

WST Series

Three Phase Super Premium Efficiency
PM Synchronous Motors

IE4 · IE5

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Super Premium Efficiency
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General Information:

Wonder WST Series PM motors are supplied with built-in permanent magnetic steel produced from rare earth permanent magnet material (NdFeB) which is with high coercive force and hypersonic magnetic induction force. The motor guarantees high performance while offering higher power density. Even in the case of overload, the motor can also show excellent electrical characteristics.

WST Series realized our goal to draw more power per frame, saving the space for installation considerably. The motor is able to output constant torque at all speed, and the efficiency indicators are even better than those of induction motor at low speed.

The efficiency indicators of WST Series are in accordance with IE5 and IE4 levels defined by IEC60034-30, 2014.

WST Series are equipped with TOSHIBA inverter, which can be applied where is damp, full of dust or vibration. The inverter is flexible to install, and can be widely applied in general equipment such as pumps, ventilators, as well as electrical transmission occasions requiring higher level of protection.

Wonder WST permanent magnet motors feature series of technical advantages such as running at various speed, precise control at low speed, low noise, compact structure, etc. The motors are widely used where speed variation, high efficiency, low noise levels and reduced volume are mandatory.

Technical Characteristics:

- Variable-frequency speed control and constant torque
- No rotor losses, low temp. rise, high efficiency (IE5, IE4)
- In the case of overload, offering excellent efficiency
- High torque density, high power density, high power factor
- No encoder needed
- No slip, synchro-speed, accurate speed control is realized
- Constant power at weak magnetic speed regulation
- Wide speed range, motor direct drive is supported

Technical Specifications:

- Frame size: 71-355;
- Power range: 0.55-400kW;
- Speed: 1500-4500 r/m;
- IP55 protection, class F insulation, B-level temperature rise, S1 duty;
- Rated voltage 400V;
- Operation ambient temperature: -20°C~40°C;
- Operation altitude ≤1000m;
- IE5 efficiency available upon request.

Applications:

Elevators, fans, pumps, conveyors, exhausts, electrical vehicles, textile industry machines, compressors and other applications where speed variation, high efficiency, low noise and reduced volume are core concerns.

Technical Specifications (1/5)

Type	Frame Size	Rated speed r/m	Rated Power P _n kW	Rated Torque M _n Nm	Peak Torque M _{pk} Nm	Voltage Constant K _e Vs	Torque Constant K _t Nm/A	BEMF at Rated E _n V	Rated Current I _n A	Efficiency η%
4500r/m (6 Pole) 225Hz										
WST71-4500-1.1	71	4500	1.1	2.3	7.0	0.571	0.989	273.5	2.4	89.1
WST71-4500-1.5	71	4500	1.5	3.2	9.6	0.577	0.999	273.5	3.2	90.6
WST71-4500-2.2	71	4500	2.2	4.7	14.0	0.585	1.013	273.5	4.6	91.7
WST71-4500-3.0	71	4500	3.0	6.4	19.1	0.605	1.048	273.5	6.1	92.6
WST90-4500-3.0	90L	4500	3.0	6.4	19.1	0.623	1.060	288	6.0	91.8
WST90-4500-4.0	90L	4500	4.0	8.5	25.5	0.623	1.060	288	8.0	92.4
WST90-4500-5.5	90L	4500	5.5	11.7	35.0	0.623	1.060	288	11.0	93.0
WST90-4500-7.5	90L	4500	7.5	15.9	47.8	0.623	1.060	288	15.0	93.5
3600r/m (6 Pole) 180Hz										
WST71-3600-0.75	71	3600	0.75	2.0	6.0	0.732	1.268	273.5	1.6	88.3
WST71-3600-1.1	71	3600	1.1	2.9	8.8	0.732	1.268	273.5	2.3	89.9
WST71-3600-1.5	71	3600	1.5	4.0	11.9	0.732	1.268	273.5	3.4	90.9
WST71-3600-2.2	71	3600	2.2	5.8	17.5	0.732	1.268	273.5	4.5	91.9
WST90-3600-2.2	90L	3600	2.2	5.8	17.5	0.766	1.327	288	4.4	91.7
WST90-3600-3.0	90L	3600	3.0	8.0	23.9	0.766	1.327	288	6.0	92.4
WST90-3600-4.0	90L	3600	4.0	10.6	31.8	0.766	1.327	288	8.0	92.9
WST90-3600-5.5	90L	3600	5.5	14.6	43.8	0.766	1.327	288	11.0	93.4
WST112-3600-5.5	112M	3600	5.5	14.6	43.8	0.766	1.327	288	11.0	93.0
WST112-3600-7.5	112M	3600	7.5	19.9	59.7	0.766	1.327	288	15.0	93.7
WST112-3600-11	112M	3600	11	29.2	87.5	0.766	1.327	288	21.3	94.4
WST112-3600-15	112M	3600	15	39.8	119	0.766	1.327	288	29.0	94.9
WST132-3600-15	132M	3600	15	39.8	119	0.779	1.350	294	29.5	94.1
WST132-3600-18.5	132M	3600	18.5	49.4	147	0.779	1.350	294	35.9	94.8
WST132-3600-22	132M	3600	22	58.4	175	0.779	1.350	294	42.6	95.0
WST132-3600-30	132M	3600	30	79.6	239	0.779	1.350	294	57.9	95.4
WST160-3600-22	160M	3600	22	58.0	140	0.881	1.526	332	40.0	94.3
WST160-3600-30	160M	3600	30	80.0	191	0.881	1.526	332	54.0	94.7
WST160-3600-37	160M	3600	37	98.0	235	0.878	1.521	331	67.0	95.0
WST180-3600-37	180M	3600	37	98.0	236	0.894	1.549	337	67.0	94.1
WST180-3600-45	180M	3600	45	119	287	0.916	1.586	345	80.5	94.6
WST180-3600-55	180L	3600	55	146	350	0.899	1.558	339	96.5	94.9
WST200-3600-55	200L	3600	55	146	350	0.939	1.627	354	96.5	95.5
WST200-3600-75	200L	3600	75	199	478	0.950	1.646	358	130	95.9

