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# AC-Motoren

Wir treiben Sie an!

## PRODUCT CATALOG

LOW-VOLTAGE MOTORS



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Abbreviations & acronyms

# TECHNICALLY ADEPT. PERSONALLY COMMITTED. DRIVEN BY YOUR CHALLENGES.

We have been trading in electric motors since 1998. In all these years, one thing never changed: The drive to offer our customers the optimum solution at the best price/performance ratio.

Our location in Eppertshausen near Frankfurt covers an area of over 16,000 sqm with approx. 30,000 pallet spaces. A well-organized logistics system helps us to even faster and more flexibly respond to the wishes of our customers.



Maximum availability



Certified partners



Certified acc. to ISO 9001



Shortest possible delivery times



Efficient logistics



UL approval

## Energy efficiency

The individual efficiency classes are specified according to the IEC 60034-30 standard and divided into four classes.

|     |                                |
|-----|--------------------------------|
| IE4 | Super Premium Efficiency (SPE) |
| IE3 | Premium Efficiency (PHE)       |
| IE2 | High Efficiency (HE)           |
| IE1 | Standard Efficiency            |

**The efficiency classification according to IEC 60034-30 covers low-voltage three-phase AC motors with the following characteristics:**

- Rated voltage: up to 1000 V
- Rated power: 0.75 - 375 kW
- Operating mode: S1 or S3, S6 >80%
- Mains-operated
- Ambient conditions according to IEC 60034-1

The following motors are excluded from this efficiency classification:

- Motors for short-time operation or intermittent operation with a duty cycle of <80%.
- Motors specially designed for frequency converter operation
- Motors with 8 or more poles
- Motors specially designed for integration into a certain application that cannot be assessed independently.

The determination of the efficiency classes is carried out according to the methods defined in the IEC 60034-2-1 standard.

The European Minimum Energy Performance Standard (EU MEPS) regulates the essential efficiency values for motors that must be achieved to use them on the European market.

**As of 1 January 2017 the following provision applies to motors from 0.75 to 375 kW:**

Mains-operated motors must comply with the requirements of efficiency class IE3.

Motors with efficiency class IE2 may only be operated in conjunction with a frequency converter.

**The following motors are excluded from the regulations of the EU MEPS:**

- Motors with explosion protection
- Motors with braking device
- Motors specially designed for frequency converter operation
- Double-speed motors
- Motors with 8 or more poles
- Motors specially designed for integration into a certain application that cannot be assessed independently.

## Explanation of the type code

| Mounting                               |            | Aluminum |     | Cast iron |   |   |
|----------------------------------------|------------|----------|-----|-----------|---|---|
| B3                                     |            | ACA      |     | ACM       |   |   |
| B5 / B14                               |            | FCA      |     | FCM       |   | ← |
| B35 / B34                              |            | FCPA     |     | FCMP      |   |   |
| Terminal box right                     |            |          |     |           |   | ← |
| B3                                     |            | ARA      |     | ACR       |   |   |
| B35 / B34                              |            | FRPA     |     | FCPR      |   |   |
| Terminal box left                      |            |          |     |           |   | ← |
| B3                                     |            | ALA      |     | ACL       |   |   |
| B35 / B34                              |            | FLPA     |     | FCPL      |   |   |
| Shaft height (foot to center of shaft) |            |          |     |           |   |   |
| 63                                     | 90         | 132      | 200 | 280       | ← |   |
| 71                                     | 100        | 160      | 225 | 315       |   |   |
| 80                                     | 112        | 180      | 250 | 355       |   |   |
| Frame type                             |            |          |     |           |   |   |
| S - short                              | M - medium | L - long |     | ←         |   |   |
| short                                  | medium     | long     |     |           |   |   |
| Number of poles / speed                |            |          |     |           |   |   |
| 2                                      | 3000 rpm   |          | ←   |           |   |   |
| 4                                      | 1500 rpm   |          |     |           |   |   |
| 6                                      | 1000 rpm   |          |     |           |   |   |
| 8                                      | 750 rpm    |          |     |           |   |   |
| Efficiency class                       |            |          |     |           |   |   |
| IE4                                    | SPE        |          | ←   |           |   |   |
| IE3                                    | PHE        |          |     |           |   |   |
| IE2                                    | HE         |          |     |           |   |   |
| IE1                                    | -          |          |     |           |   |   |

FCA

132

M

4

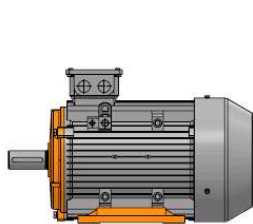
PHE



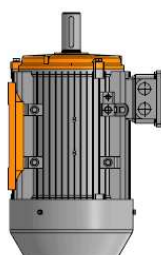
|    |                        |
|----|------------------------|
| 01 | Technical data         |
| 02 | Additional information |
| 03 | Insulation class       |
| 04 | Type code              |
| 05 | Protection class       |
| 06 | Serial number          |
| 07 | Efficiency class       |
| 08 | Operating mode         |

## Mounting types

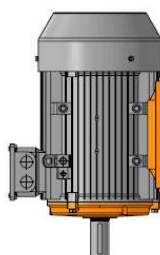
The following diagrams show the most common mounting types according to DIN EN 60034-7, Code I. The variable components of the different mounting types are shown in orange.



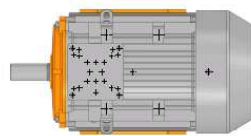
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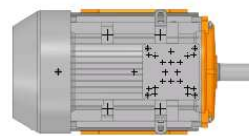
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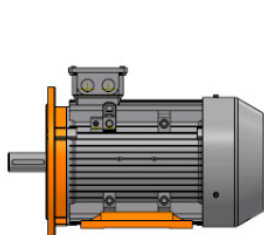
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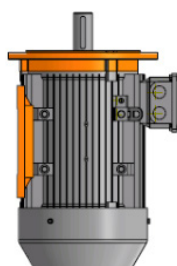
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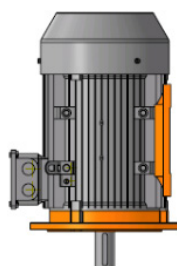
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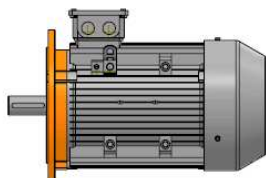
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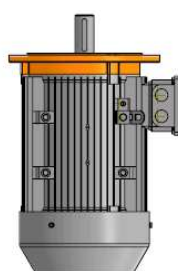
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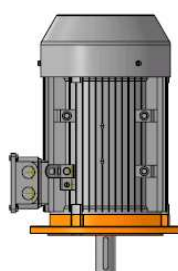
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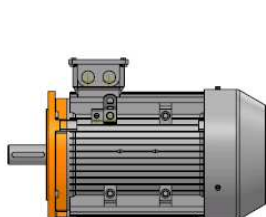
**IMB5**



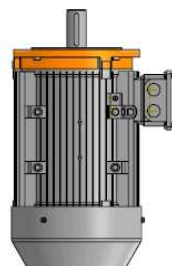
**IMV3**



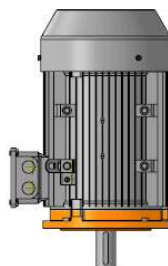
**IMV1**



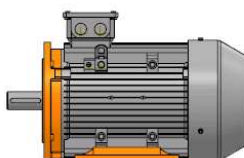
**IMB14**



**IMV19**



**IMV18**



**IMB34**

## Voltages and frequencies

The tolerances of the voltages and frequencies of the mains network are regulated by the EN 60034-1 standard. In range A, a combination of a voltage deviation of +/-5% and a frequency deviation of +/-2% is permissible. In the extended voltage range B, a combination of voltage deviation of +/-10% and a frequency deviation of +3% / -5% is permissible.

## Tolerances

|                                                   |                                                      |                                                                                                                                                                                                                   |
|---------------------------------------------------|------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Electrical tolerances according to DIN EN 60034-1 | Efficiency                                           | 0.15 (1- $\eta$ ) for PN $\leq$ 150 kW<br>-0.1 (1- $\eta$ ) for PN > 150 kW                                                                                                                                       |
|                                                   | Power factor $\frac{1 - \cos\phi}{6}$                | at least 0.02<br>not more than 0.07                                                                                                                                                                               |
|                                                   | Slip at rated load                                   | $\pm 20\%$                                                                                                                                                                                                        |
|                                                   | Starting current in starting circuit                 | +20% with no downward limit                                                                                                                                                                                       |
|                                                   | Starting torque                                      | -15 to +25%                                                                                                                                                                                                       |
|                                                   | Pull-up torque                                       | -15%                                                                                                                                                                                                              |
|                                                   | Breakdown torque                                     | -10% (minimum breakdown torque = factor 1.6)                                                                                                                                                                      |
|                                                   | Moment of inertia                                    | $\pm 10\%$                                                                                                                                                                                                        |
|                                                   | Noise level                                          | +3 dB (A)                                                                                                                                                                                                         |
| Mechanical tolerances                             | Distance of foot holes (axial and transverse)        | $\pm 1$ mm                                                                                                                                                                                                        |
|                                                   | Flange diameter                                      | -1 mm                                                                                                                                                                                                             |
|                                                   | Diameter of centering edge of the flange             | up to $\varnothing$ 230 mm corresponding to j6<br>from $\varnothing$ 250 mm corresponding to h6                                                                                                                   |
|                                                   | Shaft end diameter                                   | from $\varnothing$ 9 mm to $\varnothing$ 28 mm corresponding to j6<br>from $\varnothing$ 38 mm to $\varnothing$ 48 mm corresponding to k6<br>from $\varnothing$ 55 mm to $\varnothing$ 100 mm corresponding to m6 |
|                                                   | Feather key width                                    | h9                                                                                                                                                                                                                |
|                                                   | Total length and height of the motor                 | according to DIN ISO 2768-1 (roughly)                                                                                                                                                                             |
|                                                   | Lower edge of shaft end to upper edge of feather key | $\pm 0.2$ mm                                                                                                                                                                                                      |
|                                                   | Motor weight                                         | $\pm 5\%$                                                                                                                                                                                                         |

## Mechanical balancing

All rotors are dynamically balanced according to DIN EN 60034-14 with half feather key according to vibration severity level A (normal). In accordance with DIN ISO 8821, the balancing type "half-key balancing" is prescribed.

## Color and coating

The motors are painted in RAL 7030 as standard. The coating of the motors corresponds to C2 "medium" according to DIN EN ISO 12944. The coating and color can be adapted on request.

## Operating modes

The rated power is always stated for "S1, Continuous Duty" according to DIN EN 60034-1. If short-time duty (S2) or intermittent duty (S3, S6) is required, an increase in power is to be expected. In this context, it must be made sure that the relative breakdown torque results in a value of  $\geq 1.6$ .

$$\frac{M_K / M_N}{\text{Power factor } x} \leq 1.6$$

### Overview of the most common operating modes:

|    |                                                                                                                                                                                                                                                      |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| S1 | <b>Continuous duty</b> with constant load until thermal equilibrium is reached.                                                                                                                                                                      |
| S2 | <b>Short-time duty</b> with constant load for a time not sufficient to reach thermal equilibrium. Example: S2-10min, S2-30min, S2-60min, S2-90min                                                                                                    |
| S3 | <b>Intermittent periodic duty</b> composed of a sequence of identical load cycles and a standstill time. Example: S3-25%, S3-40%, S3-60%                                                                                                             |
| S6 | <b>Continuous-operation periodic duty</b> composed of a sequence of identical load cycles and an idle time. There is no standstill, so the motor does not have the possibility to cool down completely (as with S3). Example: S6-25%, S6-40%, S6-60% |

Necessary data for the calculation of power are the following:

- Relative duty cycle (this is specified in minutes ("min") for S2 and in percent ("%") for S3, S6 – see above)
- Switching frequency

## Protection class

All motors are designed as standard with IP55 level of protection according to DIN EN 60529. If required, the level of protection can be increased to IP66. (IP = International Protection)  
The abbreviation IP is followed by two digits: The first digit indicates the level of protection that the enclosure provides against the ingress of solid foreign objects. The second digit indicates the level of protection that the enclosure provides against the ingress of water.

### **Brief description of the level of protection:**

#### First digit

5 = Dust-protected  
6 = Dust-tight

#### Second digit

5 = Water jets  
6 = Powerful water jets

## Insulation class

All motors have insulation class "F" as standard. The utilization of the motors corresponds to class "B" for rated power and mains operation. At an ambient temperature of 40 °C and an altitude of up to 1000 m, the motor can be operated at rated power. If one of the two values changes, a power reduction must be taken into account, which can be seen in the following table. The increased insulation class H for temperatures up to 80 °C is available on request.

| Installation altitude | Ambient temperature |       |       |       |       |       |       |
|-----------------------|---------------------|-------|-------|-------|-------|-------|-------|
| (in m)                | ≤ 30 °C             | 35 °C | 40 °C | 45 °C | 50 °C | 55 °C | 60 °C |
| 1000                  | -                   | -     | 100 % | 96 %  | 92 %  | 87 %  | 82 %  |
| 1500                  | -                   | 100 % | 97 %  | 93 %  | 89 %  | 84 %  | 79 %  |
| 2000                  | 100 %               | 97 %  | 94 %  | 90 %  | 86 %  | 82 %  | 77 %  |
| 2500                  | 96 %                | 93 %  | 90 %  | 86 %  | 83 %  | 78 %  | 74 %  |
| 3000                  | 92 %                | 89 %  | 86 %  | 82 %  | 79 %  | 75 %  | 70 %  |
| 3500                  | 88 %                | 85 %  | 82 %  | 79 %  | 75 %  | 71 %  | 67 %  |
| 4000                  | 82 %                | 79 %  | 77 %  | 74 %  | 71 %  | 67 %  | 63 %  |

## Cooling and ventilation

The motors are equipped with radial fans made of plastic or aluminum which provide cooling independently of the motor's direction of rotation (IC 411 according to DIN EN 60034-6). To ensure adequate ventilation, a minimum distance from surrounding walls must be maintained.

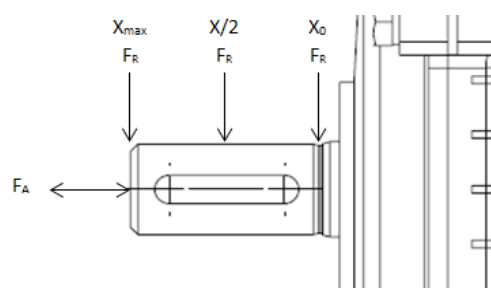
| Frame size       | 56 | 63 | 71 | 80 | 90 | 100 | 112 | 160 | 180 | 200 | 225 | 250 | 280 | 315 | 355 |
|------------------|----|----|----|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Distance (in mm) | 22 | 25 | 28 | 32 | 34 | 36  | 42  | 50  | 60  | 65  | 65  | 70  | 70  | 75  | 75  |

## Bearings

The nominal bearing life (Lh10) is at least 20,000 hours if the loads given in the following table apply.

Up to frame size 280 the motors are equipped with closed bearings as standard. From frame size 315 open bearings with relubrication devices are fitted. The values given in the following table apply to operation at 50 Hz. If the motor is operated at 60 Hz, the values must be reduced by 10%.

Starting from frame size 280 we recommend the use of an insulated bearing on the non-drive side of three-phase motors.



| Frame size | No. of poles | Bearing types |               | Xmax   | X/2    | Xo     |        | V1     |
|------------|--------------|---------------|---------------|--------|--------|--------|--------|--------|
|            |              | Drive end     | Non-drive end | FR (N) | FR (N) | FR (N) | FA (N) | FA (N) |
| 56         | 2            | 6201.ZZ.C3    | 6201.ZZ.C3    | 250    | 275    | 300    | 250    | 235    |
|            | 4            | 6201.ZZ.C3    | 6201.ZZ.C3    | 325    | 362.5  | 400    | 350    | 335    |
| 63         | 2            | 6201.ZZ.C3    | 6201.ZZ.C3    | 275    | 300    | 325    | 250    | 235    |
|            | 4            | 6201.ZZ.C3    | 6201.ZZ.C3    | 350    | 375    | 400    | 350    | 335    |
| 71         | 2            | 6202.ZZ.C3    | 6202.ZZ.C3    | 300    | 337.5  | 375    | 300    | 280    |
|            | 4            | 6202.ZZ.C3    | 6202.ZZ.C3    | 375    | 412.5  | 450    | 400    | 380    |
|            | 6            | 6202.ZZ.C3    | 6202.ZZ.C3    | 450    | 487.5  | 525    | 475    | 450    |
| 80         | 2            | 6204.ZZ.C3    | 6204.ZZ.C3    | 500    | 562.5  | 625    | 475    | 445    |
|            | 4            | 6204.ZZ.C3    | 6204.ZZ.C3    | 625    | 700    | 775    | 625    | 595    |
|            | 6            | 6204.ZZ.C3    | 6204.ZZ.C3    | 725    | 812.5  | 900    | 775    | 745    |
|            | 8            | 6204.ZZ.C3    | 6204.ZZ.C3    | 800    | 900    | 1000   | 850    | 820    |
| 90S        | 2            | 6205.ZZ.C3    | 6205.ZZ.C3    | 525    | 600    | 675    | 500    | 460    |
|            | 4            | 6205.ZZ.C3    | 6205.ZZ.C3    | 675    | 775    | 875    | 675    | 635    |
|            | 6            | 6205.ZZ.C3    | 6205.ZZ.C3    | 775    | 887.5  | 1000   | 825    | 785    |
|            | 8            | 6205.ZZ.C3    | 6205.ZZ.C3    | 850    | 975    | 1100   | 925    | 885    |
| 90L        | 2            | 6205.ZZ.C3    | 6205.ZZ.C3    | 550    | 625    | 700    | 500    | 460    |
|            | 4            | 6205.ZZ.C3    | 6205.ZZ.C3    | 700    | 787.5  | 875    | 675    | 635    |
|            | 6            | 6205.ZZ.C3    | 6205.ZZ.C3    | 825    | 925    | 1025   | 825    | 785    |
|            | 8            | 6205.ZZ.C3    | 6205.ZZ.C3    | 900    | 1012.5 | 1125   | 925    | 885    |
| 100        | 2            | 6206.ZZ.C3    | 6206.ZZ.C3    | 775    | 887.5  | 1000   | 700    | 655    |
|            | 4            | 6206.ZZ.C3    | 6206.ZZ.C3    | 1000   | 1125   | 1250   | 950    | 905    |
|            | 6            | 6206.ZZ.C3    | 6206.ZZ.C3    | 1150   | 1287.5 | 1425   | 1125   | 1080   |
|            | 8            | 6206.ZZ.C3    | 6206.ZZ.C3    | 1250   | 1412.5 | 1575   | 1300   | 1255   |
| 112M       | 2            | 6306.ZZ.C3    | 6306.ZZ.C3    | 775    | 875    | 975    | 700    | 655    |
|            | 4            | 6306.ZZ.C3    | 6306.ZZ.C3    | 975    | 1100   | 1225   | 950    | 905    |
|            | 6            | 6306.ZZ.C3    | 6306.ZZ.C3    | 1125   | 1262.5 | 1400   | 1125   | 1080   |
|            | 8            | 6306.ZZ.C3    | 6306.ZZ.C3    | 1250   | 1400   | 1550   | 1300   | 1255   |
| 132S       | 2            | 6308.ZZ.C3    | 6308.ZZ.C3    | 1150   | 1312.5 | 1475   | 1075   | 1025   |
|            | 4            | 6308.ZZ.C3    | 6308.ZZ.C3    | 1450   | 1650   | 1850   | 1450   | 1400   |
|            | 6            | 6308.ZZ.C3    | 6308.ZZ.C3    | 1650   | 1887.5 | 2125   | 1725   | 1675   |
|            | 8            | 6308.ZZ.C3    | 6308.ZZ.C3    | 1825   | 2087.5 | 2350   | 1975   | 1925   |
| 132M       | 2            | 6308.ZZ.C3    | 6308.ZZ.C3    | 1200   | 1350   | 1500   | 1075   | 1025   |
|            | 4            | 6308.ZZ.C3    | 6308.ZZ.C3    | 1500   | 1700   | 1900   | 1450   | 1400   |
|            | 6            | 6308.ZZ.C3    | 6308.ZZ.C3    | 1725   | 1950   | 2175   | 1725   | 1675   |
|            | 8            | 6308.ZZ.C3    | 6308.ZZ.C3    | 1900   | 2150   | 2400   | 1975   | 1925   |

# Bearings

| Frame size | No. of poles | Bearing types |               | Xmax    | X/2     | Xo      |         | V1      |
|------------|--------------|---------------|---------------|---------|---------|---------|---------|---------|
|            |              | Drive end     | Non-drive end | F R (N) | F R (N) | F R (N) | F A (N) | F A (N) |
| 160M       | 2            | 6309.ZZ.C3    | 6309.ZZ.C3    | 2000    | 2300    | 2600    | 2150    | 2070    |
|            | 4            | 6309.ZZ.C3    | 6309.ZZ.C3    | 2525    | 2900    | 3275    | 2850    | 2770    |
|            | 6            | 6309.ZZ.C3    | 6309.ZZ.C3    | 2900    | 3325    | 3750    | 3375    | 3295    |
|            | 8            | 6309.ZZ.C3    | 6309.ZZ.C3    | 3175    | 3662    | 4150    | 3825    | 3745    |
| 160L       | 2            | 6309.ZZ.C3    | 6309.ZZ.C3    | 2100    | 2375    | 2650    | 2150    | 2070    |
|            | 4            | 6309.ZZ.C3    | 6309.ZZ.C3    | 2650    | 3000    | 3350    | 2850    | 2770    |
|            | 6            | 6309.ZZ.C3    | 6309.ZZ.C3    | 3025    | 3437    | 3850    | 3375    | 3295    |
|            | 8            | 6309.ZZ.C3    | 6309.ZZ.C3    | 3325    | 3775    | 4225    | 3825    | 3745    |
| 180M       | 2            | 6311.ZZ.C3    | 6311.ZZ.C3    | 2925    | 3300    | 3675    | 2900    | 2800    |
|            | 4            | 6311.ZZ.C3    | 6311.ZZ.C3    | 3700    | 4175    | 4650    | 3800    | 3700    |
| 180L       | 2            | 6311.ZZ.C3    | 6311.ZZ.C3    | 3800    | 4250    | 4700    | 3800    | 3700    |
|            | 4            | 6311.ZZ.C3    | 6311.ZZ.C3    | 4350    | 4862    | 5375    | 4525    | 4425    |
|            | 6            | 6311.ZZ.C3    | 6311.ZZ.C3    | 4800    | 5362    | 5925    | 5125    | 5025    |
| 200L       | 2            | 6312.ZZ.C3    | 6312.ZZ.C3    | 3450    | 3825    | 4200    | 3325    | 2700    |
|            | 4            | 6312.ZZ.C3    | 6312.ZZ.C3    | 4350    | 4825    | 5300    | 4350    | 3550    |
|            | 6            | 6312.ZZ.C3    | 6312.ZZ.C3    | 4975    | 5525    | 6075    | 5150    | 4360    |
|            | 8            | 6312.ZZ.C3    | 6312.ZZ.C3    | 5500    | 6100    | 6700    | 5850    | 5150    |
| 225S       | 4            | 6313.ZZ.C3    | 6313.ZZ.C3    | 4600    | 5237    | 5875    | 4900    | 4100    |
|            | 8            | 6313.ZZ.C3    | 6313.ZZ.C3    | 5800    | 6600    | 7400    | 6550    | 5730    |
| 225M       | 2            | 6313.ZZ.C3    | 6313.ZZ.C3    | 3875    | 4287    | 4700    | 3725    | 3100    |
|            | 4            | 6313.ZZ.C3    | 6313.ZZ.C3    | 4675    | 5300    | 5925    | 4900    | 4000    |
|            | 6            | 6313.ZZ.C3    | 6313.ZZ.C3    | 5350    | 6062    | 6775    | 5775    | 4880    |
|            | 8            | 6313.ZZ.C3    | 6313.ZZ.C3    | 5900    | 6687    | 7475    | 6550    | 5620    |
| 250M       | 2            | 6314.ZZ.C3    | 6314.ZZ.C3    | 4325    | 4837    | 5350    | 4175    | 3350    |
|            | 4            | 6314.ZZ.C3    | 6314.ZZ.C3    | 5450    | 6100    | 6750    | 5500    | 4420    |
|            | 6            | 6314.ZZ.C3    | 6314.ZZ.C3    | 6250    | 6987    | 7725    | 6500    | 5370    |
|            | 8            | 6314.ZZ.C3    | 6314.ZZ.C3    | 6875    | 7687    | 8500    | 7350    | 6150    |
| 280S       | 2            | 6314.ZZ.C3    | 6314.ZZ.C3    | 4350    | 4825    | 5300    | 4175    | 3160    |
|            | 4            | 6317.ZZ.C3    | 6317.ZZ.C3    | 7025    | 7787    | 8550    | 6900    | 5450    |
|            | 6            | 6317.ZZ.C3    | 6317.ZZ.C3    | 8025    | 8912    | 9800    | 8125    | 6660    |
|            | 8            | 6317.ZZ.C3    | 6317.ZZ.C3    | 8850    | 9812    | 10775   | 9150    | 7630    |
| 280M       | 2            | 6314.ZZ.C3    | 6314.ZZ.C3    | 4475    | 4925    | 5375    | 4175    | 4050    |
|            | 4            | 6317.ZZ.C3    | 6317.ZZ.C3    | 7200    | 7925    | 8650    | 6900    | 5280    |
|            | 6            | 6317.ZZ.C3    | 6317.ZZ.C3    | 8250    | 9087    | 9925    | 8125    | 6450    |
|            | 8            | 6317.ZZ.C3    | 6317.ZZ.C3    | 9075    | 10000   | 10925   | 9150    | 7370    |
| 315S       | 2            | 6317 C3       | 6317 C3       | 5850    | 6362    | 6875    | 5175    | 3360    |
|            | 4            | 6319 C3       | 6319 C3       | 10000   | 15500   | 21000   | 7875    | 5600    |
|            | 6            | 6319 C3       | 6319 C3       | 10000   | 17000   | 24000   | 9225    | 6860    |
|            | 8            | 6319 C3       | 6319 C3       | 10000   | 18000   | 26000   | 10350   | 7980    |
| 315M,L     | 2            | 6317 C3       | 6317 C3       | 6050    | 6525    | 7000    | 5175    | 2660    |
|            | 4            | 6319 C3       | 6319 C3       | 9000    | 15500   | 22000   | 7875    | 4430    |
|            | 6            | 6319 C3       | 6319 C3       | 9000    | 16500   | 24000   | 9225    | 3510    |
|            | 8            | 6319 C3       | 6319 C3       | 9000    | 18000   | 27000   | 10350   | 6560    |
| 355        | 2            | 6319 C3       | 6319 C3       | 7250    | 7712    | 8175    | 5875    | 2420    |
|            | 4            | 6322 C3       | 6322 C3       | 11500   | 19250   | 27000   | 10075   | 4700    |
|            | 6            | 6322 C3       | 6322 C3       | 11500   | 19250   | 27000   | 11950   | 5350    |
|            | 8            | 6322 C3       | 6322 C3       | 11500   | 19250   | 27000   | 13375   | 6130    |

## Motor protection

Various protective devices are available to prevent damage to the motor due to overloading. The following shows which protective component can be used for which type of protection.

|                    |       |        |       |        |
|--------------------|-------|--------|-------|--------|
| Winding protection | PTC   | PTO    | PT100 | PT1000 |
| Bearing protection | PT100 | PT1000 |       |        |

### PTC – definition

A PTC thermistor is a temperature-dependent component that emits a signal. The motor current is interrupted via a tripping unit connected to the PTC thermistor. If the measured temperature reaches a certain limit value, the resistance of the PTC increases rapidly and the tripping unit switches off the motor.

### PTO – definition

A PTO bimetal tripping unit is a temperature-dependent component that interrupts the current as soon as the rated load temperature is exceeded. If the temperature of the motor drops, it can be restarted after a short time.

### PT100 / PT1000 – definition

A PT100 / PT1000 is a temperature-dependent component that outputs a signal. Temperature and resistance are linearly dependent on each other, so that it is possible to set exactly when the tripping device should switch. The numbers 100 / 1000 indicate the nominal resistance at 0 °C.

## Space heaters (anti-condensation heating)

For operating conditions involving high humidity or high temperature fluctuations, a space heater is recommended. This prevents condensation inside the motor when the motor is at a standstill. The space heater must not be switched on when the motor is running.

## Protective roof

For vertical mounting (especially outdoors) with the shaft downwards, a protective roof (fan cowl cover / rain hood) is recommended. It prevents the ingress of water and foreign bodies. For explosion-proof motors, a protective roof is required for this type of mounting in accordance with DIN EN 50014.

## Frequency converters

All motors are generally suitable for use with frequency converters. For motors with an output of 0.55 to 22 kW, frequency converters can be installed directly on the motor.

### Advantages of motors with frequency converters

- Speed settings are infinitely variable
- Smooth starting with acceleration ramp
- Extensive motor control and monitoring options

### Low-speed operation

At low speeds, it must be taken into account that the motor's cooling via its own fan is no longer guaranteed within a certain range. In such a case, the use of an external fan ("forced cooling") is necessary.

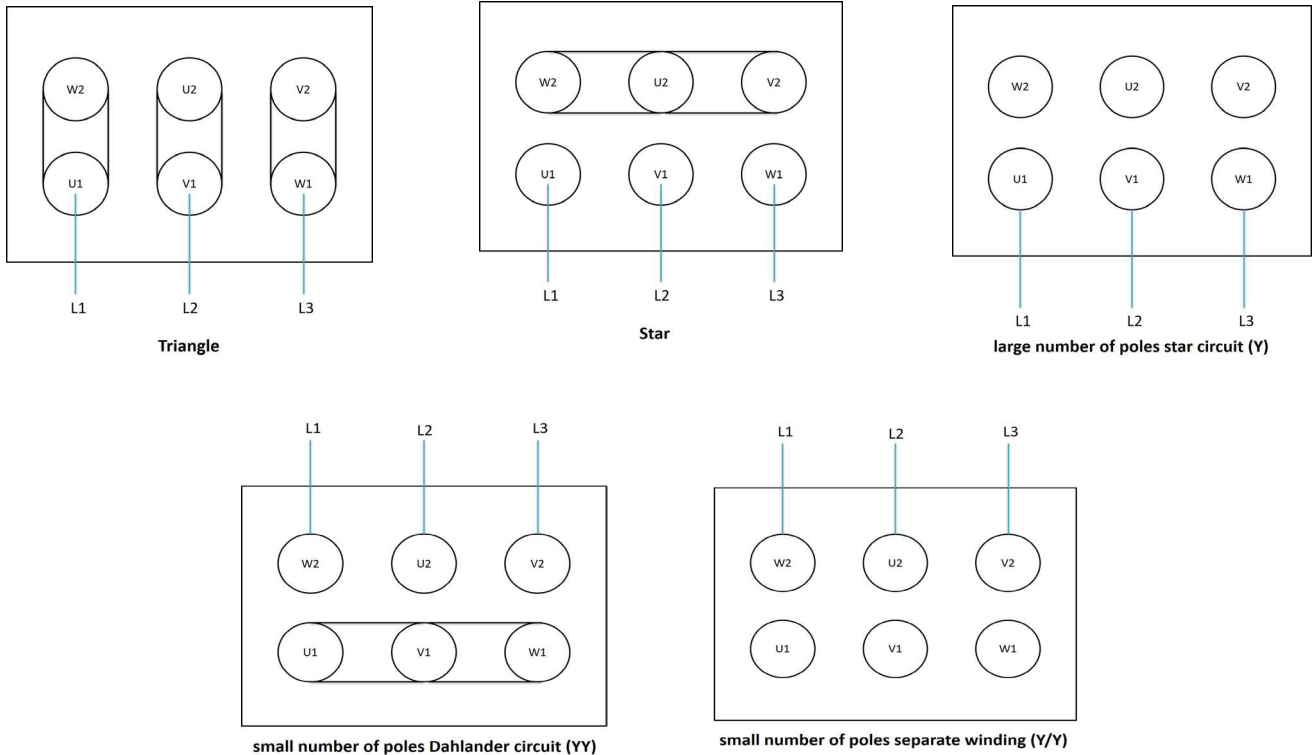
An exception from this applies to motors that are cooled via the fan system they are integrated in. The motors are cooled via their built-in fan ("self-cooled") up to a frequency of 30 Hz. The minimum frequency is 5 Hz.

### Note

The motors must be grounded properly. According to the EMC Directive, wiring must be carried out with shielded cables and EMC cable glands. In addition, current-insulated bearings can be offered as an option. The electric motors supplied by AC-Motoren GmbH are used as components in more complex plants and systems. The operator is responsible for selecting the electric motors and integrating them into the overall system.

## Wiring diagram for three-phase motors

The following wiring diagrams show the wiring from the winding to the terminal board. This type of wiring is intended for direct mains connection and direct start-up. For star-delta operation, the jumpers must be removed and the motor must then be controlled via an external circuit.



## Certificates



### UL listed motors

Frame sizes 80-355  
Number of poles: 2-6  
File-Nr.: E480221  
Electric design according to NEMA



### Explosion-proof motors

Zone 2  
Zone 22  
Flameproof enclosure



### CE marking

Products comply with EU directives



### China Compulsory Certification

Frame sizes 63-90  
Number of poles: 2-8



# YOUR MOTOR. OUR DRIVE.

In our 16,000 sqm warehouse there are countless variants of electric motors available for you. Immediate availability ensures fast delivery ex works and maximum flexibility. With our global, reliable network of partners we meet virtually any special requirement you might have for your electric motor.

