AEEB • AEVB
LOW VOLTAGE SERIES

Three-Phase Squirrel Cage Induction Motor

- Conforming to SS530 (Occasional Use)
- Conforming to IE1

TECO

STANDARD AND SPECIFICATION

Performance:

Meet the requirement of Singapore standard SS 530:2006 (Occasional use) and IEC 60034-30:2008 (IE1)

Enclosure:
The standard protection is IP55.
These enclosures comply to BS EN 60034-5

Designation	First Numeral	Second Numeral
IP55	Protection against solid objects	Protection against water
	The ingress of dust is not totally prevented but dust does not enter in sufficient quantity to interfere with satisfactory operation of the machines.	Water projected by a nozzle against the machine from any direction shall have no harmful effect.

Time Rating:
Maximum continuous rating type S1 duty to BS EN 60034-1:2010.

Cooling:
Totally enclosed fan cooled IC411 to BS EN 60034-6, IEC 60034-6.

Direction of Rotation:
All standard motors are suitable for operation in either direction of rotation.

Insulation:
All standard motors are non-hygroscopic Class F insulation with Class B temperature rise.

Insulation Class	B	F
Maximum Permissible Temperature	130°C	155°C
Measuring Method	Resistance Method	Resistance Method
Coil windings Temperature rise	80°C	105°C
Maximum ambient temperature is 40°C. Other insulation Classes are available on request.		

Supply and Operation Conditions:
Electric Supply:
Standard stock available is
220-240/380-415V/50HZ for 3HP and below
380-415/660-720V/50HZ for 4HP and above

Other voltages such as 200V, 346V, 440V up to 690V and 60HZ can be supplied upon request.

Voltage Variation:
All standard motors are suitable for continuous operation within ± 10% rated voltage, supplying rated output at normal rate speed in accordance to IEC 60034-1. Sustained operation on voltages exceeding ±10% rated voltage will result in overheating.

Ambient:
All standard motor are design to operate at ambient temperature of -20°C to 40°C (104°F). For other ambient temperature please refer to Teco.

Altitude:
All standard motors are designed for operation at an altitude not exceeding 1,000m (3,300feet) above sea-level. For higher altitudes please refer to TECO.

Totally Enclosed Fan-Cooled (TEFC) Squirrel Cage Induction Motor

INTERNATIONAL DESIGN STANDARD

TECO motors are designed and manufactured conforming to:

- IEC 60034
- BS EN 60034
- BS 3979
- BS 4999
- BS 5000
- AS 1359
- AS 1360

Other international standards also available for all general applications

ROBUST & RELIABLE

Good quality and rugged cast iron construction of TEFC squirrel cage induction motor, with high grade material and excellent workmanship to churn out a unique and reliable induction motor.

TYPES OF MOUNTING

- Foot Mounted
- Flange Mounted
- Foot and Flange Mounted

Other mounting please refer to TECO

WIDE-RANGING OF HORSE-POWER, VOLTAGE & FREQUENCY

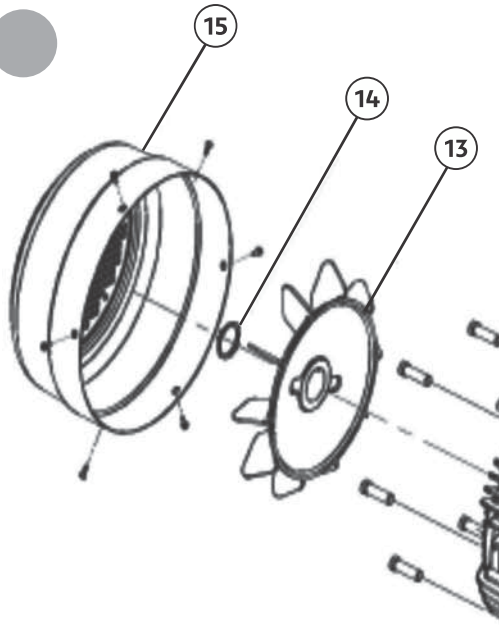
HP: 0.25HP to 250HP
Voltage: 230V to 690V
Frequency: 50Hz and / or 60 Hz
For other specific values are available on request.

APPLICATION

- Fan and Pump
- Extruder
- Blower
- Compressor
- Mixer

Other general purpose used

CONSTRUCTION



Frames and 'L' or 'F' Bracket (Endshields):

Stator frames and 'L' or 'F' bracket (end-shields) are made of high grade cast-iron for exceptional corrosion resistance and longer motor life, precisely machined to close tolerance and jig drilled to ensure rigid alignment, minimum vibration and interchangeability of parts.

Cooling System:

Frames and 'L' or 'F' bracket (end-shields) have uniquely designed Close-High-Fins. Improved high air-flow external fan, assures low temperature rise, low noise and increase motor life.

Fan and Fan Cover:

The fan is made of Poly Propylene.

Cast-iron fans can be provided for all frame sizes if required.

The fan cover is made of pressed steel, securely bolted to the end-shield. The air inlet mesh screen is designed to prevent a test finger touching the fan.

Cast-Iron fan covers are available for all frames if required.

Bearings and Lubrication System:

Standard motors are fitted with high quality ball bearings for frame size up to D315M. Bracket mounting, grease pre-packed shielded bearings for frame size from 80 to 180L, open bearings for frame size 180MA (2-Pole) and 200L through 315M

TECO Standard re-greasable motor is well-lubricated with Multitemp SRL or Shell Alvania RL3 grease

Shaft:

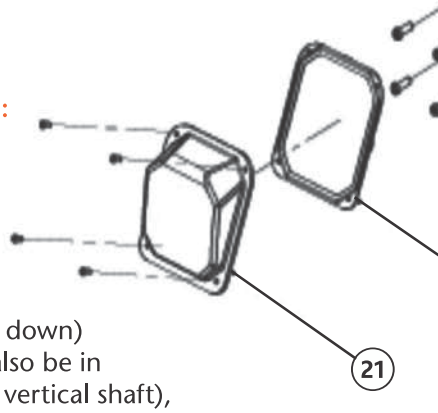
The motor shaft material is made of carbon steel. Special keyway and shaft extensions are available upon request.

Rotor Assembly:

The rotor core is made of low loss electro-magnetic steel lamination. The rotor bars are pressure die cast of high conductivity aluminum and cast integrally with end rings and wafter fan blades. All rotor assemblies are dynamically balanced and surface is treated with corrosion free coating

Stator, Windings and Insulation System:

Stator laminations are made of good grade, insulated cold rolled electro-magnetic steel for better efficiency. All standards motors are Class F insulation with Class B temperature rise. Heavy coated, heat and moisture resistance polyester enameled copper wire are used for stator winding.



Construction / Mounting:

Basic constructions are for mounting in the

B3 (foot mounted), B5(flange mounted) and V1(vertical mounting shaft down) position. Installations can also be in B6,B7(Wall mounting with vertical shaft), B8(Ceiling mounted), V3 (flange mounting with vertical shaft) and B3/B5 (foot and flange mounting).

Nameplate:

Nameplates are made of corrosion-free stainless steel

Hardware:

