

# WGOST

## Industrial Motors

Commercial &  
Appliance Motors

Automation

Digital &  
Systems

Energy

Transmission &  
Distribution

Coatings

## Three-Phase Motor Technical Catalogue



Driving efficiency and sustainability



# WGOST

**In order to serve the markets that require motors according to the GOST R 51689-2000 (GOST 28330-89) standard, WEG offers the WGOST line, using modern and proven technologies, WEG gives new life to this concept.**

**High efficiency coupled with low cost of ownership throughout the motor's lifetime have been the basis for the WGOST development. A design created to anticipate concepts in performance and energy savings.**

The increasing demand for electrical energy to sustain global development requires consistent heavy investments in power supply generation. However, in addition to complex medium and long term planning, these investments rely on natural resources, which are becoming depleted due to constant pressures upon the environment. The best strategy, therefore, to maintain energy supply in the short term is to avoid wastage and increase energy efficiency.

Electric motors play a major role in this strategy, since around 40% of global energy demand is estimated to be related to electric motor Applications. Consequently, any initiatives to increase energy efficiency, by using high efficiency electric motors and frequency inverters, are to be welcomed, as they can make a real contribution to reductions in global energy demand. At the same time as efficiency initiatives make an impact in traditional market sectors, the application of new technologies in emerging sectors is resulting in profound changes in the way that electric motors are applied and controlled.

By integrating these changes together with the demands for increased energy efficiency, WEG has taken up the challenge and produced a new design of high efficiency motor, one that exceeds the performance of the previous WEG's W21 motor line, which is recognised worldwide for its quality, reliability and efficiency.

Using the latest generation of computerised tools, such as structural analysis software (finite element analysis) and computer fluid dynamics, as well as electrical design optimization software, an innovative next generation product has been developed: the WGOST motor.

Several key objectives have been achieved in the design of the WGOST motor:

- Reduction of noise and vibration levels;
- Increased energy efficiency and reduced thermal footprint;
- Easy maintenance;
- Flexible and modular design.



**WEG presents to the market a line of general-purpose motors immediately available, whose reliability is present in the dedicated and personalized service. The new line has a complete portfolio of frames (71 to 355M/L) with a sturdy, versatile and efficient design, bringing features that increase the service life and ensure easy maintenance.**

**WGOST motors, WEG quality for everything your productivity needs.**



### **Lower Total Operational Costs**

A product which can operate throughout its lifetime consuming the minimum amount of energy whilst delivering high levels of productivity under continuous operation, without unplanned stops and with optimum performance, thus generating the maximum value to the user - this is the philosophy of the WGOST design.



### **Energy Efficiency Level**

WGOST motors are supplied with IE1 Efficiency Level assuring even greater energy savings and reduced return on investment.



### **Versatility**

The WGOST concept permits the terminal box to be assembled on the top or either side of the motor. For frame sizes 225S/M to 355M/L, a top mounted terminal box can, with the use of an adaptor, be relocated to the left or right side without disassembly of the complete motor, thus reducing modification times and reducing inventories.



### **Built to Last**

WGOST motors are constructed using high quality FC-200 (EN GJL 200) cast iron in WEG's own foundries, assuring maximum durability and high performance in arduous environments. Fan covers were designed to provide greater resistance to impacts, whilst the endshields were developed to maximise bearing heat dissipation.

- Easy installation and maintenance
- Low noise level and vibration severity level A
- Immediately available
- Efficiency level IE1 according to GOST IEC 60034-30-1-2016



### Cooling System

#### Fan Cover

- Aerodynamic concept
- Easier assembly
- Better air flow distribution over frame
- Increased mechanical strength
- Provisions for canopy

#### Fan

- Reduction of fan blades
- Reinforced fan hub structure
- Noise level reduction
- Increased air flow

### Frame

- Terminal box positioned at DE to improve heat dissipation (frames 225S/M to 355M/L)
- Reduced winding and bearing temperatures

#### Vibration Monitoring

- Flat areas at both ends for placement of accelerometers

#### Eyebolts

- Safer and easier handling
- High mechanical resistance

#### Solid Feet

- Higher resistance to impacts
- Suitable for applications with high vibration
- Easier installation and alignment

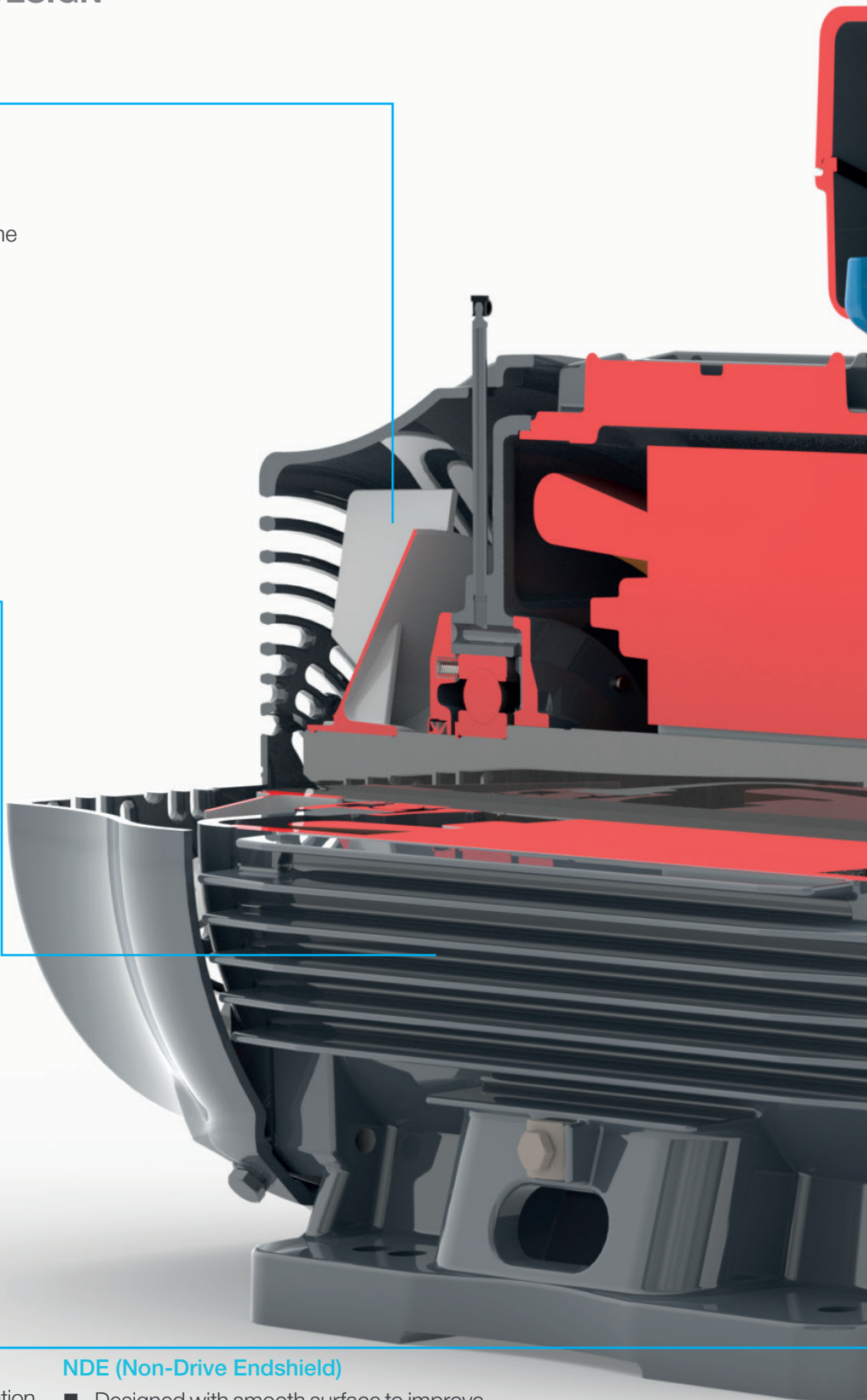
### Endshields Subsystem

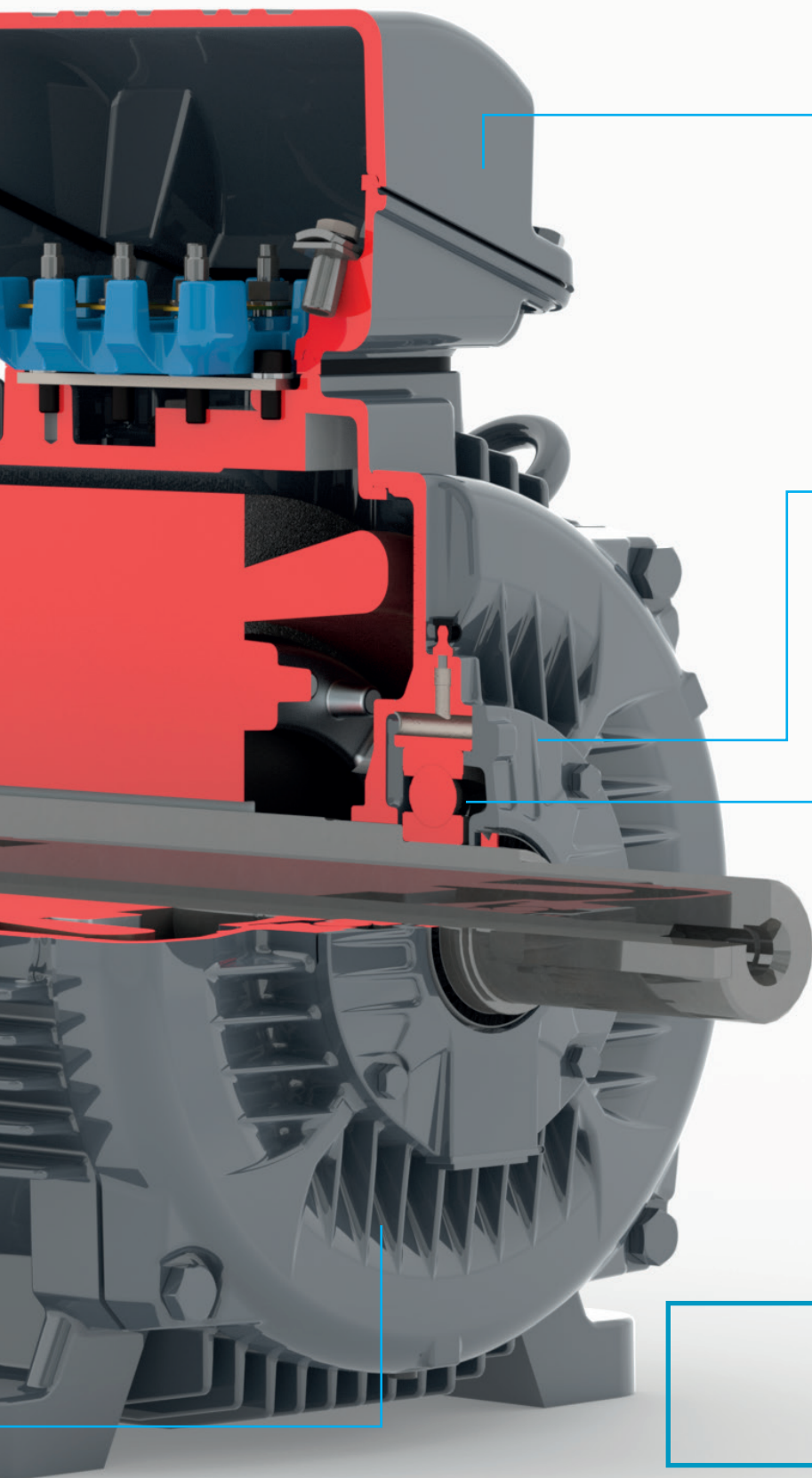
#### DE (Drive Endshield)

- Cooling fins for improved heat dissipation
- Reduced bearing operating temperature
- Reinforced endshield structure
- Bolt protection

#### NDE (Non-Drive Endshield)

- Designed with smooth surface to improve airflow
- Noise level reduction
- Structure stiffening to avoid machining deformation





### Terminal Box

- Diagonally split for easier cable installation
- More space available for accessory connections
- Flexible mounting (B3T, B3R, B3L) for frames 225S/M to 355M/L
- Rotation 4 x 90°
- Bulk Moulding Compound terminal block (BMC)

### Bearing Caps

#### External

- Finned surface for improved bearing heat dissipation

#### Internal

- Redesigned grease path
- Improvement in lubrication quality
- Reduced grease operating temperatures

### Sealing System

- Increased dust and moisture protection
- V-Ring sealing

## 2 CONSTRUCTION DETAILS

### 2.1 POINTS FOR VIBRATION MONITORING

To allow easy maintenance, specifically vibration testing, the 160 to 355 frames are designed with flat areas on both ends for better placement of accelerometers (Figura 2.1). These flat areas are provided in both vertical and horizontal planes.

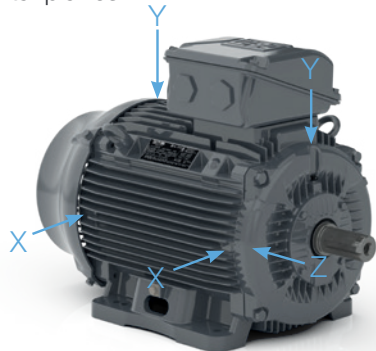


Figure 2.1: Flat surfaces for vibration monitoring on the top, front and side.

### 2.2 GROUNDING TERMINALS

All frames from 71 to 355M/L are provided with an grounding terminal located inside the terminal box (see Figura 2.2).

Motors in frames 225S/M to 355M/L are also fitted with an grounding terminal on the frame. It is located on the same side of the main terminal box cable entry (see Figura 2.2) and is responsible to equalize electrical potential and provide greater safety for operators. Capable of terminating cables from 25 mm<sup>2</sup> to 185 mm<sup>2</sup>.

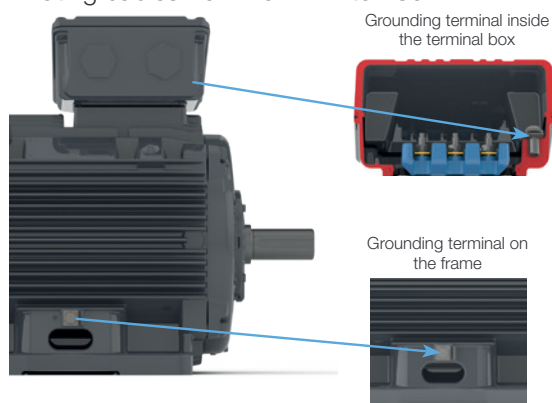


Figure 2.2: Grounding terminal inside the terminal box and on the frame

Optionally, an external grounding terminal can be provided for motors in frame sizes 71 to 200, and, for frame sizes 80 to 355M/L a second external grounding terminal as indicated in Figura 2.3.

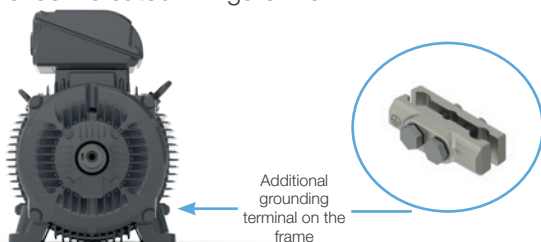


Figure 2.3: Additional grounding terminal position on the frame.

### 2.3 NAMEPLATE

The nameplate details information relating to the construction and performance characteristics of the motor. It is also necessary to indicate on the nameplate the IE code and nominal efficiency of the motor at full load (and 3/4 and 1/2 load where space permits), as required by IEC 60034-30-1.

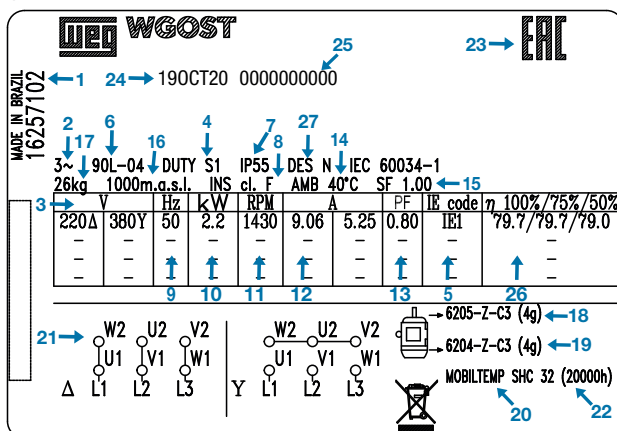


Figure 2.4: Nameplate layout for frames 71 to 132

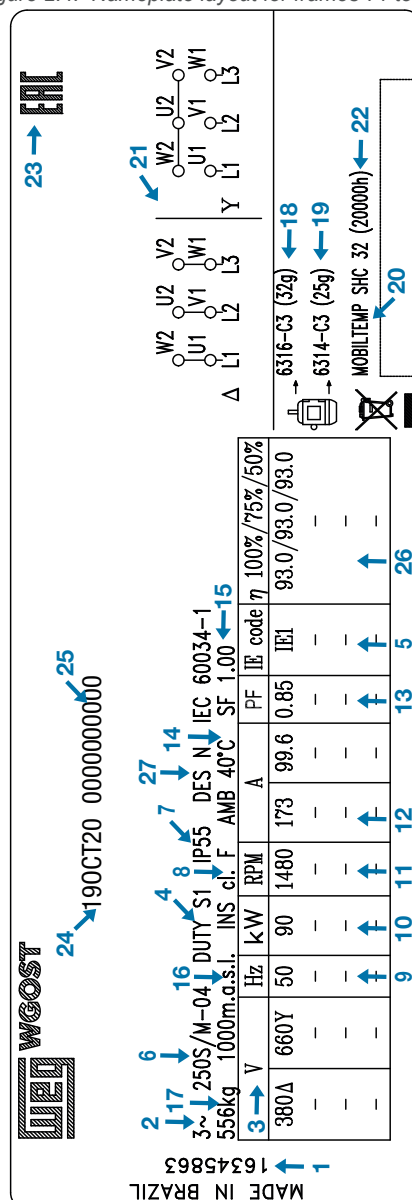


Figure 2.5: Nameplate layout for frames 160 to 355

- |                              |                                                      |
|------------------------------|------------------------------------------------------|
| 1 - Motor code               | 18 - Drive end bearing type and amount of grease     |
| 2 - Number of phases         | (where applicable)                                   |
| 3 - Rated operating voltage  | 19 - Non-drive end bearing type and amount of grease |
| 4 - Service duty             | (where applicable)                                   |
| 5 - Efficiency Code - IE     | 20 - Type of grease for bearings                     |
| 6 - Frame size               | 21 - Connection diagram                              |
| 7 - Degree of protection     | 22 - Relubrication intervals in hours                |
| 8 - Insulation class         | 23 - Certification labels                            |
| 9 - Frequency                | 24 - Manufacturing date                              |
| 10 - Motor rated power       | 25 - Serial number                                   |
| 11 - Full load speed (rpm)   | 26 - Partial load efficiencies                       |
| 12 - Rated operating current | 27 - Design                                          |
| 13 - Power factor            |                                                      |
| 14 - Ambient temperature     |                                                      |
| 15 - Service factor          |                                                      |
| 16 - Altitude                |                                                      |
| 17 - Motor weight            |                                                      |

## 2.4 NOISE LEVEL

WGOST motors comply with IEC 60034-9 Standard and the corresponding sound pressure levels. Tabela 2.1 shows sound pressure levels in dB(A) which are obtained upon tests at 50 Hz.