# ACA ALUMINUM HOUSING IE4

DIN EN 60034-30 | Super Premium Efficiency (SPE)

2 poles, idle speed 3000 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 A-2     | 0.75 / 0.90       | 2910 / 3492             | 83.5                    | 83.5 | 81.8 | 0.82                     | 2.8 / 1.6                      | 2.5          | 7.0                               | 2.3                             | 2.3                              | 0.0012            | 11.0   |
| 80 B-2     | 1.10 / 1.32       | 2920 / 3504             | 85.2                    | 85.2 | 83.5 | 0.83                     | 4.0 / 2.3                      | 3.6          | 7.3                               | 2.2                             | 2.3                              | 0.0014            | 11.6   |
| 90 S-2     | 1.50 / 1.80       | 2930 / 3516             | 86.5                    | 86.5 | 84.8 | 0.84                     | 5.3 / 3.0                      | 4.9          | 7.6                               | 2.2                             | 2.3                              | 0.0018            | 16.0   |
| 90 L-2     | 2.20 / 2.64       | 2930 / 3516             | 88.0                    | 88.0 | 86.2 | 0.85                     | 7.5 / 4.3                      | 7.2          | 7.6                               | 2.2                             | 2.3                              | 0.0022            | 20.6   |
| 100 L-2    | 3.00 / 3.60       | 2935 / 3522             | 89.1                    | 89.1 | 87.3 | 0.87                     | 9.9 / 5.7                      | 9.8          | 7.8                               | 2.2                             | 2.3                              | 0.0040            | 23.7   |
| 112 M-2    | 4.00 / 4.80       | 2940 / 3528             | 90.0                    | 90.0 | 88.2 | 0.88                     | 12.9 / 7.4                     | 13.0         | 8.3                               | 2.2                             | 2.3                              | 0.0072            | 42.0   |
| 132 SA-2   | 5.50 / 6.60       | 2945 / 3534             | 90.9                    | 90.9 | 89.1 | 0.88                     | 17.5 / 10.1                    | 17.8         | 8.3                               | 2.0                             | 2.3                              | 0.0144            | 46.0   |
| 132 SB-2   | 7.50 / 9.00       | 2950 / 3540             | 91.7                    | 91.7 | 89.9 | 0.88                     | 23.7 / 13.6                    | 24.3         | 7.9                               | 2.0                             | 2.3                              | 0.0180            | 52.0   |

4 poles, idle speed 1500 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 B-4     | 0.75 / 0.90       | 1430 / 1716             | 85.7                    | 85.7 | 84.0 | 0.82                     | 3.0 / 1.7                      | 5.0          | 6.6                               | 2.3                             | 2.3                              | 0.0031            | 12.9   |
| 90 S-4     | 1.10 / 1.32       | 1445 / 1734             | 87.2                    | 87.2 | 85.5 | 0.83                     | 4.2 / 2.4                      | 7.3          | 6.8                               | 2.3                             | 2.3                              | 0.0037            | 16.8   |
| 90 L-4     | 1.50 / 1.80       | 1450 / 1740             | 88.2                    | 88.2 | 86.4 | 0.84                     | 5.6 / 3.2                      | 9.9          | 7.0                               | 2.3                             | 2.3                              | 0.0044            | 19.7   |
| 100 LA-4   | 2.20 / 2.64       | 1455 / 1746             | 89.5                    | 89.5 | 87.7 | 0.85                     | 7.7 / 4.4                      | 14.4         | 7.6                               | 2.3                             | 2.3                              | 0.0076            | 25.5   |
| 100 LB-4   | 3.00 / 3.60       | 1455 / 1746             | 90.4                    | 90.4 | 88.6 | 0.87                     | 10.3 / 5.9                     | 19.7         | 7.6                               | 2.3                             | 2.3                              | 0.0095            | 31.3   |
| 112 M-4    | 4.00 / 4.80       | 1460 / 1752             | 91.1                    | 91.1 | 89.3 | 0.88                     | 13.6 / 7.8                     | 26.2         | 7.8                               | 2.2                             | 2.3                              | 0.0134            | 39.2   |
| 132 S-4    | 5.50 / 6.60       | 1470 / 1764             | 91.9                    | 91.9 | 90.1 | 0.88                     | 18.4 / 10.6                    | 35.7         | 7.9                               | 2.0                             | 2.3                              | 0.0305            | 51.2   |
| 132 M-4    | 7.50 / 9.00       | 1470 / 1764             | 92.6                    | 92.6 | 90.7 | 0.88                     | 24.6 / 14.1                    | 48.7         | 7.5                               | 2.0                             | 2.3                              | 0.0415            | 65.0   |

# ACA ALUMINUM HOUSING IE4

DIN EN 60034-30 | Super Premium Efficiency (SPE)

6 poles, idle speed 1000 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 90 S-6     | 0.75 / 0.90       | 950 / 1140              | 82.7                    | 82.7 | 81.0 | 0.71                     | 3.3 / 1.9                      | 7.5          | 6.0                               | 2.0                             | 2.1                              | 0.0042            | 17.2   |
| 90 L-6     | 1.10 / 1.32       | 955 / 1146              | 84.5                    | 84.5 | 82.8 | 0.73                     | 4.5 / 2.6                      | 11.0         | 6.0                               | 2.0                             | 2.1                              | 0.0047            | 22.4   |
| 100 L-6    | 1.50 / 1.80       | 960 / 1152              | 85.9                    | 85.9 | 84.2 | 0.73                     | 6.1 / 3.5                      | 14.9         | 6.5                               | 2.0                             | 2.1                              | 0.0090            | 33.5   |
| 112 M-6    | 2.20 / 2.64       | 965 / 1158              | 87.4                    | 87.4 | 85.7 | 0.74                     | 8.7 / 5.0                      | 21.8         | 6.6                               | 2.0                             | 2.1                              | 0.0150            | 38.6   |
| 132 S-6    | 3.00 / 3.60       | 970 / 1164              | 88.6                    | 88.6 | 86.8 | 0.74                     | 11.7 / 6.7                     | 29.5         | 6.8                               | 2.0                             | 2.1                              | 0.0300            | 46.0   |
| 132 MA-6   | 4.00 / 4.80       | 975 / 1170              | 89.5                    | 89.5 | 87.7 | 0.74                     | 15.4 / 8.8                     | 39.2         | 6.8                               | 2.0                             | 2.1                              | 0.0380            | 54.0   |
| 132 MB-6   | 5.50 / 6.60       | 975 / 1170              | 90.5                    | 90.5 | 88.7 | 0.75                     | 20.6 / 11.9                    | 53.9         | 7.0                               | 2.0                             | 2.1                              | 0.0430            | 61.8   |

8 poles, idle speed 750 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 100 LA-8   | 0.75 / 0.90       | 700 / 840               | 78.4                    | 78.4 | 76.8 | 0.67                     | 3.6 / 2.1                      | 10.2         | 4.0                               | 1.8                             | 2.0                              | 0.0102            | 31.0   |
| 100 LB-8   | 1.10 / 1.32       | 700 / 840               | 80.8                    | 80.8 | 79.2 | 0.69                     | 5.0 / 2.9                      | 15.0         | 5.0                               | 1.8                             | 2.0                              | 0.0114            | 33.5   |
| 112 M-8    | 1.50 / 1.80       | 710 / 852               | 82.6                    | 82.6 | 80.9 | 0.70                     | 6.6 / 3.8                      | 20.2         | 5.0                               | 1.8                             | 2.0                              | 0.0168            | 39.8   |
| 132 S-8    | 2.20 / 2.64       | 720 / 864               | 84.5                    | 84.5 | 82.8 | 0.71                     | 9.3 / 5.4                      | 29.2         | 6.0                               | 1.8                             | 2.0                              | 0.0420            | 53.0   |
| 132 M-8    | 3.00 / 3.60       | 720 / 864               | 85.9                    | 85.9 | 84.2 | 0.73                     | 12.2 / 7.0                     | 39.8         | 6.0                               | 1.8                             | 2.0                              | 0.0516            | 61.0   |

# ACM CAST IRON HOUSING IE4

DIN EN 60034-30 | Super Premium Efficiency (SPE)

2 poles, idle speed 3000 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 MA-2   | 11.0 / 13.2       | 2960 / 3552             | 92.6                    | 92.6 | 90.7 | 0.89                     | 19.5                           | 35.5         | 8.1                               | 2.0                             | 2.3                              | 0.0480            | 133    |
| 160 MB-2   | 15.0 / 18.0       | 2960 / 3552             | 93.3                    | 93.3 | 91.4 | 0.89                     | 26.4                           | 48.4         | 8.1                               | 2.0                             | 2.3                              | 0.0600            | 146    |
| 160 L-2    | 18.5 / 22.2       | 2960 / 3552             | 93.7                    | 93.7 | 91.8 | 0.89                     | 32.5                           | 59.7         | 8.2                               | 2.0                             | 2.3                              | 0.0708            | 160    |
| 180 M-2    | 22.0 / 26.4       | 2965 / 3558             | 94.0                    | 94.0 | 92.1 | 0.89                     | 38.5                           | 70.9         | 8.2                               | 2.0                             | 2.3                              | 0.1116            | 221    |
| 200 LA-2   | 30.0 / 36.0       | 2970 / 3564             | 94.5                    | 94.5 | 92.6 | 0.89                     | 52.2                           | 96.5         | 7.6                               | 2.0                             | 2.3                              | 0.1680            | 260    |
| 200 LB-2   | 37.0 / 44.4       | 2970 / 3564             | 94.8                    | 94.8 | 92.9 | 0.89                     | 64.2                           | 119.0        | 7.6                               | 2.0                             | 2.3                              | 0.1956            | 309    |
| 225 M-2    | 45.0 / 54.0       | 2975 / 3570             | 95.0                    | 95.0 | 93.1 | 0.90                     | 77.1                           | 144.5        | 7.7                               | 2.0                             | 2.3                              | 0.2940            | 370    |
| 250 M-2    | 55.0 / 66.0       | 2975 / 3570             | 95.3                    | 95.3 | 93.4 | 0.90                     | 93.9                           | 176.6        | 7.7                               | 2.0                             | 2.3                              | 0.3960            | 520    |
| 280 S-2    | 75.0 / 90.0       | 2980 / 3576             | 95.6                    | 95.6 | 93.7 | 0.90                     | 127.6                          | 240.4        | 7.1                               | 1.8                             | 2.3                              | 0.7800            | 570    |
| 280 M-2    | 90.0 / 108        | 2982 / 3578             | 95.8                    | 95.8 | 93.9 | 0.90                     | 152.8                          | 288.2        | 7.1                               | 1.8                             | 2.3                              | 0.8520            | 630    |
| 315 S-2    | 110 / 132         | 2980 / 3576             | 96.0                    | 96.0 | 94.1 | 0.90                     | 186.4                          | 352.5        | 7.1                               | 1.8                             | 2.3                              | 1.5600            | 985    |
| 315 M-2    | 132 / 158         | 2980 / 3576             | 96.2                    | 96.2 | 94.3 | 0.90                     | 223.2                          | 423.0        | 7.1                               | 1.8                             | 2.3                              | 2.4000            | 1050   |
| 315 LA-2   | 160 / 192         | 2980 / 3576             | 96.3                    | 96.3 | 94.4 | 0.91                     | 267.3                          | 512.8        | 7.2                               | 1.8                             | 2.3                              | 2.8200            | 1160   |
| 315 LB-2   | 200 / 240         | 2980 / 3576             | 96.5                    | 96.5 | 94.6 | 0.91                     | 333.4                          | 640.9        | 7.2                               | 1.8                             | 2.2                              | 3.2400            | 1200   |
| 355 M-2    | 250 / 300         | 2985 / 3582             | 96.5                    | 96.5 | 94.6 | 0.91                     | 416.8                          | 800.0        | 7.2                               | 1.6                             | 2.2                              | 4.0800            | 2050   |
| 355 L-2    | 315 / 378         | 2982 / 3578             | 96.5                    | 96.5 | 94.6 | 0.91                     | 525.2                          | 1009         | 7.2                               | 1.6                             | 2.2                              | 4.6800            | 2380   |

4 poles, idle speed 1500 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 M-4    | 11.0 / 13.2       | 1475 / 1770             | 93.3                    | 93.3 | 91.4 | 0.85                     | 20.3                           | 71.2         | 7.7                               | 2.2                             | 2.3                              | 0.0988            | 146    |
| 160 L-4    | 15.0 / 18.0       | 1475 / 1770             | 93.9                    | 93.9 | 92.0 | 0.86                     | 27.2                           | 97.1         | 7.8                               | 2.2                             | 2.3                              | 0.1159            | 156    |
| 180 M-4    | 18.5 / 22.2       | 1480 / 1776             | 94.2                    | 94.2 | 92.3 | 0.86                     | 33.4                           | 119.4        | 7.8                               | 2.0                             | 2.3                              | 0.1720            | 181    |
| 180 L-4    | 22.0 / 26.4       | 1480 / 1776             | 94.5                    | 94.5 | 92.6 | 0.86                     | 39.6                           | 142.0        | 7.8                               | 2.0                             | 2.3                              | 0.2050            | 209    |
| 200 L-4    | 30.0 / 36.0       | 1480 / 1776             | 94.9                    | 94.9 | 93.0 | 0.86                     | 53.8                           | 193.6        | 7.3                               | 2.0                             | 2.3                              | 0.3355            | 280    |
| 225 S-4    | 37.0 / 44.4       | 1485 / 1782             | 95.2                    | 95.2 | 93.3 | 0.86                     | 66.2                           | 237.9        | 7.4                               | 2.0                             | 2.3                              | 0.5246            | 373    |
| 225 M-4    | 45.0 / 54.0       | 1485 / 1782             | 95.4                    | 95.4 | 93.5 | 0.86                     | 80.3                           | 289.4        | 7.4                               | 2.0                             | 2.3                              | 0.5978            | 390    |
| 250 M-4    | 55.0 / 66.0       | 1485 / 1782             | 95.7                    | 95.7 | 93.8 | 0.86                     | 97.8                           | 353.7        | 7.4                               | 2.2                             | 2.3                              | 0.8418            | 553    |
| 280 S-4    | 75.0 / 90.0       | 1490 / 1788             | 96.0                    | 96.0 | 94.1 | 0.88                     | 130.0                          | 480.7        | 6.9                               | 2.0                             | 2.3                              | 1.4762            | 655    |
| 280 M-4    | 90.0 / 108        | 1490 / 1788             | 96.1                    | 96.1 | 94.2 | 0.88                     | 155.8                          | 576.8        | 6.9                               | 2.0                             | 2.3                              | 1.8056            | 730    |
| 315 S-4    | 110 / 132         | 1490 / 1788             | 96.3                    | 96.3 | 94.4 | 0.89                     | 187.9                          | 705.0        | 7.0                               | 2.0                             | 2.2                              | 4.2456            | 980    |
| 315 M-4    | 132 / 158         | 1490 / 1788             | 96.4                    | 96.4 | 94.5 | 0.89                     | 225.2                          | 846.0        | 7.0                               | 2.0                             | 2.2                              | 4.4530            | 1031   |
| 315 LA-4   | 160 / 192         | 1490 / 1788             | 96.6                    | 96.6 | 94.7 | 0.89                     | 272.5                          | 1026         | 7.1                               | 2.0                             | 2.2                              | 5.1240            | 1093   |
| 315 LB-4   | 200 / 240         | 1490 / 1788             | 96.7                    | 96.7 | 94.8 | 0.9                      | 336.4                          | 1282         | 7.1                               | 2.0                             | 2.2                              | 6.1000            | 1190   |
| 355 M-4    | 250 / 300         | 1490 / 1788             | 96.7                    | 96.7 | 94.8 | 0.9                      | 420.6                          | 1602         | 7.1                               | 2.0                             | 2.2                              | 8.4180            | 1754   |
| 355 L-4    | 315 / 378         | 1490 / 1788             | 96.7                    | 96.7 | 94.8 | 0.9                      | 529.9                          | 2019         | 7.1                               | 2.0                             | 2.2                              | 10.614            | 1960   |

# ACM CAST IRON HOUSING IE4

DIN EN 60034-30 | Super Premium Efficiency (SPE)

6 poles, idle speed 1000 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 M-6    | 7.50 / 9.00       | 980 / 1176              | 91.3                    | 91.3 | 89.5 | 0.79                     | 15.2                           | 73.1         | 7.0                               | 2.0                             | 2.1                              | 0.0950            | 140    |
| 160 L-6    | 11.0 / 13.2       | 980 / 1176              | 92.3                    | 92.3 | 90.5 | 0.80                     | 21.8                           | 107.2        | 7.2                               | 2.0                             | 2.1                              | 0.1200            | 160    |
| 180 L-6    | 15.0 / 18.0       | 985 / 1182              | 92.9                    | 92.9 | 91.0 | 0.81                     | 29.2                           | 145.5        | 7.3                               | 2.0                             | 2.1                              | 0.2200            | 245    |
| 200 LA-6   | 18.5 / 22.2       | 985 / 1182              | 93.4                    | 93.4 | 91.5 | 0.81                     | 35.8                           | 179.4        | 7.3                               | 2.0                             | 2.1                              | 0.3700            | 265    |
| 200 LB-6   | 22.0 / 26.4       | 985 / 1182              | 93.7                    | 93.7 | 91.8 | 0.81                     | 42.4                           | 213.3        | 7.4                               | 2.0                             | 2.1                              | 0.4200            | 285    |
| 225 M-6    | 30.0 / 36.0       | 990 / 1188              | 94.2                    | 94.2 | 92.3 | 0.83                     | 56.2                           | 289.4        | 6.9                               | 2.0                             | 2.1                              | 0.5500            | 335    |
| 250 M-6    | 37.0 / 44.4       | 990 / 1188              | 94.5                    | 94.5 | 92.6 | 0.84                     | 68.2                           | 356.9        | 7.1                               | 2.0                             | 2.1                              | 0.8400            | 471    |
| 280 S-6    | 45.0 / 54.0       | 990 / 1188              | 94.8                    | 94.8 | 92.9 | 0.85                     | 81.8                           | 434.1        | 7.3                               | 2.0                             | 2.0                              | 1.4200            | 530    |
| 280 M-6    | 55.0 / 66.0       | 990 / 1188              | 95.1                    | 95.1 | 93.2 | 0.86                     | 98.5                           | 530.6        | 7.3                               | 2.0                             | 2.0                              | 1.7000            | 670    |
| 315 S-6    | 75.0 / 90.0       | 990 / 1188              | 95.4                    | 95.4 | 93.5 | 0.84                     | 137.0                          | 723.5        | 6.6                               | 2.0                             | 2.0                              | 4.2000            | 960    |
| 315 M-6    | 90.0 / 108        | 990 / 1188              | 95.6                    | 95.6 | 93.7 | 0.85                     | 162.1                          | 868.2        | 6.7                               | 2.0                             | 2.0                              | 4.9000            | 1070   |
| 315 LA-6   | 110 / 132         | 990 / 1188              | 95.8                    | 95.8 | 93.9 | 0.85                     | 197.8                          | 1061         | 6.7                               | 2.0                             | 2.0                              | 5.5000            | 1160   |
| 315 LB-6   | 132 / 158         | 990 / 1188              | 96.0                    | 96.0 | 94.1 | 0.86                     | 234.1                          | 1273         | 6.8                               | 2.0                             | 2.0                              | 6.5000            | 1250   |
| 355 MA-6   | 160 / 192         | 990 / 1188              | 96.2                    | 96.2 | 94.3 | 0.86                     | 283.1                          | 1543         | 6.8                               | 1.8                             | 2.0                              | 10.100            | 1780   |
| 355 MB-6   | 200 / 240         | 990 / 1188              | 96.3                    | 96.3 | 94.4 | 0.87                     | 349.5                          | 1929         | 6.8                               | 1.8                             | 2.0                              | 11.200            | 1900   |
| 355 L-6    | 250 / 300         | 990 / 1188              | 96.5                    | 96.5 | 94.6 | 0.87                     | 436.0                          | 2412         | 6.8                               | 1.8                             | 2.0                              | 13.000            | 2100   |

8 poles, idle speed 750 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 MA-8   | 4.00 / 4.80       | 730 / 876               | 87.1                    | 87.1 | 85.4 | 0.73                     | 9.2                            | 52.3         | 6.0                               | 1.9                             | 2.0                              | 1.1160            | 138    |
| 160 MB-8   | 5.50 / 6.60       | 730 / 876               | 88.3                    | 88.3 | 86.5 | 0.74                     | 12.3                           | 72.0         | 6.0                               | 1.9                             | 2.0                              | 0.1260            | 150    |
| 160 L-8    | 7.50 / 9.00       | 730 / 876               | 89.3                    | 89.3 | 87.5 | 0.75                     | 16.4                           | 98.1         | 6.0                               | 1.9                             | 2.0                              | 0.1440            | 170    |
| 180 L-8    | 11.0 / 13.2       | 735 / 882               | 90.4                    | 90.4 | 88.6 | 0.75                     | 23.8                           | 142.9        | 6.5                               | 2.0                             | 2.0                              | 0.2640            | 230    |
| 200 L-8    | 15.0 / 18.0       | 735 / 882               | 91.2                    | 91.2 | 89.4 | 0.76                     | 31.7                           | 194.9        | 6.6                               | 2.0                             | 2.0                              | 0.4680            | 280    |
| 225 S-8    | 18.5 / 22.2       | 735 / 882               | 91.7                    | 91.7 | 89.9 | 0.76                     | 38.9                           | 240.4        | 6.6                               | 1.9                             | 2.0                              | 0.6120            | 302    |
| 225 M-8    | 22.0 / 26.4       | 735 / 882               | 92.1                    | 92.1 | 90.3 | 0.78                     | 44.8                           | 285.9        | 6.6                               | 1.9                             | 2.0                              | 0.7080            | 335    |
| 250 M-8    | 30.0 / 36.0       | 735 / 882               | 92.7                    | 92.7 | 90.8 | 0.79                     | 60.0                           | 389.8        | 6.5                               | 1.9                             | 2.0                              | 0.9840            | 400    |
| 280 S-8    | 37.0 / 44.4       | 740 / 888               | 93.1                    | 93.1 | 91.2 | 0.79                     | 73.7                           | 477.5        | 6.6                               | 1.9                             | 2.0                              | 1.7040            | 520    |
| 280 M-8    | 45.0 / 54.0       | 740 / 888               | 93.4                    | 93.4 | 91.5 | 0.79                     | 89.3                           | 580.7        | 6.6                               | 1.9                             | 2.0                              | 2.0400            | 600    |
| 315 S-8    | 55.0 / 66.0       | 740 / 888               | 93.7                    | 93.7 | 91.8 | 0.81                     | 106.1                          | 709.8        | 6.6                               | 1.8                             | 2.0                              | 5.5200            | 1010   |
| 315 M-8    | 75.0 / 90.0       | 740 / 888               | 94.2                    | 94.2 | 92.3 | 0.81                     | 143.9                          | 967.9        | 6.2                               | 1.8                             | 2.0                              | 6.6000            | 1140   |
| 315 LA-8   | 90.0 / 108        | 740 / 888               | 94.4                    | 94.4 | 92.5 | 0.82                     | 170.2                          | 1161         | 6.4                               | 1.8                             | 2.0                              | 7.5600            | 1175   |
| 315 LB-8   | 110 / 132         | 740 / 888               | 94.7                    | 94.7 | 92.8 | 0.82                     | 207.4                          | 1420         | 6.4                               | 1.8                             | 2.0                              | 8.4400            | 1210   |
| 355 MA-8   | 132 / 158         | 740 / 888               | 94.9                    | 94.9 | 93.0 | 0.82                     | 248.3                          | 1704         | 6.4                               | 1.8                             | 2.0                              | 12.720            | 2050   |
| 355 MB-8   | 160 / 192         | 740 / 888               | 95.1                    | 95.1 | 93.2 | 0.82                     | 300.4                          | 2065         | 6.4                               | 1.8                             | 2.0                              | 14.160            | 2200   |
| 355 L-8    | 200 / 240         | 740 / 888               | 95.4                    | 95.4 | 93.5 | 0.83                     | 369.8                          | 2581         | 6.4                               | 1.8                             | 2.0                              | 16.560            | 2300   |

# ACA ALUMINUM HOUSING IE3

DIN EN 60034-30 | Premium High Efficiency (PHE)

2 poles, idle speed 3000 rpm230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 A-2     | 0.75 / 0.90       | 2880 / 3456             | 80.7                    | 80.7 | 79.1 | 0.82                     | 2.9 / 1.7                      | 2.5          | 7.0                               | 2.3                             | 2.3                              | 0.0010            | 8.8    |
| 80 B-2     | 1.10 / 1.32       | 2880 / 3456             | 82.7                    | 82.7 | 81.0 | 0.83                     | 4.1 / 2.3                      | 3.7          | 7.3                               | 2.3                             | 2.3                              | 0.0012            | 9.0    |
| 90 S-2     | 1.50 / 1.80       | 2895 / 3474             | 84.2                    | 84.2 | 82.5 | 0.84                     | 5.4 / 3.1                      | 4.9          | 7.6                               | 2.3                             | 2.3                              | 0.0015            | 13.5   |
| 90 L-2     | 2.20 / 2.64       | 2895 / 3474             | 85.9                    | 85.9 | 84.2 | 0.85                     | 7.7 / 4.4                      | 7.3          | 7.6                               | 2.3                             | 2.3                              | 0.0018            | 17.0   |
| 100 L-2    | 3.00 / 3.60       | 2895 / 3474             | 87.1                    | 87.1 | 85.4 | 0.87                     | 10.1 / 5.8                     | 9.9          | 7.8                               | 2.3                             | 2.3                              | 0.0033            | 23.2   |
| 112 M-2    | 4.00 / 4.80       | 2905 / 3486             | 88.1                    | 88.1 | 86.3 | 0.88                     | 13.1 / 7.6                     | 13.1         | 8.3                               | 2.3                             | 2.3                              | 0.0060            | 40.0   |
| 132 SA-2   | 5.50 / 6.60       | 2930 / 3516             | 89.2                    | 89.2 | 87.4 | 0.88                     | 17.8 / 10.3                    | 17.9         | 8.3                               | 2.2                             | 2.3                              | 0.0120            | 42.0   |
| 132 SB-2   | 7.50 / 9.00       | 2930 / 3516             | 90.1                    | 90.1 | 88.3 | 0.88                     | 24.1 / 13.8                    | 24.4         | 7.9                               | 2.2                             | 2.3                              | 0.0150            | 48.0   |

4 poles, idle speed 1500 rpm230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 B-4     | 0.75 / 0.90       | 1420 / 1704             | 82.5                    | 82.5 | 80.9 | 0.75                     | 3.1 / 1.8                      | 5.0          | 6.6                               | 2.3                             | 2.3                              | 0.0025            | 11.1   |
| 90 S-4     | 1.10 / 1.32       | 1445 / 1734             | 84.1                    | 84.1 | 82.4 | 0.76                     | 4.4 / 2.5                      | 7.3          | 6.8                               | 2.3                             | 2.3                              | 0.0030            | 15.0   |
| 90 L-4     | 1.50 / 1.80       | 1445 / 1734             | 85.3                    | 85.3 | 83.6 | 0.77                     | 5.8 / 3.3                      | 9.9          | 7.0                               | 2.3                             | 2.3                              | 0.0036            | 19.0   |
| 100 LA-4   | 2.20 / 2.64       | 1435 / 1722             | 86.7                    | 86.7 | 85.0 | 0.81                     | 8.0 / 4.6                      | 14.6         | 7.6                               | 2.3                             | 2.3                              | 0.0062            | 25.4   |
| 100 LB-4   | 3.00 / 3.60       | 1435 / 1722             | 87.7                    | 87.7 | 85.9 | 0.82                     | 10.6 / 6.1                     | 20.0         | 7.6                               | 2.3                             | 2.3                              | 0.0078            | 30.5   |
| 112 M-4    | 4.00 / 4.80       | 1440 / 1728             | 88.6                    | 88.6 | 86.8 | 0.82                     | 14.0 / 8.1                     | 26.5         | 7.8                               | 2.3                             | 2.3                              | 0.0110            | 37.0   |
| 132 S-4    | 5.50 / 6.60       | 1460 / 1752             | 89.6                    | 89.6 | 87.8 | 0.83                     | 18.8 / 10.8                    | 36.0         | 7.9                               | 2.0                             | 2.3                              | 0.0250            | 48.5   |
| 132 M-4    | 7.50 / 9.00       | 1460 / 1752             | 90.4                    | 90.4 | 88.6 | 0.84                     | 25.1 / 14.5                    | 49.1         | 7.5                               | 2.0                             | 2.3                              | 0.0340            | 60.0   |

# ACA ALUMINUM HOUSING IE3

DIN EN 60034-30 | Premium High Efficiency (PHE)

6 poles, idle speed 1000 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 90 S-6     | 0.75 / 0.90       | 935 / 1122              | 78.9                    | 78.9 | 77.3 | 0.71                     | 3.4 / 2.0                      | 7.7          | 6.0                               | 2.0                             | 2.1                              | 0.0035                | 14.0   |
| 90 L-6     | 1.10 / 1.32       | 945 / 1134              | 81.0                    | 81.0 | 79.4 | 0.73                     | 4.7 / 2.7                      | 11.1         | 6.0                               | 2.0                             | 2.1                              | 0.0047                | 18.0   |
| 100 L-6    | 1.50 / 1.80       | 949 / 1138              | 82.5                    | 82.5 | 80.9 | 0.73                     | 6.3 / 3.6                      | 15.1         | 6.5                               | 2.0                             | 2.1                              | 0.0090                | 29.5   |
| 112 M-6    | 2.20 / 2.64       | 955 / 1146              | 84.3                    | 84.3 | 82.6 | 0.74                     | 9.0 / 5.2                      | 22.0         | 6.6                               | 2.0                             | 2.1                              | 0.0150                | 32.0   |
| 132 S-6    | 3.00 / 3.60       | 968 / 1161              | 85.6                    | 85.6 | 83.9 | 0.74                     | 12.1 / 6.9                     | 29.6         | 6.8                               | 2.0                             | 2.1                              | 0.0300                | 43.0   |
| 132 MA-6   | 4.00 / 4.80       | 968 / 1161              | 86.8                    | 86.8 | 85.1 | 0.74                     | 15.9 / 9.1                     | 39.5         | 6.3                               | 2.0                             | 2.1                              | 0.0380                | 49.0   |
| 132 MB-6   | 5.50 / 6.60       | 968 / 1161              | 88.0                    | 88.0 | 86.2 | 0.75                     | 21.2 / 12.2                    | 54.3         | 7.0                               | 2.0                             | 2.1                              | 0.0430                | 59.0   |

8 poles, idle speed 750 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 100 LA-8   | 0.75 / 0.90       | 685 / 822               | 75.0                    | 75.0 | 73.5 | 0.67                     | 3.8 / 2.2                      | 10.5         | 4.0                               | 1.8                             | 2.0                              | 0.0085                | 29.0   |
| 100 LB-8   | 1.10 / 1.32       | 685 / 822               | 77.7                    | 77.7 | 76.1 | 0.69                     | 5.2 / 3.0                      | 15.3         | 5.0                               | 1.8                             | 2.0                              | 0.0095                | 30.5   |
| 112 M-8    | 1.50 / 1.80       | 695 / 834               | 79.7                    | 79.7 | 78.1 | 0.70                     | 6.8 / 3.9                      | 20.6         | 5.0                               | 1.8                             | 2.0                              | 0.0140                | 38.5   |
| 132 S-8    | 2.20 / 2.64       | 710 / 852               | 81.9                    | 81.9 | 80.3 | 0.71                     | 9.6 / 5.5                      | 29.6         | 6.0                               | 1.8                             | 2.0                              | 0.0350                | 49.5   |
| 132 M-8    | 3.00 / 3.60       | 710 / 852               | 83.5                    | 83.5 | 81.8 | 0.73                     | 12.5 / 7.2                     | 40.4         | 6.0                               | 1.8                             | 2.0                              | 0.0430                | 59.0   |

# ACM CAST IRON HOUSING IE3

DIN EN 60034-30 | Premium High Efficiency (PHE)

2 poles, idle speed 3000 rpm400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 MA-2   | 11.0 / 13.2       | 2945 / 3534             | 91.2                    | 91.2 | 89.4 | 0.89                     | 19.8                           | 35.7         | 8.1                               | 2.0                             | 2.3                              | 0.0400            | 113    |
| 160 MB-2   | 15.0 / 18.0       | 2945 / 3534             | 91.9                    | 91.9 | 90.1 | 0.89                     | 26.8                           | 48.6         | 8.1                               | 2.0                             | 2.3                              | 0.0500            | 123    |
| 160 L-2    | 18.5 / 22.2       | 2940 / 3528             | 92.4                    | 92.4 | 90.6 | 0.89                     | 32.9                           | 60.1         | 8.2                               | 2.0                             | 2.3                              | 0.0590            | 142    |
| 180 M-2    | 22.0 / 26.4       | 2955 / 3546             | 92.7                    | 92.7 | 90.8 | 0.89                     | 39.0                           | 71.1         | 8.2                               | 2.0                             | 2.3                              | 0.0930            | 182    |
| 200 LA-2   | 30.0 / 36.0       | 2960 / 3552             | 93.3                    | 93.3 | 91.4 | 0.89                     | 52.9                           | 96.8         | 7.6                               | 2.0                             | 2.3                              | 0.1400            | 246    |
| 200 LB-2   | 37.0 / 44.4       | 2960 / 3552             | 93.7                    | 93.7 | 91.8 | 0.89                     | 65.0                           | 119.4        | 7.6                               | 2.0                             | 2.3                              | 0.1630            | 265    |
| 225 M-2    | 45.0 / 54.0       | 2965 / 3558             | 94.0                    | 94.0 | 92.1 | 0.90                     | 77.9                           | 144.9        | 7.7                               | 2.0                             | 2.3                              | 0.2450            | 323    |
| 250 M-2    | 55.0 / 66.0       | 2970 / 3564             | 94.3                    | 94.3 | 92.4 | 0.90                     | 94.9                           | 176.9        | 7.7                               | 2.0                             | 2.3                              | 0.3300            | 413    |
| 280 S-2    | 75.0 / 90.0       | 2975 / 3570             | 94.7                    | 94.7 | 92.8 | 0.90                     | 128.8                          | 240.8        | 7.1                               | 1.8                             | 2.3                              | 0.6500            | 546    |
| 280 M-2    | 90.0 / 108        | 2975 / 3570             | 95.0                    | 95.0 | 93.1 | 0.90                     | 154.1                          | 288.9        | 7.1                               | 1.8                             | 2.3                              | 0.7100            | 569    |
| 315 S-2    | 110 / 132         | 2978 / 3573             | 95.2                    | 95.2 | 93.3 | 0.90                     | 188.0                          | 352.8        | 7.1                               | 1.8                             | 2.3                              | 1.3000            | 897    |
| 315 M-2    | 132 / 158         | 2978 / 3573             | 95.4                    | 95.4 | 93.5 | 0.90                     | 225.1                          | 423.3        | 7.1                               | 1.8                             | 2.3                              | 2.0000            | 1029   |
| 315 LA-2   | 160 / 192         | 2980 / 3576             | 95.6                    | 95.6 | 93.7 | 0.91                     | 269.3                          | 512.8        | 7.2                               | 1.8                             | 2.3                              | 2.3500            | 1067   |
| 315 LB-2   | 200 / 240         | 2980 / 3576             | 95.8                    | 95.8 | 93.9 | 0.91                     | 335.9                          | 640.9        | 7.2                               | 1.8                             | 2.2                              | 2.7000            | 1194   |
| 355 M-2    | 250 / 300         | 2982 / 3578             | 95.8                    | 95.8 | 93.9 | 0.91                     | 419.8                          | 800.6        | 7.2                               | 1.6                             | 2.2                              | 3.4000            | 1685   |
| 355 L-2    | 315 / 378         | 2982 / 3578             | 95.8                    | 95.8 | 93.9 | 0.91                     | 529.0                          | 1009         | 7.2                               | 1.6                             | 2.2                              | 3.9000            | 1734   |

