



Catalog

# Low voltage General performance IE2 high efficiency motors



# General performance IE2 high efficiency motors Sizes 71 to 355



ABB's General performance IE2 high efficiency motors are best suited for applications where simplicity and off-the-shelf availability are paramount. With ABB quality and support these motors have the features appreciated by volume customers and serial OEM's. Motors have IE2 efficiency.

## Technical data

- Cast iron 04-06

## Dimension drawings

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## General performance motors in brief

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# General performance cast iron motors

## Technical data for totally enclosed squirrel cage three phase motors

IE2

IP 55 - IC 411 - Insulation class F, temperature rise class B  
IE2 efficiency class according to IEC 60034-30; 2008

| Output kW             | Frame Size   | Speed r/min | Efficiency     |              |              | Power factor cos φ | Current            |                                | Torque              |                                |                                | Moment of inertia J=1/4GD <sup>2</sup> kgm <sup>2</sup> | Weight kg |
|-----------------------|--------------|-------------|----------------|--------------|--------------|--------------------|--------------------|--------------------------------|---------------------|--------------------------------|--------------------------------|---|-----------|
|                       |              |             | Full load 100% | 3/4 load 75% | 1/2 load 50% |                    | I <sub>n</sub> , A | I <sub>s</sub> /I <sub>n</sub> | T <sub>n</sub> , Nm | T <sub>l</sub> /T <sub>n</sub> | T <sub>b</sub> /T <sub>n</sub> |   |           |
| 3000 r/min 415V, 50Hz |              |             |                |              |              |                    |                    |                                |                     |                                |                                |   |           |
| 0.37                  | E2BA71A2     | 2660        | 72.2           | 72.2         | 72           | 0.80               | 0.92               | 3.9                            | 1.3                 | 2.2                            | 2.3                            | 0.00039   | 11        |
| 0.55                  | E2BA71B2     | 2680        | 74.8           | 74.8         | 74           | 0.85               | 1.2                | 4.3                            | 2                   | 2.4                            | 2.5                            | 0.00051   | 11        |
| 0.75                  | E2BA80B2     | 2895        | 77.4           | 77.4         | 73           | 0.74               | 1.8                | 6.5                            | 2.5                 | 2.4                            | 4.2                            | 0.001   | 16        |
| 1.1                   | E2BA80C2     | 2870        | 79.6           | 79.6         | 78           | 0.80               | 2.4                | 6.5                            | 3.7                 | 2.7                            | 3.5                            | 0.0012  | 18        |
| 1.5                   | E2BA90SLB2   | 2900        | 81.3           | 81.3         | 79.9         | 0.86               | 3                  | 6.5                            | 4.9                 | 2.5                            | 2.6                            | 0.00254   | 24        |
| 2.2                   | E2BA90SLC2   | 2885        | 83.2           | 83.2         | 82.2         | 0.87               | 4.2                | 7.0                            | 7.3                 | 1.9                            | 2.5                            | 0.0028  | 25        |
| 3.7                   | E2BA100LC2   | 2905        | 85.5           | 85.5         | 85           | 0.86               | 7                  | 7.0                            | 12.2                | 2.9                            | 3.2                            | 0.00575   | 37        |
| 5.5                   | E2BA132SMB2  | 2865        | 87             | 87           | 85.8         | 0.86               | 10.2               | 7.0                            | 18.3                | 2                              | 2.7                            | 0.01275   | 68        |
| 7.5                   | E2BA132SMC2  | 2890        | 88.1           | 88.1         | 86.3         | 0.84               | 14.1               | 7.0                            | 24.80               | 2                              | 3.6                            | 0.01359   | 70        |
| 11                    | M2BAX160MLA2 | 2925        | 89.4           | 89.7         | 88.2         | 0.88               | 19.6               | 7.0                            | 36                  | 2.4                            | 3.0                            | 0.0415  | 105       |
| 15                    | M2BAX160MLB2 | 2930        | 90.3           | 90.7         | 90.0         | 0.90               | 25.9               | 7.0                            | 49                  | 2.4                            | 3.0                            | 0.0544  | 120       |
| 18.5                  | M2BAX160MLC2 | 2934        | 90.9           | 91.2         | 90.4         | 0.90               | 31.7               | 7.0                            | 60                  | 2.6                            | 3.1                            | 0.0581  | 131       |
| 22                    | M2BAX180MLA2 | 2936        | 91.3           | 91.7         | 91.0         | 0.91               | 37.3               | 7.0                            | 72                  | 3.0                            | 3.5                            | 0.0679  | 152       |
| 30                    | M2BAX200MLA2 | 2940        | 92.0           | 92.4         | 91.5         | 0.90               | 50.7               | 7.0                            | 97                  | 2.5                            | 3.2                            | 0.1077  | 198       |
| 37                    | M2BAX200MLB2 | 2950        | 92.5           | 92.8         | 91.7         | 0.89               | 62.9               | 7.0                            | 120                 | 3.0                            | 3.8                            | 0.1332  | 232       |
| 45                    | M2BAX225SMA2 | 2956        | 92.9           | 92.6         | 92.0         | 0.90               | 75.7               | 7.0                            | 145                 | 2.4                            | 3.2                            | 0.2443  | 295       |
| 55                    | M2BAX250SMA2 | 2960        | 93.2           | 93.8         | 92.8         | 0.90               | 91.7               | 7.0                            | 177                 | 2.6                            | 3.0                            | 0.3160  | 344       |
| 75                    | E2HX280SMB2  | 2970        | 93.8           | 93.8         | 92.8         | 0.92               | 121                | 7.0                            | 241                 | 2.3                            | 2.7                            | 1.025   | 690       |
| 90                    | E2HX280SMC2  | 2970        | 94.1           | 94.1         | 93.1         | 0.92               | 145                | 7.0                            | 289                 | 2.3                            | 2.5                            | 1.2   | 685       |
| 110                   | E2BA315SMA2  | 2980        | 94.3           | 94.3         | 93.3         | 0.90               | 180                | 7.0                            | 353                 | 2.4                            | 2.7                            | 1.41  | 935       |
| 125                   | E2BA315SMB2k | 2980        | 94.5           | 94.5         | 93.5         | 0.90               | 204                | 7.0                            | 401                 | 2.4                            | 2.7                            | 1.61  | 975       |
| 132                   | E2BA315SMB2  | 2980        | 94.6           | 94.6         | 93.6         | 0.90               | 216                | 7.0                            | 423                 | 2.4                            | 2.7                            | 1.610   | 975       |
| 160                   | E2BA315MLA2  | 2980        | 94.8           | 94.8         | 93.8         | 0.90               | 261                | 7.0                            | 513                 | 2.3                            | 3.0                            | 1.950   | 1150      |
| 200                   | E2BA315MLC2  | 2980        | 95.0           | 95.0         | 94.0         | 0.90               | 325                | 7.0                            | 641                 | 2.6                            | 3.0                            | 2.55  | 1275      |
| 250                   | E2BA355SMA2  | 2980        | 95.0           | 95.0         | 94.0         | 0.90               | 407                | 7.0                            | 801                 | 1.6                            | 3.0                            | 4.250   | 1645      |
| 315                   | E2BA355MLA2  | 2980        | 95.0           | 95.0         | 94.0         | 0.91               | 507                | 7.0                            | 1009                | 1.7                            | 3.0                            | 5.75  | 1895      |
| 355                   | E2BA355MLC2  | 2982        | 95.0           | 95.0         | 94.0         | 0.90               | 578                | 7.0                            | 1137                | 1.7                            | 3.2                            | 6.525   | 2000      |

