									
AD100LD	215	180	250	0	15	4	11	28	60	44	8	24	7	M10x22	150	205	360	300	NA	1"							
ND100LD	215	180	250	0	15	4	11	28	60	44	8	24	7	M10x22	160	210	380	320	150	1"							
AD112MD	215	180	250	0	15	4	11	28	60	44	8	24	7	M10x22	158	222	380	320	NA	1"							
ND112MD	215	180	250	0	15	4	11	28	60	44	8	24	7	M10x22	170	230	405	345	160	1"							
AD132SD	265	230	300	0	15	4	14	38	80	60	10	33	8	M12x28	180	270	480	400	150	1"							
ND132SD	265	230	300	0	15	4	14	38	80	60	10	33	8	M12x28	190	270	470	390	190	1"							
AD132MD	265	230	300	0	15	4	14	38	80	60	10	33	8	M12x28	180	270	480	400	150	1"							
ND132MD	265	230	300	0	15	4	14	38	80	60	10	33	8	M12x28	190	270	510	430	190	1"							
ND160MD	300	250	350	0	19	5	18	42	110	80	12	37	8	M16x32	265	318	605	213	210	2Nos. -1"							
ND160LD																	650	235									
ND180MD																	677	241.5									
ND180LD																	715	260.5									
ND200LD	350	300	400	0	19	5	18	55	110	80	16	49	10	M20x40	345	428	805	285.5	278	2Nos. -1.5"							
ND225SD	400	350	450	0	19	5	19	60	140	110	18	53	11	M20x40	375	470	880	304.5	309								
ND225MD																	940	342.5	344								
ND250SD	500	450	550	0	19	5	22	65	140	110	18	58	11	M20x40	405	500	940	342.5	344								
ND250MD																	1085	399.5	361								
ND280SD																	75	140	110		20	67.5	12	430	536	1085	399.5
ND280MD																	75	140	110	20	67.5	12	430	536	1085	399.5	361
ND315SD	600	550	660	0	24	6	25	80	170	140	22	71	14	M20x40	510	588	1230	444.5	406	2Nos. -2"							
ND315MD																	1375	530.5	440								
ND315LD																	90	170	140		25	81	14	570	655	1375	530.5

1) In frames 200 and above, an auxiliary terminal box is provided for space heater and thermistors, when specified. 2) Please call for certified drawings for tolerances and specific contractual details. 3) In flange mounted AD frames up to 112M, eyebolt is not provided, hence dimension HB is "Not Applicable". 4) Dimension 'X' is 2.5mm in frame AD63 and 71. In all other frames, it is zero i.e. the keyway is open. 5) KK is the conduit entry diameter. 6) Frames 200 and above to have 8 equally spaced holes on the flange instead of 4 shown in Drg. 7) Second eyebolt is provided for motors in frame 160 and above. 8) 2 Earthing terminals of M8 size are provided on Frame 160 upto 250 and M12 size for 280/315. 9. Please refer to page 7 for shaft dimensions of in 2 pole, 225 and higher frame motors.

DIMENSIONS, FACE MOUNTING - B14

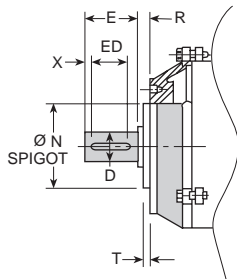
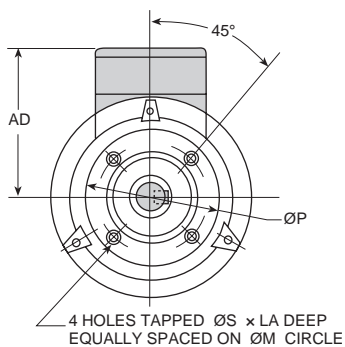


All dimensions in mm.

