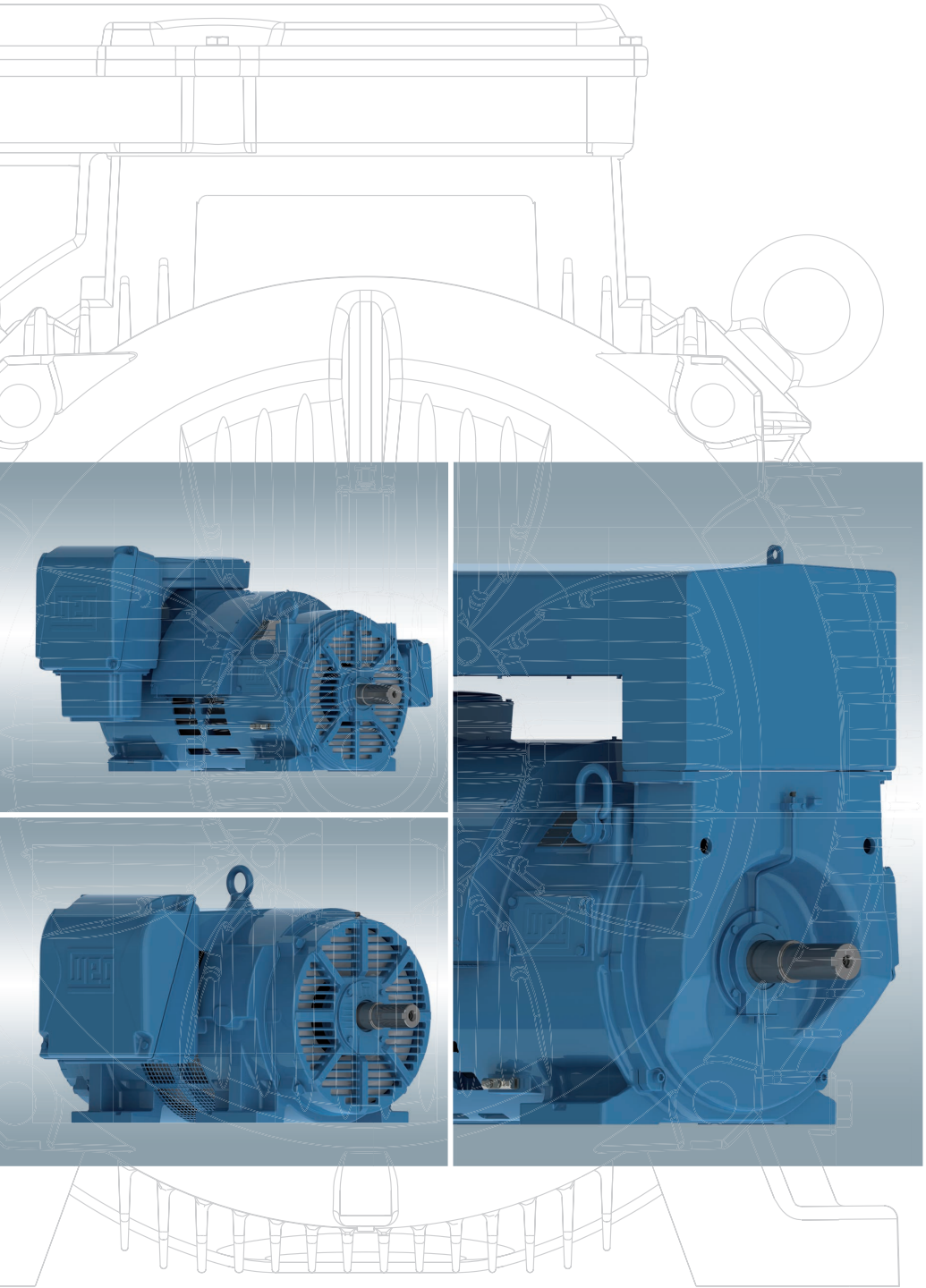
W40

Open Induction Motors

European Market



W40
Open Induction Motors

The W40 motor is a general purpose line designed for environments where dirt and moisture are minimal. The W40 cast iron frame is designed to provide maximum ventilation and heat dissipation, offering low vibration levels, high mechanical stiffness and durability. Widely used in applications such as compressors, pumps and chillers, the W40 line meets or exceeds the efficiency levels determined by International Standards and the minimum efficiency level programs in force worldwide.

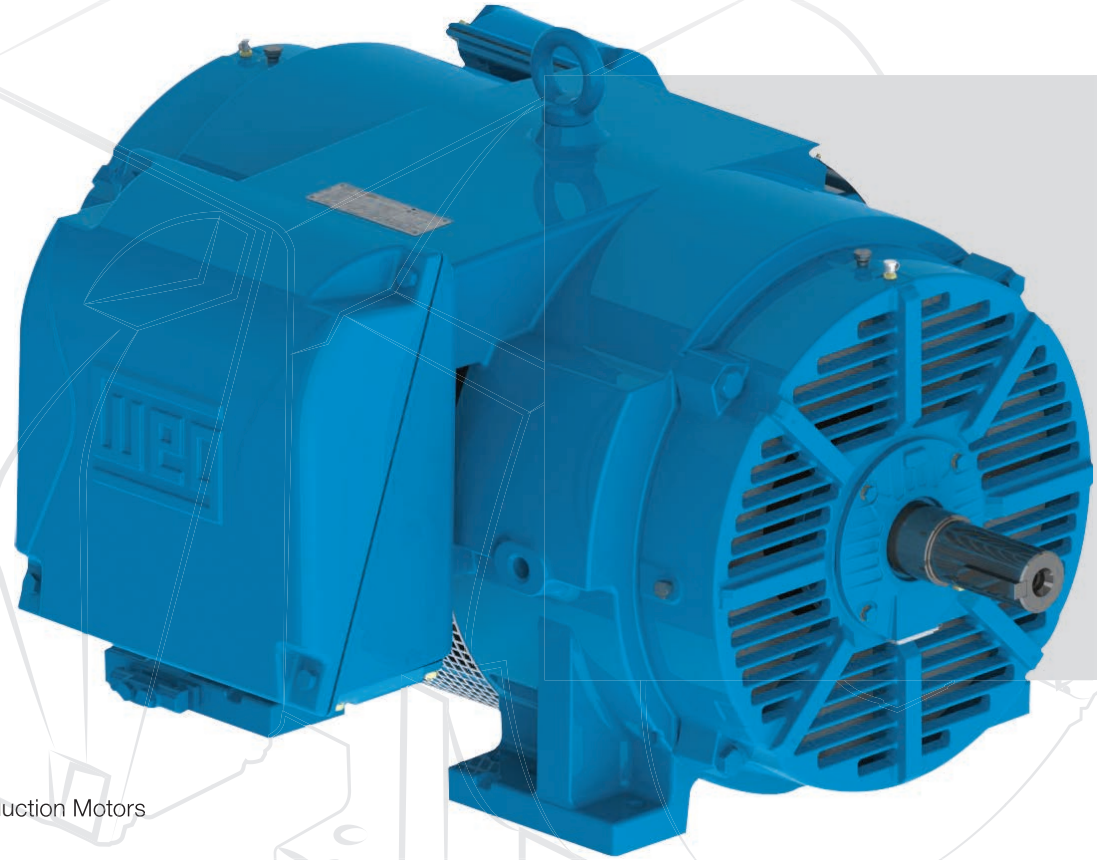
Standard Features

- Rated output: 11 to 1,500kw (50Hz)
- Number of poles: 2 and 4
- Frame sizes IEC 160M to 450 K/J
- Frequency: 50 or 60 Hz
- Voltage: 380 to 3,300 V
- Insulation class F (DT 80K)
- Degree of protection ODP (IP23) for frames 160L to 400 WPI (IP24) for frame size 450K/J
- Efficiency levels:
  Frames 160L to 280L IE2 Efficiency (RAL 5009 - blue)
  Frames 315G/F to 450K/J IE3 Efficiency (RAL 5009 - blue)
- Cooling method: IC-01 according to DIN EN 60034-6
- Mounting: B3
- Frame, end-shields and terminal box material: FC 200 cast iron
- Terminal block or flying leads for motor connection
- Grease nipples for frames 225S/M and above
- Ball bearings
- Suitable for frequency inverter operation for voltages up to 460V
- Thermistors (PTC), one per phase in windings for frame size 160M and up

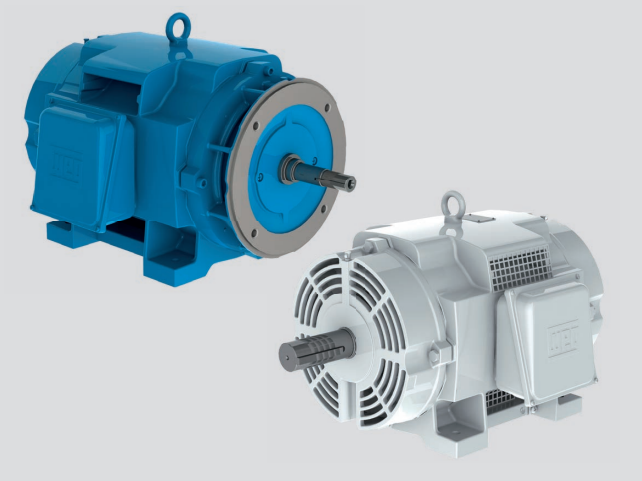
Optional Features

- Voltage: 5,000 to 6,600 V
- Number of poles: 6 or 8 poles and above
- Efficiency level IE3 (frames 160L to 280L)
- Frame sizes: 112 and 132 or NEMA 254T to L6808/09
- Other mounting configurations, including vertical and foot / flange mounted motors [1)]
- Accessories terminal box (standard for medium and high voltage motors)
- Thermal protections: Thermostats or Thermoresistances (Pt-100) on windings or bearings
- Class H insulation
- Suitable for frequency inverter operation for voltages above 575V up to 6,600V
- Space heaters
- Cable glands
- Roller bearings
- Sleeve bearings for frames 400 and above
- Degree of protection WPI or WPII (IP24) for frame size 315 and up

Note: 1) Vertical flange mounting unavailable in frame sizes 160L to 280L



Features and Benefits

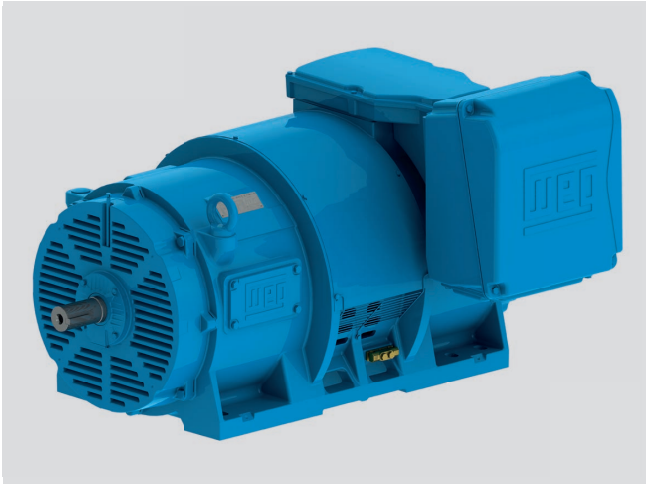


Definite Purpose Lines

WEG, with its massive product portfolio, offers several lines from the cast iron W40 mechanical platform such as Close-Coupled Pump Motors (JM/JP), Oil Well Pumping Motors (Design D, high slip), fire pump motors and Compressor Duty Motors. These definite purpose lines take advantage of all W40 benefits and are specifically designed to perfectly suit all applicaitons needs.