Table 2.1: Sound pressure levels for 50 Hz motors

| Frame | IEC 50 Hz                               |         |         |         |
|-------|-----------------------------------------|---------|---------|---------|
|       | Sound pressure level - dB(A) at 1 meter |         |         |         |
|       | 2 poles                                 | 4 poles | 6 poles | 8 poles |
| 71    | 56                                      | 43      | -       | -       |
| 80    | 59                                      | 44      | 43      | 42      |
| 90    | 64                                      | 49      | 45      | 44      |
| 100   | 67                                      | 53      | 44      | 50      |
| 112   | 64                                      | 56      | 49      | 46      |
| 132   | 68                                      | 60      | 53      | 48      |
| 160   | 67                                      | 61      | 57      | 51      |
| 180   | 67                                      | 61      | 56      | 52      |
| 200   | 72                                      | 65      | 60      | 56      |
| 225   | 75                                      | 68      | 63      | 56      |
| 250   | 75                                      | 68      | 64      | 56      |
| 280   | 77                                      | 71      | 65      | 59      |
| 315   | 77                                      | 71      | 67      | 62      |
| 355   | 80                                      | 76      | 73      | 70      |

## 3 SHAFT / BEARINGS

### 3.1 SHAFT

The shaft steel material for WGOST standard motors is AISI 1040/45, in frames IEC 71 to 315S/M, and AISI 4140 for frame 355M/L. Information regarding the maximum allowable radial and axial loads on shaft ends is given in Table 3 and Table 4. Dimensions of motor shafts can be found in Section 12 - Mechanical Data and features scope can be found in Section 10 - Construction Features

### 3.2 BEARINGS

WGOST motors are supplied with deep groove ball bearings as standard (Figure 3.1).

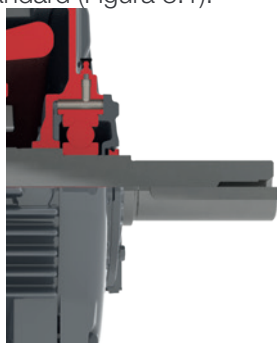


Figure 3.1: Ball bearing view

The nominal bearing life L<sub>10h</sub> is 20.000 hours in conformance with maximum radial and axial loads as described in Tabela 3.2 and Tabela 3.3.

In standard configuration, with ball bearings, the drive end bearing is locked axially from frame 160. To compensate for any axial movement the motors are fitted with pre-load washers for frames 71 to 200 and with pre-load springs for frames 225 to 355.

The lifetime of the bearing is dependent on its type and size, the radial and axial mechanical loads it is submitted to, operating conditions (environment, temperature, mounting orientation), rotational speed and grease life. Therefore, bearing lifetime is closely related to its correct use, maintenance and lubrication. Respecting the quantity of grease and lubrication intervals allows bearings to reach the indicated lifetime. WGOST motors in frames 225S/M and above are provided as standard with grease fittings in each endshield to permit the relubrication of the bearings. The quantity of grease and lubrication intervals are stamped on the motor nameplate. The lubrication intervals are shown in Tabela 3.4. It must be emphasized that excessive lubrication, i.e. a quantity of grease greater than that recommended on the motor nameplate, can result in the increase of bearing temperatures leading to reduced operating hours. Note:

1. L<sub>10h</sub> lifetime means that at least 90% of the bearings submitted to the maximum indicated loads will reach the number of hours indicated. The maximum admissible radial and axial loads for the standard configuration are shown in Tabela 3.2 and Tabela 3.3. The values of the maximum radial load consider axial load as nil. The values of the maximum axial load consider radial load as nil. For bearing lifetimes with combined axial and radial loads condition contact WEG.

2. The radial force value Fr usually results from information recommended in the catalogues of pulley / belt manufacturers.

When this information is not available, the force Fr, under operation, can be calculated based on the output power, on coupling design characteristics with pulleys and belts and on the type of application. So we have:

$$Fr = \frac{19.1 \times 10^6 \times P_n \times k_a}{n_n \times d_p} \text{ (N)}$$

Where:

Fr is the radial force caused by pulley and belt coupling [N];

P<sub>n</sub> is the motor rated power [kW];

n<sub>n</sub> is the motor rated speed per minute [rpm];

d<sub>p</sub> is the pitch diameter of the drive pulley [mm];

k<sub>a</sub> is a factor that depends on belt tension and type of application (Tabela 3.15.1).

Table 3.1: ka factor

|   | Groups and basic types of application                                                                                                                                                                                               | ka factor of the application |             |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|-------------|
|   |                                                                                                                                                                                                                                     | V belts                      | Plane belts |
| 1 | Fans and blowers, centrifugal pumps, winding machines, compressors, machine tools with outputs up to 22 kW (30 HP)                                                                                                                  | 2,0                          | 3,1         |
| 2 | Fans and blowers, centrifugal pumps, winding machines, compressors, machine tools with outputs higher than 22 kW (30 HP)                                                                                                            | 2,4                          | 3,3         |
| 3 | Presses, vibrating screens, piston and screw compressors, pulverisers, helicoidal conveyors, woodworking machines, textile machines, kneading machines, ceramic machines, pulp and paper industrial grinders (for all power range). | 2,7                          | 3,4         |
| 4 | Overhead cranes, hammer mills, metal laminators, conveyors, gyratory crushers, jaw crushers, cone crushers, cage mills, ball mills, rubber mixers, mining machines, shredders (for all power range).                                | 3,0                          | 3,7         |

### Important:

#### 1 - Special applications

Motor operation under adverse operating conditions, such as higher ambient temperatures and altitudes or abnormal

axial / radial loads, may require specific lubrication measures and alternative relubrication intervals to those indicated in the tables provided within this technical catalogue.

#### 2 - Frequency inverter driven motors

Bearing life may be reduced when a motor is driven by a frequency drive at speeds above nominal. Speed itself is one of the factors taken into consideration when determining motor bearing life.

#### 3 - Motors with modified mounting configurations

For motors supplied with horizontal mounting but working vertically, lubrication intervals must be reduced by half.

#### 4 - Figures for radial thrusts

The figures given in the tables below for radial thrusts take into consideration the point upon which the load is applied, either at the centre of the shaft (L/2) or at the end of the shaft (L), Figura 3.2.

Note: On motors with second shaft end, refer to WEG for details of the maximum permissible axial and radial loads.

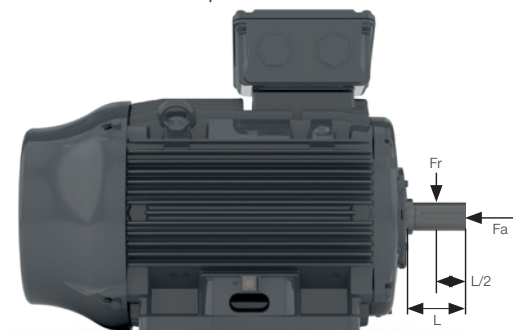


Figure 3.2: Radial and axial thrust on motor shaft

## 3.2.1 Permissible Loads

### Radial Thrust - Ball Bearings

Table 3.2: Maximum permissible radial thrusts for ball bearings (horizontal mounting)

| Maximum permissible radial thrust<br>50 Hz - Fr in (kN) 20.000 hours |         |     |         |      |         |      |         |      |
|----------------------------------------------------------------------|---------|-----|---------|------|---------|------|---------|------|
| Frame                                                                | 2 poles |     | 4 poles |      | 6 poles |      | 8 poles |      |
|                                                                      | L       | L/2 | L       | L/2  | L       | L/2  | L       | L/2  |
| 71                                                                   | 0,6     | 0,6 | 0,7     | 0,8  | 0,8     | 0,9  | 0,9     | 1,0  |
| 80                                                                   | 0,6     | 0,6 | 0,8     | 0,9  | 0,9     | 1,0  | 1,0     | 1,1  |
| 90                                                                   | 0,6     | 0,6 | 0,8     | 0,9  | 0,9     | 1,0  | 1,0     | 1,1  |
| 100                                                                  | 0,9     | 1,0 | 1,1     | 1,3  | 1,3     | 1,4  | 1,5     | 1,6  |
| 112                                                                  | 1,5     | 1,7 | 1,9     | 2,2  | 2,2     | 2,5  | 2,2     | 2,8  |
| 132                                                                  | 1,9     | 2,1 | 2,3     | 2,6  | 2,7     | 3,0  | 3,1     | 3,4  |
| 160                                                                  | 2,4     | 2,7 | 4,1     | 4,6  | 4,4     | 5,3  | 5,1     | 5,9  |
| 180                                                                  | 3,3     | 3,6 | 4,7     | 5,3  | 5,4     | 6,1  | 6,0     | 6,7  |
| 200                                                                  | 3,9     | 4,3 | 6,2     | 6,9  | 6,7     | 8,0  | 7,0     | 8,9  |
| 225                                                                  | 5,1     | 5,6 | 6,2     | 6,8  | 6,9     | 7,8  | 6,8     | 8,5  |
| 250                                                                  | 5,0     | 5,5 | 7,4     | 8,1  | 8,5     | 9,3  | 9,4     | 10,3 |
| 280                                                                  | 5,9     | 6,4 | 8,6     | 9,5  | 9,9     | 10,9 | 10,9    | 12,1 |
| 315                                                                  | 5,5     | 5,9 | 8,1     | 8,8  | 9,1     | 9,9  | 10,0    | 10,9 |
| 355                                                                  | 4,4     | 4,7 | 10,3    | 11,3 | 12,1    | 13,1 | 8,4     | 14,3 |

### Axial Thrust - Ball Bearings

Table 3.3: Maximum permissible axial thrusts for ball bearings (horizontal mounting).

| Maximum permissible axial thrust - 50 Hz - Fa in (kN) - 20.000 hours |       |            |         |                             |         |                               |         |
|----------------------------------------------------------------------|-------|------------|---------|-----------------------------|---------|-------------------------------|---------|
| Frame                                                                | Poles | Horizontal |         | Vertical with shaft upwards |         | Vertical with shaft downwards |         |
|                                                                      |       | Pushing    | Pulling | Pushing                     | Pulling | Pushing                       | Pulling |
| 71                                                                   | 2     | 0,3        | 0,3     | 0,3                         | 0,3     | 0,3                           | 0,3     |
|                                                                      | 4     | 0,4        | 0,5     | 0,4                         | 0,5     | 0,4                           | 0,5     |
|                                                                      | 6     | 0,5        | 0,7     | 0,5                         | 0,7     | 0,5                           | 0,7     |
|                                                                      | 8     | 0,6        | 0,8     | 0,6                         | 0,8     | 0,6                           | 0,8     |
| 80                                                                   | 2     | 0,4        | 0,3     | 0,4                         | 0,4     | 0,4                           | 0,3     |
|                                                                      | 4     | 0,5        | 0,5     | 0,5                         | 0,6     | 0,6                           | 0,5     |
|                                                                      | 6     | 0,6        | 0,7     | 0,6                         | 0,8     | 0,7                           | 0,7     |
|                                                                      | 8     | 0,7        | 0,9     | 0,7                         | 0,9     | 0,8                           | 0,8     |
| 90                                                                   | 2     | 0,5        | 0,3     | 0,5                         | 0,4     | 0,6                           | 0,3     |
|                                                                      | 4     | 0,7        | 0,5     | 0,6                         | 0,6     | 0,8                           | 0,5     |
|                                                                      | 6     | 0,9        | 0,7     | 0,8                         | 0,8     | 0,9                           | 0,6     |
|                                                                      | 8     | 1,0        | 0,8     | 0,9                         | 0,9     | 1,1                           | 0,8     |
| 100                                                                  | 2     | 0,6        | 0,5     | 0,5                         | 0,6     | 0,7                           | 0,4     |
|                                                                      | 4     | 0,8        | 0,8     | 0,7                         | 0,9     | 0,9                           | 0,7     |
|                                                                      | 6     | 0,9        | 1,0     | 0,8                         | 1,1     | 1,1                           | 0,9     |
|                                                                      | 8     | 1,1        | 1,2     | 1,0                         | 1,3     | 1,2                           | 1,1     |
| 112                                                                  | 2     | 0,8        | 1,0     | 0,7                         | 1,2     | 0,9                           | 1,0     |
|                                                                      | 4     | 1,1        | 1,5     | 1,0                         | 1,7     | 1,2                           | 1,4     |
|                                                                      | 6     | 1,3        | 1,9     | 1,1                         | 2,1     | 1,5                           | 1,8     |
|                                                                      | 8     | 1,5        | 2,2     | 1,3                         | 2,4     | 1,6                           | 2,1     |
| 132                                                                  | 2     | 1,0        | 1,2     | 0,8                         | 1,4     | 1,3                           | 1,0     |
|                                                                      | 4     | 1,4        | 1,8     | 1,1                         | 2,1     | 1,7                           | 1,5     |
|                                                                      | 6     | 1,6        | 2,2     | 1,4                         | 2,5     | 2,0                           | 2,0     |
|                                                                      | 8     | 1,9        | 2,6     | 1,6                         | 2,9     | 2,3                           | 2,3     |
| 160                                                                  | 2     | 2,6        | 1,7     | 2,3                         | 2,0     | 2,9                           | 1,4     |
|                                                                      | 4     | 4,3        | 3,2     | 4,0                         | 3,8     | 4,9                           | 2,9     |
|                                                                      | 6     | 5,1        | 4,0     | 4,7                         | 4,6     | 5,7                           | 3,6     |
|                                                                      | 8     | 5,7        | 4,6     | 5,4                         | 5,1     | 6,2                           | 4,3     |
| 180                                                                  | 2     | 3,3        | 2,2     | 3,0                         | 2,7     | 3,8                           | 1,9     |
|                                                                      | 4     | 5,0        | 3,8     | 4,5                         | 4,4     | 5,6                           | 3,3     |
|                                                                      | 6     | 5,8        | 4,6     | 5,3                         | 5,4     | 6,6                           | 4,1     |
|                                                                      | 8     | 6,5        | 5,3     | 6,1                         | 6,2     | 7,4                           | 4,9     |
| 200                                                                  | 2     | 3,8        | 2,6     | 3,2                         | 3,3     | 4,5                           | 2,0     |
|                                                                      | 4     | 6,4        | 5,0     | 5,7                         | 6,0     | 7,4                           | 4,3     |
|                                                                      | 6     | 7,5        | 6,1     | 6,8                         | 7,1     | 8,5                           | 5,4     |
|                                                                      | 8     | 8,5        | 7,1     | 7,7                         | 8,1     | 9,5                           | 6,3     |
| 225                                                                  | 2     | 4,9        | 3,5     | 4,2                         | 4,4     | 5,8                           | 2,8     |
|                                                                      | 4     | 6,4        | 5,0     | 5,6                         | 6,3     | 7,7                           | 4,2     |
|                                                                      | 6     | 7,5        | 6,1     | 6,5                         | 7,4     | 8,8                           | 5,1     |
|                                                                      | 8     | 8,3        | 6,9     | 7,3                         | 8,3     | 9,7                           | 5,9     |

| Maximum permissible axial thrust - 50 Hz - Fa in (kN) - 20.000 hours |       |            |         |                             |         |                               |         |
|----------------------------------------------------------------------|-------|------------|---------|-----------------------------|---------|-------------------------------|---------|
| Frame                                                                | Poles | Horizontal |         | Vertical with shaft upwards |         | Vertical with shaft downwards |         |
|                                                                      |       | Pushing    | Pulling | Pushing                     | Pulling | Pushing                       | Pulling |
| 250                                                                  | 2     | 4,8        | 3,4     | 3,9                         | 4,8     | 6,2                           | 2,5     |
|                                                                      | 4     | 7,2        | 5,6     | 6,0                         | 7,5     | 9,1                           | 4,4     |
|                                                                      | 6     | 8,4        | 6,8     | 7,0                         | 8,6     | 10,2                          | 5,4     |
|                                                                      | 8     | 9,5        | 7,9     | 8,0                         | 9,9     | 11,5                          | 6,5     |
| 280                                                                  | 2     | 5,4        | 3,8     | 3,8                         | 5,6     | 7,2                           | 2,2     |
|                                                                      | 4     | 8,2        | 6,3     | 5,9                         | 9,0     | 10,9                          | 4,0     |
|                                                                      | 6     | 9,7        | 7,8     | 7,3                         | 10,8    | 12,7                          | 5,4     |
|                                                                      | 8     | 10,9       | 9,0     | 8,3                         | 12,0    | 13,9                          | 6,4     |
| 315                                                                  | 2     | 5,2        | 3,6     | 2,8                         | 6,1     | 7,7                           | 1,2     |
|                                                                      | 4     | 7,9        | 6,0     | 5,0                         | 9,9     | 11,8                          | 3,1     |
|                                                                      | 6     | 9,2        | 7,3     | 5,6                         | 11,4    | 13,3                          | 3,7     |
|                                                                      | 8     | 10,3       | 8,4     | 6,4                         | 13,2    | 15,1                          | 4,5     |
| 355                                                                  | 2     | 4,6        | 2,7     | 1,5                         | 6,9     | On request                    |         |
|                                                                      | 4     | 9,4        | 7,2     | 5,0                         | 12,5    | 14,7                          | 2,8     |
|                                                                      | 6     | 11,2       | 9,0     | 6,3                         | 14,1    | 16,3                          | 4,1     |
|                                                                      | 8     | 12,4       | 10,2    | 6,7                         | 15,9    | 18,1                          | 4,5     |

#### Lubrication Intervals

Table 3.4: Lubrication intervals for ball bearings (horizontal mounting).

| Lubrication intervals (hours) |               |        |
|-------------------------------|---------------|--------|
| Frame                         | Poles         | 50 Hz  |
| 71                            | 2 / 4 / 6 / 8 | 20.000 |
| 80                            | 2 / 4 / 6 / 8 |        |
| 90                            | 2 / 4 / 6 / 8 |        |
| 100                           | 2 / 4 / 6 / 8 |        |
| 112                           | 2 / 4 / 6 / 8 |        |
| 132                           | 2 / 4 / 6 / 8 |        |
| 160                           | 2 / 4 / 6 / 8 |        |
| 180                           | 2 / 4 / 6 / 8 |        |
| 200                           | 2 / 4 / 6 / 8 |        |
| 225                           | 2             | 9.000  |
|                               | 4 / 6 / 8     | 20.000 |
| 250                           | 2             | 9.000  |
|                               | 4 / 6 / 8     | 20.000 |
| 280                           | 2             | 7.000  |
|                               | 4             | 18.000 |
|                               | 6 / 8         | 20.000 |
| 315                           | 2             | 7.000  |
|                               | 4             | 18.000 |
|                               | 6 / 8         | 20.000 |
| 355                           | 2             | 6.000  |
|                               | 4             | 14.000 |
|                               | 6 / 8         | 20.000 |

## 4 MOUNTING FORMS

WGOST motors are supplied, as standard, in the B3T foot configuration, with the terminal box on top.