Technical Specifications (2/5)

Type	Frame Size	Rated speed r/m	Rated Power P _n kW	Rated Torque M _n Nm	Peak Torque M _{pk} Nm	Voltage Constant K _e Vs	Torque Constant K _t Nm/A	BEMF at Rated E _n V	Rated Current I _n A	Efficiency η%
3600r/m (8 Pole) 240Hz										
WST225-3600-75	225M	3600	75	199	478	0.918	1.590	346	137	95.6
WST225-3600-90	225M	3600	90	239	534	0.924	1.600	348	163	95.9
WST225-3600-110	225M	3600	110	292	701	0.942	1.632	355	195	96.2
WST250-3600-110	250M	3600	110	292	701	0.921	1.595	347	204	96.0
WST250-3600-132	250M	3600	132	350	840	0.924	1.600	348	244	96.2
WST280-3600-132	280M	3600	132	350	840	0.939	1.627	354	238	96.2
WST280-3600-160	280M	3600	160	424	1018	0.934	1.618	352	290	96.3
WST280-3600-180	280M	3600	180	478	1147	0.937	1.623	353	323	96.3
WST280-3600-200	280M	3600	200	531	1274	0.937	1.623	353	354	96.5
WST315-3600-132	315S	3600	132	350	770	0.926	1.604	349	241	96.2
WST315-3600-160	315S	3600	160	424	935	0.921	1.595	347	294	96.3
WST315-3600-180	315S	3600	180	478	1052	0.932	1.613	351	325	96.3
WST315-3600-200	315M/L	3600	200	531	1168	0.937	1.623	353	364	96.5
WST315-3600-220	315M/L	3600	220	584	1285	0.937	1.623	353	395	96.5
WST315-3600-250	315M/L	3600	250	663	1459	0.934	1.618	352	450	96.5
WST315-3600-315	315M/L	3600	315	836	1839	0.926	1.604	349	568	96.6
WST315-3600-355	315M/L	3600	355	942	2043	0.934	1.618	352	632	96.6
WST315-3600-400	315M/L	3600	400	1061	2334	0.937	1.623	353	712	96.6

Technical Specifications (3/5)

Type	Frame Size	Rated speed r/m	Rated Power P _n kW	Rated Torque M _n Nm	Peak Torque M _{pk} Nm	Voltage Constant K _e Vs	Torque Constant K _t Nm/A	BEMF at Rated E _n V	Rated Current I _n A	Efficiency η%
3000r/m (6 Pole) 150Hz										
WST71-3000-0.75	71	3000	0.75	2.4	7.2	0.861	1.491	273.5	1.6	89.1
WST71-3000-1.1	71	3000	1.1	3.5	40.5	0.861	1.491	273.5	2.3	90.6
WST71-3000-1.5	71	3000	1.5	4.8	14.3	0.861	1.491	273.5	3.3	91.3
WST71-3000-2.2	71	3000	2.2	7.0	21.0	0.861	1.491	273.5	4.6	92.0
WST90-3000-2.2	90L	3000	2.2	7.0	21.0	0.918	1.590	288	4.4	91.5
WST90-3000-3.0	90L	3000	3.0	9.6	28.7	0.918	1.590	288	6.0	92.1
WST90-3000-4.0	90L	3000	4.0	12.7	38.2	0.918	1.590	288	8.0	92.5
WST90-3000-5.5	90L	3000	5.5	17.5	52.5	0.918	1.590	288	11.0	93.0
WST112-3000-5.5	112M	3000	5.5	17.5	52.5	0.918	1.590	288	11.0	93.0
WST112-3000-7.5	112M	3000	7.5	23.9	71.6	0.918	1.590	288	14.9	93.8
WST112-3000-11	112M	3000	11	35.0	105	0.918	1.590	288	21.5	94.4
WST112-3000-15	112M	3000	15	47.8	143	0.918	1.590	288	29.1	94.8
WST132-3000-15	132M	3000	15	47.8	143	0.936	1.662	294	29.2	94.7
WST132-3000-18.5	132M	3000	18.5	58.9	177	0.936	1.662	294	36.0	95.0
WST132-3000-22	132M	3000	22	70.0	210	0.936	1.662	294	42.6	95.2
WST132-3000-30	132M	3000	30	95.4	286	0.936	1.662	294	58.0	95.5
WST160-3000-22	160M	3000	22	70.0	168	1.061	1.836	333	39.5	94.8
WST160-3000-30	160M	3000	30	96.0	229	1.067	1.848	335	53.0	95.2
WST160-3000-37	160M	3000	37	118	283	1.080	1.870	339	66.0	95.4
WST180-3000-37	180M	3000	37	118	283	13.070	1.853	336	65.5	95.0
WST180-3000-45	180M	3000	45	143	344	13.070	1.853	332	81.0	95.3
WST180-3000-55	180L	3000	55	175	420	1.086	1.881	341	97.0	95.5
WST200-3000-55	200L	3000	55	175	420	1.121	1.942	352	97.0	95.8
WST200-3000-75	200L	3000	75	239	574	1.118	1.936	351	134	96.0
3000r/m (8 Pole) 200Hz										
WST225-3000-75	225M	3000	75	239	574	1.108	1.920	348	136	96.0
WST225-3000-90	225M	3000	90	287	688	1.099	1.903	345	164	96.2
WST225-3000-110	225M	3000	110	350	840	1.102	1.909	346	198	96.3
WST250-3000-110	250M	3000	110	350	770	1.108	1.920	348	202	96.0
WST250-3000-132	250M	3000	132	420	924	1.108	1.920	348	243	96.2
WST280-3000-132	280M	3000	132	420	924	1.143	1.980	359	233	96.2
WST280-3000-160	280M	3000	160	509	1120	1.131	1.958	355	286	96.4
WST280-3000-180	280M	3000	180	573	1261	1.150	1.991	361	313	96.5
WST280-3000-200	280M	3000	200	637	1402	1.124	1.947	353	360	96.6
WST315-3000-132	315S	3000	132	420	840	1.105	1.914	347	242	96.2
WST315-3000-160	315S	3000	160	509	1018	1.127	1.953	354	289	96.3
WST315-3000-180	315S	3000	180	573	1146	1.118	1.936	351	325	96.3
WST315-3000-200	315M/L	3000	200	637	1401	1.127	1.953	354	358	96.5
WST315-3000-220	315M/L	3000	220	700	1540	1.118	1.936	351	394	96.5
WST315-3000-250	315M/L	3000	250	796	1751	1.118	1.936	351	449	96.5
WST315-3000-315	315M/L	3000	315	1003	2207	1.121	1.942	352	563	96.6
WST315-3000-355	315M/L	3000	355	1130	2451	1.121	1.942	352	634	96.7
WST315-3000-400	315M/L	3000	400	1273	2801	1.121	1.942	352	712	96.8