New IEC 355, 400 and 450K/J Frame Sizes

WEG is now introducing frame sizes 355, 400 and 450 in the W40 portfolio. This represents a significant improvement in the available rated outputs, increasing from 370kw to 1,500kw at 50Hz and from 600HP to 2,500HP at 60Hz. This new range features an entirely new concept, offering low noise levels, improved mechanical stiffness and heat dissipation. The introduction of this new design enables WEG to now offer W40 motors in medium and high voltage versions, up to 6.6KV.



W40, The Most Cost-Effective Industrial Motor

The W40 motor is an effective option for applications which do not require a high degree of protection. Due to its open enclosure, the motor design permits higher output levels to be achieved when compared with totally enclosed motors, resulting in a cost effective solution for driven equipment. The motor enclosures are carefully designed with high-tech simulation tools to ensure low sound pressure levels, even with the high amount of air circulating inside the casting.

Electrical Data

Low Voltage - IE2 Efficiency level

Output		Frame	Full Load Torque (Nm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
II poles																			
11	15	160M	35.8	6.5	1.7	2.5	0.0338	14	31	85.0	61.0	2940	88.8	89.6	89.6	0.71	0.81	0.86	20.6
15	20	160M	48.8	6.5	1.7	2.4	0.0382	12	26	106	61.0	2935	90.0	90.4	90.4	0.70	0.80	0.85	28.2
18.5	25	160L	60.3	6.5	1.9	2.4	0.0431	8	18	126	66.0	2930	90.7	91.0	90.9	0.72	0.82	0.86	34.2
22	30	160L	71.6	6.5	1.9	2.4	0.0555	10	22	140	66.0	2935	91.1	91.3	91.4	0.77	0.84	0.87	39.9
30	40	180M	97.7	6.0	1.8	2.4	0.0803	8	18	162	71.0	2935	91.9	92.0	92.0	0.74	0.83	0.87	54.1
37	50	180L	120	6.7	1.8	2.7	0.0990	7	15	200	73.0	2945	92.4	92.5	92.5	0.73	0.82	0.86	67.1
45	60	200M	146	5.0	1.8	2.0	0.1522	15	33	249	75.0	2955	92.8	93.0	92.9	0.77	0.84	0.86	81.3
55	75	200L	178	5.5	1.9	2.1	0.1734	12	26	285	76.0	2955	92.8	93.4	93.2	0.76	0.84	0.86	99.0
75	100	225S/M	242	6.2	1.9	2.4	0.3336	11	24	390	78.0	2960	94.0	94.1	93.9	0.80	0.85	0.87	130
90	125	250S/M	290	7.3	2.0	3.6	0.4105	8	18	480	79.0	2970	93.3	94.2	94.2	0.80	0.86	0.88	157
110	150	250S/M	354	8.2	2.2	3.2	0.4754	6	13	565	79.0	2965	93.5	94.4	94.4	0.80	0.86	0.88	191
132	175	280S/M	425	6.5	1.6	2.6	1.02	15	33	620	81.0	2970	93.5	94.8	94.8	0.84	0.88	0.89	226
150	200	280S/M	483	7.0	1.7	2.8	1.20	19	42	650	81.0	2970	93.5	95.0	95.0	0.82	0.88	0.90	253
160	220	280S/M	515	7.0	1.8	3.1	1.20	15	33	670	81.0	2970	94.5	95.1	95.1	0.83	0.88	0.89	273
185	250	280S/M	596	7.0	1.8	2.5	1.18	15	33	690	81.0	2965	94.0	95.0	95.0	0.84	0.88	0.90	312
200	270	280S/M	645	6.7	1.8	2.7	1.31	15	33	705	81.0	2965	94.0	95.0	95.1	0.83	0.89	0.90	337
220	300	280S/M	709	6.5	1.7	2.5	1.31	11	24	710	81.0	2965	94.2	95.0	95.0	0.83	0.89	0.90	371
250	340	280L	804	7.0	1.8	2.6	1.38	11	24	860	81.0	2970	95.0	95.5	95.5	0.80	0.87	0.89	425
260	350	280L	836	6.8	1.7	2.5	1.51	11	24	860	81.0	2970	95.0	95.5	95.5	0.80	0.87	0.89	442
280	380	280L	901	6.8	1.8	2.5	1.51	23	51	900	81.0	2970	95.1	95.5	95.5	0.83	0.88	0.89	475
300	400	280L	965	6.8	1.8	2.5	1.68	18	40	940	81.0	2970	95.2	95.5	95.5	0.84	0.88	0.90	504
315	430	280L	1013	7.2	1.9	2.6	1.81	19	42	985	81.0	2970	95.3	95.5	95.5	0.83	0.89	0.90	529
330	450	280L	1063	7.2	1.9	2.6	1.81	19	42	985	81.0	2965	95.3	95.5	95.5	0.84	0.89	0.90	554
355	480	280L	1142	7.5	2.1	2.7	1.94	14	31	1015	81.0	2970	95.4	95.6	95.6	0.79	0.86	0.89	602
370	500	280L	1190	7.7	2.1	2.7	2.07	16	35	1080	81.0	2970	95.5	95.7	95.7	0.84	0.89	0.90	620
400	550	315G/F	1285	6.8	1.8	2.5	3.31	12	26	1550	87.0	2975	95.8	96.1	96.1	0.80	0.86	0.88	683
450	610	315G/F	1443	7.9	2.1	2.7	3.78	10	22	1670	87.0	2980	95.5	96.1	96.1	0.74	0.83	0.87	777
500	680	315G/F	1603	7.9	2.3	2.7	4.04	10	22	1900	87.0	2980	96.0	96.3	96.3	0.77	0.84	0.87	861
IV Poles																			
11	15	160M	71.7	5.5	2.0	2.2	0.0777	12	26	110	53.0	1465	89.8	90.0	89.8	0.67	0.78	0.83	21.3
15	20	160L	97.8	5.5	2.0	2.2	0.0923	12	26	130	56.0	1465	90.3	90.6	90.6	0.65	0.77	0.82	29.1
18.5	25	160L	121	5.5	2.0	2.2	0.1069	12	26	176	56.0	1465	90.5	91.2	91.2	0.64	0.76	0.81	36.1
22	30	180M	143	6.0	2.2	2.6	0.1653	16	35	185	65.0	1470	91.5	91.7	91.7	0.68	0.79	0.84	41.2
30	40	180L	195	6.5	2.4	2.5	0.2001	10	22	222	66.0	1470	92.2	92.4	92.3	0.65	0.77	0.82	57.2
37	50	200M	239	6.0	2.2	2.3	0.2449	10	22	255	66.0	1480	92.4	92.7	92.7	0.61	0.72	0.79	72.9
45	60	200L	292	6.0	2.0	2.5	0.3111	11	24	300	66.0	1475	93.0	93.1	93.1	0.66	0.77	0.82	85.1
55	75	225S/M	355	6.5	2.2	2.7	0.7973	12	26	390	66.0	1480	93.5	93.6	93.6	0.75	0.84	0.87	97.5
75	100	250S/M	484	6.8	2.2	2.8	0.9623	12	26	480	66.0	1480	93.9	94.0	94.0	0.73	0.82	0.87	132
90	125	250S/M	581	6.5	2.2	2.6	1.08	10	22	550	66.0	1480	94.1	94.2	94.2	0.74	0.83	0.87	159
110	150	280S/M	708	7.5	2.4	2.6	1.80	14	31	670	71.0	1485	94.0	94.5	94.5	0.72	0.82	0.86	195
132	175	280S/M	849	6.9	2.2	2.4	2.03	14	31	750	71.0	1485	94.5	94.7	94.7	0.76	0.84	0.87	231
150	200	280S/M	965	7.0	2.2	2.4	2.31	12	26	850	71.0	1485	94.6	95.0	95.0	0.74	0.82	0.86	265
160	220	280S/M	1029	7.0	2.3	2.4	2.34	10	22	920	71.0	1485	94.6	94.9	94.9	0.75	0.83	0.87	280
185	250	280L	1194	7.0	2.3	2.5	2.63	10	22	900	72.0	1480	95.3	95.5	95.3	0.78	0.84	0.87	322
200	270	280L	1291	7.5	2.4	2.7	2.65	8	18	900	72.0	1480	95.4	95.5	95.4	0.73	0.81	0.85	352
220	300	280L	1420	7.8	2.5	2.7	3.09	8	18	952	72.0	1480	95.4	95.6	95.4	0.77	0.84	0.87	383
250	340	280L*	1609	8.1	2.6	2.8	3.71	8	18	1080	72.0	1485	95.6	95.7	95.6	0.77	0.84	0.87	434
260	350	280L*	1673	8.0	2.5	2.7	3.40	8	18	1080	72.0	1485	95.6	95.7	95.6	0.77	0.84	0.87	451
280	380	315G/F	1796	6.8	2.4	2.5	4.96	15	33	1450	85.0	1490	95.4	96.0	96.0	0.71	0.80	0.84	501
300	400	315G/F	1924	6.9	2.6	2.5	5.51	15	33	1550	85.0	1490	95.6	96.1	96.0	0.72	0.81	0.85	531
315	430	315G/F	2020	7.0	2.8	2.6	6.06	15	33	1650	85.0	1490	95.7	96.2	96.2	0.72	0.81	0.85	556
330	450	315G/F	2116	7.0	2.7	2.5	6.06	12	26	1650	85.0	1490	95.8	96.2	96.1	0.73	0.82	0.85	583
355	480	315G/F	2277	7.2	2.7	2.6	6.62	12	26	1750	85.0	1490	95.8	96.3	96.3	0.72	0.81	0.85	626
370	500	315G/F	2373	7.2	2.6	2.5	6.62	12	26	1750	85.0	1490	95.9	96.3	96.2	0.73	0.82	0.86	646
400	550	315G/F*	2574	6.8	2.4	2.3	6.62	9	20	1750	85.0	1485	96.0	96.3	96.1	0.75	0.83	0.86	699

