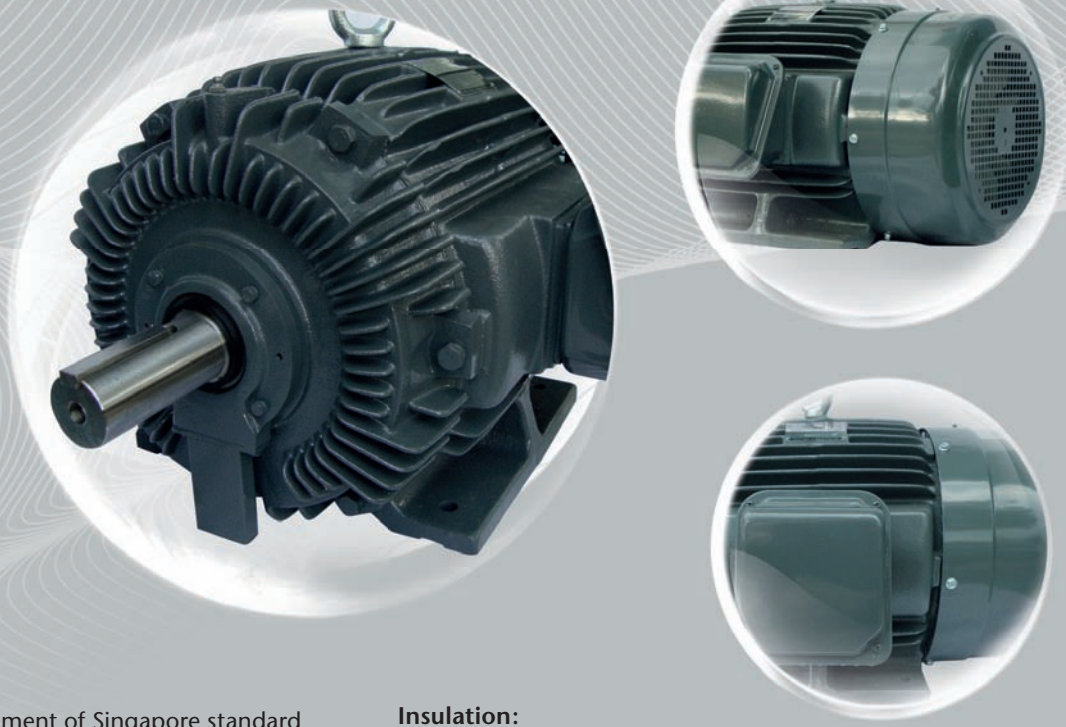
# AEEB • AEVB
# LOW VOLTAGE SERIES

## 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

## 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.

## 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

## TYPES OF MOUNTING

- Foot Mounted
- Flange Mounted
- Foot and Flange Mounted

Other mounting please refer to TECO

## WIDE-RANGING OF HORSE-POWER, VOLTAGE & FREQUENCY

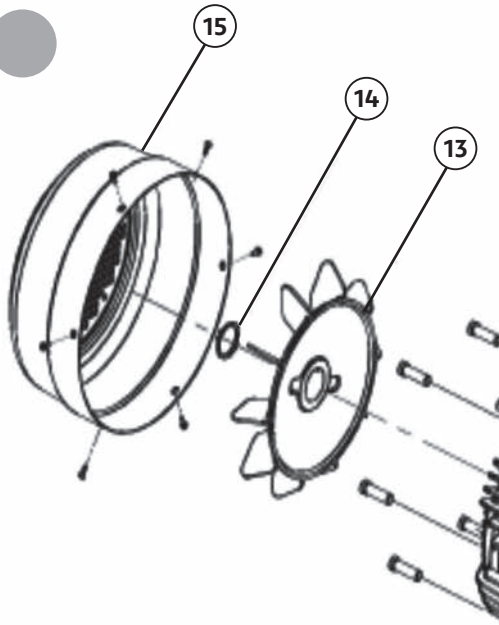
HP: 0.25HP to 250HP
Voltage: 230V to 690V
Frequency: 50Hz and / or 60 Hz
For other specific values are available on request.

