

# GENERAL PURPOSE 3-PHASE INDUCTION MOTORS



## ENERGY EFFICIENT MOTORS



**CANTONI**  
**MOTOR**



# Product range

|                                                                         |                                                                                                                                                                                                          |                          |                                                                                                                                                                           |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LOW VOLTAGE<br/>GENERAL PURPOSE<br/>3-PHASE<br/>INDUCTION MOTORS</b> | Three-phase motors with squirrel-cage rotor series (2)Sg(m), Sh.<br><br>High efficiency motors series 2SIE, 3SIE and 4SIE (efficiency classes IE2, IE3, IE4)                                             | from 0,04kW up to 2200kW | for general purpose applications like pumps, fans, compressors; complying with the newest efficiency requirements                                                         |
| <b>GENERAL PURPOSE<br/>1-PHASE<br/>INDUCTION MOTORS</b>                 | Single-phase motors with squirrel-cage rotor series SEh(R), SEMh(R).<br>– motors with standard starting torque<br>– motors with increased starting torque<br>– motors with high starting torque.         | from 0,04kW up to 2,2kW  | for general purpose applications like pumps, fans, compressors, woodworking machines, devices for food processing, concrete mixers etc.                                   |
| <b>HIGH VOLTAGE<br/>INDUCTION MOTORS<br/>UP TO 11kV</b>                 | Three-phase squirrel-cage high voltage and high efficiency motors series Sh with cast-iron housing.<br><br>High voltage motors with module construction (steel/welded housing) series Sf (-E), Sfw, Sfr. | from 160kW up to 6000kW  | for general industrial use, drives used for own needs of power plants (pumps, fans, coal mills, conveyors)                                                                |
| <b>BRAKE MOTORS</b>                                                     | Three-phase and single-phase brake motors with AC and DC brakes                                                                                                                                          | from 0,04kW up to 160kW  | for applications with high safety requirements or where immediate stopping of the drive is required e.g.: theatres, concert, halls, lifts, platforms, etc.                |
| <b>MOTORS WITH<br/>FORCED VENTILATION</b>                               | Three-phase induction motors with forced ventilation.                                                                                                                                                    | from 0,06kW up to 2500kW | for variable frequency drives with very wide speed regulation                                                                                                             |
| <b>EXPLOSION-PROOF<br/>MOTORS</b>                                       | Increased safety motors                                                                                                                                                                                  | from 0,06kW up to 22kW   | adapted for operation in areas endangered by explosion (without methane)                                                                                                  |
|                                                                         | Flame-proof motors                                                                                                                                                                                       | from 0,55kW up to 3200kW | for applications in chemical and mining industry where explosive atmosphere of gases, vapours or dust can occur                                                           |
| <b>NEMA MOTORS</b>                                                      | Low voltage NEMA motors SIE series (in compliance with the NEMA PREMIUM requirements).                                                                                                                   | from 1HP up to 250HP     | for general industrial applications like pumps (including JM and JP), fans, compressors also for Hazardous Locations (Class I Div 2, Class II Div 2) with CSA certificate |
| <b>TRACTION MOTORS</b>                                                  | Traction motors and traction generators.                                                                                                                                                                 | from 50kW up to 1500kW   | various traction vehicles: trams (including low-deck trams), trolleybusses, subway and locomotives                                                                        |

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## Efficiency of motors

New efficiency classes for the low-voltage three-phase motors (IE = International Efficiency).

Along with the international discussion on energy efficiency a worldwide harmonized energy efficiency standard classification system has been established for low-voltage three-phase asynchronous motors. For many years low-voltage three-phase motors in the European Union have been sold in three efficiency classes EFF3, EFF2 and EFF1. Aside from this, many different efficiency classification systems have been introduced and well-proven in many countries all over the world.

This was the reason for the International Electrotechnical Commission IEC to develop and publish an energy efficiency standard which replaces all previous national issues. In parallel IEC developed and issued a new standard for determining motor efficiency. The new standard IEC 60034-30-1 defines and harmonizes worldwide the efficiency classes IE1, IE2, IE3 and IE4 for low-voltage three-phase motors in the power range from 0,12 kW to 1000 kW (2p=2, 4, 6, 8).

IE1 = Standard Efficiency

IE2 = High Efficiency

IE3 = Premium Efficiency

**IE4 = Super Premium Efficiency**

Complying with IEC 60034-30-1 standard the efficiency has to be determined in accordance with the new requirements given in the IEC 60034-2-1 standard.

### New EU Commission Regulation 2019/1781 regarding minimum efficiency of electric motors.

Motors covered by new Regulation

|                        |                                         |
|------------------------|-----------------------------------------|
| <b>Type</b>            | general purpose, geared, with brake, Ex |
| <b>Voltage</b>         | >50V ÷ 1000V                            |
| <b>Frequency</b>       | 50 Hz, 60 Hz or 50/60 Hz                |
| <b>Number of poles</b> | 2, 4, 6, 8                              |
| <b>Rated power</b>     | 0,12kW ÷ 1000kW                         |
| <b>Duty</b>            | continuous (S1, S3≥80 % or S6≥80%)      |

Motors excluded from new Regulation

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Type</b> | <ul style="list-style-type: none"> <li>• multi-speed, slip-ring and with mechanical commutators</li> <li>• motors completely integrated into a product whose efficiency cannot be tested independently from the product</li> <li>• motors with an integrated variable speed drive (compact drives) whose efficiency cannot be tested independently from the variable speed drive</li> <li>• motors with an integrated brake which forms an integral part of the inner motor construction and can neither be removed nor powered by a separate power source during the testing of the motor efficiency</li> <li>• motors specifically designed and specified to operate wholly immersed in a liquid</li> <li>• motors specifically qualified for the safety of nuclear installations, as defined in Article 3 of Council Directive 2009/71/EURATOM</li> <li>• explosion-protected motors specifically designed and certified for mining, as defined in Annex I, point 1 of Directive 2014/34/EU</li> <li>• motors in cordless or battery-operated equipment and motors in hand-held equipment whose weight is supported by hand during operation</li> <li>• motors in hand-guided mobile equipment moved while in operation</li> <li>• Totally Enclosed Non-Ventilated (TENV) motors</li> <li>• motors placed on the market before 1 July 2029 as substitutes for identical motors integrated in products placed on the market before 1 July 2022, and specifically marketed as such</li> <li>• motors designed specifically for the traction of electric vehicles</li> </ul> |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**Designed for altitudes** > 4000 m a.s.l.

**Designed for ambient temperatures** < -30°C and > 60°C

**With maximum operating temperatures** > 400°C

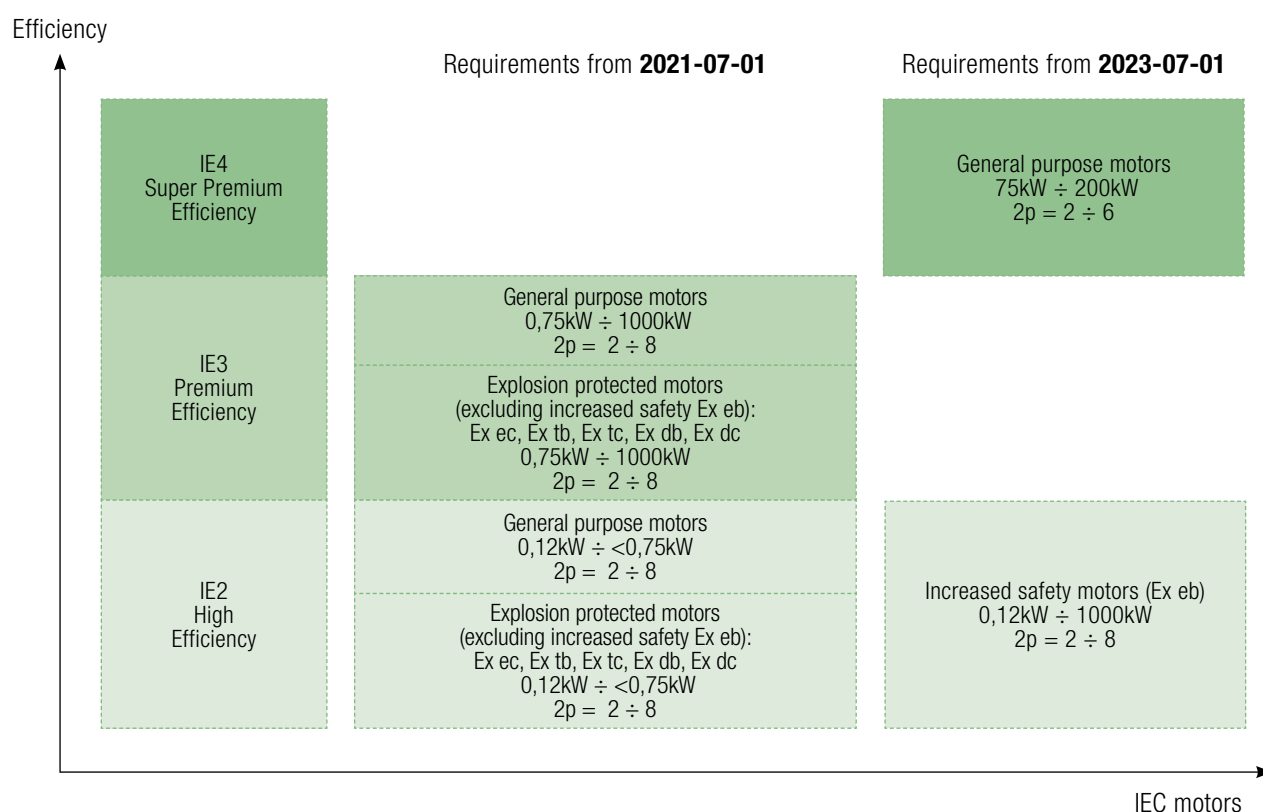
The Commission Regulation (EC) No 2019/1781 describes efficiency requirements coming into force on **2021-07-01** and **2023-07-01**. The required efficiency class of three phase induction motors has to be as follows:

| Required efficiency class of three phase induction motors | General purpose motors                            | Explosion protected motors except motors dedicated for mining |                                                   |
|-----------------------------------------------------------|---------------------------------------------------|---------------------------------------------------------------|---------------------------------------------------|
|                                                           |                                                   | Increased safety (Ex eb)                                      | Others (Ex ec, Ex tb, Ex tc, Ex db, Ex dc)        |
| IE2                                                       | 0,12kW ÷ <0,75kW<br>2p = 2 ÷ 8<br>from 2021-07-01 | 0,12kW ÷ 1000kW<br>2p = 2 ÷ 8<br>from 2023-07-01              | 0,12kW ÷ <0,75kW<br>2p = 2 ÷ 8<br>from 2021-07-01 |
| IE3                                                       | 0,75kW ÷ 1000kW<br>2p = 2 ÷ 8<br>from 2021-07-01  | —                                                             | 0,75kW ÷ 1000kW<br>2p = 2 ÷ 8<br>from 2021-07-01  |
| IE4                                                       | 75kW ÷ 200kW<br>2p = 2 ÷ 6<br>from 2023-07-01     | —                                                             | —                                                 |

Cantoni Group pursuing a policy of continuous development of its products, back in the past already took actions to extend offer of high efficiency motors including also explosion-proof motors – we are ready for the new requirements.

Moreover, at this point, **we can deliver to our Customers motors with higher efficiencies or in wider range than defined in Regulation 2019/1781.**

A graph representation of the above table:



**IE4 efficiency motors available upon request.**

## Ratings – Tolerances

### Tolerances of motor parameters

Permissible deviations between catalogue values and real values are according to the IEC 60034-1:

|                                          |                                                                                                                                       |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Power factor $\cos \varphi$              | $\Delta \cos \varphi = -1/6 (1 - \cos \varphi_N)$                                                                                     |
| Efficiency $\eta$                        | $\Delta \eta = -15\% (100 - \eta_N)$ for $P_N \leq 150 \text{ kW}$<br>$\Delta \eta = -10\% (100 - \eta_N)$ for $P_N > 150 \text{ kW}$ |
| Speed $n$                                | $\Delta n = \pm 20\% (n_s - n_N)$ for $P_N > 1 \text{ kW}$<br>$\Delta n = \pm 30\% (n_s - n_N)$ for $P_N \leq 1 \text{ kW}$           |
| Locked rotor current ratio $I_L/I_N$     | $\Delta(I_L/I_N) = +20\% (I_L/I_N)$                                                                                                   |
| Locked rotor torque ratio $T_L/T_N$      | $\min (T_L/T_N) = -15\% (T_L/T_N)$<br>$\max (T_L/T_N) = +25\% (T_L/T_N)$                                                              |
| Breakdown torque ratio $T_B/T_N$         | $\Delta(T_B/T_N) = -10\% (T_B/T_N)$                                                                                                   |
| Moment of inertia $J$ [ $\text{kgm}^2$ ] | $\Delta J = \pm 10\% J$                                                                                                               |
| Sound pressure level $L_{pA}$ [dB]       | $\Delta L_{pA} = +3 \text{ dB / A}$                                                                                                   |

### Tolerances of supply voltage value and frequency

Motors comply in standard with voltage value and voltage frequency variations within zone A according to the IEC 60034-1:

|                       |                      |
|-----------------------|----------------------|
| Voltage value $U$     | $\Delta U = \pm 5\%$ |
| Voltage frequency $f$ | $\Delta f = \pm 2\%$ |

Other extended tolerances of supply voltage and their frequency are available on request.

## Standards

The electric motors are manufactured according to the international standards:

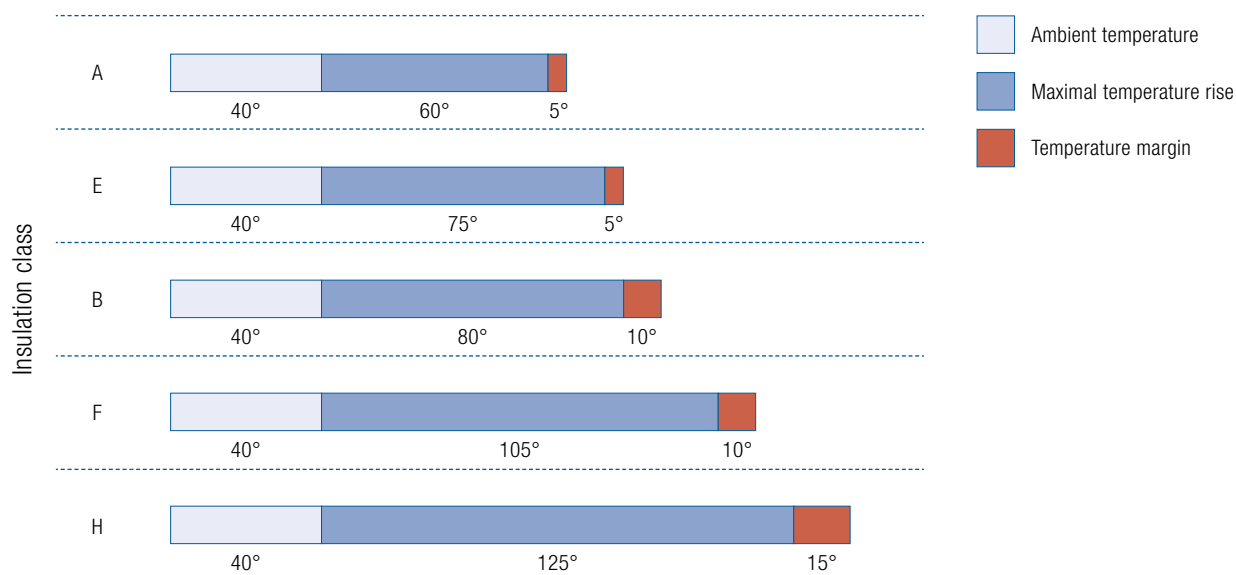
|                                                   |               |
|---------------------------------------------------|---------------|
| Rating and performance                            | IEC 60034-1   |
| Methods for determining losses and efficiency     | IEC 60034-2-1 |
| Classification of degrees of protection           | IEC 60034-5   |
| Methods of cooling                                | IEC 60034-6   |
| Symbols of construction and mounting arrangements | IEC 60034-7   |
| Terminal markings and direction of rotation       | IEC 60034-8   |
| Noise limits                                      | IEC 60034-9   |
| Dimensions and output of electric machines        | IEC 60072-1   |
| Vibration limits                                  | IEC 60034-14  |

## Insulation classification

The insulation system of an electric motor is determined by a given insulation class on the basis of its thermal resistance. This thermal resistance should be guaranteed by the entire set of electric insulating materials used in the motor insulating system.

Thermal resistance classification is related to the temperature of the hotspot in the insulation occurring during rated operating conditions of the electric motor, allowing for the highest permissible rise in average temperature.

This rise should be selected so that at the highest permissible ambient temperature, the temperature of the hotspot in insulation will not exceed the value assigned to a given thermal resistance class.



Insulation class F in an electric motor means that at ambient temperature of 40°C the temperature rise of the winding may be max. 105°C with the additional temperature margin of 10°C (under specified measuring conditions in accordance with the IEC 60034-1 standard).

Symbols of thermal resistance classes (permissible insulation temperatures at 40°C ambient temperature)

| Symbol | Temperature [°C] |
|--------|------------------|
| A      | 105              |
| E      | 120              |
| B      | 130              |
| F      | 155              |
| H      | 180              |

## 3SIE series Class F/B

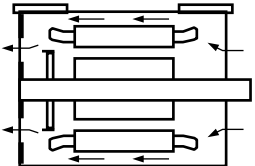
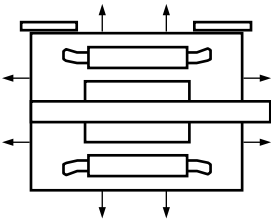
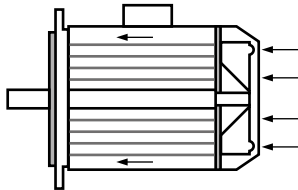
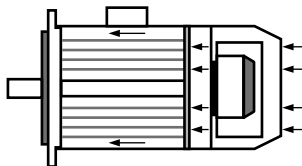
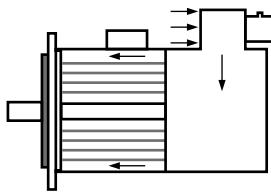
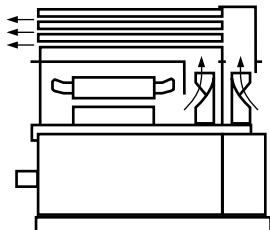
The standard motors made by Cantoni Motor in their basic version have the insulation class F while the temperature rise is for class B. This means longer life for motors.

**For special request we can deliver motors equipped with insulation class H.**

Strengthened insulation system gives possibility to safe operation with frequency converters.

## Cooling

General purpose motors from Cantoni Group are equipped with standard IC411 cooling according to IEC 60034-6. Other cooling methods (for example motors with external/separate cooling) are available on request.

| IC code according to IEC 60034-6 | Description                                                                                                                                                                                                 | Drawing                                                                               |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>IC01</b>                      | <ul style="list-style-type: none"> <li>– Open machine</li> <li>– Fan mounted on shaft</li> <li>– Often called "drip-proof" motor</li> </ul>                                                                 |    |
| <b>IC410</b>                     | <ul style="list-style-type: none"> <li>– Enclosed machine</li> <li>– Surface cooled by natural convection and radiation</li> <li>– Without internal or external fan</li> </ul>                              |    |
| <b>IC411</b>                     | <ul style="list-style-type: none"> <li>– Enclosed machine</li> <li>– Smooth or finned casing</li> <li>– External shaft-mounted fan</li> <li>– Often called TEFC motor</li> </ul>                            |  |
| <b>IC416A</b>                    | <ul style="list-style-type: none"> <li>– Enclosed machine</li> <li>– Smooth or finned casing</li> <li>– External motorized axial fan integrated with the motor</li> </ul>                                   |  |
| <b>IC416R</b>                    | <ul style="list-style-type: none"> <li>– Enclosed machine</li> <li>– Smooth or finned casing</li> <li>– External motorized radial fan integrated with the motor</li> </ul>                                  |  |
| <b>IC611</b>                     | <ul style="list-style-type: none"> <li>– Enclosed machine</li> <li>– Heat Exchanger fitted</li> <li>– Two separate air circuits</li> <li>– Shaft-mounted Fans</li> <li>– Often called CacA motor</li> </ul> |  |



## Standard terminal box equipment

| Motor frame size | Number of terminals | Number of cable glands | Size of cable glands | Permissible cable diameter for cable gland | Optional rotation of terminal box | Temperature sensors in the winding | Thermal protection of bearings |
|------------------|---------------------|------------------------|----------------------|--------------------------------------------|-----------------------------------|------------------------------------|--------------------------------|
| 56               | 6                   | 1                      | M20                  | 7÷13                                       | 180°                              | on request                         | no                             |
| 63               | 6                   | 1                      | M20                  | 7÷13                                       | 180°                              | on request                         | no                             |
| 71               | 6                   | 1                      | M20                  | 7÷13                                       | 180°                              | on request                         | no                             |
| 80               | 6                   | 1                      | M20                  | 7÷13                                       | 180°                              | on request                         | no                             |
| 90               | 6                   | 1                      | M20                  | 7÷13                                       | 180°                              | on request                         | no                             |
| 100              | 6                   | 1                      | M20                  | 7÷13                                       | 180°                              | on request                         | no                             |
| 112              | 6                   | 1                      | M25                  | 9÷17                                       | 180°                              | on request                         | no                             |
| 132              | 6                   | 1                      | M25                  | 9÷17                                       | 180°                              | on request                         | no                             |
| 160              | 6                   | 1                      | M40                  | 19÷28                                      | 180°                              | on request                         | on request                     |
| 180              | 6                   | 1                      | M40                  | 19÷28                                      | 180°                              | on request                         | on request                     |
| 200              | 6                   | 3                      | 2xM50/1xM16          | 24÷32/4÷8                                  | 4x90°                             | 3xPTC                              | on request                     |
| 225              | 6                   | 3                      | 2xM50/1xM16          | 24÷32/4÷8                                  | 4x90°                             | 3xPTC                              | on request                     |
| 250              | 6                   | 3                      | 2xM63/1xM16          | 32÷40/4÷8                                  | 4x90°                             | 3xPTC                              | on request                     |
| 280              | 6                   | 3                      | 2xM63/1xM16          | 32÷40/4÷8                                  | 4x90°                             | 3xPTC                              | on request                     |
| 315              | 6                   | 3                      | 2xM63/1xM16          | 44÷55/4÷8                                  | 4x90°                             | 3xPTC                              | on request                     |
| 355ML            | 6                   | 4                      | 2xM63/2xM20          | 51÷56/7÷13                                 | 4x90°                             | 3xPTC                              | on request                     |
| 355H             | 6                   | 2                      | 2xM63                | 51÷56                                      | 4x90°                             | 3xPt100                            | Pt100                          |
| 400              | 6 (bars)            | 3                      | 3xM63                | 44÷55                                      | 180°                              | 3xPt100                            | Pt100                          |
| 450              | 3 (bars)            | 3                      | 3xM80                | 58÷64                                      | 180°                              | 3xPt100                            | Pt100                          |
| 500              | 3 (bars)            | on request             | on request           | on request                                 | 180°                              | 3xPt100                            | Pt100                          |

## Vibration level

The rotor balancing method guarantees that a standard vibration level A is maintained in accordance with the IEC 60034-14. On customer's demand the motors can be produced with reduced vibration (level B).

### Limits of maximum vibration velocity (r.m.s.) for shaft height H according to IEC 60034-14

| Vibration level | Shaft height    | 132 < H ≤ 280 | H > 280 |
|-----------------|-----------------|---------------|---------|
|                 | Fitting type    | mm/s          | mm/s    |
| A               | Free suspension | 2.2           | 2.8     |
|                 | Rigid setting   | 1.8           | 2.3     |
| B               | Free suspension | 1.1           | 1.8     |
|                 | Rigid setting   | 0.9           | 1.5     |

#### Remark:

Limits stated in the table mentioned above are applicable for uncoupled (disconnected from the driven machine) and operating at no load motors.

## Noise level

Motors in standard comply with a permissible sound power level according to IEC 60034-9.

On customer's demand the motors can be delivered with reduced noise level by using special cooling systems or additional external sound-absorbing covers.

## Terminal box

The terminal boxes of low voltage motors have threaded inlet holes designed for mounting cable glands.

The box contains a terminal board with marked terminals making possible connection of supply cables.

In addition, terminal boxes may be provided with additional terminals connected to the ends of thermal protection or anticondensation heater circuits and extra glands to connect these circuits.

Starting from frame size 355 motors contain terminal boxes with cable gland seals.

The circuits of thermal protection and anticondensation heaters are connected to separate terminal boxes.

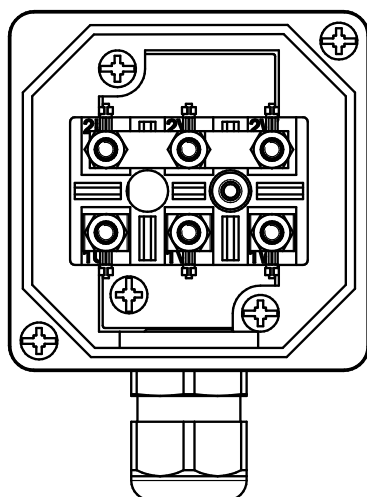
Inside the boxes there are special clamps used to ground the supply cable armouring.



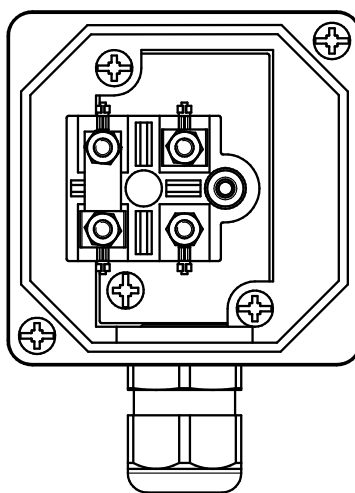
**In standard all motors except series 2Sg are equipped with terminal box mounted on top (in case of 2Sg series terminal box can be on right or left side).**

### Standard terminal box view:

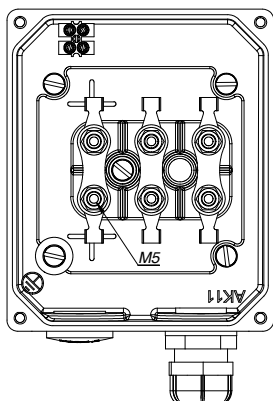
Frame size  
3SIE, 2SIE, Sh56÷80 3-phase



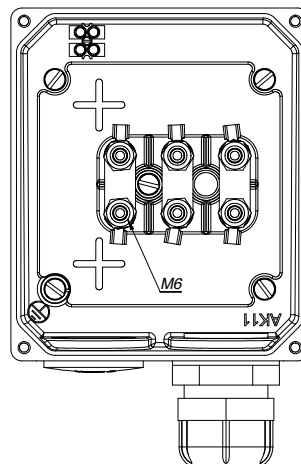
Frame size  
SE(M)h56÷90 1-phase



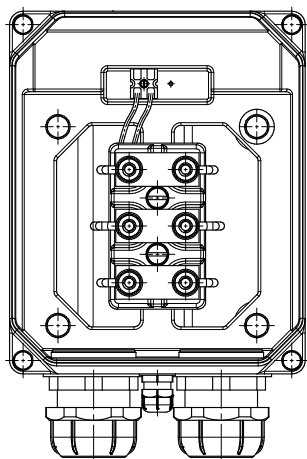
Frame size  
3SIE90 ÷ 112



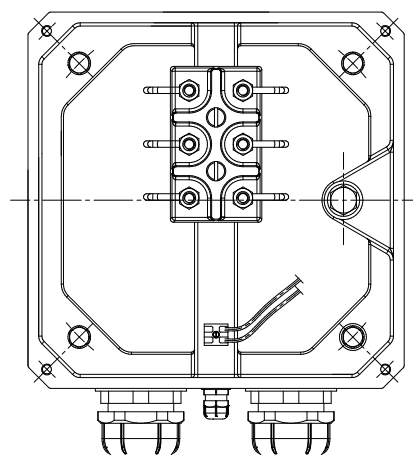
Frame size  
3SIE132 ÷ 180



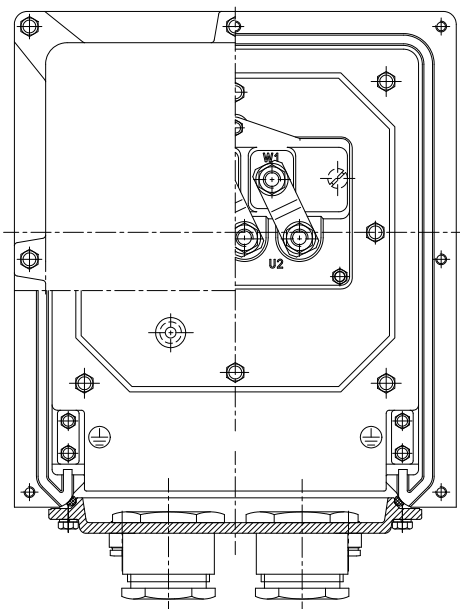
Frame size  
3SIE200 ÷ 280  
and 2Sg200 ÷ 315



Frame size  
(3)SIE315



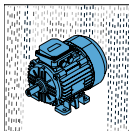
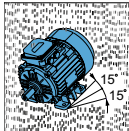
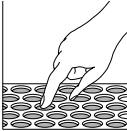
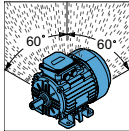
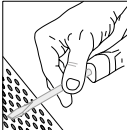
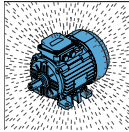
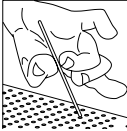
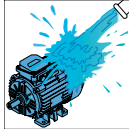
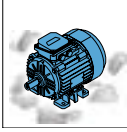
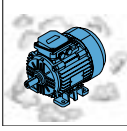
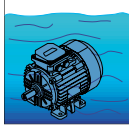
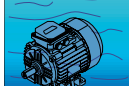
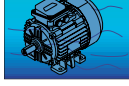
Frame size  
2(3)SIE355ML  
2(3)SIE355H



# Degree of protection IP

## IP 55

Degree of protection IP55 is the standard of our production according to the standard IEC 60034-5

| Protection against penetration of solid matter |                                                                                                                                       |  | Protection against penetration of fluids |                                                                                                                                                    |  |
|------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1st digit                                      | Description                                                                                                                           |  | 2nd digit                                | Description                                                                                                                                        |  |
| 0                                              |  Not protected                                       |  | 0                                        |  Not protected                                                  |  |
| 1                                              |  Protected against solid bodies larger than 50 mm    |  | 1                                        |  Protected against vertically falling drops of water            |  |
| 2                                              |  Protected against solid bodies larger than 12 mm   |  | 2                                        |  Protected against vertically falling drops of water up to 15° |  |
| 3                                              |  Protected against solid bodies larger than 2,5 mm |  | 3                                        |  Protected against rain up to 60°                             |  |
| 4                                              |  Protected against solid bodies larger than 1 mm   |  | 4                                        |  Protected against rain falling from any direction            |  |
| 5                                              |  Protected against deposition of dust              |  | 5                                        |  Protected against sprayed water from any direction           |  |
| 6                                              |  Totally protected against deposition of dust      |  | 6                                        |  Protected against temporary immersion                        |  |
|                                                |                                                                                                                                       |  | 7                                        |  Protected against immersion between 0,15 and 1 m             |  |
|                                                |                                                                                                                                       |  | 8                                        |  Protected against immersion at preset pressure and time      |  |

Each size 56 to 180 motor is equipped with seal rings (Simmerring or V-ring) on drive side and on non drive side. Labyrinth seals protect the motors from size 200 and above. The terminal box is sealed with a gasket.

**Higher degree of protection is available on request.**

## Painting and corrosivity classes

Standard painting system with RAL5010 color used in all our motors comply with C3 corrosion class according to ISO 12944.

For special request motors can be painted with other colors and with alternative painting systems (up to C5M corrosion class).

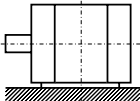
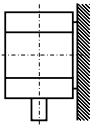
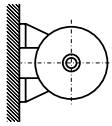
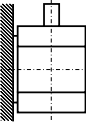
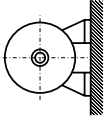
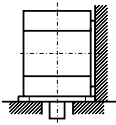
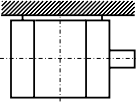
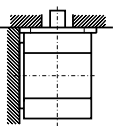
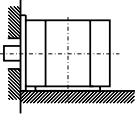
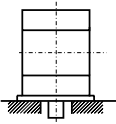
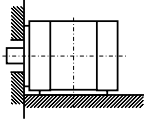
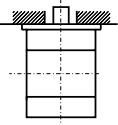
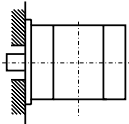
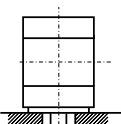
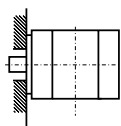
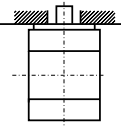
# RAL 5010/C3



| Corrosion class                         | Environment                                                                                                           |                                                                                                                        |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|
|                                         | Interior                                                                                                              | Exterior                                                                                                               |
| <b>C1<br/>(very low)</b>                | Heated buildings with a clean atmosphere such as hotels, offices, shops, schools.                                     | N/A                                                                                                                    |
| <b>C2<br/>(low)</b>                     | Unheated buildings, where condensation may occur e.g. storehouses, sports halls.                                      | Atmosphere contaminated to a small extent, mostly rural regions.                                                       |
| <b>C3<br/>(medium)</b>                  | Production space of high humidity and certain air contamination e.g. foodstuff plants, laundries, breweries, dairies. | Industrial and urban atmosphere with an average Sulphur oxide (IV) contamination level. Inshore areas of low salinity. |
| <b>C4<br/>(high)</b>                    | Chemical plants, swimming pools, ship repair yards.                                                                   | Industrial areas and inshore areas of medium salinity.                                                                 |
| <b>C5I<br/>(very high – industrial)</b> | Buildings and areas of almost constant condensation and high contamination.                                           | Industrial areas of high humidity and aggressive atmosphere.                                                           |
| <b>C5M<br/>(very high – marine)</b>     | Buildings and areas of almost constant condensation and high contamination.                                           | Coast and offshore areas with high salt content.                                                                       |

# Mounting arrangements

According to the IEC 60034-7 standard

| Horizontal shaft                                                                    |         |            |          | Vertical shaft                                                                      |                          |            |          |
|-------------------------------------------------------------------------------------|---------|------------|----------|-------------------------------------------------------------------------------------|--------------------------|------------|----------|
| Designation                                                                         |         |            |          | Designation                                                                         |                          |            |          |
| Code II                                                                             | Code I  | Frame size |          | Code II                                                                             | Code I                   | Frame size |          |
|    | IM 1001 | IM B3      | 56 ÷ 500 |    | IM 1011                  | IM V5      | 56 ÷ 315 |
|    | IM 1051 | IM B6      | 56 ÷ 280 |    | IM 1031                  | IM V6      | 56 ÷ 315 |
|   | IM 1061 | IM B7      | 56 ÷ 280 |   | IM 2011<br>or<br>IM 2111 | IM V15     | 56 ÷ 355 |
|  | IM 1071 | IM B8      | 56 ÷ 280 |  | IM 2031<br>or<br>IM 2131 | IM V36     | 56 ÷ 355 |
|  | IM 2001 | IM B35     | 56 ÷ 500 |  | IM 3011                  | IM V1      | 56 ÷ 500 |
|  | IM 2101 | IM B34     | 56 ÷ 132 |  | IM 3031                  | IM V3      | 56 ÷ 280 |
|  | IM 3001 | IM B5      | 56 ÷ 315 |  | IM 3611                  | IM V18     | 56 ÷ 180 |
|  | IM 3601 | IM B14     | 56 ÷ 132 |  | IM 3631                  | IM V19     | 56 ÷ 180 |

\*Other mounting arrangements available on special request

## Definitions

### Relation between rated output power and rated torque on motor shaft:

$$T = \frac{9,55 \times P}{n}$$

where:

- $T$  [Nm] is rated output torque on motor shaft
- $P$  [W] is rated output power on motor shaft
- $n$  [rpm] is rated speed of motor shaft

### Relation between rated output power on shaft and rated consumed power from mains:

$$P_1 = \frac{P}{\eta} \times 100$$

where:

- $P_1$  [kW] is rated consumed power from mains by motor
- $P$  [kW] is rated output power on motor shaft
- $\eta$  [%] is rated efficiency of motor

### Relation between rated consumed power from mains and rated voltage, current, power factor:

$$P_1 = \sqrt{3} \times U \times I \times \cos\varphi$$

where:

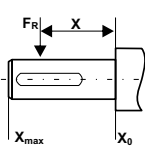
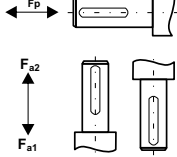
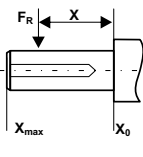
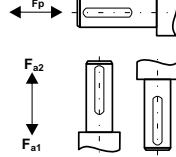
- $P_1$  [W] is rated consumed power from mains by motor
- $U$  [V] is rated supply voltage of motor
- $I$  [A] is rated current consumed from mains by motor
- $\cos\varphi$  is rated power factor of motor

### Units of measurement

| Parameter name       | Symbol        | Unit name | Symbol   |
|----------------------|---------------|-----------|----------|
| Frequency            | f             | Hertz     | Hz       |
| Active power         | P             | Watt      | W        |
| Voltage              | U             | Volt      | V        |
| Electric Current     | I             | Amper     | A        |
| Power factor         | $\cos\varphi$ | N/A       | N/A      |
| Resistance           | R             | Ohm       | $\Omega$ |
| Sound power level    | $L_w$         | decibel   | dB       |
| Sound pressure level | $L_p$         | decibel   | dB       |



# Permissible shaft end loads

| Frame size       | Number of poles | Horizontal operation                                                              |               | Vertical operation                                                                |          |          | Frame size  | Number of poles | Horizontal operation                                                                |               | Vertical operation                                                                  |          |          |
|------------------|-----------------|-----------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------------------------|----------|----------|-------------|-----------------|-------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------|----------|----------|
|                  |                 |  |               |  |          |          |             |                 |  |               |  |          |          |
|                  |                 | $F_R(x=0)$                                                                        | $F_R(x=\max)$ | $F_P$                                                                             | $F_{a1}$ | $F_{a2}$ |             |                 | $F_R(x=0)$                                                                          | $F_R(x=\max)$ | $F_P$                                                                               | $F_{a1}$ | $F_{a2}$ |
|                  |                 | [kN]                                                                              |               | [kN]                                                                              |          |          |             |                 | [kN]                                                                                |               | [kN]                                                                                |          |          |
| 2SIE (Sh) 56     | 2               | 0,20                                                                              | 0,16          | 0,04                                                                              | 0,03     | 0,05     | 3SIE 225 S  | 4               | 4,18                                                                                | 3,40          | 3,19                                                                                | 2,42     | 4,16     |
|                  | 4               | 0,25                                                                              | 0,20          | 0,05                                                                              | 0,04     | 0,06     |             | 8               | 5,55                                                                                | 4,40          | 4,55                                                                                | 3,80     | 5,52     |
|                  | 6               | 0,25                                                                              | 0,20          | 0,06                                                                              | 0,05     | 0,07     |             | 2               | 3,31                                                                                | 2,81          | 2,53                                                                                | 1,93     | 3,29     |
| 2SIE (Sh) 63     | 2               | 0,20                                                                              | 0,16          | 0,04                                                                              | 0,04     | 0,06     | 3SIE 225 M  | 4               | 3,97                                                                                | 3,23          | 3,13                                                                                | 2,26     | 4,24     |
|                  | 4               | 0,25                                                                              | 0,20          | 0,06                                                                              | 0,05     | 0,07     |             | 6               | 4,57                                                                                | 3,72          | 3,98                                                                                | 2,95     | 5,33     |
|                  | 6               | 0,27                                                                              | 0,22          | 0,06                                                                              | 0,05     | 0,07     |             | 8               | 5,35                                                                                | 4,24          | 4,48                                                                                | 3,62     | 5,62     |
|                  | 8               | 0,27                                                                              | 0,22          | 0,07                                                                              | 0,06     | 0,08     |             | 2               | 4,09                                                                                | 3,39          | 3,11                                                                                | 2,33     | 4,13     |
| 3,2SIE (Sh) 71   | 2               | 0,29                                                                              | 0,24          | 0,07                                                                              | 0,05     | 0,09     | 3SIE 250 M  | 4               | 4,90                                                                                | 4,06          | 3,85                                                                                | 2,68     | 5,36     |
|                  | 4               | 0,36                                                                              | 0,30          | 0,09                                                                              | 0,07     | 0,11     |             | 6               | 5,92                                                                                | 4,90          | 4,99                                                                                | 3,81     | 6,55     |
|                  | 6               | 0,40                                                                              | 0,35          | 0,10                                                                              | 0,08     | 0,12     |             | 8               | 6,52                                                                                | 5,28          | 5,49                                                                                | 4,26     | 7,10     |
|                  | 8               | 0,40                                                                              | 0,35          | 0,11                                                                              | 0,09     | 0,13     |             | 2               | 3,94                                                                                | 3,34          | 3,07                                                                                | 2,01     | 4,43     |
| 3,2SIE 80        | 2               | 0,33                                                                              | 0,27          | 0,09                                                                              | 0,06     | 0,12     | 3SIE 280 S  | 4               | 6,69                                                                                | 5,67          | 5,01                                                                                | 3,65     | 6,77     |
|                  | 4               | 0,44                                                                              | 0,37          | 0,12                                                                              | 0,09     | 0,15     |             | 6               | 7,86                                                                                | 6,67          | 5,79                                                                                | 4,32     | 7,70     |
|                  | 6               | 0,51                                                                              | 0,42          | 0,14                                                                              | 0,11     | 0,17     |             | 8               | 8,78                                                                                | 7,27          | 7,09                                                                                | 5,78     | 8,84     |
|                  | 8               | 0,51                                                                              | 0,42          | 0,17                                                                              | 0,15     | 0,20     |             | 2               | 3,80                                                                                | 3,22          | 3,03                                                                                | 1,89     | 4,49     |
| 3SIE 90          | 2               | 0,79                                                                              | 0,66          | 0,64                                                                              | 0,44     | 0,84     | 3SIE 280 M  | 4               | 6,15                                                                                | 5,22          | 4,86                                                                                | 3,16     | 7,04     |
|                  | 4               | 1,00                                                                              | 0,83          | 0,80                                                                              | 0,65     | 1,05     |             | 6               | 7,69                                                                                | 6,52          | 5,75                                                                                | 4,19     | 7,75     |
|                  | 6, 8            | 1,15                                                                              | 0,95          | 0,90                                                                              | 0,77     | 1,17     |             | 8               | 8,47                                                                                | 7,01          | 6,99                                                                                | 5,45     | 9,03     |
| 3SIE 100         | 2               | 1,11                                                                              | 0,89          | 0,90                                                                              | 0,61     | 1,17     | 3SIE 315 S  | 2               | 3,56                                                                                | 3,08          | 2,96                                                                                | 1,63     | 4,69     |
|                  | 4               | 1,39                                                                              | 1,12          | 1,12                                                                              | 0,90     | 1,46     |             | 4               | 5,75                                                                                | 4,82          | 4,74                                                                                | 2,71     | 7,37     |
|                  | 6, 8            | 1,60                                                                              | 1,29          | 1,26                                                                              | 1,08     | 1,64     |             | 6               | 7,21                                                                                | 6,04          | 5,61                                                                                | 3,84     | 8,14     |
| 3SIE 112         | 2               | 1,56                                                                              | 1,22          | 1,23                                                                              | 0,84     | 1,60     | 3SIE 315 MA | 8               | 8,51                                                                                | 7,05          | 7,03                                                                                | 5,32     | 9,30     |
|                  | 4               | 1,92                                                                              | 1,58          | 1,50                                                                              | 1,19     | 1,96     |             | 2               | 3,07                                                                                | 2,65          | 2,82                                                                                | 1,23     | 4,89     |
|                  | 6, 8            | 2,20                                                                              | 1,80          | 1,69                                                                              | 1,26     | 2,20     |             | 4               | 5,40                                                                                | 4,52          | 4,64                                                                                | 2,41     | 7,53     |
| 3SIE 132         | 2               | 2,11                                                                              | 1,65          | 1,82                                                                              | 0,98     | 2,37     | 3SIE 315 MB | 6               | 6,75                                                                                | 5,66          | 5,48                                                                                | 3,22     | 8,40     |
|                  | 4               | 2,67                                                                              | 2,08          | 2,31                                                                              | 1,36     | 3,00     |             | 8               | 7,88                                                                                | 6,52          | 6,83                                                                                | 4,72     | 9,62     |
|                  | 6, 8            | 3,06                                                                              | 2,39          | 2,51                                                                              | 1,40     | 3,26     |             | 2               | 2,67                                                                                | 2,31          | 2,71                                                                                | 0,91     | 5,05     |
| 3SIE 160         | 2               | 2,43                                                                              | 1,88          | 1,97                                                                              | 1,00     | 2,56     | 3SIE 315 MC | 4               | 5,16                                                                                | 4,33          | 4,58                                                                                | 2,20     | 7,64     |
|                  | 4               | 3,06                                                                              | 2,38          | 2,54                                                                              | 1,43     | 3,31     |             | 6               | 6,27                                                                                | 5,33          | 5,34                                                                                | 2,68     | 8,78     |
|                  | 6, 8            | 3,54                                                                              | 2,81          | 2,83                                                                              | 1,80     | 3,68     |             | 8               | 7,22                                                                                | 5,98          | 6,63                                                                                | 4,08     | 10,00    |
| 3SIE 180         | 2               | 2,61                                                                              | 2,13          | 2,20                                                                              | 1,00     | 2,87     | 3SIE 315 MD | 2               | 2,84                                                                                | 2,48          | 2,71                                                                                | 0,63     | 5,37     |
|                  | 4               | 3,30                                                                              | 2,68          | 2,83                                                                              | 1,37     | 3,68     |             | 4               | 6,27                                                                                | 5,33          | 4,34                                                                                | 1,46     | 8,06     |
|                  | 6, 8            | 3,78                                                                              | 3,07          | 3,17                                                                              | 1,93     | 4,12     |             | 6               | 7,57                                                                                | 6,44          | 5,08                                                                                | 1,87     | 9,23     |
| 3SIE 200 LA      | 2               | 2,91                                                                              | 2,44          | 2,24                                                                              | 1,72     | 2,92     |             | 8               | 8,76                                                                                | 7,45          | 6,76                                                                                | 3,48     | 11,12    |
| 3SIE 200 LB      | 2               | 2,85                                                                              | 2,39          | 2,23                                                                              | 1,67     | 2,93     |             | 6               | 7,47                                                                                | 6,36          | 5,05                                                                                | 1,82     | 9,22     |
| 3SIE 200 L       | 4               | 3,61                                                                              | 3,03          | 2,81                                                                              | 2,12     | 3,70     |             | 8               | 8,62                                                                                | 7,33          | 6,71                                                                                | 3,34     | 11,20    |
| 3SIE 200 LA      | 6               | 4,31                                                                              | 3,62          | 3,62                                                                              | 2,92     | 4,56     |             |                 |                                                                                     |               |                                                                                     |          |          |
| 3SIE 200 LB      | 6               | 4,06                                                                              | 3,40          | 3,54                                                                              | 2,71     | 4,65     |             |                 |                                                                                     |               |                                                                                     |          |          |
| 3SIE 200 L       | 8               | 4,84                                                                              | 3,97          | 4,02                                                                              | 3,35     | 4,89     |             |                 |                                                                                     |               |                                                                                     |          |          |
| 2Sg (2p = 10÷12) |                 |                                                                                   |               |                                                                                   |          |          |             |                 |                                                                                     |               |                                                                                     |          |          |
|                  |                 | $F_R(x=0)$                                                                        | $F_R(x=\max)$ | $F_P$                                                                             | $F_{a1}$ | $F_{a2}$ |             |                 | $F_R(x=0)$                                                                          | $F_R(x=\max)$ | $F_P$                                                                               | $F_{a1}$ | $F_{a2}$ |
|                  |                 | [kN]                                                                              |               | [kN]                                                                              |          |          |             |                 | [kN]                                                                                |               | [kN]                                                                                |          |          |
| 2Sg 200LA        | 10              | 5,50                                                                              | 4,60          | 4,20                                                                              | 3,50     | 5,10     | 2Sg 280S    | 10              | 9,30                                                                                | 7,70          | 6,70                                                                                | 5,40     | 8,40     |
| 2Sg 200LB        | 10              | 5,50                                                                              | 4,50          | 4,10                                                                              | 3,40     | 5,10     |             | 12              | 9,80                                                                                | 8,10          | 7,00                                                                                | 5,70     | 8,70     |
| 2Sg 200L         | 12              | 5,90                                                                              | 4,90          | 4,40                                                                              | 3,70     | 5,40     | 2Sg 280M    | 10              | 8,80                                                                                | 7,30          | 6,50                                                                                | 5,20     | 8,20     |
| 2Sg 225S         | 10              | 6,50                                                                              | 5,10          | 4,70                                                                              | 4,00     | 5,60     |             | 12              | 9,20                                                                                | 7,60          | 6,80                                                                                | 5,00     | 9,30     |
|                  | 12              | 6,70                                                                              | 5,30          | 4,80                                                                              | 4,20     | 6,00     | 2Sg 315S    | 10              | 9,30                                                                                | 7,70          | 7,60                                                                                | 5,50     | 10,20    |
| 2Sg 225M         | 10              | 6,30                                                                              | 4,90          | 5,70                                                                              | 4,40     | 7,40     |             | 12              | 9,80                                                                                | 8,10          | 8,00                                                                                | 5,90     | 10,80    |
|                  | 12              | 6,70                                                                              | 5,30          | 4,90                                                                              | 3,90     | 6,20     | 2Sg 315M    | 10              | 8,40                                                                                | 7,00          | 7,30                                                                                | 4,80     | 10,70    |
| 2Sg 250M         | 10              | 7,50                                                                              | 6,20          | 5,70                                                                              | 4,40     | 7,40     | 2Sg 315MA   | 12              | 9,30                                                                                | 7,70          | 7,90                                                                                | 5,50     | 11,10    |
|                  | 12              | 8,10                                                                              | 6,70          | 6,10                                                                              | 4,80     | 7,80     | 2Sg 315MB   | 12              | 9,10                                                                                | 7,60          | 7,80                                                                                | 5,30     | 11,20    |



## Permissible shaft end loads

Value of radial force  $F_R$  acting on the shaft end for a given belt pulley diameter is calculated according to the following formula:

$$F_R = \frac{19\,600 \times P \times k}{D_K \times n} \text{ [N]}$$

where:  $P$  – motor output [kW]

$D_K$  – belt pulley diameter [m]

$n$  – speed [rpm]

$k$  – belt tension factor:

for V-belts  $k=2,2$

for flat belts  $k=3$

Value of force  $F_R$  acting on any point of the shaft end (between points  $X=\max$  and  $X=0$ ) may be calculated according to the following formula:

$$F_R = F_{x0} - \frac{X}{E} \times (F_{x0} - F_{x\max}) \text{ [N]}$$

where:  $F_{x0}$  – value of  $F_R$  force acting on the beginning of the shaft end

$F_{x\max}$  – value of  $F_R$  force acting on the end of the shaft end

$E$  – length of the shaft end

### VERSION WITH ROLLER BEARINGS for motors 355

| Mechanical Size | Type of construction | No. of poles, 2p | D.E. bearing              | N.D.E. bearing        |
|-----------------|----------------------|------------------|---------------------------|-----------------------|
| 3SIE 355 ML     | IM1001 (B3)          | 4÷8              | NU222EM1C3                | 6222 C3               |
| 3SIE 355 ML     | IM1001 (B3)          | 4÷8              | NU322 EM1C3 <sup>1)</sup> | 6322 C3 <sup>1)</sup> |
| 3SIE 355 H      | IM1001 (B3)          | 4÷8              | NU322 EM1C3               | 6322 C3               |

| Motor type  | Number of poles | Length of shaft extension E (mm) | Horizontal mounting       |                    |                          |
|-------------|-----------------|----------------------------------|---------------------------|--------------------|--------------------------|
|             |                 |                                  | Permissible radial forces |                    | Permissible axial forces |
|             |                 |                                  | $F_{x0}$                  | $F_{x\max}$        | $F_A$                    |
| 3SIE 355 ML | 4               | 210                              | 22                        | 18                 | 5                        |
|             | 6               | 210                              | 23                        | 15                 | 5,5                      |
|             | 8 <sup>2)</sup> | 210                              | 24                        | 14                 | 6                        |
| 3SIE 355 ML | 4               | 210                              | 34,0 <sup>1)</sup>        | 21,0 <sup>1)</sup> | 7,0 <sup>1)</sup>        |
|             | 6               | 210                              | 36,0 <sup>1)</sup>        | 21,0 <sup>1)</sup> | 8,0 <sup>1)</sup>        |
|             | 8 <sup>2)</sup> | 210                              | 38 <sup>1)</sup>          | 21 <sup>1)</sup>   | 9 <sup>1)</sup>          |
| 3SIE 355 H  | 4               | 210                              | 27                        | 17                 | 6                        |
|             | 6               | 210                              | 29                        | 15                 | 7                        |
|             | 8 <sup>2)</sup> | 210                              | 30                        | 15                 | 8                        |

### VERSION WITH ROLLER BEARINGS for motors 3SIE/Sh 400-500

| Mechanical Size | Type of construction | No. of poles, 2p | D.E. bearing | N.D.E. bearing |
|-----------------|----------------------|------------------|--------------|----------------|
| 3SIE/Sh 400..s  | IM1001 (B3)          | 4÷10             | on request   | on request     |
| 3SIE/Sh 450..s  | IM1001 (B3)          | 4÷12             | on request   | on request     |
| 3SIE/Sh 500..s  | IM1001 (B3)          | 4÷10             | on request   | on request     |

<sup>1)</sup> oversized bearings.