4 poles, idle speed 1500 rpm400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 M-4    | 11.0 / 13.2       | 1465 / 1758             | 91.4                    | 91.4 | 89.6 | 0.85                     | 20.7                           | 71.7         | 7.7                               | 2.2                             | 2.3                              | 0.0810            | 121    |
| 160 L-4    | 15.0 / 18.0       | 1465 / 1758             | 92.1                    | 92.1 | 90.3 | 0.86                     | 27.7                           | 97.8         | 7.8                               | 2.2                             | 2.3                              | 0.0950            | 142    |
| 180 M-4    | 18.5 / 22.2       | 1470 / 1764             | 92.6                    | 92.6 | 90.7 | 0.86                     | 34.0                           | 120.2        | 7.8                               | 2.0                             | 2.3                              | 0.1410            | 181    |
| 180 L-4    | 22.0 / 26.4       | 1470 / 1764             | 93.0                    | 93.0 | 91.1 | 0.86                     | 40.3                           | 142.9        | 7.8                               | 2.0                             | 2.3                              | 0.1680            | 209    |
| 200 L-4    | 30.0 / 36.0       | 1475 / 1770             | 93.6                    | 93.6 | 91.7 | 0.86                     | 54.6                           | 194.2        | 7.3                               | 2.0                             | 2.3                              | 0.2750            | 284    |
| 225 S-4    | 37.0 / 44.4       | 1485 / 1782             | 93.9                    | 93.9 | 92.0 | 0.86                     | 67.1                           | 237.9        | 7.4                               | 2.0                             | 2.3                              | 0.4300            | 328    |
| 225 M-4    | 45.0 / 54.0       | 1485 / 1782             | 94.2                    | 94.2 | 92.3 | 0.86                     | 81.3                           | 289.4        | 7.4                               | 2.0                             | 2.3                              | 0.4900            | 363    |
| 250 M-4    | 55.0 / 66.0       | 1485 / 1782             | 94.6                    | 94.6 | 92.7 | 0.86                     | 99.0                           | 353.7        | 7.4                               | 2.2                             | 2.3                              | 0.6900            | 442    |
| 280 S-4    | 75.0 / 90.0       | 1486 / 1783             | 95.0                    | 95.0 | 93.1 | 0.88                     | 131.3                          | 482.0        | 6.9                               | 2.0                             | 2.3                              | 1.2100            | 569    |
| 280 M-4    | 90.0 / 108        | 1486 / 1783             | 95.2                    | 95.2 | 93.3 | 0.88                     | 157.3                          | 578.4        | 6.9                               | 2.0                             | 2.3                              | 1.4800            | 639    |
| 315 S-4    | 110 / 132         | 1488 / 1785             | 95.4                    | 95.4 | 93.5 | 0.89                     | 189.7                          | 706.0        | 7.0                               | 2.0                             | 2.2                              | 3.4800            | 939    |
| 315 M-4    | 132 / 158         | 1488 / 1785             | 95.6                    | 95.6 | 93.7 | 0.89                     | 227.1                          | 847.2        | 7.0                               | 2.0                             | 2.2                              | 3.6500            | 1033   |
| 315 LA-4   | 160 / 192         | 1488 / 1785             | 95.8                    | 95.8 | 93.9 | 0.89                     | 274.7                          | 1027         | 7.1                               | 2.0                             | 2.2                              | 4.2000            | 1126   |
| 315 LB-4   | 200 / 240         | 1490 / 1788             | 96.0                    | 96.0 | 94.1 | 0.90                     | 338.9                          | 1282         | 7.1                               | 2.0                             | 2.2                              | 5.0000            | 1238   |
| 355 M-4    | 250 / 300         | 1490 / 1788             | 96.0                    | 96.0 | 94.1 | 0.90                     | 423.6                          | 1602         | 7.1                               | 2.0                             | 2.2                              | 6.9000            | 1830   |
| 355 L-4    | 315 / 378         | 1490 / 1788             | 96.0                    | 96.0 | 94.1 | 0.90                     | 533.8                          | 2019         | 7.1                               | 2.0                             | 2.2                              | 8.7000            | 1950   |

# ACM CAST IRON HOUSING IE3

DIN EN 60034-30 | Premium High Efficiency (PHE)

6 poles, idle speed 1000 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 M-6    | 7.50 / 9.00       | 970 / 1164              | 89.1                    | 89.1 | 87.3 | 0.79                     | 15.6                           | 73.8         | 6.7                               | 2.0                             | 2.1                              | 0.0950            | 112    |
| 160 L-6    | 11.0 / 13.2       | 970 / 1164              | 90.3                    | 90.3 | 88.5 | 0.80                     | 22.3                           | 108.3        | 7.2                               | 2.0                             | 2.1                              | 0.1200            | 134    |
| 180 L-6    | 15.0 / 18.0       | 978 / 1173              | 91.2                    | 91.2 | 89.4 | 0.81                     | 29.7                           | 146.5        | 7.3                               | 2.0                             | 2.1                              | 0.2200            | 197    |
| 200 LA-6   | 18.5 / 22.2       | 980 / 1176              | 91.7                    | 91.7 | 89.9 | 0.81                     | 43.1                           | 180.3        | 7.3                               | 2.0                             | 2.1                              | 0.3700            | 234    |
| 200 LB-6   | 22.0 / 26.4       | 980 / 1176              | 92.2                    | 92.2 | 90.4 | 0.81                     | 57.0                           | 214.4        | 7.4                               | 2.0                             | 2.1                              | 0.4200            | 251    |
| 225 M-6    | 30.0 / 36.0       | 980 / 1176              | 92.9                    | 92.9 | 91.0 | 0.83                     | 69.1                           | 292.3        | 6.9                               | 2.0                             | 2.1                              | 0.5500            | 308    |
| 250 M-6    | 37.0 / 44.4       | 985 / 1182              | 93.3                    | 93.3 | 91.4 | 0.84                     | 82.7                           | 358.7        | 7.1                               | 2.0                             | 2.1                              | 0.8400            | 383    |
| 280 S-6    | 45.0 / 54.0       | 985 / 1182              | 93.7                    | 93.7 | 91.8 | 0.85                     | 99.5                           | 436.3        | 7.3                               | 2.0                             | 2.0                              | 1.4200            | 501    |
| 280 M-6    | 55.0 / 66.0       | 985 / 1182              | 94.1                    | 94.1 | 92.2 | 0.86                     | 138.2                          | 533.2        | 7.3                               | 2.0                             | 2.0                              | 1.7000            | 573    |
| 315 S-6    | 75.0 / 90.0       | 985 / 1182              | 94.6                    | 94.6 | 92.7 | 0.84                     | 163.3                          | 727.2        | 6.6                               | 2.0                             | 2.0                              | 4.2000            | 843    |
| 315 M-6    | 90.0 / 108        | 988 / 1185              | 94.9                    | 94.9 | 93.0 | 0.85                     | 186.4                          | 869.9        | 6.7                               | 2.0                             | 2.0                              | 4.9000            | 941    |
| 315 LA-6   | 110 / 132         | 988 / 1185              | 95.1                    | 95.1 | 93.2 | 0.85                     | 199.2                          | 1063         | 6.7                               | 2.0                             | 2.0                              | 5.5000            | 1017   |
| 315 LB-6   | 132 / 158         | 988 / 1185              | 95.4                    | 95.4 | 93.5 | 0.86                     | 235.5                          | 1276         | 6.8                               | 2.0                             | 2.0                              | 6.5000            | 1121   |
| 355 MA-6   | 160 / 192         | 990 / 1188              | 95.6                    | 95.6 | 93.7 | 0.86                     | 284.9                          | 1543         | 6.8                               | 1.8                             | 2.0                              | 10.100            | 1715   |
| 355 MB-6   | 200 / 240         | 990 / 1188              | 95.8                    | 95.8 | 93.9 | 0.87                     | 351.3                          | 1929         | 6.8                               | 1.8                             | 2.0                              | 11.200            | 1846   |
| 355 L-6    | 250 / 300         | 990 / 1188              | 95.8                    | 95.8 | 93.9 | 0.87                     | 439.1                          | 2412         | 6.8                               | 1.8                             | 2.0                              | 13.000            | 2085   |

8 poles, idle speed 750 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 MA-8   | 4.00 / 4.80       | 725 / 870               | 84.8                    | 84.8 | 83.1 | 0.73                     | 9.3                            | 52.7         | 6.0                               | 1.9                             | 2.0                              | 0.0930            | 101    |
| 160 MB-8   | 5.50 / 6.60       | 725 / 870               | 86.2                    | 86.2 | 84.5 | 0.74                     | 12.4                           | 72.4         | 6.0                               | 1.9                             | 2.0                              | 0.1050            | 126.5  |
| 160 L-8    | 7.50 / 9.00       | 725 / 870               | 87.3                    | 87.3 | 85.6 | 0.75                     | 16.5                           | 98.8         | 6.0                               | 1.9                             | 2.0                              | 0.1200            | 136    |
| 180 L-8    | 11.0 / 13.2       | 735 / 882               | 88.6                    | 88.6 | 86.8 | 0.75                     | 23.9                           | 142.9        | 6.5                               | 2.0                             | 2.0                              | 0.2200            | 198    |
| 200 L-8    | 15.0 / 18.0       | 730 / 876               | 89.6                    | 89.6 | 87.8 | 0.76                     | 31.8                           | 196.2        | 6.6                               | 2.0                             | 2.0                              | 0.3900            | 234    |
| 225 S-8    | 18.5 / 22.2       | 730 / 876               | 90.1                    | 90.1 | 85.3 | 0.76                     | 39.0                           | 242.0        | 6.6                               | 1.9                             | 2.0                              | 0.5100            | 284    |
| 225 M-8    | 22.0 / 26.4       | 730 / 876               | 90.6                    | 90.6 | 88.8 | 0.78                     | 44.9                           | 287.8        | 6.6                               | 1.9                             | 2.0                              | 0.5900            | 325    |
| 250 M-8    | 30.0 / 36.0       | 735 / 882               | 91.3                    | 91.3 | 89.5 | 0.79                     | 60.0                           | 389.8        | 6.5                               | 1.9                             | 2.0                              | 0.8200            | 425    |
| 280 S-8    | 37.0 / 44.4       | 735 / 882               | 91.8                    | 91.8 | 90.0 | 0.79                     | 73.6                           | 480.7        | 6.6                               | 1.9                             | 2.0                              | 1.4200            | 518    |
| 280 M-8    | 45.0 / 54.0       | 735 / 882               | 92.2                    | 92.2 | 90.4 | 0.79                     | 89.2                           | 584.7        | 6.6                               | 1.9                             | 2.0                              | 1.7000            | 582    |
| 315 S-8    | 55.0 / 66.0       | 735 / 882               | 92.5                    | 92.5 | 90.7 | 0.81                     | 106.0                          | 714.6        | 6.6                               | 1.8                             | 2.0                              | 4.6000            | 852    |
| 315 M-8    | 75.0 / 90.0       | 735 / 882               | 93.1                    | 93.1 | 91.2 | 0.81                     | 144.0                          | 974.5        | 6.2                               | 1.8                             | 2.0                              | 5.5000            | 952    |
| 315 LA-8   | 90.0 / 108        | 735 / 882               | 93.4                    | 93.4 | 91.5 | 0.82                     | 170.0                          | 1169         | 6.4                               | 1.8                             | 2.0                              | 6.3000            | 1040   |
| 315 LB-8   | 110 / 132         | 735 / 882               | 93.7                    | 93.7 | 91.8 | 0.82                     | 207.0                          | 1429         | 6.4                               | 1.8                             | 2.0                              | 7.2000            | 1056   |
| 355 MA-8   | 132 / 158         | 740 / 888               | 94.0                    | 94.0 | 92.1 | 0.82                     | 247.0                          | 1704         | 6.4                               | 1.8                             | 2.0                              | 10.600            | 1784   |
| 355 MB-8   | 160 / 192         | 740 / 888               | 94.3                    | 94.3 | 92.4 | 0.82                     | 299.0                          | 2065         | 6.4                               | 1.8                             | 2.0                              | 11.800            | 1941   |
| 355 L-8    | 200 / 240         | 740 / 888               | 94.6                    | 94.6 | 92.7 | 0.83                     | 368.0                          | 2581         | 6.4                               | 1.8                             | 2.0                              | 13.800            | 2026   |

# ACA ALUMINUM HOUSING IE2

DIN EN 60034-30 | High Efficiency (HE)

2 poles, idle speed 3000 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 A-2     | 0.75 / 0.90       | 2875 / 3450             | 77.4                    | 77.4 | 75.9 | 0.83                     | 3.0 / 1.7                      | 2.5          | 6.8                               | 2.3                             | 2.3                              | 0.0008            | 8.9    |
| 80 B-2     | 1.10 / 1.32       | 2875 / 3450             | 79.6                    | 79.6 | 78.0 | 0.84                     | 4.2 / 2.4                      | 3.7          | 7.1                               | 2.3                             | 2.3                              | 0.0009            | 10.0   |
| 90 S-2     | 1.50 / 1.80       | 2890 / 3468             | 81.3                    | 81.3 | 79.7 | 0.84                     | 5.6 / 3.2                      | 5.0          | 7.3                               | 2.3                             | 2.3                              | 0.0012            | 12.5   |
| 90 L-2     | 2.20 / 2.64       | 2890 / 3468             | 83.2                    | 83.2 | 81.5 | 0.85                     | 7.9 / 4.6                      | 7.3          | 7.6                               | 2.3                             | 2.3                              | 0.0015            | 15.2   |
| 100 L-2    | 3.00 / 3.60       | 2891 / 3469             | 84.6                    | 84.6 | 82.9 | 0.87                     | 10.4 / 6.0                     | 9.9          | 7.8                               | 2.2                             | 2.3                              | 0.0028            | 21.5   |
| 112 M-2    | 4.00 / 4.80       | 2914 / 3496             | 85.8                    | 85.8 | 84.1 | 0.88                     | 13.5 / 7.8                     | 13.1         | 8.1                               | 2.2                             | 2.3                              | 0.0050            | 26.0   |
| 132 SA-2   | 5.50 / 6.60       | 2937 / 3524             | 87.0                    | 87.0 | 85.3 | 0.86                     | 18.7 / 10.8                    | 17.9         | 8.2                               | 2.2                             | 2.3                              | 0.0100            | 38.2   |
| 132 SB-2   | 7.50 / 9.00       | 2940 / 3528             | 88.1                    | 88.1 | 86.3 | 0.88                     | 24.6 / 14.2                    | 24.4         | 7.8                               | 2.2                             | 2.3                              | 0.0120            | 44.0   |

4 poles, idle speed 1500 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 B-4     | 0.75 / 0.90       | 1400 / 1680             | 79.6                    | 79.6 | 78.0 | 0.76                     | 3.2 / 1.8                      | 5.1          | 6.4                               | 2.3                             | 2.3                              | 0.0022            | 10.8   |
| 90 S-4     | 1.10 / 1.32       | 1440 / 1728             | 81.4                    | 81.4 | 79.8 | 0.76                     | 4.5 / 2.6                      | 7.3          | 6.6                               | 2.3                             | 2.3                              | 0.0024            | 13.8   |
| 90 L-4     | 1.50 / 1.80       | 1445 / 1734             | 82.8                    | 82.8 | 81.1 | 0.77                     | 6.0 / 3.4                      | 9.9          | 6.7                               | 2.3                             | 2.3                              | 0.0030            | 15.8   |
| 100 LA-4   | 2.20 / 2.64       | 1440 / 1728             | 84.3                    | 84.3 | 82.6 | 0.81                     | 8.2 / 4.7                      | 14.6         | 7.3                               | 2.3                             | 2.3                              | 0.0056            | 22.4   |
| 100 LB-4   | 3.00 / 3.60       | 1440 / 1728             | 85.5                    | 85.5 | 83.8 | 0.82                     | 10.9 / 6.3                     | 19.9         | 7.5                               | 2.3                             | 2.3                              | 0.0068            | 24.0   |
| 112 M-4    | 4.00 / 4.80       | 1445 / 1734             | 86.6                    | 86.6 | 84.9 | 0.82                     | 14.3 / 8.2                     | 26.4         | 7.5                               | 2.3                             | 2.3                              | 0.0095            | 35.0   |
| 132 S-4    | 5.50 / 6.60       | 1455 / 1746             | 87.7                    | 87.7 | 85.9 | 0.83                     | 19.2 / 11.1                    | 36.1         | 7.5                               | 2.0                             | 2.3                              | 0.0220            | 43.0   |
| 132 M-4    | 7.50 / 9.00       | 1455 / 1746             | 88.7                    | 88.7 | 86.9 | 0.84                     | 25.6 / 14.7                    | 49.2         | 7.3                               | 2.0                             | 2.3                              | 0.0300            | 54.0   |

# ACA ALUMINUM HOUSING IE2

DIN EN 60034-30 | High Efficiency (HE)

6 poles, idle speed 1000 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 90 S-6     | 0.75 / 0.90       | 934 / 1120              | 75.9                    | 75.9 | 74.4 | 0.72                     | 3.5 / 2.0                      | 7.7          | 5.3                               | 2.0                             | 2.1                              | 0.0030            | 12.5   |
| 90 L-6     | 1.10 / 1.32       | 945 / 1134              | 78.1                    | 78.1 | 76.5 | 0.72                     | 5.0 / 2.9                      | 11.1         | 5.0                               | 2.0                             | 2.1                              | 0.0040            | 16.6   |
| 100 L-6    | 1.50 / 1.80       | 945 / 1134              | 79.8                    | 79.8 | 78.2 | 0.72                     | 6.6 / 3.8                      | 15.2         | 5.5                               | 2.0                             | 2.1                              | 0.0082            | 22.5   |
| 112 M-6    | 2.20 / 2.64       | 960 / 1152              | 81.8                    | 81.8 | 80.2 | 0.76                     | 9.0 / 5.2                      | 21.9         | 5.5                               | 2.0                             | 2.1                              | 0.0140            | 27.5   |
| 132 S-6    | 3.00 / 3.60       | 964 / 1156              | 83.3                    | 83.3 | 81.6 | 0.76                     | 12.1 / 6.9                     | 29.7         | 6.5                               | 2.0                             | 2.1                              | 0.0290            | 41.5   |
| 132 MA-6   | 4.00 / 4.80       | 965 / 1158              | 84.6                    | 84.6 | 82.9 | 0.76                     | 15.8 / 9.1                     | 39.6         | 6.5                               | 2.0                             | 2.1                              | 0.0360            | 49.0   |
| 132 MB-6   | 5.50 / 6.60       | 965 / 1158              | 86.0                    | 86.3 | 84.3 | 0.77                     | 21.1 / 12.2                    | 54.4         | 6.5                               | 2.0                             | 2.1                              | 0.0400            | 52.5   |

8 poles, idle speed 750 rpm

230/400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 100 LA-8   | 0.75 / 0.90       | 685 / 822               | 66.2                    | 66.2 | 64.9 | 0.67                     | 4.3 / 2.5                      | 10.5         | 4.0                               | 1.8                             | 2.0                              | 0.0092            | 25.2   |
| 100 LB-8   | 1.10 / 1.32       | 685 / 822               | 70.8                    | 70.8 | 69.4 | 0.69                     | 5.7 / 3.3                      | 15.3         | 5.0                               | 1.8                             | 2.0                              | 0.0120            | 26.5   |
| 112 M-8    | 1.50 / 1.80       | 695 / 834               | 74.1                    | 74.1 | 72.6 | 0.70                     | 7.4 / 4.2                      | 20.6         | 5.0                               | 1.8                             | 2.0                              | 0.0246            | 33.5   |
| 132 S-8    | 2.20 / 2.64       | 710 / 852               | 77.6                    | 77.6 | 76.0 | 0.71                     | 10.2 / 5.8                     | 29.6         | 6.0                               | 1.8                             | 2.0                              | 0.0315            | 43.2   |
| 132 M-8    | 3.00 / 3.60       | 710 / 852               | 80.0                    | 80.0 | 78.4 | 0.73                     | 13.1 / 7.5                     | 40.4         | 6.0                               | 1.8                             | 2.0                              | 0.0396            | 51.5   |

# ACM CAST IRON HOUSING IE2

DIN EN 60034-30 | High Efficiency (HE)

2 poles, idle speed 3000 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 MA-2   | 11.0 / 13.2       | 2930 / 3516             | 89.4                    | 89.4 | 87.6 | 0.89                     | 20.0                           | 35.9         | 7.9                               | 2.2                             | 2.3                              | 0.0385            | 108    |
| 160 MB-2   | 15.0 / 18.0       | 2930 / 3516             | 90.3                    | 90.3 | 88.5 | 0.89                     | 26.9                           | 48.9         | 7.9                               | 2.2                             | 2.3                              | 0.0466            | 122    |
| 160 L-2    | 18.5 / 22.2       | 2937 / 3524             | 90.9                    | 90.9 | 89.1 | 0.89                     | 33.0                           | 60.2         | 8.0                               | 2.2                             | 2.3                              | 0.0550            | 140    |
| 180 M-2    | 22.0 / 26.4       | 2940 / 3528             | 91.3                    | 91.3 | 89.5 | 0.88                     | 39.5                           | 71.5         | 8.1                               | 2.2                             | 2.3                              | 0.0810            | 178    |
| 200 LA-2   | 30.0 / 36.0       | 2950 / 3540             | 92.0                    | 92.0 | 90.2 | 0.88                     | 53.5                           | 97.1         | 7.5                               | 2.0                             | 2.3                              | 0.1250            | 229    |
| 200 LB-2   | 37.0 / 44.4       | 2950 / 3540             | 92.5                    | 92.5 | 90.7 | 0.89                     | 64.9                           | 119.8        | 7.5                               | 2.0                             | 2.3                              | 0.1450            | 249    |
| 225 M-2    | 45.0 / 54.0       | 2960 / 3552             | 92.9                    | 92.9 | 91.0 | 0.89                     | 78.6                           | 145.2        | 7.5                               | 2.2                             | 2.3                              | 0.2280            | 322    |
| 250 M-2    | 55.0 / 66.0       | 2965 / 3558             | 93.2                    | 93.2 | 91.3 | 0.90                     | 94.6                           | 177.2        | 7.6                               | 2.2                             | 2.3                              | 0.3050            | 401    |
| 280 S-2    | 75.0 / 90.0       | 2970 / 3564             | 93.8                    | 93.8 | 91.9 | 0.90                     | 126.8                          | 241.2        | 6.9                               | 1.8                             | 2.3                              | 0.6000            | 533    |
| 280 M-2    | 90.0 / 108        | 2970 / 3564             | 94.1                    | 94.1 | 92.2 | 0.91                     | 151.7                          | 289.4        | 6.9                               | 1.8                             | 2.3                              | 0.6860            | 568    |
| 315 S-2    | 110 / 132         | 2975 / 3570             | 94.3                    | 94.3 | 92.4 | 0.91                     | 185.0                          | 353.1        | 7.0                               | 1.8                             | 2.2                              | 1.1700            | 914    |
| 315 M-2    | 132 / 158         | 2975 / 3570             | 94.6                    | 94.6 | 92.7 | 0.91                     | 221.3                          | 423.7        | 7.0                               | 1.8                             | 2.2                              | 1.8000            | 1029   |
| 315 LA-2   | 160 / 192         | 2975 / 3570             | 94.8                    | 94.8 | 92.9 | 0.92                     | 264.8                          | 513.6        | 7.1                               | 1.8                             | 2.2                              | 2.1200            | 1067   |
| 315 LB-2   | 200 / 240         | 2975 / 3570             | 95.0                    | 95.0 | 93.1 | 0.92                     | 330.3                          | 642.0        | 7.1                               | 1.8                             | 2.2                              | 2.5000            | 1194   |
| 355 M-2    | 250 / 300         | 2980 / 3576             | 95.0                    | 95.0 | 93.1 | 0.92                     | 412.9                          | 801.2        | 7.1                               | 1.6                             | 2.2                              | 3.1000            | 1597   |
| 355 L-2    | 315 / 378         | 2980 / 3576             | 95.0                    | 95.0 | 93.1 | 0.92                     | 520.2                          | 1009.5       | 7.2                               | 1.6                             | 2.2                              | 3.6000            | 1702   |

4 poles, idle speed 1500 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 M-4    | 11.0 / 13.2       | 1460 / 1752             | 89.8                    | 89.8 | 88.0 | 0.84                     | 21.0                           | 72.0         | 6.9                               | 2.1                             | 2.8                              | 0.0740            | 114    |
| 160 L-4    | 15.0 / 18.0       | 1460 / 1752             | 90.6                    | 90.6 | 88.8 | 0.85                     | 28.1                           | 98.1         | 7.5                               | 2.1                             | 2.8                              | 0.0918            | 136    |
| 180 M-4    | 18.5 / 22.2       | 1470 / 1764             | 91.2                    | 91.2 | 89.4 | 0.86                     | 34.0                           | 120.2        | 7.8                               | 2.1                             | 2.8                              | 0.1350            | 176    |
| 180 L-4    | 22.0 / 26.4       | 1470 / 1764             | 91.6                    | 91.6 | 89.8 | 0.86                     | 40.3                           | 142.9        | 7.5                               | 2.1                             | 2.8                              | 0.1600            | 196    |
| 200 L-4    | 30.0 / 36.0       | 1470 / 1764             | 92.3                    | 92.3 | 90.5 | 0.86                     | 54.5                           | 194.9        | 7.1                               | 2.0                             | 2.8                              | 0.2650            | 259    |
| 225 S-4    | 37.0 / 44.4       | 1480 / 1776             | 92.7                    | 92.7 | 90.8 | 0.87                     | 66.2                           | 238.8        | 7.5                               | 2.0                             | 2.5                              | 0.4200            | 302    |
| 225 M-4    | 45.0 / 54.0       | 1480 / 1776             | 93.1                    | 93.1 | 91.2 | 0.87                     | 80.2                           | 290.4        | 7.6                               | 1.8                             | 2.5                              | 0.4700            | 329    |
| 250 M-4    | 55.0 / 66.0       | 1480 / 1776             | 93.5                    | 93.5 | 91.6 | 0.87                     | 97.6                           | 354.9        | 7.3                               | 1.8                             | 2.5                              | 0.6600            | 418    |
| 280 S-4    | 75.0 / 90.0       | 1480 / 1776             | 94.0                    | 94.0 | 92.1 | 0.87                     | 132.4                          | 484.0        | 7.6                               | 1.8                             | 2.2                              | 1.1400            | 546    |
| 280 M-4    | 90.0 / 108        | 1480 / 1776             | 94.2                    | 94.2 | 92.3 | 0.87                     | 158.5                          | 580.7        | 7.5                               | 1.8                             | 2.2                              | 1.4200            | 638    |
| 315 S-4    | 110 / 132         | 1485 / 1782             | 94.5                    | 94.5 | 92.6 | 0.88                     | 190.9                          | 707.4        | 7.1                               | 1.8                             | 2.2                              | 3.4000            | 939    |
| 315 M-4    | 132 / 158         | 1485 / 1782             | 94.7                    | 94.7 | 92.8 | 0.88                     | 228.6                          | 848.9        | 7.3                               | 1.8                             | 2.2                              | 3.5800            | 1033   |
| 315 LA-4   | 160 / 192         | 1485 / 1782             | 94.9                    | 94.9 | 93.0 | 0.89                     | 273.4                          | 1029         | 7.4                               | 1.8                             | 2.2                              | 4.1000            | 1126   |
| 315 LB-4   | 200 / 240         | 1485 / 1782             | 95.1                    | 95.1 | 93.2 | 0.89                     | 341.1                          | 1286         | 7.6                               | 1.8                             | 2.2                              | 4.9000            | 1229   |
| 355 M-4    | 250 / 300         | 1490 / 1788             | 95.1                    | 95.1 | 93.2 | 0.90                     | 421.6                          | 1602         | 7.5                               | 1.8                             | 2.2                              | 6.7000            | 1670   |
| 355 L-4    | 315 / 378         | 1490 / 1788             | 95.1                    | 95.1 | 93.2 | 0.90                     | 531.2                          | 2019         | 7.4                               | 1.8                             | 2.2                              | 8.4000            | 2848   |

# ACM CAST IRON HOUSING IE2

DIN EN 60034-30 | High Efficiency (HE)

6 poles, idle speed 1000 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 M-6    | 7.50 / 9.00       | 970 / 1164              | 87.2                    | 87.2 | 85.5 | 0.78                     | 15.9                           | 73.8         | 6.8                               | 2.0                             | 2.1                              | 0.0880            | 112    |
| 160 L-6    | 11.0 / 13.2       | 970 / 1164              | 88.7                    | 88.7 | 86.9 | 0.78                     | 22.9                           | 108.3        | 6.9                               | 2.0                             | 2.1                              | 0.1150            | 133    |
| 180 L-6    | 15.0 / 18.0       | 975 / 1170              | 89.7                    | 89.7 | 87.9 | 0.81                     | 29.8                           | 146.9        | 7.3                               | 2.0                             | 2.1                              | 0.2100            | 183    |
| 200 LA-6   | 18.5 / 22.2       | 980 / 1176              | 90.4                    | 90.4 | 88.6 | 0.81                     | 36.5                           | 180.3        | 7.2                               | 2.0                             | 2.1                              | 0.3100            | 224    |
| 200 LB-6   | 22.0 / 26.4       | 980 / 1176              | 90.9                    | 90.9 | 89.1 | 0.83                     | 42.1                           | 214.4        | 7.3                               | 2.0                             | 2.1                              | 0.3500            | 240    |
| 225 M-6    | 30.0 / 36.0       | 980 / 1176              | 91.7                    | 91.7 | 89.9 | 0.84                     | 56.2                           | 292.3        | 6.8                               | 2.1                             | 2.1                              | 0.5340            | 285    |
| 250 M-6    | 37.0 / 44.4       | 980 / 1176              | 92.2                    | 92.2 | 90.4 | 0.86                     | 67.4                           | 360.6        | 7.0                               | 2.0                             | 2.1                              | 0.8250            | 389    |
| 280 S-6    | 45.0 / 54.0       | 980 / 1176              | 92.7                    | 92.7 | 90.8 | 0.86                     | 81.5                           | 438.5        | 7.2                               | 2.0                             | 2.0                              | 1.3500            | 489    |
| 280 M-6    | 55.0 / 66.0       | 980 / 1176              | 93.1                    | 93.1 | 91.8 | 0.86                     | 99.1                           | 536.0        | 7.2                               | 2.0                             | 2.0                              | 1.6000            | 550    |
| 315 S-6    | 75.0 / 90.0       | 985 / 1182              | 93.7                    | 93.7 | 93.9 | 0.86                     | 134.3                          | 727.2        | 6.5                               | 2.0                             | 2.0                              | 4.0000            | 838    |
| 315 M-6    | 90.0 / 108        | 985 / 1182              | 94.0                    | 94.0 | 92.1 | 0.86                     | 160.7                          | 872.6        | 6.6                               | 2.0                             | 2.0                              | 4.6000            | 941    |
| 315 LA-6   | 110 / 132         | 985 / 1182              | 94.3                    | 94.3 | 92.5 | 0.86                     | 195.8                          | 1066         | 6.6                               | 2.0                             | 2.0                              | 5.2500            | 986    |
| 315 LB-6   | 132 / 158         | 985 / 1182              | 94.6                    | 94.6 | 92.7 | 0.87                     | 231.5                          | 1280         | 6.6                               | 2.0                             | 2.0                              | 6.2000            | 1121   |
| 355 MA-6   | 160 / 192         | 990 / 1188              | 94.8                    | 94.8 | 92.9 | 0.88                     | 276.8                          | 1543         | 6.7                               | 2.0                             | 2.0                              | 9.6000            | 1650   |
| 355 MB-6   | 200 / 240         | 990 / 1188              | 95.0                    | 95.0 | 93.1 | 0.88                     | 345.3                          | 1929         | 6.8                               | 2.0                             | 2.0                              | 10.800            | 1752   |
| 355 L-6    | 250 / 300         | 990 / 1188              | 95.0                    | 95.0 | 93.1 | 0.88                     | 431.6                          | 2412         | 6.8                               | 2.0                             | 2.0                              | 12.500            | 1990   |

8 poles, idle speed 750 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 160 MA-8   | 4.00 / 4.80       | 725 / 870               | 81.9                    | 81.9 | 80.3 | 0.73                     | 9.7                            | 52.7         | 6.0                               | 1.9                             | 2.0                              | 0.0480            | 92     |
| 160 MB-8   | 5.50 / 6.60       | 725 / 870               | 83.8                    | 83.8 | 82.1 | 0.74                     | 12.8                           | 72.4         | 6.0                               | 1.9                             | 2.0                              | 0.0600            | 115    |
| 160 L-8    | 7.50 / 9.00       | 725 / 870               | 85.3                    | 85.3 | 83.6 | 0.75                     | 16.9                           | 98.8         | 6.0                               | 1.9                             | 2.0                              | 0.0708            | 124    |
| 180 L-8    | 11.0 / 13.2       | 735 / 882               | 86.9                    | 86.9 | 85.2 | 0.75                     | 24.4                           | 142.9        | 6.5                               | 2.0                             | 2.0                              | 0.1116            | 180    |
| 200 L-8    | 15.0 / 18.0       | 730 / 876               | 88.0                    | 88.0 | 86.2 | 0.76                     | 32.4                           | 196.2        | 6.6                               | 2.0                             | 2.0                              | 0.1680            | 213    |
| 225 S-8    | 18.5 / 22.2       | 730 / 876               | 88.6                    | 88.6 | 86.8 | 0.76                     | 39.7                           | 242.0        | 6.6                               | 1.9                             | 2.0                              | 0.1956            | 263    |
| 225 M-8    | 22.0 / 26.4       | 730 / 876               | 89.1                    | 89.1 | 87.3 | 0.78                     | 45.7                           | 287.8        | 6.6                               | 1.9                             | 2.0                              | 0.2940            | 301    |
| 250 M-8    | 30.0 / 36.0       | 735 / 882               | 89.8                    | 89.8 | 88.0 | 0.79                     | 61.0                           | 389.8        | 6.5                               | 1.9                             | 2.0                              | 0.3960            | 394    |
| 280 S-8    | 37.0 / 44.4       | 735 / 882               | 90.3                    | 90.3 | 88.5 | 0.79                     | 74.9                           | 480.7        | 6.6                               | 1.9                             | 2.0                              | 0.7800            | 480    |
| 280 M-8    | 45.0 / 54.0       | 735 / 882               | 90.7                    | 90.7 | 88.9 | 0.79                     | 90.6                           | 584.7        | 6.6                               | 1.9                             | 2.0                              | 0.8520            | 539    |
| 315 S-8    | 55.0 / 66.0       | 735 / 882               | 91.0                    | 91.0 | 89.2 | 0.81                     | 108.0                          | 714.6        | 6.6                               | 1.8                             | 2.0                              | 1.5600            | 820    |
| 315 M-8    | 75.0 / 90.0       | 735 / 882               | 91.6                    | 91.6 | 89.8 | 0.81                     | 146.0                          | 974.5        | 6.2                               | 1.8                             | 2.0                              | 2.4000            | 916    |
| 315 LA-8   | 90.0 / 108        | 735 / 882               | 91.9                    | 91.9 | 90.1 | 0.82                     | 172.0                          | 1169         | 6.4                               | 1.8                             | 2.0                              | 2.8200            | 1000   |
| 315 LB-8   | 110 / 132         | 735 / 882               | 92.3                    | 92.3 | 90.5 | 0.82                     | 210.0                          | 1429         | 6.4                               | 1.8                             | 2.0                              | 3.2400            | 1015   |
| 355 MA-8   | 132 / 158         | 740 / 888               | 92.6                    | 92.6 | 90.7 | 0.82                     | 251.0                          | 1703         | 6.4                               | 1.8                             | 2.0                              | 4.0800            | 1715   |
| 355 MB-8   | 160 / 192         | 740 / 888               | 93.0                    | 93.0 | 91.1 | 0.82                     | 303.0                          | 2065         | 6.4                               | 1.8                             | 2.0                              | 4.6800            | 1866   |
| 355 L-8    | 200 / 240         | 740 / 888               | 93.5                    | 93.5 | 91.6 | 0.83                     | 372.0                          | 2518         | 6.4                               | 1.8                             | 2.0                              | 4.0800            | 1948   |

# IE1 ALUMINUM SERIES

## “SMALL MOTORS”

Due to their power output these motors are not covered by the IE2 standard.  
This standard only covers power outputs of 0.75 kW – 375 kW.

