



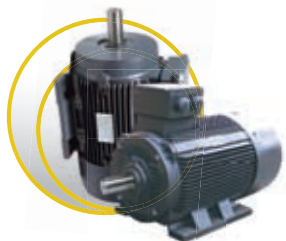
**M O T O R S**

**TEC Electric Motors Ltd.**





# GENERAL INFORMATION



## THREE PHASE-TECA/TECC TYPES-IE1/IE2



## SINGLE PHASE-TPC/TCC TYPES



## BRAKE MOTOR-TECA-BM TYPE



## THREE PHASE MOTORS ECOL-IE1/IE2/IE3

TEC motors are designed for altitudes up to 1000m and ambient temperatures up to 40°C rated output will change at the % ratios given below for different altitudes and ambient temperatures.

| ALTITUDE         |   | Up to 1000m | 1500m | 2000m | 2500m | 3000m | 3500m | 4000m |
|------------------|---|-------------|-------|-------|-------|-------|-------|-------|
| Insulation Class | B | 100         | 97    | 94    | 90    | 86    | 82    | 77    |
|                  | F | 100         | 98    | 95    | 91    | 87    | 83    | 78    |

| AMBIENT TEMPERATURE |   | 30°C | 35°C | 40m | 45°C | 50°C | 55°C | 60°C |
|---------------------|---|------|------|-----|------|------|------|------|
| Insulation Class    | B | 106  | 103  | 100 | 97   | 92   | 86   | 80   |
|                     | F | 105  | 102  | 100 | 97   | 93   | 87   | 82   |

TEC motors are wound to Class F insulation B rise.

### FREQUENCY

TEC motors wound to 400V for 50Hz can be operated on 60Hz.

The ratios given below indicate changes in the given parameters.

| 60Hz application coefficients of 50Hz motor |              |             |             |              |               |                 |                   |                  |
|---------------------------------------------|--------------|-------------|-------------|--------------|---------------|-----------------|-------------------|------------------|
| 50Hz voltage                                | 60Hz voltage | Rated Speed | Rated Power | Rated Torque | Rated Current | Starting Torque | Break down Torque | Starting Current |
| 230V                                        | 230V         | 1.2         | 1           | 0.83         | 1             | 0.83            | 0.83              | 0.83             |
| 230V                                        | 265V         | 1.2         | 1.15        | 0.96         | 1             | 0.96            | 0.96              | 0.96             |
| 400V                                        | 400V         | 1.2         | 1           | 0.83         | 1             | 0.7             | 0.83              | 0.83             |
| 400V                                        | 460V         | 1.2         | 1.15        | 0.96         | 1             | 0.95            | 0.98              | 0.97             |

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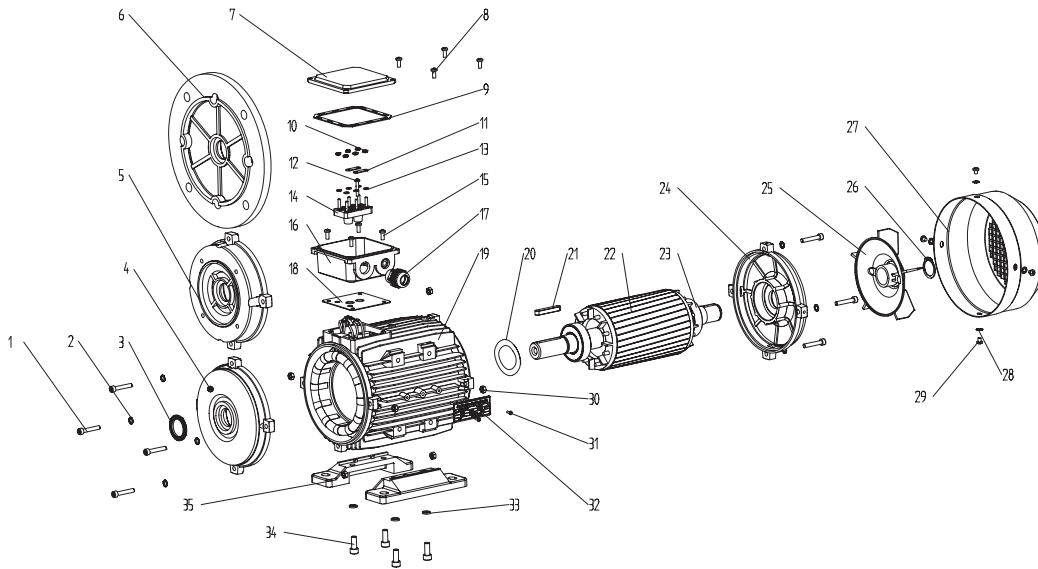


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# MOTORS



## Motor Spare Part List "Exploded Drawing"



1. Screw
2. Washer
3. Oil seal
4. Drive end endshield
5. B14 flange
6. B5 flange
7. TB cover
8. TB fixing screws
9. TB upper gasket
10. Terminal board fixing nut
11. Terminal Links
12. Terminal pin
13. Terminal washer
14. Terminal block
15. TB fixing screws
16. TB base
17. Cable gland
18. TB bottom gasket
19. Stator
20. Thrust washer
21. Key
22. Rotor
23. Bearing
24. NDE endshield
25. Cooling fan
26. Fan circlip
27. Fan cowl
28. Fan cover fixing washer
29. Fan cover fixing screws
30. Endshield fixing nut
31. Rivet
32. Nameplate
33. Foot fixing washer
34. Foot fixing screws
35. Foot

This catalogue is for reference only, TEC Electric Motors reserves the right to change any content or information without prior notification, for critical none IEC dimensions please consult our sales office

## Mountings and Positions

Mountings and positions for standard motors, according to IEC 60034-7, are defined by the codes mentioned in the following table.

|                                                                                     | Standards |             |         | Frame Sizes  |
|-------------------------------------------------------------------------------------|-----------|-------------|---------|--------------|
|                                                                                     | CEI 2-14  | IEC 60034-7 |         | 56-200       |
|                                                                                     |           | Code I      | Code II |              |
|  | B3        | IM B3       | IM 1001 | Standard     |
|  | B3/B5     | IM B35      | IM 2001 | Standard     |
|  | B5        | IM B5       | IM 3001 | Standard     |
|  | B14       | IM B14      | IM 4001 | Standard     |
|  | B8        | IM B8       | IM 1071 | Upon request |
|  | B6        | IM B6       | IM 1051 | Upon request |
|  | B7        | IM B7       | IM 1061 | Upon request |

|                                                                                     | Standards |             |         | Frame Sizes  |
|-------------------------------------------------------------------------------------|-----------|-------------|---------|--------------|
|                                                                                     | CEI 2-14  | IEC 60034-7 |         | 56-200       |
|                                                                                     |           | Code I      | Code II |              |
|  | V1        | IM V1       | IM 3011 | Standard     |
|  | V3        | IM V3       | IM 3031 | Upon request |
|  | V5        | IM V5       | IM 1011 | Upon request |
|  | V6        | IM V6       | IM 1031 | Upon request |
|  | V1/V5     | IM V15      | IM 2011 | Upon request |

## TECA aluminum housing bearing and seal data

| Frame  | Bearings  |                  | Oil Seals |                    | ※Cable gland thread |
|--------|-----------|------------------|-----------|--------------------|---------------------|
|        | Drive End | Non-drive End    | Drive End | Non-drive End      |                     |
| 56     | 6201 2RS  | 6201 2RS         | 12×22×5   | 12×22×5            | M16                 |
| 63     | 6201 2RS  | 6201 2RS         | 12×24×5   | 12×24×5            | M16                 |
| 71     | 6202 2RS  | 6202 2RS         | 15×25×7   | 15×25×7            | M20                 |
| 80     | 6204 2RS  | 6204 2RS         | 20×34×7   | 20×34×7            | M20                 |
| 90S    | 6205 2RS  | 6205(6204) 2RS ※ | 25×37×7   | 25×37×7(20×34×7) ※ | M25                 |
| 90L    | 6205 2RS  | 6205(6204) 2RS ※ | 25×37×7   | 25×37×7(20×34×7) ※ | M25                 |
| 100L   | 6206 2RS  | 6206 2RS         | 30×44×7   | 30×44×7            | M25                 |
| 112M   | 6306 2RS  | 6206(6306) 2RS   | 30×44×7   | 30×44×7            | M25                 |
| 132S   | 6308 2RS  | 6208(6308) 2RS   | 40×58×7   | 40×58×7            | M32                 |
| 132M/L | 6308 2RS  | 6208(6308) 2RS   | 40×58×7   | 40×58×7            | M32                 |
| 160M   | 6309 2RS  | 6309 2RS         | 45×65×8   | 45×65×8            | M32                 |
| 160L   | 6309 2RS  | 6309 2RS         | 45×65×8   | 45×65×8            | M32                 |
| 180M   | 6311 2RS  | 6211 2RS         | 55×72×8   | 55×72×8            | M32                 |
| 180L   | 6311 2RS  | 6211 2RS         | 55×72×8   | 55×72×8            | M32                 |
| 200L   | 6312 2RS  | 6212 2RS         | 60×80×8   | 60×80×8            | M40                 |

※ Other standards are also available on request, the figures in brackets() are for the single phase motors

# TECA

## Series Aluminium Housing Three-Phase Multi-Mount Asynchronous Motor

TECA series Aluminum Housing 3 Phase Multi-mount motors up to 200 frame, utilising new automated production technology. The motors are manufactured to IEC Standard

Motors are :Easily maintained,light weight with high performance and low noise levels. The multi-mount design offers both O.E.M and stockist greater flexibility where terminal box position is important.



### TECA Series **IE1** Efficiency Motors Technical Data (at 50Hz)

| Model       | Power (KW) | Current (A) |      |      | Current (A) |      |      | Current (A) |      |      | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | I <sub>st</sub> /I <sub>n</sub> (Times) | Noise dB(A) | W.T (Kg) |
|-------------|------------|-------------|------|------|-------------|------|------|-------------|------|------|---------------|----------|---------------------|-----------------------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|-------------|----------|
|             |            | 220V        | 380V | 660V | 230V        | 400V | 690V | 240V        | 415V | 720V |               |          |                     |                                         |                                          |                                          |                                         |             |          |
| TECA 561-2  | 0.09       | 0.66        | 0.38 | 0.22 | 0.62        | 0.36 | 0.21 | 0.60        | 0.35 | 0.20 | 2710          | 53       | 0.72                | 2.2                                     | 2.3                                      | 2                                        | 4                                       | 58          | 2.60     |
| TECA 562-2  | 0.12       | 0.73        | 0.42 | 0.24 | 0.69        | 0.40 | 0.23 | 0.67        | 0.39 | 0.22 | 2700          | 61       | 0.72                | 2.2                                     | 2.3                                      | 2                                        | 4                                       | 58          | 3.00     |
| TECA 563-2  | 0.18       | 1.00        | 0.58 | 0.33 | 0.95        | 0.55 | 0.32 | 0.92        | 0.53 | 0.31 | 2710          | 63       | 0.75                | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 61          | 4.00     |
| TECA 631-2  | 0.18       | 1.00        | 0.58 | 0.33 | 0.95        | 0.55 | 0.32 | 0.92        | 0.53 | 0.31 | 2710          | 63       | 0.75                | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 61          | 4.00     |
| TECA 632-2  | 0.25       | 1.29        | 0.75 | 0.43 | 1.23        | 0.71 | 0.41 | 1.19        | 0.69 | 0.40 | 2710          | 65       | 0.78                | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 61          | 4.20     |
| TECA 633-2  | 0.37       | 1.92        | 1.11 | 0.64 | 1.82        | 1.05 | 0.61 | 1.76        | 1.02 | 0.59 | 2710          | 65       | 0.78                | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 62          | 4.70     |
| TECA 711-2  | 0.37       | 1.76        | 1.02 | 0.59 | 1.67        | 0.97 | 0.56 | 1.61        | 0.93 | 0.54 | 2730          | 70       | 0.79                | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 64          | 5.20     |
| TECA 712-2  | 0.55       | 2.57        | 1.49 | 0.86 | 2.45        | 1.42 | 0.82 | 2.36        | 1.36 | 0.79 | 2760          | 71       | 0.79                | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 64          | 6.00     |
| TECA 713-2  | 0.75       | 3.33        | 1.93 | 1.11 | 3.18        | 1.83 | 1.06 | 3.06        | 1.77 | 1.02 | 2730          | 72       | 0.82                | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 65          | 7.00     |
| TECA 801-2  | 0.75       | 3.21        | 1.86 | 1.07 | 3.06        | 1.77 | 1.02 | 2.94        | 1.70 | 0.98 | 2770          | 73       | 0.84                | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 67          | 8.70     |
| TECA 802-2  | 1.1        | 4.56        | 2.64 | 1.52 | 4.35        | 2.51 | 1.45 | 4.18        | 2.42 | 1.39 | 2770          | 76.2     | 0.83                | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 67          | 10.00    |
| TECA 803-2  | 1.5        | 6.04        | 3.50 | 2.01 | 5.87        | 3.32 | 1.92 | 5.54        | 3.20 | 1.85 | 2800          | 78.5     | 0.83                | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 70          | 11.20    |
| TECA 90S-2  | 1.5        | 5.97        | 3.46 | 1.99 | 5.76        | 3.28 | 1.90 | 5.47        | 3.16 | 1.82 | 2840          | 78.5     | 0.84                | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 72          | 12.00    |
| TECA 90L1-2 | 2.2        | 8.39        | 4.85 | 2.80 | 8.0         | 4.61 | 2.66 | 7.69        | 4.45 | 2.56 | 2840          | 81       | 0.85                | 2.2                                     | 2.4                                      | 1.4                                      | 6                                       | 72          | 14.50    |
| TECA 90L2-2 | 3          | 11.1        | 6.42 | 3.69 | 10.6        | 6.10 | 3.52 | 10.2        | 5.88 | 3.39 | 2840          | 82.6     | 0.86                | 2.2                                     | 2.4                                      | 1.4                                      | 6                                       | 74          | 15.00    |

## TECA Series IE1 Efficiency Motors Technical Data (at 50Hz)

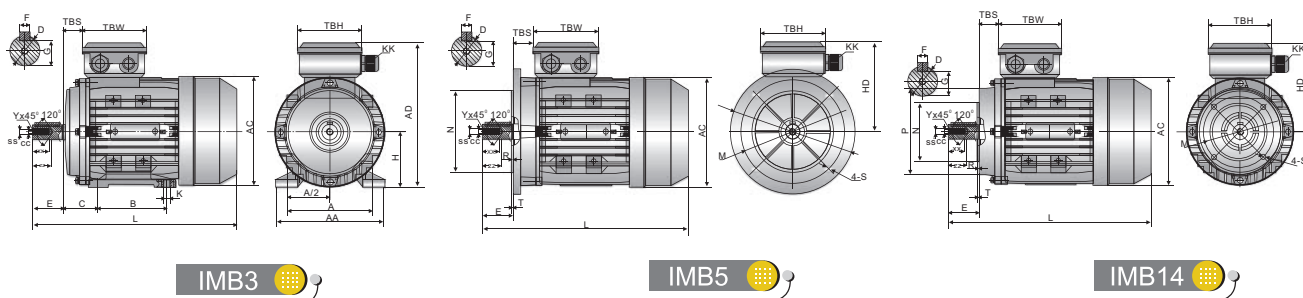
| Model        | Power (KW) | Current (A) |      |      | Current (A) |      |      | Current (A) |      |      | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | I <sub>st</sub> /I <sub>n</sub> (Times) | Noise dB(A) | W.T (Kg) |
|--------------|------------|-------------|------|------|-------------|------|------|-------------|------|------|---------------|----------|---------------------|-----------------------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|-------------|----------|
|              |            | 220V        | 380V | 660V | 230V        | 400V | 690V | 240V        | 415V | 720V |               |          |                     |                                         |                                          |                                          |                                         |             |          |
| TECA 100L1-2 | 3          | 11          | 6.34 | 3.65 | 10.4        | 6.03 | 3.48 | 10          | 5.81 | 3.35 | 2840          | 82.6     | 0.87                | 2.2                                     | 2.3                                      | 1.4                                      | 7                                       | 76          | 20       |
| TECA 100L2-2 | 4          | 14.3        | 8.3  | 4.78 | 13.7        | 7.88 | 4.55 | 13.1        | 7.6  | 4.38 | 2850          | 84.2     | 0.87                | 2.2                                     | 2.3                                      | 1.4                                      | 7.5                                     | 77          | 24       |
| TECA 112M-2  | 4          | 14.3        | 8.3  | 4.78 | 13.7        | 7.88 | 4.55 | 13.1        | 7.6  | 4.38 | 2880          | 84.2     | 0.87                | 2.2                                     | 2.3                                      | 1.4                                      | 7.5                                     | 77          | 26       |
| TECA 112L-2  | 5.5        | 19.1        | 11.1 | 6.38 | 18.2        | 10.5 | 6.08 | 17.5        | 10.1 | 5.85 | 2880          | 85.7     | 0.88                | 2.2                                     | 2.3                                      | 1.2                                      | 7.5                                     | 78          | 29.3     |
| TECA 132S1-2 | 5.5        | 19.1        | 11.1 | 6.38 | 18.2        | 10.5 | 6.08 | 17.5        | 10.1 | 5.85 | 2900          | 85.7     | 0.88                | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 80          | 38.4     |
| TECA 132S2-2 | 7.5        | 25.7        | 14.9 | 8.57 | 24.5        | 14.1 | 8.16 | 23.6        | 13.6 | 7.86 | 2920          | 87       | 0.88                | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 80          | 41.3     |
| TECA 132M1-2 | 9.2        | 30.8        | 17.8 | 10.3 | 29.9        | 17.3 | 9.96 | 28.3        | 16.3 | 9.42 | 2930          | 88       | 0.89                | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 81          | 48.2     |
| TECA 132M2-2 | 11         | 36.3        | 21   | 12.1 | 34.6        | 20   | 11.5 | 33.3        | 19.2 | 11.1 | 2930          | 88.4     | 0.9                 | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 83          | 52.5     |
| TECA 160M1-2 | 11         | 36.3        | 21   | 12.1 | 34.6        | 20   | 11.5 | 33.3        | 19.2 | 11.1 | 2940          | 88.4     | 0.9                 | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 86          | 76       |
| TECA 160M2-2 | 15         | 48.4        | 28   | 16.1 | 46.1        | 26.6 | 15.4 | 44.4        | 25.7 | 14.8 | 2940          | 89.4     | 0.91                | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 86          | 77.5     |
| TECA 160L-2  | 18.5       | 59.3        | 34.3 | 19.8 | 56.5        | 32.6 | 18.8 | 54.3        | 31.4 | 18.1 | 2940          | 90       | 0.91                | 2                                       | 2.2                                      | 1.1                                      | 7.5                                     | 86          | 92       |
| TECA 180M-2  | 22         | 71.3        | 41.3 | 23.8 | 68.2        | 39.2 | 22.6 | 65.3        | 37.8 | 21.8 | 2950          | 90       | 0.9                 | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 91          | 121      |
| TECA 200L1-2 | 30         | 96          | 55.6 | 32.1 | 91.8        | 52.8 | 30.5 | 88          | 50.9 | 29.4 | 2950          | 91.2     | 0.9                 | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 94          | 144      |
| TECA 200L2-2 | 37         | 117         | 67.9 | 39.2 | 112         | 64.5 | 37.2 | 108         | 62.2 | 35.9 | 2940          | 92       | 0.9                 | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 94          | 151      |
| TECA 561-4   | 0.06       | 0.64        | 0.37 | 0.21 | 0.61        | 0.35 | 0.2  | 0.58        | 0.34 | 0.19 | 1360          | 50       | 0.56                | 2.3                                     | 2.4                                      | 2                                        | 4                                       | 50          | 2.9      |
| TECA 562-4   | 0.09       | 0.82        | 0.47 | 0.27 | 0.78        | 0.45 | 0.26 | 0.75        | 0.43 | 0.25 | 1360          | 52       | 0.59                | 2.3                                     | 2.4                                      | 2                                        | 4                                       | 50          | 3.20     |
| TECA 631-4   | 0.12       | 1           | 0.58 | 0.33 | 0.95        | 0.55 | 0.32 | 0.92        | 0.53 | 0.31 | 1360          | 52       | 0.64                | 2.2                                     | 2.4                                      | 2                                        | 4                                       | 52          | 3.7      |
| TECA 632-4   | 0.18       | 1.28        | 0.74 | 0.43 | 1.21        | 0.7  | 0.4  | 1.17        | 0.67 | 0.39 | 1310          | 57       | 0.65                | 2.2                                     | 2.4                                      | 2                                        | 4                                       | 52          | 4.2      |
| TECA 633-4   | 0.25       | 1.66        | 0.96 | 0.55 | 1.58        | 0.91 | 0.53 | 1.52        | 0.88 | 0.51 | 1340          | 60       | 0.66                | 2.2                                     | 2.2                                      | 2                                        | 4                                       | 54          | 5        |
| TECA 711-4   | 0.25       | 1.52        | 0.88 | 0.51 | 1.45        | 0.84 | 0.48 | 1.39        | 0.81 | 0.46 | 1350          | 60       | 0.72                | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 55          | 5        |
| TECA 712-4   | 0.37       | 2.02        | 1.17 | 0.67 | 1.92        | 1.11 | 0.64 | 1.85        | 1.07 | 0.62 | 1370          | 65       | 0.74                | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 55          | 5.8      |
| TECA 713-4   | 0.55       | 2.92        | 1.69 | 0.97 | 2.78        | 1.6  | 0.93 | 2.67        | 1.55 | 0.89 | 1380          | 66       | 0.75                | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 57          | 6.5      |
| TECA 801-4   | 0.55       | 2.87        | 1.66 | 0.96 | 2.74        | 1.58 | 0.91 | 2.63        | 1.52 | 0.88 | 1370          | 67       | 0.75                | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 58          | 8.1      |
| TECA 802-4   | 0.75       | 3.5         | 2.03 | 1.17 | 3.34        | 1.93 | 1.11 | 3.21        | 1.86 | 1.07 | 1380          | 72       | 0.78                | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 58          | 9.1      |
| TECA 803-4   | 1.1        | 4.86        | 2.81 | 1.62 | 4.63        | 2.67 | 1.54 | 4.45        | 2.57 | 1.48 | 1390          | 76.2     | 0.78                | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 60          | 11       |
| TECA 90S-4   | 1.1        | 4.8         | 2.78 | 1.6  | 4.57        | 2.64 | 1.52 | 4.4         | 2.54 | 1.47 | 1400          | 76.2     | 0.79                | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 61          | 11.7     |
| TECA 90L1-4  | 1.5        | 6.27        | 3.63 | 2.09 | 5.97        | 3.45 | 1.99 | 5.75        | 3.32 | 1.92 | 1400          | 78.5     | 0.8                 | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 61          | 14.4     |
| TECA 90L2-4  | 2.2        | 8.91        | 5.16 | 2.97 | 8.45        | 4.9  | 2.83 | 8.17        | 4.72 | 2.72 | 1400          | 81       | 0.8                 | 2.2                                     | 2.4                                      | 1.5                                      | 7                                       | 63          | 17.6     |
| TECA 100L1-4 | 2.2        | 8.8         | 5.09 | 2.93 | 8.38        | 4.84 | 2.79 | 8.07        | 4.66 | 2.69 | 1420          | 81       | 0.81                | 2.2                                     | 2.3                                      | 1.5                                      | 7                                       | 64          | 19.2     |
| TECA 100L2-4 | 3          | 11.8        | 6.81 | 3.92 | 11.2        | 6.47 | 3.74 | 10.8        | 6.24 | 3.6  | 1420          | 82.6     | 0.81                | 2.2                                     | 2.3                                      | 1.5                                      | 7                                       | 64          | 22.5     |
| TECA 100L3-4 | 4          | 15.2        | 8.8  | 5.07 | 14.2        | 8.36 | 4.83 | 13.9        | 8.06 | 4.65 | 1430          | 84.2     | 0.82                | 2.2                                     | 2.3                                      | 1.5                                      | 7                                       | 65          | 27.3     |
| TECA 112M-4  | 4          | 15          | 8.7  | 5.01 | 14.3        | 8.26 | 4.77 | 13.8        | 7.96 | 4.59 | 1430          | 84.2     | 0.83                | 2.2                                     | 2.2                                      | 1.5                                      | 7                                       | 65          | 29       |
| TECA 112L-4  | 5.5        | 20.3        | 11.7 | 6.76 | 19.3        | 11.2 | 6.44 | 18.6        | 10.8 | 6.2  | 1440          | 85.7     | 0.83                | 2.2                                     | 2.2                                      | 1.4                                      | 7                                       | 68          | 35.7     |
| TECA 132S-4  | 5.5        | 20.1        | 11.6 | 6.68 | 19.1        | 11   | 6.37 | 18.4        | 10.6 | 6.13 | 1450          | 85.7     | 0.84                | 2.2                                     | 2.2                                      | 1.4                                      | 7                                       | 71          | 39       |
| TECA 132M-4  | 7.5        | 26.6        | 15.4 | 8.87 | 25.4        | 14.6 | 8.45 | 24.4        | 14.1 | 8.13 | 1450          | 87       | 0.85                | 2.2                                     | 2.2                                      | 1.4                                      | 7                                       | 71          | 48.6     |
| TECA 132L1-4 | 9.2        | 32.5        | 18.8 | 10.8 | 30.9        | 17.9 | 10.3 | 29.8        | 17.2 | 9.9  | 1460          | 87.5     | 0.85                | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 74          | 56.5     |
| TECA 132L2-4 | 11         | 38          | 22   | 12.7 | 36.2        | 20.9 | 12.1 | 34.8        | 20.1 | 11.6 | 1460          | 88.4     | 0.86                | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 74          | 64       |

## TECA Series IE1 Efficiency Motors Technical Data (at 50Hz)

| Model        | Power (KW) | Current (A) |      |      | Current (A) |      |      | Current (A) |      |      | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | I <sub>st</sub> /I <sub>n</sub> (Times) | Noise dB(A) | W.T (Kg) |
|--------------|------------|-------------|------|------|-------------|------|------|-------------|------|------|---------------|----------|---------------------|-----------------------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|-------------|----------|
|              |            | 220V        | 380V | 660V | 230V        | 400V | 690V | 240V        | 415V | 720V |               |          |                     |                                         |                                          |                                          |                                         |             |          |
| TECA 160M-4  | 11         | 37.5        | 21.7 | 12.5 | 35.8        | 20.6 | 11.9 | 34.4        | 19.9 | 11.5 | 1460          | 88.4     | 0.87                | 2.2                                     | 2.2                                      | 1.4                                      | 7                                       | 75          | 73.00    |
| TECA 160L1-4 | 15         | 51.2        | 29.6 | 17.1 | 48.8        | 28.2 | 16.3 | 46.9        | 27.1 | 15.6 | 1460          | 88.4     | 0.87                | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 75          | 88.50    |
| TECA 160L2-4 | 18.5       | 63.1        | 36.5 | 21.0 | 60.1        | 34.7 | 20.0 | 57.9        | 33.5 | 19.3 | 1460          | 90.5     | 0.85                | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 78          | 97.50    |
| TECA 180M-4  | 18.5       | 62.4        | 36.1 | 20.8 | 59.7        | 34.3 | 19.8 | 57.2        | 33.1 | 19.1 | 1460          | 90.5     | 0.86                | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 80          | 118.0    |
| TECA 180L-4  | 22         | 73.8        | 42.7 | 24.7 | 70.6        | 40.6 | 23.4 | 67.7        | 39.1 | 22.6 | 1460          | 91       | 0.86                | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 80          | 128.0    |
| TECA 200L-4  | 30         | 99.5        | 57.6 | 33.2 | 95.1        | 54.7 | 31.6 | 91.2        | 52.7 | 30.4 | 1470          | 92       | 0.86                | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 83          | 158.0    |
| TECA 631-6   | 0.09       | 0.92        | 0.53 | 0.31 | 0.88        | 0.51 | 0.29 | 0.85        | 0.49 | 0.28 | 840           | 42       | 0.61                | 2                                       | 2                                        | 1.5                                      | 3.5                                     | 50          | 4.20     |
| TECA 632-6   | 0.12       | 1.13        | 0.65 | 0.38 | 1.08        | 0.62 | 0.36 | 1.03        | 0.60 | 0.34 | 850           | 45       | 0.62                | 2                                       | 2                                        | 1.5                                      | 3.5                                     | 50          | 4.50     |
| TECA 711-6   | 0.18       | 1.28        | 0.74 | 0.43 | 1.22        | 0.70 | 0.41 | 1.17        | 0.68 | 0.39 | 880           | 56       | 0.66                | 1.6                                     | 1.7                                      | 1.5                                      | 4                                       | 52          | 5.60     |
| TECA 712-6   | 0.25       | 1.59        | 0.92 | 0.53 | 1.51        | 0.87 | 0.50 | 1.46        | 0.84 | 0.49 | 900           | 59       | 0.7                 | 2.1                                     | 2.2                                      | 1.5                                      | 4                                       | 52          | 6.00     |
| TECA 713-6   | 0.37       | 2.31        | 1.34 | 0.77 | 2.2         | 1.27 | 0.73 | 2.11        | 1.22 | 0.70 | 890           | 61       | 0.69                | 2                                       | 2.1                                      | 1.5                                      | 4                                       | 54          | 6.80     |
| TECA 801-6   | 0.37       | 2.24        | 1.30 | 0.75 | 2.13        | 1.23 | 0.71 | 2.05        | 1.19 | 0.68 | 900           | 62       | 0.7                 | 1.9                                     | 1.9                                      | 1.5                                      | 4                                       | 56          | 8.10     |
| TECA 802-6   | 0.55       | 2.99        | 1.73 | 1.00 | 2.85        | 1.65 | 0.95 | 2.74        | 1.59 | 0.91 | 900           | 67       | 0.72                | 2                                       | 2.3                                      | 1.5                                      | 4                                       | 56          | 9.60     |
| TECA 803-6   | 0.75       | 4.02        | 2.33 | 1.34 | 3.83        | 2.21 | 1.28 | 3.69        | 2.13 | 1.23 | 900           | 68       | 0.72                | 2                                       | 2.3                                      | 1.5                                      | 4                                       | 58          | 10.00    |
| TECA 90S-6   | 0.75       | 3.96        | 2.29 | 1.32 | 3.77        | 2.18 | 1.26 | 3.63        | 2.10 | 1.21 | 920           | 69       | 0.72                | 2.2                                     | 2.2                                      | 1.5                                      | 5.5                                     | 59          | 11.30    |
| TECA 90L1-6  | 1.1        | 5.49        | 3.18 | 1.83 | 5.23        | 3.02 | 1.74 | 5.03        | 2.91 | 1.68 | 925           | 72       | 0.73                | 2.2                                     | 2.2                                      | 1.3                                      | 5.5                                     | 59          | 14.40    |
| TECA 90L2-6  | 1.5        | 7.09        | 4.11 | 2.36 | 6.76        | 3.90 | 2.25 | 6.50        | 3.76 | 2.17 | 925           | 74       | 0.75                | 2.2                                     | 2.2                                      | 1.3                                      | 5.5                                     | 60          | 15.50    |
| TECA 100L1-6 | 1.5        | 7.00        | 4.05 | 2.33 | 6.67        | 3.85 | 2.22 | 6.42        | 3.71 | 2.14 | 945           | 74       | 0.76                | 2.2                                     | 2.2                                      | 1.3                                      | 6                                       | 61          | 18.80    |
| TECA 100L2-6 | 2.2        | 9.87        | 5.71 | 3.29 | 9.40        | 5.43 | 3.13 | 9.04        | 5.23 | 3.01 | 950           | 77       | 0.76                | 2.2                                     | 2.2                                      | 1.3                                      | 6                                       | 63          | 19.80    |
| TECA 112M-6  | 2.2        | 9.7         | 5.64 | 3.25 | 9.28        | 5.36 | 3.09 | 8.93        | 5.16 | 2.98 | 955           | 78       | 0.76                | 2.2                                     | 2.2                                      | 1.3                                      | 6                                       | 64          | 25.00    |
| TECA 112L-6  | 3          | 12.9        | 7.49 | 4.31 | 12.3        | 7.12 | 4.11 | 11.9        | 6.86 | 3.95 | 950           | 79       | 0.77                | 2.2                                     | 2.2                                      | 1.3                                      | 6                                       | 64          | 30.00    |
| TECA 132S-6  | 3          | 13.1        | 7.59 | 4.37 | 12.5        | 7.21 | 4.16 | 12.0        | 6.95 | 4.01 | 960           | 79       | 0.76                | 2                                       | 2                                        | 1.3                                      | 6.5                                     | 64          | 35.00    |
| TECA 132M1-6 | 4          | 17.2        | 9.93 | 5.72 | 16.4        | 9.44 | 5.45 | 15.7        | 9.10 | 5.24 | 960           | 80.5     | 0.76                | 2                                       | 2                                        | 1.3                                      | 6.5                                     | 68          | 47.60    |
| TECA 132M2-6 | 5.5        | 22.6        | 13.1 | 7.53 | 21.5        | 12.4 | 7.17 | 20.7        | 12.0 | 6.9  | 960           | 83       | 0.77                | 2                                       | 2                                        | 1.3                                      | 6.5                                     | 68          | 50.70    |
| TECA 132L-6  | 7.5        | 30.1        | 17.4 | 10.0 | 28.7        | 16.5 | 9.55 | 27.6        | 15.9 | 9.2  | 960           | 85       | 0.77                | 2                                       | 2                                        | 1.3                                      | 6.5                                     | 68          | 47.60    |
| TECA 160M-6  | 7.5        | 28.6        | 16.6 | 9.5  | 27.3        | 15.7 | 9.08 | 26.2        | 15.2 | 8.7  | 960           | 86       | 0.8                 | 2                                       | 2.2                                      | 1.3                                      | 6.5                                     | 68          | 70.0     |
| TECA 160L-6  | 11         | 41.8        | 24.2 | 13.9 | 39.8        | 23.0 | 13.3 | 38.3        | 22.1 | 12.8 | 960           | 87.5     | 0.79                | 2                                       | 2.2                                      | 1.2                                      | 6.5                                     | 73          | 87.0     |
| TECA 180L-6  | 15         | 54.6        | 31.6 | 18.2 | 52.2        | 30.0 | 17.3 | 50.1        | 28.9 | 16.7 | 970           | 89       | 0.81                | 2                                       | 2.2                                      | 1.3                                      | 6.5                                     | 79          | 122.0    |
| TECA 200L1-6 | 18.5       | 66.6        | 38.6 | 22.2 | 63.7        | 36.6 | 21.1 | 61.0        | 35.3 | 20.3 | 975           | 90       | 0.81                | 2                                       | 2.2                                      | 1.3                                      | 6.5                                     | 82          | 136.0    |
| TECA 200L2-6 | 22         | 77.3        | 44.7 | 25.8 | 73.9        | 42.5 | 24.5 | 70.8        | 41.0 | 23.6 | 975           | 90       | 0.83                | 2                                       | 2.2                                      | 1.3                                      | 6.5                                     | 82          | 152.0    |
| TECA 711-8   | 0.09       | 0.88        | 0.51 | 0.29 | 0.84        | 0.48 | 0.28 | 0.81        | 0.47 | 0.27 | 680           | 48       | 0.56                | 1.5                                     | 1.7                                      | 1.3                                      | 3                                       | 50          | 5.60     |
| TECA 712-8   | 0.12       | 1.05        | 0.61 | 0.35 | 1.00        | 0.58 | 0.33 | 0.96        | 0.55 | 0.32 | 690           | 51       | 0.59                | 1.6                                     | 1.7                                      | 1.3                                      | 2.7                                     | 50          | 6.00     |
| TECA 801-8   | 0.18       | 1.52        | 0.88 | 0.51 | 1.45        | 0.84 | 0.48 | 1.39        | 0.80 | 0.46 | 680           | 51       | 0.61                | 1.5                                     | 1.7                                      | 1.3                                      | 2.8                                     | 52          | 9.40     |
| TECA 802-8   | 0.25       | 1.92        | 1.11 | 0.64 | 1.83        | 1.06 | 0.61 | 1.76        | 1.02 | 0.59 | 680           | 56       | 0.61                | 1.6                                     | 2                                        | 1.3                                      | 2.7                                     | 52          | 10.10    |
| TECA 90S-8   | 0.37       | 2.45        | 1.42 | 0.82 | 2.33        | 1.35 | 0.78 | 2.24        | 1.30 | 0.75 | 680           | 63       | 0.63                | 1.6                                     | 1.8                                      | 1.3                                      | 2.8                                     | 56          | 12.50    |
| TECA 90L-8   | 0.55       | 3.36        | 1.95 | 1.12 | 3.21        | 1.85 | 1.07 | 3.08        | 1.78 | 1.03 | 680           | 66       | 0.65                | 1.6                                     | 1.8                                      | 1.3                                      | 3                                       | 56          | 15.30    |
| TECA 100L1-8 | 0.75       | 4.45        | 2.58 | 1.48 | 4.24        | 2.45 | 1.41 | 4.08        | 2.36 | 1.36 | 710           | 66       | 0.67                | 1.7                                     | 2.1                                      | 1.3                                      | 3.5                                     | 59          | 17.20    |
| TECA 100L2-8 | 1.1        | 5.81        | 3.36 | 1.94 | 5.54        | 3.20 | 1.85 | 5.33        | 3.08 | 1.78 | 710           | 72       | 0.69                | 1.7                                     | 2.1                                      | 1.2                                      | 3.5                                     | 59          | 19.50    |
| TECA 112M-8  | 1.5        | 7.82        | 4.53 | 2.61 | 7.45        | 4.30 | 2.48 | 7.17        | 4.15 | 2.39 | 710           | 74       | 0.68                | 1.8                                     | 2.1                                      | 1.2                                      | 4.2                                     | 61          | 25.50    |
| TECA 132S-8  | 2.2        | 10.8        | 6.28 | 3.61 | 10.3        | 5.96 | 3.44 | 9.94        | 5.75 | 3.31 | 720           | 75       | 0.71                | 2                                       | 2                                        | 1.2                                      | 5.5                                     | 64          | 34.20    |
| TECA 132M-8  | 3          | 14.0        | 8.11 | 4.67 | 13.3        | 7.70 | 4.45 | 12.8        | 7.43 | 4.28 | 720           | 77       | 0.73                | 2                                       | 2                                        | 1.2                                      | 5.5                                     | 64          | 40.00    |
| TECA 160M1-8 | 4          | 18.0        | 10.4 | 5.99 | 17.1        | 9.89 | 5.71 | 16.5        | 9.53 | 5.49 | 730           | 80       | 0.73                | 1.9                                     | 2.1                                      | 1.2                                      | 6                                       | 68          | 59.00    |
| TECA 160M2-8 | 5.5        | 23.4        | 13.5 | 7.79 | 22.3        | 12.9 | 7.42 | 21.4        | 12.4 | 7.14 | 720           | 83.5     | 0.74                | 2                                       | 2.2                                      | 1.2                                      | 6                                       | 68          | 69.00    |
| TECA 160L-8  | 7.5        | 30.9        | 17.9 | 10.3 | 29.4        | 17.0 | 9.8  | 28.3        | 16.4 | 9.43 | 720           | 85       | 0.75                | 1.9                                     | 2.2                                      | 1.2                                      | 6                                       | 68          | 87.00    |
| TECA 180L-8  | 11         | 45.2        | 26.2 | 15.1 | 43.6        | 25.1 | 14.5 | 41.5        | 24.0 | 13.8 | 715           | 87.4     | 0.73                | 1.9                                     | 2.2                                      | 1.2                                      | 6                                       | 78          | 125.0    |
| TECA 200L-8  | 15         | 58.9        | 34.1 | 19.6 | 56.3        | 32.4 | 18.7 | 54.0        | 31.2 | 18.0 | 725           | 88.0     | 0.76                | 1.9                                     | 2.2                                      | 1.2                                      | 6                                       | 80          | 151.0    |