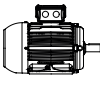
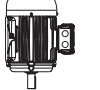
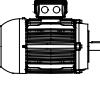
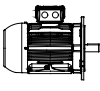
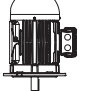
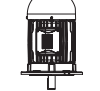
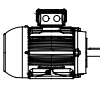
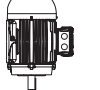


Figure 4.1: B3T mounting

The mounting configuration for the WGOST motor lines comply with IEC 60034-7 standard. Standard mounting forms and their variations are shown in Tabela 4.1. After the designation, a characteristic letter is used to define the terminal box position. So, the mounting code IM B3 can be seen in WEG documents as detailed below (without IM code).

B3L - terminal box on left hand side of the motor frame  
B3T - terminal box on top of the motor frame  
B3R - terminal box on right hand side of the motor frame  
Note: The terminal box position is defined viewing the motor from the shaft end. Mounting forms and their variations are indicated in Tabela 4.1

Table 4.1: Mountings configurations

| Basic mountings                                                                   | Other type of mounting                                                              |                                                                                     |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| IM B3                                                                             | IM V5                                                                               | IM V6                                                                               | IM B14                                                                              | IM V18                                                                              |
| IM 1001                                                                           | IM 1011                                                                             | IM 1031                                                                             | IM 3601                                                                             | IM 3611                                                                             |
|  |  |  |  |  |
| IM B35                                                                            | IM V15                                                                              | IM B5                                                                               | IM V1                                                                               | IM V3                                                                               |
| IM 2001                                                                           | IM 2011                                                                             | IM 3001                                                                             | IM 3011                                                                             | IM 3031                                                                             |
|  |  |  |  |  |
| IM B34                                                                            | IM V17                                                                              | IM V19                                                                              |                                                                                     |                                                                                     |
| IM 2101                                                                           | IM 2111                                                                             | IM 3631                                                                             |                                                                                     |                                                                                     |
|  |  |  |                                                                                     |                                                                                     |

#### Important:

1. For motors mounted vertically shaft down fitting of a drip cover / impact canopy is recommended to prevent ingress of small objects into the fan cover.
2. For motors mounted vertically with shaft up and installed in environments containing liquids, the use of a rubber slinger is recommended to prevent the ingress of liquid into the motor through the shaft.

## 4.1 PAINTING



Figure 4.2: WEG internal painting plan

The standard painting plans utilized on WGOST motors meet the atmospheric corrosive category "C2" as indicated in the DIN EN ISO 12944-2 standard. They are designed for use on motors installed in normal environments, slightly severe, sheltered or non-sheltered, for industrial use, with low relative humidity, normal temperature variations and the presence of SO<sub>2</sub>. Motor frame sizes 71 to 132 utilize WEG internal painting plan 207A (semi-matt), which consists of:  
Primer: One coat of red oxide, alkyd based primer, with minimum thickness of 20 mm.  
Finishing: One coat of styrenated alkyd based synthetic enamel paint, with minimum thickness of 30 mm.

And, motors in frame sizes 160-355 utilise the WEG internal paint plan 203A (semi-gloss):

Primer: One coat of red oxide, alkyd based primer, with minimum dry coat thickness of 20 mm.

Finishing: One coat of alkyd based synthetic enamel paint, with minimum dry coat thickness of 40 mm.

Note:

These painting plans are not recommended for direct exposure to acid steam, alkalis, solvents and salty environments.

Alternative painting plans are available on request, which are suitable to guarantee additional protection in aggressive environments, either protected or unprotected.

## 5 AMBIENT AND ALTITUDE

Unless otherwise specified, the rated outputs shown in the electrical data tables within this catalogue refer to continuous duty operation S1, as per IEC 60034-1 and under the following conditions:

■ ambient temperature range -45 °C to 40 °C

■ altitudes up to 1000 metres above sea level

For operating temperatures and altitudes differing from those above, the factors indicated in Tabela 5.1 must be applied to the nominal motor power rating in order to determine the derated output (Pmax).

$P_{max} = P_{nom} \times \text{correction factor}$

Table 5.1: Correction factors for altitude and ambient temperature

| T (°C) | Altitude (m) |      |      |      |      |      |      |      |      |
|--------|--------------|------|------|------|------|------|------|------|------|
|        | 1000         | 1500 | 2000 | 2500 | 3000 | 3500 | 4000 | 4500 | 5000 |
| 10     |              |      |      |      |      |      | 0,97 | 0,92 | 0,88 |
| 15     |              |      |      |      |      | 0,98 | 0,94 | 0,90 | 0,86 |
| 20     |              |      |      |      | 1,00 | 0,95 | 0,91 | 0,87 | 0,83 |
| 25     |              |      |      | 1,00 | 0,95 | 0,93 | 0,89 | 0,85 | 0,81 |
| 30     |              |      | 1,00 | 0,96 | 0,92 | 0,90 | 0,86 | 0,82 | 0,78 |
| 35     |              | 1,00 | 0,95 | 0,93 | 0,90 | 0,88 | 0,84 | 0,80 | 0,75 |
| 40     | 1,00         | 0,97 | 0,94 | 0,90 | 0,86 | 0,82 | 0,80 | 0,76 | 0,71 |
| 45     | 0,95         | 0,92 | 0,90 | 0,88 | 0,85 | 0,81 | 0,78 | 0,74 | 0,69 |
| 50     | 0,92         | 0,90 | 0,87 | 0,85 | 0,82 | 0,80 | 0,77 | 0,72 | 0,67 |
| 55     | 0,88         | 0,85 | 0,83 | 0,81 | 0,78 | 0,76 | 0,73 | 0,70 | 0,65 |
| 60     | 0,83         | 0,82 | 0,80 | 0,77 | 0,75 | 0,73 | 0,70 | 0,67 | 0,62 |
| 65     | 0,79         | 0,76 | 0,74 | 0,72 | 0,70 | 0,68 | 0,66 | 0,62 | 0,58 |
| 70     | 0,74         | 0,71 | 0,69 | 0,67 | 0,66 | 0,64 | 0,62 | 0,58 | 0,53 |
| 75     | 0,70         | 0,68 | 0,66 | 0,64 | 0,62 | 0,60 | 0,58 | 0,53 | 0,49 |
| 80     | 0,65         | 0,64 | 0,62 | 0,60 | 0,58 | 0,56 | 0,55 | 0,48 | 0,44 |

## 6 INSULATION & TEMPERATURE RISE

WGOST motors are supplied with class F or H insulation.

Figure 6.1 shows the safety margins per thermal class.

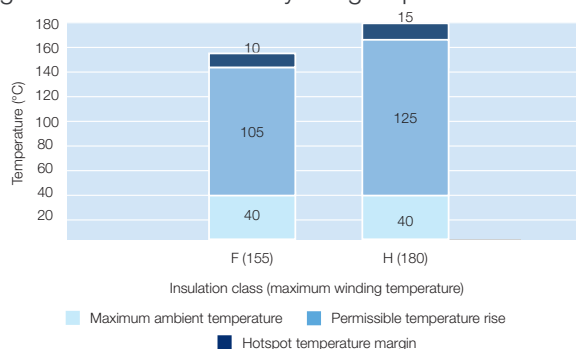


Figure 6.1: Safety margins per thermal class.

Bearing lubrication intervals will change under operating conditions other than 40 °C maximum ambient temperature and 1000 metres above sea level. Contact WEG for further information.

All WGOST motors are wound with the insulation system which consists of enamelled wire impregnated with solvent free resin which protects motors at temperatures up to 200 °C.

## 6.1 SPACE HEATERS

The use of space heaters is recommended in two situations:

- Motors installed in environments with relative air humidity up to 95%, in which the motor may remain idle for periods greater than 24 hours;
- Motors installed in environments with relative air humidity greater than 95%, regardless of the operating schedule. It should be highlighted that in this situation it is strongly recommended that an epoxy painting, more commonly known as tropicalization, is applied to the internal components of the motor.

The supply voltage for space heaters must be defined by the Customer. For all frame sizes, WGOST motors can be provided with space heaters suitable for 220-240 V. The power rating and number of space heaters fitted depends on the size of the motor as indicated in Table 8 below:

Table 6.1: Power and quantity of space heaters

| Frame       | Quantities | Total power rated (W) |
|-------------|------------|-----------------------|
| 71 to 80    | 1          | 7,5                   |
| 90 and 100  | 1          | 11                    |
| 112         | 2          | 22                    |
| 132 and 160 | 2          | 30                    |
| 180 and 200 | 2          | 38                    |
| 225 and 250 | 2          | 56                    |
| 280 and 315 | 2          | 140                   |
| 355         | 2          | 174                   |

## 7 MOTOR PROTECTIONS

Protections available for the WGOST motor line can be classified as follows:

■ Based on operating temperature

■ Based on operating current

### 7.1 PROTECTION BASED ON OPERATING TEMPERATURE

Continuous duty motors must be protected from overload either by a device integrated into the motor or via an independent protection system, usually a thermal relay with rated or setting current, equal to or below the value obtained when multiplying the power supply rated current ( $I_n$ ), as per Tabela 7.1.

Table 7.1: Relay setting current referred to service factor

| Service factor | Relay setting current     |
|----------------|---------------------------|
| 1,0 up to 1,15 | $I_n \times S.F.$         |
| $\geq 1,15$    | $(I_n \times S.F.) - 5\%$ |

#### 7.1.1 Pt-100



Figure 7.1: Pt-100

These are temperature detectors with operating principle based on the properties that some materials vary the electric resistance with the variation in temperature (usually platinum, nickel or copper). They are also

fitted with calibrated resistances that vary linearly with temperature, allowing continuous reading of motor operating temperature through a monitoring display, with high precision rate and response sensitivity. The same detector can serve as alarm (with operation above the regular operating temperature) and trip (usually set up for the maximum temperature of the insulation class).

### 7.1.2 Thermistor (PTC)



Figure 7.2: Thermistor (PTC)

A thermistor is a non-linear resistance temperature detector, made from semi-conductor material. Each specific thermistor has its own unique resistance vs. temperature characteristic i.e. they have one pre-set, non-adjustable tripping point.

PTC (positive temperature coefficient) thermistors have a resistance that increases dramatically at its defined tripping temperature. This sudden variation in resistance blocks the PTC current which causes the output relay to operate and the main circuit to switch off.

Thermistors are compact, do not wear, and feature faster response times when compared to other types of thermal protectors, although they do not allow continuous monitoring of motor operating temperature.

Together with their electronic circuits, these thermistors provide full protection against overheating caused by overload, under or overvoltage or frequent reversing operations.

Where thermistor protection is required to provide both alarm and trip operation, it is necessary for each phase of the motor winding to be equipped with two sets of appropriately rated thermistors.

WEG Automation offers a range of electronic relays 'RPW' intended specifically to read the PTC signal and operate its output relay. For further information please visit the website [www.weg.net](http://www.weg.net).

## 7.2 PROTECTION BASED ON OPERATING CURRENT

Overloads are processes which usually see the temperature increase gradually. To overcome this problem, the thermal protectors described in item 7.1 are quite suitable. However, the only way to protect motors against short-circuit currents is the application of fuses.

This type of protection depends directly on the motor current and is highly effective in cases of locked rotor. WEG Automation supplies a range of fuses in versions D and NH. Visit the website [www.weg.net](http://www.weg.net) for further information.

## 8 VARIABLE SPEED DRIVE APPLICATION

### 8.1 INFLUENCE OF THE VSD ON THE MOTOR TEMPERATURE

Motors operating with frequency inverters may present a higher temperature rise than when operating under sinusoidal supply. This occurs due to the combined effects of the loss increase resulting from the PWM harmonics and the reduction in ventilation experienced by self-ventilated motors when operating at low frequencies. There are basically two solutions to avoid excessive overheating of the motor in VSD applications:

- Torque derating (oversizing of the self-ventilated motor frame size);
- Optimal Flux Solution (exclusive to applications where both motor and drive are WEG).

#### 8.1.1 Torque Derating Criteria

In order to maintain the temperature rise of WEG motors within acceptable levels, when supplied by VSD, the speed range-related loadability limits established in Figura 8.1 (for operation under constant flux condition).

Notes:

- 1 - These derating curves relate to the motor thermal capability only and do not concern the insulation class. Speed regulation will depend on VSD mode of operation and proper adjustment.
- 2 - Torque derating is usually necessary when the motor is required to drive constant torque loads (e.g. screw compressors, conveyors, extruders, etc.). For squared torque loads, such as pumps and fans, no torque derating is normally required.

#### 8.1.2 Constant Flux Condition

Applicable when the motor is supplied by any commercial drive operating with any control scheme other than the Optimal Flux available in WEG drives

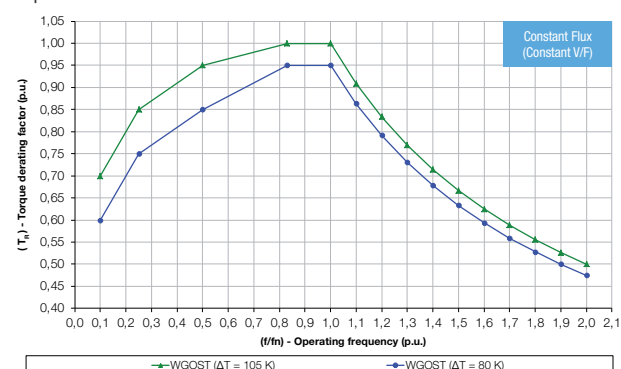


Figure 8.1: Derating curves for constant flux condition

## 9 CONSTRUCTION FEATURES

| Frame                                  |                    |        | 71                                                                | 80        | 90        | 100       | 112       | 132                           | 160                                   | 180                                                                                     | 200                | 225                                                                                              | 250                                                                                                     | 280     | 315S/M  | 355M/L                          |  |
|----------------------------------------|--------------------|--------|-------------------------------------------------------------------|-----------|-----------|-----------|-----------|-------------------------------|---------------------------------------|-----------------------------------------------------------------------------------------|--------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|---------|---------|---------------------------------|--|
| Mechanical features                    |                    |        |                                                                   |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Mounting form                          |                    |        | B3T (options are available as per section 5)                      |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Frame material                         |                    |        | FC-200 (EN GJL 200) cast iron                                     |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Degree of protection                   |                    |        | IP55                                                              |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Grounding                              |                    |        | Simple grounding - one grounding terminal inside the terminal box |           |           |           |           |                               |                                       |                                                                                         |                    | Double grounding - one grounding terminal inside the terminal box and another on the motor frame |                                                                                                         |         |         |                                 |  |
| Cooling method                         |                    |        | Totally enclosed fan cooled - IC411                               |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Fan material                           |                    |        | Polypropylene                                                     |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Fan cover material                     |                    |        | Steel                                                             |           |           |           |           | FC-200 (EN GJL 200) cast iron |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Endshields material                    |                    |        | FC-200 (EN GJL 200) cast iron                                     |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Drain hole                             |                    |        | Rubber drain plug                                                 |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Bearings                               | Drive end side     | 2p     | 6204-Z-C3                                                         | 6205-Z-C3 | 6205-Z-C3 | 6206-Z-C3 | 6307-Z-C3 | 6308-Z-C3                     | 6309-Z-C3                             | 6311-Z-C3                                                                               | 6312-Z-C3          | 6314-C3                                                                                          | 6314-C3                                                                                                 | 6316-C3 | 6316-C3 | 6219-C3                         |  |
|                                        |                    | 4 - 8p | 6204-Z-C3                                                         | 6205-Z-C3 | 6205-Z-C3 | 6206-Z-C3 | 6307-Z-C3 | 6308-Z-C3                     | 6311-Z-C3                             | 6312-Z-C3                                                                               | 6314-Z-C3          |                                                                                                  | 6316-C3                                                                                                 | 6319-C3 | 6319-C3 | 6322-C3                         |  |
|                                        | Non drive end side | 2p     | 6202-Z-C3                                                         | 6203-Z-C3 | 6204-Z-C3 | 6205-Z-C3 | 6206-Z-C3 | 6207-Z-C3                     | 6209-Z-C3                             | 6211-Z-C3                                                                               | 6212-Z-C3          |                                                                                                  | 6314-C3                                                                                                 | 6314-C3 | 6314-C3 | 6314-C3                         |  |
|                                        |                    | 4 - 8p | 6202-Z-C3                                                         | 6203-Z-C3 | 6204-Z-C3 | 6205-Z-C3 | 6206-Z-C3 | 6207-Z-C3                     | 6209-Z-C3                             | 6211-Z-C3                                                                               | 6212-Z-C3          |                                                                                                  |                                                                                                         | 6316-C3 | 6316-C3 | 6319-C3                         |  |
|                                        | Locking            |        | Without bearing cap and with spring washer at NDE                 |           |           |           |           |                               |                                       | DE bearing locked with inner bearing cap and fitted with wave washer in the NDE bearing |                    |                                                                                                  | DE bearing locked with inner and outer bearing caps and fitted with pre-load springs in the NDE bearing |         |         |                                 |  |
| Shaft Seal                             |                    |        | V' Ring                                                           |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Lubrication                            | Type of grease     |        | Mobiltemp SHC 32                                                  |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
|                                        | Grease fitting     |        | Without grease fitting                                            |           |           |           |           |                               |                                       |                                                                                         |                    | With grease fitting                                                                              |                                                                                                         |         |         |                                 |  |
| Terminal block                         |                    |        | BMC terminal block - 6 pins                                       |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Terminal box material                  |                    |        | FC-200 (EN GJL 200) cast iron                                     |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Cable entries                          | Main               | Size   | 2xM20x1,5                                                         |           | 2xM25x1,5 |           | 2xM32x1,5 |                               | 2xM40x1,5                             |                                                                                         | 2xM50x1,5          |                                                                                                  | 2 x M63 x 1.5                                                                                           |         |         | 2xM80x2 (removable gland plate) |  |
|                                        | Threaded plug      |        | Threaded plug for transport and storage; cable gland as optional  |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
|                                        | Accessory          | Size   | 1xM20x1,5 lateral threaded hole when fitted with accessories      |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Shaft                                  | Material           |        | AISI 1040/45                                                      |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         | AISI 4140                       |  |
|                                        | DE Threaded hole   | 2p     | M6                                                                | M8        | M8        | M10       | M12       | M12                           | M16                                   | M16                                                                                     | M20                | M20                                                                                              | M20                                                                                                     | M20     | M20     | M20                             |  |
|                                        |                    | 4 - 8p | M6                                                                | M8        | M8        | M10       | M12       | M12                           | M16                                   | M20                                                                                     | M20                | M20                                                                                              | M20                                                                                                     | M20     | M20     | M24                             |  |
| Key (in accordance with DIN 6885:1968) |                    |        | A                                                                 |           |           |           |           |                               |                                       |                                                                                         |                    | B                                                                                                |                                                                                                         |         |         |                                 |  |
| Direction of rotation                  |                    |        | Bidirectional                                                     |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Vibration level                        |                    |        | Grade A                                                           |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Nameplate material                     |                    |        | Stainless steel AISI 304                                          |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Painting                               | Type               |        | 207 A                                                             |           |           |           |           | 203 A                         |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
|                                        | Colour             |        | RAL 7024                                                          |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Electrical features                    |                    |        |                                                                   |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Design                                 |                    |        | N                                                                 |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Voltage / Frequency                    |                    |        | 220/380 - 6 cables                                                |           |           |           |           |                               |                                       |                                                                                         | 380/660 - 6 cables |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Winding                                | Impregnation       |        | Dip and bake                                                      |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
|                                        | Insulation class   |        | F (DT 105K)                                                       |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Service factor                         |                    |        | 1                                                                 |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Rotor                                  |                    |        | Aluminum die cast                                                 |           |           |           |           |                               |                                       |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |
| Thermal protection                     |                    |        | Without thermal protection                                        |           |           |           |           |                               | Thermistor PTC for tripping at 155 °C |                                                                                         |                    |                                                                                                  |                                                                                                         |         |         |                                 |  |