** Motor with class F (105K) temperature rise.*

Output		380 V								415 V							
		Rated speed (rpm)	% of full load						Full load current In (A)	Rated speed (rpm)	% of full load						Full load current In (A)
			Efficiency			Power Factor					Efficiency			Power Factor			
kW	HP		50	75	100	50	75	100			50	75	100	50	75	100	
II poles																	
11	15	2935	89.0	89.6	89.4	0.73	0.83	0.87	21.5	2945	88.5	89.5	89.6	0.69	0.80	0.85	20.1
15	20	2930	90.0	90.4	90.3	0.75	0.83	0.87	29.0	2940	89.5	90.3	90.4	0.66	0.77	0.83	27.8
18.5	25	2925	91.0	90.9	90.9	0.77	0.85	0.88	35.1	2935	90.5	90.9	90.9	0.68	0.79	0.84	33.7
22	30	2930	91.3	91.5	91.3	0.80	0.86	0.88	41.6	2940	90.9	91.1	91.3	0.74	0.83	0.86	39.0
30	40	2930	92.1	92.0	92.0	0.78	0.86	0.88	56.3	2940	91.6	92.0	92.0	0.70	0.80	0.85	53.4
37	50	2940	92.7	92.5	92.5	0.77	0.85	0.87	69.9	2950	92.1	92.5	92.5	0.69	0.80	0.85	65.5
45	60	2950	93.1	93.0	92.9	0.81	0.87	0.88	83.6	2960	92.5	93.0	92.9	0.73	0.82	0.85	79.3
55	75	2950	93.0	93.3	93.2	0.81	0.86	0.88	102	2960	92.6	93.3	93.2	0.71	0.81	0.85	96.6
75	100	2960	94.2	94.2	93.8	0.84	0.89	0.90	135	2965	93.8	94.0	93.9	0.76	0.83	0.86	126
90	125	2965	93.5	94.3	94.1	0.83	0.87	0.89	163	2970	93.1	94.1	94.3	0.78	0.85	0.88	151
110	150	2960	93.7	94.4	94.3	0.82	0.87	0.89	199	2965	93.3	94.4	94.4	0.78	0.84	0.87	186
132	175	2965	93.7	94.6	94.6	0.87	0.89	0.90	236	2975	93.3	94.8	94.8	0.82	0.87	0.88	220
150	200	2970	93.8	95.0	94.8	0.85	0.89	0.91	264	2975	93.2	95.0	95.0	0.79	0.87	0.89	247
160	220	2970	94.7	95.0	94.9	0.86	0.89	0.90	285	2975	94.2	95.0	95.1	0.81	0.87	0.88	266
185	250	2965	94.1	95.0	95.0	0.86	0.89	0.90	329	2970	93.8	95.0	95.0	0.82	0.87	0.89	304
200	270	2960	94.3	95.0	95.0	0.86	0.90	0.91	351	2970	93.7	95.0	95.2	0.81	0.88	0.89	328
220	300	2960	94.4	95.0	95.0	0.85	0.90	0.91	387	2965	94.0	95.0	95.0	0.81	0.88	0.89	362
250	340	2965	94.8	95.1	95.0	0.84	0.89	0.90	444	2970	94.8	95.5	95.5	0.76	0.84	0.87	419
260	350	2965	94.8	95.1	95.0	0.84	0.89	0.90	462	2970	94.8	95.5	95.5	0.76	0.84	0.87	435
280	380	2965	95.2	95.5	95.1	0.85	0.89	0.90	497	2970	95.0	95.5	95.5	0.81	0.87	0.88	464
300	400	2965	95.3	95.6	95.2	0.86	0.89	0.91	526	2970	95.1	95.5	95.5	0.82	0.87	0.89	491
315	430	2965	95.4	95.6	95.3	0.85	0.90	0.91	552	2970	95.2	95.5	95.6	0.82	0.88	0.89	515
330	450	2965	95.4	95.6	95.3	0.86	0.90	0.91	578	2970	95.2	95.4	95.6	0.83	0.88	0.90	534
355	480	2965	95.5	95.6	95.4	0.82	0.88	0.90	628	2970	95.3	95.5	95.7	0.77	0.85	0.88	586
370	500	2970	95.6	95.7	95.5	0.86	0.90	0.91	647	2970	95.4	95.6	95.6	0.82	0.87	0.89	605
400	550	2975	95.9	95.9	95.9	0.82	0.87	0.89	712	2975	95.7	96.2	96.2	0.77	0.84	0.87	665
450	610	2980	95.8	96.1	96.1	0.79	0.85	0.88	808	2980	95.2	95.9	96.0	0.70	0.80	0.85	767
500	680	2975	96.1	96.3	96.2	0.81	0.87	0.89	887	2980	95.8	96.2	96.2	0.74	0.82	0.86	841
IV Poles																	
11	15	1460	90.0	90.0	89.8	0.72	0.81	0.85	21.9	1465	89.5	90.0	89.8	0.64	0.76	0.81	21.0
15	20	1460	90.7	90.7	90.6	0.70	0.80	0.84	29.9	1470	89.6	90.6	90.6	0.61	0.73	0.80	28.8
18.5	25	1460	91.0	91.2	91.2	0.70	0.80	0.84	36.7	1465	89.8	91.2	91.2	0.60	0.72	0.79	35.7
22	30	1465	91.7	91.7	91.6	0.73	0.82	0.86	42.4	1470	91.3	91.6	91.7	0.65	0.77	0.82	40.7
30	40	1465	92.6	92.5	92.3	0.71	0.80	0.85	58.1	1475	91.6	92.3	92.3	0.61	0.73	0.80	56.5
37	50	1475	92.7	92.7	92.7	0.66	0.76	0.81	74.9	1480	91.5	92.7	92.7	0.56	0.69	0.76	73.1
45	60	1470	93.2	93.2	93.1	0.71	0.80	0.84	87.4	1475	92.8	93.1	93.1	0.61	0.74	0.80	84.1
55	75	1475	93.6	93.6	93.5	0.79	0.86	0.88	102	1480	93.4	93.5	93.6	0.73	0.82	0.86	95.1
75	100	1475	94.1	94.1	94.0	0.77	0.85	0.88	138	1480	93.7	94.0	94.0	0.69	0.80	0.85	131
90	125	1475	94.3	94.3	94.2	0.78	0.85	0.88	165	1480	93.9	94.2	94.2	0.71	0.81	0.86	155
110	150	1485	94.4	94.6	94.5	0.77	0.85	0.88	201	1485	93.4	94.5	94.5	0.68	0.79	0.84	193
132	175	1480	94.7	94.7	94.7	0.79	0.86	0.88	241	1485	94.3	94.7	94.7	0.72	0.82	0.86	225
150	200	1480	94.9	94.9	94.9	0.78	0.84	0.87	276	1485	94.3	95.0	95.0	0.70	0.80	0.85	258
160	220	1480	94.9	94.9	94.9	0.79	0.85	0.88	291	1485	94.3	94.9	94.9	0.71	0.81	0.86	273
185	250	1480	95.3	95.3	95.1	0.81	0.86	0.88	336	1480	95.2	95.5	95.4	0.76	0.83	0.86	314
200	270	1480	95.5	95.5	95.3	0.76	0.83	0.86	366	1480	95.2	95.5	95.5	0.70	0.80	0.84	343
220	300	1480	95.5	95.5	95.2	0.80	0.86	0.88	399	1480	95.2	95.6	95.5	0.75	0.83	0.86	373
250	340	1480	95.7	95.7	95.4	0.80	0.86	0.88	452	1485	95.3	95.6	95.6	0.75	0.83	0.86	423
260	350	1480	95.7	95.7	95.4	0.80	0.86	0.88	471	1485	95.3	95.6	95.6	0.75	0.83	0.86	440
280	380	1485	95.7	96.1	95.9	0.75	0.83	0.86	516	1490	95.0	95.8	95.9	0.67	0.78	0.83	489
300	400	1485	95.8	96.2	96.0	0.76	0.84	0.86	552	1490	95.2	95.9	96.0	0.68	0.79	0.83	524
315	430	1485	96.0	96.3	96.1	0.76	0.84	0.87	572	1490	95.4	96.1	96.2	0.68	0.79	0.84	542
330	450	1485	96.0	96.3	96.0	0.77	0.84	0.87	600	1490	95.5	96.1	96.1	0.70	0.80	0.84	569
355	480	1485	96.1	96.4	96.2	0.76	0.84	0.87	644	1490	95.5	96.2	96.3	0.69	0.79	0.84	611
370	500	1485	96.2	96.4	96.2	0.77	0.85	0.87	672	1490	95.6	96.2	96.2	0.70	0.80	0.84	637
400	550	1485	96.2	96.3	96.0	0.79	0.85	0.87	728	1490	95.8	96.2	96.1	0.72	0.81	0.85	681