## TECA-2 Series IE2 Efficiency Motors Technical Data (at 400V/50Hz)

| Model          | Power (KW) | Eff. (%) | Current (A) | Power Factor (CosΦ) | Speed (r/min) | T <sub>max</sub> /T <sub>n</sub> (Times) | T <sub>st</sub> /T <sub>n</sub> (Times) | I <sub>st</sub> /I <sub>n</sub> (Times) |
|----------------|------------|----------|-------------|---------------------|---------------|------------------------------------------|-----------------------------------------|-----------------------------------------|
| TECA-2 801-2   | 0.75       | 77.4     | 1.75        | 0.80                | 2840          | 3.3                                      | 2.9                                     | 5.8                                     |
| TECA-2 802-2   | 1.1        | 80       | 2.42        | 0.82                | 2850          | 3.6                                      | 3.5                                     | 6.8                                     |
| TECA-2 90S-2   | 1.5        | 81.4     | 3.20        | 0.83                | 2850          | 3.6                                      | 3.5                                     | 6.9                                     |
| TECA-2 90L-2   | 2.2        | 83.2     | 4.54        | 0.84                | 2860          | 4.1                                      | 4.1                                     | 7.9                                     |
| TECA-2 100L-2  | 3          | 84.6     | 5.88        | 0.87                | 2880          | 3.4                                      | 3.4                                     | 7.8                                     |
| TECA-2 112M-2  | 4          | 86       | 7.54        | 0.89                | 2890          | 3.3                                      | 2.7                                     | 7.5                                     |
| TECA-2 132S1-2 | 5.5        | 87.2     | 10.2        | 0.89                | 2900          | 3                                        | 2.4                                     | 7.7                                     |
| TECA-2 132S2-2 | 7.5        | 88.1     | 13.8        | 0.89                | 2910          | 3.2                                      | 2.6                                     | 8.4                                     |
| TECA-2 160M1-2 | 11         | 89.4     | 19.9        | 0.89                | 2930          | 3.1                                      | 2.4                                     | 7.6                                     |
| TECA-2 160M2-2 | 15         | 90.3     | 26.9        | 0.89                | 2930          | 3.2                                      | 2.6                                     | 8                                       |
| TECA-2 160L-2  | 18.5       | 90.9     | 32.6        | 0.90                | 2940          | 3.5                                      | 3                                       | 9                                       |
| TECA-2 180M-2  | 22         | 91.3     | 38.6        | 0.90                | 2950          | 3.5                                      | 2.6                                     | 8.5                                     |
| TECA-2 200L1-2 | 30         | 92       | 52.3        | 0.90                | 2950          | 3.4                                      | 2.4                                     | 8                                       |
| TECA-2 200L2-2 | 37         | 92.5     | 64.1        | 0.90                | 2950          | 3.5                                      | 2.5                                     | 8.5                                     |
| TECA-2 802-4   | 0.75       | 79.6     | 1.79        | 0.76                | 1410          | 3                                        | 2.8                                     | 5.3                                     |
| TECA-2 90S-4   | 1.1        | 81.4     | 2.50        | 0.78                | 1420          | 2.6                                      | 3.8                                     | 6.7                                     |
| TECA-2 90L-4   | 1.5        | 82.8     | 3.31        | 0.79                | 1420          | 2.7                                      | 4                                       | 7.2                                     |
| TECA-2 100L1-4 | 2.2        | 84.3     | 4.83        | 0.78                | 1440          | 3.6                                      | 3.6                                     | 7.4                                     |
| TECA-2 100L2-4 | 3          | 85.5     | 6.33        | 0.80                | 1440          | 3.5                                      | 3.8                                     | 7.8                                     |
| TECA-2 112M-4  | 4          | 86.6     | 8.23        | 0.81                | 1440          | 2.9                                      | 3.1                                     | 7.1                                     |
| TECA-2 132S-4  | 5.5        | 87.9     | 10.9        | 0.83                | 1450          | 2.7                                      | 2.6                                     | 7.4                                     |
| TECA-2 132M-4  | 7.5        | 88.7     | 14.5        | 0.84                | 1450          | 2.7                                      | 2.8                                     | 7.7                                     |
| TECA-2 160M-4  | 11         | 89.8     | 21.6        | 0.82                | 1450          | 3.1                                      | 2.7                                     | 7.7                                     |
| TECA-2 160L-4  | 15         | 90.6     | 28.4        | 0.84                | 1450          | 2.6                                      | 2.4                                     | 7.3                                     |
| TECA-2 180M-4  | 18.5       | 91.4     | 34.4        | 0.85                | 1460          | 3.2                                      | 2.2                                     | 7.4                                     |
| TECA-2 180L-4  | 22         | 91.7     | 40.3        | 0.86                | 1460          | 3.2                                      | 2.3                                     | 7.5                                     |
| TECA-2 200L-4  | 30         | 92.3     | 55.2        | 0.86                | 1470          | 3.1                                      | 2.8                                     | 7.6                                     |
| TECA-2 90S-6   | 0.75       | 76.0     | 2.01        | 0.71                | 925           | 3.1                                      | 3.1                                     | 4.7                                     |
| TECA-2 90L-6   | 1.1        | 78.1     | 2.82        | 0.72                | 930           | 3.2                                      | 3.2                                     | 5                                       |
| TECA-2 100L-6  | 1.5        | 80.0     | 3.71        | 0.73                | 940           | 2.9                                      | 3.1                                     | 5.9                                     |
| TECA-2 112M-6  | 2.2        | 81.8     | 5.17        | 0.75                | 945           | 2.8                                      | 2.6                                     | 5.5                                     |
| TECA-2 132S-6  | 3          | 83.3     | 6.84        | 0.76                | 960           | 2.7                                      | 2.2                                     | 5.7                                     |
| TECA-2 132M1-6 | 4          | 84.6     | 8.86        | 0.77                | 960           | 2.7                                      | 2.4                                     | 6.2                                     |
| TECA-2 132M2-6 | 5.5        | 86       | 12.0        | 0.77                | 960           | 2.7                                      | 2.6                                     | 6.7                                     |
| TECA-2 160M-6  | 7.5        | 87.5     | 16.1        | 0.77                | 970           | 2.8                                      | 2                                       | 5.6                                     |
| TECA-2 160L-6  | 11         | 89.0     | 22.9        | 0.78                | 970           | 2.8                                      | 2                                       | 5.8                                     |
| TECA-2 180L-6  | 15         | 90.1     | 28.9        | 0.83                | 975           | 2.9                                      | 1.9                                     | 7.5                                     |
| TECA-2 200L1-6 | 18.5       | 90.4     | 35.6        | 0.83                | 975           | 2.7                                      | 2.2                                     | 6.3                                     |
| TECA-2 200L2-6 | 22         | 90.9     | 41.6        | 0.84                | 975           | 2.6                                      | 2.3                                     | 6.2                                     |



## Overall & Installation Dimensions

**B3**

| Frame  | H   | A   | B       | C   | D   | E   | F  | G    | K       | AA  | AC   | L        | Lccl*    | KK        | TBS | TBW | TBH | SS  | XX | ZZ | CC   | Y   |
|--------|-----|-----|---------|-----|-----|-----|----|------|---------|-----|------|----------|----------|-----------|-----|-----|-----|-----|----|----|------|-----|
| 56     | 56  | 90  | 71      | 36  | φ9  | 20  | 3  | 7.2  | 5.8×8.8 | 110 | φ117 | 196      | 232      | 1-M16×1.5 | 14  | 88  | 88  | M3  | 9  | 12 | 2.5  | 0.5 |
| 63     | 63  | 100 | 80      | 40  | φ11 | 23  | 4  | 8.5  | 7×10    | 120 | φ130 | 220      | 258      | 1-M16×1.5 | 14  | 94  | 94  | M4  | 10 | 14 | 3.3  | 0.8 |
| 71**   | 71  | 112 | 90      | 45  | φ14 | 30  | 5  | 11   | 7×10    | 132 | φ147 | 241(255) | 282(296) | 1-M20×1.5 | 20  | 94  | 94  | M5  | 12 | 17 | 4.2  | 0.8 |
| 80     | 80  | 125 | 100     | 50  | φ19 | 40  | 6  | 15.5 | 10×13   | 160 | φ163 | 290      | 339      | 1-M20×1.5 | 27  | 105 | 105 | M6  | 16 | 21 | 5    | 1   |
| 90 S   | 90  | 140 | 100     | 56  | φ24 | 50  | 8  | 20   | 10×13   | 175 | φ183 | 312      | 361      | 1-M20×1.5 | 30  | 105 | 105 | M8  | 19 | 25 | 6.8  | 1   |
| 90L/L2 | 90  | 140 | 125     | 56  | φ24 | 50  | 8  | 20   | 10×13   | 175 | φ183 | 337/367  | 386/416  | 1-M20×1.5 | 30  | 105 | 105 | M8  | 19 | 25 | 6.8  | 1   |
| 100**  | 100 | 160 | 140     | 63  | φ28 | 60  | 8  | 24   | 12×15   | 198 | φ205 | 369(387) | 425(443) | 2-M20×1.5 | 26  | 105 | 105 | M10 | 22 | 30 | 8.5  | 1.5 |
| 112    | 112 | 190 | 140     | 70  | φ28 | 60  | 8  | 24   | 12×15   | 220 | φ229 | 395      | 463      | 2-M25×1.5 | 32  | 112 | 112 | M10 | 22 | 30 | 8.5  | 1.5 |
| 132S   | 132 | 216 | 140     | 89  | φ38 | 80  | 10 | 33   | 12×15   | 252 | φ265 | 437      | 497      | 2-M25×1.5 | 38  | 112 | 112 | M12 | 28 | 37 | 10.2 | 1.5 |
| 132M/L | 132 | 216 | 178     | 89  | φ38 | 80  | 10 | 33   | 12×15   | 252 | φ265 | 475/501  | 535/561  | 2-M25×1.5 | 38  | 112 | 112 | M12 | 28 | 37 | 10.2 | 1.5 |
| 160M/L | 160 | 254 | 210/254 | 108 | φ42 | 110 | 12 | 37   | 15×19   | 290 | φ325 | 640      | 697      | 2-M32×1.5 | 64  | 143 | 143 | M13 | 36 | 45 | 14.2 | 2   |
| 180M/L | 180 | 279 | 241/279 | 121 | φ48 | 110 | 14 | 42.5 | 15×25   | 340 | φ368 | 730      |          | 2-M32×1.5 | 73  | 190 | 190 | M14 | 36 | 45 | 14.2 | 2   |
| 200L   | 200 | 318 | 305     | 133 | φ55 | 110 | 16 | 49   | 19×29   | 390 | φ368 | 745      |          | 2-M40×1.5 | 85  | 190 | 190 | M15 | 42 | 53 | 17.5 | 2   |

## B5 Overall & Installation Dimensions

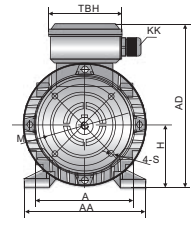
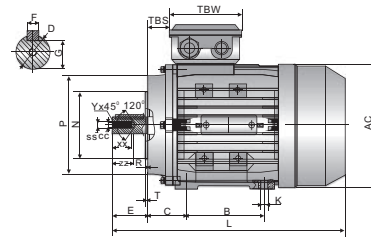
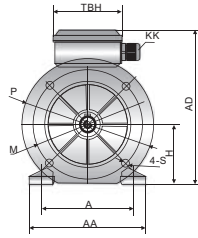
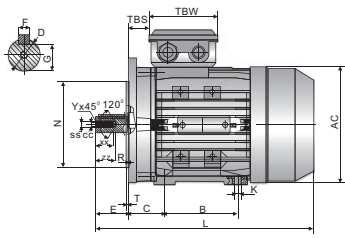
| Frame   | B5   |      |      |     |   |     | B5R  |      |      |     |   |     | D   | E   | F  | G    | KK        | AC   | HD  | L        | Lccl*    | TBS | TBW | TBH | SS  | XX | ZZ | CC   | Y   |
|---------|------|------|------|-----|---|-----|------|------|------|-----|---|-----|-----|-----|----|------|-----------|------|-----|----------|----------|-----|-----|-----|-----|----|----|------|-----|
|         | M    | N    | P    | T   | R | S   | M    | N    | P    | T   | R | S   |     |     |    |      |           |      |     |          |          |     |     |     |     |    |    |      |     |
| 56      | φ100 | φ80  | φ120 | 3.0 | 0 | φ7  |      |      |      |     |   |     | φ9  | 20  | 3  | 7.2  | 1-M16×1.5 | φ117 | 100 | 196      | 232      | 14  | 88  | 88  | M3  | 9  | 12 | 2.5  | 0.8 |
| 63      | φ115 | φ95  | φ140 | 3.0 | 0 | φ10 |      |      |      |     |   |     | φ11 | 23  | 4  | 8.5  | 1-M16×1.5 | φ130 | 108 | 220      | 258      | 14  | 94  | 94  | M4  | 10 | 14 | 3.3  | 0.8 |
| 71**    | φ130 | φ110 | φ160 | 3.5 | 0 | φ10 | φ115 | φ95  | φ140 | 3.5 | 0 | φ10 | φ14 | 30  | 5  | 11   | 1-M20×1.5 | φ147 | 115 | 241(255) | 282(296) | 20  | 94  | 94  | M5  | 12 | 17 | 4.2  | 0.8 |
| 80      | φ165 | φ130 | φ200 | 3.5 | 0 | φ12 | φ130 | φ110 | φ160 | 3.5 | 0 | φ10 | φ19 | 40  | 6  | 15.5 | 1-M20×1.5 | φ163 | 133 | 290      | 339      | 27  | 105 | 105 | M6  | 16 | 21 | 5    | 1   |
| 90 S    | φ165 | φ130 | φ200 | 3.5 | 0 | φ12 | φ130 | φ110 | φ160 | 3.5 | 0 | φ10 | φ24 | 50  | 8  | 20   | 1-M20×1.5 | φ183 | 139 | 312      | 361      | 30  | 105 | 105 | M8  | 19 | 25 | 6.8  | 1   |
| 90L1/L2 | φ165 | φ130 | φ200 | 3.5 | 0 | φ12 | φ130 | φ110 | φ160 | 3.5 | 0 | φ10 | φ24 | 50  | 8  | 20   | 1-M20×1.5 | φ183 | 139 | 337/367  | 386/416  | 30  | 105 | 105 | M8  | 19 | 25 | 6.8  | 1   |
| 100*    | φ215 | φ180 | φ250 | 4.0 | 0 | φ15 | φ165 | φ130 | φ200 | 4.0 | 0 | φ12 | φ28 | 60  | 8  | 24   | 2-M20×1.5 | φ205 | 152 | 369(387) | 425(443) | 26  | 105 | 105 | M10 | 22 | 30 | 8.5  | 1.5 |
| 112     | φ215 | φ180 | φ250 | 4.0 | 0 | φ15 | φ165 | φ130 | φ200 | 4.0 | 0 | φ12 | φ28 | 60  | 8  | 24   | 2-M25×1.5 | φ229 | 167 | 395      | 463      | 32  | 112 | 112 | M10 | 22 | 30 | 8.5  | 1.5 |
| 132S    | φ265 | φ230 | φ300 | 4.0 | 0 | φ15 | φ215 | φ180 | φ250 | 4.0 | 0 | φ15 | φ38 | 80  | 10 | 33   | 2-M25×1.5 | φ265 | 186 | 437      | 497      | 38  | 112 | 112 | M12 | 28 | 37 | 10.2 | 1.5 |
| 132M/L  | φ265 | φ230 | φ300 | 4.0 | 0 | φ15 | φ215 | φ180 | φ250 | 4.0 | 0 | φ15 | φ38 | 80  | 10 | 33   | 2-M25×1.5 | φ265 | 186 | 475/501  | 535/561  | 38  | 112 | 112 | M12 | 28 | 37 | 10.2 | 1.5 |
| 160M/L  | φ300 | φ250 | φ350 | 5.0 | 0 | φ19 |      |      |      |     |   |     | φ42 | 110 | 12 | 37   | 2-M32×1.5 | φ325 | 224 | 640      | 697      | 64  | 143 | 143 | M13 | 36 | 45 | 14.2 | 2   |
| 180M/L  | φ300 | φ250 | φ350 | 5.0 | 0 | φ19 |      |      |      |     |   |     | φ48 | 110 | 14 | 42.5 | 2-M32×1.5 | φ368 | 260 | 730      |          | 73  | 190 | 190 | M14 | 36 | 45 | 14.2 | 2   |
| 200L    | φ350 | φ300 | φ400 | 5.0 | 0 | φ19 |      |      |      |     |   |     | φ55 | 110 | 16 | 49   | 2-M40×1.5 | φ368 | 260 | 745      |          | 85  | 190 | 190 | M15 | 42 | 53 | 17.5 | 2   |

## B14 Overall & Installation Dimensions

| Frame   | B14  |      |      |     |   |     | B14R |      |      |     |   |     | D   | E   | F  | G    | KK        | AC   | HD  | L        | LccL*    | TBS | TBW | TBH | SS  | XX | ZZ | CC   | Y   |
|---------|------|------|------|-----|---|-----|------|------|------|-----|---|-----|-----|-----|----|------|-----------|------|-----|----------|----------|-----|-----|-----|-----|----|----|------|-----|
|         | M    | N    | P    | T   | R | S   | M    | N    | P    | T   | R | S   |     |     |    |      |           |      |     |          |          |     |     |     |     |    |    |      |     |
| 56      | φ65  | φ50  | φ80  | 2.5 | 0 | M6  |      |      |      |     |   |     | φ9  | 20  | 3  | 7.2  | 1-M16×1.5 | φ117 | 100 | 196      | 232      | 14  | 88  | 88  | M3  | 9  | 12 | 3.5  | 0.8 |
| 63      | φ75  | φ60  | φ90  | 2.5 | 0 | M6  | φ100 | φ80  | φ120 | 3.0 | 0 | M6  | φ11 | 23  | 4  | 8.5  | 1-M16×1.5 | φ130 | 108 | 220      | 258      | 14  | 94  | 94  | M4  | 10 | 14 | 3.3  | 0.8 |
| 71**    | φ85  | φ70  | φ105 | 2.5 | 0 | M6  | φ115 | φ95  | φ140 | 3.0 | 0 | M8  | φ14 | 30  | 5  | 11   | 1-M20×1.5 | φ147 | 115 | 241(255) | 282(296) | 20  | 94  | 94  | M5  | 12 | 17 | 4.2  | 0.8 |
| 80      | φ100 | φ80  | φ120 | 3.0 | 0 | M6  | φ130 | φ110 | φ160 | 3.5 | 0 | M8  | φ19 | 40  | 6  | 15.5 | 1-M20×1.5 | φ163 | 133 | 290      | 339      | 27  | 105 | 105 | M6  | 16 | 21 | 5.0  | 1.0 |
| 90 S    | φ115 | φ95  | φ140 | 3.0 | 0 | M8  | φ130 | φ110 | φ160 | 3.5 | 0 | M8  | φ24 | 50  | 8  | 20   | 1-M20×1.5 | φ183 | 139 | 312      | 361      | 30  | 105 | 105 | M8  | 19 | 25 | 6.8  | 1.0 |
| 90L1/L2 | φ115 | φ95  | φ140 | 3.0 | 0 | M8  | φ130 | φ110 | φ160 | 3.5 | 0 | M8  | φ24 | 50  | 8  | 20   | 1-M20×1.5 | φ183 | 139 | 337/367  | 386/416  | 30  | 105 | 105 | M8  | 19 | 25 | 6.8  | 1.0 |
| 100*    | φ130 | φ110 | φ160 | 3.5 | 0 | M8  | φ165 | φ130 | φ200 | 3.5 | 0 | M10 | φ28 | 60  | 8  | 24   | 2-M20×1.5 | φ205 | 152 | 369(387) | 425(443) | 26  | 105 | 105 | M10 | 22 | 30 | 8.5  | 1.5 |
| 112     | φ130 | φ110 | φ160 | 3.5 | 0 | M8  | φ165 | φ130 | φ200 | 3.5 | 0 | M10 | φ28 | 60  | 8  | 24   | 2-M25×1.5 | φ229 | 167 | 395      | 463      | 32  | 112 | 112 | M10 | 22 | 30 | 8.5  | 1.5 |
| 132S    | φ165 | φ130 | φ200 | 4.0 | 0 | M10 | φ215 | φ180 | φ250 | 4.0 | 0 | M12 | φ38 | 80  | 10 | 33   | 2-M25×1.5 | φ265 | 186 | 437      | 497      | 38  | 112 | 112 | M12 | 28 | 37 | 10.2 | 1.5 |
| 132M/L  | φ165 | φ130 | φ200 | 4.0 | 0 | M10 | φ215 | φ180 | φ250 | 4.0 | 0 | M12 | φ38 | 80  | 10 | 33   | 2-M25×1.5 | φ265 | 186 | 475/501  | 535/561  | 38  | 112 | 112 | M12 | 28 | 37 | 10.2 | 1.5 |
| 160M/L  | φ215 | φ180 | φ250 | 4.0 | 0 | M12 |      |      |      |     |   |     | φ42 | 110 | 12 | 37   | 2-M32×1.5 | φ325 | 224 | 640      | 697      | 64  | 143 | 143 | M16 | 36 | 45 | 14.2 | 2.0 |

\* for brake motors

\*\* this frame size has two options,the rated output is for normal "L" size,and increased output is for thd large "L" size (refer to the figures in the bracket"()")



IMB35

IMB34

## B35 Overall & Installation Dimensions

| Frame   | H   | B35  |      |      |     |   |     | B35R |     |     |     |   |     | A   | B       | C   | D   | E   | F  |
|---------|-----|------|------|------|-----|---|-----|------|-----|-----|-----|---|-----|-----|---------|-----|-----|-----|----|
|         |     | M    | N    | P    | T   | R | S   | M    | N   | P   | T   | R | S   |     |         |     |     |     |    |
| 56      | 56  | φ100 | φ80  | φ120 | 3.0 | 0 | φ7  |      |     |     |     |   |     | 90  | 71      | 36  | φ9  | 20  | 3  |
| 63      | 63  | φ115 | φ95  | φ140 | 3.0 | 0 | φ10 |      |     |     |     |   |     | 100 | 80      | 40  | φ11 | 23  | 4  |
| 71**    | 71  | φ130 | φ110 | φ160 | 3.5 | 0 | φ10 | 115  | 95  | 140 | 3.5 | 0 | φ10 | 112 | 90      | 45  | φ14 | 30  | 5  |
| 80      | 80  | φ165 | φ130 | φ200 | 3.5 | 0 | φ12 | 130  | 110 | 160 | 3.5 | 0 | φ10 | 125 | 100     | 50  | φ19 | 40  | 6  |
| 90 S    | 90  | φ165 | φ130 | φ200 | 3.5 | 0 | φ12 | 130  | 110 | 160 | 3.5 | 0 | φ10 | 140 | 100     | 56  | φ24 | 50  | 8  |
| 90L1/L2 | 90  | φ165 | φ130 | φ200 | 3.5 | 0 | φ12 | 130  | 110 | 160 | 3.5 | 0 | φ10 | 140 | 125     | 56  | φ24 | 50  | 8  |
| 100**   | 100 | φ215 | φ180 | φ250 | 4.0 | 0 | φ15 | 165  | 130 | 200 | 4.0 | 0 | φ12 | 160 | 140     | 63  | φ28 | 60  | 8  |
| 112     | 112 | φ215 | φ180 | φ250 | 4.0 | 0 | φ15 | 165  | 130 | 200 | 4.0 | 0 | φ12 | 190 | 140     | 70  | φ28 | 60  | 8  |
| 132S    | 132 | φ265 | φ230 | φ300 | 4.0 | 0 | φ15 | 215  | 180 | 250 | 4.0 | 0 | φ15 | 216 | 140     | 89  | φ38 | 80  | 10 |
| 132M/L  | 132 | φ265 | φ230 | φ300 | 4.0 | 0 | φ15 | 215  | 180 | 250 | 4.0 | 0 | φ15 | 216 | 178     | 89  | φ38 | 80  | 10 |
| 160M/L  | 160 | φ300 | φ250 | φ350 | 5.0 | 0 | φ19 |      |     |     |     |   |     | 254 | 210/254 | 108 | φ42 | 110 | 12 |
| 180M/L  | 180 | φ300 | φ250 | φ350 | 5.0 | 0 | φ19 |      |     |     |     |   |     | 279 | 241/279 | 121 | φ48 | 110 | 14 |
| 200L    | 200 | φ350 | φ300 | φ400 | 5.0 | 0 | φ19 |      |     |     |     |   |     | 318 | 305     | 133 | φ55 | 110 | 16 |

| Frame   | G    | K       | KK        | AA  | AD  | AC   | L        | Lccl.*   | TBS | TBW | TBH | SS  | XX | ZZ   | CC   | Y   |
|---------|------|---------|-----------|-----|-----|------|----------|----------|-----|-----|-----|-----|----|------|------|-----|
| 56      | 7.2  | 5.8×8.8 | 1-M16×1.5 | 110 | 156 | φ117 | 196      | 232      | 14  | 88  | 88  | M3  | 9  | 12   | 2.5  | 0.5 |
| 63      | 8.5  | 7×10    | 1-M16×1.5 | 120 | 171 | φ130 | 220      | 258      | 14  | 94  | 94  | M4  | 10 | 14   | 3.3  | 0.8 |
| 71**    | 11   | 7×10    | 1-M20×1.5 | 132 | 186 | φ147 | 241(255) | 282(296) | 20  | 94  | 94  | M5  | 12 | 17   | 4.2  | 0.8 |
| 80      | 15.5 | 10×13   | 1-M20×1.5 | 160 | 213 | φ163 | 290      | 339      | 27  | 105 | 105 | M6  | 16 | 21.0 | 5.0  | 1.0 |
| 90 S    | 20   | 10×13   | 1-M20×1.5 | 175 | 229 | φ183 | 312      | 361      | 30  | 105 | 105 | M8  | 19 | 25.0 | 6.8  | 1.0 |
| 90L1/L2 | 20   | 10×13   | 1-M20×1.5 | 175 | 229 | φ183 | 337/367  | 386/416  | 30  | 105 | 105 | M8  | 19 | 25.0 | 6.8  | 1.0 |
| 100**   | 24   | 12×15   | 2-M20×1.5 | 198 | 252 | φ205 | 369(387) | 425(443) | 26  | 105 | 105 | M10 | 22 | 30.0 | 8.5  | 1.5 |
| 112     | 24   | 12×15   | 2-M25×1.5 | 220 | 279 | φ229 | 395      | 463      | 32  | 112 | 112 | M10 | 22 | 30.0 | 8.5  | 1.5 |
| 132S    | 33   | 12×15   | 2-M25×1.5 | 252 | 318 | φ265 | 437      | 497      | 38  | 112 | 112 | M12 | 28 | 37.0 | 10.2 | 1.5 |
| 132M/L  | 33   | 12×15   | 2-M25×1.5 | 252 | 318 | φ265 | 475/501  | 535/561  | 38  | 112 | 112 | M12 | 28 | 37.0 | 10.2 | 1.5 |
| 160M/L  | 37   | 15×19   | 2-M32×1.5 | 290 | 384 | φ325 | 640      | 697      | 64  | 143 | 143 | M16 | 36 | 45.0 | 14.2 | 2.0 |
| 180M/L  | 42.5 | 15×25   | 2-M32×1.5 | 340 | 440 | φ368 | 730      |          | 73  | 190 | 190 | M16 | 36 | 45.0 | 14.2 | 2.0 |
| 200L    | 49   | 19×29   | 2-M40×1.5 | 390 | 460 | φ368 | 745      |          | 85  | 190 | 190 | M20 | 42 | 53.0 | 17.5 | 2.0 |

## B34 Overall & Installation Dimensions

| Frame   | H   | A   | B       | C   | D   | E   | F  | G    | K       | KK        | B34  |      |      |     |   |     |
|---------|-----|-----|---------|-----|-----|-----|----|------|---------|-----------|------|------|------|-----|---|-----|
|         |     |     |         |     |     |     |    |      |         |           | M    | N    | P    | T   | R | S   |
| 56      | 56  | 90  | 71      | 36  | φ9  | 20  | 3  | 7.2  | 5.8×8.8 | 1-M16×1.5 | φ65  | φ50  | φ80  | 2.5 | 0 | M5  |
| 63      | 63  | 100 | 80      | 40  | φ11 | 23  | 4  | 8.5  | 7×10    | 1-M16×1.5 | φ75  | φ60  | φ90  | 2.5 | 0 | M5  |
| 71**    | 71  | 112 | 90      | 45  | φ14 | 30  | 5  | 11   | 7×10    | 1-M20×1.5 | φ85  | φ70  | φ105 | 2.5 | 0 | M6  |
| 80      | 80  | 125 | 100     | 50  | φ19 | 40  | 6  | 15.5 | 10×13   | 1-M20×1.5 | φ100 | φ80  | φ120 | 3.0 | 0 | M6  |
| 90 S    | 90  | 140 | 100     | 56  | φ24 | 50  | 8  | 20   | 10×13   | 1-M20×1.5 | φ115 | φ95  | φ140 | 3.0 | 0 | M8  |
| 90L1/L2 | 90  | 140 | 125     | 56  | φ24 | 50  | 8  | 20   | 10×13   | 1-M20×1.5 | φ115 | φ95  | φ140 | 3.0 | 0 | M8  |
| 100**   | 100 | 160 | 140     | 63  | φ28 | 60  | 8  | 24   | 12×15   | 2-M20×1.5 | φ130 | φ110 | φ160 | 3.5 | 0 | M8  |
| 112     | 112 | 190 | 140     | 70  | φ28 | 60  | 8  | 24   | 12×15   | 2-M25×1.5 | φ130 | φ110 | φ160 | 3.5 | 0 | M8  |
| 132S    | 132 | 216 | 140     | 89  | φ38 | 80  | 10 | 33   | 12×15   | 2-M25×1.5 | φ165 | φ130 | φ200 | 4.0 | 0 | M10 |
| 132M/L  | 132 | 216 | 178     | 89  | φ38 | 80  | 10 | 33   | 12×15   | 2-M25×1.5 | φ165 | φ130 | φ200 | 4.0 | 0 | M10 |
| 160M/L  | 160 | 254 | 210/254 | 108 | φ42 | 110 | 12 | 37   | 15×19   | 2-M32×1.5 | φ215 | φ180 | φ250 | 4.0 | 0 | M12 |

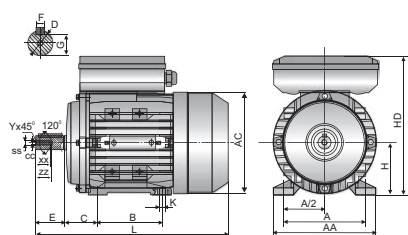
| Frame   | B34R |      |      |     |   |     | AC   | AD  | AA  | L        | LccL *   | TBS | TBW | TBH | SS  | XX | ZZ | CC   | Y   |
|---------|------|------|------|-----|---|-----|------|-----|-----|----------|----------|-----|-----|-----|-----|----|----|------|-----|
|         | M    | N    | P    | T   | R | S   |      |     |     |          |          |     |     |     |     |    |    |      |     |
| 56      |      |      |      |     |   |     | φ117 | 156 | 110 | 196      | 232      | 14  | 88  | 88  | M3  | 9  | 12 | 2.5  | 0.5 |
| 63      | φ100 | φ80  | φ120 | 3.0 |   | M6  | φ130 | 171 | 120 | 220      | 258      | 14  | 94  | 94  | M4  | 10 | 14 | 3.3  | 0.8 |
| 71**    | φ115 | φ95  | φ140 | 3.0 | 0 | M8  | φ147 | 186 | 132 | 241(255) | 282(296) | 20  | 94  | 94  | M5  | 12 | 17 | 4.2  | 0.8 |
| 80      | φ130 | φ110 | φ160 | 3.5 | 0 | M8  | φ163 | 213 | 160 | 290      | 339      | 27  | 105 | 105 | M6  | 16 | 21 | 5.0  | 1.0 |
| 90 S    | φ130 | φ110 | φ160 | 3.5 | 0 | M8  | φ183 | 229 | 175 | 312      | 361      | 30  | 105 | 105 | M8  | 19 | 25 | 6.8  | 1.0 |
| 90L1/L2 | φ130 | φ110 | φ160 | 3.5 | 0 | M8  | φ183 | 229 | 175 | 337/367  | 386/416  | 30  | 105 | 105 | M8  | 19 | 25 | 6.8  | 1.0 |
| 100**   | φ165 | φ130 | φ200 | 3.5 | 0 | M10 | φ205 | 252 | 198 | 369(387) | 425(443) | 26  | 105 | 105 | M10 | 22 | 30 | 8.5  | 1.5 |
| 112     | φ165 | φ130 | φ200 | 3.5 | 0 | M10 | φ229 | 279 | 220 | 395      | 463      | 32  | 112 | 112 | M10 | 22 | 30 | 8.5  | 1.5 |
| 132S    | φ215 | φ180 | φ250 | 4.0 | 0 | M12 | φ265 | 318 | 252 | 437      | 497      | 38  | 112 | 112 | M12 | 28 | 37 | 10.2 | 1.5 |
| 132M/L  | φ215 | φ180 | φ250 | 4.0 | 0 | M12 | φ265 | 318 | 252 | 475/501  | 535/561  | 38  | 112 | 112 | M12 | 28 | 37 | 10.2 | 1.5 |
| 160M/L  |      |      |      |     |   |     | φ325 | 384 | 290 | 640      | 697      | 64  | 143 | 143 | M16 | 36 | 45 | 14.2 | 2.0 |

# TCC

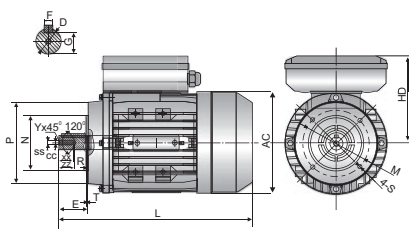
## Series Aluminium Housing Single-Phase Multi-Mount Asynchronous Motor-Dual Capacitors

TCC aluminum multi-mount single phase dual capacitor asynchronous motors are manufactured to the latest design. All motors conform to IEC standards and offer a comprehensive range up to 3.7KW an aesthetically pleasing design with the flexibility of a multi-mount terminal box and available in all mounting configurations including B14B and B5R. They are suitable for applications where starting torque requirements are 1.8-2.5 times F.L.T.

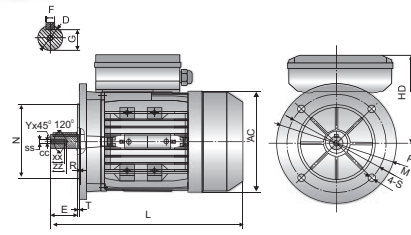
N.B.: it is recommended that single phase motors are not stop/started more than 15 times within a 1 hour period in order to allow safe discharge of capacitors.



