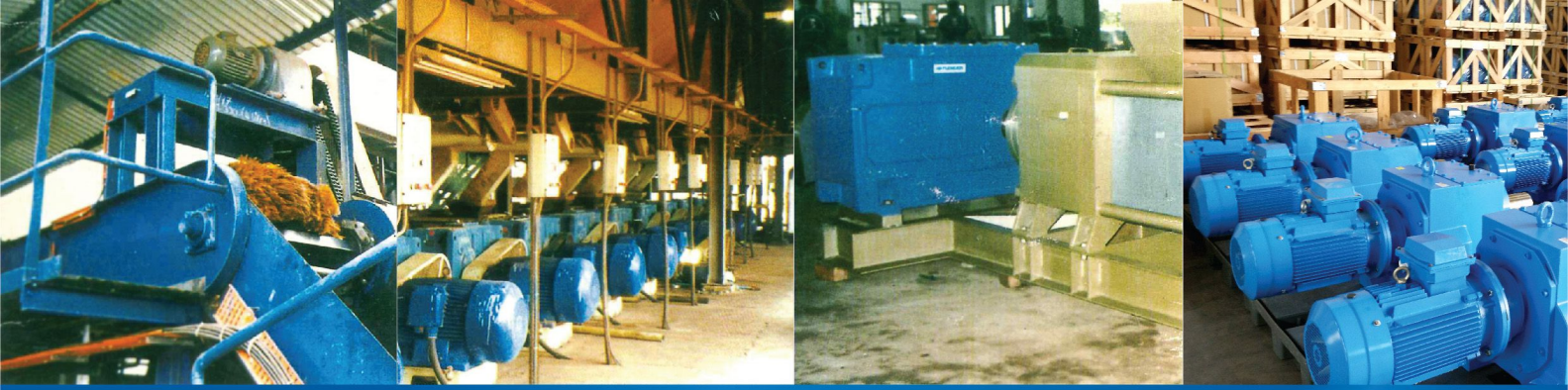
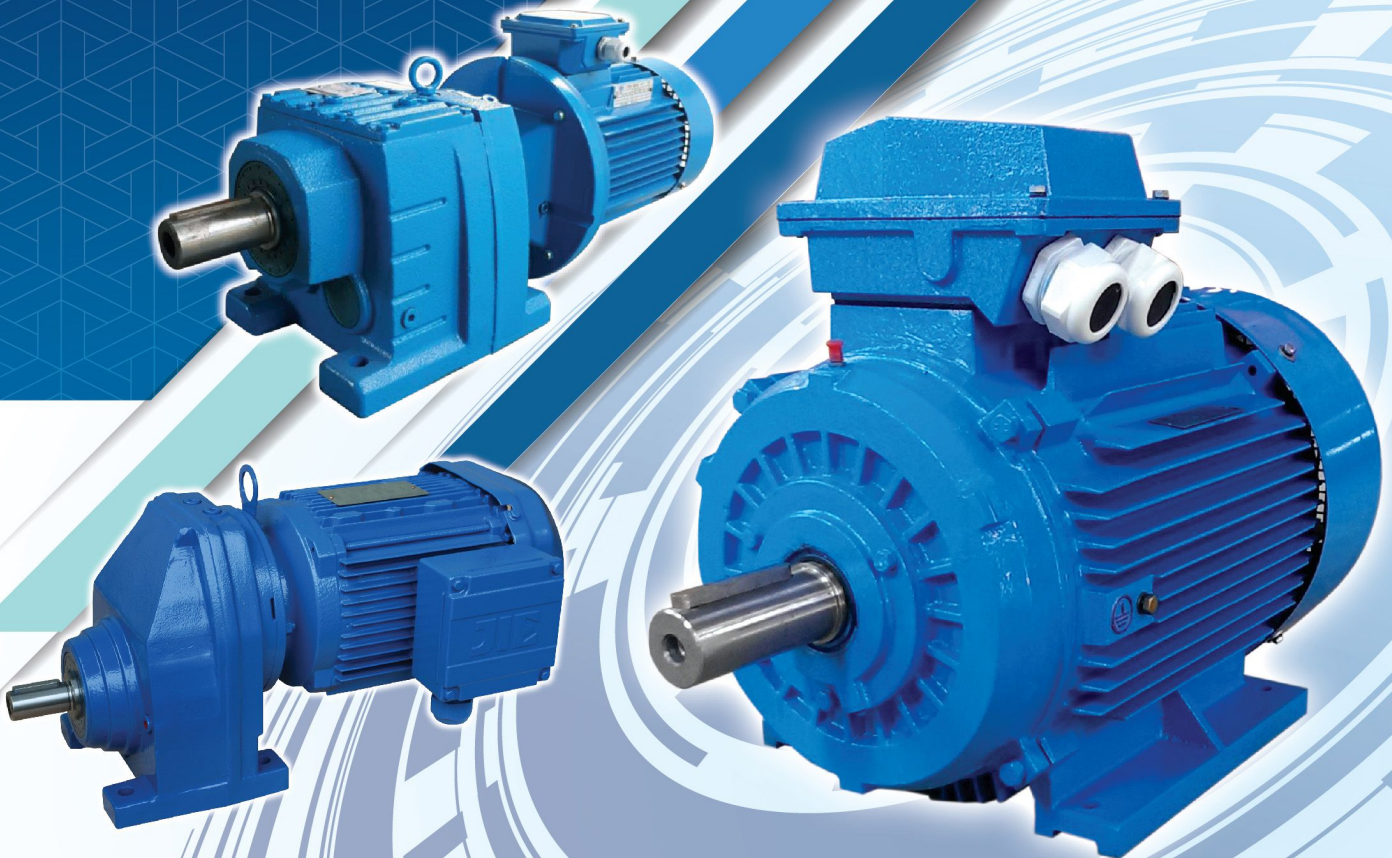




**FEM Motor**

***Three-Phase Squirrel Cage  
Induction Motors  
Complying to IE1 & IE2  
EU Efficiency  
Certification***



**EMPOWER DRIVES & AUTOMATION SDN BHD**





The new series of **Frander Elektrim Motor**, now written in short form **FEM**, is robust in design and construction to meet the ever increasing demand in quality for all standard industries drives. The output range from 1.1 KW to 90 KW is now manufactured to the high efficiency greeting meeting the requirement of the EUROPE standard of the efficiency level. The word IE1, IE2 or IE3 appearing on the name plate shall designated to its performance.

## COMPLIANCES

- IEC Part 1 & BS 5000 part 10
- IEC part 9, BS 4999 part 51
- BS 4999 part 50
- DIN IEC 34 part 7
- DIN IEC 34 part 4/5

## SPECIAL FEATURES

- Terminal box are all of cast iron to meet the efficiency requirement.
- Enlarge terminal box from 160 frame is an improve protection to IP55/IP56 designated.
- High grade laminated sheet-steel is used to minimizes electrical harming sound are improve efficiency.
- High grade bearing are used in the motor to lower down sound lever & prolong running life.
- Varnish are vacuum impregnated.