Electrical Data

Low Voltage - IE3 Efficiency level

Output		Frame	Full Load Torque (Nm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
II poles																			
11	15	160M	35.6	6.9	2.0	2.8	0.0357	20	44	106	66.0	2950	91.0	91.2	91.2	0.65	0.77	0.83	21.0
15	20	160L	48.8	7.0	2.0	2.7	0.0426	20	44	126	66.0	2935	91.5	91.9	91.9	0.68	0.79	0.84	28.0
18.5	25	160L	60.0	7.3	2.4	2.9	0.0549	18	40	140	66.0	2945	92.0	92.4	92.4	0.69	0.80	0.85	34.0
22	30	180M	71.3	7.1	2.0	3.1	0.0799	20	44	162	73.0	2950	92.4	92.7	92.7	0.67	0.77	0.83	41.3
30	40	180L	97.2	7.6	2.3	3.3	0.0985	15	33	200	73.0	2950	92.8	93.3	93.3	0.66	0.78	0.83	55.9
37	50	200M	119	6.0	2.1	2.3	0.1522	30	66	225	76.0	2960	93.5	93.7	93.7	0.73	0.82	0.86	66.3
45	60	200L	145	6.3	2.4	2.5	0.1734	30	66	264	76.0	2960	93.9	94.0	94.0	0.71	0.80	0.85	81.3
55	75	225S/M	177	7.0	2.1	2.8	0.3311	18	40	395	79.0	2965	94.0	94.3	94.3	0.81	0.86	0.88	95.7
75	100	225S/M	242	7.0	2.0	2.8	0.3311	18	40	395	79.0	2960	94.2	94.7	94.7	0.77	0.83	0.86	133
90	125	250S/M	291	7.3	2.2	2.8	0.4075	18	40	485	79.0	2960	94.8	95.0	95.0	0.79	0.85	0.88	155
110	150	250S/M	355	7.5	2.2	2.9	0.4755	15	33	565	79.0	2960	94.8	95.2	95.2	0.81	0.86	0.88	190
132	175	280S/M	424	7.0	2.0	3.2	0.9928	15	33	630	81.0	2975	94.1	95.4	95.4	0.70	0.80	0.85	235
150	200	280S/M	482	7.5	2.2	3.2	1.17	15	33	740	81.0	2975	94.8	95.6	95.6	0.74	0.83	0.87	260
160	220	280S/M	514	7.1	2.1	3.0	1.17	20	44	740	81.0	2975	95.0	95.6	95.6	0.76	0.84	0.88	275
185	250	280S/M	594	6.8	2.0	2.8	1.29	25	55	820	81.0	2975	95.4	95.8	95.8	0.80	0.87	0.89	313
200	270	280S/M	642	6.6	2.0	2.9	1.29	20	44	820	81.0	2975	95.4	95.8	95.8	0.78	0.85	0.88	342
220	300	280S/M	708	6.0	1.8	2.6	1.29	20	44	820	81.0	2970	95.6	95.8	95.8	0.80	0.87	0.89	372
250	340	280L	82.0	6.6	1.8	2.8	1.38	11	24	860	81.0	2970	95.0	95.5	95.8	0.80	0.87	0.89	423
260	350	280L	85.3	6.6	1.8	2.8	1.51	11	24	860	81.0	2970	95.0	95.5	95.8	0.80	0.87	0.89	440
280	380	280L	91.8	6.8	1.9	2.8	1.51	23	51	900	81.0	2970	95.1	95.5	95.8	0.83	0.88	0.89	474
300	400	280L	98.4	6.8	2.0	2.9	1.68	16	35	940	81.0	2970	95.2	95.5	95.8	0.82	0.88	0.90	502
315	430	280L	103	7.2	1.9	2.6	1.81	19	42	985	81.0	2970	95.3	95.5	95.8	0.83	0.89	0.90	527
330	450	280L	108	7.2	1.9	2.6	1.81	19	42	985	81.0	2965	95.3	95.5	95.8	0.84	0.89	0.90	552
355	480	280L	116	7.5	2.1	2.7	1.94	14	31	1015	81.0	2970	95.4	95.6	95.8	0.79	0.86	0.89	601
370	500	280L	121	7.7	2.1	2.7	2.07	16	35	1080	81.0	2970	95.5	95.7	95.8	0.84	0.89	0.90	619
400	550	315G/F	131	6.8	1.8	2.5	3.31	12	26	1550	87.0	2975	95.8	96.1	96.1	0.80	0.86	0.88	683
450	610	315G/F	147	7.9	2.1	2.7	3.78	10	22	1670	87.0	2980	95.5	96.1	96.1	0.74	0.83	0.87	777
500	680	315G/F	163	7.9	2.3	2.7	4.04	10	22	1900	87.0	2980	96.0	96.3	96.3	0.77	0.84	0.87	861
560	750	355J/H	183	5.6	1.1	2.0	4.66	25	55	2000	87.0	2975	95.8	96.2	96.2	0.80	0.87	0.88	955
590	800	355J/H	193	5.8	1.1	2.0	4.66	25	55	2100	87.0	2975	96.2	96.5	96.5	0.79	0.87	0.88	1000
630	850	355J/H	206	6.5	1.2	2.2	5.41	20	44	2300	87.0	2980	96.2	96.8	96.8	0.81	0.86	0.87	1080
660	900	355J/H	216	6.0	1.1	2.2	5.41	20	44	2300	87.0	2980	96.2	96.8	96.8	0.78	0.84	0.86	1140
710	970	400J/H	232	6.0	1.1	2.0	8.33	25	55	2800	90.0	2980	96.2	96.5	96.5	0.83	0.87	0.88	1210
800	1100	400J/H	261	6.0	1.2	2.0	9.16	20	44	3000	90.0	2980	96.5	97.0	97.0	0.86	0.87	0.88	1350

Output		380 V								415 V							
		Rated speed (rpm)	% of full load						Full load current In (A)	Rated speed (rpm)	% of full load						Full load current In (A)
			Efficiency			Power Factor					Efficiency			Power Factor			
kW	HP		50	75	100	50	75	100			50	75	100	50	75	100	
II poles																	
11	15	2945	91.0	91.2	91.2	0.70	0.80	0.85	21.6	2950	90.6	91.3	91.3	0.61	0.74	0.80	21.0
15	20	2935	91.5	91.9	91.9	0.73	0.82	0.86	28.8	2945	91.5	91.9	91.9	0.64	0.76	0.82	27.7
18.5	25	2940	92.0	92.4	92.4	0.73	0.83	0.87	35.0	2950	92.2	92.5	92.5	0.65	0.77	0.83	33.5
22	30	2945	92.4	92.7	92.7	0.72	0.81	0.85	42.4	2955	92.2	92.7	92.7	0.63	0.75	0.81	40.8
30	40	2950	92.8	93.3	93.3	0.71	0.81	0.86	56.8	2955	92.5	93.3	93.3	0.61	0.74	0.81	55.2
37	50	2960	93.5	93.7	93.7	0.78	0.85	0.87	69.0	2965	93.5	93.7	93.7	0.69	0.79	0.84	65.4
45	60	2960	93.5	94.0	94.0	0.76	0.84	0.87	83.6	2965	93.9	94.0	94.0	0.65	0.77	0.82	81.2
55	75	2960	94.0	94.3	94.3	0.84	0.88	0.90	98.5	2970	94.0	94.3	94.3	0.78	0.84	0.87	93.3
75	100	2955	94.2	94.7	94.7	0.81	0.85	0.88	137	2965	94.2	94.7	94.7	0.73	0.81	0.84	131
90	125	2955	94.0	94.5	95.0	0.81	0.86	0.89	162	2960	94.8	95.0	95.0	0.77	0.84	0.87	151
110	150	2960	94.8	95.2	95.2	0.85	0.88	0.90	195	2965	94.8	95.2	95.2	0.78	0.87	0.89	181
132	175	2975	94.1	95.4	95.4	0.75	0.83	0.87	242	2980	94.1	95.4	95.4	0.66	0.77	0.83	232
150	200	2975	95.2	95.6	95.6	0.78	0.86	0.88	271	2980	94.5	95.6	95.6	0.70	0.80	0.85	257
160	220	2970	95.0	95.6	95.6	0.79	0.86	0.89	286	2975	95.0	95.6	95.6	0.72	0.82	0.86	271
185	250	2970	95.4	95.8	95.8	0.83	0.88	0.90	326	2975	95.3	95.8	95.8	0.77	0.85	0.88	305
200	270	2670	95.4	95.8	95.8	0.81	0.88	0.90	352	2975	95.1	95.8	95.8	0.74	0.83	0.87	334
220	300	2965	95.6	95.8	95.8	0.83	0.88	0.90	388	2970	95.3	95.8	95.8	0.77	0.85	0.88	363
250	340	2970	95.0	95.5	95.8	0.84	0.89	0.90	441	2975	95.5	95.8	95.8	0.76	0.84	0.87	417
260	350	2970	95.0	95.5	95.8	0.84	0.89	0.90	458	2975	95.5	95.8	95.8	0.76	0.84	0.87	434
280	380	2965	95.2	95.5	95.8	0.85	0.89	0.90	493	2975	95.1	95.5	95.8	0.80	0.87	0.88	462
300	400	2965	95.2	95.5	95.8	0.85	0.90	0.91	523	2970	95.5	95.8	95.8	0.80	0.86	0.89	490
315	430	2965	95.4	95.6	95.8	0.85	0.90	0.91	549	2970	95.2	95.5	95.8	0.82	0.88	0.89	514
330	450	2965	95.4	95.6	95.8	0.86	0.90	0.91	575	2970	95.2	95.4	95.8	0.83	0.88	0.90	532
355	480	2965	95.5	95.6	95.8	0.82	0.88	0.90	626	2970	95.3	95.5	95.8	0.77	0.85	0.88	586
370	500	2970	95.6	95.7	95.8	0.86	0.90	0.91	645	2970	95.4	95.6	95.8	0.82	0.87	0.89	604
400	550	2975	95.9	95.9	95.9	0.82	0.87	0.89	712	2975	95.7	96.2	96.2	0.77	0.84	0.87	665
450	610	2980	95.8	96.1	96.1	0.79	0.85	0.88	808	2980	95.2	95.9	96.0	0.70	0.80	0.85	767
500	680	2975	96.1	96.3	96.2	0.81	0.87	0.89	887	2980	95.8	96.2	96.2	0.74	0.82	0.86	841
560	750	2975	95.8	96.2	96.2	0.81	0.88	0.89	994	2975	95.8	96.2	96.2	0.79	0.86	0.87	931
590	800	2975	96.2	96.5	96.5	0.80	0.88	0.89	1040	2975	96.2	96.5	96.5	0.78	0.86	0.87	978
630	850	2980	96.2	96.8	96.8	0.82	0.87	0.88	1120	2980	96.2	96.8	96.8	0.80	0.85	0.86	1050
660	900	2980	96.2	96.8	96.8	0.78	0.85	0.87	1190	2980	96.2	96.8	96.8	0.77	0.83	0.85	1120
710	970	2980	96.2	96.5	96.5	0.84	0.88	0.89	1260	2980	96.2	96.5	96.5	0.82	0.86	0.87	1180
800	1100	2980	96.5	97.0	97.0	0.87	0.88	0.89	1410	2980	96.5	97.0	97.0	0.85	0.86	0.87	1320