## 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:

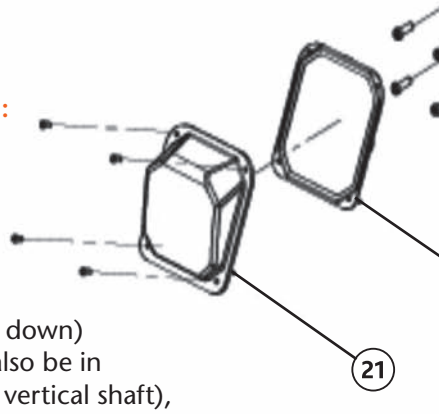
The motor shaft material is made of carbon steel. Special keyway and shaft extensions are available upon request.

### 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:

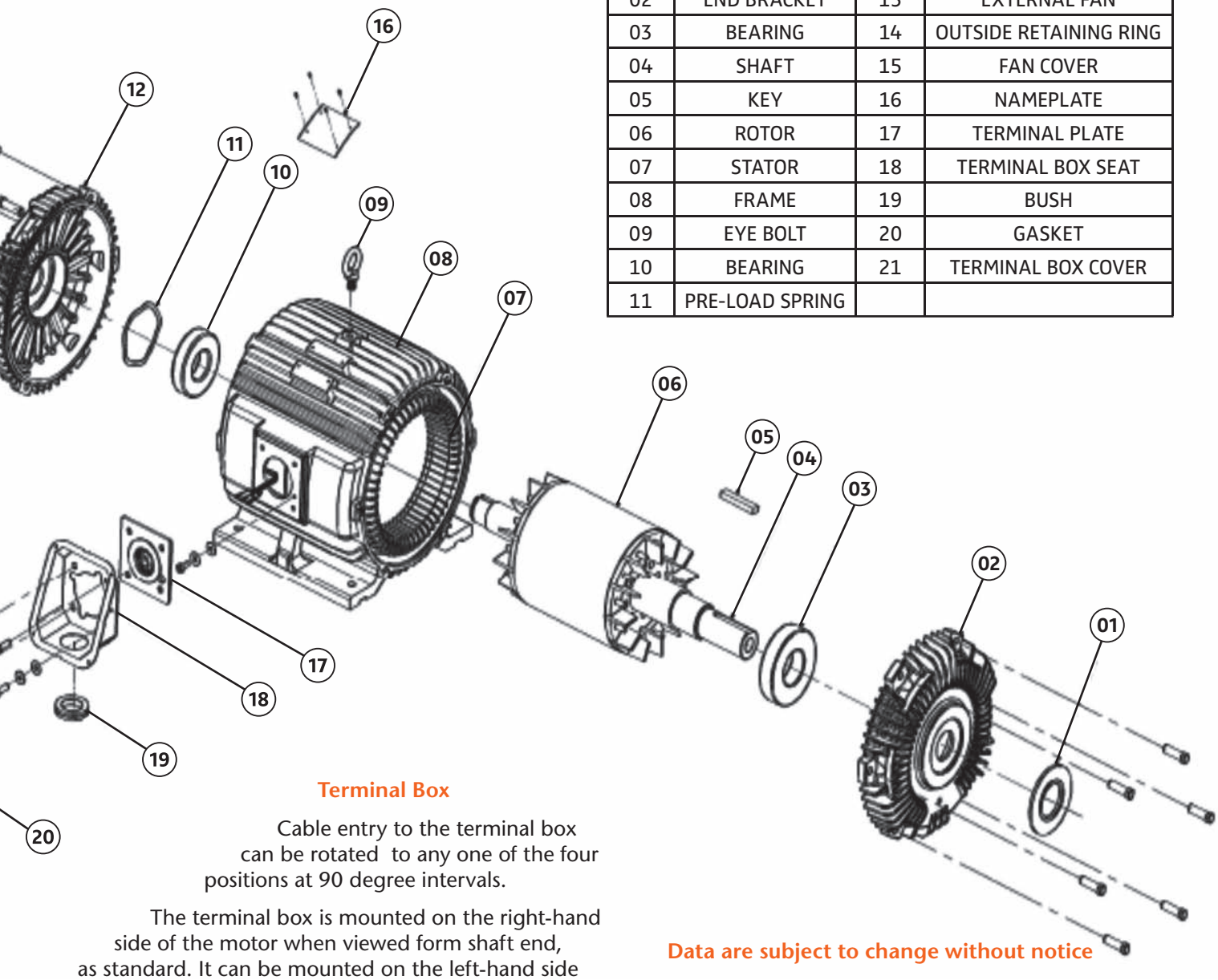
Motor hardware components are electric-zinc plated for better corrosion resistance.