## SPECIFICATION

- Design Voltage : 400V/3ø/50Hz
- Utility Voltage : 380V-420V - 3ø-50Hz  
440V-480- 3ø-60Hz

## CONNECTION

- 0.18 KW to 1.5 KW
- Dual Voltage : 230V – Delta  
400V – Star
- Up to 3 KW : Star connection at  
400V/3ø/50Hz
- From 4 KW onward : Delta connection at  
400V/3ø/50Hz

| FEM Motor EFF 2 CE |    |        |     |     |     |      |
|--------------------|----|--------|-----|-----|-----|------|
| Type: MK           | IP | Ins.Cl | F   | S1  |     |      |
| V.                 | Hz | kW     | RPM | Amp | Eff | CosØ |
| 380-420            | 50 |        |     |     |     |      |
| 440-480            | 60 |        |     |     |     |      |

## BEARING SIZE

| FRAME | Poles       | Drive End      | Non-Drive End |
|-------|-------------|----------------|---------------|
| 63    | 2 , 4       | 6201ZZ         | 6201ZZ        |
| 71    | 2, 4, 6     | 6202ZZ         | 6202ZZ        |
| 80    | 2, 4, 6, 8  | 6204ZZ         | 6204ZZ        |
| 90    | 2, 4, 6, 8  | 6205ZZ         | 6205ZZ        |
| 100   | 2, 4, 6, 8  | 6206ZZ         | 6206ZZ        |
| 112   | 2, 4, 6, 8  | 6206ZZ         | 6206ZZ        |
| 132   | 2, 4, 6, 8  | 6208ZZ         | 6208ZZ        |
| 160   | 2, 4, 6, 8  | 6309C3         | 6309C3        |
| 180   | 2, 4, 6, 8  | 6311C3         | 6311C3        |
| 200   | 2, 4, 6, 8  | 6312C3         | 6312C3        |
| 225   | 2, 4, 6, 8  | 6313C3         | 6313C3        |
| 250   | 2, 4, 6, 8  | 6314C3         | 6314C3        |
| 280   | 2           | 6314C3         | 6314C3        |
|       | 4, 6, 8     | 6317C3/NU317C3 | 6317C3        |
| 315   | 2           | 6317C3         | 6317C3        |
|       | 4, 6, 8, 10 | 6319C3/NU319C3 | 6319C3        |
| 355   | 2           | 6319C3         | 6319C3        |
|       | 4, 6, 8, 10 | 6322C3/NU322C3 | 6322C3        |



## PERFORMANCE DATA

### 2 POLES MOTOR (IE1)

|              |              |                  |                           |
|--------------|--------------|------------------|---------------------------|
| Construction | : Cast Iron  | Rating           | : Continuous              |
| Type         | : Cage Rotor | Insulation Class | : F                       |
| Enclosure    | : IP55       | Supply Voltage   | : 3 Phase 50Hz up to 660V |

| MODEL SIZE |      |     | SPEED | FLC AT 380V | FLC AT 415V | EFFICIENCY (%) |      |      | POWER FACTOR, Cos Ø |      |      | DOL Starting % Of Full Load |     | NOISE LEVEL | WEIGHT |
|------------|------|-----|-------|-------------|-------------|----------------|------|------|---------------------|------|------|-----------------------------|-----|-------------|--------|
| FRAME SIZE | KW   | HP  | r/min | A           | A           | 100%           | 75%  | 50%  | 100%                | 75%  | 50%  | LRT                         | LRC | dB (A)      | Kg     |
| MK 80A     | 0.75 | 1   | 2840  | 1.8         | 1.7         | 75.0           | 73.0 | 72.0 | 0.83                | 0.79 | 0.66 | 220                         | 610 | 69          | 18     |
| MK 80B     | 1.1  | 1.5 | 2840  | 2.6         | 2.4         | 76.2           | 75.0 | 73.0 | 0.84                | 0.78 | 0.67 | 220                         | 700 | 69          | 20     |
| MK 90S     | 1.5  | 2   | 2840  | 3.5         | 3.2         | 78.5           | 78.0 | 74.0 | 0.84                | 0.8  | 0.72 | 220                         | 700 | 74          | 20     |
| MK 90L     | 2.2  | 3   | 2840  | 4.9         | 4.4         | 81.0           | 80.0 | 80.0 | 0.85                | 0.81 | 0.72 | 220                         | 700 | 74          | 23     |
| MK 100L    | 3    | 4   | 2860  | 6.3         | 5.8         | 82.6           | 82.0 | 81.0 | 0.87                | 0.83 | 0.76 | 220                         | 700 | 78          | 32     |
| MK 112M    | 4    | 5.5 | 2880  | 8.2         | 7.5         | 84.2           | 84.0 | 83.0 | 0.88                | 0.85 | 0.76 | 220                         | 750 | 79          | 37     |
| MK 132S    | 5.5  | 7.5 | 2910  | 11.1        | 10.1        | 85.7           | 85.0 | 84.0 | 0.88                | 0.83 | 0.72 | 220                         | 750 | 82          | 57     |
| MK 132M    | 7.5  | 10  | 2910  | 14.9        | 13.6        | 87.0           | 87.0 | 86.0 | 0.88                | 0.84 | 0.72 | 220                         | 750 | 82          | 60     |
| MK 160MA   | 11   | 15  | 2920  | 21.2        | 19.6        | 88.4           | 87.0 | 84.5 | 0.89                | 0.84 | 0.76 | 220                         | 750 | 88          | 106    |
| MK 160MB   | 15   | 20  | 2920  | 28.6        | 26.2        | 89.4           | 87.0 | 85.0 | 0.89                | 0.85 | 0.82 | 220                         | 750 | 88          | 114    |
| MK 160L    | 18.5 | 25  | 2930  | 34.7        | 31.8        | 90.0           | 89.0 | 88.0 | 0.9                 | 0.86 | 0.84 | 220                         | 750 | 88          | 131    |
| MK 180M    | 22   | 30  | 2930  | 41          | 37.6        | 90.5           | 90.0 | 89.5 | 0.9                 | 0.88 | 0.82 | 200                         | 750 | 91          | 168    |
| MK 200LA   | 30   | 40  | 2940  | 55.4        | 50.7        | 91.4           | 91.0 | 91.0 | 0.9                 | 0.87 | 0.8  | 200                         | 750 | 94          | 219    |
| MK 200LB   | 37   | 50  | 2960  | 67.9        | 62.2        | 92.0           | 91.5 | 91.0 | 0.9                 | 0.83 | 0.75 | 200                         | 750 | 94          | 236    |
| MK 225M    | 45   | 60  | 2960  | 82.1        | 75.2        | 92.5           | 92.0 | 91.5 | 0.9                 | 0.89 | 0.83 | 200                         | 750 | 94          | 288    |
| MK 250M    | 55   | 75  | 2960  | 99.8        | 94.1        | 93.0           | 92.5 | 92.0 | 0.9                 | 0.86 | 0.79 | 200                         | 750 | 95          | 382    |
| MK 280S    | 75   | 100 | 2960  | 135.3       | 123.9       | 93.6           | 93.0 | 92.5 | 0.91                | 0.87 | 0.81 | 200                         | 750 | 96          | 494    |
| MK 280M    | 90   | 125 | 2960  | 160         | 146.5       | 93.9           | 93.0 | 92.0 | 0.91                | 0.88 | 0.85 | 180                         | 710 | 96          | 550    |
| MK 315S    | 110  | 150 | 2975  | 195.4       | 178.9       | 94.0           | 93.5 | 93.0 | 0.91                | 0.88 | 0.85 | 180                         | 710 | 98          | 890    |
| MK 315M    | 132  | 175 | 2970  | 233.2       | 213.6       | 94.5           | 94.0 | 93.5 | 0.91                | 0.89 | 0.83 | 180                         | 710 | 98          | 995    |
| MK 315LA   | 160  | 220 | 2970  | 297.3       | 255.8       | 94.6           | 94.5 | 93.0 | 0.92                | 0.91 | 0.89 | 180                         | 710 | 101         | 1046   |
| MK 315LB   | 200  | 270 | 2970  | 348.4       | 319         | 94.8           | 93.5 | 93.0 | 0.92                | 0.91 | 0.89 | 180                         | 710 | 101         | 1145   |
| MK 355MA   | 250  | 350 | 2970  | 433.7       | 397.1       | 95.2           | 95.0 | 94.0 | 0.92                | 0.91 | 0.89 | 160                         | 710 | 105         | 1714   |
| MK 355L    | 315  | 420 | 2970  | 545.3       | 499.3       | 95.4           | 95.0 | 94.5 | 0.92                | 0.91 | 0.89 | 160                         | 710 | 105         | 1870   |