Technical Specifications (4/5)

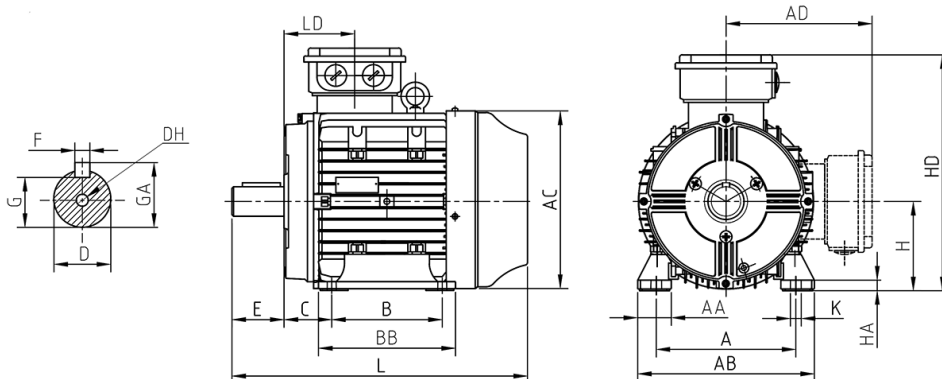
Type	Frame Size	Rated speed r/m	Rated Power P _n kW	Rated Torque M _n Nm	Peak Torque M _{pk} Nm	Voltage Constant K _e Vs	Torque Constant K _t Nm/A	BEMF at Rated E _n V	Rated Current I _n A	Efficiency η%
1800r/m (6 Pole) 90Hz										
WST71-1800-0.55	71	1800	0.55	2.9	8.8	1.452	2.515	273.5	1.2	87.3
WST71-1800-0.75	71	1800	0.75	4.0	11.9	1.452	2.515	273.5	1.6	88.5
WST71-1800-1.1	71	1800	1.1	5.8	17.5	1.452	2.515	273.5	2.3	89.7
WST71-1800-1.5	71	1800	1.5	8.0	23.9	1.452	2.515	273.5	3.1	90.3
WST90-1800-1.5	90L	1800	1.5	8.0	23.9	1.525	2.640	288	3.0	91.2
WST90-1800-2.2	90L	1800	2.2	11.7	35.0	1.525	2.640	288	4.4	91.7
WST90-1800-3.0	90L	1800	3	15.9	47.7	1.525	2.640	288	6.0	92.3
WST90-1800-4.0	90L	1800	4	21.2	63.7	1.525	2.640	288	8.0	92.4
WST112-1800-4.0	112M	1800	4	21.2	63.7	1.525	2.640	288	8.0	92.0
WST112-1800-5.5	112M	1800	5.5	29.2	87.5	1.525	2.640	288	11.0	92.8
WST112-1800-7.5	112M	1800	7.5	39.8	119	1.525	2.640	288	14.9	93.4
WST112-1800-11	112M	1800	11	58.4	175	1.525	2.640	288	21.6	93.6
WST132-1800-11	132M	1800	11	58.4	175	1.564	2.708	294	21.6	94.3
WST132-1800-15	132M	1800	15	79.6	239	1.564	2.708	294	29.3	94.7
WST132-1800-18.5	132M	1800	18.5	98.1	294	1.564	2.708	294	36.1	94.8
WST160-1800-18.5	160M	1800	18.5	98.0	235	1.762	3.052	332	33.5	94.6
WST160-1800-22	160M	1800	22	117	281	1.757	3.043	331	39.5	94.9
WST160-1800-30	160L	1800	30	159	382	1.762	3.052	332	53.5	95.3
WST180-1800-30	180M	1800	30	159	382	1.805	3.127	340	54	94.9
WST180-1800-37	180L	1800	37	196	472	1.767	3.061	333	66	95.4
WST180-1800-45	180L	1800	45	239	574	1.778	3.08	335	81.5	95.6
WST200-1800-45	200L	1800	45	239	574	1.858	3.218	350	80	95.4
WST200-1800-55	200L	1800	55	292	701	1.858	3.218	350	98	95.7
1800r/m (8 Pole) 120Hz										
WST225-1800-55	225M	1800	55	292	701	1.858	3.218	350	99	95.7
WST225-1800-75	225M	1800	75	398	955	1.874	3.245	353	134	96.0
WST250-1800-75	250M	1800	75	398	955	1.847	3.199	348	137	96.0
WST250-1800-90	250M	1800	90	478	1147	1.847	3.199	348	165	96.2
WST280-1800-110	280M	1800	110	584	1402	1.884	3.264	355	194	96.3
WST280-1800-132	280M	1800	132	700	1680	1.874	3.245	353	234	96.4
WST280-1800-160	280M	1800	160	849	2038	1.879	3.254	354	284	96.6
WST315-1800-110	315S	1800	110	584	1285	1.884	3.264	355	195	96.3
WST315-1800-132	315S	1800	132	700	1540	1.874	3.245	353	234	96.4
WST315-1800-160	315S	1800	160	849	1868	1.879	3.254	354	287	96.6
WST315-1800-180	315M/L	1800	180	955	2101	1.852	3.208	349	320	96.7
WST315-1800-200	315M/L	1800	200	1061	2334	1.895	3.282	357	354	96.7
WST315-1800-220	315M/L	1800	220	1167	2567	1.890	3.273	356	390	96.7
WST315-1800-250	315M/L	1800	250	1326	2917	1.890	3.273	356	444	96.7
WST315-1800-315	315M/L	1800	315	1671	3676	1.895	3.282	357	560	96.9