Efficiency values are given according to IEC 60034-2-1; 2007.  
Please note that the values are not comparable without knowing the testing method.  
ABB has calculated the efficiency values according to indirect method, stray load losses (additional losses) determined from measuring.

I<sub>s</sub> / I<sub>n</sub> = Starting current  
T<sub>l</sub> / T<sub>n</sub> = Locked rotor torque  
T<sub>b</sub> / T<sub>n</sub> = Breakdown torque

IE-class concerns motors from 0.37 kW to 355 kW

# General performance cast iron motors

## Technical data for totally enclosed squirrel cage three phase motors

IE2

IP 55 - IC 411 - Insulation class F, temperature rise class B  
IE2 efficiency class according to IEC 60034-30; 2008

| Output kW             | Frame Size   | Speed r/min | Efficiency     |              |              | Power factor cos φ | Current            |                                | Torque              |                                |                                | Moment of inertia J=1/4GD <sup>2</sup> kgm <sup>2</sup> | Weight kg |
|-----------------------|--------------|-------------|----------------|--------------|--------------|--------------------|--------------------|--------------------------------|---------------------|--------------------------------|--------------------------------|---|-----------|
|                       |              |             | Full load 100% | 3/4 load 75% | 1/2 load 50% |                    | I <sub>n</sub> , A | I <sub>s</sub> /I <sub>n</sub> | T <sub>n</sub> , Nm | T <sub>i</sub> /T <sub>n</sub> | T <sub>b</sub> /T <sub>n</sub> |   |           |
| 1500 r/min 415V, 50Hz |              |             |                |              |              |                    |                    |                                |                     |                                |                                |   |           |
| 0.37                  | E2BA71B4     | 1380        | 70.1           | 70.1         | 68.7         | 0.83               | 0.9                | 4                              | 2.6                 | 1.6                            | 2.1                            | 0.00088   | 11        |
| 0.55                  | E2BA80A4     | 1415        | 75.1           | 75.1         | 71.4         | 0.73               | 1.4                | 5                              | 3.7                 | 2                              | 2.8                            | 0.00144   | 15        |
| 0.75                  | E2BA80D4     | 1430        | 79.6           | 79.6         | 76.2         | 0.73               | 1.8                | 6                              | 5                   | 2.7                            | 3.2                            | 0.00205   | 17        |
| 1.1                   | E2BA90SLC4   | 1435        | 81.4           | 81.4         | 80.9         | 0.80               | 2.4                | 6                              | 7.3                 | 2.7                            | 3.4                            | 0.0044  | 25        |
| 1.5                   | E2BA90SLD4   | 1430        | 82.8           | 82.8         | 81           | 0.83               | 3                  | 6                              | 10                  | 2.5                            | 3                              | 0.00538   | 27        |
| 2.2                   | E2BA100LC4   | 1450        | 84.3           | 84.3         | 82.6         | 0.78               | 4.7                | 7.0                            | 14.5                | 2.9                            | 3.6                            | 0.00948   | 36        |
| 3.7                   | E2BA112MB4   | 1440        | 86.3           | 86.3         | 85.9         | 0.81               | 7.4                | 7.0                            | 24.5                | 2.5                            | 2.9                            | 0.0125  | 44        |
| 5.5                   | E2BA132SMB4  | 1460        | 87.7           | 87.7         | 86.8         | 0.80               | 10.9               | 7.0                            | 36                  | 1.8                            | 2.4                            | 0.03282   | 70        |
| 7.5                   | E2BA132SMC4  | 1450        | 88.7           | 88.7         | 86           | 0.81               | 14.5               | 7.0                            | 49.4                | 1.6                            | 2.4                            | 0.03659   | 73        |
| 9.3                   | M2BAX160MLJ4 | 1460        | 89.3           | 89.8         | 88.0         | 0.84               | 17.4               | 7.0                            | 61                  | 2.3                            | 2.9                            | 0.0738  | 107       |
| 11                    | M2BAX160MLA4 | 1463        | 89.8           | 90.4         | 89.4         | 0.85               | 20.2               | 7.0                            | 72                  | 2.3                            | 2.9                            | 0.0840  | 115       |