FRAME	FACE FIXING						
	ØM	ØN	ØP	R	ØS	T	LA
AD63C	75	60	90	0	M5	2.5	8
AD71C	85	70	105	0	M6	2.5	8
AD80C	100	80	120	0	M6	3	10
AD90SC	115	95	140	0	M8	3	10
AD90LC							
AD100LC	130	110	160	0	M8	3.5	10
ND100LC	130	110	160	0	M8	3.5	10
AD112MC	130	110	160	0	M8	3.5	12
ND112MC	130	110	160	0	M8	3.5	10
AD 132SC	165	130	200	0	M10	3.5	12
AD 132MC							
ND 132SC/MC	165	130	200	0	M10	3.5	12

- All other dimensions are similar to flange mounted motors as above.
- Please call for certified drawings for tolerances and specific contractual details.
- In face mounted AD frames up to 112M, eye bolt is not provided, hence dimension HB is "Not Applicable".
- Dimension 'X' is 2.5mm in frame AD63 and 71. In all other frames, it is zero i.e. the keyway is open.
- Please refer to us for higher frames.

DIMENSIONS, FACE MOUNTING - B14B



FRAME	FACE FIXING						
	ØM	ØN	ØP	R	ØS	T	LA
AD63C	100	80	120	0	M6	3	8
AD71C	115	95	140	0	M8	3	10
AD80C	130	110	160	0	M8	3.5	10
AD90SC	130	110	160	0	M8	3.5	10
AD90LC							
AD100LC	165	130	200	0	M10	3.5	12
AD112MC	165	130	200	0	M10	3.5	12

- All other dimensions are similar to flange mounted motors as above.
- Please call for certified drawings for tolerances and specific and contractual details.
- In face mounted AD frames up to 112M, eye bolt is not provided, hence dimension HB is "Not Applicable".
- Dimension 'X' is 2.5mm in frame AD63 and 71. In all other frames, it is zero i.e. the keyway is open.
- Please refer to us for higher frames.
- Please specify ØM with frame for clarity.

225 and higher frames, 2 pole motors running at 3000 syn. rpm have smaller shafts as shown here	Frame	Ø D	E	ED	F	G	GD	L		
								S	M	L
	ND 225	55.00	110.00	80.00	16.0	49.0	10.0	850	850	-
	ND 250	60.00	140.00	110.0	18.0	53.0	11.0	940	940	-
	ND 280	65.00	140.00	110.0	18.0	58.0	11.0	1085	1085	-
	ND315	65.00	140.00	110.0	18.0	58.0	11.0	1200	1200	-
	ND 315	70.00	140.00	110.0	20.0	62.50	12.0	-	-	1345
	ND 355*	75.00	170.00	140.00	20.0	67.50	12.0	-	-	1530

*Yx Depth = M20x40.

All dimensions in mm.

BEARING REFERENCES, B3

FRAME	POLARITY	DE BEARING	ODE BEARING
AD63	2 / 4	6201ZZ	6201ZZ
AD71	2 / 4	6203ZZ	6203ZZ
AD80	2 / 4 / 6 / 8	6204ZZ	6204ZZ
AD90 S/L	2 / 4 / 6 / 8	6205ZZ	6205ZZ
ND/AD100 L	2 / 4 / 6 / 8	6206ZZ	6205ZZ/6206ZZ
ND/AD112M	2 / 4 / 6 / 8	6306ZZ	6205ZZ
ND/AD132 S/M	2 / 4 / 6 / 8	6308ZZ	6305ZZ
ND160 M/L	2 / 4 / 6 / 8	6309 - 2RS	6309 - 2RS
ND180 M/L	2 / 4 / 6 / 8	6310 - 2RS	6310 - 2RS
ND200L	2 / 4 / 6 / 8	6312 - 2RS	6312 - 2RS

FRAME	POLARITY	DE BEARING	ODE BEARING
ND225 S/M	2 / 4 / 6 / 8	6313 - 2RS	6313 - 2RS
ND250 S/M	2	6314 - C3	6314 - C3
ND250 S/M	4 / 6 / 8	6314 - C3	6314 - C3
ND280 S/M	2	6314 - C3	6314 - C3
ND280 S/M	4 / 6 / 8	6318 - C3	6318 - C3
ND315 S/M/L	2	6315 - C3	6315 - C3
	4 / 6 / 8	6319 - C3	6319 - C3
ND355 L	2	6316 - C3	6316 - C3
	4 / 6 / 8	6321 - C3	6321 - C3