Electrical Data

Low Voltage - IE3 Efficiency level

Output		Frame	Full Load Torque (Nm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	400 V							
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
IV poles																			
11	15	160L	71.7	5.5	2.1	2.4	0.0923	25	55	130	56.0	1465	91.0	91.4	91.4	0.69	0.79	0.84	20.7
15	20	160L	97.5	6.0	2.5	2.7	0.1070	25	55	176	56.0	1470	91.5	92.1	92.1	0.64	0.75	0.81	29.0
18.5	25	180M	120	6.7	2.8	3.2	0.1646	15	33	185	65.0	1475	92.0	92.6	92.6	0.63	0.75	0.81	35.6
22	30	180L	143	7.0	2.9	3.0	0.1993	15	33	222	65.0	1470	92.8	93.0	93.0	0.67	0.78	0.83	41.1
30	40	200M	194	6.6	2.3	2.8	0.2449	15	33	255	66.0	1480	93.1	93.6	93.6	0.57	0.70	0.79	58.6
37	50	200L	239	6.8	2.5	2.8	0.3111	20	44	300	66.0	1480	93.5	93.9	93.9	0.60	0.73	0.81	70.2
45	60	225S/M	291	7.7	2.5	3.0	0.7924	15	33	390	66.0	1480	94.0	94.2	94.2	0.71	0.81	0.85	81.1
55	75	225S/M	355	7.8	2.7	3.1	0.7900	12	26	390	66.0	1480	94.2	94.6	94.6	0.67	0.78	0.83	101
75	100	250S/M	483	8.7	3.1	3.4	1.08	10	22	550	66.0	1485	94.5	95.0	95.0	0.68	0.79	0.84	136
90	125	280S/M	579	7.0	2.5	2.7	1.78	20	44	670	71.0	1485	95.0	95.2	95.2	0.69	0.79	0.84	162
110	150	280S/M	708	7.0	2.4	2.6	1.78	20	44	670	71.0	1485	95.2	95.4	95.4	0.69	0.79	0.83	201
132	175	280S/M	849	7.5	2.6	2.7	2.01	15	33	750	71.0	1485	95.1	95.6	95.6	0.67	0.78	0.83	240
150	200	280S/M	965	7.2	2.6	2.5	2.32	20	44	920	71.0	1485	95.6	95.8	95.8	0.72	0.81	0.85	266
160	220	280S/M	1029	7.0	2.5	2.4	2.32	20	44	920	71.0	1485	95.7	95.8	95.8	0.74	0.82	0.85	284
185	250	280L	122	7.0	2.3	2.5	2.63	10	22	900	72.0	1480	95.3	95.5	96.0	0.78	0.84	0.87	320
200	270	280L	132	7.5	2.4	2.7	2.65	8	18	900	72.0	1480	95.4	95.5	96.0	0.73	0.81	0.85	354
220	300	280L	145	7.8	2.5	2.7	3.09	8	18	952	72.0	1480	95.4	95.6	96.0	0.77	0.84	0.87	380
250	340	280L*	164	8.1	2.6	2.8	3.71	8	18	1080	72.0	1485	95.6	95.7	96.0	0.77	0.84	0.87	432
260	350	280L*	171	8.0	2.5	2.7	3.40	8	18	1080	72.0	1485	95.6	95.7	96.0	0.77	0.84	0.87	449
280	380	315G/F	183	6.8	2.4	2.5	4.96	15	33	1450	85.0	1490	95.4	96.0	96.0	0.71	0.80	0.84	501
300	400	315G/F	196	6.9	2.6	2.5	5.51	15	33	1550	85.0	1490	95.6	96.1	96.0	0.72	0.81	0.85	531
315	430	315G/F	206	7.0	2.8	2.6	6.06	15	33	1650	85.0	1490	95.7	96.2	96.2	0.72	0.81	0.85	556
330	450	315G/F	216	7.0	2.7	2.5	6.06	12	26	1650	85.0	1490	95.8	96.2	96.1	0.73	0.82	0.85	583
355	480	315G/F	232	7.2	2.7	2.6	6.62	12	26	1750	85.0	1490	95.8	96.3	96.3	0.72	0.81	0.85	626
370	500	315G/F	242	7.2	2.6	2.5	6.62	12	26	1750	85.0	1490	95.9	96.3	96.2	0.73	0.82	0.86	646
400	550	315G/F*	262	6.8	2.4	2.3	6.62	9	20	1750	85.0	1485	96.0	96.3	96.1	0.75	0.83	0.86	699
440	600	355J/H	289	5.5	1.4	2.2	9.57	22	48	2500	85.0	1485	95.8	96.0	96.0	0.77	0.84	0.86	769
480	650	355J/H	314	6.9	1.8	2.5	10.5	20	44	2700	85.0	1490	95.4	96.0	96.0	0.68	0.78	0.82	880
515	700	400J/H	337	6.5	1.5	2.0	18.5	20	44	2800	87.0	1490	95.8	96.0	96.0	0.78	0.85	0.87	890
560	750	400J/H	366	6.7	1.6	2.2	19.1	20	44	3000	87.0	1490	95.8	96.0	96.0	0.76	0.84	0.86	979
590	800	400J/H	386	6.6	1.5	2.0	20.6	20	44	3250	87.0	1490	95.7	96.2	96.2	0.79	0.85	0.87	1020
660	900	400J/H	433	6.6	1.5	2.0	22.1	18	40	3500	87.0	1485	95.8	96.2	96.2	0.80	0.85	0.87	1140

** Motor with class F (105K) temperature rise.*

Output		380 V								415 V							
		Rated speed (rpm)	% of full load						Full load current In (A)	Rated speed (rpm)	% of full load						Full load current In (A)
			Efficiency			Power Factor					Efficiency			Power Factor			
kW	HP		50	75	100	50	75	100			50	75	100	50	75	100	
IV poles																	
11	15	1460	91.0	91.4	91.4	0.72	0.81	0.85	21.5	1470	90.9	91.4	91.4	0.66	0.77	0.82	20.4
15	20	1465	91.5	92.1	92.1	0.68	0.79	0.83	29.8	1470	91.5	92.1	92.1	0.60	0.72	0.79	28.7
18.5	25	1465	92.9	93.1	92.4	0.67	0.78	0.83	36.7	1470	92.0	92.8	92.7	0.59	0.72	0.79	35.1
22	30	1465	92.8	93.0	93.0	0.71	0.81	0.85	42.3	1470	92.8	93.0	93.0	0.64	0.76	0.82	40.1
30	40	1475	93.1	93.6	93.6	0.63	0.74	0.82	59.4	1480	93.1	93.6	93.6	0.53	0.66	0.77	57.9
37	50	1485	93.5	93.9	93.9	0.66	0.76	0.83	72.1	1480	93.5	93.9	93.9	0.56	0.69	0.79	69.4
45	60	1480	94.0	94.2	94.2	0.74	0.83	0.86	84.4	1485	94.0	94.2	94.2	0.68	0.79	0.84	79.1
55	75	1480	94.2	94.6	94.6	0.71	0.81	0.85	104	1485	94.0	94.6	94.6	0.63	0.75	0.81	100
75	100	1480	94.5	95.2	95.2	0.73	0.82	0.86	139	1485	94.5	95.2	95.2	0.65	0.76	0.82	134
90	125	1485	95.0	95.2	95.2	0.73	0.82	0.85	169	1485	95.0	95.2	95.2	0.66	0.77	0.82	160
110	150	1480	95.2	95.4	95.4	0.73	0.82	0.85	206	1485	95.2	95.4	95.4	0.65	0.76	0.82	196
132	175	1485	95.1	95.6	95.6	0.72	0.81	0.85	247	1485	95.1	95.6	95.6	0.63	0.75	0.81	237
150	200	1480	95.7	95.8	95.8	0.77	0.84	0.86	277	1485	95.3	95.8	95.8	0.70	0.80	0.84	259
160	220	1480	95.7	95.8	95.8	0.77	0.84	0.86	295	1485	95.3	95.8	95.8	0.70	0.80	0.84	277
185	250	1480	95.3	95.5	96.0	0.78	0.84	0.87	337	1485	95.3	95.5	96.0	0.73	0.82	0.85	315
200	270	1480	95.3	95.5	96.0	0.78	0.84	0.87	364	1485	95.3	95.5	96.0	0.73	0.82	0.85	341
220	300	1480	95.9	95.7	96.0	0.80	0.86	0.87	400	1485	95.2	95.6	96.0	0.72	0.81	0.85	375
250	340	1480	95.7	95.7	96.0	0.80	0.86	0.88	450	1485	95.3	95.6	96.0	0.75	0.83	0.86	421
260	350	1480	95.7	95.7	96.0	0.80	0.86	0.88	468	1485	95.3	95.6	96.0	0.75	0.83	0.86	438
280	380	1485	95.7	96.1	96.0	0.75	0.83	0.86	515	1490	95.0	95.8	96.0	0.67	0.78	0.83	489
300	400	1485	95.8	96.2	96.0	0.76	0.84	0.86	552	1490	95.2	95.9	96.0	0.68	0.79	0.83	524
315	430	1485	96.0	96.3	96.1	0.76	0.84	0.87	572	1490	95.4	96.1	96.2	0.68	0.79	0.84	542
330	450	1485	96.0	96.3	96.0	0.77	0.84	0.87	600	1490	95.5	96.1	96.1	0.70	0.80	0.84	569
355	480	1485	96.1	96.4	96.2	0.76	0.84	0.87	644	1490	95.5	96.2	96.3	0.69	0.79	0.84	611
370	500	1485	96.2	96.4	96.2	0.77	0.85	0.87	672	1490	95.6	96.2	96.2	0.70	0.80	0.84	637
400	550	1485	96.2	96.3	96.0	0.79	0.85	0.87	728	1490	95.8	96.2	96.1	0.72	0.81	0.85	681
440	600	1485	95.8	96.0	96.0	0.78	0.85	0.87	800	1485	95.8	96.0	96.0	0.76	0.83	0.85	750
480	650	1490	95.4	96.0	96.0	0.67	0.79	0.83	915	1490	95.4	96.0	96.0	0.68	0.78	0.82	848
515	700	1490	95.8	96.0	96.0	0.79	0.86	0.88	926	1490	95.0	96.0	96.0	0.77	0.84	0.86	868
560	750	1490	95.8	96.0	96.0	0.77	0.85	0.87	1020	1490	95.8	96.0	96.0	0.75	0.83	0.86	944
590	800	1490	95.7	96.2	96.2	0.80	0.86	0.88	1060	1490	95.7	96.2	96.2	0.78	0.84	0.86	992
660	900	1485	95.8	96.2	96.2	0.81	0.86	0.88	1180	1485	95.8	96.2	96.2	0.81	0.86	0.88	1080