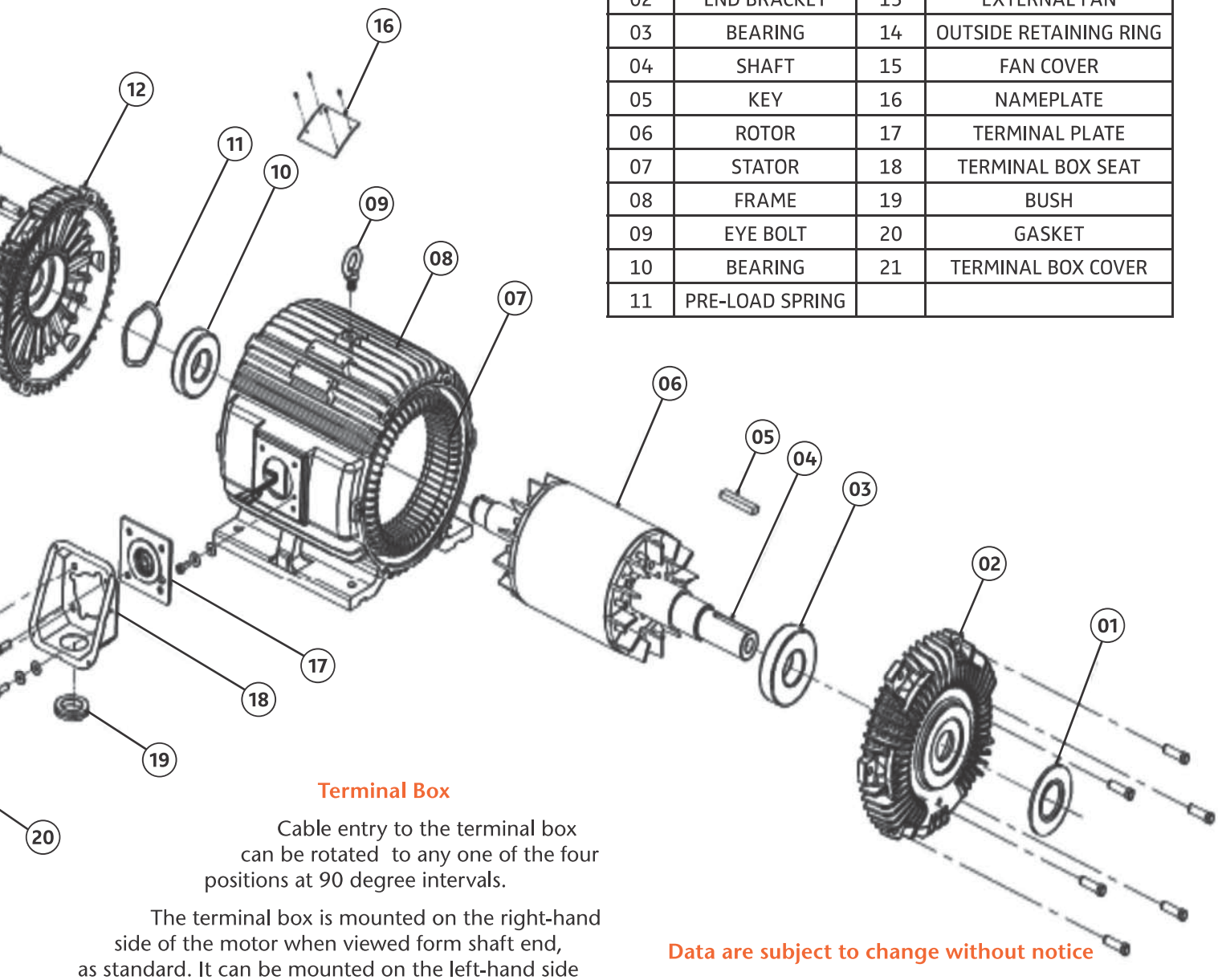
Motor hardware components are electric-zinc plated for better corrosion resistance.

Finish:

All inside exposed surfaces are cleaned and applied with rust-proof coating.

Outside exterior is painted with phenolic rustproof base and then a lacquer surface finishing of Blue-Gray colour (Munsell 7.5 B 3.5/0.5)

Item	Name	Item	Name
01	DUSTFLINGER	12	END BRACKET
02	END BRACKET	13	EXTERNAL FAN
03	BEARING	14	OUTSIDE RETAINING RING
04	SHAFT	15	FAN COVER
05	KEY	16	NAMEPLATE
06	ROTOR	17	TERMINAL PLATE
07	STATOR	18	TERMINAL BOX SEAT
08	FRAME	19	BUSH
09	EYE BOLT	20	GASKET
10	BEARING	21	TERMINAL BOX COVER
11	PRE-LOAD SPRING		



Terminal Box

Cable entry to the terminal box can be rotated to any one of the four positions at 90 degree intervals.

The terminal box is mounted on the right-hand side of the motor when viewed form shaft end, as standard. It can be mounted on the left-hand side upon request.

Standard terminal box is pressed steel type for motor frame size of 180 and below, cast iron T-box for frame size of 200 and above.

Earthing terminal is located in the main terminal box. Additional external grounding terminal on the motor frame is provided for frame size of 280 and above.

Eye bolt

Motor frame size of 100 and above is equipped with eye bolt or lifting lug

Electromagnetic compatibility

Compliance with European Electromagnetic Compatibility (EMC) directive reference number 89/336/EEC, standard EN 50081-1 1992 for motors up to 450KW

Data are subject to change without notice

Options

The following additional options are available:

- IP56
- Class 'H' Insulation
- Grease relief valves for frame down to D100
- Anti-condensation heaters
- Thermistor for thermal protection
- Special paint finishes
- Special shaft extensions
- Dual-speed
- Smoke spill duty
- Stainless steel hardware
- Inverter duty application

Performance Data (1HP to 15HP)

AEEB & AEVB PERFORMANCE DATA
CONFORMING TO IEC 60034-30 :2008 (IE1) 380 & 415V / 50 HZ

OUTPUT		FULL	FRAME	EFFICIENCY			POWER FACTOR			CURRENT (A)				TORQUE				ROTOR	Approx Weight	Approx Weight
HP	KW	LOAD (RPM)	SIZE	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD 380V /50Hz	LOCKED ROTOR 380V /50Hz	FULL LOAD 415V / 50Hz	LOCKED ROTOR 415V / 50Hz	FULL LOAD (KG-M)	LOCKED ROTOR (% FLT)	PULL UP (% FLT)	PULL OUT (% FLT)	GD^2 KG-M²	AEEB Kg	AEVB Kg
1	0.75	2800	80	77.5	78.5	76.5	87.0	81.0	67.5	1.7	11	1.55	10	0.261	235	210	255	0.005	15	18
		1425	80	76.0	76.0	73.0	77.0	67.5	53.5	1.9	12	1.78	11	0.512	240	215	275	0.009	15	17
		935	90S	71.0	70.0	64.5	69.0	59.5	47.0	2.3	11	2.13	10	0.78	190	175	285	0.017	21	23
1.5	1.1	2810	80	80.0	81.0	79.0	86.0	79.0	65.0	2.4	16	2.22	15	0.381	265	235	290	0.006	16	20
		1425	90S	76.5	77.5	76.0	78.0	69.5	55.5	2.8	17	2.56	16	0.751	220	165	235	0.014	20	22
		935	90L	73.5	72.5	68.5	68.5	59.0	46.0	3.3	17	3.04	16	1.145	220	205	260	0.023	24	27
2	1.5	2850	90S	81.0	82.5	81.5	87.0	82.0	71.0	3.2	22	2.96	20	0.512	225	210	290	0.01	22	23
		1425	90L	79.0	81.0	80.5	81.0	73.0	60.0	3.6	23	3.26	21	1.024	230	175	240	0.017	23	25
		935	100L	75.5	74.5	71.0	74.5	65.5	52.0	4	22	3.71	20	1.561	200	170	235	0.033	32	35
3	2.2	2855	90L	83.5	85.0	84.5	88.0	83.5	73.0	4.5	33	4.17	30	0.75	240	230	310	0.014	27	38
		1435	100L	80.0	80.5	78.5	82.0	74.0	60.5	5.1	38	4.67	35	1.492	210	185	300	0.033	31	33
		950	112M	80.0	80.0	77.5	72.0	63.0	50.0	5.8	35	5.31	32	2.253	205	195	270	0.058	41	45
4	3	2850	100L	84.5	86.0	86.0	88.5	84.5	75.0	6.1	48	5.58	44	1.024	275	265	315	0.023	35	35
		1445	100L	82.5	82.5	79.5	81.5	73.5	60.0	6.8	56	6.21	51	2.02	250	180	320	0.046	36	40
		955	132S	84.5	85.0	83.5	81.0	75.0	63.0	6.6	40	6.10	37	3.057	170	155	260	0.125	57	67
5.5	4	2910	112M	85.0	86.0	85.5	90.0	87.0	79.0	7.9	69	7.27	63	1.337	200	170	325	0.042	44.5	45
		1445	112M	84.5	85.5	85.0	82.0	76.0	65.0	8.8	61	8.03	56	2.693	190	180	260	0.065	43	47
		955	132M	84.5	85.0	84.0	80.5	74.0	62.0	8.9	55	8.18	50	4.075	170	155	255	0.151	68	78
7.5	5.5	2900	132S	85.0	85.5	84.0	87.0	84.5	78.0	11.2	73	10.3	67	1.845	180	160	250	0.063	60	64
		1465	132S	85.0	85.0	82.5	80.0	71.0	58.0	12.3	93	11.3	85	3.653	235	190	315	0.103	64	74
		960	132M	86.0	86.5	85.5	79.5	72.5	60.0	12.2	83	11.2	76	5.574	190	175	290	0.217	73	82
10	7.5	2895	132S	86.0	86.5	85.5	84.0	81.0	73.0	15.7	93	14.4	85	2.521	180	160	245	0.076	64	66
		1460	132M	86.5	87.0	86.0	86.0	81.0	70.0	15.3	115	14	105	4.998	215	175	298	0.143	80	90
		970	160M	86.5	86.5	85.0	79.5	73.5	61.5	16.6	109	15.2	100	7.523	210	180	255	0.4	115	120
15	11	2945	160M	87.6	88.0	88.0	91.0	89.0	83.0	20.9	180	19.2	165	3.634	225	140	280	0.147	110	117
		1465	160M	88.0	88.5	88.0	86.0	81.5	71.5	22	164	20.2	150	7.306	200	150	255	0.271	120	130
		970	160L	87.5	88.0	87.5	84.0	80.0	70.5	22.7	153	20.8	140	11.03	225	195	250	0.588	145	150