Technical Specifications (5/5)

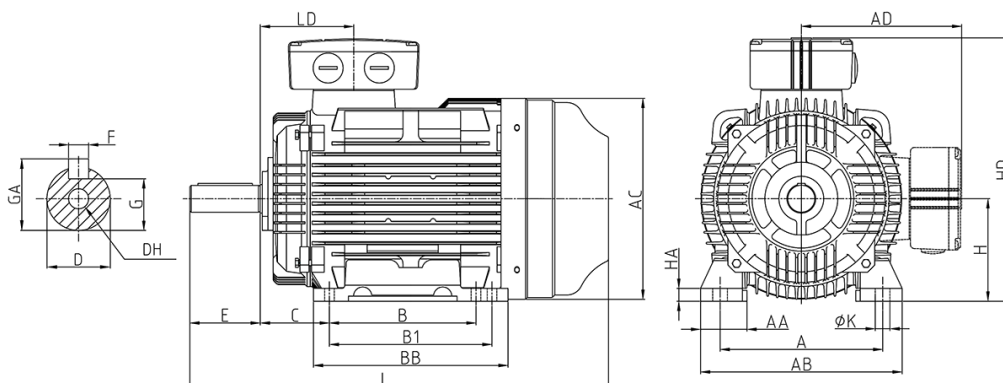
Type	Frame Size	Rated speed r/m	Rated Power P _n kW	Rated Torque M _n Nm	Peak Torque M _{pk} Nm	Voltage Constant K _e Vs	Torque Constant K _t Nm/A	BEMF at Rated E _n V	Rated Current I _n A	Efficiency η%
1500r/m (6 Pole) 75Hz										
WST71-1500-0.55	71	1500	0.55	3.5	10.5	1.742	3.017	273.5	1.2	86.7
WST71-1500-0.75	71	1500	0.75	4.8	14.4	1.742	3.017	273.5	1.6	88.1
WST71-1500-1.1	71	1500	1.1	7.0	21.0	1.742	3.017	273.5	2.3	89.1
WST71-1500-1.5	71	1500	1.5	9.6	28.8	1.742	3.017	273.5	3.1	89.1
WST90-1500-1.5	90L	1500	1.5	9.6	28.8	1.837	3.180	288	3.0	91.0
WST90-1500-2.2	90L	1500	2.2	14.0	42.0	1.837	3.180	288	4.4	91.6
WST90-1500-3.0	90L	1500	3	19.1	57.3	1.837	3.180	288	6.0	92.1
WST90-1500-4.0	90L	1500	4	25.5	76.4	1.837	3.180	288	8.0	92.2
WST112-1500-4.0	112M	1500	4	25.5	76.4	1.837	3.180	288	8.0	92.2
WST112-1500-5.5	112M	1500	5.5	35.0	105	1.837	3.180	288	11.0	92.4
WST112-1500-7.5	112M	1500	7.5	47.8	143	1.837	3.180	288	15.0	92.9
WST112-1500-11	112M	1500	11	70.0	210	1.837	3.180	288	22.0	92.9
WST132-1500-11	132M	1500	11	70.0	210	1.887	3.245	294	21.6	94.3
WST132-1500-15	132M	1500	15	95.5	287	1.887	3.245	294	29.4	94.5
WST132-1500-18.5	132M	1500	18.5	118	353	1.887	3.245	294	36.2	94.6
WST160-1500-18.5	160M	1500	18.5	118	283	2.115	3.663	332	33	94.8
WST160-1500-22	160M	1500	22	140	336	2.115	3.663	331	39.5	94.9
WST160-1500-30	160L	1500	30	191	420	2.134	3.696	335	53	95.2
WST180-1500-30	180M	1500	30	191	458	2.166	3.751	340	54	94.9
WST180-1500-37	180L	1500	37	236	565	2.166	3.751	341	64.5	95.2
WST180-1500-45	180L	1500	45	287	688	2.166	3.751	343	81	95.4
WST200-1500-45	200L	1500	45	287	688	2.229	3.861	350	79	95.4
WST200-1500-55	200L	1500	55	350	840	2.261	3.916	355	94.6	95.7
1500r/m (8 Pole) 100Hz										
WST225-1500-55	225M	1500	55	350	840	2.229	3.861	350	98.6	95.7
WST225-1500-75	225M	1500	75	478	1146	2.261	3.916	355	132	96.0
WST250-1500-75	250M	1500	75	478	1051	2.216	3.838	348	137	96.0
WST250-1500-90	250M	1500	90	573	1261	2.267	3.926	356	161	96.2
WST280-1500-110	280M	1500	110	700	1540	2.248	3.894	353	196.4	96.3
WST280-1500-132	280M	1500	132	840	1848	2.248	3.894	353	234	96.4
WST280-1500-160	280M	1500	160	1019	2242	2.261	3.916	355	283	96.6
WST315-1500-110	315S	1500	110	700	1540	2.242	3.883	352	196	96.3
WST315-1500-132	315S	1500	132	840	1848	2.255	3.905	354	233	96.6
WST315-1500-160	315S	1500	160	1019	2242	2.248	3.894	353	284	96.7
WST315-1500-180	315M/L	1500	180	1146	2521	2.242	3.883	352	321	96.7
WST315-1500-200	315M/L	1500	200	1273	2801	2.261	3.916	355	354	96.7
WST315-1500-220	315M/L	1500	220	1401	3082	2.261	3.916	355	389	96.8
WST315-1500-250	315M/L	1500	250	1592	3502	2.236	3.872	351	447	96.8
WST315-1500-315	315M/L	1500	315	2006	4413	2.274	3.938	357	556	97.0