# 10 ELECTRICAL DATA

WGOST - IE1 Efficiency

| Output                     |      | Frame  | Full Load Torque (Nm) | Locked Rotor Current I/Ln | Locked Rotor Torque Tl/Tn | Break-down Torque Tb/Tn | Inertia J (kgm²) | Allowable locked rotor time (s) |      | Weight (kg) | Sound dB(A) | Rated speed (rpm) | % of full load |      |      |      |      |      | Voltage (V) | Full load current In (A) |
|----------------------------|------|--------|-----------------------|---------------------------|---------------------------|-------------------------|------------------|---------------------------------|------|-------------|-------------|-------------------|----------------|------|------|------|------|------|-------------|--------------------------|
| kW                         | HP   |        |                       |                           |                           |                         |                  | Efficiency                      |      |             |             |                   | Power Factor   |      |      |      |      |      |             |                          |
|                            |      |        |                       |                           |                           |                         |                  | Hot                             | Cold |             |             |                   | 50             | 75   | 100  | 50   | 75   | 100  |             |                          |
| II pole - 3000 rpm - 50 Hz |      |        |                       |                           |                           |                         |                  |                                 |      |             |             |                   |                |      |      |      |      |      |             |                          |
| 0,37                       | 0,5  | 71     | 1,24                  | 4,4                       | 2,2                       | 2,6                     | 0,0003           | 12                              | 26   | 10,0        | 56          | 2845              | 58,8           | 63,9 | 63,9 | 0,51 | 0,65 | 0,76 | 220         | 2,00                     |
| 0,55                       | 0,75 | 71     | 1,87                  | 4,6                       | 1,9                       | 2,4                     | 0,0004           | 10                              | 22   | 11,0        | 56          | 2810              | 69,0           | 69,0 | 69,0 | 0,63 | 0,77 | 0,86 | 220         | 2,43                     |
| 0,75                       | 1    | 71     | 2,53                  | 5,3                       | 3,7                       | 3,6                     | 0,0005           | 10                              | 22   | 12,0        | 56          | 2830              | 69,8           | 72,1 | 72,1 | 0,51 | 0,66 | 0,76 | 220         | 3,59                     |
| 1,1                        | 1,5  | L71    | 3,77                  | 5,5                       | 3,8                       | 3,3                     | 0,0006           | 11                              | 24   | 13,0        | 56          | 2790              | 74,5           | 75,0 | 75,0 | 0,57 | 0,71 | 0,82 | 220         | 4,69                     |
| 1,5                        | 2    | L80    | 5,06                  | 5,9                       | 3                         | 3                       | 0,0010           | 8                               | 18   | 16,0        | 59          | 2835              | 76,9           | 77,2 | 77,2 | 0,60 | 0,72 | 0,81 | 220         | 6,3                      |
| 2,2                        | 3    | L80    | 7,59                  | 6,0                       | 4,2                       | 3                       | 0,0014           | 9                               | 20   | 18,0        | 59          | 2770              | 79,0           | 79,7 | 79,7 | 0,62 | 0,74 | 0,82 | 220         | 8,83                     |
| 3                          | 4    | 90L    | 10,0                  | 6,5                       | 3,9                       | 3,7                     | 0,0027           | 7                               | 15   | 24,0        | 64          | 2865              | 79,2           | 81,5 | 81,5 | 0,48 | 0,62 | 0,72 | 220         | 13,4                     |
| 4                          | 5,5  | 100S   | 13,2                  | 8,5                       | 3,6                       | 3,9                     | 0,0064           | 9                               | 20   | 33,0        | 67          | 2905              | 80,9           | 83,1 | 83,1 | 0,63 | 0,77 | 0,85 | 220         | 14,9                     |
| 5,5                        | 7,5  | L100L  | 18,2                  | 8,0                       | 3                         | 3,2                     | 0,0080           | 6                               | 13   | 36,0        | 67          | 2880              | 84,7           | 84,7 | 84,7 | 0,75 | 0,85 | 0,89 | 220         | 19,1                     |
| 7,5                        | 10   | L112M  | 24,9                  | 7,7                       | 3,2                       | 3,4                     | 0,0101           | 10                              | 22   | 47,0        | 64          | 2880              | 85,5           | 86,0 | 86,0 | 0,69 | 0,79 | 0,85 | 220         | 26,9                     |
| 11                         | 15   | 132M   | 36,0                  | 8,0                       | 3                         | 3,4                     | 0,0342           | 7                               | 15   | 85,0        | 68          | 2920              | 85,6           | 87,6 | 87,6 | 0,71 | 0,81 | 0,86 | 220         | 38,3                     |
| 15                         | 20   | 160S   | 48,6                  | 8,9                       | 3,4                       | 4,3                     | 0,0516           | 7                               | 15   | 116         | 67          | 2950              | 87,3           | 88,7 | 88,7 | 0,56 | 0,70 | 0,78 | 220         | 56,9                     |
| 18,5                       | 25   | 160M   | 60,0                  | 8,3                       | 3,3                       | 3,9                     | 0,0626           | 7                               | 15   | 127         | 67          | 2945              | 89,3           | 89,3 | 89,3 | 0,68 | 0,80 | 0,85 | 220         | 64                       |
| 22                         | 30   | 180S   | 71,3                  | 7,9                       | 3,3                       | 3,5                     | 0,0906           | 12                              | 26   | 163         | 67          | 2950              | 89,9           | 89,9 | 89,9 | 0,63 | 0,75 | 0,82 | 220         | 78,3                     |
| 30                         | 40   | 180M   | 97,2                  | 8,4                       | 3,1                       | 3,1                     | 0,1192           | 11                              | 24   | 184         | 67          | 2950              | 90,7           | 90,7 | 90,7 | 0,71 | 0,81 | 0,85 | 220         | 102                      |
| 37                         | 50   | 200M   | 119                   | 7,4                       | 3                         | 3,1                     | 0,1788           | 14                              | 31   | 234         | 72          | 2960              | 91,1           | 91,2 | 91,2 | 0,66 | 0,77 | 0,82 | 380         | 75,2                     |
| 45                         | 60   | 200L   | 145                   | 8,5                       | 3,4                       | 3,5                     | 0,2204           | 10                              | 22   | 258         | 72          | 2965              | 91,4           | 91,7 | 91,7 | 0,62 | 0,74 | 0,80 | 380         | 93,2                     |
| 55                         | 75   | 225S/M | 177                   | 8,4                       | 2,7                       | 3,5                     | 0,2731           | 10                              | 22   | 358         | 75          | 2965              | 92,1           | 92,1 | 92,1 | 0,69 | 0,79 | 0,84 | 380         | 108                      |
| 75                         | 100  | 250S/M | 242                   | 8,9                       | 3,1                       | 3,5                     | 0,4245           | 11                              | 24   | 447         | 75          | 2960              | 92,7           | 92,7 | 92,7 | 0,73 | 0,82 | 0,86 | 380         | 143                      |
| 90                         | 125  | 250S/M | 291                   | 8,9                       | 3,1                       | 3,3                     | 0,5434           | 11                              | 24   | 499         | 75          | 2960              | 93,0           | 93,0 | 93,0 | 0,79 | 0,86 | 0,88 | 380         | 167                      |
| 110                        | 150  | 280S/M | 353                   | 8,3                       | 2,2                       | 3,4                     | 0,9776           | 17                              | 37   | 646         | 77          | 2977              | 93,3           | 93,3 | 93,3 | 0,67 | 0,77 | 0,82 | 380         | 218                      |
| 132                        | 175  | 280S/M | 424                   | 8,4                       | 2,2                       | 3,3                     | 1,16             | 17                              | 37   | 697         | 77          | 2976              | 93,5           | 93,5 | 93,5 | 0,73 | 0,82 | 0,85 | 380         | 252                      |
| 160                        | 220  | 315S/M | 514                   | 7,3                       | 2,1                       | 3                       | 1,86             | 26                              | 57   | 934         | 77          | 2977              | 93,8           | 93,8 | 93,8 | 0,74 | 0,82 | 0,86 | 380         | 301                      |
| 200                        | 270  | 315S/M | 641                   | 8,7                       | 2,8                       | 3,6                     | 2,66             | 20                              | 44   | 1079        | 77          | 2982              | 94,0           | 94,0 | 94,0 | 0,79 | 0,86 | 0,88 | 380         | 367                      |
| 250                        | 340  | 315S/M | 801                   | 8,9                       | 3                         | 3,5                     | 3,42             | 19                              | 42   | 1228        | 77          | 2982              | 94,0           | 94,0 | 94,0 | 0,83 | 0,88 | 0,90 | 380         | 449                      |
| 315                        | 430  | 355M/L | 1007                  | 9,0                       | 2,9                       | 4,1                     | 4,72             | 19                              | 42   | 1605        | 80          | 2988              | 94,0           | 94,0 | 94,0 | 0,68 | 0,79 | 0,84 | 380         | 606                      |
| 355                        | 480  | 355M/L | 1136                  | 8,8                       | 2,6                       | 3,5                     | 5,25             | 20                              | 44   | 1698        | 80          | 2987              | 94,0           | 94,0 | 94,0 | 0,79 | 0,86 | 0,88 | 380         | 652                      |
| IV pole - 1500 rpm - 50 Hz |      |        |                       |                           |                           |                         |                  |                                 |      |             |             |                   |                |      |      |      |      |      |             |                          |
| 0,37                       | 0,5  | 71     | 2,55                  | 3,8                       | 2,1                       | 2,1                     | 0,0007           | 19                              | 42   | 11,0        | 43          | 1385              | 58,2           | 66,0 | 66,0 | 0,50 | 0,60 | 0,73 | 220         | 2,02                     |
| 0,55                       | 0,75 | 71     | 3,82                  | 4,2                       | 3,4                       | 2,8                     | 0,0009           | 28                              | 62   | 12,0        | 43          | 1375              | 67,5           | 70,0 | 70,0 | 0,44 | 0,57 | 0,67 | 220         | 3,08                     |
| 0,75                       | 1    | L71    | 5,29                  | 4,7                       | 3,2                       | 2,9                     | 0,0011           | 29                              | 64   | 13,0        | 43          | 1355              | 72,1           | 72,1 | 72,1 | 0,50 | 0,60 | 0,70 | 220         | 3,90                     |
| 1,1                        | 1,5  | 80     | 7,51                  | 5,5                       | 2,7                       | 2,7                     | 0,0032           | 8                               | 18   | 16,0        | 44          | 1400              | 73,4           | 75,0 | 75,0 | 0,57 | 0,70 | 0,80 | 220         | 4,81                     |
| 1,5                        | 2    | L80    | 10,3                  | 5,5                       | 2,9                       | 2,6                     | 0,0039           | 6                               | 13   | 18,0        | 44          | 1385              | 75,5           | 77,2 | 77,2 | 0,59 | 0,73 | 0,82 | 220         | 6,22                     |
| 2,2                        | 3    | 90L    | 14,7                  | 6,6                       | 2,7                       | 2,7                     | 0,0066           | 6                               | 13   | 24,0        | 49          | 1430              | 79,0           | 79,7 | 79,7 | 0,57 | 0,71 | 0,80 | 220         | 9,06                     |
| 3                          | 4    | L100S  | 20,0                  | 6,9                       | 2,8                       | 2,8                     | 0,0119           | 6                               | 13   | 34,0        | 53          | 1435              | 80,7           | 81,5 | 81,5 | 0,53 | 0,68 | 0,77 | 220         | 12,5                     |
| 4                          | 5,5  | L100L  | 26,9                  | 7,0                       | 3,9                       | 3,3                     | 0,0119           | 10                              | 22   | 37,0        | 53          | 1420              | 83,1           | 83,1 | 83,1 | 0,54 | 0,68 | 0,77 | 220         | 16,4                     |
| 5,5                        | 7,5  | 112M   | 36,5                  | 6,7                       | 2,7                       | 2,8                     | 0,0180           | 9                               | 20   | 45,0        | 56          | 1440              | 84,0           | 84,7 | 84,7 | 0,55 | 0,69 | 0,77 | 220         | 22,1                     |
| 7,5                        | 10   | 132S   | 49,1                  | 7,0                       | 2                         | 2,9                     | 0,0751           | 5                               | 11   | 69,0        | 60          | 1460              | 82,0           | 86,0 | 86,0 | 0,63 | 0,76 | 0,83 | 220         | 27,6                     |
| 11                         | 15   | 132M/L | 71,7                  | 7,7                       | 2,1                       | 3                       | 0,0788           | 4                               | 9    | 121         | 60          | 1465              | 86,5           | 87,6 | 87,6 | 0,67 | 0,78 | 0,84 | 220         | 39,2                     |
| 15                         | 20   | 160S   | 97,2                  | 7,7                       | 2,7                       | 2,9                     | 0,1258           | 7                               | 15   | 131         | 61          | 1475              | 88,0           | 88,7 | 88,7 | 0,64 | 0,76 | 0,83 | 220         | 53,5                     |
| 18,5                       | 25   | 160M   | 120                   | 7,2                       | 2,7                       | 3,1                     | 0,1603           | 5                               | 11   | 144         | 61          | 1475              | 88,3           | 89,3 | 89,3 | 0,62 | 0,74 | 0,80 | 220         | 68,0                     |
| 22                         | 30   | 180S   | 143                   | 7,1                       | 2,9                       | 3                       | 0,1661           | 12                              | 26   | 167         | 61          | 1465              | 89,9           | 89,9 | 89,9 | 0,65 | 0,77 | 0,82 | 220         | 78,3                     |
| 30                         | 40   | 180M   | 196                   | 7,7                       | 3,2                       | 3,2                     | 0,2393           | 10                              | 22   | 191         | 61          | 1465              | 90,3           | 90,7 | 90,7 | 0,61 | 0,73 | 0,80 | 220         | 109                      |
| 37                         | 50   | 200M   | 240                   | 7,5                       | 2,9                       | 3                       | 0,3736           | 13                              | 29   | 260         | 65          | 1475              | 91,2           | 91,2 | 91,2 | 0,67 | 0,78 | 0,83 | 380         | 74,3                     |
| 45                         | 60   | 200L   | 291                   | 8,4                       | 3,6                       | 3,6                     | 0,4002           | 7                               | 15   | 270         | 65          | 1480              | 91,3           | 91,7 | 91,7 | 0,53 | 0,67 | 0,75 | 380         | 99,4                     |
| 55                         | 75   | 225S/M | 356                   | 6,8                       | 2,4                       | 2,6                     | 0,6903           | 17                              | 37   | 397         | 68          | 1475              | 91,5           | 92,1 | 92,1 | 0,77 | 0,84 | 0,87 | 380         | 104                      |
| 75                         | 100  | 250S/M | 486                   | 6,7                       | 2,3                       | 2,4                     | 1,14             | 13                              | 29   | 504         | 68          | 1475              | 92,7           | 92,7 | 92,7 | 0,78 | 0,85 | 0,87 | 380         | 141                      |
| 90                         | 125  | 250S/M | 581                   | 7,9                       | 3                         | 3,1                     | 1,21             | 9                               | 20   | 518         | 68          | 1480              | 93,0           | 93,0 | 93,0 | 0,72 | 0,81 | 0,85 | 380         | 173                      |
| 110                        | 150  | 280S/M | 708                   | 7,2                       | 2,2                       | 2,7                     | 1,79             | 11                              | 24   | 636         | 71          | 1485              | 93,3           | 93,3 | 93,3 | 0,65 | 0,75 | 0,81 | 380         | 221                      |
| 132                        | 175  | 280S/M | 849                   | 8,3                       | 2,8                       | 3,1                     | 2,33             | 13                              | 29   | 728         | 71          | 1485              | 93,5           | 93,5 | 93,5 | 0,69 | 0,79 | 0,83 | 380         | 258                      |
| 160                        | 220  | 315S/M | 1026                  | 7,3                       | 2,6                       | 2,8                     | 3,01             | 21                              | 46   | 952         | 71          | 1490              | 93,8           | 93,8 | 93,8 | 0,69 | 0,79 | 0,83 | 380         | 312                      |
| 200                        | 270  | 315S/M | 1283                  | 7,8                       | 2,8                       | 3                       | 3,77             | 18                              | 40   | 1054        | 71          | 1490              | 94,0           | 94,0 | 94,0 | 0,67 | 0,77 | 0,82 | 380         | 394                      |
| 250                        | 340  | 355M/L | 1604                  | 6,0                       | 2                         | 2,3                     | 7,16             | 20                              | 44   | 1492        | 76          | 1489              | 94,0           | 94,0 | 94,0 | 0,68 | 0,79 | 0,83 | 380         | 487                      |
| 315                        | 430  | 355M/L | 2020                  | 6,5                       | 2,3                       | 2,6                     | 8,02             | 17                              | 37   | 1582        | 76          | 1490              | 94,0           | 94,0 | 94,0 | 0,69 | 0,79 | 0,82 | 380         | 621                      |

Notes:

(1) Efficiency values are given according to GOST IEC 60034-30-1-2016.