SHIPPING SPECIFICATIONS

TEFC, SCR, FOOTED MOUNTED MOTORS

FRAME SIZE	TYPE OF PACKING	NET WT. (kgs)	GROSS WT. (kgs)	LENGTH (mm)	BREADTH (mm)	HEIGHT (mm)	VOLUME (cu.m.)
ALUMINIUM FRAME MOTORS TERMINAL BOX ON TOP							
AD63	CARTON	5.6	7.5	295	190	230	0.013
AD71	CARTON	7.0	9.0	295	190	230	0.013
AD80	CARTON	10.0	13.0	340	230	250	0.019
AD90S	CARTON	13.0	17.0	400	235	305	0.029
AD90L	CARTON	16.0	20.0	400	235	305	0.029
AD100L	CARTON	19.0	24.0	430	265	330	0.038
CAST IRON FRAME MOTORS TERMINAL BOX ON TOP							
ND160M	WOODEN	121	184	826	500	615	0.0254
ND160L	WOODEN	143	206	826	500	615	0.0254
ND180M	WOODEN	174	246	930	525	655	0.032
ND180L	WOODEN	204	276	930	525	655	0.032
ND200L	WOODEN	254	368	1275	725	790	0.073
ND225S	WOODEN	350	464	1275	725	790	0.073
ND225M	WOODEN	380	494	1275	725	790	0.073
ND250S	WOODEN	460	601	1530	785	890	1.06
ND250M	WOODEN	500	641	1530	785	890	1.06
ND280S	WOODEN	620	761	1350	785	890	1.06
ND280M	WOODEN	700	841	1350	785	890	1.06
ND315S	WOODEN	1056	1306	1730	1052	1065	1.94
ND315M	WOODEN	1130	1380	1730	1052	1065	1.94
ND315L	WOODEN	1200	1480	1830	1102	1115	2.25
ND355L	WOODEN	2020	2425	1900	1375	1325	3.46
CAST IRON FRAME MOTORS TERMINAL BOX ON SIDE							
D80	CARTON	17	21	360	295	245	0.026
D90S	CARTON	22	26	410	310	270	0.034
D90L	CARTON	25	29	410	310	270	0.034

SHIPPING SPECIFICATIONS

TEFC, SCR, FOOTED MOUNTED MOTORS (Contd.)

FRAME	TYPE OF PACKING	NET WT. (Kgs)	GROSS WT. (Kgs)	LENGTH (mm)	BREADTH (mm)	HEIGHT (mm)	VOLUME (cu.m.)
ND90S	CARTON	22	26	410	310	270	0.034
ND90L	CARTON	25	29	410	310	270	0.034
ND100L	CARTON	32	37	465	345	290	0.047
ND100LX	CARTON	35	40	465	345	290	0.047
ND112M	CARTON	42	48	495	370	320	0.059
	WOODEN	45	59	525	410	355	0.076
ND112MX	CARTON	45	51	495	370	320	0.059
	WOODEN	45	62	525	410	355	0.076
ND132S	CARTON	68	76	600	430	380	0.098
	WOODEN	68	92	625	445	410	0.114
ND132M	CARTON	79	88	600	430	380	0.098
	WOODEN	79	103	635	445	410	0.114
ND160M	WOODEN	121	179	826	615	535	0.27
ND160L	WOODEN	143	204	826	615	535	0.27
ND180M	WOODEN	174	250	935	715	570	0.38
ND180L	WOODEN	204	280	935	715	570	0.38
ND200L	WOODEN	254	366	1025	825	700	0.59
ND225S	WOODEN	350	462	1025	825	700	0.59
ND225M	WOODEN	380	492	1025	825	700	0.59
ND250S	WOODEN	460	586	1150	845	710	0.69
ND250M	WOODEN	500	628	1150	845	710	0.69
ND280S	WOODEN	620	766	1500	1067	850	1.36
ND280M	WOODEN	700	846	1500	1067	850	1.36
ND315S	WOODEN	1056	1319	1730	1170	925	1.88
ND315M	WOODEN	1130	1393	1730	1170	925	1.88
ND315L	WOODEN	1200	1475	1730	1170	925	1.88
ND355L	WOODEN	2020	2300	1730	1170	925	1.88