<sup>2)</sup> vertical operation possible upon request.

For motors series Sh size  $\geq 400$  information about permissible loads on request.

## Bearing types and bearing nodes

| Frame size      | Number of poles | Bearings          |
|-----------------|-----------------|-------------------|
| 2SIE (Sh) 56    | 2÷6             | 6201 2Z C3        |
| 2SIE (Sh) 63    | 2÷8             | 6202 2Z C3        |
| 3,2SIE (Sh) 71  | 2÷8             | 6203 2Z C3        |
| 3,2 SIE 80      | 2÷8             | 6204 2Z C3        |
| 3SIE 90         | 2÷8             | 6205 2Z C3        |
| 3SIE 100        | 2÷8             | 6206 2Z C3        |
| 3SIE 112        | 2÷8             | 6306 2Z C3        |
| 3SIE 132        | 2÷8             | 6308 2Z C3        |
| 3SIE 160        | 2÷8             | 6309 2Z C3        |
| 3SIE 180        | 2÷8             | 6311 2Z C3        |
| 3SIE 200        | 2÷8             | 6312 C3           |
| 3SIE 225        | 2÷8             | 6313 C3           |
| 3SIE 250        | 2÷8             | 6315 C3           |
| 3SIE 280        | 2÷8             | 6315 C3           |
| 3SIE 280        | 4÷8             | 6318 C3           |
| 3SIE 315S,MA,MB | 2               | 6315 C3           |
| 3SIE 315MC      | 2               | 6316 C3           |
| 3SIE 315S,MA,MB | 4÷8             | 6318 C3           |
| 3SIE 315MC,MD   | 4÷8             | 6320 C3 / 6318 C3 |

The bearings in basic version of motors for horizontal and vertical duty, excluding 3SIE 315 with 2p=2.

| BEARINGS for 2Sg (2p = 10 ÷ 12) |                 |          |
|---------------------------------|-----------------|----------|
| Frame size                      | Number of poles | Bearings |
| 2Sg 200                         | 10÷12           | 6312 C3  |
| 2Sg 225                         | 10÷12           | 6313 C3  |
| 2Sg 250                         | 10÷12           | 6315 C3  |
| 2Sg 280                         | 10÷12           | 6317 C3  |
| 2Sg 315                         | 10÷12           | 6318 C3  |

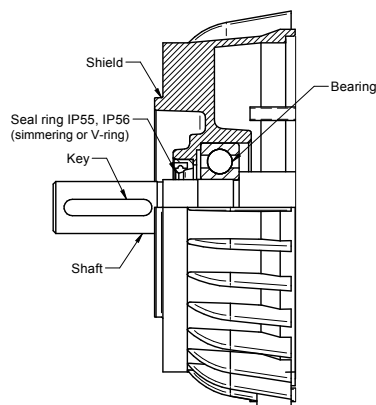
| Frame size   | Type of construction | No. of poles, 2p | D.E. Bearing | N.D.E. Bearing |
|--------------|----------------------|------------------|--------------|----------------|
| 3SIE 355ML   | IM1001 (B3)          | 2                | 6217 C3      | 6217 C3        |
| 3SIEL 355ML  | IM2001 (B35)         | 4÷8              | 6222 C3      | 6222 C3        |
| 3SIEK 355ML  | IM3011 (V1)          | 4÷8              | 6322 C3      | 6322 C3        |
| 3SIE 355H    | IM1001 (B3)          | 2                | 6217 C3      | 6217 C3        |
| 3SIEL 355H   | IM2001 (B35)         | 4÷8              | 6322 C3      | 6322 C3        |
| 3SIEK 355H   | IM3011 (V1)          | 4÷8              | 6322 C3      | 6322 C3        |
| 3SIE 355..s  | IM1001 (B3)          | 2                | 6217 C3      | 6217 C3        |
| 3SIEL 355..s | IM2001 (B35)         | 4÷8              | 6322 C3      | 6322 C3        |
| 3SIEK 355..s | IM3001 (V1)          | 4÷8              | 6322 C3      | 6322 C3        |
| 3SIE 400..s  | IM1001 (B3)          | 2                |              |                |
| 3SIEL 400..s | IM2001 (B35)         | 4÷10             |              |                |
| 3SIEK 400..s | IM3011 (V1)          | 4÷10             |              |                |
| 3SIE 450..s  | IM1001 (B3)          | 4÷12             |              |                |
| 3SIEL 450..s | IM2001 (B35)         | 4÷12             |              |                |
| 3SIEK 450..s | IM3011 (V1)          | 4÷12             |              |                |
| 3SIE 500..s  | IM1001 (B3)          | 4÷12             |              |                |
| 3SIEL 500..s | IM2001 (B35)         | 4÷12             |              |                |
| 3SIEK 500..s | IM3011 (V1)          | 4÷12             |              |                |

The bearings in basic version of motors for horizontal and vertical duty.

on request

## Bearing types and bearing nodes

Frame size  
3SIE, S(E)h56 ÷ 80



**Motor  
frame size**

**Bearings  
lubrication  
on the run**

|     |            |
|-----|------------|
| 56  | no         |
| 63  | no         |
| 71  | no         |
| 80  | no         |
| 90  | no         |
| 100 | no         |
| 112 | no         |
| 132 | on request |
| 160 | on request |
| 180 | on request |

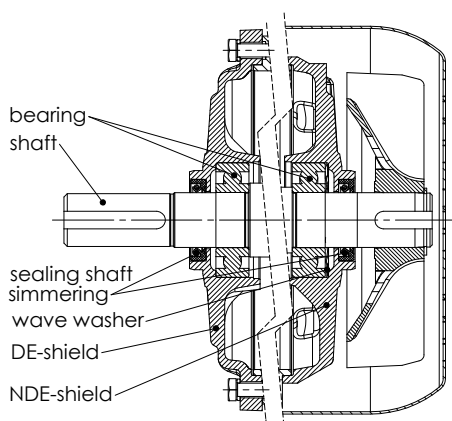
**Motor  
frame size**

**Bearings  
lubrication  
on the run**

|       |     |
|-------|-----|
| 200   | yes |
| 225   | yes |
| 250   | yes |
| 280   | yes |
| 315   | yes |
| 355ML | yes |
| 355H  | yes |
| 400   | yes |
| 450   | yes |
| 500   | yes |

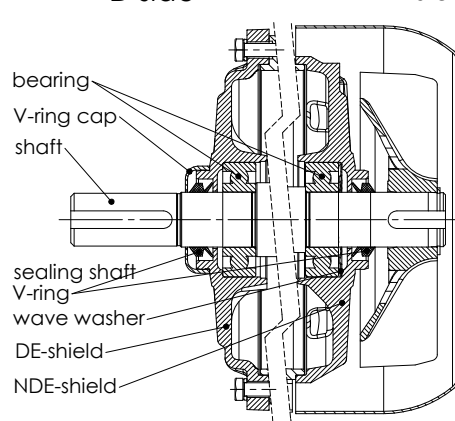
Frame size  
3SIE90 ÷ 180 (with simmering)

D side ND side

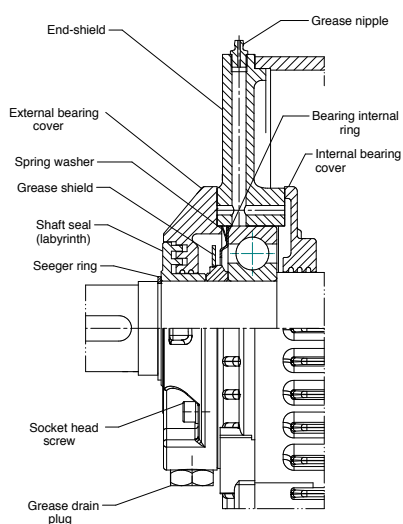


Frame size  
3SIE90 ÷ 180 (with V-ring)

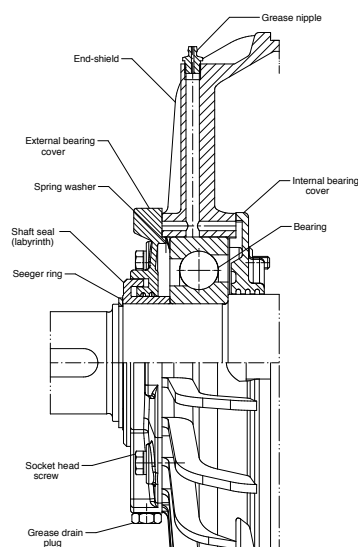
D side ND side



Frame size  
(2,3)SIE200 ÷ (2,3)SIE315 and 2Sg315



Frame size  
2Sg200 ÷ 2Sg280



## Material of housing, end shields and feet

| Frame size [mm] | Motor housing       | End shields | Feet                                        |
|-----------------|---------------------|-------------|---------------------------------------------|
| 2SIE (Sh) 56    | Aluminium           | Aluminium   | Aluminium – screwed                         |
| 2SIE (Sh) 63    | Aluminium           | Aluminium   | Aluminium – screwed                         |
| 3,2SIE (Sh) 71  | Aluminium           | Aluminium   | Aluminium – screwed                         |
| 3,2SIE 80       | Aluminium           | Aluminium   | Aluminium – screwed                         |
| 3SIE 90         | Aluminium           | Aluminium   | Aluminium – screwed                         |
| 3SIE 100        | Aluminium           | Aluminium   | Aluminium – screwed                         |
| 3SIE 112        | Aluminium           | Cast iron   | Aluminium – screwed                         |
| 3SIE 132        | Aluminium/Cast iron | Cast iron   | Aluminium/Cast iron – screwed or integrated |
| 3SIE 160        | Cast iron           | Cast iron   | Cast iron – screwed or integrated           |
| 3SIE 180        | Cast iron           | Cast iron   | Cast iron – screwed or integrated           |
| 3SIE 200        | Cast iron           | Cast iron   | Cast iron – screwed or integrated           |
| 3SIE 225        | Cast iron           | Cast iron   | Cast iron – screwed or integrated           |
| 3SIE 250        | Cast iron           | Cast iron   | Cast iron – screwed or integrated           |
| 3SIE 280        | Cast iron           | Cast iron   | Cast iron – screwed or integrated           |
| 3SIE 315        | Cast iron           | Cast iron   | Cast iron – screwed or integrated           |
| 355             | Cast iron           | Cast iron   | Cast iron – integrated                      |
| 400             | Cast iron           | Cast iron   | Cast iron – integrated                      |
| 450             | Cast iron           | Cast iron   | Cast iron – integrated                      |
| 500             | Cast iron           | Cast iron   | Cast iron – integrated                      |

In motors series 3SIE, Sh, Sg of frame size 80, 90 and 100 mm: on request end shields may be made of cast iron.

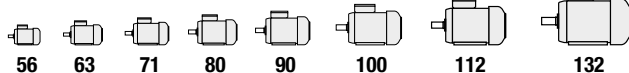
In motors 3SIE of frame size 132, 160 and 180 mm – feet may be integrated with housing (motors with cast iron housing).

In motors 3SIE of frame size 90 and 100 flanges are made of cast iron.

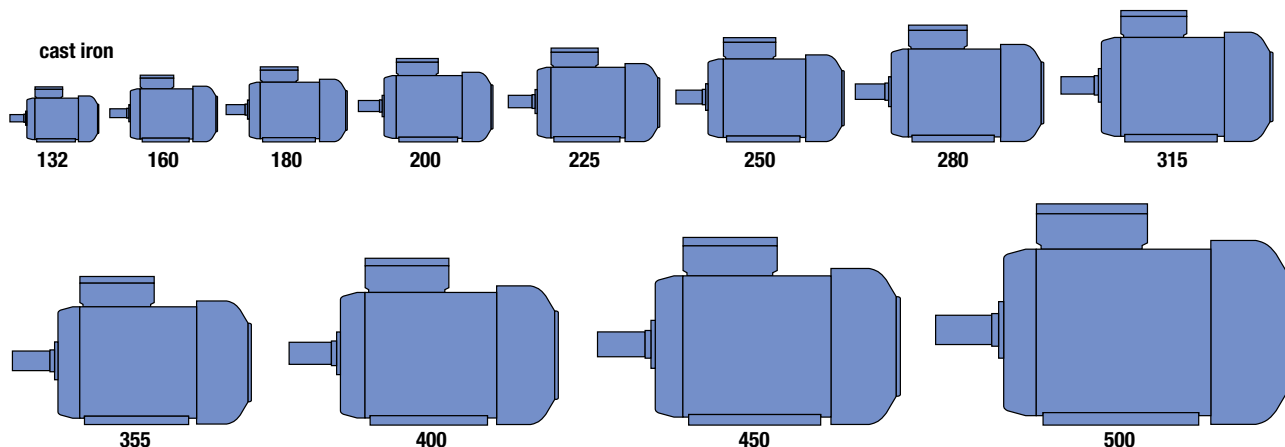
In motors 3SIE of frame size 90 to 112 cast iron motor housing and feet are possible.

In motors 2Sg series from frame 200 to 315 cast iron feet can be only integrated.

aluminium

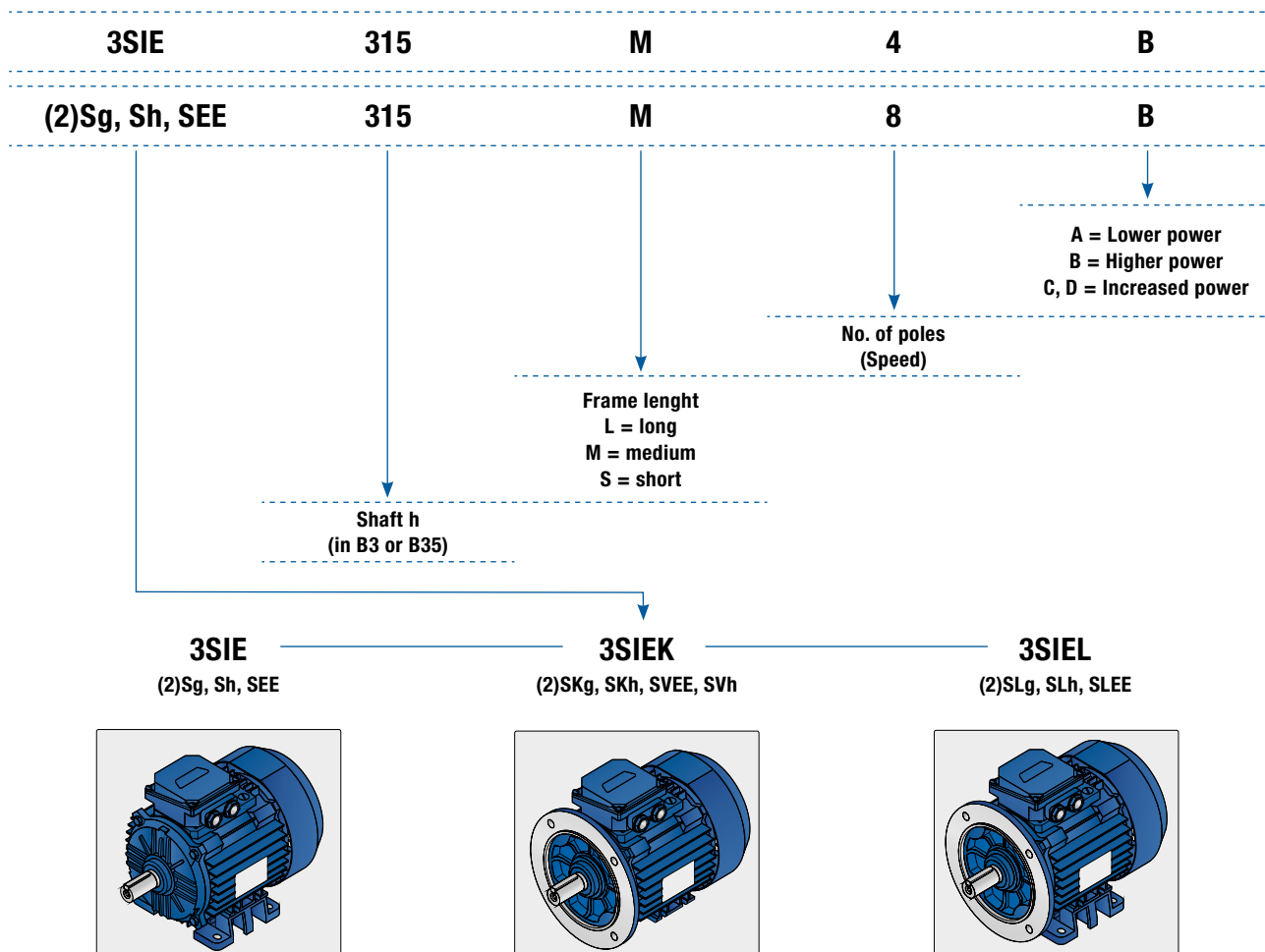


cast iron



aluminium  
cast iron

## Nomenclature



## Frequency converter operation (VSD)

Electronic speed control is carried out using a frequency converter (VSD) that adjusts the speed of the motor – and therefore the torque produced – based on the energy needed.

| Motor size                                                                                                                                             | Sh56-80<br>3SIE80                                                                                                                                                                                                                                                      | (Sg,Sh)90-180<br>3SIE90-180 | 2Sg200-280<br>3SIE200-280              | 2Sg315<br>(3)SIE315                                                             | (Sg,Sh)355-500<br>3SIE355 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|----------------------------------------|---------------------------------------------------------------------------------|---------------------------|
| In standard designed for frequency converter supply                                                                                                    | Yes                                                                                                                                                                                                                                                                    | Yes                         | Yes                                    | No<br>(available on request)                                                    |                           |
| Permissible output parameters of the frequency converter (measured on motor terminals – including supply cable between motor and frequency converter): | $U_{peak} \leq 1,35kV$<br>$t_r \geq 0,8\mu s$                                                                                                                                                                                                                          |                             | $U_{peak} < 1,5kV$<br>$t_r > 0,5\mu s$ |                                                                                 |                           |
|                                                                                                                                                        | In case of higher voltage peaks and/or lower time rise it's necessary to use motors with special insulation systems (available on request) or to use proper output filters in the frequency converter (which can reduce voltage peaks and increase voltage time rise). |                             |                                        |                                                                                 |                           |
| Insulated bearing or bearing chamber on NDE-side                                                                                                       | N/A                                                                                                                                                                                                                                                                    | N/A                         | Available on request                   | Yes (in motors designed for frequency converter supply with rated power >100kW) |                           |
| Speed control range                                                                                                                                    | Permissible speed control range will depend on the application (load curve) and parameters of the frequency converter thus it should be established individually.                                                                                                      |                             |                                        |                                                                                 |                           |

# Totally Enclosed Motors IP 55    f=50Hz    RPM=3000 min<sup>-1</sup>

| Item                               | Type        | Rated output        |      | Rated speed<br>n <sub>N</sub> | Rated torque<br>T <sub>N</sub> | Efficiency |      |      | Power factor<br>cos φ <sub>N</sub> | Full load current                   |      |                  | Locked rotor torque ratio<br>T <sub>L</sub> /T <sub>N</sub> | Locked rotor current ratio<br>I <sub>L</sub> /I <sub>N</sub> | Breakdown torque ratio<br>T <sub>B</sub> /T <sub>N</sub> | Moment of Inertia<br>J | Weight (NMB3) |      |      |
|------------------------------------|-------------|---------------------|------|-------------------------------|--------------------------------|------------|------|------|------------------------------------|-------------------------------------|------|------------------|-------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------|------------------------|---------------|------|------|
|                                    |             | P <sub>N</sub>      |      |                               |                                | 50%        | 75%  | 100% |                                    | I <sub>N</sub> at rated voltage [A] |      |                  |                                                             |                                                              |                                                          |                        |               |      |      |
|                                    |             | [kW]                | [HP] |                               |                                |            |      |      |                                    | [min <sup>-1</sup> ]                | [Nm] | [-]              |                                                             |                                                              |                                                          | 230V                   |               | 380V | 400V |
|                                    |             | [kgm <sup>2</sup> ] | [kg] |                               |                                |            |      |      |                                    |                                     |      |                  |                                                             |                                                              |                                                          |                        |               |      |      |
| 2p=2      n <sub>s</sub> =3000 rpm |             |                     |      |                               |                                |            |      |      |                                    |                                     |      |                  |                                                             |                                                              |                                                          |                        |               |      |      |
| 1                                  | Sh56-2A     | 0,09                | 0,12 | 2820                          | 0,3                            | 47,5       | 55,9 | 62,0 | 0,63                               | 0,6                                 | 0,37 | 0,35             | 2,5                                                         | 3,4                                                          | 2,7                                                      | 0,000076               | 2,9           |      |      |
| 2                                  | 2SIE56-2B   | 0,12                | 0,17 | 2800                          | 0,41                           | 59,1       | 64,7 | 65,0 | 0,73                               | 0,7                                 | 0,42 | 0,4              | 2,0                                                         | 3,0                                                          | 2,0                                                      | 0,000095               | 3,2           |      |      |
| 3                                  | 2SIE63-2A   | 0,18                | 0,25 | 2760                          | 0,62                           | 61,9       | 66,2 | 65,0 | 0,80                               | 0,85                                | 0,53 | 0,5              | 2,1                                                         | 3,4                                                          | 2,1                                                      | 0,000175               | 3,5           |      |      |
| 4                                  | 2SIE63-2B   | 0,25                | 0,33 | 2780                          | 0,85                           | 68,9       | 69,8 | 70,0 | 0,79                               | 1,1                                 | 0,7  | 0,65             | 2,4                                                         | 3,3                                                          | 2,5                                                      | 0,000235               | 4,1           |      |      |
| 5                                  | 2SIE71-2A   | 0,37                | 0,5  | 2840                          | 1,24                           | 66,0       | 72,0 | 73,0 | 0,73                               | 1,75                                | 1,1  | 1                | 3,2                                                         | 5,0                                                          | 3,2                                                      | 0,00046                | 5,6           |      |      |
| 6                                  | 2SIE71-2B   | 0,55                | 0,75 | 2820                          | 1,86                           | 70,0       | 74,0 | 75,0 | 0,73                               | 2,5                                 | 1,55 | 1,45             | 3,0                                                         | 4,7                                                          | 3,0                                                      | 0,00053                | 6,3           |      |      |
| 7                                  | 3SIE80-2A   | 0,75                | 1    | 2890                          | 2,48                           | 74,6       | 79,0 | 82,0 | 0,79                               | 2,95                                | 1,8  | 1,7              | 4,0                                                         | 7,5                                                          | 4,2                                                      | 0,001                  | 10,6          |      |      |
| 8                                  | 3SIE80-2B   | 1,1                 | 1,5  | 2890                          | 3,63                           | 73,7       | 83,0 | 83,0 | 0,77                               | 4,3                                 | 2,65 | 2,5              | 5,1                                                         | 9,5                                                          | 4,8                                                      | 0,00142                | 11,9          |      |      |
| 9                                  | 3SIE90S2    | 1,5                 | 2    | 2925                          | 4,9                            | 82,7       | 84,4 | 84,2 | 0,85                               | 5,3                                 | 3,2  | 3                | 2,4                                                         | 7,3                                                          | 3,5                                                      | 0,0014                 | 16,5          |      |      |
| 10                                 | 3SIE90L2    | 2,2                 | 3    | 2910                          | 7,2                            | 85,4       | 86,5 | 85,9 | 0,86                               | 7,5                                 | 4,5  | 4,3              | 2,7                                                         | 8,0                                                          | 4,0                                                      | 0,0019                 | 18,5          |      |      |
| 11                                 | 3SIE100L2   | 3                   | 4    | 2915                          | 9,8                            | 86,2       | 87,7 | 87,1 | 0,85                               | 10,2                                | 6,2  | 5,8              | 3,1                                                         | 8,5                                                          | 4,1                                                      | 0,0039                 | 25            |      |      |
| 12                                 | 3SIE112M2   | 4                   | 5,5  | 2925                          | 13,1                           | 88,1       | 88,8 | 88,1 | 0,89                               | 12,8                                | 7,7  | 7,4              | 2,3                                                         | 8,4                                                          | 3,2                                                      | 0,0075                 | 35,5          |      |      |
| 13                                 | 3SIE132S2A  | 5,5                 | 7,5  | 2940                          | 17,9                           | 87,7       | 89,2 | 89,2 | 0,89                               | 17,4                                | 10,5 | 10               | 2,6                                                         | 8,2                                                          | 3,6                                                      | 0,014                  | 55            |      |      |
| 14                                 | 3SIE132S2B  | 7,5                 | 10   | 2940                          | 24,4                           | 89,0       | 90,3 | 90,1 | 0,90                               | 23,2                                | 14,1 | 13,3             | 2,8                                                         | 8,5                                                          | 3,8                                                      | 0,017                  | 64            |      |      |
| 15                                 | 3SIE160M2A  | 11                  | 15   | 2945                          | 35,7                           | 89,7       | 91,0 | 91,2 | 0,90                               | 33,6                                | 20,4 | 19,3             | 2,1                                                         | 7,9                                                          | 3,0                                                      | 0,048                  | 123           |      |      |
| 16                                 | 3SIE160M2B  | 15                  | 20   | 2945                          | 48,6                           | 89,8       | 91,9 | 91,9 | 0,90                               | 45,5                                | 27,6 | 26,2             | 2,4                                                         | 8,0                                                          | 3,4                                                      | 0,059                  | 132           |      |      |
| 17                                 | 3SIE160L2   | 18,5                | 25   | 2940                          | 60,1                           | 92,2       | 92,8 | 92,4 | 0,90                               | 55,8                                | 33,8 | 32,1             | 2,3                                                         | 7,7                                                          | 3,0                                                      | 0,072                  | 139           |      |      |
| 18                                 | 3SIE180M2   | 22                  | 30   | 2955                          | 71,1                           | 91,1       | 92,4 | 92,7 | 0,90                               | 66,2                                | 40,1 | 38,1             | 3,2                                                         | 9,2                                                          | 3,7                                                      | 0,095                  | 190           |      |      |
| 19                                 | 3SIE200L2A  | 30                  | 40   | 2965                          | 97                             | 93,1       | 93,7 | 93,5 | 0,90                               | 89                                  | 54   | 51               | 2,4                                                         | 7,0                                                          | 2,8                                                      | 0,19                   | 275           |      |      |
| 20                                 | 3SIE200L2B  | 37                  | 50   | 2955                          | 120                            | 93,5       | 93,8 | 93,7 | 0,90                               | 110                                 | 67   | 63               | 2,2                                                         | 6,3                                                          | 2,6                                                      | 0,2                    | 295           |      |      |
| 21                                 | 3SIE225M2   | 45                  | 60   | 2972                          | 145                            | 94,2       | 94,6 | 94,2 | 0,88                               | 136                                 | 82   | 78               | 2,0                                                         | 6,7                                                          | 2,6                                                      | 0,26                   | 385           |      |      |
| 22                                 | 3SIE250M2   | 55                  | 75   | 2969                          | 177                            | 94,5       | 94,8 | 94,5 | 0,91                               | 161                                 | 97   | 92               | 2,2                                                         | 6,9                                                          | 2,9                                                      | 0,42                   | 495           |      |      |
| 23                                 | 3SIE280S2   | 75                  | 100  | 2978                          | 241                            | 94,2       | 94,8 | 94,7 | 0,91                               | 218                                 | 132  | 126              | 1,8                                                         | 6,7                                                          | 2,9                                                      | 0,76                   | 660           |      |      |
| 24                                 | 3SIE280M2   | 90                  | 125  | 2979                          | 289                            | 94,5       | 95,1 | 95,0 | 0,91                               | 261                                 | 158  | 150              | 1,8                                                         | 7,3                                                          | 3,1                                                      | 0,95                   | 690           |      |      |
| 25                                 | 3SIE315S2   | 110                 | 150  | 2978                          | 353                            | 95,4       | 95,6 | 95,2 | 0,92                               | 315                                 | 191  | 181              | 1,9                                                         | 6,9                                                          | 2,9                                                      | 0,98                   | 865           |      |      |
| 26                                 | 3SIE315M2A  | 132                 | 175  | 2977                          | 423                            | 95,8       | 95,9 | 95,6 | 0,92                               | 377                                 | 228  | 217              | 2,0                                                         | 7,3                                                          | 2,7                                                      | 1,28                   | 970           |      |      |
| 27                                 | 3SIE315M2B  | 160                 | 220  | 2978                          | 513                            | 95,9       | 96,1 | 95,8 | 0,92                               | 456                                 | 276  | 262              | 2,2                                                         | 8,2                                                          | 3,1                                                      | 1,57                   | 1118          |      |      |
| 28                                 | 3SIE315M2C  | 200                 | 270  | 2980                          | 641                            | 95,9       | 96,1 | 95,8 | 0,93                               |                                     | 341  | 324              | 2,3                                                         | 8,1                                                          | 3,1                                                      | 1,74                   | 1185          |      |      |
| 29                                 | 3SIE355ML2A | 250                 | 355  | 2982                          | 801                            | 94,8       | 95,7 | 95,8 | 0,91                               |                                     | 436  | 414              | 1,9                                                         | 6,8                                                          | 2,8                                                      | 2,8                    | 1620          |      |      |
| 30                                 | 3SIE355ML2B | 315                 | 425  | 2982                          | 1009                           | 95,5       | 96,0 | 96,0 | 0,91                               |                                     | 548  | 520              | 2,0                                                         | 7,3                                                          | 2,9                                                      | 3,0                    | 1700          |      |      |
| 31                                 | 3SIE355H2D  | 355                 | 475  | 2985                          | 1136                           | 95,2       | 96,0 | 96,1 | 0,91                               |                                     | 617  | 586              | 1,8                                                         | 7,5                                                          | 2,8                                                      | 4,9                    | 2160          |      |      |
| 32                                 | 3SIE355H2E  | 400                 | 540  | 2985                          | 1280                           | 95,3       | 96,0 | 96,1 | 0,91                               |                                     |      | 660              | 1,6                                                         | 8,0                                                          | 2,8                                                      | 5,7                    | 2200          |      |      |
| 33                                 | 3SIE400H2C  | 450                 | 600  | 2985                          | 1440                           | 95,3       | 96,1 | 96,2 | 0,91                               |                                     |      | 742              | 1,3                                                         | 6,6                                                          | 2,6                                                      | 6,7                    | 2800          |      |      |
| 34                                 | 3SIE400H2D  | 500                 | 680  | 2985                          | 1600                           | 95,3       | 96,1 | 96,2 | 0,91                               |                                     |      | 824              | 1,4                                                         | 7,2                                                          | 2,8                                                      | 7,7                    | 2880          |      |      |
| 35                                 | 3SIE400H2E  | 560                 | 750  | 2985                          | 1789                           | 95,3       | 96,1 | 96,2 | 0,90                               |                                     |      | 934              | 1,5                                                         | 8,0                                                          | 2,9                                                      | 8,7                    | 3100          |      |      |
| 36                                 | 3SIE400H2F  | 630                 | 850  | 2985                          | 2016                           | 95,4       | 96,2 | 96,3 | 0,90                               |                                     |      | 1049             | 1,5                                                         | 7,9                                                          | 2,8                                                      | 8,7                    | 3100          |      |      |
| 37                                 | 3SIE450H2B  | 710                 | 950  | 2990                          | 2268                           | 95,9       | 96,4 | 96,4 | 0,88                               |                                     |      | 700 <sup>1</sup> | 0,6                                                         | 6,2                                                          | 2,7                                                      | 17,2                   | 4160          |      |      |
| 38                                 | 3SIE450H2C  | 800                 | 1080 | 2991                          | 2554                           | 95,9       | 96,4 | 96,4 | 0,88                               |                                     |      | 789 <sup>1</sup> | 0,7                                                         | 6,8                                                          | 2,7                                                      | 18,4                   | 4380          |      |      |
| 39                                 | 3SIE450H2D  | 900                 | 1200 | 2990                          | 2875                           | 95,9       | 96,4 | 96,4 | 0,88                               |                                     |      | 888 <sup>1</sup> | 0,7                                                         | 6,6                                                          | 2,7                                                      | 19,0                   | 4480          |      |      |

<sup>1</sup> – at rated voltage 690V

# Totally Enclosed Motors IP 55 $f=50\text{Hz}$ RPM=1500 min<sup>-1</sup>

| Item | Type        | Rated output                       |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |                   | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|------|-------------|------------------------------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|-------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|      |             | P <sub>N</sub>                     |      | η <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |                   | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|      |             | [kW]                               | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | -                  | 230V                                | 380V | 400V              | -                              | -                              | -                              | [kgm <sup>2</sup> ] | [kg]          |
|      |             | 2p=4      n <sub>s</sub> =1500 rpm |      |                      |                |                    |      |      |                    |                                     |      |                   |                                |                                |                                |                     |               |
| 1    | Sh56-4A     | 0,06                               | 0,08 | 1400                 | 0,41           | 34,5               | 43,7 | 50,0 | 0,58               | 0,52                                | 0,31 | 0,3               | 2,0                            | 2,8                            | 2,3                            | 0,000145            | 2,6           |
| 2    | Sh56-4B     | 0,09                               | 0,12 | 1380                 | 0,62           | 48,6               | 56,2 | 60,0 | 0,61               | 0,6                                 | 0,37 | 0,35              | 2,0                            | 2,4                            | 2,1                            | 0,000186            | 2,8           |
| 3    | 2SIE63-4A   | 0,12                               | 0,17 | 1380                 | 0,83           | 49,6               | 57,1 | 60,0 | 0,63               | 0,8                                 | 0,5  | 0,45              | 1,9                            | 2,6                            | 2,0                            | 0,00024             | 3,5           |
| 4    | 2SIE63-4B   | 0,18                               | 0,25 | 1380                 | 1,25           | 54,2               | 60,6 | 65,0 | 0,65               | 1,1                                 | 0,7  | 0,65              | 2,0                            | 2,6                            | 2,0                            | 0,00031             | 4,1           |
| 5    | 2SIE71-4A   | 0,25                               | 0,33 | 1390                 | 1,72           | 61,0               | 67,0 | 69,0 | 0,60               | 1,55                                | 0,95 | 0,9               | 2,7                            | 3,3                            | 2,8                            | 0,00072             | 5,8           |
| 6    | 2SIE71-4B   | 0,37                               | 0,55 | 1400                 | 2,52           | 68,0               | 72,0 | 73,0 | 0,65               | 2                                   | 1,2  | 1,15              | 2,5                            | 3,5                            | 2,5                            | 0,00085             | 7,2           |
| 7    | 2SIE80-4A   | 0,55                               | 0,75 | 1400                 | 3,75           | 71,0               | 75,4 | 77,1 | 0,61               | 2,95                                | 1,8  | 1,7               | 3,1                            | 4,1                            | 3,1                            | 0,0016              | 8,4           |
| 8    | 3SIE80-4B   | 0,75                               | 1    | 1430                 | 5              | 80,1               | 81,7 | 82,5 | 0,64               | 3,6                                 | 2,2  | 2,1               | 4,1                            | 6,3                            | 3,9                            | 0,00265             | 11            |
| 9    | 3SIE90S4    | 1,1                                | 1,5  | 1450                 | 7,2            | 81,8               | 84,0 | 84,1 | 0,77               | 4,3                                 | 2,6  | 2,5               | 2,3                            | 7,2                            | 3,5                            | 0,0036              | 18            |
| 10   | 3SIE90L4    | 1,5                                | 2    | 1450                 | 9,9            | 83,9               | 85,5 | 85,3 | 0,78               | 5,7                                 | 3,4  | 3,3               | 2,5                            | 7,4                            | 3,4                            | 0,004               | 21            |
| 11   | 3SIE100L4A  | 2,2                                | 3    | 1465                 | 14,3           | 84,4               | 86,4 | 86,7 | 0,80               | 8                                   | 4,8  | 4,6               | 2,5                            | 7,1                            | 3,3                            | 0,0076              | 27,5          |
| 12   | 3SIE100L4B  | 3                                  | 4    | 1465                 | 19,6           | 85,8               | 87,7 | 87,7 | 0,79               | 10,9                                | 6,6  | 6,3               | 2,5                            | 7,4                            | 3,5                            | 0,0086              | 31            |
| 13   | 3SIE112M4   | 4                                  | 5,5  | 1460                 | 26,2           | 88,5               | 89,0 | 88,6 | 0,80               | 14,2                                | 8,6  | 8,1               | 2,1                            | 7,0                            | 3,0                            | 0,0115              | 41,5          |
| 14   | 3SIE132S4   | 5,5                                | 7,5  | 1465                 | 35,9           | 88,6               | 89,8 | 89,6 | 0,85               | 18,1                                | 11   | 10,4              | 2,5                            | 8,5                            | 3,4                            | 0,036               | 63            |
| 15   | 3SIE132M4   | 7,5                                | 10   | 1465                 | 48,9           | 89,7               | 90,6 | 90,4 | 0,83               | 25,1                                | 15,2 | 14,4              | 2,6                            | 8,8                            | 3,5                            | 0,042               | 67            |
| 16   | 3SIE160M4   | 11                                 | 15   | 1470                 | 71,5           | 90,9               | 91,7 | 91,4 | 0,83               | 36,4                                | 22   | 20,9              | 2,6                            | 7,3                            | 3,0                            | 0,088               | 136           |
| 17   | 3SIE160L4   | 15                                 | 20   | 1475                 | 97,1           | 92,0               | 92,5 | 92,1 | 0,83               | 49,3                                | 29,8 | 28,3              | 2,7                            | 7,9                            | 3,2                            | 0,104               | 154           |
| 18   | 3SIE180M4   | 18,5                               | 25   | 1475                 | 119,8          | 92,1               | 92,8 | 92,6 | 0,85               | 59                                  | 35,7 | 33,9              | 2,9                            | 8,3                            | 3,5                            | 0,162               | 190           |
| 19   | 3SIE180L4   | 22                                 | 30   | 1475                 | 142,4          | 91,4               | 92,8 | 93,0 | 0,83               | 71,5                                | 42,3 | 41,1              | 3,2                            | 8,5                            | 3,6                            | 0,185               | 200           |
| 20   | 3SIE200L4   | 30                                 | 40   | 1477                 | 194            | 94,2               | 94,3 | 93,8 | 0,89               | 90                                  | 55   | 52                | 2,1                            | 6,4                            | 2,6                            | 0,38                | 329           |
| 21   | 3SIE225S4   | 37                                 | 50   | 1485                 | 238            | 94,1               | 94,4 | 94,0 | 0,87               | 114                                 | 69   | 65                | 2,0                            | 6,9                            | 2,8                            | 0,51                | 373           |
| 22   | 3SIE225M4   | 45                                 | 60   | 1483                 | 290            | 94,4               | 94,8 | 94,3 | 0,88               | 136                                 | 82   | 78                | 2,1                            | 7,1                            | 2,7                            | 0,59                | 410           |
| 23   | 3SIE250M4   | 55                                 | 75   | 1487                 | 353            | 94,0               | 94,8 | 94,7 | 0,90               | 162                                 | 98   | 93                | 2,5                            | 7,6                            | 2,9                            | 1                   | 520           |
| 24   | 3SIE280S4   | 75                                 | 100  | 1488                 | 481            | 93,9               | 95,0 | 95,0 | 0,91               | 218                                 | 132  | 125               | 2,0                            | 6,8                            | 2,5                            | 1,37                | 710           |
| 25   | 3SIE280M4   | 90                                 | 125  | 1491                 | 576            | 94,9               | 95,5 | 95,4 | 0,89               | 266                                 | 161  | 153               | 2,6                            | 8,4                            | 3,0                            | 1,8                 | 761           |
| 26   | 3SIE315S4   | 110                                | 150  | 1488                 | 706            | 95,1               | 95,5 | 95,4 | 0,90               | 322                                 | 195  | 185               | 2,0                            | 6,6                            | 2,4                            | 2,25                | 920           |
| 27   | 3SIE315M4A  | 132                                | 175  | 1489                 | 847            | 95,6               | 95,9 | 95,6 | 0,91               | 381                                 | 231  | 219               | 2,3                            | 7,9                            | 2,8                            | 2,59                | 1030          |
| 28   | 3SIE315M4B  | 160                                | 220  | 1490                 | 1026           | 95,9               | 96,1 | 95,8 | 0,90               | 466                                 | 282  | 268               | 2,4                            | 8,5                            | 3,1                            | 2,8                 | 1130          |
| 29   | 3SIE315M4C  | 200                                | 270  | 1488                 | 1284           | 95,8               | 96,2 | 96,2 | 0,90               |                                     | 351  | 333               | 2,4                            | 8,1                            | 2,9                            | 3,46                | 1205          |
| 30   | 3SIE355ML4A | 250                                | 355  | 1489                 | 1603           | 95,8               | 96,1 | 96,0 | 0,89               |                                     | 444  | 422               | 2,0                            | 7,4                            | 2,3                            | 5,3                 | 1700          |
| 31   | 3SIE355ML4B | 315                                | 425  | 1489                 | 2020           | 95,9               | 96,1 | 96,0 | 0,89               |                                     | 560  | 532               | 2,2                            | 7,2                            | 2,5                            | 6,4                 | 1830          |
| 32   | 3SIE355H4D  | 355                                | 475  | 1488                 | 2278           | 95,8               | 96,1 | 96,0 | 0,88               |                                     | 639  | 607               | 1,6                            | 6,5                            | 2,2                            | 8,2                 | 2200          |
| 33   | 3SIE355H4E  | 400                                | 540  | 1487                 | 2569           | 95,8               | 96,1 | 96,0 | 0,88               |                                     |      | 683               | 1,8                            | 7,0                            | 2,3                            | 9,1                 | 2450          |
| 34   | 3SIE400H4C  | 450                                | 600  | 1490                 | 2884           | 95,5               | 96,1 | 96,0 | 0,87               |                                     |      | 778               | 1,6                            | 7,6                            | 2,6                            | 12,3                | 2920          |
| 35   | 3SIE400H4D  | 500                                | 680  | 1491                 | 3203           | 95,5               | 96,1 | 96,0 | 0,87               |                                     |      | 864               | 1,6                            | 7,5                            | 2,6                            | 13,6                | 3100          |
| 36   | 3SIE400H4E  | 560                                | 750  | 1491                 | 3587           | 95,5               | 96,1 | 96,0 | 0,87               |                                     |      | 968               | 1,7                            | 7,6                            | 2,6                            | 15,0                | 3250          |
| 37   | 3SIE400H4F  | 600                                | 810  | 1491                 | 3843           | 95,5               | 96,0 | 96,0 | 0,87               |                                     |      | 1037              | 1,9                            | 8,5                            | 2,9                            | 17,2                | 3500          |
| 38   | 3SIE450H4B  | 710                                | 950  | 1492                 | 4545           | 96,0               | 96,5 | 96,5 | 0,87               |                                     |      | 708 <sup>1</sup>  | 1,6                            | 7,0                            | 2,5                            | 27,1                | 4000          |
| 39   | 3SIE450H4C  | 800                                | 1070 | 1493                 | 5117           | 96,0               | 96,5 | 96,5 | 0,88               |                                     |      | 788 <sup>1</sup>  | 1,6                            | 6,8                            | 2,6                            | 31,6                | 4400          |
| 40   | 3SIE450H4D  | 900                                | 1200 | 1493                 | 5757           | 96,0               | 96,5 | 96,5 | 0,88               |                                     |      | 887 <sup>1</sup>  | 1,5                            | 7,3                            | 2,5                            | 35,4                | 4620          |
| 41   | 3SIE450H4E  | 1000                               | 1350 | 1493                 | 6397           | 96,0               | 96,5 | 96,5 | 0,88               |                                     |      | 985 <sup>1</sup>  | 1,5                            | 7,3                            | 2,5                            | 38,0                | 4700          |
| 42   | Sh500H4Cs   | 1120                               | 1500 | 1495                 | 7155           | 96,7               | 97,3 | 97,4 | 0,87               |                                     |      | 1106 <sup>1</sup> | 0,8                            | 6,9                            | 2,5                            | 58,4                | 6100          |
| 43   | Sh500H4Ds   | 1250                               | 1680 | 1495                 | 7985           | 96,7               | 97,3 | 97,5 | 0,87               |                                     |      | 1233 <sup>1</sup> | 0,8                            | 7,5                            | 2,7                            | 65,2                | 6600          |
| 44   | Sh500H4Es   | 1400                               | 1880 | 1494                 | 8949           | 97,0               | 97,5 | 97,5 | 0,88               |                                     |      | 1365 <sup>1</sup> | 0,7                            | 6,4                            | 2,4                            | 66,5                | 6900          |

<sup>1</sup> – at rated voltage 690V



# Totally Enclosed Motors IP 55    f=50Hz    RPM=1000 min<sup>-1</sup>

| Item                                               | Type        | Rated output |      | Rated speed<br>$n_N$ | Rated torque<br>$T_N$ | Efficiency |              |                  | Power factor<br>$\cos \varphi_N$ | Full load current          |      |                   | Locked rotor torque ratio<br>$T_L/T_N$ | Locked rotor current ratio<br>$I_L/I_N$ | Breakdown torque ratio<br>$T_B/T_N$ | Moment of Inertia<br>J | Weight (IMB3) |
|----------------------------------------------------|-------------|--------------|------|----------------------|-----------------------|------------|--------------|------------------|----------------------------------|----------------------------|------|-------------------|----------------------------------------|-----------------------------------------|-------------------------------------|------------------------|---------------|
|                                                    |             | $P_N$        |      |                      |                       | $\eta_N$   | $\eta_N$ [%] | $\cos \varphi_N$ |                                  | $I_N$ at rated voltage [A] |      |                   |                                        |                                         |                                     |                        |               |
|                                                    |             | [kW]         | [HP] |                      |                       |            |              |                  |                                  | [min <sup>-1</sup> ]       | [Nm] | 50%               |                                        |                                         |                                     |                        |               |
| 2p=6                      n <sub>s</sub> =1000 rpm |             |              |      |                      |                       |            |              |                  |                                  |                            |      |                   |                                        |                                         |                                     |                        |               |
| 1                                                  | Sh56-6B     | 0,06         | 0,08 | 860                  | 0,66                  | 20,0       | 27,2         | 32,0             | 0,65                             | 0,73                       | 0,44 | 0,42              | 1,4                                    | 1,7                                     | 1,5                                 | 0,00019                | 2,8           |
| 2                                                  | Sh63-6A     | 0,09         | 0,12 | 870                  | 0,99                  | 39,7       | 46,3         | 49,0             | 0,53                             | 0,9                        | 0,53 | 0,5               | 1,5                                    | 2,0                                     | 1,6                                 | 0,00024                | 3,5           |
| 3                                                  | 2SIE63-6B   | 0,12         | 0,17 | 920                  | 1,25                  | 52,0       | 58,7         | 60,0             | 0,52                             | 0,95                       | 0,6  | 0,55              | 2,1                                    | 2,8                                     | 2,5                                 | 0,00077                | 5,9           |
| 4                                                  | 2SIE71-6A   | 0,18         | 0,25 | 900                  | 1,91                  | 44,9       | 53,1         | 57,0             | 0,65                             | 1,2                        | 0,75 | 0,7               | 2,3                                    | 2,6                                     | 2,3                                 | 0,00074                | 5             |
| 5                                                  | 2SIE71-6B   | 0,25         | 0,33 | 880                  | 2,71                  | 61,3       | 65,6         | 65,0             | 0,69                             | 1,4                        | 0,85 | 0,8               | 2,3                                    | 2,8                                     | 2,3                                 | 0,00122                | 6,2           |
| 6                                                  | 2SIE80-6A   | 0,37         | 0,5  | 920                  | 3,84                  | 70,3       | 73,8         | 73,0             | 0,69                             | 1,9                        | 1,15 | 1,1               | 2,2                                    | 3,3                                     | 2,0                                 | 0,00207                | 8,6           |
| 7                                                  | 2SIE80-6B   | 0,55         | 0,75 | 900                  | 5,83                  | 72,5       | 74,7         | 73,1             | 0,78                             | 2,4                        | 1,5  | 1,4               | 2,0                                    | 3,6                                     | 2,2                                 | 0,00293                | 10,8          |
| 8                                                  | 3SIE90S6    | 0,75         | 1    | 940                  | 7,6                   | 72,2       | 79,3         | 78,9             | 0,70                             | 3,4                        | 2,1  | 2                 | 1,7                                    | 4,3                                     | 2,4                                 | 0,0032                 | 16            |
| 9                                                  | 3SIE90L6    | 1,1          | 1,5  | 940                  | 11,2                  | 79,9       | 81,9         | 81,0             | 0,70                             | 4,9                        | 2,9  | 2,8               | 2,1                                    | 4,5                                     | 2,6                                 | 0,009                  | 19            |
| 10                                                 | 3SIE100L6   | 1,5          | 2    | 960                  | 14,9                  | 81,1       | 82,8         | 82,5             | 0,74                             | 6,2                        | 3,7  | 3,5               | 2,1                                    | 5,9                                     | 2,9                                 | 0,01                   | 23,5          |
| 11                                                 | 3SIE112M6   | 2,2          | 3    | 965                  | 21,8                  | 83,9       | 84,9         | 84,3             | 0,76                             | 8,6                        | 5,2  | 5                 | 2,1                                    | 5,9                                     | 2,6                                 | 0,0177                 | 34            |
| 12                                                 | 3SIE132S6   | 3            | 4    | 965                  | 29,7                  | 85,4       | 86,4         | 85,6             | 0,81                             | 10,9                       | 6,6  | 6,2               | 2,2                                    | 6,6                                     | 2,9                                 | 0,044                  | 54            |
| 13                                                 | 3SIE132M6A  | 4            | 5,5  | 965                  | 39,6                  | 89,1       | 89,2         | 88,0             | 0,81                             | 14,1                       | 8,5  | 8,1               | 2,2                                    | 6,5                                     | 3,0                                 | 0,0579                 | 62            |
| 14                                                 | 3SIE132M6B  | 5,5          | 7,5  | 960                  | 54,7                  | 88,9       | 89,1         | 88,0             | 0,81                             | 19,4                       | 11,7 | 11,1              | 2,4                                    | 6,7                                     | 3,1                                 | 0,0637                 | 66            |
| 15                                                 | 3SIE160M6   | 7,5          | 10   | 970                  | 73,8                  | 89,0       | 89,9         | 89,5             | 0,82                             | 25,7                       | 15,5 | 14,8              | 2,3                                    | 6,6                                     | 2,8                                 | 0,102                  | 134           |
| 16                                                 | 3SIE160L6   | 11           | 15   | 970                  | 108,3                 | 91,4       | 91,4         | 90,3             | 0,82                             | 37,3                       | 22,6 | 21,4              | 2,2                                    | 7,0                                     | 3,0                                 | 0,123                  | 146           |
| 17                                                 | 3SIE180L6   | 15           | 20   | 975                  | 146,9                 | 90,0       | 91,3         | 91,2             | 0,81                             | 51                         | 30,9 | 29,3              | 3,3                                    | 7,3                                     | 2,8                                 | 0,276                  | 198           |
| 18                                                 | 3SIE200L6A  | 18,5         | 25   | 988                  | 179                   | 91,3       | 92,0         | 91,7             | 0,81                             | 63                         | 38   | 36                | 2,0                                    | 5,8                                     | 2,4                                 | 0,5                    | 285           |
| 19                                                 | 3SIE200L6B  | 22           | 30   | 987                  | 213                   | 91,7       | 92,2         | 92,2             | 0,82                             | 73                         | 44   | 42                | 2,0                                    | 5,7                                     | 2,1                                 | 0,64                   | 309           |
| 20                                                 | 3SIE225M6   | 30           | 40   | 989                  | 290                   | 92,3       | 92,9         | 92,9             | 0,83                             | 98                         | 59   | 56                | 1,9                                    | 6,4                                     | 2,3                                 | 0,89                   | 392           |
| 21                                                 | 3SIE250M6   | 37           | 50   | 991                  | 357                   | 92,2       | 93,4         | 93,3             | 0,82                             | 121                        | 73   | 70                | 2,0                                    | 6,7                                     | 2,6                                 | 1,23                   | 440           |
| 22                                                 | 3SIE280S6   | 45           | 60   | 993                  | 433                   | 92,9       | 93,8         | 93,7             | 0,81                             | 149                        | 90   | 86                | 2,3                                    | 7,3                                     | 2,6                                 | 1,7                    | 635           |
| 23                                                 | 3SIE280M6   | 55           | 75   | 992                  | 529                   | 93,8       | 94,4         | 94,1             | 0,82                             | 179                        | 108  | 103               | 2,3                                    | 6,8                                     | 2,6                                 | 1,9                    | 695           |
| 24                                                 | 3SIE315S6   | 75           | 100  | 992                  | 722                   | 94,6       | 95,0         | 94,7             | 0,82                             | 242                        | 147  | 139               | 2,4                                    | 7,1                                     | 2,6                                 | 2,4                    | 900           |
| 25                                                 | 3SIE315M6A  | 90           | 125  | 993                  | 866                   | 95,1       | 95,4         | 95,1             | 0,82                             | 290                        | 175  | 167               | 2,6                                    | 7,6                                     | 2,7                                 | 2,93                   | 965           |
| 26                                                 | 3SIE315M6B  | 110          | 150  | 992                  | 1059                  | 95,2       | 95,6         | 95,2             | 0,82                             | 354                        | 214  | 203               | 2,8                                    | 7,5                                     | 2,8                                 | 3,46                   | 1110          |
| 27                                                 | 3SIE315M6C  | 132          | 175  | 992                  | 1271                  | 95,4       | 95,8         | 95,4             | 0,83                             | 418                        | 253  | 241               | 2,5                                    | 7,0                                     | 2,5                                 | 4,21                   | 1230          |
| 28                                                 | 3SIE315M6D  | 160          | 220  | 992                  | 1540                  | 95,2       | 95,7         | 95,6             | 0,78                             | 539                        | 326  | 310               | 3,3                                    | 8,0                                     | 2,7                                 | 4,36                   | 1235          |
| 29                                                 | 3SIE355ML6A | 200          | 270  | 989                  | 1931                  | 95,3       | 95,8         | 95,8             | 0,85                             |                            | 373  | 350               | 2,0                                    | 7,1                                     | 2,3                                 | 7,2                    | 1740          |
| 30                                                 | 3SIE355ML6B | 250          | 355  | 990                  | 2412                  | 95,4       | 95,8         | 95,8             | 0,85                             |                            | 466  | 438               | 2,1                                    | 7,2                                     | 2,4                                 | 8,6                    | 1950          |
| 31                                                 | 3SIE355H6C  | 315          | 425  | 991                  | 3036                  | 95,5       | 95,8         | 95,8             | 0,85                             |                            | 588  | 558               | 2,0                                    | 7,1                                     | 2,2                                 | 12,7                   | 2390          |
| 32                                                 | 3SIE355H6D  | 355          | 475  | 990                  | 3425                  | 95,5       | 95,8         | 95,8             | 0,85                             |                            | 662  | 627               | 1,9                                    | 7,3                                     | 2,2                                 | 14,3                   | 2550          |
| 33                                                 | 3SIE355H6E  | 400          | 540  | 992                  | 3851                  | 95,5       | 95,8         | 95,8             | 0,85                             |                            |      | 709               | 2,2                                    | 8,0                                     | 2,4                                 | 15,3                   | 2600          |
| 34                                                 | 3SIE400H6C  | 450          | 600  | 993                  | 4328                  | 95,0       | 95,8         | 95,8             | 0,82                             |                            |      | 827               | 1,5                                    | 7,5                                     | 2,5                                 | 19,4                   | 3250          |
| 35                                                 | 3SIE400H6D  | 500          | 680  | 994                  | 4804                  | 95,0       | 95,8         | 95,8             | 0,82                             |                            |      | 919               | 1,7                                    | 8,0                                     | 2,6                                 | 22,0                   | 3450          |
| 36                                                 | 3SIE450H6B  | 560          | 750  | 994                  | 5380                  | 95,4       | 95,9         | 95,9             | 0,86                             |                            |      | 568 <sup>1</sup>  | 1,2                                    | 6,8                                     | 2,6                                 | 40,6                   | 4300          |
| 37                                                 | 3SIE450H6C  | 630          | 850  | 994                  | 6053                  | 95,5       | 96,0         | 96,0             | 0,87                             |                            |      | 631 <sup>1</sup>  | 1,3                                    | 7,0                                     | 2,6                                 | 45,0                   | 4500          |
| 38                                                 | 3SIE450H6D  | 710          | 950  | 994                  | 6821                  | 95,5       | 96,0         | 96,1             | 0,87                             |                            |      | 711 <sup>1</sup>  | 1,4                                    | 7,4                                     | 2,6                                 | 50,0                   | 4890          |
| 39                                                 | 3SIE500H6A  | 800          | 1080 | 995                  | 7678                  | 95,5       | 96,2         | 96,3             | 0,86                             |                            |      | 808 <sup>1</sup>  | 0,9                                    | 5,8                                     | 2,4                                 | 61,5                   | 6200          |
| 40                                                 | 3SIE500H6B  | 900          | 1200 | 995                  | 8638                  | 95,6       | 96,2         | 96,3             | 0,86                             |                            |      | 909 <sup>1</sup>  | 1,0                                    | 6,0                                     | 2,2                                 | 71,0                   | 6550          |
| 41                                                 | 3SIE500H6C  | 1000         | 1350 | 995                  | 9598                  | 95,7       | 96,3         | 96,4             | 0,86                             |                            |      | 1009 <sup>1</sup> | 1,0                                    | 6,4                                     | 2,5                                 | 75,0                   | 6700          |
| 42                                                 | Sh500H6Ds   | 1120         | 1500 | 996                  | 10739                 | 96,1       | 96,8         | 97,0             | 0,85                             |                            |      | 1137 <sup>1</sup> | 1,1                                    | 7,0                                     | 2,6                                 | 80                     | 7130          |
| 43                                                 | Sh500H6Es   | 1250         | 1680 | 996                  | 11985                 | 96,2       | 96,9         | 97,0             | 0,85                             |                            |      | 1269 <sup>1</sup> | 1,1                                    | 7,1                                     | 2,6                                 | 84,9                   | 7460          |