| 15                    | M2BAX160MLB4 | 1463        | 90.6           | 91.2         | 90.2         | 0.84               | 27.6               | 7.0                            | 98                  | 2.5                            | 3.1                            | 0.1025  | 134       |
| 18.5                  | M2BAX180MLA4 | 1464        | 91.2           | 91.8         | 90.9         | 0.84               | 33.8               | 7.0                            | 121                 | 2.9                            | 3.5                            | 0.1217  | 155       |
| 22                    | M2BAX180MLB4 | 1465        | 91.6           | 92.1         | 91.2         | 0.83               | 40.5               | 7.0                            | 143                 | 2.5                            | 3.2                            | 0.1396  | 171       |
| 30                    | M2BAX200MLA4 | 1474        | 92.3           | 92.5         | 91.8         | 0.84               | 54.1               | 7.0                            | 194                 | 2.7                            | 3.5                            | 0.2572  | 229       |
| 37                    | M2BAX225SMA4 | 1478        | 92.7           | 93.1         | 92.2         | 0.85               | 65.7               | 6.5                            | 239                 | 2.3                            | 2.7                            | 0.3605  | 267       |
| 45                    | M2BAX225SMB4 | 1478        | 93.1           | 93.5         | 92.6         | 0.84               | 80.5               | 7.0                            | 291                 | 2.4                            | 2.9                            | 0.4314  | 304       |
| 55                    | M2BAX250SMA4 | 1478        | 93.5           | 93.7         | 92.9         | 0.85               | 96.8               | 7.0                            | 355                 | 2.7                            | 3.0                            | 0.5331  | 342       |
| 75                    | E2HX280SMB4  | 1478        | 94.0           | 94.0         | 93.0         | 0.87               | 128                | 7.0                            | 485                 | 2.4                            | 2.7                            | 1.11  | 670       |
| 90                    | E2HX280SMC4  | 1479        | 94.2           | 94.2         | 93.2         | 0.85               | 156                | 7.0                            | 581                 | 2.6                            | 2.8                            | 1.425   | 730       |
| 110                   | E2BA315SMA4  | 1486        | 94.5           | 94.5         | 93.5         | 0.88               | 184                | 7.0                            | 707                 | 2.3                            | 2.8                            | 2.387   | 930       |
| 125                   | E2BA315SMB4k | 1486        | 94.6           | 94.6         | 93.6         | 0.86               | 214                | 7.0                            | 803                 | 2.0                            | 2.7                            | 2.65  | 960       |
| 132                   | E2BA315SMB4  | 1486        | 94.7           | 94.7         | 93.7         | 0.86               | 225                | 7.0                            | 848                 | 2.3                            | 2.7                            | 2.65  | 960       |
| 160                   | E2BA315MLA4  | 1485        | 94.9           | 94.9         | 93.9         | 0.87               | 270                | 7.0                            | 1029                | 2.3                            | 2.6                            | 3.375   | 1110      |
| 200                   | E2BA315MLC4  | 1485        | 95.1           | 95.1         | 94.1         | 0.88               | 332                | 7.0                            | 1286                | 2.4                            | 2.8                            | 4.25  | 1260      |
| 250                   | E2BA355SMA4  | 1486        | 95.1           | 95.1         | 94.1         | 0.87               | 420                | 7.0                            | 1607                | 2.0                            | 2.5                            | 6.625   | 1620      |
| 315                   | E2BA355MLA4  | 1486        | 95.1           | 95.1         | 94.1         | 0.87               | 530                | 7.0                            | 2024                | 2.5                            | 3.0                            | 8.25  | 1870      |
| 355                   | E2BA355MLB4  | 1486        | 95.1           | 95.1         | 94.1         | 0.87               | 597                | 7.0                            | 2281                | 2.2                            | 3.0                            | 10  | 2110      |