NOTE:

1. To calculate the full-load current with different voltage supply, multiply the full-load current of 415V by the following factors:

Voltage	200	220	346	365	400	420	440	500	550
Factor	2.08	1.89	1.2	1.13	1.04	0.99	0.94	0.83	0.75

2. FLT= full-load torque
3. Data are subject to change without prior notice

Performance Data (0.25HP to 15HP)

AEEB & AEVB PERFORMANCE DATA
CONFORMING TO SS530 (Occasional Use) 380 & 415V / 50HZ

OUTPUT		FULL	FRAME	EFFICIENCY			POWER FACTOR			CURRENT (A)				TORQUE				ROTOR	Approx Weight	Approx Weight
HP	KW	LOAD (RPM)	SIZE	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD (%)	3/4 LOAD (%)	1/2 LOAD (%)	FULL LOAD 380V /50Hz	LOCKED ROTOR 380V /50Hz	FULL LOAD 415V / 50Hz	LOCKED ROTOR 415V / 50Hz	FULL LOAD (KG-M)	LOCKED ROTOR (% FLT)	PULL UP (% FLT)	PULL OUT (% FLT)	GD^2 KG-M²	AEEB Kg	AEVB Kg
0.25	0.18	2730	63	61.0	57.5	50.5	77.5	69.5	58.5	0.60	2.7	0.55	2.5	0.066	335	335	340	0.002	9	10
		1345	63	64.0	63.0	57.0	68.5	58.5	45.5	0.64	2.6	0.59	2.4	0.135	220	215	240	0.002	9	10
		920	71	61.0	56.0	48.0	64.0	54.0	43.5	0.72	2.5	0.66	2.3	0.197	260	245	280	0.007	12	13
		710	80	52.0	46.0	37.0	47.5	41.0	34.0	1.15	3.5	1.05	3.2	0.256	360	350	370	0.01	17	17
0.5	0.37	2810	71	75.0	74.0	69.5	85.0	77.0	65.0	0.88	5.9	0.81	5.4	0.129	320	270	310	0.002	13	15
		1395	71	71.5	70.5	65.5	70.5	61.0	48.5	1.12	5.7	1.03	5.2	0.260	275	240	270	0.005	11.5	13
		925	80	66.0	63.0	57.0	67.5	56.5	45.0	1.27	5.5	1.16	5	0.392	220	215	240	0.009	15	18
		710	90S	64.5	61.0	53.0	60.5	48.5	39.0	1.45	5.5	1.33	5	0.511	190	185	265	0.017	21	25
0.75	0.55	2755	71	75.0	75.5	73.0	86.0	78.5	66.0	1.32	8.7	1.21	8	0.198	300	260	280	0.002	13	15
		1405	80	71.5	71.0	64.0	74.5	65.0	51.5	1.59	8.7	1.46	8	0.387	260	245	280	0.007	14	16.5
		915	80	68.0	67.5	62.5	72.0	60.5	48.0	1.74	8.2	1.59	7.5	0.595	230	215	230	0.012	20	23
		695	90L	70.0	70.0	65.5	70.0	59.0	47.0	1.74	7.9	1.59	7.2	0.783	170	140	205	0.023	25	26
1	0.75	2805	80	78.0	78.5	75.5	88.0	81.0	68.0	1.65	11	1.51	10	0.259	240	230	270	0.005	15	18
		1405	80	76.5	76.0	72.5	77.0	66.0	52.5	1.92	12	1.76	11	0.517	265	250	270	0.009	15	17
		940	90S	74.0	71.0	66.5	71.0	60.5	48.0	2.16	11	1.98	10	0.772	200	185	240	0.017	21	23
		700	100L	68.0	66.5	61.0	66.0	56.5	45.5	2.52	10	2.31	9	1.037	185	165	230	0.033	31	33
1.5	1.1	2810	80	80.5	81.5	80.0	87.5	81.0	70.0	2.41	16	2.21	15	0.387	270	250	280	0.006	16	20
		1415	90S	76.5	76.5	69.5	79.0	68.5	55.5	2.82	17	2.58	16	0.769	210	190	250	0.014	20	22
		940	90L	75.0	73.0	68.0	68.5	57.0	44.5	3.31	17	3.03	16	1.158	230	215	270	0.023	24	27
		690	100L	74.5	74.5	71.0	67.5	59.0	47.0	3.39	15	3.1	14	1.578	205	180	220	0.046	34	36
2	1.5	2825	90S	81.0	81.0	79.0	88.0	82.0	70.5	3.18	22	2.91	20	0.514	260	240	270	0.01	22	23
		1400	90L	78.5	78.5	75.5	81.0	72.5	59.0	3.56	23	3.26	21	1.037	220	195	255	0.017	23	25
		930	100L	76.0	76.0	70.5	75.5	65.0	52.0	3.95	22	3.62	20	1.561	200	190	230	0.033	32	35
		705	112M	75.5	75.0	71.0	67.0	59.0	46.5	4.48	20	4.1	18	2.059	185	150	240	0.065	43	47
3	2.2	2840	90L	83.5	84.5	83.5	89.0	84.0	74.0	4.58	33	4.19	30	0.767	245	245	290	0.014	27	38
		1425	100L	81.0	81.0	78.5	82.5	75.0	62.0	5.09	38	4.66	35	1.528	240	210	270	0.033	31	33
		950	112M	81.0	81.0	78.0	73.5	63.0	50.0	5.71	35	5.23	32	2.292	200	185	270	0.058	41	45
		705	132S	81.5	81.5	79.0	74.0	63.5	50.5	5.64	32	5.16	29	3.089	215	200	250	0.138	62	66
4	3	2865	100L	85.0	85.5	84.0	89.0	83.5	74.0	6	48	5.49	44	1.013	310	280	320	0.023	35	35
		1435	100L	83.5	83.0	80.0	82.0	73.5	61.0	6.62	56	6.06	51	2.023	300	275	340	0.046	36	40
		955	132S	85.0	85.5	84.0	81.0	75.0	64.0	6.59	40	6.03	37	3.04	200	190	270	0.125	57	67
		715	132M	82.5	81.0	77.5	67.0	58.0	45.0	8.2	44	7.51	40	4.061	265	245	310	0.18	72	80
5	3.7	2865	112M	86.0	86.5	86.0	91.0	88.5	82.5	7.24	61	6.63	56	1.258	290	265	330	0.042	43	48
		1440	112M	85.0	84.5	83.0	82.0	77.0	65.0	8.13	63	7.44	58	2.502	250	210	310	0.065	41	47
		955	132M	83.0	82.5	81.0	78.0	71.0	59.0	8.75	58	8.01	53	3.773	210	175	280	0.151	65	70
		720	160M	84.5	84.0	81.5	71.0	62.5	50.0	9.45	56	8.65	51	5.004	200	180	270	0.343	111	116
5.5	4	2870	112M	86.0	87.0	86.0	90.5	87.5	79.5	8.01	69	7.33	63	1.391	290	265	325	0.042	44.5	45
		1445	112M	86.0	86.5	84.5	82.0	76.0	64.0	8.84	61	8.09	56	2.763	240	220	310	0.065	43	47
		950	132M	85.0	85.5	84.0	80.5	74.5	62.5	9.11	55	8.34	50	4.202	190	175	260	0.151	68	78
		720	160M	84.5	83.5	80.5	74.5	64.5	51.5	9.9	60	9.07	55	5.545	200	180	270	0.344	111	116
7.5	5.5	2905	132S	87.0	86.0	83.5	88.0	85.5	79.0	11.1	73	10.2	67	1.874	205	185	260	0.063	60	64
		1445	132S	86.0	86.0	84.5	82.5	75.5	63.5	12	93	11	85	3.767	240	200	280	0.103	64	74
		960	132M	84.5	84.0	82.0	77.0	70.0	58.0	13.1	83	12	76	5.671	250	230	310	0.217	73	82
		720	160M	85.5	85.5	83.0	75.5	65.5	53.0	13.2	83	12.1	76	7.561	200	180	270	0.484	130	135
10	7.5	2880	132S	88.0	88.0	86.5	89.0	87.5	82.5	14.5	93	13.3	85	2.52	215	190	260	0.076	64	66
		1450	132M	88.5	89.0	87.5	86.0	81.5	71.5	14.9	115	13.6	105	5.006	260	220	300	0.143	80	90
		975	160M	88.0	87.0	84.5	79.0	71.5	59.5	16.3	109	14.9	100	7.445	265	225	300	0.4	115	120
		720	160L	86.0	86.0	84.5	76.0	65.5	53.0	17.4	104	15.9	95	10.081	200	190	270	0.588	150	155
15	11	2940	160M	89.0	89.0	87.0	89.0	85.5	77.5	21.5	180	19.7	165	3.703	215	180	285	0.147	110	117
		1455	160M	89.5	90.0	89.0	86.5	82.5	74.5	22	164	20.1	150	7.483	235	190	280	0.297	120	130
		970	160L	89.0	89.5	88.5	84.0	80.0	71.0	22.7	153	20.8	140	11.225	240	210	280	0.588	145	150
		730	180LC	89.0	89.5	88.0	78.0	70.5	58.5	24.5	156	22.4	143	14.915	220	195	260	1.233	207	206