### 2 POLES MOTOR (IE2)

|              |              |                  |                           |
|--------------|--------------|------------------|---------------------------|
| Construction | : Cast Iron  | Rating           | : Continuous              |
| Type         | : Cage Rotor | Insulation Class | : F                       |
| Enclosure    | : IP55       | Supply Voltage   | : 3 Phase 50Hz up to 660V |

| MODEL SIZE |      |     | SPEED | FLC AT 380V | FLC AT 415V | EFFICIENCY (%) |      |      | POWER FACTOR, Cos Ø |      |      | DOL Starting % Of Full Load |     | NOISE LEVEL | WEIGHT |
|------------|------|-----|-------|-------------|-------------|----------------|------|------|---------------------|------|------|-----------------------------|-----|-------------|--------|
| FRAME SIZE | KW   | HP  | r/min | A           | A           | 100%           | 75%  | 50%  | 100%                | 75%  | 50%  | LRT                         | LRC | dB (A)      | Kg     |
| MK 80A     | 0.75 | 1   | 2875  | 1.77        | 1.6         | 77.4           | 77.0 | 73.0 | 0.83                | 0.79 | 0.66 | 230                         | 680 | 64          | 18     |
| MK 80B     | 1.1  | 1.5 | 2875  | 2.5         | 2.3         | 79.6           | 78.0 | 73.0 | 0.84                | 0.78 | 0.67 | 230                         | 730 | 64          | 20     |
| MK 90S     | 1.5  | 2   | 2890  | 3.32        | 3.0         | 81.3           | 78.0 | 74.0 | 0.84                | 0.8  | 0.72 | 230                         | 760 | 69          | 20     |
| MK 90L     | 2.2  | 3   | 2890  | 4.72        | 4.3         | 83.2           | 8.0  | 80.0 | 0.85                | 0.81 | 0.72 | 230                         | 780 | 69          | 23     |
| MK 100L    | 3    | 4   | 2891  | 6.17        | 5.6         | 84.6           | 83.0 | 81.0 | 0.87                | 0.83 | 0.76 | 230                         | 810 | 76          | 32     |
| MK 112M    | 4    | 5.5 | 2914  | 8.04        | 7.3         | 85.8           | 86.0 | 83.0 | 0.88                | 0.88 | 0.76 | 230                         | 830 | 79          | 37     |
| MK 132S    | 5.5  | 7.5 | 2937  | 11.2        | 10.2        | 87.0           | 87.0 | 86.0 | 0.88                | 0.83 | 0.72 | 230                         | 820 | 81          | 57     |
| MK 132M    | 7.5  | 10  | 2940  | 14.6        | 13.3        | 88.1           | 87.0 | 86.0 | 0.88                | 0.84 | 0.72 | 230                         | 780 | 81          | 60     |
| MK 160MA   | 11   | 15  | 2930  | 21          | 19.1        | 89.4           | 87.0 | 84.5 | 0.89                | 0.84 | 0.76 | 230                         | 790 | 83          | 106    |
| MK 160MB   | 15   | 20  | 2930  | 28.4        | 25.8        | 90.3           | 87.0 | 85.0 | 0.89                | 0.85 | 0.82 | 230                         | 800 | 83          | 114    |
| MK 160L    | 18.5 | 25  | 2937  | 34.7        | 31.6        | 90.9           | 89.0 | 88.0 | 0.89                | 0.86 | 0.84 | 230                         | 810 | 83          | 131    |
| MK 180M    | 22   | 30  | 2940  | 41.6        | 37.9        | 91.3           | 91.0 | 90.0 | 0.88                | 0.88 | 0.82 | 230                         | 820 | 85          | 168    |
| MK 200LA   | 30   | 40  | 2950  | 54.2        | 49.3        | 92.0           | 91.0 | 91.0 | 0.88                | 0.87 | 0.8  | 220                         | 750 | 86          | 219    |
| MK 200LB   | 37   | 50  | 2950  | 68.2        | 62.1        | 92.5           | 91.5 | 91.0 | 0.89                | 0.83 | 0.75 | 220                         | 750 | 86          | 236    |
| MK 225M    | 45   | 60  | 2960  | 82.5        | 75.1        | 92.9           | 93.0 | 92.5 | 0.89                | 0.89 | 0.83 | 220                         | 760 | 88          | 288    |
| MK 250M    | 55   | 75  | 2965  | 99.5        | 90.5        | 93.2           | 94.5 | 94.0 | 0.9                 | 0.86 | 0.79 | 220                         | 760 | 91          | 382    |
| MK 280S    | 75   | 100 | 2970  | 135         | 122.9       | 93.8           | 94.5 | 93.0 | 0.9                 | 0.87 | 0.81 | 200                         | 690 | 93          | 494    |
| MK 280M    | 90   | 125 | 2970  | 160         | 145.6       | 94.1           | 93.0 | 92.0 | 0.91                | 0.88 | 0.85 | 200                         | 700 | 93          | 550    |
| MK 315S    | 110  | 150 | 2975  | 194         | 176.5       | 94.3           | 93.5 | 93.0 | 0.91                | 0.88 | 0.85 | 200                         | 710 | 94          | 890    |
| MK 315M    | 132  | 175 | 2975  | 233         | 212.0       | 94.6           | 94.0 | 93.5 | 0.91                | 0.89 | 0.83 | 200                         | 710 | 94          | 995    |
| MK 315LA   | 160  | 220 | 2975  | 278         | 253.0       | 94.8           | 94.5 | 93.0 | 0.92                | 0.91 | 0.89 | 200                         | 710 | 94          | 1046   |
| MK 315LB   | 200  | 270 | 2975  | 348         | 316.7       | 95.0           | 93.5 | 93.0 | 0.92                | 0.91 | 0.89 | 200                         | 710 | 94          | 1145   |
| MK 355MA   | 250  | 350 | 2980  | 434         | 394.9       | 95.0           | 95.0 | 94.0 | 0.92                | 0.91 | 0.89 | 200                         | 710 | 102         | 1714   |
| MK 355L    | 315  | 420 | 2980  | 547         | 497.8       | 95.0           | 95.0 | 94.5 | 0.92                | 0.91 | 0.89 | 200                         | 710 | 95          | 1870   |





## PERFORMANCE DATA

### 4 POLES MOTOR (IE1)

|                     |              |                         |                           |
|---------------------|--------------|-------------------------|---------------------------|
| <b>Construction</b> | : Cast Iron  | <b>Rating</b>           | : Continuous              |
| <b>Type</b>         | : Cage Rotor | <b>Insulation Class</b> | : F                       |
| <b>Enclosure</b>    | : IP55       | <b>Supply Voltage</b>   | : 3 Phase 50Hz up to 660V |