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I<sub>s</sub> / I<sub>n</sub> = Starting current  
T<sub>i</sub> / T<sub>n</sub> = Locked rotor torque  
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IE-class concerns motors from 0.37 kW to 355 kW

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# General performance cast iron motors

## Technical data for totally enclosed squirrel cage three phase motors

IE2

IP 55 - IC 411 - Insulation class F, temperature rise class B  
IE2 efficiency class according to IEC 60034-30; 2008

| Output kW             | Frame Size   | Speed r/min | Efficiency     |              |              | Power factor cos φ | Current            |                                | Torque              |                                |                                | Moment of inertia J=1/4GD <sup>2</sup> kgm <sup>2</sup> | Weight kg |
|-----------------------|--------------|-------------|----------------|--------------|--------------|--------------------|--------------------|--------------------------------|---------------------|--------------------------------|--------------------------------|---|-----------|
|                       |              |             | Full load 100% | 3/4 load 75% | 1/2 load 50% |                    | I <sub>n</sub> , A | I <sub>s</sub> /I <sub>n</sub> | T <sub>n</sub> , Nm | T <sub>i</sub> /T <sub>n</sub> | T <sub>b</sub> /T <sub>n</sub> |   |           |
| 1000 r/min 415V, 50Hz |              |             |                |              |              |                    |                    |                                |                     |                                |                                |   |           |
| 0.37                  | E2BA80A6     | 915         | 69             | 69           | 64.4         | 0.69               | 1.1                | 6                              | 3.9                 | 1.8                            | 2.2                            | 0.00187   | 15        |
| 0.55                  | E2BA80B6     | 920         | 72.9           | 72.9         | 70.6         | 0.71               | 1.5                | 6                              | 5.7                 | 1.8                            | 2.2                            | 0.00239   | 17        |
| 0.75                  | E2BA90SLC6   | 960         | 75.9           | 75.9         | 69.7         | 0.60               | 2.3                | 6                              | 7.5                 | 2.3                            | 3.1                            | 0.00444   | 25        |
| 1.1                   | E2BA90SLE6   | 930         | 78.1           | 78.1         | 75.4         | 0.66               | 3                  | 6                              | 11.3                | 1.9                            | 2.3                            | 0.0054  | 28        |
| 1.5                   | E2BA100L6    | 950         | 79.8           | 79.8         | 76.8         | 0.69               | 3.8                | 6                              | 15                  | 2.2                            | 2.7                            | 0.00873   | 37        |
| 2.2                   | E2BA112MB6   | 950         | 81.8           | 81.8         | 79.3         | 0.69               | 5.4                | 7                              | 22.1                | 1.7                            | 2.3                            | 0.0125  | 44        |
| 3.7                   | E2BA132SMB6  | 970         | 84.3           | 84.3         | 82.4         | 0.70               | 8.8                | 7                              | 36.4                | 1.5                            | 2.2                            | 0.03336   | 69        |
| 5.5                   | E2BA132SMF6  | 965         | 86             | 86           | 85           | 0.71               | 12.5               | 7                              | 54.4                | 2.5                            | 2.8                            | 0.0487  | 86        |
| 7.5                   | M2BAX160MLA6 | 967         | 87.2           | 88.0         | 86.8         | 0.79               | 15.3               | 6.5                            | 74                  | 1.9                            | 2.6                            | 0.0890  | 122       |
| 9.3                   | M2BAX160MLJ6 | 968         | 88.0           | 88.6         | 87.8         | 0.79               | 18.9               | 6.5                            | 92                  | 2.1                            | 2.8                            | 0.1190  | 141       |
| 11                    | M2BAX160MLB6 | 970         | 88.7           | 89.2         | 88.5         | 0.78               | 22.3               | 7.0                            | 108                 | 2.3                            | 3.0                            | 0.1293  | 147       |
| 15                    | M2BAX180MLA6 | 972         | 89.7           | 90.1         | 89.4         | 0.76               | 30.9               | 7.0                            | 147                 | 2.3                            | 3.2                            | 0.1522  | 173       |
| 18.5                  | M2BAX200MLA6 | 972         | 90.4           | 90.8         | 90.0         | 0.79               | 36.5               | 6.0                            | 182                 | 1.7                            | 2.5                            | 0.1980  | 190       |
| 22                    | M2BAX200MLB6 | 973         | 90.9           | 91.2         | 90.6         | 0.79               | 43.1               | 6.0                            | 216                 | 1.7                            | 2.5                            | 0.2384  | 212       |
| 30                    | M2BAX225SMA6 | 985         | 91.7           | 92.0         | 91.2         | 0.83               | 55.2               | 6.5                            | 291                 | 2.3                            | 2.8                            | 0.5687  | 284       |
| 37                    | M2BAX250SMA6 | 985         | 92.2           | 92.4         | 91.9         | 0.82               | 68.5               | 6.0                            | 359                 | 2.0                            | 2.6                            | 0.8042  | 337       |
| 45                    | E2HX280SMA6  | 988         | 92.7           | 92.7         | 90.7         | 0.84               | 80                 | 7.0                            | 435                 | 2.2                            | 2.4                            | 1.8   | 590       |
| 55                    | E2HX280SMB6  | 988         | 93.1           | 93.1         | 91.1         | 0.84               | 98                 | 7.0                            | 532                 | 2.2                            | 2.4                            | 2.025   | 600       |
| 75                    | E2BA315SMA6  | 989         | 93.7           | 93.7         | 91.7         | 0.85               | 131                | 7.0                            | 724                 | 2.4                            | 2.7                            | 3.887   | 932       |
| 90                    | E2BA315SMB6  | 990         | 94.0           | 94           | 92.0         | 0.85               | 157                | 7.0                            | 868                 | 2.4                            | 2.8                            | 4.8   | 1005      |
| 110                   | E2BA315SMC6  | 990         | 94.3           | 94.3         | 92.3         | 0.85               | 191                | 7.0                            | 1061                | 2.5                            | 3.0                            | 5.45  | 1072      |
| 125                   | E2BA315MLC6k | 990         | 94.4           | 94.4         | 92.4         | 0.86               | 214                | 7.0                            | 1206                | 2.5                            | 3.0                            | 7.05  | 1305      |
| 132                   | E2BA315MLC6  | 988         | 94.6           | 94.6         | 92.6         | 0.86               | 226                | 7.0                            | 1276                | 2.3                            | 2.6                            | 7.05  | 1305      |
| 160                   | E2BA355SMA6  | 989         | 94.8           | 94.8         | 92.8         | 0.85               | 276                | 7.0                            | 1545                | 2.0                            | 2.7                            | 9.80  | 1675      |
| 200                   | E2BA355SMB6  | 990         | 95.0           | 95.0         | 93.0         | 0.84               | 349                | 7.0                            | 1929                | 2.5                            | 2.8                            | 12.625  | 1800      |
| 250                   | E2BA355MLA6  | 988         | 95.0           | 95.0         | 93.0         | 0.85               | 431                | 7.0                            | 2416                | 2.3                            | 2.7                            | 13.75   | 1940      |
| 315                   | E2BA355MLB6  | 990         | 95.0           | 95.0         | 93.0         | 0.84               | 549                | 7.0                            | 3039                | 2.5                            | 2.8                            | 15.06   | 2040      |