IMB3



IMB14



IMB5

### Overall & Installation Dimensions

| Frame Size | Mounting Dimensions |     |    |    |    |   |      |     |       |        |     |     |   |    |     |       |     |     | Overall Dimensions |      |     |     |     | Shaft End Screw Dimensions |     |         |     |    |    |
|------------|---------------------|-----|----|----|----|---|------|-----|-------|--------|-----|-----|---|----|-----|-------|-----|-----|--------------------|------|-----|-----|-----|----------------------------|-----|---------|-----|----|----|
|            | A                   | B   | C  | D  | E  | F | G    | H   | K     | IM B14 |     |     |   |    |     | IM B5 |     |     |                    |      |     |     |     |                            |     |         |     |    |    |
|            |                     |     |    |    |    |   |      |     |       | M      | N   | P   | R | S  | T   | M     | N   | P   | R                  | S    | T   | AA  | AC  | AD                         | HD  | L       | SS  | XX | ZZ |
| 63         | 100                 | 80  | 40 | 11 | 23 | 4 | 8.5  | 63  | 7X10  | 75     | 60  | 90  | 0 | M5 | 2.5 | 115   | 95  | 140 | 0                  | φ 10 | 3.0 | 120 | 130 | 179                        | 116 | 212     | M4  | 10 | 15 |
| 71         | 112                 | 90  | 45 | 14 | 30 | 5 | 11   | 71  | 7X10  | 85     | 70  | 105 | 0 | M6 | 2.5 | 130   | 110 | 160 | 0                  | φ 10 | 3.5 | 132 | 145 | 194                        | 123 | 255     | M5  | 12 | 18 |
| 80         | 125                 | 100 | 50 | 19 | 40 | 6 | 15.5 | 80  | 10X13 | 100    | 80  | 120 | 0 | M6 | 3.0 | 165   | 130 | 200 | 0                  | φ 12 | 3.5 | 157 | 165 | 223                        | 143 | 290     | M6  | 16 | 22 |
| 90S        | 140                 | 100 | 56 | 24 | 50 | 8 | 20   | 90  | 10X13 | 115    | 95  | 140 | 0 | M8 | 3.0 | 165   | 130 | 200 | 0                  | φ 12 | 3.5 | 172 | 185 | 240                        | 150 | 335     | M8  | 20 | 25 |
| 90L        | 140                 | 125 | 56 | 24 | 50 | 8 | 20   | 90  | 10X13 | 115    | 95  | 140 | 0 | M8 | 3.0 | 165   | 130 | 200 | 0                  | φ 12 | 3.5 | 172 | 185 | 240                        | 150 | 365     | M8  | 20 | 25 |
| 100L       | 160                 | 140 | 63 | 28 | 60 | 8 | 24   | 100 | 12X15 | 130    | 110 | 160 | 0 | M8 | 3.5 | 215   | 180 | 250 | 0                  | φ 15 | 4.0 | 196 | 205 | 260                        | 160 | 398/416 | M10 | 22 | 28 |
| 112M       | 190                 | 140 | 70 | 28 | 60 | 8 | 24   | 112 | 12X15 | 130    | 110 | 160 | 0 | M8 | 3.5 | 215   | 180 | 250 | 0                  | φ 15 | 4.0 | 222 | 230 | 295                        | 183 | 416     | M10 | 22 | 28 |

## T echnical Data (at 110V/50Hz)

| Model       | Power (KW) | Current (A)<br>110V | Speed (r/min) | Eff. (%) | Power Factor (Cosφ) | Rate Torque (N.M) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | Starting Current (A) | Run Capacitor (μF/V) | Start Capacitor (μF/V) | Noise dB (A) | W.T (Kg) |
|-------------|------------|---------------------|---------------|----------|---------------------|-------------------|-----------------------------------------|------------------------------------------|----------------------|----------------------|------------------------|--------------|----------|
| TCC 631-2   | 0.18       | 2.89                | 2710          | 63       | 0.9                 | 0.63              | 1.8                                     | 1.6                                      | 16                   | 30μF/250V            | 100μF/125V             | 70           | 4.2      |
| TCC 632-2   | 0.25       | 3.95                | 2710          | 64       | 0.9                 | 0.88              | 1.8                                     | 1.6                                      | 20                   | 40μF/250V            | 100μF/125V             | 73           | 4.7      |
| TCC 711-2   | 0.37       | 5.4                 | 2780          | 67       | 0.93                | 1.27              | 2.0                                     | 1.8                                      | 30                   | 40μF/250V            | 200μF/125V             | 75           | 5.3      |
| TCC 712-2   | 0.55       | 7.68                | 2790          | 70       | 0.93                | 1.88              | 2.0                                     | 1.8                                      | 40                   | 60μF/250V            | 300μF/125V             | 76           | 7.4      |
| TCC 801-2   | 0.75       | 9.97                | 2800          | 72       | 0.95                | 2.56              | 2.5                                     | 1.8                                      | 60                   | 80μF/250V            | 400μF/125V             | 76           | 9.5      |
| TCC 802-2   | 1.1        | 14.04               | 2810          | 75       | 0.95                | 3.74              | 2.5                                     | 1.8                                      | 80                   | 100μF/250V           | 600μF/125V             | 79           | 11.2     |
| TCC 90S-2   | 1.5        | 18.89               | 2810          | 76       | 0.95                | 5.10              | 2.5                                     | 1.8                                      | 110                  | 140μF/250V           | 800μF/125V             | 84           | 14       |
| TCC 90L-2   | 2.2        | 27.34               | 2810          | 77       | 0.95                | 7.48              | 2.5                                     | 1.8                                      | 150                  | 160μF/250V           | 1000μF/125V            | 84           | 17       |
| TCC 100L-2  | 3          | 36.34               | 2830          | 79       | 0.95                | 10.13             | 2.5                                     | 1.7                                      | 220                  | 180μF/250V           | 1400μF/125V            | 88           | 25       |
| TCC 631-4   | 0.12       | 2.2                 | 1350          | 55       | 0.9                 | 0.86              | 2.5                                     | 1.6                                      | 12                   | 30μF/250V            | 100μF/125V             | 64           | 4.1      |
| TCC 632-4   | 0.18       | 3.25                | 1350          | 56       | 0.9                 | 1.27              | 1.8                                     | 1.6                                      | 17                   | 40μF/250V            | 100μF/125V             | 64           | 4.4      |
| TCC 711-4   | 0.25       | 4.21                | 1380          | 60       | 0.9                 | 1.73              | 1.8                                     | 1.7                                      | 20                   | 40μF/250V            | 150μF/125V             | 66           | 5.9      |
| TCC 712-4   | 0.37       | 5.93                | 1380          | 63       | 0.9                 | 2.56              | 2.0                                     | 1.7                                      | 30                   | 40μF/250V            | 200μF/125V             | 68           | 6.9      |
| TCC 801-4   | 0.55       | 8.42                | 1400          | 66       | 0.9                 | 3.75              | 2.0                                     | 1.8                                      | 40                   | 70μF/250V            | 300μF/125V             | 71           | 9.6      |
| TCC 802-4   | 0.75       | 10.98               | 1410          | 69       | 0.9                 | 5.08              | 2.5                                     | 1.8                                      | 60                   | 90μF/250V            | 400μF/125V             | 71           | 10.8     |
| TCC 90S-4   | 1.1        | 14.73               | 1410          | 73       | 0.93                | 7.45              | 2.5                                     | 1.8                                      | 80                   | 120μF/250V           | 600μF/125V             | 74           | 13.5     |
| TCC 90L-4   | 1.5        | 19.81               | 1400          | 74       | 0.93                | 10.24             | 2.5                                     | 1.8                                      | 110                  | 140μF/250V           | 800μF/125V             | 79           | 16.5     |
| TCC 100L-4  | 2.2        | 28.3                | 1430          | 76       | 0.93                | 14.70             | 2.5                                     | 1.8                                      | 150                  | 170μF/250V           | 1300μF/125V            | 79           | 24       |
| TCC 100L2-4 | 3          | 38.09               | 1440          | 77       | 0.93                | 19.91             | 2.5                                     | 1.8                                      | 220                  | 200μF/250V           | 1600μF/125V            | 83           | 30       |

## T echnical Data (at 230V/50Hz)

| Model       | Power (KW) | Current (A)<br>230V | Speed (r/min) | Eff. (%) | Power Factor (Cosφ) | Rate Torque (N.M) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | Starting Current (A) | Run Capacitor (μF/V) | Start Capacitor (μF/V) | Noise dB (A) | W.T (Kg) |
|-------------|------------|---------------------|---------------|----------|---------------------|-------------------|-----------------------------------------|------------------------------------------|----------------------|----------------------|------------------------|--------------|----------|
| TCC 631-2   | 0.18       | 1.38                | 2710          | 63       | 0.9                 | 0.63              | 2.5                                     | 1.6                                      | 8                    | 10μF/450V            | 30μF/250V              | 70           | 3.9      |
| TCC 632-2   | 0.25       | 1.89                | 2710          | 64       | 0.9                 | 0.88              | 2.5                                     | 1.6                                      | 10                   | 12μF/450V            | 40μF/250V              | 73           | 4.4      |
| TCC 711-2   | 0.37       | 2.66                | 2780          | 65       | 0.93                | 1.27              | 2.5                                     | 1.8                                      | 15                   | 12μF/450V            | 75μF/250V              | 75           | 6.1      |
| TCC 712-2   | 0.55       | 3.78                | 2790          | 68       | 0.93                | 1.88              | 2.5                                     | 1.8                                      | 20                   | 16μF/450V            | 100μF/250V             | 76           | 7        |
| TCC 801-2   | 0.75       | 4.87                | 2800          | 72       | 0.93                | 2.56              | 2.5                                     | 1.8                                      | 30                   | 20μF/450V            | 100μF/250V             | 76           | 9        |
| TCC 802-2   | 1.1        | 7.04                | 2810          | 73       | 0.93                | 3.74              | 2.5                                     | 1.8                                      | 40                   | 30μF/450V            | 150μF/250V             | 79           | 10.3     |
| TCC 90S-2   | 1.5        | 9.48                | 2810          | 74       | 0.93                | 5.10              | 2.5                                     | 1.8                                      | 55                   | 40μF/450V            | 200μF/300V             | 84           | 16.3     |
| TCC 90L-2   | 2.2        | 13.57               | 2810          | 75       | 0.94                | 7.48              | 2.5                                     | 1.8                                      | 75                   | 50μF/450V            | 250μF/300V             | 84           | 16.7     |
| TCC 100L-2  | 3.0        | 17.83               | 2830          | 77       | 0.95                | 10.13             | 2.5                                     | 1.7                                      | 110                  | 60μF/450V            | 400μF/300V             | 88           | 25       |
| TCC 112M1-2 | 3.7        | 21.48               | 2850          | 78       | 0.96                | 12.40             | 2.5                                     | 1.7                                      | 140                  | 60μF/450V            | 600μF/300V             | 90           | 33       |
| TCC 112M2-2 | 4.0        | 22.18               | 2850          | 80       | 0.98                | 13.41             | 2.5                                     | 1.7                                      | 150                  | 60μF/450V            | 600μF/300V             | 90           | 34.2     |
| TCC 631-4   | 0.12       | 1.05                | 1350          | 55       | 0.9                 | 0.85              | 2.5                                     | 1.6                                      | 6                    | 10μF/450V            | 30μF/250V              | 64           | 4.1      |
| TCC 632-4   | 0.18       | 1.55                | 1350          | 56       | 0.9                 | 1.27              | 2.5                                     | 1.6                                      | 8.5                  | 12μF/450V            | 40μF/250V              | 64           | 4.5      |
| TCC 711-4   | 0.25       | 2.01                | 1380          | 60       | 0.9                 | 1.73              | 2.5                                     | 1.7                                      | 10                   | 12μF/450V            | 50μF/250V              | 66           | 5.9      |
| TCC 712-4   | 0.37       | 2.84                | 1380          | 63       | 0.9                 | 2.56              | 2.5                                     | 1.7                                      | 15                   | 16μF/450V            | 75μF/250V              | 68           | 6.9      |
| TCC 801-4   | 0.55       | 4.03                | 1400          | 66       | 0.9                 | 3.75              | 2.5                                     | 1.8                                      | 20                   | 20μF/450V            | 100μF/250V             | 71           | 9.6      |
| TCC 802-4   | 0.75       | 5.25                | 1410          | 69       | 0.9                 | 5.08              | 2.5                                     | 1.8                                      | 30                   | 25μF/450V            | 100μF/250V             | 71           | 10.9     |
| TCC 90S-4   | 1.1        | 7.24                | 1410          | 71       | 0.93                | 7.45              | 2.5                                     | 1.8                                      | 40                   | 35μF/450V            | 150μF/250V             | 74           | 13.8     |
| TCC 90L-4   | 1.5        | 9.61                | 1400          | 73       | 0.93                | 10.24             | 2.5                                     | 1.8                                      | 55                   | 40μF/450V            | 200μF/300V             | 79           | 16.7     |
| TCC 100L1-4 | 2.2        | 13.90               | 1430          | 74       | 0.93                | 14.70             | 2.5                                     | 1.8                                      | 75                   | 50μF/450V            | 300μF/300V             | 79           | 22.8     |
| TCC 100L2-4 | 3          | 18.70               | 1440          | 75       | 0.93                | 19.91             | 2.5                                     | 1.8                                      | 110                  | 60μF/450V            | 500μF/300V             | 83           | 28.7     |
| TCC 112M1-4 | 3.7        | 21.99               | 1440          | 77       | 0.95                | 24.55             | 2.5                                     | 1.7                                      | 140                  | 60μF/450V            | 600μF/300V             | 86           | 31       |
| TCC 112M2-4 | 4.0        | 22.41               | 1440          | 80       | 0.97                | 26.54             | 2.5                                     | 1.7                                      | 150                  | 60μF/450V            | 600μF/300V             | 86           | 32.8     |

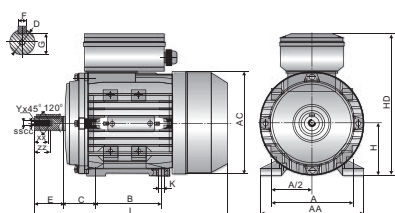
# TPC

## Series Aluminium Housing Single-Phase Multi-Mount Asynchronous Motor-Run Capacitor

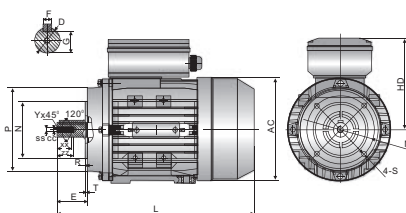
The TPC Aluminum multi-mount single phase permanent capacitor asynchronous motor adopts the same frame configurations as the TCC range with smaller terminal box arrangement and high resistance rotor.

The TPC range is suitable for most fan and square law torque applications, This range is suitable for Triac speed control and offers starting torque of 0.5-0.9 times F.L.T.

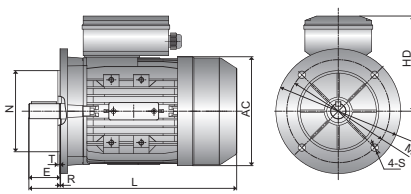
N.B.: it is recommended that single phase motors are not stopped / started more than 15 times in 1 hour in order to allow safe discharge of capacitors.



IMB3



IMB14



IMB5

### Overall & Installation Dimensions

| Frame Size | Mounting Dimensions |     |    |     |    |   |      |     |         |        |      |      |     |   |    |       |      |      |     | Overall Dimensions |     |     |      |     | Shaft End Screw Dimensions |         |     |    |    |
|------------|---------------------|-----|----|-----|----|---|------|-----|---------|--------|------|------|-----|---|----|-------|------|------|-----|--------------------|-----|-----|------|-----|----------------------------|---------|-----|----|----|
|            | A                   | B   | C  | D   | E  | F | G    | H   | K       | IM B14 |      |      |     |   |    | IM B5 |      |      |     |                    |     |     |      |     |                            |         |     |    |    |
|            |                     |     |    |     |    |   |      |     |         | M      | N    | P    | T   | R | S  | M     | N    | P    | T   | R                  | S   | AA  | AC   | AD  | HD                         | L       | SS  | XX | ZZ |
| 56         | 90                  | 71  | 36 | φ9  | 20 | 3 | 7.2  | 56  | 5.8x8.8 | φ65    | φ50  | φ80  | 2.5 | 0 | M5 | φ100  | φ80  | φ120 | 3.0 | 0                  | φ7  | 110 | φ117 | 144 | 88                         | 196     | M3  | 9  | 12 |
| 63         | 100                 | 80  | 40 | φ11 | 23 | 4 | 8.5  | 63  | 7x10    | φ75    | φ60  | φ90  | 2.5 | 0 | M5 | φ115  | φ95  | φ140 | 3.0 | 0                  | φ10 | 120 | φ130 | 181 | 118                        | 220     | M4  | 10 | 14 |
| 71*        | 112                 | 90  | 45 | φ14 | 30 | 5 | 11   | 71  | 7x10    | φ85    | φ70  | φ105 | 2.5 | 0 | M6 | φ130  | φ110 | φ160 | 3.5 | 0                  | φ10 | 132 | φ147 | 196 | 125                        | 241/255 | M5  | 12 | 17 |
| 80         | 125                 | 100 | 50 | φ19 | 40 | 6 | 15.5 | 80  | 10x13   | φ100   | φ80  | φ120 | 3.0 | 0 | M6 | φ165  | φ130 | φ200 | 3.5 | 0                  | φ12 | 160 | φ163 | 226 | 146                        | 290     | M6  | 16 | 21 |
| 90S        | 140                 | 100 | 56 | φ24 | 50 | 8 | 20   | 90  | 10x13   | φ115   | φ95  | φ140 | 3.0 | 0 | M8 | φ165  | φ130 | φ200 | 3.5 | 0                  | φ12 | 175 | φ183 | 243 | 153                        | 312     | M8  | 19 | 25 |
| 90L        | 140                 | 125 | 56 | φ24 | 50 | 8 | 20   | 90  | 10x13   | φ115   | φ95  | φ140 | 3.0 | 0 | M8 | φ165  | φ130 | φ200 | 3.5 | 0                  | φ12 | 175 | φ183 | 243 | 153                        | 337/367 | M8  | 19 | 25 |
| 100L**     | 160                 | 140 | 63 | φ28 | 60 | 8 | 24   | 100 | 12x15   | φ130   | φ110 | φ160 | 3.5 | 0 | M8 | φ215  | φ180 | φ250 | 4.0 | 0                  | φ15 | 198 | φ205 | 265 | 165                        | 369/387 | M10 | 22 | 30 |

\*\* This frame size has two housing sizes, the rated output is for normal "L" size, and increased output is for the large "L" size ( refer to the figures in the bracket "()" )

## Technical Data (at 230V/50Hz)

| Model       | Power (KW) | Current (A) | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | Starting Current (A) | Run Capacitor (μF/V) | Noise dB(A) | W.T (Kg) |
|-------------|------------|-------------|---------------|----------|---------------------|-----------------------------------------|------------------------------------------|----------------------|----------------------|-------------|----------|
| TPC 5612    | 0.09       | 0.80        | 2740          | 54       | 0.91                | 0.69                                    | 1.8                                      | 2.5                  | 4μF/450V             | 67          | 2.8      |
| TPC 5622    | 0.12       | 0.90        | 2760          | 60       | 0.93                | 0.69                                    | 1.8                                      | 3.5                  | 6μF/450V             | 67          | 3.05     |
| TPC 5632    | 0.18       | 1.40        | 2760          | 62       | 0.93                | 0.55                                    | 1.8                                      | 4.5                  | 8μF/450V             | 70          | 3.5      |
| TPC 6312    | 0.18       | 1.40        | 2760          | 62       | 0.93                | 0.55                                    | 1.8                                      | 4.5                  | 8μF/450V             | 70          | 4.1      |
| TPC 6322    | 0.25       | 1.70        | 2780          | 66       | 0.93                | 0.55                                    | 1.8                                      | 6                    | 10μF/450V            | 70          | 4.5      |
| TPC 6332    | 0.37       | 2.50        | 2780          | 67       | 0.93                | 0.45                                    | 1.65                                     | 8                    | 12μF/450V            | 75          | 5.25     |
| TPC 711-2   | 0.37       | 2.60        | 2640          | 66       | 0.94                | 0.72                                    | 1.65                                     | 8                    | 14μF/450V            | 75          | 6.1      |
| TPC 712-2   | 0.55       | 3.60        | 2760          | 71       | 0.95                | 0.7                                     | 1.8                                      | 14                   | 20μF/450V            | 75          | 7.7      |
| TPC 801-2   | 0.75       | 4.50        | 2735          | 73       | 0.98                | 0.68                                    | 1.75                                     | 16                   | 25μF/450V            | 75          | 10.3     |
| TPC 802-2   | 1.10       | 6.60        | 2720          | 74       | 0.98                | 0.65                                    | 1.8                                      | 23                   | 35μF/450V            | 78          | 11.6     |
| TPC 803-2   | 1.50       | 9.20        | 2730          | 74       | 0.98                | 0.65                                    | 1.8                                      | 31                   | 50μF/450V            | 78          | 13.6     |
| TPC 90S-2   | 1.50       | 8.50        | 2755          | 76       | 0.98                | 0.65                                    | 1.8                                      | 31                   | 50μF/450V            | 80          | 14.6     |
| TPC 90L-2   | 2.20       | 12.30       | 2765          | 77       | 0.98                | 0.65                                    | 1.8                                      | 51                   | 70μF/450V            | 80          | 17.8     |
| TPC 100L-2  | 3.00       | 16.90       | 2765          | 77       | 0.99                | 0.55                                    | 1.75                                     | 64                   | 90μF/450V            | 83          | 23.7     |
| TPC 5614    | 0.06       | 0.60        | 1360          | 50       | 0.94                | 0.75                                    | 1.75                                     | 2                    | 4μF/450V             | 63          | 3.3      |
| TPC 5624    | 0.09       | 0.80        | 1360          | 52       | 0.94                | 0.6                                     | 1.75                                     | 3                    | 6μF/451V             | 63          | 3.6      |
| TPC 5634    | 0.12       | 1.30        | 1370          | 52       | 0.92                | 0.6                                     | 1.75                                     | 3                    | 8μF/452V             | 65          | 4.1      |
| TPC 6314    | 0.12       | 1.30        | 1370          | 52       | 0.92                | 0.6                                     | 1.75                                     | 3                    | 8μF/453V             | 65          | 4.45     |
| TPC 6324    | 0.18       | 1.50        | 1370          | 54       | 0.94                | 0.6                                     | 1.6                                      | 4                    | 10μF/450V            | 65          | 5.05     |
| TPC 6334    | 0.25       | 2.00        | 1370          | 58       | 0.95                | 0.6                                     | 1.6                                      | 5                    | 12μF/450V            | 65          | 5.4      |
| TPC 711-4   | 0.25       | 2.00        | 1320          | 56       | 0.94                | 0.75                                    | 1.6                                      | 5                    | 14μF/450V            | 65          | 6.2      |
| TPC 712-4   | 0.37       | 2.90        | 1325          | 58       | 0.94                | 0.7                                     | 1.55                                     | 7                    | 20μF/450V            | 68          | 7.3      |
| TPC 801-4   | 0.55       | 3.90        | 1340          | 64       | 0.94                | 0.7                                     | 1.7                                      | 11                   | 25μF/450V            | 73          | 10.1     |
| TPC 802-4   | 0.75       | 5.30        | 1340          | 64       | 0.94                | 0.7                                     | 1.75                                     | 15                   | 35μF/450V            | 73          | 11.4     |
| TPC 90S-4   | 1.10       | 7.00        | 1355          | 72       | 0.95                | 0.68                                    | 1.8                                      | 22                   | 50μF/450V            | 75          | 14.4     |
| TPC 90L-4   | 1.50       | 9.30        | 1360          | 74       | 0.95                | 0.68                                    | 1.8                                      | 32                   | 50μF/450V            | 78          | 17.5     |
| TPC 100L1-4 | 2.20       | 12.60       | 1390          | 78       | 0.97                | 0.48                                    | 1.75                                     | 49                   | 70μF/450V            | 80          | 24.5     |
| TPC 100L2-4 | 3.00       | 16.50       | 1380          | 79       | 0.99                | 0.45                                    | 1.6                                      | 61                   | 90μF/450V            | 80          | 32       |
| TPC 6316    | 0.09       | 0.92        | 900           | 46       | 0.92                | 0.8                                     | 1.45                                     | 2                    | 8μF/464V             | 63          | 5.1      |
| TPC 6326    | 0.12       | 1.05        | 900           | 54       | 0.92                | 0.75                                    | 1.45                                     | 3                    | 11μF/465V            | 63          | 6        |
| TPC 7116    | 0.18       | 1.55        | 900           | 55       | 0.92                | 0.7                                     | 1.5                                      | 4                    | 16μF/466V            | 68          | 6.3      |
| TPC 7126    | 0.25       | 2.07        | 900           | 57       | 0.92                | 0.68                                    | 1.5                                      | 5                    | 20μF/467V            | 68          | 7.6      |
| TPC 8016    | 0.37       | 2.82        | 900           | 62       | 0.92                | 0.68                                    | 1.6                                      | 8                    | 25μF/468V            | 68          | 9        |
| TPC 8026    | 0.55       | 4.08        | 900           | 63       | 0.93                | 0.68                                    | 1.6                                      | 14                   | 30μF/469V            | 70          | 11.6     |
| TPC 90S6    | 0.75       | 5.20        | 900           | 66       | 0.95                | 0.65                                    | 1.6                                      | 16                   | 40μF/470V            | 70          | 13.5     |
| TPC 90L6    | 1.10       | 7.51        | 900           | 67       | 0.95                | 0.62                                    | 1.6                                      | 25                   | 50μF/471V            | 70          | 16.2     |

# TECA-BM

## **Series Aluminium Housing Three-Phase Multi-Mount Asynchronous Brake Motor With Squirrel Cage Rotor - Direct Current Brake**



TEC brake-motor in the TECA-BM series utilises an asynchronous three-phase motor and an electromagnetic D.C brake Unit.

Features include reliability, operating safety, and quick braking time (connection and disconnection=5-80 milli seconds) they are suitable for a variety of applications, such as:

- Braking of loads or torques on the drive shaft
- Braking of rotating loads to reduce stopping time
- Braking operations to assist set-up precision
- Braking of machine parts, in accordance with safety standards

## Technical Features

**2 poles-3000rpm-50Hz**  
**Brake motors have a  $\pm 6\%$  tolerance on the supply voltage**

| Model           | Power (KW) | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | Current (A) |       |       | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | I <sub>st</sub> /I <sub>n</sub> (Times) | Noise dB(A) |
|-----------------|------------|---------------|----------|---------------------|-------------|-------|-------|-----------------------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|-------------|
|                 |            |               |          |                     | 230V        | 400V  | 690V  |                                         |                                          |                                          |                                         |             |
| TECA-BM 631-2   | 0.18       | 2710          | 63       | 0.75                | 0.95        | 0.55  | 0.32  | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 61          |
| TECA-BM 632-2   | 0.25       | 2710          | 65       | 0.78                | 1.23        | 0.71  | 0.41  | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 61          |
| TECA-BM 633-2   | 0.37       | 2710          | 65       | 0.78                | 1.82        | 1.05  | 0.61  | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 62          |
| TECA-BM 711-2   | 0.37       | 2730          | 70       | 0.79                | 1.67        | 0.97  | 0.56  | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 64          |
| TECA-BM 712-2   | 0.55       | 2760          | 71       | 0.79                | 2.45        | 1.42  | 0.82  | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 64          |
| TECA-BM 713-2   | 0.75       | 2730          | 72       | 0.82                | 3.18        | 1.83  | 1.06  | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 65          |
| TECA-BM 801-2   | 0.75       | 2770          | 73       | 0.84                | 3.06        | 1.77  | 1.02  | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 67          |
| TECA-BM 802-2   | 1.1        | 2770          | 76.2     | 0.83                | 4.35        | 2.51  | 1.45  | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 67          |
| TECA-BM 803-2   | 1.5        | 2800          | 78.5     | 0.83                | 5.87        | 3.32  | 1.92  | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 70          |
| TECA-BM 90S-2   | 1.5        | 2840          | 78.5     | 0.84                | 5.76        | 3.28  | 1.90  | 2.2                                     | 2.4                                      | 1.5                                      | 6                                       | 72          |
| TECA-BM 90L1-2  | 2.2        | 2840          | 81       | 0.85                | 8.0         | 4.61  | 2.66  | 2.2                                     | 2.4                                      | 1.4                                      | 6                                       | 72          |
| TECA-BM 90L2-2  | 3          | 2840          | 82.6     | 0.86                | 10.56       | 6.10  | 3.52  | 2.2                                     | 2.4                                      | 1.4                                      | 6                                       | 74          |
| TECA-BM 100L1-2 | 3          | 2840          | 82.6     | 0.87                | 10.44       | 6.03  | 3.48  | 2.2                                     | 2.3                                      | 1.4                                      | 7                                       | 76          |
| TECA-BM 100L2-2 | 4          | 2850          | 84.2     | 0.87                | 13.65       | 7.88  | 4.55  | 2.2                                     | 2.3                                      | 1.4                                      | 7.5                                     | 77          |
| TECA-BM 112M-2  | 4          | 2880          | 84.2     | 0.87                | 13.65       | 7.88  | 4.55  | 2.2                                     | 2.3                                      | 1.4                                      | 7.5                                     | 77          |
| TECA-BM 112L-2  | 5.5        | 2880          | 85.7     | 0.88                | 18.23       | 10.53 | 6.08  | 2.2                                     | 2.3                                      | 1.2                                      | 7.5                                     | 78          |
| TECA-BM 132S1-2 | 5.5        | 2900          | 85.7     | 0.88                | 18.23       | 10.53 | 6.08  | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 80          |
| TECA-BM 132S2-2 | 7.5        | 2920          | 87       | 0.88                | 24.49       | 14.14 | 8.16  | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 80          |
| TECA-BM 132M1-2 | 9.2        | 2930          | 88       | 0.89                | 29.87       | 17.25 | 9.96  | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 81          |
| TECA-BM 132M2-2 | 11         | 2930          | 88.4     | 0.9                 | 34.57       | 19.96 | 11.52 | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 83          |
| TECA-BM 160M1-2 | 11         | 2940          | 88.4     | 0.9                 | 34.57       | 19.96 | 11.52 | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 86          |
| TECA-BM 160M2-2 | 15         | 2940          | 89.4     | 0.91                | 46.09       | 26.61 | 15.36 | 2                                       | 2.2                                      | 1.2                                      | 7.5                                     | 86          |
| TECA-BM 160L-2  | 18.5       | 2940          | 90       | 0.91                | 56.47       | 32.6  | 18.82 | 2                                       | 2.2                                      | 1.1                                      | 7.5                                     | 86          |

| Type           | Brake Type K | Brake Torque Nm | Brake Rated Power W | J Brake Pd <sup>2</sup> Kg m <sup>2</sup> | No. of Starts/hr. Under No Load | Delayed Cut-in Time ★ Msec. | Quick Cut-in Time Msec. | Cut Out Time Msec. | Noise dB(A) |
|----------------|--------------|-----------------|---------------------|-------------------------------------------|---------------------------------|-----------------------------|-------------------------|--------------------|-------------|
| TECA-BM 63     | K 1          | 5               | 15                  | 0.00005                                   | 3000                            | 45                          | 20                      | 10                 | 62          |
| TECA-BM 71     | K 2          | 12              | 20                  | 0.00014                                   | 3000                            | 50                          | 30                      | 15                 | 64          |
| TECA-BM 80     | K 3          | 16              | 25                  | 0.00021                                   | 1300                            | 55                          | 30                      | 15                 | 67          |
| TECA-BM 90S    | K 4          | 20              | 30                  | 0.00039                                   | 1100                            | 65                          | 40                      | 15                 | 72          |
| ●TECA-BM 90S   | K 4 D        | 40              | 30                  | 0.00078                                   | 1100                            | 65                          | 40                      | 15                 | 72          |
| TECA-BM 90 L   | K 4          | 20              | 30                  | 0.00039                                   | 1100                            | 65                          | 40                      | 15                 | 72          |
| ●TECA-BM 90 L  | K 4 D        | 40              | 30                  | 0.00078                                   | 1100                            | 65                          | 40                      | 15                 | 72          |
| TECA-BM 100 L  | K 5          | 40              | 45                  | 0.00104                                   | 900                             | 75                          | 45                      | 20                 | 76          |
| ●TECA-BM 100 L | K 6          | 60              | 50                  | 0.00135                                   | 900                             | 180                         | 85                      | 25                 | 76          |
| TECA-BM 112 MT | K 5          | 40              | 45                  | 0.00104                                   | 880                             | 75                          | 45                      | 20                 | 77          |
| TECA-BM 112 M  | K 6          | 60              | 50                  | 0.00135                                   | 880                             | 180                         | 85                      | 25                 | 78          |
| TECA-BM 132 S  | K 7          | 90              | 55                  | 0.00219                                   | 480                             | 200                         | 95                      | 50                 | 80          |
| ●TECA-BM 132 S | K 7 D        | 180             | 55                  | 0.00438                                   | 480                             | 200                         | 95                      | 50                 | 80          |
| TECA-BM 132 M  | K 7          | 90              | 55                  | 0.00219                                   | 450                             | 200                         | 95                      | 50                 | 80          |
| ●TECA-BM 132 M | K 7 D        | 180             | 55                  | 0.00438                                   | 480                             | 200                         | 95                      | 50                 | 80          |
| TECA-BM 160 MT | K 7 D        | 180             | 55                  | 0.00438                                   | 350                             | 200                         | 95                      | 50                 | 86          |
| TECA-BM 160 L  | K 8          | 200             | 60                  | 0.00408                                   | 350                             | 210                         | 100                     | 60                 | 86          |
| ●TECA-BM 160 L | K 8 D        | 400             | 60                  | 0.00816                                   | 350                             | 210                         | 100                     | 60                 | 86          |

● Motor with increased braking torque on request

★ On request, delayed brake cut in time for lifting equipment. We suggest double disk brake D for lifting equipment.

## Technical Features

### 4 poles-1500rpm-50Hz

Brake motors have a  $\pm 6\%$  tolerance on the supply voltage

| Model           | Power (KW) | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | Current (A) |       |       | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | I <sub>st</sub> /I <sub>n</sub> (Times) | Noise dB(A) |
|-----------------|------------|---------------|----------|---------------------|-------------|-------|-------|-----------------------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|-------------|
|                 |            |               |          |                     | 230V        | 400V  | 690V  |                                         |                                          |                                          |                                         |             |
| TECA-BM 631-4   | 0.12       | 1350          | 57       | 0.64                | 0.82        | 0.47  | 0.27  | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 52          |
| TECA-BM 632-4   | 0.18       | 1350          | 59       | 0.65                | 1.17        | 0.68  | 0.39  | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 52          |
| TECA-BM 633-4   | 0.25       | 1350          | 60       | 0.66                | 1.58        | 0.91  | 0.53  | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 54          |
| TECA-BM 711-4   | 0.25       | 1350          | 60       | 0.72                | 1.45        | 0.84  | 0.48  | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 55          |
| TECA-BM 712-4   | 0.37       | 1370          | 65       | 0.74                | 1.92        | 1.11  | 0.64  | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 55          |
| TECA-BM 713-4   | 0.55       | 1380          | 66       | 0.75                | 2.78        | 1.60  | 0.93  | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 57          |
| TECA-BM 801-4   | 0.55       | 1370          | 67       | 0.75                | 2.74        | 1.58  | 0.91  | 2.2                                     | 2.4                                      | 1.7                                      | 6                                       | 58          |
| TECA-BM 802-4   | 0.75       | 1380          | 72       | 0.78                | 3.34        | 1.93  | 1.11  | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 58          |
| TECA-BM 803-4   | 1.1        | 1390          | 76.2     | 0.78                | 4.63        | 2.67  | 1.54  | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 60          |
| TECA-BM 90S-4   | 1.1        | 1400          | 76.2     | 0.79                | 4.57        | 2.64  | 1.52  | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 61          |
| TECA-BM 90L-4   | 1.5        | 1400          | 78.5     | 0.8                 | 5.97        | 3.45  | 1.99  | 2.2                                     | 2.4                                      | 1.6                                      | 6                                       | 61          |
| TECA-BM 90L2-4  | 2.2        | 1400          | 81       | 0.8                 | 8.45        | 4.90  | 2.83  | 2.2                                     | 2.4                                      | 1.5                                      | 7                                       | 63          |
| TECA-BM 100L1-4 | 2.2        | 1420          | 81       | 0.81                | 8.38        | 4.84  | 2.79  | 2.2                                     | 2.3                                      | 1.5                                      | 7                                       | 64          |
| TECA-BM 100L2-4 | 3          | 1420          | 82.6     | 0.81                | 11.21       | 6.47  | 3.74  | 2.2                                     | 2.3                                      | 1.5                                      | 7                                       | 64          |
| TECA-BM 100L3-4 | 4          | 1430          | 84.2     | 0.82                | 14.18       | 8.36  | 4.83  | 2.2                                     | 2.3                                      | 1.5                                      | 7                                       | 65          |
| TECA-BM 112M-4  | 4          | 1430          | 84.2     | 0.83                | 14.31       | 8.26  | 4.77  | 2.2                                     | 2.2                                      | 1.5                                      | 7                                       | 65          |
| TECA-BM 112L-4  | 5.5        | 1440          | 85.7     | 0.83                | 19.33       | 11.16 | 6.44  | 2.2                                     | 2.2                                      | 1.4                                      | 7                                       | 68          |
| TECA-BM 132S-4  | 5.5        | 1450          | 85.7     | 0.84                | 19.1        | 11.03 | 6.37  | 2.2                                     | 2.2                                      | 1.4                                      | 7                                       | 71          |
| TECA-BM 132M-4  | 7.5        | 1450          | 87       | 0.85                | 25.35       | 14.64 | 8.45  | 2.2                                     | 2.2                                      | 1.4                                      | 7                                       | 71          |
| TECA-BM 132L1-4 | 9.2        | 1460          | 87.5     | 0.85                | 30.92       | 17.85 | 10.31 | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 74          |
| TECA-BM 132L2-4 | 10         | 1460          | 88       | 0.85                | 33.42       | 19.3  | 11.14 | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 74          |
| TECA-BM 132L2-4 | 11         | 1460          | 88.4     | 0.86                | 36.17       | 20.88 | 12.06 | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 74          |
| TECA-BM 160M-4  | 11         | 1460          | 88.4     | 0.87                | 35.76       | 20.64 | 11.92 | 2.2                                     | 2.2                                      | 1.4                                      | 7                                       | 75          |
| TECA-BM 160L-4  | 15         | 1460          | 88.4     | 0.87                | 48.76       | 28.15 | 16.25 | 2.2                                     | 2.2                                      | 1.4                                      | 7.5                                     | 75          |

| Type           | Brake Type K | Brake Torque Nm | Brake Rated Power W | J Brake Pd <sup>2</sup> Kgm <sup>2</sup> | No. of Starts/hr. Under No Load | Delayed Cut-in Time ★ Msec. | Quick Cut-in Time Msec. | Cut Out Time Msec. | Noise dB(A) |
|----------------|--------------|-----------------|---------------------|------------------------------------------|---------------------------------|-----------------------------|-------------------------|--------------------|-------------|
| TECA-BM 63     | K 1          | 5               | 15                  | 0.00005                                  | 3000                            | 45                          | 20                      | 10                 | 52          |
| TECA-BM 71     | K 2          | 12              | 20                  | 0.00014                                  | 3000                            | 50                          | 30                      | 15                 | 55          |
| TECA-BM 80     | K 3          | 16              | 25                  | 0.00021                                  | 1300                            | 55                          | 30                      | 15                 | 58          |
| TECA-BM 90S    | K 4          | 20              | 30                  | 0.00039                                  | 1100                            | 65                          | 40                      | 15                 | 61          |
| ●TECA-BM 90S   | K 4 D        | 40              | 30                  | 0.00078                                  | 1100                            | 65                          | 40                      | 15                 | 61          |
| TECA-BM 90 L   | K 4          | 20              | 30                  | 0.00039                                  | 1100                            | 65                          | 40                      | 15                 | 63          |
| ●TECA-BM 90 L  | K 4 D        | 40              | 30                  | 0.00078                                  | 1100                            | 65                          | 40                      | 15                 | 63          |
| TECA-BM 100 L  | K 5          | 40              | 45                  | 0.00104                                  | 900                             | 75                          | 45                      | 20                 | 64          |
| ●TECA-BM 100 L | K 6          | 60              | 50                  | 0.00135                                  | 900                             | 180                         | 85                      | 25                 | 65          |
| TECA-BM 112 MT | K 5          | 40              | 45                  | 0.00104                                  | 880                             | 75                          | 45                      | 20                 | 65          |
| TECA-BM 112 M  | K 6          | 60              | 50                  | 0.00135                                  | 880                             | 180                         | 85                      | 25                 | 65          |
| TECA-BM 132 S  | K 7          | 90              | 55                  | 0.00219                                  | 480                             | 200                         | 95                      | 50                 | 71          |
| ●TECA-BM 132 S | K 7 D        | 180             | 55                  | 0.00438                                  | 480                             | 200                         | 95                      | 50                 | 71          |
| TECA-BM 132 M  | K 7          | 90              | 55                  | 0.00219                                  | 450                             | 200                         | 95                      | 50                 | 71          |
| ●TECA-BM 132 M | K 7 D        | 180             | 55                  | 0.00438                                  | 480                             | 200                         | 95                      | 50                 | 71          |
| TECA-BM 160 MT | K 7 D        | 180             | 55                  | 0.00438                                  | 350                             | 200                         | 95                      | 50                 | 75          |
| TECA-BM 160 L  | K 8          | 200             | 60                  | 0.00408                                  | 350                             | 210                         | 100                     | 60                 | 75          |
| ●TECA-BM 160 L | K 8 D        | 400             | 60                  | 0.00816                                  | 350                             | 210                         | 100                     | 60                 | 75          |

● Motor with increased braking torque on request

★ On request, delayed brake cut in time for lifting equipment. We suggest double disk brake D for lifting equipment.