B3 Mounting and Overall Dimensions

71-132



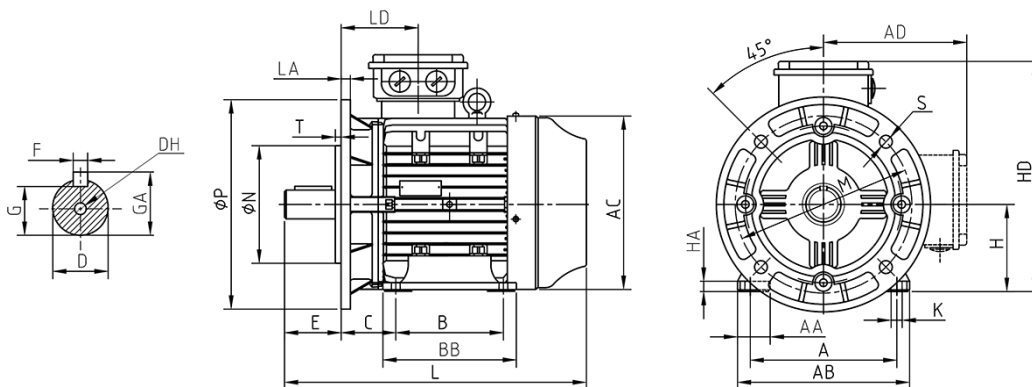
160-315



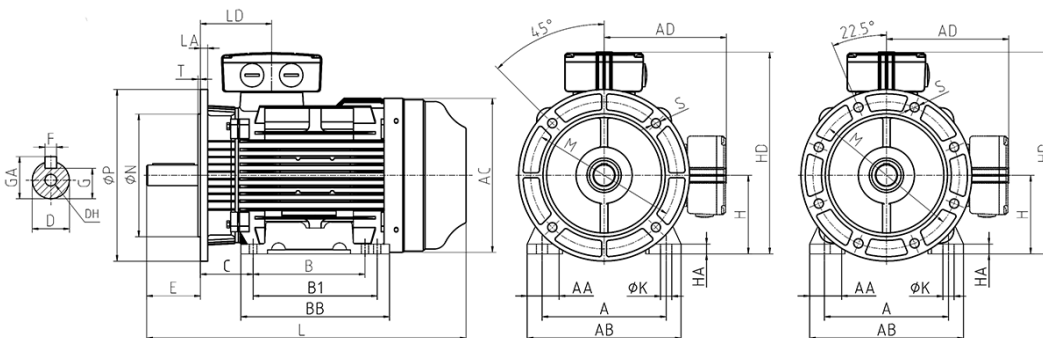
Frame Size	Mounting and Overall Dimensions (mm)																				
	A	B	B1	C	D	E	F	G	H	K	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
71	112	90	/	45	14	30	5	11	71	7	M5×13	16	27.5	136	137	107	10	178	110	66	247
90L	140	125	/	56	24	50	8	20	90	10	M8×20	27	37	180	175	141	10	231	153	87	324
112M	190	140	/	70	28	60	8	24	112	12	M10×22	31	47	230	222	167	12	279	170	85	381
132M	216	178	/	89	38	80	10	33	132	12	M12×28	41	54	264	260	191	15	323	210	129	463
160M	254	210	/	108	42	110	12	37	160	15	M16×36	45	64	315	314	244	20	404	260	146	610
160L	254	254	/	108	42	110	12	37	160	15	M16×36	45	64	315	314	244	20	404	304	146	654
180M	279	241	/	121	48	110	14	42.5	180	15	M16×36	51.5	68	351	355	264	22	444	311	161	684
180L	279	279	/	121	48	110	14	42.5	180	15	M16×36	51.5	68	351	355	264	22	444	349	161	722
200L	318	305	/	133	55	110	16	49	200	19	M20×42	59	70	388	397	296	25	496	369	186	774
225M	356	311	/	149	60	140	18	53	225	19	M20×42	64	79	430	445	319	28	544	386	189	846
250S/M	406	311	349	168	65	140	18	58	250	24	M20×42	69	97	484	484	370	32	620	445	208	911
280M	457	419	/	190	75	140	20	67.5	280	24	M20×42	79.5	85	542	546	400	35	680	536	217	1016
315S	508	406	/	216	80	170	22	71	315	28	M20×46	85	120	628	620	502	45	817	570	257	1231
315M/L	508	457	508	216	80	170	22	71	315	28	M20×46	85	120	628	620	502	45	817	680	257	1341