### 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 | | 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 | $GD^2$ | AEEB | AEVB |
| | | (RPM) | SIZE | (%) | (%) | (%) | (%) | (%) | (%) | 380V /50Hz | | 415V / 50Hz | | (%) | (% FLT) | (% FLT) | (% FLT) | KG-M² | Kg | 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 | | 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 | $GD^2$ | AEEB | AEVB |
| | | (RPM) | SIZE | (%) | (%) | (%) | (%) | (%) | (%) | 380V /50Hz | | 415V / 50Hz | | (%) | (% FLT) | (% FLT) | (% FLT) | KG-M² | Kg | 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:**

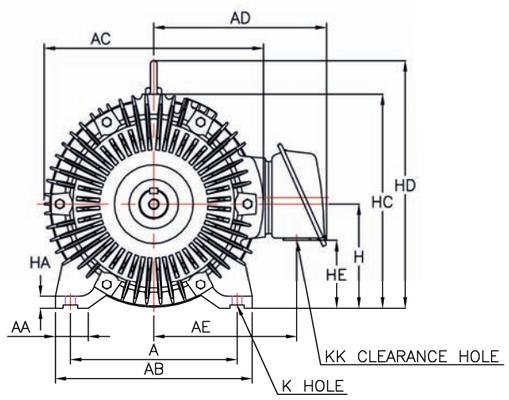
1. To calculate the full-load current with different voltage supply, multiply the full-load current of 415V by the following factors:

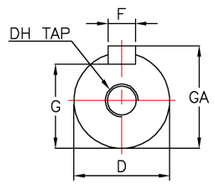
| Voltage | 200 | 220 | 346 | 365 | 400 | 420 | 440 | 500 | 550 |
|---|---|---|---|---|---|---|---|---|---|
| Factor | 2.08 | 1.89 | 1.2 | 1.13 | 1.04 | 0.99 | 0.94 | 0.83 | 0.75 |

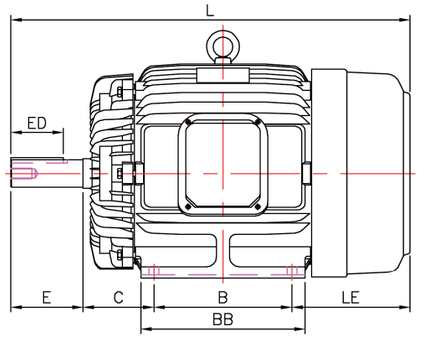
2. FLT= full-load torque
3. Data are subject to change without prior notice

## AEEB Motor Dimension (0.25HP to 15HP)

## Foot Mounting B3 (IM 1001)




| OUTPUT (HP) | | | | FRAME SIZE | FIXING | | | | | | | SHAFT | | | | | BEARINGS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2P | 4P | 6P | 8P | | 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 |

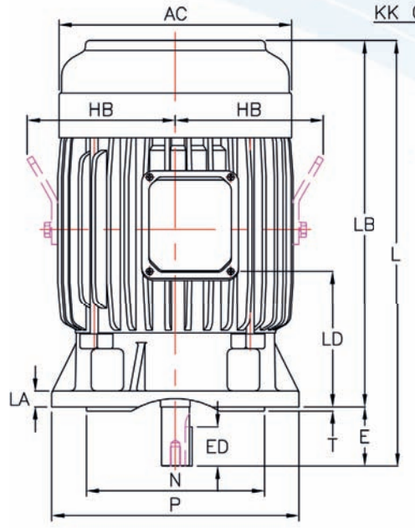
| OUTPUT (HP) | | | | FRAME SIZE | GENERAL | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2P | 4P | 6P | 8P | | AA | AC | AD | AE | DH | ED | HA | HC | HD | HE | KK | L | LE |
| 0.25 | 0.25 | - | - | 63 | 28.0 | 144 | 123 | 93.0 | M4x8 | 18 | 8 | 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 |