## Technical Features

### 6 poles-1000rpm-50Hz

Brake motors have a  $\pm 6\%$  tolerance on the supply voltage

| Model           | Power (KW) | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | Current (A) |       |       | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | I <sub>st</sub> /I <sub>n</sub> (Times) | Noise dB(A) |
|-----------------|------------|---------------|----------|---------------------|-------------|-------|-------|-----------------------------------------|------------------------------------------|------------------------------------------|-----------------------------------------|-------------|
|                 |            |               |          |                     | 230V        | 400V  | 690V  |                                         |                                          |                                          |                                         |             |
| TECA-BM 631-6   | 0.09       | 840           | 42       | 0.61                | 0.88        | 0.51  | 0.29  | 2                                       | 2                                        | 1.5                                      | 3.5                                     | 50          |
| TECA-BM 632-6   | 0.12       | 850           | 45       | 0.62                | 1.08        | 0.62  | 0.36  | 2                                       | 2                                        | 1.5                                      | 3.5                                     | 50          |
| TECA-BM 711-6   | 0.18       | 880           | 56       | 0.66                | 1.22        | 0.70  | 0.41  | 1.6                                     | 1.7                                      | 1.5                                      | 4                                       | 52          |
| TECA-BM 712-6   | 0.25       | 900           | 59       | 0.7                 | 1.51        | 0.87  | 0.50  | 2.1                                     | 2.2                                      | 1.5                                      | 4                                       | 52          |
| TECA-BM 713-6   | 0.37       | 890           | 61       | 0.69                | 2.2         | 1.27  | 0.73  | 2                                       | 2.1                                      | 1.5                                      | 4                                       | 54          |
| TECA-BM 801-6   | 0.37       | 900           | 62       | 0.7                 | 2.13        | 1.23  | 0.71  | 1.9                                     | 1.9                                      | 1.5                                      | 4                                       | 56          |
| TECA-BM 802-6   | 0.55       | 900           | 67       | 0.72                | 2.85        | 1.65  | 0.95  | 2                                       | 2.3                                      | 1.5                                      | 4                                       | 56          |
| TECA-BM 803-6   | 0.75       | 900           | 68       | 0.72                | 3.83        | 2.21  | 1.28  | 2                                       | 2.3                                      | 1.5                                      | 4                                       | 58          |
| TECA-BM 90S-6   | 0.75       | 920           | 69       | 0.72                | 3.77        | 2.18  | 1.26  | 2.2                                     | 2.2                                      | 1.5                                      | 5.5                                     | 59          |
| TECA-BM 90L-6   | 1.1        | 925           | 72       | 0.73                | 5.23        | 3.02  | 1.74  | 2.2                                     | 2.2                                      | 1.3                                      | 5.5                                     | 59          |
| TECA-BM 100L-6  | 1.5        | 945           | 74       | 0.76                | 6.67        | 3.85  | 2.22  | 2.2                                     | 2.2                                      | 1.3                                      | 6                                       | 61          |
| TECA-BM 112M-6  | 2.2        | 955           | 78       | 0.76                | 9.28        | 5.36  | 3.09  | 2.2                                     | 2.2                                      | 1.3                                      | 6                                       | 64          |
| TECA-BM 132S-6  | 3          | 960           | 79       | 0.76                | 12.49       | 7.21  | 4.16  | 2                                       | 2                                        | 1.3                                      | 6.5                                     | 64          |
| TECA-BM 132M1-6 | 4          | 960           | 80.5     | 0.76                | 16.35       | 9.44  | 5.45  | 2                                       | 2                                        | 1.3                                      | 6.5                                     | 68          |
| TECA-BM 132M2-6 | 5.5        | 960           | 83       | 0.77                | 21.51       | 12.42 | 7.17  | 2                                       | 2                                        | 1.3                                      | 6.5                                     | 68          |
| TECA-BM 132L-6  | 7.5        | 960           | 85       | 0.77                | 28.65       | 16.54 | 9.55  | 2                                       | 2                                        | 1.3                                      | 6.5                                     | 68          |
| TECA-BM 160M-6  | 7.5        | 960           | 86       | 0.8                 | 27.25       | 15.73 | 9.08  | 2                                       | 2.2                                      | 1.3                                      | 6.5                                     | 68          |
| TECA-BM 160L-6  | 11         | 960           | 87.5     | 0.79                | 39.78       | 22.97 | 13.26 | 2                                       | 2.2                                      | 1.2                                      | 6.5                                     | 73          |

| Type            | Brake Type K | Brake Torque Nm | Brake Rated Power W | J Brake Pd <sup>2</sup> Kg m <sup>2</sup> | No. of Starts/hr. Under No Load | Delayed Cut-in Time ★ Msec. | Quick Cut-in Time Msec. | Cut Out Time Msec. | Noise dB(A) |
|-----------------|--------------|-----------------|---------------------|-------------------------------------------|---------------------------------|-----------------------------|-------------------------|--------------------|-------------|
| TECA-BM 63      | K 1          | 5               | 15                  | 0.00005                                   | 3000                            | 45                          | 20                      | 10                 | 50          |
| TECA-BM 71      | K 2          | 12              | 20                  | 0.00014                                   | 3000                            | 50                          | 30                      | 15                 | 52          |
| TECA-BM 80      | K 3          | 16              | 25                  | 0.00021                                   | 1300                            | 55                          | 30                      | 15                 | 56          |
| TECA-BM 90S     | K 4          | 20              | 30                  | 0.00039                                   | 1100                            | 65                          | 40                      | 15                 | 59          |
| ● TECA-BM 90S   | K 4 D        | 40              | 30                  | 0.00078                                   | 1100                            | 65                          | 40                      | 15                 | 59          |
| TECA-BM 90 L    | K 4          | 20              | 30                  | 0.00039                                   | 1100                            | 65                          | 40                      | 15                 | 59          |
| ● TECA-BM 90 L  | K 4 D        | 40              | 30                  | 0.00078                                   | 1100                            | 65                          | 40                      | 15                 | 59          |
| TECA-BM 100 L   | K 5          | 40              | 45                  | 0.00104                                   | 900                             | 75                          | 45                      | 20                 | 61          |
| ● TECA-BM 100 L | K 6          | 60              | 50                  | 0.00135                                   | 900                             | 180                         | 85                      | 25                 | 61          |
| TECA-BM 112 MT  | K 5          | 40              | 45                  | 0.00104                                   | 880                             | 75                          | 45                      | 20                 | 64          |
| TECA-BM 112 M   | K 6          | 60              | 50                  | 0.00135                                   | 880                             | 180                         | 85                      | 25                 | 64          |
| TECA-BM 132 S   | K 7          | 90              | 55                  | 0.00219                                   | 480                             | 200                         | 95                      | 50                 | 64          |
| ● TECA-BM 132 S | K 7 D        | 180             | 55                  | 0.00438                                   | 480                             | 200                         | 95                      | 50                 | 64          |
| TECA-BM 132 M   | K 7          | 90              | 55                  | 0.00219                                   | 450                             | 200                         | 95                      | 50                 | 68          |
| ● TECA-BM 132 M | K 7 D        | 180             | 55                  | 0.00438                                   | 480                             | 200                         | 95                      | 50                 | 68          |
| TECA-BM 160 MT  | K 7 D        | 180             | 55                  | 0.00438                                   | 350                             | 200                         | 95                      | 50                 | 68          |
| TECA-BM 160 L   | K 8          | 200             | 60                  | 0.00408                                   | 350                             | 210                         | 100                     | 60                 | 73          |
| ● TECA-BM 160 L | K 8 D        | 400             | 60                  | 0.00816                                   | 350                             | 210                         | 100                     | 60                 | 73          |

● Motor with increased braking torque on request

★ On request, delayed brake cut in time for lifting equipment. We suggest double disk brake D for lifting equipment.

## Technical Features

### 8 poles-750rpm-50Hz

Brake motors have a  $\pm 6\%$  tolerance on the supply voltage

| Model           | Power (KW) | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | Current (A) |       |      | $T_{st}/T_n$ (Times) | $T_{max}/T_n$ (Times) | $T_{min}/T_n$ (Times) | $I_{st}/I_n$ (Times) | Noise dB(A) |
|-----------------|------------|---------------|----------|---------------------|-------------|-------|------|----------------------|-----------------------|-----------------------|----------------------|-------------|
|                 |            |               |          |                     | 230V        | 400V  | 690V |                      |                       |                       |                      |             |
| TECA-BM 711-8   | 0.09       | 680           | 48       | 0.56                | 0.84        | 0.48  | 0.28 | 1.5                  | 1.7                   | 1.3                   | 3                    | 50          |
| TECA-BM 712-8   | 0.12       | 690           | 51       | 0.59                | 1.00        | 0.58  | 0.33 | 1.6                  | 1.7                   | 1.3                   | 2.7                  | 50          |
| TECA-BM 801-8   | 0.18       | 680           | 51       | 0.61                | 1.45        | 0.84  | 0.48 | 1.5                  | 1.7                   | 1.3                   | 2.8                  | 52          |
| TECA-BM 802-8   | 0.25       | 680           | 56       | 0.61                | 1.83        | 1.06  | 0.61 | 1.6                  | 2                     | 1.3                   | 2.7                  | 52          |
| TECA-BM 90S-8   | 0.37       | 680           | 63       | 0.63                | 2.33        | 1.35  | 0.78 | 1.6                  | 1.8                   | 1.3                   | 2.8                  | 56          |
| TECA-BM 90L-8   | 0.55       | 680           | 66       | 0.65                | 3.21        | 1.85  | 1.07 | 1.6                  | 1.8                   | 1.3                   | 3                    | 56          |
| TECA-BM 100L1-8 | 0.75       | 710           | 66       | 0.67                | 4.24        | 2.45  | 1.41 | 1.7                  | 2.1                   | 1.3                   | 3.5                  | 59          |
| TECA-BM 100L2-8 | 1.1        | 710           | 72       | 0.69                | 5.54        | 3.20  | 1.85 | 1.7                  | 2.1                   | 1.2                   | 3.5                  | 59          |
| TECA-BM 112M-8  | 1.5        | 710           | 74       | 0.68                | 7.45        | 4.30  | 2.48 | 1.8                  | 2.1                   | 1.2                   | 4.2                  | 61          |
| TECA-BM 132S-8  | 2.2        | 720           | 75       | 0.71                | 10.33       | 5.96  | 3.44 | 2                    | 2                     | 1.2                   | 5.5                  | 64          |
| TECA-BM 132M-8  | 3          | 720           | 77       | 0.73                | 13.34       | 7.70  | 4.45 | 2                    | 2                     | 1.2                   | 5.5                  | 64          |
| TECA-BM 160M1-8 | 4          | 730           | 80       | 0.73                | 17.12       | 9.89  | 5.71 | 1.9                  | 2.1                   | 1.2                   | 6                    | 68          |
| TECA-BM 160M2-8 | 5.5        | 720           | 83.5     | 0.74                | 22.25       | 12.85 | 7.42 | 2                    | 2.2                   | 1.2                   | 6                    | 68          |
| TECA-BM 160L-8  | 7.5        | 720           | 85       | 0.75                | 29.41       | 17.0  | 9.8  | 1.9                  | 2.2                   | 1.2                   | 6                    | 68          |

| Type           | Brake Type K | Brake Torque Nm | Brake Rated Power W | J Brake $Pd^2$ Kgm <sup>2</sup> | No. of Starts/hr. Under No Load | Delayed Cut-in Time ★ Msec. | Quick Cut-in Time Msec. | Cut Out Time Msec. | Noise dB(A) |
|----------------|--------------|-----------------|---------------------|---------------------------------|---------------------------------|-----------------------------|-------------------------|--------------------|-------------|
| 63 TECA-BM     | K 1          | 5               | 15                  | 0.00005                         | 3000                            | 45                          | 20                      | 10                 | 50          |
| 71 TECA-BM     | K 2          | 12              | 20                  | 0.00014                         | 3000                            | 50                          | 30                      | 15                 | 50          |
| 80 TECA-BM     | K 3          | 16              | 25                  | 0.00021                         | 1300                            | 55                          | 30                      | 15                 | 52          |
| 90 S TECA-BM   | K 4          | 20              | 30                  | 0.00039                         | 1100                            | 65                          | 40                      | 15                 | 56          |
| ●90 S TECA-BM  | K 4 D        | 40              | 30                  | 0.00078                         | 1100                            | 65                          | 40                      | 15                 | 56          |
| 90 L TECA-BM   | K 4          | 20              | 30                  | 0.00039                         | 1100                            | 65                          | 40                      | 15                 | 56          |
| ●90 L TECA-BM  | K 4 D        | 40              | 30                  | 0.00078                         | 1100                            | 65                          | 40                      | 15                 | 56          |
| 100 L TECA-BM  | K 5          | 40              | 45                  | 0.00104                         | 900                             | 75                          | 45                      | 20                 | 59          |
| ●100 L TECA-BM | K 6          | 60              | 50                  | 0.00135                         | 900                             | 180                         | 85                      | 25                 | 59          |
| 112 MT TECA-BM | K 5          | 40              | 45                  | 0.00104                         | 880                             | 75                          | 45                      | 20                 | 61          |
| 112 M TECA-BM  | K 6          | 60              | 50                  | 0.00135                         | 880                             | 180                         | 85                      | 25                 | 61          |
| 132 S TECA-BM  | K 7          | 90              | 55                  | 0.00219                         | 480                             | 200                         | 95                      | 50                 | 64          |
| ●132 S TECA-BM | K 7 D        | 180             | 55                  | 0.00438                         | 480                             | 200                         | 95                      | 50                 | 64          |
| 132 M TECA-BM  | K 7          | 90              | 55                  | 0.00219                         | 450                             | 200                         | 95                      | 50                 | 64          |
| ●132 M TECA-BM | K 7 D        | 180             | 55                  | 0.00438                         | 480                             | 200                         | 95                      | 50                 | 64          |
| 160 MT TECA-BM | K 7 D        | 180             | 55                  | 0.00438                         | 350                             | 200                         | 95                      | 50                 | 68          |
| 160 L TECA-BM  | K 8          | 200             | 60                  | 0.00408                         | 350                             | 210                         | 100                     | 60                 | 68          |
| ●160 L TECA-BM | K 8 D        | 400             | 60                  | 0.00816                         | 350                             | 210                         | 100                     | 60                 | 68          |

● Motor with increased braking torque on request

★ On request, delayed brake cut in time for lifting equipment. We suggest double disk brake D for lifting equipment.

## Direct Current Brake Series CC

### OPERATING PRINCIPLE

The direct current brake is fed by means of an electronic circuit with diode bridge (rectifier) situated inside the terminal-box. When feeding the electromagnet (5), the movable anchor (4) is attracted towards the same, thus loading the braking torque springs (9) and allowing the disk (2), equipped with friction pad and fitted on the gear hub (6) to turn solely the motor shaft (1) by means of a key (7). By interrupting the feeding, the movable anchor (4), pushed by the braking torque springs (9), exerts a pressure upon the friction surface of the disk (2), thus causing it to stop.

### ADJUSTMENT OF THE AIR GAP

The air gap (11) is the distance between the electromagnet (5) and the movable anchor (9).

The air gap has to be regularly checked, since due to the wear of the friction pad (2) it tends to increase.

Act on the brake adjusters (3) after loosening the screws (8) to bring the air gap to the required value.

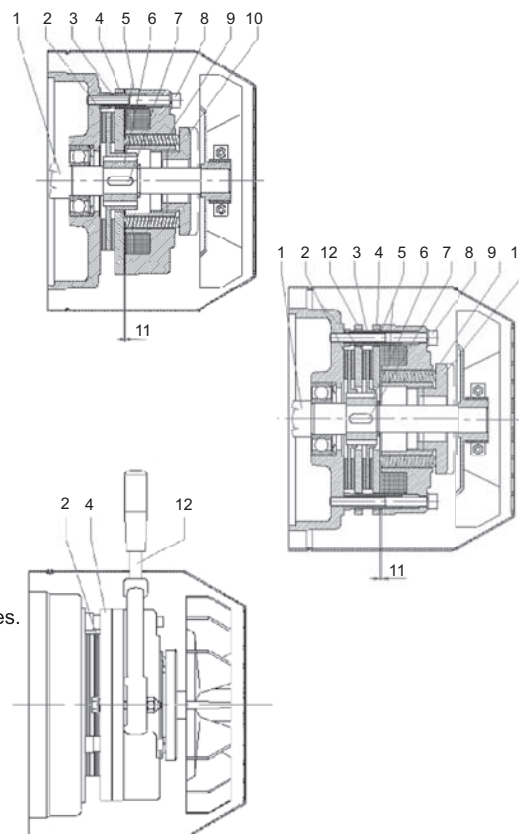
Act on the ring nut (10) which acts on the braking torque springs (9) to adjust the braking torque.

Pls. contact our technical department for information on the air gap adjustment values.

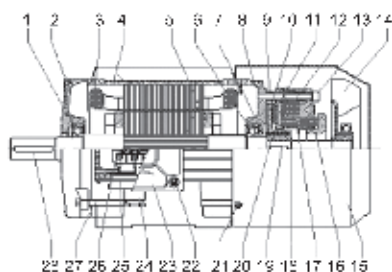
### HANDRELEASE WITH LEVER

Up on request a hand release with lever can be supplied.

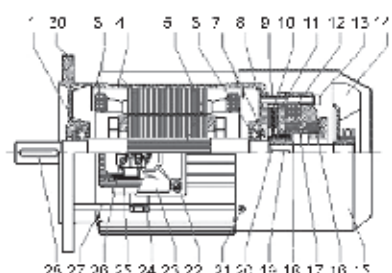
In case of a current cutoff, acting on the lever (12), the release, connected to the movable anchor (4) overcomes the springs pressure, thus detaching the movable anchor from the disc friction packing (2) allowing the shaft to turn.



### TECA-BM Brake Motors B3 63-160 Frame



### TECA-BM Brake Motors B5 63-160 Frame



### SPARE PARTS

1. Front bearing
2. Front shield
3. Winding
4. Frame with stator package
5. Shaft with rotor
6. Rear bearing
7. Spring
8. Rearshield
9. Adjusting bush
10. Brake disc
11. Moving anchor
12. Electromagnet coil with diode
13. Fixing screws for brake
14. Cooling fan
15. Fan cowl
16. Ring nut
17. Spring
18. See gearing
19. Key brake side
20. Toothed pinion
21. Fixing screw for fan cowl
22. Fixing screw for terminal-box
23. Terminal-box
24. Cable gland
25. Packing
26. Terminal-block
27. Tie-bolt
28. Shaft key
29. Fixing screw for shield

ASYNCHRONOUS THREE-PHASE BRAKE MOTORS with direct current 63~160 Type C FECCL Frame B3 Sizes 63~160, Type FC FECCL Frame B5 Sizes 63~160 Enclosed construction -External ventilation

# MSC/MYC Series

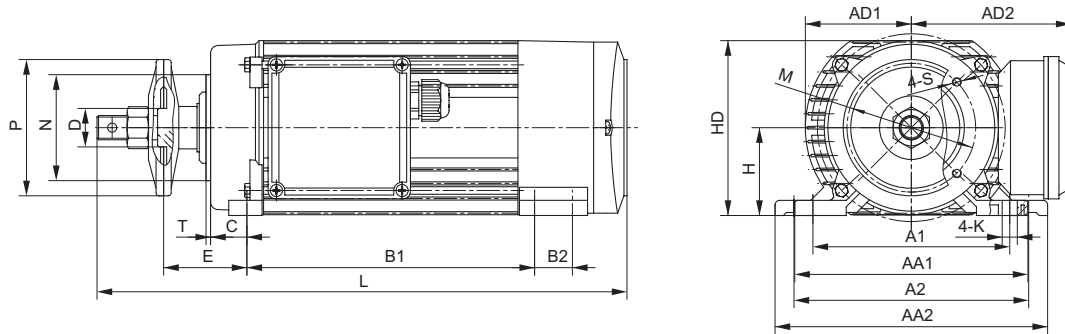
## Three/Single-Phase Aluminum Housing Saw Motors



### MSC/MYC Series Motors Technical Data

| Type    | Power (KW) | Phase | V/Hz   | Current (A) | Eff. (%) | Power Factor (CosΦ) | Speed (r/min) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | I <sub>st</sub> /I <sub>n</sub> (Times) | Duty   | Capacitor |
|---------|------------|-------|--------|-------------|----------|---------------------|---------------|-----------------------------------------|------------------------------------------|-----------------------------------------|--------|-----------|
| MYC58A2 | 1.1        | 1     | 230/50 | 7.18        | 68       | 0.98                | 2770          | 0.35                                    | 1.7                                      | 5                                       | S6-40% | 25uF/450V |
| MYC58B2 | 1.5        | 1     | 230/50 | 9.51        | 70       | 0.98                | 2790          | 0.35                                    | 1.7                                      | 5                                       | S6-40% | 30uF/450V |
| MYC58C2 | 1.8        | 1     | 230/50 | 11.1        | 72       | 0.98                | 2790          | 0.32                                    | 1.7                                      | 5                                       | S6-40% | 30uF/450V |
| MYC63B2 | 2.2        | 1     | 230/50 | 13.2        | 74       | 0.98                | 2800          | 0.32                                    | 1.7                                      | 5                                       | S6-40% | 40uF/450V |
| MSC58A2 | 1.5        | 3     | 400/50 | 3.41        | 77.5     | 0.82                | 2750          | 3                                       | 3                                        | 6                                       | S6-40% |           |
| MSC58B2 | 2.2        | 3     | 400/50 | 4.76        | 78.5     | 0.85                | 2750          | 3                                       | 3                                        | 6                                       | S6-40% |           |
| MSC63A2 | 2.2        | 3     | 400/50 | 4.73        | 79       | 0.85                | 2800          | 2.4                                     | 2.2                                      | 6                                       | S6-40% |           |
| MSC63B2 | 3          | 3     | 400/50 | 6.37        | 80       | 0.85                | 2820          | 2.8                                     | 2.4                                      | 6.5                                     | S6-40% |           |
| MSC74A2 | 4          | 3     | 400/50 | 8.19        | 82       | 0.86                | 2850          | 3                                       | 3                                        | 7                                       | S6-40% |           |
| MSC81A2 | 5.5        | 3     | 400/50 | 10.5        | 85       | 0.89                | 2880          | 3                                       | 3                                        | 9                                       | S1     |           |
| MSC81B2 | 7.5        | 3     | 400/50 | 14.1        | 86       | 0.89                | 2880          | 3                                       | 3                                        | 9                                       | S1     |           |
| MSC93A2 | 5.5        | 3     | 400/50 | 10.1        | 87       | 0.90                | 2890          | 3                                       | 3                                        | 9                                       | S1     |           |
| MSC93B2 | 7.5        | 3     | 400/50 | 13.6        | 87.5     | 0.91                | 2890          | 3                                       | 3                                        | 9                                       | S1     |           |

## MSC/MYC Series Three/Single-Phase Aluminum Housing Saw Motors



## MSC/MYC Series Motors Overall & Installation Dimensions

| Model   | H  | D    | P   | N   | M   | S  | A1  | A2  | B1  | B2 | C  | E  | T   | K  | AA1 | AA2 | HD  | AD1 | AD2 | L*  |
|---------|----|------|-----|-----|-----|----|-----|-----|-----|----|----|----|-----|----|-----|-----|-----|-----|-----|-----|
| MYC58A2 | 58 | 25.4 | 90  | 70  | 85  | M6 | 130 | 155 | 165 | 25 | 24 | 55 | 3   | 10 | 154 | 180 | 116 | 70  | 113 | 325 |
| MYC58B2 | 58 | 25.4 | 90  | 70  | 85  | M6 | 130 | 155 | 190 | 25 | 24 | 55 | 3   | 10 | 154 | 180 | 116 | 70  | 113 | 350 |
| MYC58C2 | 58 | 25.4 | 90  | 70  | 85  | M6 | 130 | 155 | 190 | 25 | 24 | 55 | 3   | 10 | 154 | 180 | 116 | 70  | 113 | 350 |
| MYC63B2 | 63 | 25.4 | 90  | 80  | 100 | M6 | 130 | 155 | 190 | 28 | 24 | 55 | 3   | 10 | 154 | 180 | 126 | 77  | 108 | 355 |
| MSC58A2 | 58 | 25.4 | 90  | 70  | 85  | M6 | 130 | 155 | 165 | 25 | 24 | 55 | 3   | 10 | 154 | 180 | 116 | 70  | 103 | 325 |
| MSC58B2 | 58 | 25.4 | 90  | 70  | 85  | M6 | 130 | 155 | 190 | 25 | 24 | 55 | 3   | 10 | 154 | 180 | 116 | 70  | 103 | 350 |
| MSC63A2 | 63 | 25.4 | 90  | 80  | 100 | M6 | 130 | 155 | 165 | 28 | 24 | 55 | 3   | 10 | 154 | 180 | 126 | 77  | 108 | 330 |
| MSC63B2 | 63 | 25.4 | 90  | 80  | 100 | M6 | 130 | 155 | 190 | 28 | 24 | 55 | 3   | 10 | 154 | 180 | 126 | 77  | 108 | 355 |
| MSC74A2 | 74 | 30   | 110 | 95  | 115 | M6 | 155 | 155 | 190 | 25 | 24 | 55 | 3   | 12 | 180 | 180 | 147 | 87  | 126 | 370 |
| MSC81A2 | 81 | 40   | 158 | 110 | 130 | M8 | 160 | 190 | 254 | 20 | 25 | 64 | 3.5 | 12 | 190 | 225 | 162 | 99  | 133 | 462 |
| MSC81B2 | 81 | 40   | 158 | 110 | 130 | M8 | 160 | 190 | 318 | 20 | 25 | 64 | 3.5 | 12 | 190 | 225 | 162 | 99  | 133 | 526 |
| MSC93A2 | 93 | 40   | 158 | 110 | 130 | M8 | 190 | 190 | 229 | 25 | 25 | 64 | 3.5 | 14 | 225 | 225 | 184 | 108 | 145 | 442 |
| MSC93B2 | 93 | 40   | 158 | 110 | 130 | M8 | 190 | 190 | 254 | 25 | 25 | 64 | 3.5 | 14 | 225 | 225 | 184 | 108 | 145 | 467 |

\* Note: The size "L" With brake type is 30mm more

# MSV/MYV Series

## Three/Single-Phase Aluminum Housing Pad Mount Motors



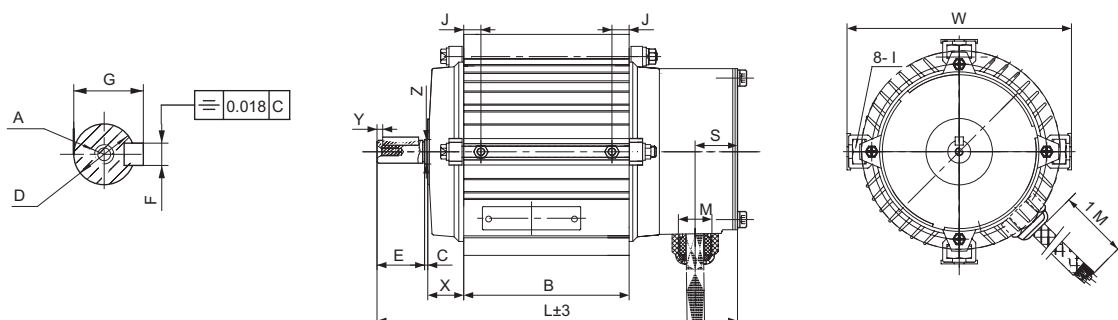
### MYV Series Technical Data (at 230V/50Hz)

| Model      | Power (KW) | Current (A) | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | Starting Current (A) | Run Capacitor (μF/V) | Noise dB(A) | W.T (Kg) |
|------------|------------|-------------|---------------|----------|---------------------|-----------------------------------------|------------------------------------------|----------------------|----------------------|-------------|----------|
| MYV711-2   | 0.37       | 2.60        | 2780          | 67       | 0.93                | 0.5                                     | 1.65                                     | 10                   | 12μF/450V            | 75          | 5.6      |
| MYV712-2   | 0.55       | 3.50        | 2790          | 73       | 0.95                | 0.5                                     | 1.8                                      | 15                   | 16μF/450V            | 75          | 6.95     |
| MYV713-2   | 0.75       | 4.50        | 2810          | 74       | 0.97                | 0.48                                    | 1.8                                      | 20                   | 25μF/450V            | 75          | 8.15     |
| MYV801-2   | 0.75       | 4.40        | 2810          | 74       | 0.98                | 0.4                                     | 1.8                                      | 19                   | 25μF/450V            | 75          | 8.5      |
| MYV802-2   | 1.1        | 6.30        | 2810          | 75       | 0.98                | 0.4                                     | 1.8                                      | 30                   | 35μF/450V            | 78          | 11       |
| MYV803-2   | 1.5        | 8.50        | 2810          | 77       | 0.98                | 0.33                                    | 1.8                                      | 40                   | 40μF/450V            | 80          | 12.75    |
| MYV90S-2   | 1.5        | 8.40        | 2820          | 77       | 0.98                | 0.33                                    | 1.72                                     | 35                   | 45μF/450V            | 80          | 13.7     |
| MYV90L-2   | 2.2        | 12.10       | 2850          | 78       | 0.98                | 0.29                                    | 1.8                                      | 61                   | 60μF/450V            | 80          | 16.7     |
| MYV100L-2  | 3          | 16.50       | 2860          | 79       | 0.99                | 0.28                                    | 1.8                                      | 73                   | 80μF/450V            | 83          | 23.1     |
| MYV711-4   | 0.25       | 1.80        | 1390          | 61       | 0.96                | 0.5                                     | 1.6                                      | 5                    | 14μF/450V            | 65          | 5.8      |
| MYV712-4   | 0.37       | 2.70        | 1390          | 62       | 0.96                | 0.5                                     | 1.6                                      | 8                    | 16μF/450V            | 68          | 6.9      |
| MYV713-4   | 0.55       | 3.70        | 1390          | 64       | 0.97                | 0.48                                    | 1.7                                      | 12                   | 20μF/450V            | 70          | 8.25     |
| MYV801-4   | 0.55       | 3.50        | 1410          | 64       | 0.98                | 0.37                                    | 1.8                                      | 13                   | 25μF/450V            | 70          | 9.55     |
| MYV802-4   | 0.75       | 4.70        | 1410          | 68       | 0.98                | 0.37                                    | 1.65                                     | 17                   | 30μF/450V            | 70          | 10.45    |
| MYV90S-4   | 1.1        | 6.30        | 1410          | 71       | 0.98                | 0.35                                    | 1.75                                     | 24                   | 40μF/450V            | 73          | 13.1     |
| MYV90L-4   | 1.5        | 8.50        | 1420          | 73       | 0.96                | 0.33                                    | 1.8                                      | 36                   | 45μF/450V            | 75          | 16.45    |
| MYV100L1-4 | 2.2        | 12.90       | 1440          | 77       | 0.96                | 0.32                                    | 1.8                                      | 57                   | 80μF/450V            | 78          | 22.8     |
| MYV711-6   | 0.18       | 1.49        | 920           | 57       | 0.92                | 0.45                                    | 1.5                                      | 4                    | 16μF/450V            | 68          | 6.3      |
| MYV712-6   | 0.25       | 2.00        | 920           | 59       | 0.92                | 0.45                                    | 1.5                                      | 5                    | 20μF/450V            | 68          | 7.6      |
| MYV801-6   | 0.37       | 2.78        | 920           | 63       | 0.92                | 0.35                                    | 1.6                                      | 8                    | 20μF/450V            | 68          | 9        |
| MYV802-6   | 0.55       | 3.90        | 920           | 66       | 0.93                | 0.35                                    | 1.6                                      | 14                   | 25μF/450V            | 70          | 11.6     |
| MYV90S-6   | 0.75       | 5.05        | 920           | 68       | 0.95                | 0.35                                    | 1.6                                      | 16                   | 35μF/450V            | 70          | 13.5     |
| MYV90L-6   | 1.1        | 7.30        | 920           | 69       | 0.95                | 0.35                                    | 1.6                                      | 25                   | 50μF/450V            | 70          | 16.2     |

## MSV Series Technical Data at 50Hz

| Model      | Power (KW) | Current (A) |       |      | Current (A) |       |      | Current (A) |       |      | Speed (r/min) | Eff. (%) | Power Factor (CosΦ) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | I <sub>st</sub> /I <sub>n</sub> (Times) | Noise dB(A) | W.T (Kg) | Moment Of Inertia (Kg·M <sup>2</sup> ) | Rated Torque (N.M) |
|------------|------------|-------------|-------|------|-------------|-------|------|-------------|-------|------|---------------|----------|---------------------|-----------------------------------------|------------------------------------------|-----------------------------------------|-------------|----------|----------------------------------------|--------------------|
|            |            | 220V        | 380V  | 660V | 230V        | 400V  | 690V | 240V        | 415V  | 720V |               |          |                     |                                         |                                          |                                         |             |          |                                        |                    |
| MSV711-2   | 0.37       | 1.76        | 1.02  | 0.59 | 1.67        | 0.97  | 0.56 | 1.61        | 0.93  | 0.54 | 2730          | 70       | 0.79                | 2.2                                     | 2.4                                      | 6                                       | 64          | 5.6      | 0.00034                                | 1.30               |
| MSV712-2   | 0.55       | 2.57        | 1.49  | 0.86 | 2.45        | 1.42  | 0.82 | 2.36        | 1.36  | 0.79 | 2760          | 71       | 0.79                | 2.2                                     | 2.4                                      | 6                                       | 64          | 6.1      | 0.00042                                | 1.90               |
| MSV713-2   | 0.75       | 3.33        | 1.93  | 1.11 | 3.18        | 1.83  | 1.06 | 3.06        | 1.77  | 1.02 | 2730          | 72       | 0.82                | 2.2                                     | 2.4                                      | 6                                       | 65          | 7        | 0.00054                                | 2.63               |
| MSV801-2   | 0.75       | 3.21        | 1.86  | 1.07 | 3.06        | 1.77  | 1.02 | 2.94        | 1.70  | 0.98 | 2770          | 73       | 0.84                | 2.2                                     | 2.4                                      | 6                                       | 67          | 9.1      | 0.00083                                | 2.59               |
| MSV802-2   | 1.1        | 4.56        | 2.64  | 1.52 | 4.35        | 2.51  | 1.45 | 4.18        | 2.42  | 1.39 | 2770          | 76.2     | 0.83                | 2.2                                     | 2.4                                      | 6                                       | 67          | 10.2     | 0.00097                                | 3.79               |
| MSV803-2   | 1.5        | 6.04        | 3.50  | 2.01 | 5.87        | 3.32  | 1.92 | 5.54        | 3.20  | 1.85 | 2800          | 78.5     | 0.83                | 2.2                                     | 2.4                                      | 6                                       | 70          | 11.7     | 0.00125                                | 5.12               |
| MSV90S-2   | 1.5        | 5.97        | 3.46  | 1.99 | 5.76        | 3.28  | 1.90 | 5.47        | 3.16  | 1.82 | 2840          | 78.5     | 0.84                | 2.2                                     | 2.4                                      | 6                                       | 72          | 12       | 0.00136                                | 5.05               |
| MSV90L1-2  | 2.2        | 8.39        | 4.85  | 2.80 | 8.0         | 4.61  | 2.66 | 7.69        | 4.45  | 2.56 | 2840          | 81       | 0.85                | 2.2                                     | 2.4                                      | 6                                       | 72          | 15       | 0.0017                                 | 7.40               |
| MSV90L2-2  | 3          | 11.08       | 6.42  | 3.69 | 10.56       | 6.10  | 3.52 | 10.16       | 5.88  | 3.39 | 2840          | 82.6     | 0.86                | 2.2                                     | 2.4                                      | 6                                       | 74          | 18.5     | 0.0021                                 | 10.09              |
| MSV100L1-2 | 3          | 10.96       | 6.34  | 3.65 | 10.44       | 6.03  | 3.48 | 10.04       | 5.81  | 3.35 | 2840          | 82.6     | 0.87                | 2.2                                     | 2.3                                      | 7                                       | 76          | 22.3     | 0.0036                                 | 10.09              |
| MSV100L2-2 | 4          | 14.33       | 8.30  | 4.78 | 13.65       | 7.88  | 4.55 | 13.14       | 7.60  | 4.38 | 2850          | 84.2     | 0.87                | 2.2                                     | 2.3                                      | 7.5                                     | 77          | 25.2     | 0.0044                                 | 13.41              |
| MSV112M-2  | 4          | 14.33       | 8.30  | 4.78 | 13.65       | 7.88  | 4.55 | 13.14       | 7.60  | 4.38 | 2880          | 84.2     | 0.87                | 2.2                                     | 2.3                                      | 7.5                                     | 77          | 26.7     | 0.0054                                 | 13.27              |
| MSV112L-2  | 5.5        | 19.14       | 11.08 | 6.38 | 18.23       | 10.53 | 6.08 | 17.54       | 10.15 | 5.85 | 2880          | 85.7     | 0.88                | 2.2                                     | 2.3                                      | 7.5                                     | 78          | 30.2     | 0.0068                                 | 18.25              |
| MSV711-4   | 0.25       | 1.52        | 0.88  | 0.51 | 1.45        | 0.84  | 0.48 | 1.39        | 0.81  | 0.46 | 1350          | 60       | 0.72                | 2.2                                     | 2.4                                      | 6                                       | 55          | 5.4      | 0.00051                                | 1.77               |
| MSV712-4   | 0.37       | 2.02        | 1.17  | 0.67 | 1.92        | 1.11  | 0.64 | 1.85        | 1.07  | 0.62 | 1370          | 65       | 0.74                | 2.2                                     | 2.4                                      | 6                                       | 55          | 6.2      | 0.00081                                | 2.58               |
| MSV713-4   | 0.55       | 2.92        | 1.69  | 0.97 | 2.78        | 1.60  | 0.93 | 2.67        | 1.55  | 0.89 | 1380          | 66       | 0.75                | 2.2                                     | 2.4                                      | 6                                       | 57          | 7.3      | 0.00092                                | 3.81               |
| MSV801-4   | 0.55       | 2.87        | 1.66  | 0.96 | 2.74        | 1.58  | 0.91 | 2.63        | 1.52  | 0.88 | 1370          | 67       | 0.75                | 2.2                                     | 2.4                                      | 6                                       | 58          | 9        | 0.00128                                | 3.84               |
| MSV802-4   | 0.75       | 3.50        | 2.03  | 1.17 | 3.34        | 1.93  | 1.11 | 3.21        | 1.86  | 1.07 | 1380          | 72       | 0.78                | 2.2                                     | 2.4                                      | 6                                       | 58          | 10       | 0.0015                                 | 5.19               |
| MSV803-4   | 1.1        | 4.86        | 2.81  | 1.62 | 4.63        | 2.67  | 1.54 | 4.45        | 2.57  | 1.48 | 1390          | 76.2     | 0.78                | 2.2                                     | 2.4                                      | 6                                       | 60          | 12.3     | 0.00184                                | 7.56               |
| MSV90S-4   | 1.1        | 4.80        | 2.78  | 1.60 | 4.57        | 2.64  | 1.52 | 4.40        | 2.54  | 1.47 | 1400          | 76.2     | 0.79                | 2.2                                     | 2.4                                      | 6                                       | 61          | 12.1     | 0.00221                                | 7.51               |
| MSV90L1-4  | 1.5        | 6.27        | 3.63  | 2.09 | 5.97        | 3.45  | 1.99 | 5.75        | 3.32  | 1.92 | 1400          | 78.5     | 0.8                 | 2.2                                     | 2.4                                      | 6                                       | 61          | 14.6     | 0.00284                                | 10.24              |
| MSV90L2-4  | 2.2        | 8.91        | 5.16  | 2.97 | 8.45        | 4.90  | 2.83 | 8.17        | 4.72  | 2.72 | 1400          | 81       | 0.8                 | 2.2                                     | 2.4                                      | 7                                       | 63          | 18.3     | 0.0037                                 | 15.02              |
| MSV100L1-4 | 2.2        | 8.80        | 5.09  | 2.93 | 8.38        | 4.84  | 2.79 | 8.07        | 4.66  | 2.69 | 1420          | 81       | 0.81                | 2.2                                     | 2.3                                      | 7                                       | 64          | 21       | 0.0058                                 | 14.80              |
| MSV100L2-4 | 3          | 11.77       | 6.81  | 3.92 | 11.21       | 6.47  | 3.74 | 10.79       | 6.24  | 3.60 | 1420          | 82.6     | 0.81                | 2.2                                     | 2.3                                      | 7                                       | 64          | 24.7     | 0.0073                                 | 20.19              |
| MSV100L3-4 | 4          | 15.20       | 8.80  | 5.07 | 14.18       | 8.36  | 4.83 | 13.94       | 8.06  | 4.65 | 1430          | 84.2     | 0.82                | 2.2                                     | 2.3                                      | 7                                       | 65          | 29       | 0.0092                                 | 26.73              |
| MSV112M-4  | 4          | 15.02       | 8.70  | 5.01 | 14.31       | 8.26  | 4.77 | 13.77       | 7.96  | 4.59 | 1430          | 84.2     | 0.83                | 2.2                                     | 2.2                                      | 7                                       | 65          | 30.5     | 0.0107                                 | 26.73              |
| MSV112L-4  | 5.5        | 20.29       | 11.75 | 6.76 | 19.33       | 11.16 | 6.44 | 18.60       | 10.76 | 6.20 | 1440          | 85.7     | 0.83                | 2.2                                     | 2.2                                      | 7                                       | 68          | 34.8     | 0.013                                  | 36.49              |
| MSV711-6   | 0.18       | 1.28        | 0.74  | 0.43 | 1.22        | 0.70  | 0.41 | 1.17        | 0.68  | 0.39 | 880           | 56       | 0.66                | 1.6                                     | 1.7                                      | 4                                       | 52          | 6        | 0.00083                                | 1.95               |
| MSV712-6   | 0.25       | 1.59        | 0.92  | 0.53 | 1.51        | 0.87  | 0.50 | 1.46        | 0.84  | 0.49 | 900           | 59       | 0.7                 | 2.1                                     | 2.2                                      | 4                                       | 52          | 6.5      | 0.00095                                | 2.65               |
| MSV713-6   | 0.37       | 2.31        | 1.34  | 0.77 | 2.2         | 1.27  | 0.73 | 2.11        | 1.22  | 0.70 | 890           | 61       | 0.69                | 2                                       | 2.1                                      | 4                                       | 54          | 7.2      | 0.00114                                | 3.97               |
| MSV801-6   | 0.37       | 2.24        | 1.30  | 0.75 | 2.13        | 1.23  | 0.71 | 2.05        | 1.19  | 0.68 | 900           | 62       | 0.7                 | 1.9                                     | 1.9                                      | 4                                       | 56          | 8.2      | 0.00153                                | 3.93               |
| MSV802-6   | 0.55       | 2.99        | 1.73  | 1.00 | 2.85        | 1.65  | 0.95 | 2.74        | 1.59  | 0.91 | 900           | 67       | 0.72                | 2                                       | 2.3                                      | 4                                       | 56          | 9.9      | 0.00232                                | 5.84               |
| MSV803-6   | 0.75       | 4.02        | 2.33  | 1.34 | 3.83        | 2.21  | 1.28 | 3.69        | 2.13  | 1.23 | 900           | 68       | 0.72                | 2                                       | 2.3                                      | 4                                       | 58          | 11.3     | 0.00286                                | 7.96               |
| MSV90S-6   | 0.75       | 3.96        | 2.29  | 1.32 | 3.77        | 2.18  | 1.26 | 3.63        | 2.10  | 1.21 | 920           | 69       | 0.72                | 2.2                                     | 2.2                                      | 5.5                                     | 59          | 11.7     | 0.00376                                | 7.79               |
| MSV90L1-6  | 1.1        | 5.49        | 3.18  | 1.83 | 5.23        | 3.02  | 1.74 | 5.03        | 2.91  | 1.68 | 925           | 72       | 0.73                | 2.2                                     | 2.2                                      | 5.5                                     | 59          | 15.1     | 0.00467                                | 11.36              |
| MSV90L2-6  | 1.5        | 7.19        | 4.16  | 2.40 | 6.88        | 3.97  | 2.29 | 6.59        | 3.81  | 2.20 | 930           | 73       | 0.75                | 2.2                                     | 2.2                                      | 6                                       | 61          | 18       | 0.00567                                | 15.41              |
| MSV100L1-6 | 1.5        | 7.00        | 4.05  | 2.33 | 6.67        | 3.85  | 2.22 | 6.42        | 3.71  | 2.14 | 945           | 74       | 0.76                | 2.2                                     | 2.2                                      | 6                                       | 61          | 19.1     | 0.0073                                 | 15.17              |
| MSV100L2-6 | 2.2        | 9.87        | 5.71  | 3.29 | 9.40        | 5.44  | 3.13 | 9.04        | 5.23  | 3.01 | 950           | 77       | 0.76                | 2.2                                     | 2.2                                      | 6                                       | 63          | 23.4     | 0.0084                                 | 22.13              |
| MSV112M-6  | 2.2        | 9.74        | 5.64  | 3.25 | 9.28        | 5.36  | 3.09 | 8.93        | 5.16  | 2.98 | 955           | 78       | 0.76                | 2.2                                     | 2.2                                      | 6                                       | 64          | 25.4     | 0.013                                  | 22.01              |
| MSV112L-6  | 3          | 13.28       | 7.69  | 4.43 | 12.7        | 7.31  | 4.24 | 12.17       | 7.04  | 4.06 | 955           | 78       | 0.76                | 2.2                                     | 2.2                                      | 6                                       | 69          | 30       | 0.019                                  | 30.02              |