NOTE:

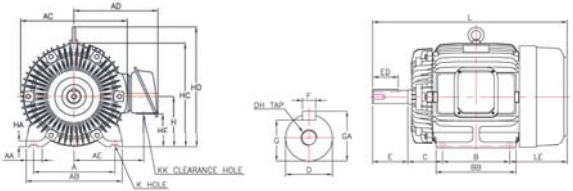
1. To calculate the full-load current with different voltage supply, multiply the full-load current of 415V by the following factors:

Voltage	200	220	346	365	400	420	440	500	550
Factor	2.08	1.89	1.2	1.13	1.04	0.99	0.94	0.83	0.75

2. FLT= full-load torque
3. Data are subject to change without prior notice

AEEB Motor Dimension (0.25HP to 15HP)

Foot Mounting B3 (IM 1001)



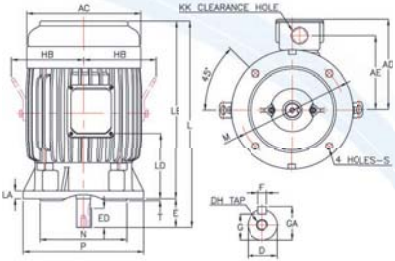
OUTPUT (HP)				FRAME	FIXING							SHAFT					BEARINGS	
2P	4P	6P	8P	SIZE	A	AB	B	BB	C	H	K	D	E	F	G	GA	DE	NDE
0.25	0.25	-	-	63	100	120	80	100	40	63	7	11j6	23	-	10.0	0.0	6201ZZ	6201ZZ
0.5/0.75	0.5	0.25	-	71	112	140	90	115	45	71	7	14j6	30	5	11.0	16.0	6202ZZ	6202ZZ
1/1.5	0.75/1	0.5/0.75	0.25	80	125	155	100	130	50	80	10	19j6	40	6	15.5	21.5	6204ZZ	6204ZZ
2	1.5	1	0.5	90S	140	170	100	130	56	90	10	24j6	50	8	20.0	27.0	6205ZZ	6205ZZ
3	2	1.5	0.75	90L	140	170	125	150	56	90	10	24j6	50	8	20.0	27.0	6205ZZ	6205ZZ
4	3/4	2	1/1.5	100L	160	195	140	175	63	100	12	28j6	60	8	24.0	31.0	6206ZZ	6305ZZ
5/5.5	5/5.5	3	2	112M	190	224	140	175	70	112	12	28j6	60	8	24.0	31.0	6306ZZ	6306ZZ
7.5/10	7.5	4	3	132S	216	250	140	175	89	132	12	38k6	80	10	33.0	41.0	6308ZZ	6306ZZ
-	10	5/5.5/7.5	4	132M	216	250	178	212	89	132	12	38k6	80	10	33.0	41.0	6308ZZ	6306ZZ
15	15	10	5/5.5/7.5	160M	254	300	210	250	108	160	14.5	42k6	110	12	37.0	45.0	6309ZZ	6307ZZ
-	-	15	10	160L	254	300	254	300	108	160	14.5	42k6	110	12	37.0	45.0	6309ZZ	6307ZZ

OUTPUT (HP)				FRAME	GENERAL										
2P	4P	6P	8P	SIZE	AA	AC	AD	AE	DH	ED	HA	HC	HD	HE	KK	L	LE
0.25	0.25	-	-	63	28.0	144	123	93.0	M4x8	18	8	135	-	29	20	219.0	76.0
0.5/0.75	0.5	0.25	-	71	35.5	162	133	103.0	M5x10	24	8	152	-	54	20	250.5	85.5
1/1.5	0.75/1	0.5/0.75	0.25	80	35.5	177	159	122.0	M6x12	25	9	168	-	51	20	282.5	92.5
2	1.5	1	0.5	90S	35.5	200	170	135.0	M8x16	32	10	190	-	61	20	307.5	101.5
3	2	1.5	0.75	90L	35.5	200	170	135.0	M8x16	32	10	190	-	61	20	332.5	101.5
4	3/4	2	1/1.5	100L	45.0	219	180	144.5	M10x20	40	12.5	-	243	71	28	374.5	111.5
5/5.5	5/5.5	3	2	112M	45.0	238	189	154.0	M10x20	40	14	-	265	83	28	391.5	121.5
7.5/10	7.5	4	3	132S	45.0	273	225	179.5	M12x24	64	16	-	310	83	35	454.0	145.0
-	10	5/5.5/7.5	4	132M	45.0	273	225	179.5	M12x24	64	16	-	310	83	35	492.0	145.0
15	15	10	5/5.5/7.5	160M	50.0	334	263	218.0	M16x32	80	18	-	377	108	35	608.0	180.0
-	-	15	10	160L	50	334	263	218.0	M16x32	80	18	-	377	108	35	652.0	180.0

NOTE:
1 All dimensions are in mm
2 Frame sizes 63 - 90L do not have lifting eye-bolt.
3 Tolerance of shaft centre height H: (+0, -0.5) for frame 250 and smaller.
4 Grease pre-packed shielded bearings for frame sizes 63 through 160L.
Open bearings and with grease nipples for re-greasing for frame sizes 180MA 2-Pole, 200LA, 200LC and larger.
5 Frame sizes 63 motors can be provided with keyway or without keyway.
6 Data are subject to change without prior notice.

AEVB Motor Dimension (0.25HP to 15HP)

Flange Mounting V1 (IM 3001)



OUTPUT (HP)				FRAME	FIXING						SHAFT						BEARINGS	
2P	4P	6P	8P	SIZE	M	N	P	S	T	LA	D	E	F	G	GA		DE	NDE
0.25	0.25	-	-	63	130	110	160	10	3.5	12	11j6	23	-	10.0	-		6201ZZ	6201ZZ
0.5/0.75	0.5	0.25	-	71	130	110	160	10	3.5	12	14j6	30	5	11.0	16.0		6202ZZ	6202ZZ
1/1.5	0.75/1	0.5/0.75	0.25	80	165	130	200	12	3.5	12	19j6	40	6	15.5	21.5		6204ZZ	6204ZZ
2	1.5	1	0.5	90S	165	130	200	12	3.5	12	24j6	50	8	20.0	27.0		6205ZZ	6205ZZ
3	2	1.5	0.75	90L	165	130	200	12	3.5	12	24j6	50	8	20.0	27.0		6205ZZ	6205ZZ
4	3/4	2	1/1.5	100L	215	180	250	14.5	4.0	16	28j6	60	8	24.0	31.0		6206ZZ	6305ZZ
5/5.5	5/5.5	3	2	112M	215	180	250	14.5	4.0	16	28j6	60	8	24.0	31.0		6306ZZ	6306ZZ
7.5/10	7.5	4	3	132S	265	230	300	14.5	4.0	20	38k6	80	10	33.0	41.0		6308ZZ	6306ZZ
-	10	5/5.5/7.5	4	132M	265	230	300	14.5	4.0	20	38k6	80	10	33.0	41.0		6308ZZ	6306ZZ
15	15	10	5/5.5/7.5	160M	300	250	350	18.5	5.0	20	42k6	110	12	37.0	45.0		6309ZZ	6307ZZ
-	-	15	10	160L	300	250	350	18.5	5.0	20	42k6	110	12	37.0	45.0		6309ZZ	6307ZZ

OUTPUT (HP)				FRAME	GENERAL							
2P	4P	6P	8P	SIZE	AC	AD	AE	DH	ED	HB	KK	L	LB	LD
0.25	0.25	-	-	63	144	123	93	M4x8	18	-	20	248.0	225.0	74
0.5/0.75	0.5	0.25	-	71	162	133	103	M5x10	24	-	20	277.5	247.5	82
1/1.5	0.75/1	0.5/0.75	0.25	80	177	159	122	M6x12	25	-	20	282.0	242.0	55
2	1.5	1	0.5	90S	200	170	135	M8x16	32	-	20	346.5	296.5	100
3	2	1.5	0.75	90L	200	170	135	M8x16	32	-	20	371.5	321.5	113
4	3/4	2	1/1.5	100L	219	180	144.5	M10x20	40	140	28	374.5	314.5	88
5/5.5	5/5.5	3	2	112M	238	189	154	M10x20	40	150	28	431.0	371.0	135
7.5/10	7.5	4	3	132S	273	225	179.5	M12x24	64	169	35	454.0	374.0	97
-	10	5/5.5/7.5	4	132M	273	225	179.5	M12x24	64	169	35	492.0	412.0	116
15	15	10	5/5.5/7.5	160M	334	263	218	M16x32	80	217	35	608.0	498.0	151
-	-	15	10	160L	334	263	218	M16x32	80	217	35	652.0	542.0	173

NOTE:
1 All dimensions are in mm.
2 Tolerance of N : h7
3 Data are subject to change without prior notice.