TEFC, SCR, FLANGE MOUNTED MOTORS

FRAME	TYPE OF PACKING	NET WT. (Kgs)	GROSS WT. (Kgs)	LENGTH (mm)	BREADTH (mm)	HEIGHT (mm)	VOLUME (cu.m.)
ALUMINIUM FRAME MOTORS - TERMINAL BOX ON TOP							
AD63D	CARTON	5.6	7.5	295	190	230	0.012
AD71D	CARTON	7.0	9.0	295	190	230	0.012
AD80D	CARTON	10.0	13.0	340	230	250	0.02
AD90SD	CARTON	13.0	17.0	400	235	305	0.029
AD90LD	CARTON	16.0	20.0	400	235	305	0.029
AD100LD	CARTON	19.0	24.0	430	265	330	0.038
CAST IRON FRAME MOTORS - TERMINAL BOX ON SIDE							
D80D	CARTON	19	23	360	295	250	0.027
D90SD	CARTON	24	29	410	310	270	0.034
D90LD	CARTON	27	32	425	310	270	0.034
ND90SD	CARTON	24	29	410	310	270	0.034
ND90LD	CARTON	27	32	410	310	270	0.034
ND100LD	CARTON	34	39	465	345	290	0.047
ND100LXD	CARTON	37	42	465	345	290	0.047
ND112MD	CARTON	45	51	495	370	320	0.059
	WOODEN	45	72	555	445	405	0.100
ND112MXD	CARTON	48	54	495	370	320	0.0562
	WOODEN	48	75	555	445	405	0.1000
ND132SD	CARTON	71	79	600	430	380	0.098
	WOODEN	71	108	660	490	465	0.1504
ND132MD	CARTON	82	91	600	430	380	0.098
	WOODEN	82	119	762	442	407	0.137
ND160M	WOODEN	127	204	900	655	610	0.36
ND160L	WOODEN	148	225	900	655	610	0.36
ND180M	WOODEN	181	258	900	655	610	0.36
ND180L	WOODEN	215	292	900	655	610	0.36
ND200L	WOODEN	258	406	1142	885	839	0.84
ND225S	WOODEN	363	511	1142	885	839	0.84
ND225M	WOODEN	393	541	1142	885	839	0.84
ND250S	WOODEN	467	705	992	902	1246	1.11
ND250M	WOODEN	507	745	992	902	1246	1.11
ND280S	WOODEN	620	898	1072	1072	1431	1.64
ND280M	WOODEN	700	978	1072	1072	1431	1.64
ND315S	WOODEN	1086	1424	1280	1210	1545	2.39
ND315M	WOODEN	1160	1498	1280	1210	1545	2.39
ND315L	WOODEN	1200	1624	1850	1450	1275	3.42
ND355L	WOODEN	2020	2300	1850	1450	1275	3.42

■ The standard packing is in carton when available, alternatively it is wooden.

■ The carton packing is for full container shipment.
■ The shipping specifications for face

mounting motors would be similar to those of foot mounting motors for frames up to 132.

NOTES

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The Widest Range of Motors, AC Generators & Pumps

Single/Three Phase FHP Motors (FHP)

- From 90 watts to 2.25kW to BS 5000 part11 and IEC.
- BS/NEMA Frames in Series 40 and 50 and Metric Frames.
- DP, TEFC and TE(AOM) enclosures.
- General Purpose and Customer Specific applications.
- For 120 or 240 Volts, 50/60Hz supply suitability.
- BS/NEMA motors with UL and c-CSA-us mark for USA and Canada, with CE mark for Europe.