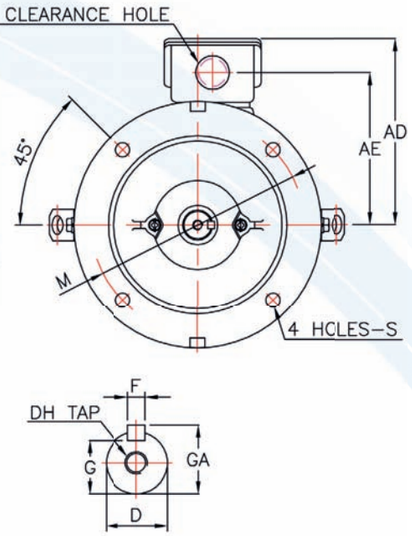
**NOTE:**
1 All dimensions are in mm
2 Frame sizes 63 - 90L do not have lifting eye-bolt.
3 Tolerance of shaft centre height H: (+0, -0.5) for frame 250 and smaller.
4 Grease pre-packed shielded bearings for frame sizes 63 through 160L.
Open bearings and with grease nipples for re-greasing for frame 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 SIZE | FIXING | | | | | | SHAFT | | | | | BEARINGS | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2P | 4P | 6P | 8P | | 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 SIZE | GENERAL | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2P | 4P | 6P | 8P | | 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 | FRAME | EFFICIENCY | | | POWER FACTOR | | | CURRENT (A) | | | | TORQUE | | | | ROTOR | Approx Weight | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HP | KW | LOAD | | 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 | GD² | AEEB | AEVB |
| | | (RPM) | SIZE | (%) | (%) | (%) | (%) | (%) | (%) | 380V /50Hz | | 415V / 50Hz | | (%) | (% 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 | 90.5 | 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 | 250SB | 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 | 250MB | 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 | FRAME | EFFICIENCY | | | POWER FACTOR | | | CURRENT (A) | | | | TORQUE | | | | ROTOR | Approx Weight | Approx Weight |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HP | KW | LOAD | | 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 | GD² | AEEB | AEVB |
| | | (RPM) | SIZE | (%) | (%) | (%) | (%) | (%) | (%) | 380V /50Hz | | 415V / 50Hz | | (%) | (% 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 | 92.0 | 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 | 250MA | 94.0 | 94.0 | 93.0 | 90.0 | 89.5 | 86.0 | 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 | 1.7 | 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:**

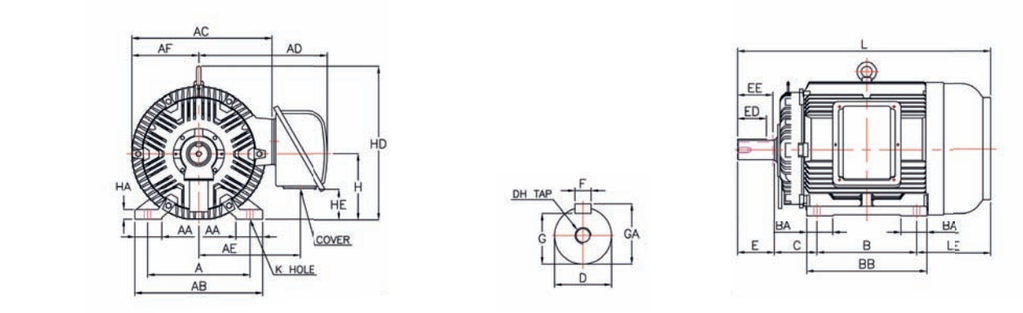
1. To calculate the full-load current with different voltage supply, multiply the full-load current of 415V by the following factors:

| 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 |

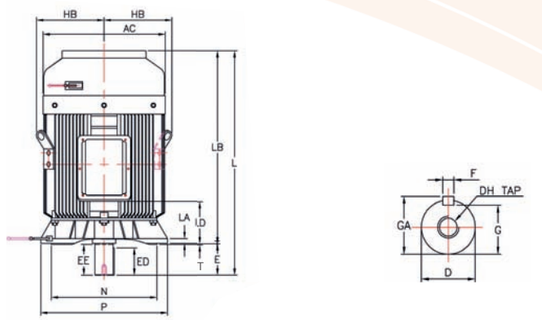
| OUTPUT (HP) | | | | FRAME | GENERAL | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 2P | 4P | 6P | 8P | SIZE | AA | AC | AD | AE | AF | BA | DH | ED | HA | HD | HE | KK | L | LE |
| 15/20 | - | - | - | 160M | 50 | 334 | 263 | 218 | - | - | 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 |