<sup>1</sup> – at rated voltage 690V

# Totally Enclosed Motors IP 55    f=50Hz    RPM=750 min<sup>-1</sup>

| Item                              | Type        | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |                   | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|-----------------------------------|-------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|-------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                   |             | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |                   | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                   |             | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 230V                                | 380V | 400V              | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| 2p=8      n <sub>s</sub> =750 rpm |             |                |      |                      |                |                    |      |      |                    |                                     |      |                   |                                |                                |                                |                     |               |
| 1                                 | Sh63-8A     | 0,04           | 0,06 | 670                  | 0,57           | 11,3               | 16,2 | 30,0 | 0,56               | 0,9                                 | 0,53 | 0,5               | 1,8                            | 1,3                            | 1,7                            | 0,00024             | 3,5           |
| 2                                 | Sh63-8B     | 0,06           | 0,08 | 660                  | 0,86           | 10,7               | 15,3 | 28,0 | 0,48               | 1,1                                 | 0,7  | 0,65              | 1,4                            | 1,4                            | 1,4                            | 0,000307            | 4,1           |
| 3                                 | Sh71-8A     | 0,09           | 0,12 | 680                  | 1,26           | 24,1               | 30,6 | 35,0 | 0,50               | 1,3                                 | 0,8  | 0,75              | 2,2                            | 1,6                            | 2,2                            | 0,000736            | 4,7           |
| 4                                 | 2SIE71-8B   | 0,12           | 0,17 | 670                  | 1,71           | 31,8               | 40,2 | 45,0 | 0,59               | 1,15                                | 0,7  | 0,65              | 2,2                            | 1,9                            | 2,0                            | 0,003882            | 5,6           |
| 5                                 | 2SIE80-8A   | 0,18           | 0,25 | 710                  | 2,42           | 47,4               | 55,7 | 58,7 | 0,55               | 1,4                                 | 0,85 | 0,8               | 2,2                            | 2,9                            | 2,6                            | 0,002933            | 11            |
| 6                                 | 2SIE80-8B   | 0,25           | 0,33 | 700                  | 3,41           | 56,1               | 63,2 | 64,1 | 0,56               | 1,75                                | 1,1  | 1                 | 2,2                            | 3,0                            | 2,5                            | 0,00345             | 12,7          |
| 7                                 | 2SIE90S8    | 0,37           | 0,5  | 700                  | 5              | 43,0               | 54,0 | 56,1 | 0,56               | 3,0                                 | 1,8  | 1,7               | 1,3                            | 3,0                            | 2,1                            | 0,0021              | 13            |
| 8                                 | 2SIE90L8    | 0,55           | 0,75 | 700                  | 7,5            | 52,8               | 61,2 | 61,7 | 0,62               | 3,6                                 | 2,2  | 2,1               | 1,4                            | 3,1                            | 2,0                            | 0,0030              | 16            |
| 9                                 | 3SIE100L8A  | 0,75           | 1    | 720                  | 9,9            | 69,5               | 74,3 | 75,0 | 0,63               | 4                                   | 2,4  | 2,3               | 1,4                            | 4,0                            | 2,4                            | 0,0076              | 19,5          |
| 10                                | 3SIE100L8B  | 1,1            | 1,5  | 710                  | 14,8           | 76,3               | 78,7 | 77,7 | 0,66               | 5,4                                 | 3,3  | 3,1               | 1,4                            | 3,7                            | 2,0                            | 0,0122              | 27            |
| 11                                | 3SIE112M8   | 1,5            | 2    | 700                  | 20,5           | 79,2               | 80,8 | 79,7 | 0,70               | 6,7                                 | 4,1  | 3,9               | 1,7                            | 4,6                            | 2,7                            | 0,0168              | 33,5          |
| 12                                | 3SIE132S8   | 2,2            | 3    | 710                  | 29,6           | 81,2               | 82,6 | 81,9 | 0,73               | 9,2                                 | 5,6  | 5,3               | 2,2                            | 5,5                            | 2,9                            | 0,0361              | 46            |
| 13                                | 3SIE132M8   | 3              | 4    | 710                  | 40,4           | 82,8               | 84,2 | 83,5 | 0,75               | 12                                  | 7,3  | 6,9               | 2,3                            | 5,7                            | 2,9                            | 0,0489              | 54            |
| 14                                | 3SIE160M8A  | 4              | 5,5  | 710                  | 53,8           | 85,7               | 86,3 | 84,8 | 0,73               | 16,2                                | 9,8  | 9,3               | 1,6                            | 4,6                            | 2,3                            | 0,057               | 106           |
| 15                                | 3SIE160M8B  | 5,5            | 7,5  | 710                  | 74             | 86,4               | 87,2 | 86,2 | 0,73               | 21,9                                | 13,3 | 12,6              | 1,8                            | 5,0                            | 2,6                            | 0,078               | 118           |
| 16                                | 3SIE160L8   | 7,5            | 10   | 710                  | 100,9          | 87,9               | 88,5 | 87,3 | 0,77               | 28                                  | 17   | 16,1              | 2,0                            | 5,4                            | 2,6                            | 0,102               | 132           |
| 17                                | 3SIE180L8   | 11             | 15   | 730                  | 143,9          | 87,7               | 89,2 | 89,0 | 0,76               | 41                                  | 24,8 | 23,8              | 2,0                            | 5,5                            | 2,4                            | 0,213               | 165           |
| 18                                | 3SIE200L8   | 15             | 20   | 736                  | 195            | 88,0               | 89,6 | 89,6 | 0,78               | 54                                  | 32,5 | 31                | 2,0                            | 6,4                            | 2,9                            | 0,45                | 260           |
| 19                                | 3SIE225S8   | 18,5           | 25   | 737                  | 240            | 89,5               | 90,4 | 90,1 | 0,77               | 67                                  | 41   | 38,5              | 2,4                            | 6,0                            | 2,3                            | 0,58                | 315           |
| 20                                | 3SIE225M8   | 22             | 30   | 737                  | 285            | 90,7               | 91,0 | 90,6 | 0,79               | 77                                  | 47   | 44                | 2,4                            | 6,0                            | 2,0                            | 0,68                | 350           |
| 21                                | 3SIE250M8   | 30             | 40   | 739                  | 388            | 90,8               | 91,6 | 91,3 | 0,80               | 103                                 | 62   | 59                | 2,8                            | 6,6                            | 2,5                            | 1,27                | 460           |
| 22                                | 3SIE280S8   | 37             | 50   | 738                  | 479            | 91,4               | 92,2 | 92,0 | 0,81               | 125                                 | 75   | 72                | 2,3                            | 5,8                            | 2,2                            | 1,47                | 600           |
| 23                                | 3SIE280M8   | 45             | 60   | 738                  | 582            | 92,4               | 92,8 | 92,2 | 0,82               | 149                                 | 90   | 86                | 2,3                            | 6,0                            | 2,1                            | 1,8                 | 640           |
| 24                                | 3SIE315S8   | 55             | 75   | 740                  | 710            | 91,4               | 92,5 | 92,5 | 0,80               | 187                                 | 113  | 107               | 1,9                            | 6,3                            | 2,6                            | 1,9                 | 850           |
| 25                                | 3SIE315M8A  | 75             | 100  | 739                  | 969            | 93,2               | 93,6 | 93,1 | 0,80               | 253                                 | 153  | 145               | 2,1                            | 6,6                            | 2,8                            | 2,6                 | 960           |
| 26                                | 3SIE315M8B  | 90             | 125  | 739                  | 1163           | 93,3               | 93,7 | 93,4 | 0,80               | 302                                 | 183  | 174               | 2,2                            | 7,1                            | 3,1                            | 3,3                 | 1090          |
| 27                                | 3SIE315M8C  | 110            | 150  | 740                  | 1420           | 93,8               | 94,0 | 93,7 | 0,78               | 378                                 | 229  | 217               | 2,4                            | 7,3                            | 2,8                            | 4,1                 | 1230          |
| 28                                | 3SIE315M8D  | 132            | 175  | 739                  | 1706           | 93,4               | 94,1 | 94,0 | 0,80               | 441                                 | 267  | 253               | 2,2                            | 6,9                            | 2,9                            | 4,2                 | 1245          |
| 29                                | 3SIE355ML8A | 160            | 215  | 739                  | 2068           | 94,4               | 94,8 | 94,3 | 0,80               |                                     | 322  | 306               | 1,4                            | 5,8                            | 2,0                            | 7,0                 | 1680          |
| 30                                | 3SIE355ML8B | 200            | 270  | 740                  | 2581           | 94,7               | 95,1 | 94,6 | 0,80               |                                     | 402  | 382               | 1,7                            | 6,2                            | 2,1                            | 8,3                 | 1750          |
| 31                                | 3SIE355H8D  | 250            | 340  | 742                  | 3218           | 94,2               | 94,8 | 94,8 | 0,78               |                                     | 514  | 488               | 1,3                            | 6,0                            | 2,0                            | 12,9                | 2440          |
| 32                                | 3SIE355H8E  | 315            | 430  | 742                  | 4054           | 94,4               | 95,0 | 94,8 | 0,79               |                                     | 639  | 607               | 1,3                            | 6,0                            | 2,0                            | 16,0                | 2590          |
| 33                                | 3SIE400H8D  | 355            | 480  | 742                  | 4569           | 94,5               | 95,1 | 95,0 | 0,77               |                                     |      | 701               | 1,2                            | 5,8                            | 2,0                            | 18,8                | 3200          |
| 34                                | 3SIE400H8E  | 400            | 540  | 742                  | 5148           | 94,6               | 95,2 | 95,1 | 0,77               |                                     |      | 788               | 1,2                            | 5,9                            | 2,0                            | 21,0                | 3350          |
| 35                                | 3SIE450H8B  | 450            | 600  | 744                  | 5776           | 94,3               | 95,0 | 95,1 | 0,77               |                                     |      | 514 <sup>1</sup>  | 0,8                            | 5,1                            | 2,1                            | 45,0                | 4400          |
| 36                                | 3SIE450H8C  | 500            | 680  | 744                  | 6418           | 94,5               | 95,2 | 95,2 | 0,77               |                                     |      | 571 <sup>1</sup>  | 0,8                            | 5,0                            | 2,0                            | 49,0                | 4600          |
| 37                                | 3SIE450H8D  | 560            | 750  | 744                  | 7198           | 94,6               | 95,2 | 95,2 | 0,78               |                                     |      | 631 <sup>1</sup>  | 0,8                            | 4,9                            | 1,9                            | 53,0                | 4770          |
| 38                                | 3SIE450H8E  | 630            | 850  | 744                  | 8087           | 94,8               | 95,4 | 95,3 | 0,78               |                                     |      | 709 <sup>1</sup>  | 0,8                            | 4,8                            | 1,9                            | 57,0                | 4980          |
| 39                                | 3SIE500H8B  | 710            | 950  | 746                  | 9089           | 94,8               | 95,1 | 95,3 | 0,80               |                                     |      | 779 <sup>1</sup>  | 1,1                            | 6,3                            | 2,5                            | 92,4                | 6680          |
| 40                                | 3SIE500H8C  | 800            | 1080 | 746                  | 10241          | 94,8               | 95,1 | 95,3 | 0,80               |                                     |      | 878 <sup>1</sup>  | 1,1                            | 6,3                            | 2,5                            | 95,8                | 6800          |
| 41                                | 3SIE500H8D  | 900            | 1200 | 746                  | 11522          | 94,8               | 95,1 | 95,3 | 0,80               |                                     |      | 988 <sup>1</sup>  | 1,0                            | 6,0                            | 2,4                            | 108                 | 7240          |
| 42                                | 3SIE500H8E  | 1000           | 1350 | 746                  | 12802          | 94,8               | 95,1 | 95,3 | 0,80               |                                     |      | 1098 <sup>1</sup> | 1,1                            | 6,5                            | 2,5                            | 118                 | 7570          |

<sup>1</sup> – at rated voltage 690V

# Totally Enclosed Motors IP 55    f=50Hz    RPM=600 min<sup>-1</sup>

| Item                               | Type       | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |                  | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|------------------------------------|------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                    |            | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |                  | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                    |            | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 230V                                | 380V | 400V             | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| 2p=10      n <sub>s</sub> =600 rpm |            |                |      |                      |                |                    |      |      |                    |                                     |      |                  |                                |                                |                                |                     |               |
| 1                                  | Sh90S-10   | 0,25           | 0,34 | 560                  | 4,3            | 44,9               | 51,3 | 55,6 | 0,51               | 2,2                                 | 1,3  | 1,3              | 1,8                            | 2,2                            | 2,0                            | 0,0028              | 17            |
| 2                                  | Sh90L-10   | 0,37           | 0,5  | 565                  | 6,3            | 50,7               | 58,9 | 63,4 | 0,56               | 2,6                                 | 1,6  | 1,5              | 1,9                            | 2,3                            | 2,1                            | 0,003               | 20            |
| 3                                  | Sg100L-10A | 0,55           | 0,75 | 570                  | 9,2            | 39,8               | 49,2 | 55   | 0,44               | 5,7                                 | 3,5  | 3,3              | 2,7                            | 3,1                            | 2,7                            | 0,009               | 24            |
| 4                                  | Sg100L-10B | 0,75           | 1    | 560                  | 12,8           | 44,6               | 54,1 | 56,8 | 0,54               | 6,1                                 | 3,7  | 3,5              | 2,0                            | 3,0                            | 2,1                            | 0,01                | 24,5          |
| 5                                  | Sg112M-10  | 0,75           | 1    | 550                  | 13             | 42,6               | 52,1 | 71,3 | 0,65               | 4,1                                 | 2,5  | 2,3              | 2,5                            | 3,1                            | 2,5                            | 0,0177              | 33            |
| 6                                  | Sg112M-10A | 1,1            | 1,5  | 560                  | 18,7           | 69,2               | 72,6 | 72,2 | 0,64               | 6                                   | 3,4  | 3,4              | 1,3                            | 3,3                            | 1,8                            | 0,018               | 32            |
| 7                                  | Sg132S-10  | 1,1            | 1,5  | 565                  | 18,6           | 53,4               | 68,2 | 77   | 0,65               | 5,5                                 | 3,3  | 3,2              | 1,2                            | 3,5                            | 1,6                            | 0,025               | 52            |
| 8                                  | Sg132S-10A | 1,5            | 2    | 565                  | 25,4           | 53,2               | 69,8 | 74   | 0,6                | 8,5                                 | 5,1  | 4,9              | 1,3                            | 3,7                            | 2,4                            | 0,032               | 66            |
| 9                                  | Sg132S-10B | 2,2            | 3    | 560                  | 37,5           | 43,1               | 62,9 | 75   | 0,58               | 12,7                                | 7,7  | 7,3              | 1,4                            | 3,9                            | 2,5                            | 0,04                | 72            |
| 10                                 | Sg160M-10  | 4              | 5,5  | 570                  | 67             | 71,1               | 74,4 | 75,3 | 0,56               | 23,8                                | 14,4 | 13,7             | 1,7                            | 4,1                            | 2,7                            | 0,096               | 125           |
| 11                                 | Sg160L-10  | 5,5            | 7,5  | 575                  | 91,3           | 76,1               | 79,9 | 80,9 | 0,56               | 30,5                                | 18,4 | 17,5             | 1,9                            | 4,8                            | 2,6                            | 0,096               | 125           |
| 12                                 | Sg180L-10  | 7,5            | 10   | 585                  | 122,4          | 81,9               | 85,1 | 86   | 0,58               | 37,7                                | 22,8 | 21,7             | 2,3                            | 5,1                            | 2,4                            | 0,22                | 164           |
| 13                                 | 2Sg200L10A | 7,5            | 10   | 580                  | 123            | 82,5               | 84,0 | 85,0 | 0,68               | 32,5                                | 19,7 | 18,7             | 1,7                            | 3,5                            | 2,1                            | 0,4                 | 240           |
| 14                                 | 2Sg200L10B | 11             | 15   | 590                  | 178            | 84,7               | 86,7 | 87,5 | 0,68               | 47                                  | 28,1 | 26,7             | 3,2                            | 5,9                            | 2,4                            | 0,47                | 255           |
| 15                                 | 2Sg225S10  | 13             | 18   | 592                  | 210            | 87,5               | 89,3 | 90,5 | 0,67               | 54                                  | 32,5 | 31               | 1,8                            | 3,8                            | 2,0                            | 0,6                 | 280           |
| 16                                 | 2Sg225M10  | 15             | 20   | 590                  | 243            | 86,0               | 88,0 | 89,0 | 0,67               | 63                                  | 38   | 36,5             | 2,8                            | 5,4                            | 2,0                            | 0,76                | 315           |
| 17                                 | 2Sg250M10  | 22             | 30   | 592                  | 355            | 87,5               | 89,6 | 90,0 | 0,70               | 88                                  | 53   | 50               | 3,0                            | 5,8                            | 2,0                            | 1,27                | 430           |
| 18                                 | 2Sg280S10A | 30             | 40   | 586                  | 489            | 85,3               | 87,3 | 88,8 | 0,71               | 119                                 | 72   | 69               | 2,0                            | 4,5                            | 1,7                            | 1,35                | 525           |
| 19                                 | 2Sg280S10B | 37             | 50   | 583                  | 606            | 87,0               | 90,0 | 91,0 | 0,75               | 136                                 | 82   | 78               | 1,9                            | 4,5                            | 1,5                            | 1,61                | 565           |
| 20                                 | 2Sg280M10  | 45             | 60   | 587                  | 732            | 88,0               | 90,5 | 91,6 | 0,76               | 162                                 | 98   | 93               | 2,0                            | 4,5                            | 1,6                            | 2,03                | 630           |
| 21                                 | 2Sg315S10z | 55             | 75   | 583                  | 901            | 88,0               | 90,5 | 91,5 | 0,75               | 201                                 | 122  | 116              | 1,7                            | 4,7                            | 1,9                            | 2,86                | 840           |
| 22                                 | 2Sg315M10  | 75             | 100  | 583                  | 1229           | 88,0               | 90,5 | 91,5 | 0,75               | 274                                 | 166  | 158              | 1,8                            | 4,9                            | 1,5                            | 3,01                | 895           |
| 23                                 | Sg355S10A  | 90             | 125  | 592                  | 1452           | 92,2               | 93,0 | 93,0 | 0,79               |                                     | 185  | 176              | 1,3                            | 5,7                            | 2,1                            | 8,2                 | 1250          |
| 24                                 | Sg355S10B  | 110            | 150  | 592                  | 1775           | 92,5               | 93,2 | 93,2 | 0,79               |                                     | 227  | 216              | 1,3                            | 5,8                            | 2,3                            | 10,3                | 1390          |
| 25                                 | Sh355H10As | 132            | 180  | 593                  | 2126           | 92,6               | 93,4 | 93,3 | 0,76               |                                     | 283  | 269              | 1,3                            | 5,5                            | 2,0                            | 11                  | 2080          |
| 26                                 | Sh355H10Bs | 160            | 220  | 592                  | 2581           | 93,1               | 93,6 | 93,5 | 0,78               |                                     | 334  | 317              | 1,3                            | 5,3                            | 1,9                            | 13                  | 2220          |
| 27                                 | Sh355H10Cs | 200            | 270  | 592                  | 3226           | 93,3               | 93,8 | 93,7 | 0,77               |                                     | 421  | 400              | 1,3                            | 5,4                            | 2,0                            | 15,5                | 2360          |
| 28                                 | Sh400H10Bs | 250            | 340  | 593                  | 4026           | 94,3               | 94,6 | 94,6 | 0,80               |                                     | 502  | 477              | 1,1                            | 5,6                            | 2,4                            | 28,5                | 3170          |
| 29                                 | Sh400H10Cs | 315            | 430  | 593                  | 5073           | 94,3               | 94,6 | 94,6 | 0,80               |                                     | 632  | 601              | 1,1                            | 5,7                            | 2,4                            | 32,2                | 3350          |
| 30                                 | Sh450H10As | 355            | 480  | 595                  | 5698           | 94,3               | 94,9 | 94,8 | 0,80               |                                     |      | 392 <sup>1</sup> | 0,8                            | 6,0                            | 2,1                            | 39,0                | 3850          |
| 31                                 | Sh450H10Bs | 400            | 540  | 595                  | 6420           | 94,5               | 95,0 | 94,9 | 0,81               |                                     |      | 435 <sup>1</sup> | 0,8                            | 5,9                            | 2,1                            | 45,0                | 4050          |
| 32                                 | Sh450H10Cs | 450            | 600  | 595                  | 7223           | 94,7               | 95,1 | 95,0 | 0,81               |                                     |      | 483 <sup>1</sup> | 0,8                            | 5,8                            | 2,0                            | 52,0                | 4280          |
| 33                                 | Sh450H10Ds | 500            | 680  | 595                  | 8025           | 94,5               | 95,1 | 95,1 | 0,80               |                                     |      | 550 <sup>1</sup> | 0,9                            | 6,4                            | 2,2                            | 57                  | 4450          |
| 34                                 | Sh450H10Es | 560            | 750  | 595                  | 8988           | 94,6               | 95,2 | 95,1 | 0,80               |                                     |      | 616 <sup>1</sup> | 0,9                            | 6,4                            | 2,2                            | 60                  | 4540          |
| 35                                 | Sh500H10Ds | 630            | 850  | 594                  | 10129          | 93,9               | 94,8 | 95,0 | 0,80               |                                     |      | 694 <sup>1</sup> | 1,3                            | 6,9                            | 2,2                            | 108                 | 6450          |
| 36                                 | Sh500H10Es | 710            | 950  | 596                  | 11377          | 94,0               | 94,9 | 95,0 | 0,80               |                                     |      | 782 <sup>1</sup> | 1,3                            | 6,8                            | 2,2                            | 117                 | 6680          |
| 37                                 | Sh500H10Fs | 800            | 1070 | 596                  | 12818          | 94,1               | 94,9 | 95,0 | 0,80               |                                     |      | 881 <sup>1</sup> | 1,3                            | 6,8                            | 2,2                            | 128                 | 7000          |

<sup>1</sup> – at rated voltage 690V

# Totally Enclosed Motors IP 55    f=50Hz    RPM=500 min<sup>-1</sup>

| Item                               | Type       | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |      | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|------------------------------------|------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                    |            | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |      | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                    |            | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 230V                                | 380V | 400V | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| 2p=12      n <sub>s</sub> =500 rpm |            |                |      |                      |                |                    |      |      |                    |                                     |      |      |                                |                                |                                |                     |               |
| 1                                  | Sg100L-12  | 0,55           | 0,75 | 450                  | 11,7           | 43,8               | 51,4 | 54,4 | 0,53               | 4,8                                 | 2,9  | 2,8  | 1,3                            | 2,3                            | 1,5                            | 0,009               | 22            |
| 2                                  | Sg112M-12  | 0,75           | 1    | 475                  | 15,1           | 54,3               | 59,8 | 65,3 | 0,47               | 6,1                                 | 3,7  | 3,5  | 1,5                            | 3,0                            | 2,5                            | 0,0177              | 33            |
| 3                                  | Sg132S-12  | 1,1            | 1,5  | 460                  | 22,8           | 62,3               | 68,2 | 69   | 0,61               | 6,6                                 | 4    | 3,8  | 1,0                            | 2,8                            | 1,6                            | 0,025               | 54            |
| 4                                  | Sg132M-12  | 1,5            | 2    | 465                  | 30,8           | 68,7               | 70,2 | 72   | 0,57               | 9,2                                 | 5,6  | 5,3  | 1,3                            | 3,1                            | 2,3                            | 0,032               | 66            |
| 5                                  | Sg132M-12B | 2,2            | 3    | 460                  | 45,7           | 68,5               | 69,2 | 70,2 | 0,56               | 14                                  | 8,5  | 8,1  | 1,2                            | 3,0                            | 1,8                            | 0,04                | 72            |
| 6                                  | Sg160M-12  | 2,2            | 3    | 470                  | 44,7           | 69                 | 73,8 | 75   | 0,51               | 14,4                                | 8,7  | 8,3  | 1,4                            | 3,4                            | 2,4                            | 0,072               | 100           |
| 7                                  | Sg160L-12  | 3              | 4    | 480                  | 59,7           | 69,8               | 75   | 78,5 | 0,51               | 18,8                                | 11,4 | 10,8 | 1,5                            | 3,7                            | 2,5                            | 0,096               | 125           |
| 8                                  | Sg180L-12  | 5,5            | 7,5  | 480                  | 109,4          | 68,8               | 70,8 | 73,9 | 0,6                | 31,1                                | 18,8 | 17,9 | 1,1                            | 2,8                            | 1,5                            | 0,22                | 170           |
| 9                                  | 2Sg200L12  | 9              | 12   | 490                  | 175            | 75,3               | 80,1 | 81,8 | 0,55               | 50                                  | 30,5 | 28,5 | 2,7                            | 4,3                            | 2,5                            | 0,47                | 255           |
| 10                                 | 2Sg225S12  | 11             | 15   | 490                  | 214            | 85,0               | 86,0 | 86,0 | 0,63               | 51                                  | 31   | 29,3 | 1,7                            | 3,5                            | 1,7                            | 0,58                | 315           |
| 11                                 | 2Sg225M12  | 13             | 18   | 475                  | 261            | 82,2               | 82,5 | 82,5 | 0,59               | 67                                  | 41   | 38,5 | 1,7                            | 3,5                            | 1,7                            | 0,68                | 350           |
| 12                                 | 2Sg250M12  | 18,5           | 25   | 490                  | 361            | 84,0               | 86,0 | 87,8 | 0,65               | 81                                  | 50   | 47   | 1,7                            | 3,5                            | 1,8                            | 1,27                | 430           |
| 13                                 | 2Sg280S12  | 22             | 30   | 491                  | 428            | 86,9               | 89,2 | 89,6 | 0,61               | 101                                 | 61   | 58   | 2,3                            | 4,5                            | 1,8                            | 1,47                | 535           |
| 14                                 | 2Sg280M12  | 30             | 40   | 490                  | 585            | 85,6               | 88,2 | 89,0 | 0,62               | 136                                 | 83   | 78   | 1,8                            | 3,5                            | 1,8                            | 1,8                 | 570           |
| 15                                 | 2Sg315S12  | 37             | 50   | 492                  | 718            | 87,5               | 89,9 | 90,4 | 0,58               | 177                                 | 107  | 102  | 2,6                            | 4,5                            | 1,9                            | 2,29                | 730           |
| 16                                 | 2Sg315M12A | 45             | 60   | 490                  | 877            | 87,9               | 89,0 | 90,1 | 0,58               | 216                                 | 131  | 124  | 2,0                            | 3,5                            | 1,8                            | 2,86                | 870           |
| 17                                 | 2Sg315M12B | 55             | 75   | 490                  | 1072           | 87,5               | 90,0 | 89,5 | 0,58               | 266                                 | 161  | 153  | 2,5                            | 4,4                            | 1,8                            | 3,01                | 885           |
| 18                                 | Sg355S12   | 75             | 100  | 492                  | 1456           | 89,5               | 91,2 | 91,2 | 0,73               |                                     | 171  | 163  | 1,2                            | 4,3                            | 1,9                            | 8,3                 | 1250          |
| 19                                 | Sg355S12A  | 90             | 120  | 493                  | 1743           | 90,0               | 91,4 | 91,5 | 0,73               |                                     | 205  | 195  | 1,2                            | 5,5                            | 2,2                            | 10,4                | 1390          |
| 20                                 | Sg355S12B  | 110            | 150  | 491                  | 2140           | 90,0               | 91,5 | 91,5 | 0,73               |                                     | 250  | 238  | 1,3                            | 5,1                            | 1,9                            | 12,1                | 1570          |
| 21                                 | Sg355M12   | 132            | 180  | 492                  | 2562           | 90,5               | 91,9 | 92,0 | 0,73               |                                     | 299  | 284  | 1,2                            | 4,8                            | 1,9                            | 13,1                | 1730          |
| 22                                 | Sh450H12As | 160            | 220  | 494                  | 3093           | 93,1               | 93,8 | 93,8 | 0,76               |                                     | 341  | 324  | 0,8                            | 5,6                            | 2,3                            | 30,0                | 3470          |
| 23                                 | Sh450H12Bs | 200            | 270  | 495                  | 3859           | 93,1               | 93,8 | 93,8 | 0,76               |                                     | 426  | 405  | 0,9                            | 5,7                            | 2,3                            | 33,7                | 3600          |
| 24                                 | Sh450H12Cs | 250            | 340  | 492                  | 4853           | 93,1               | 93,8 | 93,8 | 0,76               |                                     | 533  | 506  | 0,8                            | 5,0                            | 2,1                            | 40,0                | 3750          |
| 25                                 | Sh450H12Ds | 315            | 430  | 493                  | 6102           | 93,3               | 94,0 | 94,0 | 0,77               |                                     | 661  | 628  | 0,8                            | 5,1                            | 2,3                            | 34,7                | 4030          |
| 26                                 | Sh450H12Es | 355            | 480  | 494                  | 6863           | 93,4               | 94,1 | 94,1 | 0,77               |                                     | 744  | 707  | 0,9                            | 5,6                            | 2,4                            | 41,7                | 4330          |
| 27                                 | Sh450H12Fs | 400            | 540  | 494                  | 7733           | 93,6               | 94,2 | 94,2 | 0,77               |                                     | 838  | 796  | 0,9                            | 5,6                            | 2,4                            | 46,3                | 4530          |
| 28                                 | Sh500H12Cs | 450            | 600  | 494                  | 8699           | 94,1               | 94,7 | 94,7 | 0,78               |                                     | 926  | 879  | 1,1                            | 6,1                            | 2,5                            | 100                 | 6090          |
| 29                                 | Sh500H12Ds | 500            | 680  | 495                  | 9647           | 94,2               | 94,8 | 94,8 | 0,78               |                                     | 1027 | 976  | 1,1                            | 6,2                            | 2,5                            | 112                 | 6370          |
| 30                                 | Sh500H12Es | 560            | 750  | 495                  | 10804          | 94,2               | 94,8 | 94,8 | 0,78               |                                     | 1151 | 1093 | 1,2                            | 6,5                            | 2,6                            | 125                 | 6680          |

# Totally Enclosed Motors IP 55    f=60Hz    RPM=3600 min<sup>-1</sup>

| Item | Type        | Rated output                       |      | Rated speed          | Rated torque | Efficiency         |      |      | Power factor | Full load current                   |      |                  | Locked rotor torque ratio | Locked rotor current ratio | Breakdown torque ratio | Moment of Inertia   | Weight (IMB3) |
|------|-------------|------------------------------------|------|----------------------|--------------|--------------------|------|------|--------------|-------------------------------------|------|------------------|---------------------------|----------------------------|------------------------|---------------------|---------------|
|      |             | P <sub>N</sub>                     |      |                      |              | η <sub>N</sub> [%] |      |      |              | I <sub>N</sub> at rated voltage [A] |      |                  |                           |                            |                        |                     |               |
|      |             | [kW]                               | [HP] | [min <sup>-1</sup> ] | [Nm]         | 50%                | 75%  | 100% | [-]          | 230V                                | 380V | 400V             | [-]                       | [-]                        | [-]                    | [kgm <sup>2</sup> ] | [kg]          |
|      |             | 2p=2      n <sub>s</sub> =3600 rpm |      |                      |              |                    |      |      |              |                                     |      |                  |                           |                            |                        |                     |               |
| 1    | Sh56-2A     | 0,09                               | 0,12 | 3380                 | 0,25         | 48,3               | 56,8 | 63,0 | 0,59         | 0,6                                 | 0,37 | 0,35             | 3,1                       | 4,0                        | 3,2                    | 0,000076            | 2,9           |
| 2    | 2SIE56-2B   | 0,12                               | 0,17 | 3360                 | 0,34         | 56,5               | 61,8 | 68,0 | 0,64         | 0,7                                 | 0,42 | 0,4              | 2,4                       | 3,5                        | 2,4                    | 0,000095            | 3,2           |
| 3    | 2SIE63-2A   | 0,18                               | 0,25 | 3310                 | 0,52         | 60,9               | 65,1 | 64,0 | 0,81         | 0,85                                | 0,53 | 0,5              | 2,5                       | 3,9                        | 2,5                    | 0,000175            | 3,5           |
| 4    | 2SIE63-2B   | 0,25                               | 0,33 | 3340                 | 0,71         | 64,6               | 65,4 | 65,6 | 0,61         | 1,1                                 | 0,7  | 0,65             | 3,0                       | 3,8                        | 3,0                    | 0,000235            | 4,1           |
| 5    | 2SIE71-2A   | 0,37                               | 0,5  | 3410                 | 1,03         | 65,0               | 71,0 | 72,0 | 0,69         | 1,75                                | 1,1  | 1                | 3,0                       | 4,8                        | 3,0                    | 0,00046             | 5,6           |
| 6    | 2SIE71-2B   | 0,55                               | 0,75 | 3380                 | 1,55         | 69,1               | 73,1 | 74,0 | 0,74         | 2,5                                 | 1,55 | 1,45             | 2,9                       | 4,5                        | 2,8                    | 0,00053             | 6,3           |
| 7    | 3SIE80-2A   | 0,75                               | 1    | 3470                 | 2,06         | 76,0               | 80,5 | 83,6 | 0,76         | 2,95                                | 1,8  | 1,7              | 4,9                       | 7,5                        | 5,1                    | 0,001               | 10,6          |
| 8    | 3SIE80-2B   | 1,1                                | 1,5  | 3470                 | 3,03         | 74,9               | 84,4 | 84,4 | 0,75         | 4,3                                 | 2,65 | 2,5              | 4,1                       | 9,5                        | 4,0                    | 0,00142             | 11,9          |
| 9    | 3SIE90S2    | 1,5                                | 2    | 3535                 | 4,1          | 82,7               | 85,2 | 85,5 | 0,81         | 5,4                                 | 3,3  | 3,1              | 2,8                       | 9,6                        | 3,6                    | 0,0014              | 16,5          |
| 10   | 3SIE90L2    | 2,2                                | 3    | 3520                 | 6            | 85,5               | 86,6 | 86,5 | 0,84         | 7,6                                 | 4,6  | 4,4              | 3,2                       | 9,4                        | 4,8                    | 0,0019              | 18,5          |
| 11   | 3SIE100L2   | 3                                  | 4    | 3530                 | 8,1          | 87,3               | 88,6 | 88,5 | 0,82         | 10,4                                | 6,1  | 6                | 3,5                       | 9,8                        | 4,8                    | 0,0039              | 25            |
| 12   | 3SIE112M2   | 4                                  | 5,5  | 3535                 | 10,8         | 88,2               | 89,1 | 88,5 | 0,88         | 12,9                                | 7,8  | 7,4              | 2,6                       | 9,8                        | 3,8                    | 0,0075              | 35,5          |
| 13   | 3SIE132S2A  | 5,5                                | 7,5  | 3540                 | 14,8         | 86,1               | 88,1 | 89,5 | 0,89         | 17,3                                | 10,5 | 10,0             | 2,8                       | 9,5                        | 4,4                    | 0,014               | 55            |
| 14   | 3SIE132S2B  | 7,5                                | 10   | 3545                 | 20,2         | 88,9               | 90,2 | 90,2 | 0,89         | 23,5                                | 14,2 | 13,5             | 3,0                       | 9,1                        | 4,3                    | 0,017               | 64            |
| 15   | 3SIE160M2A  | 11                                 | 15   | 3550                 | 29,6         | 87,9               | 90,4 | 91,0 | 0,90         | 33,7                                | 20,4 | 19,4             | 2,2                       | 8,4                        | 3,1                    | 0,048               | 123           |
| 16   | 3SIE160M2B  | 15                                 | 20   | 3550                 | 40,4         | 90,7               | 91,3 | 91,0 | 0,90         | 46                                  | 27,8 | 26,4             | 2,6                       | 8,6                        | 3,9                    | 0,059               | 132           |
| 17   | 3SIE160L2   | 18,5                               | 25   | 3545                 | 49,8         | 90,3               | 91,7 | 91,7 | 0,90         | 56,3                                | 34,1 | 32,4             | 2,6                       | 9,0                        | 3,4                    | 0,072               | 139           |
| 18   | 3SIE180M2   | 22                                 | 30   | 3560                 | 59           | 89,5               | 91,3 | 91,7 | 0,89         | 67,7                                | 41   | 38,9             | 3,5                       | 9,8                        | 4,1                    | 0,095               | 190           |
| 19   | 3SIE200L2A  | 30                                 | 40   | 3565                 | 80           | 91,7               | 92,6 | 92,4 | 0,90         | 91                                  | 55   | 52               | 2,4                       | 7,5                        | 2,8                    | 0,19                | 275           |
| 20   | 3SIE200L2B  | 37                                 | 50   | 3557                 | 99           | 92,8               | 93,3 | 93,0 | 0,90         | 111                                 | 67   | 64               | 2,1                       | 6,6                        | 2,5                    | 0,2                 | 295           |
| 21   | 3SIE225M2   | 45                                 | 60   | 3570                 | 120          | 93,1               | 93,8 | 93,6 | 0,89         | 136                                 | 82   | 78               | 2,0                       | 7,3                        | 2,8                    | 0,26                | 385           |
| 22   | 3SIE250M2   | 55                                 | 75   | 3571                 | 147          | 93,5               | 93,9 | 93,6 | 0,91         | 162                                 | 98   | 93               | 2,3                       | 7,6                        | 3,3                    | 0,42                | 495           |
| 23   | 3SIE280S2   | 75                                 | 100  | 3579                 | 200          | 93,0               | 94,0 | 94,1 | 0,90         | 222                                 | 135  | 128              | 1,8                       | 7,7                        | 3,2                    | 0,76                | 660           |
| 24   | 3SIE280M2   | 90                                 | 125  | 3579                 | 240          | 94,4               | 95,1 | 95,0 | 0,90         | 264                                 | 160  | 152              | 1,8                       | 7,7                        | 3,3                    | 0,95                | 690           |
| 25   | 3SIE315S2   | 110                                | 150  | 3579                 | 294          | 94,8               | 95,2 | 95,0 | 0,91         | 319                                 | 193  | 184              | 2,0                       | 7,9                        | 3,1                    | 0,98                | 865           |
| 26   | 3SIE315M2A  | 132                                | 175  | 3577                 | 352          | 95,3               | 95,6 | 95,4 | 0,92         | 378                                 | 229  | 217              | 1,9                       | 7,6                        | 2,7                    | 1,28                | 970           |
| 27   | 3SIE315M2B  | 160                                | 220  | 3579                 | 427          | 94,7               | 95,1 | 95,0 | 0,92         | 460                                 | 278  | 264              | 2,2                       | 8,6                        | 3,1                    | 1,57                | 1118          |
| 28   | 3SIE315M2C  | 200                                | 270  | 3580                 | 534          | 95,8               | 96,0 | 95,8 | 0,93         |                                     | 341  | 324              | 2,2                       | 8,0                        | 2,9                    | 1,74                | 1185          |
| 29   | 3SIE355ML2A | 250                                | 355  | 3584                 | 666          | 94,3               | 95,4 | 95,8 | 0,91         |                                     | 436  | 414              | 1,5                       | 7,8                        | 2,8                    | 2,8                 | 1620          |
| 30   | 3SIE355ML2B | 315                                | 425  | 3584                 | 839          | 95,0               | 95,9 | 96,1 | 0,91         |                                     | 547  | 520              | 1,9                       | 7,9                        | 3,0                    | 3,0                 | 1700          |
| 31   | 3SIE355H2D  | 355                                | 475  | 3586                 | 945          | 94,4               | 95,6 | 96,0 | 0,91         |                                     | 617  | 586              | 1,8                       | 8,1                        | 2,9                    | 4,9                 | 2160          |
| 32   | 3SIE355H2E  | 400                                | 540  | 3582                 | 1066         | 95,3               | 96,0 | 96,1 | 0,91         |                                     |      | 660              | 1,6                       | 8,5                        | 2,8                    | 5,7                 | 2200          |
| 33   | 3SIE400H2C  | 450                                | 600  | 3582                 | 1200         | 95,3               | 96,0 | 96,1 | 0,91         |                                     |      | 743              | 1,3                       | 7,1                        | 2,6                    | 6,7                 | 2800          |
| 34   | 3SIE400H2D  | 500                                | 680  | 3582                 | 1333         | 95,3               | 96,0 | 96,1 | 0,91         |                                     |      | 825              | 1,4                       | 7,6                        | 2,8                    | 7,7                 | 2880          |
| 35   | 3SIE400H2E  | 560                                | 750  | 3582                 | 1493         | 95,3               | 96,0 | 96,1 | 0,90         |                                     |      | 935              | 1,5                       | 8,5                        | 2,9                    | 8,7                 | 3100          |
| 36   | 3SIE400H2F  | 630                                | 850  | 3582                 | 1680         | 95,3               | 96,0 | 96,1 | 0,90         |                                     |      | 1051             | 1,5                       | 8,3                        | 2,8                    | 8,7                 | 3100          |
| 37   | 3SIE450H2B  | 710                                | 950  | 3588                 | 1890         | 95,3               | 96,0 | 96,1 | 0,88         |                                     |      | 703 <sup>1</sup> | 0,6                       | 6,7                        | 2,7                    | 17,2                | 4160          |
| 38   | 3SIE450H2C  | 800                                | 1080 | 3588                 | 2129         | 95,3               | 96,0 | 96,1 | 0,88         |                                     |      | 792 <sup>1</sup> | 0,7                       | 7,2                        | 2,7                    | 18,4                | 4380          |
| 39   | 3SIE450H2D  | 900                                | 1200 | 3588                 | 2395         | 95,3               | 96,0 | 96,1 | 0,88         |                                     |      | 891 <sup>1</sup> | 0,7                       | 7,0                        | 2,7                    | 19,0                | 4480          |

<sup>1</sup> – at rated voltage 690V

# Totally Enclosed Motors IP 55 $f=60\text{Hz}$ RPM=1800 min<sup>-1</sup>

| Item                          | Type        | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |                   | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|-------------------------------|-------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|-------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                               |             | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |                   | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                               |             | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 230V                                | 380V | 400V              | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| 2p=4 n <sub>s</sub> =1800 rpm |             |                |      |                      |                |                    |      |      |                    |                                     |      |                   |                                |                                |                                |                     |               |
| 1                             | Sh56-4A     | 0,06           | 0,08 | 1680                 | 0,34           | 37,3               | 46,3 | 52,0 | 0,51               | 0,52                                | 0,31 | 0,3               | 2,4                            | 3,3                            | 2,8                            | 0,000145            | 2,6           |
| 2                             | Sh56-4B     | 0,09           | 0,12 | 1660                 | 0,51           | 50,9               | 58,1 | 62,0 | 0,56               | 0,6                                 | 0,37 | 0,35              | 2,4                            | 2,7                            | 2,5                            | 0,000186            | 2,8           |
| 3                             | 2SIE63-4A   | 0,12           | 0,17 | 1660                 | 0,69           | 52,9               | 60,9 | 64,0 | 0,60               | 0,8                                 | 0,5  | 0,45              | 2,3                            | 3,0                            | 2,4                            | 0,00024             | 3,5           |
| 4                             | 2SIE63-4B   | 0,18           | 0,25 | 1660                 | 1,03           | 56,8               | 63,6 | 68,0 | 0,59               | 1,1                                 | 0,7  | 0,65              | 2,4                            | 3,0                            | 2,4                            | 0,00031             | 4,1           |
| 5                             | 2SIE71-4A   | 0,25           | 0,33 | 1670                 | 1,43           | 61,8               | 67,9 | 70,0 | 0,58               | 1,55                                | 0,95 | 0,9               | 2,5                            | 3,1                            | 2,7                            | 0,00072             | 5,8           |
| 6                             | 2SIE71-4B   | 0,37           | 0,55 | 1680                 | 2,1            | 67,0               | 71,0 | 72,0 | 0,64               | 2                                   | 1,2  | 1,15              | 2,4                            | 3,3                            | 2,4                            | 0,00085             | 7,2           |
| 7                             | 2SIE80-4A   | 0,55           | 0,75 | 1680                 | 3,12           | 69,5               | 73,8 | 75,5 | 0,59               | 2,95                                | 1,8  | 1,7               | 3,0                            | 3,9                            | 3,0                            | 0,0016              | 8,4           |
| 8                             | 3SIE80-4B   | 0,75           | 1    | 1720                 | 4,16           | 81,1               | 82,7 | 83,5 | 0,62               | 3,6                                 | 2,2  | 2,1               | 4,8                            | 6,3                            | 4,6                            | 0,00265             | 11            |
| 9                             | 3SIE90S4    | 1,1            | 1,5  | 1760                 | 6              | 82,6               | 85,8 | 86,5 | 0,73               | 4,4                                 | 2,6  | 2,5               | 2,6                            | 8,5                            | 4,2                            | 0,0036              | 18            |
| 10                            | 3SIE90L4    | 1,5            | 2    | 1755                 | 8,2            | 83,2               | 86,0 | 86,5 | 0,77               | 5,7                                 | 3,4  | 3,3               | 2,8                            | 8,2                            | 4,0                            | 0,004               | 21            |
| 11                            | 3SIE100L4A  | 2,2            | 3    | 1760                 | 11,9           | 85,3               | 89,1 | 89,5 | 0,77               | 8                                   | 4,9  | 4,6               | 3,1                            | 8,3                            | 3,9                            | 0,0076              | 27,5          |
| 12                            | 3SIE100L4B  | 3              | 4    | 1770                 | 16,2           | 86,5               | 89,1 | 89,5 | 0,77               | 10,9                                | 6,6  | 6,3               | 3,2                            | 8,7                            | 4,1                            | 0,0086              | 31            |
| 13                            | 3SIE112M4   | 4              | 5,5  | 1765                 | 21,6           | 88,5               | 89,7 | 89,5 | 0,79               | 14,2                                | 8,6  | 8,2               | 2,3                            | 8,6                            | 3,9                            | 0,0115              | 41,5          |
| 14                            | 3SIE132S4   | 5,5            | 7,5  | 1770                 | 29,7           | 88,9               | 91,1 | 91,7 | 0,83               | 18,1                                | 11   | 10,4              | 2,7                            | 10,0                           | 4,0                            | 0,036               | 63            |
| 15                            | 3SIE132M4   | 7,5            | 10   | 1770                 | 40,5           | 90,0               | 91,6 | 91,7 | 0,79               | 26                                  | 15,7 | 14,9              | 3,7                            | 11,0                           | 4,6                            | 0,042               | 67            |
| 16                            | 3SIE160M4   | 11             | 15   | 1775                 | 59,2           | 91,0               | 92,4 | 92,4 | 0,83               | 36                                  | 21,8 | 20,7              | 2,9                            | 8,4                            | 3,5                            | 0,088               | 136           |
| 17                            | 3SIE160L4   | 15             | 20   | 1775                 | 80,7           | 92,8               | 93,1 | 93,0 | 0,82               | 49,4                                | 29,9 | 28,4              | 3,1                            | 9,2                            | 3,6                            | 0,104               | 154           |
| 18                            | 3SIE180M4   | 18,5           | 25   | 1775                 | 99,5           | 92,3               | 93,0 | 93,6 | 0,84               | 59,1                                | 35,7 | 34                | 3,5                            | 9,3                            | 4,2                            | 0,162               | 190           |
| 19                            | 3SIE180L4   | 22             | 30   | 1775                 | 118,4          | 91,6               | 93,1 | 93,6 | 0,82               | 72                                  | 43,6 | 41,4              | 3,9                            | 9,4                            | 4,4                            | 0,185               | 200           |
| 20                            | 3SIE200L4   | 30             | 40   | 1778                 | 161            | 94,5               | 94,7 | 94,1 | 0,89               | 90                                  | 54   | 52                | 2,3                            | 6,9                            | 2,6                            | 0,38                | 329           |
| 21                            | 3SIE225S4   | 37             | 50   | 1785                 | 198            | 94,7               | 94,9 | 94,5 | 0,87               | 113                                 | 68   | 65                | 2,1                            | 7,2                            | 2,9                            | 0,51                | 373           |
| 22                            | 3SIE225M4   | 45             | 60   | 1784                 | 241            | 95,2               | 95,4 | 95,0 | 0,88               | 135                                 | 82   | 78                | 2,1                            | 7,5                            | 3,0                            | 0,59                | 410           |
| 23                            | 3SIE250M4   | 55             | 75   | 1786                 | 294            | 95,2               | 95,6 | 95,4 | 0,91               | 159                                 | 96   | 91                | 2,5                            | 7,9                            | 3,0                            | 1                   | 520           |
| 24                            | 3SIE280S4   | 75             | 100  | 1788                 | 400            | 95,1               | 95,6 | 95,4 | 0,90               | 219                                 | 133  | 126               | 2,0                            | 7,2                            | 2,6                            | 1,37                | 710           |
| 25                            | 3SIE280M4   | 90             | 125  | 1791                 | 480            | 95,0               | 95,5 | 95,4 | 0,89               | 266                                 | 161  | 153               | 2,7                            | 8,8                            | 3,1                            | 1,8                 | 761           |
| 26                            | 3SIE315S4   | 110            | 150  | 1788                 | 587            | 95,7               | 96,0 | 95,8 | 0,91               | 317                                 | 192  | 182               | 2,1                            | 7,0                            | 2,2                            | 2,25                | 920           |
| 27                            | 3SIE315M4A  | 132            | 175  | 1790                 | 704            | 96,4               | 96,5 | 96,2 | 0,90               | 383                                 | 232  | 220               | 2,2                            | 8,3                            | 2,6                            | 2,59                | 1030          |
| 28                            | 3SIE315M4B  | 160            | 220  | 1790                 | 854            | 96,5               | 96,6 | 96,2 | 0,90               | 464                                 | 281  | 267               | 2,3                            | 8,5                            | 2,9                            | 2,8                 | 1130          |
| 29                            | 3SIE315M4C  | 200            | 270  | 1789                 | 1068           | 96,0               | 96,4 | 96,2 | 0,90               |                                     | 351  | 333               | 2,4                            | 8,1                            | 2,8                            | 3,46                | 1205          |
| 30                            | 3SIE355ML4A | 250            | 355  | 1788                 | 1335           | 95,6               | 96,1 | 96,2 | 0,90               |                                     | 439  | 416               | 1,9                            | 8,0                            | 2,2                            | 5,3                 | 1700          |
| 31                            | 3SIE355ML4B | 315            | 425  | 1789                 | 1682           | 95,8               | 96,3 | 96,2 | 0,90               |                                     | 553  | 525               | 2,0                            | 8,0                            | 2,2                            | 6,4                 | 1830          |
| 32                            | 3SIE355H4D  | 355            | 475  | 1790                 | 1894           | 95,8               | 96,3 | 96,2 | 0,88               |                                     | 637  | 605               | 1,6                            | 7,6                            | 2,3                            | 8,0                 | 2350          |
| 33                            | 3SIE355H4E  | 400            | 540  | 1789                 | 2135           | 95,8               | 96,3 | 96,2 | 0,88               |                                     |      | 682               | 1,8                            | 7,7                            | 2,3                            | 9,1                 | 2450          |
| 34                            | 3SIE400H4C  | 450            | 600  | 1789                 | 2402           | 95,6               | 96,3 | 96,2 | 0,87               |                                     |      | 776               | 1,6                            | 8,0                            | 2,5                            | 12,3                | 2920          |
| 35                            | 3SIE400H4D  | 500            | 680  | 1790                 | 2667           | 95,6               | 96,3 | 96,2 | 0,87               |                                     |      | 862               | 1,6                            | 8,0                            | 2,6                            | 13,6                | 3100          |
| 36                            | 3SIE400H4E  | 560            | 750  | 1790                 | 2987           | 95,6               | 96,3 | 96,2 | 0,87               |                                     |      | 966               | 1,7                            | 8,0                            | 2,6                            | 15,0                | 3250          |
| 37                            | 3SIE400H4F  | 600            | 810  | 1791                 | 3200           | 95,6               | 96,3 | 96,2 | 0,87               |                                     |      | 1035              | 1,9                            | 8,8                            | 2,9                            | 17,2                | 3500          |
| 38                            | 3SIE450H4B  | 710            | 950  | 1792                 | 3784           | 96,0               | 96,5 | 96,5 | 0,87               |                                     |      | 708 <sup>1</sup>  | 1,6                            | 7,5                            | 2,5                            | 27,1                | 4000          |
| 39                            | 3SIE450H4C  | 800            | 1070 | 1793                 | 4261           | 96,0               | 96,5 | 96,5 | 0,88               |                                     |      | 788 <sup>1</sup>  | 1,6                            | 7,4                            | 2,6                            | 31,6                | 4400          |
| 40                            | 3SIE450H4D  | 900            | 1200 | 1793                 | 4794           | 96,0               | 96,5 | 96,5 | 0,88               |                                     |      | 887 <sup>1</sup>  | 1,5                            | 7,7                            | 2,5                            | 35,4                | 4620          |
| 41                            | 3SIE450H4E  | 1000           | 1350 | 1793                 | 5326           | 96,0               | 96,5 | 96,5 | 0,88               |                                     |      | 985 <sup>1</sup>  | 1,5                            | 7,8                            | 2,5                            | 38,0                | 4700          |
| 42                            | Sh500H4Cs   | 1120           | 1500 | 1794                 | 5962           | 96,7               | 97,3 | 97,4 | 0,87               |                                     |      | 1106 <sup>1</sup> | 0,8                            | 7,4                            | 2,5                            | 58,4                | 6100          |
| 43                            | Sh500H4Ds   | 1250           | 1680 | 1795                 | 6650           | 96,7               | 97,3 | 97,5 | 0,87               |                                     |      | 1233 <sup>1</sup> | 0,8                            | 8,0                            | 2,7                            | 65,2                | 6600          |
| 44                            | Sh500H4Es   | 1400           | 1880 | 1795                 | 7448           | 97,0               | 97,5 | 97,5 | 0,88               |                                     |      | 1365 <sup>1</sup> | 0,7                            | 6,9                            | 2,4                            | 66,5                | 6900          |