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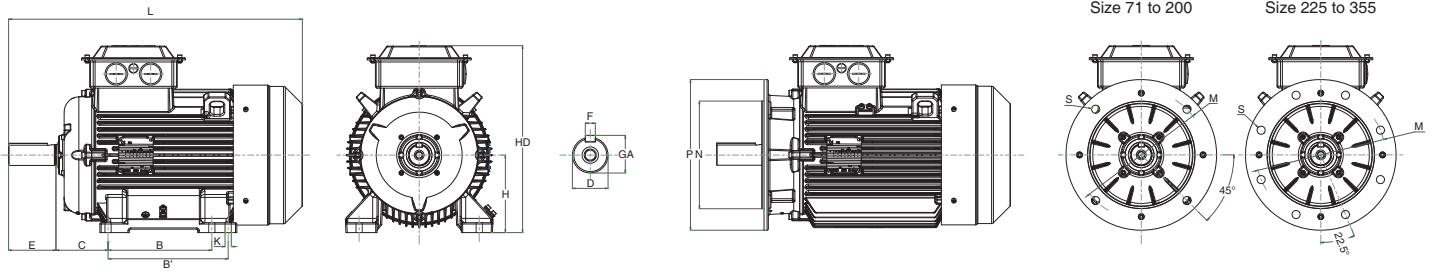
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## Dimension drawings