Performance Data (20HP to 250HP)

AEEB & AEVB PERFORMANCE DATA
CONFORMING TO IEC 60034-30:2008 (IE1) 380 & 415V / 50 HZ

OUTPUT		FULL LOAD	FRAME	EFFICIENCY			POWER FACTOR			CURRENT (A)				TORQUE				ROTOR GD²	Approx Weight AEEB	Approx Weight AEVB
HP	KW			FULL LOAD	3/4 LOAD	1/2 LOAD	FULL LOAD	3/4 LOAD	1/2 LOAD	FULL LOAD	LOCKED ROTOR	FULL LOAD	LOCKED ROTOR	FULL LOAD	LOCKED ROTOR	PULL UP	PULL OUT			
		(RPM)	SIZE	(%)	(%)	(%)	(%)	(%)	(%)	380V /50Hz		415V / 50Hz		(KG-M)	(% FLT)	(% FLT)	(% FLT)	KG-M²	Kg	Kg
20	15	2940	160M	88.7	90.0	90.0	92.0	90.5	86.5	27.9	218	25.6	200	4.964	220	135	260	0.183	118	125
		1465	160L	90.0	91.0	90.5	88.0	85.5	77.0	28.7	218	26.3	200	9.962	215	155	265	0.381	135	139
		970	180LC	88.0	89.0	89.0	85.0	83.0	76.0	30.4	180	27.9	165	15.05	195	140	210	1.233	185	218
25	18.5	2940	160L	90.0	90.5	90.0	92.0	90.5	85.5	33.9	305	31.1	280	6.123	270	190	310	0.237	148	168
		1475	180MC	91.0	91.5	90.5	85.0	82.0	75.0	36.3	229	33.3	210	12.2	180	140	240	0.571	160	170
		970	200LC	88.6	89.5	90.0	83.5	82.0	76.0	37.9	213	34.8	195	18.56	190	160	200	1.61	270	280
30	22	2940	180MA	91.0	91.5	91.0	91.5	90.5	83.0	40.1	311	36.8	285	7.281	210	155	255	0.283	178	190
		1480	180LC	91.5	92.0	91.0	85.0	82.0	74.0	42.9	316	39.4	290	14.46	190	145	245	0.744	195	205
		975	200LC	92.5	91.0	91.0	83.0	80.0	72.0	44.4	289	40.7	265	21.95	205	165	220	1.919	280	289
40	30	2955	200LA	91.5	92.0	90.5	90.5	89.0	85.0	54.9	431	50.4	395	9.878	185	140	275	0.521	270	285
		1475	200LC	92.0	92.5	92.0	87.5	85.0	78.0	56.5	452	51.8	415	19.79	240	185	275	1.264	278	280
		985	225MC	90.5	90.0	88.5	80.0	74.0	64.0	62.8	376	57.6	345	26.63	205	175	225	2.326	347	357
50	37	2955	200LA	92.0	92.5	91.5	91.0	89.5	86.0	67	543	61.5	490	12.18	195	135	270	0.633	291	300
		1480	225SC	92.5	93.0	92.0	87.0	84.0	77.0	69.8	496	64	455	24.33	190	160	245	1.649	326	332
		975	250SB	91.0	91.5	91.0	83.5	81.0	76.5	73.8	485	67.7	445	36.92	205	140	200	3.373	410	431
60	45	2955	225MA	92.5	93.0	92.5	92.0	91.5	88.0	80.2	621	73.6	570	14.82	150	130	260	1.074	346	356
		1475	225MC	92.5	93.0	92.5	87.0	85.0	79.0	84.8	534	77.8	490	29.68	185	155	235	1.731	356	367
		980	250MB	92.0	92.5	92.0	82.5	78.0	69.0	89.9	610	82.5	560	44.68	220	205	260	3.829	440	450
75	55	2970	250SA	93.0	93.0	92.5	91.0	89.0	84.5	98.5	807	90.4	740	18.02	155	130	310	1.41	465	467
		1485	250SB	93.5	93.5	93.0	87.0	85.0	79.5	102.6	801	94.1	735	36.04	265	225	250	3.643	460	472
		970	280SB	92.6	92.4	91.2	83.0	79.0	73.0	109	681	100	625	55.2	145	115	220	7	600	600
100	75	2960	250MA	93.5	94.0	93.5	91.5	91.0	88.5	133	932	122	855	24.65	150	120	285	1.678	510	520
		1485	250MB	94.0	94.0	93.5	89.0	87.5	82.0	136.3	1026	125	941	49.14	265	200	245	4.49	559	575
		975	280MB	92.9	92.8	90.9	84.5	80.5	73.0	145	927	133	850	74.9	140	110	210	10	690	750
125	90	2950	280SA	93.5	93.4	90.5	88.5	86.5	84.5	164.6	1117	151	1025	29.7	130	105	220	2.7	620	680
		1475	280SB	93.5	93.4	90.5	86.5	83.0	79.0	169	1117	155	1025	59.4	145	115	220	7	630	700
		975	315SB	93.3	93.2	91.0	84.5	80.5	73.0	173.3	1112	159	1020	89.9	140	110	210	15.7	870	910
150	110	2955	280MA	93.5	93.4	90.5	88.5	86.5	84.5	201.7	1363	185	1250	36.3	120	95	210	3.6	690	750
		1480	280MB	93.5	93.4	90.5	86.5	84.5	79.0	206	1363	189	1250	72.4	125	100	210	8.7	710	760
		975	315MB	93.5	93.4	90.5	84.5	80.5	73.0	211.5	1363	194	1250	110	120	95	210	17	970	1070
175	132	2955	315SA	93.8	93.7	90.8	89.2	87.5	84.5	238.7	1559	219	1430	43.5	110	90	210	6.3	840	880
		1480	315SB	93.8	93.7	90.8	87.5	84.5	80.5	244.2	1559	224	1430	86.9	125	100	210	11.3	890	950
		975	315MB	93.8	93.7	90.8	84.5	80.5	73.0	252.9	1559	232	1430	132	120	95	210	18.9	1100	1120
200	150	2960	315MA	93.8	93.7	90.8	89.2	87.5	84.5	271.4	1771	249	1625	49.4	105	85	210	7.2	910	990
		1480	315MB	93.8	93.7	90.8	87.5	84.5	80.5	276.9	1771	254	1625	98.7	110	90	210	14.3	970	1090
250	185	2960	315MA	94.0	93.9	90.1	89.2	87.5	84.5	334.6	2185	307	2005	60.9	105	85	210	7.3	1000	1150
		1480	315MB	94.0	93.9	90.1	87.5	84.5	80.5	341.2	2185	313	2005	122	110	90	210	14.3	1070	1210

NOTE:
1. To calculate the full-load current with different voltage supply, multiply the full-load current of 415V by the following factors:

Voltage	200	220	346	365	400	420	440	500	550
Factor	2.08	1.89	1.2	1.13	1.04	0.99	0.94	0.83	0.75

2. FLT= full-load torque
3. Data are subject to change without prior notice

Performance Data (20HP to 250HP)

AEEB & AEVB PERFORMANCE DATA
CONFORMING TO SS530 (Occasional Use) 380 & 415V / 50HZ