| MODEL SIZE |      |      | SPEED | FLC AT 380V | FLC AT 415V | EFFICIENCY (%) |      |      | POWER FACTOR, Cos Ø |      |      | DOL Starting % Of Full Load |     | NOISE LEVEL | WEIGHT |
|------------|------|------|-------|-------------|-------------|----------------|------|------|---------------------|------|------|-----------------------------|-----|-------------|--------|
| FRAME SIZE | KW   | HP   | r/min | A           | A           | 100%           | 75%  | 50%  | 100%                | 75%  | 50%  | LRT                         | LRC | dB (A)      | Kg     |
| MK 80A     | 0.55 | 0.75 | 1390  | 1.6         | 1.4         | 71.0           | 70.5 | 70.0 | 0.75                | 0.66 | 0.55 | 240                         | 520 | 63          | 14     |
| MK 80B     | 0.75 | 1    | 1390  | 2.1         | 1.9         | 73.0           | 72.0 | 71.0 | 0.76                | 0.65 | 0.54 | 230                         | 600 | 63          | 15     |
| MK 90S     | 1.1  | 1.5  | 1390  | 2.8         | 2.6         | 76.2           | 74.3 | 72.5 | 0.77                | 0.70 | 0.57 | 230                         | 600 | 66          | 19     |
| MK 90L     | 1.5  | 2    | 1390  | 3.7         | 3.4         | 78.5           | 78.1 | 76.7 | 0.79                | 0.75 | 0.64 | 230                         | 600 | 66          | 23     |
| MK 100LS   | 2.2  | 3    | 1410  | 5.1         | 4.7         | 81.0           | 80.2 | 79.8 | 0.81                | 0.76 | 0.65 | 230                         | 700 | 69          | 32     |
| MK 100L    | 3    | 4    | 1410  | 6.7         | 6.2         | 82.6           | 81.8 | 81.0 | 0.82                | 0.78 | 0.66 | 230                         | 700 | 69          | 35     |
| MK 112M    | 4    | 5.5  | 1435  | 8.8         | 8.1         | 84.2           | 83.8 | 82.7 | 0.82                | 0.76 | 0.64 | 230                         | 700 | 70          | 41     |
| MK 132S    | 5.5  | 7.5  | 1440  | 11.7        | 10.8        | 85.7           | 85.0 | 84.6 | 0.83                | 0.81 | 0.71 | 230                         | 700 | 76          | 60     |
| MK 132M    | 7.5  | 10   | 1440  | 15.6        | 14.3        | 87.0           | 86.8 | 85.9 | 0.84                | 0.83 | 0.74 | 230                         | 700 | 76          | 72     |
| MK 160M    | 11   | 15   | 1460  | 22.5        | 20.6        | 88.4           | 88.2 | 87.8 | 0.84                | 0.83 | 0.75 | 230                         | 700 | 80          | 109    |
| MK 160L    | 15   | 20   | 1460  | 30.2        | 27.5        | 89.4           | 89.7 | 88.4 | 0.85                | 0.82 | 0.75 | 220                         | 700 | 80          | 130    |
| MK 180M    | 18.5 | 25   | 1470  | 36.3        | 33.3        | 90.0           | 89.6 | 88.2 | 0.86                | 0.86 | 0.77 | 220                         | 750 | 80          | 166    |
| MK 180L    | 22   | 30   | 1470  | 42.9        | 39.3        | 90.5           | 89.7 | 88.7 | 0.86                | 0.85 | 0.75 | 220                         | 750 | 83          | 182    |
| MK 200L    | 30   | 40   | 1470  | 58          | 53.1        | 91.4           | 90.4 | 89.6 | 0.86                | 0.84 | 0.75 | 220                         | 750 | 84          | 232    |
| MK 225S    | 37   | 50   | 1475  | 70.2        | 64.3        | 92.0           | 91.7 | 90.5 | 0.87                | 0.84 | 0.75 | 220                         | 750 | 84          | 280    |
| MK 225M    | 45   | 60   | 1475  | 85          | 77.8        | 92.5           | 91.3 | 90.5 | 0.87                | 0.87 | 0.81 | 220                         | 720 | 84          | 309    |
| MK 250M    | 55   | 75   | 1480  | 103.3       | 94.6        | 93.0           | 92.8 | 92.0 | 0.87                | 0.87 | 0.82 | 220                         | 720 | 86          | 400    |
| MK 280S    | 75   | 100  | 1480  | 139.9       | 128.1       | 93.9           | 92.9 | 92.2 | 0.87                | 0.87 | 0.84 | 220                         | 720 | 89          | 515    |
| MK 280M    | 90   | 125  | 1480  | 167.4       | 153.3       | 93.9           | 93.3 | 92.7 | 0.87                | 0.86 | 0.80 | 220                         | 720 | 89          | 601    |
| MK 315S    | 110  | 150  | 1480  | 201         | 184         | 94.5           | 94.5 | 94.0 | 0.88                | 0.86 | 0.76 | 210                         | 690 | 96          | 910    |
| MK 315MA   | 132  | 175  | 1480  | 240.4       | 220         | 94.8           | 94.0 | 93.5 | 0.88                | 0.86 | 0.86 | 210                         | 690 | 96          | 1046   |
| MK 315LA   | 160  | 220  | 1480  | 287.8       | 263.6       | 94.9           | 94.5 | 94.0 | 0.89                | 0.87 | 0.82 | 210                         | 690 | 100         | 1115   |
| MK 315LB   | 200  | 270  | 1480  | 359.8       | 329.4       | 94.9           | 94.6 | 94.5 | 0.89                | 0.87 | 0.84 | 210                         | 690 | 100         | 1200   |
| MK 355M    | 250  | 350  | 1490  | 443.3       | 405.9       | 95.2           | 95.0 | 95.0 | 0.90                | 0.88 | 0.85 | 210                         | 690 | 104         | 1697   |
| MK 355L    | 315  | 420  | 1490  | 558.6       | 511.5       | 95.8           | 95.0 | 95.0 | 0.90                | 0.88 | 0.85 | 210                         | 690 | 104         | 1855   |

### 4 POLES MOTOR (IE2)

|                     |              |                         |                           |
|---------------------|--------------|-------------------------|---------------------------|
| <b>Construction</b> | : Cast Iron  | <b>Rating</b>           | : Continuous              |
| <b>Type</b>         | : Cage Rotor | <b>Insulation Class</b> | : F                       |
| <b>Enclosure</b>    | : IP55       | <b>Supply Voltage</b>   | : 3 Phase 50Hz up to 660V |