Foot-mounted motor IM1001, B3

Flange-mounted motor IM3001, B5



IM 1001. IM B3

IM 3001. IM B5

IM 1001. IM B3

IM 3001. IM B5

| Motor Size                           | D Poles |     | GA Poles |      | F Poles |     | E Poles |     | L max Poles |             | A   | B   | B'  | C   | HD  | K    | H   | M   | N   | P   | S  |
|--------------------------------------|---------|-----|----------|------|---------|-----|---------|-----|-------------|-------------|-----|-----|-----|-----|-----|------|-----|-----|-----|-----|----|
|                                      | 2       | 4-6 | 2        | 4-6  | 2       | 4-6 | 2       | 4-6 | 2           | 4-6         |     |     |     |     |     |      |     |     |     |     |    |
| General performance cast iron motors |         |     |          |      |         |     |         |     |             |             |     |     |     |     |     |      |     |     |     |     |    |
| 71                                   | 14      | 14  | 16       | 16   | 5       | 5   | 30      | 30  | 264         | 264         | 112 | 90  | -   | 45  | 178 | 7    | 71  | 130 | 110 | 160 | 10 |
| 80                                   | 19      | 19  | 21.5     | 21.5 | 6       | 6   | 40      | 40  | 321         | 321         | 125 | 100 | -   | 50  | 195 | 10   | 80  | 165 | 130 | 200 | 12 |
| 90                                   | 24      | 24  | 27       | 27   | 8       | 8   | 50      | 50  | 357         | 357         | 140 | 100 | 125 | 56  | 219 | 10   | 90  | 165 | 130 | 200 | 12 |
| 100                                  | 28      | 28  | 31       | 31   | 8       | 8   | 60      | 60  | 381         | 381         | 160 | 140 | -   | 63  | 247 | 12   | 100 | 215 | 180 | 250 | 15 |
| 112                                  | 28      | 28  | 31       | 31   | 8       | 8   | 60      | 60  | 403         | 403         | 190 | 140 | -   | 70  | 259 | 12   | 112 | 215 | 180 | 250 | 15 |
| 132                                  | 38      | 38  | 41       | 41   | 10      | 10  | 80      | 80  | 533         | 533         | 216 | 140 | 178 | 89  | 300 | 12   | 132 | 265 | 230 | 300 | 15 |
| 160                                  | 42      | 42  | 45       | 45   | 12      | 12  | 110     | 110 | 586         | 586 1), 1') | 254 | 210 | 254 | 108 | 414 | 14.5 | 160 | 300 | 250 | 350 | 19 |
| 180                                  | 48      | 48  | 51.5     | 51.5 | 14      | 14  | 110     | 110 | 683         | 683 2)      | 279 | 241 | 279 | 121 | 434 | 14.5 | 180 | 300 | 250 | 350 | 19 |
| 200                                  | 55      | 55  | 59       | 59   | 16      | 16  | 110     | 110 | 728         | 728 3)      | 318 | 267 | 305 | 133 | 474 | 18.5 | 200 | 350 | 300 | 400 | 19 |
| 225                                  | 55      | 60  | 59       | 64   | 16      | 18  | 110     | 140 | 854         | 854 4)      | 356 | 286 | 311 | 149 | 540 | 18.5 | 225 | 400 | 350 | 450 | 19 |
| 250                                  | 60      | 65  | 64       | 69   | 18      | 18  | 140     | 140 | 882         | 882         | 406 | 311 | 349 | 168 | 585 | 24   | 250 | 500 | 450 | 550 | 19 |
| 280                                  | 65      | 75  | 69       | 79.5 | 18      | 20  | 140     | 140 | 1040        | 1040        | 457 | 368 | 419 | 190 | 728 | 24   | 280 | 500 | 450 | 550 | 19 |
| 315SM                                | 65      | 80  | 69       | 85   | 18      | 22  | 140     | 170 | 1169        | 1199        | 508 | 406 | 457 | 216 | 872 | 28   | 315 | 600 | 550 | 660 | 24 |
| 315ML                                | 65      | 90  | 69       | 95   | 18      | 25  | 140     | 170 | 1215        | 1245        | 508 | 457 | 508 | 216 | 872 | 28   | 315 | 600 | 550 | 660 | 24 |
| 355SM                                | 75      | 100 | 79.5     | 106  | 20      | 28  | 140     | 210 | 1399        | 1469        | 610 | 500 | 560 | 254 | 965 | 28   | 355 | 740 | 680 | 800 | 24 |
| 355ML                                | 75      | 100 | 79.5     | 106  | 20      | 28  | 140     | 210 | 1504        | 1574        | 610 | 560 | 630 | 254 | 965 | 28   | 355 | 740 | 680 | 800 | 24 |

| Motor   | D   | GA   | F  | E   | L Max | A   | B   | B'  | C   | HD  | K  | H   | M   | N   | P   | S  |
|---------|-----|------|----|-----|-------|-----|-----|-----|-----|-----|----|-----|-----|-----|-----|----|
| 355MLB4 | 100 | 106  | 28 | 210 | 1680  | 610 | 560 | 630 | 254 | 965 | 28 | 355 | 740 | 680 | 800 | 24 |
| 355MLC2 | 75  | 79.5 | 20 | 140 | 1610  | 610 | 560 | 630 | 254 | 965 | 28 | 355 | 740 | 680 | 800 | 24 |

Above table gives the main dimensions in mm.

- 1) M2BAX160MLC2, B4, J6 L = 626
- 1') M2BAX160MLB6 L = 646
- 2) M2BAX180MLB4, A6 L = 703
- 3) M2BAX200MLB2, A4, B6 L = 768
- 4) M2BAX225SMB4, A6 L = 884