<sup>1</sup> – at rated voltage 690V



# Totally Enclosed Motors IP 55    f=60Hz    RPM=1200 min<sup>-1</sup>

| Item                                               | Type                    | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |                   | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|----------------------------------------------------|-------------------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|-------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                                    |                         | P <sub>N</sub> |      | η <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |                   | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                                    |                         | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | -                  | 230V                                | 380V | 400V              | -                              | -                              | -                              | [kgm <sup>2</sup> ] | [kg]          |
| 2p=6                      n <sub>s</sub> =1200 rpm |                         |                |      |                      |                |                    |      |      |                    |                                     |      |                   |                                |                                |                                |                     |               |
| 1                                                  | Sh56-6B                 | 0,06           | 0,08 | 1030                 | 0,55           | 20,7               | 28,1 | 33,0 | 0,62               | 0,73                                | 0,44 | 0,42              | 1,7                            | 2,0                            | 1,8                            | 0,00019             | 2,8           |
| 2                                                  | Sh63-6A                 | 0,09           | 0,12 | 1040                 | 0,82           | 40,5               | 47,2 | 50,0 | 0,52               | 0,9                                 | 0,53 | 0,5               | 1,8                            | 2,3                            | 1,9                            | 0,00024             | 3,5           |
| 3                                                  | 2SIE63-6B               | 0,12           | 0,17 | 1110                 | 1,03           | 55,5               | 62,6 | 64,0 | 0,49               | 0,95                                | 0,6  | 0,55              | 2,0                            | 2,7                            | 2,4                            | 0,00077             | 5,9           |
| 4                                                  | 2SIE71-6A               | 0,18           | 0,25 | 1080                 | 1,59           | 43,0               | 51,0 | 55,0 | 0,67               | 1,2                                 | 0,75 | 0,7               | 2,2                            | 2,4                            | 2,2                            | 0,00074             | 5             |
| 5                                                  | 2SIE71-6B               | 0,25           | 0,33 | 1060                 | 2,25           | 56,1               | 60,0 | 59,5 | 0,76               | 1,4                                 | 0,85 | 0,8               | 2,2                            | 2,6                            | 2,2                            | 0,00122             | 6,2           |
| 6                                                  | 2SIE80-6A               | 0,37           | 0,5  | 1100                 | 3,21           | 61,6               | 64,7 | 64,0 | 0,72               | 1,9                                 | 1,15 | 1,1               | 2,1                            | 3,1                            | 1,9                            | 0,00207             | 8,6           |
| 7                                                  | 2SIE80-6B               | 0,55           | 0,75 | 1080                 | 4,86           | 70,3               | 72,5 | 71,0 | 0,80               | 2,4                                 | 1,5  | 1,4               | 2,0                            | 3,6                            | 2,2                            | 0,00293             | 10,8          |
| 8                                                  | 3SIE90S6                | 0,75           | 1    | 1150                 | 6,2            | 79,1               | 82,2 | 82,5 | 0,65               | 3,5                                 | 2,1  | 2                 | 1,8                            | 5,1                            | 2,9                            | 0,0032              | 16            |
| 9                                                  | 3SIE90L6 <sup>2</sup>   | 1,1            | 1,5  | 1150                 | 9,1            | 82,3               | 85,2 | 85,5 | 0,65               | 5                                   | 3    | 2,9               | 2,9                            | 5,3                            | 3,1                            | 0,009               | 19            |
| 10                                                 | 3SIE100L6 <sup>2</sup>  | 1,5            | 2    | 1160                 | 12,3           | 85,3               | 86,9 | 86,5 | 0,73               | 6                                   | 3,6  | 3,4               | 2,8                            | 7,2                            | 3,6                            | 0,01                | 23,5          |
| 11                                                 | 3SIE112M6 <sup>2</sup>  | 2,2            | 3    | 1170                 | 18             | 84,3               | 86,7 | 87,5 | 0,72               | 8,8                                 | 5,3  | 5                 | 2,4                            | 6,5                            | 3,0                            | 0,0177              | 34            |
| 12                                                 | 3SIE132S6               | 3              | 4    | 1170                 | 24,5           | 88,2               | 89,6 | 89,5 | 0,79               | 10,7                                | 6,4  | 6,1               | 2,4                            | 7,4                            | 3,4                            | 0,044               | 54            |
| 13                                                 | 3SIE132M6A              | 4              | 5,5  | 1165                 | 32,8           | 89,0               | 90,0 | 89,5 | 0,80               | 14                                  | 8,5  | 8,1               | 2,6                            | 7,7                            | 3,6                            | 0,0579              | 62            |
| 14                                                 | 3SIE132M6B <sup>2</sup> | 5,5            | 7,5  | 1165                 | 45,1           | 88,6               | 89,9 | 89,5 | 0,79               | 19,5                                | 11,8 | 11,2              | 2,7                            | 7,6                            | 3,4                            | 0,0637              | 66            |
| 15                                                 | 3SIE160M6               | 7,5            | 10   | 1170                 | 61,2           | 89,9               | 91,2 | 91,0 | 0,81               | 25,8                                | 15,5 | 14,7              | 2,6                            | 8,0                            | 3,3                            | 0,102               | 134           |
| 16                                                 | 3SIE160L6               | 11             | 15   | 1170                 | 89,8           | 91,0               | 91,5 | 91,7 | 0,79               | 38,1                                | 23,1 | 21,9              | 2,4                            | 8,0                            | 3,5                            | 0,123               | 146           |
| 17                                                 | 3SIE180L6               | 15             | 20   | 1180                 | 121,4          | 89,1               | 91,3 | 91,7 | 0,80               | 51,3                                | 31,1 | 29,5              | 4,0                            | 8,6                            | 3,2                            | 0,276               | 198           |
| 18                                                 | 3SIE200L6A              | 18,5           | 25   | 1189                 | 149            | 92,0               | 93,0 | 93,0 | 0,81               | 62                                  | 37,5 | 35,5              | 2,3                            | 6,5                            | 2,6                            | 0,5                 | 285           |
| 19                                                 | 3SIE200L6B              | 22             | 30   | 1190                 | 177            | 92,0               | 93,1 | 93,0 | 0,80               | 74                                  | 45   | 43                | 2,5                            | 7,0                            | 2,7                            | 0,64                | 309           |
| 20                                                 | 3SIE225M6               | 30             | 40   | 1189                 | 241            | 94,1               | 94,5 | 94,1 | 0,82               | 98                                  | 59   | 56                | 2,2                            | 7,1                            | 2,3                            | 0,89                | 392           |
| 21                                                 | 3SIE250M6               | 37             | 50   | 1192                 | 296            | 93,0               | 94,1 | 94,1 | 0,81               | 122                                 | 74   | 70                | 2,2                            | 7,7                            | 2,8                            | 1,23                | 440           |
| 22                                                 | 3SIE280S6               | 45             | 60   | 1193                 | 360            | 93,5               | 94,4 | 94,5 | 0,82               | 146                                 | 88   | 84                | 2,2                            | 7,8                            | 2,6                            | 1,7                 | 635           |
| 23                                                 | 3SIE280M6               | 55             | 75   | 1192                 | 441            | 94,0               | 94,6 | 94,5 | 0,82               | 178                                 | 108  | 102               | 2,2                            | 7,3                            | 2,6                            | 1,9                 | 695           |
| 24                                                 | 3SIE315S6               | 75             | 100  | 1192                 | 601            | 94,7               | 95,1 | 95,0 | 0,82               | 242                                 | 146  | 139               | 2,2                            | 7,1                            | 2,3                            | 2,4                 | 900           |
| 25                                                 | 3SIE315M6A              | 90             | 125  | 1192                 | 721            | 94,6               | 95,1 | 95,0 | 0,82               | 290                                 | 176  | 167               | 2,6                            | 8,0                            | 2,9                            | 2,93                | 965           |
| 26                                                 | 3SIE315M6B              | 110            | 150  | 1192                 | 881            | 95,5               | 96,0 | 95,8 | 0,83               | 347                                 | 210  | 200               | 2,8                            | 7,8                            | 2,9                            | 3,46                | 1110          |
| 27                                                 | 3SIE315M6C              | 132            | 175  | 1191                 | 1058           | 95,7               | 96,1 | 95,8 | 0,84               | 412                                 | 249  | 237               | 2,4                            | 7,2                            | 2,4                            | 4,21                | 1230          |
| 28                                                 | 3SIE315M6D              | 160            | 220  | 1193                 | 1281           | 94,6               | 95,6 | 95,8 | 0,75               | 559                                 | 338  | 321               | 3,3                            | 8,2                            | 3,0                            | 4,36                | 1235          |
| 29                                                 | 3SIE355ML6A             | 200            | 270  | 1192                 | 1602           | 94,8               | 95,7 | 95,8 | 0,86               |                                     | 369  | 351               | 2,0                            | 8,0                            | 2,4                            | 7,2                 | 1740          |
| 30                                                 | 3SIE355ML6B             | 250            | 355  | 1191                 | 2005           | 95,2               | 95,8 | 95,8 | 0,86               |                                     | 461  | 438               | 1,9                            | 8,0                            | 2,3                            | 8,6                 | 1950          |
| 31                                                 | 3SIE355H6C              | 315            | 425  | 1191                 | 2526           | 95,0               | 95,8 | 95,8 | 0,86               |                                     | 581  | 552               | 1,5                            | 7,6                            | 2,2                            | 12,7                | 2390          |
| 32                                                 | 3SIE355H6D              | 355            | 475  | 1191                 | 2847           | 95,0               | 95,8 | 95,8 | 0,86               |                                     | 655  | 622               | 1,5                            | 7,4                            | 2,2                            | 14,3                | 2550          |
| 33                                                 | 3SIE355H6E              | 400            | 540  | 1191                 | 3207           | 95,5               | 95,8 | 95,8 | 0,85               |                                     |      | 709               | 2,2                            | 8,6                            | 2,4                            | 15,3                | 2600          |
| 34                                                 | 3SIE400H6C              | 450            | 600  | 1192                 | 3605           | 95,0               | 95,8 | 95,8 | 0,82               |                                     |      | 827               | 1,5                            | 8,0                            | 2,5                            | 19,4                | 3250          |
| 35                                                 | 3SIE400H6D              | 500            | 680  | 1192                 | 4006           | 95,0               | 95,8 | 95,8 | 0,82               |                                     |      | 919               | 1,7                            | 8,5                            | 2,6                            | 22,0                | 3450          |
| 36                                                 | 3SIE450H6B              | 560            | 750  | 1193                 | 4483           | 95,4               | 95,9 | 95,9 | 0,86               |                                     |      | 568 <sup>1</sup>  | 1,2                            | 7,3                            | 2,6                            | 40,6                | 4300          |
| 37                                                 | 3SIE450H6C              | 630            | 850  | 1193                 | 5043           | 95,5               | 96,0 | 96,0 | 0,87               |                                     |      | 631 <sup>1</sup>  | 1,3                            | 7,5                            | 2,6                            | 45,0                | 4500          |
| 38                                                 | 3SIE450H6D              | 710            | 950  | 1194                 | 5679           | 95,5               | 96,0 | 96,1 | 0,87               |                                     |      | 711 <sup>1</sup>  | 1,4                            | 7,9                            | 2,6                            | 50,0                | 4890          |
| 39                                                 | 3SIE500H6A              | 800            | 1080 | 1195                 | 6393           | 95,5               | 96,2 | 96,3 | 0,86               |                                     |      | 808 <sup>1</sup>  | 0,9                            | 6,3                            | 2,4                            | 61,5                | 6200          |
| 40                                                 | 3SIE500H6B              | 900            | 1200 | 1195                 | 7192           | 95,6               | 96,2 | 96,3 | 0,86               |                                     |      | 909 <sup>1</sup>  | 1,0                            | 6,5                            | 2,2                            | 71,0                | 6550          |
| 41                                                 | 3SIE500H6C              | 1000           | 1350 | 1195                 | 7992           | 95,7               | 96,3 | 96,4 | 0,86               |                                     |      | 1009 <sup>1</sup> | 1,0                            | 7,0                            | 2,5                            | 75,0                | 6700          |
| 42                                                 | Sh500H6Ds               | 1120           | 1500 | 1195                 | 8951           | 96,1               | 96,8 | 97,0 | 0,85               |                                     |      | 1137 <sup>1</sup> | 1,1                            | 7,5                            | 2,6                            | 80                  | 7130          |
| 43                                                 | Sh500H6Es               | 1250           | 1680 | 1195                 | 9990           | 96,2               | 96,9 | 97,0 | 0,85               |                                     |      | 1269 <sup>1</sup> | 1,1                            | 7,6                            | 2,6                            | 84,9                | 7460          |

<sup>1</sup> – at rated voltage 690V, <sup>2</sup> – IE3 with standard rated output at 50Hz



# Totally Enclosed Motors IP 55    f=60Hz    RPM=900 min<sup>-1</sup>

| Item                              | Type                   | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |                   | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|-----------------------------------|------------------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|-------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                   |                        | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |                   | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                   |                        | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 230V                                | 380V | 400V              | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| 2p=8      n <sub>s</sub> =900 rpm |                        |                |      |                      |                |                    |      |      |                    |                                     |      |                   |                                |                                |                                |                     |               |
| 1                                 | Sh63-8A                | 0,04           | 0,06 | 800                  | 0,48           | 11,5               | 16,5 | 30,5 | 0,39               | 0,9                                 | 0,53 | 0,5               | 2,1                            | 1,5                            | 2,0                            | 0,00024             | 3,5           |
| 2                                 | Sh63-8B                | 0,06           | 0,08 | 790                  | 0,72           | 10,9               | 15,6 | 28,6 | 0,47               | 1,1                                 | 0,7  | 0,65              | 1,7                            | 1,6                            | 1,7                            | 0,000307            | 4,1           |
| 3                                 | Sh71-8A                | 0,09           | 0,12 | 820                  | 1,05           | 24,1               | 30,6 | 34,0 | 0,50               | 1,3                                 | 0,8  | 0,75              | 2,3                            | 1,8                            | 2,3                            | 0,000736            | 4,7           |
| 4                                 | 2SIE71-8B              | 0,12           | 0,17 | 800                  | 1,43           | 28,2               | 35,6 | 39,8 | 0,67               | 1,15                                | 0,7  | 0,65              | 2,1                            | 1,8                            | 1,9                            | 0,003882            | 5,6           |
| 5                                 | 2SIE80-8A              | 0,18           | 0,25 | 850                  | 2,02           | 51,6               | 60,7 | 64,0 | 0,51               | 1,4                                 | 0,85 | 0,8               | 2,1                            | 2,7                            | 2,4                            | 0,002933            | 11            |
| 6                                 | 2SIE80-8B              | 0,25           | 0,33 | 840                  | 2,84           | 59,5               | 67,0 | 68,0 | 0,51               | 1,75                                | 1,1  | 1                 | 2,1                            | 2,9                            | 2,4                            | 0,00345             | 12,7          |
| 7                                 | 2SIE90S8               | 0,37           | 0,5  | 855                  | 4,1            | 48,7               | 55,9 | 58,0 | 0,60               | 2,4                                 | 1,5  | 1,4               | 1,4                            | 3,5                            | 2,3                            | 0,0021              | 13            |
| 8                                 | 2SIE90L8               | 0,55           | 0,75 | 855                  | 6,1            | 53,1               | 61,5 | 62,0 | 0,62               | 3,3                                 | 2,0  | 1,9               | 1,5                            | 3,7                            | 2,3                            | 0,0030              | 16            |
| 9                                 | 3SIE100L8A             | 0,75           | 1    | 870                  | 8,2            | 70,0               | 74,8 | 75,5 | 0,64               | 3,9                                 | 2,4  | 2,2               | 1,9                            | 4,5                            | 2,9                            | 0,0076              | 19,5          |
| 10                                | 3SIE100L8B             | 1,1            | 1,5  | 855                  | 12,3           | 69,0               | 76,9 | 78,5 | 0,68               | 5,2                                 | 3,1  | 3                 | 1,5                            | 4,2                            | 2,3                            | 0,0122              | 27            |
| 11                                | 3SIE112M8              | 1,5            | 2    | 855                  | 16,8           | 83,1               | 84,5 | 84,0 | 0,65               | 6,9                                 | 4,2  | 4                 | 1,8                            | 5,4                            | 3,2                            | 0,0168              | 33,5          |
| 12                                | 3SIE132S8 <sup>2</sup> | 2,2            | 3    | 865                  | 24,3           | 83,3               | 84,7 | 84,0 | 0,71               | 9,3                                 | 5,6  | 5,3               | 2,7                            | 6,2                            | 3,5                            | 0,0361              | 46            |
| 13                                | 3SIE132M8 <sup>2</sup> | 3              | 4    | 865                  | 33,1           | 84,8               | 86,2 | 85,5 | 0,71               | 12,4                                | 7,5  | 7,1               | 2,6                            | 7,0                            | 3,5                            | 0,0489              | 54            |
| 14                                | 3SIE160M8A             | 4              | 5,5  | 860                  | 44,4           | 87,4               | 88,0 | 86,5 | 0,72               | 16,1                                | 9,8  | 9,3               | 1,8                            | 5,5                            | 3,0                            | 0,057               | 106           |
| 15                                | 3SIE160M8B             | 5,5            | 7,5  | 860                  | 61,1           | 87,4               | 88,0 | 86,5 | 0,72               | 22,2                                | 13,4 | 12,7              | 2,1                            | 6,0                            | 3,5                            | 0,078               | 118           |
| 16                                | 3SIE160L8              | 7,5            | 10   | 860                  | 83,3           | 90,1               | 90,7 | 89,5 | 0,74               | 28,4                                | 17,2 | 16,3              | 2,3                            | 6,5                            | 3,3                            | 0,102               | 132           |
| 17                                | 3SIE180L8              | 11             | 15   | 875                  | 120,1          | 87,7               | 89,2 | 89,5 | 0,74               | 41,6                                | 25,2 | 24                | 2,0                            | 5,5                            | 2,4                            | 0,213               | 165           |
| 18                                | 3SIE200L8              | 15             | 20   | 886                  | 162            | 87,9               | 89,7 | 90,2 | 0,80               | 52                                  | 31,5 | 30                | 2,0                            | 6,8                            | 2,9                            | 0,45                | 260           |
| 19                                | 3SIE225S8              | 18,5           | 25   | 887                  | 199            | 89,9               | 90,6 | 90,2 | 0,79               | 65                                  | 39,5 | 37,5              | 2,3                            | 6,6                            | 2,3                            | 0,58                | 315           |
| 20                                | 3SIE225M8              | 22             | 30   | 888                  | 237            | 90,5               | 91,7 | 91,7 | 0,80               | 75                                  | 46   | 43                | 2,5                            | 7,0                            | 2,1                            | 0,68                | 350           |
| 21                                | 3SIE250M8              | 30             | 40   | 889                  | 322            | 90,7               | 91,7 | 91,7 | 0,81               | 101                                 | 61   | 58                | 2,9                            | 7,1                            | 2,5                            | 1,27                | 460           |
| 22                                | 3SIE280S8              | 37             | 50   | 889                  | 397            | 91,6               | 92,5 | 92,4 | 0,82               | 123                                 | 74   | 70                | 2,2                            | 6,1                            | 2,0                            | 1,47                | 600           |
| 23                                | 3SIE280M8              | 45             | 60   | 889                  | 483            | 92,0               | 92,6 | 92,4 | 0,82               | 149                                 | 90   | 86                | 2,3                            | 6,6                            | 2,2                            | 1,8                 | 640           |
| 24                                | 3SIE315S8              | 55             | 75   | 890                  | 590            | 92,3               | 93,4 | 93,6 | 0,81               | 182                                 | 110  | 105               | 1,7                            | 6,6                            | 2,6                            | 1,9                 | 850           |
| 25                                | 3SIE315M8A             | 75             | 100  | 889                  | 806            | 92,7               | 93,6 | 93,6 | 0,80               | 251                                 | 152  | 145               | 2,1                            | 7,3                            | 2,9                            | 2,6                 | 960           |
| 26                                | 3SIE315M8B             | 90             | 125  | 889                  | 967            | 93,9               | 94,4 | 94,1 | 0,81               | 296                                 | 179  | 170               | 2,2                            | 7,4                            | 3,1                            | 3,3                 | 1090          |
| 27                                | 3SIE315M8C             | 110            | 150  | 891                  | 1179           | 93,0               | 93,9 | 94,1 | 0,77               | 381                                 | 231  | 219               | 2,6                            | 8,0                            | 3,1                            | 4,1                 | 1230          |
| 28                                | 3SIE315M8D             | 132            | 175  | 890                  | 1416           | 93,6               | 94,3 | 94,5 | 0,78               | 450                                 | 272  | 258               | 2,4                            | 7,8                            | 3,0                            | 4,2                 | 1245          |
| 29                                | 3SIE355ML8A            | 160            | 215  | 889                  | 1718           | 94,2               | 94,5 | 94,5 | 0,80               |                                     | 321  | 305               | 1,4                            | 6,6                            | 2,0                            | 7,0                 | 1680          |
| 30                                | 3SIE355ML8B            | 200            | 270  | 890                  | 2146           | 94,7               | 95,0 | 95,0 | 0,80               |                                     | 400  | 380               | 1,7                            | 7,2                            | 2,1                            | 8,3                 | 1750          |
| 31                                | 3SIE355H8D             | 250            | 340  | 890                  | 2683           | 94,7               | 95,1 | 95,1 | 0,78               |                                     | 511  | 486               | 1,3                            | 6,5                            | 2,0                            | 12,9                | 2440          |
| 32                                | 3SIE355H8E             | 315            | 430  | 892                  | 3372           | 94,7               | 95,1 | 95,1 | 0,79               |                                     | 637  | 605               | 1,3                            | 6,6                            | 2,0                            | 16,0                | 2590          |
| 33                                | 3SIE400H8D             | 355            | 480  | 891                  | 3805           | 94,7               | 95,2 | 95,2 | 0,77               |                                     |      | 699               | 1,2                            | 6,2                            | 2,0                            | 18,8                | 3200          |
| 34                                | 3SIE400H8E             | 400            | 540  | 891                  | 4287           | 94,7               | 95,2 | 95,2 | 0,77               |                                     |      | 788               | 1,2                            | 6,3                            | 2,0                            | 21,0                | 3350          |
| 35                                | 3SIE450H8B             | 450            | 600  | 896                  | 4796           | 94,8               | 95,3 | 95,3 | 0,77               |                                     |      | 513 <sup>1</sup>  | 0,9                            | 6,2                            | 2,0                            | 41,6                | 4400          |
| 36                                | 3SIE450H8C             | 500            | 680  | 896                  | 5329           | 94,9               | 95,4 | 95,4 | 0,77               |                                     |      | 570 <sup>1</sup>  | 1,0                            | 6,2                            | 2,1                            | 46,0                | 4600          |
| 37                                | 3SIE450H8D             | 560            | 750  | 895                  | 5975           | 94,9               | 95,4 | 95,4 | 0,78               |                                     |      | 630 <sup>1</sup>  | 1,0                            | 6,2                            | 2,1                            | 49,0                | 4770          |
| 38                                | 3SIE450H8E             | 630            | 850  | 895                  | 6722           | 95,0               | 95,5 | 95,5 | 0,78               |                                     |      | 708 <sup>1</sup>  | 1,0                            | 5,9                            | 2,0                            | 53,8                | 4980          |
| 39                                | 3SIE500H8B             | 710            | 950  | 896                  | 7568           | 95,0               | 95,5 | 95,5 | 0,80               |                                     |      | 778 <sup>1</sup>  | 1,1                            | 6,8                            | 2,5                            | 92,4                | 6680          |
| 40                                | 3SIE500H8C             | 800            | 1080 | 896                  | 8527           | 95,0               | 95,5 | 95,5 | 0,80               |                                     |      | 876 <sup>1</sup>  | 1,1                            | 6,8                            | 2,5                            | 95,8                | 6800          |
| 41                                | 3SIE500H8D             | 900            | 1200 | 896                  | 9593           | 95,0               | 95,5 | 95,5 | 0,80               |                                     |      | 986 <sup>1</sup>  | 1,0                            | 6,5                            | 2,4                            | 108                 | 7240          |
| 42                                | 3SIE500H8E             | 1000           | 1350 | 896                  | 10658          | 95,0               | 95,5 | 95,5 | 0,80               |                                     |      | 1095 <sup>1</sup> | 1,1                            | 7,0                            | 2,5                            | 118                 | 7570          |

<sup>1</sup> – at rated voltage 690V, <sup>2</sup> – IE3 with standard rated output at 50Hz

# Totally Enclosed Motors IP 55    f=60Hz    RPM=720 min<sup>-1</sup>

| Item                                               | Type       | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |                  | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|----------------------------------------------------|------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                                    |            | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |                  | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                                    |            | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 230V                                | 380V | 400V             | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| 2p=10                      n <sub>s</sub> =720 rpm |            |                |      |                      |                |                    |      |      |                    |                                     |      |                  |                                |                                |                                |                     |               |
| 1                                                  | Sh90S-10   | 0,25           | 0,34 | 710                  | 3,4            | 48,9               | 54,8 | 57,0 | 0,47               | 2,34                                | 1,42 | 1,35             | 2,5                            | 2,8                            | 2,9                            | 0,0028              | 17            |
| 2                                                  | Sh90L-10   | 0,37           | 0,5  | 710                  | 5              | 54,7               | 62,4 | 65,8 | 0,52               | 2,71                                | 1,64 | 1,56             | 2,6                            | 3,0                            | 2,9                            | 0,003               | 20            |
| 3                                                  | Sg100L-10A | 0,55           | 0,75 | 690                  | 7,6            | 40,9               | 51,8 | 56,8 | 0,43               | 5,7                                 | 3,4  | 3,3              | 3,5                            | 4,2                            | 3,7                            | 0,009               | 24            |
| 4                                                  | Sg100L-10B | 0,75           | 1    | 680                  | 10,5           | 46,8               | 55,6 | 57,9 | 0,52               | 6,3                                 | 3,8  | 3,6              | 2,9                            | 4,1                            | 3,3                            | 0,01                | 24,5          |
| 5                                                  | Sg112M-10  | 0,75           | 1    | 680                  | 10,5           | 45,2               | 53,4 | 73,0 | 0,63               | 4,1                                 | 2,5  | 2,4              | 3,9                            | 5,0                            | 4,0                            | 0,0177              | 33            |
| 6                                                  | Sg112M-10A | 1,1            | 1,5  | 680                  | 15,4           | 70,9               | 75,1 | 75,1 | 0,62               | 5,9                                 | 3,6  | 3,4              | 1,9                            | 4,2                            | 2,6                            | 0,018               | 32            |
| 7                                                  | Sg132S-10  | 1,1            | 1,5  | 680                  | 15,4           | 56,3               | 69,7 | 78,2 | 0,63               | 5,6                                 | 3,4  | 3,2              | 1,8                            | 5,0                            | 2,2                            | 0,025               | 52            |
| 8                                                  | Sg132S-10A | 1,5            | 2    | 680                  | 21,1           | 55,1               | 71,7 | 75,5 | 0,58               | 8,6                                 | 5,2  | 4,9              | 2,1                            | 4,9                            | 3,0                            | 0,032               | 66            |
| 9                                                  | Sg132S-10B | 2,2            | 3    | 675                  | 31,1           | 45,2               | 64,2 | 76,4 | 0,55               | 13,1                                | 8    | 7,6              | 2,4                            | 5,1                            | 3,2                            | 0,04                | 72            |
| 10                                                 | Sg160M-10  | 4              | 5,5  | 685                  | 55,8           | 73,5               | 75,8 | 77,0 | 0,55               | 23,7                                | 14,4 | 13,6             | 2,8                            | 5,3                            | 3,1                            | 0,096               | 125           |
| 11                                                 | Sg160L-10  | 5,5            | 7,5  | 690                  | 76,1           | 77,8               | 80,3 | 82,1 | 0,55               | 30,6                                | 18,5 | 17,6             | 2,8                            | 6,1                            | 3,7                            | 0,096               | 125           |
| 12                                                 | Sg180L-10  | 7,5            | 10   | 705                  | 101,6          | 84,4               | 87,2 | 88,0 | 0,60               | 35,7                                | 21,6 | 20,5             | 3,2                            | 6,7                            | 3,5                            | 0,22                | 164           |
| 13                                                 | 2Sg200L10A | 7,5            | 10   | 707                  | 101            | 84,8               | 86,3 | 86,6 | 0,75               | 29                                  | 17,5 | 16,7             | 2,3                            | 5,5                            | 2,1                            | 0,4                 | 240           |
| 14                                                 | 2Sg200L10B | 11             | 15   | 705                  | 149            | 85,7               | 87,7 | 87,7 | 0,73               | 43                                  | 26,1 | 24,8             | 2,9                            | 6,1                            | 2,4                            | 0,47                | 255           |
| 15                                                 | 2Sg225S10  | 13             | 18   | 712                  | 174            | 88,2               | 90,7 | 91,5 | 0,68               | 52                                  | 32   | 30               | 1,9                            | 4,9                            | 2,2                            | 0,6                 | 280           |
| 16                                                 | 2Sg225M10  | 15             | 20   | 711                  | 201            | 87,5               | 89,6 | 90,0 | 0,69               | 61                                  | 36,5 | 35               | 2,7                            | 5,9                            | 2,1                            | 0,76                | 315           |
| 17                                                 | 2Sg250M10  | 22             | 30   | 710                  | 296            | 88,0               | 90,1 | 90,7 | 0,71               | 86                                  | 52   | 49               | 2,9                            | 6,2                            | 2,1                            | 1,27                | 430           |
| 18                                                 | 2Sg280S10A | 30             | 40   | 706                  | 406            | 89,2               | 91,3 | 91,0 | 0,73               | 113                                 | 69   | 65               | 1,8                            | 4,7                            | 1,9                            | 1,35                | 525           |
| 19                                                 | 2Sg280S10B | 37             | 50   | 705                  | 501            | 91,0               | 91,5 | 91,0 | 0,75               | 136                                 | 82   | 78               | 2,0                            | 5,3                            | 1,8                            | 1,61                | 565           |
| 20                                                 | 2Sg280M10  | 45             | 60   | 708                  | 607            | 92,7               | 93,2 | 92,7 | 0,75               | 162                                 | 98   | 93               | 2,0                            | 5,0                            | 1,7                            | 2,03                | 630           |
| 21                                                 | 2Sg315S10z | 55             | 75   | 704                  | 746            | 88,0               | 90,0 | 91,0 | 0,74               | 205                                 | 124  | 118              | 1,8                            | 5,5                            | 2,1                            | 2,86                | 840           |
| 22                                                 | 2Sg315M10  | 75             | 100  | 704                  | 1017           | 91,8               | 92,6 | 92,2 | 0,74               | 276                                 | 167  | 159              | 2,2                            | 5,1                            | 1,9                            | 3,01                | 895           |
| 23                                                 | Sg355S10A  | 90             | 125  | 712                  | 1207           | 92,5               | 93,5 | 93,5 | 0,79               |                                     | 185  | 176              | 1,3                            | 6,3                            | 2,1                            | 8,2                 | 1250          |
| 24                                                 | Sg355S10B  | 110            | 150  | 712                  | 1475           | 92,8               | 93,7 | 93,7 | 0,79               |                                     | 226  | 215              | 1,3                            | 6,5                            | 2,3                            | 10,3                | 1390          |
| 25                                                 | Sh355H10As | 132            | 180  | 712                  | 1771           | 93,2               | 93,9 | 93,8 | 0,79               |                                     | 271  | 257              | 1,1                            | 5,1                            | 1,9                            | 11                  | 2080          |
| 26                                                 | Sh355H10Bs | 160            | 220  | 713                  | 2143           | 93,2               | 94,0 | 94,0 | 0,78               |                                     | 332  | 315              | 1,3                            | 5,6                            | 2,0                            | 13                  | 2220          |
| 27                                                 | Sh355H10Cs | 200            | 270  | 712                  | 2683           | 94,2               | 94,2 | 94,1 | 0,79               |                                     | 408  | 388              | 1,2                            | 5,6                            | 1,9                            | 15,5                | 2360          |
| 28                                                 | Sh400H10Bs | 250            | 340  | 712                  | 3353           | 93,9               | 94,4 | 94,3 | 0,80               |                                     | 503  | 478              | 1,1                            | 6,1                            | 2,4                            | 28,5                | 3170          |
| 29                                                 | Sh400H10Cs | 315            | 430  | 712                  | 4225           | 94,3               | 94,7 | 94,6 | 0,80               |                                     | 633  | 601              | 1,1                            | 6,2                            | 2,4                            | 32,2                | 3350          |
| 30                                                 | Sh450H10As | 355            | 480  | 715                  | 4742           | 94,3               | 95,1 | 95,2 | 0,81               |                                     |      | 385 <sup>1</sup> | 0,7                            | 6,2                            | 2,2                            | 39,0                | 3850          |
| 31                                                 | Sh450H10Bs | 400            | 540  | 716                  | 5335           | 94,5               | 95,2 | 95,3 | 0,81               |                                     |      | 434 <sup>1</sup> | 0,7                            | 6,2                            | 2,1                            | 45,0                | 4050          |
| 32                                                 | Sh450H10Cs | 450            | 600  | 716                  | 6002           | 94,6               | 95,3 | 95,4 | 0,81               |                                     |      | 487 <sup>1</sup> | 0,8                            | 6,3                            | 2,2                            | 52,0                | 4280          |
| 33                                                 | Sh450H10Ds | 500            | 680  | 716                  | 6669           | 94,4               | 95,2 | 95,4 | 0,79               |                                     |      | 555 <sup>1</sup> | 0,8                            | 7,3                            | 2,3                            | 57                  | 4450          |
| 34                                                 | Sh450H10Es | 560            | 750  | 716                  | 7469           | 94,5               | 95,3 | 95,5 | 0,78               |                                     |      | 629 <sup>1</sup> | 0,9                            | 7,5                            | 2,3                            | 60                  | 4540          |
| 35                                                 | Sh500H10Ds | 630            | 850  | 716                  | 8403           | 93,7               | 95,0 | 95,1 | 0,81               |                                     |      | 684 <sup>1</sup> | 1,1                            | 6,8                            | 2,2                            | 108                 | 6450          |
| 36                                                 | Sh500H10Es | 710            | 950  | 716                  | 9470           | 93,9               | 95,1 | 95,2 | 0,80               |                                     |      | 780 <sup>1</sup> | 1,2                            | 6,9                            | 2,2                            | 117                 | 6680          |
| 37                                                 | Sh500H10Fs | 800            | 1070 | 716                  | 10670          | 93,9               | 95,0 | 95,1 | 0,80               |                                     |      | 880 <sup>1</sup> | 1,2                            | 7,1                            | 2,2                            | 128                 | 7000          |

<sup>1</sup> – at rated voltage 690V

# Totally Enclosed Motors IP 55    $f=60\text{Hz}$    $\text{RPM}=600\text{ min}^{-1}$

| Item | Type       | Rated output                                      |      | Rated speed         | Rated torque | Efficiency   |      |      | Power factor     | Full load current          |      |      | Locked rotor torque ratio | Locked rotor current ratio | Breakdown torque ratio | Moment of Inertia | Weight (IMB3) |
|------|------------|---------------------------------------------------|------|---------------------|--------------|--------------|------|------|------------------|----------------------------|------|------|---------------------------|----------------------------|------------------------|-------------------|---------------|
|      |            | $P_N$                                             |      | $n_N$               | $T_N$        | $\eta_N[\%]$ |      |      | $\cos \varphi_N$ | $I_N$ at rated voltage [A] |      |      | $T_L/T_N$                 | $I_L/I_N$                  | $T_B/T_N$              | J                 |               |
|      |            | [kW]                                              | [HP] | $[\text{min}^{-1}]$ | [Nm]         | 50%          | 75%  | 100% | [-]              | 230V                       | 380V | 400V | [-]                       | [-]                        | [-]                    | $[\text{kgm}^2]$  | [kg]          |
|      |            | <b>2p=12      <math>n_s=600\text{ rpm}</math></b> |      |                     |              |              |      |      |                  |                            |      |      |                           |                            |                        |                   |               |
| 1    | Sg100L-12  | 0,55                                              | 0,75 | 560                 | 9,4          | 40,9         | 51,8 | 56,8 | 0,52             | 4,7                        | 2,8  | 2,7  | 1,8                       | 3,1                        | 2,1                    | 0,009             | 22            |
| 2    | Sg112M-12  | 0,75                                              | 1    | 570                 | 12,6         | 54,3         | 59,8 | 65,3 | 0,47             | 6,1                        | 3,7  | 3,5  | 2,5                       | 4,2                        | 3,3                    | 0,0177            | 33            |
| 3    | Sg132S-12  | 1,1                                               | 1,5  | 565                 | 18,6         | 64,3         | 69,7 | 70,4 | 0,60             | 6,5                        | 4    | 3,8  | 1,7                       | 3,9                        | 2,8                    | 0,025             | 54            |
| 4    | Sg132M-12  | 1,5                                               | 2    | 565                 | 25,4         | 69,9         | 71,9 | 74,0 | 0,58             | 8,8                        | 5,3  | 5    | 1,9                       | 4,7                        | 3,0                    | 0,032             | 66            |
| 5    | Sg132M-12B | 2,2                                               | 3    | 565                 | 37,2         | 69,9         | 72,3 | 72,5 | 0,55             | 13,8                       | 8,4  | 8    | 1,8                       | 4,0                        | 2,6                    | 0,04              | 72            |
| 6    | Sg160M-12  | 2,2                                               | 3    | 570                 | 36,9         | 68,5         | 73,1 | 74,5 | 0,50             | 14,8                       | 8,2  | 8,5  | 2,1                       | 5,2                        | 3,1                    | 0,072             | 100           |
| 7    | Sg160L-12  | 3                                                 | 4    | 580                 | 49,4         | 73,3         | 80,4 | 83,5 | 0,51             | 17,7                       | 10,7 | 10,2 | 2,2                       | 5,7                        | 3,1                    | 0,096             | 125           |
| 8    | Sg180L-12  | 5,5                                               | 7,5  | 585                 | 89,8         | 69,8         | 71,2 | 74,7 | 0,58             | 31,9                       | 19,3 | 18,3 | 1,6                       | 4,1                        | 2,4                    | 0,22              | 170           |
| 9    | 2Sg200L12  | 9                                                 | 12   | 589                 | 146          | 80,0         | 82,6 | 83,0 | 0,61             | 45                         | 27   | 25,6 | 2,7                       | 4,7                        | 2,5                    | 0,47              | 255           |
| 10   | 2Sg225S12  | 11                                                | 15   | 591                 | 178          | 83,1         | 86,2 | 87,0 | 0,65             | 49                         | 29,6 | 28,1 | 2,0                       | 4,2                        | 2,2                    | 0,58              | 315           |
| 11   | 2Sg225M12  | 13                                                | 18   | 592                 | 210          | 86,0         | 88,9 | 89,2 | 0,68             | 54                         | 32,5 | 31   | 2,0                       | 5,5                        | 2,0                    | 0,68              | 350           |
| 12   | 2Sg250M12  | 18,5                                              | 25   | 590                 | 299          | 87,5         | 89,0 | 88,8 | 0,67             | 78                         | 47   | 45   | 2,6                       | 5,0                        | 2,0                    | 1,27              | 430           |
| 13   | 2Sg280S12  | 22                                                | 30   | 592                 | 355          | 88,7         | 90,6 | 91,2 | 0,63             | 96                         | 58   | 55   | 1,9                       | 4,9                        | 2,1                    | 1,47              | 535           |
| 14   | 2Sg280M12  | 30                                                | 40   | 591                 | 485          | 85,8         | 88,6 | 89,4 | 0,64             | 132                        | 80   | 76   | 2,0                       | 4,4                        | 1,7                    | 1,8               | 570           |
| 15   | 2Sg315S12  | 37                                                | 50   | 592                 | 597          | 87,9         | 90,1 | 90,7 | 0,60             | 171                        | 103  | 98   | 2,1                       | 5,0                        | 2,0                    | 2,29              | 730           |
| 16   | 2Sg315M12A | 45                                                | 60   | 591                 | 792          | 88,0         | 90,4 | 91,1 | 0,60             | 207                        | 125  | 119  | 2,4                       | 4,8                        | 1,7                    | 2,86              | 870           |
| 17   | 2Sg315M12B | 55                                                | 75   | 589                 | 973          | 86,6         | 89,5 | 90,4 | 0,61             | 250                        | 152  | 144  | 2,3                       | 4,9                        | 1,7                    | 3,01              | 885           |
| 18   | Sg355S12   | 75                                                | 100  | 591                 | 1212         | 89,5         | 91,2 | 91,2 | 0,73             |                            | 172  | 163  | 1,2                       | 5,0                        | 1,9                    | 8,3               | 1250          |
| 19   | Sg355S12A  | 90                                                | 120  | 592                 | 1452         | 90,0         | 91,4 | 91,5 | 0,73             |                            | 205  | 195  | 1,2                       | 6,2                        | 2,2                    | 10,4              | 1390          |
| 20   | Sg355S12B  | 110                                               | 150  | 591                 | 1777         | 90,0         | 91,5 | 91,5 | 0,73             |                            | 251  | 238  | 1,3                       | 5,7                        | 1,9                    | 12,1              | 1570          |
| 21   | Sg355M12   | 132                                               | 180  | 593                 | 2162         | 90,5         | 91,9 | 92,0 | 0,73             |                            | 299  | 284  | 1,2                       | 5,5                        | 1,9                    | 13,1              | 1730          |
| 22   | Sh450H12As | 160                                               | 220  | 594                 | 2572         | 93,1         | 93,8 | 93,8 | 0,76             |                            | 351  | 324  | 0,8                       | 6,2                        | 2,3                    | 30,0              | 3470          |
| 23   | Sh450H12Bs | 200                                               | 270  | 593                 | 3221         | 93,1         | 93,8 | 93,8 | 0,76             |                            | 426  | 405  | 0,9                       | 6,2                        | 2,3                    | 33,7              | 3600          |
| 24   | Sh450H12Cs | 250                                               | 340  | 591                 | 4040         | 93,1         | 93,8 | 93,8 | 0,76             |                            | 533  | 506  | 0,8                       | 5,5                        | 2,1                    | 40,0              | 3750          |
| 25   | Sh450H12Ds | 315                                               | 430  | 592                 | 5081         | 93,3         | 94,0 | 94,0 | 0,77             |                            | 661  | 628  | 0,8                       | 5,6                        | 2,3                    | 34,7              | 4030          |
| 26   | Sh450H12Es | 355                                               | 480  | 593                 | 5717         | 93,4         | 94,1 | 94,1 | 0,77             |                            | 744  | 707  | 0,9                       | 6,1                        | 2,4                    | 41,7              | 4330          |
| 27   | Sh450H12Fs | 400                                               | 540  | 593                 | 6442         | 93,6         | 94,2 | 94,2 | 0,77             |                            | 838  | 796  | 0,9                       | 6,1                        | 2,4                    | 46,3              | 4530          |
| 28   | Sh500H12Cs | 450                                               | 600  | 594                 | 7235         | 94,1         | 94,7 | 94,7 | 0,78             |                            | 925  | 879  | 1,1                       | 6,6                        | 2,5                    | 100               | 6090          |
| 29   | Sh500H12Ds | 500                                               | 680  | 594                 | 8039         | 94,2         | 94,8 | 94,8 | 0,78             |                            | 1027 | 976  | 1,1                       | 6,7                        | 2,5                    | 112               | 6370          |
| 30   | Sh500H12Es | 560                                               | 750  | 594                 | 9003         | 94,2         | 94,8 | 94,8 | 0,78             |                            | 1150 | 1093 | 1,2                       | 7,0                        | 2,6                    | 125               | 6680          |