# WGOST - IE1 Efficiency

| Output                      |      | Frame  | Full Load Torque (Nm) | Locked Rotor Current I/Ln | Locked Rotor Torque Tl/Tn | Break-down Torque Tb/Tn | Inertia J (kgm²) | Allowable locked rotor time (s) |      | Weight (kg) | Sound dB(A) | Rated speed (rpm) | % of full load |      |      |              |      |      | Voltage (V) | Full load current In (A) |
|-----------------------------|------|--------|-----------------------|---------------------------|---------------------------|-------------------------|------------------|---------------------------------|------|-------------|-------------|-------------------|----------------|------|------|--------------|------|------|-------------|--------------------------|
|                             |      |        |                       |                           |                           |                         |                  | Hot                             | Cold |             |             |                   | Efficiency     |      |      | Power Factor |      |      |             |                          |
| kW                          | HP   |        |                       |                           |                           |                         |                  |                                 |      |             |             |                   | 50             | 75   | 100  | 50           | 75   | 100  |             |                          |
| 355                         | 480  | 355M/L | 2277                  | 6,5                       | 2,3                       | 2,4                     | 10,7             | 24                              | 53   | 1856        | 76          | 1490              | 94,0           | 94,0 | 94,0 | 0,65         | 0,76 | 0,82 | 380         | 700                      |
| VI pole - 1000 rpm - 50 Hz  |      |        |                       |                           |                           |                         |                  |                                 |      |             |             |                   |                |      |      |              |      |      |             |                          |
| 0,37                        | 0,5  | 80     | 3,80                  | 3,4                       | 2,2                       | 2,3                     | 0,0025           | 24                              | 53   | 15,0        | 43          | 930               | 59,0           | 59,7 | 59,7 | 0,49         | 0,62 | 0,72 | 220         | 2,26                     |
| 0,55                        | 0,75 | 80     | 5,71                  | 3,7                       | 2,3                       | 2,1                     | 0,0030           | 18                              | 40   | 16,0        | 43          | 920               | 64,5           | 65,8 | 65,8 | 0,51         | 0,65 | 0,75 | 220         | 2,92                     |
| 0,75                        | 1    | L80    | 7,79                  | 4,5                       | 2,8                       | 2,5                     | 0,0037           | 13                              | 29   | 17,0        | 43          | 920               | 65,2           | 70,0 | 70,0 | 0,50         | 0,62 | 0,72 | 220         | 3,91                     |
| 1,1                         | 1,5  | 90L    | 11,2                  | 4,5                       | 2,5                       | 2,1                     | 0,0066           | 17                              | 37   | 24,0        | 45          | 935               | 72,9           | 72,9 | 72,9 | 0,54         | 0,68 | 0,76 | 220         | 5,21                     |
| 1,5                         | 2    | L90L   | 15,4                  | 4,7                       | 2,7                       | 2,3                     | 0,0077           | 9                               | 20   | 25,0        | 45          | 930               | 74,0           | 75,2 | 75,2 | 0,46         | 0,62 | 0,70 | 220         | 7,48                     |
| 2,2                         | 3    | L100L  | 22,0                  | 5,2                       | 2,6                       | 2,7                     | 0,0176           | 9                               | 20   | 35,0        | 44          | 955               | 71,6           | 77,7 | 77,7 | 0,43         | 0,56 | 0,66 | 220         | 11,3                     |
| 3                           | 4    | 112M   | 30,2                  | 5,5                       | 2,6                       | 2,6                     | 0,0257           | 12                              | 26   | 45,0        | 49          | 950               | 79,0           | 79,7 | 79,7 | 0,51         | 0,64 | 0,72 | 220         | 13,7                     |
| 4                           | 5,5  | L112M  | 39,6                  | 6,5                       | 3,9                       | 3,8                     | 0,0293           | 14                              | 31   | 48,0        | 49          | 965               | 77,5           | 81,4 | 81,4 | 0,45         | 0,55 | 0,66 | 220         | 19,5                     |
| 5,5                         | 7,5  | 132S   | 55,0                  | 6,0                       | 2,3                       | 2,3                     | 0,0643           | 28                              | 62   | 70,0        | 53          | 955               | 83,1           | 83,1 | 83,1 | 0,57         | 0,68 | 0,75 | 220         | 23,2                     |
| 7,5                         | 10   | 132M/L | 74,3                  | 7,0                       | 2,8                       | 2,8                     | 0,0871           | 18                              | 40   | 95,0        | 53          | 965               | 84,6           | 84,7 | 84,7 | 0,51         | 0,63 | 0,71 | 220         | 32,7                     |
| 11                          | 15   | 160S   | 108                   | 6,3                       | 3                         | 3,2                     | 0,1580           | 11                              | 24   | 125         | 57          | 975               | 85,4           | 86,4 | 86,4 | 0,52         | 0,66 | 0,74 | 220         | 45,2                     |
| 15                          | 20   | L160M  | 147                   | 7,0                       | 3,3                       | 3,4                     | 0,2195           | 9                               | 20   | 148         | 57          | 975               | 85,0           | 87,7 | 87,7 | 0,56         | 0,68 | 0,76 | 220         | 59,1                     |
| 18,5                        | 25   | 180M   | 180                   | 8,4                       | 3,2                       | 3,7                     | 0,2958           | 6                               | 13   | 176         | 56          | 980               | 87,9           | 88,6 | 88,6 | 0,56         | 0,70 | 0,78 | 220         | 70,3                     |
| 22                          | 30   | 200M   | 213                   | 6,6                       | 2,9                       | 3,3                     | 0,3686           | 10                              | 22   | 224         | 60          | 985               | 85,6           | 88,2 | 89,2 | 0,45         | 0,59 | 0,68 | 380         | 55,1                     |
| 30                          | 40   | 200L   | 292                   | 6,3                       | 2,5                       | 2,7                     | 0,4905           | 11                              | 24   | 257         | 60          | 980               | 90,0           | 90,2 | 90,2 | 0,59         | 0,71 | 0,78 | 380         | 64,8                     |
| 37                          | 50   | 225S/M | 361                   | 6,9                       | 2,6                       | 2,8                     | 0,7192           | 13                              | 29   | 346         | 63          | 980               | 90,0           | 90,8 | 90,8 | 0,66         | 0,77 | 0,82 | 380         | 75,5                     |
| 45                          | 60   | 250S/M | 437                   | 7,1                       | 2,8                       | 2,9                     | 1,01             | 12                              | 26   | 410         | 64          | 985               | 91,4           | 91,4 | 91,4 | 0,60         | 0,73 | 0,79 | 380         | 94,7                     |
| 55                          | 75   | 250S/M | 534                   | 7,2                       | 2,9                       | 3,1                     | 1,23             | 11                              | 24   | 449         | 64          | 985               | 90,0           | 91,9 | 91,9 | 0,58         | 0,71 | 0,78 | 380         | 117                      |
| 75                          | 100  | 280S/M | 727                   | 6,4                       | 2,2                       | 2,5                     | 2,79             | 18                              | 40   | 659         | 65          | 986               | 92,0           | 92,6 | 92,6 | 0,65         | 0,75 | 0,80 | 380         | 154                      |
| 90                          | 125  | 280S/M | 870                   | 7,5                       | 2,7                       | 2,9                     | 3,03             | 12                              | 26   | 684         | 65          | 988               | 92,9           | 92,9 | 92,9 | 0,61         | 0,73 | 0,78 | 380         | 189                      |
| 110                         | 150  | 315S/M | 1061                  | 6,7                       | 2,3                       | 2,7                     | 4,70             | 19                              | 42   | 920         | 67          | 991               | 93,3           | 93,3 | 93,3 | 0,58         | 0,71 | 0,77 | 380         | 233                      |
| 132                         | 175  | 315S/M | 1271                  | 7,3                       | 2,6                       | 3                       | 5,79             | 17                              | 37   | 1008        | 67          | 992               | 93,5           | 93,5 | 93,5 | 0,56         | 0,69 | 0,75 | 380         | 286                      |
| 160                         | 220  | 355M/L | 1541                  | 5,3                       | 1,9                       | 2,2                     | 6,95             | 33                              | 73   | 1306        | 73          | 992               | 93,8           | 93,8 | 93,8 | 0,65         | 0,75 | 0,79 | 380         | 328                      |
| 200                         | 270  | 355M/L | 1926                  | 5,2                       | 1,8                       | 2,2                     | 7,41             | 31                              | 68   | 1348        | 73          | 992               | 93,8           | 94,0 | 94,0 | 0,61         | 0,72 | 0,77 | 380         | 420                      |
| 250                         | 340  | 355M/L | 2401                  | 7,2                       | 2,9                       | 3,3                     | 12,0             | 22                              | 48   | 1693        | 73          | 995               | 93,0           | 94,0 | 94,0 | 0,48         | 0,61 | 0,69 | 380         | 586                      |
| VIII pole - 750 rpm - 50 Hz |      |        |                       |                           |                           |                         |                  |                                 |      |             |             |                   |                |      |      |              |      |      |             |                          |
| 0,37                        | 0,5  | 80     | 5,16                  | 3,0                       | 2,4                       | 1,8                     | 0,0034           | 24                              | 53   | 16,0        | 42          | 685               | 46,7           | 49,7 | 49,7 | 0,43         | 0,54 | 0,66 | 220         | 2,96                     |
| 0,55                        | 0,75 | 90L    | 7,51                  | 3,5                       | 2,1                       | 2                       | 0,0058           | 40                              | 88   | 22,0        | 44          | 700               | 55,5           | 56,1 | 56,1 | 0,44         | 0,56 | 0,66 | 220         | 3,9                      |
| 0,75                        | 1    | L90L   | 10,4                  | 3,6                       | 1,9                       | 1,7                     | 0,0077           | 28                              | 62   | 25,0        | 44          | 690               | 60,6           | 61,2 | 61,2 | 0,50         | 0,61 | 0,72 | 220         | 4,47                     |
| 1,1                         | 1,5  | 100L   | 14,9                  | 3,6                       | 1,5                       | 1,7                     | 0,0143           | 17                              | 37   | 31,0        | 50          | 705               | 63,5           | 66,5 | 66,5 | 0,46         | 0,59 | 0,67 | 220         | 6,48                     |
| 1,5                         | 2    | 100L   | 20,6                  | 3,9                       | 1,9                       | 1,8                     | 0,0143           | 27                              | 59   | 33,0        | 50          | 695               | 70,0           | 70,0 | 70,2 | 0,45         | 0,58 | 0,66 | 220         | 8,5                      |
| 2,2                         | 3    | 112M   | 30,5                  | 4,3                       | 2,5                       | 2,3                     | 0,0238           | 23                              | 51   | 43,0        | 46          | 690               | 74,0           | 74,2 | 74,2 | 0,49         | 0,63 | 0,71 | 220         | 11                       |
| 3                           | 4    | 132S   | 40,4                  | 6,1                       | 2,4                       | 2,7                     | 0,0789           | 23                              | 51   | 69,0        | 48          | 710               | 76,5           | 77,0 | 77,0 | 0,51         | 0,64 | 0,72 | 220         | 14,2                     |
| 4                           | 5,5  | L132M  | 53,1                  | 7,1                       | 3,6                       | 4                       | 0,1036           | 13                              | 29   | 92,0        | 48          | 720               | 75,5           | 79,2 | 79,2 | 0,39         | 0,52 | 0,62 | 220         | 21,4                     |
| 5,5                         | 7,5  | 160M   | 72,5                  | 4,3                       | 2                         | 2,1                     | 0,1141           | 17                              | 37   | 107         | 51          | 725               | 80,5           | 81,4 | 81,4 | 0,52         | 0,65 | 0,73 | 220         | 24,3                     |
| 7,5                         | 10   | 160S   | 98,8                  | 5,0                       | 2,2                       | 2,2                     | 0,1492           | 19                              | 42   | 122         | 51          | 725               | 82,5           | 83,1 | 83,1 | 0,51         | 0,62 | 0,70 | 220         | 33,8                     |
| 11                          | 15   | L160M  | 145                   | 5,3                       | 2,6                       | 2,6                     | 0,2195           | 13                              | 29   | 148         | 51          | 725               | 82,0           | 85,0 | 85,0 | 0,49         | 0,60 | 0,68 | 220         | 49,9                     |
| 15                          | 20   | 180M   | 198                   | 6,6                       | 2,5                       | 2,7                     | 0,3259           | 9                               | 20   | 184         | 52          | 725               | 85,5           | 86,2 | 86,2 | 0,60         | 0,71 | 0,78 | 220         | 58,5                     |
| 18,5                        | 25   | 200M   | 242                   | 4,3                       | 1,8                       | 2                       | 0,4396           | 22                              | 48   | 243         | 56          | 730               | 86,0           | 86,9 | 86,9 | 0,60         | 0,70 | 0,76 | 380         | 42,6                     |
| 22                          | 30   | 200L   | 288                   | 5,0                       | 2,1                       | 2,2                     | 0,4923           | 14                              | 31   | 257         | 56          | 730               | 86,0           | 86,9 | 87,4 | 0,52         | 0,63 | 0,70 | 380         | 54,6                     |
| 30                          | 40   | 225S/M | 390                   | 7,6                       | 2,6                       | 2,1                     | 0,7214           | 11                              | 24   | 346         | 56          | 735               | 87,5           | 88,3 | 88,3 | 0,55         | 0,67 | 0,74 | 380         | 69,8                     |
| 37                          | 50   | 250S/M | 488                   | 6,5                       | 1,8                       | 2,3                     | 1,29             | 14                              | 31   | 453         | 56          | 725               | 88,0           | 88,8 | 88,8 | 0,69         | 0,79 | 0,83 | 380         | 76,3                     |
| 45                          | 60   | 250S/M | 589                   | 7,8                       | 2,5                       | 3,1                     | 1,38             | 9                               | 20   | 467         | 56          | 730               | 88,5           | 89,2 | 89,2 | 0,59         | 0,71 | 0,80 | 380         | 95,8                     |
| 55                          | 75   | 280S/M | 713                   | 5,0                       | 1,5                       | 1,9                     | 2,71             | 25                              | 55   | 642         | 59          | 737               | 89,0           | 89,7 | 89,7 | 0,64         | 0,74 | 0,79 | 380         | 118                      |
| 75                          | 100  | 280S/M | 971                   | 5,3                       | 1,7                       | 1,9                     | 3,61             | 21                              | 46   | 736         | 59          | 738               | 89,0           | 90,3 | 90,3 | 0,64         | 0,74 | 0,79 | 380         | 160                      |
| 90                          | 125  | 315S/M | 1164                  | 5,4                       | 1,6                       | 1,9                     | 5,67             | 29                              | 64   | 989         | 62          | 739               | 90,0           | 90,7 | 90,7 | 0,69         | 0,77 | 0,80 | 380         | 188                      |
| 110                         | 150  | 315S/M | 1422                  | 5,5                       | 1,7                       | 1,9                     | 6,93             | 30                              | 66   | 1092        | 62          | 739               | 90,5           | 91,1 | 91,1 | 0,67         | 0,76 | 0,81 | 380         | 226                      |
| 132                         | 175  | 355M/L | 1698                  | 5,7                       | 1,5                       | 2,3                     | 8,27             | 24                              | 53   | 1242        | 70          | 743               | 91,5           | 91,5 | 91,5 | 0,59         | 0,70 | 0,76 | 380         | 288                      |
| 160                         | 220  | 355M/L | 2055                  | 6,3                       | 1,9                       | 2,6                     | 10,1             | 18                              | 40   | 1352        | 70          | 744               | 91,0           | 91,9 | 91,9 | 0,51         | 0,64 | 0,71 | 380         | 373                      |
| 200                         | 270  | 355M/L | 2572                  | 6,3                       | 1,7                       | 2,5                     | 13,8             | 20                              | 44   | 1564        | 70          | 743               | 92,5           | 92,5 | 92,5 | 0,62         | 0,73 | 0,78 | 380         | 421                      |
| 250                         | 340  | 355M/L | 3215                  | 6,5                       | 1,8                       | 2,5                     | 18,1             | 23                              | 51   | 1825        | 70          | 743               | 92,5           | 92,5 | 92,5 | 0,63         | 0,74 | 0,79 | 380         | 520                      |

Notes:

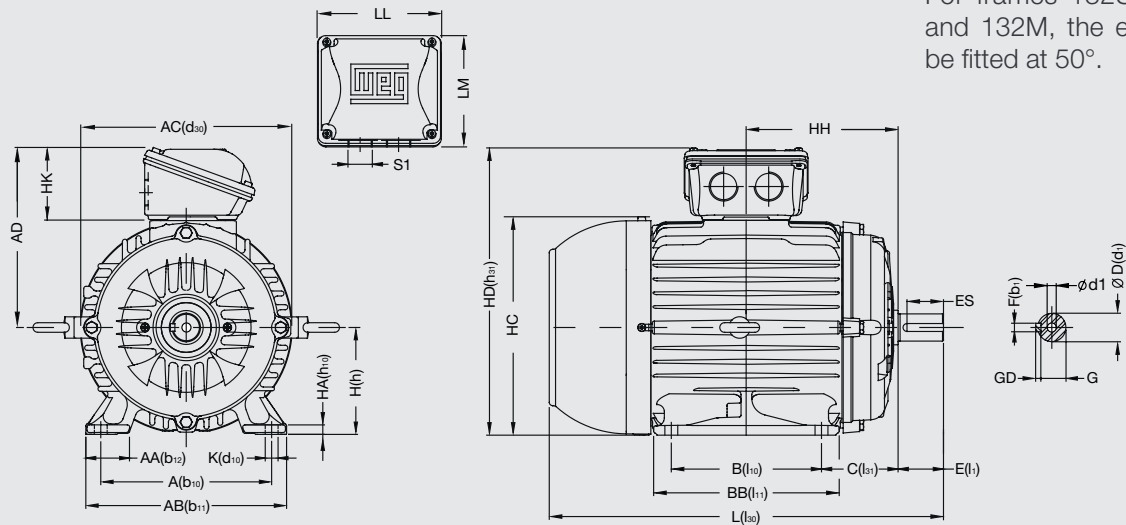
(1) Efficiency values are given according to GOST IEC 60034-30-1-2016.