# General performance IE2 cast iron motors in brief

| Size                |                             | 71   | 80         | 90         | 100        | 112        | 132        |
|---------------------|-----------------------------|--|------------|------------|------------|------------|------------|
| Stator              | Material                    | Cast Iron Grade 150:ISO 185  |            |            |            |            |            |
|                     | Paint colour shade          | Munsell blue 8B 4.5/3.25 / NCS 4822 B05G                                   |            |            |            |            |            |
|                     | Surface Treatment           | Aliphatic polyurethane enamel paint $\geq 70\mu\text{m}$                   |            |            |            |            |            |
| Feet                |                             | Fixed feet   |            |            |            |            |            |
|                     | Material                    | Cast Iron Grade 150:ISO 185  |            |            |            |            |            |
| Bearing end shields | Material                    | Cast Iron Grade 150:ISO 185  |            |            |            |            |            |
|                     | Paint colour shade          | Munsell blue 8B 4.5/3.25 / NCS 4822 B05G                                   |            |            |            |            |            |
|                     | Surface Treatment           | Aliphatic polyurethane enamel paint $\geq 70\mu\text{m}$                   |            |            |            |            |            |
| Bearings            | D-end                       | 6203-2Z/C3   | 6204-2Z/C3 | 6205-2Z/C3 | 6206-2Z/C3 | 6206-2Z/C3 | 6208-2Z/C3 |
|                     | N-end                       | 6202-2Z/C3   | 6203-2Z/C3 | 6204-2Z/C3 | 6205-2Z/C3 | 6205-2Z/C3 | 6208-2Z/C3 |
| Axially-locked      | Inner Bearing Cover         | As stranded, locked at D-end   |            |            |            |            |            |
| Bearing seals       | D-end                       | V-ring   |            |            |            |            |            |
|                     | N-end                       | Labyrinth seal   |            |            |            |            |            |
| Lubrication         |                             | Permanently lubricated shielded bearings. Grease temp. range -40 to +160°C |            |            |            |            |            |
| Terminal Box Cover  | Material                    | Sheet of steel, Cold rolled  |            |            |            |            |            |
|                     | Surface Treatment           | Similar to stator  |            |            |            |            |            |
|                     | Screws                      | Steel  |            |            |            |            |            |
| Connections         | Threaded opening            | 2 x M16  | 2 x M25    |            | 2 x M32    |            |            |
|                     | Max Cu area mm <sup>2</sup> | 4  | 6          |            | 10         |            |            |
|                     | Terminal Box                | Cable lugs, 6 terminals  |            |            |            |            |            |
|                     | Screws                      | M4   |            |            | M5         |            |            |
| Fan                 | Material                    | Polypropylene, Reinforced with 20% glass fibre                             |            |            |            |            |            |
| Fan Cover           | Material                    | Steel  |            |            |            |            |            |
|                     | Paint colour shade          | Black RAL 9011   |            |            |            |            |            |
|                     | Surface Treatment           | Polyster Powder coated $\geq 50\mu\text{m}$                                |            |            |            |            |            |
| Stator winding      | Material                    | Copper   |            |            |            |            |            |
|                     | Insulation class            | Insulation class F, Temperature rise class B, unless otherwise stated      |            |            |            |            |            |
|                     | Winding protection          | Optional   |            |            |            |            |            |
| Rotor winding       | Material                    | Pressure die cast aluminum   |            |            |            |            |            |
| Balancing method    |                             | Half Key balancing as standard   |            |            |            |            |            |
| Key ways            |                             | Closed Key Way   |            |            |            |            |            |
| Enclosure           |                             | IP 55  |            |            |            |            |            |
| Cooling method      |                             | IC 411   |            |            |            |            |            |
| Drain holes         |                             | Drain holes with closable plastic plugs, open on delivery                  |            |            |            |            |            |
| Lifting lugs        |                             | Bolted to the Stator   |            |            |            |            |            |



# General performance IE2 cast iron motors in brief

| Size                | M2BA                        | 160   | 180        | 200             | 225        | 250        |
|---------------------|-----------------------------|---|------------|-----------------|------------|------------|
| Stator              | Material                    | Cast iron grade 200 : ISO 185                             |            |                 |            |            |
|                     | Paint colour shade          | Munsell blue 8B 4.5/3.25 / NCS 4822 B05G                  |            |                 |            |            |
|                     | Surface Treatment           | Aliphatic polyurethane enamel paint $\geq 70\mu\text{m}$  |            |                 |            |            |
| Feet                |                             | Integrated with stator                                    |            |                 |            |            |
|                     | Material                    | Cast iron grade 200 : ISO 185                             |            |                 |            |            |
| Bearing end shields | Material                    | Cast iron grade 200 : ISO 185                             |            |                 |            |            |
|                     | Paint colour shade          | Munsell blue 8B 4.5/3.25 / NCS 4822 B05G                  |            |                 |            |            |
|                     | Surface Treatment           | Aliphatic polyurethane enamel paint $\geq 70\mu\text{m}$  |            |                 |            |            |
| Bearings            | D-end                       | 6209-2Z/C3  | 6210-2Z/C3 | 6212-2Z/C3      | 6213-2Z/C3 | 6215-2Z/C3 |
|                     | N-end                       | 6209-2Z/C3  | 6209-2Z/C3 | 6209-2Z/C3      | 6210-2Z/C3 | 6212-2Z/C3 |
| Axially-locked      | Inner Bearing Cover         | As standard, locked at D-end                              |            |                 |            |            |
| Bearing seals       | D-end                       | V-ring  |            |                 |            |            |
|                     | N-end                       | V-ring  |            |                 |            |            |
| Lubrication         |                             | Permanently lubricated shielded bearings                  |            |                 |            |            |
| Terminal Box        | Material                    | Sheet of Steel, Cold Rolled                               |            |                 |            |            |
|                     | Surface Treatment           | Similar to stator   |            |                 |            |            |
|                     | Screws                      | Steel 8.8   |            |                 |            |            |
| Connections         | Threaded opening            | (2 x M40 + M16)*  |            | (2 x M50 + M16) |            |            |
|                     | Max Al-area mm <sup>2</sup> | 70  |            | 120             |            |            |
|                     | Terminal Box                | 6 terminals for connection with cable lugs (not included) |            |                 |            |            |
|                     | Screws                      | M6  |            | M10             |            |            |
| Fan                 | Material                    | Polypropylene, Reinforced with 20% glass fibre            |            |                 |            |            |
| Fan Cover           | Material                    | Sheet of Steel, Cold Rolled                               |            |                 |            |            |
|                     | Paint colour shade          | Munsell blue 8B 4.5/3.25 / NCS 4822 B05G                  |            |                 |            |            |
|                     | Surface Treatment           | Similar to stator   |            |                 |            |            |
| Stator winding      | Material                    | Copper  |            |                 |            |            |
|                     | Insulation                  | Insulation class F  |            |                 |            |            |
| Rotor winding       | Material                    | Diecast aluminum  |            |                 |            |            |
| Balancing method    |                             | Half Key Balancing  |            |                 |            |            |
| Key ways            |                             | Open Key Way  |            |                 |            |            |
| Enclosure           |                             | IP 55   |            |                 |            |            |
| Cooling method      |                             | IC 411  |            |                 |            |            |
| Drain holes         |                             | Drain holes with closable plastic plugs, open on delivery |            |                 |            |            |
| Lifting lugs        |                             | Integrated with the stator                                |            |                 |            |            |