## MSV/MYV Series Motors Overall & Installation Dimensions



## MYV Series Motors Overall & Installation Dimensions

| Model      | Power (KW) | A     | B   | C | D   | E  | F | G    | Y   | Z      | W   | I   | J  | L   | X  | M   | S  |
|------------|------------|-------|-----|---|-----|----|---|------|-----|--------|-----|-----|----|-----|----|-----|----|
| MYV711-2   | 0.37       | M5X10 | 115 | 2 | Φ14 | 30 | 5 | 16   | 4.5 | Φ14.85 | 147 | M10 | 11 | 235 | 26 | M16 | 22 |
| MYV712-2   | 0.55       |       | 135 |   |     |    |   |      |     |        |     |     |    | 255 |    |     |    |
| MYV713-2   | 0.75       |       | 155 |   |     |    |   |      |     |        |     |     |    | 275 |    |     |    |
| MYV711-4   | 0.25       |       | 120 |   |     |    |   |      |     |        |     |     |    | 240 |    |     |    |
| MYV712-4   | 0.37       |       | 140 |   |     |    |   |      |     |        |     |     |    | 260 |    |     |    |
| MYV713-4   | 0.55       |       | 160 |   |     |    |   |      |     |        |     |     |    | 280 |    |     |    |
| MYV711-6   | 0.18       |       | 135 |   |     |    |   |      |     |        |     |     |    | 255 |    |     |    |
| MYV712-6   | 0.25       |       | 150 |   |     |    |   |      |     |        |     |     |    | 270 |    |     |    |
| MYV801-2   | 0.75       | M6X12 | 125 | 2 | Φ19 | 40 | 6 | 21.5 | 7   | Φ19.85 | 173 | M12 | 13 | 267 | 30 | M16 | 26 |
| MYV802-2   | 1.1        |       | 145 |   |     |    |   |      |     |        |     |     |    | 287 |    |     |    |
| MYV803-2   | 1.5        |       | 165 |   |     |    |   |      |     |        |     |     |    | 307 |    |     |    |
| MYV801-4   | 0.55       |       | 130 |   |     |    |   |      |     |        |     |     |    | 272 |    |     |    |
| MYV802-4   | 0.75       |       | 145 |   |     |    |   |      |     |        |     |     |    | 287 |    |     |    |
| MYV801-6   | 0.37       |       | 140 |   |     |    |   |      |     |        |     |     |    | 282 |    |     |    |
| MYV802-6   | 0.55       |       | 165 |   |     |    |   |      |     |        |     |     |    | 307 |    |     |    |
| MYV90S-2   | 1.5        | M6X12 | 150 | 8 | Φ24 | 50 | 8 | 27   | 4   | Φ24.85 | 191 | M12 | 13 | 320 | 35 | M16 | 28 |
| MYV90L-2   | 2.2        |       | 180 |   |     |    |   |      |     |        |     |     |    | 350 |    |     |    |
| MYV90S-4   | 1.1        |       | 155 |   |     |    |   |      |     |        |     |     |    | 325 |    |     |    |
| MYV90L-4   | 1.5        |       | 185 |   |     |    |   |      |     |        |     |     |    | 355 |    |     |    |
| MYV90S-6   | 0.75       |       | 155 |   |     |    |   |      |     |        |     |     |    | 325 |    |     |    |
| MYV90L-6   | 1.1        |       | 195 |   |     |    |   |      |     |        |     |     |    | 365 |    |     |    |
| MYV100L-2  | 3          | M8X16 | 175 | 8 | Φ28 | 60 | 8 | 31   | 4   | Φ29.7  | 211 | M12 | 13 | 356 | 27 | M20 | 28 |
| MYV100L1-4 | 2.2        |       | 175 |   |     |    |   |      |     |        |     |     |    | 356 |    |     |    |

## MSV Series Motors Overall & Installation Dimensions

| Model      | Power (KW) | A     | B   | C | D   | E  | F | G    | Y   | Z      | W   | I   | J  | L   | X  | M   | S  |
|------------|------------|-------|-----|---|-----|----|---|------|-----|--------|-----|-----|----|-----|----|-----|----|
| MSV711-2   | 0.37       | M5X10 | 110 | 2 | Φ14 | 30 | 5 | 16   | 4.5 | Φ14.85 | 147 | M10 | 11 | 230 | 26 | M16 | 22 |
| MSV712-2   | 0.55       |       | 125 |   |     |    |   |      |     |        |     |     |    | 245 |    |     |    |
| MSV713-2   | 0.75       |       | 140 |   |     |    |   |      |     |        |     |     |    | 260 |    |     |    |
| MSV711-4   | 0.25       |       | 110 |   |     |    |   |      |     |        |     |     |    | 230 |    |     |    |
| MSV712-4   | 0.37       |       | 125 |   |     |    |   |      |     |        |     |     |    | 245 |    |     |    |
| MSV713-4   | 0.55       |       | 145 |   |     |    |   |      |     |        |     |     |    | 265 |    |     |    |
| MSV711-6   | 0.18       |       | 125 |   |     |    |   |      |     |        |     |     |    | 245 |    |     |    |
| MSV712-6   | 0.25       |       | 135 |   |     |    |   |      |     |        |     |     |    | 255 |    |     |    |
| MSV713-6   | 0.37       |       | 155 |   |     |    |   |      |     |        |     |     |    | 275 |    |     |    |
| MSV801-2   | 0.75       | M6X12 | 120 | 2 | Φ19 | 40 | 6 | 21.5 | 7   | Φ19.85 | 173 | M12 | 13 | 257 | 30 | M16 | 26 |
| MSV802-2   | 1.1        |       | 135 |   |     |    |   |      |     |        |     |     |    | 272 |    |     |    |
| MSV803-2   | 1.5        |       | 155 |   |     |    |   |      |     |        |     |     |    | 292 |    |     |    |
| MSV801-4   | 0.55       |       | 115 |   |     |    |   |      |     |        |     |     |    | 252 |    |     |    |
| MSV802-4   | 0.75       |       | 135 |   |     |    |   |      |     |        |     |     |    | 272 |    |     |    |
| MSV803-4   | 1.1        |       | 155 |   |     |    |   |      |     |        |     |     |    | 292 |    |     |    |
| MSV801-6   | 0.37       |       | 115 |   |     |    |   |      |     |        |     |     |    | 252 |    |     |    |
| MSV802-6   | 0.55       |       | 135 |   |     |    |   |      |     |        |     |     |    | 272 |    |     |    |
| MSV803-6   | 0.75       |       | 155 |   |     |    |   |      |     |        |     |     |    | 292 |    |     |    |
| MSV90S-2   | 1.5        | M6X12 | 140 | 8 | Φ24 | 50 | 8 | 27   | 4   | Φ24.85 | 191 | M12 | 13 | 310 | 35 | M16 | 28 |
| MSV90L1-2  | 2.2        |       | 170 |   |     |    |   |      |     |        |     |     |    | 340 |    |     |    |
| MSV90L2-2  | 3          |       | 200 |   |     |    |   |      |     |        |     |     |    | 370 |    |     |    |
| MSV90S-4   | 1.1        |       | 135 |   |     |    |   |      |     |        |     |     |    | 305 |    |     |    |
| MSV90L1-4  | 1.5        |       | 160 |   |     |    |   |      |     |        |     |     |    | 330 |    |     |    |
| MSV90L2-4  | 2.2        |       | 195 |   |     |    |   |      |     |        |     |     |    | 365 |    |     |    |
| MSV90S-6   | 0.75       |       | 135 |   |     |    |   |      |     |        |     |     |    | 305 |    |     |    |
| MSV90L1-6  | 1.1        |       | 170 |   |     |    |   |      |     |        |     |     |    | 340 |    |     |    |
| MSV90L2-6  | 1.5        |       | 200 |   |     |    |   |      |     |        |     |     |    | 370 |    |     |    |
| MSV100L1-2 | 3          | M8X16 | 150 | 8 | Φ28 | 60 | 8 | 31   | 4   | Φ29.7  | 211 | M12 | 13 | 331 | 27 | M20 | 25 |
| MSV100L2-2 | 4          |       | 175 |   |     |    |   |      |     |        |     |     |    | 356 |    |     |    |
| MSV100L1-4 | 2.2        |       | 150 |   |     |    |   |      |     |        |     |     |    | 331 |    |     |    |
| MSV100L2-4 | 3          |       | 175 |   |     |    |   |      |     |        |     |     |    | 356 |    |     |    |
| MSV100L3-4 | 4          |       | 210 |   |     |    |   |      |     |        |     |     |    | 391 |    |     |    |
| MSV100L1-6 | 1.5        |       | 150 |   |     |    |   |      |     |        |     |     |    | 331 |    |     |    |
| MSV100L2-6 | 2.2        |       | 185 |   |     |    |   |      |     |        |     |     |    | 366 |    |     |    |
| MSV112M-2  | 4          | M8X16 | 165 | 4 | Φ28 | 60 | 8 | 31   | 4   | Φ29.7  | 211 | M12 | 13 | 337 | 28 | M25 | 25 |
| MSV112L-2  | 5.5        |       | 190 |   |     |    |   |      |     |        |     |     |    | 362 |    |     |    |
| MSV112M-4  | 4          |       | 190 |   |     |    |   |      |     |        |     |     |    | 362 |    |     |    |
| MSV112L-4  | 5.5        |       | 220 |   |     |    |   |      |     |        |     |     |    | 392 |    |     |    |
| MSV112M-6  | 2.2        |       | 165 |   |     |    |   |      |     |        |     |     |    | 337 |    |     |    |
| MSV112L-6  | 3          |       | 200 |   |     |    |   |      |     |        |     |     |    | 372 |    |     |    |

# TECC

## Series Three-Phase Induction Motors Cast Iron Housing

### Multi-mount from 80 to 200 frame

- |                            |                          |
|----------------------------|--------------------------|
| • Frame size               | H63~355                  |
| • Power                    | 0.12~315KW               |
| • Synchronous speed        | 3000; 1500; 1000; 750RPM |
| • Voltage                  | 230/400V; 400/690V       |
| • Frequency                | 50Hz、60Hz                |
| • Protection class         | IP55                     |
| • Insulation class         | F                        |
| • Ambi temperature         | -30~+40°C                |
| • Altitude above sea level | ≤1000m                   |
- See Table 1 for the mounting arrangements and respective frame numbers
  - See Table 2 for the bearings
  - See Table 3-4 for the technical data
  - See Table 5-8 for the types and mounting dimensions



## Mounting Arrangements

The commonly used mounting arrangements and the corresponding frame numbers are shown in table 1

Table 1

| Frame No. | Basic                                                                             |                                                                                   |                                                                                   | Variations                                                                        |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|-----------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|           |  |  |  | Based On B5                                                                       |                                                                                   | Based On B3                                                                       |                                                                                   |                                                                                    |                                                                                     |                                                                                     | Based On B35                                                                        |                                                                                     |
|           |                                                                                   |                                                                                   |                                                                                   |  |  |  |  |  |  |  |  |  |
|           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| H80~160   | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                  | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   | ✓                                                                                   |
| H180~225  | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | ✓                                                                                 | —                                                                                 | —                                                                                 | —                                                                                 | —                                                                                  | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   |
| H250~355  | ✓                                                                                 | —                                                                                 | ✓                                                                                 | ✓                                                                                 | —                                                                                 | —                                                                                 | —                                                                                 | —                                                                                  | —                                                                                   | —                                                                                   | —                                                                                   | —                                                                                   |

## Bearings

Table 2

| Frame No. | Drive End |        | Non-drive End |          | Cable Glands |
|-----------|-----------|--------|---------------|----------|--------------|
|           | 2P        | 4,6,8P | 2P            | 4, 6, 8P |              |
| 63        | 6201ZZ    |        | 6201ZZ        |          | 1*M20*1.5    |
| 71        | 6202ZZ    |        | 6201ZZ        |          | 1*M20*1.5    |
| 80        | 6204ZZ    |        | 6204ZZ        |          | 1*M20*1.5    |
| 90        | 6205ZZ    |        | 6205ZZ        |          | 1*M25*1.5    |
| 100       | 6206ZZ    |        | 6206ZZ        |          | 1*M25*1.5    |
| 112       | 6306ZZ    |        | 6306ZZ        |          | 2*M25*1.5    |
| 132       | 6308ZZ    |        | 6308ZZ        |          | 2*M32*1.5    |
| 160       | 6309C3    |        | 6309C3        |          | 2*M32*1.5    |
| 180       | 6311C3    |        | 6311C3        |          | 2*M40*1.5    |
| 200       | 6312C3    |        | 6312C3        |          | 2*M40*1.5    |
| 225       | 6313C3    |        | 6312C3        |          | 2*M40*1.5    |
| 250       | 6314C3    |        | 6313C3        |          | 2*M40*1.5    |
| 280       | 6314C3    | 6317C3 | 6314C3        | 6314C3   | 2*M63*1.5    |
| 315       | 6317C3    | NU319  | 6317C3        | 6319C3   | 2*M63*1.5    |
| 355       | 6319C3    | NU322  | 6319C3        | 6322C3   | 2*M63*1.5    |

# T ECC Series Technical Data (at 400V)

Table 3

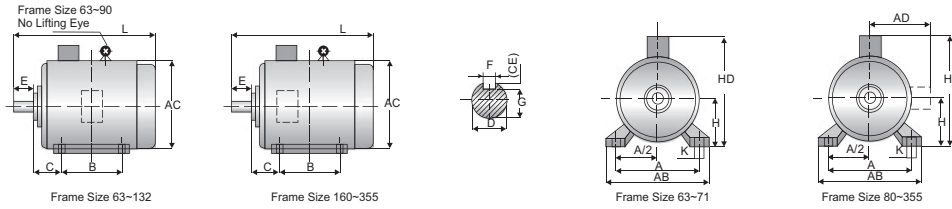
| Model                            | Rated output (KW) | At full load  |             |          |                      | Locked current | Locked torque | Max torque   | Net weight (kg) | Noise level dB(A) |      |     |     |      |
|----------------------------------|-------------------|---------------|-------------|----------|----------------------|----------------|---------------|--------------|-----------------|-------------------|------|-----|-----|------|
|                                  |                   | Speed (r/min) | Current (A) | Eff. (%) | Power factor (cos ϕ) | Rated current  | Rated torque  | Rated torque |                 | I                 | II   |     |     |      |
|                                  |                   |               |             |          |                      |                |               |              |                 |                   |      |     |     |      |
| Synchronous Speed 3000r/min 50Hz |                   |               |             |          |                      |                |               |              |                 |                   |      |     |     |      |
| 63M1                             | 0.18              | 2730          | 0.5         | 65       | 0.80                 | 5.5            | 2.2           | 2.2          | 5               | 61                | 63   |     |     |      |
| 63M2                             | 0.25              | 2800          | 0.7         | 68       | 0.81                 |                |               |              | 5.4             |                   |      |     |     |      |
| 71M1                             | 0.37              | 2760          | 1.0         | 70       |                      |                |               |              | 6.1             | 7.8               | 64   | 66  |     |      |
| 71M2                             | 0.55              | 2800          | 1.4         | 73       | 10                   |                |               |              |                 |                   |      |     |     |      |
| 80M1                             | 0.75              | 2830          | 1.8         | 75       | 16                   | 67             |               | 69           |                 |                   |      |     |     |      |
| 80M2                             | 1.1               |               | 2.5         | 77       | 17                   |                |               |              |                 |                   |      |     |     |      |
| 90S                              | 1.5               | 2840          | 3.3         | 79       | 0.84                 | 22             |               | 72           | 74              |                   |      |     |     |      |
| 90L                              | 2.2               |               | 4.6         | 81       |                      | 25             |               |              |                 |                   |      |     |     |      |
| 100L                             | 3                 |               | 2860        | 6.0      |                      | 83             |               | 0.87         | 33              | 76                | 78   |     |     |      |
| 112M                             | 4                 | 2880          | 7.7         | 85       | 0.88                 | 45             |               | 77           | 79              |                   |      |     |     |      |
| 132S1                            | 5.5               | 2900          | 10.5        | 86       |                      | 64             | 80            | 82           |                 |                   |      |     |     |      |
| 132S2                            | 7.5               |               | 14.1        | 87       |                      | 70             |               |              |                 |                   |      |     |     |      |
| 160M1                            | 11                | 2930          | 20.3        | 88       | 0.89                 | 7.5            | 2.3           | 117          | 86              | 88                |      |     |     |      |
| 160M2                            | 15                |               | 27.3        | 89       |                      |                |               | 125          |                 |                   |      |     |     |      |
| 160L                             | 18.5              |               | 33          | 90       |                      |                |               | 147          |                 |                   |      |     |     |      |
| 180M                             | 22                | 2940          | 39.2        | 90       | 0.90                 | 2              |               | 180          | 89              | 91                |      |     |     |      |
| 200L1                            | 30                | 2950          | 52.8        | 91.2     |                      |                |               | 240          | 92              | 94                |      |     |     |      |
| 200L2                            | 37                |               | 64.5        | 92       |                      |                |               | 255          |                 |                   |      |     |     |      |
| 225M                             | 45                | 2970          | 78.2        | 92.3     |                      |                |               | 309          | 93              | 95                |      |     |     |      |
| 250M                             | 55                |               | 95.4        | 92.5     |                      |                |               | 403          |                 |                   |      |     |     |      |
| 280S                             | 75                |               | 129.3       | 93       |                      |                |               | 544          | 94              | 96                |      |     |     |      |
| 280M                             | 90                | 152.2         | 93.8        | 620      |                      |                |               |              |                 |                   |      |     |     |      |
| 315S                             | 110               | 2980          | 185.6       | 94       |                      |                | 0.91          | 7.1          | 1.8             | 2.2               | 980  | 96  | 98  |      |
| 315M                             | 132               |               | 221.6       | 94.5     |                      |                |               |              |                 |                   | 1080 |     |     |      |
| 315L1                            | 160               |               | 265.4       | 94.6     |                      |                |               |              |                 |                   | 1160 | 99  | 101 |      |
| 315L2                            | 200               | 331.0         | 94.8        | 1190     |                      |                |               |              |                 |                   |      |     |     |      |
| 355M                             | 250               | 411.6         | 95.3        | 1760     | 103                  | 105            |               |              |                 |                   |      |     |     |      |
| 355L                             | 315               | 517.0         | 95.6        | 1850     |                      |                |               |              |                 |                   |      |     |     |      |
| Synchronous Speed 1500r/min 50Hz |                   |               |             |          |                      |                |               |              |                 |                   |      |     |     |      |
| 63M1                             | 0.12              | 1320          | 0.4         | 57       | 0.72                 | 4.4            | 2.1           | 2.2          | 5.2             | 52                | 57   |     |     |      |
| 63M2                             | 0.18              |               | 0.6         | 60       | 0.73                 |                |               |              | 5.5             |                   |      |     |     |      |
| 71M1                             | 0.25              | 1350          | 0.8         | 65       | 0.74                 | 5.2            |               |              | 2.4             | 2.3               | 7    | 55  | 60  |      |
| 71M2                             | 0.37              | 1340          | 1.1         | 67       | 0.75                 |                | 7.5           |              |                 |                   |      |     |     |      |
| 80M1                             | 0.55              | 1390          | 1.5         | 71       | 0.76                 | 6              | 2.3           | 2.3          | 17              |                   | 58   | 63  |     |      |
| 80M2                             | 0.75              |               | 2.0         | 73       | 0.76                 |                |               |              | 18              |                   |      |     |     |      |
| 90S                              | 1.1               | 1390          | 2.8         | 75       | 0.77                 |                |               |              | 22              | 61                | 66   |     |     |      |
| 90L                              | 1.5               |               | 3.5         | 78       | 0.79                 | 27             |               |              |                 |                   |      |     |     |      |
| 100L1                            | 2.2               | 1410          | 4.9         | 80       | 0.81                 | 7              |               | 2.3          | 2.3             | 34                | 64   | 69  |     |      |
| 100L2                            | 3                 |               | 6.5         | 82       | 0.82                 |                |               |              |                 | 38                |      |     |     |      |
| 112M                             | 4                 | 1440          | 8.4         | 84       | 0.84                 |                |               |              |                 | 43                | 65   | 70  |     |      |
| 132S                             | 5.5               | 1440          | 11.3        | 85       | 0.83                 | 7.5            |               |              | 2.2             | 2.2               | 68   | 71  | 76  |      |
| 132M                             | 7.5               |               | 14.8        | 87       | 81                   |                |               |              |                 |                   |      |     |     |      |
| 160M                             | 11                | 1460          | 21.5        | 88       | 0.85                 |                |               |              |                 |                   | 123  | 75  | 80  |      |
| 160L                             | 15                |               | 30.1        | 89       | 144                  | 79             |               |              |                 |                   |      |     |     |      |
| 180M                             | 18.5              | 1470          | 34.3        | 90.5     | 0.86                 | 7.2            | 2.1           |              |                 | 2.2               | 182  | 76  | 80  |      |
| 180L                             | 22                |               | 40.6        | 91       |                      |                |               |              |                 |                   | 190  |     |     | 79   |
| 200L                             | 30                |               | 54.7        | 92       |                      |                |               |              |                 |                   | 270  | 81  | 85  |      |
| 225S                             | 37                | 1480          | 66.4        | 92.5     | 0.87                 | 6.9            |               | 2.1          |                 | 2.2               | 284  | 81  | 84  |      |
| 225M                             | 45                |               | 80.5        | 92.8     |                      |                |               |              |                 |                   | 320  |     |     | 83   |
| 250M                             | 55                |               | 98.1        | 93       |                      |                |               |              |                 |                   | 427  | 86  | 89  |      |
| 280S                             | 75                | 132.7         | 93.8        | 562      | 93                   | 96             |               |              |                 |                   |      |     |     |      |
| 280M                             | 90                | 158.5         | 94.2        | 667      |                      |                |               | 97           | 100             |                   |      |     |     |      |
| 315S                             | 110               | 1490          | 191.0       | 94.5     |                      |                |               |              |                 | 0.88              | 6.9  | 2.1 | 2.2 | 1000 |
| 315M                             | 132               |               | 228.4       | 94.8     | 1100                 |                |               |              |                 |                   |      |     |     |      |
| 315L1                            | 160               |               | 273.4       | 94.9     | 1160                 | 0.89           | 0.90          |              |                 |                   |      |     |     |      |
| 315L2                            | 200               | 334.4         | 95          | 1270     |                      |                |               |              |                 |                   |      |     |     |      |
| 355M                             | 250               | 420.7         | 95.3        | 1700     | 101                  |                |               | 104          |                 |                   |      |     |     |      |
| 355L                             | 315               | 528.4         | 95.6        | 1850     |                      |                |               |              |                 |                   |      |     |     |      |

# T ECC Series Technical Data (at 400V)

Table 4

| Model                            | Rated output (KW) | At full load  |             |          |                      | Locked current | Locked torque | Max torque | Net weight (kg) | Noise level dB(A) |     |    |    |
|----------------------------------|-------------------|---------------|-------------|----------|----------------------|----------------|---------------|------------|-----------------|-------------------|-----|----|----|
|                                  |                   | Speed (r/min) | Current (A) | Eff. (%) | Power factor (cos ϕ) |                |               |            |                 | I                 | II  |    |    |
| Synchronous Speed 1000r/min 50Hz |                   |               |             |          |                      |                |               |            |                 |                   |     |    |    |
| 71M1                             | 0.18              | 870           | 0.7         | 56       | 0.66                 | 4.00           | 1.90          | 2.00       | 7               | 52                | 59  |    |    |
| 71M2                             | 0.25              | 870           | 0.9         | 59       | 0.68                 |                |               |            | 8               |                   |     |    |    |
| 80M1                             | 0.37              | 890           | 1.3         | 62       | 0.70                 | 4.70           |               | 2.00       | 17              | 54                | 61  |    |    |
| 80M2                             | 0.55              |               | 1.7         | 65       | 0.72                 |                |               |            | 19              |                   |     |    |    |
| 90S                              | 0.75              | 910           | 2.2         | 69       | 0.73                 | 5.50           | 2.00          |            | 23              | 57                | 64  |    |    |
| 90L                              | 1.1               |               | 3.0         | 72       |                      |                |               |            | 25              |                   |     |    |    |
| 100L                             | 1.5               | 920           | 3.8         | 76       | 0.75                 |                |               | 6.50       | 2.10            | 33                | 61  | 68 |    |
| 112M                             | 2.2               | 940           | 5.3         | 79       | 0.76                 |                |               |            |                 | 2.10              | 45  | 65 | 72 |
| 132S                             | 3                 | 960           | 7.0         | 81       |                      | 0.77           | 2.00          |            |                 |                   | 63  | 69 | 76 |
| 132M1                            | 4                 |               | 9.3         | 82       |                      |                |               |            |                 |                   | 73  |    |    |
| 132M2                            | 5.5               | 970           | 12.3        | 84       |                      |                |               | 0.78       | 7.00            |                   | 84  | 73 | 80 |
| 160M                             | 7.5               |               | 16.4        | 86       | 119                  |                |               |            |                 |                   |     |    |    |
| 160L                             | 11                |               | 23.3        | 87.5     | 147                  | 76             | 82            |            |                 |                   |     |    |    |
| 180L                             | 15                |               | 30.0        | 89.0     | 195                  |                |               |            |                 |                   |     |    |    |
| 200L1                            | 18.5              | 980           | 36.6        | 90.0     | 0.81                 | 7.00           | 2.10          | 220        | 80              | 85                |     |    |    |
| 200L2                            | 22                |               | 42.5        | 90.0     | 0.83                 |                |               | 250        |                 |                   |     |    |    |
| 225M                             | 30                |               | 56.3        | 91.5     | 0.84                 |                |               | 2.00       |                 |                   | 292 |    |    |
| 250M                             | 37                |               | 67.5        | 92       | 0.86                 |                |               | 2.10       |                 |                   | 408 | 78 | 84 |
| 280S                             | 45                | 81.7          | 92.5        | 2.00     |                      | 2.00           | 536           |            | 80              | 85                |     |    |    |
| 280M                             | 55                | 99.5          | 92.8        |          |                      |                | 595           |            |                 |                   |     |    |    |
| 315S                             | 75                | 990           | 134.6       |          |                      |                | 93.5          |            | 6.70            | 1.90              | 990 | 92 | 96 |
| 315M                             | 90                |               | 161.1       |          | 93.8                 |                | 1080          |            |                 |                   |     |    |    |
| 315L1                            | 110               |               | 196.1       | 94.0     | 1150                 |                |               |            |                 |                   |     |    |    |
| 315L2                            | 132               |               | 232.5       | 94.2     | 1210                 |                |               |            |                 |                   |     |    |    |
| 355M1                            | 160               | 990           | 227.7       | 94.5     | 0.88                 | 1.90           | 1600          | 90         | 95              |                   |     |    |    |
| 355M2                            | 200               |               | 346.4       | 94.7     |                      |                | 1700          |            |                 |                   |     |    |    |
| 355L                             | 250               |               | 432.1       | 94.9     |                      |                | 1800          |            |                 |                   |     |    |    |
| Synchronous Speed 750r/min 50Hz  |                   |               |             |          |                      |                |               |            |                 |                   |     |    |    |
| 80M1                             | 0.18              | 630           | 0.9         | 51.0     | 0.61                 | 3.30           | 1.80          | 1.90       | 17              | 52                | 60  |    |    |
| 80M2                             | 0.25              | 640           | 1.1         | 54.0     |                      |                |               |            | 19              |                   |     |    |    |
| 90S                              | 0.37              | 660           | 1.4         | 62.0     |                      | 0.67           |               | 4.00       | 1.80            | 23                | 56  | 64 |    |
| 90L                              | 0.55              |               | 2.1         | 63.0     |                      |                |               |            |                 | 25                |     |    |    |
| 100L1                            | 0.75              | 690           | 2.3         | 71.0     | 0.69                 | 5.00           | 2.00          | 33         |                 | 59                | 67  |    |    |
| 100L2                            | 1.1               |               | 3.2         | 73.0     |                      |                |               | 38         |                 |                   |     |    |    |
| 112M                             | 1.5               | 680           | 4.2         | 75.0     | 0.69                 | 6.00           |               | 1.90       | 50              | 61                | 69  |    |    |
| 132S                             | 2.2               | 710           | 5.8         | 78.0     | 0.71                 |                |               |            | 2.00            | 63                | 64  | 72 |    |
| 132M                             | 3                 |               | 7.5         | 79.0     | 0.73                 |                | 79            |            |                 |                   |     |    |    |
| 160M1                            | 4                 | 720           | 9.8         | 81.0     | 0.74                 |                | 1.90          |            |                 | 118               | 68  | 76 |    |
| 160M2                            | 5.5               |               | 12.9        | 83.0     |                      | 119            |               |            |                 |                   |     |    |    |
| 160L                             | 7.5               | 730           | 16.9        | 85.5     | 0.75                 | 1.80           |               | 145        | 70              | 78                |     |    |    |
| 180L                             | 11                |               | 23.9        | 87.5     | 0.76                 |                |               | 184        |                 |                   |     |    |    |
| 200L                             | 15                |               | 32.4        | 88.0     |                      |                | 250           | 73         |                 |                   | 80  |    |    |
| 225S                             | 18.5              |               | 39.1        | 90.0     |                      |                | 266           |            |                 |                   |     |    |    |
| 225M                             | 22                | 740           | 45.0        | 90.5     |                      | 0.78           | 6.60          | 1.90       | 292             | 75                | 82  |    |    |
| 250M                             | 30                |               | 63.4        | 91.0     | 0.79                 | 405            |               |            |                 |                   |     |    |    |
| 280S                             | 37                |               | 73.9        | 91.5     |                      | 0.81           |               |            | 520             |                   |     | 76 | 83 |
| 280M                             | 45                |               | 89.4        | 92.0     |                      |                |               |            | 592             |                   |     |    |    |
| 315S                             | 55                | 740           | 105.6       | 92.8     |                      |                | 0.82          | 6.40       | 1.80            | 1000              | 82  | 88 |    |
| 315M                             | 75                |               | 143.7       | 93.0     | 1100                 |                |               |            |                 |                   |     |    |    |
| 315L1                            | 90                |               | 168.9       | 93.8     | 1160                 |                |               |            |                 |                   |     |    |    |
| 315L2                            | 110               |               | 206.0       | 94.0     | 1230                 |                |               |            |                 |                   |     |    |    |
| 355M1                            | 132               | 740           | 248.0       | 93.7     | 0.83                 | 6.40           | 1.80          | 1600       | 90              | 95                |     |    |    |
| 355M2                            | 160               |               | 299.0       | 94.2     |                      |                |               | 1700       |                 |                   |     |    |    |
| 355L                             | 200               |               | 368.1       | 94.5     |                      |                |               | 1800       |                 |                   |     |    |    |

# T ECC Series Mounting Dimensions



IM B3

Table 5

| Frame No. | Poles    | Mounting Dimensions & Tolerance |       |       |     |      |      |                  |       |        |        |                 | Frame Dimensions |       |                 |      |             |      |             |             |      |      |      |      |     |     |     |
|-----------|----------|---------------------------------|-------|-------|-----|------|------|------------------|-------|--------|--------|-----------------|------------------|-------|-----------------|------|-------------|------|-------------|-------------|------|------|------|------|-----|-----|-----|
|           |          | A                               | A/2   | B     | C   | D    |      | E                |       | F      |        | G <sup>1)</sup> |                  | H     | K <sup>2)</sup> |      | AB          | AC   | AD          | HD          | L    |      |      |      |     |     |     |
| 63M       | 2,4      | 100                             | 50    | 80    | 40  | ±1.5 | 11   | +0.008<br>-0.003 | 23    | ±0.26  | 4      | 8.5             | 0                | -0.10 | 63              | 7    | +0.036<br>0 | 135  | 130         | 70          | 180  | 230  |      |      |     |     |     |
| 71M       | 2,4,6    | 112                             | 56    | 90    | 45  |      | 14   | 30               | 5     | 0      | -0.030 |                 | 11               | 0     | -0.10           |      |             | 71   | 150         | 145         | 80   | 195  | 255  |      |     |     |     |
| 80M       | 2,4,6,8  | 125                             | 62.5  | 100   | 50  |      | 19   | 40               | 6     | 15.5   | 80     |                 | 10               | 20    | 90              |      |             | 10   | 180         | 195         | 155  | 250  | 345  |      |     |     |     |
| 90S       |          | 140                             | 70    | 100   | 56  | 24   | 50   | ±0.31            | 8     | 0      | -0.036 | 24              | 100              | 0     | -0.5            | 12   | +0.430<br>0 | 165  | 175         | 145         | 220  | 320  |      |      |     |     |     |
| 90L       |          |                                 |       | 125   |     |      |      |                  |       |        |        |                 |                  |       |                 |      |             | 180  | 195         | 155         | 250  | 345  |      |      |     |     |     |
| 100L      |          | 160                             | 80    | 140   | 63  | ±2.0 | 28   | 60               | ±0.37 | 0      | -0.036 | 33              | 100              | 112   | 132             | 160  | 180         | 205  | 215         | 180         | 270  | 385  |      |      |     |     |     |
| 112M      |          | 190                             | 95    | 140   | 70  |      |      |                  |       |        |        |                 |                  |       |                 |      |             |      |             |             |      |      | 230  | 240  | 190 | 300 | 400 |
| 132S      |          | 216                             | 108   | 140   | 89  |      |      |                  |       |        |        |                 |                  |       |                 |      |             |      |             |             |      |      | 270  | 275  | 210 | 345 | 470 |
| 132M      |          | 2,4,6,8                         | 254   | 127   | 210 | 108  | 42   | +0.018<br>+0.002 | 110   | ±0.43  | 14     | 42.5            | 180              | 200   | 225             | 250  | 0           | -1.0 | 15          | +0.430<br>0 | 320  | 330  | 255  | 420  | 615 |     |     |
| 160M      |          |                                 |       |       | 254 |      |      |                  |       |        |        |                 |                  |       |                 |      |             |      |             |             | 320  | 330  | 255  | 420  | 670 |     |     |
| 160L      |          |                                 | 279   | 139.5 | 241 | 121  | ±3.0 | 48               | 110   | ±0.43  | 16     | 49              | 180              | 200   | 225             | 250  | 0           | -1.0 | 15          | +0.430<br>0 | 355  | 380  | 280  | 455  | 700 |     |     |
| 180M      |          |                                 |       |       | 279 |      |      |                  |       |        |        |                 |                  |       |                 |      |             |      |             |             | 740  |      |      |      |     |     |     |
| 180L      |          |                                 | 318   | 159   | 305 | 133  | ±4.0 | 55               | 140   | ±0.50  | 18     | 0               | -0.043           | 53    | 225             | 250  | 0           | -1.0 | 19          | +0.520<br>0 | 395  | 420  | 305  | 505  | 770 |     |     |
| 200L      |          |                                 |       |       |     |      |      |                  |       |        |        |                 |                  |       |                 |      |             |      |             |             | 225S | 4,8  | 286  | 149  | 60  | 110 | 16  |
| 225M      | 2        |                                 | 356   | 178   | 311 | 149  | 55   | 110              | ±0.43 | 16     | 49     | 53              | 225              | 250   | 0               | -1.0 | 19          | 435  | 470         | 335         | 560  | 820  |      |      |     |     |     |
| 250M      | 4,6,8    |                                 |       |       | 2   |      | 406  | 203              | 349   | 168    | 60     | 18              | 58               | 280   | 315             | 355  | 315         | 355  | 730         | 710         | 655  | 1010 | 845  |      |     |     |     |
| 280S      | 2        | 457                             | 228.5 | 368   | 190 | 65   | 140  | 20               | 0     | -0.052 | 67.5   | 280             | 315              | 355   | 280             | 0    | -1.0        | 24   | +0.520<br>0 | 550         | 580  | 410  | 680  | 1035 |     |     |     |
| 280M      | 4,6,8    |                                 |       | 2     |     | 419  |      |                  |       |        |        |                 |                  |       |                 |      |             |      |             |             |      |      |      |      | 75  | 18  | 0   |
| 315S      | 2        | 508                             | 254   | 406   | 216 | 65   | 170  | ±0.50            | 22    | 0      | -0.052 | 71              | 315              | 355   | 280             | 0    | -1.0        | 28   | +0.520<br>0 | 635         | 645  | 530  | 845  | 1295 |     |     |     |
| 315M      | 4,6,8,10 |                                 |       | 2     |     | 457  |      |                  |       |        |        |                 |                  |       |                 |      |             |      |             |             |      |      |      |      | 80  | 18  | 0   |
| 315L      | 2        | 508                             | 254   | 508   | 216 | 65   | 170  | ±0.50            | 22    | 0      | -0.043 | 58              | 315              | 355   | 280             | 0    | -1.0        | 28   | +0.520<br>0 | 635         | 645  | 530  | 845  | 1295 |     |     |     |
| 355M      | 4,6,8,10 |                                 |       | 2     |     | 560  |      |                  |       |        |        |                 |                  |       |                 |      |             |      |             |             |      |      |      |      | 80  | 18  | 0   |
| 355L      | 2        | 610                             | 305   | 630   | 254 | 75   | 210  | 140              | 28    | 0      | -0.052 | 90              | 355              | 355   | 280             | 0    | -1.0        | 28   | +0.520<br>0 | 730         | 710  | 655  | 1010 | 1500 |     |     |     |
| 355L      | 4,6,8,10 |                                 |       | 2     |     | 630  |      |                  |       |        |        |                 |                  |       |                 |      |             |      |             |             |      |      |      |      | 75  | 28  | 0   |