## 11 MECHANICAL DATA

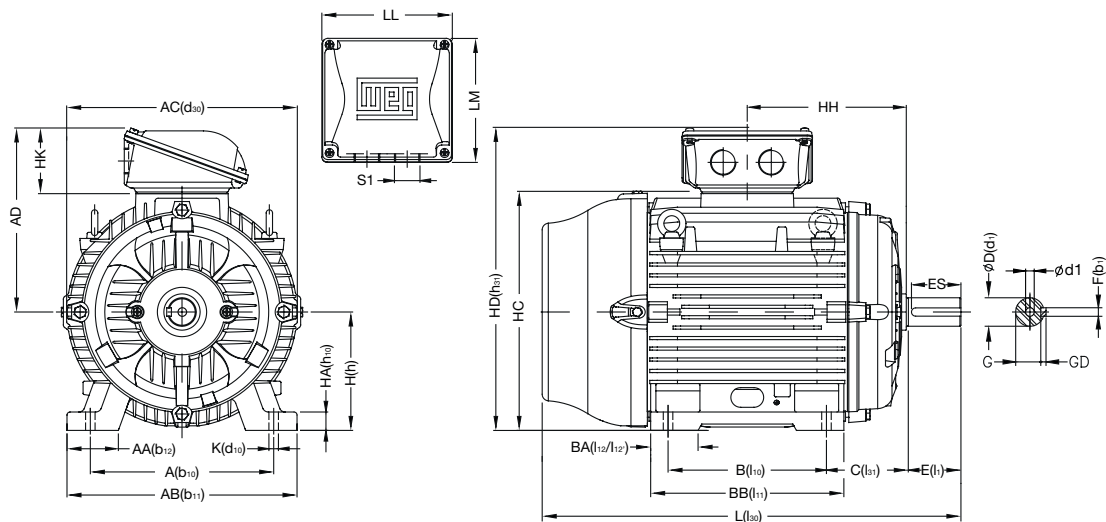
### 11.1 FOOT MOUNTED MOTORS, TERMINAL BOX TOP

#### 11.1.1 Frames 71 to L132M/L

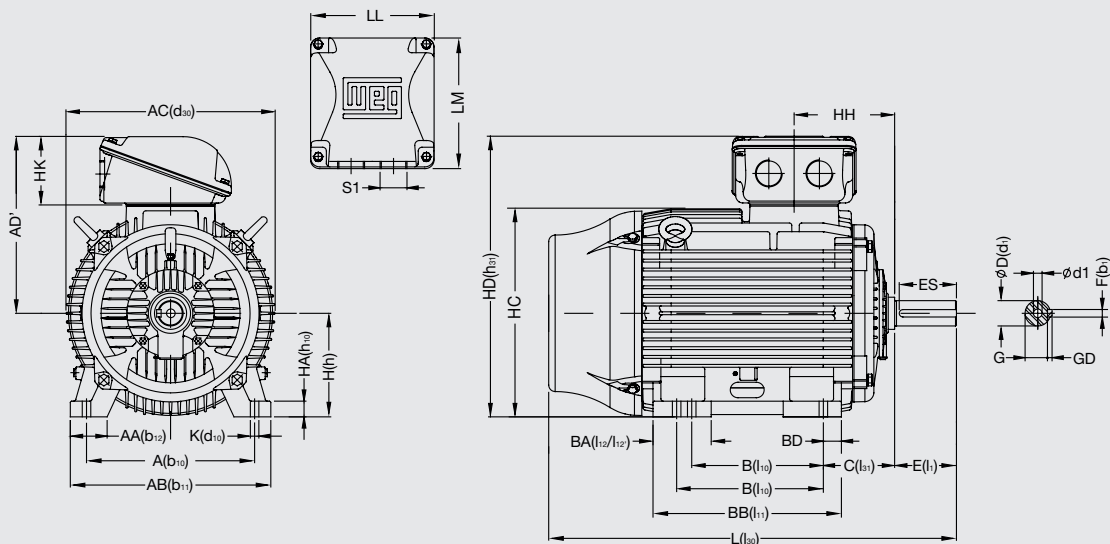
For frames 132S, 132M/L and 132M, the eyebolt will be fitted at 50°.



#### 11.1.2 Frames 160M to 200L



#### 11.1.3 Frames 225 to 355M/L



| Frame   | A (b10) | AA (b12) | AB (b11) | AC (d30) | AD    | AD' | B (f10) | BA (f12/ f12') | BB (f11) | BD  | C (f31) | DE Shaft end |        |     |        |      |              |      |      | H (h) | HA (h10) | HC    | HD (h31) | HH    | HK    | LL  | LM  | K (d10) | L (f30) | S1 | Bearing                 |            |           |           |           |
|---------|---------|----------|----------|----------|-------|-----|---------|----------------|----------|-----|---------|--------------|--------|-----|--------|------|--------------|------|------|-------|----------|-------|----------|-------|-------|-----|-----|---------|---------|----|-------------------------|------------|-----------|-----------|-----------|
|         |         |          |          |          |       |     |         |                |          |     |         | D (d1)       | E (f1) | ES  | F (b1) | G    | GD           | d1   | DE   |       |          |       |          |       |       |     |     |         |         |    | NDE                     |            |           |           |           |
| 71      | 112     | 28,5     | 132      | 141      | 129,5 |     | 90      |                | 113,5    |     | 45      | 19j6         | 40     | 28  | 6      | 15,5 | 6            | DM6  | 71   | 7     | 144,5    | 200,5 | 90       |       |       |     |     |         |         | 7  | 260<br>303              | 2xM20x1,5  | 6204 Z-C3 | 6202 Z-C3 |           |
| L71     |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 80      |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| L80     |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 90L     | 125     | 30,5     | 149      | 159      | 138,5 |     | 100     |                | 125,5    |     | 50      | 22j6         | 50     | 36  | 6      | 18,5 |              | DM8  | 80   | 8     | 163      | 218,5 | 100      |       |       |     |     |         |         | 10 | 287<br>312              |            | 6205 Z-C3 | 6203 Z-C3 |           |
| L80     |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 90L     |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| L90L    |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 100S    | 140     | 37       | 164      | 179      | 148,5 |     | 125     |                | 156      |     | 56      | 24j6         |        |     | 20     |      |              |      | 90   |       | 182      | 238,5 | 118      |       | 59    | 108 | 98  |         |         |    | 359                     |            | 6205 Z-C3 | 6204 Z-C3 |           |
| L90L    |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 100S    |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| L100S   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 100L    | 160     | 40       | 188      | 206      | 159   |     | 112     |                | 173      |     | 63      | 28j6         | 60     | 45  | 8      | 24   |              | DM10 | 100  | 10    | 203      | 259   | 133      |       |       |     |     |         |         |    | 376<br>414              | 2xM25x1,5  | 6206 Z-C3 | 6205 Z-C3 |           |
| L100L   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 100L    |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| L100L   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 112M    | 190     | 40,5     | 220      | 226      | 191   |     | 140     |                | 177      |     | 70      | 32j6         |        |     |        | 27   |              |      | 112  |       |          | 225,5 | 303      | 140   |       |     |     |         |         |    |                         | 410<br>445 |           | 6307 Z-C3 | 6206 Z-C3 |
| L112M   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 132S    |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| L132S   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 132M    | 216     | 45,5     | 248      | 272      | 219   |     | 178     |                | 225      |     | 89      | 38k6         | 80     | 63  | 10     |      | 33           | 8    | DM12 | 132   | 16       | 272   | 351      |       | 79    | 140 | 133 |         |         |    | 450,5<br>475,5<br>488,5 | 2xM32x1,5  | 6308 Z-C3 | 6207 Z-C3 |           |
| L132M   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 132M/L  |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| L132M/L |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 160S*   | 254     | 44       | 292      | 329      | 265,5 |     | 178/203 |                | 250      |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 160S    |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 160M*   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 160M    |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| L160M   | 279     | 57       | 329      | 360      | 279,5 |     | 203     |                | 294      |     |         |              | 110    | 80  |        | 14   | 42,5         | 9    |      |       |          |       |          | 100,5 | 198,5 | 190 |     |         |         |    |                         |            |           |           |           |
| 180S*   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 180S    |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 180M*   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 180M    | 318     | 82       | 385      | 402      | 317,5 |     | 241     |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 200M*   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 200M    |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 200L*   |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 200L    | 356     | 80       | 436      | 455      |       |     | 267     |                | 332      |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 225S/M* |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 225S/M  |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 250S/M* |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 250S/M  | 406     | 100      | 506      | 486      |       |     | 403     | 311/349        | 146      | 467 | 59      | 168          |        | 140 | 125    |      | 18           | 58   | 11   |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 280S/M* |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 280S/M  |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 315S/M* |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 315S/M  | 508     | 120      | 630      | 657      |       |     | 532     | 406/457        | 184      | 626 | 70      | 216          |        | 140 | 125    | 20   | 67,5<br>62,5 | 12   |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 355M/L* |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 355M/L  |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |
| 355M/L  |         |          |          |          |       |     |         |                |          |     |         |              |        |     |        |      |              |      |      |       |          |       |          |       |       |     |     |         |         |    |                         |            |           |           |           |

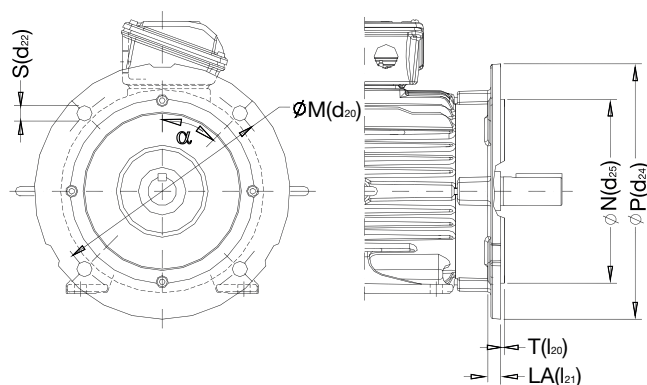
Notes:

(\*) Dimension applicable to 2 pole motors.

(\*\*) All dimensions are in mm.

## 11.2 FLANGE MOUNTED MOTORS

### 11.2.1 “FF” Flange

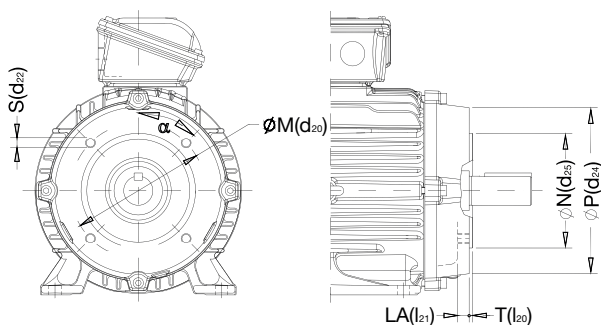


| Frame | Flange | LA (l <sub>21</sub> ) | M (d <sub>20</sub> ) | N (d <sub>25</sub> ) | P (d <sub>24</sub> ) | S (d <sub>22</sub> ) | T (l <sub>20</sub> ) | α (α°) | N° of holes (n) |       |   |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
|-------|--------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------|-----------------|-------|---|-------|---|-------|---|----|---|-------|---|-------|---|-------|---|-------|---|-------|---|
| 71    | FF-165 | 9                     | 165                  | 130                  | 200                  | 11                   | 3,5                  | 45°    | 4               |       |   |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
| 80    |        |                       |                      |                      |                      |                      |                      |        |                 |       |   |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
| 90    | FF-215 | 10                    | 215                  | 180                  | 250                  | 14                   | 4                    |        |                 | 22,5° | 8 |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
| 100   |        | 12,5                  |                      |                      |                      |                      |                      |        |                 |       |   |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
| 112   | FF-265 | 11                    | 265                  | 230                  | 300                  | 19                   | 5                    | 22,5°  | 8               |       |   |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
| 132   | FF-300 | 15                    | 300                  | 250                  | 350                  |                      |                      |        |                 |       |   | 19    | 5 | 22,5° | 8 |    |   |       |   |       |   |       |   |       |   |       |   |
| 160   |        | 18                    |                      |                      |                      |                      |                      |        |                 |       |   |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
| 180   | FF-350 | 17,5                  | 350                  | 300                  | 400                  |                      |                      |        |                 |       |   |       |   |       |   | 19 | 5 | 22,5° | 8 |       |   |       |   |       |   |       |   |
| 200   | FF-400 | 17                    | 400                  | 350                  | 450                  | 19                   | 5                    |        |                 |       |   |       |   |       |   |    |   |       |   | 22,5° | 8 |       |   |       |   |       |   |
| 225   | FF-500 | 18                    | 500                  | 450                  | 550                  |                      |                      |        |                 |       |   | 24    | 6 |       |   |    |   |       |   |       |   | 22,5° | 8 |       |   |       |   |
| 250   |        | 20                    |                      |                      |                      |                      |                      |        |                 |       |   |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
| 280   | FF-600 | 16                    | 600                  | 550                  | 660                  |                      |                      |        |                 |       |   |       |   |       |   | 24 | 6 |       |   |       |   |       |   | 22,5° | 8 |       |   |
| 315   |        | 22                    |                      |                      |                      |                      |                      |        |                 |       |   |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
| 355   | FF-740 |                       | 740                  | 680                  | 800                  | 24                   | 6                    |        |                 |       |   | 22,5° | 8 |       |   |    |   |       |   |       |   |       |   |       |   |       |   |
|       |        |                       |                      |                      |                      |                      |                      |        |                 | 24    | 6 |       |   |       |   |    |   |       |   |       |   |       |   |       |   | 22,5° | 8 |
|       |        |                       |                      |                      |                      |                      |                      |        |                 |       |   |       |   |       |   | 24 | 6 |       |   |       |   |       |   |       |   |       |   |
|       |        |                       |                      |                      |                      |                      |                      | 24     | 6               |       |   |       |   |       |   |    |   |       |   |       |   |       |   |       |   |       |   |

\*Only for motors fitted with air deflector in drive end side.

\*\* Dimensions are in mm.

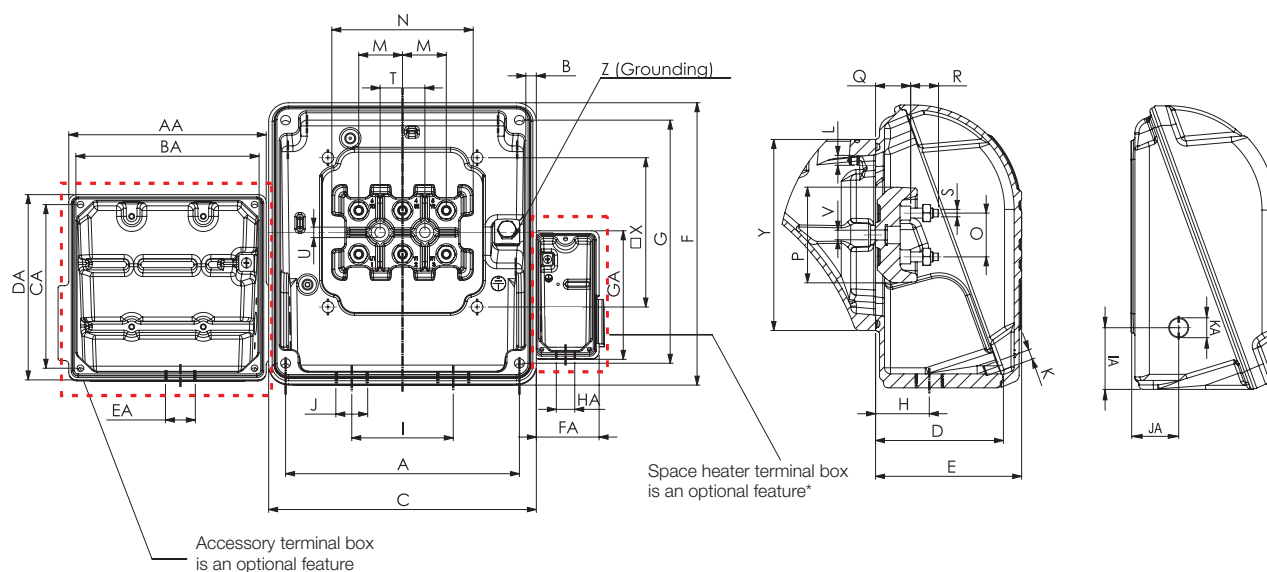
### 11.2.2 “FT” Flange (C-DIN)



| Frame | Flange |        | LA (l <sub>21</sub> ) | M (d <sub>20</sub> ) | N (d <sub>25</sub> ) | P (d <sub>24</sub> ) | S (d <sub>22</sub> ) | T (l <sub>20</sub> ) | α (α°) | N° of holes (n) |
|-------|--------|--------|-----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|--------|-----------------|
|       | C-DIN  | GOST   |                       |                      |                      |                      |                      |                      |        |                 |
| 71    | C-105  | FT-85  | 8                     | 85                   | 70                   | 105                  | M6                   | 2,5                  | 45°    | 4               |
|       | C-140  | FT-115 | 12                    | 115                  | 95                   | 140                  | M8                   | 3                    |        |                 |
| 80    | C-120  | FT-100 | 10,5                  | 100                  | 80                   | 120                  | M6                   | 3,5                  |        |                 |
|       | C-160  | FT-130 | 15                    | 130                  | 110                  | 160                  | M8                   | 3                    |        |                 |
| 90    | C-140  | FT-115 | 10,5                  | 115                  | 95                   | 140                  |                      | 3                    |        |                 |
|       | C-160  | FT-130 | 12                    | 130                  | 110                  | 160                  |                      | 3,5                  |        |                 |
| 100   | C-200  | FT-165 | 15                    | 165                  | 130                  | 200                  | M10                  | 3,5                  |        |                 |
|       | C-160  | FT-130 | 13,5                  | 130                  | 110                  | 160                  | M8                   | 3,5                  |        |                 |
| 112   | C-200  | FT-165 | 13                    | 165                  | 130                  | 200                  | M10                  | 3,5                  |        |                 |
|       | C-160  | FT-130 | 19                    | 130                  | 110                  | 160                  | M8                   | 3,5                  |        |                 |
| 132   | C-180  | FT-150 | 150                   | 120                  | 180                  | M12                  | 5                    | 3,5                  |        |                 |

\* Dimensions are in mm.