# Totally Enclosed Motors IP 55    f=60Hz    RPM=3600 min<sup>-1</sup>

| Item | Type                    | Rated output                       |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |                  | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|------|-------------------------|------------------------------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|      |                         | P <sub>N</sub>                     |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |                  | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|      |                         | [kW]                               | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 265V                                | 460V             | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
|      |                         | 2p=2      n <sub>s</sub> =3600 rpm |      |                      |                |                    |      |      |                    |                                     |                  |                                |                                |                                |                     |               |
| 1    | Sh56-2A                 | 0,11                               | 0,14 | 3380                 | 0,31           | 47,5               | 55,9 | 62,0 | 0,63               | 0,6                                 | 0,35             | 2,5                            | 3,4                            | 2,7                            | 0,000076            | 2,9           |
| 2    | 2SIE56-2B <sup>3</sup>  | 0,14                               | 0,18 | 3360                 | 0,39           | 59,1               | 64,7 | 65,0 | 0,73               | 0,7                                 | 0,4              | 2,0                            | 3,0                            | 2,0                            | 0,000095            | 3,2           |
| 3    | 2SIE63-2A <sup>3</sup>  | 0,21                               | 0,28 | 3310                 | 0,6            | 62,8               | 67,2 | 66,0 | 0,80               | 0,85                                | 0,5              | 2,1                            | 3,4                            | 2,0                            | 0,000175            | 3,5           |
| 4    | 2SIE63-2B <sup>3</sup>  | 0,29                               | 0,39 | 3340                 | 0,83           | 68,9               | 69,8 | 70,0 | 0,79               | 1,1                                 | 0,65             | 2,4                            | 3,3                            | 2,5                            | 0,000235            | 4,1           |
| 5    | 2SIE71-2A <sup>3</sup>  | 0,43                               | 0,58 | 3410                 | 1,2            | 67,0               | 73,0 | 74,0 | 0,73               | 1,75                                | 1                | 3,2                            | 5,0                            | 3,2                            | 0,00046             | 5,6           |
| 6    | 2SIE71-2B <sup>3</sup>  | 0,64                               | 0,86 | 3380                 | 1,8            | 70,9               | 75,0 | 76,0 | 0,73               | 2,5                                 | 1,45             | 3,0                            | 4,7                            | 3,0                            | 0,00053             | 6,3           |
| 7    | 3SIE80-2A <sup>2</sup>  | 0,87                               | 1,17 | 3470                 | 2,39           | 74,6               | 79,0 | 82,0 | 0,79               | 2,95                                | 1,7              | 4,0                            | 7,5                            | 4,2                            | 0,001               | 10,6          |
| 8    | 3SIE80-2B <sup>2</sup>  | 1,3                                | 1,74 | 3470                 | 3,58           | 73,7               | 83,0 | 85,5 | 0,77               | 4,3                                 | 2,5              | 5,1                            | 9,5                            | 4,8                            | 0,00142             | 11,9          |
| 9    | 3SIE90S2 <sup>2</sup>   | 1,73                               | 2,3  | 3525                 | 4,7            | 83,9               | 85,5 | 85,5 | 0,85               | 5,2                                 | 3                | 2,4                            | 8,5                            | 3,2                            | 0,0014              | 16,5          |
| 10   | 3SIE90L2 <sup>2</sup>   | 2,53                               | 3,4  | 3510                 | 6,9            | 86,5               | 87,1 | 86,5 | 0,87               | 7,3                                 | 4,2              | 2,8                            | 8,7                            | 4,1                            | 0,0019              | 18,5          |
| 11   | 3SIE100L2 <sup>2</sup>  | 3,45                               | 4,6  | 3515                 | 9,4            | 87,9               | 88,6 | 88,5 | 0,86               | 9,9                                 | 5,7              | 3,0                            | 8,8                            | 4,1                            | 0,0039              | 25            |
| 12   | 3SIE112M2 <sup>2</sup>  | 4,6                                | 6,2  | 3525                 | 12,5           | 88,1               | 88,8 | 88,5 | 0,90               | 12,6                                | 7,2              | 2,3                            | 8,7                            | 3,3                            | 0,0075              | 35,5          |
| 13   | 3SIE132S2A <sup>2</sup> | 6,3                                | 8,4  | 3535                 | 17             | 87,1               | 89,1 | 89,5 | 0,88               | 17,4                                | 10               | 2,4                            | 8,4                            | 3,8                            | 0,014               | 55            |
| 14   | 3SIE132S2B <sup>2</sup> | 8,6                                | 11,5 | 3535                 | 23,2           | 89,7               | 90,5 | 90,2 | 0,91               | 22,8                                | 13,2             | 2,6                            | 8,6                            | 3,7                            | 0,017               | 64            |
| 15   | 3SIE160M2A <sup>2</sup> | 12,7                               | 17   | 3545                 | 34,2           | 89,0               | 90,8 | 91,0 | 0,90               | 33,8                                | 19,5             | 2,0                            | 7,8                            | 2,9                            | 0,048               | 123           |
| 16   | 3SIE160M2B <sup>2</sup> | 17,3                               | 23,2 | 3545                 | 46,6           | 91,8               | 92,3 | 91,7 | 0,91               | 45,2                                | 26               | 2,3                            | 8,0                            | 3,4                            | 0,059               | 132           |
| 17   | 3SIE160L2 <sup>2</sup>  | 21,3                               | 28,6 | 3540                 | 57,5           | 91,2               | 91,9 | 91,7 | 0,91               | 55,6                                | 32               | 2,3                            | 7,9                            | 3,0                            | 0,072               | 139           |
| 18   | 3SIE180M2 <sup>2</sup>  | 25,3                               | 33,9 | 3550                 | 68,1           | 90,9               | 92,2 | 92,4 | 0,90               | 66,3                                | 38,2             | 3,1                            | 9,0                            | 3,6                            | 0,095               | 190           |
| 19   | 3SIE200L2A <sup>2</sup> | 35                                 | 47   | 3563                 | 94             | 90,5               | 92,5 | 92,9 | 0,90               | 91                                  | 53               | 2,3                            | 7,0                            | 2,8                            | 0,19                | 275           |
| 20   | 3SIE200L2B <sup>2</sup> | 43                                 | 58   | 3554                 | 116            | 92,6               | 93,5 | 93,5 | 0,90               | 111                                 | 64               | 2,1                            | 6,4                            | 2,5                            | 0,2                 | 295           |
| 21   | 3SIE225M2 <sup>2</sup>  | 52                                 | 70   | 3571                 | 139            | 93,0               | 93,7 | 93,5 | 0,88               | 138                                 | 79               | 1,9                            | 6,6                            | 2,4                            | 0,26                | 385           |
| 22   | 3SIE250M2 <sup>2</sup>  | 63                                 | 85   | 3568                 | 169            | 93,4               | 93,8 | 93,5 | 0,91               | 161                                 | 93               | 2,0                            | 6,9                            | 2,8                            | 0,42                | 495           |
| 23   | 3SIE280S2 <sup>2</sup>  | 86                                 | 115  | 3577                 | 230            | 93,9               | 94,9 | 94,8 | 0,90               | 220                                 | 127              | 1,7                            | 6,7                            | 2,8                            | 0,76                | 660           |
| 24   | 3SIE280M2 <sup>2</sup>  | 104                                | 139  | 3579                 | 278            | 94,3               | 95,0 | 94,9 | 0,90               | 265                                 | 153              | 1,7                            | 7,3                            | 3,2                            | 0,95                | 690           |
| 25   | 3SIE315S2 <sup>2</sup>  | 127                                | 170  | 3579                 | 339            | 94,7               | 95,1 | 94,9 | 0,91               | 320                                 | 185              | 1,7                            | 6,9                            | 2,7                            | 0,98                | 865           |
| 26   | 3SIE315M2A <sup>2</sup> | 152                                | 204  | 3576                 | 406            | 95,1               | 95,4 | 95,2 | 0,92               | 378                                 | 218              | 1,9                            | 7,3                            | 2,6                            | 1,28                | 970           |
| 27   | 3SIE315M2B <sup>2</sup> | 184                                | 247  | 3578                 | 491            | 95,4               | 95,8 | 95,6 | 0,92               | 456                                 | 263              | 2,1                            | 8,2                            | 2,9                            | 1,57                | 1118          |
| 28   | 3SIE315M2C <sup>2</sup> | 230                                | 310  | 3580                 | 614            | 95,6               | 95,9 | 95,6 | 0,93               |                                     | 325              | 2,2                            | 8,1                            | 2,9                            | 1,74                | 1185          |
| 29   | 3SIE355ML2A             | 290                                | 390  | 3584                 | 764            | 94,3               | 95,4 | 95,8 | 0,91               |                                     | 417              | 1,5                            | 6,8                            | 2,8                            | 2,8                 | 1620          |
| 30   | 3SIE355ML2B             | 365                                | 490  | 3584                 | 972            | 95,0               | 95,9 | 96,1 | 0,91               |                                     | 452              | 1,9                            | 7,3                            | 3,0                            | 3,0                 | 1700          |
| 31   | 3SIE355H2D              | 410                                | 550  | 3587                 | 945            | 94,7               | 95,8 | 96,1 | 0,91               |                                     | 510              | 1,8                            | 8,6                            | 3,0                            | 4,9                 | 2160          |
| 32   | 3SIE355H2E              | 460                                | 616  | 3582                 | 1226           | 95,3               | 96,0 | 96,1 | 0,91               |                                     | 660              | 1,6                            | 8,0                            | 2,8                            | 5,7                 | 2200          |
| 33   | 3SIE400H2C              | 520                                | 700  | 3582                 | 1386           | 95,3               | 96,0 | 96,1 | 0,91               |                                     | 746              | 1,3                            | 6,6                            | 2,6                            | 6,7                 | 2800          |
| 34   | 3SIE400H2D              | 575                                | 770  | 3582                 | 1533           | 95,3               | 96,0 | 96,1 | 0,91               |                                     | 825              | 1,4                            | 7,2                            | 2,8                            | 7,7                 | 2880          |
| 35   | 3SIE400H2E              | 644                                | 863  | 3582                 | 1670           | 95,3               | 96,0 | 96,1 | 0,90               |                                     | 934              | 1,5                            | 8,0                            | 2,9                            | 8,7                 | 3100          |
| 36   | 3SIE400H2F              | 700                                | 938  | 3582                 | 1866           | 95,3               | 96,0 | 96,1 | 0,90               |                                     | 1016             | 1,5                            | 7,9                            | 2,8                            | 8,7                 | 3100          |
| 37   | 3SIE450H2B              | 816                                | 1094 | 3588                 | 2172           | 95,3               | 96,0 | 96,1 | 0,88               |                                     | 701 <sup>1</sup> | 0,6                            | 6,2                            | 2,7                            | 17,2                | 4160          |
| 38   | 3SIE450H2C              | 920                                | 1230 | 3588                 | 2449           | 95,3               | 96,0 | 96,1 | 0,88               |                                     | 790 <sup>1</sup> | 0,7                            | 6,8                            | 2,7                            | 18,4                | 4380          |
| 39   | Sh450H2Ds               | 1035                               | 1390 | 3588                 | 2754           | 96,5               | 97,1 | 97,2 | 0,88               |                                     | 878 <sup>1</sup> | 0,7                            | 6,6                            | 2,7                            | 19                  | 4480          |

<sup>1</sup> – at rated voltage 795V<sup>2</sup> – IE3 with standard rated output at 50Hz<sup>3</sup> – IE2 with standard rated output at 50Hz

# Totally Enclosed Motors IP 55 $f=60\text{Hz}$ RPM=1800 min<sup>-1</sup>

| Item                                               | Type        | Rated output   |      | Rated speed | Rated torque | Efficiency           |                |                    | Power factor | Full load current | Locked rotor torque ratio | Locked rotor current ratio | Breakdown torque ratio | Moment of Inertia | Weight (IMB3) |                    |                                     |                                |                                |                                |     |     |     |
|----------------------------------------------------|-------------|----------------|------|-------------|--------------|----------------------|----------------|--------------------|--------------|-------------------|---------------------------|----------------------------|------------------------|-------------------|---------------|--------------------|-------------------------------------|--------------------------------|--------------------------------|--------------------------------|-----|-----|-----|
|                                                    |             | P <sub>N</sub> |      |             |              | η <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |              |                   |                           |                            |                        |                   |               | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J   |     |     |
|                                                    |             | [kW]           | [HP] |             |              | [min <sup>-1</sup> ] | [Nm]           | 50%                |              |                   |                           |                            |                        |                   |               | 75%                | 100%                                | [-]                            | 265V                           | 460V                           | [-] | [-] | [-] |
| 2p=4                      n <sub>s</sub> =1800 rpm |             |                |      |             |              |                      |                |                    |              |                   |                           |                            |                        |                   |               |                    |                                     |                                |                                |                                |     |     |     |
| 1                                                  | Sh56-4A     | 0,07           | 0,09 | 1680        | 0,39         | 40,8                 | 49,4           | 54,0               | 0,55         | 0,52              | 0,3                       | 2,4                        | 2,8                    | 2,8               | 0,000145      | 2,6                |                                     |                                |                                |                                |     |     |     |
| 2                                                  | Sh56-4B     | 0,11           | 0,14 | 1660        | 0,62         | 48,6                 | 56,2           | 60,0               | 0,61         | 0,6               | 0,35                      | 2,4                        | 2,4                    | 2,5               | 0,000186      | 2,8                |                                     |                                |                                |                                |     |     |     |
| 3                                                  | 2SIE63-4A³  | 0,14           | 0,18 | 1660        | 0,8          | 52,9                 | 60,9           | 64,0               | 0,63         | 0,8               | 0,45                      | 2,0                        | 2,6                    | 2,0               | 0,00024       | 3,5                |                                     |                                |                                |                                |     |     |     |
| 4                                                  | 2SIE63-4B³  | 0,21           | 0,28 | 1660        | 1,21         | 54,2                 | 60,6           | 68,0               | 0,65         | 1,1               | 0,65                      | 2,0                        | 2,6                    | 2,0               | 0,00031       | 4,1                |                                     |                                |                                |                                |     |     |     |
| 5                                                  | 2SIE71-4A³  | 0,29           | 0,39 | 1670        | 1,66         | 61,8                 | 67,9           | 70,0               | 0,60         | 1,55              | 0,9                       | 2,7                        | 3,3                    | 2,8               | 0,00072       | 5,8                |                                     |                                |                                |                                |     |     |     |
| 6                                                  | 2SIE71-4B³  | 0,43           | 0,58 | 1680        | 2,44         | 68,0                 | 72,0           | 73,0               | 0,65         | 2                 | 1,15                      | 2,5                        | 3,5                    | 2,5               | 0,00085       | 7,2                |                                     |                                |                                |                                |     |     |     |
| 7                                                  | 2SIE80-4A³  | 0,64           | 0,86 | 1680        | 3,64         | 69,5                 | 73,8           | 75,5               | 0,61         | 2,95              | 1,7                       | 3,1                        | 4,1                    | 3,1               | 0,0016        | 8,4                |                                     |                                |                                |                                |     |     |     |
| 8                                                  | 3SIE80-4B²  | 0,87           | 1,17 | 1720        | 4,83         | 80,1                 | 81,7           | 83,5               | 0,64         | 3,6               | 2,2                       | 4,1                        | 6,3                    | 3,9               | 0,00265       | 11                 |                                     |                                |                                |                                |     |     |     |
| 9                                                  | 3SIE90S4²   | 1,27           | 1,7  | 1750        | 6,9          | 84,1                 | 86,3           | 86,5               | 0,78         | 4,1               | 2,4                       | 2,3                        | 7,9                    | 3,6               | 0,0036        | 18                 |                                     |                                |                                |                                |     |     |     |
| 10                                                 | 3SIE90L4²   | 1,73           | 2,3  | 1750        | 9,4          | 84,4                 | 86,5           | 86,5               | 0,78         | 5,6               | 3,2                       | 2,4                        | 7,3                    | 3,5               | 0,004         | 21                 |                                     |                                |                                |                                |     |     |     |
| 11                                                 | 3SIE100L4A² | 2,53           | 3,4  | 1760        | 13,7         | 86,9                 | 88,3           | 87,5               | 0,80         | 7,9               | 4,5                       | 2,7                        | 7,5                    | 3,4               | 0,0076        | 27,5               |                                     |                                |                                |                                |     |     |     |
| 12                                                 | 3SIE100L4B² | 3,45           | 4,6  | 1765        | 18,7         | 87,7                 | 89,4           | 89,5               | 0,80         | 10,5              | 6                         | 2,7                        | 7,7                    | 3,6               | 0,0086        | 31                 |                                     |                                |                                |                                |     |     |     |
| 13                                                 | 3SIE112M4²  | 4,6            | 6,2  | 1755        | 25           | 89,4                 | 90,0           | 89,5               | 0,82         | 13,7              | 7,9                       | 2,0                        | 7,5                    | 3,4               | 0,0115        | 41,5               |                                     |                                |                                |                                |     |     |     |
| 14                                                 | 3SIE132S4²  | 6,3            | 8,4  | 1765        | 34,1         | 89,1                 | 91,0           | 91,7               | 0,84         | 17,8              | 10,3                      | 2,4                        | 8,8                    | 3,5               | 0,036         | 66                 |                                     |                                |                                |                                |     |     |     |
| 15                                                 | 3SIE132M4²  | 8,6            | 11,5 | 1760        | 46,7         | 90,0                 | 91,9           | 91,7               | 0,83         | 24,6              | 14,2                      | 3,2                        | 9,4                    | 4,0               | 0,042         | 70                 |                                     |                                |                                |                                |     |     |     |
| 16                                                 | 3SIE160M4²  | 12,7           | 17   | 1770        | 68,5         | 91,3                 | 92,5           | 92,4               | 0,84         | 35,6              | 20,5                      | 2,3                        | 7,4                    | 2,6               | 0,088         | 136                |                                     |                                |                                |                                |     |     |     |
| 17                                                 | 3SIE160L4²  | 17,3           | 23,2 | 1770        | 93,3         | 92,6                 | 92,8           | 93,0               | 0,84         | 48,2              | 27,8                      | 2,7                        | 8,2                    | 3,1               | 0,104         | 154                |                                     |                                |                                |                                |     |     |     |
| 18                                                 | 3SIE180M4²  | 21,3           | 28,5 | 1770        | 114,9        | 92,4                 | 92,9           | 93,6               | 0,86         | 57,6              | 33,2                      | 3,0                        | 8,3                    | 3,6               | 0,162         | 190                |                                     |                                |                                |                                |     |     |     |
| 19                                                 | 3SIE180L4²  | 25,3           | 33,9 | 1770        | 136,5        | 91,8                 | 93,3           | 93,6               | 0,83         | 71                | 40,9                      | 3,2                        | 8,3                    | 3,8               | 0,185         | 200                |                                     |                                |                                |                                |     |     |     |
| 20                                                 | 3SIE200L4²  | 35             | 47   | 1778        | 188          | 94,3                 | 94,5           | 93,9               | 0,89         | 91                | 53                        | 2,2                        | 6,6                    | 2,4               | 0,38          | 329                |                                     |                                |                                |                                |     |     |     |
| 21                                                 | 3SIE225S4²  | 43             | 58   | 1785        | 230          | 94,4                 | 94,6           | 94,2               | 0,87         | 114               | 66                        | 2,0                        | 6,8                    | 2,7               | 0,51          | 373                |                                     |                                |                                |                                |     |     |     |
| 22                                                 | 3SIE225M4²  | 52             | 70   | 1782        | 279          | 94,7                 | 94,9           | 94,5               | 0,87         | 138               | 79                        | 2,0                        | 7,1                    | 2,8               | 0,59          | 410                |                                     |                                |                                |                                |     |     |     |
| 23                                                 | 3SIE250M4²  | 63             | 85   | 1786        | 337          | 94,5                 | 94,9           | 94,7               | 0,91         | 159               | 92                        | 2,5                        | 7,9                    | 2,9               | 1             | 520                |                                     |                                |                                |                                |     |     |     |
| 24                                                 | 3SIE280S4²  | 86             | 115  | 1787        | 460          | 94,7                 | 95,2           | 95,0               | 0,91         | 217               | 125                       | 1,9                        | 6,9                    | 2,4               | 1,37          | 710                |                                     |                                |                                |                                |     |     |     |
| 25                                                 | 3SIE280M4²  | 104            | 139  | 1790        | 555          | 94,9                 | 95,4           | 95,3               | 0,89         | 267               | 154                       | 2,6                        | 8,5                    | 2,9               | 1,8           | 761                |                                     |                                |                                |                                |     |     |     |
| 26                                                 | 3SIE315S4²  | 127            | 170  | 1787        | 679          | 94,9                 | 95,2           | 95,0               | 0,90         | 324               | 186                       | 2,0                        | 6,8                    | 2,1               | 2,25          | 920                |                                     |                                |                                |                                |     |     |     |
| 27                                                 | 3SIE315M4A² | 152            | 204  | 1789        | 811          | 95,9                 | 96,0           | 95,7               | 0,91         | 380               | 219                       | 2,3                        | 8,0                    | 2,6               | 2,59          | 1030               |                                     |                                |                                |                                |     |     |     |
| 28                                                 | 3SIE315M4B² | 184            | 247  | 1790        | 982          | 96,3                 | 96,4           | 96,0               | 0,90         | 464               | 267                       | 2,4                        | 8,7                    | 3,0               | 2,8           | 1130               |                                     |                                |                                |                                |     |     |     |
| 29                                                 | 3SIE315M4C² | 230            | 310  | 1788        | 1228         | 95,8                 | 96,2           | 96,0               | 0,89         |                   | 338                       | 2,5                        | 8,2                    | 2,8               | 3,46          | 1205               |                                     |                                |                                |                                |     |     |     |
| 30                                                 | 3SIE355ML4A | 290            | 390  | 1788        | 1548         | 95,6                 | 96,1           | 96,2               | 0,90         |                   | 420                       | 1,9                        | 7,4                    | 2,2               | 5,3           | 1700               |                                     |                                |                                |                                |     |     |     |
| 31                                                 | 3SIE355ML4B | 365            | 490  | 1789        | 1950         | 95,8                 | 96,3           | 96,2               | 0,90         |                   | 529                       | 2,0                        | 7,5                    | 2,2               | 6,4           | 1830               |                                     |                                |                                |                                |     |     |     |
| 32                                                 | 3SIE355H4D  | 410            | 550  | 1790        | 1894         | 95,8                 | 96,3           | 96,2               | 0,88         |                   | 526                       | 1,6                        | 8,1                    | 2,3               | 8,0           | 2350               |                                     |                                |                                |                                |     |     |     |
| 33                                                 | 3SIE355H4E  | 460            | 620  | 1789        | 2456         | 95,7                 | 96,3           | 96,2               | 0,88         |                   | 682                       | 1,8                        | 7,0                    | 2,3               | 9,1           | 2450               |                                     |                                |                                |                                |     |     |     |
| 34                                                 | 3SIE400H4C  | 520            | 700  | 1789        | 2776         | 95,6                 | 96,3           | 96,2               | 0,87         |                   | 780                       | 1,6                        | 7,6                    | 2,5               | 12,3          | 2920               |                                     |                                |                                |                                |     |     |     |
| 35                                                 | 3SIE400H4D  | 575            | 770  | 1790        | 3068         | 95,6                 | 96,3           | 96,2               | 0,87         |                   | 862                       | 1,6                        | 7,5                    | 2,6               | 13,6          | 3100               |                                     |                                |                                |                                |     |     |     |
| 36                                                 | 3SIE400H4E  | 645            | 865  | 1790        | 3441         | 95,6                 | 96,3           | 96,2               | 0,87         |                   | 967                       | 1,7                        | 7,6                    | 2,6               | 15,0          | 3250               |                                     |                                |                                |                                |     |     |     |
| 37                                                 | 3SIE400H4F  | 690            | 925  | 1791        | 3679         | 95,6                 | 96,3           | 96,2               | 0,87         |                   | 1035                      | 1,9                        | 8,5                    | 2,9               | 17,2          | 3500               |                                     |                                |                                |                                |     |     |     |
| 38                                                 | 3SIE450H4B  | 820            | 1100 | 1792        | 4370         | 96,0                 | 96,5           | 96,5               | 0,87         |                   | 709¹                      | 1,6                        | 7,0                    | 2,5               | 27,1          | 4000               |                                     |                                |                                |                                |     |     |     |
| 39                                                 | 3SIE450H4C  | 920            | 1230 | 1793        | 4900         | 96,0                 | 96,5           | 96,5               | 0,88         |                   | 787¹                      | 1,6                        | 6,8                    | 2,6               | 31,6          | 4400               |                                     |                                |                                |                                |     |     |     |
| 40                                                 | Sh450H4Ds   | 1035           | 1390 | 1793        | 5513         | 96,6                 | 97,0           | 97,0               | 0,88         |                   | 879¹                      | 1,5                        | 7,3                    | 2,5               | 35,4          | 4620               |                                     |                                |                                |                                |     |     |     |
| 41                                                 | Sh450H4Es   | 1150           | 1540 | 1793        | 6125         | 96,8                 | 97,2           | 97,2               | 0,89         |                   | 964¹                      | 1,5                        | 7,3                    | 2,5               | 38            | 4700               |                                     |                                |                                |                                |     |     |     |
| 42                                                 | Sh500H4Cs   | 1290           | 1730 | 1794        | 6867         | 96,7                 | 97,3           | 97,4               | 0,87         |                   | 1104¹                     | 0,8                        | 6,9                    | 2,5               | 58,4          | 6100               |                                     |                                |                                |                                |     |     |     |
| 43                                                 | Sh500H4Ds   | 1440           | 1930 | 1795        | 7661         | 96,7                 | 97,3           | 97,5               | 0,87         |                   | 1231¹                     | 0,8                        | 7,5                    | 2,7               | 65,2          | 6600               |                                     |                                |                                |                                |     |     |     |
| 44                                                 | Sh500H4Es   | 1610           | 2160 | 1795        | 8566         | 97,0                 | 97,5           | 97,5               | 0,88         |                   | 1361¹                     | 0,7                        | 6,4                    | 2,4               | 66,5          | 6900               |                                     |                                |                                |                                |     |     |     |

<sup>1</sup> – at rated voltage 795V <sup>2</sup> – IE3 with standard rated output at 50Hz <sup>3</sup> – IE2 with standard rated output at 50Hz

# Totally Enclosed Motors IP 55    f=60Hz    RPM=1200 min<sup>-1</sup>

| Item                                               | Type                    | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |                   | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|----------------------------------------------------|-------------------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|-------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                                    |                         | P <sub>N</sub> |      | η <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |                   | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                                    |                         | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | -                  | 265V                                | 460V              | -                              | -                              | -                              | [kgm <sup>2</sup> ] | [kg]          |
| 2p=6                      n <sub>s</sub> =1200 rpm |                         |                |      |                      |                |                    |      |      |                    |                                     |                   |                                |                                |                                |                     |               |
| 1                                                  | Sh56-6B                 | 0,07           | 0,09 | 1030                 | 0,64           | 20,0               | 27,2 | 32,0 | 0,65               | 0,73                                | 0,42              | 1,7                            | 1,7                            | 1,8                            | 0,00019             | 2,8           |
| 2                                                  | Sh63-6A                 | 0,11           | 0,14 | 1040                 | 1,01           | 39,7               | 46,3 | 49,0 | 0,53               | 0,9                                 | 0,5               | 1,5                            | 2,0                            | 1,6                            | 0,00024             | 3,5           |
| 3                                                  | 2SIE63-6B <sup>3</sup>  | 0,14           | 0,18 | 1110                 | 1,2            | 54,0               | 60,3 | 64,0 | 0,52               | 0,95                                | 0,55              | 2,1                            | 2,8                            | 2,5                            | 0,00077             | 5,9           |
| 4                                                  | 2SIE71-6A <sup>3</sup>  | 0,21           | 0,28 | 1080                 | 1,86           | 45,7               | 54,0 | 58,0 | 0,65               | 1,2                                 | 0,7               | 2,3                            | 2,6                            | 2,3                            | 0,00074             | 5             |
| 5                                                  | 2SIE71-6B <sup>3</sup>  | 0,29           | 0,39 | 1060                 | 2,56           | 62,2               | 66,6 | 66,0 | 0,69               | 1,4                                 | 0,8               | 2,3                            | 2,8                            | 2,3                            | 0,00122             | 6,2           |
| 6                                                  | 2SIE80-6A <sup>3</sup>  | 0,43           | 0,58 | 1100                 | 3,73           | 70,3               | 73,8 | 73,0 | 0,69               | 1,9                                 | 1,1               | 2,2                            | 3,3                            | 2,0                            | 0,00207             | 8,6           |
| 7                                                  | 2SIE80-6B <sup>3</sup>  | 0,64           | 0,86 | 1080                 | 5,66           | 72,5               | 74,7 | 73,1 | 0,78               | 2,4                                 | 1,4               | 2,0                            | 3,6                            | 2,2                            | 0,00293             | 10,8          |
| 8                                                  | 3SIE90S6 <sup>2</sup>   | 0,86           | 1,15 | 1140                 | 7,2            | 80,8               | 82,9 | 82,5 | 0,70               | 3,2                                 | 1,9               | 1,7                            | 4,6                            | 2,6                            | 0,0032              | 16            |
| 9                                                  | 3SIE90L6 <sup>2</sup>   | 1,27           | 1,7  | 1140                 | 10,6           | 82,2               | 82,7 | 82,5 | 0,71               | 4,7                                 | 2,7               | 2,0                            | 4,6                            | 2,7                            | 0,009               | 19            |
| 10                                                 | 3SIE100L6 <sup>2</sup>  | 1,73           | 2,3  | 1155                 | 14,3           | 81,9               | 85,7 | 86,5 | 0,75               | 5,8                                 | 3,3               | 2,0                            | 5,8                            | 2,8                            | 0,01                | 23,5          |
| 11                                                 | 3SIE112M6 <sup>2</sup>  | 2,53           | 3,4  | 1165                 | 20,7           | 83,9               | 87,0 | 87,5 | 0,77               | 8,2                                 | 4,7               | 2,1                            | 5,9                            | 2,6                            | 0,0177              | 34            |
| 12                                                 | 3SIE132S6 <sup>2</sup>  | 3,45           | 4,6  | 1165                 | 28,3           | 89,1               | 89,7 | 89,5 | 0,81               | 10,4                                | 6                 | 2,1                            | 6,6                            | 2,9                            | 0,044               | 54            |
| 13                                                 | 3SIE132M6A <sup>2</sup> | 4,6            | 6,2  | 1160                 | 37,9           | 90,1               | 90,4 | 89,5 | 0,82               | 13,7                                | 7,9               | 2,2                            | 6,8                            | 3,1                            | 0,0579              | 62            |
| 14                                                 | 3SIE132M6B <sup>2</sup> | 6,3            | 8,4  | 1160                 | 51,9           | 89,8               | 90,4 | 89,5 | 0,81               | 18,9                                | 10,9              | 2,4                            | 6,8                            | 3,1                            | 0,0637              | 66            |
| 15                                                 | 3SIE160M6 <sup>2</sup>  | 8,6            | 11,5 | 1165                 | 70,5           | 90,3               | 91,4 | 91,0 | 0,82               | 25,1                                | 14,5              | 2,3                            | 7,0                            | 2,9                            | 0,102               | 134           |
| 16                                                 | 3SIE160L6 <sup>2</sup>  | 12,7           | 17   | 1165                 | 104,1          | 91,1               | 91,4 | 91,7 | 0,81               | 37,3                                | 21,5              | 2,1                            | 7,1                            | 3,0                            | 0,123               | 146           |
| 17                                                 | 3SIE180L6 <sup>2</sup>  | 17,3           | 23,2 | 1175                 | 140,6          | 90,0               | 91,5 | 91,7 | 0,82               | 50,1                                | 28,9              | 3,4                            | 7,5                            | 2,9                            | 0,276               | 198           |
| 18                                                 | 3SIE200L6A <sup>2</sup> | 21             | 28   | 1188                 | 169            | 91,5               | 92,5 | 92,5 | 0,81               | 61                                  | 35                | 2,1                            | 6,0                            | 2,4                            | 0,5                 | 285           |
| 19                                                 | 3SIE200L6B <sup>2</sup> | 25             | 34   | 1187                 | 201            | 91,5               | 92,6 | 92,5 | 0,82               | 72                                  | 41                | 2,0                            | 5,9                            | 2,1                            | 0,64                | 309           |
| 20                                                 | 3SIE225M6 <sup>2</sup>  | 35             | 47   | 1189                 | 281            | 93,1               | 93,5 | 93,1 | 0,83               | 99                                  | 57                | 1,9                            | 6,6                            | 2,2                            | 0,89                | 392           |
| 21                                                 | 3SIE250M6 <sup>2</sup>  | 43             | 58   | 1191                 | 345            | 92,5               | 93,6 | 93,6 | 0,82               | 122                                 | 70                | 2,0                            | 6,4                            | 2,4                            | 1,23                | 440           |
| 22                                                 | 3SIE280S6 <sup>2</sup>  | 52             | 70   | 1193                 | 416            | 92,8               | 93,7 | 93,8 | 0,82               | 147                                 | 85                | 2,1                            | 7,4                            | 2,4                            | 1,7                 | 635           |
| 23                                                 | 3SIE280M6 <sup>2</sup>  | 63             | 85   | 1192                 | 505            | 93,9               | 94,5 | 94,4 | 0,82               | 177                                 | 102               | 2,2                            | 7,0                            | 2,4                            | 1,9                 | 695           |
| 24                                                 | 3SIE315S6 <sup>2</sup>  | 86             | 115  | 1192                 | 689            | 94,2               | 94,7 | 94,6 | 0,80               | 248                                 | 143               | 2,4                            | 7,4                            | 2,4                            | 2,4                 | 900           |
| 25                                                 | 3SIE315M6A <sup>2</sup> | 104            | 139  | 1192                 | 833            | 94,8               | 95,3 | 95,2 | 0,82               | 290                                 | 167               | 2,5                            | 7,8                            | 2,5                            | 2,93                | 965           |
| 26                                                 | 3SIE315M6B <sup>2</sup> | 127            | 170  | 1192                 | 1018           | 95,1               | 95,6 | 95,4 | 0,82               | 354                                 | 204               | 2,8                            | 7,8                            | 2,7                            | 3,46                | 1110          |
| 27                                                 | 3SIE315M6C <sup>2</sup> | 152            | 204  | 1192                 | 1218           | 95,6               | 96,0 | 95,7 | 0,83               | 417                                 | 240               | 2,5                            | 7,5                            | 2,5                            | 4,21                | 1230          |
| 28                                                 | 3SIE315M6D <sup>2</sup> | 184            | 247  | 1192                 | 1474           | 94,5               | 95,5 | 95,7 | 0,78               | 537                                 | 309               | 2,8                            | 8,0                            | 2,6                            | 4,36                | 1235          |
| 29                                                 | 3SIE355ML6A             | 230            | 310  | 1192                 | 1842           | 94,8               | 95,7 | 95,8 | 0,86               |                                     | 350               | 2,0                            | 7,1                            | 2,4                            | 7,2                 | 1740          |
| 30                                                 | 3SIE355ML6B             | 290            | 390  | 1191                 | 2325           | 95,2               | 95,8 | 95,8 | 0,86               |                                     | 442               | 1,9                            | 7,2                            | 2,3                            | 8,6                 | 1950          |
| 31                                                 | 3SIE355H6C              | 365            | 490  | 1189                 | 2932           | 95,0               | 95,8 | 95,8 | 0,86               |                                     | 556               | 1,8                            | 7,1                            | 2,1                            | 12,7                | 2390          |
| 32                                                 | 3SIE355H6D              | 410            | 550  | 1191                 | 2847           | 95,0               | 95,8 | 95,8 | 0,86               |                                     | 541               | 1,5                            | 7,9                            | 2,2                            | 14,3                | 2550          |
| 33                                                 | 3SIE355H6E              | 460            | 620  | 1191                 | 3688           | 95,5               | 95,8 | 95,8 | 0,85               |                                     | 709               | 2,2                            | 8,0                            | 2,4                            | 15,3                | 2600          |
| 34                                                 | 3SIE400H6C              | 520            | 700  | 1192                 | 4166           | 95,0               | 95,8 | 95,8 | 0,82               |                                     | 831               | 1,5                            | 7,5                            | 2,5                            | 19,4                | 3250          |
| 35                                                 | 3SIE400H6D              | 575            | 770  | 1192                 | 4607           | 95,0               | 95,8 | 95,8 | 0,82               |                                     | 919               | 1,7                            | 8,0                            | 2,6                            | 22,0                | 3450          |
| 36                                                 | 3SIE450H6B              | 645            | 865  | 1193                 | 5163           | 95,4               | 95,9 | 95,9 | 0,86               |                                     | 568 <sup>1</sup>  | 1,2                            | 6,8                            | 2,6                            | 40,6                | 4300          |
| 37                                                 | 3SIE450H6C              | 725            | 970  | 1193                 | 5804           | 95,5               | 96,0 | 96,0 | 0,87               |                                     | 631 <sup>1</sup>  | 1,3                            | 7,0                            | 2,6                            | 45,0                | 4500          |
| 38                                                 | 3SIE450H6D              | 820            | 1100 | 1194                 | 6559           | 95,5               | 96,0 | 96,1 | 0,87               |                                     | 712 <sup>1</sup>  | 1,4                            | 7,4                            | 2,6                            | 50,0                | 4890          |
| 39                                                 | 3SIE500H6A              | 920            | 1230 | 1195                 | 7352           | 95,5               | 96,2 | 96,3 | 0,86               |                                     | 807 <sup>1</sup>  | 0,9                            | 5,8                            | 2,4                            | 61,5                | 6200          |
| 40                                                 | Sh500H6Bs               | 1035           | 1390 | 1195                 | 8271           | 96,5               | 96,9 | 96,8 | 0,87               |                                     | 891 <sup>1</sup>  | 1,0                            | 6,0                            | 2,2                            | 71                  | 6550          |
| 41                                                 | Sh500H6Cs               | 1150           | 1540 | 1195                 | 9190           | 96,2               | 96,8 | 96,9 | 0,86               |                                     | 1001 <sup>1</sup> | 1,0                            | 6,4                            | 2,5                            | 75                  | 6700          |
| 42                                                 | Sh500H6Ds               | 1290           | 1730 | 1195                 | 10309          | 96,1               | 96,8 | 97,0 | 0,85               |                                     | 1135 <sup>1</sup> | 1,1                            | 7,0                            | 2,6                            | 80                  | 7130          |
| 43                                                 | Sh500H6Es               | 1440           | 1930 | 1195                 | 11508          | 96,2               | 96,9 | 97,0 | 0,85               |                                     | 1267 <sup>1</sup> | 1,1                            | 7,1                            | 2,6                            | 84,9                | 7460          |

<sup>1</sup> – at rated voltage 795V<sup>2</sup> – IE3 with standard rated output at 50Hz<sup>3</sup> – IE2 with standard rated output at 50Hz



# Totally Enclosed Motors IP 55 $f=60\text{Hz}$ $\text{RPM}=900\text{ min}^{-1}$

| Item                      | Type                    | Rated output |       | Rated speed         | Rated torque | Efficiency   |      |      | Power factor     | Full load current          |                   | Locked rotor torque ratio | Locked rotor current ratio | Breakdown torque ratio | Moment of Inertia | Weight (IMB3) |
|---------------------------|-------------------------|--------------|-------|---------------------|--------------|--------------|------|------|------------------|----------------------------|-------------------|---------------------------|----------------------------|------------------------|-------------------|---------------|
|                           |                         | $P_N$        |       | $n_N$               | $T_N$        | $\eta_N[\%]$ |      |      | $\cos \varphi_N$ | $I_N$ at rated voltage [A] |                   | $T_L/T_N$                 | $I_L/I_N$                  | $T_B/T_N$              | J                 |               |
|                           |                         | [kW]         | [HP]  | $[\text{min}^{-1}]$ | [Nm]         | 50%          | 75%  | 100% | [-]              | 265V                       | 460V              | [-]                       | [-]                        | [-]                    | $[\text{kgm}^2]$  | [kg]          |
| 2p=8 $n_s=900\text{ rpm}$ |                         |              |       |                     |              |              |      |      |                  |                            |                   |                           |                            |                        |                   |               |
| 1                         | Sh63-8A                 | 0,046        | 0,062 | 800                 | 0,55         | 11,3         | 16,2 | 30,0 | 0,56             | 0,9                        | 0,5               | 1,8                       | 1,3                        | 1,7                    | 0,00024           | 3,5           |
| 2                         | Sh63-8B                 | 0,07         | 0,09  | 790                 | 0,84         | 10,7         | 15,3 | 28,0 | 0,48             | 1,1                        | 0,65              | 1,4                       | 1,4                        | 1,4                    | 0,000307          | 4,1           |
| 3                         | Sh71-8A                 | 0,11         | 0,14  | 820                 | 1,28         | 24,1         | 30,6 | 35,0 | 0,50             | 1,3                        | 0,75              | 2,2                       | 1,6                        | 2,2                    | 0,000736          | 4,7           |
| 4                         | 2SIE71-8B <sup>2</sup>  | 0,14         | 0,18  | 800                 | 1,67         | 32,5         | 41,1 | 46,0 | 0,59             | 1,15                       | 0,65              | 2,2                       | 1,9                        | 2,0                    | 0,003882          | 5,6           |
| 5                         | 2SIE80-8A <sup>3</sup>  | 0,21         | 0,28  | 850                 | 2,36         | 51,6         | 60,7 | 64,0 | 0,55             | 1,4                        | 0,8               | 2,2                       | 2,9                        | 2,6                    | 0,002933          | 11            |
| 6                         | 2SIE80-8B <sup>3</sup>  | 0,29         | 0,39  | 840                 | 3,3          | 59,5         | 67,0 | 68,0 | 0,56             | 1,75                       | 1                 | 2,2                       | 3,0                        | 2,5                    | 0,00345           | 12,7          |
| 7                         | 2SIE90S8                | 0,45         | 0,6   | 855                 | 5            | 52,1         | 59,8 | 62,0 | 0,60             | 2,6                        | 1,5               | 1,3                       | 3,2                        | 2,1                    | 0,0021            | 13            |
| 8                         | 2SIE90L8                | 0,65         | 0,9   | 850                 | 7,3          | 56,5         | 65,5 | 66,0 | 0,59             | 3,6                        | 2,1               | 1,4                       | 3,4                        | 2,1                    | 0,0030            | 16            |
| 9                         | 3SIE100L8A              | 0,86         | 1,16  | 865                 | 9,5          | 74,2         | 78,0 | 78,5 | 0,63             | 3,8                        | 2,2               | 1,4                       | 4,0                        | 2,3                    | 0,0076            | 19,5          |
| 10                        | 3SIE100L8B              | 1,27         | 1,7   | 850                 | 14,3         | 78,1         | 79,6 | 78,5 | 0,66             | 5,3                        | 3,1               | 1,4                       | 3,7                        | 2,0                    | 0,0122            | 27            |
| 11                        | 3SIE112M8 <sup>2</sup>  | 1,73         | 2,32  | 850                 | 19,4         | 82,5         | 83,7 | 82,5 | 0,70             | 6,5                        | 3,8               | 1,8                       | 4,5                        | 2,6                    | 0,0168            | 33,5          |
| 12                        | 3SIE132S8 <sup>2</sup>  | 2,53         | 3,4   | 860                 | 28,1         | 83,3         | 84,7 | 84,0 | 0,73             | 9                          | 5,2               | 3,4                       | 5,6                        | 3,0                    | 0,0361            | 46            |
| 13                        | 3SIE132M8 <sup>2</sup>  | 3,45         | 4,62  | 860                 | 38,3         | 84,0         | 85,2 | 85,5 | 0,74             | 11,9                       | 6,8               | 2,4                       | 5,6                        | 2,9                    | 0,0489            | 54            |
| 14                        | 3SIE160M8A <sup>2</sup> | 4,6          | 6,2   | 855                 | 51,4         | 88,2         | 88,4 | 86,5 | 0,75             | 15,4                       | 8,9               | 1,6                       | 4,7                        | 2,5                    | 0,057             | 106           |
| 15                        | 3SIE160M8B              | 6,3          | 8,4   | 855                 | 70,4         | 87,7         | 88,2 | 86,5 | 0,75             | 21,2                       | 12,2              | 1,8                       | 5,1                        | 2,7                    | 0,078             | 118           |
| 16                        | 3SIE160L8 <sup>2</sup>  | 8,6          | 11,5  | 855                 | 96,4         | 90,7         | 90,2 | 88,5 | 0,77             | 27,5                       | 15,8              | 1,9                       | 5,4                        | 2,5                    | 0,102             | 132           |
| 17                        | 3SIE180L8               | 12,7         | 17    | 870                 | 139,4        | 88,3         | 90,2 | 89,9 | 0,77             | 40                         | 23                | 1,9                       | 5,5                        | 2,3                    | 0,213             | 165           |
| 18                        | 3SIE200L8 <sup>2</sup>  | 17           | 23    | 886                 | 183          | 88,0         | 89,7 | 90,0 | 0,79             | 52                         | 30                | 2,0                       | 6,7                        | 2,9                    | 0,45              | 260           |
| 19                        | 3SIE225S8 <sup>2</sup>  | 21           | 28    | 887                 | 226          | 91,1         | 91,5 | 91,2 | 0,78             | 64                         | 37                | 2,3                       | 6,4                        | 2,2                    | 0,58              | 315           |
| 20                        | 3SIE225M8 <sup>2</sup>  | 25           | 34    | 887                 | 269          | 90,4         | 91,5 | 91,4 | 0,79             | 75                         | 43                | 2,4                       | 6,9                        | 2,0                    | 0,68              | 350           |
| 21                        | 3SIE250M8 <sup>2</sup>  | 35           | 47    | 888                 | 376          | 91,2         | 92,1 | 92,0 | 0,81             | 102                        | 59                | 2,9                       | 7,0                        | 2,4                    | 1,27              | 460           |
| 22                        | 3SIE280S8 <sup>2</sup>  | 43           | 58    | 888                 | 462          | 91,6         | 92,2 | 92,0 | 0,82             | 124                        | 72                | 2,1                       | 5,9                        | 1,9                    | 1,47              | 600           |
| 23                        | 3SIE280M8 <sup>2</sup>  | 52           | 70    | 888                 | 559          | 92,9         | 93,6 | 93,3 | 0,82             | 152                        | 87                | 2,2                       | 6,3                        | 1,9                    | 1,8               | 640           |
| 24                        | 3SIE315S8 <sup>2</sup>  | 63           | 85    | 890                 | 676          | 92,3         | 93,3 | 93,4 | 0,81             | 181                        | 105               | 1,7                       | 6,4                        | 2,6                    | 1,9               | 850           |
| 25                        | 3SIE315M8A <sup>2</sup> | 86           | 115   | 888                 | 925          | 93,0         | 93,8 | 93,7 | 0,81             | 247                        | 142               | 2,0                       | 6,8                        | 2,6                    | 2,6               | 960           |
| 26                        | 3SIE315M8B <sup>2</sup> | 104          | 139   | 888                 | 1118         | 94,0         | 94,2 | 93,9 | 0,81             | 298                        | 172               | 2,0                       | 7,2                        | 2,8                    | 3,3               | 1090          |
| 27                        | 3SIE315M8C              | 127          | 170   | 890                 | 1363         | 93,0         | 93,9 | 93,9 | 0,79             | 373                        | 215               | 2,4                       | 7,3                        | 2,7                    | 4,1               | 1230          |
| 28                        | 3SIE315M8D              | 152          | 204   | 889                 | 1633         | 93,5         | 94,2 | 94,3 | 0,81             | 434                        | 250               | 2,1                       | 7,0                        | 2,7                    | 4,2               | 1245          |
| 29                        | 3SIE355ML8A             | 185          | 250   | 889                 | 1987         | 94,7         | 95,0 | 95,0 | 0,80             |                            | 306               | 1,4                       | 5,8                        | 2,0                    | 7,0               | 1680          |
| 30                        | 3SIE355ML8B             | 230          | 310   | 890                 | 2468         | 94,7         | 95,0 | 95,0 | 0,80             |                            | 379               | 1,7                       | 6,2                        | 2,1                    | 8,3               | 1750          |
| 31                        | 3SIE355H8D              | 290          | 390   | 890                 | 3112         | 94,7         | 95,1 | 95,1 | 0,78             |                            | 491               | 1,3                       | 6,0                        | 2,0                    | 12,9              | 2440          |
| 32                        | 3SIE355H8E              | 362          | 485   | 892                 | 3587         | 94,7         | 95,1 | 95,1 | 0,79             |                            | 605               | 1,3                       | 6,0                        | 2,0                    | 16,0              | 2590          |
| 33                        | 3SIE400H8D              | 410          | 550   | 891                 | 4395         | 94,7         | 95,2 | 95,2 | 0,77             |                            | 702               | 1,2                       | 5,8                        | 2,0                    | 18,8              | 3200          |
| 34                        | 3SIE400H8E              | 460          | 620   | 891                 | 4930         | 94,7         | 95,2 | 95,2 | 0,77             |                            | 788               | 1,2                       | 5,9                        | 2,0                    | 21,0              | 3350          |
| 35                        | 3SIE450H8B              | 520          | 700   | 896                 | 5542         | 94,8         | 95,3 | 95,3 | 0,77             |                            | 515 <sup>1</sup>  | 0,9                       | 5,8                        | 2,0                    | 41,6              | 4400          |
| 36                        | 3SIE450H8C              | 575          | 770   | 896                 | 6129         | 94,9         | 95,4 | 95,4 | 0,77             |                            | 569 <sup>1</sup>  | 1,0                       | 5,8                        | 2,1                    | 46,0              | 4600          |
| 37                        | 3SIE450H8D              | 645          | 865   | 895                 | 6882         | 94,9         | 95,4 | 95,4 | 0,78             |                            | 630 <sup>1</sup>  | 1,0                       | 5,7                        | 2,1                    | 49,0              | 4770          |
| 38                        | 3SIE450H8E              | 725          | 970   | 895                 | 7736         | 95,0         | 95,5 | 95,5 | 0,78             |                            | 707 <sup>1</sup>  | 1,0                       | 5,5                        | 2,0                    | 53,8              | 4980          |
| 39                        | 3SIE500H8B              | 820          | 1100  | 896                 | 8740         | 95,0         | 95,5 | 95,5 | 0,80             |                            | 780 <sup>1</sup>  | 1,1                       | 6,3                        | 2,5                    | 92,4              | 6680          |
| 40                        | 3SIE500H8C              | 920          | 1230  | 896                 | 9806         | 95,0         | 95,5 | 95,5 | 0,80             |                            | 875 <sup>1</sup>  | 1,1                       | 6,3                        | 2,5                    | 95,8              | 6800          |
| 41                        | Sh500H8Ds               | 1035         | 1390  | 896                 | 11032        | 95,9         | 96,5 | 96,6 | 0,80             |                            | 971 <sup>1</sup>  | 1,0                       | 6,0                        | 2,4                    | 108               | 7240          |
| 42                        | Sh500H8Es               | 1150         | 1540  | 896                 | 12257        | 95,8         | 96,5 | 96,6 | 0,80             |                            | 1079 <sup>1</sup> | 1,1                       | 6,5                        | 2,5                    | 118               | 7570          |

<sup>1</sup> – at rated voltage 795V<sup>2</sup> – IE3 with standard rated output at 50Hz<sup>3</sup> – IE2 with standard rated output at 50Hz



# Totally Enclosed Motors IP 55    f=60Hz    RPM=720 min<sup>-1</sup>

| Item                                               | Type       | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |                  | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|----------------------------------------------------|------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------------------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                                    |            | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |                  | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                                    |            | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 265V                                | 460V             | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| 2p=10                      n <sub>s</sub> =720 rpm |            |                |      |                      |                |                    |      |      |                    |                                     |                  |                                |                                |                                |                     |               |
| 1                                                  | Sh90S-10   | 0,29           | 0,38 | 705                  | 3,9            | 51,5               | 55,8 | 56,4 | 0,52               | 1,24                                | 0,72             | 1,7                            | 2,1                            | 2,0                            | 0,0028              | 17            |
| 2                                                  | Sh90L-10   | 0,43           | 0,57 | 705                  | 5,8            | 62,3               | 70,6 | 64,8 | 0,56               | 1,49                                | 0,86             | 1,8                            | 2,3                            | 2,1                            | 0,003               | 20            |
| 3                                                  | Sg100L-10A | 0,64           | 0,85 | 680                  | 9              | 40,5               | 50,2 | 56,0 | 0,45               | 3,2                                 | 1,8              | 2,6                            | 3,1                            | 2,6                            | 0,009               | 24            |
| 4                                                  | Sg100L-10B | 0,86           | 1,16 | 670                  | 12,3           | 44,9               | 54,5 | 57,0 | 0,55               | 3,4                                 | 2                | 1,9                            | 3,0                            | 2,0                            | 0,01                | 24,5          |
| 5                                                  | Sg112M-10  | 0,86           | 1,16 | 670                  | 12,3           | 44,7               | 53,0 | 72,7 | 0,67               | 2,2                                 | 1,3              | 2,4                            | 3,0                            | 2,5                            | 0,0177              | 33            |
| 6                                                  | Sg112M-10A | 1,27           | 1,7  | 670                  | 18,1           | 70,1               | 74,5 | 74,6 | 0,65               | 3,3                                 | 1,9              | 1,3                            | 3,3                            | 1,7                            | 0,018               | 32            |
| 7                                                  | Sg132S-10  | 1,27           | 1,7  | 670                  | 18,1           | 55,8               | 69,0 | 77,9 | 0,66               | 3,1                                 | 1,8              | 1,2                            | 3,4                            | 1,6                            | 0,025               | 52            |
| 8                                                  | Sg132S-10A | 1,73           | 2,32 | 670                  | 24,7           | 56,0               | 72,1 | 74,8 | 0,61               | 4,8                                 | 2,8              | 1,3                            | 3,6                            | 2,3                            | 0,032               | 66            |
| 9                                                  | Sg132S-10B | 2,53           | 3,4  | 670                  | 36,1           | 47,1               | 63,5 | 75,8 | 0,58               | 7,2                                 | 4,2              | 1,4                            | 3,9                            | 2,4                            | 0,04                | 72            |
| 10                                                 | Sg160M-10  | 4,6            | 6,2  | 680                  | 64,6           | 72,7               | 75,0 | 76,5 | 0,57               | 13,2                                | 7,7              | 1,6                            | 4,0                            | 2,5                            | 0,096               | 125           |
| 11                                                 | Sg160L-10  | 6,3            | 8,4  | 685                  | 87,8           | 77,0               | 79,9 | 81,8 | 0,57               | 17                                  | 9,8              | 1,8                            | 4,7                            | 2,5                            | 0,096               | 125           |
| 12                                                 | Sg180L-10  | 8,6            | 11,5 | 700                  | 117,3          | 84,1               | 87,0 | 87,5 | 0,62               | 34,5                                | 19,9             | 2,2                            | 5,1                            | 2,4                            | 0,22                | 164           |
| 13                                                 | 2Sg200L10A | 9              | 12   | 705                  | 121            | 84,8               | 86,3 | 86,6 | 0,75               | 30,2                                | 17,4             | 2,2                            | 5,2                            | 2,0                            | 0,4                 | 240           |
| 14                                                 | 2Sg200L10B | 13             | 17   | 704                  | 176            | 85,5               | 87,5 | 87,5 | 0,72               | 45                                  | 25,9             | 2,2                            | 5,0                            | 1,9                            | 0,47                | 255           |
| 15                                                 | 2Sg225S10  | 15             | 20   | 712                  | 201            | 87,3               | 89,0 | 90,0 | 0,68               | 53                                  | 31               | 2,8                            | 6,0                            | 2,2                            | 0,6                 | 280           |
| 16                                                 | 2Sg225M10  | 17             | 23   | 711                  | 228            | 87,5               | 89,6 | 89,9 | 0,69               | 60                                  | 33,5             | 2,5                            | 5,7                            | 1,9                            | 0,76                | 315           |
| 17                                                 | 2Sg250M10  | 25             | 34   | 712                  | 335            | 88,1               | 90,2 | 90,8 | 0,70               | 86                                  | 49               | 3,0                            | 6,2                            | 2,1                            | 1,27                | 430           |
| 18                                                 | 2Sg280S10A | 35             | 47   | 704                  | 474            | 89,7               | 91,8 | 91,5 | 0,72               | 116                                 | 67               | 1,7                            | 4,3                            | 1,6                            | 1,35                | 525           |
| 19                                                 | 2Sg280S10B | 43             | 58   | 706                  | 581            | 91,4               | 91,9 | 91,4 | 0,74               | 139                                 | 80               | 1,8                            | 4,8                            | 1,6                            | 1,61                | 565           |
| 20                                                 | 2Sg280M10  | 52             | 70   | 707                  | 702            | 92,3               | 92,9 | 92,4 | 0,75               | 163                                 | 94               | 1,9                            | 5,0                            | 1,6                            | 2,03                | 630           |
| 21                                                 | 2Sg315S10z | 63             | 85   | 708                  | 849            | 90,0               | 92,0 | 93,0 | 0,74               | 199                                 | 115              | 2,4                            | 5,3                            | 2,0                            | 2,86                | 840           |
| 22                                                 | 2Sg315M10  | 86             | 115  | 702                  | 1169           | 91,8               | 92,6 | 92,2 | 0,74               | 275                                 | 158              | 1,8                            | 5,1                            | 1,5                            | 3,01                | 895           |
| 23                                                 | Sg355S10A  | 105            | 140  | 712                  | 1408           | 92,5               | 93,5 | 93,5 | 0,79               |                                     | 178              | 1,3                            | 5,7                            | 2,1                            | 8,2                 | 1250          |
| 24                                                 | Sg355S10B  | 125            | 170  | 712                  | 1677           | 92,8               | 93,7 | 93,7 | 0,79               |                                     | 212              | 1,3                            | 5,8                            | 2,3                            | 10,3                | 1390          |
| 25                                                 | Sh355H10As | 150            | 200  | 712                  | 2012           | 93,0               | 93,9 | 93,8 | 0,77               |                                     | 261              | 1,3                            | 5,4                            | 2,0                            | 11                  | 2080          |
| 26                                                 | Sh355H10Bs | 185            | 250  | 712                  | 2480           | 93,5               | 94,1 | 94,0 | 0,79               |                                     | 313              | 1,3                            | 5,3                            | 1,9                            | 13                  | 2220          |
| 27                                                 | Sh355H10Cs | 230            | 310  | 712                  | 3085           | 93,7               | 94,2 | 94,1 | 0,78               |                                     | 393              | 1,3                            | 5,3                            | 1,9                            | 15,5                | 2360          |
| 28                                                 | Sh400H10Bs | 290            | 390  | 712                  | 3890           | 93,9               | 94,4 | 94,3 | 0,80               |                                     | 483              | 1,1                            | 5,6                            | 2,4                            | 28,5                | 3170          |
| 29                                                 | Sh400H10Cs | 362            | 485  | 712                  | 4855           | 94,3               | 94,7 | 94,6 | 0,80               |                                     | 600              | 1,1                            | 5,7                            | 2,4                            | 32,2                | 3350          |
| 30                                                 | Sh450H10As | 410            | 550  | 715                  | 5476           | 94,5               | 95,1 | 95,1 | 0,81               |                                     | 387 <sup>1</sup> | 0,7                            | 5,8                            | 2,0                            | 39,0                | 3850          |
| 31                                                 | Sh450H10Bs | 460            | 620  | 715                  | 6144           | 94,7               | 95,3 | 95,2 | 0,82               |                                     | 428 <sup>1</sup> | 0,7                            | 5,7                            | 2,0                            | 45,0                | 4050          |
| 32                                                 | Sh450H10Cs | 520            | 700  | 715                  | 6945           | 94,9               | 95,4 | 95,3 | 0,82               |                                     | 483 <sup>1</sup> | 0,7                            | 5,6                            | 2,0                            | 52,0                | 4280          |
| 33                                                 | Sh450H10Ds | 575            | 770  | 716                  | 7680           | 94,7               | 95,3 | 95,3 | 0,81               |                                     | 541 <sup>1</sup> | 0,8                            | 6,3                            | 2,2                            | 57                  | 4450          |
| 34                                                 | Sh450H10Es | 645            | 865  | 716                  | 8615           | 94,8               | 95,4 | 95,4 | 0,81               |                                     | 611 <sup>1</sup> | 0,8                            | 6,2                            | 2,2                            | 60                  | 4540          |
| 35                                                 | Sh500H10Ds | 725            | 970  | 716                  | 9670           | 93,9               | 94,9 | 95,1 | 0,81               |                                     | 684 <sup>1</sup> | 1,2                            | 6,8                            | 2,1                            | 108                 | 6450          |
| 36                                                 | Sh500H10Es | 820            | 1100 | 716                  | 10937          | 94,1               | 95,1 | 95,2 | 0,80               |                                     | 782 <sup>1</sup> | 1,2                            | 6,7                            | 2,1                            | 117                 | 6680          |
| 37                                                 | Sh500H10Fs | 920            | 1230 | 715                  | 12288          | 94,2               | 95,1 | 95,2 | 0,80               |                                     | 877 <sup>1</sup> | 1,2                            | 6,7                            | 2,1                            | 128                 | 7000          |