Electrical Data

Medium Voltage 1,2 kV up to 5,0 kV - IE3 Efficiency level

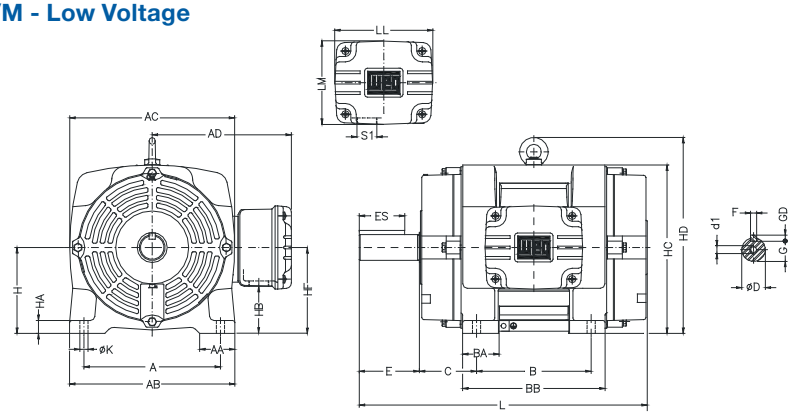
Output		Frame	Full Load Torque (Nm)	Locked Rotor Current Il/In	Locked Rotor Torque Tl/Tn	Break-down Torque Tb/Tn	Inertia J (kgm2)	Allowable locked rotor time (s)		Weight (kg)	Sound dB(A)	3300 V								
												Rated speed (rpm)	% of full load						Full load current In (A)
													Efficiency			Power Factor			
kW	HP							Hot	Cold				50	75	100	50	75	100	
II poles																			
220	300	315G/F	709	7.0	1.3	2.6	1.84	12	26	1250	89	2965	93.5	94.1	94.1	0.75	0.84	0.87	47.0
250	340	315G/F	806	7.0	1.3	2.6	1.84	10	22	1300	89	2965	93.7	94.2	94.2	0.75	0.84	0.87	53.4
260	350	315G/F	838	7.0	1.3	2.6	1.84	10	22	1300	89	2965	93.8	94.3	94.3	0.75	0.84	0.87	55.5
280	380	315G/F	902	7.5	1.4	2.7	1.96	10	22	1350	89	2965	94.0	94.5	94.5	0.75	0.84	0.87	59.6
300	400	315G/F	967	7.5	1.4	2.7	2.09	10	22	1400	89	2965	94.2	94.6	94.6	0.75	0.84	0.87	63.8
315	430	315G/F	1014	7.5	1.4	2.7	2.09	10	22	1450	89	2968	94.3	94.7	94.7	0.75	0.84	0.87	66.9
330	450	315G/F	1062	7.8	1.5	2.7	2.24	8	18	1450	89	2968	94.6	94.9	94.9	0.75	0.84	0.87	69.9
355	480	315G/F	1143	7.8	1.5	2.8	2.24	8	18	1500	89	2968	94.7	95.0	95.0	0.75	0.84	0.87	75.1
370	500	315G/F	1191	7.8	1.5	2.8	2.41	8	18	1550	89	2968	94.8	95.1	95.1	0.75	0.84	0.87	78.3
400	550	315G/F	1288	7.8	1.5	2.8	2.41	8	18	1600	89	2968	94.9	95.2	95.2	0.75	0.84	0.87	84.5
450	610	315G/F	1449	7.8	1.5	2.8	2.58	8	18	1650	89	2968	95.0	95.3	95.3	0.75	0.84	0.87	94.9
500	680	315G/F*	1610	7.8	1.5	2.8	2.58	8	18	1700	89	2968	95.1	95.4	95.4	0.73	0.83	0.87	105
560	750	355J/H	1799	6.1	0.7	2.2	3.35	18	40	2200	87	2975	96.0	95.9	95.7	0.85	0.88	0.89	115
630	850	400J/H	2020	6.5	1	2.4	8.49	15	33	2250	90	2980	95.9	96.2	96.2	0.79	0.85	0.87	132
750	1000	400J/H	2405	6.6	1	2.4	9.16	15	33	2400	90	2980	95.9	96.3	96.3	0.80	0.86	0.88	155
800	1100	400J/H	2569	6.8	1	2.4	9.82	15	33	2500	90	2975	96.0	96.3	96.3	0.80	0.86	0.88	165
900	1250	400J/H	2891	6.8	1	2.4	10.3	15	33	2650	90	2975	96.1	96.4	96.4	0.80	0.86	0.88	186
1100	1500	400J/H	3533	7.0	1.1	2.5	10.7	15	33	3000	90	2975	96.2	96.5	96.5	0.81	0.87	0.89	224
1300	1750	450K/J	4175	5.5	0.6	2.1	14.6	15	33	3650	85	2975	96.3	96.5	96.5	0.85	0.88	0.89	265
1400	1900	450K/J	4496	5.5	0.6	2.1	15.8	15	33	3850	85	2975	96.3	96.5	96.5	0.85	0.88	0.89	285
1500	2000	450K/J*	4818	5.8	0.6	2.2	16.9	14	31	4050	85	2975	96.4	96.6	96.6	0.86	0.89	0.89	305
IV Poles																			
220	300	315G/F	1417	6.0	1.1	2.3	5.03	15	33	1250	87	1484	93.6	93.9	93.9	0.72	0.81	0.84	48.8
250	340	315G/F	1610	6.0	1.1	2.3	5.35	15	33	1300	87	1484	93.7	94.0	94.0	0.72	0.81	0.84	55.4
260	350	315G/F	1674	6.0	1.1	2.3	5.35	15	33	1300	87	1484	93.8	94.1	94.1	0.72	0.81	0.84	57.5
280	380	315G/F	1803	6.0	1.1	2.3	5.67	15	33	1400	87	1484	93.9	94.2	94.2	0.72	0.81	0.84	61.9
300	400	315G/F	1932	6.0	1.1	2.3	5.99	15	33	1400	87	1484	94.0	94.3	94.3	0.72	0.81	0.84	66.3
315	430	315G/F	2028	6.0	1.1	2.3	5.99	15	33	1500	87	1484	94.2	94.4	94.4	0.72	0.81	0.84	69.5
330	450	315G/F	2125	6.0	1.1	2.3	6.61	15	33	1600	87	1484	94.3	94.5	94.5	0.72	0.81	0.84	72.7
355	480	315G/F	2286	6.0	1.1	2.3	6.61	15	33	1700	87	1484	94.4	94.6	94.6	0.72	0.81	0.84	78.2
370	500	315G/F*	2382	6.0	1.1	2.3	6.61	12	26	1700	87	1484	94.5	94.7	94.7	0.72	0.81	0.84	81.4
400	550	355J/H	2574	4.5	1	1.8	8.02	25	55	2050	85	1485	94.5	95.2	95.1	0.74	0.81	0.83	88.7
440	600	355J/H	2831	4.7	1	1.8	9.09	25	55	2100	85	1485	94.5	95.2	95.2	0.72	0.80	0.82	98.6
480	650	355J/H	3088	5.0	1.1	2	9.09	25	55	2150	85	1485	94.5	95.3	95.4	0.71	0.79	0.82	107
515	700	400J/H	3314	6.2	0.8	2.1	14.2	18	40	2100	90	1485	95.8	96.3	96.4	0.72	0.80	0.82	114
590	800	400J/H	3796	6.2	0.8	2.1	16.3	17	37	2300	90	1485	95.8	96.3	96.5	0.72	0.80	0.83	129
660	900	400J/H	4247	6.5	1	2.2	17.5	17	37	2600	90	1485	96.0	96.4	96.5	0.72	0.81	0.83	144
750	1000	400J/H	4826	6.5	1	2.2	18.4	15	33	2900	90	1485	96.2	96.5	96.6	0.73	0.81	0.84	162
900	1250	400J/H	5791	6.7	1	2.2	19.0	15	33	3000	90	1485	96.3	96.6	96.7	0.73	0.81	0.84	194
1100	1500	450K/J	7078	6.2	0.9	2.2	23.4	12	26	4100	85	1485	96.3	96.6	96.6	0.73	0.81	0.84	237
1320	1750	450K/J	8493	5.9	0.9	2.1	24.5	12	26	4300	85	1485	96.4	96.7	96.7	0.75	0.82	0.85	281