## 12 TERMINAL BOX DRAWINGS



| Frame  | A   | B    | C     | D    | E        | F        | G   | H    | I   | J         | K       | L       | M         | N   | O   | P  | Q    | R        | S       | T  | U    |
|--------|-----|------|-------|------|----------|----------|-----|------|-----|-----------|---------|---------|-----------|-----|-----|----|------|----------|---------|----|------|
| 71     | 90  | 3,5  | 108   | 51,5 | 59       | 98       | 85  | 27   | 42  | 2xM20x1,5 | M5x0,8  | M5x0,8  | 16        | 75  | 16  | 35 | 13,5 | 12       | M4x0,7  | 20 | 5,8  |
| 80     |     |      |       |      |          |          |     |      |     | 2xM25x1,5 |         |         |           |     |     |    |      |          |         |    |      |
| 90     |     |      |       |      |          |          |     |      |     |           |         |         |           |     |     |    |      |          |         |    |      |
| 100    |     |      |       |      |          |          |     |      |     |           |         |         |           |     |     |    |      |          |         |    |      |
| 112    | 117 | 2,5  | 140   | 71   | 80       | 133      | 117 | 36,5 | 54  | 2xM32x1,5 | M6x1,0  | M6x1,0  | 23        |     | 23  | 52 | 17   | 16       | M5x0,8  | 23 | 6,5  |
| 132    | 175 | 4    | 198,5 | 90   | 101      | 190      | 175 | 46   | 84  | 2xM40x1,5 | M8x1,25 | M8x1,25 | 28        | 90  | 28  | 60 | 21,5 | 20,5     | M6x1    | 28 | 6,6  |
| 160    |     |      |       |      |          |          |     |      |     |           |         |         | 35        | 112 | 35  | 74 | 24   | 24       | M8x1,25 | 35 | 9,5  |
| 180    |     |      |       |      |          |          |     |      |     |           |         |         |           |     |     |    |      |          |         |    |      |
| 200    |     |      |       |      |          |          |     |      |     |           |         |         |           |     |     |    |      |          |         |    |      |
| 225S/M | 235 | 12,5 | 269   | 133  | 153      | 285      | 260 | 71   | 110 | 2xM50x1,5 | M10x1,5 | M10x1,5 | 44        | 140 | 44  | 94 | 28   | 28       | M10x1,5 | 45 | 10,5 |
| 250S/M | 275 | 13,5 | 314   |      | 152      | 312      | 275 |      | 126 |           |         |         | 2xM63x1,5 |     |     |    |      |          |         |    |      |
| 280S/M |     |      |       |      | M12x1,75 | M12x1,75 | 45  |      | 153 |           |         |         |           | 45  | 108 | 34 | 40   | M12x1,75 |         |    |      |
| 315S/M |     |      |       |      |          |          |     |      |     |           |         |         |           |     |     |    |      |          | 340     |    |      |
| 355M/L | 365 | 14,5 | 404   | 202  | 220      | 436      | 390 | 97   | 200 | 2xM80x2   | M14x2,0 | 65      | 210       | 65  | 146 | 48 | 48   | M16x2,0  | 65      |    |      |

| Frame  | V       | X   | Y   | Z          | AA  | BA  | CA  | DA  | EA      | FA | GA    | HA      | IA | JA   | KA      | Max number of connectors |             |              |    |    |           |
|--------|---------|-----|-----|------------|-----|-----|-----|-----|---------|----|-------|---------|----|------|---------|--------------------------|-------------|--------------|----|----|-----------|
|        |         |     |     |            |     |     |     |     |         |    |       |         |    |      |         | Main                     | Accessories | Space heater |    |    |           |
| 71     | M5x0,8  | 56  | 78  | 0,5-6 mm²  | 109 | 90  | 85  | 98  | M20x1,5 | 68 | 101,4 | M20x1,5 | 23 | 17,5 | M20x1,5 | 4                        | 16          | 4            |    |    |           |
| 80     |         |     | 81  |            |     |     |     |     |         |    |       |         | 25 | 22,5 |         |                          |             |              |    |    |           |
| 90     |         |     | 77  |            |     |     |     |     |         |    |       |         |    |      |         |                          |             |              |    |    |           |
| 100    |         |     | 81  |            |     |     |     |     |         |    |       |         |    |      |         |                          |             |              |    |    |           |
| 112    |         | 70  | 107 | 2-10 mm²   |     |     |     |     |         |    |       |         |    |      |         | 35                       |             |              | 20 |    |           |
| 132    |         |     | 103 |            |     |     |     |     |         |    |       |         |    |      |         |                          |             |              |    |    |           |
| 160    | M6x1,0  | 110 | 140 | 5,2-25 mm² | 139 | 117 | 117 | 133 |         |    | 131,2 | M20x1,5 | 47 | 40   |         | 12                       | 26          |              |    |    |           |
| 180    | M8x1,25 | 120 | 155 | 5,2-35 mm² |     |     |     |     |         |    |       |         | 47 | 45   |         |                          |             |              |    |    |           |
| 225S/M | M10x1,5 | 150 | 192 | 25-50 mm²  |     |     |     |     |         |    |       |         |    |      |         |                          |             |              | 62 | 48 |           |
| 250S/M |         |     | 197 |            |     |     |     |     |         |    |       |         |    |      |         |                          |             |              |    |    |           |
| 280S/M |         |     | 204 |            |     |     |     |     |         |    |       |         |    |      |         |                          |             |              |    |    | 35-70 mm² |
| 315S/M |         |     | 260 |            |     |     |     |     |         |    |       |         |    |      |         |                          |             |              |    |    |           |
| 355M/L |         | 260 | 300 | 85-120 mm² |     |     |     |     | 97      | 79 |       |         |    |      |         |                          |             |              |    |    |           |

Notes:

(\*) Dimension is applicable to top, right or left terminal box mounting

(\*\*) Space heater terminal box is a special feature for frame sizes 71 to 112.

(\*\*\*) Dimensions are in mm.

## 13 PACKAGING

### 13.1 FRAMES 71 TO 132

WGOST motors in frames 71 to 132 are packaged in cardboard boxes, following the dimensions, weights and volumes of the Tabela 13.1 and Tabela 13.2.



Table 13.1: Cardboard box dimensions, weights and volumes for top mounting.

| Frame           | External height (m) | External width (m) | External length (m) | Weight (kg) | Volume (m³) |
|-----------------|---------------------|--------------------|---------------------|-------------|-------------|
| 71 / L71        | 0,265               | 0,255              | 0,36                | 1,347       | 0,025       |
| 80 / L80        |                     |                    |                     |             |             |
| 90L / L90L      |                     |                    |                     |             |             |
| 100S / L100S    | 0,325               | 0,27               | 0,455               | 1,804       | 0,04        |
| 100L            | 0,335               | 0,275              | 0,552               | 2,254       | 0,052       |
| L100L           | 0,325               | 0,27               | 0,455               | 1,804       | 0,04        |
| 112M / L112M    | 0,415               | 0,335              | 0,595               | 3,43        | 0,08        |
| 132S / L132S    | 0,42                | 0,33               | 0,60                | 1,7         | 0,08        |
| 132M / L132M    |                     |                    |                     |             |             |
| 132M/L / 132M/L |                     |                    |                     |             |             |

Table 13.2: Cardboard box dimensions, weights and volumes for side mounting.

| Frame            | External height (m) | External width (m) | External length (m) | Weight (kg) | Volume (m³) |
|------------------|---------------------|--------------------|---------------------|-------------|-------------|
| 71 / L71         | 0,215               | 0,285              | 0,355               | 0,71        | 0,021       |
| 80               |                     |                    |                     |             |             |
| L80              |                     |                    |                     |             |             |
| 90L              | 0,23                | 0,315              | 0,398               | 0,8         | 0,029       |
| L90L             | 0,255               | 0,34               | 0,442               | 0,985       | 0,039       |
| 100S             | 0,26                | 0,35               | 0,455               | 1,685       | 0,042       |
| L100S            | 0,255               | 0,34               | 0,540               | 2,021       | 0,047       |
| 100L             | 0,26                | 0,35               | 0,455               | 1,685       | 0,042       |
| L100L            | 0,255               | 0,34               | 0,54                | 2,021       | 0,047       |
| 112M / L112M     | 0,315               | 0,375              | 0,52                | 2,379       | 0,06        |
| 132S / L132S     | 0,35                | 0,48               | 0,60                | 2,1         | 0,10        |
| 132M / L132M     |                     |                    |                     |             |             |
| 132M/L / L132M/L |                     |                    |                     |             |             |

### 13.2 FRAMES 160 TO 355M/L

For frames 160 to 355M/L, the motors are packaged in wooden crates. Dimensions, weights and volumes are in Tabela 13.3 and Tabela 13.4.



Table 13.3: Wooden crates dimensions, weights and volumes for top mounting.

| Frame  | External height (m) | External width (m) | External length (m) | Weight (kg) | Volume (m³) |
|--------|---------------------|--------------------|---------------------|-------------|-------------|
| 160    | 0,50                | 0,41               | 0,74                | 9,32        | 0,15        |
| 180    | 0,54                | 0,44               | 0,82                | 13,17       | 0,19        |
| 200    | 0,61                | 0,51               | 0,88                | 16,74       | 0,27        |
| 225S/M | 0,90                | 0,85               | 1,15                | 49,3        | 0,88        |
| 250S/M |                     |                    | 1,25                | 51,6        | 0,96        |
| 280S/M |                     |                    | 1,40                | 77,5        | 1,34        |
| 315S/M | 1,13                |                    | 1,55                | 81,2        | 1,49        |
| 355M/L | 1,32                | 1,05               | 1,73                | 127         | 2,40        |

Table 13.4: Wooden crates dimensions, weights and volumes for side mounting.

| Frame  | External height (m) | External width (m) | External length (m) | Weight (kg) | Volume (m³) |
|--------|---------------------|--------------------|---------------------|-------------|-------------|
| 160    | 0,40                | 0,50               | 0,74                | 10,03       | 0,15        |
| 180    | 0,45                | 0,57               | 0,82                | 14,51       | 0,21        |
| 200    | 0,49                | 0,63               | 0,88                | 15,75       | 0,27        |
| 225S/M | 0,78                | 0,85               | 1,15                | 49,7        | 0,88        |
| 250S/M | 0,90                | 0,85               | 1,25                | 56,6        | 0,96        |
| 280S/M | 1,0                 | 0,95               | 1,40                | 72,1        | 1,33        |
| 315S/M | 1,13                | 1,10               | 1,50                | 84,3        | 1,86        |
| 355M/L | 1,20                | 1,19               | 1,72                | 146         | 2,46        |

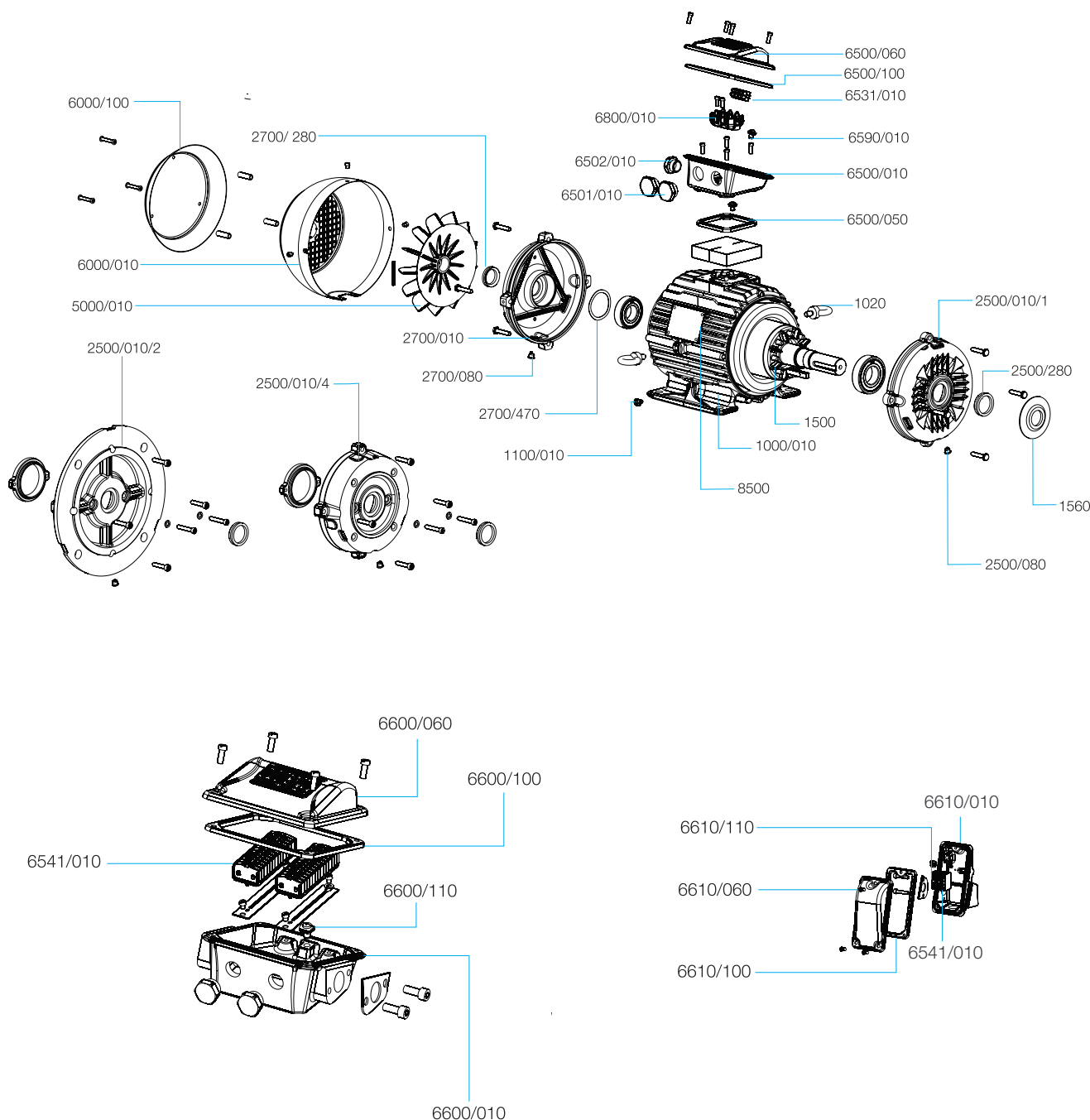
## 14 SPARE PARTS

### 14.1 GENERAL INFORMATION

The following information is required when purchasing of spare parts:

- Serial number and manufacturing date, both stamped in the nameplate
- Spare part description
- Codes shown are for reference only. Final codes of spare parts will depend on colour