B35 Mounting and Overall Dimensions

71-132



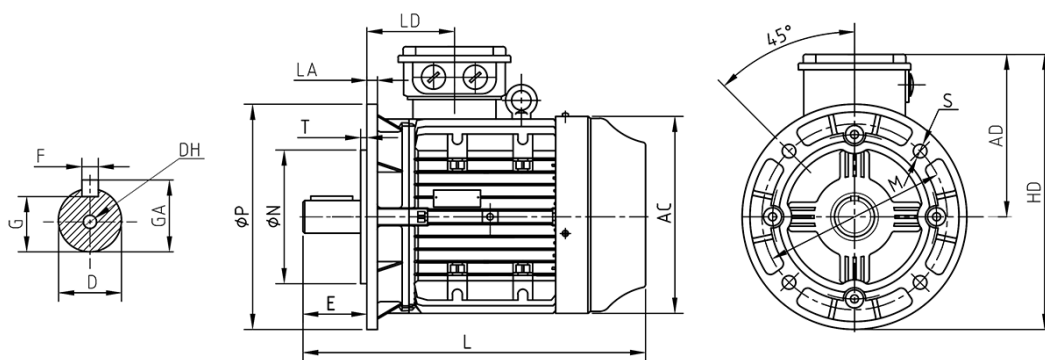
160-315



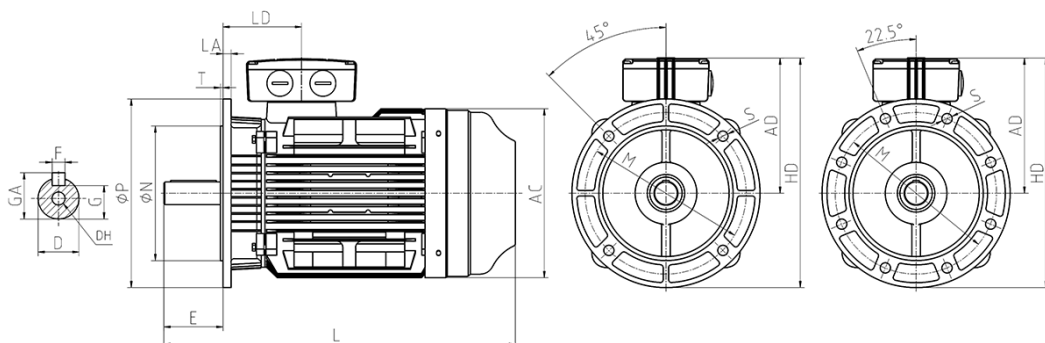
Frame Size	Mounting and Overall Dimensions (mm)																										
	A	B	BI	C	D	E	F	G	H	K	M	N	P	S	T	DH	GA	AA	AB	AC	AD	HA	HD	BB	LA	LD	L
71	112	90	/	45	14	30	5	11	71	7	130	110	160	4-Φ10	3.5	M5×13	16	27.5	136	137	107	10	178	110	9	66	247
90L	140	125	/	56	24	50	8	20	90	10	165	130	200	4-Φ12	3.5	M8×20	27	37	180	175	141	10	231	153	10	87	324
112M	190	140	/	70	28	60	8	24	112	12	215	180	250	4-Φ14.5	4	M10×22	31	47	230	222	167	12	279	170	12	85	381
132M	216	178	/	89	38	80	10	33	132	12	265	230	300	4-Φ14.5	4	M12×28	41	54	264	260	191	15	323	210	14	129	463
160M	254	210	/	108	42	110	12	37	160	15	300	250	350	4-Φ19	5	M16×36	45	64	315	314	244	20	404	260	15	146	610
160L	254	254	/	108	42	110	12	37	160	15	300	250	350	4-Φ19	5	M16×36	45	64	315	314	244	20	404	304	15	146	654
180M	279	241	/	121	48	110	14	42.5	180	15	300	250	350	4-Φ19	5	M16×36	51.5	68	351	355	264	22	444	311	15	161	684
180L	279	279	/	121	48	110	14	42.5	180	15	300	250	350	4-Φ19	5	M16×36	51.5	68	351	355	264	22	444	349	15	161	722
200L	318	305	/	133	55	110	16	49	200	19	350	300	400	4-Φ19	5	M20×42	59	70	388	397	296	25	496	369	17	186	774
225M	356	311	/	149	60	140	18	53	225	19	400	350	450	8-Φ19	5	M20×42	64	79	430	445	319	28	544	386	20	189	846
250S/M	406	311	349	168	65	140	18	58	250	24	500	450	550	8-Φ19	5	M20×42	69	97	484	484	370	32	620	445	22	208	911
280M	457	419	/	190	75	140	20	67.5	280	24	500	450	550	8-Φ19	5	M20×42	79.5	85	542	546	400	35	680	536	22	217	1016
315S	508	406	/	216	80	170	22	71	315	28	600	550	660	8-Φ24	6	M20×46	85	120	628	620	502	45	817	570	22	257	1231
315M/L	508	457	508	216	80	170	22	71	315	28	600	550	660	8-Φ24	6	M20×46	85	120	628	620	502	45	817	680	22	257	1341