OUTPUT		FULL LOAD	FRAME	EFFICIENCY			POWER FACTOR			CURRENT (A)				TORQUE				ROTOR GD²	Approx Weight AEEB	Approx Weight AEVB
HP	KW			FULL LOAD	3/4 LOAD	1/2 LOAD	FULL LOAD	3/4 LOAD	1/2 LOAD	FULL LOAD	LOCKED ROTOR	FULL LOAD	LOCKED ROTOR	FULL LOAD	LOCKED ROTOR	PULL UP	PULL OUT			
		(RPM)	SIZE	(%)	(%)	(%)	(%)	(%)	(%)	380V /50Hz		415V / 50Hz		(KG-M)	(% FLT)	(% FLT)	(% FLT)	KG-M²	Kg	Kg
20	15	2925	160M	90.5	91.0	90.0	91.0	90.0	85.5	27.5	218	25.2	200	4.963	215	180	270	0.183	118	125
		1465	160L	90.5	90.5	89.0	86.0	80.5	71.0	29.2	218	26.7	200	9.909	240	195	285	0.381	135	139
		970	180LC	90.0	90.5	90.0	85.0	82.5	76.0	29.6	180	27.1	165	14.966	200	155	230	1.233	185	218
		730	200LC	89.5	89.0	87.5	77.0	70.5	59.5	32.9	208	30.1	190	19.887	200	180	240	1.61	274	282
25	18.5	2930	160L	91.5	91.5	91.0	92.0	90.0	85.5	33.6	305	30.8	280	6.193	250	190	290	0.237	148	168
		1450	180MC	91.0	91.0	90.5	86.0	83.5	76.5	36.3	229	33.2	210	12.515	200	170	230	0.571	160	170
		970	200LC	91.0	91.0	91.0	83.5	82.0	76.0	37.2	213	34.1	195	18.708	205	170	215	1.61	270	280
		730	225SC	90.0	90.0	89.0	78.0	72.0	62.0	40.4	246	37.0	225	24.858	185	150	200	2.093	324	334
30	22	2930	180MA	92.0	92.5	91.5	90.0	88.5	83.5	41.1	311	37.6	285	7.432	220	190	270	0.283	178	190
		1460	180LC	91.5	91.5	90.5	86.5	82.5	74.5	42.9	316	39.3	290	14.915	215	180	260	0.744	195	205
		975	200LC	92.5	92.5	92.0	83.5	79.5	71.5	44	289	40.3	265	22.334	220	200	250	1.919	280	289
		730	225MC	91.0	90.5	89.0	77.0	70.5	59.0	48.5	295	44.4	270	29.83	200	175	220	2.442	352	362
40	30	2960	200LA	92.0	91.5	89.0	84.5	79.0	71.0	58.3	431	53.4	395	9.809	190	170	280	0.521	270	285
		1470	200LC	92.5	93.0	92.5	86.5	83.5	76.5	56.7	452	51.9	415	19.751	240	195	285	1.264	278	280
		980	225MC	91.5	91.5	88.5	81.5	75.0	65.0	60.8	376	55.7	345	29.627	220	190	240	2.376	347	357
		730	250SB	90.5	90.0	88.5	78.5	70.5	60.0	63.8	393	58.4	360	39.773	200	170	230	3.475	442	442
50	37	2950	200LA	92.5	92.5	91.5	88.5	87.0	81.0	69.2	543	63.4	490	12.303	180	145	260	0.633	291	300
		1470	225SC	92.5	92.0	91.0	85.0	81.5	74.5	72.1	496	66	455	24.689	200	175	230	1.649	326	332
		980	250SB	92.5	92.5	91.5	85.5	81.0	73.0	71.6	485	65.6	445	37.034	210	190	240	3.373	410	432
		730	250MB	91.0	91.0	89.5	79.5	73.0	62.0	78.3	481	71.7	440	49.716	200	170	230	4.572	499	510
60	45	2950	225MA	93.0	92.5	91.0	91.5	90.0	86.0	79.9	621	73.2	570	14.763	145	130	260	1.074	346	356
		1470	225MC	92.5	93.0	92.5	85.5	83.0	76.5	85.9	534	78.7	490	29.627	190	160	215	1.731	356	367
		980	250MB	92.5	92.5	91.5	84.5	79.0	69.5	87	610	79.7	560	44.44	230	210	270	3.829	440	450
		725	280SB	92.0	91.0	90.2	80.0	74.0	66.0	92.8	552	85	505	60.5	140	110	210	8.4	650	710
75	55	2960	250SA	93.5	93.5	87.5	90.5	88.0	85.5	100	807	92	740	18.392	165	140	315	1.41	465	467
		1480	250SB	93.5	93.5	92.0	89.0	87.0	81.0	102	801	93.5	735	36.783	200	165	265	3.643	460	472
		970	280SB	93.0	92.8	91.6	83.0	79.0	73.0	108	681	99	625	55.2	145	115	220	7	600	660
		730	280MB	92.4	92.0	91.0	80.0	74.0	66.0	112	677	103	620	73.4	135	105	210	10	680	750
100	75	2950	280MA	94.0	94.0	93.0	89.5	86.0	81.5	134	932	123	855	24.605	150	120	285	1.678	510	520
		1480	250MB	94.5	94.5	93.5	88.5	87.0	83.0	135	1026	124	941	49.044	240	200	280	4.49	559	575
		975	280MB	93.6	93.5	91.6	84.5	80.5	73.0	144	927	132	850	74.9	140	110	210	10	690	750
		730	315SB	93.0	92.4	91.0	80.0	75.5	68.0	153	928	140	850	100	135	105	210	19.1	840	930
125	90	2950	280SA	94.0	93.9	91.0	88.5	86.5	84.5	164	1117	150	1025	29.7	130	105	220	2.7	620	680
		1475	280SB	94.0	93.9	91.0	86.5	83.0	79.0	168	1117	154	1025	59.4	145	115	220	7	630	700
		975	315SB	93.9	93.8	91.6	84.5	80.5	73.0	171	1112	157	1020	89.9	140	110	210	15.7	870	910
		730	315SB	93.0	93.0	91.7	80.0	75.5	68.0	183	1114	168	1020	120	125	100	210	23.9	950	1040
150	110	2955	280MA	94.0	94.0	91.0	88.5	86.5	84.5	201	1363	184	1250	36.3	120	95	210	3.6	690	750
		1480	280MB	94.5	94.5	91.0	86.5	84.5	79.0	204	1363	187	1250	72.4	125	100	210	8.7	710	760
		975	315MB	94.1	94.0	92.0	84.5	80.5	73.0	211	1363	193	1250	110	120	95	210	17	970	1070
175	132	2955	315SA	94.6	94.5	90.8	89.2	87.5	84.5	237	1559	217	1430	43.5	110	90	210	6.3	840	880
		1480	315SB	94.8	94.8	91.2	87.5	84.5	80.5	242	1559	222	1430	86.9	125	100	210	11.3	890	950
		975	315MB	94.3	94.2	92.4	84.5	80.5	73.0	252	1559	231	1430	132	120	95	210	18.9	1100	1120
200	150	2960	315MA	94.8	94.6	92.0	89.2	87.5	84.5	270	1771	247	1625	49.4	105	85	210	7.2	910	900
		1480	315MB	94.9	94.9	91.3	87.5	84.5	80.5	274	1771	251	1625	98.7	110	90	210	14.3	970	1090
250	185	2960	315MA	94.9	94.8	92.0	89.2	87.5	84.5	333	2185	305	2005	60.9	105	85	210	7.3	1000	1150
		1480	315MB	95.0	94.9	92.0	87.5	84.5	80.5	339	2185	310	2005	122	110	90	210	14.3	1100	1210

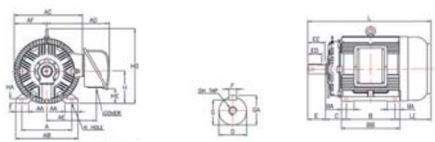
NOTE:
1. To calculate the full-load current with different voltage supply, multiply the full-load current of 415V by the following factors:

Voltage	200	220	346	365	400	420	440	500	550
Factor	2.08	1.89	1.2	1.13	1.04	0.99	0.94	0.83	0.75

2. FLT= full-load torque
3. Data are subject to change without prior notice

AEEB Motor Dimension (20HP to 250HP)

Foot Mounting B3 (IM 1001)