<sup>1</sup> – at rated voltage 795V

# Totally Enclosed Motors IP 55    f=60Hz    RPM=600 min<sup>-1</sup>

| Item                               | Type       | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|------------------------------------|------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                    |            | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                    |            | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 265V                                | 460V | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| 2p=12      n <sub>s</sub> =600 rpm |            |                |      |                      |                |                    |      |      |                    |                                     |      |                                |                                |                                |                     |               |
| 1                                  | Sg100L-12  | 0,64           | 0,85 | 550                  | 11,1           | 40,5               | 50,2 | 56,0 | 0,54               | 2,7                                 | 1,5  | 1,3                            | 2,3                            | 1,5                            | 0,009               | 22            |
| 2                                  | Sg112M-12  | 0,86           | 1,16 | 560                  | 14,7           | 54,0               | 58,2 | 64,9 | 0,49               | 3,4                                 | 2    | 1,4                            | 3,0                            | 2,5                            | 0,0177              | 33            |
| 3                                  | Sg132S-12  | 1,27           | 1,7  | 555                  | 21,9           | 62,6               | 69,0 | 69,2 | 0,62               | 3,7                                 | 2,1  | 1,0                            | 2,7                            | 1,5                            | 0,025               | 54            |
| 4                                  | Sg132M-12  | 1,73           | 2,32 | 555                  | 29,8           | 70,2               | 72,1 | 73,8 | 0,61               | 4,8                                 | 2,8  | 1,3                            | 3,1                            | 2,2                            | 0,032               | 66            |
| 5                                  | Sg132M-12B | 2,53           | 3,4  | 555                  | 43,5           | 70,7               | 70,0 | 71,8 | 0,56               | 7,9                                 | 4,6  | 1,1                            | 2,9                            | 1,7                            | 0,04                | 72            |
| 6                                  | Sg160M-12  | 2,53           | 3,4  | 560                  | 43,1           | 69,7               | 73,8 | 75,5 | 0,51               | 8,2                                 | 4,8  | 1,3                            | 3,3                            | 2,3                            | 0,072               | 100           |
| 7                                  | Sg160L-12  | 3,5            | 4,7  | 570                  | 58,6           | 72,5               | 79,8 | 82,5 | 0,52               | 10,2                                | 5,9  | 1,5                            | 3,5                            | 2,4                            | 0,096               | 125           |
| 8                                  | Sg180L-12  | 6,3            | 8,4  | 575                  | 104,6          | 68,7               | 70,7 | 74,0 | 0,60               | 30,9                                | 17,8 | 1,1                            | 2,7                            | 1,4                            | 0,22                | 170           |
| 9                                  | 2Sg200L12  | 10             | 13   | 587                  | 171            | 81,9               | 84,2 | 84,5 | 0,63               | 41                                  | 23,6 | 2,0                            | 4,2                            | 1,9                            | 0,47                | 255           |
| 10                                 | 2Sg225S12  | 13             | 17   | 591                  | 202            | 82,3               | 85,8 | 87,3 | 0,61               | 53                                  | 30,5 | 2,4                            | 5,0                            | 2,1                            | 0,58                | 315           |
| 11                                 | 2Sg225M12  | 15             | 20   | 591                  | 242            | 87,9               | 89,4 | 89,5 | 0,68               | 54                                  | 31   | 2,3                            | 4,3                            | 1,8                            | 0,68                | 350           |
| 12                                 | 2Sg250M12  | 21             | 28   | 590                  | 340            | 87,5               | 89,0 | 88,8 | 0,65               | 79                                  | 46   | 2,4                            | 4,7                            | 1,9                            | 1,27                | 430           |
| 13                                 | 2Sg280S12  | 25             | 34   | 591                  | 404            | 88,6               | 90,1 | 90,7 | 0,60               | 100                                 | 58   | 2,3                            | 4,8                            | 1,8                            | 1,47                | 535           |
| 14                                 | 2Sg280M12  | 35             | 47   | 588                  | 568            | 86,8               | 89,4 | 89,4 | 0,65               | 131                                 | 76   | 1,9                            | 4,4                            | 1,6                            | 1,8                 | 570           |
| 15                                 | 2Sg315S12  | 43             | 58   | 591                  | 695            | 88,7               | 90,8 | 91,5 | 0,60               | 171                                 | 98   | 2,5                            | 4,8                            | 1,9                            | 2,29                | 730           |
| 16                                 | 2Sg315M12A | 52             | 70   | 591                  | 840            | 87,8               | 90,2 | 90,9 | 0,58               | 215                                 | 124  | 2,5                            | 4,7                            | 1,7                            | 2,86                | 870           |
| 17                                 | 2Sg315M12B | 63             | 85   | 590                  | 1020           | 86,8               | 89,7 | 90,6 | 0,61               | 248                                 | 143  | 2,4                            | 4,7                            | 1,6                            | 3,01                | 885           |
| 18                                 | Sg355S12   | 85             | 115  | 591                  | 1374           | 89,5               | 91,2 | 91,2 | 0,73               |                                     | 142  | 1,2                            | 4,3                            | 1,9                            | 8,3                 | 1250          |
| 19                                 | Sg355S12A  | 105            | 140  | 592                  | 1694           | 90,0               | 91,4 | 91,5 | 0,73               |                                     | 197  | 1,2                            | 5,5                            | 2,2                            | 10,4                | 1390          |
| 20                                 | Sg355S12B  | 125            | 170  | 591                  | 2020           | 90,0               | 91,5 | 91,5 | 0,73               |                                     | 235  | 1,3                            | 5,1                            | 1,9                            | 12,1                | 1570          |
| 21                                 | Sg355M12   | 150            | 200  | 593                  | 2420           | 90,5               | 91,9 | 92,0 | 0,73               |                                     | 280  | 1,2                            | 4,8                            | 1,9                            | 13,1                | 1730          |
| 22                                 | Sh450H12As | 185            | 250  | 594                  | 2974           | 93,1               | 93,8 | 93,8 | 0,76               |                                     | 325  | 0,8                            | 5,6                            | 2,3                            | 30,0                | 3470          |
| 23                                 | Sh450H12Bs | 230            | 310  | 593                  | 3704           | 93,1               | 93,8 | 93,8 | 0,76               |                                     | 405  | 0,9                            | 5,7                            | 2,3                            | 33,7                | 3600          |
| 24                                 | Sh450H12Cs | 290            | 390  | 591                  | 4686           | 93,1               | 93,8 | 93,8 | 0,76               |                                     | 511  | 0,8                            | 5,0                            | 2,1                            | 40,0                | 3750          |
| 25                                 | Sh450H12Ds | 365            | 490  | 592                  | 5888           | 93,3               | 94,0 | 94,0 | 0,77               |                                     | 633  | 0,8                            | 5,1                            | 2,3                            | 34,7                | 4030          |
| 26                                 | Sh450H12Es | 410            | 550  | 593                  | 6603           | 93,4               | 94,1 | 94,1 | 0,77               |                                     | 710  | 0,9                            | 5,6                            | 2,4                            | 41,7                | 4330          |
| 27                                 | Sh450H12Fs | 460            | 620  | 593                  | 7408           | 93,6               | 94,2 | 94,2 | 0,77               |                                     | 796  | 0,9                            | 5,6                            | 2,4                            | 46,3                | 4530          |
| 28                                 | Sh500H12Cs | 520            | 700  | 594                  | 8360           | 94,1               | 94,7 | 94,7 | 0,78               |                                     | 884  | 1,1                            | 6,1                            | 2,5                            | 100                 | 6090          |
| 29                                 | Sh500H12Ds | 575            | 770  | 594                  | 9245           | 94,2               | 94,8 | 94,8 | 0,78               |                                     | 976  | 1,1                            | 6,2                            | 2,5                            | 112                 | 6370          |
| 30                                 | Sh500H12Es | 645            | 865  | 594                  | 10370          | 94,2               | 94,8 | 94,8 | 0,78               |                                     | 1095 | 1,2                            | 6,5                            | 2,6                            | 125                 | 6680          |

# Totally Enclosed Increased Output Motors IP 55 f=50Hz

| Item                               | Type       | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |      | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|------------------------------------|------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                    |            | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |      | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                    |            | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 230V                                | 380V | 400V | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| <b>2p=2 n<sub>s</sub>=3000 rpm</b> |            |                |      |                      |                |                    |      |      |                    |                                     |      |      |                                |                                |                                |                     |               |
| 1                                  | 3SIE71x-2C | 0,75           | 1    | 2880                 | 2,48           | 74,6               | 79,0 | 81,0 | 0,70               | 3,3                                 | 2    | 1,9  | 4,0                            | 7,5                            | 4,2                            | 0,0007              | 8,1           |
| 2                                  | 3SIE80x-2C | 1,5            | 2    | 2880                 | 4,97           | 82,4               | 84,2 | 84,2 | 0,82               | 5,45                                | 3,3  | 3,15 | 4,1                            | 8,0                            | 4,0                            | 0,001673            | 13,2          |
| 3                                  | 3SIE90L2A  | 3              | 4    | 2920                 | 9,8            | 86,7               | 87,7 | 87,1 | 0,85               | 10,2                                | 6,2  | 5,8  | 2,6                            | 9,0                            | 3,9                            | 0,0019              | 18,5          |
| 4                                  | 3SIE100L2A | 4              | 5,5  | 2920                 | 13,1           | 88,1               | 88,8 | 88,1 | 0,85               | 13,4                                | 8,1  | 7,7  | 3,2                            | 9,0                            | 4,1                            | 0,0039              | 30            |
| 5                                  | 3SIE112M2A | 5,5            | 7,5  | 2925                 | 18             | 88,9               | 89,8 | 89,2 | 0,87               | 17,8                                | 10,8 | 10,2 | 2,0                            | 7,4                            | 3,2                            | 0,0075              | 39,5          |
| 6                                  | 3SIE132M2  | 9,2            | 12,3 | 2935                 | 29,9           | 90,5               | 91,2 | 90,7 | 0,88               | 28,9                                | 17,5 | 16,6 | 3,2                            | 9,7                            | 3,8                            | 0,02                | 93            |
| 7                                  | 3SIE132M2A | 11             | 15   | 2925                 | 35,9           | 91,3               | 91,9 | 91,2 | 0,89               | 34                                  | 20,6 | 19,6 | 2,6                            | 8,1                            | 3,8                            | 0,021               | 96            |
| 8                                  | 3SIE160L2A | 22             | 30   | 2950                 | 71,2           | 91,9               | 92,8 | 92,7 | 0,89               | 66,9                                | 40,5 | 38,5 | 3,2                            | 9,7                            | 3,8                            | 0,072               | 148           |
| 9                                  | 3SIE200L2C | 45             | 60   | 2962                 | 145            | 94,5               | 94,6 | 94,0 | 0,90               | 134                                 | 81   | 77   | 2,6                            | 7,3                            | 2,5                            | 0,21                | 301           |
| 10                                 | 3SIE200L2D | 55             | 75   | 2950                 | 178            | 95,2               | 95,2 | 94,3 | 0,90               | 163                                 | 98   | 94   | 2,3                            | 6,4                            | 2,6                            | 0,24                | 322           |
| 11                                 | 3SIE225M2C | 55             | 75   | 2970                 | 177            | 94,8               | 95,0 | 94,5 | 0,89               | 164                                 | 99   | 94   | 2,1                            | 7,1                            | 3,1                            | 0,33                | 425           |
| 12                                 | 3SIE250M2C | 75             | 100  | 2969                 | 241            | 94,3               | 94,8 | 94,7 | 0,88               | 226                                 | 137  | 130  | 2,3                            | 7,2                            | 3,2                            | 0,42                | 498           |
| 13                                 | 3SIE280M2C | 110            | 150  | 2978                 | 353            | 95,4               | 95,6 | 95,2 | 0,92               | 315                                 | 191  | 181  | 1,9                            | 6,9                            | 2,9                            | 0,98                | 748           |
| 14                                 | 3SIE280M2D | 132            | 175  | 2977                 | 423            | 95,8               | 95,9 | 95,6 | 0,92               | 377                                 | 228  | 217  | 2,0                            | 7,3                            | 2,7                            | 1,28                | 864           |
| <b>2p=4 n<sub>s</sub>=1500 rpm</b> |            |                |      |                      |                |                    |      |      |                    |                                     |      |      |                                |                                |                                |                     |               |
| 1                                  | 3SIE80x-4C | 1,1            | 1,5  | 1410                 | 7,45           | 82,0               | 83,1 | 84,1 | 0,69               | 4,75                                | 2,9  | 2,75 | 3,8                            | 5,5                            | 3,2                            | 0,003129            | 13,3          |
| 2                                  | 3SIE100L4C | 4              | 5,5  | 1460                 | 26,2           | 87,7               | 88,9 | 88,6 | 0,80               | 14,2                                | 8,6  | 8,1  | 2,6                            | 7,1                            | 3,2                            | 0,0086              | 34            |
| 3                                  | 3SIE112M4A | 5,5            | 7,5  | 1460                 | 36             | 89,4               | 90,2 | 89,6 | 0,80               | 19,3                                | 11,7 | 11,1 | 2,5                            | 7,2                            | 3,3                            | 0,0115              | 35,5          |
| 4                                  | 3SIE132M4A | 9,2            | 12,3 | 1460                 | 60,2           | 91,0               | 91,5 | 91,0 | 0,83               | 30,6                                | 18,5 | 17,6 | 3,1                            | 9,0                            | 4,1                            | 0,05                | 93            |
| 5                                  | 3SIE132M4B | 11             | 15   | 1460                 | 72             | 91,7               | 92,1 | 91,4 | 0,83               | 36,4                                | 22   | 20,9 | 3,2                            | 9,5                            | 4,4                            | 0,057               | 97            |
| 6                                  | 3SIE160L4A | 18,5           | 25   | 1475                 | 119,8          | 91,8               | 92,7 | 92,6 | 0,81               | 61,9                                | 37,5 | 35,6 | 2,9                            | 7,7                            | 3,2                            | 0,118               | 168           |
| 7                                  | 3SIE200L4C | 37             | 50   | 1475                 | 240            | 93,2               | 93,5 | 93,9 | 0,86               | 115                                 | 70   | 66   | 2,3                            | 6,7                            | 2,7                            | 0,38                | 330           |
| 8                                  | 3SIE200L4D | 45             | 60   | 1481                 | 290            | 93,5               | 94,1 | 94,2 | 0,85               | 141                                 | 85   | 81   | 2,6                            | 7,3                            | 3,3                            | 0,49                | 367           |
| 9                                  | 3SIE225M4C | 55             | 75   | 1484                 | 354            | 93,6               | 94,6 | 94,6 | 0,86               | 170                                 | 103  | 98   | 2,1                            | 7,1                            | 2,9                            | 0,66                | 431           |
| 10                                 | 3SIE250M4C | 75             | 100  | 1483                 | 483            | 94,5               | 94,9 | 95,0 | 0,90               | 220                                 | 133  | 127  | 2,3                            | 6,8                            | 3,0                            | 1,15                | 553           |
| 11                                 | 3SIE280M4C | 110            | 150  | 1488                 | 706            | 95,1               | 95,5 | 95,4 | 0,90               | 322                                 | 195  | 185  | 2,0                            | 6,6                            | 2,4                            | 2,25                | 839           |

# Totally Enclosed Increased Output Motors IP 55 $f=50\text{Hz}$

| Item                                  | Type       | Rated output |      | Rated speed         | Rated torque | Efficiency   |      |      | Power factor     | Full load current          |      |      | Locked rotor torque ratio | Locked rotor current ratio | Breakdown torque ratio | Moment of Inertia | Weight (IMB3) |
|---------------------------------------|------------|--------------|------|---------------------|--------------|--------------|------|------|------------------|----------------------------|------|------|---------------------------|----------------------------|------------------------|-------------------|---------------|
|                                       |            | $P_N$        |      | $n_N$               | $T_N$        | $\eta_N[\%]$ |      |      | $\cos \varphi_N$ | $I_N$ at rated voltage [A] |      |      | $T_L/T_N$                 | $I_L/I_N$                  | $T_B/T_N$              | J                 |               |
|                                       |            | [kW]         | [HP] | $[\text{min}^{-1}]$ | [Nm]         | 50%          | 75%  | 100% | [-]              | 230V                       | 380V | 400V | [-]                       | [-]                        | [-]                    | $[\text{kgm}^2]$  | [kg]          |
| <b>2p=6 <math>n_s=1000</math> rpm</b> |            |              |      |                     |              |              |      |      |                  |                            |      |      |                           |                            |                        |                   |               |
| 1                                     | 3SIE90L6A  | 1,5          | 2    | 940                 | 15,2         | 82,0         | 83,2 | 82,5 | 0,71             | 6,4                        | 3,9  | 3,7  | 1,7                       | 5,0                        | 2,7                    | 0,009             | 18,5          |
| 2                                     | 3SIE100L6A | 2,2          | 3    | 960                 | 21,9         | 82,7         | 84,6 | 84,3 | 0,73             | 9                          | 5,4  | 5,2  | 2,0                       | 6,2                        | 3,0                    | 0,01              | 26            |
| 3                                     | 3SIE112M6A | 3            | 4    | 960                 | 29,8         | 86,0         | 86,7 | 85,6 | 0,75             | 11,7                       | 7,1  | 6,7  | 1,5                       | 5,5                        | 2,3                    | 0,0177            | 36            |
| 4                                     | 3SIE132M6C | 7,5          | 10   | 965                 | 74,2         | 88,4         | 89,5 | 89,1 | 0,76             | 27,8                       | 16,8 | 16   | 3,3                       | 7,8                        | 3,8                    | 0,0637            | 66            |
| 5                                     | 3SIE225M6C | 37           | 50   | 991                 | 357          | 91,8         | 92,8 | 93,9 | 0,77             | 128                        | 78   | 74   | 2,4                       | 8,6                        | 2,6                    | 1,09              | 432           |
| 6                                     | 3SIE250M6C | 45           | 60   | 992                 | 433          | 93,2         | 93,8 | 93,7 | 0,82             | 147                        | 89   | 85   | 2,0                       | 6,9                        | 2,6                    | 1,55              | 489           |
| 7                                     | 3SIE280M6C | 75           | 100  | 992                 | 722          | 94,6         | 95,0 | 94,7 | 0,82             | 242                        | 147  | 139  | 2,4                       | 7,1                        | 2,6                    | 2,4               | 785           |
| <b>2p=8 <math>n_s=750</math> rpm</b>  |            |              |      |                     |              |              |      |      |                  |                            |      |      |                           |                            |                        |                   |               |
| 1                                     | Sh63X-8C   | 0,075        | 0,11 | 650                 | 1,1          | 11,5         | 16,4 | 30,0 | 0,50             | 1,35                       | 0,82 | 0,78 | 1,6                       | 1,5                        | 1,6                    | 0,000422          | 5             |
| <b>2p=10 <math>n_s=600</math> rpm</b> |            |              |      |                     |              |              |      |      |                  |                            |      |      |                           |                            |                        |                   |               |
| 1                                     | 2Sg225M10z | 18,5         | 25   | 590                 | 299          | 84,3         | 87,1 | 87,7 | 0,64             | 83                         | 50   | 48   | 2,8                       | 5,5                        | 2,1                    | 0,76              | 325           |
| <b>2p=12 <math>n_s=500</math> rpm</b> |            |              |      |                     |              |              |      |      |                  |                            |      |      |                           |                            |                        |                   |               |
| 1                                     | 2Sg200L12z | 11           | 15   | 487                 | 216          | 83,5         | 84,5 | 85,0 | 0,61             | 53                         | 32   | 31   | 2,5                       | 4,2                        | 1,9                    | 0,53              | 320           |
| 2                                     | 2Sg225M12z | 15           | 20   | 491                 | 290          | 80,5         | 83,5 | 84,4 | 0,58             | 77                         | 47   | 44   | 2,7                       | 4,6                        | 1,8                    | 0,68              | 350           |

# Totally Enclosed Increased Output Motors IP 55 f=60Hz

| Item                               | Type                    | Rated output   |      | Rated speed          | Rated torque   | Efficiency         |      |      | Power factor       | Full load current                   |      |      | Locked rotor torque ratio      | Locked rotor current ratio     | Breakdown torque ratio         | Moment of Inertia   | Weight (IMB3) |
|------------------------------------|-------------------------|----------------|------|----------------------|----------------|--------------------|------|------|--------------------|-------------------------------------|------|------|--------------------------------|--------------------------------|--------------------------------|---------------------|---------------|
|                                    |                         | P <sub>N</sub> |      | n <sub>N</sub>       | T <sub>N</sub> | η <sub>N</sub> [%] |      |      | cos φ <sub>N</sub> | I <sub>N</sub> at rated voltage [A] |      |      | T <sub>L</sub> /T <sub>N</sub> | I <sub>L</sub> /I <sub>N</sub> | T <sub>B</sub> /T <sub>N</sub> | J                   |               |
|                                    |                         | [kW]           | [HP] | [min <sup>-1</sup> ] | [Nm]           | 50%                | 75%  | 100% | [-]                | 230V                                | 380V | 400V | [-]                            | [-]                            | [-]                            | [kgm <sup>2</sup> ] | [kg]          |
| <b>2p=2 n<sub>s</sub>=3600 rpm</b> |                         |                |      |                      |                |                    |      |      |                    |                                     |      |      |                                |                                |                                |                     |               |
| 1                                  | 3SIE71x-2C              | 0,75           | 1    | 3460                 | 2,07           | 76,0               | 80,5 | 77,0 | 0,76               | 3,3                                 | 2    | 1,9  | 4,9                            | 7,5                            | 5,1                            | 0,0007              | 8,1           |
| 2                                  | 3SIE80x-2C              | 1,5            | 2    | 3460                 | 4,14           | 83,6               | 85,5 | 85,5 | 0,80               | 5,45                                | 3,3  | 3,15 | 4,8                            | 8,0                            | 4,7                            | 0,001673            | 13,2          |
| 3                                  | 3SIE90L2A               | 3              | 4    | 3515                 | 8,2            | 86,0               | 88,3 | 88,5 | 0,86               | 9,9                                 | 6    | 5,7  | 2,7                            | 9,8                            | 4,2                            | 0,0019              | 18,5          |
| 4                                  | 3SIE100L2A              | 4              | 5,5  | 3525                 | 10,8           | 86,9               | 88,4 | 88,5 | 0,87               | 13                                  | 7,9  | 7,5  | 3,3                            | 9,7                            | 4,3                            | 0,0039              | 30            |
| 5                                  | 3SIE112M2A <sup>1</sup> | 5,5            | 7,5  | 3535                 | 14,9           | 85,8               | 88,6 | 89,5 | 0,87               | 17,7                                | 10,7 | 10,2 | 2,0                            | 8,3                            | 3,1                            | 0,0075              | 39,5          |
| 6                                  | 3SIE132M2               | 9,2            | 12,3 | 3535                 | 24,9           | 90,3               | 91,5 | 91,0 | 0,87               | 29,2                                | 17,7 | 16,8 | 3,6                            | 9,9                            | 4,6                            | 0,02                | 93            |
| 7                                  | 3SIE132M2A              | 11             | 15   | 3530                 | 29,8           | 90,9               | 91,7 | 91,0 | 0,88               | 34,5                                | 20,9 | 19,8 | 3,1                            | 8,9                            | 4,3                            | 0,021               | 96            |
| 8                                  | 3SIE160L2A              | 22             | 30   | 3550                 | 59,2           | 90,8               | 92,2 | 91,7 | 0,90               | 66,9                                | 40,5 | 38,5 | 3,5                            | 10,1                           | 4,2                            | 0,072               | 148           |
| 9                                  | 3SIE200L2C              | 45             | 60   | 3562                 | 121            | 93,6               | 94,0 | 93,6 | 0,90               | 134                                 | 81   | 77   | 2,5                            | 7,6                            | 2,8                            | 0,21                | 301           |
| 10                                 | 3SIE200L2D              | 55             | 75   | 3549                 | 148            | 93,6               | 94,0 | 93,6 | 0,90               | 164                                 | 99   | 94   | 2,3                            | 6,8                            | 2,7                            | 0,24                | 322           |
| 11                                 | 3SIE225M2C              | 55             | 75   | 3570                 | 147            | 93,4               | 93,8 | 93,6 | 0,89               | 166                                 | 100  | 95   | 2,1                            | 7,4                            | 3,2                            | 0,33                | 425           |
| 12                                 | 3SIE250M2C              | 75             | 100  | 3567                 | 201            | 93,7               | 94,3 | 94,1 | 0,89               | 225                                 | 136  | 129  | 2,2                            | 7,3                            | 3,3                            | 0,42                | 498           |
| 13                                 | 3SIE280M2C              | 110            | 150  | 3579                 | 294            | 94,8               | 95,2 | 95,0 | 0,91               | 319                                 | 193  | 184  | 2,0                            | 7,9                            | 3,1                            | 0,98                | 748           |
| 14                                 | 3SIE280M2D              | 132            | 175  | 3577                 | 352            | 95,3               | 95,6 | 95,4 | 0,92               | 378                                 | 229  | 217  | 1,9                            | 7,6                            | 2,7                            | 1,28                | 864           |
| <b>2p=4 n<sub>s</sub>=1800 rpm</b> |                         |                |      |                      |                |                    |      |      |                    |                                     |      |      |                                |                                |                                |                     |               |
| 1                                  | 3SIE80x-4C              | 1,1            | 1,5  | 1690                 | 6,2            | 84,2               | 85,4 | 86,5 | 0,62               | 4,75                                | 2,9  | 2,75 | 4,4                            | 5,5                            | 3,7                            | 0,003129            | 13,3          |
| 2                                  | 3SIE100L4C              | 4              | 5,5  | 1760                 | 21,7           | 87,7               | 89,6 | 89,5 | 0,79               | 14,2                                | 8,6  | 8,2  | 3,0                            | 7,9                            | 3,6                            | 0,0086              | 34            |
| 3                                  | 3SIE112M4A <sup>1</sup> | 5,5            | 7,5  | 1765                 | 29,8           | 88,1               | 89,8 | 90,0 | 0,80               | 19,2                                | 11,6 | 11   | 2,8                            | 7,9                            | 3,6                            | 0,0115              | 35,5          |
| 4                                  | 3SIE132M4A              | 9,2            | 12,3 | 1760                 | 49,9           | 91,2               | 91,9 | 91,7 | 0,82               | 30,7                                | 18,6 | 17,7 | 4,2                            | 10,9                           | 4,5                            | 0,05                | 93            |
| 5                                  | 3SIE132M4B <sup>1</sup> | 11             | 15   | 1760                 | 59,7           | 91,5               | 91,8 | 91,0 | 0,82               | 37                                  | 22,4 | 21,3 | 4,3                            | 11,1                           | 4,7                            | 0,057               | 97            |
| 6                                  | 3SIE160L4A              | 18,5           | 25   | 1775                 | 99,5           | 92,2               | 93,2 | 93,0 | 0,80               | 62,4                                | 37,8 | 35,9 | 3,3                            | 8,6                            | 3,6                            | 0,118               | 168           |
| 7                                  | 3SIE200L4C              | 37             | 50   | 1775                 | 199            | 94,6               | 95,0 | 94,5 | 0,87               | 113                                 | 68   | 65   | 2,4                            | 6,9                            | 2,7                            | 0,38                | 330           |
| 8                                  | 3SIE200L4D              | 45             | 60   | 1780                 | 241            | 94,9               | 95,3 | 95,0 | 0,87               | 137                                 | 83   | 79   | 2,7                            | 7,5                            | 3,2                            | 0,49                | 367           |
| 9                                  | 3SIE225M4C              | 55             | 75   | 1784                 | 294            | 95,5               | 95,8 | 95,4 | 0,87               | 166                                 | 101  | 96   | 2,1                            | 7,3                            | 3,0                            | 0,66                | 431           |
| 10                                 | 3SIE250M4C              | 75             | 100  | 1783                 | 402            | 95,4               | 95,9 | 95,4 | 0,90               | 219                                 | 133  | 126  | 2,3                            | 7,0                            | 3,0                            | 1,15                | 553           |
| 11                                 | 3SIE280M4C              | 110            | 150  | 1788                 | 587            | 95,7               | 96,0 | 95,8 | 0,91               | 317                                 | 192  | 182  | 2,1                            | 7,0                            | 2,2                            | 2,25                | 839           |

<sup>1</sup> — IE3 with standard rated output at 50Hz

# Totally Enclosed Increased Output Motors IP 55 $f=60\text{Hz}$

| Item | Type                    | Rated output |      | Rated speed                              | Rated torque | Efficiency   |      |      | Power factor     | Full load current          |      |      | Locked rotor torque ratio | Locked rotor current ratio | Breakdown torque ratio | Moment of Inertia | Weight (IMB3) |
|------|-------------------------|--------------|------|------------------------------------------|--------------|--------------|------|------|------------------|----------------------------|------|------|---------------------------|----------------------------|------------------------|-------------------|---------------|
|      |                         | $P_N$        |      | $n_N$                                    | $T_N$        | $\eta_N[\%]$ |      |      | $\cos \varphi_N$ | $I_N$ at rated voltage [A] |      |      | $T_L/T_N$                 | $I_L/I_N$                  | $T_B/T_N$              | J                 |               |
|      |                         | [kW]         | [HP] | $[\text{min}^{-1}]$                      | [Nm]         | 50%          | 75%  | 100% | [-]              | 230V                       | 380V | 400V | [-]                       | [-]                        | [-]                    | $[\text{kgm}^2]$  | [kg]          |
|      |                         | <b>2p=6</b>  |      | <b><math>n_s=1200 \text{ rpm}</math></b> |              |              |      |      |                  |                            |      |      |                           |                            |                        |                   |               |
| 1    | 3SIE90L6A <sup>1</sup>  | 1,5          | 2    | 1145                                     | 12,5         | 80,0         | 83,0 | 83,5 | 0,71             | 6,4                        | 3,8  | 3,7  | 1,7                       | 5,4                        | 2,8                    | 0,009             | 18,5          |
| 2    | 3SIE100L6A <sup>1</sup> | 2,2          | 3    | 1170                                     | 21,7         | 84,3         | 87,1 | 87,5 | 0,73             | 8,6                        | 5,2  | 5    | 2,0                       | 6,4                        | 3,0                    | 0,01              | 26            |
| 3    | 3SIE112M6A <sup>1</sup> | 3            | 4    | 1165                                     | 24,6         | 86,4         | 87,9 | 87,5 | 0,73             | 11,8                       | 7,1  | 6,8  | 1,8                       | 6,3                        | 2,7                    | 0,0177            | 36            |
| 4    | 3SIE132M6C <sup>1</sup> | 7,5          | 10   | 1158                                     | 61,9         | 88,5         | 89,5 | 89,5 | 0,74             | 28,4                       | 17,2 | 16,3 | 3,8                       | 8,5                        | 4,1                    | 0,0637            | 66            |
| 5    | 3SIE225M6C              | 37           | 50   | 1192                                     | 296          | 93,2         | 94,2 | 94,1 | 0,80             | 123                        | 75   | 71   | 2,2                       | 7,8                        | 2,6                    | 1,09              | 432           |
| 6    | 3SIE250M6C              | 45           | 60   | 1192                                     | 361          | 94,0         | 94,7 | 94,5 | 0,81             | 148                        | 89   | 85   | 2,4                       | 7,4                        | 2,7                    | 1,55              | 489           |
| 7    | 3SIE280M6C              | 75           | 100  | 1192                                     | 601          | 94,7         | 95,1 | 95,0 | 0,82             | 242                        | 146  | 139  | 2,2                       | 7,1                        | 2,3                    | 2,4               | 785           |
|      |                         | <b>2p=8</b>  |      | <b><math>n_s=900 \text{ rpm}</math></b>  |              |              |      |      |                  |                            |      |      |                           |                            |                        |                   |               |
| 1    | Sh63X-8C                | 0,075        | 0,11 | 780                                      | 0,92         | 11,1         | 15,8 | 29,0 | 0,48             | 1,35                       | 0,82 | 0,78 | 1,9                       | 1,7                        | 1,9                    | 0,000422          | 5             |
|      |                         | <b>2p=10</b> |      | <b><math>n_s=720 \text{ rpm}</math></b>  |              |              |      |      |                  |                            |      |      |                           |                            |                        |                   |               |
| 1    | 2Sg225M10z              | 18,5         | 25   | 711                                      | 248          | 87,1         | 89,4 | 89,9 | 0,65             | 79                         | 48   | 46   | 2,7                       | 6,2                        | 2,1                    | 0,76              | 325           |
|      |                         | <b>2p=12</b> |      | <b><math>n_s=600 \text{ rpm}</math></b>  |              |              |      |      |                  |                            |      |      |                           |                            |                        |                   |               |
| 1    | 2Sg200L12z              | 11           | 15   | 588                                      | 179          | 82,9         | 84,7 | 85,2 | 0,64             | 51                         | 30,5 | 29,1 | 2,5                       | 4,6                        | 2,0                    | 0,53              | 320           |
| 2    | 2Sg225M12z              | 15           | 20   | 592                                      | 242          | 84,6         | 86,7 | 87,1 | 0,69             | 63                         | 38   | 36   | 1,8                       | 3,8                        | 1,5                    | 0,68              | 350           |

<sup>1</sup> — IE3 with standard rated output at 50Hz

# Totally Enclosed Increased Output Motors IP 55 $f=60\text{Hz}$

| Item                                  | Type                    | Rated output |      | Rated speed          | Rated torque | Efficiency   |      |      | Power factor     | Full load current          |      | Locked rotor torque ratio | Locked rotor current ratio | Breakdown torque ratio | Moment of Inertia   | Weight (IMB3) |
|---------------------------------------|-------------------------|--------------|------|----------------------|--------------|--------------|------|------|------------------|----------------------------|------|---------------------------|----------------------------|------------------------|---------------------|---------------|
|                                       |                         | $P_N$        |      | $n_N$                | $T_N$        | $\eta_N$ [%] |      |      | $\cos \varphi_N$ | $I_N$ at rated voltage [A] |      | $T_L/T_N$                 | $I_L/I_N$                  | $T_B/T_N$              | J                   |               |
|                                       |                         | [kW]         | [HP] | [min <sup>-1</sup> ] | [Nm]         | 50%          | 75%  | 100% | [-]              | 265V                       | 460V | [-]                       | [-]                        | [-]                    | [kgm <sup>2</sup> ] | [kg]          |
| <b>2p=2 <math>n_s=3600</math> rpm</b> |                         |              |      |                      |              |              |      |      |                  |                            |      |                           |                            |                        |                     |               |
| 1                                     | 3SIE71x-2C              | 0,87         | 1,17 | 3460                 | 2,4          | 74,6         | 79,0 | 80,0 | 0,70             | 3,3                        | 1,9  | 4,0                       | 7,5                        | 4,2                    | 0,0007              | 8,1           |
| 2                                     | 3SIE80x-2C              | 1,74         | 2,3  | 3460                 | 4,8          | 83,6         | 85,5 | 85,5 | 0,82             | 5,45                       | 3,15 | 4,1                       | 8,0                        | 4,0                    | 0,001673            | 13,2          |
| 3                                     | 3SIE90L2A               | 3,45         | 4,6  | 3510                 | 9,4          | 86,0         | 88,3 | 88,5 | 0,86             | 9,9                        | 5,7  | 2,7                       | 9,1                        | 4,0                    | 0,0019              | 18,5          |
| 4                                     | 3SIE100L2A              | 4,6          | 6,2  | 3520                 | 12,5         | 87,2         | 88,6 | 88,5 | 0,87             | 13                         | 7,5  | 3,2                       | 9,5                        | 4,2                    | 0,0039              | 30            |
| 5                                     | 3SIE112M2A <sup>1</sup> | 6,3          | 8,4  | 3530                 | 17           | 86,3         | 87,9 | 89,5 | 0,87             | 17,6                       | 10,2 | 2,1                       | 7,8                        | 3,2                    | 0,0075              | 39,5          |
| 6                                     | 3SIE132M2 <sup>1</sup>  | 10,6         | 14,2 | 3525                 | 28,7         | 90,6         | 91,3 | 91,0 | 0,88             | 28,8                       | 16,6 | 3,1                       | 9,2                        | 4,0                    | 0,02                | 93            |
| 7                                     | 3SIE132M2A <sup>1</sup> | 12,7         | 17   | 3520                 | 34,5         | 90,2         | 91,3 | 91,0 | 0,89             | 34,2                       | 19,7 | 2,7                       | 8,0                        | 3,7                    | 0,021               | 96            |
| 8                                     | 3SIE160L2A              | 25,3         | 34   | 3545                 | 68,2         | 91,4         | 92,0 | 91,7 | 0,89             | 67,5                       | 38,9 | 3,2                       | 9,8                        | 4,0                    | 0,072               | 148           |
| 9                                     | 3SIE200L2C <sup>1</sup> | 52           | 70   | 3561                 | 140          | 93,3         | 93,7 | 93,3 | 0,90             | 135                        | 78   | 2,4                       | 7,3                        | 2,7                    | 0,21                | 301           |
| 10                                    | 3SIE200L2D <sup>1</sup> | 63           | 85   | 3546                 | 170          | 93,5         | 93,9 | 93,5 | 0,90             | 163                        | 94   | 2,2                       | 6,5                        | 2,6                    | 0,24                | 322           |
| 11                                    | 3SIE225M2C <sup>1</sup> | 63           | 85   | 3569                 | 169          | 93,7         | 93,9 | 93,5 | 0,89             | 165                        | 95   | 2,1                       | 7,1                        | 3,0                    | 0,33                | 425           |
| 12                                    | 3SIE250M2C <sup>1</sup> | 86           | 115  | 3567                 | 230          | 94,6         | 95,0 | 94,8 | 0,88             | 225                        | 129  | 2,2                       | 7,3                        | 3,3                    | 0,42                | 498           |
| 13                                    | 3SIE280M2C <sup>1</sup> | 127          | 170  | 3579                 | 339          | 94,7         | 95,1 | 94,9 | 0,91             | 320                        | 185  | 1,7                       | 6,9                        | 2,7                    | 0,98                | 748           |
| 14                                    | 3SIE280M2D <sup>1</sup> | 152          | 204  | 3576                 | 406          | 95,1         | 95,4 | 95,2 | 0,92             | 378                        | 218  | 1,9                       | 7,3                        | 2,6                    | 1,28                | 864           |
| <b>2p=4 <math>n_s=1800</math> rpm</b> |                         |              |      |                      |              |              |      |      |                  |                            |      |                           |                            |                        |                     |               |
| 1                                     | 3SIE80x-4C              | 1,3          | 1,74 | 1690                 | 7,35         | 84,2         | 85,4 | 86,5 | 0,69             | 4,75                       | 2,75 | 3,8                       | 5,5                        | 3,2                    | 0,003129            | 13,3          |
| 2                                     | 3SIE100L4C <sup>1</sup> | 4,6          | 6,2  | 1755                 | 25           | 88,1         | 89,1 | 88,5 | 0,82             | 13,8                       | 8    | 2,7                       | 7,4                        | 3,3                    | 0,0086              | 34            |
| 3                                     | 3SIE112M4A <sup>1</sup> | 6,3          | 8,4  | 1760                 | 34,2         | 89,2         | 90,3 | 90,2 | 0,80             | 19                         | 11   | 2,6                       | 7,5                        | 3,4                    | 0,0115              | 35,5          |
| 4                                     | 3SIE132M4A <sup>1</sup> | 10,6         | 14,2 | 1755                 | 57,7         | 91,3         | 91,8 | 91,0 | 0,83             | 30,6                       | 17,6 | 3,5                       | 9,5                        | 3,9                    | 0,05                | 93            |
| 5                                     | 3SIE132M4B <sup>1</sup> | 12,7         | 17   | 1755                 | 69,1         | 91,1         | 91,4 | 91,0 | 0,83             | 36,6                       | 21,1 | 3,7                       | 9,7                        | 4,1                    | 0,057               | 97            |
| 6                                     | 3SIE160L4A              | 21,3         | 28,5 | 1770                 | 114,9        | 92,4         | 93,0 | 93,0 | 0,81             | 61,6                       | 35,5 | 3,0                       | 7,8                        | 3,3                    | 0,118               | 168           |
| 7                                     | 3SIE200L4C <sup>1</sup> | 43           | 58   | 1774                 | 231          | 93,7         | 94,1 | 93,6 | 0,87             | 115                        | 66   | 2,3                       | 6,8                        | 2,6                    | 0,38                | 330           |
| 8                                     | 3SIE200L4D <sup>1</sup> | 52           | 70   | 1780                 | 279          | 94,3         | 94,7 | 94,4 | 0,86             | 140                        | 80   | 2,7                       | 7,5                        | 3,2                    | 0,49                | 367           |
| 9                                     | 3SIE225M4C <sup>1</sup> | 63           | 85   | 1783                 | 337          | 95,0         | 95,3 | 94,9 | 0,87             | 166                        | 96   | 2,2                       | 7,1                        | 2,9                    | 0,66                | 431           |
| 10                                    | 3SIE250M4C <sup>1</sup> | 86           | 115  | 1783                 | 461          | 94,4         | 95,2 | 94,7 | 0,90             | 220                        | 127  | 2,3                       | 6,9                        | 3,0                    | 1,15                | 553           |
| 11                                    | 3SIE280M4C <sup>1</sup> | 127          | 170  | 1787                 | 679          | 94,9         | 95,2 | 95,0 | 0,90             | 324                        | 186  | 2,0                       | 6,8                        | 2,1                    | 2,25                | 839           |

<sup>1</sup> – IE3 with standard rated output at 50Hz

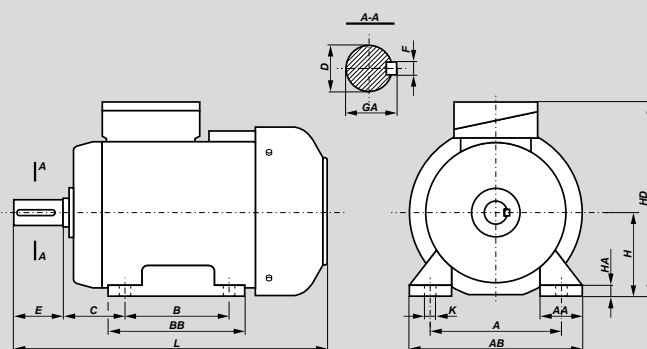


# Totally Enclosed Increased Output Motors IP 55 $f=60\text{Hz}$

| Item                                         | Type                    | Rated output |      | Rated speed         | Rated torque | Efficiency   |      |      | Power factor     | Full load current          |      | Locked rotor torque ratio | Locked rotor current ratio | Breakdown torque ratio | Moment of Inertia | Weight (IMB3) |
|----------------------------------------------|-------------------------|--------------|------|---------------------|--------------|--------------|------|------|------------------|----------------------------|------|---------------------------|----------------------------|------------------------|-------------------|---------------|
|                                              |                         | $P_N$        |      | $n_N$               | $T_N$        | $\eta_N[\%]$ |      |      | $\cos \varphi_N$ | $I_N$ at rated voltage [A] |      | $T_L/T_N$                 | $I_L/I_N$                  | $T_B/T_N$              | J                 |               |
|                                              |                         | [kW]         | [HP] | $[\text{min}^{-1}]$ | [Nm]         | 50%          | 75%  | 100% | [-]              | 265V                       | 460V | [-]                       | [-]                        | [-]                    | $[\text{kgm}^2]$  | [kg]          |
| <b>2p=6 <math>n_s=1200\text{ rpm}</math></b> |                         |              |      |                     |              |              |      |      |                  |                            |      |                           |                            |                        |                   |               |
| 1                                            | 3SIE90L6A <sup>1</sup>  | 1,73         | 2,3  | 1140                | 14,5         | 80,1         | 82,8 | 83,0 | 0,73             | 6,2                        | 3,6  | 1,7                       | 5,2                        | 2,7                    | 0,009             | 18,5          |
| 2                                            | 3SIE100L6A <sup>1</sup> | 2,53         | 3,4  | 1160                | 25           | 85,6         | 87,7 | 87,5 | 0,73             | 8,6                        | 5    | 2,1                       | 6,6                        | 3,1                    | 0,01              | 26            |
| 3                                            | 3SIE112M6A <sup>1</sup> | 3,45         | 4,6  | 1160                | 28,4         | 87,9         | 88,3 | 87,5 | 0,74             | 11,6                       | 6,7  | 1,6                       | 5,7                        | 2,4                    | 0,0177            | 36            |
| 4                                            | 3SIE132M6C <sup>1</sup> | 8,6          | 11,5 | 1150                | 71,4         | 88,6         | 89,7 | 89,5 | 0,76             | 27,5                       | 15,9 | 3,4                       | 7,9                        | 3,8                    | 0,0637            | 66            |
| 5                                            | 3SIE225M6C <sup>1</sup> | 43           | 58   | 1191                | 345          | 92,7         | 93,7 | 93,6 | 0,79             | 127                        | 73   | 2,4                       | 8,7                        | 2,5                    | 1,09              | 432           |
| 6                                            | 3SIE250M6C <sup>1</sup> | 52           | 70   | 1191                | 417          | 93,4         | 94,1 | 93,7 | 0,81             | 149                        | 86   | 2,2                       | 6,9                        | 2,5                    | 1,55              | 489           |
| 7                                            | 3SIE280M6C <sup>1</sup> | 86           | 115  | 1192                | 689          | 94,2         | 94,7 | 94,6 | 0,80             | 248                        | 143  | 2,4                       | 7,4                        | 2,4                    | 2,4               | 785           |
| <b>2p=8 <math>n_s=900\text{ rpm}</math></b>  |                         |              |      |                     |              |              |      |      |                  |                            |      |                           |                            |                        |                   |               |
| 1                                            | Sh63X-8C                | 0,086        | 0,12 | 780                 | 1,05         | 11,5         | 16,4 | 30,0 | 0,50             | 1,35                       | 0,78 | 1,6                       | 1,5                        | 1,6                    | 0,000422          | 5             |
| <b>2p=10 <math>n_s=720\text{ rpm}</math></b> |                         |              |      |                     |              |              |      |      |                  |                            |      |                           |                            |                        |                   |               |
| 1                                            | 2Sg225M10z              | 21           | 29   | 711                 | 281          | 87,6         | 90,0 | 90,5 | 0,65             | 78                         | 45   | 2,7                       | 6,1                        | 2,0                    | 0,76              | 325           |
| <b>2p=12 <math>n_s=600\text{ rpm}</math></b> |                         |              |      |                     |              |              |      |      |                  |                            |      |                           |                            |                        |                   |               |
| 1                                            | 2Sg200L12z              | 13           | 17   | 587                 | 203          | 83,5         | 86,0 | 86,4 | 0,62             | 53                         | 30,5 | 2,1                       | 4,4                        | 1,8                    | 0,53              | 320           |
| 2                                            | 2Sg225M12z              | 17           | 23   | 591                 | 283          | 88,0         | 89,6 | 89,7 | 0,69             | 60                         | 34   | 2,3                       | 4,1                        | 1,7                    | 0,68              | 350           |

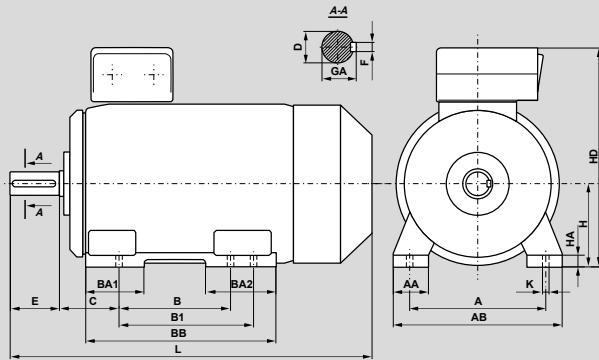
<sup>1</sup> – IE3 with standard rated output at 50Hz

## Dimensions of Foot Mounted Motors – IM B3



| Motor type            | A   | B   | C   | D    | E   | F    | GA   | H   | K   | AA | AB  | BB  | HA  | HD  | L   |
|-----------------------|-----|-----|-----|------|-----|------|------|-----|-----|----|-----|-----|-----|-----|-----|
| Sh56-.A               | 90  | 71  | 36  | 9j6  | 20  | 3h9  | 10,2 | 56  | 5,8 | 30 | 110 | 92  | 7   | 154 | 183 |
| 2SIE56-2B             | 90  | 71  | 36  | 9j6  | 20  | 3h9  | 10,2 | 56  | 5,8 | 30 | 110 | 92  | 7   | 154 | 193 |
| 2SIE63-.A             | 100 | 80  | 40  | 11j6 | 23  | 4h9  | 12,5 | 63  | 7   | 36 | 124 | 106 | 8,5 | 165 | 200 |
| 2SIE63-2,4B           | 100 | 80  | 40  | 11j6 | 23  | 4h9  | 12,5 | 63  | 7   | 36 | 124 | 106 | 8,5 | 165 | 210 |
| 2SIE63-6B             | 100 | 80  | 40  | 11j6 | 23  | 4h9  | 12,5 | 63  | 7   | 36 | 124 | 106 | 8,5 | 165 | 245 |
| 2SIE71-2,4A           | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 45 | 142 | 116 | 8   | 182 | 245 |
| 2SIE71-2B             | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 45 | 142 | 116 | 8   | 182 | 245 |
| 2SIE71-4,6B           | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 45 | 142 | 116 | 8   | 182 | 263 |
| 2SIE71-6A             | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 45 | 142 | 116 | 8   | 182 | 223 |
| 2SIE71-8B             | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 45 | 142 | 116 | 8   | 182 | 284 |
| 2SIE80-4A             | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 55 | 160 | 130 | 9   | 200 | 266 |
| 2SIE80-6A             | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 55 | 160 | 130 | 9   | 200 | 278 |
| 2SIE80-6B             | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 55 | 160 | 130 | 9   | 200 | 306 |
| 2SIE80-8A             | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 55 | 160 | 130 | 9   | 200 | 306 |
| 2SIE80-8B             | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 55 | 160 | 130 | 9   | 200 | 318 |
| 3SIE 80-.A            | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 55 | 160 | 130 | 9   | 199 | 278 |
| 3SIE 80-.B            | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 55 | 160 | 130 | 9   | 199 | 306 |
| 2,3SIE 90S-2, 4, 6, 8 | 140 | 100 | 56  | 24j6 | 50  | 8h9  | 27   | 90  | 10  | 47 | 182 | 153 | 10  | 238 | 331 |
| 2,3SIE 90L-2, 8       | 140 | 125 | 56  | 24j6 | 50  | 8h9  | 27   | 90  | 10  | 47 | 182 | 153 | 10  | 238 | 331 |
| 3SIE 90L-4, 6         | 140 | 125 | 56  | 24j6 | 50  | 8h9  | 27   | 90  | 10  | 47 | 182 | 153 | 10  | 238 | 356 |
| 3SIE 100L-2, 6, 8A    | 160 | 140 | 63  | 28j6 | 60  | 8h9  | 31   | 100 | 12  | 52 | 202 | 170 | 12  | 257 | 377 |
| 3SIE 100L-4A, 4B, 8B  | 160 | 140 | 63  | 28j6 | 60  | 8h9  | 31   | 100 | 12  | 52 | 202 | 170 | 12  | 257 | 417 |
| 3SIE 112M-2, 6, 8     | 190 | 140 | 70  | 28j6 | 60  | 8h9  | 31   | 112 | 12  | 52 | 222 | 170 | 14  | 280 | 398 |
| 3SIE 112M-4           | 190 | 140 | 70  | 28j6 | 60  | 8h9  | 31   | 112 | 12  | 52 | 222 | 170 | 14  | 280 | 425 |
| 3SIE 132S             | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 12  | 61 | 266 | 220 | 18  | 329 | 512 |
| 3SIE 132M             | 216 | 178 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 12  | 61 | 266 | 220 | 18  | 329 | 512 |
| 3SIE 160M             | 254 | 210 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 15  | 81 | 320 | 300 | 25  | 383 | 643 |
| 3SIE 160L             | 254 | 254 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 15  | 81 | 320 | 300 | 25  | 383 | 643 |
| 3SIE 180M-2, 4        | 279 | 241 | 121 | 48k6 | 110 | 14h9 | 51,5 | 180 | 15  | 92 | 353 | 320 | 27  | 414 | 723 |
| 3SIE 180L-4, 6, 8     | 279 | 279 | 121 | 48k6 | 110 | 14h9 | 51,5 | 180 | 15  | 92 | 353 | 320 | 27  | 414 | 723 |