2 poles, idle speed 3000 rpm

230 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos $\phi$               | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 56 A-2     | 0.09 / 0.12       | 2750 / 3300             | 62.0                    | -   | -   | 0.70                     | 0.53                           | 0.31         | 5.2                               | 2.1                             | 2.2                              | 0.00                  | 3.4    |
| 56 B-2     | 0.12 / 0.14       | 2800 / 3360             | 64.0                    | -   | -   | 0.78                     | 0.61                           | 0.41         | 5.2                               | 2.1                             | 2.2                              | 0.00                  | 3.7    |
| 63 A-2     | 0.18 / 0.21       | 2800 / 3360             | 66.0                    | -   | -   | 0.80                     | 0.87                           | 0.61         | 5.5                               | 2.2                             | 2.3                              | 0.00                  | 4.3    |
| 63 B-2     | 0.25 / 0.30       | 2800 / 3360             | 69.0                    | -   | -   | 0.81                     | 1.14                           | 0.85         | 5.5                               | 2.2                             | 2.3                              | 0.00                  | 4.4    |
| 71 A-2     | 0.37 / 0.44       | 2800 / 3360             | 70.0                    | -   | -   | 0.81                     | 1.66                           | 1.26         | 6.1                               | 2.3                             | 2.4                              | 0.00                  | 5.3    |
| 71 B-2     | 0.55 / 0.66       | 2740 / 3288             | 73.0                    | -   | -   | 0.82                     | 2.34                           | 1.92         | 6.1                               | 2.2                             | 2.3                              | 0.00                  | 6.2    |

4 poles, idle speed 1500 rpm

230 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos $\phi$               | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 56 A-4     | 0.06 / 0.07       | 1340 / 1608             | 56.0                    | -   | -   | 0.69                     | 0.40                           | 0.43         | 4.0                               | 2.0                             | 2.1                              | 0.00                  | 3.6    |
| 56 B-4     | 0.09 / 0.11       | 1340 / 1608             | 58.0                    | -   | -   | 0.70                     | 0.56                           | 0.64         | 4.0                               | 2.0                             | 2.1                              | 0.00                  | 3.9    |
| 63 A-4     | 0.12 / 0.14       | 1360 / 1632             | 59.0                    | -   | -   | 0.72                     | 0.72                           | 0.84         | 4.4                               | 2.1                             | 2.2                              | 0.00                  | 4.2    |
| 63 B-4     | 0.18 / 0.22       | 1360 / 1632             | 59.0                    | -   | -   | 0.73                     | 1.06                           | 1.26         | 4.4                               | 2.1                             | 2.2                              | 0.00                  | 4.5    |
| 71 A-4     | 0.25 / 0.30       | 1380 / 1656             | 67.3                    | -   | -   | 0.74                     | 1.28                           | 1.73         | 5.2                               | 2.1                             | 2.2                              | 0.00                  | 5.3    |
| 71 B-4     | 0.37 / 0.44       | 1380 / 1656             | 70.0                    | -   | -   | 0.75                     | 1.79                           | 2.56         | 5.2                               | 2.1                             | 2.2                              | 0.00                  | 6.1    |
| 80 A-4     | 0.55 / 0.66       | 1390 / 1668             | 71.1                    | -   | -   | 0.75                     | 2.63                           | 3.78         | 5.2                               | 2.3                             | 2.3                              | 0.00                  | 8.1    |

6 poles, idle speed 1000 rpm

230 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos $\phi$               | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 63 A-6     | 0.09 / 0.12       | 840 / 1008              | 44.0                    | -   | -   | 0.60                     | 0.87                           | 1.02         | 3.5                               | 1.8                             | 1.9                              | 0.00                  | 4.5    |
| 63 B-6     | 0.12 / 0.18       | 850 / 1020              | 48.0                    | -   | -   | 0.60                     | 1.06                           | 1.35         | 3.5                               | 1.8                             | 1.9                              | 0.00                  | 4.6    |
| 71 A-6     | 0.18 / 0.22       | 900 / 1080              | 57.0                    | -   | -   | 0.66                     | 1.22                           | 1.91         | 4.0                               | 1.9                             | 2.0                              | 0.00                  | 6.5    |
| 71 B-6     | 0.25 / 0.30       | 900 / 1080              | 60.0                    | -   | -   | 0.68                     | 1.56                           | 2.65         | 4.0                               | 1.9                             | 2.0                              | 0.00                  | 6.7    |
| 80 A-6     | 0.37 / 0.44       | 900 / 1080              | 63.0                    | -   | -   | 0.70                     | 2.14                           | 3.93         | 4.7                               | 1.9                             | 2.0                              | 0.00                  | 8.5    |
| 80 B-6     | 0.55 / 0.66       | 885 / 1062              | 65.0                    | -   | -   | 0.72                     | 2.99                           | 5.94         | 4.7                               | 1.9                             | 2.1                              | 0.00                  | 9.4    |

# IE1 ACA ALUMINUM SERIES AND ACM CAST IRON MOTORS

8 poles, idle speed 750 rpm

400 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos $\phi$               | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 80 A-8     | 0.18 / 0.21       | 690 / 828               | 38.0                    | -   | -   | 0.61                     | 1.1                            | 2.5          | 3.3                               | 1.8                             | 1.9                              | 0.00                  | 8.5    |
| 80 B-8     | 0.25 / 0.30       | 690 / 828               | 43.3                    | -   | -   | 0.61                     | 1.4                            | 3.5          | 3.3                               | 1.8                             | 1.9                              | 0.00                  | 9.0    |
| 90 S-8     | 0.37 / 0.44       | 690 / 828               | 49.7                    | -   | -   | 0.61                     | 1.8                            | 5.1          | 4.0                               | 1.8                             | 1.9                              | 0.01                  | 12.6   |
| 90 L-8     | 0.55 / 0.66       | 690 / 828               | 56.1                    | -   | -   | 0.61                     | 2.3                            | 7.6          | 4.0                               | 1.8                             | 2.0                              | 0.01                  | 15.3   |
| 100 LA-8   | 0.75 / 0.90       | 700 / 840               | 61.2                    | -   | -   | 0.67                     | 2.6                            | 10.2         | 4.0                               | 1.8                             | 2.0                              | 0.01                  | 21.0   |
| 100 LB-8   | 1.10 / 1.32       | 700 / 840               | 66.5                    | -   | -   | 0.69                     | 3.5                            | 15.0         | 5.0                               | 1.8                             | 2.0                              | 0.01                  | 22.0   |
| 112 M-8    | 1.50 / 1.80       | 700 / 840               | 70.2                    | -   | -   | 0.69                     | 4.4                            | 20.5         | 5.0                               | 1.8                             | 2.0                              | 0.02                  | 28.0   |
| 132 S-8    | 2.20 / 2.64       | 710 / 852               | 74.2                    | -   | -   | 0.72                     | 6                              | 29.6         | 6.0                               | 1.8                             | 2.0                              | 0.03                  | 36.0   |
| 132 M-8    | 3.00 / 3.60       | 710 / 852               | 77.0                    | -   | -   | 0.74                     | 7.7                            | 40.4         | 6.0                               | 1.8                             | 2.0                              | 0.04                  | 43.0   |

8 poles, idle speed 750 rpm

400 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos $\phi$               | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 160 MA-8   | 4.0 / 4.8         | 720 / 864               | 79.2                    | -   | -   | 0.73                     | 10.0                           | 53.1         | 6.0                               | 1.9                             | 2.0                              | 0.08                  | 91.0   |
| 160 MB-8   | 5.5 / 6.6         | 720 / 864               | 81.4                    | -   | -   | 0.74                     | 13.2                           | 73.0         | 6.0                               | 2.0                             | 2.0                              | 0.09                  | 103    |
| 160 L-8    | 7.5 / 9.0         | 720 / 864               | 83.1                    | -   | -   | 0.75                     | 17.4                           | 99.5         | 6.0                               | 2.0                             | 2.0                              | 0.13                  | 124    |
| 180 L-8    | 11.0 / 13.2       | 730 / 876               | 85.0                    | -   | -   | 0.76                     | 24.6                           | 143.9        | 6.0                               | 2.0                             | 2.0                              | 0.20                  | 165    |
| 200 L-8    | 15.0 / 18.0       | 730 / 876               | 86.2                    | -   | -   | 0.76                     | 33.0                           | 196.2        | 6.6                               | 2.0                             | 2.0                              | 0.40                  | 225    |
| 225 S-8    | 18.5 / 22.2       | 730 / 876               | 86.9                    | -   | -   | 0.76                     | 40.4                           | 242.0        | 6.6                               | 1.9                             | 2.0                              | 0.49                  | 256    |
| 225 M-8    | 22.0 / 26.4       | 730 / 876               | 87.4                    | -   | -   | 0.78                     | 46.6                           | 287.8        | 6.6                               | 1.9                             | 2.0                              | 0.55                  | 275    |
| 250 M-8    | 30.0 / 36.0       | 735 / 882               | 88.3                    | -   | -   | 0.79                     | 62.1                           | 389.8        | 6.6                               | 1.9                             | 2.0                              | 0.83                  | 350    |
| 280 S-8    | 37.0 / 44.4       | 735 / 882               | 88.8                    | -   | -   | 0.79                     | 76.1                           | 480.7        | 6.6                               | 1.9                             | 2.0                              | 1.93                  | 472    |
| 280 M-8    | 45.0 / 54.0       | 735 / 882               | 89.2                    | -   | -   | 0.79                     | 92.2                           | 584.7        | 6.6                               | 1.8                             | 2.0                              | 3.65                  | 520    |
| 315 S-8    | 55.0 / 66.0       | 735 / 882               | 89.7                    | -   | -   | 0.81                     | 109.0                          | 714.6        | 6.6                               | 1.8                             | 2.0                              | 6.37                  | 815    |
| 315 M-8    | 75.0 / 90.0       | 735 / 882               | 90.3                    | -   | -   | 0.81                     | 148.0                          | 974.5        | 6.6                               | 1.8                             | 2.0                              | 7.23                  | 906    |
| 315 LA-8   | 90.0 / 108        | 735 / 882               | 90.7                    | -   | -   | 0.82                     | 175.0                          | 1169         | 6.6                               | 1.8                             | 2.0                              | 4.79                  | 987    |
| 315 LB-8   | 110 / 132         | 735 / 882               | 91.1                    | -   | -   | 0.82                     | 213.0                          | 1429         | 6.4                               | 1.8                             | 2.0                              | 5.58                  | 995    |
| 355 MA-8   | 132 / 158         | 740 / 888               | 91.5                    | -   | -   | 0.82                     | 254.0                          | 1704         | 6.4                               | 1.8                             | 2.0                              | 7.90                  | 1700   |
| 355 MB-8   | 160 / 192         | 740 / 888               | 91.9                    | -   | -   | 0.82                     | 306.0                          | 2065         | 6.4                               | 1.8                             | 2.0                              | 10.30                 | 1850   |
| 355 L-8    | 200 / 240         | 740 / 888               | 92.5                    | -   | -   | 0.83                     | 376.0                          | 2581         | 6.4                               | 1.8                             | 2.0                              | 12.30                 | 1930   |

# PROGRESSIVE

IE3 motors with increased power in a smaller housing

2 poles, idle speed 3000 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 C-2     | 1.50              | 2890                    | 84.2                    | 84.2 | 82.5 | 0.84                     | 3.1                            | 5.0          | 7.6                               | 2.3                             | 2.3                              | 0.00110           | 11.6   |
| 90 LC-2    | 3.00              | 2890                    | 87.1                    | 87.1 | 85.4 | 0.87                     | 5.7                            | 9.9          | 8.1                               | 2.3                             | 2.3                              | 0.00260           | 20.4   |
| 100 LC-2   | 4.00              | 2895                    | 88.1                    | 88.1 | 86.3 | 0.88                     | 7.4                            | 13.2         | 8.3                               | 2.3                             | 2.3                              | 0.00450           | 23.7   |
| 112 MC-2   | 5.50              | 2920                    | 89.2                    | 89.4 | 87.4 | 0.88                     | 10.1                           | 18.0         | 8.0                               | 2.2                             | 2.3                              | 0.00690           | 30.2   |
| 132 MC-2   | 11.0              | 2940                    | 91.2                    | 91.2 | 89.4 | 0.90                     | 19.3                           | 35.7         | 7.9                               | 2.2                             | 2.3                              | 0.01700           | 71.2   |
| 160 LC-2   | 22.0              | 2950                    | 92.7                    | 92.7 | 90.8 | 0.90                     | 38.1                           | 71.2         | 8.2                               | 2.2                             | 2.3                              | 0.06000           | 187    |
| 180 MC-2   | 30.0              | 2950                    | 93.3                    | 93.3 | 91.4 | 0.89                     | 52.1                           | 97.1         | 7.5                               | 2.2                             | 2.3                              | 0.09300           | 235    |

4 poles, idle speed 1500 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 C-4     | 1.10              | 1430                    | 84.1                    | 84.1 | 82.4 | 0.74                     | 2.6                            | 7.3          | 6.5                               | 2.3                             | 2.3                              | 0.00240           | 12.9   |
| 90 LC-4    | 2.20              | 1430                    | 86.7                    | 86.7 | 85.0 | 0.78                     | 4.7                            | 14.7         | 6.9                               | 2.3                             | 2.3                              | 0.00530           | 19.7   |
| 100 LC-4   | 4.00              | 1435                    | 88.6                    | 88.6 | 86.8 | 0.80                     | 8.1                            | 26.6         | 7.6                               | 2.3                             | 2.3                              | 0.00950           | 31.3   |
| 112 MC-4   | 5.50              | 1450                    | 89.6                    | 89.6 | 87.8 | 0.80                     | 11.1                           | 36.2         | 7.7                               | 2.0                             | 2.3                              | 0.01100           | 39.2   |
| 132 MC-4   | 11.0              | 1460                    | 91.4                    | 91.4 | 89.6 | 0.84                     | 21.2                           | 72.0         | 7.4                               | 2.2                             | 2.3                              | 0.03950           | 58.2   |
| 160 LC-4   | 18.5              | 1465                    | 92.6                    | 92.6 | 90.7 | 0.84                     | 33.4                           | 120.6        | 7.5                               | 2.2                             | 2.3                              | 0.09800           | 182    |
| 180 MC-4   | 22.0              | 1465                    | 93.0                    | 93.0 | 91.1 | 0.85                     | 40.2                           | 143.4        | 7.7                               | 2.2                             | 2.3                              | 0.16000           | 231    |
| 180 LC-4   | 30.0              | 1470                    | 93.6                    | 93.6 | 91.7 | 0.86                     | 53.8                           | 194.9        | 7.8                               | 2.2                             | 2.3                              | 0.18200           | 225    |
| 200 LC-4   | 37.0              | 1475                    | 93.9                    | 93.9 | 92.0 | 0.86                     | 66.1                           | 239.6        | 7.5                               | 2.1                             | 2.3                              | 0.31000           | 331    |
| 225 MC-4   | 55.0              | 1480                    | 94.6                    | 94.6 | 92.7 | 0.86                     | 97.6                           | 354.9        | 7.5                               | 2.2                             | 2.3                              | 0.60000           | 443    |
| 250 MC-4   | 75.0              | 1480                    | 95.0                    | 95.0 | 93.1 | 0.87                     | 131.0                          | 484.0        | 7.5                               | 2.2                             | 2.3                              | 0.81000           | 553    |
| 280 MC-4   | 110.0             | 1485                    | 95.4                    | 95.4 | 93.5 | 0.88                     | 189.1                          | 707.5        | 7.5                               | 2.0                             | 2.3                              | 1.70000           | 835    |
| 315 MC-4   | 200.0             | 1485                    | 96.0                    | 96.0 | 94.1 | 0.90                     | 334.1                          | 1286         | 7.5                               | 2.0                             | 2.3                              | 5.00000           | 1336   |

# PROGRESSIVE

IE3 motors with increased power in a smaller housing

6 poles, idle speed 1000 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 90 LC-6    | 1.50              | 945                     | 82.5                    | 82.5 | 80.9 | 0.69                     | 3.8                            | 15.2         | 6.0                               | 2.1                             | 2.1                              | 0.00720               | 26.6   |
| 100 LC-6   | 2.20              | 952                     | 84.3                    | 84.3 | 82.6 | 0.71                     | 5.3                            | 22.1         | 6.0                               | 2.1                             | 2.2                              | 0.01300               | 33.5   |
| 112 MC-6   | 3.00              | 965                     | 85.6                    | 85.6 | 83.9 | 0.71                     | 7.1                            | 29.7         | 6.2                               | 2.0                             | 2.1                              | 0.02000               | 38.3   |
| 112 MD-6   | 4.00              | 965                     | 86.8                    | 86.8 | 85.1 | 0.71                     | 9.4                            | 39.6         | 6.8                               | 2.0                             | 2.1                              | 0.02500               | 54.1   |
| 132 MC-6   | 5.50              | 965                     | 88.0                    | 88.0 | 86.2 | 0.75                     | 12.0                           | 54.4         | 7.1                               | 2.0                             | 2.1                              | 0.05100               | 68.9   |
| 132 MC-6   | 7.50              | 968                     | 89.1                    | 89.1 | 87.3 | 0.77                     | 15.8                           | 74.0         | 6.7                               | 2.1                             | 2.1                              | 0.05100               | 72.4   |
| 160 LC-6   | 15.0              | 968                     | 91.2                    | 91.2 | 89.4 | 0.81                     | 29.3                           | 148.0        | 7.2                               | 2.0                             | 2.1                              | 0.12100               | 143    |
| 180 LC-6   | 18.5              | 977                     | 91.7                    | 91.7 | 89.9 | 0.81                     | 35.0                           | 180.8        | 7.2                               | 2.1                             | 2.1                              | 0.25300               | 250    |
| 280 MC-6   | 75.0              | 990                     | 94.6                    | 94.6 | 92.7 | 0.86                     | 133.1                          | 723.6        | 7.3                               | 2.0                             | 2.1                              | 1.95000               | 713    |

# PROGRESSIVE

IE2 motors with increased power in a smaller housing

2 poles, idle speed 3000 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 C-2     | 1.50              | 2850                    | 81.3                    | 81.6 | 79.7 | 0.84                     | 3.2                            | 5.0          | 6.5                               | 2.2                             | 2.3                              | 0.0011            | 13.0   |
| 90 LC-2    | 3.00              | 2850                    | 84.6                    | 84.9 | 82.9 | 0.87                     | 5.9                            | 10.1         | 7.0                               | 2.2                             | 2.3                              | 0.0026            | 17.0   |
| 100 LC-2   | 4.00              | 2870                    | 85.8                    | 86.1 | 84.1 | 0.88                     | 7.6                            | 13.3         | 7.5                               | 2.2                             | 2.3                              | 0.0048            | 22.5   |
| 112 MC-2   | 5.50              | 2900                    | 87.0                    | 87.3 | 85.3 | 0.88                     | 10.4                           | 18.1         | 7.5                               | 2.2                             | 2.3                              | 0.0069            | 30.5   |
| 132 MC-2   | 11.0              | 2910                    | 89.4                    | 89.8 | 87.6 | 0.89                     | 20.0                           | 36.1         | 7.8                               | 2.2                             | 2.3                              | 0.0170            | 49.0   |
| 160 LC-2   | 22.0              | 2940                    | 91.3                    | 91.7 | 89.5 | 0.89                     | 39.1                           | 71.5         | 7.8                               | 2.2                             | 2.3                              | 0.0600            | 145    |
| 180 MC-2   | 30.0              | 2940                    | 92.0                    | 92.4 | 90.2 | 0.89                     | 52.9                           | 97.5         | 7.5                               | 2.0                             | 2.3                              | 0.0930            | 190    |
| 200 LC-2   | 45.0              | 2960                    | 92.9                    | 93.3 | 91.0 | 0.90                     | 77.7                           | 145.2        | 7.8                               | 2.2                             | 2.3                              | 0.1680            | 290    |
| 225 MC-2   | 55.0              | 2960                    | 93.2                    | 93.6 | 91.3 | 0.90                     | 94.6                           | 177.5        | 7.5                               | 2.1                             | 2.3                              | 0.2570            | 320    |
| 250 MC-2   | 75.0              | 2970                    | 93.8                    | 94.2 | 91.9 | 0.90                     | 128.2                          | 241.2        | 7.2                               | 2.1                             | 2.3                              | 0.3500            | 432    |
| 280 MC-2   | 110.0             | 2975                    | 94.3                    | 94.7 | 92.4 | 0.90                     | 187.1                          | 353.2        | 7.5                               | 2.0                             | 2.3                              | 0.7270            | 800    |

4 poles, idle speed 1500 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 C-4     | 1.10              | 1400                    | 81.4                    | 81.7 | 79.8 | 0.77                     | 2.5                            | 7.5          | 6.5                               | 2.2                             | 2.3                              | 0.0024            | 10.3   |
| 90 LC-4    | 2.20              | 1420                    | 84.3                    | 84.6 | 82.6 | 0.81                     | 4.7                            | 14.8         | 7.0                               | 2.2                             | 2.3                              | 0.0053            | 20.3   |
| 100 LC-4   | 4.00              | 1435                    | 86.6                    | 86.9 | 84.9 | 0.82                     | 8.1                            | 26.6         | 7.0                               | 2.2                             | 2.3                              | 0.0095            | 30.5   |
| 112 MC-4   | 5.50              | 1440                    | 87.7                    | 88.0 | 85.9 | 0.82                     | 11.0                           | 36.5         | 7.5                               | 2.2                             | 2.3                              | 0.0110            | 36.5   |
| 132 MC-4   | 11.0              | 1460                    | 89.8                    | 90.1 | 88.0 | 0.84                     | 21.0                           | 72.0         | 7.5                               | 2.2                             | 2.3                              | 0.0395            | 56.0   |
| 160 LC-4   | 18.5              | 1460                    | 91.2                    | 91.5 | 89.4 | 0.86                     | 33.1                           | 121.0        | 7.5                               | 2.1                             | 2.3                              | 0.0980            | 150    |
| 180 MC-4   | 22.0              | 1460                    | 91.6                    | 91.9 | 89.8 | 0.86                     | 40.3                           | 143.9        | 7.5                               | 2.2                             | 2.3                              | 0.1600            | 134    |
| 180 LC-4   | 30.0              | 1470                    | 92.3                    | 92.6 | 90.5 | 0.86                     | 54.5                           | 194.9        | 7.5                               | 2.2                             | 2.3                              | 0.1820            | 205    |
| 200 LC-4   | 37.0              | 1470                    | 92.7                    | 93.0 | 90.8 | 0.86                     | 67.0                           | 240.4        | 7.5                               | 2.2                             | 2.3                              | 0.2950            | 280    |
| 225 MC-4   | 55.0              | 1470                    | 93.5                    | 93.8 | 91.6 | 0.86                     | 98.7                           | 357.4        | 7.2                               | 2.2                             | 2.3                              | 0.5300            | 346    |
| 250 MC-4   | 75.0              | 1480                    | 94.0                    | 94.3 | 92.1 | 0.87                     | 132.4                          | 484.0        | 7.2                               | 2.2                             | 2.3                              | 0.7200            | 440    |
| 280 MC-4   | 110.0             | 1485                    | 94.5                    | 94.8 | 92.6 | 0.88                     | 190.9                          | 707.5        | 7.2                               | 2.2                             | 2.3                              | 1.5900            | 830    |
| 315 MC-4   | 200.0             | 1485                    | 95.1                    | 95.4 | 93.2 | 0.89                     | 341.1                          | 1286.4       | 7.5                               | 2.2                             | 2.3                              | 4.9000            | 1150   |

# PROGRESSIVE

IE2 motors with increased power in a smaller housing

6 poles, idle speed 1000 rpm

400 V / 50 Hz, 460 V / 60 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75%  | 50%  | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to Rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|------|------|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %    | %    | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 90 LC-6    | 1.50              | 920                     | 79.8                    | 80.0 | 78.2 | 0.74                     | 3.7                            | 15.6         | 6.0                               | 2.0                             | 2.1                              | 0.0072                | 20.5   |
| 100 LC-6   | 2.20              | 940                     | 81.8                    | 82.0 | 80.2 | 0.74                     | 5.2                            | 22.4         | 6.5                               | 2.1                             | 2.2                              | 0.0130                | 25.0   |
| 112 MC-6   | 3.00              | 940                     | 83.3                    | 83.5 | 81.6 | 0.76                     | 6.8                            | 30.5         | 6.5                               | 2.0                             | 2.1                              | 0.0200                | 39.0   |
| 112 MD-6   | 4.00              | 950                     | 84.6                    | 84.9 | 82.9 | 0.76                     | 9.0                            | 40.2         | 6.5                               | 2.0                             | 2.1                              | 0.0250                | 46.0   |
| 132 MC-6   | 7.50              | 960                     | 87.2                    | 87.5 | 85.5 | 0.77                     | 16.1                           | 74.6         | 6.5                               | 2.1                             | 2.1                              | 0.0510                | 65.0   |
| 160 LC-6   | 15.0              | 965                     | 89.7                    | 90.0 | 87.9 | 0.79                     | 30.6                           | 148.5        | 7.0                               | 2.1                             | 2.1                              | 0.1210                | 160    |
| 180 LC-6   | 18.5              | 975                     | 90.4                    | 90.7 | 88.6 | 0.81                     | 35.5                           | 151.2        | 7.0                               | 2.2                             | 2.1                              | 0.2530                | 203    |
| 200 LC-6   | 30.0              | 975                     | 91.7                    | 92.1 | 89.9 | 0.82                     | 57.6                           | 293.9        | 7.0                               | 2.1                             | 2.1                              | 0.4200                | 450    |
| 250 MC-6   | 45.0              | 980                     | 92.7                    | 93.0 | 90.8 | 0.85                     | 82.4                           | 438.6        | 7.0                               | 2.1                             | 2.1                              | 1.0500                | 580    |
| 280 MC-6   | 75.0              | 985                     | 93.7                    | 94.0 | 91.8 | 0.86                     | 134.3                          | 727.2        | 7.0                               | 2.1                             | 2.1                              | 1.9800                | 270    |

# DOUBLE-SPEED MOTORS

Double-speed pole-changing motors for quadratically increasing counter torque  
(aluminum housing)

2-4 poles, idle torque 3000/1500 rpm

400 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 A-2-4   | 0.75 / 0.17       | 2825 / 1360             | 72.0 / 61.0             | -   | -   | 0.81 / 0.50              | 1.9 / 0.8                      | 2.5 / 1.1    | 6.5 / 5.0                         | 1.6 / 1.6                       | 2.0                              | 0.0009            | 16.0   |
| 80 B-2-4   | 0.95 / 0.25       | 2825 / 1380             | 74.0 / 66.0             | -   | -   | 0.80 / 0.61              | 2.3 / 0.9                      | 3.2 / 1.7    | 7.5 / 5.5                         | 2.0 / 1.4                       | 1.8                              | 0.0010            | 18.0   |
| 90 S-2-4   | 1.4 / 0.3         | 2840 / 1380             | 80.0 / 69.0             | -   | -   | 0.82 / 0.57              | 3.1 / 1.1                      | 4.7 / 2.0    | 7.5 / 5.5                         | 2.0 / 1.4                       | 1.8                              | 0.0013            | 23.0   |
| 90 L-2-4   | 1.9 / 0.4         | 2840 / 1380             | 80.0 / 69.0             | -   | -   | 0.82 / 0.57              | 4.2 / 1.5                      | 6.3 / 2.7    | 7.5 / 5.5                         | 2.0 / 1.4                       | 1.8                              | 0.0015            | 26.0   |
| 100 LA-2-4 | 2.5 / 0.65        | 2840 / 1400             | 81.0 / 69.0             | -   | -   | 0.89 / 0.70              | 5.0 / 1.9                      | 8.4 / 4.4    | 7.5 / 5.5                         | 1.8 / 1.2                       | 1.8                              | 0.0030            | 36.0   |
| 100 LB-2-4 | 3.1 / 0.8         | 2880 / 1400             | 83.0 / 73.0             | -   | -   | 0.89 / 0.70              | 6.1 / 2.3                      | 10.2 / 5.4   | 7.5 / 5.5                         | 1.8 / 1.3                       | 1.8                              | 0.0038            | 36.0   |
| 112 M-2-4  | 4.4 / 1.1         | 2915 / 1445             | 84.0 / 76.0             | -   | -   | 0.87 / 0.69              | 8.7 / 3.0                      | 14.4 / 7.3   | 7.5 / 5.5                         | 1.4 / 1.4                       | 1.8                              | 0.0072            | 42.0   |
| 132 S-2-4  | 5.9 / 1.4         | 2895 / 1395             | 83.0 / 77.0             | -   | -   | 0.90 / 0.74              | 11.4 / 3.6                     | 19.5 / 9.6   | 7.5 / 5.5                         | 1.9 / 1.3                       | 1.8                              | 0.0120            | 68.0   |
| 132 M-2-4  | 8.0 / 2.0         | 2900 / 1420             | 85.0 / 79.0             | -   | -   | 0.91 / 0.78              | 14.9 / 4.7                     | 26.3 / 13.5  | 7.5 / 5.5                         | 1.9 / 1.3                       | 1.8                              | 0.0160            | 79.0   |

4-6 poles, idle torque 1500/1000 rpm

400 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm²]          | kg     |
| 80 A-4-6   | 0.4 / 0.12        | 1415 / 925              | 67.0 / 50.0             | -   | -   | 0.66 / 0.50              | 1.3 / 0.7                      | 2.7 / 1.2    | 6.0 / 4.7                         | 1.9 / 1.9                       | 2.3                              | 0.0021            | 15.0   |
| 80 B-4-6   | 0.55 / 0.18       | 1390 / 885              | 71.0 / 50.0             | -   | -   | 0.76 / 0.60              | 1.5 / 0.9                      | 3.8 / 1.9    | 6.0 / 6.0                         | 2.0 / 1.6                       | 2.2                              | 0.0023            | 16.0   |
| 90 S-4-6   | 1.1 / 0.32        | 1430 / 960              | 76.0 / 59.0             | -   | -   | 0.78 / 0.46              | 2.7 / 1.7                      | 7.3 / 3.2    | 6.0 / 6.0                         | 1.5 / 1.5                       | 2.0                              | 0.0029            | 24.0   |
| 90 L-4-6   | 1.4 / 0.45        | 1395 / 935              | 72.0 / 62.0             | -   | -   | 0.84 / 0.66              | 3.3 / 1.6                      | 9.6 / 4.6    | 6.5 / 6.0                         | 1.3 / 1.3                       | 1.8                              | 0.0035            | 26.0   |
| 100 LA-4-6 | 2.2 / 0.7         | 1420 / 910              | 77.0 / 65.0             | -   | -   | 0.76 / 0.66              | 5.4 / 2.4                      | 14.8 / 7.4   | 6.5 / 6.0                         | 1.5 / 1.5                       | 1.8                              | 0.0067            | 36.0   |
| 100 LB-4-6 | 2.5 / 0.9         | 1420 / 910              | 81.0 / 74.0             | -   | -   | 0.78 / 0.67              | 5.7 / 2.6                      | 16.8 / 9.4   | 7.0 / 6.0                         | 1.8 / 1.6                       | 1.8                              | 0.0071            | 36.0   |
| 112 M-4-6  | 3.2 / 1.1         | 1440 / 960              | 82.0 / 78.0             | -   | -   | 0.82 / 0.68              | 6.9 / 3.0                      | 21.2 / 10.9  | 7.0 / 6.0                         | 1.8 / 1.6                       | 1.8                              | 0.0095            | 42.0   |
| 132 S-4-6  | 4.7 / 1.5         | 1440 / 940              | 81.0 / 73.0             | -   | -   | 0.83 / 0.64              | 10.1 / 4.7                     | 31.2 / 15.2  | 7.0 / 6.0                         | 1.8 / 1.6                       | 1.8                              | 0.0214            | 68.0   |
| 132 M-4-6  | 6.7 / 2.2         | 1440 / 940              | 84.0 / 75.0             | -   | -   | 0.87 / 0.70              | 13.2 / 6.0                     | 44.4 / 22.3  | 6.5 / 6.0                         | 1.3 / 1.3                       | 1.8                              | 0.0320            | 79.0   |

# DOUBLE-SPEED MOTORS

Double-speed pole-changing motors for quadratically increasing counter torque  
(aluminum housing)

4-8 poles, idle torque 1500/750 rpm

400 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 80 A-4-8   | 0.5 / 0.1         | 1420 / 660              | 74.0 / 36.0             | -   | -   | 0.70 / 0.43              | 1.4 / 0.9                      | 3.3 / 1.4    | 5.5 / 4.5                         | 1.4 / 1.8                       | 2.0                              | 0.0021                | 15.0   |
| 80 B-4-8   | 0.7 / 0.15        | 1390 / 655              | 74.0 / 43.0             | -   | -   | 0.77 / 0.50              | 1.8 / 1.0                      | 4.8 / 2.1    | 5.5 / 4.5                         | 1.5 / 1.3                       | 1.8                              | 0.0026                | 16.0   |
| 90 S-4-8   | 1.0 / 0.22        | 1395 / 670              | 75.0 / 60.0             | -   | -   | 0.82 / 0.60              | 2.3 / 0.9                      | 6.8 / 3.1    | 6.0 / 4.5                         | 1.5 / 1.5                       | 1.8                              | 0.0029                | 23.0   |
| 90 L-4-8   | 1.5 / 0.3         | 1395 / 695              | 78.0 / 57.0             | -   | -   | 0.84 / 0.49              | 3.3 / 1.5                      | 10.3 / 4.1   | 7.0 / 5.0                         | 1.8 / 1.5                       | 1.8                              | 0.0037                | 26.0   |
| 100 LA-4-8 | 2.0 / 0.55        | 1445 / 700              | 80.0 / 65.0             | -   | -   | 0.80 / 0.61              | 4.5 / 2.0                      | 13.2 / 7.6   | 7.5 / 5.0                         | 1.9 / 1.5                       | 1.8                              | 0.0061                | 36.0   |
| 100 LB-4-8 | 2.4 / 0.65        | 1435 / 695              | 80.0 / 65.0             | -   | -   | 0.79 / 0.59              | 5.5 / 2.45                     | 15.9 / 8.9   | 6.0 / 6.0                         | 1.8 / 1.6                       | 1.8                              | 0.0067                | 36.0   |
| 112 M-4-8  | 3.2 / 0.9         | 1450 / 710              | 84.0 / 73.0             | -   | -   | 0.77 / 0.56              | 7.1 / 3.2                      | 21.0 / 12.1  | 7.5 / 5.0                         | 2.0 / 1.6                       | 2.2                              | 0.0095                | 42.0   |
| 132 S-4-8  | 4.5 / 1.1         | 1460 / 730              | 86.0 / 78.0             | -   | -   | 0.81 / 0.57              | 9.3 / 3.6                      | 29.4 / 14.4  | 7.5 / 5.0                         | 1.8 / 1.3                       | 2.0                              | 0.0214                | 68.0   |
| 132 M-4-8  | 6.3 / 1.5         | 1450 / 720              | 87.0 / 80.0             | -   | -   | 0.85 / 0.60              | 12.3 / 4.5                     | 41.5 / 19.9  | 7.0 / 6.0                         | 1.8 / 1.6                       | 1.8                              | 0.0296                | 79.0   |

# DOUBLE-SPEED MOTORS

Double-speed pole-changing motors for quadratically increasing counter torque  
(cast iron housing)

2-4 poles, idle torque 3000/1500 rpm

400 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 160 M-2-4  | 12.5 / 2.8        | 2930 / 1420             | 85.0 / 80.0             | -   | -   | 0.90 / 0.75              | 23.6 / 6.7                     | 40.7 / 13.5  | 7.5 / 5.5                         | 1.8 / 1.3                       | 1.8                              | 0.0410                | 148    |
| 160 L-2-4  | 16.5 / 3.8        | 2930 / 1440             | 87.0 / 82.0             | -   | -   | 0.91 / 0.76              | 30.1 / 8.8                     | 38 / 25.2    | 7.5 / 5.5                         | 1.8 / 1.3                       | 1.8                              | 0.0550                | 160    |
| 180 M-2-4  | 20.0 / 5.5        | 2930 / 1440             | 87.0 / 82.0             | -   | -   | 0.89 / 0.74              | 37.3 / 13.1                    | 65.2 / 36.5  | 7.0 / 5.5                         | 1.6 / 1.5                       | 1.8                              | 0.0750                | 185    |
| 180 L-2-4  | 24.0 / 6.4        | 2940 / 1440             | 88.0 / 82.0             | -   | -   | 0.89 / 0.72              | 44.2 / 15.6                    | 78.0 / 42.4  | 7.5 / 6.5                         | 1.8 / 1.6                       | 1.8                              | 0.0850                | 200    |
| 200 L-2-4  | 30.0 / 7.8        | 2955 / 1475             | 87.0 / 82.0             | -   | -   | 0.89 / 0.72              | 55.9 / 19.1                    | 96.9 / 50.5  | 7.5 / 6.5                         | 1.8 / 1.6                       | 1.8                              | 0.1390                | 265    |
| 225 S-2-4  | 37.0 / 9.5        | 2950 / 1460             | 87.0 / 82.0             | -   | -   | 0.89 / 0.72              | 69.0 / 23.2                    | 120 / 62.1   | 7.0 / 6.5                         | 1.8 / 1.6                       | 1.8                              | 0.2050                | 290    |
| 225 M-2-4  | 45.0 / 12.0       | 2970 / 1485             | 89.0 / 84.0             | -   | -   | 0.89 / 0.72              | 82.0 / 28.6                    | 145 / 77.2   | 7.0 / 6.5                         | 1.8 / 1.6                       | 1.8                              | 0.2260                | 320    |
| 250 M-2-4  | 55.0 / 15.0       | 2970 / 1480             | 90.0 / 85.0             | -   | -   | 0.89 / 0.75              | 99.1 / 34                      | 177 / 97     | 7.0 / 6.5                         | 1.4 / 1.4                       | 1.8                              | 0.2950                | 425    |
| 280 S-2-4  | 75.0 / 20.0       | 2975 / 1485             | 89.0 / 84.0             | -   | -   | 0.89 / 0.74              | 136.7 / 46.4                   | 241 / 129    | 7.0 / 6.5                         | 1.4 / 1.4                       | 1.8                              | 0.5850                | 550    |
| 280 M-2-4  | 90.0 / 24.0       | 2980 / 1485             | 89.0 / 84.0             | -   | -   | 0.88 / 0.71              | 166 / 58.1                     | 288 / 154    | 7.0 / 6.5                         | 1.4 / 1.4                       | 1.8                              | 0.6750                | 660    |