| MODEL SIZE |      |     | SPEED | FLC AT 380V | FLC AT 415V | EFFICIENCY (%) |      |      | POWER FACTOR, Cos Ø |      |      | DOL Starting % Of Full Load |     | NOISE LEVEL | WEIGHT |
|------------|------|-----|-------|-------------|-------------|----------------|------|------|---------------------|------|------|-----------------------------|-----|-------------|--------|
| FRAME SIZE | KW   | HP  | r/min | A           | A           | 100%           | 75%  | 50%  | 100%                | 75%  | 50%  | LRT                         | LRC | dB (A)      | Kg     |
| MK 80B     | 0.75 | 1   | 1400  | 1.88        | 1.7         | 79.6           | 74.0 | 72.0 | 0.76                | 0.65 | 0.54 | 230                         | 630 | 61          | 15     |
| MK 90S     | 1.1  | 1.5 | 1400  | 2.66        | 2.4         | 81.4           | 74.3 | 72.5 | 0.77                | 0.70 | 0.57 | 230                         | 650 | 64          | 19     |
| MK 90L     | 1.5  | 2   | 1445  | 3.57        | 3.2         | 82.8           | 78.1 | 76.7 | 0.77                | 0.75 | 0.64 | 230                         | 660 | 64          | 23     |
| MK 100LS   | 2.2  | 3   | 1440  | 4.88        | 4.4         | 84.3           | 81.2 | 80.8 | 0.81                | 0.76 | 0.65 | 230                         | 690 | 69          | 32     |
| MK 100L    | 3    | 4   | 1440  | 6.5         | 5.9         | 85.5           | 81.8 | 81.0 | 0.82                | 0.78 | 0.66 | 230                         | 750 | 69          | 35     |
| MK 112M    | 4    | 5.5 | 1445  | 8.55        | 7.8         | 86.6           | 84.8 | 82.7 | 0.82                | 0.76 | 0.64 | 230                         | 760 | 70          | 41     |
| MK 132S    | 5.5  | 7.5 | 1455  | 11.5        | 10.5        | 87.7           | 86.0 | 85.6 | 0.83                | 0.81 | 0.71 | 200                         | 770 | 76          | 60     |
| MK 132M    | 7.5  | 10  | 1455  | 15.3        | 13.9        | 88.7           | 87.8 | 86.9 | 0.84                | 0.83 | 0.74 | 200                         | 750 | 76          | 72     |
| MK 160M    | 11   | 15  | 1460  | 22.1        | 20.1        | 89.8           | 89.2 | 87.8 | 0.84                | 0.85 | 0.75 | 220                         | 740 | 78          | 109    |
| MK 160L    | 15   | 20  | 1460  | 29.6        | 26.9        | 90.6           | 89.7 | 88.4 | 0.85                | 0.88 | 0.75 | 220                         | 750 | 78          | 130    |
| MK 180M    | 18.5 | 25  | 1470  | 35.8        | 32.6        | 91.2           | 90.6 | 89.2 | 0.86                | 0.90 | 0.77 | 220                         | 750 | 80          | 166    |
| MK 180L    | 22   | 30  | 1470  | 42.3        | 38.5        | 91.6           | 91.7 | 90.7 | 0.86                | 0.85 | 0.75 | 220                         | 770 | 80          | 182    |
| MK 200L    | 30   | 40  | 1470  | 56.9        | 51.8        | 92.3           | 92.4 | 91.6 | 0.86                | 0.84 | 0.75 | 220                         | 780 | 80          | 232    |
| MK 225S    | 37   | 50  | 1480  | 69.7        | 63.4        | 92.7           | 92.7 | 91.5 | 0.87                | 0.84 | 0.75 | 220                         | 720 | 81          | 280    |
| MK 225M    | 45   | 60  | 1480  | 84.3        | 76.7        | 93.1           | 93.3 | 92.5 | 0.87                | 0.87 | 0.81 | 220                         | 730 | 81          | 309    |
| MK 250M    | 55   | 75  | 1480  | 103         | 93.7        | 93.5           | 93.8 | 93.0 | 0.87                | 0.88 | 0.82 | 220                         | 740 | 82          | 400    |
| MK 280S    | 75   | 100 | 1480  | 139         | 126.5       | 94.0           | 93.9 | 93.2 | 0.87                | 0.89 | 0.84 | 220                         | 740 | 83          | 515    |
| MK 280M    | 90   | 125 | 1480  | 167         | 152.0       | 94.2           | 94.3 | 92.7 | 0.87                | 0.86 | 0.80 | 220                         | 670 | 83          | 601    |
| MK 315S    | 110  | 150 | 1485  | 201         | 182.9       | 94.5           | 94.5 | 94.0 | 0.88                | 0.86 | 0.76 | 220                         | 690 | 91          | 910    |
| MK 315MA   | 132  | 175 | 1485  | 240         | 218.4       | 94.7           | 94.0 | 93.5 | 0.88                | 0.86 | 0.86 | 220                         | 690 | 91          | 1046   |
| MK 315LA   | 160  | 220 | 1485  | 288         | 262.1       | 94.9           | 95.0 | 94.0 | 0.89                | 0.87 | 0.82 | 220                         | 690 | 91          | 1115   |
| MK 315LB   | 200  | 270 | 1485  | 359         | 326.7       | 95.1           | 95.5 | 94.5 | 0.89                | 0.87 | 0.84 | 220                         | 690 | 91          | 1200   |
| MK 355M    | 250  | 350 | 1490  | 443         | 403.1       | 95.1           | 95.0 | 95.0 | 0.90                | 0.88 | 0.85 | 220                         | 690 | 97          | 1697   |
| MK 355L    | 315  | 420 | 1490  | 559         | 508.7       | 95.1           | 95.0 | 95.0 | 0.90                | 0.88 | 0.85 | 220                         | 690 | 97          | 1855   |





## PERFORMANCE DATA

### 6 POLES MOTOR (IE1)

|                     |              |                         |                           |
|---------------------|--------------|-------------------------|---------------------------|
| <b>Construction</b> | : Cast Iron  | <b>Rating</b>           | : Continuous              |
| <b>Type</b>         | : Cage Rotor | <b>Insulation Class</b> | : F                       |
| <b>Enclosure</b>    | : IP55       | <b>Supply Voltage</b>   | : 3 Phase 50Hz up to 660V |

| MODEL SIZE |      |      | SPEED | FLC AT 380V | FLC AT 415V | EFFICIENCY (%) |      |      | POWER FACTOR, Cos Ø |      |      | DOL Starting % Of Full Load |     | NOISE LEVEL | WEIGHT |
|------------|------|------|-------|-------------|-------------|----------------|------|------|---------------------|------|------|-----------------------------|-----|-------------|--------|
| FRAME SIZE | KW   | HP   | r/min | A           | A           | 100%           | 75%  | 50%  | 100%                | 75%  | 50%  | LRT                         | LRC | dB (A)      | Kg     |
| MK 80A     | 0.37 | 0.5  | 885   | 1.3         | 1.2         | 62.0           | 61.0 | 60.0 | 0.70                | 0.59 | 0.45 | 190                         | 470 | 61          | 14     |
| MK 80B     | 0.55 | 0.75 | 885   | 1.8         | 1.6         | 65.0           | 64.0 | 63.0 | 0.72                | 0.62 | 0.45 | 190                         | 470 | 61          | 17     |
| MK 90S     | 0.75 | 1    | 910   | 2.3         | 2.2         | 69             | 68.0 | 60.0 | 0.72                | 0.62 | 0.48 | 200                         | 550 | 64          | 20     |
| MK 90L     | 1.1  | 1.5  | 910   | 3.2         | 2.9         | 72             | 71.0 | 70.0 | 0.73                | 0.67 | 0.53 | 200                         | 550 | 64          | 20     |
| MK 100L    | 1.5  | 2    | 920   | 4           | 3.7         | 76             | 75.0 | 74.0 | 0.75                | 0.67 | 0.54 | 200                         | 550 | 68          | 31     |
| MK 112M    | 2.2  | 3    | 935   | 5.6         | 5.1         | 79             | 78.0 | 77.0 | 0.76                | 0.67 | 0.54 | 200                         | 650 | 72          | 37     |
| MK 132S    | 3    | 4    | 960   | 7.4         | 6.8         | 81             | 79.0 | 80.0 | 0.76                | 0.70 | 0.55 | 210                         | 650 | 76          | 54     |
| MK 132MA   | 4    | 5.5  | 960   | 9.8         | 8.9         | 82             | 81.0 | 80.0 | 0.76                | 0.70 | 0.56 | 210                         | 650 | 76          | 64     |
| MK 132MB   | 5.5  | 7.5  | 960   | 12.9        | 12.3        | 84             | 83.0 | 81.0 | 0.77                | 0.71 | 0.65 | 210                         | 650 | 76          | 73     |
| MK 160M    | 7.5  | 10   | 970   | 17.2        | 15.8        | 86             | 85.0 | 84.0 | 0.77                | 0.75 | 0.68 | 200                         | 650 | 80          | 104    |
| MK 160L    | 11   | 15   | 970   | 24.5        | 22.4        | 87.5           | 86.0 | 85.5 | 0.78                | 0.75 | 0.68 | 200                         | 650 | 80          | 126    |
| MK 180L    | 15   | 20   | 970   | 31.6        | 28.9        | 89             | 88.0 | 87.0 | 0.81                | 0.76 | 0.70 | 200                         | 700 | 79          | 169    |
| MK 200LA   | 18.5 | 25   | 980   | 38.6        | 35.3        | 90             | 89.0 | 88.0 | 0.81                | 0.76 | 0.67 | 210                         | 700 | 82          | 211    |
| MK 200LB   | 22   | 30   | 980   | 44.7        | 41          | 90             | 89.0 | 88.0 | 0.83                | 0.78 | 0.70 | 210                         | 700 | 82          | 225    |
| MK 225M    | 30   | 40   | 985   | 59.3        | 54.3        | 91.5           | 91.0 | 90.5 | 0.84                | 0.79 | 0.71 | 200                         | 700 | 82          | 281    |
| MK 250M    | 37   | 50   | 980   | 71.1        | 65.1        | 92             | 91.0 | 90.0 | 0.86                | 0.81 | 0.72 | 210                         | 700 | 84          | 378    |
| MK 280S    | 45   | 60   | 980   | 85.9        | 78.7        | 92.5           | 92.0 | 90.0 | 0.86                | 0.81 | 0.73 | 210                         | 700 | 85          | 475    |
| MK 280M    | 55   | 75   | 980   | 104.7       | 95.9        | 92.8           | 92.0 | 91.0 | 0.86                | 0.82 | 0.76 | 210                         | 700 | 85          | 541    |
| MK 315S    | 75   | 100  | 985   | 141.7       | 129.8       | 93.5           | 93   | 92   | 0.86                | 0.82 | 0.75 | 200                         | 700 | 90          | 795    |
| MK 315M    | 90   | 125  | 985   | 169.5       | 155.2       | 93.8           | 93   | 92   | 0.86                | 0.83 | 0.77 | 200                         | 700 | 90          | 965    |
| MK 315LA   | 110  | 150  | 985   | 206.7       | 189.3       | 94             | 94   | 93   | 0.86                | 0.83 | 0.77 | 200                         | 670 | 90          | 1052   |
| MK 315LB   | 132  | 175  | 985   | 244.7       | 224.1       | 94.2           | 94   | 92.5 | 0.87                | 0.82 | 0.74 | 200                         | 670 | 89          | 1130   |
| MK 355MA   | 160  | 220  | 990   | 192.3       | 267.7       | 94.5           | 94   | 92   | 0.88                | 0.85 | 0.79 | 190                         | 670 | 96          | 1593   |
| MK 355MB   | 200  | 270  | 990   | 365.4       | 334.6       | 94.5           | 94   | 93.5 | 0.88                | 0.85 | 0.79 | 190                         | 670 | 96          | 1700   |
| MK 355L    | 250  | 350  | 990   | 456.8       | 418.2       | 94.5           | 94.5 | 93.5 | 0.88                | 0.87 | 0.83 | 190                         | 670 | 96          | 1890   |