# T ECC Series Mounting Dimensions

IM B5

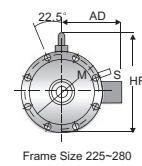
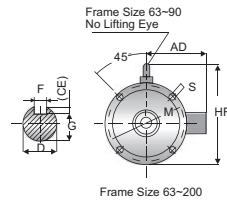
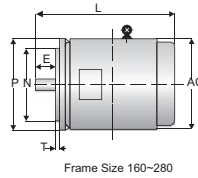
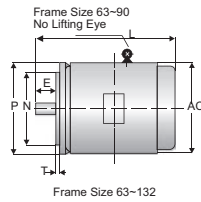
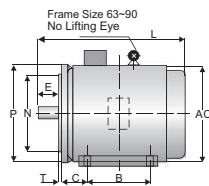


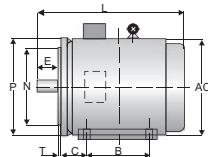
Table 6

| Frame No. | Poles   | Mounting Dimensions & Tolerance |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     | Frame Dimensions |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|-----------|---------|---------------------------------|------------------|------------------|-------|-------|-------------|-----------------|------------|------------|-------|------------------|-----------------|------------------|-----|------------------|-------------|-------------|-------------|-----------|-------------|-----|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|--|--|--|--|--|-----|--|-----|-----|-----|-----|-----|-----|--|--|
|           |         | D                               |                  | E                |       | F     |             | G <sup>1)</sup> |            | M          | N     |                  | P <sup>3)</sup> | R <sup>4)</sup>  |     | S                |             | T           |             | Holes No. | AC          | AD  | HF          | L   |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 63M       | 2,4     | 11                              | +0.008<br>-0.003 | 23               | ±0.26 | 4     |             | 8.5             |            | 115        | 95    | +0.013<br>-0.009 | 140             | ±1.5             |     | 10               | +0.360<br>0 | 3           | 0<br>-0.100 | 4         | 130         | 70  | 130         | 230 |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 71M       | 2,4,6   | 14                              |                  | 30               |       | 5     | 0<br>-0.030 | 11              | 0<br>-0.10 | 130        | 110   |                  | 160             |                  |     |                  |             |             |             |           |             | 145 | 80          | 145 | 255 |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 80M       | 2,4,6,8 | 19                              |                  | 40               |       | 6     |             | 15.5            |            |            |       |                  |                 |                  |     |                  | 12          |             |             |           |             |     | 175         | 145 | 185 | 295 |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 90S       |         | 24                              | +0.009<br>-0.004 | 50               | ±0.31 | 8     | 0<br>-0.036 | 24              |            | 165        | 130   | +0.014<br>-0.011 | 200             |                  |     | ±2.0             | 15          | +0.430<br>0 | 3.5         |           | 4           |     |             |     |     |     | 195 | 155 | 195 | 320 |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 90L       |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  | 345 |  |     |     |     |     |     |     |  |  |
| 100L      |         | 28                              |                  | 60               |       | ±0.37 |             |                 | 33         | 265        | 180   |                  | 250             |                  |     |                  |             |             |             |           |             |     |             |     |     | 215 | 180 | 245 | 385 |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 112M      |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  | 240 | 190 | 265 | 400 |     |     |  |  |
| 132S      |         | 38                              |                  |                  | 80    |       | 10          |                 | 33         |            | 265   | 230              |                 | 300              |     |                  |             |             |             |           |             |     | 275         | 210 | 315 | 470 |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 132M      |         | 2,4,6,8                         | 42               | +0.018<br>+0.002 | 110   | ±0.43 | 14          |                 | 42.5       | 0<br>-0.20 |       | 300              | 250             | +0.016<br>-0.013 | 350 | 0                | ±3.0        |             |             |           | 0<br>-0.120 |     |             |     |     |     |     |     | 330 | 255 | 385 | 615 |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 160L      |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     | 670 |     |  |  |
| 180M      |         |                                 |                  |                  |       |       | 48          |                 |            |            |       | 16               |                 | 49               |     | 350              | 300         | ±0.016      | 400         |           |             |     |             |     |     |     |     |     |     |     |     |     | 380 | 280 | 430 | 700 |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 180L      |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 200L      |         |                                 |                  |                  |       |       | 55          |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     | 420 | 305 | 480 | 770 |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 225S      |         |                                 |                  |                  |       |       | 4,8         | 60              |            | 140        | ±0.50 | 18               | 0<br>-0.043     | 53               |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     | 815 |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 225M      | 2       |                                 |                  |                  |       |       | 55          |                 | 110        | ±0.43      | 16    |                  | 49              |                  | 400 | 350              | ±0.018      | 450         |             |           |             |     |             |     |     |     |     | 470 | 335 | 535 | 820 |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           | 4,6,8   |                                 |                  |                  |       |       | 60          |                 |            |            | 18    |                  | 53              |                  |     |                  |             |             |             |           | ±4.0        | 19  | +0.520<br>0 | 5   |     |     |     |     |     |     |     |     |     | 845 |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 250M      | 2       |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     | 910 |  |  |
| 280S      | 4,6,8   | 65                              | +0.030<br>+0.011 | 140              | ±0.50 |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     | 500 | 450 | ±0.020 | 550 |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           | 2       |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
| 280M      | 4,6,8   | 75                              |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           | 2       | 65                              |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           | 4,6,8   | 75                              |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |
|           |         |                                 |                  |                  |       |       |             |                 |            |            |       |                  |                 |                  |     |                  |             |             |             |           |             |     |             |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |        |     |  |  |  |  |  |     |  |     |     |     |     |     |     |  |  |

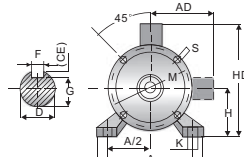
# T ECC Series Mounting Dimensions



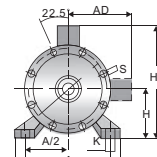
Frame Size 63-132



Frame Size 160-355



Frame Size 63-200



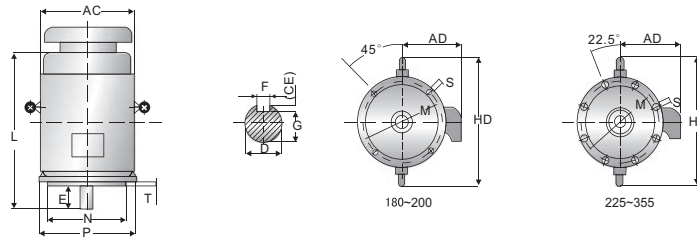
Frame Size 225-355

IM B35

Table 7

| Frame No. | Poles    | Mounting Dimensions & Tolerance |     |     |     |      |                  |                  |                 |             |                 |             |     |                 |                 |        |             |            | Frame Dimensions |                  |             |             |            |            |            |            |            |            |        |            |            |
|-----------|----------|---------------------------------|-----|-----|-----|------|------------------|------------------|-----------------|-------------|-----------------|-------------|-----|-----------------|-----------------|--------|-------------|------------|------------------|------------------|-------------|-------------|------------|------------|------------|------------|------------|------------|--------|------------|------------|
|           |          | A                               | A/2 | B   | C   | D    | E                | F                | G <sup>1)</sup> | H           | K <sup>2)</sup> | M           | N   | P <sup>3)</sup> | R <sup>4)</sup> | S      | T           | Holes No.  | AB               | AC               | AD          | HD          | L          |            |            |            |            |            |        |            |            |
| 63M       | 2,4      | 100                             | 50  | 80  | 40  | ±1.5 | 11               | +0.008<br>-0.003 | 23              | ±0.260      | 4               | 0<br>-0.030 | 8.5 | 0<br>-0.10      | 63              | 7      | 115         | 95         | +0.013<br>-0.009 | 140              | ±1.5        | 10          | +0.36<br>0 | 3          | 0<br>-0.10 | 4          | 135        | 130        | 70     | 180        | 230        |
| 71M       | 2,4,6    | 112                             | 56  | 90  | 45  |      | 14               | 30               | 5               | 11          | 71              |             | 130 |                 | 110             |        | 160         | 150        | 145              | 80               |             |             | 195        | 255        |            |            |            |            |        |            |            |
| 80M       | 2,4,6,8  | 125                             | 63  | 100 | 50  | ±2.0 | 19               | +0.009<br>-0.004 | 40              | 6           | 16              | 0<br>-0.036 | 24  | 100<br>112      | 0<br>-0.5       | 10     | +0.360<br>0 | 165        | 130              | +0.014<br>-0.011 | 200         | ±2.0        | 12         | +0.43<br>0 | 3.5        | 0<br>-0.12 | 165        | 175        | 145    | 220        | 295        |
| 90S       |          | 140                             | 70  | 100 | 56  |      | 24               |                  | 50              | ±0.310      | 20              |             |     |                 |                 |        | 90          |            | 12               |                  | 215         |             |            |            |            |            | 180        | 250        | 180    | 195        | 155        |
| 90L       |          | 216                             | 108 | 125 | 89  | 38   | 80               | 10               | 33              | 132         | 15              | 300         | 250 | 300             | ±3.0            | 15     | 4           | 0<br>-0.12 | 205              | 215              | 180         | 270         | 385        | 470<br>510 |            |            |            |            |        |            |            |
| 100L      |          |                                 |     | 160 |     |      |                  |                  |                 |             |                 |             | 80  | 140             |                 |        |             |            | 63               | 28               | 60          | 0<br>-0.036 | 24         | 100<br>112 | 215        | 180        | 250        | 270        | 275    | 210        | 345        |
| 112M      |          | 190                             | 95  | 140 | 70  | ±3.0 | 48               | 110              | ±0.370          | 14          | 43              | 180         | 15  | 300             | 250             | 350    | ±3.0        | 15         | 4                | 0<br>-0.12       | 230         | 240         | 190        | 300        | 400        | 470<br>510 |            |            |        |            |            |
| 132S      |          | 216                             | 108 | 140 | 178 |      |                  |                  | 38              |             |                 |             |     |                 | 80              | 10     |             |            |                  |                  | 33          | 132         | 15         | 300        | 250        | 300        | 270        | 275        | 210    | 345        | 420<br>470 |
| 132M      |          | 254                             | 127 | 210 | 108 | 42   | +0.018<br>+0.002 | 110              | ±0.430          | 14          | 43              | 180         | 15  | 300             | 250             | 350    | ±3.0        | 15         | 4                | 0<br>-0.12       | 230         | 240         | 190        | 300        | 400        | 470<br>510 |            |            |        |            |            |
| 160M      |          | 279                             | 140 | 241 | 121 | 48   | 110              |                  |                 |             |                 |             |     |                 | ±0.430          | 14     |             |            |                  |                  | 43          | 180         | 15         | 300        | 250        | 350        | 270        | 275        | 210    | 345        | 420<br>470 |
| 160L      |          | 318                             | 159 | 305 | 133 | 55   | 140              | ±0.500           | 18              | 0<br>-0.043 | 53              | 225         | 19  | 400             | 350             | 300    | ±0.016      | 400        | ±3.0             | 15               | 4           | 0<br>-0.12  | 230        | 240        | 190        | 300        | 400        | 470<br>510 |        |            |            |
| 180M      |          | 279                             | 140 | 279 | 190 | 55   |                  |                  |                 |             |                 |             |     |                 | 110             | ±0.430 | 16          | 53         |                  |                  |             |             | 225        | 19         | 400        | 350        | 300        | ±0.018     | 450    | 320        | 330        |
| 180L      | 318      | 159                             | 305 | 133 |     |      | 55               | 110              | ±0.430          | 16          | 53              | 225         | 19  | 400             |                 |        |             |            | 350              | 300              | ±0.016      | 400         |            |            |            | 320        | 330        | 255        | 420    | 615<br>670 |            |
| 200L      | 4,8      | 356                             | 178 | 286 | 149 | 60   | 140              | ±0.500           | 18              | 0<br>-0.043 | 53              | 19          | 400 | 350             | 300             | ±0.016 | 400         | ±3.0       | 15               | 4                | 0<br>-0.12  | 230         | 240        | 190        | 300        | 400        | 470<br>510 |            |        |            |            |
| 225S      | 2        |                                 |     | 356 |     | 178  | 311              | 55               | 110             | ±0.430      | 16              |             |     | 53              | 225             | 19     | 400         |            |                  |                  |             | 350         | 300        | ±0.018     | 450        | 320        | 330        | 255        | 420    | 615<br>670 |            |
| 225M      | 4,6,8    | 406                             | 203 | 349 | 168 | 60   | 140              | ±0.500           | 18              | 0<br>-0.043 | 53              | 19          | 400 | 350             | 300             | ±0.018 | 450         | ±3.0       | 15               | 4                | 0<br>-0.12  | 230         | 240        | 190        | 300        | 400        | 470<br>510 |            |        |            |            |
| 250M      | 2        |                                 |     | 406 | 203 | 349  |                  |                  |                 |             |                 |             |     | 168             | 60              | 110    | ±0.430      |            |                  |                  |             | 16          | 53         | 225        | 19         | 400        | 350        | 300        | ±0.018 | 450        | 320        |
| 280S      | 2        | 457                             | 229 | 368 | 190 | 65   | 140              | ±0.500           | 18              | 0<br>-0.043 | 58              | 24          | 500 | 450             | ±0.020          | 550    | ±3.0        | 15         | 4                | 0<br>-0.12       | 230         | 240         | 190        | 300        | 400        | 470<br>510 |            |            |        |            |            |
| 280M      | 4,6,8    |                                 |     | 368 |     | 190  |                  |                  |                 |             |                 |             |     | 75              | 140             | 20     |             |            |                  |                  | 0<br>-0.052 | 68          | 0<br>-0.20 | 280        | 24         | 500        | 450        | ±0.020     | 550    | 320        | 330        |
| 280M      | 2        | 508                             | 254 | 419 | 216 | 65   | +0.030<br>+0.011 | 170              | ±0.500          | 18          | 0<br>-0.043     | 58          | 28  | 600             | 550             | ±0.022 | 660         | ±3.0       | 15               | 4                | 0<br>-0.12  | 230         | 240        | 190        | 300        | 400        | 470<br>510 |            |        |            |            |
| 315S      | 4,6,8,10 |                                 |     | 419 |     | 216  | 75               |                  |                 |             |                 |             |     |                 | 140             | 20     | 0<br>-0.052 |            |                  |                  |             | 71          | 0<br>-0.20 | 280        | 24         | 600        | 550        | ±0.022     | 660    | 320        | 330        |
| 315M      | 2        | 508                             | 254 | 457 | 216 | 65   | 140              | ±0.500           | 18              | 0<br>-0.043 | 58              | 28          | 600 | 550             | ±0.022          | 660    | ±3.0        | 15         | 4                | 0<br>-0.12       | 230         | 240         | 190        | 300        | 400        | 470<br>510 |            |            |        |            |            |
| 315L      | 4,6,8,10 |                                 |     | 457 |     | 216  |                  |                  |                 |             |                 |             |     | 75              | 140             | 20     |             |            |                  |                  | 0<br>-0.052 | 71          | 0<br>-0.20 | 280        | 24         | 600        | 550        | ±0.022     | 660    | 320        | 330        |
| 355M      | 2        | 610                             | 305 | 560 | 254 | 75   | 140              | ±0.500           | 18              | 0<br>-0.043 | 58              | 28          | 600 | 550             | ±0.022          | 660    | ±3.0        | 15         | 4                | 0<br>-0.12       | 230         | 240         | 190        | 300        | 400        | 470<br>510 |            |            |        |            |            |
| 355L      | 4,6,8,10 |                                 |     | 560 |     | 254  |                  |                  |                 |             |                 |             |     | 75              | 140             | 20     |             |            |                  |                  | 0<br>-0.052 | 71          | 0<br>-0.20 | 280        | 24         | 600        | 550        | ±0.022     | 660    | 320        | 330        |
| 355L      | 2        | 610                             | 305 | 630 | 254 | 75   | +0.030<br>+0.011 | 170              | ±0.500          | 18          | 0<br>-0.043     | 58          | 28  | 600             | 550             | ±0.025 | 800         | ±3.0       | 15               | 4                | 0<br>-0.12  | 230         | 240        | 190        | 300        | 400        | 470<br>510 |            |        |            |            |
| 355L      | 4,6,8,10 |                                 |     | 630 |     | 254  | 75               |                  |                 |             |                 |             |     |                 | 140             | 20     | 0<br>-0.052 |            |                  |                  |             | 71          | 0<br>-0.20 | 280        | 24         | 600        | 550        | ±0.025     | 800    | 320        | 330        |

# T ECC Series Mounting Dimensions



IM V1

Table 8

| Frame No. | Poles   | Mounting Dimensions & Tolerance |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    | Frame Dimensions |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|-----------|---------|---------------------------------|------------------|--------|--------|--------|-------------|-----------------|------|--------|------|------------------|-----------------|-----------------|------|----|------------------|-------------|------|-----|--------|-----|-----|--|--|--|--|--|--|--|-----|--------|--------|--------|--------|-------------|--------|--|-----|-----|--------|-----|--|--|--|--|--|--|--|--|--|--|-------------|--------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------|------|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------|----|------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|-------------|-------------|-------------|
|           |         | D                               |                  | E      |        | F      |             | G <sup>1)</sup> |      | M      | N    |                  | P <sup>3)</sup> | R <sup>4)</sup> |      | S  | T                | Holes No.   | AC   | AD  | HF     | L   |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 180M      | 2,4,6,8 | 48                              | +0.018<br>+0.022 | 110    | ±0.430 | 14     |             | 42.5            |      | 300    | 250  | +0.016<br>-0.013 | 350             |                 | ±3.0 |    |                  | 0<br>-0.120 | 4    | 380 | 280    | 500 | 760 |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 180L      |         |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  | 800 |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 200L      |         | 55                              | +0.030<br>+0.011 | 140    | ±0.500 | 16     | 0<br>-0.043 | 49              |      | 350    | 300  | ±0.016           | 400             |                 |      | 19 |                  | 5           |      | 420 | 305    | 550 | 840 |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 225S      | 4,8     | 60                              |                  |        |        | 140    |             | ±0.500          |      | 18     | 53   |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  | 905 |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 225M      | 2       | 55                              |                  |        |        | 110    |             | ±0.430          |      | 16     | 49   |                  | 400             |                 |      |    |                  |             |      | 350 | ±0.018 | 450 |     |  |  |  |  |  |  |  |     | 910    |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 4,6,8   | 60                              |                  |        |        |        |             |                 |      | 18     | 53   |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 250M      | 2       |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 65     | 58     |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 280S      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 140    | ±0.500 | 20     | 0<br>-0.052 | 67.5   |  | 500 | 450 | ±0.020 | 550 |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 280M    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        | 2      | 65          | 18     |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | 0<br>-0.043 | 58     |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 315S      | 2       | 65                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        | 140    | ±0.500      | 18     |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | 0<br>-0.043 | 58     |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 315M    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             | 2      |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | 65          | 20     |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0<br>-0.052 | 67.5 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 315L      | 2       | 65                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             | 140    |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | ±0.500      | 18     |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0<br>-0.043 | 58   |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 315M    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             | 2      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 65          | 22   |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0<br>-0.052 | 71 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 315L      | 2       | 65                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             | 140    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ±0.500      | 18   |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0<br>-0.043 | 58 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 315M    |                                 | 2                | 65     | 22     |        | 0<br>-0.052 |                 | 71   |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355M      | 2       | 75                              | 140              | ±0.500 | 20     |        |             |                 | 67.5 |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        | 2      |        |             |                 | 75   |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 25          | 0<br>-0.052 | 86          |
| 355L      | 2       | 75                              |                  |        | 140    | ±0.500 |             | 20              |      | 67.5   |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             | 2               |      | 75     |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | 25     |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0<br>-0.052 | 86          |             |
| 355L      | 2       | 75                              |                  |        |        |        |             | 140             |      | ±0.500 |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | 20     |        | 67.5   |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | 2      |        | 75     |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 25          | 0<br>-0.052 | 86          |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | 140    |        | ±0.500 | 20     |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        | 67.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        | 2      |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        | 75   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             | 25          | 0<br>-0.052 |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        | 140    |             | ±0.500 |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | 20          |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      | 67.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | 2           |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      | 75   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             | 25          |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | 140         | ±0.500 |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 20          |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    | 67.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2           |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    | 75   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              | 140              | ±0.500 |        |        | 20          |                 |      |        |      |                  |                 |                 | 67.5 |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        | 2           |                 |      |        |      |                  |                 |                 | 75   |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        | 140    | ±0.500 | 20          |                 |      |        | 67.5 |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        | 2           |                 |      |        | 75   |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        | 140         | ±0.500          |      | 20     |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 67.5   |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      | 2      |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 75     |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      | 140    |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | ±0.500 | 20     |        |        | 67.5        |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 2      |        |        | 75          |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 140    |        | ±0.500 | 20          |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        | 67.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        | 2           |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        | 75   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        | 140         |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | ±0.500      | 20     |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      | 67.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             | 2      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      | 75   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              | 140              | ±0.500 |        |        |             |                 |      |        |      |                  |                 | 20              |      |    | 67.5             |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 | 2               |      |    | 75               |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        | 140    | ±0.500 |             |                 | 20   |        |      |                  | 67.5            |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 | 2    |        |      |                  | 75              |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        | 140         | ±0.500          | 20   |        |      |                  | 67.5            |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 | 2    |        |      |                  | 75              |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 | 140  | ±0.500 |      |                  | 20              |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        | 67.5   |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  | 2               |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        | 75     |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  | 140             |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | ±0.500 | 20     |        |             | 67.5   |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        | 2      |        |             | 75     |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        | 140    |        | ±0.500      | 20     |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        | 67.5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             | 2      |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        | 75   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              | 140              | ±0.500 |        |        |             |                 |      |        |      |                  |                 |                 |      | 20 |                  |             | 67.5 |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      | 2  |                  |             | 75   |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        | 140    | ±0.500 |             |                 |      |        |      | 20               |                 |                 | 67.5 |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      | 2                |                 |                 | 75   |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        | 140         | ±0.500          |      |        | 20   |                  |                 |                 | 67.5 |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        | 2    |                  |                 |                 | 75   |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 | 140  | ±0.500 | 20   |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | 67.5   |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        | 2    |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | 75     |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        | 140  |                  | ±0.500          |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | 20     |        |        | 67.5   |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | 2      |        |        | 75     |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | 140    |        | ±0.500 | 20     |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | 67.5        |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        | 2      |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  | 75          |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              | 140              | ±0.500 |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  | 20          |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             | 67.5   |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  | 2           |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             | 75     |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        | 140    | ±0.500 |             |                 |      |        |      |                  |                 | 20              |      |    | 67.5             |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 | 2               |      |    | 75               |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        | 140         | ±0.500          |      |        |      | 20               |                 |                 |      |    | 67.5             |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      | 2                |                 |                 |      |    | 75               |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 | 140  | ±0.500 |      | 20               |                 |                 |      |    | 67.5             |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      | 2                |                 |                 |      |    | 75               |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        | 140  | ±0.500           | 20              |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 67.5   |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  | 2               |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 75     |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        |        |        |             |                 |      |        |      |                  | 140             |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     | ±0.500 | 20     |        |        | 67.5        |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 2      |        |        | 75          |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              | 140              | ±0.500 |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 20     |        |        | 67.5        |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      |    |                  |             |      |     |        |     |     |  |  |  |  |  |  |  |     |        | 2      |        |        | 75          |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
| 355L      | 2       | 75                              |                  |        | 140    | ±0.500 |             |                 |      |        |      |                  |                 |                 |      | 20 |                  |             | 67.5 |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |
|           | 355L    |                                 |                  |        |        |        |             |                 |      |        |      |                  |                 |                 |      | 2  |                  |             | 75   |     |        |     |     |  |  |  |  |  |  |  |     |        |        |        |        |             |        |  |     |     |        |     |  |  |  |  |  |  |  |  |  |  |             |        |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |      |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |    |      |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |             |             |             |

The note for: 1)The position tolerance for hole K is based on the axis of shaft extension.  
 2)Dimension P is the maximum limit value.  
 3)R is the distance from the matching surface of flange to the shoulder of shaft extension.

# “ECOL” Motors

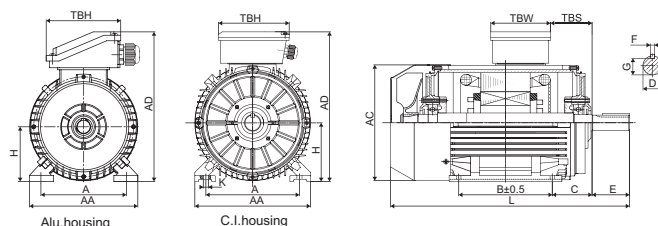
## FEATURES

- Energy savings, high efficiency
- High starting torque, lower starting current
- Versatile and easy to modify design adapts to a variety of applications
- Option of integrated or removable feet
- Option of aluminum housing up to frame size 200
- Option of terminal box location (top, left or right)
- Option of IE2, IE3, MEPS High and Premium Efficiency for IEC standards + NEMA EPACT and Premium Efficiency
- Full use of the magnetization properties of cold rolled silicone steel in which the stator laminations are magnetized evenly to reduce temperature rise of the winding
- Dimensional interchangeability (same or shorter than many motors currently offered in the market)



## APPLICATIONS

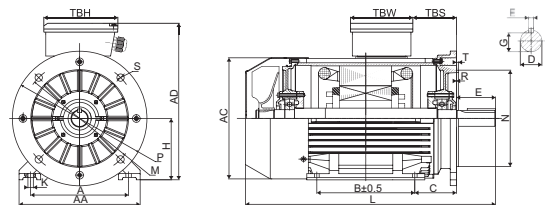
- Pumps
- Waste water treatment plants
- Air compressors, fans
- Gear reducers and power transmission
- Pulp and paper mills
- Steel mill
- Conveyors, elevators
- Material handling equipment
- Agricultural application
- Mining equipment
- Hydraulic equipment



Alu. housing

C.I. housing

IM B3 Figure 1



IM B35 Figure 2

IM B14 **Figure 4**

## IE1 Efficiency Motors Technical Data

| Model                                    | Power (KW) | Full Load Speed (r/min) | I <sub>n</sub> 400V (A) | I <sub>s</sub> 400V (A) | I <sub>st</sub> /I <sub>n</sub> (Times) | Eff. 100%FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) |
|------------------------------------------|------------|-------------------------|-------------------------|-------------------------|-----------------------------------------|-----------------|---------------------|------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
| 2 Pole - 3000 rpm Synchronous Speed 50Hz |            |                         |                         |                         |                                         |                 |                     |                        |                                         |                                          |                                          |
| TCA-1/TCC-1 801-2                        | 0.75       | 2838                    | 1.09                    | 2.06                    | 5                                       | 72.1            | 0.73                | 2.52                   | 2.2                                     | 1.9                                      | 2.6                                      |
| TCA-1/TCC-1 802-2                        | 1.1        | 2836                    | 1.54                    | 2.90                    | 5                                       | 75              | 0.73                | 3.70                   | 2.2                                     | 1.8                                      | 2.6                                      |
| TCA-1/TCC-1 90S-2                        | 1.5        | 2842                    | 1.98                    | 3.79                    | 5                                       | 77.2            | 0.74                | 5.04                   | 2.2                                     | 1.8                                      | 2.5                                      |
| TCA-1/TCC-1 90L-2                        | 2.2        | 2835                    | 2.39                    | 5.04                    | 5.5                                     | 79.7            | 0.79                | 7.41                   | 2.2                                     | 1.8                                      | 2.5                                      |
| TCA-1/TCC-1 100L-2                       | 3          | 2841                    | 2.97                    | 6.56                    | 5.5                                     | 81.5            | 0.81                | 10.08                  | 2.3                                     | 1.9                                      | 2.6                                      |
| TCA-1/TCC-1 112M-2                       | 4          | 2900                    | 3.88                    | 8.58                    | 6                                       | 83.1            | 0.81                | 13.17                  | 2.4                                     | 1.9                                      | 2.6                                      |
| TCA-1/TCC-1 132S1-2                      | 5.5        | 2895                    | 4.65                    | 11.16                   | 6                                       | 84.7            | 0.84                | 18.14                  | 2.3                                     | 2                                        | 2.6                                      |
| TCA-1/TCC-1 132S2-2                      | 7.5        | 2900                    | 5.98                    | 14.81                   | 6.4                                     | 86              | 0.85                | 24.70                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 160M1-2                      | 11         | 2910                    | 7.85                    | 20.83                   | 6.3                                     | 87.6            | 0.87                | 36.10                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 160M2-2                      | 15         | 2908                    | 10.57                   | 28.06                   | 6.8                                     | 88.7            | 0.87                | 49.26                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 160L-2                       | 18.5       | 2912                    | 11.69                   | 33.60                   | 7                                       | 89.3            | 0.89                | 60.67                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 180M-2                       | 22         | 2920                    | 13.81                   | 39.69                   | 7.2                                     | 89.9            | 0.89                | 71.95                  | 2.3                                     | 2                                        | 2.6                                      |
| TCA-1/TCC-1 200L1-2                      | 30         | 2915                    | 18.67                   | 53.64                   | 7                                       | 90.7            | 0.89                | 98.28                  | 2.3                                     | 2                                        | 2.6                                      |
| TCA-1/TCC-1 200L2-2                      | 37         | 2920                    | 22.90                   | 65.80                   | 7.2                                     | 91.2            | 0.89                | 121.00                 | 2.3                                     | 2                                        | 2.7                                      |
| TCC-1 225M-2                             | 45         | 2920                    | 26.21                   | 78.70                   | 7                                       | 91.7            | 0.90                | 147.16                 | 2.3                                     | 2                                        | 2.7                                      |
| TCC-1 250M-2                             | 55         | 2930                    | 35.47                   | 97.85                   | 7.8                                     | 92.2            | 0.88                | 179.25                 | 2.2                                     | 1.9                                      | 2.5                                      |
| TCC-1 280S-2                             | 75         | 2930                    | 45.66                   | 131.22                  | 7.8                                     | 92.7            | 0.89                | 244.44                 | 2.1                                     | 1.9                                      | 2.5                                      |
| TCC-1 280M-2                             | 90         | 2930                    | 51.68                   | 155.21                  | 7.7                                     | 93              | 0.90                | 293.32                 | 2.1                                     | 1.9                                      | 2.5                                      |
| TCC-1 315S-2                             | 110        | 2940                    | 62.97                   | 189.09                  | 7.7                                     | 93.3            | 0.90                | 357.29                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 315M-2                             | 132        | 2940                    | 71.12                   | 223.93                  | 7.6                                     | 93.5            | 0.91                | 428.74                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 315L1-2                            | 160        | 2945                    | 91.10                   | 273.57                  | 7.8                                     | 93.8            | 0.90                | 518.81                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 315L2-2                            | 200        | 2945                    | 120.08                  | 345.07                  | 7.9                                     | 94              | 0.89                | 648.51                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 355M-2                             | 250        | 2945                    | 142.04                  | 426.54                  | 7.8                                     | 94              | 0.90                | 810.64                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 355L-2                             | 315        | 2945                    | 189.13                  | 543.48                  | 7.8                                     | 94              | 0.89                | 1021.40                | 2                                       | 1.8                                      | 2.3                                      |
| 4 Pole - 1500 rpm Synchronous Speed 50Hz |            |                         |                         |                         |                                         |                 |                     |                        |                                         |                                          |                                          |
| TCA-1/TCC-1 802-4                        | 0.75       | 1410                    | 1.03                    | 2.00                    | 5.4                                     | 72.1            | 0.75                | 5.08                   | 2.2                                     | 1.9                                      | 2.6                                      |
| TCA-1/TCC-1 90S-4                        | 1.1        | 1415                    | 1.32                    | 2.71                    | 5.3                                     | 75              | 0.78                | 7.42                   | 2.2                                     | 1.8                                      | 2.6                                      |
| TCA-1/TCC-1 90L-4                        | 1.5        | 1410                    | 1.74                    | 3.60                    | 5.5                                     | 77.2            | 0.78                | 10.16                  | 2.2                                     | 1.8                                      | 2.5                                      |
| TCA-1/TCC-1 100L1-4                      | 2.2        | 1420                    | 2.31                    | 4.98                    | 6                                       | 79.7            | 0.80                | 14.79                  | 2.2                                     | 1.8                                      | 2.5                                      |
| TCA-1/TCC-1 100L2-4                      | 3          | 1420                    | 3.08                    | 6.64                    | 6                                       | 81.5            | 0.80                | 20.17                  | 2.3                                     | 1.9                                      | 2.6                                      |
| TCA-1/TCC-1 112M-4                       | 4          | 1425                    | 3.74                    | 8.47                    | 6.3                                     | 83.1            | 0.82                | 26.81                  | 2.4                                     | 1.9                                      | 2.6                                      |
| TCA-1/TCC-1 132S-4                       | 5.5        | 1420                    | 4.85                    | 11.29                   | 6.5                                     | 84.7            | 0.83                | 36.99                  | 2.3                                     | 2                                        | 2.6                                      |
| TCA-1/TCC-1 132M-4                       | 7.5        | 1420                    | 5.98                    | 14.81                   | 6.4                                     | 86              | 0.85                | 50.44                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 160M-4                       | 11         | 1430                    | 8.61                    | 21.32                   | 6.8                                     | 87.6            | 0.85                | 73.46                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 160L-4                       | 15         | 1435                    | 10.06                   | 27.74                   | 6.7                                     | 88.7            | 0.88                | 99.82                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 180M-4                       | 18.5       | 1435                    | 12.32                   | 33.98                   | 7.2                                     | 89.3            | 0.88                | 123.11                 | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 180L-4                       | 22         | 1450                    | 15.29                   | 40.60                   | 7.3                                     | 89.9            | 0.87                | 144.89                 | 2.3                                     | 2                                        | 2.6                                      |

## IE1 Efficiency Motors Technical Data

| Model                                    | Power (KW) | Full Load Speed (r/min) | I <sub>nl</sub> 400V (A) | I <sub>n</sub> 400V (A) | I <sub>st</sub> /I <sub>n</sub> (Times) | Eff. 100%FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) |
|------------------------------------------|------------|-------------------------|--------------------------|-------------------------|-----------------------------------------|-----------------|---------------------|------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
| 4 Pole - 1500 rpm Synchronous Speed 50Hz |            |                         |                          |                         |                                         |                 |                     |                        |                                         |                                          |                                          |
| TCA-1/TCC-1 200L-4                       | 30         | 1450                    | 18.67                    | 53.64                   | 7.6                                     | 90.7            | 0.89                | 197.57                 | 2.3                                     | 2                                        | 2.6                                      |
| TCC-1 225S-4                             | 37         | 1460                    | 22.90                    | 65.80                   | 7.5                                     | 91.2            | 0.89                | 242.00                 | 2.3                                     | 2                                        | 2.7                                      |
| TCC-1 225M-4                             | 45         | 1470                    | 29.18                    | 80.49                   | 7.3                                     | 91.7            | 0.88                | 292.33                 | 2.3                                     | 2                                        | 2.7                                      |
| TCC-1 250M-4                             | 55         | 1470                    | 33.70                    | 96.85                   | 7.4                                     | 92.1            | 0.89                | 357.29                 | 2.2                                     | 1.9                                      | 2.5                                      |
| TCC-1 280S-4                             | 75         | 1470                    | 48.11                    | 132.71                  | 7.5                                     | 92.7            | 0.88                | 487.21                 | 2.1                                     | 1.9                                      | 2.5                                      |
| TCC-1 280M-4                             | 90         | 1470                    | 51.68                    | 155.21                  | 7.7                                     | 93              | 0.90                | 584.65                 | 2.1                                     | 1.9                                      | 2.5                                      |
| TCC-1 315S-4                             | 110        | 1475                    | 62.97                    | 189.09                  | 7.8                                     | 93.3            | 0.90                | 712.15                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 315M-4                             | 132        | 1475                    | 71.12                    | 223.93                  | 7.8                                     | 93.5            | 0.91                | 854.58                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 315L1-4                            | 160        | 1475                    | 85.93                    | 270.56                  | 7.9                                     | 93.8            | 0.91                | 1035.86                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 315L2-4                            | 200        | 1475                    | 113.63                   | 341.23                  | 7.7                                     | 94              | 0.90                | 1294.82                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 355M-4                             | 250        | 1475                    | 150.10                   | 431.33                  | 7.9                                     | 94              | 0.89                | 1618.52                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 355L-4                             | 315        | 1475                    | 178.97                   | 537.44                  | 7.8                                     | 94              | 0.90                | 2039.34                | 2                                       | 1.8                                      | 2.3                                      |
| 6 Pole - 1000 rpm Synchronous Speed 50Hz |            |                         |                          |                         |                                         |                 |                     |                        |                                         |                                          |                                          |
| TCA-1/TCC-1 90S-6                        | 0.75       | 930                     | 1.16                     | 2.15                    | 5.3                                     | 70              | 0.72                | 7.70                   | 2.2                                     | 1.9                                      | 2.6                                      |
| TCA-1/TCC-1 90L-6                        | 1.1        | 930                     | 1.63                     | 3.02                    | 5                                       | 72.9            | 0.72                | 11.29                  | 2.2                                     | 1.8                                      | 2.6                                      |
| TCA-1/TCC-1 100L-6                       | 1.5        | 935                     | 2.09                     | 3.94                    | 4.9                                     | 75.2            | 0.73                | 15.32                  | 2.2                                     | 1.8                                      | 2.5                                      |
| TCA-1/TCC-1 112M-6                       | 2.2        | 935                     | 2.97                     | 5.60                    | 5.7                                     | 77.7            | 0.73                | 22.47                  | 2.2                                     | 1.8                                      | 2.5                                      |
| TCA-1/TCC-1 132S-6                       | 3          | 935                     | 3.95                     | 7.44                    | 6.3                                     | 79.7            | 0.73                | 30.64                  | 2.3                                     | 1.9                                      | 2.6                                      |
| TCA-1/TCC-1 132M1-6                      | 4          | 940                     | 5.01                     | 9.59                    | 6.2                                     | 81.4            | 0.74                | 40.64                  | 2.4                                     | 1.9                                      | 2.6                                      |
| TCA-1/TCC-1 132M2-6                      | 5.5        | 940                     | 6.34                     | 12.57                   | 6.8                                     | 83.1            | 0.76                | 55.87                  | 2.3                                     | 2                                        | 2.6                                      |
| TCA-1/TCC-1 160M-6                       | 7.5        | 950                     | 8.49                     | 16.82                   | 7                                       | 84.7            | 0.76                | 75.39                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 160L-6                       | 11         | 955                     | 11.43                    | 23.56                   | 7.3                                     | 86.4            | 0.78                | 109.99                 | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 180L-6                       | 15         | 955                     | 14.84                    | 31.25                   | 7.2                                     | 87.7            | 0.79                | 149.99                 | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 200L1-6                      | 18.5       | 960                     | 15.58                    | 36.31                   | 6.9                                     | 88.6            | 0.83                | 184.02                 | 2.3                                     | 2                                        | 2.7                                      |
| TCA-1/TCC-1 200L2-6                      | 22         | 960                     | 18.41                    | 42.89                   | 7.3                                     | 89.2            | 0.83                | 218.84                 | 2.3                                     | 2                                        | 2.6                                      |
| TCC-1 225M-6                             | 30         | 970                     | 24.82                    | 57.84                   | 7.4                                     | 90.2            | 0.83                | 295.34                 | 2.3                                     | 2                                        | 2.6                                      |
| TCC-1 250M-6                             | 37         | 970                     | 27.94                    | 69.20                   | 7.5                                     | 90.8            | 0.85                | 364.25                 | 2.3                                     | 2                                        | 2.7                                      |
| TCC-1 280S-6                             | 45         | 975                     | 32.26                    | 82.63                   | 7.7                                     | 91.4            | 0.86                | 440.74                 | 2.3                                     | 2                                        | 2.7                                      |
| TCC-1 280M1-6                            | 55         | 975                     | 37.40                    | 99.29                   | 7.7                                     | 91.9            | 0.87                | 538.68                 | 2.2                                     | 1.9                                      | 2.5                                      |
| TCC-1 315S-6                             | 75         | 975                     | 45.71                    | 131.36                  | 7.9                                     | 92.6            | 0.89                | 734.56                 | 2.1                                     | 1.9                                      | 2.5                                      |
| TCC-1 315M-6                             | 90         | 975                     | 51.74                    | 155.37                  | 8                                       | 92.9            | 0.90                | 881.47                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 315L1-6                            | 110        | 975                     | 62.97                    | 189.09                  | 7.7                                     | 93.3            | 0.90                | 1077.36                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 315L2-6                            | 132        | 975                     | 79.68                    | 228.96                  | .8                                      | 93.5            | 0.89                | 1292.83                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 355M1-6                            | 160        | 975                     | 85.93                    | 270.56                  | 7.6                                     | 93.8            | 0.91                | 1567.06                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 355M2-6                            | 200        | 975                     | 113.63                   | 341.23                  | 7.8                                     | 94              | 0.90                | 1958.83                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-1 355L-6                             | 250        | 975                     | 150.10                   | 431.33                  | 7.8                                     | 94              | 0.89                | 2448.54                | 2                                       | 1.8                                      | 2.3                                      |