OUTPUT (HP)				FRAME	FIXING							SHAFT						BEARINGS	
2P	4P	6P	8P	SIZE	A	AB	B	BB	C	H	K	D	E	EF	F	G	GA	DE	NDE
20	-	-	-	160M	254	300	210	250	108	160	14.5	42k6	110	-	12	37.0	45.0	6309ZZ	6307ZZ
25	20	-	-	160L	254	300	254	300	108	160	14.5	42k6	110	-	12	37.0	45.0	6309ZZ	6307ZZ
30	-	-	-	180MA	279	355	241	297	121	180	14.5	48k6	110	-	14	42.5	51.5	6211C3	6211C3
-	25	-	-	180MC	279	355	241	297	121	180	14.5	48k6	110	-	14	42.5	51.5	6311ZZ	6310ZZ
-	30	20	-	180LC	279	355	279	335	121	180	14.5	48k6	110	-	14	42.5	51.5	6311ZZ	6310ZZ
40/50	-	-	-	200LA	318	400	305	365	133	200	18.5	55m6	110	-	16	49.0	59.0	6312C3	6212C3
-	40	25/30	20	200LC	318	400	305	365	133	200	18.5	55m6	110	-	16	49.0	59.0	6312	6212
-	50	-	25	225SC	356	450	286	350	149	225	18.5	60m6	140	-	18	53.0	64.0	6313	6213
60	-	-	-	225MA	356	450	311	375	149	225	18.5	55m6	110	-	16	49.0	59.0	6312C3	6212C3
-	60	40	30	225MC	356	450	311	375	149	225	18.5	60m6	140	-	18	53.0	64.0	6313	6213
*75	-	-	-	250SA	406	500	311	385	168	250	24.0	60m6	140	-	18	53.0	64.0	6313C3	6213C3
-	*75	*50	40	250SB	406	500	311	385	168	250	24.0	70m6	140	-	20	62.5	74.5	6316 (NU316)	6213
*100	-	-	-	250MA	406	500	349	425	168	250	24.0	60m6	140	-	18	53.0	64.0	6313C3	6213C3
-	*100	*60	50	250MB	406	500	349	425	168	250	24.0	70m6	140	-	20	62.5	74.5	6316 (NU316)	6213
*125	-	-	-	280SA	457	560	368	445	190	280	24.0	65m6	140	134	18	58.0	69.0	6314C3	6314C3
-	*125	*75	60	280SB	457	560	368	445	190	280	24.0	80m6	170	157	22	71.0	85.0	6318 (NU318C3)	6316
*150	-	-	-	280MA	457	560	419	495	190	280	24.0	65m6	140	134	18	58.0	69.0	6314C3	6314C3
-	*150	*100	75	280MB	457	560	419	495	190	280	24.0	80m6	170	157	22	71.0	85.0	6318 (NU318C3)	6316
*175	-	-	-	315SA	508	615	406	490	216	315	28.0	65m6	140	134	18	58.0	69.0	6314C3	6314C3
-	*175	*125	100	315SB	508	615	406	490	216	315	28.0	85m6	170	157	22	76.0	90.0	6320 (NU320C3)	6316
*200/*250	-	-	-	315MA	508	615	457	540	216	315	28.0	65m6	140	134	18	58.0	69.0	6314C3	6314C3
-	*250	-	-	315MB	508	615	457	540	216	315	28.0	85m6	170	157	22	76.0	90.0	6320	6316

OUTPUT (HP)				FRAME	GENERAL													
2P	4P	6P	8P	SIZE	AA	AC	AD	AE	AF	BA	DH	ED	HA	HD	HE	KK	L	LE
15/20	-	-	-	160M	50	334	263	218	-	-	M16x32	80	18	377	108	35	608.0	180.0
25	20	-	-	160L	50	334	263	218	-	-	M16x32	80	18	377	108	35	652.0	180.0
30	-	-	-	180MA	75	382	305	250	-	-	M16x32	80	20	431	119	35	672.0	200.0
-	25	-	-	180MC	75	382	305	250	-	-	M16x32	80	20	431	119	35	672.0	200.0
-	30	20	-	180LC	75	382	305	250	-	-	M16x32	80	20	431	119	35	710.0	200.0
40/50	-	-	-	200LA	80	420	342	279	-	-	M20x40	80	25	469	112	-	770.0	222.0
-	40	25/30	20	200LC	80	420	342	279	-	-	M20x40	80	25	469	112	-	770.0	222.0
-	50	-	25	225SC	90	458	382	312	-	-	M20x40	110	30	524	79	-	816.0	241.0
60	-	-	-	225MA	90	458	382	312	-	-	M20x40	80	30	524	79	-	811.0	241.0
-	60	40	30	225MC	90	458	382	312	-	-	M20x40	110	30	524	79	-	841.0	241.0
*75	-	-	-	250SA	100	510	479	364	-	-	M20x40	110	36	595	70	-	882.5	263.5
-	*75	*50	40	250SB	100	510	479	364	-	-	M20x40	110	36	595	70	-	882.5	263.5
*100	-	-	-	250MA	100	510	479	364	-	-	M20x40	110	36	595	70	-	920.5	263.5
-	*100	*60	50	250MB	100	510	479	364	-	-	M20x40	110	36	595	70	-	920.5	263.5
*125	-	-	-	280SA	110	603	600	445	293	110	M20x40	110	30	651	111	-	1042.0	344.0
-	*125	*75	60	280SB	110	603	600	445	293	110	M20x40	140	30	651	111	-	1072.0	344.0
*150	-	-	-	280MA	110	603	600	445	293	130	M20x40	110	30	651	111	-	1092.0	343.0
-	*150	*100	75	280MB	110	603	600	445	293	130	M20x40	140	30	651	111	-	1122.0	343.0
*175	-	-	-	315SA	115	642	620	465	312	115	M20x40	110	35	723	141	-	1131.0	369.0
-	*175	*125	100	315SB	115	642	620	465	312	115	M20x40	140	35	723	141	-	1161.0	369.0
*200/*250	-	-	-	315MA	115	642	620	465	312	115	M20x40	110	35	723	141	-	1182.0	369.0
-	*250	-	-	315MB	115	642	620	465	312	115	M20x40	140	35	723	141	-	1212.0	369.0

NOTE:
1 All dimensions are in mm.
2 Tolerance of shaft centre height H : (+0,-0.5) for frame 225S to 250M, and (+0, -1) for frame 280C to 315M
3 Output (HP) with mark * is for direct coupling only
4 Usable shaft length : EE
5 For frame sizes 250 through 315, NU series roller bearings in brackets ( ) are fitted to 8 Pole standard motors only
NU series roller bearings are applicable to the drive end of the 4 & 6 Pole motors if higher radial loads are encountered, such as belt drive applications
6 Grease pre-packed shielded bearings for frame sizes 160M through 180L.
Open bearings and with grease nipples for re-greasing for frame sizes 180MA 2-Pole, 200LA, 200LC and larger.
7 Data are subject to change without prior notice.

AEVB Motor Dimension (20HP to 250HP)

Flange Mounting V1 (IM 3001)

OUTPUT (HP)				FRAME	FIXING						SHAFT						BEARINGS	
2P	4P	6P	8P	SIZE	M	N	P	S	T	LA	D	E	EF	F	G	GA	DE	NDE
20	-	-	-	160M	300	250	350	4h x 18.5	5	20	42k6	110	-	12	37.0	45.0	6309ZZ	6307ZZ
25	20	-	-	160L	300	250	350	4h x 18.5	5	20	42k6	110	-	12	37.0	45.0	6309ZZ	6307ZZ
30	-	-	-	180MA	300	250	350	4h x 18.5	5	20	48k6	110	-	14	42.5	51.5	6211C3	6211C3
-	25	-	-	180MC	300	250	350	4h x 18.5	5	20	48k6	110	-	14	42.5	51.5	6311ZZ	6310ZZ
-	30	20	-	180LC	300	250	350	4h x 18.5	5	20	48k6	110	-	14	42.5	51.5	6311ZZ	6310ZZ
40/50	-	-	-	200LA	350	300	400	4h x 18.5	5	20	55m6	110	-	16	49.0	59.0	6312C3	6212C3
-	40	25/30	20	200LC	350	300	400	4h x 18.5	5	20	55m6	110	-	16	49.0	59.0	6312	6212
-	50	-	25	225SC	400	350	450	8h x 18.5	5	22	60m6	140	-	18	53.0	64.0	6313	6213
60	-	-	-	225MA	400	350	450	8h x 18.5	5	22	55m6	110	-	16	49.0	59.0	6312C3	6212C3
-	60	40	30	225MC	400	350	450	8h x 18.5	5	22	60m6	140	-	18	53.0	64.0	6313	6213
*75	-	-	-	250SA	500	450	550	8h x 18.5	5	22	60m6	140	-	18	53.0	64.0	6313C3	6213C3
-	*75	*50	40	250SB	500	450	550	8h x 18.5	5	22	70m6	140	-	20	62.5	74.5	6316C3 (NU316)	6213
*100	-	-	-	250MA	500	450	550	8h x 18.5	5	22	60m6	140	-	18	53.0	64.0	6313C3	6213C3
-	*100	*60	50	250MB	500	450	550	8h x 18.5	5	22	70m6	140	-	20	62.5	74.5	6316C3 (NU316)	6213
*125	-	-	-	280SA	500	450	550	8h x 19	5	22	65m6	140	134	18	58.0	69.0	6314C3	6314C3
-	*125	*75	60	280SB	500	450	550	8h x 19	5	22	80m6	170	157	22	71.0	85.0	6318 (NU318C3)	6316
*150	-	-	-	280MA	500	450	550	8h x 19	5	22	65m6	140	134	18	58.0	69.0	6314C3	6314C3
-	*150	*100	75	280MB	500	450	550	8h x 19	5	22	80m6	170	157	22	71.0	85.0	6318 (NU318C3)	6316
*175	-	-	-	315SA	600	550	660	8h x 24	6	25	65m6	140	134	18	58.0	69.0	6314C3	6314C3
-	*175	*125	100	315SB	600	550	660	8h x 24	6	25	85m6	170	157	22	76.0	90.0	6320 (NU320C3)	6316
*200/*250	-	-	-	315MA	600	550	660	8h x 24	6	25	65m6	140	134	18	58.0	69.0	6314C3	6314C3
-	*250	-	-	315MB	600	550	660	8h x 24	6	25	85m6	170	157	22	76.0	90.0	6320	6316