Standard Three Phase, LT Industrial Motors (M1 and M3)

- From 0.18kW to 400kW, SCR and SR to IEC in frames 63 to 355L and to NEMA frames 143 to 405.
- DP, TEFC, TE, Flame proof (Type 'd'), Increased Safety (Type 'e'), Non-sparking (Type 'N'), Pressurized (Type 'p') enclosures etc.
- For 110 to 660V, 50/60Hz supply.
- Standard TEFC, SCR motors with EFF2 (Improved Efficiencies) conforming to EFF2, efficiency levels to CEMEP
- Agreement with EU for Energy Efficient Motors , optionally with EFF1 (High Efficiencies) on request.
- NEMA Motors certified by CSA, Canada to EPACT for Energy Efficient Motors, with CC Number from March 2003, by DoE, USA.
- With c-CSA-us mark for Canada and USA and with CE mark for Europe.
- S1 to S9 duty cycles for all applications.



Three Phase, HT Induction and Synchronous Machines (Large Machines)

- Upto 10 MW SCR and SR.
- Upto 20 poles.
- CACA, TETV, SPDP, CACW, Flame proof, Type 'e', Type 'd', Type 'N', Type 'p' enclosures.
- For 2.2kV, 3.3kV, 6.6kV, 11kV, 14.3kV, 50/60 Hz supply.
- "Resin-Rich" alternatively "Resin-Poor" VPI Insulation.
- S1 to S8 duty cycles for all applications.



Three Phase, LT Induction Motors and Generators (Large Machines)

- Upto 1500HP, SCR and SR.
- Frames upto 560, 2 pole to 12 poles.
- TEFC, DP, Type 'd', Type 'e', Type 'N', Type 'p' enclosures.
- Vertical and horizontal mounting.
- For 400 to 690 volts, 50/60 Hz supply.
- S1 to S8 duty cycles for all applications.
- Standard Re-Rolling Mill Duty motors and Special Dual Speed Induction Generators for Windmill.



AC Generators

- Brushless AC Generators with CE mark for Europe.
 - 15 kVA to 500 kVA in three phase
 - For upto 600V, 50Hz or 60Hz, 0.8pf (lag).
 - 12.5 kVA to 15 kVA in single phase
 - For upto 300V, 50Hz or 60Hz, 0.8pf (lag).
 - Single or double bearing.
- Slip Ring AC Generators
 - 5 kVA to 82.5kVA in three phase.
 - For upto 600V, 50Hz or 60Hz, 0.8pf (lag).
 - 5kVA to 15 kVA in single phase.
 - For upto 300V, 50Hz or 60Hz, 0.8pf (lag).
 - Single or double bearing.



Pumps

- Coupled, Monoblocks, Submersibles, Jet Centrifugals, In Line, Back-Pullout, Coupled Pumps for Industrial, Agricultural domestic and Commercial applications.
- Water Circulation Pumps for single phase and three phase supply.

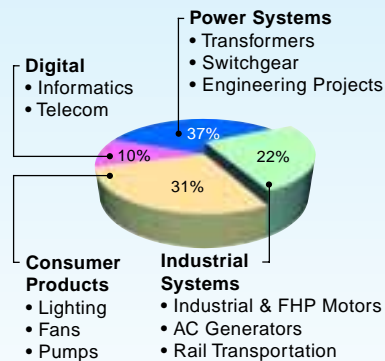


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Crompton Greaves Limited, established in 1937, has witnessed over six decades of unparalleled growth to have current sales of over Rs. 16 Billion (US \$ 330 Millions). With an electrifying attitude, a fusion of experience and expertise in the field of applied energy, extensive R & D, advanced technology, dedicated workforce, superior manufacturing skills, exacting standards of quality and diverse and distinctive competencies that converge, Crompton Greaves offers a comprehensive portfolio of products and services for Generation, Transmission, Distribution and Utilisation of power in various applications. Its presence is well established and widespread, notably in the Utilities, Industry, Agriculture, Transportation, Informatics, Telecommunication and Lifestyle Products.



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Crompton Greaves promotes a high level of Research and Development activities to maintain a technological lead and competitive advantage. R & D operations are structured to initiate a techno-active response right through the company, getting research out of the labs in to the products. Numerous awards and ISO 9000 certifications have accredited the exacting standards of quality management.

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