## IE2 Efficiency Motors Technical Data

| Model                                    | Power (KW) | Full Load Speed (r/min) | I <sub>m</sub> 400V (A) | I <sub>s</sub> 400V (A) | I <sub>s</sub> /I <sub>n</sub> (Times) | Eff. 100%FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) |
|------------------------------------------|------------|-------------------------|-------------------------|-------------------------|----------------------------------------|-----------------|---------------------|------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
| 2 Pole - 3000 rpm Synchronous Speed 50Hz |            |                         |                         |                         |                                        |                 |                     |                        |                                         |                                          |                                          |
| TCA-2/TCC-2 801-2                        | 0.75       | 2848                    | 0.96                    | 1.86                    | 6                                      | 77.4            | 0.75                | 2.51                   | 2.7                                     | 2.1                                      | 2.8                                      |
| TCA-2/TCC-2 802-2                        | 1.1        | 2846                    | 1.20                    | 2.52                    | 6.7                                    | 79.6            | 0.79                | 3.69                   | 2.7                                     | 2.1                                      | 2.9                                      |
| TCA-2/TCC-2 90S-2                        | 1.5        | 2852                    | 1.32                    | 3.17                    | 6.1                                    | 81.3            | 0.84                | 5.02                   | 2.3                                     | 2                                        | 2.7                                      |
| TCA-2/TCC-2 90L-2                        | 2.2        | 2845                    | 1.89                    | 4.54                    | 7                                      | 83.2            | 0.84                | 7.38                   | 2.6                                     | 2.1                                      | 2.7                                      |
| TCA-2/TCC-2 100L-2                       | 3          | 2851                    | 2.00                    | 5.75                    | 7.6                                    | 84.6            | 0.89                | 10.05                  | 2.5                                     | 2                                        | 2.8                                      |
| TCA-2/TCC-2 112M-2                       | 4          | 2910                    | 2.63                    | 7.56                    | 7.8                                    | 85.8            | 0.89                | 13.13                  | 2.5                                     | 2                                        | 2.7                                      |
| TCA-2/TCC-2 132S1-2                      | 5.5        | 2905                    | 3.57                    | 10.25                   | 7.8                                    | 87              | 0.89                | 18.08                  | 2.4                                     | 2                                        | 2.9                                      |
| TCA-2/TCC-2 132S2-2                      | 7.5        | 2910                    | 5.06                    | 13.96                   | 7.9                                    | 88.1            | 0.88                | 24.61                  | 2.7                                     | 2                                        | 2.8                                      |
| TCA-2/TCC-2 160M1-2                      | 11         | 2920                    | 6.57                    | 19.73                   | 7.9                                    | 89.4            | 0.90                | 35.97                  | 2.2                                     | 2.1                                      | 3                                        |
| TCA-2/TCC-2 160M2-2                      | 15         | 2918                    | 8.37                    | 26.35                   | 7.9                                    | 90.3            | 0.91                | 49.09                  | 2.3                                     | 2.1                                      | 3                                        |
| TCA-2/TCC-2 160L-2                       | 18.5       | 2922                    | 9.64                    | 31.93                   | 8                                      | 90.9            | 0.92                | 60.46                  | 2.4                                     | 2.1                                      | 2.9                                      |
| TCA-2/TCC-2 180M-2                       | 22         | 2930                    | 13.60                   | 39.08                   | 7.5                                    | 91.3            | 0.89                | 71.70                  | 2.3                                     | 2                                        | 2.8                                      |
| TCA-2/TCC-2 200L1-2                      | 30         | 2925                    | 19.39                   | 53.49                   | 6.7                                    | 92              | 0.88                | 97.94                  | 2.4                                     | 2                                        | 2.7                                      |
| TCA-2/TCC-2 200L2-2                      | 37         | 2930                    | 21.36                   | 64.15                   | 6.3                                    | 92.5            | 0.90                | 120.59                 | 2.3                                     | 2                                        | 2.7                                      |
| TCC-2 225M-2                             | 45         | 2930                    | 28.81                   | 79.45                   | 6.9                                    | 92.9            | 0.88                | 146.66                 | 2.3                                     | 2                                        | 2.8                                      |
| TCC-2 250M-2                             | 55         | 2940                    | 35.09                   | 96.80                   | 8                                      | 93.2            | 0.88                | 178.64                 | 2.3                                     | 1.9                                      | 2.7                                      |
| TCC-2 280S-2                             | 75         | 2940                    | 37.86                   | 125.45                  | 8                                      | 93.8            | 0.92                | 243.60                 | 2.2                                     | 1.9                                      | 2.7                                      |
| TCC-2 280M-2                             | 90         | 2940                    | 45.28                   | 150.06                  | 7.7                                    | 94.1            | 0.92                | 292.33                 | 2.2                                     | 1.9                                      | 2.6                                      |
| TCC-2 315S-2                             | 110        | 2940                    | 62.30                   | 187.08                  | 7.7                                    | 94.3            | 0.90                | 357.29                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 315M-2                             | 132        | 2940                    | 70.29                   | 221.33                  | 7.6                                    | 94.6            | 0.91                | 428.74                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 315L1-2                            | 160        | 2945                    | 90.14                   | 270.68                  | 7.8                                    | 94.8            | 0.90                | 518.81                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 315L2-2                            | 200        | 2945                    | 118.82                  | 341.44                  | 7.9                                    | 95              | 0.89                | 648.51                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 355M-2                             | 250        | 2945                    | 140.54                  | 422.05                  | 7.8                                    | 95              | 0.90                | 810.64                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 355L-2                             | 315        | 2945                    | 187.14                  | 537.76                  | 7.8                                    | 95              | 0.89                | 1021.40                | 2                                       | 1.8                                      | 2.3                                      |
| 4 Pole - 1500 rpm Synchronous Speed 50Hz |            |                         |                         |                         |                                        |                 |                     |                        |                                         |                                          |                                          |
| TCA-2/TCC-2 802-4                        | 0.75       | 1420                    | 0.90                    | 1.79                    | 5.4                                    | 79.6            | 0.76                | 5.04                   | 2.3                                     | 2.1                                      | 2.9                                      |
| TCA-2/TCC-2 90S-4                        | 1.1        | 1425                    | 1.21                    | 2.50                    | 5.9                                    | 81.4            | 0.78                | 7.37                   | 2.3                                     | 2.1                                      | 2.7                                      |
| TCA-2/TCC-2 90L-4                        | 1.5        | 1420                    | 1.57                    | 3.31                    | 6.4                                    | 82.8            | 0.79                | 10.09                  | 2.4                                     | 2                                        | 2.7                                      |
| TCA-2/TCC-2 100L1-4                      | 2.2        | 1430                    | 2.03                    | 4.59                    | 6.6                                    | 84.3            | 0.82                | 14.69                  | 2.4                                     | 2.1                                      | 2.9                                      |
| TCA-2/TCC-2 100L2-4                      | 3          | 1430                    | 2.94                    | 6.33                    | 6.9                                    | 85.5            | 0.80                | 20.03                  | 2.4                                     | 2                                        | 2.8                                      |
| TCA-2/TCC-2 112M-4                       | 4          | 1435                    | 4.01                    | 8.44                    | 7.9                                    | 86.6            | 0.79                | 26.62                  | 2.5                                     | 2                                        | 3                                        |
| TCA-2/TCC-2 132S-4                       | 5.5        | 1430                    | 4.87                    | 11.04                   | 7.1                                    | 87.7            | 0.82                | 36.73                  | 2.3                                     | 2                                        | 2.8                                      |
| TCA-2/TCC-2 132M-4                       | 7.5        | 1430                    | 6.31                    | 14.70                   | 7.8                                    | 88.7            | 0.83                | 50.08                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-2/TCC-2 160M-4                       | 11         | 1440                    | 6.17                    | 19.43                   | 7.9                                    | 89.8            | 0.91                | 72.95                  | 2.5                                     | 2.1                                      | 2.8                                      |
| TCA-2/TCC-2 160L-4                       | 15         | 1445                    | 7.82                    | 25.92                   | 7.8                                    | 90.8            | 0.92                | 99.13                  | 2.4                                     | 2.1                                      | 2.9                                      |
| TCA-2/TCC-2 180M-4                       | 18.5       | 1445                    | 12.68                   | 33.66                   | 7.8                                    | 91.2            | 0.87                | 122.26                 | 2.4                                     | 2.1                                      | 3                                        |
| TCA-2/TCC-2 180L-4                       | 22         | 1460                    | 13.55                   | 38.95                   | 7.5                                    | 91.6            | 0.89                | 143.89                 | 2.3                                     | 2                                        | 3                                        |

## IE2 Efficiency Motors Technical Data

| Model                                    | Power (KW) | Full Load Speed (r/min) | I <sub>n</sub> 400V (A) | I <sub>n</sub> 400V (A) | I <sub>s</sub> /I <sub>n</sub> (Times) | Eff. 100%FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) |
|------------------------------------------|------------|-------------------------|-------------------------|-------------------------|----------------------------------------|-----------------|---------------------|------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
| 4 Pole - 1500 rpm Synchronous Speed 50Hz |            |                         |                         |                         |                                        |                 |                     |                        |                                         |                                          |                                          |
| TCA-2/TCC-2 200L-4                       | 30         | 1460                    | 19.33                   | 53.31                   | 7.9                                    | 92.3            | 0.88                | 196.22                 | 2.4                                     | 2                                        | 2.7                                      |
| TCC-2 225S-4                             | 37         | 1470                    | 33.42                   | 72.02                   | 6.7                                    | 92.7            | 0.80                | 240.36                 | 2.4                                     | 2                                        | 2.7                                      |
| TCC-2 225M-4                             | 45         | 1480                    | 40.47                   | 87.21                   | 7                                      | 93.1            | 0.80                | 290.35                 | 2.3                                     | 2                                        | 2.8                                      |
| TCC-2 250M-4                             | 55         | 1480                    | 34.98                   | 96.49                   | 7.4                                    | 93.5            | 0.88                | 354.87                 | 2.4                                     | 1.9                                      | 2.7                                      |
| TCC-2 280S-4                             | 75         | 1480                    | 40.19                   | 126.56                  | 7.5                                    | 94              | 0.91                | 483.92                 | 2.2                                     | 1.9                                      | 2.6                                      |
| TCC-2 280M-4                             | 90         | 1480                    | 45.23                   | 149.90                  | 7.7                                    | 94.2            | 0.92                | 580.70                 | 2.2                                     | 1.9                                      | 2.6                                      |
| TCC-2 315S-4                             | 110        | 1480                    | 62.17                   | 186.69                  | 7.8                                    | 94.5            | 0.90                | 709.75                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 315M-4                             | 132        | 1480                    | 70.22                   | 221.09                  | 7.8                                    | 94.7            | 0.91                | 851.69                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 315L1-4                            | 160        | 1480                    | 84.93                   | 267.43                  | 7.9                                    | 94.9            | 0.91                | 1032.36                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 315L2-4                            | 200        | 1480                    | 112.32                  | 337.29                  | 7.7                                    | 95.1            | 0.90                | 1290.45                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 355M-4                             | 250        | 1480                    | 148.36                  | 426.35                  | 7.9                                    | 95.1            | 0.89                | 1613.06                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 355L-4                             | 315        | 1480                    | 176.90                  | 531.23                  | 7.8                                    | 95.1            | 0.90                | 2032.45                | 2                                       | 1.8                                      | 2.3                                      |
| 6 Pole - 1000 rpm Synchronous Speed 50Hz |            |                         |                         |                         |                                        |                 |                     |                        |                                         |                                          |                                          |
| TCA-2/TCC-2 90S-6                        | 0.75       | 935                     | 0.95                    | 1.88                    | 6.2                                    | 75.9            | 0.76                | 7.66                   | 2.2                                     | 2                                        | 2.7                                      |
| TCA-2/TCC-2 90L-6                        | 1.1        | 935                     | 1.18                    | 2.54                    | 6                                      | 78.1            | 0.80                | 11.23                  | 2.3                                     | 2.1                                      | 2.6                                      |
| TCA-2/TCC-2 100L-6                       | 1.5        | 940                     | 1.46                    | 3.31                    | 5.8                                    | 79.8            | 0.82                | 15.24                  | 2.3                                     | 2.1                                      | 2.7                                      |
| TCA-2/TCC-2 112M-6                       | 2.2        | 940                     | 2.25                    | 4.85                    | 6.4                                    | 81.8            | 0.80                | 22.35                  | 2.3                                     | 2.1                                      | 2.9                                      |
| TCA-2/TCC-2 132S-6                       | 3          | 940                     | 2.69                    | 6.26                    | 6.3                                    | 83.3            | 0.83                | 30.48                  | 2.4                                     | 2.2                                      | 2.8                                      |
| TCA-2/TCC-2 132M1-6                      | 4          | 945                     | 3.39                    | 8.12                    | 6.2                                    | 84.6            | 0.84                | 40.42                  | 2.5                                     | 2                                        | 2.8                                      |
| TCA-2/TCC-2 132M2-6                      | 5.5        | 945                     | 4.97                    | 11.26                   | 6.8                                    | 86              | 0.82                | 55.58                  | 2.3                                     | 1.9                                      | 2.8                                      |
| TCA-2/TCC-2 160M-6                       | 7.5        | 955                     | 6.16                    | 14.78                   | 7                                      | 87.2            | 0.84                | 74.99                  | 2.4                                     | 1.9                                      | 2.7                                      |
| TCA-2/TCC-2 160L-6                       | 11         | 960                     | 8.50                    | 21.06                   | 7.3                                    | 88.7            | 0.85                | 109.42                 | 2.5                                     | 2                                        | 2.8                                      |
| TCA-2/TCC-2 180L-6                       | 15         | 960                     | 12.48                   | 29.08                   | 7.8                                    | 89.7            | 0.83                | 149.21                 | 2.3                                     | 2.1                                      | 2.9                                      |
| TCA-2/TCC-2 200L1-6                      | 18.5       | 965                     | 14.03                   | 34.75                   | 7.8                                    | 90.4            | 0.85                | 183.07                 | 2.4                                     | 2.1                                      | 3.2                                      |
| TCA-2/TCC-2 200L2-6                      | 22         | 965                     | 15.86                   | 40.62                   | 7.9                                    | 90.9            | 0.86                | 217.70                 | 2.3                                     | 1.9                                      | 3.1                                      |
| TCC-2 225M-6                             | 30         | 975                     | 22.43                   | 55.56                   | 7.9                                    | 91.7            | 0.85                | 293.82                 | 2.2                                     | 1.9                                      | 2.7                                      |
| TCC-2 250M-6                             | 37         | 975                     | 29.95                   | 69.79                   | 7.5                                    | 92.2            | 0.83                | 362.38                 | 2.3                                     | 2.1                                      | 2.7                                      |
| TCC-2 280S-6                             | 45         | 980                     | 31.81                   | 81.48                   | 7.2                                    | 92.7            | 0.86                | 438.49                 | 2.3                                     | 2                                        | 2.8                                      |
| TCC-2 280M1-6                            | 55         | 980                     | 38.71                   | 99.15                   | 7.7                                    | 93.1            | 0.86                | 535.93                 | 2.2                                     | 1.9                                      | 2.7                                      |
| TCC-2 315S-6                             | 75         | 980                     | 45.17                   | 129.81                  | 7.9                                    | 93.7            | 0.89                | 730.81                 | 2.1                                     | 1.9                                      | 2.5                                      |
| TCC-2 315M-6                             | 90         | 980                     | 51.13                   | 153.56                  | 8                                      | 94              | 0.90                | 876.98                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 315L1-6                            | 110        | 980                     | 62.30                   | 187.08                  | 7.7                                    | 94.3            | 0.90                | 1071.86                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 315L2-6                            | 132        | 980                     | 78.75                   | 226.30                  | .8                                     | 94.6            | 0.89                | 1286.23                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 355M1-6                            | 160        | 980                     | 85.02                   | 267.71                  | 7.6                                    | 94.8            | 0.91                | 1559.07                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 355M2-6                            | 200        | 980                     | 112.43                  | 337.64                  | 7.8                                    | 95              | 0.90                | 1948.84                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-2 355L-6                             | 250        | 980                     | 148.52                  | 426.79                  | 7.8                                    | 95              | 0.89                | 2436.05                | 2                                       | 1.8                                      | 2.3                                      |

## IE3 Efficiency Motors Technical Data

| Model                                    | Power (KW) | Full Load Speed (r/min) | I <sub>nl</sub> 400V (A) | I <sub>n</sub> 400V (A) | I <sub>st</sub> /I <sub>n</sub> (Times) | Eff. 100%FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) |
|------------------------------------------|------------|-------------------------|--------------------------|-------------------------|-----------------------------------------|-----------------|---------------------|------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
| 2 Pole - 3000 rpm Synchronous Speed 50Hz |            |                         |                          |                         |                                         |                 |                     |                        |                                         |                                          |                                          |
| TCA-3/TCC-3 801-2                        | 0.75       | 2848                    | 0.92                     | 1.79                    | 6                                       | 80.7            | 0.75                | 2.51                   | 2.7                                     | 2.1                                      | 2.8                                      |
| TCA-3/TCC-3 802-2                        | 1.1        | 2846                    | 1.15                     | 2.43                    | 6.7                                     | 82.7            | 0.79                | 3.69                   | 2.7                                     | 2.1                                      | 2.9                                      |
| TCA-3/TCC-3 90S-2                        | 1.5        | 2852                    | 1.28                     | 3.06                    | 6.1                                     | 84.2            | 0.84                | 5.02                   | 2.3                                     | 2                                        | 2.7                                      |
| TCA-3/TCC-3 90L-2                        | 2.2        | 2845                    | 1.83                     | 4.40                    | 7                                       | 85.9            | 0.84                | 7.38                   | 2.6                                     | 2.1                                      | 2.7                                      |
| TCA-3/TCC-3 100L-2                       | 3          | 2851                    | 1.94                     | 5.59                    | 7.6                                     | 87.1            | 0.89                | 10.05                  | 2.5                                     | 2                                        | 2.8                                      |
| TCA-3/TCC-3 112M-2                       | 4          | 2910                    | 2.56                     | 7.36                    | 7.8                                     | 88.1            | 0.89                | 13.13                  | 2.5                                     | 2                                        | 2.7                                      |
| TCA-3/TCC-3 132S1-2                      | 5.5        | 2905                    | 3.48                     | 10.00                   | 7.8                                     | 89.2            | 0.89                | 18.08                  | 2.4                                     | 2                                        | 2.9                                      |
| TCA-3/TCC-3 132S2-2                      | 7.5        | 2910                    | 4.95                     | 13.65                   | 7.9                                     | 90.1            | 0.88                | 24.61                  | 2.7                                     | 2                                        | 2.8                                      |
| TCA-3/TCC-3 160M1-2                      | 11         | 2920                    | 6.44                     | 19.34                   | 7.9                                     | 91.2            | 0.90                | 35.97                  | 2.2                                     | 2.1                                      | 3                                        |
| TCA-3/TCC-3 160M2-2                      | 15         | 2918                    | 8.22                     | 25.89                   | 7.9                                     | 91.9            | 0.91                | 49.09                  | 2.3                                     | 2.1                                      | 3                                        |
| TCA-3/TCC-3 160L-2                       | 18.5       | 2922                    | 9.48                     | 31.41                   | 8                                       | 92.4            | 0.92                | 60.46                  | 2.4                                     | 2.1                                      | 2.9                                      |
| TCA-3/TCC-3 180M-2                       | 22         | 2930                    | 13.39                    | 38.49                   | 7.5                                     | 92.7            | 0.89                | 71.70                  | 2.3                                     | 2                                        | 2.8                                      |
| TCA-3/TCC-3 200L1-2                      | 30         | 2925                    | 19.12                    | 52.74                   | 6.7                                     | 93.3            | 0.88                | 97.94                  | 2.4                                     | 2                                        | 2.7                                      |
| TCA-3/TCC-3 200L2-2                      | 37         | 2930                    | 21.09                    | 63.33                   | 6.3                                     | 93.7            | 0.90                | 120.59                 | 2.3                                     | 2                                        | 2.7                                      |
| TCC-3 225M-2                             | 45         | 2930                    | 28.47                    | 78.52                   | 6.9                                     | 94              | 0.88                | 146.66                 | 2.3                                     | 2                                        | 2.8                                      |
| TCC-3 250M-2                             | 55         | 2940                    | 34.68                    | 95.67                   | 8                                       | 94.3            | 0.88                | 178.64                 | 2.3                                     | 1.9                                      | 2.7                                      |
| TCC-3 280S-2                             | 75         | 2940                    | 37.50                    | 124.26                  | 8                                       | 94.7            | 0.92                | 243.60                 | 2.2                                     | 1.9                                      | 2.7                                      |
| TCC-3 280M-2                             | 90         | 2940                    | 44.85                    | 148.64                  | 7.7                                     | 95              | 0.92                | 292.33                 | 2.2                                     | 1.9                                      | 2.6                                      |
| TCC-3 315S-2                             | 110        | 2940                    | 61.71                    | 185.31                  | 7.7                                     | 95.2            | 0.90                | 357.29                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 315M-2                             | 132        | 2940                    | 69.70                    | 219.47                  | 7.6                                     | 95.4            | 0.91                | 428.74                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 315L1-2                            | 160        | 2945                    | 89.20                    | 267.86                  | 7.8                                     | 95.8            | 0.90                | 518.81                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 315L2-2                            | 200        | 2945                    | 117.82                   | 338.58                  | 7.9                                     | 95.8            | 0.89                | 648.51                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 355M-2                             | 250        | 2945                    | 139.37                   | 418.53                  | 7.8                                     | 95.8            | 0.90                | 810.64                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 355L-2                             | 315        | 2945                    | 185.57                   | 533.27                  | 7.8                                     | 95.8            | 0.89                | 1021.40                | 2                                       | 1.8                                      | 2.3                                      |
| 4 Pole - 1500 rpm Synchronous Speed 50Hz |            |                         |                          |                         |                                         |                 |                     |                        |                                         |                                          |                                          |
| TCA-3/TCC-3 802-4                        | 0.75       | 1420                    | 0.87                     | 1.73                    | 5.4                                     | 82.5            | 0.76                | 5.04                   | 2.3                                     | 2.1                                      | 2.9                                      |
| TCA-3/TCC-3 90S-4                        | 1.1        | 1425                    | 1.17                     | 2.42                    | 5.9                                     | 84.1            | 0.78                | 7.37                   | 2.3                                     | 2.1                                      | 2.7                                      |
| TCA-3/TCC-3 90L-4                        | 1.5        | 1420                    | 1.53                     | 3.21                    | 6.4                                     | 85.3            | 0.79                | 10.09                  | 2.4                                     | 2                                        | 2.7                                      |
| TCA-3/TCC-3 100L1-4                      | 2.2        | 1430                    | 1.97                     | 4.47                    | 6.6                                     | 86.7            | 0.82                | 14.69                  | 2.4                                     | 2.1                                      | 2.9                                      |
| TCA-3/TCC-3 100L2-4                      | 3          | 1430                    | 2.86                     | 6.17                    | 6.9                                     | 87.7            | 0.80                | 20.03                  | 2.4                                     | 2                                        | 2.8                                      |
| TCA-3/TCC-3 112M-4                       | 4          | 1435                    | 3.92                     | 8.25                    | 7.9                                     | 88.6            | 0.79                | 26.62                  | 2.5                                     | 2                                        | 3                                        |
| TCA-3/TCC-3 132S-4                       | 5.5        | 1430                    | 4.77                     | 10.81                   | 7.1                                     | 89.6            | 0.82                | 36.73                  | 2.3                                     | 2                                        | 2.8                                      |
| TCA-3/TCC-3 132M-4                       | 7.5        | 1430                    | 6.19                     | 14.43                   | 7.8                                     | 90.4            | 0.83                | 50.08                  | 2.3                                     | 2                                        | 2.7                                      |
| TCA-3/TCC-3 160M-4                       | 11         | 1440                    | 6.06                     | 19.09                   | 7.9                                     | 91.4            | 0.91                | 72.95                  | 2.5                                     | 2.1                                      | 2.8                                      |
| TCA-3/TCC-3 160L-4                       | 15         | 1445                    | 7.71                     | 25.55                   | 7.8                                     | 92.1            | 0.92                | 99.13                  | 2.4                                     | 2.1                                      | 2.9                                      |
| TCA-3/TCC-3 180M-4                       | 18.5       | 1445                    | 12.49                    | 33.15                   | 7.8                                     | 92.6            | 0.87                | 122.26                 | 2.4                                     | 2.1                                      | 3                                        |
| TCA-3/TCC-3 180L-4                       | 22         | 1460                    | 13.35                    | 38.37                   | 7.5                                     | 93              | 0.89                | 143.89                 | 2.3                                     | 2                                        | 3                                        |
| TCA-3/TCC-3 200L-4                       | 30         | 1460                    | 19.06                    | 52.57                   | 7.9                                     | 93.6            | 0.88                | 196.22                 | 2.4                                     | 2                                        | 2.7                                      |
| TCC-3 225S-4                             | 37         | 1470                    | 32.99                    | 71.09                   | 6.7                                     | 93.9            | 0.80                | 240.36                 | 2.4                                     | 2                                        | 2.7                                      |
| TCC-3 225M-4                             | 45         | 1480                    | 39.99                    | 86.19                   | 7                                       | 94.2            | 0.80                | 290.35                 | 2.3                                     | 2                                        | 2.8                                      |
| TCC-3 250M-4                             | 55         | 1480                    | 34.57                    | 95.36                   | 7.4                                     | 94.6            | 0.88                | 354.87                 | 2.4                                     | 1.9                                      | 2.7                                      |
| TCC-3 280S-4                             | 75         | 1480                    | 39.77                    | 125.22                  | 7.5                                     | 95              | 0.91                | 483.92                 | 2.2                                     | 1.9                                      | 2.6                                      |
| TCC-3 280M-4                             | 90         | 1480                    | 44.76                    | 148.32                  | 7.7                                     | 95.2            | 0.92                | 580.70                 | 2.2                                     | 1.9                                      | 2.6                                      |
| TCC-3 315S-4                             | 110        | 1480                    | 61.58                    | 184.92                  | 7.8                                     | 95.4            | 0.90                | 709.75                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 315M-4                             | 132        | 1480                    | 69.56                    | 219.01                  | 7.8                                     | 95.6            | 0.91                | 851.69                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 315L1-4                            | 160        | 1480                    | 84.13                    | 264.91                  | 7.9                                     | 95.8            | 0.91                | 1032.36                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 315L2-4                            | 200        | 1480                    | 111.26                   | 334.12                  | 7.7                                     | 96              | 0.90                | 1290.45                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 355M-4                             | 250        | 1480                    | 146.97                   | 422.35                  | 7.9                                     | 96              | 0.89                | 1613.06                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 355L-4                             | 315        | 1480                    | 175.24                   | 526.25                  | 7.8                                     | 96              | 0.90                | 2032.45                | 2                                       | 1.8                                      | 2.3                                      |
| 6 Pole - 1000 rpm Synchronous Speed 50Hz |            |                         |                          |                         |                                         |                 |                     |                        |                                         |                                          |                                          |
| TCA-3/TCC-3 90S-6                        | 0.75       | 935                     | 0.91                     | 1.81                    | 6.2                                     | 78.9            | 0.76                | 7.66                   | 2.2                                     | 2                                        | 2.7                                      |
| TCA-3/TCC-3 90L-6                        | 1.1        | 935                     | 1.14                     | 2.45                    | 6                                       | 81              | 0.80                | 11.23                  | 2.3                                     | 2.1                                      | 2.6                                      |
| TCA-3/TCC-3 100L-6                       | 1.5        | 940                     | 1.41                     | 3.20                    | 5.8                                     | 82.5            | 0.82                | 15.24                  | 2.3                                     | 2.1                                      | 2.7                                      |
| TCA-3/TCC-3 112M-6                       | 2.2        | 940                     | 2.18                     | 4.71                    | 6.4                                     | 84.3            | 0.80                | 22.35                  | 2.3                                     | 2.1                                      | 2.9                                      |
| TCA-3/TCC-3 132S-6                       | 3          | 940                     | 2.62                     | 6.09                    | 6.3                                     | 85.6            | 0.83                | 30.48                  | 2.4                                     | 2.2                                      | 2.8                                      |
| TCA-3/TCC-3 132M1-6                      | 4          | 945                     | 3.30                     | 7.92                    | 6.2                                     | 86.8            | 0.84                | 40.42                  | 2.5                                     | 2                                        | 2.8                                      |
| TCA-3/TCC-3 132M2-6                      | 5.5        | 945                     | 4.85                     | 11.00                   | 6.8                                     | 88              | 0.82                | 55.58                  | 2.3                                     | 1.9                                      | 2.8                                      |
| TCA-3/TCC-3 160M-6                       | 7.5        | 955                     | 6.03                     | 14.46                   | 7                                       | 89.1            | 0.84                | 74.99                  | 2.4                                     | 1.9                                      | 2.7                                      |
| TCA-3/TCC-3 160L-6                       | 11         | 960                     | 8.35                     | 20.69                   | 7.3                                     | 90.3            | 0.85                | 109.42                 | 2.5                                     | 2                                        | 2.8                                      |
| TCA-3/TCC-3 180L-6                       | 15         | 960                     | 12.27                    | 28.60                   | 7.8                                     | 91.2            | 0.83                | 149.21                 | 2.3                                     | 2.1                                      | 2.9                                      |
| TCA-3/TCC-3 200L1-6                      | 18.5       | 965                     | 13.83                    | 34.26                   | 7.8                                     | 91.7            | 0.85                | 183.07                 | 2.4                                     | 2.1                                      | 3.2                                      |
| TCA-3/TCC-3 200L2-6                      | 22         | 965                     | 15.64                    | 40.05                   | 7.9                                     | 92.2            | 0.86                | 217.70                 | 2.3                                     | 1.9                                      | 3.1                                      |
| TCC-3 225M-6                             | 30         | 975                     | 22.14                    | 54.84                   | 7.9                                     | 92.9            | 0.85                | 293.82                 | 2.2                                     | 1.9                                      | 2.7                                      |
| TCC-3 250M-6                             | 37         | 975                     | 29.59                    | 68.97                   | 7.5                                     | 93.3            | 0.83                | 362.38                 | 2.3                                     | 2.1                                      | 2.7                                      |
| TCC-3 280S-6                             | 45         | 980                     | 31.47                    | 80.61                   | 7.2                                     | 93.7            | 0.86                | 438.49                 | 2.3                                     | 2                                        | 2.8                                      |
| TCC-3 280M1-6                            | 55         | 980                     | 38.30                    | 98.10                   | 7.7                                     | 94.1            | 0.86                | 535.93                 | 2.2                                     | 1.9                                      | 2.7                                      |
| TCC-3 315S-6                             | 75         | 980                     | 44.74                    | 128.58                  | 7.9                                     | 94.6            | 0.89                | 730.81                 | 2.1                                     | 1.9                                      | 2.5                                      |
| TCC-3 315M-6                             | 90         | 980                     | 50.65                    | 152.10                  | 8                                       | 94.9            | 0.90                | 876.98                 | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 315L1-6                            | 110        | 980                     | 61.77                    | 185.51                  | 7.7                                     | 95.1            | 0.90                | 1071.86                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 315L2-6                            | 132        | 980                     | 78.09                    | 224.40                  | .8                                      | 95.4            | 0.89                | 1286.23                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 355M1-6                            | 160        | 980                     | 84.31                    | 265.47                  | 7.6                                     | 95.6            | 0.91                | 1559.07                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 355M2-6                            | 200        | 980                     | 111.50                   | 334.82                  | 7.8                                     | 95.8            | 0.90                | 1948.84                | 2                                       | 1.8                                      | 2.3                                      |
| TCC-3 355L-6                             | 250        | 980                     | 147.28                   | 423.23                  | 7.8                                     | 95.8            | 0.89                | 2436.05                | 2                                       | 1.8                                      | 2.3                                      |



## EC Frame - NEMA EPACT Efficiency TEFC Motors Technical Data

| Model   | Power (KW) | 60Hz                    |                         |                         |                 |                     |                        | 50Hz                    |                         |                         |                 |                     |                        | I <sub>st</sub> /I <sub>n</sub> (Times) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) |
|---------|------------|-------------------------|-------------------------|-------------------------|-----------------|---------------------|------------------------|-------------------------|-------------------------|-------------------------|-----------------|---------------------|------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
|         |            | Full Load Speed (r/min) | I <sub>n</sub> 460V (A) | I <sub>n</sub> 460V (A) | Eff. 100%FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) | Full Load Speed (r/min) | I <sub>n</sub> 460V (A) | I <sub>n</sub> 460V (A) | Eff. 100%FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) |                                         |                                         |                                          |                                          |
| 801-2   | 0.75       | 3495                    | 0.85                    | 1.66                    | 75.5            | 0.75                | 2.05                   | 2848                    | 0.96                    | 1.86                    | 77.4            | 0.75                | 2.51                   | 6                                       | 2.7                                     | 2.1                                      | 2.8                                      |
| 802-2   | 1.1        | 3495                    | 1.01                    | 2.12                    | 82.5            | 0.79                | 3.01                   | 2846                    | 1.20                    | 2.52                    | 79.6            | 0.79                | 3.69                   | 6.7                                     | 2.7                                     | 2.1                                      | 2.9                                      |
| 90S-2   | 1.5        | 3510                    | 1.11                    | 2.67                    | 84              | 0.84                | 4.08                   | 2852                    | 1.32                    | 3.17                    | 81.3            | 0.84                | 5.02                   | 6.1                                     | 2.3                                     | 2                                        | 2.7                                      |
| 90L-2   | 2.2        | 3525                    | 1.60                    | 3.84                    | 85.5            | 0.84                | 5.96                   | 2845                    | 1.89                    | 4.54                    | 83.2            | 0.84                | 7.38                   | 7                                       | 2.6                                     | 2.1                                      | 2.7                                      |
| 100L-2  | 3          | 3540                    | 1.68                    | 4.84                    | 87.5            | 0.89                | 8.09                   | 2851                    | 2.00                    | 5.75                    | 84.6            | 0.89                | 10.05                  | 7.6                                     | 2.5                                     | 2                                        | 2.8                                      |
| 112M-2  | 4          | 3540                    | 2.24                    | 6.45                    | 87.5            | 0.89                | 10.79                  | 2910                    | 2.63                    | 7.56                    | 85.8            | 0.89                | 13.13                  | 7.8                                     | 2.5                                     | 2                                        | 2.7                                      |
| 132S1-2 | 5.5        | 3540                    | 3.05                    | 8.76                    | 88.5            | 0.89                | 14.84                  | 2905                    | 3.57                    | 10.25                   | 87              | 0.89                | 18.08                  | 7.8                                     | 2.4                                     | 2                                        | 2.9                                      |
| 132S2-2 | 7.5        | 3545                    | 4.33                    | 11.95                   | 89.5            | 0.88                | 20.20                  | 2910                    | 5.06                    | 13.96                   | 88.1            | 0.88                | 24.61                  | 7.9                                     | 2.7                                     | 2                                        | 2.8                                      |
| 160M1-2 | 11         | 3550                    | 5.66                    | 17.01                   | 90.2            | 0.90                | 29.59                  | 2920                    | 6.57                    | 19.73                   | 89.4            | 0.90                | 35.97                  | 7.9                                     | 2.2                                     | 2.1                                      | 3                                        |
| 160M2-2 | 15         | 3550                    | 7.28                    | 22.94                   | 90.2            | 0.91                | 40.35                  | 2918                    | 8.37                    | 26.35                   | 90.3            | 0.91                | 49.09                  | 7.9                                     | 2.3                                     | 2.1                                      | 3                                        |
| 160L-2  | 18.5       | 3550                    | 8.37                    | 27.74                   | 91              | 0.92                | 49.76                  | 2922                    | 9.64                    | 31.93                   | 90.9            | 0.92                | 60.46                  | 8                                       | 2.4                                     | 2.1                                      | 2.9                                      |
| 180M-2  | 22         | 3555                    | 11.86                   | 34.09                   | 91              | 0.89                | 59.10                  | 2930                    | 13.60                   | 39.08                   | 91.3            | 0.89                | 71.70                  | 7.5                                     | 2.3                                     | 2                                        | 2.8                                      |
| 200L1-2 | 30         | 3555                    | 16.92                   | 46.66                   | 91.7            | 0.88                | 80.58                  | 2925                    | 19.39                   | 53.49                   | 92              | 0.88                | 97.94                  | 6.7                                     | 2.4                                     | 2                                        | 2.7                                      |
| 200L2-2 | 37         | 3560                    | 18.60                   | 55.84                   | 92.4            | 0.90                | 99.25                  | 2930                    | 21.36                   | 64.15                   | 92.5            | 0.90                | 120.59                 | 6.3                                     | 2.3                                     | 2                                        | 2.7                                      |
| 225M-2  | 45         | 3560                    | 25.02                   | 69.01                   | 93              | 0.88                | 120.71                 | 2930                    | 28.81                   | 79.45                   | 92.9            | 0.88                | 146.66                 | 6.9                                     | 2.3                                     | 2                                        | 2.8                                      |
| 250M-2  | 55         | 3565                    | 30.58                   | 84.35                   | 93              | 0.88                | 147.32                 | 2940                    | 35.09                   | 96.80                   | 93.2            | 0.88                | 178.64                 | 8                                       | 2.3                                     | 1.9                                      | 2.7                                      |
| 250M2-2 | 75         | 3565                    | 37.21                   | 111.75                  | 93.6            | 0.90                | 200.90                 | 2940                    | 42.70                   | 128.24                  | 93.8            | 0.90                | 243.60                 | 8                                       | 2.3                                     | 1.9                                      | 2.7                                      |
| 280S-2  | 75         | 3565                    | 32.99                   | 109.32                  | 93.6            | 0.92                | 200.90                 | 2940                    | 37.86                   | 125.45                  | 93.8            | 0.92                | 243.60                 | 8                                       | 2.2                                     | 1.9                                      | 2.7                                      |
| 280M-2  | 90         | 3564                    | 39.21                   | 129.93                  | 94.5            | 0.92                | 241.14                 | 2940                    | 45.28                   | 150.06                  | 94.1            | 0.92                | 292.33                 | 7.7                                     | 2.2                                     | 1.9                                      | 2.6                                      |
| 280M2-2 | 110        | 3555                    | 50.99                   | 160.55                  | 94.5            | 0.91                | 295.48                 | 2940                    | 58.76                   | 185.03                  | 94.3            | 0.91                | 357.29                 | 7.7                                     | 2.2                                     | 1.9                                      | 2.6                                      |
| 315S-2  | 110        | 3555                    | 54.06                   | 162.34                  | 94.5            | 0.90                | 295.48                 | 2940                    | 62.30                   | 187.08                  | 94.3            | 0.90                | 357.29                 | 7.7                                     | 2                                       | 1.8                                      | 2.3                                      |
| 315M-2  | 132        | 3560                    | 61.19                   | 192.66                  | 94.5            | 0.91                | 354.08                 | 2940                    | 70.29                   | 221.33                  | 94.6            | 0.91                | 428.74                 | 7.6                                     | 2                                       | 1.8                                      | 2.3                                      |
| 315L1-2 | 160        | 3560                    | 78.22                   | 234.88                  | 95              | 0.90                | 429.18                 | 2945                    | 90.14                   | 270.68                  | 94.8            | 0.90                | 518.81                 | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |
| 315L2-2 | 200        | 3565                    | 102.89                  | 295.66                  | 95.4            | 0.89                | 535.72                 | 2945                    | 118.82                  | 341.44                  | 95              | 0.89                | 648.51                 | 7.9                                     | 2                                       | 1.8                                      | 2.3                                      |
| 355M-2  | 250        | 3565                    | 121.70                  | 365.46                  | 95.4            | 0.90                | 669.66                 | 2945                    | 140.54                  | 422.05                  | 95              | 0.90                | 810.64                 | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |
| 355L-2  | 315        | 3568                    | 162.04                  | 465.66                  | 95.4            | 0.89                | 843.06                 | 2945                    | 187.14                  | 537.76                  | 95              | 0.89                | 1021.40                | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |
|         |            |                         |                         |                         |                 |                     |                        |                         |                         |                         |                 |                     |                        |                                         |                                         |                                          |                                          |
| 802-4   | 0.75       | 1705                    | 0.76                    | 1.50                    | 82.5            | 0.76                | 4.20                   | 1420                    | 0.90                    | 1.79                    | 79.6            | 0.76                | 5.04                   | 5.4                                     | 2.3                                     | 2.1                                      | 2.9                                      |
| 90S-4   | 1.1        | 1710                    | 1.02                    | 2.11                    | 84              | 0.78                | 6.14                   | 1425                    | 1.21                    | 2.50                    | 81.4            | 0.78                | 7.37                   | 5.9                                     | 2.3                                     | 2.1                                      | 2.7                                      |
| 90L-4   | 1.5        | 1710                    | 1.35                    | 2.84                    | 84              | 0.79                | 8.38                   | 1420                    | 1.57                    | 3.31                    | 82.8            | 0.79                | 10.09                  | 6.4                                     | 2.4                                     | 2                                        | 2.7                                      |
| 100L1-4 | 2.2        | 1710                    | 1.70                    | 3.85                    | 87.5            | 0.82                | 12.29                  | 1430                    | 2.03                    | 4.59                    | 84.3            | 0.82                | 14.69                  | 6.6                                     | 2.4                                     | 2.1                                      | 2.9                                      |
| 100L2-4 | 3          | 1715                    | 2.50                    | 5.38                    | 87.5            | 0.80                | 16.70                  | 1430                    | 2.94                    | 6.33                    | 85.5            | 0.80                | 20.03                  | 6.9                                     | 2.4                                     | 2                                        | 2.8                                      |
| 112M-4  | 4          | 1715                    | 3.45                    | 7.26                    | 87.5            | 0.79                | 22.27                  | 1435                    | 4.01                    | 8.44                    | 86.6            | 0.79                | 26.62                  | 7.9                                     | 2.5                                     | 2                                        | 3                                        |
| 132S-4  | 5.5        | 1720                    | 4.15                    | 9.41                    | 89.5            | 0.82                | 30.54                  | 1430                    | 4.87                    | 11.04                   | 87.7            | 0.82                | 36.73                  | 7.1                                     | 2.3                                     | 2                                        | 2.8                                      |
| 132M-4  | 7.5        | 1720                    | 5.44                    | 12.67                   | 89.5            | 0.83                | 41.64                  | 1430                    | 6.31                    | 14.70                   | 88.7            | 0.83                | 50.08                  | 7.8                                     | 2.3                                     | 2                                        | 2.7                                      |
| 160M-4  | 11         | 1730                    | 5.30                    | 16.67                   | 91              | 0.91                | 60.72                  | 1440                    | 6.17                    | 19.43                   | 89.8            | 0.91                | 72.95                  | 7.9                                     | 2.5                                     | 2.1                                      | 2.8                                      |
| 160L-4  | 15         | 1730                    | 6.79                    | 22.49                   | 91              | 0.92                | 82.80                  | 1445                    | 7.82                    | 25.92                   | 90.8            | 0.92                | 99.13                  | 7.8                                     | 2.4                                     | 2.1                                      | 2.9                                      |
| 180M-4  | 18.5       | 1730                    | 10.88                   | 28.89                   | 92.4            | 0.87                | 102.12                 | 1445                    | 12.68                   | 33.66                   | 91.2            | 0.87                | 122.26                 | 7.8                                     | 2.4                                     | 2.1                                      | 3                                        |
| 180L-4  | 22         | 1740                    | 11.68                   | 33.58                   | 92.4            | 0.89                | 120.74                 | 1460                    | 13.55                   | 38.95                   | 91.6            | 0.89                | 143.89                 | 7.5                                     | 2.3                                     | 2                                        | 3                                        |