** Motor with class F (105K) temperature rise.*

W40 , ideal for
applications in pumps

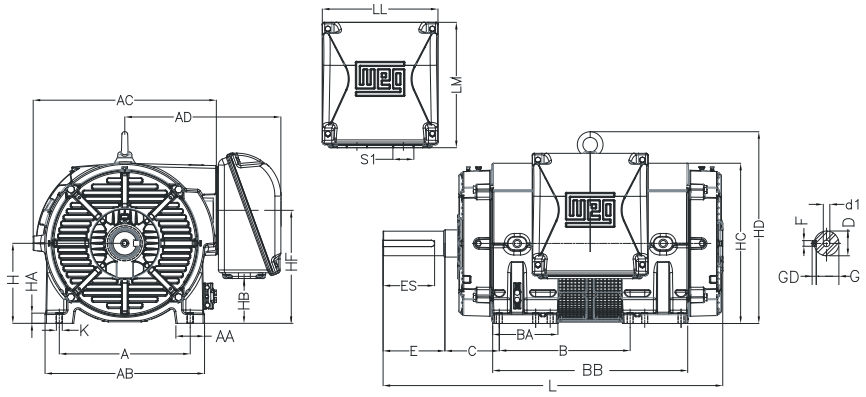
IEC Mechanical Data (Dimension in mm)

IP23 Frames 160M to 280S/M - Low Voltage



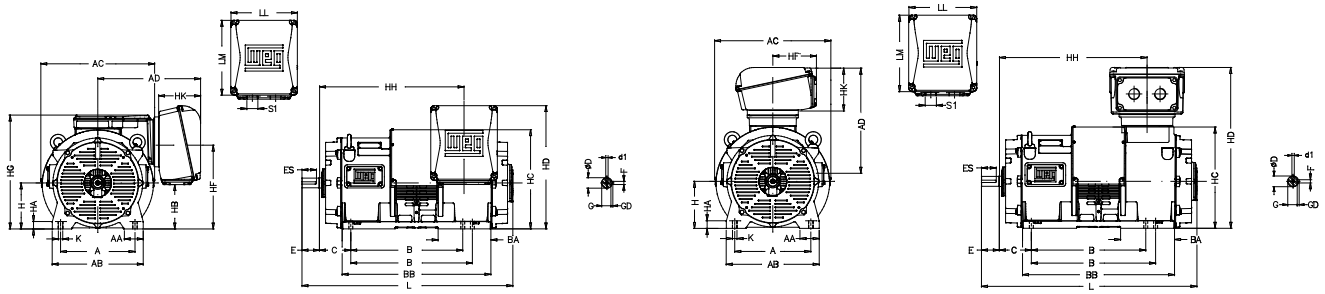
Frame	A	AA	AB	AC	AD	B	BA	BB	C	D	d1	E	ES	F	G	GD	H	HA	HB	HC	HD	HF	K	L	LL	LM	S1	Bearings	
																												Drive end	Non-drive end
160M	254	64	308	300	256	210	65	254	108	48k6	DM16	110	80	14	42.5	9	160	22	80.6	310	365	160	14.5	533	160	170	2 x M40x1.5	6311 Z-C3	6209 Z-C3
160L						254		298																577					
180M	279	80	350	350	276	241	75	294	121	55m6	DM20			16	49	10	180	30	100.6	354	409	180		586				6312 Z-C3	6211 Z-C3
180L						279		332																624					
200M	318	82	385	384	295	267	85	332	133	60m6		140	125	18	53	11	200	30	100	392	457	200	18.5	671	200	210	2 x 50x1.5	6314 Z-C3	6212 Z-C3
200L						305		370																709					
225S/M	356	80	436	454	370	286/ 311	105	391	149	60m6 [1]					53 [1]		225	34	103.5	464	535	225	18.5	747	245	254		6314 C3 [1]	6314 C3 [1]
										65m6					58													6314 C3	6314 C3
250S/M	406	100	506	454	370	311/ 349	138	449	168	65m6 [1]				18 [1]	58 [1]	11 [1]	250	46	128.5	489	560	250	24	823			2 x 63x1.5	6314 C3 [1]	6314 C3 [1]
										75m6				20	67.5	12												6316 C3	6314 C3
280S/M	457	100	557	562	488	368/ 419	142	510	190	65m6 [1]		140 [1]	125 [1]	18 [1]	58 [1]	11 [1]	280	46	150	570	660	280	24	935 [1]	379	363		6314 C3 [1]	6314 C3 [1]
										80m6		170	160	22	71	14								965				6319 C3	6316 C3
280L 2P				640	546	457/ 635	228	680		65m6		140	125	18	58	11		36	126	560		280		1,111	404	436	2x M63x1.5	6314	6314
280L 4P										80m6		170	160	22	71	14								1,141				6319	

IP23 Frame 280L - Low Voltage



Frame	A	AA	AB	AC	AD	B	BA	BB	C	D	d1	E	ES	F	G	GD	H	HA	HB	HC	HD	HF	K	L	LL	LM	S1	Bearings	
																												Drive end	Non-drive end
280L 2P	457	100	557	640	546	457/ 635	228	680	190	65m6	DM20	140	125	18	58	11	280	36	157	560	660	395	24	1,111	404	436	2x M63x1.5	6314	6314
280L 4P										80m6		170	160	22	71	14								1,141				6319	

IP23 Frames 315G/F to 400J/H - Low Voltage

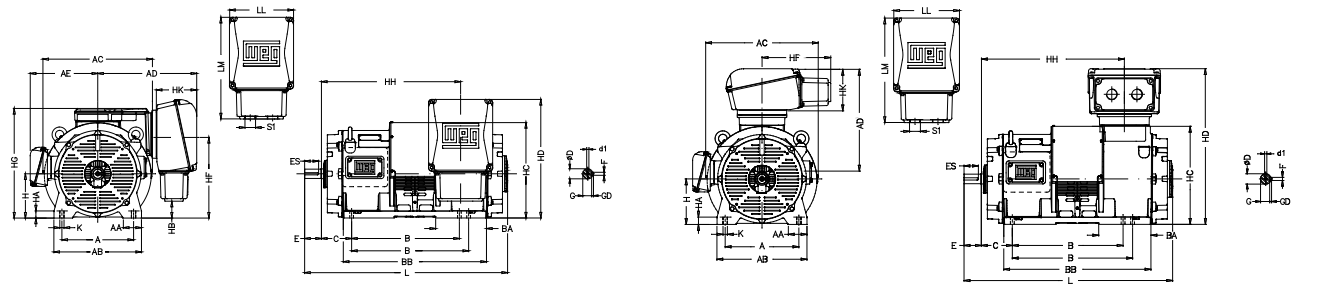


Frame	A	AA	AB	AC	AD	B	BA	BB	C	D	d1	E	ES	F	G	GD
315G/F	508	133	628	779	732 [2]	800/900	361	1,023	216	65m6 [1]	DM20 [1]	140 [1]	125 [1]	18 [1]	58 [1]	11 [1]
					737 [3]					90m6	DM24	170	140	25	81	14
355J/H	610	170	750	866	794 [2]	800/900	265	1,065	254	80m6 [1]	DM20 [1]	170 [1]	140 [1]	22 [1]	71 [1]	14 [1]
					794 [3]					110m6	DM24	210	155	28	100	16
400J/H	686	190	840	1,015	835	900/1,000	271	1,183	280	85m6 [1]	DM20 [1]	170 [1]	140 [1]	22 [1]	76 [1]	14 [1]
										130m6	DM24	250	200	32	119	18

Frame	H	HA	HB	HC	HD	HF	HG	HH	HK	K	L	LL	LM	S1	Bearings	
															Drive end	Non-drive end
315G/F	315	48	339	687	880 [2]	634 [2]	818,5	999	290	28	1,467 [1]	460	544	2xM80x2.0	6314 C3 [1]	6314 C3 [1]
					1,052 [3]	295 [3]					1,497				6319 C3	6314 C3
355J/H	355	48	426	787	970 [2]	730 [2]	927	1,075	290	28	1,566 [1]	460	544	2xM80x2.0	6218 C3 [1]	6218 C3 [1]
					1,150 [3]	295 [3]					1,606				6224 C3	6218 C3
400J/H	400	50	510	907	1,055 [2]	815 [2]	1,012	1,190	290	36	1,690 [1]	460	544	2xM80x2.0	6220 C3 [1]	6220 C3 [1]
					1,235 [3]	295 [3]					1,770				6228 C3	6220 C3

Note: 1) Only for 2-pole motors.
2) For side mounted terminal box only.
3) For top mounted terminal box only.

IP23 Frames 315G/F to 400J/H - High Voltage



Frame	A	AA	AB	AC	AD	AE	B	BA	BB	C	D	d1	E	ES	F	G	GD
315G/F	508	133	628	779	732 [2]	460	800/900	361	1,023	216	65m6 [1]	DM20 [1]	140 [1]	125 [1]	18 [1]	58 [1]	11 [1]
					737 [3]						90m6	DM24	170	140	25	81	14
355J/H	610	170	750	866	700 [2]	505	800/900	265	1,065	254	80m6 [1]	DM20 [1]	170 [1]	140 [1]	22 [1]	71 [1]	14 [1]
					795 [3]						110m6	DM24	210	155	28	100	16
400J/H	686	190	840	1,015	700 [2]	555	900/1,000	271	1,183	280	85m6 [1]	DM20 [1]	170 [1]	140 [1]	22 [1]	76 [1]	14 [1]
					835 [3]						130m6	DM24	250	200	32	119	18

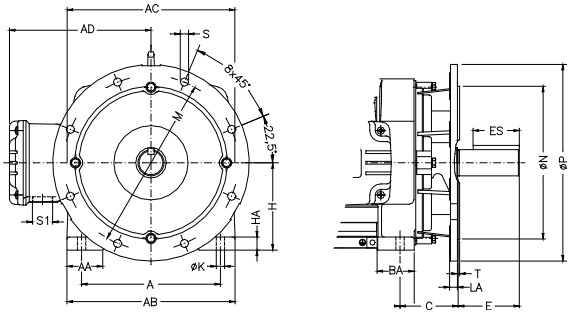
Frame	H	HA	HB	HC	HD	HF	HG	HH	HK	K	L	LL	LM	S1	Bearings	
															Drive end	Non-drive end
315G/F	315	48	154	687	880 [2]	634 [2]	818.5	999	290	28	1,467 [1]	460	730	2xM80x2	6314 C3 [1]	6314 C3 [1]
					1,052 [3]	480 [3]					1,497				6319 C3	6314 C3
355J/H	355	48	240	787	970 [2]	730 [2]	927	1,075	290	28	1,566 [1]	460	730	2xM80x2	6218 C3 [1]	6218 C3 [1]
					1,150 [3]	480 [3]					1,606				6224 C3	6218 C3
400J/H	400	50	325	907	1,055 [2]	815 [2]	1,012	1,190	290	36	1,690 [1]	460	730	2xM80x2	6220 C3 [1]	6220 C3 [1]
					1,235 [3]	480 [3]					1,770				6228 C3	6220 C3

Note: 1) Only for 2-pole motors.
2) For side mounted terminal box only.
3) For top mounted terminal box only.