OUTPUT (HP)				FRAME	GENERAL											
2P	4P	6P	8P	SIZE	AC	AD	AE	DH	ED	HB	KK	L	LB	LD	Y	Z
20	-	-	-	160M	334	263	218	M16x32	80	217	35	608.0	498.0	151.0	-	-
25	20	15	-	160L	334	263	218	M16x32	80	217	35	652.0	542.0	173.0	-	-
30	-	-	-	180MA	382	305	250	M16x32	80	241	35	672.0	562.0	170.5	-	-
-	25	-	-	180MC	382	305	250	M16x32	80	241	35	672.0	562.0	170.5	-	-
-	30	20	-	180LC	382	305	250	M16x32	80	241	35	710.0	600.0	189.5	-	-
40/50	-	-	-	200LA	420	374	287	M20x40	80	260	-	770.0	660.0	177.0	-	-
-	40	25/30	20	200LC	420	374	287	M20x40	80	260	-	770.0	660.0	177.0	-	-
-	50	-	25	225SC	458	427	330	M20x40	110	286	-	816.0	676.0	117.0	-	-
60	-	-	-	225MA	458	427	330	M20x40	80	286	-	811.0	701.0	130.0	-	-
-	60	40	30	225MC	458	427	330	M20x40	110	286	-	841.0	701.0	130.0	-	-
*75	-	-	-	250SA	510	493	375	M20x40	110	312	-	882.5	742.5	114.0	-	-
-	*75	*50	40	250SB	510	493	375	M20x40	110	312	-	882.5	742.5	114.0	-	-
*100	-	-	-	250MA	510	493	375	M20x40	110	312	-	920.5	780.5	133.0	-	-
-	*100	*60	50	250MB	510	493	375	M20x40	110	312	-	920.5	780.5	133.0	-	-
*125	-	-	-	280SA	563	600	445	M20x40	110	322	-	1092.0	952.0	180.5	490	490
-	*125	*75	60	280SB	563	600	445	M20x40	140	322	-	1122.0	952.0	180.5	460	480
*150	-	-	-	280MA	563	600	445	M20x40	110	322	-	1092.0	952.0	180.5	490	490
-	*150	*100	75	280MB	563	600	445	M20x40	140	322	-	1122.0	952.0	180.5	460	480
*175	-	-	-	315SA	610	620	465	M20x40	110	339	-	1182.0	1042.0	225.5	550	550
-	*175	*125	100	315SB	610	620	465	M20x40	140	339	-	1212.0	1042.0	225.5	525	540
*200/*250	-	-	-	315MA	610	620	465	M20x40	110	339	-	1182.0	1042.0	225.5	550	550
-	*250	-	-	315MB	610	620	465	M20x40	140	339	-	1212.0	1042.0	225.5	525	540

NOTE:
1 All dimensions are in mm.
2 Tolerance of N : h7
3 Output (HP) with mark * is for direct coupling service only.
4 Usable shaft length : EE
5 Frame sizes 180MA, and 200L through 315M are with open type bearings and grease nipples.
6 For frame sizes 250 through 315, NU series roller bearings in brackets ( ) are fitted to 8 Pole standard motors only.
NU series roller bearings are applicable to the drive end of the 4 & 6 Pole motors if higher radial loads are encountered, such as belt drive applications
7 Data are subject to change without prior notice.

STANDARD FORMULA USED IN ELECTRICAL ENGINEERING

Name	Formula	Units	Definitions/ Notes
Output	1HP=746W=0.746kW		HP: horsepower
Current	$I = \frac{E}{R}$	I in A	E : volt R : Ohm
Input power	$P_{in} = E \bullet I \bullet COS\phi$ .....(1Φ) $P_{in} = \sqrt{3} \bullet E \bullet I \bullet COS\phi$ .....(3Φ)	P_{in} in W	E : volt I : ampere
Output power	$P_{out} = E \bullet I \bullet \eta \bullet \ COS\phi$ .....(1Φ) $P_{out} = \sqrt{3} \bullet E \bullet I \bullet \eta \bullet \ COS\phi$ ...(3Φ)	P_{out} in W	
Efficiency	$\eta = \frac{P_{out}}{P_{in}} \times 100\% = \frac{P_{in} - P_{loss}}{P_{in}} \times 100\%$		
Power factor	$COS\phi = \frac{P_{in}}{\sqrt{3} \bullet E \bullet I} \times 100\%$		
Synchronous speed	$N_S = \frac{120f}{P}$	N_s in min^{-1}	f: frequency of the power supply P: poles
Slip	$S = \frac{N_S - N}{N_S} \times 100\%$		N: motor speed
Torque	$T = \frac{974kW}{N}$	T in kgf-m	1 kgf-m=9.8 N-m
Power	$P = 1.027NT$	P in W	
Starting time	$t_S = \frac{GD^2N}{375(T_M - T_L)}$	t_s in sec GD² in kgm²	GD^2: inertia of system T_m: torque of motor
Braking time	$t_B = \frac{GD^2N}{375(T_M + T_L)}$	t_B in sec	T_L : torque of load
Reactive power absorbed by the motor	$Q = \sqrt{3} \bullet E \bullet I \bullet SIN\phi$	Q in VAR	
Sound power level	$Lw = 10\log(\frac{P}{P_o}) \quad (P_o = 10^{-12}W)$	Lw in dB	
Sound pressure level	$Lw = 10\log(\frac{P}{P_o}) \quad (P_o = 10^{-12}W)$	Lp in dB	Pa=1 N/m2

ENQUIRY FORM

Customer Name : _____

Company : _____

Contact Number : _____

Motor Specification

Type of Motor : ❒ AEEB ❒ AEVB

Output : _____KW/HP

Poles : ❒ 2 ❒ 4 ❒ 6 ❒ 8 ❒ Other:____

Voltage : _____ Volts

Frequency : _____ Hz

Location : ❒ Indoor ❒ Outdoor

Class of Insulation : ❒ Class F (155°C) ❒ Class H (180°C)

Mounting : _____ (eg. B3, V1, B35)

Protection : ❒ IP55 ❒ IP56 ❒ Other: IP __

Starting Method : ❒ Direct On-Line (DOL) ❒ Inverter ❒ Star-Delta Starting

Drive Method : ❒ Direct Coupling ❒ V-Belt Drive ❒ Pulley Drive ❒ Other

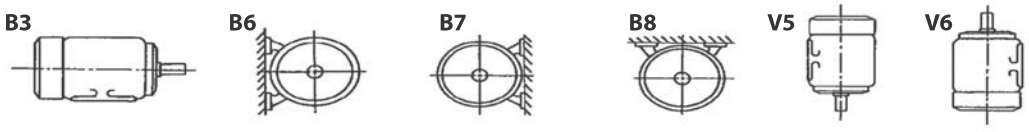
Ambient Temperature : _____ °C

Temperature Rise : ❒ B- Rise (80°C) ❒ F- Rise (105°C)

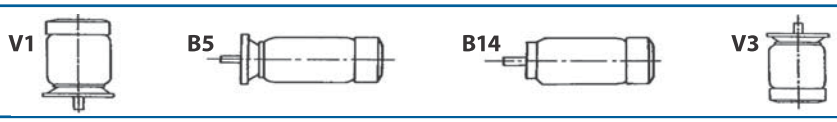
Quantity : _____

Other Requirements

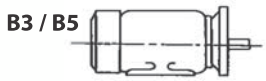
FOOT MOUNTED MOTOR



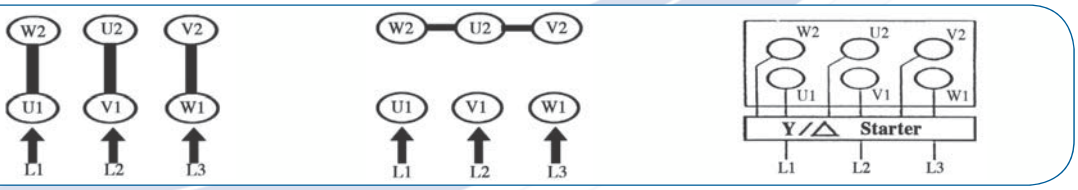
FLANGE MOUNTED MOTOR



FOOT & FLANGE MOUNTED MOTOR



CONNECTION DRAWING



DELTA Connection
LOWER Voltage
≤ 2.2kW 220-240V
≥ 3.0kW 380-415V

STAR Connection
HIGHER Voltage
≤ 2.2kW 380-415V

Star- Delta Connection

TECO ELECTRIC & MACHINERY (PTE) LTD

47, Tuas Avenue 9 , SINGAPORE 639190

General Tel : (65) 6263 9269 Fax : (65) 6265 7354

E-mail : ds@teco.com.sg Website : http://www.teco.com.sg