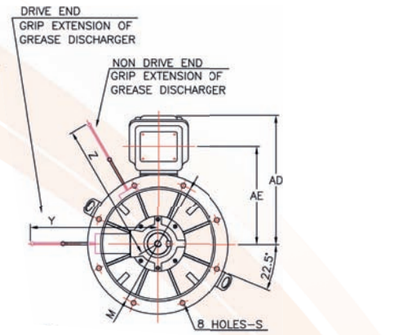
**NOTE:**
1 All dimensions are in mm.
2 Tolerance of shaft centre height H : (+0,-0.5) for frame 225S to 250M, and (+0, -1) for frame 280C to 315M
3 Output (HP) with mark * is for direct coupling only
4 Usable shaft length : EE
5 For frame sizes 250 through 315, NU series roller bearings in brackets ( ) 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<br>R : Ohm |
| Input power | $P_{in} = E \bullet I \bullet COS\phi$ .....(1Φ)<br>$P_{in} = \sqrt{3} \bullet E \bullet I \bullet COS\phi$ .....(3Φ) | $P_{in}$ in W | E : volt<br>I : ampere |
| Output power | $P_{out} = E \bullet I \bullet \eta \bullet \ COS\phi$ .....(1Φ)<br>$P_{out} = \sqrt{3} \bullet E \bullet I \bullet \eta \bullet \ COS\phi$ ...(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<br>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<br>GD² in kgm² | $GD^2$: inertia of system<br>$T_m$: 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

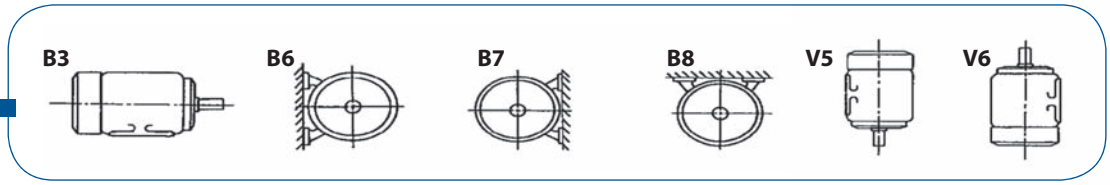
Ambient Temperature : _____ °C

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

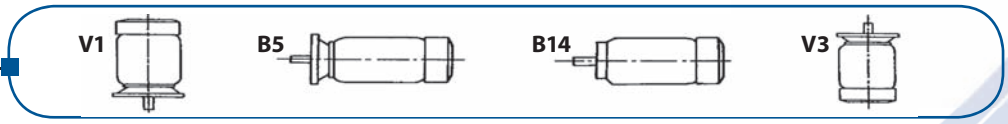
Quantity : _____

**Other Requirements**

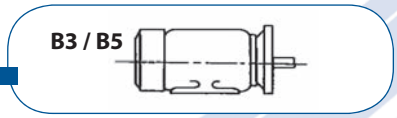
## FOOT MOUNTED MOTOR



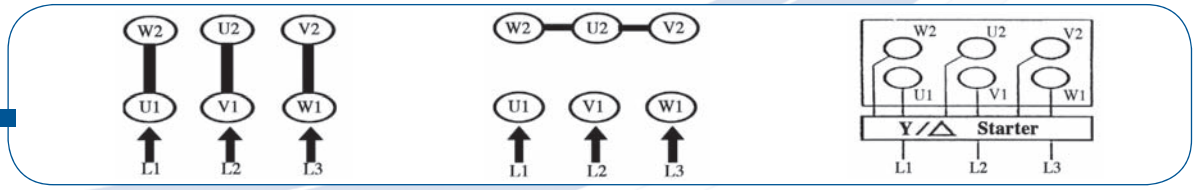

## FLANGE MOUNTED MOTOR




## 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

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