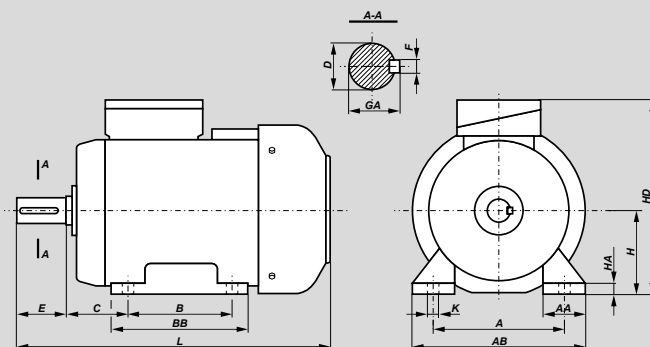
# Dimensions of Foot Mounted Motors – IM B3



| Motor type             | A   | B   | B1  | C   | D     | E   | F    | GA   | H   | HA | K  | AA  | AB  | BA1 | BA2 | BB   | HD  | L    |
|------------------------|-----|-----|-----|-----|-------|-----|------|------|-----|----|----|-----|-----|-----|-----|------|-----|------|
| 3SIE200                | 318 | 305 | —   | 133 | 55m6  | 110 | 16h9 | 59   | 200 | 32 | 19 | 80  | 400 | 113 | 113 | 380  | 520 | 850  |
| 3SIE225S               | 356 | 286 | 311 | 149 | 60m6  | 140 | 18h9 | 64   | 225 | 34 | 19 | 85  | 440 | 115 | 115 | 380  | 570 | 930  |
| 3SIE225M2              | 356 | 286 | 311 | 149 | 55m6  | 110 | 16h9 | 59   | 225 | 34 | 19 | 85  | 440 | 115 | 115 | 380  | 570 | 900  |
| 3SIE225M4-8            | 356 | 286 | 311 | 149 | 60m6  | 140 | 18h9 | 64   | 225 | 34 | 19 | 85  | 440 | 115 | 115 | 380  | 570 | 930  |
| 3SIE250M2              | 406 | 349 | —   | 168 | 60m6  | 140 | 18h9 | 64   | 250 | 37 | 24 | 90  | 480 | 135 | 135 | 445  | 635 | 1010 |
| 3SIE250M4-8            | 406 | 349 | —   | 168 | 65m6  | 140 | 18h9 | 69   | 250 | 37 | 24 | 90  | 480 | 135 | 135 | 445  | 635 | 1040 |
| 3SIE280S2              | 457 | 368 | 419 | 190 | 65m6  | 140 | 18h9 | 69   | 280 | 40 | 24 | 105 | 550 | 130 | 165 | 520  | 720 | 1135 |
| 3SIE280S4-8            | 457 | 368 | 419 | 190 | 75m6  | 140 | 20h9 | 79.5 | 280 | 40 | 24 | 105 | 550 | 130 | 165 | 520  | 720 | 1135 |
| 3SIE280M2              | 457 | 368 | 419 | 190 | 65m6  | 140 | 18h9 | 69   | 280 | 40 | 24 | 105 | 550 | 130 | 165 | 520  | 720 | 1135 |
| 3SIE280M4-8            | 457 | 368 | 419 | 190 | 75m6  | 140 | 20h9 | 79.5 | 280 | 40 | 24 | 105 | 550 | 130 | 165 | 520  | 720 | 1135 |
| 3SIE315S2              | 508 | 406 | 457 | 216 | 65m6  | 140 | 18h9 | 69   | 315 | 48 | 28 | 120 | 610 | 160 | 160 | 565  | 805 | 1235 |
| 3SIE315S4-8            | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 120 | 610 | 160 | 160 | 565  | 805 | 1265 |
| 3SIE315M2A;B           | 508 | 406 | 457 | 216 | 65m6  | 140 | 18h9 | 69   | 315 | 48 | 28 | 120 | 610 | 160 | 160 | 565  | 805 | 1235 |
| 3SIE315M4A;B;6A;8A;(B) | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 120 | 610 | 160 | 160 | 565  | 805 | 1265 |
| 3SIE315M6B             | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 1355 |
| 3SIE315M2C             | 508 | 406 | 457 | 216 | 70m6  | 140 | 20h9 | 74.5 | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 1290 |
| 3SIE315M4C             | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 1320 |
| 3SIE315M6C             | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 1320 |
| 3SIE315M6D             | 508 | 406 | 457 | 216 | 90m6  | 170 | 25h9 | 95   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 1320 |
| 3SIE 315M8C;8D         | 508 | 406 | 457 | 216 | 90m6  | 170 | 25h9 | 95   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 1385 |
| 3SIE 355 ML (2)        | 610 | 560 | 630 | 254 | 80m6  | 170 | 22h9 | 85   | 355 | 50 | 28 | 150 | 720 | 250 | 300 | 890  | 935 | 1580 |
| 3SIE 355 ML (4-8)      | 610 | 560 | 630 | 254 | 100m6 | 210 | 28h9 | 106  | 355 | 50 | 28 | 150 | 720 | 250 | 300 | 890  | 935 | 1620 |
| 3SIE 355 H (2)         | 610 | 900 | —   | 200 | 70m6  | 140 | 20h9 | 74.5 | 355 | 45 | 28 | 160 | 730 | 265 | 265 | 1045 | 995 | 1800 |
| 3SIE 355 H (4-8)       | 610 | 900 | —   | 200 | 100m6 | 210 | 28h9 | 106  | 355 | 45 | 28 | 160 | 730 | 265 | 265 | 1045 | 995 | 1870 |

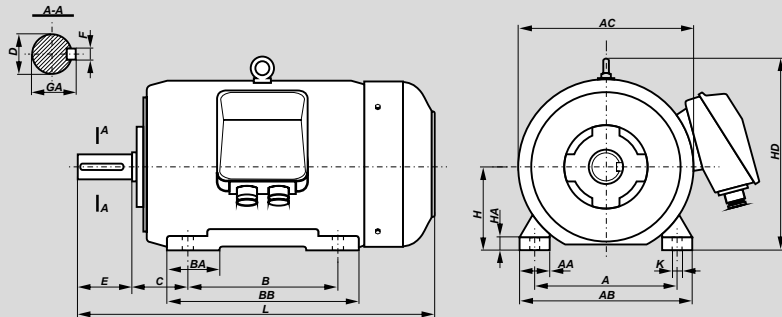
## Dimensions of Foot Mounted Motors – IM B3

Motors series Sh and Sg • 2p=10, 12

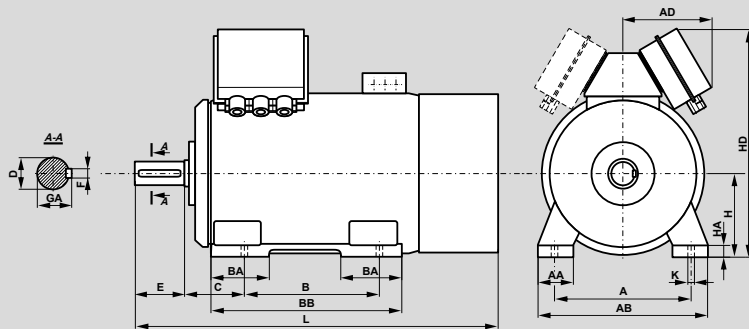


| Type of motor | A   | B   | C   | D    | E   | F    | GA   | H   | HA | K  | AA | AB  | BB  | HD  | L   |
|---------------|-----|-----|-----|------|-----|------|------|-----|----|----|----|-----|-----|-----|-----|
| Sh90S-10      | 140 | 100 | 56  | 24j6 | 50  | 8h9  | 27   | 90  | 10 | 10 | 50 | 170 | 153 | 220 | 305 |
| Sh90L-10      | 140 | 125 | 56  | 24j6 | 50  | 8h9  | 27   | 90  | 10 | 10 | 50 | 170 | 153 | 220 | 330 |
| Sg100L-10A    | 160 | 140 | 63  | 28j6 | 60  | 8h9  | 31   | 100 | 14 | 12 | 45 | 200 | 172 | 240 | 376 |
| Sg100L-10B    | 160 | 140 | 63  | 28j6 | 60  | 8h9  | 31   | 100 | 14 | 12 | 45 | 200 | 172 | 240 | 376 |
| Sg112M-10     | 190 | 140 | 70  | 28j6 | 60  | 8h9  | 31   | 112 | 14 | 12 | 54 | 230 | 174 | 276 | 384 |
| Sg112M-10A    | 190 | 140 | 70  | 28j6 | 60  | 8h9  | 31   | 112 | 14 | 12 | 54 | 230 | 174 | 276 | 384 |
| Sg132S-10     | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 182 | 310 | 463 |
| Sg132S-10A    | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 182 | 310 | 463 |
| Sg132S-10B    | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 182 | 310 | 463 |
| Sg160L-10     | 254 | 254 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 20 | 15 | 60 | 305 | 300 | 370 | 656 |
| Sg180L-10     | 279 | 279 | 121 | 48k6 | 110 | 14h9 | 51,5 | 180 | 26 | 15 | 70 | 350 | 320 | 408 | 705 |
| Sg100L-12     | 160 | 140 | 63  | 28j6 | 60  | 8h9  | 31   | 100 | 14 | 12 | 45 | 200 | 172 | 240 | 376 |
| Sg112M-12     | 190 | 140 | 70  | 28j6 | 60  | 8h9  | 31   | 112 | 14 | 12 | 54 | 230 | 174 | 276 | 384 |
| Sg132S-12     | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 182 | 310 | 463 |
| Sg132M-12     | 216 | 178 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 182 | 310 | 501 |
| Sg132M-12B    | 216 | 178 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 220 | 310 | 501 |
| Sg160M-12     | 254 | 210 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 20 | 15 | 60 | 305 | 256 | 370 | 612 |
| Sg160L-12     | 254 | 254 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 20 | 15 | 60 | 305 | 300 | 370 | 656 |
| Sg180L-12     | 279 | 279 | 121 | 48k6 | 110 | 14h9 | 51,5 | 180 | 26 | 15 | 70 | 350 | 320 | 408 | 705 |

# Dimensions of Foot Mounted Motors – IM B3

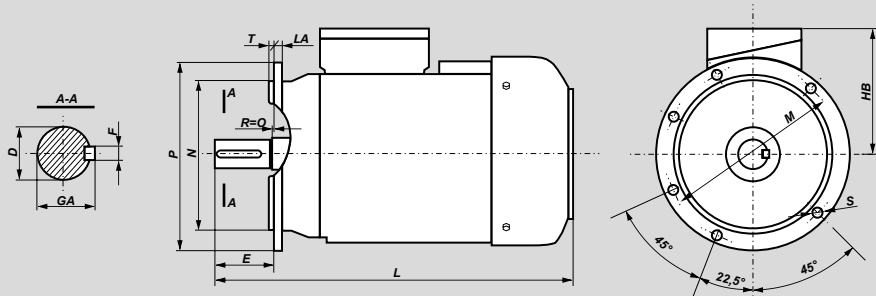


| Motor type     | A   | B   | C   | D    | E   | F    | GA   | H   | HA | K  | AA  | AB  | AC  | BA  | BB  | HD  | L    |
|----------------|-----|-----|-----|------|-----|------|------|-----|----|----|-----|-----|-----|-----|-----|-----|------|
| 2Sg 200 L10-12 | 318 | 305 | 133 | 55m6 | 110 | 16h9 | 59   | 200 | 32 | 19 | 80  | 400 | 450 | 100 | 380 | 485 | 825  |
| 2Sg 225 S10-12 | 356 | 286 | 149 | 60m6 | 140 | 18h9 | 64   | 225 | 34 | 19 | 85  | 445 | 505 | 110 | 355 | 535 | 865  |
| 2Sg 225 M10-12 | 356 | 311 | 149 | 60m6 | 140 | 18h9 | 64   | 225 | 34 | 19 | 85  | 445 | 505 | 110 | 380 | 535 | 890  |
| 2Sg 250 M10-12 | 406 | 349 | 168 | 65m6 | 140 | 18h9 | 69   | 250 | 36 | 24 | 90  | 495 | 540 | 120 | 420 | 590 | 965  |
| 2Sg 280 S10-12 | 457 | 368 | 190 | 75m6 | 140 | 20h9 | 79,5 | 280 | 40 | 24 | 100 | 560 | 620 | 165 | 520 | 660 | 1040 |
| 2Sg 280 M10-12 | 457 | 419 | 190 | 75m6 | 140 | 20h9 | 79,5 | 280 | 40 | 24 | 100 | 560 | 620 | 165 | 520 | 660 | 1040 |
| 2Sg 315 S10-12 | 508 | 406 | 216 | 80m6 | 170 | 22h9 | 85   | 315 | 46 | 28 | 105 | 610 | 620 | 190 | 560 | 695 | 1210 |
| 2Sg 315 M10-12 | 508 | 457 | 216 | 80m6 | 170 | 22h9 | 85   | 315 | 46 | 28 | 105 | 610 | 620 | 190 | 560 | 695 | 1210 |



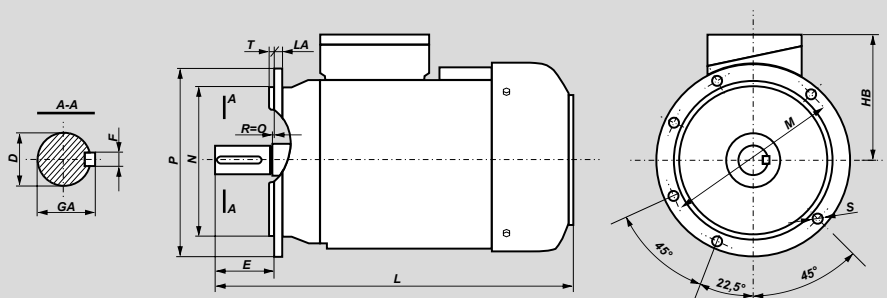
| Motor type       | Poles | A   | B    | C   | D     | E   | F    | GA   | H   | HA | K  | AA  | AB   | AD  | BA  | BB   | HD   | L    |
|------------------|-------|-----|------|-----|-------|-----|------|------|-----|----|----|-----|------|-----|-----|------|------|------|
| 3SIE 355...s     | 2     | 610 | 900  | 200 | 70m6  | 140 | 20h9 | 74,5 | 355 | 45 | 28 | 160 | 730  | —   | 265 | 1045 | 995  | 1800 |
| 3SIE 355...s     | 4÷8   | 610 | 900  | 200 | 100m6 | 210 | 28h9 | 106  | 355 | 45 | 28 | 160 | 730  | —   | 265 | 1045 | 995  | 1870 |
| 3SIE 400...s     | 2     | 686 | 1000 | 224 | 80m6  | 170 | 22h9 | 85   | 400 | 50 | 35 | 175 | 840  | 520 | 265 | 1160 | 1255 | 1980 |
| 3SIE/Sh 400...s  | 4÷10  | 686 | 1000 | 224 | 110m6 | 210 | 28h9 | 116  | 400 | 50 | 35 | 175 | 840  | 520 | 265 | 1160 | 1255 | 1960 |
| 3SIE 450...s     | 2     | 750 | 1120 | 254 | 80m6  | 170 | 22h9 | 85   | 450 | 60 | 35 | 205 | 940  | 560 | 340 | 1320 | 1356 | 2155 |
| 3SIE/Sh 450...s  | 4÷12  | 750 | 1120 | 254 | 110m6 | 210 | 28h9 | 116  | 450 | 60 | 35 | 205 | 940  | 560 | 340 | 1320 | 1356 | 2105 |
| 3SIE 500...s     | 2     | 850 | 1250 | 450 | 90m6  | 170 | 25h9 | 95   | 500 | 70 | 42 | 223 | 1050 | 560 | 300 | 1450 | 1470 | 2758 |
| 3SIE /Sh 500...s | 4÷12  | 850 | 1250 | 280 | 120m6 | 210 | 32h9 | 127  | 500 | 70 | 42 | 223 | 1050 | 560 | 300 | 1450 | 1470 | 2430 |

## Dimensions of Flange Mounted Motors – IM B5, IM V1



| Motor type                 | D    | E   | F    | GA   | M   | N     | P   | LA | T   | HB  | L   | S (f) | S (holes) |
|----------------------------|------|-----|------|------|-----|-------|-----|----|-----|-----|-----|-------|-----------|
| SKh 56-A                   | 9j6  | 20  | 3h9  | 10,2 | 100 | 80j6  | 120 | 8  | 3   | 98  | 183 | 7     | 4         |
| 2SIEK56-2B                 | 9j6  | 20  | 3h9  | 10,2 | 100 | 80j6  | 120 | 8  | 3   | 98  | 193 | 7     | 4         |
| 2SIEK63-A                  | 11j6 | 23  | 4h9  | 12,5 | 115 | 95j6  | 140 | 9  | 3   | 102 | 200 | 10    | 4         |
| 2SIEK63-2,4B               | 11j6 | 23  | 4h9  | 12,5 | 115 | 95j6  | 140 | 9  | 3   | 102 | 210 | 10    | 4         |
| 2SIEK63-6B                 | 11j6 | 23  | 4h9  | 12,5 | 115 | 95j6  | 140 | 9  | 3   | 102 | 245 | 10    | 4         |
| 2SIEK71-2,4A               | 14j6 | 30  | 5h9  | 16   | 130 | 110j6 | 160 | 9  | 3,5 | 111 | 245 | 10    | 4         |
| 2SIEK71-2B                 | 14j6 | 30  | 5h9  | 16   | 130 | 110j6 | 160 | 9  | 3,5 | 111 | 245 | 10    | 4         |
| 2SIEK71-4,6B               | 14j6 | 30  | 5h9  | 16   | 130 | 110j6 | 160 | 9  | 3,5 | 111 | 263 | 10    | 4         |
| 2SIEK71-6A                 | 14j6 | 30  | 5h9  | 16   | 130 | 110j6 | 160 | 9  | 3,5 | 111 | 223 | 10    | 4         |
| 2SIEK71-8B                 | 14j6 | 30  | 5h9  | 16   | 130 | 110j6 | 160 | 9  | 3,5 | 111 | 284 | 10    | 4         |
| 2SIEK80-4A                 | 19j6 | 40  | 6h9  | 21,5 | 165 | 130j6 | 200 | 10 | 3,5 | 120 | 266 | 12    | 4         |
| 2SIEK80-6A                 | 19j6 | 40  | 6h9  | 21,5 | 165 | 130j6 | 200 | 10 | 3,5 | 120 | 278 | 12    | 4         |
| 2SIEK80-6B                 | 19j6 | 40  | 6h9  | 21,5 | 165 | 130j6 | 200 | 10 | 3,5 | 120 | 306 | 12    | 4         |
| 2SIEK80-8A                 | 19j6 | 40  | 6h9  | 21,5 | 165 | 130j6 | 200 | 10 | 3,5 | 120 | 306 | 12    | 4         |
| 2SIEK80-8B                 | 19j6 | 40  | 6h9  | 21,5 | 165 | 130j6 | 200 | 10 | 3,5 | 120 | 318 | 12    | 4         |
| 3SIEK 80-A                 | 19j6 | 40  | 6h9  | 21,5 | 165 | 130j6 | 200 | 10 | 3,5 | 119 | 278 | 12    | 4         |
| 3SIEK 80-B                 | 19j6 | 40  | 6h9  | 21,5 | 165 | 130j6 | 200 | 10 | 3,5 | 119 | 306 | 12    | 4         |
| 2,3SIEK 90S-2, 4, 6, L2, 8 | 24j6 | 50  | 8h9  | 27   | 165 | 130j6 | 200 | 8  | 3,5 | 148 | 331 | 12    | 4         |
| 2,3SIEK 90L-4, 6           | 24j6 | 50  | 8h9  | 27   | 165 | 130j6 | 200 | 8  | 3,5 | 148 | 356 | 12    | 4         |
| 3SIEK 100L-2, 6, 8A        | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 11 | 4   | 157 | 377 | 15    | 4         |
| 3SIEK 100L-4A, 4B, 8B      | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 11 | 4   | 157 | 417 | 15    | 4         |
| 3SIEK 112M-2, 6, 8         | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 12 | 4   | 168 | 398 | 15    | 4         |
| 3SIEK 112M-4               | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 12 | 4   | 168 | 425 | 15    | 4         |
| 3SIEK 132S                 | 38k6 | 80  | 10h9 | 41   | 265 | 230j6 | 300 | 12 | 4   | 197 | 512 | 15    | 4         |
| 3SIEK 132M                 | 38k6 | 80  | 10h9 | 41   | 265 | 230j6 | 300 | 12 | 4   | 197 | 512 | 15    | 4         |
| 3SIEK 160M                 | 42k6 | 110 | 12h9 | 45   | 300 | 250j6 | 350 | 13 | 5   | 223 | 643 | 19    | 4         |
| 3SIEK 160L                 | 42k6 | 110 | 12h9 | 45   | 300 | 250j6 | 350 | 13 | 5   | 223 | 643 | 19    | 4         |
| 3SIEK 180M-2, 4            | 48k6 | 110 | 14h9 | 51,5 | 300 | 250j6 | 350 | 13 | 5   | 234 | 723 | 19    | 4         |
| 3SIEK 180L-4, 6, 8         | 48k6 | 110 | 14h9 | 51,5 | 300 | 250j6 | 350 | 13 | 5   | 234 | 723 | 19    | 4         |

# Dimensions of Flange Mounted Motors – IM B5, IM V1



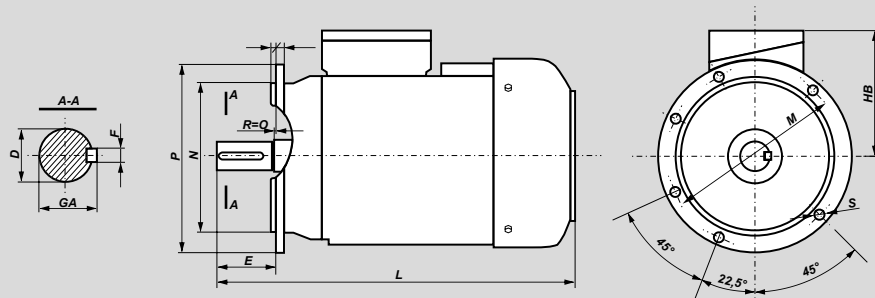
| Motor type                | D     | E   | F    | GA   | M   | N     | P   | LA   | T | HB  | L    | S (f) | S (holes) |
|---------------------------|-------|-----|------|------|-----|-------|-----|------|---|-----|------|-------|-----------|
| 3SIEK 200                 | 55m6  | 110 | 16h9 | 59   | 350 | 300j6 | 400 | 16,5 | 5 | 320 | 850  | 19    | 4         |
| 3SIEK 225S                | 60m6  | 140 | 18h9 | 64   | 400 | 350j6 | 450 | 18   | 5 | 345 | 930  | 19    | 8         |
| 3SIEK 225M2               | 55m6  | 110 | 16h9 | 59   | 400 | 350j6 | 450 | 18   | 5 | 345 | 900  | 19    | 8         |
| 3SIEK 225M4-8             | 60m6  | 140 | 18h9 | 64   | 400 | 350j6 | 450 | 18   | 5 | 345 | 930  | 19    | 8         |
| 3SIEK 250M2               | 60m6  | 140 | 18h9 | 64   | 500 | 450j6 | 550 | 23   | 5 | 385 | 1010 | 19    | 8         |
| 3SIEK 250M4-8             | 65m6  | 140 | 18h9 | 69   | 500 | 450j6 | 550 | 23   | 5 | 385 | 1040 | 19    | 8         |
| 3SIEK 280S2               | 65m6  | 140 | 18h9 | 69   | 500 | 450j6 | 550 | 23   | 5 | 440 | 1135 | 19    | 8         |
| 3SIEK 280S4-8             | 75m6  | 140 | 20h9 | 79,5 | 500 | 450j6 | 550 | 23   | 5 | 440 | 1135 | 19    | 8         |
| 3SIEK 280M2               | 65m6  | 140 | 18h9 | 69   | 500 | 450j6 | 550 | 23   | 5 | 440 | 1135 | 19    | 8         |
| 3SIEK 280M4-8             | 75m6  | 140 | 20h9 | 79,5 | 500 | 450j6 | 550 | 23   | 5 | 440 | 1135 | 19    | 8         |
| 3SIEK 315S2               | 65m6  | 140 | 18h9 | 69   | 600 | 550j6 | 660 | 23   | 6 | 490 | 1235 | 24    | 8         |
| 3SIEK 315S4-8             | 80m6  | 170 | 22h9 | 85   | 600 | 550j6 | 660 | 23   | 6 | 490 | 1265 | 24    | 8         |
| 3SIEK 315M2A;B            | 65m6  | 140 | 18h9 | 69   | 600 | 550j6 | 660 | 23   | 6 | 490 | 1235 | 24    | 8         |
| 3SIEK 315M4A;B;6A ;8A;(B) | 80m6  | 170 | 22h9 | 85   | 600 | 550j6 | 660 | 23   | 6 | 490 | 1265 | 24    | 8         |
| 3SIEK 315M6B              | 80m6  | 170 | 22h9 | 85   | 600 | 550j6 | 660 | 23   | 6 | 490 | 1355 | 24    | 8         |
| 3SIEK 315M2C              | 70m6  | 140 | 20h9 | 74,5 | 600 | 550j6 | 660 | 23   | 6 | 490 | 1290 | 24    | 8         |
| 3SIEK 315M4C              | 80m6  | 170 | 22h9 | 85   | 600 | 550j6 | 660 | 23   | 6 | 490 | 1320 | 24    | 8         |
| 3SIEK 315M6C              | 80m6  | 170 | 22h9 | 85   | 600 | 550j6 | 660 | 23   | 6 | 490 | 1320 | 24    | 8         |
| 3SIEK 315M6D              | 90m6  | 170 | 25h9 | 95   | 600 | 550j6 | 660 | 23   | 6 | 490 | 1320 | 24    | 8         |
| 3SIEK 315M8C;8D           | 90m6  | 170 | 25h9 | 95   | 600 | 550j6 | 660 | 23   | 6 | 490 | 1385 | 24    | 8         |
| 3SIEK 355 ML (4–8)*       | 100m6 | 210 | 28h9 | 106  | 740 | 680j6 | 800 | 24   | 6 | 580 | 1620 | 22    | 8         |
| 3SIEK 355 H (4–8)*        | 100m6 | 210 | 28h9 | 106  | 740 | 680j6 | 800 | 24   | 6 | 638 | 1955 | 22    | 8         |

\*only in vertical position IM V1



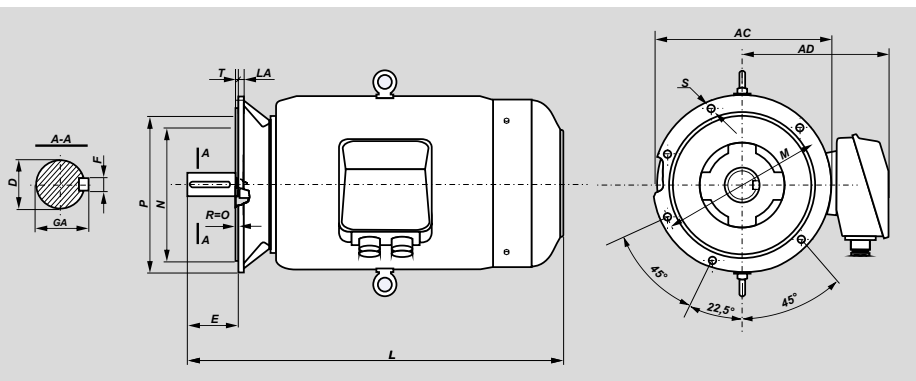
## Dimensions of Flange Mounted Motors – IM B5, IM V1

Motors series Sh and Sg • 2p=10, 12

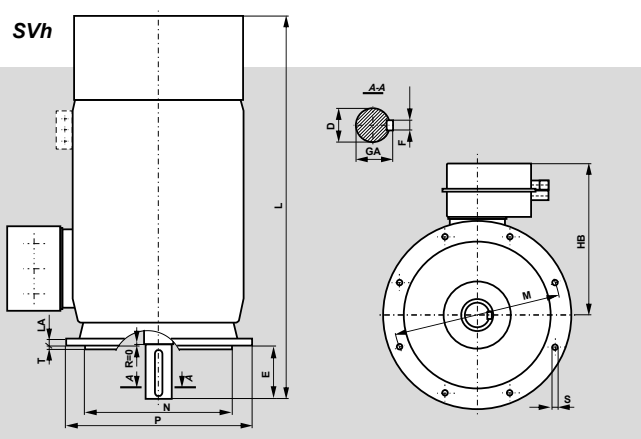


| Type of motor | D    | E   | F    | GA   | M   | N     | P   | LA | T   | S  | HB  | L   |
|---------------|------|-----|------|------|-----|-------|-----|----|-----|----|-----|-----|
| SKh90S-10     | 24j6 | 50  | 8h9  | 27   | 165 | 130j6 | 200 | 8  | 3,5 | 12 | 130 | 305 |
| SKh90L-10     | 24j6 | 50  | 8h9  | 27   | 165 | 130j6 | 200 | 8  | 3,5 | 12 | 130 | 330 |
| SKg100L-10A   | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 11 | 4   | 15 | 140 | 376 |
| SKg100L-10B   | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 11 | 4   | 15 | 140 | 376 |
| SKg112M-10    | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 12 | 4   | 15 | 164 | 384 |
| SKg112M-10A   | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 12 | 4   | 15 | 164 | 384 |
| SKg132S-10    | 38k6 | 80  | 10h9 | 41   | 265 | 230j6 | 300 | 12 | 4   | 15 | 178 | 463 |
| SKg132S-10A   | 38k6 | 80  | 10h9 | 41   | 265 | 230j6 | 300 | 12 | 4   | 15 | 178 | 463 |
| SKg132S-10B   | 38k6 | 80  | 10h9 | 41   | 265 | 230j6 | 300 | 12 | 4   | 15 | 178 | 463 |
| SKg160L-10    | 42k6 | 110 | 12h9 | 45   | 300 | 250j6 | 350 | 13 | 5   | 19 | 210 | 656 |
| SKg180L-10    | 48k6 | 110 | 14h9 | 51,5 | 300 | 250j6 | 350 | 13 | 5   | 19 | 228 | 705 |
| SKg100L-12    | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 11 | 4   | 15 | 140 | 376 |
| SKg112M-12    | 28j6 | 60  | 8h9  | 31   | 215 | 180j6 | 250 | 12 | 4   | 15 | 164 | 384 |
| SKg132S-12    | 38k6 | 80  | 10h9 | 41   | 265 | 230j6 | 300 | 12 | 4   | 15 | 178 | 463 |
| SKg132M-12    | 38k6 | 80  | 10h9 | 41   | 265 | 230j6 | 300 | 12 | 4   | 15 | 178 | 501 |
| SKg132M-12B   | 38k6 | 80  | 10h9 | 41   | 265 | 230j6 | 300 | 12 | 4   | 15 | 178 | 501 |
| SKg160M-12    | 42k6 | 110 | 12h9 | 45   | 300 | 250j6 | 350 | 13 | 5   | 19 | 210 | 612 |
| SKg160L-12    | 42k6 | 110 | 12h9 | 45   | 300 | 250j6 | 350 | 13 | 5   | 19 | 210 | 656 |
| SKg180L-12    | 48k6 | 110 | 14h9 | 51,5 | 300 | 250j6 | 350 | 13 | 5   | 19 | 228 | 705 |

# Dimensions of Flange Mounted Motors – IM B5, IM V1



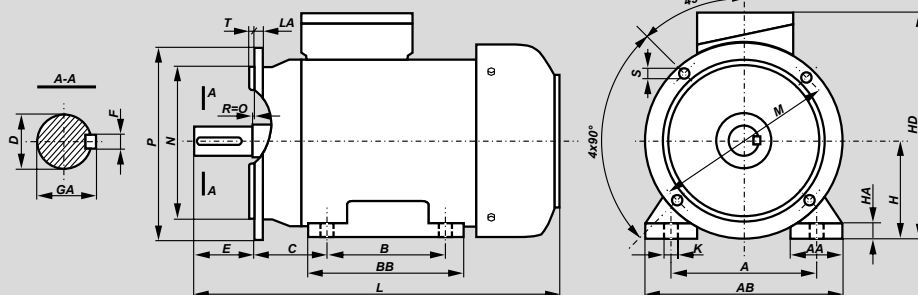
| Motor type      | D    | E   | F    | GA   | AC  | AD  | L    | LA   | M   | N     | P   | T | S  |       |
|-----------------|------|-----|------|------|-----|-----|------|------|-----|-------|-----|---|----|-------|
|                 |      |     |      |      |     |     |      |      |     |       |     |   | Ø  | Holes |
| 2SKg 200 L10-12 | 55m6 | 110 | 16h9 | 59   | 450 | 340 | 825  | 16,5 | 350 | 300j6 | 400 | 5 | 18 | 4     |
| 2SKg 225 S10-12 | 60m6 | 140 | 18h9 | 64   | 505 | 360 | 865  | 18   | 400 | 350j6 | 450 | 5 | 18 | 8     |
| 2SKg 225 M10-12 | 60m6 | 140 | 18h9 | 64   | 505 | 360 | 890  | 18   | 400 | 350j6 | 450 | 5 | 18 | 8     |
| 2SKg 250 M10-12 | 65m6 | 140 | 18h9 | 69   | 540 | 405 | 965  | 19   | 500 | 450j6 | 550 | 5 | 18 | 8     |
| 2SKg 280 S10-12 | 75m6 | 140 | 20h9 | 79,5 | 620 | 440 | 1040 | 20   | 500 | 450j6 | 550 | 5 | 18 | 8     |
| 2SKg 280 M10-12 | 75m6 | 140 | 20h9 | 79,5 | 620 | 440 | 1040 | 20   | 500 | 450j6 | 550 | 5 | 18 | 8     |
| 2SKg 315 S10-12 | 80m6 | 170 | 22h9 | 85   | 620 | 440 | 1210 | 22   | 600 | 550j6 | 660 | 6 | 22 | 8     |
| 2SKg 315 M10-12 | 80m6 | 170 | 22h9 | 85   | 620 | 440 | 1210 | 22   | 600 | 550j6 | 660 | 6 | 22 | 8     |



| Motor type         | Poles | D     | E   | F    | GA  | HB  | L    | LA | M    | N      | P    | S  | T |
|--------------------|-------|-------|-----|------|-----|-----|------|----|------|--------|------|----|---|
| 3SIEK 355...s*     | 4÷8   | 100m6 | 210 | 28h9 | 106 | 638 | 1955 | 24 | 740  | 680j6  | 800  | 22 | 6 |
| 3SIEK/SVh 400...s* | 4÷10  | 110m6 | 210 | 28h9 | 116 | 691 | 2090 | 30 | 940  | 880j6  | 1000 | 23 | 6 |
| 3SIEK/SVh 450...s* | 4÷12  | 110m6 | 210 | 28h9 | 116 | 849 | 2350 | 30 | 1080 | 1000j6 | 1150 | 28 | 6 |
| 3SIEK/SVh 500...s* | 4÷12  | 120m6 | 210 | 32h9 | 127 | 909 | 2504 | 30 | 1080 | 1000j6 | 1150 | 28 | 6 |

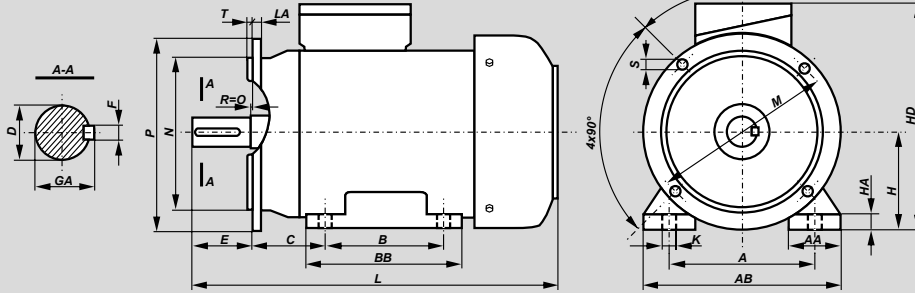
\* – the SVh motors may operate only in vertical position IM V1.

## Dimensions of Foot / Flange Mounted Motors – IM B35



| Motor type            | A   | B   | C   | D    | E   | F    | GA   | H   | K   | M   | N     | P   | S  | LA | T   | AA | AB  | BB  | HA  | HD  | L   |
|-----------------------|-----|-----|-----|------|-----|------|------|-----|-----|-----|-------|-----|----|----|-----|----|-----|-----|-----|-----|-----|
| SLh 56-A              | 90  | 71  | 36  | 9j6  | 20  | 3h9  | 10,2 | 56  | 8   | 100 | 80j6  | 120 | 7  | 8  | 3   | 30 | 110 | 92  | 7   | 154 | 183 |
| 2SIEL56-2B            | 90  | 71  | 36  | 9j6  | 20  | 3h9  | 10,2 | 56  | 5,8 | 100 | 80j6  | 120 | 7  | 8  | 3   | 30 | 110 | 92  | 7   | 154 | 193 |
| 2SIEL63-A             | 100 | 80  | 40  | 11j6 | 23  | 4h9  | 12,5 | 63  | 7   | 115 | 95j6  | 140 | 10 | 9  | 3   | 36 | 124 | 106 | 8,5 | 165 | 200 |
| 2SIEL63-2,4B          | 100 | 80  | 40  | 11j6 | 23  | 4h9  | 12,5 | 63  | 7   | 115 | 95j6  | 140 | 10 | 9  | 3   | 36 | 124 | 106 | 8,5 | 165 | 210 |
| 2SIEL63-6B            | 100 | 80  | 40  | 11j6 | 23  | 4h9  | 12,5 | 63  | 7   | 115 | 95j6  | 140 | 10 | 9  | 3   | 36 | 124 | 106 | 8,5 | 165 | 245 |
| 2SIEL71-2,4A          | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 130 | 110j6 | 160 | 10 | 9  | 3,5 | 45 | 142 | 116 | 8   | 182 | 245 |
| 2SIEL71-2B            | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 130 | 110j6 | 160 | 10 | 9  | 3,5 | 45 | 142 | 116 | 8   | 182 | 245 |
| 2SIEL71-4,6B          | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 130 | 110j6 | 160 | 10 | 9  | 3,5 | 45 | 142 | 116 | 8   | 182 | 263 |
| 2SIEL71-6A            | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 130 | 110j6 | 160 | 10 | 9  | 3,5 | 45 | 142 | 116 | 8   | 182 | 223 |
| 2SIEL71-8B            | 112 | 90  | 45  | 14j6 | 30  | 5h9  | 16   | 71  | 7   | 130 | 110j6 | 160 | 10 | 9  | 3,5 | 45 | 142 | 116 | 8   | 182 | 284 |
| 2SIEL80-4A            | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 165 | 130j6 | 200 | 12 | 10 | 3,5 | 55 | 160 | 130 | 9   | 200 | 266 |
| 2SIEL80-6A            | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 165 | 130j6 | 200 | 12 | 10 | 3,5 | 55 | 160 | 130 | 9   | 200 | 278 |
| 2SIEL80-6B            | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 165 | 130j6 | 200 | 12 | 10 | 3,5 | 55 | 160 | 130 | 9   | 200 | 306 |
| 2SIEL80-8A            | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 165 | 130j6 | 200 | 12 | 10 | 3,5 | 55 | 160 | 130 | 9   | 200 | 306 |
| 2SIEL80-8B            | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 165 | 130j6 | 200 | 12 | 10 | 3,5 | 55 | 160 | 130 | 9   | 200 | 318 |
| 3SIEL80-A             | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 165 | 130j6 | 200 | 12 | 10 | 3,5 | 55 | 160 | 130 | 9   | 200 | 278 |
| 3SIEL80-B             | 125 | 100 | 50  | 19j6 | 40  | 6h9  | 21,5 | 80  | 10  | 165 | 130j6 | 200 | 12 | 10 | 3,5 | 55 | 160 | 130 | 9   | 200 | 306 |
| 2,3SIEL90S-2, 4, 6, 8 | 140 | 100 | 56  | 24j6 | 50  | 8h9  | 27   | 90  | 10  | 165 | 130j6 | 200 | 12 | 8  | 3,5 | 47 | 182 | 153 | 10  | 238 | 331 |
| 2,3SIEL90L-2, 8       | 140 | 125 | 56  | 24j6 | 50  | 8h9  | 27   | 90  | 10  | 165 | 130j6 | 200 | 12 | 8  | 3,5 | 47 | 182 | 153 | 10  | 238 | 331 |
| 3SIEL90L-4, 6         | 140 | 125 | 56  | 24j6 | 50  | 8h9  | 27   | 90  | 10  | 165 | 130j6 | 200 | 12 | 8  | 3,5 | 47 | 182 | 153 | 10  | 238 | 356 |
| 3SIEL100L-2, 6, 8A    | 160 | 140 | 63  | 28j6 | 60  | 8h9  | 31   | 100 | 12  | 215 | 180j6 | 250 | 15 | 11 | 4   | 52 | 202 | 170 | 12  | 257 | 377 |
| 3SIEL100L-4A, 4B, 8B  | 160 | 140 | 63  | 28j6 | 60  | 8h9  | 31   | 100 | 12  | 215 | 180j6 | 250 | 15 | 11 | 4   | 52 | 202 | 170 | 12  | 257 | 417 |
| 3SIEL112M-2, 6, 8     | 190 | 140 | 70  | 28j6 | 60  | 8h9  | 31   | 112 | 12  | 215 | 180j6 | 250 | 15 | 12 | 4   | 52 | 222 | 170 | 14  | 280 | 398 |
| 3SIEL112M-4           | 190 | 140 | 70  | 28j6 | 60  | 8h9  | 31   | 112 | 12  | 215 | 180j6 | 250 | 15 | 12 | 4   | 52 | 222 | 170 | 14  | 280 | 425 |
| 3SIEL132S             | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 12  | 265 | 230j6 | 300 | 15 | 12 | 4   | 61 | 266 | 220 | 18  | 329 | 512 |
| 3SIEL132M             | 216 | 178 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 12  | 265 | 230j6 | 300 | 15 | 12 | 4   | 61 | 266 | 220 | 18  | 329 | 512 |
| 3SIEL160M             | 254 | 210 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 15  | 300 | 250j6 | 350 | 19 | 13 | 5   | 81 | 320 | 300 | 25  | 383 | 643 |
| 3SIEL160L             | 254 | 254 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 15  | 300 | 250j6 | 350 | 19 | 13 | 5   | 81 | 320 | 300 | 25  | 383 | 643 |
| 3SIEL180M             | 279 | 241 | 121 | 48k6 | 110 | 14h9 | 51,5 | 180 | 15  | 300 | 250j6 | 350 | 19 | 13 | 5   | 92 | 353 | 320 | 27  | 414 | 723 |
| 3SIEL180L             | 279 | 279 | 121 | 48k6 | 110 | 14h9 | 51,5 | 180 | 15  | 300 | 250j6 | 350 | 19 | 13 | 5   | 92 | 353 | 320 | 27  | 414 | 723 |

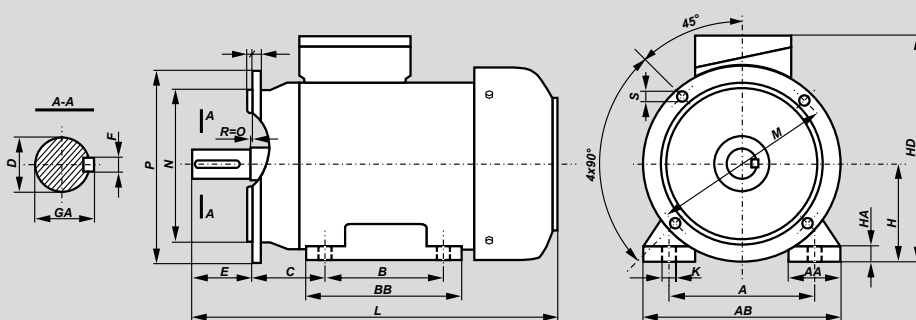
# Dimensions of Foot / Flange Mounted Motors – IM B35



| Motor type               | A   | B   | B1  | C   | D     | E   | F    | GA   | H   | HA | K  | AA  | AB  | BA1 | BA2 | BB   | HD  | LA   | P   | M   | N     | T | L    | S       |   |
|--------------------------|-----|-----|-----|-----|-------|-----|------|------|-----|----|----|-----|-----|-----|-----|------|-----|------|-----|-----|-------|---|------|---------|---|
|                          |     |     |     |     |       |     |      |      |     |    |    |     |     |     |     |      |     |      |     |     |       |   |      | ø holes |   |
| 3SIEL 200                | 318 | 305 | —   | 133 | 55m6  | 110 | 16h9 | 59   | 200 | 32 | 19 | 80  | 400 | 113 | 113 | 380  | 520 | 16,5 | 400 | 350 | 300j6 | 5 | 850  | 19      | 4 |
| 3SIEL 225S               | 356 | 286 | 311 | 149 | 60m6  | 140 | 18h9 | 64   | 225 | 34 | 19 | 85  | 440 | 115 | 115 | 380  | 570 | 18   | 450 | 400 | 350j6 | 5 | 930  | 19      | 8 |
| 3SIEL 225M2              | 356 | 286 | 311 | 149 | 55m6  | 110 | 16h9 | 59   | 225 | 34 | 19 | 85  | 440 | 115 | 115 | 380  | 570 | 18   | 450 | 400 | 350j6 | 5 | 900  | 19      | 8 |
| 3SIEL 225M4-8            | 356 | 286 | 311 | 149 | 60m6  | 140 | 18h9 | 64   | 225 | 34 | 19 | 85  | 440 | 115 | 115 | 380  | 570 | 18   | 450 | 400 | 350j6 | 5 | 930  | 19      | 8 |
| 3SIEL 250M2              | 406 | 349 | —   | 168 | 60m6  | 140 | 18h9 | 64   | 250 | 37 | 24 | 90  | 480 | 135 | 135 | 445  | 635 | 23   | 550 | 500 | 450j6 | 5 | 1010 | 19      | 8 |
| 3SIEL 250M4-8            | 406 | 349 | —   | 168 | 65m6  | 140 | 18h9 | 69   | 250 | 37 | 24 | 90  | 480 | 135 | 135 | 445  | 635 | 23   | 550 | 500 | 450j6 | 5 | 1040 | 19      | 8 |
| 3SIEL 280S2              | 457 | 368 | 419 | 190 | 65m6  | 140 | 18h9 | 69   | 280 | 40 | 24 | 105 | 550 | 130 | 165 | 520  | 720 | 23   | 550 | 500 | 450j6 | 5 | 1135 | 19      | 8 |
| 3SIEL 280S4-8            | 457 | 368 | 419 | 190 | 75m6  | 140 | 20h9 | 79,5 | 280 | 40 | 24 | 105 | 550 | 130 | 165 | 520  | 720 | 23   | 550 | 500 | 450j6 | 5 | 1135 | 19      | 8 |
| 3SIEL 280M2              | 457 | 368 | 419 | 190 | 65m6  | 140 | 18h9 | 69   | 280 | 40 | 24 | 105 | 550 | 130 | 165 | 520  | 720 | 23   | 550 | 500 | 450j6 | 5 | 1135 | 19      | 8 |
| 3SIEL 280M4-8            | 457 | 368 | 419 | 190 | 75m6  | 140 | 20h9 | 79,5 | 280 | 40 | 24 | 105 | 550 | 130 | 165 | 520  | 720 | 23   | 550 | 500 | 450j6 | 5 | 1135 | 19      | 8 |
| 3SIEL 315S2              | 508 | 406 | 457 | 216 | 65m6  | 140 | 18h9 | 69   | 315 | 48 | 28 | 120 | 610 | 160 | 160 | 565  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1235 | 24      | 8 |
| 3SIEL 315S4-8            | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 120 | 610 | 160 | 160 | 565  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1265 | 24      | 8 |
| 3SIEL 315M2A;B           | 508 | 406 | 457 | 216 | 65m6  | 140 | 18h9 | 69   | 315 | 48 | 28 | 120 | 610 | 160 | 160 | 565  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1235 | 24      | 8 |
| 3SIEL 315M4A;B;6A;8A;(B) | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 120 | 610 | 160 | 160 | 565  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1265 | 24      | 8 |
| 3SIEL 315M6B             | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1355 | 24      | 8 |
| 3SIEL 315M2C             | 508 | 406 | 457 | 216 | 70m6  | 140 | 20h9 | 74,5 | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1290 | 24      | 8 |
| 3SIEL 315M4C             | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1320 | 24      | 8 |
| 3SIEL 315M6C             | 508 | 406 | 457 | 216 | 80m6  | 170 | 22h9 | 85   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1320 | 24      | 8 |
| 3SIEL 315M6D             | 508 | 406 | 457 | 216 | 90m6  | 170 | 25h9 | 95   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1320 | 24      | 8 |
| 3SIEL 315M8C;8D          | 508 | 406 | 457 | 216 | 90m6  | 170 | 25h9 | 95   | 315 | 48 | 28 | 135 | 610 | 135 | 205 | 600  | 805 | 23   | 660 | 600 | 550j6 | 6 | 1385 | 24      | 8 |
| 3SIEL 355ML (2)          | 610 | 560 | 630 | 254 | 80m6  | 170 | 22h9 | 85   | 355 | 50 | 28 | 150 | 720 | 250 | 300 | 890  | 935 | 24   | 800 | 740 | 680j6 | 6 | 1580 | 22      | 8 |
| 3SIEL 355ML (4-8)        | 610 | 560 | 630 | 254 | 100m6 | 210 | 28h9 | 106  | 355 | 50 | 28 | 150 | 720 | 250 | 300 | 890  | 935 | 24   | 800 | 740 | 680j6 | 6 | 1620 | 22      | 8 |
| 3SIEL 355H (2)           | 610 | 900 | —   | 254 | 70m6  | 140 | 20h9 | 74,5 | 355 | 45 | 28 | 160 | 730 | 265 | 265 | 1045 | 995 | 24   | 800 | 740 | 680j6 | 6 | 1854 | 22      | 8 |
| 3SIEL 355H (4-8)         | 610 | 900 | —   | 254 | 100m6 | 210 | 28h9 | 106  | 355 | 45 | 28 | 160 | 730 | 265 | 265 | 1045 | 995 | 24   | 800 | 740 | 680j6 | 6 | 1924 | 22      | 8 |

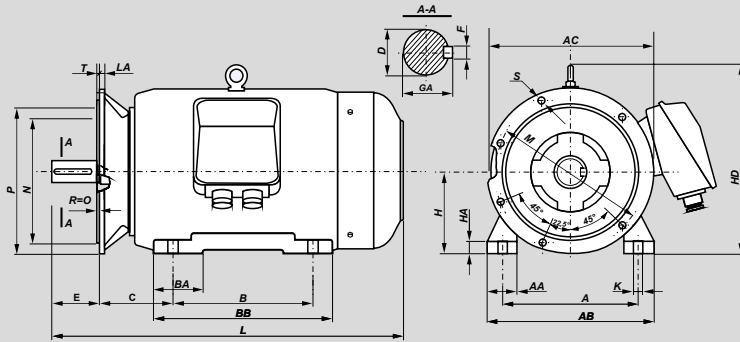
## Dimensions of Foot / Flange Mounted Motors – IM B35