B5 Mounting and Overall Dimensions

71-132



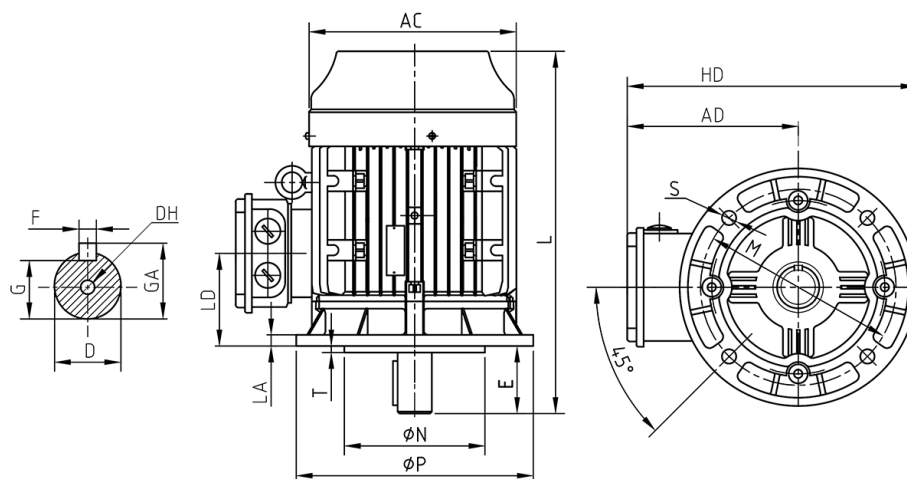
160-315



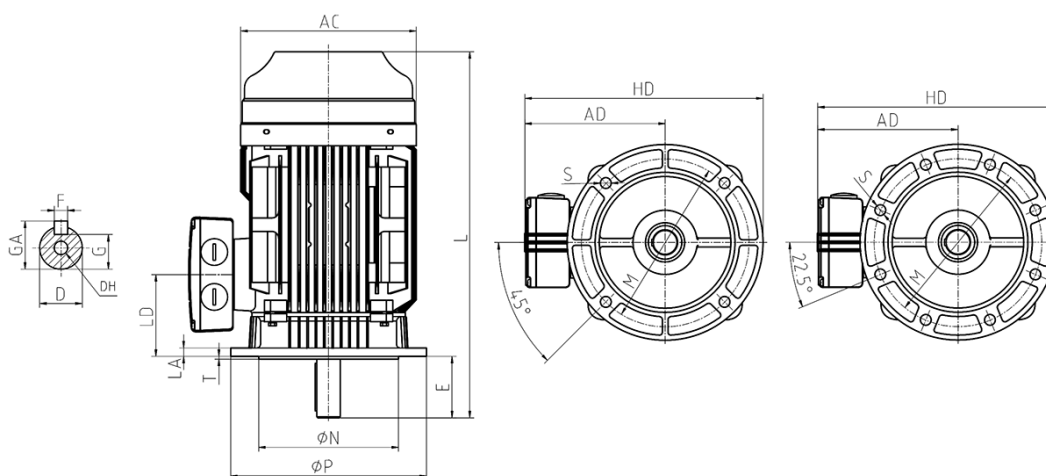
Frame Size	Mounting and Overall Dimensions (mm)																
	D	E	F	G	M	N	P	S	T	DH	GA	AC	AD	HD	LA	LD	L
71	14	30	5	11	130	110	160	4-Φ10	3.5	M5×13	16	137	107	187	9	66	247
90L	24	50	8	20	165	130	200	4-Φ12	3.5	M8×20	27	175	141	241	10	87	324
112M	28	60	8	24	215	180	250	4-Φ14.5	4	M10×22	31	222	167	292	12	85	381
132M	38	80	10	33	265	230	300	4-Φ14.5	4	M12×28	41	260	191	343	14	129	463
160M	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	244	419	15	146	610
160L	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	244	419	15	146	654
180M	48	110	14	42.5	300	250	350	4-Φ19	5	M16×36	51.5	355	264	439	15	161	684
180L	48	110	14	42.5	300	250	350	4-Φ19	5	M16×36	51.5	355	264	439	15	161	722
200L	55	110	16	49	350	300	400	4-Φ19	5	M20×42	59	397	296	496	17	186	774
225M	60	140	18	53	400	350	450	8-Φ19	5	M20×42	64	445	319	544	20	189	846
250S/M	65	140	18	58	500	450	550	8-Φ19	5	M20×42	69	484	370	645	22	208	911
280M	75	140	20	67.5	500	450	550	8-Φ19	5	M20×42	79.5	546	400	675	22	217	1016