4-6 poles, idle torque 1500/1000 rpm

400 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 160 M-4-6  | 9.5 / 3.1         | 1450 / 970              | 85.0 / 80.0             | -   | -   | 0.82 / 0.75              | 19.7 / 7.5                     | 62.6 / 30.5  | 7.5 / 6.0                         | 2.2 / 1.8                       | 2.0                              | 0.8810                | 148    |
| 160 L-4-6  | 12.0 / 4.0        | 1460 / 960              | 87.0 / 83.0             | -   | -   | 0.85 / 0.68              | 23.4 / 10.4                    | 78.5 / 39.8  | 6.5 / 6.0                         | 1.3 / 1.3                       | 1.8                              | 0.0116                | 166    |
| 180 M-4-6  | 15.5 / 5.1        | 1460 / 970              | 88.0 / 81.0             | -   | -   | 0.89 / 0.68              | 28.6 / 13.4                    | 101 / 50.2   | 7.5 / 7.5                         | 1.5 / 1.5                       | 1.8                              | 0.2150                | 185    |
| 180 L-4-6  | 18.5 / 6.2        | 1470 / 970              | 87.0 / 81.0             | -   | -   | 0.85 / 0.74              | 36.1 / 14.9                    | 120 / 61     | 7.5 / 7.0                         | 1.5 / 1.5                       | 1.8                              | 0.2350                | 200    |
| 200 L-4-6  | 26.0 / 8.70       | 1480 / 970              | 89.0 / 82.0             | -   | -   | 0.90 / 0.79              | 46.9 / 19.4                    | 168 / 85.6   | 7.5 / 7.5                         | 1.5 / 1.5                       | 1.8                              | 0.3850                | 265    |
| 225 S-4-6  | 33.0 / 11.0       | 1460 / 980              | 89.0 / 84.0             | -   | -   | 0.89 / 0.82              | 60.1 / 23.1                    | 216 / 107    | 7.0 / 6.5                         | 1.5 / 1.5                       | 1.8                              | 0.5650                | 290    |
| 225 M-4-6  | 39.0 / 13.0       | 1480 / 970              | 90.0 / 85.0             | -   | -   | 0.86 / 0.85              | 72.7 / 26                      | 252 / 128    | 7.5 / 7.0                         | 1.5 / 1.5                       | 1.8                              | 0.6750                | 320    |
| 250 M-4-6  | 47.0 / 16.0       | 1480 / 970              | 90.0 / 85.0             | -   | -   | 0.89 / 0.87              | 84.7 / 31.2                    | 303 / 158    | 7.5 / 7.0                         | 1.5 / 1.5                       | 1.8                              | 0.8950                | 425    |
| 280 S-4-6  | 55.0 / 18.5       | 1480 / 990              | 90.0 / 85.0             | -   | -   | 0.88 / 0.86              | 100.2 / 36.5                   | 355 / 178    | 7.5 / 7.0                         | 1.5 / 1.5                       | 1.8                              | 1.5950                | 550    |
| 280 M-4-6  | 70.0 / 25.0       | 1480 / 990              | 91.0 / 89.0             | -   | -   | 0.88 / 0.87              | 126.2 / 46.6                   | 452 / 241    | 7.0 / 6.0                         | 1.5 / 1.5                       | 1.8                              | 1.9800                | 660    |

# DOUBLE-SPEED MOTORS

Double-speed pole-changing motors for quadratically increasing counter torque  
(cast iron housing)

4-8 poles, idle torque 1500/750 rpm

400 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| 160 M-4-8  | 8.9 / 2.0         | 1445 / 720              | 85.0 / 82.0             | -   | -   | 0.85 / 0.67              | 17.8 / 5.2                     | 58.8 / 26.5  | 7.5 / 5.0                         | 2.0 / 1.2                       | 1.8                              | 0.0930                | 148    |
| 160 L-4-8  | 12.0 / 2.7        | 1445 / 720              | 85.0 / 82.0             | -   | -   | 0.85 / 0.67              | 24.0 / 7.0                     | 79.3 / 35.8  | 7.5 / 5.0                         | 2.0 / 1.2                       | 1.8                              | 0.1260                | 160    |
| 180 M-4-8  | 16.0 / 4.0        | 1470 / 730              | 88.0 / 84.0             | -   | -   | 0.85 / 0.65              | 30.9 / 10.6                    | 104 / 52.3   | 7.5 / 5.0                         | 2.0 / 1.2                       | 1.8                              | 0.1530                | 185    |
| 180 L-4-8  | 19.5 / 5.0        | 1470 / 720              | 89.0 / 85.0             | -   | -   | 0.85 / 0.66              | 37.2 / 12.9                    | 127 / 66.3   | 7.5 / 5.0                         | 2.0 / 1.2                       | 1.8                              | 0.1710                | 200    |
| 200 L-4-8  | 29.0 / 7.5        | 1480 / 730              | 90.0 / 87.0             | -   | -   | 0.85 / 0.66              | 54.7 / 18.9                    | 187 / 98.1   | 7.5 / 5.0                         | 2.0 / 1.2                       | 1.8                              | 0.2980                | 265    |
| 225 M-4-8  | 40.0 / 9.5        | 1480 / 720              | 91.0 / 88.0             | -   | -   | 0.88 / 0.64              | 72.1 / 24.3                    | 258 / 126    | 7.5 / 5.0                         | 2.0 / 1.3                       | 1.8                              | 0.4880                | 320    |
| 250 M-4-8  | 52.0 / 14.5       | 1480 / 740              | 92.0 / 88.0             | -   | -   | 0.86 / 0.64              | 97.1 / 37.8                    | 336 / 187    | 7.5 / 5.0                         | 1.8 / 1.5                       | 1.8                              | 0.6950                | 425    |
| 280 S-4-8  | 65.0 / 17.0       | 1490 / 740              | 91.0 / 89.0             | -   | -   | 0.87 / 0.68              | 119 / 40.5                     | 417 / 219    | 7.5 / 5.0                         | 2.0 / 1.3                       | 1.8                              | 1.2000                | 550    |
| 280 M-4-8  | 75.0 / 18.5       | 1490 / 740              | 91.0 / 89.0             | -   | -   | 0.87 / 0.68              | 137 / 44.1                     | 481 / 239    | 7.5 / 5.0                         | 2.0 / 1.3                       | 1.8                              | 1.3200                | 660    |

# SINGLE-PHASE MOTORS

Single-phase motors with operating capacitor

2 poles, idle speed 3000 rpm

230 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| ABS 63 A-2 | 0.18              | 2800                    | 60.0                    | -   | -   | 0.92                     | 1.48                           | 0.61         | 3.4                               | 0.40                            | 1.7                              | 0.00074               | 3.9    |
| ABS 63 B-2 | 0.25              | 2800                    | 63.0                    | -   | -   | 0.92                     | 1.96                           | 0.85         | 3.6                               | 0.40                            | 1.7                              | 0.00089               | 4.4    |
| ABS 71 A-2 | 0.37              | 2800                    | 67.0                    | -   | -   | 0.92                     | 2.73                           | 1.26         | 3.7                               | 0.35                            | 1.7                              | 0.00139               | 6.2    |
| ABS 71 B-2 | 0.55              | 2800                    | 70.0                    | -   | -   | 0.92                     | 3.88                           | 1.88         | 3.9                               | 0.35                            | 1.7                              | 0.00172               | 6.5    |
| ABS 80 A-2 | 0.75              | 2800                    | 72.0                    | -   | -   | 0.92                     | 5.15                           | 2.56         | 3.9                               | 0.33                            | 1.7                              | 0.00366               | 8.3    |
| ABS 80 B-2 | 1.10              | 2800                    | 75.0                    | -   | -   | 0.95                     | 7.02                           | 3.75         | 4.3                               | 0.33                            | 1.7                              | 0.00457               | 9.0    |
| ABS 90 S-2 | 1.50              | 2800                    | 76.0                    | -   | -   | 0.95                     | 9.44                           | 5.12         | 4.8                               | 0.33                            | 1.7                              | 0.00723               | 13.0   |
| ABS 90 L-2 | 2.20              | 2800                    | 78.0                    | -   | -   | 0.95                     | 13.67                          | 7.50         | 4.8                               | 0.33                            | 1.7                              | 0.00964               | 15.0   |

4 poles, idle speed 1500 rpm

230 V / 50 Hz

| Frame size  | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|-------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type        | kW                | rpm                     | %                       | %   | %   | cos φ                    | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| ABS 63 A-4  | 0.12              | 1400                    | 55.0                    | -   | -   | 0.90                     | 1.10                           | 0.82         | 3.2                               | 0.40                            | 1.7                              | 0.00129               | 4.0    |
| ABS 63 B-4  | 0.18              | 1400                    | 56.0                    | -   | -   | 0.90                     | 1.62                           | 1.23         | 3.1                               | 0.40                            | 1.7                              | 0.00181               | 4.5    |
| ABS 71 A-4  | 0.25              | 1400                    | 61.0                    | -   | -   | 0.92                     | 2.02                           | 1.71         | 3.5                               | 0.35                            | 1.7                              | 0.00281               | 6.1    |
| ABS 71 B-4  | 0.37              | 1400                    | 62.0                    | -   | -   | 0.92                     | 3.88                           | 2.52         | 3.4                               | 0.35                            | 1.7                              | 0.00358               | 7.0    |
| ABS 80 A-4  | 0.55              | 1400                    | 64.0                    | -   | -   | 0.92                     | 4.25                           | 3.75         | 3.5                               | 0.35                            | 1.7                              | 0.00596               | 9.5    |
| ABS 80 B-4  | 0.75              | 1400                    | 68.0                    | -   | -   | 0.92                     | 5.45                           | 5.12         | 3.7                               | 0.33                            | 1.7                              | 0.00769               | 10.0   |
| ABS 90 S-4  | 1.10              | 1400                    | 71.0                    | -   | -   | 0.95                     | 7.45                           | 7.50         | 4.0                               | 0.32                            | 1.7                              | 0.01728               | 13.0   |
| ABS 90 L-4  | 1.50              | 1400                    | 73.0                    | -   | -   | 0.95                     | 9.83                           | 10.2         | 4.6                               | 0.33                            | 1.7                              | 0.01481               | 16.0   |
| ABS 100 L-4 | 2.20              | 1400                    | 76.0                    | -   | -   | 0.95                     | 13.80                          | 15.0         | 4.7                               | 0.35                            | 1.7                              | 0.03901               | 23.0   |

# SINGLE-PHASE MOTORS

Single-phase motors with starting and operating capacitors

2 poles, idle speed 3000 rpm

230 V / 50 Hz

| Frame size | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type       | kW                | rpm                     | %                       | %   | %   | cos $\varphi$            | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| ABS 71 A-2 | 0.37              | 2800                    | 67.0                    | -   | -   | 0.92                     | 2.73                           | 1.26         | 5.9                               | 2.3                             | 1.8                              | 0.00139               | 7.0    |
| ABS 71 B-2 | 0.55              | 2800                    | 70.0                    | -   | -   | 0.92                     | 3.88                           | 1.88         | 5.4                               | 2.5                             | 1.8                              | 0.00172               | 8.0    |
| ABS 80 A-2 | 0.75              | 2800                    | 72.0                    | -   | -   | 0.92                     | 5.15                           | 2.56         | 5.8                               | 2.5                             | 1.8                              | 0.00366               | 8.5    |
| ABS 80 B-2 | 1.10              | 2800                    | 75.0                    | -   | -   | 0.95                     | 7.02                           | 3.75         | 5.7                               | 2.5                             | 1.8                              | 0.00457               | 9.5    |
| ABS 90 S-2 | 1.50              | 2800                    | 76.0                    | -   | -   | 0.95                     | 9.44                           | 5.12         | 5.8                               | 2.5                             | 1.8                              | 0.00723               | 12.5   |

4 poles, idle speed 1500 rpm

230 V / 50 Hz

| Frame size  | Power at 50/60 Hz | Rated speed at 50/60 Hz | Efficiency at 100% load | 75% | 50% | Power factor at 50/60 Hz | Rated current at 400 V / 50 Hz | Rated torque | Starting current to Rated current | Starting torque to rated torque | Breakdown torque to Rated torque | Moment of inertia     | Weight |
|-------------|-------------------|-------------------------|-------------------------|-----|-----|--------------------------|--------------------------------|--------------|-----------------------------------|---------------------------------|----------------------------------|-----------------------|--------|
| Type        | kW                | rpm                     | %                       | %   | %   | cos $\varphi$            | A                              | Nm           | Ia/In                             | Ta/Tn                           | Tk/Tn                            | J [kgm <sup>2</sup> ] | kg     |
| ABS 71 A-4  | 0.25              | 1400                    | 62.0                    | -   | -   | 0.92                     | 1.99                           | 1.71         | 6.0                               | 2.5                             | 1.8                              | 0.00281               | 6.9    |
| ABS 71 B-4  | 0.37              | 1400                    | 65.0                    | -   | -   | 0.92                     | 2.81                           | 2.52         | 5.7                               | 2.5                             | 1.8                              | 0.00358               | 8.1    |
| ABS 80 A-4  | 0.55              | 1400                    | 68.0                    | -   | -   | 0.92                     | 4.00                           | 3.75         | 5.3                               | 2.5                             | 1.8                              | 0.00596               | 8.9    |
| ABS 80 B-4  | 0.75              | 1400                    | 71.0                    | -   | -   | 0.92                     | 5.22                           | 5.12         | 5.7                               | 2.5                             | 1.8                              | 0.00769               | 9.6    |
| ABS 90 S-4  | 1.10              | 1400                    | 73.0                    | -   | -   | 0.95                     | 9.44                           | 7.50         | 5.6                               | 2.5                             | 1.8                              | 0.01173               | 13.0   |
| ABS 90 L-4  | 1.50              | 1400                    | 75.0                    | -   | -   | 0.95                     | 9.57                           | 10.23        | 5.7                               | 2.5                             | 1.8                              | 0.01481               | 16.0   |
| ABS 100 L-4 | 2.20              | 1400                    | 76.0                    | -   | -   | 0.95                     | 13.90                          | 15.01        | 5.8                               | 2.5                             | 1.8                              | 0.03901               | 23.0   |



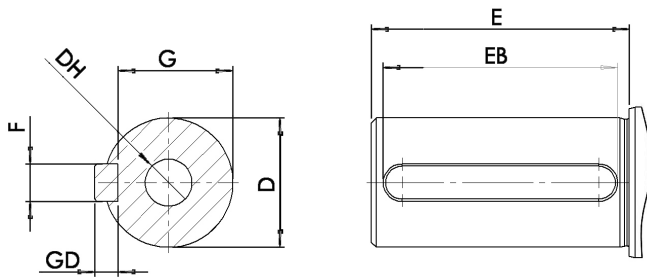
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# SHAFT END DIMENSIONS

independent of mounting type and efficiency class



## Independent of number of poles

| Frame size | D  | E  | F  | G    | DH     | EB | ED  | GD |
|------------|----|----|----|------|--------|----|-----|----|
| 56         | 9  | 20 | 3  | 7.2  | M4x12  | 16 | 2   | 3  |
| 63         | 11 | 23 | 4  | 8.5  | M4x12  | 16 | 3.5 | 4  |
| 71         | 14 | 30 | 5  | 11   | M5x12  | 25 | 2.5 | 5  |
| 80         | 19 | 40 | 6  | 15.5 | M6x16  | 30 | 5   | 6  |
| 90         | 24 | 50 | 8  | 20   | M8x19  | 40 | 5   | 7  |
| 100        | 28 | 60 | 8  | 24   | M10x22 | 50 | 5   | 7  |
| 112        | 28 | 60 | 8  | 24   | M12x28 | 50 | 5   | 7  |
| 132        | 38 | 80 | 10 | 33.0 | M12x28 | 65 | 7.5 | 8  |

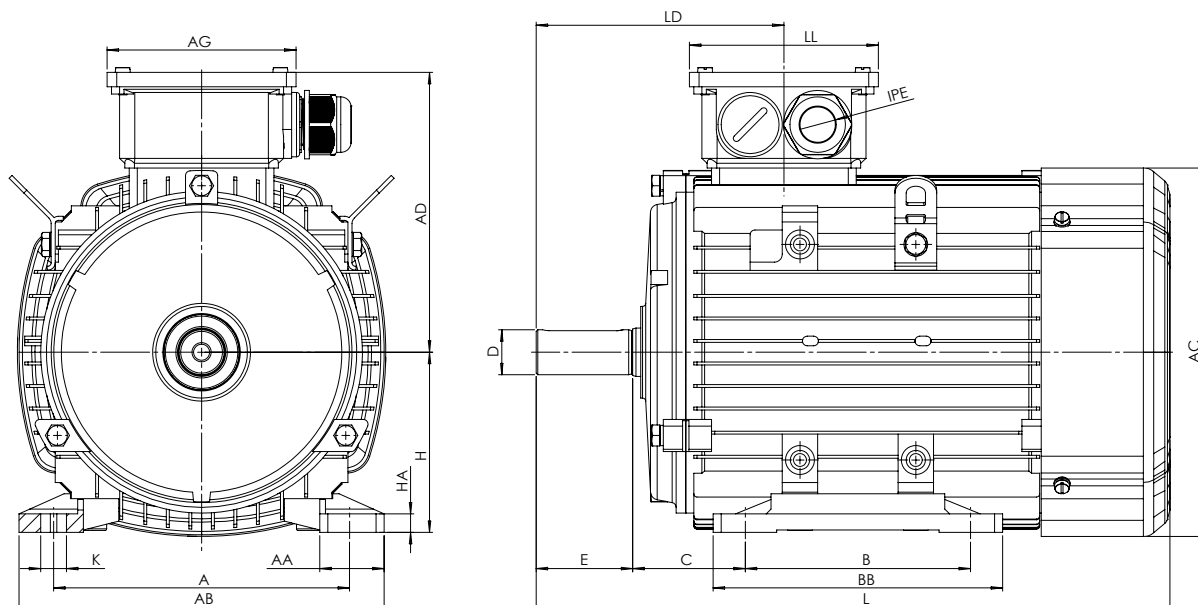
## 2 poles

| Frame size | D  | E   | F  | G    | DH     | EB  | ED  | GD |
|------------|----|-----|----|------|--------|-----|-----|----|
| 160        | 42 | 110 | 12 | 37   | M16x36 | 90  | 10  | 8  |
| 180        | 48 | 110 | 14 | 42.5 | M16x36 | 90  | 10  | 9  |
| 200        | 55 | 110 | 16 | 49   | M20x42 | 100 | 5   | 10 |
| 225        | 55 | 110 | 16 | 49   | M20x42 | 100 | 5.0 | 10 |
| 250        | 60 | 140 | 18 | 53   | M20x42 | 125 | 7.5 | 11 |
| 280        | 65 | 140 | 18 | 58   | M20x42 | 125 | 7.5 | 11 |
| 315        | 65 | 140 | 18 | 58   | M20x42 | 125 | 7.5 | 11 |
| 355        | 80 | 170 | 22 | 67.5 | M20x50 | 130 | 5   | 14 |

## 4, 6, 8 poles

| Frame size | D   | E   | F  | G    | DH     | EB  | ED  | GD |
|------------|-----|-----|----|------|--------|-----|-----|----|
| 160        | 42  | 110 | 12 | 37   | M16x36 | 90  | 10  | 8  |
| 180        | 48  | 110 | 14 | 42.5 | M16x36 | 90  | 10  | 9  |
| 200        | 55  | 110 | 16 | 49   | M20x42 | 100 | 5   | 10 |
| 225        | 60  | 110 | 18 | 53   | M20x42 | 125 | 7.5 | 11 |
| 250        | 65  | 140 | 18 | 58   | M20x42 | 125 | 7.5 | 11 |
| 280        | 75  | 140 | 20 | 67.5 | M20x42 | 125 | 7.5 | 12 |
| 315        | 80  | 140 | 22 | 71   | M20x42 | 160 | 5   | 14 |
| 355        | 100 | 210 | 28 | 86   | M24x50 | 160 | 5   | 16 |

# ALUMINUM MOTOR, MOUNTING B3



## Without IE classification

| Frame size | A   | AA | AB  | AC  | AD  | AG  | B  | BB  | C  | D  | E  | H  | HA | K     | L   | LD    | LL  | IPE       |
|------------|-----|----|-----|-----|-----|-----|----|-----|----|----|----|----|----|-------|-----|-------|-----|-----------|
| 56         | 90  | 23 | 111 | 113 | 90  | 86  | 71 | 88  | 36 | 9  | 20 | 56 | 7  |       | 199 | 83    | 86  | 1-M20x1.5 |
| 63         | 100 | 24 | 123 | 120 | 100 | 101 | 80 | 100 | 40 | 11 | 23 | 63 | 7  | 7x9.5 | 217 | 95,5  | 101 | 1-M20x1.5 |
| 71         | 112 | 26 | 138 | 136 | 112 | 101 | 90 | 110 | 45 | 14 | 30 | 71 | 8  | 7x11  | 245 | 110,5 | 101 | 1-M20x1.5 |

## IE2

| Frame size |   | A   | AA | AB  | AC  | AD  | AG    | B   | BB  | C   | D  | E   | H   | HA | K     | L   | LD    | LL    | IPE       |
|------------|---|-----|----|-----|-----|-----|-------|-----|-----|-----|----|-----|-----|----|-------|-----|-------|-------|-----------|
| 80         |   | 125 | 35 | 157 | 155 | 124 | 101   | 100 | 125 | 50  | 19 | 40  | 80  | 9  | 10x14 | 281 | 118   | 101   | 1-M25x1.5 |
| 90         | S | 140 | 37 | 173 | 175 | 137 | 109   | 100 | 125 | 56  | 24 | 50  | 90  | 10 | 10x14 | 315 | 136   | 109   | 1-M25x1.5 |
| 90         | L | 140 | 37 | 173 | 175 | 137 | 109   | 125 | 150 | 56  | 24 | 50  | 90  | 10 | 10x14 | 340 | 136   | 109   | 1-M25x1.5 |
| 100        | L | 160 | 40 | 196 | 195 | 151 | 109   | 140 | 172 | 63  | 28 | 60  | 100 | 11 | 12x16 | 373 | 144   | 109   | 1-M25x1.5 |
| 112        | M | 190 | 41 | 227 | 219 | 169 | 117.5 | 140 | 180 | 70  | 28 | 60  | 112 | 12 | 12x16 | 394 | 152   | 117.5 | 2-M32x1.5 |
| 132        | S | 216 | 51 | 262 | 258 | 188 | 117.5 | 140 | 186 | 89  | 38 | 80  | 132 | 15 | 12x16 | 465 | 180   | 117.5 | 2-M32x1.5 |
| 132        | M | 216 | 51 | 262 | 258 | 188 | 117.5 | 178 | 224 | 89  | 38 | 80  | 132 | 15 | 12x16 | 503 | 180   | 117.5 | 2-M32x1.5 |
| 160        | M | 254 | 55 | 304 | 315 | 242 | 167   | 210 | 260 | 108 | 42 | 110 | 160 | 18 | 15x18 | 607 | 268.5 | 157   | 2-M40x1.5 |
| 160        | L | 254 | 55 | 304 | 315 | 242 | 167   | 254 | 304 | 108 | 42 | 110 | 160 | 18 | 15x18 | 651 | 268.5 | 157   | 2-M40x1.5 |

# ALUMINUM MOTOR, MOUNTING B3

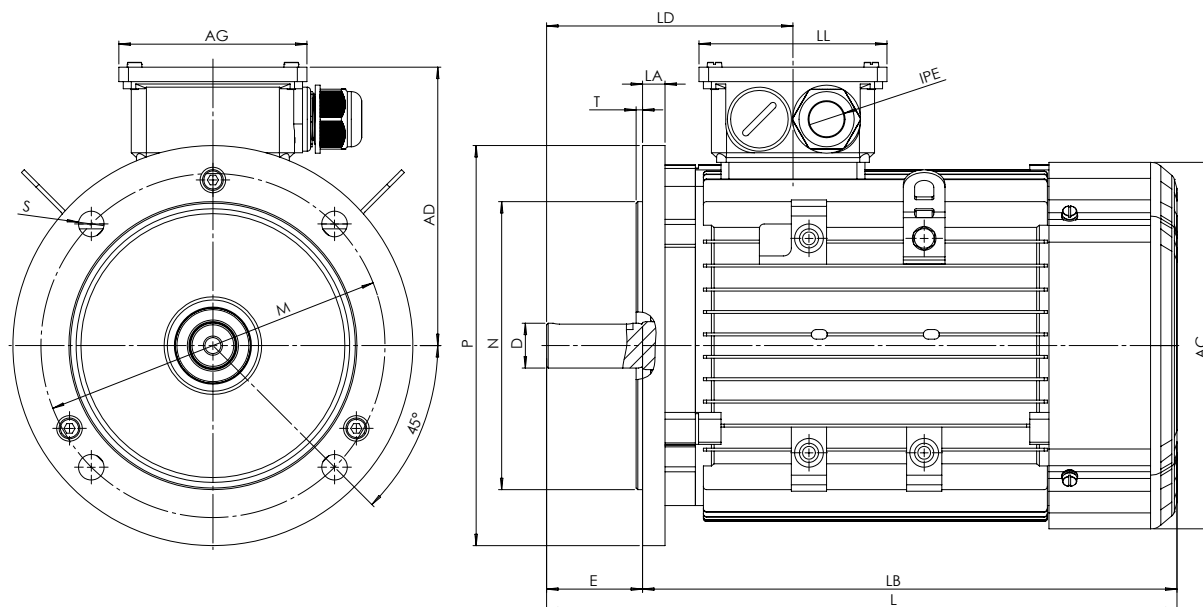
## IE3

| Frame size |   | A   | AA | AB  | AC  | AD  | AG    | B   | BB  | C   | D  | E   | H   | HA | K     | L   | LD    | LL    | IPE       |
|------------|---|-----|----|-----|-----|-----|-------|-----|-----|-----|----|-----|-----|----|-------|-----|-------|-------|-----------|
| 80         |   | 125 | 35 | 157 | 158 | 129 | 101   | 100 | 125 | 50  | 19 | 40  | 80  | 8  | 10x14 | 294 | 115   | 101   | 1-M25x1.5 |
| 90         | S | 140 | 37 | 173 | 175 | 140 | 109   | 100 | 125 | 56  | 24 | 50  | 90  | 10 | 10x14 | 319 | 145   | 109   | 1-M25x1.5 |
| 90         | L | 140 | 37 | 173 | 175 | 140 | 109   | 125 | 150 | 56  | 24 | 50  | 90  | 10 | 10x14 | 344 | 145   | 109   | 1-M25x1.5 |
| 100        | L | 160 | 40 | 196 | 198 | 156 | 109   | 140 | 172 | 63  | 28 | 60  | 100 | 11 | 12x16 | 393 | 148.5 | 109   | 1-M25x1.5 |
| 112        | M | 190 | 41 | 227 | 219 | 166 | 117.5 | 140 | 180 | 70  | 28 | 60  | 112 | 12 | 12x16 | 394 | 152   | 117.5 | 2-M32x1.5 |
| 132        | S | 216 | 51 | 262 | 258 | 188 | 117.5 | 140 | 186 | 89  | 38 | 80  | 132 | 15 | 12x16 | 445 | 180   | 117.5 | 2-M32x1.5 |
| 132        | M | 216 | 51 | 262 | 258 | 188 | 117.5 | 178 | 224 | 89  | 38 | 80  | 132 | 15 | 12x16 | 483 | 180   | 117.5 | 2-M32x1.5 |
| 160        | M | 254 | 55 | 304 | 315 | 242 | 167   | 210 | 260 | 108 | 42 | 110 | 160 | 18 | 15x18 | 589 | 268.5 | 157   | 2-M40x1.5 |
| 160        | L | 254 | 55 | 304 | 315 | 242 | 167   | 254 | 304 | 108 | 42 | 110 | 160 | 18 | 15x18 | 633 | 268.5 | 157   | 2-M40x1.5 |

## IE4

| Frame size |     | A   | AA | AB  | AC  | AD  | AG    | B   | BB  | C   | D  | E   | H   | HA | K     | L   | LD    | LL    | IPE       |
|------------|-----|-----|----|-----|-----|-----|-------|-----|-----|-----|----|-----|-----|----|-------|-----|-------|-------|-----------|
| 80         |     | 125 | 35 | 157 | 158 | 129 | 101   | 100 | 125 | 50  | 19 | 40  | 80  | 8  | 10x14 | 294 | 115   | 101   | 1-M25x1.5 |
| 90         | S   | 140 | 37 | 173 | 175 | 140 | 109   | 100 | 125 | 56  | 24 | 50  | 90  | 10 | 10x14 | 319 | 145   | 109   | 1-M25x1.5 |
| 90         | L   | 140 | 37 | 173 | 175 | 140 | 109   | 125 | 150 | 56  | 24 | 50  | 90  | 10 | 10x14 | 344 | 145   | 109   | 1-M25x1.5 |
| 100        | L   | 160 | 40 | 196 | 198 | 156 | 109   | 140 | 172 | 63  | 28 | 60  | 100 | 11 | 12x16 | 393 | 148.5 | 109   | 1-M32x1.5 |
| 112        | M   | 190 | 40 | 227 | 224 | 175 | 117.5 | 140 | 180 | 70  | 28 | 60  | 112 | 12 | 12x16 | 400 | 154   | 117.5 | 2-M32x1.5 |
| 132        | S   | 216 | 51 | 262 | 258 | 188 | 117.5 | 140 | 186 | 89  | 38 | 80  | 132 | 15 | 12x16 | 445 | 180   | 117.5 | 2-M32x1.5 |
| 132        | M   | 216 | 51 | 262 | 258 | 188 | 117.5 | 178 | 224 | 89  | 38 | 80  | 132 | 15 | 12x16 | 483 | 180   | 117.5 | 2-M32x1.5 |
| 132        | M-4 | 216 | 51 | 262 | 258 | 188 | 117.5 | 178 | 224 | 89  | 38 | 80  | 132 | 15 | 12x16 | 539 | 180   | 117.5 | 2-M32x1.5 |
| 160        | M   | 254 | 55 | 304 | 315 | 242 | 167   | 210 | 260 | 108 | 42 | 110 | 160 | 18 | 15x18 | 589 | 268.5 | 157   | 2-M40x1.5 |
| 160        | L   | 254 | 55 | 304 | 315 | 242 | 167   | 254 | 304 | 108 | 42 | 110 | 160 | 18 | 15x18 | 633 | 268.5 | 157   | 2-M40x1.5 |

# ALUMINUM MOTOR, MOUNTING B5



## Without IE classification

| Frame size | AC  | AD  | AG  | D  | E  | L   | LA | LB  | LD    | LL  | M   | N   | P   | S    | T   | IPE       |
|------------|-----|-----|-----|----|----|-----|----|-----|-------|-----|-----|-----|-----|------|-----|-----------|
| 56         | 113 | 90  | 86  | 9  | 20 | 199 | 8  | 179 | 83    | 86  | 100 | 80  | 120 | 4x7  | 3   | 1-M20x1.5 |
| 63         | 120 | 100 | 101 | 11 | 23 | 217 | 10 | 194 | 95.5  | 101 | 115 | 95  | 140 | 4x10 | 3   | 1-M20x1.5 |
| 71         | 136 | 112 | 101 | 14 | 30 | 245 | 10 | 215 | 110.5 | 101 | 130 | 110 | 160 | 4x10 | 3.5 | 1-M20x1.5 |

## IE2

| Frame size | AC  | AD  | AG  | D     | E  | L   | LA | LB  | LD    | LL    | M   | N   | P   | S      | T   | IPE       |
|------------|-----|-----|-----|-------|----|-----|----|-----|-------|-------|-----|-----|-----|--------|-----|-----------|
| 80         | 155 | 124 | 101 | 19    | 40 | 281 | 12 | 241 | 118   | 101   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 90         | S   | 175 | 137 | 109   | 24 | 315 | 11 | 265 | 136   | 109   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 90         | L   | 175 | 137 | 109   | 24 | 340 | 11 | 290 | 136   | 109   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 100        | L   | 195 | 151 | 109   | 28 | 373 | 13 | 313 | 144   | 109   | 215 | 180 | 250 | 4x14.5 | 4   | 1-M25x1.5 |
| 112        | M   | 219 | 169 | 117.5 | 28 | 394 | 14 | 334 | 152   | 117.5 | 215 | 180 | 250 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | S   | 258 | 188 | 117.5 | 38 | 465 | 14 | 385 | 180   | 117.5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | M   | 258 | 188 | 117.5 | 38 | 503 | 14 | 423 | 180   | 117.5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 160        | M   | 315 | 242 | 167   | 42 | 607 | 15 | 497 | 268.5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |
| 160        | L   | 315 | 242 | 167   | 42 | 651 | 15 | 541 | 268.5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |

# ALUMINUM MOTOR, MOUNTING B5

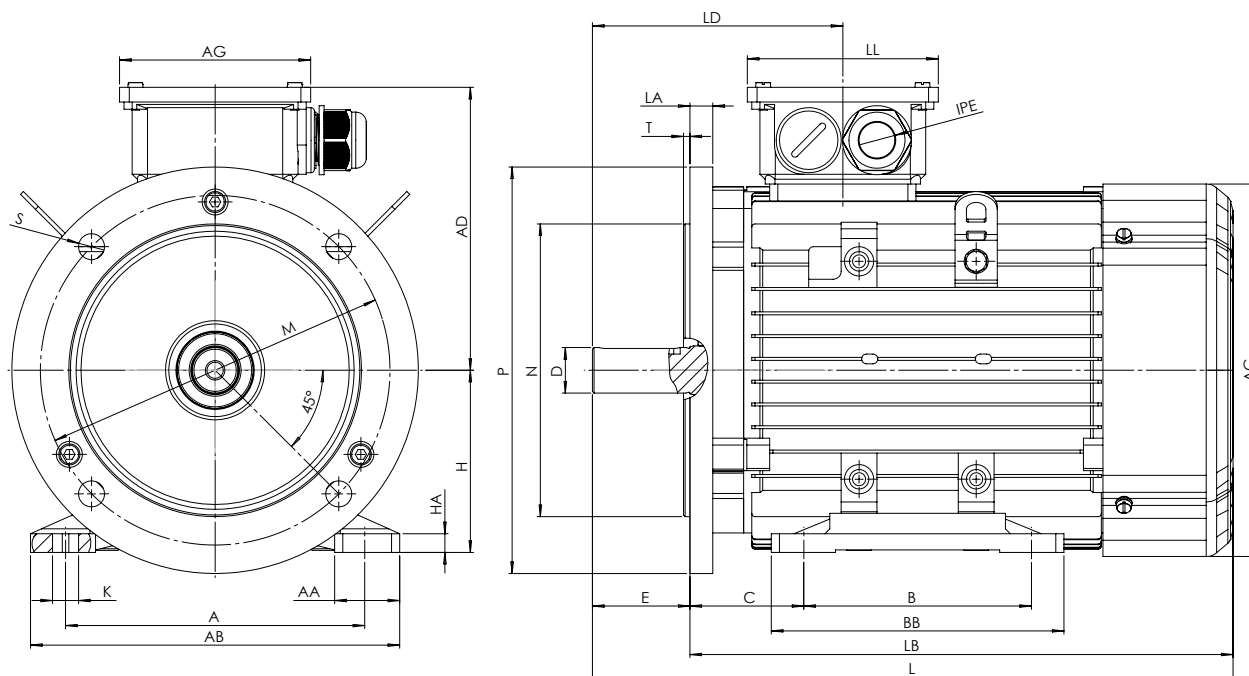
## IE3

| Frame size |   | AC  | AD  | AG    | D  | E   | L   | LA | LB  | LD    | LL    | M   | N   | P   | S      | T   | IPE       |
|------------|---|-----|-----|-------|----|-----|-----|----|-----|-------|-------|-----|-----|-----|--------|-----|-----------|
| 80         |   | 158 | 129 | 101   | 19 | 40  | 294 | 12 | 254 | 115   | 101   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 90         | S | 175 | 140 | 109   | 24 | 50  | 319 | 12 | 269 | 145   | 109   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 90         | L | 175 | 140 | 109   | 24 | 50  | 344 | 12 | 294 | 145   | 109   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 100        | L | 198 | 156 | 109   | 28 | 60  | 393 | 13 | 333 | 148.5 | 109   | 215 | 180 | 250 | 4x14.5 | 4   | 1-M25x1.5 |
| 112        | M | 219 | 166 | 117.5 | 28 | 60  | 394 | 14 | 334 | 152   | 117.5 | 215 | 180 | 250 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | S | 258 | 188 | 117.5 | 38 | 80  | 445 | 14 | 365 | 180   | 117.5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | M | 258 | 188 | 117.5 | 38 | 80  | 483 | 14 | 403 | 180   | 117.5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 160        | M | 315 | 242 | 167   | 42 | 110 | 589 | 15 | 479 | 268.5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |
| 160        | L | 315 | 242 | 167   | 42 | 110 | 633 | 15 | 523 | 268.5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |

## IE4

| Frame size |     | AC  | AD  | AG    | D  | E   | L   | LA | LB  | LD    | LL    | M   | N   | P   | S      | T   | IPE       |
|------------|-----|-----|-----|-------|----|-----|-----|----|-----|-------|-------|-----|-----|-----|--------|-----|-----------|
| 80         |     | 158 | 129 | 101   | 19 | 40  | 294 | 12 | 254 | 115   | 101   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 90         | S   | 175 | 140 | 109   | 24 | 50  | 319 | 12 | 269 | 145   | 109   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 90         | L   | 175 | 140 | 109   | 24 | 50  | 344 | 12 | 294 | 145   | 109   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 100        | L   | 198 | 156 | 109   | 28 | 60  | 393 | 13 | 333 | 148.5 | 109   | 215 | 180 | 250 | 4x14.5 | 4   | 2-M32x1.5 |
| 112        | M   | 224 | 175 | 117.5 | 28 | 60  | 400 | 14 | 340 | 154   | 117.5 | 215 | 180 | 250 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | S   | 258 | 188 | 117.5 | 38 | 80  | 445 | 14 | 365 | 180   | 117.5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | M   | 258 | 188 | 117.5 | 38 | 80  | 483 | 14 | 403 | 180   | 117.5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | M-4 | 258 | 188 | 117.5 | 38 | 80  | 539 | 14 | 459 | 180   | 117.5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 160        | M   | 315 | 242 | 167   | 42 | 110 | 589 | 15 | 479 | 268.5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |
| 160        | L   | 315 | 242 | 167   | 42 | 110 | 633 | 15 | 523 | 268.5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |

# ALUMINUM MOTOR, MOUNTING B35



## Without IE classification

| Frame size | A   | AA | AB  | AC  | AD  | AG  | B  | BB  | C  | D  | E  | H  | HA | K     | L   | LA | LB  | LD    | LL  | M   | N   | P   | S    | T   | IPE       |
|------------|-----|----|-----|-----|-----|-----|----|-----|----|----|----|----|----|-------|-----|----|-----|-------|-----|-----|-----|-----|------|-----|-----------|
| 56         | 90  | 23 | 111 | 113 | 90  | 86  | 71 | 88  | 36 | 9  | 20 | 56 | 7  |       | 199 | 8  | 179 | 83    | 86  | 100 | 80  | 120 | 4x7  | 3   | 1-M20x1.5 |
| 63         | 100 | 24 | 123 | 120 | 100 | 101 | 80 | 100 | 40 | 11 | 23 | 63 | 7  | 7x9.5 | 217 | 10 | 194 | 95,5  | 101 | 115 | 95  | 140 | 4x10 | 3   | 1-M20x1.5 |
| 71         | 112 | 26 | 138 | 136 | 112 | 101 | 90 | 110 | 45 | 14 | 30 | 71 | 8  | 7x11  | 245 | 10 | 215 | 110,5 | 101 | 130 | 110 | 160 | 4x10 | 3,5 | 1-M20x1.5 |

## IE2

| Frame size | A   | AA | AB  | AC  | AD  | AG  | B   | BB  | C   | D  | E   | H   | HA | K     | L   | LA | LB  | LD    | LL    | M   | N   | P   | S      | T   | IPE       |
|------------|-----|----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|-------|-----|----|-----|-------|-------|-----|-----|-----|--------|-----|-----------|
| 80         | 125 | 35 | 157 | 155 | 124 | 101 | 100 | 125 | 50  | 19 | 40  | 80  | 9  | 10x14 | 281 | 12 | 241 | 118   | 101   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 90 S       | 140 | 37 | 173 | 175 | 137 | 109 | 100 | 125 | 56  | 24 | 50  | 90  | 10 | 10x14 | 315 | 11 | 265 | 136   | 109   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 90 L       | 140 | 37 | 173 | 175 | 137 | 109 | 125 | 150 | 56  | 24 | 50  | 90  | 10 | 10x14 | 340 | 11 | 290 | 136   | 109   | 165 | 130 | 200 | 4x12   | 3.5 | 1-M25x1.5 |
| 100 L      | 160 | 40 | 196 | 195 | 151 | 109 | 140 | 172 | 63  | 28 | 60  | 100 | 11 | 12x16 | 373 | 13 | 313 | 144   | 109   | 215 | 180 | 250 | 4x14.5 | 4   | 1-M25x1.5 |
| 112 M      | 190 | 41 | 227 | 219 | 169 |     | 140 | 180 | 70  | 28 | 60  | 112 | 12 | 12x16 | 394 | 14 | 334 | 152   | 117.5 | 215 | 180 | 250 | 4x14.5 | 4   | 2-M32x1.5 |
| 132 S      | 216 | 51 | 262 | 258 | 188 |     | 140 | 186 | 89  | 38 | 80  | 132 | 15 | 12x16 | 465 | 14 | 385 | 180   | 117.5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 132 M      | 216 | 51 | 262 | 258 | 188 |     | 178 | 224 | 89  | 38 | 80  | 132 | 15 | 12x16 | 503 | 14 | 423 | 180   | 117.5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 160 M      | 254 | 55 | 304 | 315 | 242 | 167 | 210 | 260 | 108 | 42 | 110 | 160 | 18 | 15x18 | 607 | 15 | 497 | 268.5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |
| 160 L      | 254 | 55 | 304 | 315 | 242 | 167 | 254 | 304 | 108 | 42 | 110 | 160 | 18 | 15x18 | 651 | 15 | 541 | 268.5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |

# ALUMINUM MOTOR, MOUNTING B35

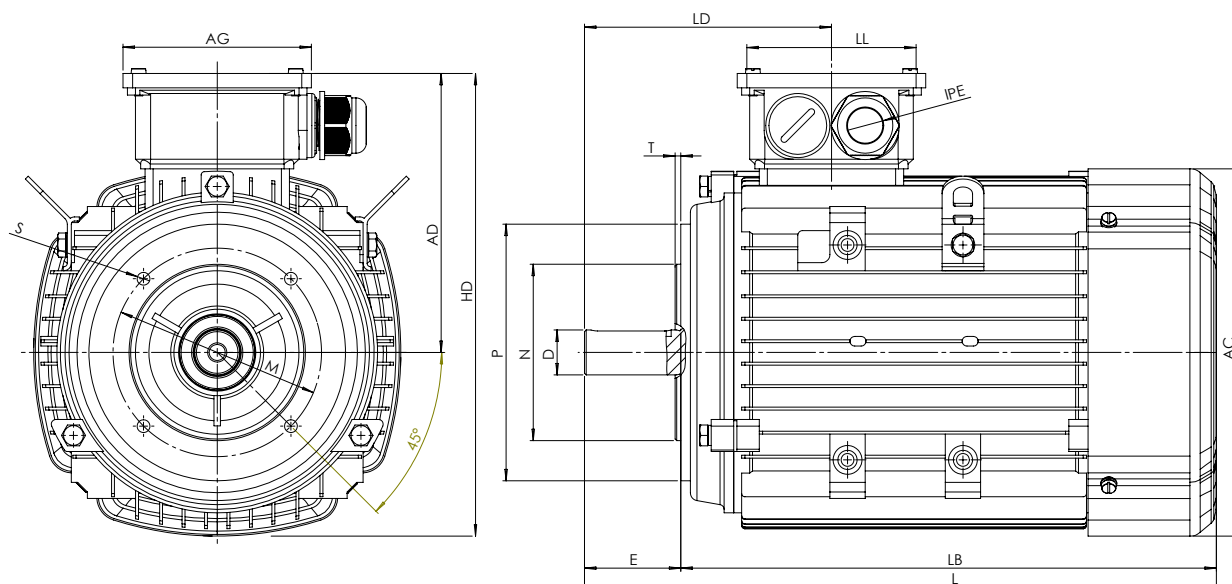
## IE3

| Frame size |   | A   | AA | AB  | AC  | AD  | AG    | B   | BB  | C   | D  | E   | H   | HA | K     | L   | LA | LB  | LD    | LL    | M   | N   | P   | S      | T   | IPE       |
|------------|---|-----|----|-----|-----|-----|-------|-----|-----|-----|----|-----|-----|----|-------|-----|----|-----|-------|-------|-----|-----|-----|--------|-----|-----------|
| 80         |   | 125 | 35 | 157 | 158 | 129 | 101   | 100 | 125 | 50  | 19 | 40  | 80  | 8  | 10x14 | 294 | 12 | 254 | 115   | 101   | 165 | 130 | 200 | 4x12   | 3,5 | 1-M25x1.5 |
| 90         | S | 140 | 37 | 173 | 175 | 140 | 109   | 100 | 125 | 56  | 24 | 50  | 90  | 10 | 10x14 | 319 | 12 | 269 | 145   | 109   | 165 | 130 | 200 | 4x12   | 3,5 | 1-M25x1.5 |
| 90         | L | 140 | 37 | 173 | 175 | 140 | 109   | 125 | 150 | 56  | 24 | 50  | 90  | 10 | 10x14 | 344 | 12 | 294 | 145   | 109   | 165 | 130 | 200 | 4x12   | 3,5 | 1-M25x1.5 |
| 100        | L | 160 | 40 | 196 | 198 | 156 | 109   | 140 | 172 | 63  | 28 | 60  | 100 | 11 | 12x16 | 393 | 13 | 333 | 148,5 | 109   | 215 | 180 | 250 | 4x14.5 | 4   | 1-M25x1.5 |
| 112        | M | 190 | 41 | 227 | 219 | 166 | 117,5 | 140 | 180 | 70  | 28 | 60  | 112 | 12 | 12x16 | 394 | 14 | 334 | 152   | 117,5 | 215 | 180 | 250 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | S | 216 | 51 | 262 | 258 | 188 | 117,5 | 140 | 186 | 89  | 38 | 80  | 132 | 15 | 12x16 | 445 | 14 | 365 | 180   | 117,5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | M | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89  | 38 | 80  | 132 | 15 | 12x16 | 483 | 14 | 403 | 180   | 117,5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 160        | M | 254 | 55 | 304 | 315 | 242 | 167   | 210 | 260 | 108 | 42 | 110 | 160 | 18 | 15x18 | 589 | 15 | 479 | 268,5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |
| 160        | L | 254 | 55 | 304 | 315 | 242 | 167   | 254 | 304 | 108 | 42 | 110 | 160 | 18 | 15x18 | 633 | 15 | 523 | 268,5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |

## IE4

| Frame size | A   | AA  | AB | AC  | AD  | AG  | B     | BB  | C   | D   | E  | H   | HA  | K  | L     | LA  | LB | LD  | LL    | M     | N   | P   | S   | T      | IPE |           |
|------------|-----|-----|----|-----|-----|-----|-------|-----|-----|-----|----|-----|-----|----|-------|-----|----|-----|-------|-------|-----|-----|-----|--------|-----|-----------|
| 80         |     | 125 | 35 | 157 | 158 | 129 | 101   | 100 | 125 | 50  | 19 | 40  | 80  | 8  | 10x14 | 294 | 12 | 254 | 115   | 101   | 165 | 130 | 200 | 4x12   | 3,5 | 1-M25x1.5 |
| 90         | S   | 140 | 37 | 173 | 175 | 140 | 109   | 100 | 125 | 56  | 24 | 50  | 90  | 10 | 10x14 | 319 | 12 | 269 | 145   | 109   | 165 | 130 | 200 | 4x12   | 3,5 | 1-M25x1.5 |
| 90         | L   | 140 | 37 | 173 | 175 | 140 | 109   | 125 | 150 | 56  | 24 | 50  | 90  | 10 | 10x14 | 344 | 12 | 294 | 145   | 109   | 165 | 130 | 200 | 4x12   | 3,5 | 1-M25x1.5 |
| 100        | L   | 160 | 40 | 196 | 198 | 156 | 109   | 140 | 172 | 63  | 28 | 60  | 100 | 11 | 12x16 | 393 | 13 | 333 | 148,5 | 109   | 215 | 180 | 250 | 4x14.5 | 4   | 1-M32x1.5 |
| 112        | M   | 190 | 40 | 227 | 224 | 175 | 117,5 | 140 | 180 | 70  | 28 | 60  | 112 | 12 | 12x16 | 400 | 14 | 340 | 154   | 117,5 | 215 | 180 | 250 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | S   | 216 | 51 | 262 | 258 | 188 | 117,5 | 140 | 186 | 89  | 38 | 80  | 132 | 15 | 12x16 | 445 | 14 | 365 | 180   | 117,5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | M   | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89  | 38 | 80  | 132 | 15 | 12x16 | 483 | 14 | 403 | 180   | 117,5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 132        | M-4 | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89  | 38 | 80  | 132 | 15 | 12x16 | 539 | 14 | 459 | 180   | 117,5 | 265 | 230 | 300 | 4x14.5 | 4   | 2-M32x1.5 |
| 160        | M   | 254 | 55 | 304 | 315 | 242 | 167   | 210 | 260 | 108 | 42 | 110 | 160 | 18 | 15x18 | 589 | 15 | 479 | 268,5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |
| 160        | L   | 254 | 55 | 304 | 315 | 242 | 167   | 254 | 304 | 108 | 42 | 110 | 160 | 18 | 15x18 | 633 | 15 | 523 | 268,5 | 157   | 300 | 250 | 350 | 4x18.5 | 5   | 2-M40x1.5 |

# ALUMINUM MOTOR, MOUNTING B14A



## Without IE classification

| Frame size | AC  | AD  | AG  | D  | E  | HD    | L   | LB  | LD    | LL  | M  | N  | P   | S    | T   | IPE       |
|------------|-----|-----|-----|----|----|-------|-----|-----|-------|-----|----|----|-----|------|-----|-----------|
| 56         | 113 | 90  | 86  | 9  | 20 | 152.5 | 199 | 179 | 83    | 86  | 65 | 50 | 80  | 4xM5 | 2.5 | 1-M20x1.5 |
| 63         | 120 | 100 | 101 | 11 | 23 | 162   | 217 | 194 | 95.5  | 101 | 75 | 60 | 90  | 4xM5 | 2.5 | 1-M20x1.5 |
| 71         | 136 | 112 | 101 | 14 | 30 | 177   | 245 | 215 | 110.5 | 101 | 85 | 70 | 105 | 4xM6 | 2.5 | 1-M20x1.5 |

## IE2

| Frame size | AC  | AD  | AG    | D  | E  | HD    | L   | LB  | LD  | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|-----|-----|-------|----|----|-------|-----|-----|-----|-------|-----|-----|-----|-------|-----|-----------|
| 80         | 155 | 124 | 101   | 19 | 40 | 201.5 | 281 | 241 | 118 | 101   | 100 | 80  | 120 | 4xM6  | 3   | 1-M25x1.5 |
| 90 S       | 175 | 137 | 109   | 24 | 50 | 224.5 | 315 | 265 | 136 | 109   | 115 | 95  | 140 | 4xM8  | 3   | 1-M25x1.5 |
| 90 L       | 175 | 137 | 109   | 24 | 50 | 224.5 | 340 | 290 | 136 | 109   | 115 | 95  | 140 | 4xM8  | 3   | 1-M25x1.5 |
| 100 L      | 195 | 151 | 109   | 28 | 60 | 248.5 | 373 | 313 | 144 | 109   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 112 M      | 219 | 169 | 117.5 | 28 | 60 | 278.5 | 394 | 334 | 152 | 117.5 | 130 | 110 | 160 | 4xM8  | 3.5 | 2-M32x1.5 |
| 132 S      | 258 | 188 | 117.5 | 38 | 80 | 317   | 465 | 385 | 180 | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |
| 132 M      | 258 | 188 | 117.5 | 38 | 80 | 317   | 503 | 423 | 180 | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |

# ALUMINUM MOTOR, MOUNTING B14A

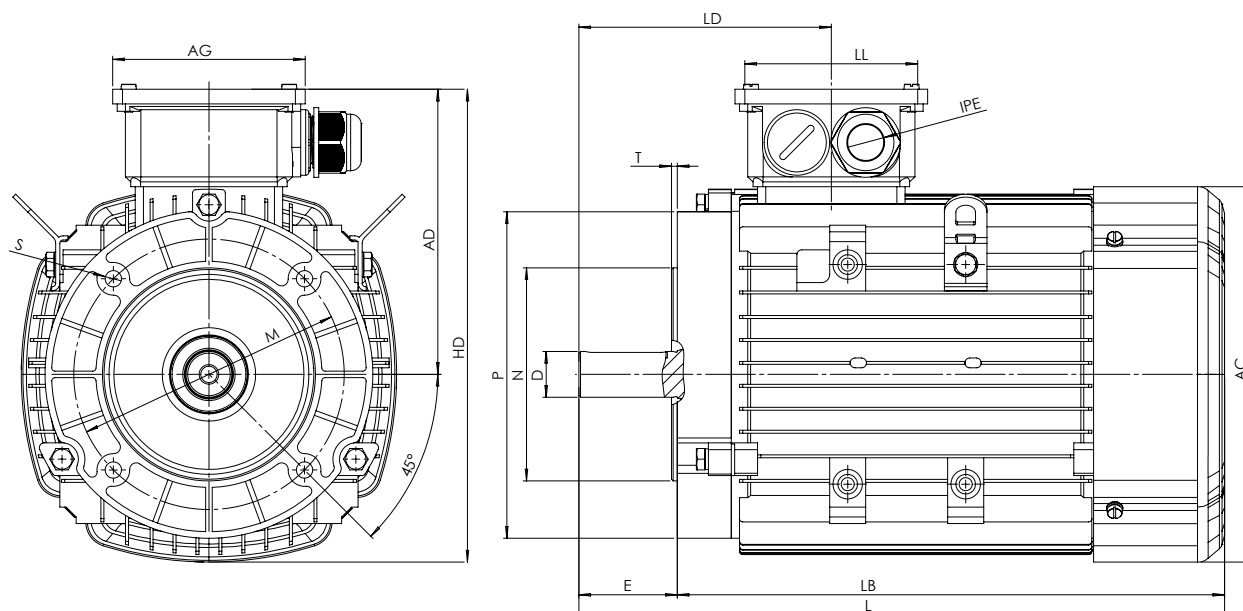
## IE3

| Frame size |   | AC  | AD  | AG    | D  | E  | HD    | L   | LB  | LD    | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|---|-----|-----|-------|----|----|-------|-----|-----|-------|-------|-----|-----|-----|-------|-----|-----------|
| 80         |   | 158 | 129 | 101   | 19 | 40 | 208   | 294 | 254 | 115   | 101   | 100 | 80  | 120 | 4xM6  | 3   | 1-M25x1.5 |
| 90         | S | 175 | 140 | 109   | 24 | 50 | 227.5 | 319 | 269 | 145   | 109   | 115 | 95  | 140 | 4xM8  | 3   | 1-M25x1.5 |
| 90         | L | 175 | 140 | 109   | 24 | 50 | 227.5 | 344 | 294 | 145   | 109   | 115 | 95  | 140 | 4xM8  | 3   | 1-M25x1.5 |
| 100        | L | 198 | 156 | 109   | 28 | 60 | 255   | 393 | 333 | 148.5 | 109   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 112        | M | 219 | 166 | 117.5 | 28 | 60 | 275.5 | 394 | 334 | 152   | 117.5 | 130 | 110 | 160 | 4xM8  | 3.5 | 2-M32x1.5 |
| 132        | S | 258 | 188 | 117.5 | 38 | 80 | 317   | 445 | 365 | 180   | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |
| 132        | M | 258 | 188 | 117.5 | 38 | 80 | 317   | 483 | 403 | 180   | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |

## IE4

| Frame size |     | AC  | AD  | AG    | D  | E  | HD    | L   | LB  | LD    | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|-----|-----|-----|-------|----|----|-------|-----|-----|-------|-------|-----|-----|-----|-------|-----|-----------|
| 80         |     | 158 | 129 | 101   | 19 | 40 | 208   | 294 | 254 | 115   | 101   | 100 | 80  | 120 | 4xM6  | 3   | 1-M25x1.5 |
| 90         | S   | 175 | 140 | 109   | 24 | 50 | 227.5 | 319 | 269 | 145   | 109   | 115 | 95  | 140 | 4xM8  | 3   | 1-M25x1.5 |
| 90         | L   | 175 | 140 | 109   | 24 | 50 | 227.5 | 344 | 294 | 145   | 109   | 115 | 95  | 140 | 4xM8  | 3   | 1-M25x1.5 |
| 100        | L   | 198 | 156 | 109   | 28 | 60 | 255   | 393 | 333 | 148.5 | 109   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M32x1.5 |
| 112        | M   | 224 | 175 | 117.5 | 28 | 60 | 287   | 400 | 340 | 154   | 117.5 | 130 | 110 | 160 | 4xM8  | 3.5 | 2-M32x1.5 |
| 132        | S   | 258 | 188 | 117.5 | 38 | 80 | 317   | 445 | 365 | 180   | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |
| 132        | M   | 258 | 188 | 117.5 | 38 | 80 | 317   | 483 | 403 | 180   | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |
| 132        | M-4 | 258 | 188 | 117.5 | 38 | 80 | 317   | 539 | 459 | 180   | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |

# ALUMINUM MOTOR, MOUNTING B14B



## Without IE classification

| Frame size | AC  | AD  | AG  | D  | E  | HD    | L   | LB  | LD    | LL  | M   | N  | P   | S    | T   | IPE       |
|------------|-----|-----|-----|----|----|-------|-----|-----|-------|-----|-----|----|-----|------|-----|-----------|
| 56         | 113 | 90  | 86  | 9  | 20 | 152.5 | 199 | 179 | 83    | 86  | 85  | 70 | 105 | 4xM6 | 2.5 | 1-M20x1.5 |
| 63         | 120 | 100 | 101 | 11 | 23 | 162   | 217 | 194 | 95.5  | 101 | 110 | 80 | 120 | 4xM6 | 3   | 1-M20x1.5 |
| 71         | 136 | 112 | 101 | 14 | 30 | 179   | 245 | 215 | 110.5 | 101 | 115 | 95 | 140 | 4xM8 | 3   | 1-M20x1.5 |

## IE2

| Frame size | AC  | AD  | AG    | D  | E  | HD    | L   | LB  | LD  | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|-----|-----|-------|----|----|-------|-----|-----|-----|-------|-----|-----|-----|-------|-----|-----------|
| 80         | 155 | 124 | 101   | 19 | 40 | 204   | 281 | 241 | 118 | 101   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 90 S       | 175 | 137 | 109   | 24 | 50 | 224.5 | 315 | 265 | 136 | 109   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 90 L       | 175 | 137 | 109   | 24 | 50 | 224.5 | 340 | 290 | 136 | 109   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 100 L      | 195 | 151 | 109   | 28 | 60 | 251   | 373 | 313 | 144 | 109   | 165 | 130 | 200 | 4xM10 | 3.5 | 1-M25x1.5 |
| 112 M      | 219 | 169 | 117.5 | 28 | 60 | 278.5 | 394 | 334 | 152 | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |
| 132 S      | 258 | 188 | 117.5 | 38 | 80 | 317   | 465 | 385 | 180 | 117.5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |
| 132 M      | 258 | 188 | 117.5 | 38 | 80 | 317   | 503 | 423 | 180 | 117.5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |

# ALUMINUM MOTOR, MOUNTING B14B

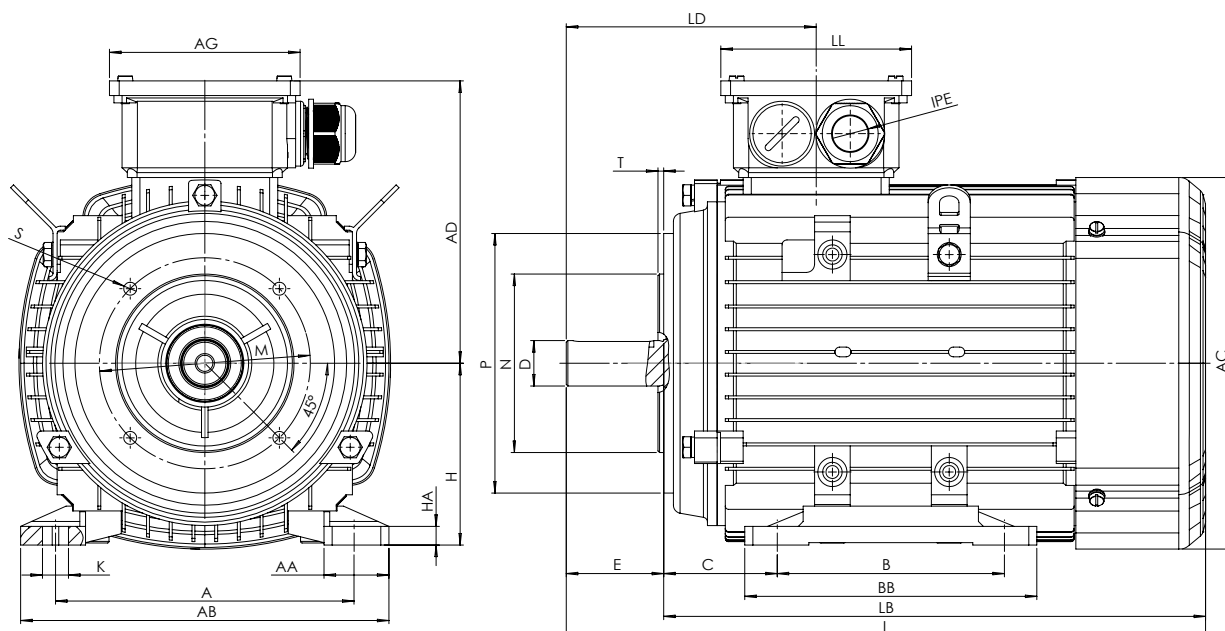
## IE3

| Frame size |   | AC  | AD  | AG    | D  | E  | HD    | L   | LB  | LD    | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|---|-----|-----|-------|----|----|-------|-----|-----|-------|-------|-----|-----|-----|-------|-----|-----------|
| 80         |   | 158 | 129 | 101   | 19 | 40 | 209   | 294 | 254 | 115   | 101   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 90         | S | 175 | 140 | 109   | 24 | 50 | 227.5 | 319 | 269 | 145   | 109   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 90         | L | 175 | 140 | 109   | 24 | 50 | 227.5 | 344 | 294 | 145   | 109   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 100        | L | 198 | 156 | 109   | 28 | 60 | 256   | 393 | 333 | 148.5 | 109   | 165 | 130 | 200 | 4xM10 | 3.5 | 1-M25x1.5 |
| 112        | M | 219 | 166 | 117.5 | 28 | 60 | 275.5 | 394 | 334 | 152   | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |
| 132        | S | 258 | 188 | 117.5 | 38 | 80 | 317   | 445 | 365 | 180   | 117.5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |
| 132        | M | 258 | 188 | 117.5 | 38 | 80 | 317   | 483 | 403 | 180   | 117.5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |

## IE4

| Frame size |     | AC  | AD  | AG    | D  | E  | HD    | L   | LB  | LD    | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|-----|-----|-----|-------|----|----|-------|-----|-----|-------|-------|-----|-----|-----|-------|-----|-----------|
| 80         |     | 158 | 129 | 101   | 19 | 40 | 209   | 294 | 254 | 115   | 101   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 90         | S   | 175 | 140 | 109   | 24 | 50 | 227.5 | 319 | 269 | 145   | 109   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 90         | L   | 175 | 140 | 109   | 24 | 50 | 227.5 | 344 | 294 | 145   | 109   | 130 | 110 | 160 | 4xM8  | 3.5 | 1-M25x1.5 |
| 100        | L   | 198 | 156 | 109   | 28 | 60 | 256   | 393 | 333 | 148.5 | 109   | 165 | 130 | 200 | 4xM10 | 3.5 | 1-M32x1.5 |
| 112        | M   | 224 | 175 | 117.5 | 28 | 60 | 285   | 400 | 340 | 154   | 117.5 | 165 | 130 | 200 | 4xM10 | 3.5 | 2-M32x1.5 |
| 132        | S   | 258 | 188 | 117.5 | 38 | 80 | 317   | 445 | 365 | 180   | 117.5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |
| 132        | M   | 258 | 188 | 117.5 | 38 | 80 | 317   | 483 | 403 | 180   | 117.5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |
| 132        | M-4 | 258 | 188 | 117.5 | 38 | 80 | 317   | 539 | 459 | 180   | 117.5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |

# ALUMINUM MOTOR, MOUNTING B34A



## Without IE classification

| Frame size | A   | AA | AB  | AC  | AD  | AG  | B  | BB  | C  | D  | E  | H  | HA | K     | L   | LB  | LD    | LL  | M  | N  | P   | S    | T   | IPE |
|------------|-----|----|-----|-----|-----|-----|----|-----|----|----|----|----|----|-------|-----|-----|-------|-----|----|----|-----|------|-----|-----|
| 56         | 90  | 23 | 111 | 113 | 90  | 86  | 71 | 88  | 36 | 9  | 20 | 56 | 7  |       | 199 | 179 | 83    | 86  | 65 | 50 | 80  | 4xM5 | 2,5 |     |
| 63         | 100 | 24 | 123 | 120 | 100 | 101 | 80 | 100 | 40 | 11 | 23 | 63 | 7  | 7x9.5 | 217 | 194 | 95,5  | 101 | 75 | 60 | 90  | 4xM5 | 2,5 |     |
| 71         | 112 | 26 | 138 | 136 | 112 | 101 | 90 | 110 | 45 | 14 | 30 | 71 | 8  | 7x11  | 245 | 215 | 110,5 | 101 | 85 | 70 | 105 | 4xM6 | 2,5 |     |

## IE2

| Frame size |   | A   | AA | AB  | AC  | AD  | AG    | B   | BB  | C  | D  | E  | H   | HA | K     | L   | LB  | LD  | LL    | M   | N   | P   | S     | T   | IPE |
|------------|---|-----|----|-----|-----|-----|-------|-----|-----|----|----|----|-----|----|-------|-----|-----|-----|-------|-----|-----|-----|-------|-----|-----|
| 80         |   | 125 | 35 | 157 | 155 | 124 | 101   | 100 | 125 | 50 | 19 | 40 | 80  | 9  | 10x14 | 281 | 241 | 118 | 101   | 100 | 80  | 120 | 4xM6  | 3   |     |
| 90         | S | 140 | 37 | 173 | 175 | 137 | 109   | 100 | 125 | 56 | 24 | 50 | 90  | 10 | 10x14 | 315 | 265 | 136 | 109   | 115 | 95  | 140 | 4xM8  | 3   |     |
| 90         | L | 140 | 37 | 173 | 175 | 137 | 109   | 125 | 150 | 56 | 24 | 50 | 90  | 10 | 10x14 | 340 | 290 | 136 | 109   | 115 | 95  | 140 | 4xM8  | 3   |     |
| 100        | L | 160 | 40 | 196 | 195 | 151 | 109   | 140 | 172 | 63 | 28 | 60 | 100 | 11 | 12x16 | 373 | 313 | 144 | 109   | 130 | 110 | 160 | 4xM8  | 3,5 |     |
| 112        | M | 190 | 41 | 227 | 219 | 169 | 117.5 | 140 | 180 | 70 | 28 | 60 | 112 | 12 | 12x16 | 394 | 334 | 152 | 117,5 | 130 | 110 | 160 | 4xM8  | 3,5 |     |
| 132        | S | 216 | 51 | 262 | 258 | 188 | 117.5 | 140 | 186 | 89 | 38 | 80 | 132 | 15 | 12x16 | 465 | 385 | 180 | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 |     |
| 132        | M | 216 | 51 | 262 | 258 | 188 | 117.5 | 178 | 224 | 89 | 38 | 80 | 132 | 15 | 12x16 | 503 | 423 | 180 | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 |     |