### 6 POLES MOTOR (IE2)

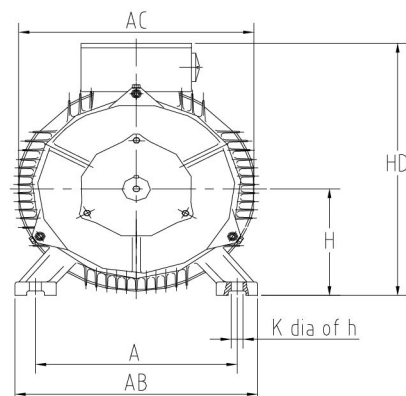
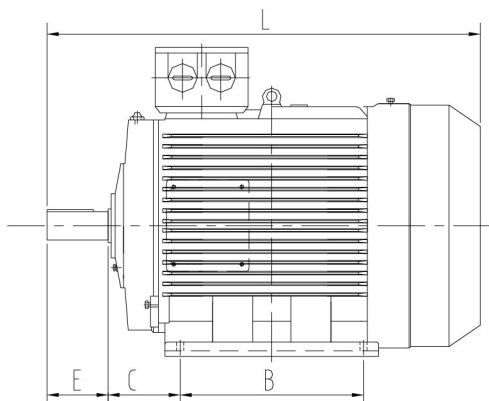
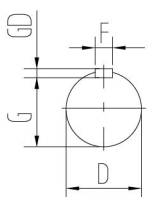
|                     |              |                         |                           |
|---------------------|--------------|-------------------------|---------------------------|
| <b>Construction</b> | : Cast Iron  | <b>Rating</b>           | : Continuous              |
| <b>Type</b>         | : Cage Rotor | <b>Insulation Class</b> | : F                       |
| <b>Enclosure</b>    | : IP55       | <b>Supply Voltage</b>   | : 3 Phase 50Hz up to 660V |

| MODEL SIZE |      |     | SPEED | FLC AT 380V | FLC AT 415V | EFFICIENCY (%) |      |      | POWER FACTOR, Cos Ø |      |      | DOL Starting % Of Full Load |     | NOISE LEVEL | WEIGHT |
|------------|------|-----|-------|-------------|-------------|----------------|------|------|---------------------|------|------|-----------------------------|-----|-------------|--------|
| FRAME SIZE | KW   | HP  | r/min | A           | A           | 100%           | 75%  | 50%  | 100%                | 75%  | 50%  | LRT                         | LRC | dB (A)      | Kg     |
| MK 90S     | 0.75 | 1   | 910   | 2           | 1.82        | 75.9           | 68.0 | 60.0 | 0.71                | 0.62 | 0.48 | 200                         | 580 | 64          | 20     |
| MK 90L     | 1.1  | 1.5 | 910   | 28          | 25.48       | 78.1           | 71.0 | 70.0 | 0.72                | 0.67 | 0.53 | 200                         | 590 | 64          | 20     |
| MK 100L    | 1.5  | 2   | 920   | 3.7         | 3.367       | 79.8           | 75.0 | 74.0 | 0.72                | 0.67 | 0.54 | 200                         | 590 | 68          | 31     |
| MK 112M    | 2.2  | 3   | 935   | 5.4         | 4.914       | 81.8           | 78.0 | 77.0 | 0.72                | 0.67 | 0.54 | 200                         | 620 | 72          | 37     |
| MK 132S    | 3    | 4   | 960   | 7.1         | 6.461       | 83.3           | 79.0 | 80.0 | 0.72                | 0.70 | 0.55 | 210                         | 640 | 76          | 54     |
| MK 132MA   | 4    | 5.5 | 960   | 9.2         | 8.372       | 84.6           | 81.0 | 80.0 | 0.74                | 0.70 | 0.56 | 210                         | 660 | 76          | 64     |
| MK 132MB   | 5.5  | 7.5 | 960   | 12.3        | 11.193      | 86             | 83.0 | 81.0 | 0.75                | 0.71 | 0.65 | 210                         | 680 | 76          | 73     |
| MK 160M    | 7.5  | 10  | 970   | 15.9        | 14.469      | 87.2           | 85.0 | 84.0 | 0.78                | 0.75 | 0.68 | 200                         | 680 | 80          | 104    |
| MK 160L    | 11   | 15  | 970   | 22.7        | 20.657      | 88.7           | 86.0 | 85.5 | 0.79                | 0.75 | 0.68 | 200                         | 690 | 80          | 126    |
| MK 180L    | 15   | 20  | 970   | 29.8        | 27.118      | 89.7           | 88.0 | 87.0 | 0.81                | 0.82 | 0.70 | 200                         | 730 | 79          | 169    |
| MK 200LA   | 18.5 | 25  | 980   | 36.5        | 33.215      | 90.4           | 89.0 | 88.0 | 0.8                 | 0.76 | 0.67 | 210                         | 720 | 79          | 211    |
| MK 200LB   | 22   | 30  | 980   | 43.1        | 39.221      | 90.9           | 89.0 | 88.0 | 0.81                | 0.78 | 0.70 | 210                         | 730 | 79          | 225    |
| MK 225M    | 30   | 40  | 985   | 57.6        | 52.416      | 91.7           | 91.0 | 90.5 | 0.82                | 0.79 | 0.71 | 200                         | 680 | 80          | 281    |
| MK 250M    | 37   | 50  | 980   | 69.8        | 63.518      | 92.2           | 91.0 | 90.0 | 0.83                | 0.81 | 0.72 | 210                         | 700 | 82          | 378    |
| MK 280S    | 45   | 60  | 980   | 82          | 74.62       | 92.7           | 92.0 | 90.0 | 0.85                | 0.81 | 0.73 | 210                         | 720 | 83          | 475    |
| MK 280M    | 55   | 75  | 980   | 100         | 91          | 93.1           | 92.0 | 91.0 | 0.86                | 0.82 | 0.76 | 210                         | 720 | 83          | 541    |
| MK 315S    | 75   | 100 | 985   | 136         | 123.76      | 93.7           | 93   | 92   | 0.84                | 0.82 | 0.75 | 200                         | 650 | 88          | 795    |
| MK 315M    | 90   | 125 | 985   | 163         | 148.33      | 94             | 93   | 92   | 0.85                | 0.83 | 0.77 | 200                         | 660 | 88          | 965    |
| MK 315LA   | 110  | 150 | 985   | 198         | 180.18      | 94.3           | 94   | 93   | 0.85                | 0.83 | 0.77 | 200                         | 660 | 88          | 1052   |
| MK 315LB   | 132  | 175 | 985   | 234         | 212.94      | 94.6           | 94   | 92.5 | 0.86                | 0.82 | 0.74 | 200                         | 670 | 88          | 1130   |
| MK 355MA   | 160  | 220 | 990   | 283         | 257.53      | 94.8           | 94   | 92   | 0.86                | 0.85 | 0.79 | 200                         | 670 | 89          | 1593   |
| MK 355MB   | 200  | 270 | 990   | 353         | 321.23      | 95             | 94   | 93.5 | 0.86                | 0.85 | 0.79 | 200                         | 680 | 89          | 1700   |
| MK 355L    | 250  | 350 | 990   | 442         | 402.22      | 95             | 94.5 | 93.5 | 0.86                | 0.87 | 0.83 | 200                         | 680 | 89          | 1890   |