## EC Frame - NEMA EPACT Efficiency TEFC Motors Technical Data

| Model   | Power (KW) | 60Hz                    |                         |                         |                 |                     |                        | 50Hz                    |                         |                         |                 |                     |                        | I <sub>st</sub> /I <sub>n</sub> (Times) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) |
|---------|------------|-------------------------|-------------------------|-------------------------|-----------------|---------------------|------------------------|-------------------------|-------------------------|-------------------------|-----------------|---------------------|------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
|         |            | Full Load Speed (r/min) | I <sub>n</sub> 460V (A) | I <sub>n</sub> 460V (A) | Eff. 100%FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) | Full Load Speed (r/min) | I <sub>n</sub> 400V (A) | I <sub>n</sub> 400V (A) | Eff. 100%FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) |                                         |                                         |                                          |                                          |
| 225S-4  | 37         | 1745                    | 28.96                   | 62.42                   | 93              | 0.80                | 202.48                 | 1470                    | 33.42                   | 72.02                   | 92.7            | 0.80                | 240.36                 | 6.7                                     | 2.4                                     | 2                                        | 2.7                                      |
| 225M-4  | 45         | 1745                    | 35.00                   | 75.43                   | 93.6            | 0.80                | 246.26                 | 1480                    | 40.47                   | 87.21                   | 93.1            | 0.80                | 290.35                 | 7                                       | 2.3                                     | 2                                        | 2.8                                      |
| 250M-4  | 55         | 1750                    | 30.22                   | 83.37                   | 94.1            | 0.88                | 300.12                 | 1480                    | 34.98                   | 96.49                   | 93.5            | 0.88                | 354.87                 | 7.4                                     | 2.4                                     | 1.9                                      | 2.7                                      |
| 250M2-4 | 75         | 1755                    | 36.86                   | 110.68                  | 94.5            | 0.90                | 408.09                 | 1480                    | 42.61                   | 127.96                  | 94              | 0.90                | 483.92                 | 7.4                                     | 2.4                                     | 1.9                                      | 2.7                                      |
| 280S-4  | 75         | 1760                    | 34.77                   | 109.47                  | 94.5            | 0.91                | 406.93                 | 1480                    | 40.19                   | 126.56                  | 94              | 0.91                | 483.92                 | 7.5                                     | 2.2                                     | 1.9                                      | 2.6                                      |
| 280M-4  | 90         | 1760                    | 39.21                   | 129.93                  | 94.5            | 0.92                | 488.32                 | 1480                    | 45.23                   | 149.90                  | 94.2            | 0.92                | 580.70                 | 7.7                                     | 2.2                                     | 1.9                                      | 2.6                                      |
| 315S-4  | 110        | 1780                    | 53.77                   | 161.48                  | 95              | 0.90                | 590.13                 | 1480                    | 62.17                   | 186.69                  | 94.5            | 0.90                | 709.75                 | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |
| 315M-4  | 132        | 1780                    | 60.87                   | 191.65                  | 95              | 0.91                | 708.15                 | 1480                    | 70.22                   | 221.09                  | 94.7            | 0.91                | 851.69                 | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |
| 315L1-4 | 160        | 1781                    | 73.78                   | 232.30                  | 95              | 0.91                | 857.88                 | 1480                    | 84.93                   | 267.43                  | 94.9            | 0.91                | 1032.36                | 7.9                                     | 2                                       | 1.8                                      | 2.3                                      |
| 315L2-4 | 200        | 1781                    | 97.77                   | 293.60                  | 95              | 0.90                | 1072.35                | 1480                    | 112.32                  | 337.29                  | 95.1            | 0.90                | 1290.45                | 7.7                                     | 2                                       | 1.8                                      | 2.3                                      |
| 355M-4  | 250        | 1782                    | 128.61                  | 369.57                  | 95.4            | 0.89                | 1339.69                | 1480                    | 148.36                  | 426.35                  | 95.1            | 0.89                | 1613.06                | 7.9                                     | 2                                       | 1.8                                      | 2.3                                      |
| 355L-4  | 315        | 1782                    | 153.34                  | 460.48                  | 95.4            | 0.90                | 1688.01                | 1480                    | 176.90                  | 531.23                  | 95.1            | 0.90                | 2032.45                | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |
|         |            |                         |                         |                         |                 |                     |                        |                         |                         |                         |                 |                     |                        |                                         |                                         |                                          |                                          |
| 90L-6   | 1.1        | 1120                    | 0.94                    | 2.02                    | 85.5            | 0.80                | 9.38                   | 935                     | 1.18                    | 2.54                    | 78.1            | 0.80                | 11.23                  | 6                                       | 2.3                                     | 2.1                                      | 2.6                                      |
| 100L-6  | 1.5        | 1120                    | 1.17                    | 2.65                    | 86.5            | 0.82                | 12.79                  | 940                     | 1.46                    | 3.31                    | 79.8            | 0.82                | 15.24                  | 5.8                                     | 2.3                                     | 2.1                                      | 2.7                                      |
| 112M-6  | 2.2        | 1130                    | 1.83                    | 3.94                    | 87.5            | 0.80                | 18.59                  | 940                     | 2.25                    | 4.85                    | 81.8            | 0.80                | 22.35                  | 6.4                                     | 2.3                                     | 2.1                                      | 2.9                                      |
| 132S-6  | 3          | 1130                    | 2.22                    | 5.18                    | 87.5            | 0.83                | 25.35                  | 940                     | 2.69                    | 6.26                    | 83.3            | 0.83                | 30.48                  | 6.3                                     | 2.4                                     | 2.2                                      | 2.8                                      |
| 132M1-6 | 4          | 1140                    | 2.85                    | 6.83                    | 87.5            | 0.84                | 33.51                  | 945                     | 3.39                    | 8.12                    | 84.6            | 0.84                | 40.42                  | 6.2                                     | 2.5                                     | 2                                        | 2.8                                      |
| 132M2-6 | 5.5        | 1140                    | 4.15                    | 9.41                    | 89.5            | 0.82                | 46.07                  | 945                     | 4.97                    | 11.26                   | 86              | 0.82                | 55.58                  | 6.8                                     | 2.3                                     | 1.9                                      | 2.8                                      |
| 160M-6  | 7.5        | 1140                    | 5.22                    | 12.52                   | 89.5            | 0.84                | 62.82                  | 955                     | 6.16                    | 14.78                   | 87.2            | 0.84                | 74.99                  | 7                                       | 2.4                                     | 1.9                                      | 2.7                                      |
| 160L-6  | 11         | 1145                    | 7.27                    | 18.01                   | 90.2            | 0.85                | 91.74                  | 960                     | 8.50                    | 21.06                   | 88.7            | 0.85                | 109.42                 | 7.3                                     | 2.5                                     | 2                                        | 2.8                                      |
| 180L-6  | 15         | 1145                    | 10.79                   | 25.15                   | 90.2            | 0.83                | 125.10                 | 960                     | 12.48                   | 29.08                   | 89.7            | 0.83                | 149.21                 | 7.8                                     | 2.3                                     | 2.1                                      | 2.9                                      |
| 200L1-6 | 18.5       | 1150                    | 12.03                   | 29.79                   | 91.7            | 0.85                | 153.62                 | 965                     | 14.03                   | 34.75                   | 90.4            | 0.85                | 183.07                 | 7.8                                     | 2.4                                     | 2.1                                      | 3.2                                      |
| 200L2-6 | 22         | 1150                    | 13.67                   | 35.01                   | 91.7            | 0.86                | 182.68                 | 965                     | 15.86                   | 40.62                   | 90.9            | 0.86                | 217.70                 | 7.9                                     | 2.3                                     | 1.9                                      | 3.1                                      |
| 225M-6  | 30         | 1150                    | 19.23                   | 47.63                   | 93              | 0.85                | 249.11                 | 975                     | 22.43                   | 55.56                   | 91.7            | 0.85                | 293.82                 | 7.9                                     | 2.2                                     | 1.9                                      | 2.7                                      |
| 250M-6  | 37         | 1150                    | 25.82                   | 60.16                   | 93              | 0.83                | 307.24                 | 975                     | 29.95                   | 69.79                   | 92.2            | 0.83                | 362.38                 | 7.5                                     | 2.3                                     | 2.1                                      | 2.7                                      |
| 250M2-6 | 45         | 1155                    | 28.66                   | 70.99                   | 93.6            | 0.85                | 372.05                 | 975                     | 33.28                   | 82.43                   | 92.7            | 0.85                | 440.74                 | 7.5                                     | 2.3                                     | 2.1                                      | 2.7                                      |
| 280S-6  | 45         | 1160                    | 27.40                   | 70.17                   | 93.6            | 0.86                | 370.45                 | 980                     | 31.81                   | 81.48                   | 92.7            | 0.86                | 438.49                 | 7.2                                     | 2.3                                     | 2                                        | 2.8                                      |
| 280M1-6 | 55         | 1160                    | 33.48                   | 85.76                   | 93.6            | 0.86                | 452.77                 | 980                     | 38.71                   | 99.15                   | 93.1            | 0.86                | 535.93                 | 7.7                                     | 2.2                                     | 1.9                                      | 2.7                                      |
| 280M2-6 | 75         | 1165                    | 41.22                   | 113.68                  | 94.1            | 0.88                | 614.76                 | 980                     | 47.60                   | 131.29                  | 93.7            | 0.88                | 730.81                 | 7.7                                     | 2.2                                     | 1.9                                      | 2.7                                      |
| 315S-6  | 75         | 1174                    | 39.11                   | 112.40                  | 94.1            | 0.89                | 610.05                 | 980                     | 45.17                   | 129.81                  | 93.7            | 0.89                | 730.81                 | 7.9                                     | 2.1                                     | 1.9                                      | 2.5                                      |
| 315M-6  | 90         | 1172                    | 44.42                   | 133.38                  | 94.1            | 0.90                | 733.31                 | 980                     | 51.13                   | 153.56                  | 94              | 0.90                | 876.98                 | 8                                       | 2                                       | 1.8                                      | 2.3                                      |
| 315L1-6 | 110        | 1176                    | 53.77                   | 161.48                  | 95              | 0.90                | 893.22                 | 980                     | 62.30                   | 187.08                  | 94.3            | 0.90                | 1071.86                | 7.7                                     | 2                                       | 1.8                                      | 2.3                                      |
| 315L2-6 | 132        | 1178                    | 68.19                   | 195.95                  | 95              | 0.89                | 1070.04                | 980                     | 78.75                   | 226.30                  | 94.6            | 0.89                | 1286.23                | .8                                      | 2                                       | 1.8                                      | 2.3                                      |
| 355M1-6 | 160        | 1180                    | 73.78                   | 232.30                  | 95              | 0.91                | 1294.82                | 980                     | 85.02                   | 267.71                  | 94.8            | 0.91                | 1559.07                | 7.6                                     | 2                                       | 1.8                                      | 2.3                                      |
| 355M2-6 | 200        | 1179                    | 97.77                   | 293.60                  | 95              | 0.90                | 1619.90                | 980                     | 112.43                  | 337.64                  | 95              | 0.90                | 1948.84                | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |
| 355L-6  | 250        | 1180                    | 129.15                  | 371.13                  | 95              | 0.89                | 2023.16                | 980                     | 148.52                  | 426.79                  | 95              | 0.89                | 2436.05                | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |

## IEC Frame - NEMA Premium Efficiency TEFC Motors Technical Data

| Model   | Power (KW) | 60Hz                    |                          |                         |                  |                     |                        | 50Hz                    |                          |                         |                  |                     |                        | Is/In (Times) | Tst/Tn (Times) | Tmin/Tn (Times) | Tmax/Tn (Times) |
|---------|------------|-------------------------|--------------------------|-------------------------|------------------|---------------------|------------------------|-------------------------|--------------------------|-------------------------|------------------|---------------------|------------------------|---------------|----------------|-----------------|-----------------|
|         |            | Full Load Speed (r/min) | I <sub>nl</sub> 460V (A) | I <sub>l</sub> 460V (A) | Eff. 100% FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) | Full Load Speed (r/min) | I <sub>nl</sub> 400V (A) | I <sub>l</sub> 400V (A) | Eff. 100% FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) |               |                |                 |                 |
| 801-2   | 0.75       | 3495                    | 0.84                     | 1.63                    | 77               | 0.75                | 2.05                   | 2848                    | 0.92                     | 1.79                    | 80.7             | 0.75                | 2.51                   | 6             | 2.7            | 2.1             | 2.8             |
| 802-2   | 1.1        | 3495                    | 0.99                     | 2.08                    | 84               | 0.79                | 3.01                   | 2846                    | 1.15                     | 2.43                    | 82.7             | 0.79                | 3.69                   | 6.7           | 2.7            | 2.1             | 2.9             |
| 90S-2   | 1.5        | 3510                    | 1.09                     | 2.62                    | 85.5             | 0.84                | 4.08                   | 2852                    | 1.28                     | 3.06                    | 84.2             | 0.84                | 5.02                   | 6.1           | 2.3            | 2               | 2.7             |
| 90L-2   | 2.2        | 3525                    | 1.58                     | 3.80                    | 86.5             | 0.84                | 5.96                   | 2845                    | 1.83                     | 4.40                    | 85.9             | 0.84                | 7.38                   | 7             | 2.6            | 2.1             | 2.7             |
| 100L-2  | 3          | 3540                    | 1.66                     | 4.78                    | 88.5             | 0.89                | 8.09                   | 2851                    | 1.94                     | 5.59                    | 87.1             | 0.89                | 10.05                  | 7.6           | 2.5            | 2               | 2.8             |
| 112M-2  | 4          | 3540                    | 2.22                     | 6.37                    | 88.5             | 0.89                | 10.79                  | 2910                    | 2.56                     | 7.36                    | 88.1             | 0.89                | 13.13                  | 7.8           | 2.5            | 2               | 2.7             |
| 132S1-2 | 5.5        | 3540                    | 3.02                     | 8.67                    | 89.5             | 0.89                | 14.84                  | 2905                    | 3.48                     | 10.00                   | 89.2             | 0.89                | 18.08                  | 7.8           | 2.4            | 2               | 2.9             |
| 132S2-2 | 7.5        | 3545                    | 4.30                     | 11.86                   | 90.2             | 0.88                | 20.20                  | 2910                    | 4.95                     | 13.65                   | 90.1             | 0.88                | 24.61                  | 7.9           | 2.7            | 2               | 2.8             |
| 160M1-2 | 11         | 3550                    | 5.61                     | 16.86                   | 91               | 0.90                | 29.59                  | 2920                    | 6.44                     | 19.34                   | 91.2             | 0.90                | 35.97                  | 7.9           | 2.2            | 2.1             | 3               |
| 160M2-2 | 15         | 3550                    | 7.22                     | 22.74                   | 91               | 0.91                | 40.35                  | 2918                    | 8.22                     | 25.89                   | 91.9             | 0.91                | 49.09                  | 7.9           | 2.3            | 2.1             | 3               |
| 160L-2  | 18.5       | 3550                    | 8.31                     | 27.52                   | 91.7             | 0.92                | 49.76                  | 2922                    | 9.48                     | 31.41                   | 92.4             | 0.92                | 60.46                  | 8             | 2.4            | 2.1             | 2.9             |
| 180M-2  | 22         | 3555                    | 11.77                    | 33.83                   | 91.7             | 0.89                | 59.10                  | 2930                    | 13.39                    | 38.49                   | 92.7             | 0.89                | 71.70                  | 7.5           | 2.3            | 2               | 2.8             |
| 200L1-2 | 30         | 3555                    | 16.79                    | 46.31                   | 92.4             | 0.88                | 80.58                  | 2925                    | 19.12                    | 52.74                   | 93.3             | 0.88                | 97.94                  | 6.7           | 2.4            | 2               | 2.7             |
| 200L2-2 | 37         | 3560                    | 18.48                    | 55.48                   | 93               | 0.90                | 99.25                  | 2930                    | 21.09                    | 63.33                   | 93.7             | 0.90                | 120.59                 | 6.3           | 2.3            | 2               | 2.7             |
| 225M-2  | 45         | 3560                    | 24.86                    | 68.57                   | 93.6             | 0.88                | 120.71                 | 2930                    | 28.47                    | 78.52                   | 94               | 0.88                | 146.66                 | 6.9           | 2.3            | 2               | 2.8             |
| 250M-2  | 55         | 3565                    | 30.39                    | 83.81                   | 93.6             | 0.88                | 147.32                 | 2940                    | 34.68                    | 95.67                   | 94.3             | 0.88                | 178.64                 | 8             | 2.3            | 1.9             | 2.7             |
| 250M2-2 | 75         | 3565                    | 37.01                    | 111.15                  | 94.1             | 0.90                | 200.90                 | 2940                    | 42.30                    | 127.02                  | 94.7             | 0.90                | 243.60                 | 8             | 2.3            | 1.9             | 2.7             |
| 280S-2  | 75         | 3565                    | 32.81                    | 108.74                  | 94.1             | 0.92                | 200.90                 | 2940                    | 37.50                    | 124.26                  | 94.7             | 0.92                | 243.60                 | 8             | 2.2            | 1.9             | 2.7             |
| 280M-2  | 90         | 3564                    | 39.00                    | 129.25                  | 95               | 0.92                | 241.14                 | 2940                    | 44.85                    | 148.64                  | 95               | 0.92                | 292.33                 | 7.7           | 2.2            | 1.9             | 2.6             |
| 280M2-2 | 110        | 3555                    | 50.72                    | 159.71                  | 95               | 0.91                | 295.48                 | 2940                    | 58.21                    | 183.28                  | 95.2             | 0.91                | 357.29                 | 7.7           | 2.2            | 1.9             | 2.6             |
| 315S-2  | 110        | 3555                    | 53.77                    | 161.48                  | 95               | 0.90                | 295.48                 | 2940                    | 61.71                    | 185.31                  | 95.2             | 0.90                | 357.29                 | 7.7           | 2              | 1.8             | 2.3             |
| 315M-2  | 132        | 3560                    | 60.87                    | 191.65                  | 95               | 0.91                | 354.08                 | 2940                    | 69.70                    | 219.47                  | 95.4             | 0.91                | 428.74                 | 7.6           | 2              | 1.8             | 2.3             |
| 315L1-2 | 160        | 3560                    | 77.89                    | 233.90                  | 95.4             | 0.90                | 429.18                 | 2945                    | 89.38                    | 268.42                  | 95.6             | 0.90                | 518.81                 | 7.8           | 2              | 1.8             | 2.3             |
| 315L2-2 | 200        | 3565                    | 102.46                   | 294.42                  | 95.8             | 0.89                | 535.72                 | 2945                    | 117.82                   | 338.58                  | 95.8             | 0.89                | 648.51                 | 7.9           | 2              | 1.8             | 2.3             |
| 55M-2   | 250        | 3565                    | 121.19                   | 363.94                  | 95.8             | 0.90                | 669.66                 | 2945                    | 139.37                   | 418.53                  | 95.8             | 0.90                | 810.64                 | 7.8           | 2              | 1.8             | 2.3             |
| 355L-2  | 315        | 3568                    | 161.37                   | 463.71                  | 95.8             | 0.89                | 843.06                 | 2945                    | 185.57                   | 533.27                  | 95.8             | 0.89                | 1021.40                | 7.8           | 2              | 1.8             | 2.3             |
|         |            |                         |                          |                         |                  |                     |                        |                         |                          |                         |                  |                     |                        |               |                |                 |                 |
| 802-4   | 0.75       | 1705                    | 0.73                     | 1.45                    | 85.5             | 0.76                | 4.20                   | 1420                    | 0.87                     | 1.73                    | 82.5             | 0.76                | 5.04                   | 5.4           | 2.3            | 2.1             | 2.9             |
| 90S-4   | 1.1        | 1710                    | 0.99                     | 2.05                    | 86.5             | 0.78                | 6.14                   | 1425                    | 1.17                     | 2.42                    | 84.1             | 0.78                | 7.37                   | 5.9           | 2.3            | 2.1             | 2.7             |
| 90L-4   | 1.5        | 1710                    | 1.31                     | 2.76                    | 86.5             | 0.79                | 8.38                   | 1420                    | 1.53                     | 3.21                    | 85.3             | 0.79                | 10.09                  | 6.4           | 2.4            | 2               | 2.7             |
| 100L1-4 | 2.2        | 1710                    | 1.66                     | 3.76                    | 89.5             | 0.82                | 12.29                  | 1430                    | 1.97                     | 4.47                    | 86.7             | 0.82                | 14.69                  | 6.6           | 2.4            | 2.1             | 2.9             |
| 100L2-4 | 3          | 1715                    | 2.44                     | 5.26                    | 89.5             | 0.80                | 16.70                  | 1430                    | 2.86                     | 6.17                    | 87.7             | 0.80                | 20.03                  | 6.9           | 2.4            | 2               | 2.8             |
| 112M-4  | 4          | 1715                    | 3.37                     | 7.10                    | 89.5             | 0.79                | 22.27                  | 1435                    | 3.92                     | 8.25                    | 88.6             | 0.79                | 26.62                  | 7.9           | 2.5            | 2               | 3               |
| 132S-4  | 5.5        | 1720                    | 4.05                     | 9.18                    | 91.7             | 0.82                | 30.54                  | 1430                    | 4.77                     | 10.81                   | 89.6             | 0.82                | 36.73                  | 7.1           | 2.3            | 2               | 2.8             |
| 132M-4  | 7.5        | 1720                    | 5.31                     | 12.37                   | 91.7             | 0.83                | 41.64                  | 1430                    | 6.19                     | 14.43                   | 90.4             | 0.83                | 50.08                  | 7.8           | 2.3            | 2               | 2.7             |
| 160M-4  | 11         | 1730                    | 5.21                     | 16.42                   | 92.4             | 0.91                | 60.72                  | 1440                    | 6.06                     | 19.09                   | 91.4             | 0.91                | 72.95                  | 7.9           | 2.5            | 2.1             | 2.8             |
| 160L-4  | 15         | 1730                    | 6.64                     | 22.00                   | 93               | 0.92                | 82.80                  | 1445                    | 7.71                     | 25.55                   | 92.1             | 0.92                | 99.13                  | 7.8           | 2.4            | 2.1             | 2.9             |
| 180M-4  | 18.5       | 1730                    | 10.74                    | 28.51                   | 93.6             | 0.87                | 102.12                 | 1445                    | 12.49                    | 33.15                   | 92.6             | 0.87                | 122.26                 | 7.8           | 2.4            | 2.1             | 3               |
| 180L-4  | 22         | 1740                    | 11.54                    | 33.15                   | 93.6             | 0.89                | 120.74                 | 1460                    | 13.35                    | 38.37                   | 93               | 0.89                | 143.89                 | 7.5           | 2.3            | 2               | 3               |
| 200L-4  | 30         | 1740                    | 16.49                    | 45.47                   | 94.1             | 0.88                | 164.64                 | 1460                    | 19.06                    | 52.57                   | 93.6             | 0.88                | 196.22                 | 7.9           | 2.4            | 2               | 2.7             |
| 225S-4  | 37         | 1745                    | 28.50                    | 61.43                   | 94.5             | 0.80                | 202.48                 | 1470                    | 32.99                    | 71.09                   | 93.9             | 0.80                | 240.36                 | 6.7           | 2.4            | 2               | 2.7             |
| 225M-4  | 45         | 1745                    | 34.48                    | 74.32                   | 95               | 0.80                | 246.26                 | 1480                    | 39.99                    | 86.19                   | 94.2             | 0.80                | 290.35                 | 7             | 2.3            | 2               | 2.8             |
| 250M-4  | 55         | 1750                    | 29.81                    | 82.23                   | 95.4             | 0.88                | 300.12                 | 1480                    | 34.57                    | 95.36                   | 94.6             | 0.88                | 354.87                 | 7.4           | 2.4            | 1.9             | 2.7             |
| 250M2-4 | 75         | 1755                    | 36.51                    | 109.64                  | 95.4             | 0.90                | 408.09                 | 1480                    | 42.16                    | 126.62                  | 95               | 0.90                | 483.92                 | 7.4           | 2.4            | 1.9             | 2.7             |
| 280S-4  | 75         | 1760                    | 34.44                    | 108.43                  | 95.4             | 0.91                | 406.93                 | 1480                    | 39.77                    | 125.22                  | 95               | 0.91                | 483.92                 | 7.5           | 2.2            | 1.9             | 2.6             |
| 280M-4  | 90         | 1760                    | 38.84                    | 128.71                  | 95.4             | 0.92                | 488.32                 | 1480                    | 44.76                    | 148.32                  | 95.2             | 0.92                | 580.70                 | 7.7           | 2.2            | 1.9             | 2.6             |
| 315S-4  | 110        | 1780                    | 53.32                    | 160.13                  | 95.8             | 0.90                | 590.13                 | 1480                    | 61.58                    | 184.92                  | 95.4             | 0.90                | 709.75                 | 7.8           | 2              | 1.8             | 2.3             |
| 315M-4  | 132        | 1780                    | 60.36                    | 190.05                  | 95.8             | 0.91                | 708.15                 | 1480                    | 69.56                    | 219.01                  | 95.6             | 0.91                | 851.69                 | 7.8           | 2              | 1.8             | 2.3             |
| 315L1-4 | 160        | 1781                    | 72.86                    | 229.40                  | 96.2             | 0.91                | 857.88                 | 1480                    | 84.13                    | 264.91                  | 95.8             | 0.91                | 1032.36                | 7.9           | 2              | 1.8             | 2.3             |
| 315L2-4 | 200        | 1781                    | 96.55                    | 289.94                  | 96.2             | 0.90                | 1072.35                | 1480                    | 111.26                   | 334.12                  | 96               | 0.90                | 1290.45                | 7.7           | 2              | 1.8             | 2.3             |
| 355M-4  | 250        | 1782                    | 127.54                   | 366.50                  | 96.2             | 0.89                | 1339.69                | 1480                    | 146.97                   | 422.35                  | 96               | 0.89                | 1613.06                | 7.9           | 2              | 1.8             | 2.3             |
| 355L-4  | 315        | 1782                    | 152.07                   | 456.65                  | 96.2             | 0.90                | 1688.01                | 1480                    | 175.24                   | 526.25                  | 96               | 0.90                | 2032.45                | 7.8           | 2              | 1.8             | 2.3             |

## IEC Frame - NEMA Premium Efficiency TEFC Motors Technical Data

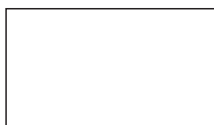
| Model   | Power (KW) | 60Hz                    |                         |                         |                  |                     |                        | 50Hz                    |                         |                         |                  |                     |                        | I <sub>st</sub> /I <sub>n</sub> (Times) | T <sub>st</sub> /T <sub>n</sub> (Times) | T <sub>min</sub> /T <sub>n</sub> (Times) | T <sub>max</sub> /T <sub>n</sub> (Times) |
|---------|------------|-------------------------|-------------------------|-------------------------|------------------|---------------------|------------------------|-------------------------|-------------------------|-------------------------|------------------|---------------------|------------------------|-----------------------------------------|-----------------------------------------|------------------------------------------|------------------------------------------|
|         |            | Full Load Speed (r/min) | I <sub>n</sub> 460V (A) | I <sub>b</sub> 460V (A) | Eff. 100% FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) | Full Load Speed (r/min) | I <sub>n</sub> 400V (A) | I <sub>b</sub> 400V (A) | Eff. 100% FL (%) | Power Factor (CosΦ) | Full Load Torque (N.M) |                                         |                                         |                                          |                                          |
| 90L-6   | 1.1        | 1120                    | 0.92                    | 1.97                    | 87.5             | 0.80                | 9.38                   | 935                     | 1.14                    | 2.45                    | 81               | 0.80                | 11.23                  | 6                                       | 2.3                                     | 2.1                                      | 2.6                                      |
| 100L-6  | 1.5        | 1120                    | 1.14                    | 2.59                    | 88.5             | 0.82                | 12.79                  | 940                     | 1.41                    | 3.20                    | 82.5             | 0.82                | 15.24                  | 5.8                                     | 2.3                                     | 2.1                                      | 2.7                                      |
| 112M-6  | 2.2        | 1130                    | 1.79                    | 3.86                    | 89.5             | 0.80                | 18.59                  | 940                     | 2.18                    | 4.71                    | 84.3             | 0.80                | 22.35                  | 6.4                                     | 2.3                                     | 2.1                                      | 2.9                                      |
| 132S-6  | 3          | 1130                    | 2.18                    | 5.07                    | 89.5             | 0.83                | 25.35                  | 940                     | 2.62                    | 6.09                    | 85.6             | 0.83                | 30.48                  | 6.3                                     | 2.4                                     | 2.2                                      | 2.8                                      |
| 132M1-6 | 4          | 1140                    | 2.78                    | 6.68                    | 89.5             | 0.84                | 33.51                  | 945                     | 3.30                    | 7.92                    | 86.8             | 0.84                | 40.42                  | 6.2                                     | 2.5                                     | 2                                        | 2.8                                      |
| 132M2-6 | 5.5        | 1140                    | 4.08                    | 9.25                    | 91               | 0.82                | 46.07                  | 945                     | 4.85                    | 11.00                   | 88               | 0.82                | 55.58                  | 6.8                                     | 2.3                                     | 1.9                                      | 2.8                                      |
| 160M-6  | 7.5        | 1140                    | 5.13                    | 12.32                   | 91               | 0.84                | 62.82                  | 955                     | 6.03                    | 14.46                   | 89.1             | 0.84                | 74.99                  | 7                                       | 2.4                                     | 1.9                                      | 2.7                                      |
| 160L-6  | 11         | 1145                    | 7.15                    | 17.71                   | 91.7             | 0.85                | 91.74                  | 960                     | 8.35                    | 20.69                   | 90.3             | 0.85                | 109.42                 | 7.3                                     | 2.5                                     | 2                                        | 2.8                                      |
| 180L-6  | 15         | 1145                    | 10.61                   | 24.74                   | 91.7             | 0.83                | 125.10                 | 960                     | 12.27                   | 28.60                   | 91.2             | 0.83                | 149.21                 | 7.8                                     | 2.3                                     | 2.1                                      | 2.9                                      |
| 200L1-6 | 18.5       | 1150                    | 11.86                   | 29.37                   | 93               | 0.85                | 153.62                 | 965                     | 13.83                   | 34.26                   | 91.7             | 0.85                | 183.07                 | 7.8                                     | 2.4                                     | 2.1                                      | 3.2                                      |
| 200L2-6 | 22         | 1150                    | 13.48                   | 34.53                   | 93               | 0.86                | 182.68                 | 965                     | 15.64                   | 40.05                   | 92.2             | 0.86                | 217.70                 | 7.9                                     | 2.3                                     | 1.9                                      | 3.1                                      |
| 225M-6  | 30         | 1150                    | 19.01                   | 47.08                   | 94.1             | 0.85                | 249.11                 | 975                     | 22.14                   | 54.84                   | 92.9             | 0.85                | 293.82                 | 7.9                                     | 2.2                                     | 1.9                                      | 2.7                                      |
| 250M-6  | 37         | 1150                    | 25.52                   | 59.46                   | 94.1             | 0.83                | 307.24                 | 975                     | 29.59                   | 68.97                   | 93.3             | 0.83                | 362.38                 | 7.5                                     | 2.3                                     | 2.1                                      | 2.7                                      |
| 250M2-6 | 45         | 1155                    | 28.39                   | 70.32                   | 94.5             | 0.85                | 372.05                 | 975                     | 32.93                   | 81.55                   | 93.7             | 0.85                | 440.74                 | 7.5                                     | 2.3                                     | 2.1                                      | 2.7                                      |
| 280S-6  | 45         | 1160                    | 27.14                   | 69.50                   | 94.5             | 0.86                | 370.45                 | 980                     | 31.47                   | 80.61                   | 93.7             | 0.86                | 438.49                 | 7.2                                     | 2.3                                     | 2                                        | 2.8                                      |
| 280M1-6 | 55         | 1160                    | 33.17                   | 84.94                   | 94.5             | 0.86                | 452.77                 | 980                     | 38.30                   | 98.10                   | 94.1             | 0.86                | 535.93                 | 7.7                                     | 2.2                                     | 1.9                                      | 2.7                                      |
| 280M2-6 | 75         | 1165                    | 40.83                   | 112.60                  | 95               | 0.88                | 614.76                 | 980                     | 47.15                   | 130.04                  | 94.6             | 0.88                | 730.81                 | 7.7                                     | 2.2                                     | 1.9                                      | 2.7                                      |
| 315S-6  | 75         | 1174                    | 38.74                   | 111.34                  | 95               | 0.89                | 610.05                 | 980                     | 44.74                   | 128.58                  | 94.6             | 0.89                | 730.81                 | 7.9                                     | 2.1                                     | 1.9                                      | 2.5                                      |
| 315M-6  | 90         | 1172                    | 44.00                   | 132.12                  | 95               | 0.90                | 733.31                 | 980                     | 50.65                   | 152.10                  | 94.9             | 0.90                | 876.98                 | 8                                       | 2                                       | 1.8                                      | 2.3                                      |
| 315L1-6 | 110        | 1176                    | 53.32                   | 160.13                  | 95.8             | 0.90                | 893.22                 | 980                     | 61.77                   | 185.51                  | 95.1             | 0.90                | 1071.86                | 7.7                                     | 2                                       | 1.8                                      | 2.3                                      |
| 315L2-6 | 132        | 1178                    | 67.62                   | 194.32                  | 95.8             | 0.89                | 1070.04                | 980                     | 78.09                   | 224.40                  | 95.4             | 0.89                | 1286.23                | .8                                      | 2                                       | 1.8                                      | 2.3                                      |
| 355M1-6 | 160        | 1180                    | 73.16                   | 230.36                  | 95.8             | 0.91                | 1294.82                | 980                     | 84.31                   | 265.47                  | 95.6             | 0.91                | 1559.07                | 7.6                                     | 2                                       | 1.8                                      | 2.3                                      |
| 355M2-6 | 200        | 1179                    | 96.95                   | 291.15                  | 95.8             | 0.90                | 1619.90                | 980                     | 111.50                  | 334.82                  | 95.8             | 0.90                | 1948.84                | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |
| 355L-6  | 250        | 1180                    | 128.07                  | 368.03                  | 95.8             | 0.89                | 2023.16                | 980                     | 147.28                  | 423.23                  | 95.8             | 0.89                | 2436.05                | 7.8                                     | 2                                       | 1.8                                      | 2.3                                      |



**CHOICE OF COLOURS AVAILABLE ON REQUEST.  
PLS CHOOSE YOUR FAVOURITE**



9022 Pearl light grey



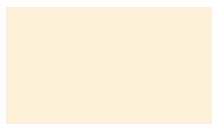
9016 Traffic white



9007 Grey aluminium



9005 Jet black



9001 Cream



7046 Telegrey 2



7035 Light grey



7030 Stone grey



6036 Pearl opal green



6027 Light green



6026 Opal green



5025 Peal gentian blue



5021 Water blue



5019 Capri blue



5017 Traffic blue



5015 Sky blue



5012 Light blue



5010 Gentian blue



5007 Brilliant blue



5005 Sea blue



5003 Sapphire blue



4010 Telemagenta



4004 Claret violet



3027 Raspberry red



3026 Luminous bright red



3020 Traffic red



2007 Luminous bright orange



1036 Pearl gold



1035 Pearl beige



1028 Melon yellow



1026 Luminous yellow



1007 Daffodil yellow

A choice of colours are available on request, standard production colour is jet black 9005



**T E C Electric Motors Ltd.**

ADD:UNIT 1, BUILDING 341

RUSHOCK TRADING ESTATE

RUSHOCK DROITWICH WR9 0NR U.K

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