# General performance IE2 cast iron motors in brief

| Size                |                             | 280 2-6 Pole  | 315 2 Pole     | 315 4-6 Pole | 355 2 Pole | 355 4-6 Pole |
|---------------------|-----------------------------|---|----------------|--------------|------------|--------------|
| Stator              | Material                    | Cast iron grade 150, IS:210                               |                |              |            |              |
|                     | Paint colour shade          | Munsell blue 8B 4.5/3.25 / NCS 4822 B05G                  |                |              |            |              |
|                     | Surface Treatment           | Aliphatic polyurethane paint $\geq 80\mu\text{m}$         |                |              |            |              |
| Feet                |                             | Integrated with stator                                    |                |              |            |              |
|                     | Material                    | Cast iron grade 150, IS:210                               |                |              |            |              |
| Bearing end shields | Material                    | Cast iron grade 150, IS:210                               |                |              |            |              |
|                     | Paint colour shade          | Munsell blue 8B 4.5/3.25 / NCS 4822 B05G                  |                |              |            |              |
|                     | Surface Treatment           | Aliphatic polyurethane paint $\geq 80\mu\text{m}$         |                |              |            |              |
| Bearings            | D-end                       | 6316/C3   | 6316/C3        | 6319/C3      | 6319/C3    | 6322/C3      |
|                     | N-end                       | 6315/C3   | 6316/C3        | 6316/C3      | 6319/C3    | 6319/C3      |
| Axially-locked      | Inner Bearing Cover         | As stranded, locked at D-end                              |                |              |            |              |
| Bearing seals       | D-end                       | Oil Seal  |                |              |            |              |
|                     | N-end                       |   |                |              |            |              |
| Lubrication         |                             | Regreasable Bearings, Regreasing nipple M10X1             |                |              |            |              |
| Terminal Box        | Material                    | Cast iron grade 150, IS:210                               |                |              |            |              |
|                     | Surface Treatment           | Similar to stator   |                |              |            |              |
|                     | Screws                      | Steel   |                |              |            |              |
| Connections         | Threaded opening            | 2 x 2" BSC  | 2 x 2-1/2" BSC |              |            |              |
|                     | Max Al-area mm <sup>2</sup> | 185   | 240            |              |            |              |
|                     | Terminal Box                | 6 terminals for connection with cable lugs (not included) |                |              |            |              |
|                     | Screws                      | M12   | M16            |              |            |              |
| Fan                 | Material                    | Polypropylene, Reinforced with 20% glass fibre            |                |              | Aluminium  |              |
| Fan Cover           | Material                    | Sheet of steel, Cold Rolled                               |                |              |            |              |
|                     | Paint colour shade          | Munsell blue 8B 4.5/3.25 / NCS 4822 B05G                  |                |              |            |              |
|                     | Surface Treatment           | Similar to stator   |                |              |            |              |
| Stator winding      | Material                    | Copper  |                |              |            |              |
|                     | Insulation                  | Insulation class F  |                |              |            |              |
| Rotor winding       | Material                    | Diecast aluminum  |                |              |            |              |
| Balancing method    |                             | Half Key Balancing  |                |              |            |              |
| Key ways            |                             | Open Key Way  |                |              |            |              |
| Enclosure           |                             | IP 55   |                |              |            |              |
| Cooling method      |                             | IC 411  |                |              |            |              |
| Drain holes         |                             | Drain holes with closable plastic plugs, open on delivery |                |              |            |              |
| Lifting lugs        |                             | Bolted to the Stator                                      |                |              |            |              |





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