#### 14.1.1 Spare Parts Available 71-112

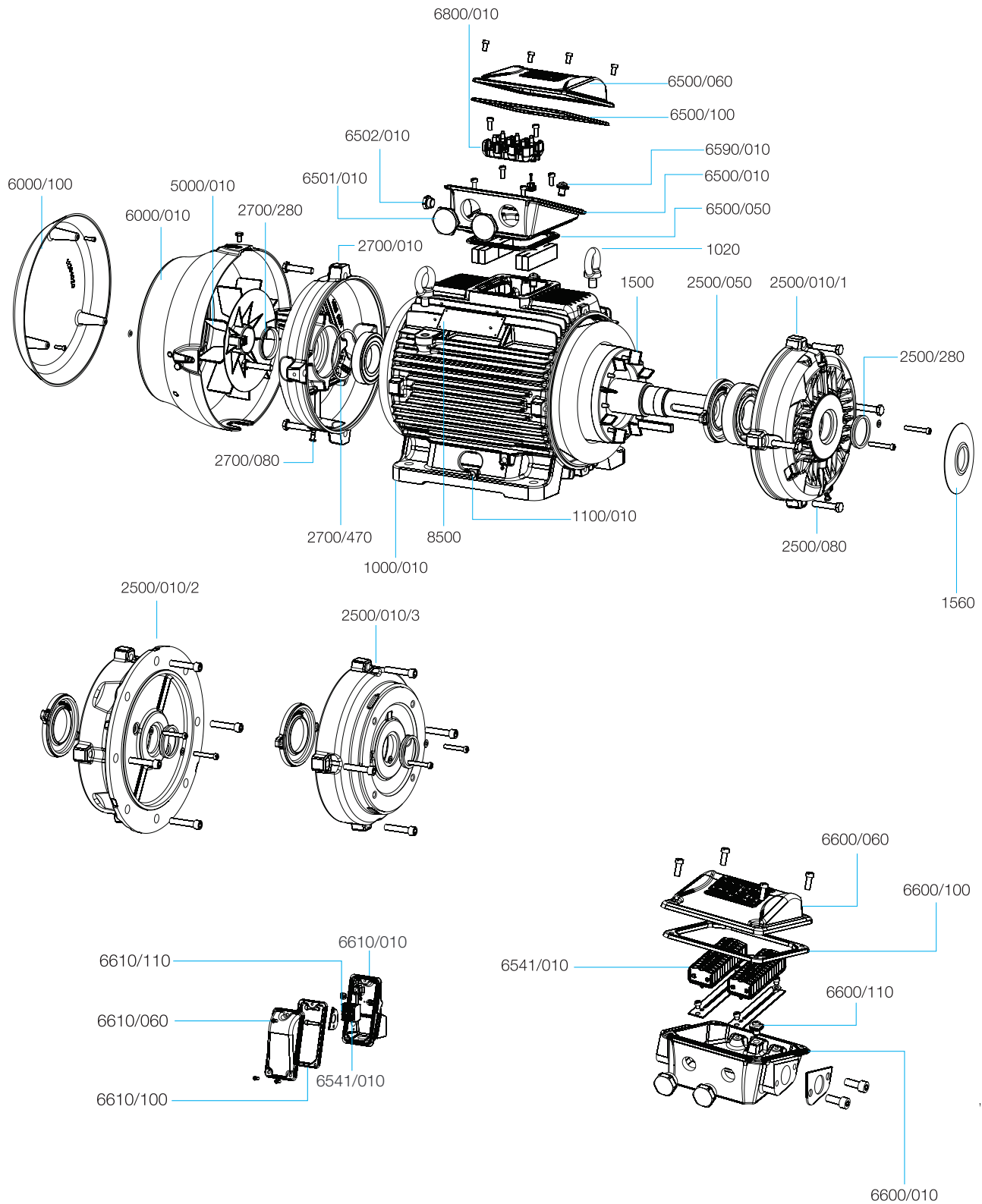


| Motor component |                                                        | Spare part |                                                                                                                                              |
|-----------------|--------------------------------------------------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Item            | Description                                            | Item       | Composition                                                                                                                                  |
| 1000/010        | Frame with wound stator                                | 1000       | Frame with wound stator                                                                                                                      |
| 1020            | Lifting eyebolt                                        | 1020       | Lifting eyebolt                                                                                                                              |
| 1100/010        | Grounding terminal                                     | 1100       | Grounding terminal                                                                                                                           |
| 1500            | Rotor, complete with shaft and key                     | 1500       | Rotor, complete with shaft and key                                                                                                           |
| 1560            | Slinger                                                | 1560       | Slinger (recommended for vertical shaft up applications, non-flange mounted)                                                                 |
| 2500/010/1      | Endshield, drive end                                   | 2500/1     | Endshield, drain plug, shaft seal, bolts and washers                                                                                         |
| 2500/080        | Drain plug, drive end                                  |            |                                                                                                                                              |
| 2500/280        | Shaft seal, drive end (1)                              |            |                                                                                                                                              |
| 2500/010/2      | FF Flange                                              | 2500/2     | FF Flange, drain plug, shaft seal, bolts and washers                                                                                         |
| 2500/080        | Drain plug, drive end                                  |            |                                                                                                                                              |
| 2500/280        | Shaft seal, drive end (1)                              |            |                                                                                                                                              |
| 2500/010/4      | FT (C-DIN) Flange                                      | 2500/4     | FT (C-DIN) Flange, drain plug, shaft seal, bolts and washers                                                                                 |
| 2500/080        | Drain plug, drive end                                  |            |                                                                                                                                              |
| 2500/280        | Shaft seal, drive end (1)                              |            |                                                                                                                                              |
| 2700/010        | Endshield, non-drive end                               | 2700       | Endshield, drain plug, shaft seal, bolts and washers                                                                                         |
| 2700/080        | Drain plug, non-drive end                              |            |                                                                                                                                              |
| 2700/280        | Shaft seal, non-drive end (1)                          |            |                                                                                                                                              |
| 2700/470        | Wave washer for axial displacement                     |            |                                                                                                                                              |
| 5000/010        | Cooling Fan                                            | 5000       | Fan                                                                                                                                          |
| 6000/010        | Fan cover                                              | 6000       | Fan cover, bolts                                                                                                                             |
|                 |                                                        | 6050       | Fan cover, drip cover and bolts                                                                                                              |
| 6000/100        | Drip cover                                             | 6100       | Drip cover, bolts                                                                                                                            |
| 6500/010        | Terminal box                                           | 6500       | Terminal box complete with lid, gaskets (for lid and terminal box), plugs (for mains and accessories), grounding terminal, bolts and washers |
| 6500/050        | Terminal box gasket                                    |            |                                                                                                                                              |
| 6500/060        | Terminal box lid                                       |            |                                                                                                                                              |
| 6500/100        | Terminal box lid gasket                                |            |                                                                                                                                              |
| 6501/010        | Terminal box plug for main leads                       |            |                                                                                                                                              |
| 6502/010        | Terminal box plug for accessory leads                  |            |                                                                                                                                              |
| 6590/010        | Terminal box grounding terminal                        |            |                                                                                                                                              |
| 6531/010        | Accessory connector                                    | 6531       | Accessory connector, mounting rail, bolts and washers                                                                                        |
| 6541/010        | Accessory connector                                    | 6541       | Accessory connector, mounting rail, bolts and washers                                                                                        |
| 6600/010        | Accessories terminal box                               | 6600       | Accessory terminal box, complete with lid, gasket, plugs, grounding terminal, bolts and washers                                              |
| 6600/060        | Accessories terminal box lid                           |            |                                                                                                                                              |
| 6600/100        | Accessories terminal box lid gasket                    |            |                                                                                                                                              |
| 6600/110        | Accessories terminal box grounding terminal            | 6610       | Space heater accessory terminal box, complete with lid, gasket, plugs, grounding terminal, bolts and washers                                 |
| 6610/010        | Space heater accessory terminal box                    |            |                                                                                                                                              |
| 6610/060        | Space heater accessory terminal box lid                |            |                                                                                                                                              |
| 6610/100        | Space heater accessory terminal box lid gasket         |            |                                                                                                                                              |
| 6610/110        | Space heater accessory terminal box grounding terminal |            |                                                                                                                                              |
| 6800/010        | Terminal block                                         | 6800       | Terminal block, bolts and washers                                                                                                            |
| 8500            | Main nameplate                                         | 8500       | Main nameplate                                                                                                                               |

Notes:

(1) As a spare part, the shaft sealing in the 71-112 range will be supplied as an integral part of the endshield kit.

## 14.1.2 Spare Parts Available 132-200

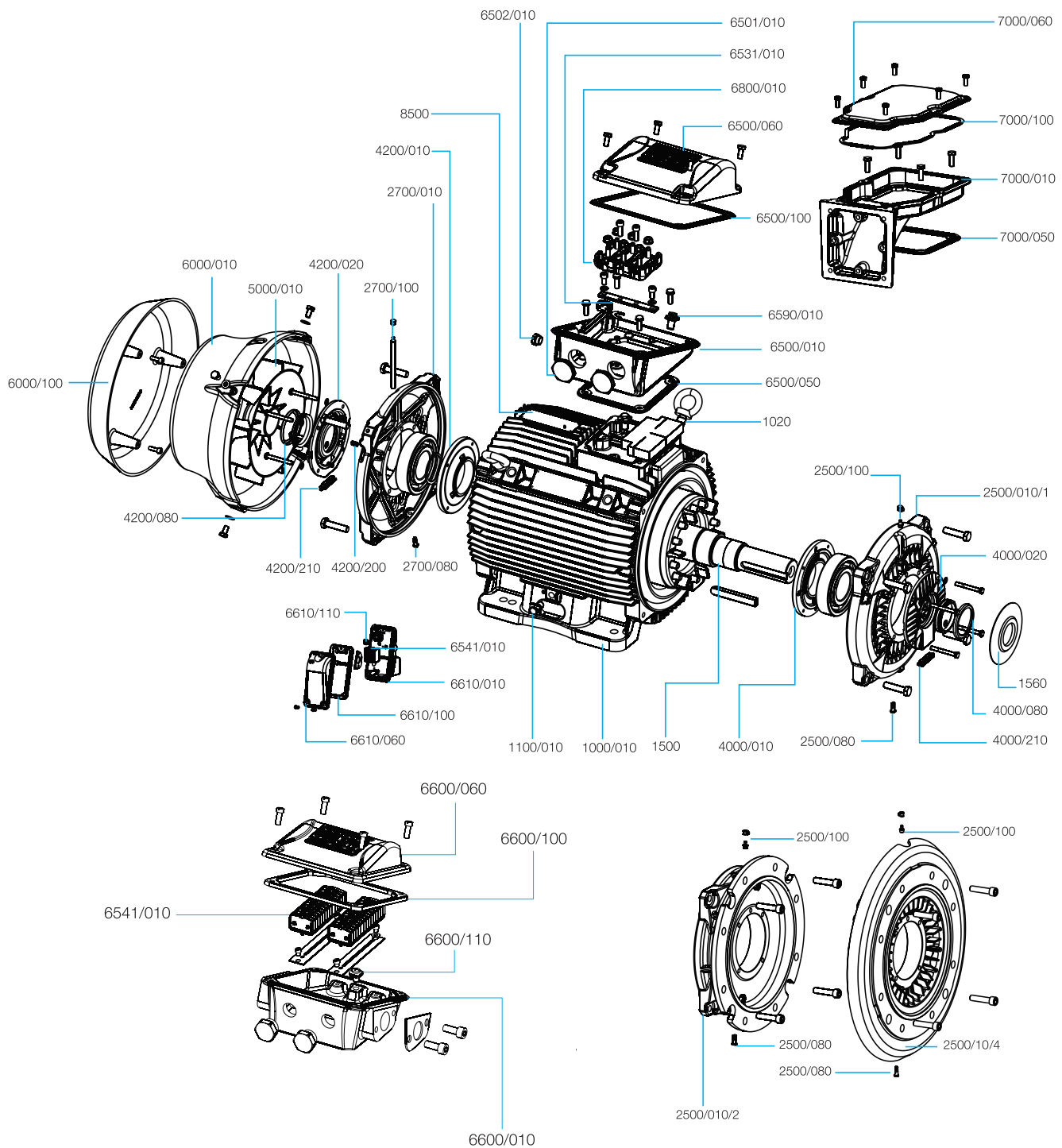


| Motor component |                                                        | Spare part |                                                                                                                                               |
|-----------------|--------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Item            | Description                                            | Item       | Composition                                                                                                                                   |
| 1000/010        | Frame with wound stator                                | 1000       | Frame with wound stator                                                                                                                       |
| 1020            | Lifting eyebolt                                        | 1020       | Lifting eyebolt                                                                                                                               |
| 1100/010        | Grounding terminal                                     | 1100       | Grounding terminal                                                                                                                            |
| 1500            | Rotor, complete with shaft and key                     | 1500       | Rotor, complete with shaft and key                                                                                                            |
| 1560            | Slinger                                                | 1560       | Slinger (recommended for vertical shaft up applications, non-flange mounted)                                                                  |
| 2500/010/1      | Endshield, drive end                                   | 2500/1     | Endshield, bearing cap, drain plug, shaft seal, bolts and washers                                                                             |
| 2500/050        | Bearing cap, internal, drive end                       |            |                                                                                                                                               |
| 2500/080        | Drain plug, drive end                                  |            |                                                                                                                                               |
| 2500/280        | Shaft seal, drive end (1)                              |            |                                                                                                                                               |
| 2500/010/2      | FF Flange                                              | 2500/2     | FF Flange, drain plug, shaft seal, bolts and washers                                                                                          |
| 2500/080        | Drain plug, drive end                                  |            |                                                                                                                                               |
| 2500/280        | Shaft seal, drive end (1)                              |            |                                                                                                                                               |
| 2500/010/3      | FT (C-DIN) Flange                                      |            |                                                                                                                                               |
| 2500/080        | Drain plug, drive end                                  | 2500/3     | FT (C-DIN) Flange, drain plug, shaft seal, bolts and washers                                                                                  |
| 2500/280        | Shaft seal, drive end (1)                              |            |                                                                                                                                               |
| 2700/010        | Endshield, non-drive end                               |            |                                                                                                                                               |
| 2700/080        | Drain plug, non-drive end                              |            |                                                                                                                                               |
| 2700/100        | Grease nipple (with extensor pipe), non-drive end      | 2700       | Endshield, drain plug, shaft seal, bolts and washers                                                                                          |
| 2700/280        | Shaft seal, non-drive end (1)                          |            |                                                                                                                                               |
| 2700/470        | Wave washer for axial displacement                     |            |                                                                                                                                               |
| 5000/010        | Fan                                                    | 5000       | Fan                                                                                                                                           |
| 6000/010        | Fan cover                                              | 6000       | Fan cover, bolts                                                                                                                              |
|                 |                                                        | 6050       | Fan cover, drip cover and bolts                                                                                                               |
| 6000/100        | Drip cover                                             | 6100       | Drip cover and bolts                                                                                                                          |
| 6500/010        | Terminal box                                           | 6500       | Terminal box, complete with lid, gaskets (for lid and terminal box), plugs (for mains and accessories), grounding terminal, bolts and washers |
| 6500/050        | Terminal box gasket                                    |            |                                                                                                                                               |
| 6500/060        | Terminal box lid                                       |            |                                                                                                                                               |
| 6500/100        | Terminal box lid gasket                                |            |                                                                                                                                               |
| 6501/010        | Terminal box plug for main leads                       |            |                                                                                                                                               |
| 6502/010        | Terminal box plug for accessory leads                  |            |                                                                                                                                               |
| 6590/010        | Terminal box grounding terminal                        |            |                                                                                                                                               |
| 6531/010        | Accessory connector                                    | 6531       | Accessory connector, mounting rail, bolts and washers                                                                                         |
| 6541/010        | Accessory connector                                    | 6541       | Accessory connector, mounting rail, bolts and washers                                                                                         |
| 6600/010        | Accessories terminal box                               | 6600       | Accessory terminal box, complete with lid, gasket, plugs, grounding terminal, bolts and washers                                               |
| 6600/060        | Accessories terminal box lid                           |            |                                                                                                                                               |
| 6600/100        | Accessories terminal box lid gasket                    |            |                                                                                                                                               |
| 6600/110        | Accessories terminal box grounding terminal            |            |                                                                                                                                               |
| 6610/010        | Space heater accessory terminal box                    | 6610       | Space heater accessory terminal box, complete with lid, gasket, plugs, grounding terminal, bolts and washers                                  |
| 6610/060        | Space heater accessory terminal box lid                |            |                                                                                                                                               |
| 6610/100        | Space heater accessory terminal box lid gasket         |            |                                                                                                                                               |
| 6610/110        | Space heater accessory terminal box grounding terminal |            |                                                                                                                                               |
| 6800/010        | Terminal block                                         | 6800       | Terminal block, bolts and washers                                                                                                             |
| 8500            | Main nameplate                                         | 8500       | Main nameplate                                                                                                                                |

Notes:

(1) As a spare part. the shaft seal in the 132-200 range will be supplied as an integral part of the endshield kit.

### 14.1.3 Spare Parts Available 225-355



| Motor component |                                                        | Spare part |                                                                                                                                               |
|-----------------|--------------------------------------------------------|------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Item            | Description                                            | Item       | Composition                                                                                                                                   |
| 1000/010        | Frame with wound stator                                | 1000       | Frame with wound stator                                                                                                                       |
| 1020            | Lifting eyebolt                                        | 1020       | Lifting eyebolt                                                                                                                               |
| 1100/010        | Grounding terminal                                     | 1100       | Grounding terminal                                                                                                                            |
| 1500            | Rotor, complete with shaft and key                     | 1500       | Rotor, complete with shaft and key                                                                                                            |
| 1560            | Slinger                                                | 1560       | Slinger                                                                                                                                       |
| 2500/010/1      | Endshield, drive end                                   | 2500/1     | Endshield, grease nipple, drain plug, bolts and washers                                                                                       |
| 2500/080        | Drain plug, drive end                                  |            |                                                                                                                                               |
| 2500/100        | Grease nipple, drive end                               |            |                                                                                                                                               |
| 2500/010/2      | FF Flange                                              | 2500/2     | FF Flange, grease nipple, drain plug, bolts and washers                                                                                       |
| 2500/080        | Drain plug, drive end                                  |            |                                                                                                                                               |
| 2500/100        | Grease nipple, drive end                               |            |                                                                                                                                               |
| 2700/010        | Endshield, non-drive end                               | 2700       | Endshield, grease nipple with extensor pipe, drain plug, bolts and washers                                                                    |
| 2700/080        | Drain plug, non-drive end                              |            |                                                                                                                                               |
| 2700/100        | Grease nipple (with extensor pipe), non-drive end      |            |                                                                                                                                               |
| 4000/010        | Bearing cap, internal, drive end                       | 4000       | Bearing cap (external and internal), shaft seal, grease relief, bolts and washers                                                             |
| 4000/020        | Bearing cap, external, drive end                       |            |                                                                                                                                               |
| 4000/080        | Shaft seal, drive end (1)                              |            |                                                                                                                                               |
| 4000/210        | Grease relief                                          | 4200       | Bearing cap (external and internal), shaft seal, grease relief with extensor pipe, pre-load springs, bolts and washers                        |
| 4200/010        | Bearing cap, internal, non-drive end                   |            |                                                                                                                                               |
| 4200/020        | Bearing cap, external, non-drive end                   |            |                                                                                                                                               |
| 4200/080        | Shaft seal, non-drive end (1)                          |            |                                                                                                                                               |
| 4200/200        | Pre-load springs for axial displacement                |            |                                                                                                                                               |
| 4200/210        | Grease relief                                          |            |                                                                                                                                               |
| 5000/010        | Fan                                                    | 5000       | Fan                                                                                                                                           |
| 6000/010        | Fan cover, cast iron                                   | 6000       | Fan cover                                                                                                                                     |
|                 |                                                        | 6050       | Fan cover and canopy                                                                                                                          |
|                 |                                                        | 6100       | Canopy                                                                                                                                        |
| 6500/010        | Terminal box                                           | 6500       | Terminal box, complete with lid, gaskets (for lid and terminal box), plugs (for mains and accessories), grounding terminal, bolts and washers |
| 6500/050        | Terminal box gasket                                    |            |                                                                                                                                               |
| 6500/060        | Terminal box lid                                       |            |                                                                                                                                               |
| 6500/100        | Terminal box lid gasket                                |            |                                                                                                                                               |
| 6501/010        | Terminal box plug for main leads                       |            |                                                                                                                                               |
| 6502/010        | Terminal box plug for accessory leads                  |            |                                                                                                                                               |
| 6531/010        | Accessory connector                                    | 6531       | Accessory connector, mounting rail, bolts and washers                                                                                         |
| 6541/010        | Accessory connector                                    | 6541       | Accessory connector, mounting rail, bolts and washers                                                                                         |
| 6590/010        | Terminal box grounding terminal                        |            |                                                                                                                                               |
| 6600/010        | Accessories terminal box                               | 6600       | Accessory terminal box, complete with lid, gasket, plugs, grounding terminal, bolts and washers                                               |
| 6600/060        | Accessories terminal box lid                           |            |                                                                                                                                               |
| 6600/100        | Accessories terminal box lid gasket                    |            |                                                                                                                                               |
| 6600/110        | Accessories terminal box grounding terminal            |            |                                                                                                                                               |
| 6610/010        | Space heater accessory terminal box                    | 6610       | Space heater accessory terminal box, complete with lid, gasket, plugs, grounding terminal, bolts and washers                                  |
| 6610/060        | Space heater accessory terminal box lid                |            |                                                                                                                                               |
| 6610/100        | Space heater accessory terminal box lid gasket         |            |                                                                                                                                               |
| 6610/110        | Space heater accessory terminal box grounding terminal |            |                                                                                                                                               |
| 6800/010        | Terminal block                                         | 6800       | Terminal block, mounting rail, bolts and washers                                                                                              |
| 7000/010        | Terminal box adaptor base                              | 7000       | Terminal box adaptor for side mounted position, complete with lid, gaskets, bolts and washers                                                 |
| 7000/050        | Terminal box adaptor base gasket                       |            |                                                                                                                                               |
| 7000/060        | Terminal box adaptor lid                               |            |                                                                                                                                               |
| 7000/100        | Terminal box adaptor lid gasket                        |            |                                                                                                                                               |
| 8500            | Main nameplate (2)                                     | 8500       | Main nameplate                                                                                                                                |

## Notes:

- (1) As a spare part, the shaft sealing in the 225-355 range will be supplied as an integral part of the bearing cap kit.  
 (2) Main nameplate position will vary with terminal box configuration (top and side mounting).

The scope of WEG Group solutions  
is not limited to products and solutions  
presented in this catalogue.

**To see our portfolio, contact us.**

**For WEG's worldwide  
operations visit our website**



**[www.weg.net](http://www.weg.net)**



 **+7 708 533 02 37**

 **[sales-wca@weg.net](mailto:sales-wca@weg.net)**

 **Almaty - Kazakhstan**

**Cod: 50103350 | Rev: 07 | Date (m/y): 09/2026.**

The values shown are subject to change without prior notice.  
The information contained is reference values.