VI Mounting and Overall Dimensions

71-132

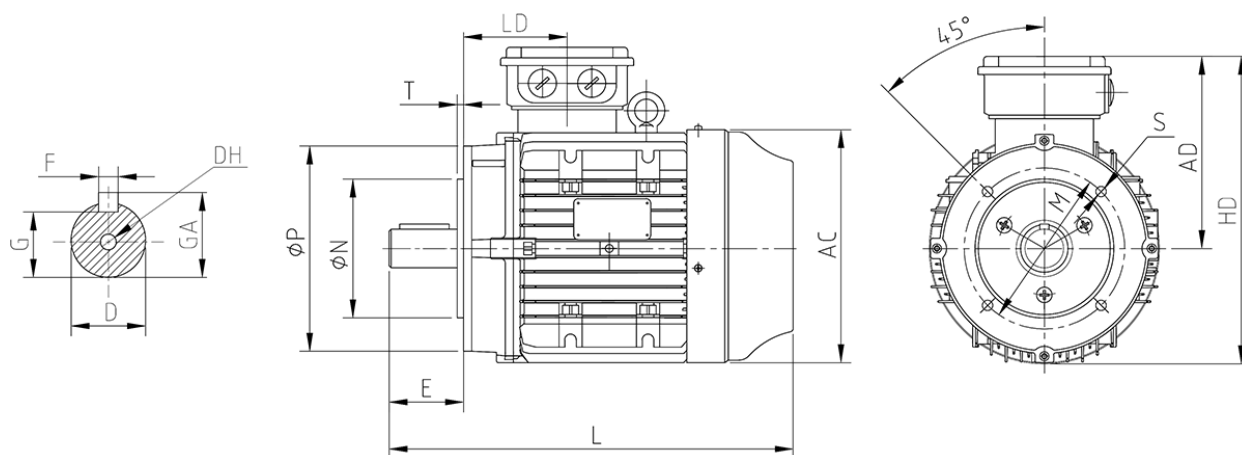


160-315



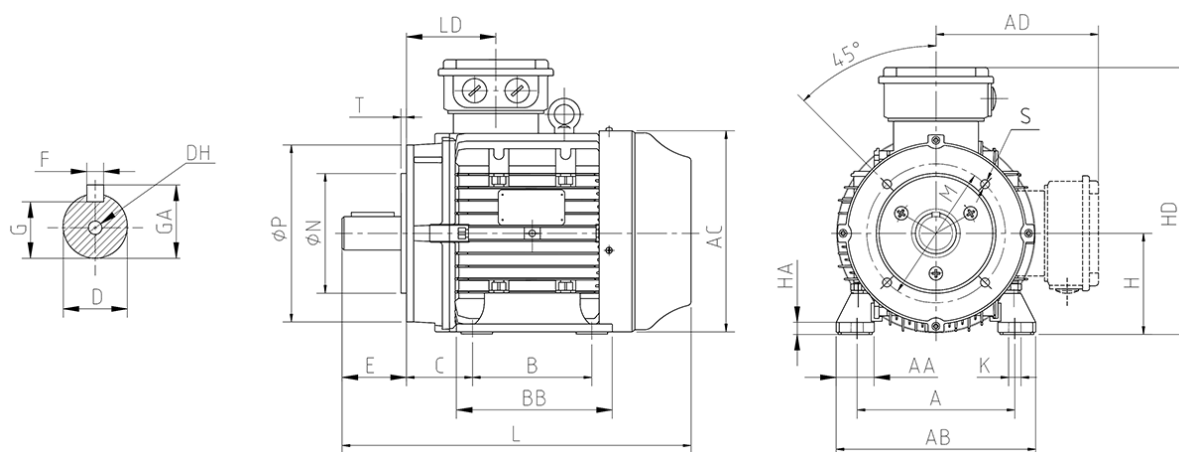
Frame Size	Mounting and Overall Dimensions (mm)																
	D	E	F	G	M	N	P	S	T	DH	GA	AC	AD	HD	LA	LD	L
71	14	30	5	11	130	110	160	4-Φ10	3.5	M5×13	16	137	107	187	9	66	247
90L	24	50	8	20	165	130	200	4-Φ12	3.5	M8×20	27	175	141	241	10	87	324
112M	28	60	8	24	215	180	250	4-Φ14.5	4	M10×22	31	222	167	292	12	85	381
132M	38	80	10	33	265	230	300	4-Φ14.5	4	M12×28	41	260	191	343	14	129	463
160M	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	244	419	15	146	610
160L	42	110	12	37	300	250	350	4-Φ19	5	M16×36	45	314	244	419	15	146	654
180M	48	110	14	42.5	300	250	350	4-Φ19	5	M16×36	51.5	355	264	439	15	161	684
180L	48	110	14	42.5	300	250	350	4-Φ19	5	M16×36	51.5	355	264	439	15	161	722
200L	55	110	16	49	350	300	400	4-Φ19	5	M20×42	59	397	296	496	17	186	774
225M	60	140	18	53	400	350	450	8-Φ19	5	M20×42	64	445	319	544	20	189	846
250S/M	65	140	18	58	500	450	550	8-Φ19	5	M20×42	69	484	370	645	22	208	911
280M	75	140	20	67.5	500	450	550	8-Φ19	5	M20×42	79.5	546	400	675	22	217	1016
315S	80	170	22	71	600	550	660	8-Φ24	6	M20×46	85	620	502	832	22	257	1231
315M/L	80	170	22	71	600	550	660	8-Φ24	6	M20×46	85	620	502	832	22	257	1341

B14 Mounting and Overall Dimensions



Frame Size	Mounting and Overall Dimensions (mm)															
	D	E	F	G	M	N	P	S	T	DH	GA	AC	AD	HD	LD	L
71	14	30	5	11	85	70	105	M6	2.5	M5×13	16	137	107	178	66	247
90L	24	50	8	20	115	95	140	M8	3	M8×20	27	175	141	231	87	324
112M	28	60	8	24	130	110	160	M8	3.5	M10×22	31	222	167	279	85	381
132M	38	80	10	33	165	130	220	M10	3.5	M12×28	41	260	191	323	129	463

B34 Mounting and Overall Dimensions



Frame Size	Mounting and Overall Dimensions (mm)																								
	A	B	C	D	E	F	G	H	K	M	N	P	S	T	DH	GA	AA	AB	AC	AD	HA	HD	BB	LD	L
71	112	90	45	14	30	5	11	71	7	85	70	105	M6	2.5	M5×13	16	27.5	136	137	107	10	178	110	66	247
90L	140	125	56	24	50	8	20	90	10	115	95	140	M8	3	M8×20	27	37	180	175	141	10	231	153	87	324
112M	190	140	70	28	60	8	24	112	12	130	110	160	M8	3.5	M10×22	31	47	230	222	167	12	279	170	85	381
132M	216	178	89	38	80	10	33	132	12	165	130	220	M10	3.5	M12×28	41	54	264	260	191	15	323	210	129	463

Bearings and Terminal Box

Frame size	Bearings		Terminal Box	
	Driving End	Non-driving End	Gland	Overall dimensions
71	6202-2Z	6202-2Z	2-M20x1.5	103x103x38
90	6205-2Z/C3	6204-2Z/C3	2-M25x1.5	115x115x54
112	6306-2Z/C3	6205-2Z/C3	2-M25x1.5	115x115x54
132	6308-2Z/C3	6206-2Z/C3	2-M32x1.5	138x138x57
160	6309/C3	6209/C3	2-M40x1.5	200x160x80
180	6311/C3	6211/C3	2-M40x1.5	200x160x80
200	6312/C3	6212/C3	2-M50x1.5	250x200x92
225	6313/C3	6312/C3	2-M50x1.5	250x200x92
250	6315/C3	6313/C3	2-M63x1.5	340x210x106
280	6317/C3	6314/C3	2-M63x1.5	340x210x106
315	6319/C3/NU319	6319/C3/7319B(V1)	2-M63x1.5	413x258x165



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