# ALUMINUM MOTOR, MOUNTING B34A

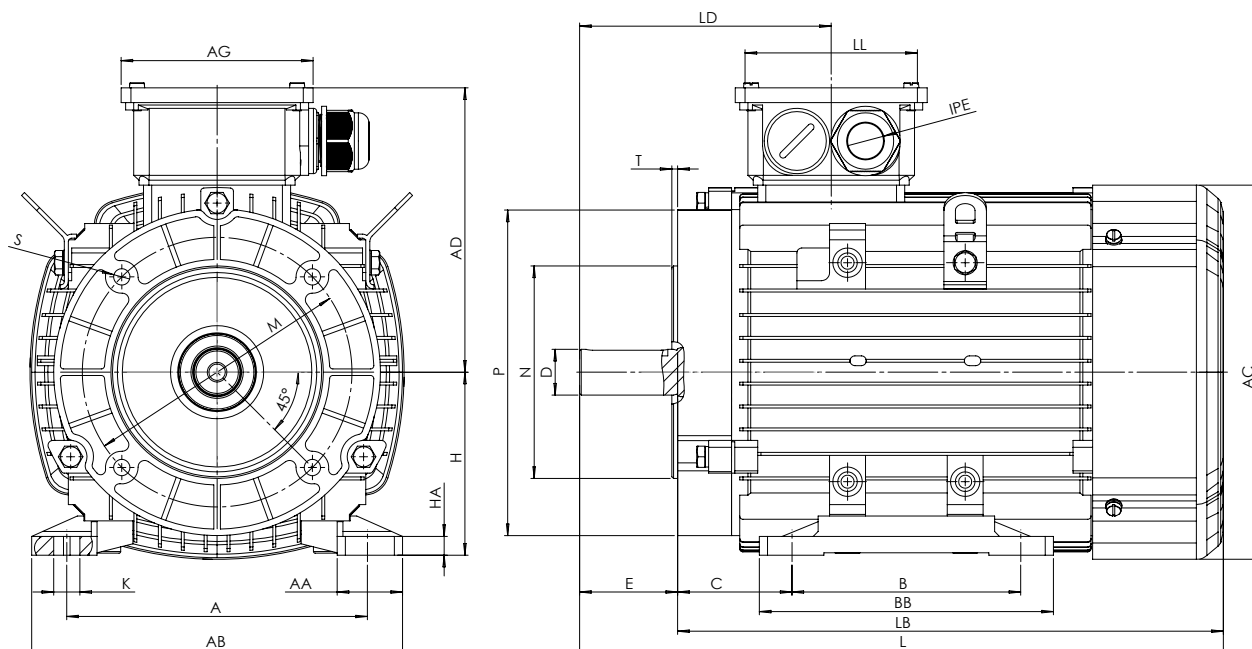
## IE3

| Frame size |   | A   | AA | AB  | AC  | AD  | AG    | B   | BB  | C  | D  | E  | H   | HA | K     | L   | LB  | LD    | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|---|-----|----|-----|-----|-----|-------|-----|-----|----|----|----|-----|----|-------|-----|-----|-------|-------|-----|-----|-----|-------|-----|-----------|
| 80         |   | 125 | 35 | 157 | 158 | 129 | 101   | 100 | 125 | 50 | 19 | 40 | 80  | 8  | 10x14 | 294 | 254 | 115   | 101   | 100 | 80  | 120 | 4xM6  | 3   | 1-M25x1.5 |
| 90         | S | 140 | 37 | 173 | 175 | 140 | 109   | 100 | 125 | 56 | 24 | 50 | 90  | 10 | 10x14 | 319 | 269 | 145   | 109   | 115 | 95  | 140 | 4xM8  | 3   | 1-M25x1.5 |
| 90         | L | 140 | 37 | 173 | 175 | 140 | 109   | 125 | 150 | 56 | 24 | 50 | 90  | 10 | 10x14 | 344 | 294 | 145   | 109   | 115 | 95  | 140 | 4xM8  | 3   | 1-M25x1.5 |
| 100        | L | 160 | 40 | 196 | 198 | 156 | 109   | 140 | 172 | 63 | 28 | 60 | 100 | 11 | 12x16 | 393 | 333 | 148,5 | 109   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1.5 |
| 112        | M | 190 | 41 | 227 | 219 | 166 | 117,5 | 140 | 180 | 70 | 28 | 60 | 112 | 12 | 12x16 | 394 | 334 | 152   | 117,5 | 130 | 110 | 160 | 4xM8  | 3,5 | 2-M32x1.5 |
| 132        | S | 216 | 51 | 262 | 258 | 188 | 117,5 | 140 | 186 | 89 | 38 | 80 | 132 | 15 | 12x16 | 445 | 365 | 180   | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 | 2-M32x1.5 |
| 132        | M | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89 | 38 | 80 | 132 | 15 | 12x16 | 483 | 403 | 180   | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 | 2-M32x1.5 |

## IE4

| Frame size | A   | AA  | AB | AC  | AD  | AG  | B     | BB  | C   | D  | E  | H  | HA  | K  | L     | LB  | LD  | LL    | M     | N   | P   | S   | T     | IPE |
|------------|-----|-----|----|-----|-----|-----|-------|-----|-----|----|----|----|-----|----|-------|-----|-----|-------|-------|-----|-----|-----|-------|-----|
| 80         |     | 125 | 35 | 157 | 158 | 129 | 101   | 100 | 125 | 50 | 19 | 40 | 80  | 8  | 10x14 | 294 | 254 | 115   | 101   | 100 | 80  | 120 | 4xM6  | 3   |
| 90         | S   | 140 | 37 | 173 | 175 | 140 | 109   | 100 | 125 | 56 | 24 | 50 | 90  | 10 | 10x14 | 319 | 269 | 145   | 109   | 115 | 95  | 140 | 4xM8  | 3   |
| 90         | L   | 140 | 37 | 173 | 175 | 140 | 109   | 125 | 150 | 56 | 24 | 50 | 90  | 10 | 10x14 | 344 | 294 | 145   | 109   | 115 | 95  | 140 | 4xM8  | 3   |
| 100        | L   | 160 | 40 | 196 | 198 | 156 | 109   | 140 | 172 | 63 | 28 | 60 | 100 | 11 | 12x16 | 393 | 333 | 148,5 | 109   | 130 | 110 | 160 | 4xM8  | 3,5 |
| 112        | M   | 190 | 40 | 227 | 224 | 175 | 117,5 | 140 | 180 | 70 | 28 | 60 | 112 | 12 | 12x16 | 400 | 340 | 154   | 117,5 | 130 | 110 | 160 | 4xM8  | 3,5 |
| 132        | S   | 216 | 51 | 262 | 258 | 188 | 117,5 | 140 | 186 | 89 | 38 | 80 | 132 | 15 | 12x16 | 445 | 365 | 180   | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 |
| 132        | M   | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89 | 38 | 80 | 132 | 15 | 12x16 | 483 | 403 | 180   | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 |
| 132        | M-4 | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89 | 38 | 80 | 132 | 15 | 12x16 | 539 | 459 | 180   | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 |

# ALUMINUM MOTOR, MOUNTING B34B



## Without IE classification

| Frame size | A   | AA | AB  | AC  | AD  | AG  | B  | BB  | C  | D  | E  | H  | HA | K       | L   | LB  | LD    | LL  | M   | N  | P   | S    | T   | IPE       |
|------------|-----|----|-----|-----|-----|-----|----|-----|----|----|----|----|----|---------|-----|-----|-------|-----|-----|----|-----|------|-----|-----------|
| 56         | 90  | 23 | 111 | 113 | 90  | 86  | 71 | 88  | 36 | 9  | 20 | 56 | 7  | 5,8x8,3 | 199 | 179 | 83    | 86  | 85  | 70 | 105 | 4xM6 | 2,5 | 1-M20x1,5 |
| 63         | 100 | 24 | 123 | 120 | 100 | 101 | 80 | 100 | 40 | 11 | 23 | 63 | 7  | 7x9,5   | 217 | 194 | 95,5  | 101 | 110 | 80 | 120 | 4xM6 | 3   | 1-M20x1,5 |
| 71         | 112 | 26 | 138 | 136 | 112 | 101 | 90 | 110 | 45 | 14 | 30 | 71 | 8  | 7x11    | 245 | 215 | 110,5 | 101 | 115 | 95 | 140 | 4xM8 | 3   | 1-M20x1,5 |

## IE2

| Frame size |   | A   | AA | AB  | AC  | AD  | AG    | B   | BB  | C  | D  | E  | H   | HA | K     | L   | LB  | LD  | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|---|-----|----|-----|-----|-----|-------|-----|-----|----|----|----|-----|----|-------|-----|-----|-----|-------|-----|-----|-----|-------|-----|-----------|
| 80         |   | 125 | 35 | 157 | 155 | 124 | 101   | 100 | 125 | 50 | 19 | 40 | 80  | 9  | 10x14 | 281 | 241 | 118 | 101   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1,5 |
| 90         | S | 140 | 37 | 173 | 175 | 137 | 109   | 100 | 125 | 56 | 24 | 50 | 90  | 10 | 10x14 | 315 | 265 | 136 | 109   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1,5 |
| 90         | L | 140 | 37 | 173 | 175 | 137 | 109   | 125 | 150 | 56 | 24 | 50 | 90  | 10 | 10x14 | 340 | 290 | 136 | 109   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1,5 |
| 100        | L | 160 | 40 | 196 | 195 | 151 | 109   | 140 | 172 | 63 | 28 | 60 | 100 | 11 | 12x16 | 373 | 313 | 144 | 109   | 165 | 130 | 200 | 4xM10 | 3,5 | 1-M25x1,5 |
| 112        | M | 190 | 41 | 227 | 219 | 169 | 117,5 | 140 | 180 | 70 | 28 | 60 | 112 | 12 | 12x16 | 394 | 334 | 152 | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 | 2-M32x1,5 |
| 132        | S | 216 | 51 | 262 | 258 | 188 | 117,5 | 140 | 186 | 89 | 38 | 80 | 132 | 15 | 12x16 | 465 | 385 | 180 | 117,5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1,5 |
| 132        | M | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89 | 38 | 80 | 132 | 15 | 12x16 | 503 | 423 | 180 | 117,5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1,5 |

# ALUMINUM MOTOR, MOUNTING B34B

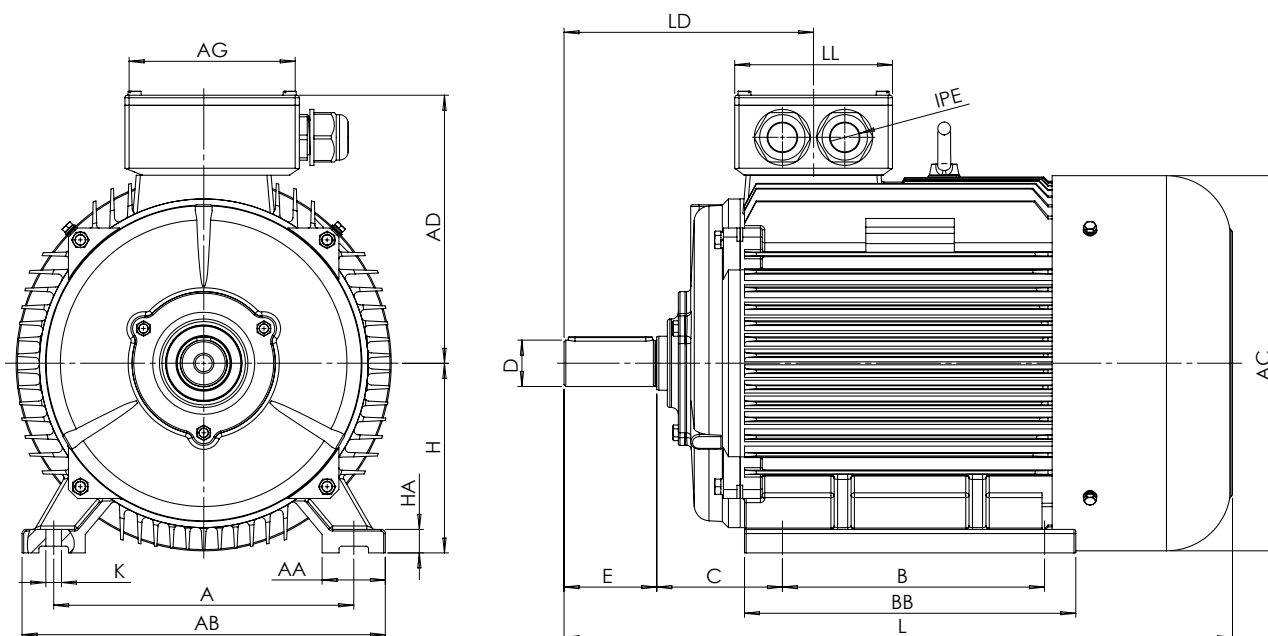
## IE3

| Frame size |   | A   | AA | AB  | AC  | AD  | AG    | B   | BB  | C  | D  | E  | H   | HA | K     | L   | LB  | LD    | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|---|-----|----|-----|-----|-----|-------|-----|-----|----|----|----|-----|----|-------|-----|-----|-------|-------|-----|-----|-----|-------|-----|-----------|
| 80         |   | 125 | 35 | 157 | 158 | 129 | 101   | 100 | 125 | 50 | 19 | 40 | 80  | 8  | 10x14 | 294 | 254 | 115   | 101   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1.5 |
| 90         | S | 140 | 37 | 173 | 175 | 140 | 109   | 100 | 125 | 56 | 24 | 50 | 90  | 10 | 10x14 | 319 | 269 | 145   | 109   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1.5 |
| 90         | L | 140 | 37 | 173 | 175 | 140 | 109   | 125 | 150 | 56 | 24 | 50 | 90  | 10 | 10x14 | 344 | 294 | 145   | 109   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1.5 |
| 100        | L | 160 | 40 | 196 | 198 | 156 | 109   | 140 | 172 | 63 | 28 | 60 | 100 | 11 | 12x16 | 393 | 333 | 148,5 | 109   | 165 | 130 | 200 | 4xM10 | 3,5 | 1-M25x1.5 |
| 112        | M | 190 | 41 | 227 | 219 | 166 | 117,5 | 140 | 180 | 70 | 28 | 60 | 112 | 12 | 12x16 | 394 | 334 | 152   | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 | 2-M32x1.5 |
| 132        | S | 216 | 51 | 262 | 258 | 188 | 117,5 | 140 | 186 | 89 | 38 | 80 | 132 | 15 | 12x16 | 445 | 365 | 180   | 117,5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |
| 132        | M | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89 | 38 | 80 | 132 | 15 | 12x16 | 483 | 403 | 180   | 117,5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |

## IE4

| Frame size |     | A   | AA | AB  | AC  | AD  | AG    | B   | BB  | C  | D  | E  | H   | HA | K     | L   | LB  | LD    | LL    | M   | N   | P   | S     | T   | IPE       |
|------------|-----|-----|----|-----|-----|-----|-------|-----|-----|----|----|----|-----|----|-------|-----|-----|-------|-------|-----|-----|-----|-------|-----|-----------|
| 80         |     | 125 | 35 | 157 | 158 | 129 | 101   | 100 | 125 | 50 | 19 | 40 | 80  | 8  | 10x14 | 294 | 254 | 115   | 101   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1.5 |
| 90         | S   | 140 | 37 | 173 | 175 | 140 | 109   | 100 | 125 | 56 | 24 | 50 | 90  | 10 | 10x14 | 319 | 269 | 145   | 109   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1.5 |
| 90         | L   | 140 | 37 | 173 | 175 | 140 | 109   | 125 | 150 | 56 | 24 | 50 | 90  | 10 | 10x14 | 344 | 294 | 145   | 109   | 130 | 110 | 160 | 4xM8  | 3,5 | 1-M25x1.5 |
| 100        | L   | 160 | 40 | 196 | 198 | 156 | 109   | 140 | 172 | 63 | 28 | 60 | 100 | 11 | 12x16 | 393 | 333 | 148,5 | 109   | 165 | 130 | 200 | 4xM10 | 3,5 | 1-M32x1.5 |
| 112        | M   | 190 | 40 | 227 | 224 | 175 | 117,5 | 140 | 180 | 70 | 28 | 60 | 112 | 12 | 12x16 | 400 | 340 | 154   | 117,5 | 165 | 130 | 200 | 4xM10 | 3,5 | 2-M32x1.5 |
| 132        | S   | 216 | 51 | 262 | 258 | 188 | 117,5 | 140 | 186 | 89 | 38 | 80 | 132 | 15 | 12x16 | 445 | 365 | 180   | 117,5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |
| 132        | M   | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89 | 38 | 80 | 132 | 15 | 12x16 | 483 | 403 | 180   | 117,5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |
| 132        | M-4 | 216 | 51 | 262 | 258 | 188 | 117,5 | 178 | 224 | 89 | 38 | 80 | 132 | 15 | 12x16 | 539 | 459 | 180   | 117,5 | 215 | 180 | 250 | 4xM12 | 4   | 2-M32x1.5 |

# CAST IRON MOTOR, MOUNTING B3



## IE2

| Frame size | x poles | A   | AA  | AB  | AC  | AD  | AG  | B   | BB  | C   | D  | E   | H   | HA | K      | L    | LD    | LL  | IPE       |
|------------|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|--------|------|-------|-----|-----------|
| 160 M      | 2,4,6,8 | 254 | 65  | 314 | 314 | 251 | 162 | 210 | 260 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 608  | 256   | 152 | 2xM40x1.5 |
| 160 L      | 2,4,6,8 | 254 | 65  | 314 | 314 | 251 | 162 | 254 | 304 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 652  | 256   | 152 | 2xM40x1.5 |
| 180 M      | 2,4,8   | 279 | 70  | 349 | 355 | 267 | 162 | 241 | 311 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 688  | 271   | 152 | 2xM40x1.5 |
| 180 L      | 4,6,8   | 279 | 70  | 349 | 355 | 267 | 162 | 279 | 349 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 726  | 271   | 152 | 2xM40x1.5 |
| 200 L      | 2,4,6,8 | 318 | 70  | 388 | 397 | 299 | 210 | 305 | 369 | 133 | 55 | 110 | 200 | 25 | 4x18.5 | 772  | 296   | 190 | 2xM50x1.5 |
| 225 S      | 4,8     | 356 | 75  | 431 | 446 | 322 | 210 | 286 | 368 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 808  | 329   | 190 | 2xM50x1.5 |
| 225 M      | 2       | 356 | 75  | 431 | 446 | 322 | 210 | 311 | 393 | 149 | 55 | 110 | 225 | 28 | 4x18.5 | 803  | 299   | 190 | 2xM50x1.5 |
| 225 M      | 4,6,8   | 356 | 75  | 431 | 446 | 322 | 210 | 311 | 393 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 833  | 329   | 190 | 2xM50x1.5 |
| 250 M      | 2       | 406 | 80  | 484 | 485 | 358 | 248 | 349 | 445 | 168 | 60 | 140 | 250 | 30 | 4x24   | 915  | 347   | 218 | 2xM63x1.5 |
| 250 M      | 4,6,8   | 406 | 80  | 484 | 485 | 358 | 248 | 349 | 445 | 168 | 65 | 140 | 250 | 30 | 4x24   | 915  | 347   | 218 | 2xM63x1.5 |
| 280 S      | 2       | 457 | 85  | 542 | 547 | 387 | 248 | 368 | 485 | 190 | 65 | 140 | 280 | 35 | 4x24   | 982  | 355.5 | 218 | 2xM63x1.5 |
| 280 S      | 4,6,8   | 457 | 85  | 542 | 547 | 387 | 248 | 368 | 485 | 190 | 75 | 140 | 280 | 35 | 4x24   | 982  | 355.5 | 218 | 2xM63x1.5 |
| 280 M      | 2       | 457 | 85  | 542 | 547 | 387 | 248 | 419 | 536 | 190 | 65 | 140 | 280 | 35 | 4x24   | 1033 | 355.5 | 218 | 2xM63x1.5 |
| 280 M      | 4,6,8   | 457 | 85  | 542 | 547 | 387 | 248 | 419 | 536 | 190 | 75 | 140 | 280 | 35 | 4x24   | 1033 | 355.5 | 218 | 2xM63x1.5 |
| 315 S      | 2       | 508 | 120 | 628 | 620 | 527 | 320 | 406 | 570 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1185 | 397   | 280 | 2xM63x1.5 |
| 315 S      | 4,6,8   | 508 | 120 | 628 | 620 | 527 | 320 | 406 | 570 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1215 | 427   | 280 | 2xM63x1.5 |
| 315 M      | 2       | 508 | 120 | 628 | 620 | 527 | 320 | 457 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1295 | 397   | 280 | 2xM63x1.5 |
| 315 M      | 4,6,8   | 508 | 120 | 628 | 620 | 527 | 320 | 457 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1325 | 427   | 280 | 2xM63x1.5 |
| 315 L      | 2       | 508 | 120 | 628 | 620 | 527 | 320 | 508 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1295 | 397   | 280 | 2xM63x1.5 |
| 315 L      | 4,6,8   | 508 | 120 | 628 | 620 | 527 | 320 | 508 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1325 | 427   | 280 | 2xM63x1.5 |
| 355 M      | 2       | 610 | 116 | 726 | 698 | 642 | 380 | 560 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1495 | 414   | 330 | 2xM63x1.5 |
| 355 M      | 4,6,8   | 610 | 116 | 726 | 698 | 642 | 380 | 560 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1565 | 444   | 330 | 2xM63x1.5 |
| 355 L      | 2       | 610 | 116 | 726 | 698 | 642 | 380 | 630 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1495 | 414   | 330 | 2xM63x1.5 |
| 355 L      | 4,6,8   | 610 | 116 | 726 | 698 | 642 | 380 | 630 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1565 | 444   | 330 | 2xM63x1.5 |

# CAST IRON MOTOR, MOUNTING B3

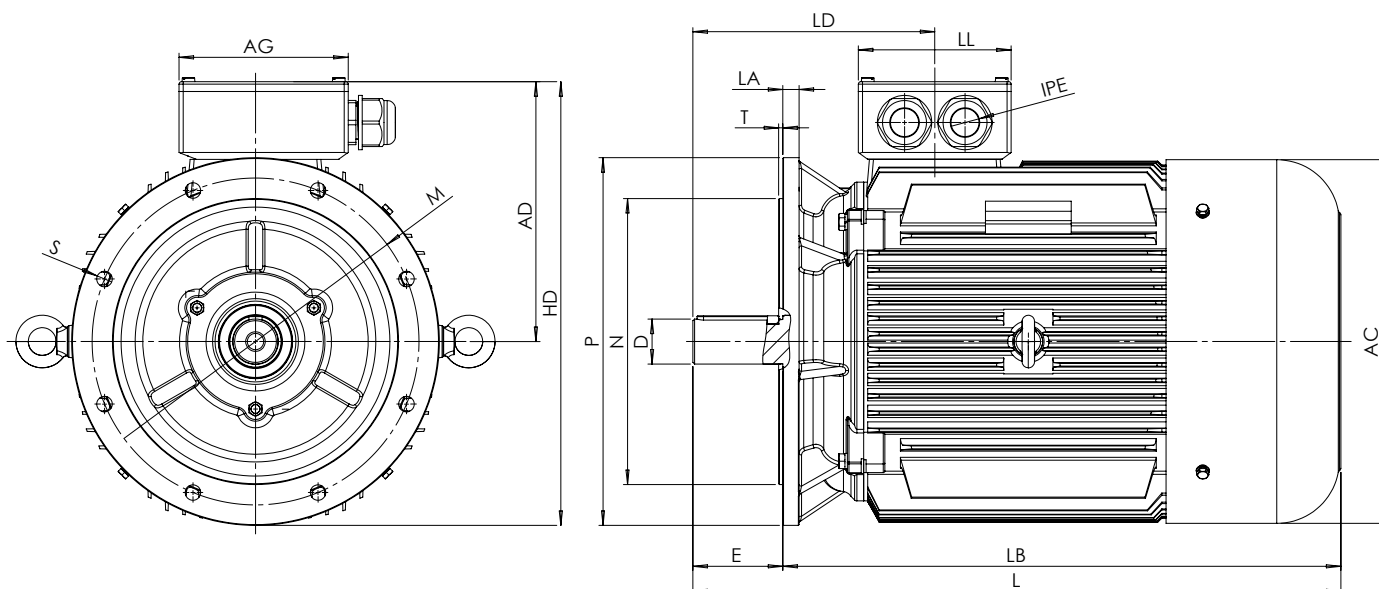
## IE3

| Frame size |   | No. of poles | A   | AA  | AB  | AC  | AD  | AG  | B   | BB  | C   | D  | E   | H   | HA | K      | L    | LD    | LL  | IPE       |
|------------|---|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|--------|------|-------|-----|-----------|
| 160        | M | 2,4,6,8      | 254 | 65  | 314 | 314 | 251 | 162 | 210 | 260 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 589  | 256   | 152 | 2xM40x1.5 |
| 160        | L | 2,4,6,8      | 254 | 65  | 314 | 314 | 251 | 162 | 254 | 304 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 633  | 256   | 152 | 2xM40x1.5 |
| 180        | M | 2,4,8        | 279 | 70  | 349 | 355 | 267 | 162 | 241 | 311 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 661  | 271   | 152 | 2xM40x1.5 |
| 180        | L | 4,6,8        | 279 | 70  | 349 | 355 | 267 | 162 | 279 | 349 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 699  | 271   | 152 | 2xM40x1.5 |
| 200        | L | 2,4,6,8      | 318 | 70  | 388 | 397 | 299 | 210 | 305 | 369 | 133 | 55 | 110 | 200 | 25 | 4x18.5 | 757  | 296   | 190 | 2xM50x1.5 |
| 225        | S | 4,8          | 356 | 75  | 431 | 446 | 322 | 210 | 286 | 368 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 798  | 329   | 190 | 2xM50x1.5 |
| 225        | M | 2            | 356 | 75  | 431 | 446 | 322 | 210 | 311 | 393 | 149 | 55 | 110 | 225 | 28 | 4x18.5 | 793  | 299   | 190 | 2xM50x1.5 |
| 225        | M | 4,6,8        | 356 | 75  | 431 | 446 | 322 | 210 | 311 | 393 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 823  | 329   | 190 | 2xM50x1.5 |
| 250        | M | 2            | 406 | 80  | 484 | 485 | 358 | 248 | 349 | 445 | 168 | 60 | 140 | 250 | 30 | 4x24   | 900  | 347   | 218 | 2xM63x1.5 |
| 250        | M | 4,6,8        | 406 | 80  | 484 | 485 | 358 | 248 | 349 | 445 | 168 | 65 | 140 | 250 | 30 | 4x24   | 900  | 347   | 218 | 2xM63x1.5 |
| 280        | S | 2            | 457 | 85  | 542 | 547 | 387 | 248 | 368 | 485 | 190 | 65 | 140 | 280 | 35 | 4x24   | 931  | 355.5 | 218 | 2xM63x1.5 |
| 280        | S | 4,6,8        | 457 | 85  | 542 | 547 | 387 | 248 | 368 | 485 | 190 | 75 | 140 | 280 | 35 | 4x24   | 961  | 355.5 | 218 | 2xM63x1.5 |
| 280        | M | 2            | 457 | 85  | 542 | 547 | 387 | 248 | 419 | 536 | 190 | 65 | 140 | 280 | 35 | 4x24   | 982  | 355.5 | 218 | 2xM63x1.5 |
| 280        | M | 4,6,8        | 457 | 85  | 542 | 547 | 387 | 248 | 419 | 536 | 190 | 75 | 140 | 280 | 35 | 4x24   | 1012 | 355.5 | 218 | 2xM63x1.5 |
| 315        | S | 2            | 508 | 120 | 628 | 620 | 527 | 320 | 406 | 570 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1156 | 397   | 280 | 2xM63x1.5 |
| 315        | S | 4,6,8        | 508 | 120 | 628 | 620 | 527 | 320 | 406 | 570 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1228 | 427   | 280 | 2xM63x1.5 |
| 315        | M | 2            | 508 | 120 | 628 | 620 | 527 | 320 | 457 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1266 | 397   | 280 | 2xM63x1.5 |
| 315        | M | 4,6,8        | 508 | 120 | 628 | 620 | 527 | 320 | 457 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1338 | 427   | 280 | 2xM63x1.5 |
| 315        | L | 2            | 508 | 120 | 628 | 620 | 527 | 320 | 508 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1266 | 397   | 280 | 2xM63x1.5 |
| 315        | L | 4,6,8        | 508 | 120 | 628 | 620 | 527 | 320 | 508 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1338 | 427   | 280 | 2xM63x1.5 |
| 355        | M | 2            | 610 | 116 | 726 | 698 | 642 | 380 | 560 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1491 | 414   | 330 | 2xM63x1.5 |
| 355        | M | 4,6,8        | 610 | 116 | 726 | 698 | 642 | 380 | 560 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1561 | 444   | 330 | 2xM63x1.5 |
| 355        | L | 2            | 610 | 116 | 726 | 698 | 642 | 380 | 630 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1491 | 414   | 330 | 2xM63x1.5 |
| 355        | L | 4,6,8        | 610 | 116 | 726 | 698 | 642 | 380 | 630 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1561 | 444   | 330 | 2xM63x1.5 |

## IE4

| Frame size |   | No. of poles | A   | AA  | AB  | AC  | AD  | AG  | B   | BB  | C   | D  | E   | H   | HA | K      | L    | LD  | LL  | IPE       |
|------------|---|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|--------|------|-----|-----|-----------|
| 160        | M | 2,4,6,8      | 254 | 65  | 314 | 335 | 256 | 162 | 210 | 315 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 648  | 248 | 152 | 2xM40x1.5 |
| 160        | L | 2,4,6,8      | 254 | 65  | 314 | 335 | 256 | 162 | 254 | 355 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 688  | 248 | 152 | 2xM40x1.5 |
| 180        | M | 2,4,8        | 279 | 70  | 349 | 363 | 271 | 162 | 241 | 359 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 711  | 271 | 152 | 2xM40x1.5 |
| 180        | L | 4,6,8        | 279 | 70  | 349 | 363 | 271 | 162 | 279 | 360 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 746  | 271 | 152 | 2xM40x1.5 |
| 200        | L | 2,4,6,8      | 318 | 70  | 395 | 418 | 312 | 210 | 305 | 372 | 133 | 55 | 110 | 200 | 25 | 4x18.5 | 846  | 296 | 190 | 2xM50x1.5 |
| 225        | S | 4,8          | 356 | 75  | 431 | 465 | 334 | 210 | 286 | 431 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 880  | 330 | 190 | 2xM50x1.5 |
| 225        | M | 2            | 356 | 75  | 431 | 465 | 334 | 210 | 311 | 466 | 149 | 55 | 110 | 225 | 28 | 4x18.5 | 885  | 299 | 190 | 2xM50x1.5 |
| 225        | M | 4,6,8        | 356 | 75  | 431 | 465 | 334 | 210 | 311 | 466 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 915  | 330 | 190 | 2xM50x1.5 |
| 250        | M | 2            | 406 | 80  | 484 | 525 | 379 | 248 | 349 | 515 | 168 | 60 | 140 | 250 | 30 | 4x24   | 980  | 347 | 220 | 2xM63x1.5 |
| 250        | M | 4,6,8        | 406 | 80  | 484 | 525 | 379 | 248 | 349 | 515 | 168 | 65 | 140 | 250 | 30 | 4x24   | 980  | 347 | 220 | 2xM63x1.5 |
| 280        | S | 2            | 457 | 85  | 542 | 588 | 412 | 248 | 368 | 510 | 190 | 65 | 140 | 280 | 35 | 4x24   | 980  | 355 | 220 | 2xM63x1.5 |
| 280        | S | 4,6,8        | 457 | 85  | 542 | 588 | 412 | 248 | 368 | 510 | 190 | 75 | 140 | 280 | 35 | 4x24   | 980  | 355 | 220 | 2xM63x1.5 |
| 280        | M | 2            | 457 | 85  | 542 | 588 | 412 | 248 | 419 | 550 | 190 | 65 | 140 | 280 | 35 | 4x24   | 1020 | 355 | 220 | 2xM63x1.5 |
| 280        | M | 4,6,8        | 457 | 85  | 542 | 588 | 412 | 248 | 419 | 550 | 190 | 75 | 140 | 280 | 35 | 4x24   | 1020 | 355 | 220 | 2xM63x1.5 |
| 315        | S | 2            | 508 | 120 | 628 | 620 | 524 | 320 | 406 | 570 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1194 | 397 | 280 | 2xM63x1.5 |
| 315        | S | 4,6,8        | 508 | 120 | 628 | 620 | 524 | 320 | 406 | 570 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1224 | 427 | 280 | 2xM63x1.5 |
| 315        | M | 2            | 508 | 120 | 628 | 620 | 524 | 320 | 457 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1304 | 397 | 280 | 2xM63x1.5 |
| 315        | M | 4,6,8        | 508 | 120 | 628 | 620 | 524 | 320 | 457 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1334 | 427 | 280 | 2xM63x1.5 |
| 315        | L | 2            | 508 | 120 | 628 | 620 | 524 | 320 | 508 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1304 | 397 | 280 | 2xM63x1.5 |
| 315        | L | 4,6,8        | 508 | 120 | 628 | 620 | 524 | 320 | 508 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1334 | 427 | 280 | 2xM63x1.5 |
| 355        | M | 2            | 610 | 116 | 726 | 698 | 639 | 380 | 560 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1496 | 422 | 330 | 2xM63x1.5 |
| 355        | M | 4,6,8        | 610 | 116 | 726 | 698 | 639 | 380 | 560 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1536 | 452 | 330 | 2xM63x1.5 |
| 355        | L | 2            | 610 | 116 | 726 | 698 | 639 | 380 | 630 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1496 | 422 | 330 | 2xM63x1.5 |
| 355        | L | 4,6,8        | 610 | 116 | 726 | 698 | 639 | 380 | 630 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1536 | 452 | 330 | 2xM63x1.5 |

# CAST IRON MOTOR, MOUNTING B5



## IE2

| Frame size | No. of poles | AC  | AD  | AG  | D  | E   | HD    | L    | LA | LB   | LD    | LL  | M   | N   | P   | S      | T | IPE       |
|------------|--------------|-----|-----|-----|----|-----|-------|------|----|------|-------|-----|-----|-----|-----|--------|---|-----------|
| 160 M      | 2,4,6,8      | 314 | 251 | 162 | 42 | 110 | 426   | 608  | 15 | 498  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 160 L      | 2,4,6,8      | 314 | 251 | 162 | 42 | 110 | 426   | 652  | 15 | 542  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180 M      | 2,4,8        | 355 | 267 | 162 | 48 | 110 | 444.5 | 688  | 15 | 578  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180 L      | 4,6,8        | 355 | 267 | 162 | 48 | 110 | 444.5 | 726  | 15 | 616  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 200 L      | 2,4,6,8      | 397 | 299 | 210 | 55 | 110 | 499   | 772  | 17 | 662  | 296   | 190 | 350 | 300 | 400 | 4x18.5 | 5 | 2xM50x1.5 |
| 225 S      | 4,8          | 446 | 322 | 210 | 60 | 140 | 547   | 808  | 20 | 668  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225 M      | 2            | 446 | 322 | 210 | 55 | 110 | 547   | 803  | 20 | 693  | 299   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225 M      | 4,6,8        | 446 | 322 | 210 | 60 | 140 | 547   | 833  | 20 | 693  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 250 M      | 2            | 485 | 358 | 248 | 60 | 140 | 633   | 915  | 22 | 775  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 250 M      | 4,6,8        | 485 | 358 | 248 | 65 | 140 | 633   | 915  | 22 | 775  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280 S      | 2            | 547 | 387 | 248 | 65 | 140 | 662   | 982  | 22 | 842  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280 S      | 4,6,8        | 547 | 387 | 248 | 75 | 140 | 662   | 982  | 22 | 842  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280 M      | 2            | 547 | 387 | 248 | 65 | 140 | 662   | 1033 | 22 | 893  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280 M      | 4,6,8        | 547 | 387 | 248 | 75 | 140 | 662   | 1033 | 22 | 893  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 315 S      | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1185 | 22 | 1045 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 S      | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1215 | 22 | 1045 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 M      | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1295 | 22 | 1155 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 M      | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1325 | 22 | 1155 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 L      | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1295 | 22 | 1155 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 L      | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1325 | 22 | 1155 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 355 M      | 2            | 698 | 642 | 380 | 75 | 140 | 1042  | 1495 | 25 | 1355 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355 M      | 4,6,8        | 698 | 642 | 380 | 95 | 170 | 1042  | 1565 | 25 | 1395 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355 L      | 2            | 698 | 642 | 380 | 75 | 140 | 1042  | 1495 | 25 | 1355 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355 L      | 4,6,8        | 698 | 642 | 380 | 95 | 170 | 1042  | 1565 | 25 | 1395 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |