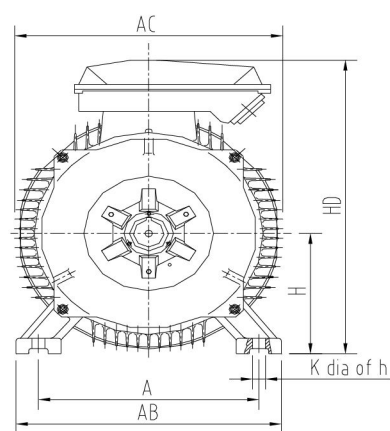
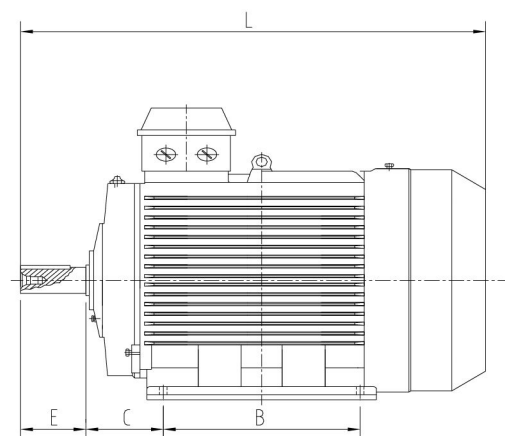
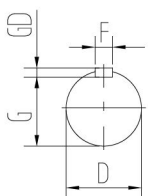




## DIMENSIONS



| FRAME SIZE | DIMENSIONS IN MILLIMETERS (mm) |     |     |    |                  |                  |                       |                  |    |     |     |     |                  |
|------------|--------------------------------|-----|-----|----|------------------|------------------|-----------------------|------------------|----|-----|-----|-----|------------------|
|            | H                              | A   | B   | C  | D<br>2P   4,6,8P | E<br>2P   4,6,8P | F X GD<br>2P   4,6,8P | G<br>2P   4,6,8P | K  | AB  | AC  | HD  | L<br>2P   4,6,8P |
| MK 63      | 63                             | 100 | 80  | 40 | 11               | 23               | 4 x 4                 | 8.5              | 7  | 135 | 130 | 80  | 225              |
| MK 71      | 71                             | 112 | 90  | 45 | 14               | 30               | 5 x 5                 | 11               | 7  | 145 | 145 | 200 | 255              |
| MK 80      | 80                             | 125 | 100 | 50 | 19               | 40               | 6 x 6                 | 15.5             | 10 | 160 | 165 | 225 | 285              |
| MK 90S     | 90                             | 140 | 100 | 56 | 24               | 50               | 8 x 7                 | 20               | 10 | 175 | 180 | 240 | 310              |
| MK 90L     | 90                             | 140 | 125 | 56 | 24               | 50               | 8 x 7                 | 20               | 10 | 175 | 180 | 240 | 335              |
| MK 100L    | 100                            | 160 | 140 | 63 | 28               | 60               | 8 x 7                 | 24               | 12 | 200 | 205 | 275 | 380              |
| MK 112M    | 112                            | 190 | 140 | 70 | 28               | 60               | 8 x 7                 | 24               | 12 | 235 | 225 | 290 | 395              |
| MK 132S    | 132                            | 216 | 140 | 89 | 38               | 80               | 10 x 8                | 33               | 12 | 270 | 265 | 335 | 465              |
| MK 132M    | 132                            | 216 | 178 | 89 | 38               | 80               | 10 x 8                | 33               | 15 | 270 | 265 | 335 | 505              |

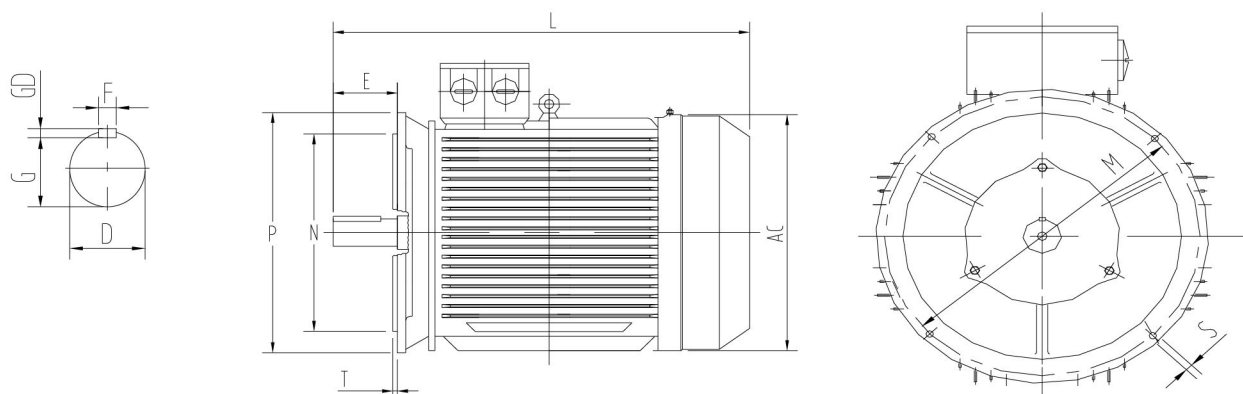


| FRAME SIZE | DIMENSIONS IN MILLIMETERS (mm) |     |     |     |                  |                  |                       |                  |    |     |     |      |                  |
|------------|--------------------------------|-----|-----|-----|------------------|------------------|-----------------------|------------------|----|-----|-----|------|------------------|
|            | H                              | A   | B   | C   | D<br>2P   4,6,8P | E<br>2P   4,6,8P | F X GD<br>2P   4,6,8P | G<br>2P   4,6,8P | K  | AB  | AC  | HD   | L<br>2P   4,6,8P |
| MK 160M    | 160                            | 254 | 210 | 108 | 42               | 110              | 12 x 8                | 37               | 15 | 325 | 330 | 415  | 600              |
| MK 160L    | 160                            | 254 | 254 | 108 | 42               | 110              | 12 x 8                | 37               | 15 | 325 | 330 | 415  | 645              |
| MK 180M    | 180                            | 279 | 241 | 121 | 48               | 110              | 14 x 9                | 42.5             | 15 | 350 | 355 | 450  | 670              |
| MK 180L    | 180                            | 279 | 279 | 121 | 48               | 110              | 14 x 9                | 42.5             | 15 | 355 | 355 | 450  | 710              |
| Mk 200L    | 200                            | 318 | 305 | 133 | 55               | 110              | 16 x 10               | 49               | 19 | 390 | 395 | 510  | 770              |
| MK 225S    | 225                            | 356 | 286 | 149 | 60               | 140              | 18 x 11               | 53               | 19 | 435 | 440 | 560  | 820              |
| MK 225M    | 225                            | 356 | 311 | 149 | 55   60          | 110   140        | 16x10   18x11         | 49   53          | 19 | 435 | 450 | 560  | 815   840        |
| MK 250M    | 250                            | 406 | 349 | 168 | 60   65          | 140              | 18 x 11               | 53   58          | 24 | 490 | 515 | 645  | 930              |
| MK 280S    | 280                            | 457 | 368 | 190 | 65   75          | 140              | 18x11   20x12         | 58   67.5        | 24 | 555 | 585 | 715  | 975              |
| MK 280M    | 280                            | 457 | 419 | 190 | 65   75          | 140              | 18x11   20x12         | 58   67.5        | 24 | 555 | 585 | 715  | 1040             |
| MK 315S    | 315                            | 508 | 406 | 216 | 65   80          | 140   170        | 18x11   22x14         | 58   71          | 28 | 640 | 630 | 870  | 1190   1220      |
| MK 315M    | 315                            | 508 | 457 | 216 | 65   80          | 140   170        | 18x11   22x14         | 58   71          | 28 | 640 | 630 | 870  | 1300   1330      |
| MK 315L    | 315                            | 508 | 508 | 216 | 65   80          | 140   170        | 18x11   22x14         | 58   71          | 28 | 640 | 630 | 870  | 1300   1330      |
| MK 355M    | 355                            | 610 | 560 | 250 | 70   100         | 140   210        | 20x12   28x16         | 62.5   90        | 35 | 730 | 710 | 1010 | 1495   1565      |
| MK 355L    | 355                            | 610 | 630 | 250 | 70   100         | 140   210        | 20x12   28x16         | 62.5   90        | 35 | 730 | 710 | 1010 | 1495   1565      |