IEC Mechanical Data (Dimension in mm)

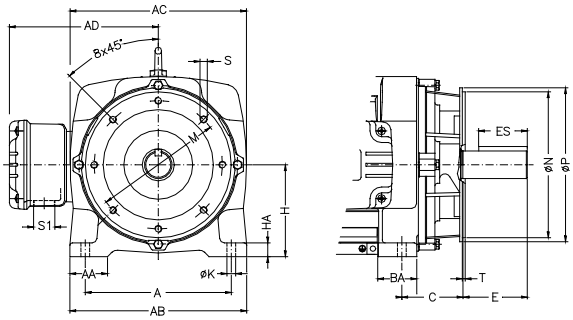
FF Flange

Frame	Flange	LA	M	N	P	S	T	α	Nº of holes
160M	FF-350	18	350	300	400	19	5	45°	4
160L	FF-350	18	350	300	400	19	5	45°	4
180M	FF-350	18	350	300	400	19	5	45°	4
180L	FF-350	18	350	300	400	19	5	45°	4
200M	FF-400	18	400	350	450	19	5	22°30”	8
200L	FF-400	18	400	350	450	19	5	22°30”	8
225S/M	FF-500	18	500	450	550	19	5	22°30”	8
250S/M	FF-600	22	600	550	660	24	6	22°30”	8
280S/M	FF-600	22	600	550	660	24	6	22°30"	8
280L	FF-600	22	600	550	660	24	6	22°30"	8
315G/F	FF-600	22	600	550	660	24	6	22°30”	8
355J/H	FF-740	22	740	680	800	24	6	22°30”	8
400J/H	FF-940	35	940	880	1,000	28	6	22°30”	8
450K/J	FF-1080	35	1,080	1,000	1,150	28	6	22°30”	8



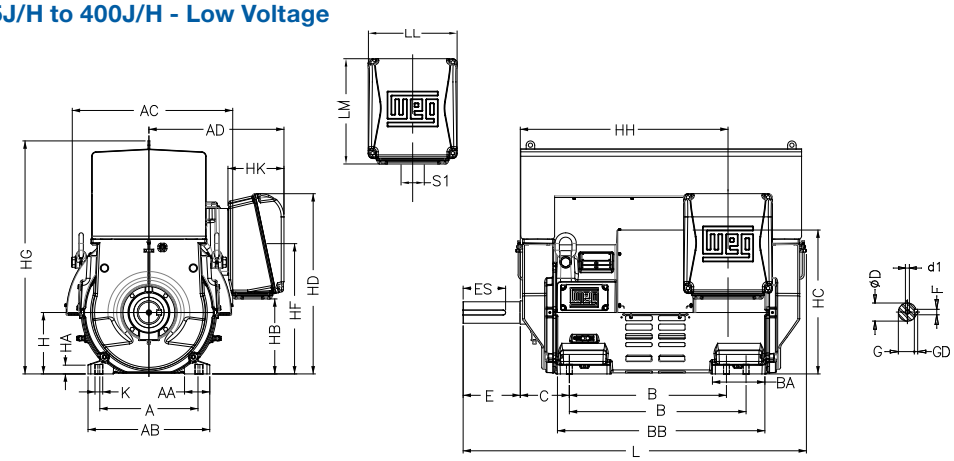
FC Flange

Frame	Flange	M	N	P	S	T	α	Nº of holes
160M	FC-184	184.2	215.9	225	UNC 1/2"x13	6.3	45°	4
160L	FC-184	184.2	215.9	225	UNC 1/2"x13	6.3	45°	4
180M	FC-228	228.6	266.7	280	UNC 1/2"x13	6.3	45°	4
180L	FC-228	228.6	266.7	280	UNC 1/2"x13	6.3	45°	4
200M	FC-228	228.6	266.7	280	UNC 1/2"x13	6.3	45°	4
200L	FC-228	228.6	266.7	280	UNC 1/2"x13	6.3	45°	4
225S/M	FC-279	279.4	317.5	380	UNC 5/8"x11	6.3	22°30”	8
250S/M	FC-279	279.4	317.5	380	UNC 5/8"x11	6.3	22°30”	8
280S/M	FC-355	355.6	406.4	455	UNC 5/8"x11	6.3	22°30”	8
280L	FC-355	355.6	406.4	455	UNC 5/8"x11	6.3	22°30"	8



IEC Mechanical Data (Dimension in mm)

IP24 Frames 355J/H to 400J/H - Low Voltage

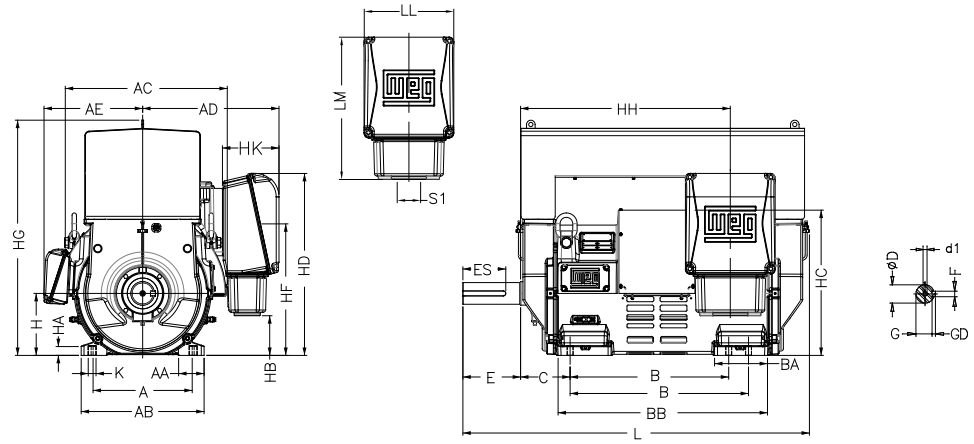


Frame	A	AA	AB	AC	AD	B	BA	BB	C	D	d1	E	ES	F	G	GD
355J/H	610	170	750	866	700	800/900	265	1,065	254	80m6 [1]	DM20 [1]	170 [1]	140 [1]	22 [1]	71 [1]	14 [1]
										110m6	DM24	210	155	28	100	16
400J/H	686	190	840	1,015	700	900/1,000	271	1,183	315	85m6 [1]	DM20 [1]	170 [1]	140 [1]	22 [1]	76 [1]	14 [1]
										130m6	DM24	250	200	32	119	18

Frame	H	HA	HB	HC	HD	HF	HG	HH	HK	K	L	LL	LM	S1	Bearings	
															Drive end	Non-drive end
355J/H	355	48	426	787	970 [2]	730	1,243	1,075	290	28	1,650 [1]	460	544	2xM63x1.5	6218 C3 [1]	6218 C3 [1]
											1,690				6224 C3	6218 C3
400J/H	400	50	510	907	1,055 [2]	815	1,340	1,225	290	36	1,838 [1]	460	544	2xM63x1.5	6220 C3 [1]	6220 C3 [1]
											1,918				6228 C3	6220 C3

Notes: 1) Dimension applicable to 2 pole motors.
2) Dimension applicable to side mounted terminal box.

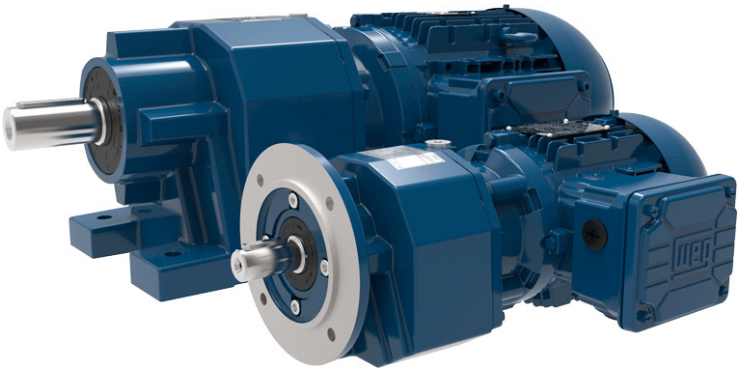
IP24 Frames 355J/H to 450K/J - High Voltage



Frame	A	AA	AB	AC	AD	AE	B	BA	BB	C	D	d1	E	ES	F	G	GD
355J/H	610	170	750	866	700	505	800/900	265	1,065	254	80m6 [1]	DM20 [1]	170 [1]	140 [1]	22 [1]	71 [1]	14 [1]
											110m6	DM24	210	155	28	100	16
400J/H	686	190	840	1,015	700	555	900/1,000	271	1,183	315	85m6 [1]	DM20 [1]	170 [1]	140 [1]	22 [1]	76 [1]	14 [1]
											130m6	DM24	250	200	32	119	18
450K/J	750	201	950	1,240	804	625	900/1,000	268	1,181	315	95m6 [1]	DM20 [1]	170 [1]	140 [1]	25 [1]	85 [1]	14 [1]
											130m6	DM24	250	200	32	119	18

Frame	H	HA	HB	HC	HD	HF	HG	HH	HK	K	L	LL	LM	S1	Bearings	
															Drive end	Non-drive end
355J/H	355	48	240	787	970 [2]	730	1,243	1,075	290	28	1,650 [1]	460	730	1xM80x2.0	6218 C3 [1]	6218 C3 [1]
											1,690				6224 C3	6218 C3
400J/H	400	50	325	907	1,055 [2]	815	1,340	1,225	290	36	1,838 [1]	460	730	1xM80x2.0	6220 C3 [1]	6220 C3 [1]
											1,918				6228 C3	6220 C3
450K/J	450	50	455	1,022	1,184 [2]	935	1,471	1,235	290	36	1,838 [1]	460	730	1xM80x2.0	6220 C3 [1]	6220 C3 [1]
											1,918				6228 C3	6220 C3

Notes: 1) Dimension applicable to 2 pole motors.
2) Dimension applicable to side mounted terminal box.
3) Dimension applicable to top mounted terminal box.



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