# CAST IRON MOTOR, MOUNTING B5

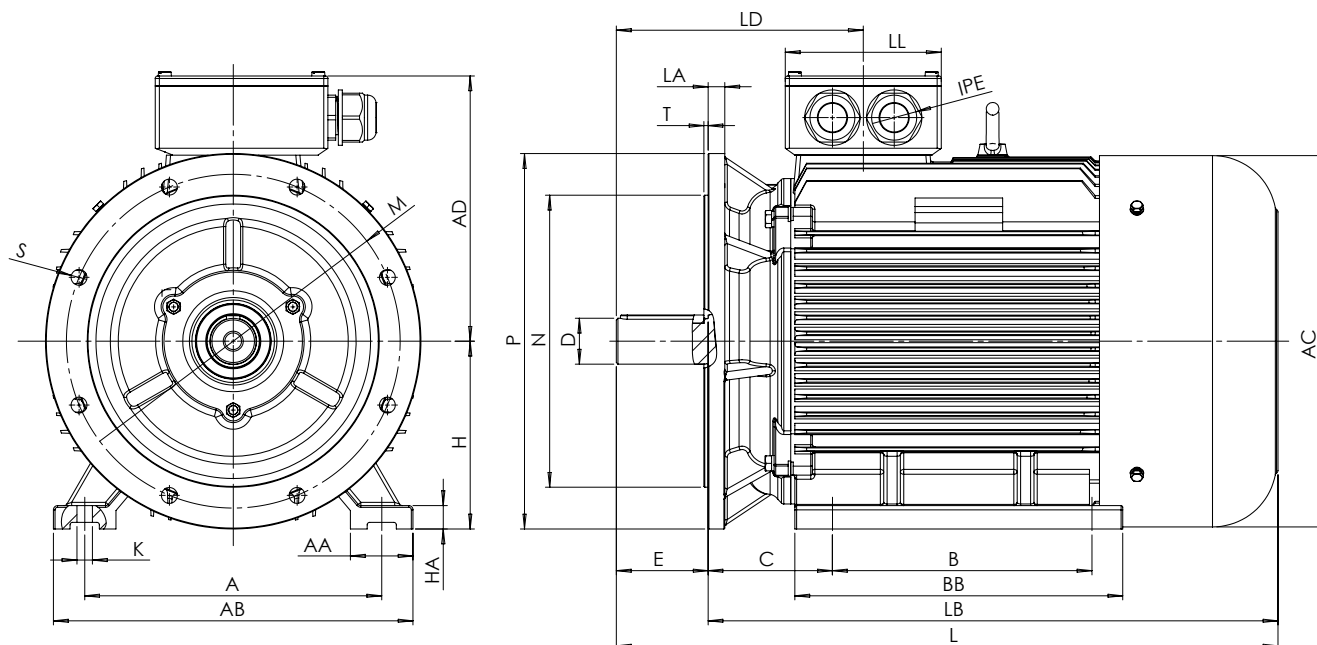
## IE3

| Frame size |   | No. of poles | AC  | AD  | AG  | D  | E   | HD    | L    | LA | LB   | LD    | LL  | M   | N   | P   | S      | T | IPE       |
|------------|---|--------------|-----|-----|-----|----|-----|-------|------|----|------|-------|-----|-----|-----|-----|--------|---|-----------|
| 160        | M | 2,4,6,8      | 314 | 251 | 162 | 42 | 110 | 426   | 589  | 15 | 479  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 160        | L | 2,4,6,8      | 314 | 251 | 162 | 42 | 110 | 426   | 633  | 15 | 523  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | M | 2,4,8        | 355 | 267 | 162 | 48 | 110 | 444.5 | 661  | 15 | 551  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | L | 4,6,8        | 355 | 267 | 162 | 48 | 110 | 444.5 | 699  | 15 | 589  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 200        | L | 2,4,6,8      | 397 | 299 | 210 | 55 | 110 | 499   | 757  | 17 | 647  | 296   | 190 | 350 | 300 | 400 | 4x18.5 | 5 | 2xM50x1.5 |
| 225        | S | 4,8          | 446 | 322 | 210 | 60 | 140 | 547   | 798  | 20 | 658  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 2            | 446 | 322 | 210 | 55 | 110 | 547   | 793  | 20 | 683  | 299   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 4,6,8        | 446 | 322 | 210 | 60 | 140 | 547   | 823  | 20 | 683  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 250        | M | 2            | 485 | 358 | 248 | 60 | 140 | 633   | 900  | 22 | 760  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 250        | M | 4,6,8        | 485 | 358 | 248 | 65 | 140 | 633   | 900  | 22 | 760  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 2            | 547 | 387 | 248 | 65 | 140 | 662   | 931  | 22 | 791  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 4,6,8        | 547 | 387 | 248 | 75 | 140 | 662   | 961  | 22 | 821  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 2            | 547 | 387 | 248 | 65 | 140 | 662   | 982  | 22 | 842  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 4,6,8        | 547 | 387 | 248 | 75 | 140 | 662   | 1012 | 22 | 872  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 315        | S | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1156 | 22 | 1016 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | S | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1228 | 22 | 1058 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1266 | 22 | 1126 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1338 | 22 | 1168 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1266 | 22 | 1126 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1338 | 22 | 1168 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 2            | 698 | 642 | 380 | 75 | 140 | 1042  | 1491 | 25 | 1351 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 4,6,8        | 698 | 642 | 380 | 95 | 170 | 1042  | 1561 | 25 | 1391 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 2            | 698 | 642 | 380 | 75 | 140 | 1042  | 1491 | 25 | 1351 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 4,6,8        | 698 | 642 | 380 | 95 | 170 | 1042  | 1561 | 25 | 1391 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |

## IE4

| Frame size |   | No. of poles | AC  | AD  | AG  | D  | E   | HD   | L    | LA  | LB   | LD  | LL  | M   | N   | P   | S      | T | IPE       |
|------------|---|--------------|-----|-----|-----|----|-----|------|------|-----|------|-----|-----|-----|-----|-----|--------|---|-----------|
| 160        | M | 2,4,6,8      | 335 | 256 | 162 | 42 | 110 | 431  | 648  | 15  | 538  | 248 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 160        | L | 2,4,6,8      | 335 | 256 | 162 | 42 | 110 | 431  | 688  | 15  | 578  | 248 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | M | 2,4,8        | 363 | 271 | 162 | 48 | 110 | 446  | 711  | 15  | 601  | 271 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | L | 4,6,8        | 363 | 271 | 162 | 48 | 110 | 446  | 746  | 15  | 636  | 271 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 200        | L | 2,4,6,8      | 418 | 312 | 210 | 55 | 110 | 512  | 846  | 17  | 736  | 296 | 190 | 350 | 300 | 400 | 4x18.5 | 5 | 2xM50x1.5 |
| 225        | S | 4,8          | 465 | 334 | 210 | 60 | 140 | 559  | 880  | 20  | 740  | 330 | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 2            | 465 | 334 | 210 | 55 | 110 | 559  | 885  | 20  | 775  | 299 | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 4,6,8        | 465 | 334 | 210 | 60 | 140 | 559  | 915  | 20  | 775  | 330 | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 250        | M | 2            | 525 | 379 | 248 | 60 | 140 | 654  | 980  | 22  | 840  | 347 | 220 | 400 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 250        | M | 4,6,8        | 525 | 379 | 248 | 65 | 140 | 654  | 980  | 22  | 840  | 347 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 2            | 588 | 412 | 248 | 65 | 140 | 687  | 980  | 222 | 840  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 4,6,8        | 588 | 412 | 248 | 75 | 140 | 687  | 980  | 22  | 840  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 2            | 588 | 412 | 248 | 65 | 140 | 687  | 1020 | 22  | 880  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 4,6,8        | 588 | 412 | 248 | 75 | 140 | 687  | 1020 | 22  | 880  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 315        | S | 2            | 620 | 524 | 320 | 65 | 140 | 854  | 1194 | 22  | 1054 | 397 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | S | 4,6,8        | 620 | 524 | 320 | 80 | 170 | 824  | 1224 | 22  | 1054 | 427 | 280 | 600 | 550 | 600 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 2            | 620 | 524 | 320 | 65 | 140 | 854  | 1304 | 22  | 1164 | 397 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 4,6,8        | 320 | 524 | 320 | 80 | 170 | 854  | 1334 | 22  | 1164 | 427 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 2            | 620 | 524 | 320 | 65 | 140 | 854  | 1304 | 22  | 1164 | 397 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 4,6,8        | 620 | 524 | 320 | 80 | 170 | 854  | 1334 | 22  | 1164 | 427 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 2            | 698 | 639 | 380 | 75 | 140 | 1039 | 1496 | 25  | 1356 | 422 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 4,6,8        | 698 | 639 | 380 | 95 | 170 | 1039 | 1536 | 25  | 1366 | 452 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 2            | 698 | 639 | 380 | 75 | 140 | 1039 | 1496 | 25  | 1356 | 422 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 4,6,8        | 698 | 639 | 380 | 95 | 170 | 1039 | 1536 | 25  | 1366 | 452 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |

# CAST IRON MOTOR, MOUNTING B35



## IE2

| Frame size |   | No. of poles | A   | AA  | AB  | AC  | AD  | AG  | B   | BB  | C   | D  | E   | H   | HA | K      | L    | LA | LB   | LD    | LL  | M   | N   | P   | S      | T | IPE       |
|------------|---|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|--------|------|----|------|-------|-----|-----|-----|-----|--------|---|-----------|
| 160        | M | 2,4,6,8      | 254 | 65  | 314 | 314 | 251 | 162 | 210 | 260 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 608  | 15 | 498  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 160        | L | 2,4,6,8      | 254 | 65  | 314 | 314 | 251 | 162 | 254 | 304 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 652  | 15 | 542  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | M | 2,4,8        | 279 | 70  | 349 | 355 | 267 | 162 | 241 | 311 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 688  | 15 | 578  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | L | 4,6,8        | 279 | 70  | 349 | 355 | 267 | 162 | 279 | 349 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 726  | 15 | 616  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 200        | L | 2,4,6,8      | 318 | 70  | 388 | 397 | 299 | 210 | 305 | 369 | 133 | 55 | 110 | 200 | 25 | 4x18.5 | 772  | 17 | 662  | 296   | 190 | 350 | 300 | 400 | 4x18.5 | 5 | 2xM50x1.5 |
| 225        | S | 4,8          | 356 | 75  | 431 | 446 | 322 | 210 | 286 | 368 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 808  | 20 | 668  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 2            | 356 | 75  | 431 | 446 | 322 | 210 | 311 | 393 | 149 | 55 | 110 | 225 | 28 | 4x18.5 | 803  | 20 | 693  | 299   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 4,6,8        | 356 | 75  | 431 | 446 | 322 | 210 | 311 | 393 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 833  | 20 | 693  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 250        | M | 2            | 406 | 80  | 484 | 485 | 358 | 248 | 349 | 445 | 168 | 60 | 140 | 250 | 30 | 4x24   | 915  | 22 | 775  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 250        | M | 4,6,8        | 406 | 80  | 484 | 485 | 358 | 248 | 349 | 445 | 168 | 65 | 140 | 250 | 30 | 4x24   | 915  | 22 | 775  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 2            | 457 | 85  | 542 | 547 | 387 | 248 | 368 | 485 | 190 | 65 | 140 | 280 | 35 | 4x24   | 982  | 22 | 842  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 4,6,8        | 457 | 85  | 542 | 547 | 387 | 248 | 368 | 485 | 190 | 75 | 140 | 280 | 35 | 4x24   | 982  | 22 | 842  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 2            | 457 | 85  | 542 | 547 | 387 | 248 | 419 | 536 | 190 | 65 | 140 | 280 | 35 | 4x24   | 1033 | 22 | 893  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 4,6,8        | 457 | 85  | 542 | 547 | 387 | 248 | 419 | 536 | 190 | 75 | 140 | 280 | 35 | 4x24   | 1033 | 22 | 893  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 315        | S | 2            | 508 | 120 | 628 | 620 | 527 | 320 | 406 | 570 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1185 | 22 | 1045 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | S | 4,6,8        | 508 | 120 | 628 | 620 | 527 | 320 | 406 | 570 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1215 | 22 | 1045 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 2            | 508 | 120 | 628 | 620 | 527 | 320 | 457 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1295 | 22 | 1155 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 4,6,8        | 508 | 120 | 628 | 620 | 527 | 320 | 457 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1325 | 22 | 1155 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 2            | 508 | 120 | 628 | 620 | 527 | 320 | 508 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1295 | 22 | 1155 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 4,6,8        | 508 | 120 | 628 | 620 | 527 | 320 | 508 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1325 | 22 | 1155 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 2            | 610 | 116 | 726 | 698 | 642 | 380 | 560 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1495 | 25 | 1355 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 4,6,8        | 610 | 116 | 726 | 698 | 642 | 380 | 560 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1565 | 25 | 1395 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 2            | 610 | 116 | 726 | 698 | 642 | 380 | 630 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1495 | 25 | 1355 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 4,6,8        | 610 | 116 | 726 | 698 | 642 | 380 | 630 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1565 | 25 | 1395 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |

# CAST IRON MOTOR, MOUNTING B35

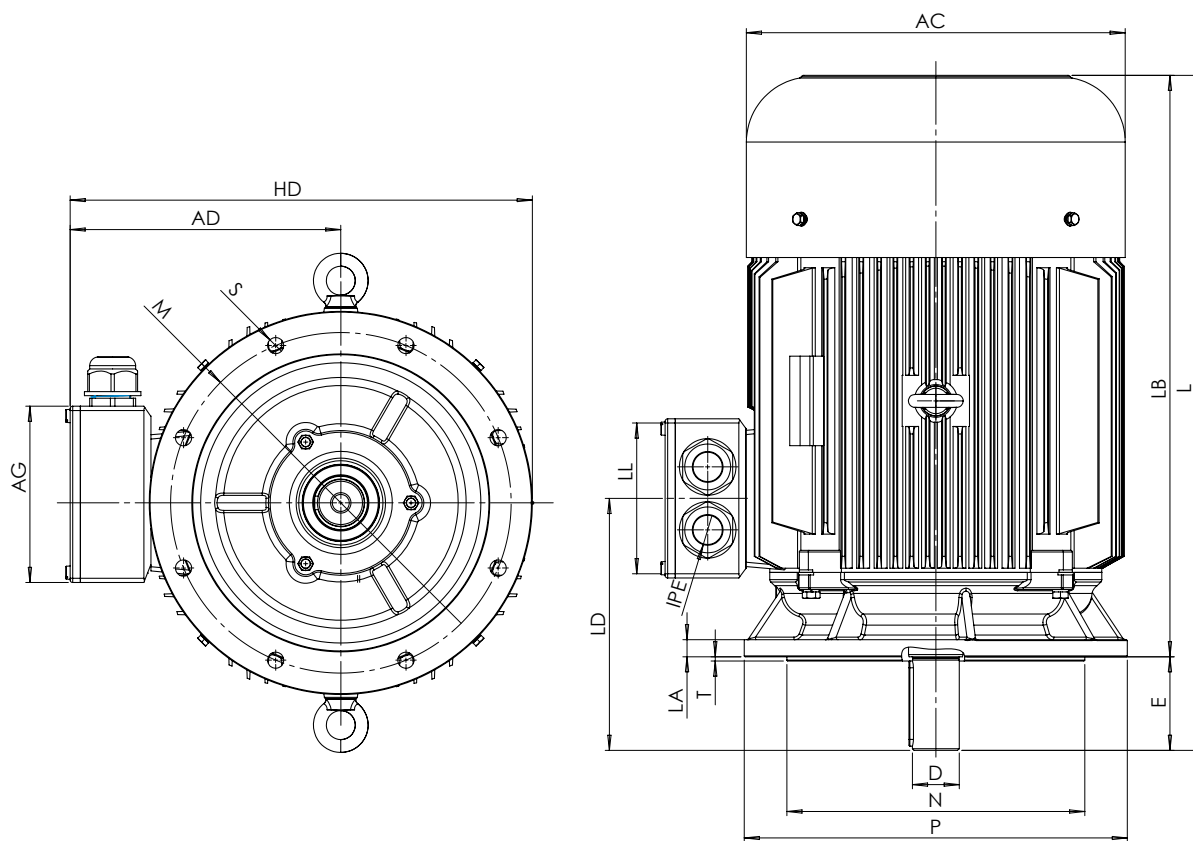
## IE3

| Frame size |   | No. of poles | A   | AA  | AB  | AC  | AD  | AG  | B   | BB  | C   | D  | E   | H   | HA | K      | L    | LA | LB   | LD    | LL  | M   | N   | P   | S      | T | IPE       |
|------------|---|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|--------|------|----|------|-------|-----|-----|-----|-----|--------|---|-----------|
| 160        | M | 2,4,6,8      | 254 | 65  | 314 | 314 | 251 | 162 | 210 | 260 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 589  | 15 | 479  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 160        | L | 2,4,6,8      | 254 | 65  | 314 | 314 | 251 | 162 | 254 | 304 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 633  | 15 | 523  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | M | 2,4,8        | 279 | 70  | 349 | 355 | 267 | 162 | 241 | 311 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 661  | 15 | 551  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | L | 4,6,8        | 279 | 70  | 349 | 355 | 267 | 162 | 279 | 349 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 699  | 15 | 589  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 200        | L | 2,4,6,8      | 318 | 70  | 388 | 397 | 299 | 210 | 305 | 369 | 133 | 55 | 110 | 200 | 25 | 4x18.5 | 757  | 17 | 647  | 296   | 190 | 350 | 300 | 400 | 4x18.5 | 5 | 2xM50x1.5 |
| 225        | S | 4.8          | 356 | 75  | 431 | 446 | 322 | 210 | 286 | 368 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 798  | 20 | 658  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 2            | 356 | 75  | 431 | 446 | 322 | 210 | 311 | 393 | 149 | 55 | 110 | 225 | 28 | 4x18.5 | 793  | 20 | 683  | 299   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 4,6,8        | 356 | 75  | 431 | 446 | 322 | 210 | 311 | 393 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 823  | 20 | 683  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 250        | M | 2            | 406 | 80  | 484 | 485 | 358 | 248 | 349 | 445 | 168 | 60 | 140 | 250 | 30 | 4x24   | 900  | 22 | 760  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 250        | M | 4,6,8        | 406 | 80  | 484 | 485 | 358 | 248 | 349 | 445 | 168 | 65 | 140 | 250 | 30 | 4x24   | 900  | 22 | 760  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 2            | 457 | 85  | 542 | 547 | 387 | 248 | 368 | 485 | 190 | 65 | 140 | 280 | 35 | 4x24   | 931  | 22 | 791  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 4,6,8        | 457 | 85  | 542 | 547 | 387 | 248 | 368 | 485 | 190 | 75 | 140 | 280 | 35 | 4x24   | 961  | 22 | 821  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 2            | 457 | 85  | 542 | 547 | 387 | 248 | 419 | 536 | 190 | 65 | 140 | 280 | 35 | 4x24   | 982  | 22 | 842  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 4,6,8        | 457 | 85  | 542 | 547 | 387 | 248 | 419 | 536 | 190 | 75 | 140 | 280 | 35 | 4x24   | 1012 | 22 | 872  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 315        | S | 2            | 508 | 120 | 628 | 620 | 527 | 320 | 406 | 570 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1156 | 22 | 1016 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | S | 4,6,8        | 508 | 120 | 628 | 620 | 527 | 320 | 406 | 570 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1228 | 22 | 1058 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 2            | 508 | 120 | 628 | 620 | 527 | 320 | 457 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1266 | 22 | 1126 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 4,6,8        | 508 | 120 | 628 | 620 | 527 | 320 | 457 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1338 | 22 | 1168 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 2            | 508 | 120 | 628 | 620 | 527 | 320 | 508 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1266 | 22 | 1126 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 4,6,8        | 508 | 120 | 628 | 620 | 527 | 320 | 508 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1338 | 22 | 1168 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 2            | 610 | 116 | 726 | 698 | 642 | 380 | 560 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1491 | 25 | 1351 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 4,6,8        | 610 | 116 | 726 | 698 | 642 | 380 | 560 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1561 | 25 | 1391 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 2            | 610 | 116 | 726 | 698 | 642 | 380 | 630 | 750 | 254 | 75 | 140 | 355 | 52 | 6x28   | 1491 | 25 | 1351 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 4,6,8        | 610 | 116 | 726 | 698 | 642 | 380 | 630 | 750 | 254 | 95 | 170 | 355 | 52 | 6x28   | 1561 | 25 | 1391 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |

## IE4

| Frame size |   | No. of poles | A   | AA  | AB  | AC  | AD  | AG  | B   | BB  | C   | D  | E   | H   | HA | K      | L    | LA | LB   | LD  | LL  | M   | N   | P   | S      | T | IPE       |
|------------|---|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|-----|-----|----|--------|------|----|------|-----|-----|-----|-----|-----|--------|---|-----------|
| 160        | M | 2,4,6,8      | 254 | 65  | 314 | 335 | 256 | 162 | 210 | 315 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 648  | 15 | 538  | 248 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 160        | L | 2,4,6,8      | 254 | 65  | 314 | 335 | 256 | 162 | 254 | 355 | 108 | 42 | 110 | 160 | 20 | 4x14.5 | 688  | 15 | 578  | 248 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | M | 2,4,8        | 279 | 70  | 349 | 363 | 271 | 162 | 241 | 359 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 711  | 15 | 601  | 271 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | L | 4,6,8        | 279 | 70  | 349 | 363 | 271 | 162 | 279 | 360 | 121 | 48 | 110 | 180 | 22 | 4x14.5 | 746  | 15 | 636  | 271 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 200        | L | 2,4,6,8      | 318 | 70  | 395 | 418 | 312 | 210 | 305 | 372 | 133 | 55 | 110 | 200 | 25 | 4x18.5 | 846  | 17 | 736  | 296 | 190 | 350 | 300 | 400 | 4x18.5 | 5 | 2xM50x1.5 |
| 225        | S | 4.8          | 356 | 75  | 431 | 465 | 334 | 210 | 286 | 431 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 880  | 20 | 740  | 330 | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 2            | 356 | 75  | 431 | 465 | 334 | 210 | 311 | 466 | 149 | 55 | 110 | 225 | 28 | 4x18.5 | 885  | 20 | 775  | 299 | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 4,6,8        | 356 | 75  | 431 | 465 | 334 | 210 | 311 | 466 | 149 | 60 | 140 | 225 | 28 | 4x18.5 | 915  | 20 | 775  | 330 | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 250        | M | 2            | 406 | 80  | 484 | 525 | 379 | 248 | 349 | 515 | 168 | 60 | 140 | 250 | 30 | 4x24   | 980  | 22 | 840  | 347 | 220 | 400 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 250        | M | 4,6,8        | 406 | 80  | 484 | 525 | 379 | 248 | 349 | 515 | 168 | 65 | 140 | 250 | 30 | 4x24   | 980  | 22 | 840  | 347 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 2            | 457 | 85  | 542 | 588 | 412 | 248 | 368 | 510 | 190 | 65 | 140 | 280 | 35 | 4x24   | 980  | 22 | 840  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 4,6,8        | 457 | 85  | 542 | 588 | 412 | 248 | 368 | 510 | 190 | 75 | 140 | 280 | 35 | 4x24   | 980  | 22 | 840  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 2            | 457 | 85  | 542 | 588 | 412 | 248 | 419 | 550 | 190 | 65 | 140 | 280 | 35 | 4x24   | 1020 | 22 | 880  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 4,6,8        | 457 | 85  | 542 | 588 | 412 | 248 | 419 | 550 | 190 | 75 | 140 | 280 | 35 | 4x24   | 1020 | 22 | 880  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 315        | S | 2            | 508 | 120 | 628 | 620 | 524 | 320 | 406 | 570 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1194 | 22 | 1054 | 397 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | S | 4,6,8        | 508 | 120 | 628 | 620 | 524 | 320 | 406 | 570 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1224 | 22 | 1054 | 427 | 280 | 600 | 550 | 600 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 2            | 508 | 120 | 628 | 620 | 524 | 320 | 457 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1304 | 22 | 1164 | 397 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 4,6,8        | 508 | 120 | 628 | 620 | 524 | 320 | 457 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1334 | 22 | 1164 | 427 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 2            | 508 | 120 | 628 | 620 | 524 | 320 | 508 | 680 | 216 | 65 | 140 | 315 | 45 | 4x28   | 1304 | 22 | 1164 | 397 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 4,6,8        | 508 | 120 | 628 | 620 | 524 | 320 | 508 | 680 | 216 | 80 | 170 | 315 | 45 | 4x28   | 1334 | 22 | 1164 | 427 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 2            | 610 | 116 | 726 | 698 | 639 | 380 | 560 | 750 | 254 | 75 | 140 | 355 | 52 | 4x28   | 1496 | 25 | 1356 | 422 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 4,6,8        | 610 | 116 | 726 | 698 | 639 | 380 | 560 | 750 | 254 | 95 | 170 | 355 | 52 | 4x28   | 1536 | 25 | 1366 | 452 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 2            | 610 | 116 | 726 | 698 | 639 | 380 | 630 | 750 | 254 | 75 | 140 | 355 | 52 | 4x28   | 1496 | 25 | 1356 | 422 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 4,6,8        | 610 | 116 | 726 | 698 | 639 | 380 | 630 | 750 | 254 | 95 | 170 | 355 | 52 | 4x28   | 1536 | 25 | 1366 | 452 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |

# CAST IRON MOTOR, MOUNTING V1



## IE2

| Frame size | No. of poles | AC  | AD  | AG  | D  | E   | HD    | L    | LA | LB   | LD    | LL  | M   | N   | P   | S      | T | IPE       |
|------------|--------------|-----|-----|-----|----|-----|-------|------|----|------|-------|-----|-----|-----|-----|--------|---|-----------|
| 160 M      | 2,4,6,8      | 314 | 251 | 162 | 42 | 110 | 426   | 608  | 15 | 498  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 160 L      | 2,4,6,8      | 314 | 251 | 162 | 42 | 110 | 426   | 652  | 15 | 542  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180 M      | 2,4,8        | 355 | 267 | 162 | 48 | 110 | 444.5 | 688  | 15 | 578  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180 L      | 4,6,8        | 355 | 267 | 162 | 48 | 110 | 444.5 | 726  | 15 | 616  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 200 L      | 2,4,6,8      | 397 | 299 | 210 | 55 | 110 | 499   | 772  | 17 | 662  | 296   | 190 | 350 | 300 | 400 | 4x18.5 | 5 | 2xM50x1.5 |
| 225 S      | 4,8          | 446 | 322 | 210 | 60 | 140 | 547   | 808  | 20 | 668  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225 M      | 2            | 446 | 322 | 210 | 55 | 110 | 547   | 803  | 20 | 693  | 299   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225 M      | 4,6,8        | 446 | 322 | 210 | 60 | 140 | 547   | 833  | 20 | 693  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 250 M      | 2            | 485 | 358 | 248 | 60 | 140 | 633   | 915  | 22 | 775  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 250 M      | 4,6,8        | 485 | 358 | 248 | 65 | 140 | 633   | 915  | 22 | 775  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280 S      | 2            | 547 | 387 | 248 | 65 | 140 | 662   | 982  | 22 | 842  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280 S      | 4,6,8        | 547 | 387 | 248 | 75 | 140 | 662   | 982  | 22 | 842  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280 M      | 2            | 547 | 387 | 248 | 65 | 140 | 662   | 1033 | 22 | 893  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280 M      | 4,6,8        | 547 | 387 | 248 | 75 | 140 | 662   | 1033 | 22 | 893  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 315 S      | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1185 | 22 | 1045 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 S      | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1215 | 22 | 1045 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 M      | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1295 | 22 | 1155 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 M      | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1325 | 22 | 1155 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 L      | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1295 | 22 | 1155 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315 L      | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1325 | 22 | 1155 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 355 M      | 2            | 698 | 642 | 380 | 75 | 140 | 1042  | 1495 | 25 | 1355 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355 M      | 4,6,8        | 698 | 642 | 380 | 95 | 170 | 1042  | 1565 | 25 | 1395 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355 L      | 2            | 698 | 642 | 380 | 75 | 140 | 1042  | 1495 | 25 | 1355 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355 L      | 4,6,8        | 698 | 642 | 380 | 95 | 170 | 1042  | 1565 | 25 | 1395 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |

# CAST IRON MOTOR, MOUNTING V1

## IE3

| Frame size |   | No. of poles | AC  | AD  | AG  | D  | E   | HD    | L    | LA | LB   | LD    | LL  | M   | N   | P   | S      | T | IPE       |
|------------|---|--------------|-----|-----|-----|----|-----|-------|------|----|------|-------|-----|-----|-----|-----|--------|---|-----------|
| 160        | M | 2,4,6,8      | 314 | 251 | 162 | 42 | 110 | 426   | 589  | 15 | 479  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 160        | L | 2,4,6,8      | 314 | 251 | 162 | 42 | 110 | 426   | 633  | 15 | 523  | 256   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | M | 2,4,8        | 355 | 267 | 162 | 48 | 110 | 444.5 | 661  | 15 | 551  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | L | 4,6,8        | 355 | 267 | 162 | 48 | 110 | 444.5 | 699  | 15 | 589  | 271   | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 200        | L | 2,4,6,8      | 397 | 299 | 210 | 55 | 110 | 499   | 757  | 17 | 647  | 296   | 190 | 350 | 300 | 400 | 4x18.5 | 5 | 2xM50x1.5 |
| 225        | S | 4.8          | 446 | 322 | 210 | 60 | 140 | 547   | 798  | 20 | 658  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 2            | 446 | 322 | 210 | 55 | 110 | 547   | 793  | 20 | 683  | 299   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 4,6,8        | 446 | 322 | 210 | 60 | 140 | 547   | 823  | 20 | 683  | 329   | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 250        | M | 2            | 485 | 358 | 248 | 60 | 140 | 633   | 900  | 22 | 760  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 250        | M | 4,6,8        | 485 | 358 | 248 | 65 | 140 | 633   | 900  | 22 | 760  | 347   | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 2            | 547 | 387 | 248 | 65 | 140 | 662   | 931  | 22 | 791  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 4,6,8        | 547 | 387 | 248 | 75 | 140 | 662   | 961  | 22 | 821  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 2            | 547 | 387 | 248 | 65 | 140 | 662   | 982  | 22 | 842  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 4,6,8        | 547 | 387 | 248 | 75 | 140 | 662   | 1012 | 22 | 872  | 355.5 | 218 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 315        | S | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1156 | 22 | 1016 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | S | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1228 | 22 | 1058 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1266 | 22 | 1126 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1338 | 22 | 1168 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 2            | 620 | 527 | 320 | 65 | 140 | 857   | 1266 | 22 | 1126 | 397   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 4,6,8        | 620 | 527 | 320 | 80 | 170 | 857   | 1338 | 22 | 1168 | 427   | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 2            | 698 | 642 | 380 | 75 | 140 | 1042  | 1491 | 25 | 1351 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 4,6,8        | 698 | 642 | 380 | 95 | 170 | 1042  | 1561 | 25 | 1391 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 2            | 698 | 642 | 380 | 75 | 140 | 1042  | 1491 | 25 | 1351 | 414   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 4,6,8        | 698 | 642 | 380 | 95 | 170 | 1042  | 1561 | 25 | 1391 | 444   | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |

## IE4

| Frame size |   | No. of poles | AC  | AD  | AG  | D  | E   | HD   | L    | LA  | LB   | LD  | LL  | M   | N   | P   | S      | T | IPE       |
|------------|---|--------------|-----|-----|-----|----|-----|------|------|-----|------|-----|-----|-----|-----|-----|--------|---|-----------|
| 160        | M | 2,4,6,8      | 335 | 256 | 162 | 42 | 110 | 431  | 648  | 15  | 538  | 248 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 160        | L | 2,4,6,8      | 335 | 256 | 162 | 42 | 110 | 431  | 688  | 15  | 578  | 248 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | M | 2,4,8        | 363 | 271 | 162 | 48 | 110 | 446  | 711  | 15  | 601  | 271 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 180        | L | 4,6,8        | 363 | 271 | 162 | 48 | 110 | 446  | 746  | 15  | 636  | 271 | 152 | 300 | 250 | 350 | 4x18.5 | 5 | 2xM40x1.5 |
| 200        | L | 2,4,6,8      | 418 | 312 | 210 | 55 | 110 | 512  | 846  | 17  | 736  | 296 | 190 | 350 | 300 | 400 | 4x18.5 | 5 | 2xM50x1.5 |
| 225        | S | 4.8          | 465 | 334 | 210 | 60 | 140 | 559  | 880  | 20  | 740  | 330 | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 2            | 465 | 334 | 210 | 55 | 110 | 559  | 885  | 20  | 775  | 299 | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 225        | M | 4,6,8        | 465 | 334 | 210 | 60 | 140 | 559  | 915  | 20  | 775  | 330 | 190 | 400 | 350 | 450 | 8x18.5 | 5 | 2xM50x1.5 |
| 250        | M | 2            | 525 | 379 | 248 | 60 | 140 | 654  | 980  | 22  | 840  | 347 | 220 | 400 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 250        | M | 4,6,8        | 525 | 379 | 248 | 65 | 140 | 654  | 980  | 22  | 840  | 347 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 2            | 588 | 412 | 248 | 65 | 140 | 687  | 980  | 222 | 840  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | S | 4,6,8        | 588 | 412 | 248 | 75 | 140 | 687  | 980  | 22  | 840  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 2            | 588 | 412 | 248 | 65 | 140 | 687  | 1020 | 22  | 880  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 280        | M | 4,6,8        | 588 | 412 | 248 | 75 | 140 | 687  | 1020 | 22  | 880  | 355 | 220 | 500 | 450 | 550 | 8x18.5 | 5 | 2xM63x1.5 |
| 315        | S | 2            | 620 | 524 | 320 | 65 | 140 | 854  | 1194 | 22  | 1054 | 397 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | S | 4,6,8        | 620 | 524 | 320 | 80 | 170 | 824  | 1224 | 22  | 1054 | 427 | 280 | 600 | 550 | 600 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 2            | 620 | 524 | 320 | 65 | 140 | 854  | 1304 | 22  | 1164 | 397 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | M | 4,6,8        | 320 | 524 | 320 | 80 | 170 | 854  | 1334 | 22  | 1164 | 427 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 2            | 620 | 524 | 320 | 65 | 140 | 854  | 1304 | 22  | 1164 | 397 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 315        | L | 4,6,8        | 620 | 524 | 320 | 80 | 170 | 854  | 1334 | 22  | 1164 | 427 | 280 | 600 | 550 | 660 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 2            | 698 | 639 | 380 | 75 | 140 | 1039 | 1496 | 25  | 1356 | 422 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | M | 4,6,8        | 698 | 639 | 380 | 95 | 170 | 1039 | 1536 | 25  | 1366 | 452 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 2            | 698 | 639 | 380 | 75 | 140 | 1039 | 1496 | 25  | 1356 | 422 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |
| 355        | L | 4,6,8        | 698 | 639 | 380 | 95 | 170 | 1039 | 1536 | 25  | 1366 | 452 | 330 | 740 | 680 | 800 | 8x24   | 6 | 2xM63x1.5 |

## Abbreviations & acronyms

| Short sign             | Translation                                                       |
|------------------------|-------------------------------------------------------------------|
| V                      | Voltage                                                           |
| A                      | Current                                                           |
| rpm or min-1           | Speed                                                             |
| $\eta$                 | Efficiency                                                        |
| $\cos \varphi$         | Power factor                                                      |
| $I_a/I_n$              | Starting current factor                                           |
| $T_a/T_n$ or $M_a/M_n$ | Starting torque factor                                            |
| $T_k/T_n$ or $M_k/M_n$ | Breakdown torque factor                                           |
| $F_R X_{max}$          | Maximum permissible radial force at shaft end                     |
| $F_R X/2$              | Maximum permissible radial force at shaft center                  |
| $F_R X_o$              | Maximum permissible radial force at flange surface (shaft recess) |
| $F_A$                  | Maximum permissible axial force, horizontal mounting              |
| $F_A V_1$              | Maximum permissible axial force, vertical mounting                |



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