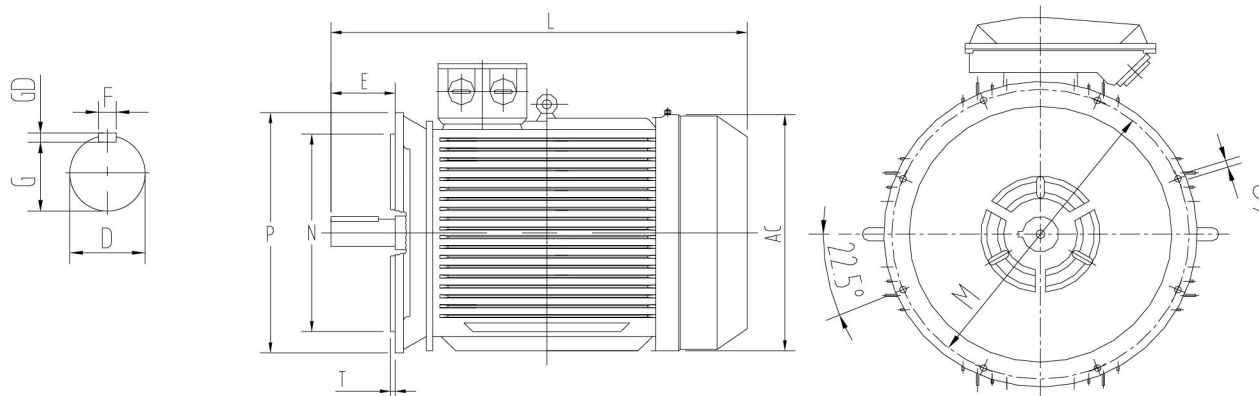




## DIMENSIONS



| FRAME SIZE | DIMENSIONS IN MILLIMETERS (mm) |     |     |     |                  |                  |                       |                  |    |     |                  |
|------------|--------------------------------|-----|-----|-----|------------------|------------------|-----------------------|------------------|----|-----|------------------|
|            | T                              | M   | N   | P   | D<br>2P   4,6,8P | E<br>2P   4,6,8P | F X GD<br>2P   4,6,8P | G<br>2P   4,6,8P | S  | AC  | L<br>2P   4,6,8P |
| MKF 63     | 3                              | 115 | 95  | 140 | 11               | 23               | 4 x 4                 | 8.5              | 10 | 130 | 225              |
| MKF 71     | 3.5                            | 130 | 110 | 160 | 14               | 30               | 5 x 5                 | 11               | 10 | 145 | 250              |
| MKF 80     | 3.5                            | 165 | 130 | 200 | 19               | 40               | 6 x 6                 | 15.5             | 12 | 175 | 295              |
| MKF 90S    | 3.5                            | 165 | 130 | 200 | 24               | 50               | 8 x 7                 | 20               | 12 | 195 | 315              |
| MKF 90L    | 3.5                            | 165 | 130 | 200 | 24               | 50               | 8 x 7                 | 20               | 12 | 195 | 340              |
| MKF 100L   | 4                              | 215 | 180 | 250 | 28               | 60               | 8 x 7                 | 24               | 15 | 215 | 385              |
| MKF 112M   | 4                              | 215 | 180 | 250 | 28               | 60               | 8 x 7                 | 24               | 15 | 240 | 400              |
| MKF 132S   | 4                              | 265 | 230 | 300 | 38               | 80               | 10 x 8                | 33               | 15 | 275 | 470              |
| MKF 132M   | 4                              | 265 | 230 | 300 | 38               | 80               | 10 x 8                | 33               | 15 | 275 | 510              |



| FRAME SIZE | DIMENSIONS IN MILLIMETERS (mm) |     |     |     |                  |                  |                       |                  |    |     |                  |
|------------|--------------------------------|-----|-----|-----|------------------|------------------|-----------------------|------------------|----|-----|------------------|
|            | T                              | M   | N   | P   | D<br>2P   4,6,8P | E<br>2P   4,6,8P | F X GD<br>2P   4,6,8P | G<br>2P   4,6,8P | S  | AC  | L<br>2P   4,6,8P |
| MKF 160M   | 5                              | 300 | 250 | 350 | 42               | 110              | 12 x 8                | 37               | 19 | 330 | 615              |
| MKF 160L   | 5                              | 300 | 250 | 350 | 42               | 110              | 12 x 8                | 37               | 19 | 330 | 670              |
| MKF 180M   | 5                              | 300 | 250 | 350 | 48               | 110              | 14 x 9                | 42.5             | 19 | 380 | 700              |
| MKF 180L   | 5                              | 300 | 250 | 350 | 48               | 110              | 14 x 9                | 42.5             | 19 | 380 | 740              |
| MKF 200L   | 5                              | 350 | 300 | 400 | 55               | 110              | 16 x 10               | 49               | 19 | 420 | 770              |
| MKF 225S   | 5                              | 400 | 350 | 450 | 60               | 140              | 18 x 11               | 53               | 19 | 470 | 820   845        |
| MKF 225M   | 5                              | 400 | 350 | 450 | 55   60          | 110   140        | 16x10   18x11         | 49   53          | 19 | 470 | 815              |
| MKF 250M   | 5                              | 500 | 450 | 550 | 60   65          | 140              | 18 x 11               | 53   58          | 19 | 510 | 910              |
| MKF 280S   | 5                              | 500 | 450 | 550 | 65   75          | 140              | 18x11   20x12         | 58   67.5        | 19 | 580 | 985              |
| MKF 280M   | 5                              | 500 | 450 | 550 | 65   75          | 140              | 18x11   20x12         | 58   67.5        | 19 | 580 | 1035             |
| MKF 315S   | 5                              | 600 | 550 | 660 | 65   80          | 140   170        | 18x11   22x14         | 58   71          | 24 | 645 | 1160   1270      |
| MKF 315M   | 5                              | 600 | 550 | 660 | 65   80          | 140   170        | 18x11   22x14         | 58   71          | 24 | 645 | 1190   1300      |
| MKF 315L   | 5                              | 600 | 550 | 660 | 65   80          | 140   170        | 18x11   22x14         | 58   71          | 24 | 645 | 1190   1300      |
| MKF 355M   | 5                              | 740 | 680 | 800 | 75   95          | 140   170        | 20x15   25x18         | 67.5   86        | 24 | 710 | 1500   1530      |
| MKF 355L   | 5                              | 740 | 680 | 800 | 75   95          | 140   170        | 20x15   25x18         | 67.5   86        | 24 | 710 | 1500   1530      |





FEM Motor



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