Motors series Sh and Sg • 2p=10, 12

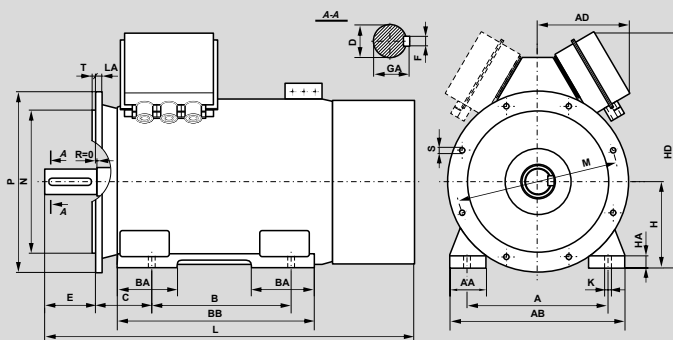


| Motor type  | A   | B   | C   | D    | E   | F    | GA   | H   | HA | K  | AA | AB  | BB  | HD  | L   | LA | M   | N     | P   | T   | S  |
|-------------|-----|-----|-----|------|-----|------|------|-----|----|----|----|-----|-----|-----|-----|----|-----|-------|-----|-----|----|
| SLh90S-10   | 140 | 100 | 56  | 24k6 | 50  | 8h9  | 27   | 90  | 10 | 10 | 50 | 170 | 153 | 220 | 305 | 8  | 165 | 130j6 | 200 | 3,5 | 12 |
| SLh90L-10   | 140 | 125 | 56  | 24k6 | 50  | 8h9  | 27   | 90  | 10 | 10 | 45 | 200 | 153 | 220 | 330 | 8  | 165 | 130j6 | 200 | 3,5 | 12 |
| SLg100L-10A | 160 | 140 | 63  | 28k6 | 60  | 8h9  | 31   | 100 | 14 | 12 | 54 | 230 | 172 | 240 | 376 | 11 | 215 | 180j6 | 250 | 4   | 15 |
| SLg100L-10B | 160 | 140 | 63  | 28k6 | 60  | 8h9  | 31   | 100 | 14 | 12 | 54 | 230 | 172 | 240 | 376 | 11 | 215 | 180j6 | 250 | 4   | 15 |
| SLg112M-10  | 190 | 140 | 70  | 28k6 | 60  | 8h9  | 31   | 112 | 14 | 12 | 56 | 278 | 174 | 276 | 384 | 12 | 215 | 180j6 | 250 | 4   | 15 |
| SLg112M-10A | 190 | 140 | 70  | 28k6 | 60  | 8h9  | 31   | 112 | 14 | 12 | 56 | 278 | 174 | 276 | 384 | 12 | 215 | 180j6 | 250 | 4   | 15 |
| SLg132S-10  | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 182 | 310 | 463 | 12 | 265 | 230j6 | 300 | 4   | 15 |
| SLg132S-10A | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 182 | 310 | 463 | 12 | 265 | 230j6 | 300 | 4   | 15 |
| SLg132S-10B | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 220 | 310 | 463 | 12 | 265 | 230j6 | 300 | 4   | 15 |
| SLg160L-10  | 254 | 254 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 20 | 15 | 60 | 305 | 300 | 370 | 656 | 13 | 300 | 250j6 | 350 | 5   | 19 |
| SLg180L-10  | 279 | 279 | 121 | 48k6 | 110 | 14h9 | 51,5 | 180 | 26 | 19 | 70 | 350 | 320 | 408 | 705 | 13 | 300 | 250j6 | 350 | 5   | 19 |
| SLg100L-12  | 160 | 140 | 63  | 28k6 | 60  | 8h9  | 31   | 100 | 14 | 12 | 54 | 230 | 172 | 240 | 376 | 11 | 215 | 180j6 | 250 | 4   | 15 |
| SLg112M-12  | 190 | 140 | 70  | 28k6 | 60  | 8h9  | 31   | 112 | 14 | 12 | 56 | 278 | 174 | 276 | 384 | 12 | 215 | 180j6 | 250 | 4   | 15 |
| SLg132S-12  | 216 | 140 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 182 | 310 | 463 | 12 | 265 | 230j6 | 300 | 4   | 15 |
| SLg132M-12  | 216 | 178 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 220 | 310 | 501 | 12 | 265 | 230j6 | 300 | 4   | 15 |
| SLg132M-12B | 216 | 178 | 89  | 38k6 | 80  | 10h9 | 41   | 132 | 16 | 12 | 56 | 278 | 220 | 310 | 501 | 12 | 265 | 230j6 | 300 | 4   | 15 |
| SLg160M-12  | 254 | 210 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 20 | 15 | 60 | 305 | 256 | 370 | 612 | 13 | 300 | 250j6 | 350 | 5   | 19 |
| SLg160L-12  | 254 | 254 | 108 | 42k6 | 110 | 12h9 | 45   | 160 | 20 | 15 | 60 | 305 | 300 | 370 | 656 | 13 | 300 | 250j6 | 350 | 5   | 19 |
| SLg180L-12  | 279 | 279 | 121 | 48k6 | 110 | 14h9 | 51,5 | 180 | 26 | 19 | 70 | 350 | 320 | 408 | 705 | 13 | 300 | 250j6 | 350 | 5   | 19 |

# Dimensions of Foot / Flange Mounted Motors – IM B35



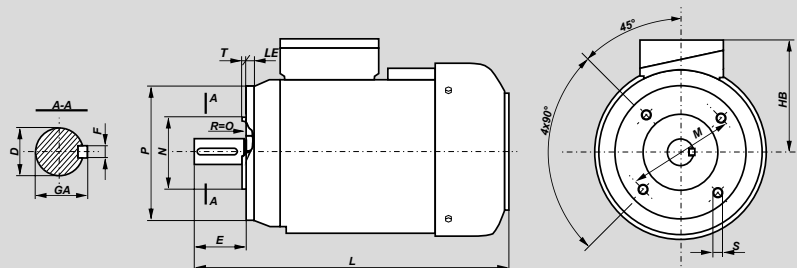
| Motor type      | A   | B   | C   | D    | E   | F    | GA   | H   | HA | K  | AA  | AB  | AC  | BA  | BB  | HD  | L    | LA   | M   | N     | P   | T | S  | Ø Holes |
|-----------------|-----|-----|-----|------|-----|------|------|-----|----|----|-----|-----|-----|-----|-----|-----|------|------|-----|-------|-----|---|----|---------|
| 2SLg 200 L10-12 | 318 | 305 | 133 | 55m6 | 110 | 16h9 | 59   | 200 | 32 | 19 | 80  | 400 | 450 | 100 | 380 | 485 | 825  | 16,5 | 350 | 300j6 | 400 | 5 | 18 | 4       |
| 2SLg 225 S10-12 | 356 | 286 | 149 | 60m6 | 140 | 18h9 | 64   | 225 | 34 | 19 | 85  | 445 | 505 | 110 | 355 | 535 | 865  | 18   | 400 | 350j6 | 450 | 5 | 18 | 8       |
| 2SLg 225 M10-12 | 356 | 311 | 149 | 60m6 | 140 | 18h9 | 64   | 225 | 34 | 19 | 85  | 445 | 505 | 110 | 380 | 535 | 890  | 18   | 400 | 350j6 | 450 | 5 | 18 | 8       |
| 2SLg 250 M10-12 | 406 | 349 | 168 | 65m6 | 140 | 18h9 | 69   | 250 | 36 | 24 | 90  | 495 | 540 | 120 | 420 | 590 | 965  | 19   | 500 | 450j6 | 550 | 5 | 18 | 8       |
| 2SLg 280 S10-12 | 457 | 368 | 190 | 75m6 | 140 | 20h9 | 79,5 | 280 | 40 | 24 | 100 | 560 | 620 | 165 | 520 | 660 | 1040 | 20   | 500 | 450j6 | 550 | 5 | 18 | 8       |
| 2SLg 280 M10-12 | 457 | 419 | 190 | 75m6 | 140 | 20h9 | 79,5 | 280 | 40 | 24 | 100 | 560 | 620 | 165 | 520 | 660 | 1040 | 20   | 500 | 450j6 | 550 | 5 | 18 | 8       |
| 2SLg 315 S10-12 | 508 | 406 | 216 | 80m6 | 170 | 22h9 | 85   | 315 | 46 | 28 | 105 | 610 | 620 | 190 | 560 | 695 | 1210 | 22   | 600 | 550j6 | 660 | 6 | 22 | 8       |
| 2SLg 315 M10-12 | 508 | 457 | 216 | 80m6 | 170 | 22h9 | 85   | 315 | 46 | 28 | 105 | 610 | 620 | 190 | 560 | 695 | 1210 | 22   | 600 | 550j6 | 660 | 6 | 22 | 8       |



| Motor type        | Poles | A   | B    | C   | D     | E   | F    | GA   | H   | HA | K  | AA  | AB   | AD  | BA  | BB   | HD   | L    | LA | M    | N      | P    | S  | T |
|-------------------|-------|-----|------|-----|-------|-----|------|------|-----|----|----|-----|------|-----|-----|------|------|------|----|------|--------|------|----|---|
| 3SIEL 355...s     | 2     | 610 | 900  | 254 | 70m6  | 140 | 20h9 | 74.5 | 355 | 45 | 28 | 160 | 730  | 344 | 265 | 1045 | 995  | 1854 | 24 | 740  | 680j6  | 800  | 22 | 6 |
| 3SIEL 355...s     | 4÷8   | 610 | 900  | 254 | 100m6 | 210 | 28h9 | 106  | 355 | 45 | 28 | 160 | 730  | 344 | 265 | 1045 | 995  | 1924 | 24 | 740  | 680j6  | 800  | 22 | 6 |
| 3SIEL 400...s     | 2     | 686 | 1000 | 280 | 80m6  | 170 | 22h9 | 85   | 400 | 50 | 35 | 175 | 840  | 520 | 265 | 1160 | 1255 | 2031 | 30 | 940  | 880j6  | 1000 | 25 | 6 |
| 3SIEL/SLh 400...s | 4÷10  | 686 | 1000 | 280 | 110m6 | 210 | 28h9 | 116  | 400 | 50 | 35 | 175 | 840  | 520 | 265 | 1160 | 1255 | 2016 | 30 | 940  | 880j6  | 1000 | 25 | 6 |
| 3SIEL 450...s     | 2     | 750 | 1120 | 315 | 80m6  | 170 | 22h9 | 85   | 450 | 60 | 35 | 205 | 940  | 560 | 340 | 1320 | 1356 | 2162 | 30 | 1080 | 1000j6 | 1150 | 28 | 6 |
| 3SIEL/SLh 450...s | 4÷12  | 750 | 1120 | 315 | 110m6 | 210 | 28h9 | 116  | 450 | 60 | 35 | 205 | 940  | 560 | 340 | 1320 | 1356 | 2162 | 30 | 1080 | 1000j6 | 1150 | 28 | 6 |
| 3SIEL/SLh 500...s | 4÷12  | 850 | 1250 | 355 | 120m6 | 210 | 32h9 | 127  | 500 | 70 | 42 | 223 | 1050 | 560 | 300 | 1450 | 1470 | 2505 | 30 | 1080 | 1000j6 | 1150 | 28 | 6 |



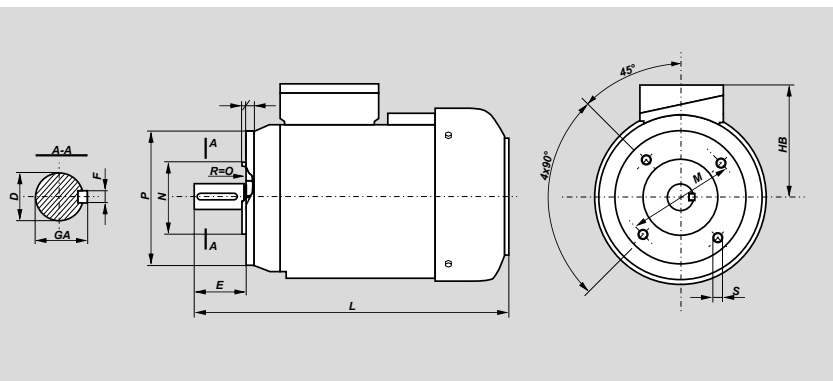
## Dimensions of Flange Mounted Motors – IM B14



| Motor type                 | Flange | D    | E  | F   | GA   | M   | N     | P   | S  | T   | LE   | HB  | L   |
|----------------------------|--------|------|----|-----|------|-----|-------|-----|----|-----|------|-----|-----|
| SKh 56- .A1                | B14/C1 | 9j6  | 20 | 3h9 | 10,2 | 85  | 70j6  | 105 | M6 | 2,5 | 15   | 98  | 183 |
| SKh 56- .A2                | B14/C2 | 9j6  | 20 | 3h9 | 10,2 | 65  | 50j6  | 80  | M5 | 2,5 | 12,5 | 98  | 183 |
| 2SIEK56-2B1                | B14/C1 | 9j6  | 20 | 3h9 | 10,2 | 85  | 70j6  | 105 | M6 | 2,5 | 15   | 98  | 193 |
| 2SIEK56-2B2                | B14/C2 | 9j6  | 20 | 3h9 | 10,2 | 65  | 50j6  | 80  | M5 | 2,5 | 12,5 | 98  | 193 |
| 2SIEK63-.A1                | B14/C1 | 11j6 | 23 | 4h9 | 12,5 | 100 | 80j6  | 120 | M6 | 3   | 14   | 102 | 200 |
| 2SIEK63-.A2                | B14/C2 | 11j6 | 23 | 4h9 | 12,5 | 75  | 60j6  | 90  | M5 | 2,5 | 9,5  | 102 | 200 |
| 2SIEK63-2,4B1              | B14/C1 | 11j6 | 23 | 4h9 | 12,5 | 100 | 80j6  | 120 | M6 | 3   | 14   | 102 | 210 |
| 2SIEK63-2,4B2              | B14/C2 | 11j6 | 23 | 4h9 | 12,5 | 75  | 60j6  | 90  | M5 | 2,5 | 9,5  | 102 | 210 |
| 2SIEK63-6B1                | B14/C1 | 11j6 | 23 | 4h9 | 12,5 | 100 | 80j6  | 120 | M6 | 3   | 14   | 102 | 245 |
| 2SIEK63-6B2                | B14/C2 | 11j6 | 23 | 4h9 | 12,5 | 75  | 60j6  | 90  | M5 | 2,5 | 9,5  | 102 | 245 |
| 2SIEK71-2,4A1              | B14/C1 | 14j6 | 30 | 5h9 | 16   | 115 | 95j6  | 140 | M8 | 3   | 14   | 111 | 245 |
| 2SIEK71-2,4A2              | B14/C2 | 14j6 | 30 | 5h9 | 16   | 85  | 70j6  | 105 | M6 | 2,5 | 12   | 111 | 245 |
| 2SIEK71-2B1                | B14/C1 | 14j6 | 30 | 5h9 | 16   | 115 | 95j6  | 140 | M8 | 3   | 14   | 111 | 245 |
| 2SIEK71-2B2                | B14/C2 | 14j6 | 30 | 5h9 | 16   | 85  | 70j6  | 105 | M6 | 2,5 | 12   | 111 | 245 |
| 2SIEK71-4,6B1              | B14/C1 | 14j6 | 30 | 5h9 | 16   | 115 | 95j6  | 140 | M8 | 3   | 14   | 111 | 263 |
| 2SIEK71-4,6B2              | B14/C2 | 14j6 | 30 | 5h9 | 16   | 85  | 70j6  | 105 | M6 | 2,5 | 12   | 111 | 263 |
| 2SIEK71-6A1                | B14/C1 | 14j6 | 30 | 5h9 | 16   | 115 | 95j6  | 140 | M8 | 3   | 14   | 111 | 223 |
| 2SIEK71-6A2                | B14/C2 | 14j6 | 30 | 5h9 | 16   | 85  | 70j6  | 105 | M6 | 2,5 | 12   | 111 | 223 |
| 2SIEK71-8B1                | B14/C1 | 14j6 | 30 | 5h9 | 16   | 115 | 95j6  | 140 | M8 | 3   | 14   | 111 | 284 |
| 2SIEK71-8B2                | B14/C2 | 14j6 | 30 | 5h9 | 16   | 85  | 70j6  | 105 | M6 | 2,5 | 12   | 111 | 284 |
| 2SIEK80-4A1                | B14/C1 | 19j6 | 40 | 6h9 | 21,5 | 130 | 110j6 | 160 | M8 | 3,5 | 14   | 120 | 266 |
| 2SIEK80-4A2                | B14/C2 | 19j6 | 40 | 6h9 | 21,5 | 100 | 80j6  | 120 | M6 | 3   | 12   | 120 | 266 |
| 2SIEK80-6A1                | B14/C1 | 19j6 | 40 | 6h9 | 21,5 | 130 | 110j6 | 160 | M8 | 3,5 | 14   | 120 | 278 |
| 2SIEK80-6A2                | B14/C2 | 19j6 | 40 | 6h9 | 21,5 | 100 | 80j6  | 120 | M6 | 3   | 12   | 120 | 278 |
| 2SIEK80-6B1                | B14/C1 | 19j6 | 40 | 6h9 | 21,5 | 130 | 110j6 | 160 | M8 | 3,5 | 14   | 120 | 306 |
| 2SIEK80-6B2                | B14/C2 | 19j6 | 40 | 6h9 | 21,5 | 100 | 80j6  | 120 | M6 | 3   | 12   | 120 | 306 |
| 2SIEK80-8A1                | B14/C1 | 19j6 | 40 | 6h9 | 21,5 | 130 | 110j6 | 160 | M8 | 3,5 | 14   | 120 | 306 |
| 2SIEK80-8A2                | B14/C2 | 19j6 | 40 | 6h9 | 21,5 | 100 | 80j6  | 120 | M6 | 3   | 12   | 120 | 306 |
| 2SIEK80-8B1                | B14/C1 | 19j6 | 40 | 6h9 | 21,5 | 130 | 110j6 | 160 | M8 | 3,5 | 14   | 120 | 316 |
| 2SIEK80-8B2                | B14/C2 | 19j6 | 40 | 6h9 | 21,5 | 100 | 80j6  | 120 | M6 | 3   | 12   | 120 | 316 |
| 3SIEK 80- .A1              | B14/C1 | 19j6 | 40 | 6h9 | 21,5 | 130 | 110j6 | 160 | M8 | 3,5 | 14   | 119 | 278 |
| 3SIEK 80- .A2              | B14/C2 | 19j6 | 40 | 6h9 | 21,5 | 100 | 80j6  | 120 | M6 | 3   | 12   | 119 | 306 |
| 3SIEK 80- .B1              | B14/C1 | 19j6 | 40 | 6h9 | 21,5 | 130 | 110j6 | 160 | M8 | 3,5 | 14   | 119 | 278 |
| 3SIEK 80- .B2              | B14/C2 | 19j6 | 40 | 6h9 | 21,5 | 100 | 80j6  | 120 | M6 | 3   | 12   | 119 | 306 |
| 2,3SIEK 90S 2, 4, 6, L2, 8 | B14/C1 | 24j6 | 50 | 8h9 | 27   | 130 | 110j6 | 160 | M8 | 3,5 | 10   | 148 | 331 |
| 2,3SIEK 90S 2, 4, 6, L2    | B14/C2 | 24j6 | 50 | 8h9 | 27   | 115 | 95j6  | 140 | M8 | 3   | 10   | 148 | 331 |



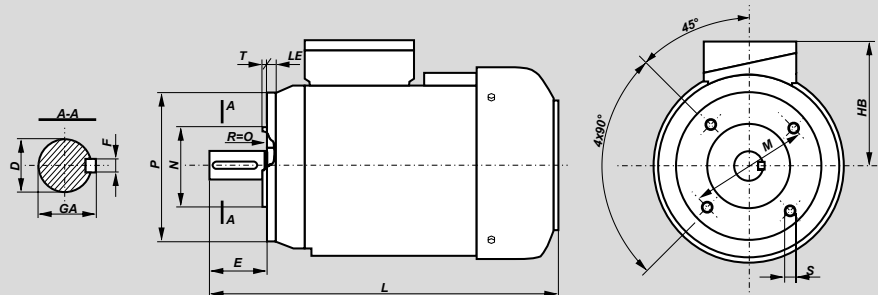
# Dimensions of Flange Mounted Motors – IM B14



| Motor type            | Flange | D    | E   | F    | GA | M   | N     | P   | S   | T   | LE | HB  | L   |
|-----------------------|--------|------|-----|------|----|-----|-------|-----|-----|-----|----|-----|-----|
| 3SIEK 90L 4, 6        | B14/C1 | 24j6 | 50  | 8h9  | 27 | 130 | 110j6 | 160 | M8  | 3,5 | 10 | 148 | 356 |
| 3SIEK 90L 4, 6        | B14/C2 | 24j6 | 50  | 8h9  | 27 | 115 | 95j6  | 140 | M8  | 3   | 10 | 148 | 356 |
| 3SIEK 100L 2, 6, 8A   | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | 157 | 377 |
| 3SIEK 100L 2, 6       | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | 157 | 377 |
| 3SIEK 100L 4A, 4B, 8B | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | 157 | 417 |
| 3SIEK 100L 4A, 4B     | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | 157 | 417 |
| 3SIEK 112M 2, 6, 8    | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | 168 | 398 |
| 3SIEK 112M 2, 6       | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | 168 | 398 |
| 3SIEK 112M 4          | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | 168 | 425 |
| 3SIEK 112M 4          | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | 168 | 425 |
| 3SIEK 132S, M         | B14/C1 | 38k6 | 80  | 10h9 | 41 | 215 | 180j6 | 250 | M12 | 4   | 12 | 197 | 512 |
| 3SIEK 132S, M         | B14/C2 | 38k6 | 80  | 10h9 | 41 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | 197 | 512 |
| 3SIEK 160M, L         | B14/C1 | 42k6 | 110 | 12h9 | 45 | 265 | 230j6 | 300 | M12 | 4   | 13 | 223 | 643 |
| 3SIEK 160M, L         | B14/C2 | 42k6 | 110 | 12h9 | 45 | 215 | 180j6 | 250 | M12 | 4   | 13 | 223 | 643 |

# Dimensions of Flange Mounted Motors – IM B14

Motors series Sh and Sg • 2p=10, 12

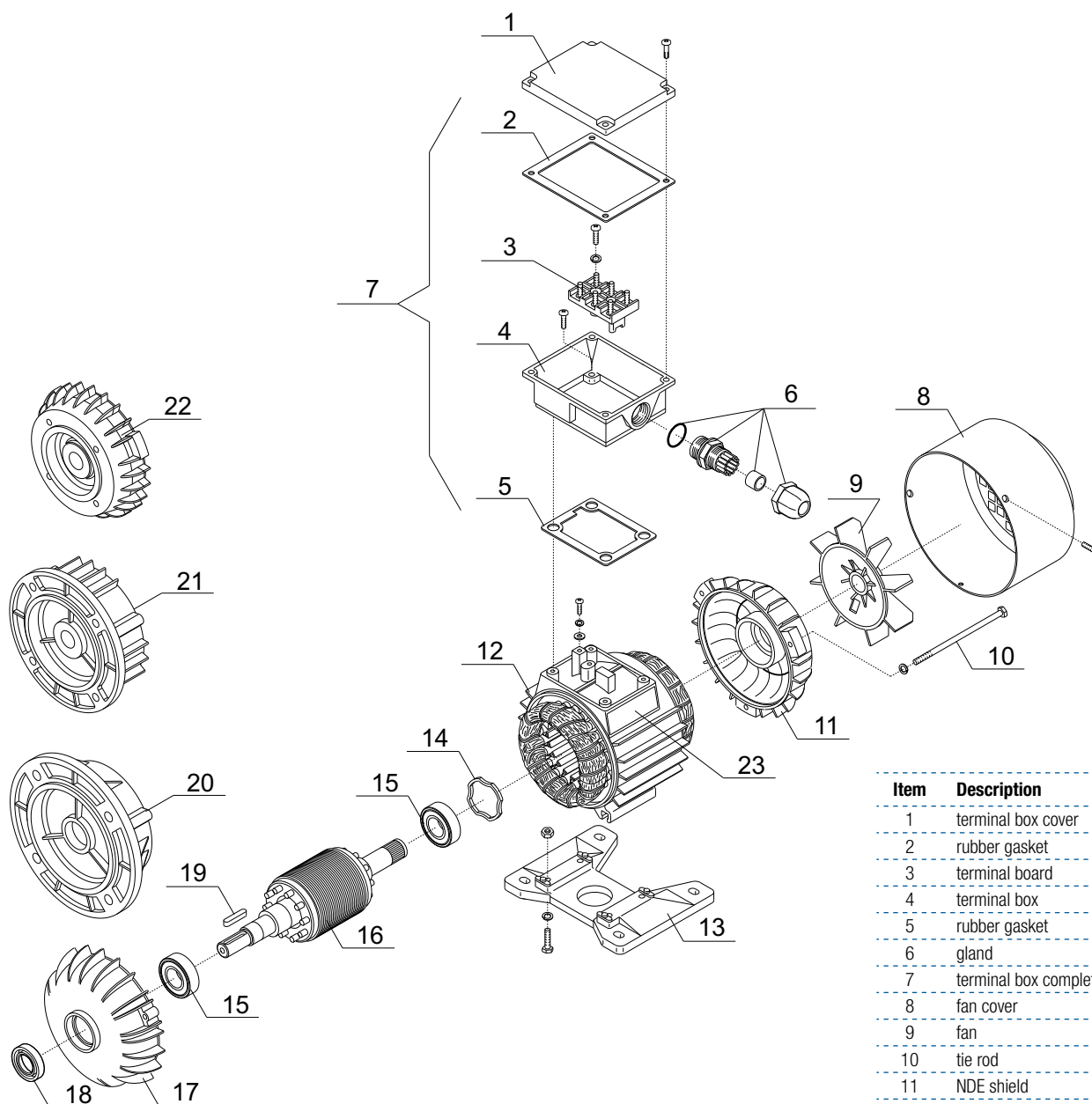


| Motor type  | Flange | D    | E   | F    | GA | M   | N     | P   | S   | T   | LE | HB | L   |
|-------------|--------|------|-----|------|----|-----|-------|-----|-----|-----|----|----|-----|
| SKh90S-10   | B14/C1 | 24j6 | 50  | 8h9  | 27 | 130 | 110j6 | 160 | M8  | 3,5 | 10 | -  | 305 |
| SKh90S-10   | B14/C2 | 24j6 | 50  | 8h9  | 27 | 100 | 80j6  | 120 | M8  | 3   | 10 | -  | 305 |
| SKh90L-10   | B14/C1 | 24j6 | 50  | 8h9  | 27 | 130 | 110j6 | 160 | M8  | 3,5 | 10 | -  | 330 |
| SKh90L-10   | B14/C2 | 24j6 | 50  | 8h9  | 27 | 100 | 80j6  | 120 | M8  | 3   | 10 | -  | 330 |
| SKg100L-10A | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 376 |
| SKg100L-10A | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | -  | 376 |
| SKg100L-10B | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 376 |
| SKg100L-10B | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | -  | 376 |
| SKg112M-10  | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 384 |
| SKg112M-10  | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | -  | 384 |
| SKg112M-10A | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 384 |
| SKg112M-10A | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | -  | 384 |
| SKg132S-10  | B14/C1 | 38k6 | 80  | 10h9 | 41 | 215 | 180j6 | 250 | M12 | 4   | 12 | -  | 463 |
| SKg132S-10  | B14/C2 | 38k6 | 80  | 10h9 | 41 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 463 |
| SKg132S-10A | B14/C1 | 38k6 | 80  | 10h9 | 41 | 215 | 180j6 | 250 | M12 | 4   | 12 | -  | 463 |
| SKg132S-10A | B14/C2 | 38k6 | 80  | 10h9 | 41 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 463 |
| SKg132S-10B | B14/C1 | 38k6 | 80  | 10h9 | 41 | 215 | 180j6 | 250 | M12 | 4   | 12 | -  | 463 |
| SKg132S-10B | B14/C2 | 38k6 | 80  | 10h9 | 41 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 463 |
| SKg160L-10  | B14/C1 | 42k6 | 110 | 12h9 | 45 | 265 | 230j6 | 300 | M12 | 4   | 13 | -  | 656 |
| SKg160L-10  | B14/C2 | 42k6 | 110 | 12h9 | 45 | 215 | 180j6 | 250 | M12 | 4   | 20 | -  | 656 |
| SKg100L-12  | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 376 |
| SKg100L-12  | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | -  | 376 |
| SKg112M-12  | B14/C1 | 28j6 | 60  | 8h9  | 31 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 384 |
| SKg112M-12  | B14/C2 | 28j6 | 60  | 8h9  | 31 | 130 | 110j6 | 160 | M8  | 3,5 | 12 | -  | 384 |
| SKg132S-12  | B14/C1 | 38k6 | 80  | 10h9 | 41 | 215 | 180j6 | 250 | M12 | 4   | 12 | -  | 463 |
| SKg132S-12  | B14/C2 | 38k6 | 80  | 10h9 | 41 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 463 |
| SKg132M-12  | B14/C1 | 38k6 | 80  | 10h9 | 41 | 215 | 180j6 | 250 | M12 | 4   | 12 | -  | 501 |
| SKg132M-12  | B14/C2 | 38k6 | 80  | 10h9 | 41 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 501 |
| SKg132M-12B | B14/C1 | 38k6 | 80  | 10h9 | 41 | 215 | 180j6 | 250 | M12 | 4   | 12 | -  | 463 |
| SKg132M-12B | B14/C2 | 38k6 | 80  | 10h9 | 41 | 165 | 130j6 | 200 | M10 | 3,5 | 12 | -  | 463 |
| SKg160M-12  | B14/C1 | 42k6 | 110 | 12h9 | 45 | 265 | 230j6 | 300 | M12 | 4   | 13 | -  | 612 |
| SKg160M-12  | B14/C2 | 42k6 | 110 | 12h9 | 45 | 215 | 180j6 | 250 | M12 | 4   | 20 | -  | 612 |
| SKg160L-12  | B14/C1 | 42k6 | 110 | 12h9 | 45 | 265 | 230j6 | 300 | M12 | 4   | 13 | -  | 656 |
| SKg160L-12  | B14/C2 | 42k6 | 110 | 12h9 | 45 | 215 | 180j6 | 250 | M12 | 4   | 20 | -  | 656 |

# List of Motor parts

**Frame Size: 56÷80**

**Motor series 2,3SIE and Sh**



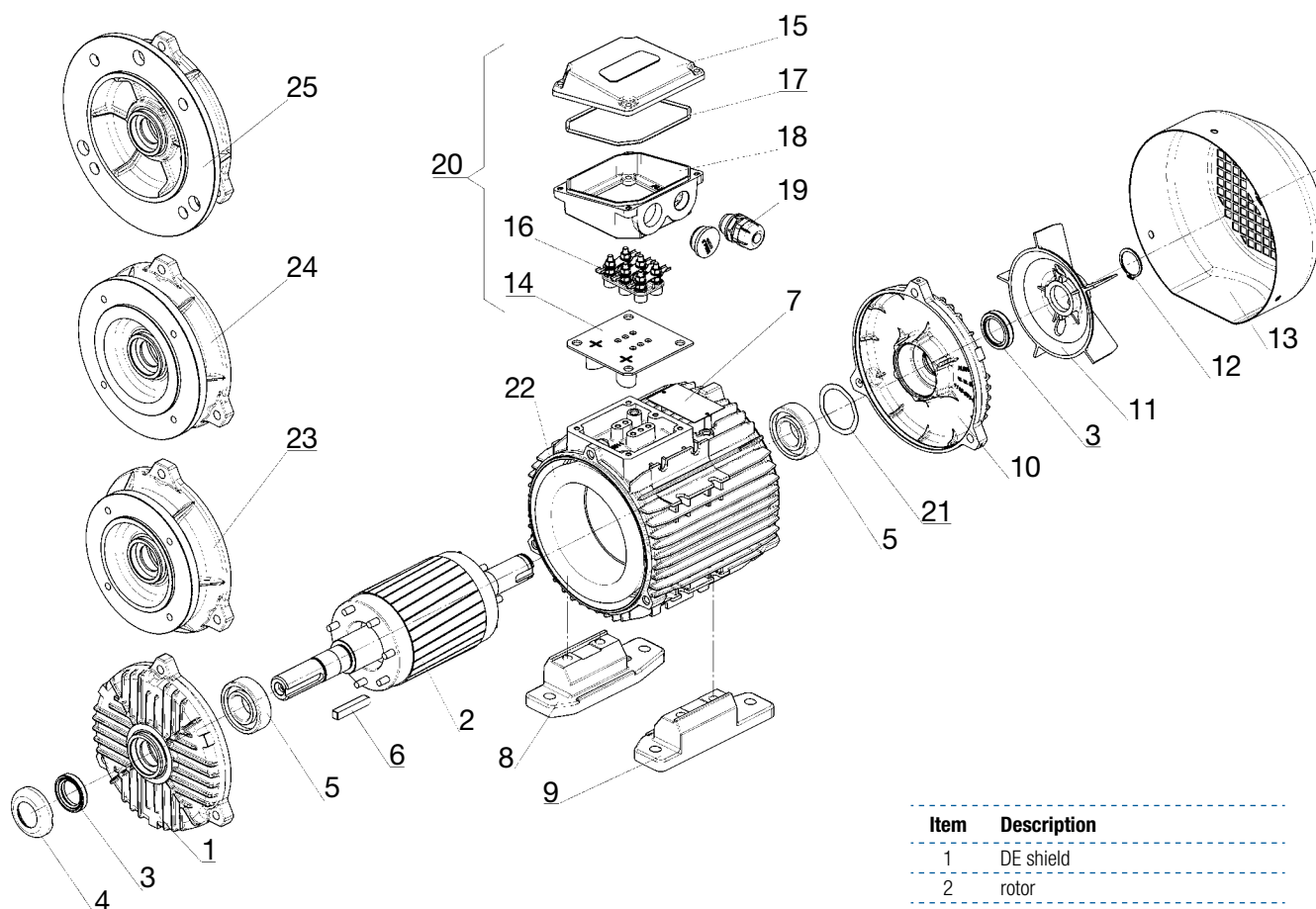
DE – drive end

NDE – non drive end

| Item | Description           |
|------|-----------------------|
| 1    | terminal box cover    |
| 2    | rubber gasket         |
| 3    | terminal board        |
| 4    | terminal box          |
| 5    | rubber gasket         |
| 6    | gland                 |
| 7    | terminal box complete |
| 8    | fan cover             |
| 9    | fan                   |
| 10   | tie rod               |
| 11   | NDE shield            |
| 12   | stator                |
| 13   | foot                  |
| 14   | spring washer         |
| 15   | bearing               |
| 16   | rotor                 |
| 17   | DE shield             |
| 18   | shaft seal            |
| 19   | key                   |
| 20   | flange B5             |
| 21   | flange B14/C1         |
| 22   | flange B14/C2         |
| 23   | name plate            |

## List of Motor parts

**Frame Size: 90÷112**  
**Motor series 3SIE**



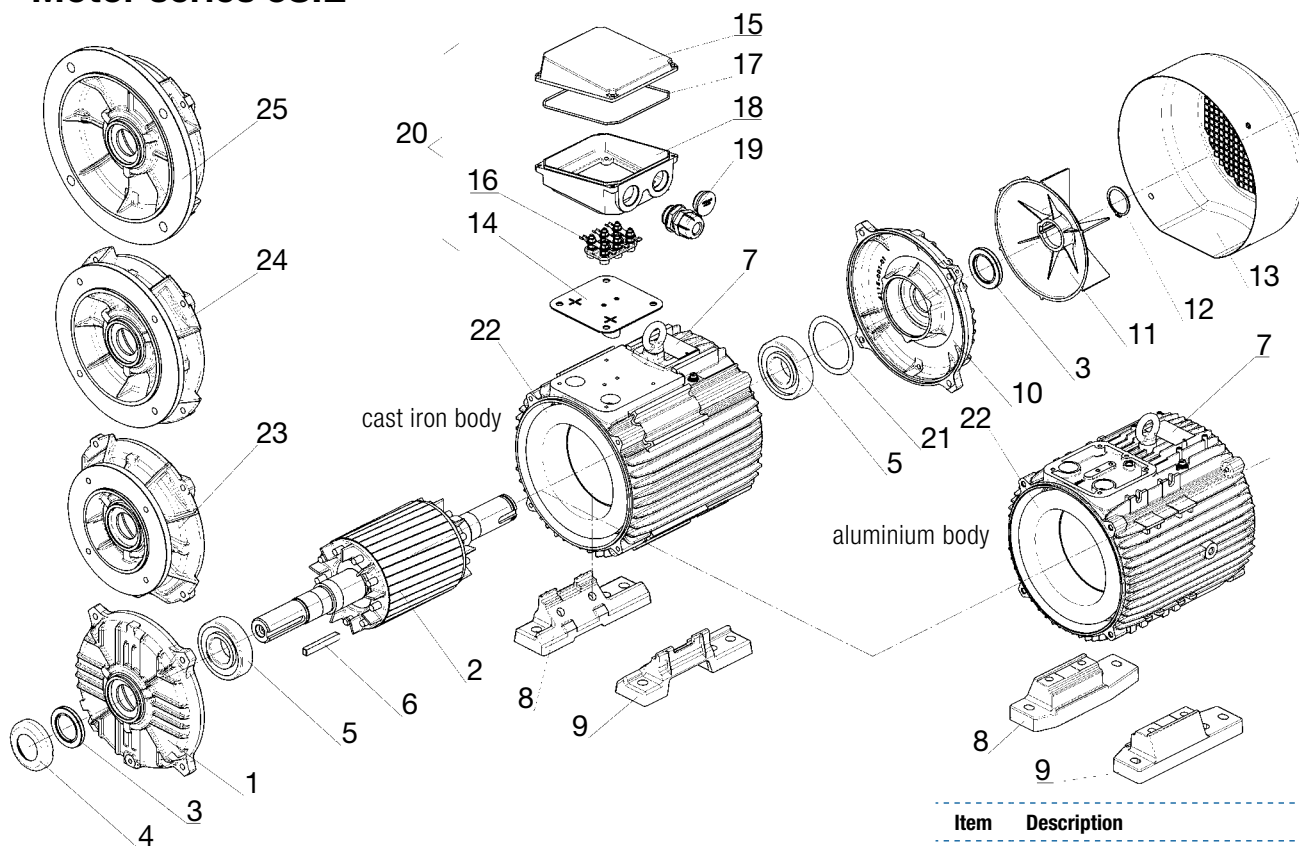
| Item | Description           |
|------|-----------------------|
| 1    | DE shield             |
| 2    | rotor                 |
| 3    | shaft seal            |
| 4    | shaft seal cover      |
| 5    | bearing               |
| 6    | key                   |
| 7    | name plate            |
| 8    | sx foot               |
| 9    | dx foot               |
| 10   | NDE shield            |
| 11   | fan                   |
| 12   | seeger ring           |
| 13   | fan cover             |
| 14   | rubber gasket         |
| 15   | terminal box cover    |
| 16   | terminal board        |
| 17   | rubber gasket         |
| 18   | terminal box          |
| 19   | gland                 |
| 20   | terminal box complete |
| 21   | spring washer         |
| 22   | stator                |
| 23   | flange B14/C2         |
| 24   | flange B14/C1         |
| 25   | flange B5             |

DE – drive end

NDE – non drive end

# List of Motor parts

**Frame Size: 132÷180**  
**Motor series 3SIE**



| Item            | Description           |
|-----------------|-----------------------|
| 1               | DE shield             |
| 2               | rotor                 |
| 3               | shaft seal            |
| 4               | shaft seal cover      |
| 5               | bearing               |
| 6               | key                   |
| 7               | name plate            |
| 8 <sup>1</sup>  | sx foot               |
| 9 <sup>1</sup>  | dx foot               |
| 10              | NDE shield            |
| 11              | fan                   |
| 12              | seeger ring           |
| 13              | fan cover             |
| 14              | rubber gasket         |
| 15              | terminal box cover    |
| 16              | terminal board        |
| 17              | rubber gasket         |
| 18              | terminal box          |
| 19              | gland                 |
| 20              | terminal box complete |
| 21              | spring washer         |
| 22 <sup>2</sup> | stator                |
| 23              | flange B14/C2         |
| 24              | flange B14/C1         |
| 25              | flange B5             |

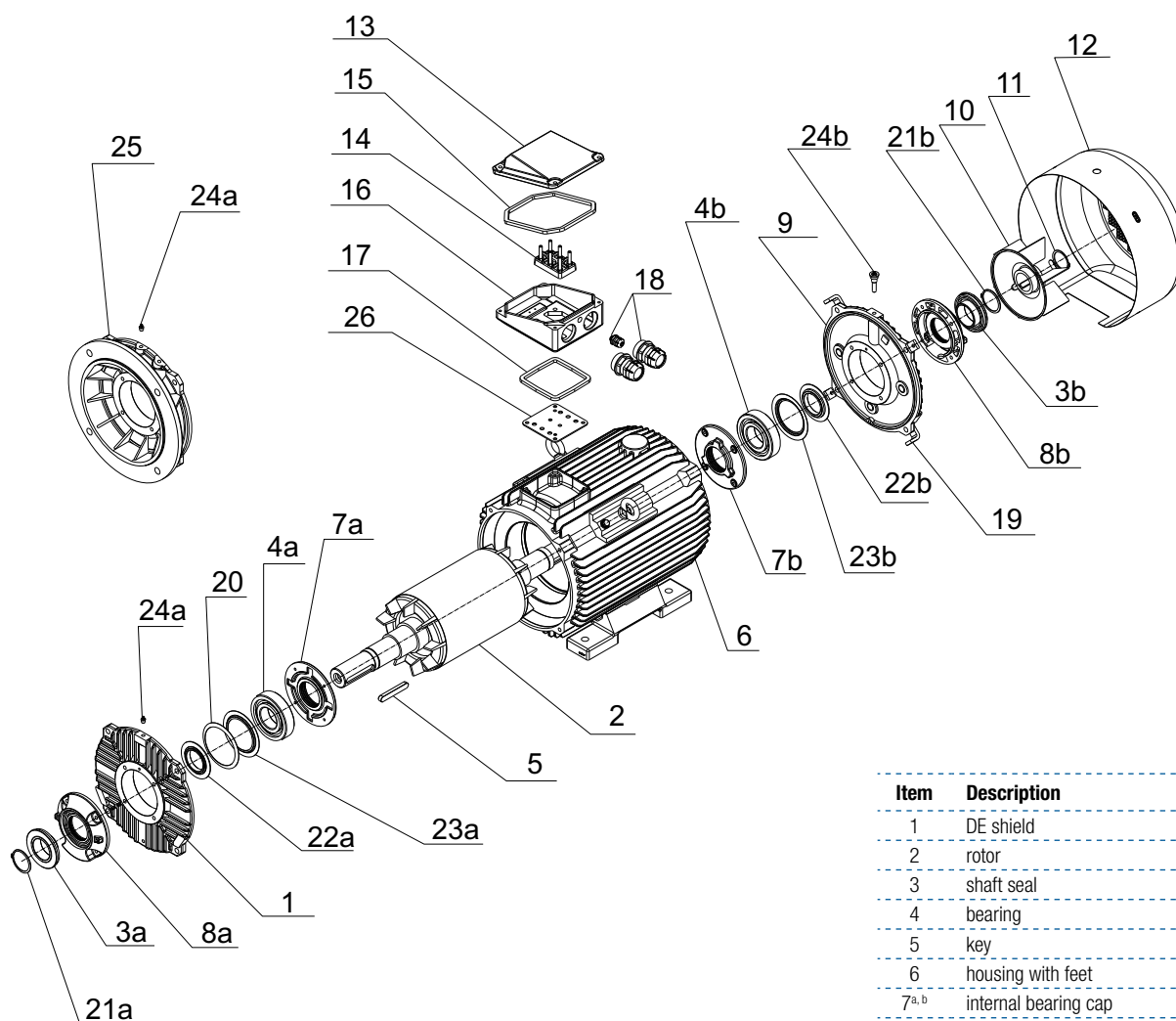
<sup>1</sup> – only for frame size 132 ÷ 180 feet can be screwed or integrated with the motor housing

<sup>2</sup> – for frame size 132 aluminium or cast iron body are possible

DE – drive end  
 NDE – non drive end

## List of Motor parts

**Frame Size: 200÷315**  
**Motor series 3SIE**



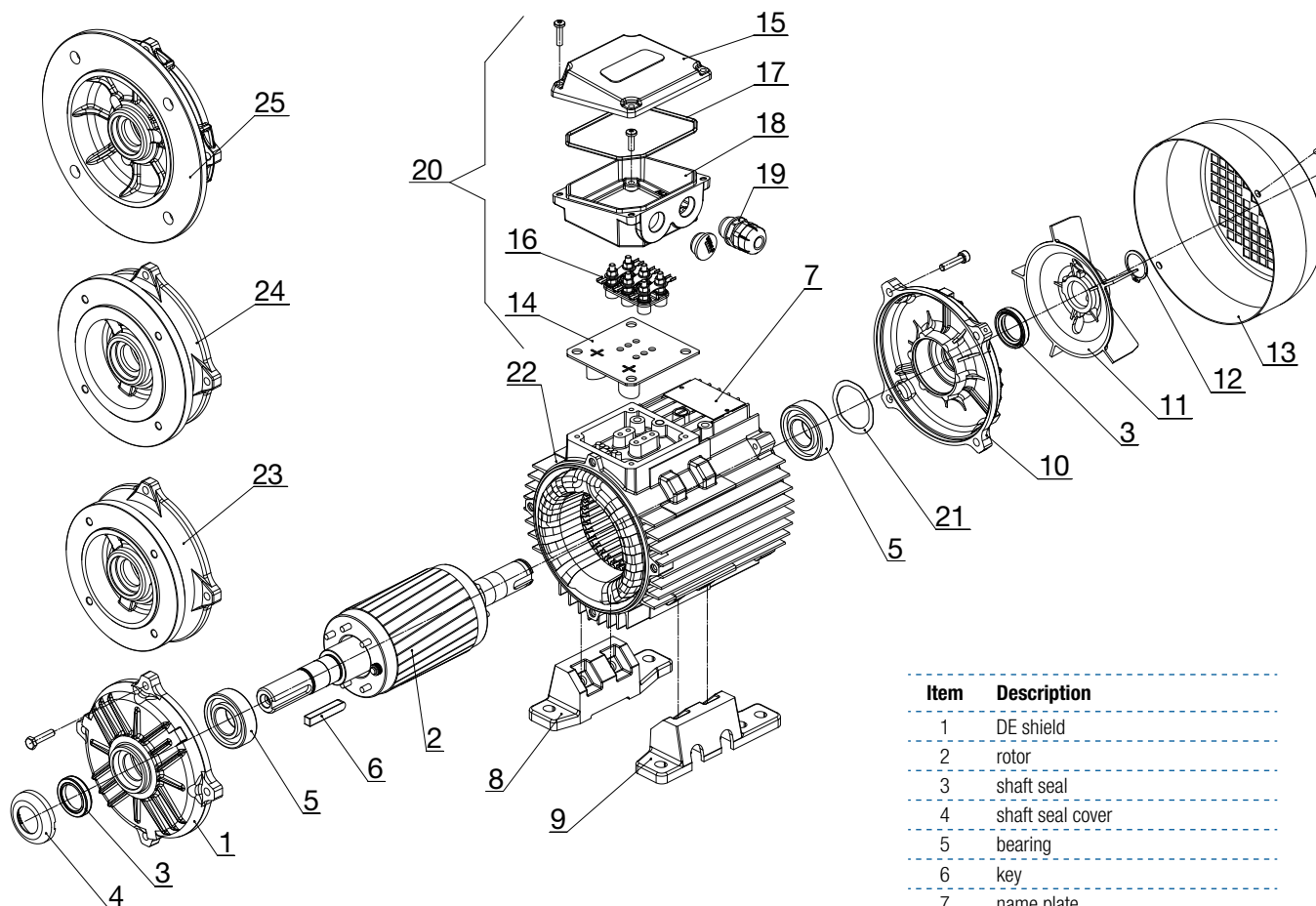
| Item              | Description           |
|-------------------|-----------------------|
| 1                 | DE shield             |
| 2                 | rotor                 |
| 3                 | shaft seal            |
| 4                 | bearing               |
| 5                 | key                   |
| 6                 | housing with feet     |
| 7 <sup>a,b</sup>  | internal bearing cap  |
| 8 <sup>a,b</sup>  | external bearing cap  |
| 9                 | NDE shield            |
| 10                | fan                   |
| 11                | seeger ring           |
| 12                | fan cover             |
| 13                | terminal box cover    |
| 14                | terminal board        |
| 15                | rubber gasket         |
| 16                | terminal box housing  |
| 17                | rubber gasket         |
| 18                | cable glands          |
| 19                | fan cover support     |
| 20                | spring washer         |
| 21 <sup>a,b</sup> | seeger ring           |
| 22 <sup>a,b</sup> | grease shield         |
| 23 <sup>a,b</sup> | bearing internal ring |
| 24 <sup>a,b</sup> | grease nipple         |
| 25                | flange B5             |
| 26                | rubber gasket         |

DE – drive end  
 NDE – non drive end

# List of Motor parts

**Frame Size: 90÷180**

**Motor series Sg and Sh (2p = 10÷12)**



| Item           | Description           |
|----------------|-----------------------|
| 1              | DE shield             |
| 2              | rotor                 |
| 3              | shaft seal            |
| 4              | shaft seal cover      |
| 5              | bearing               |
| 6              | key                   |
| 7              | name plate            |
| 8 <sup>1</sup> | sx foot               |
| 9 <sup>1</sup> | dx foot               |
| 10             | NDE shield            |
| 11             | fan                   |
| 12             | seeger ring           |
| 13             | fan cover             |
| 14             | rubber gasket         |
| 15             | terminal box cover    |
| 16             | terminal board        |
| 17             | rubber gasket         |
| 18             | terminal box          |
| 19             | glands                |
| 20             | terminal box complete |
| 21             | spring washer         |
| 22             | stator                |
| 23             | flange B14/C2         |
| 24             | flange B14/C1         |
| 25             | flange B5             |

<sup>1</sup> – for frame size 90-112 feet screwed,  
for frame size 132, 180 feet can be screwed  
or integrated with motor housing,  
for frame size 160 feet integrated

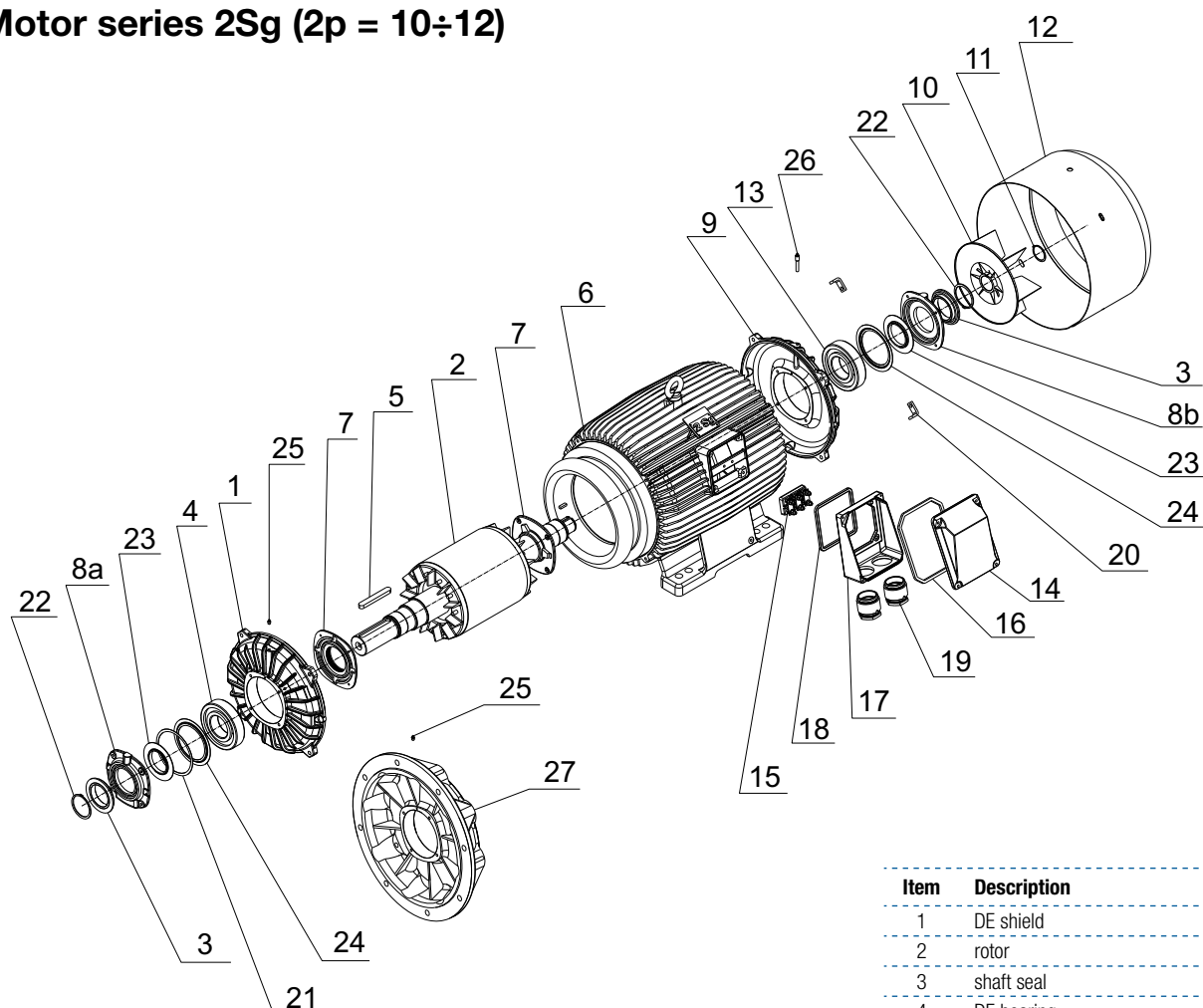
DE – drive end  
NDE – non drive end



## List of Motor parts

Frame Size: 200÷315

Motor series 2Sg (2p = 10÷12)



| Item             | Description            |
|------------------|------------------------|
| 1                | DE shield              |
| 2                | rotor                  |
| 3                | shaft seal             |
| 4                | DE bearing             |
| 5                | key                    |
| 6                | housing with feet      |
| 7                | internal bearing cap   |
| 8 <sup>a,b</sup> | external bearing cap   |
| 9                | NDE shield             |
| 10               | fan                    |
| 11               | seeger ring            |
| 12               | fan cover              |
| 13               | NDE bearing            |
| 14               | terminal box cover     |
| 15               | terminal cover support |
| 16               | rubber gasket          |
| 17               | terminal box housing   |
| 18               | rubber gasket          |
| 19               | cable gland            |
| 20               | fan cover support      |
| 21               | spring washer          |
| 22               | seeger ring            |
| 23 <sup>1</sup>  | grease shield          |
| 24 <sup>1</sup>  | bearing internal ring  |
| 25               | DE grease nipple       |
| 26               | NDE grease nipple      |
| 27               | flange B5              |

<sup>1</sup> – only for size 315

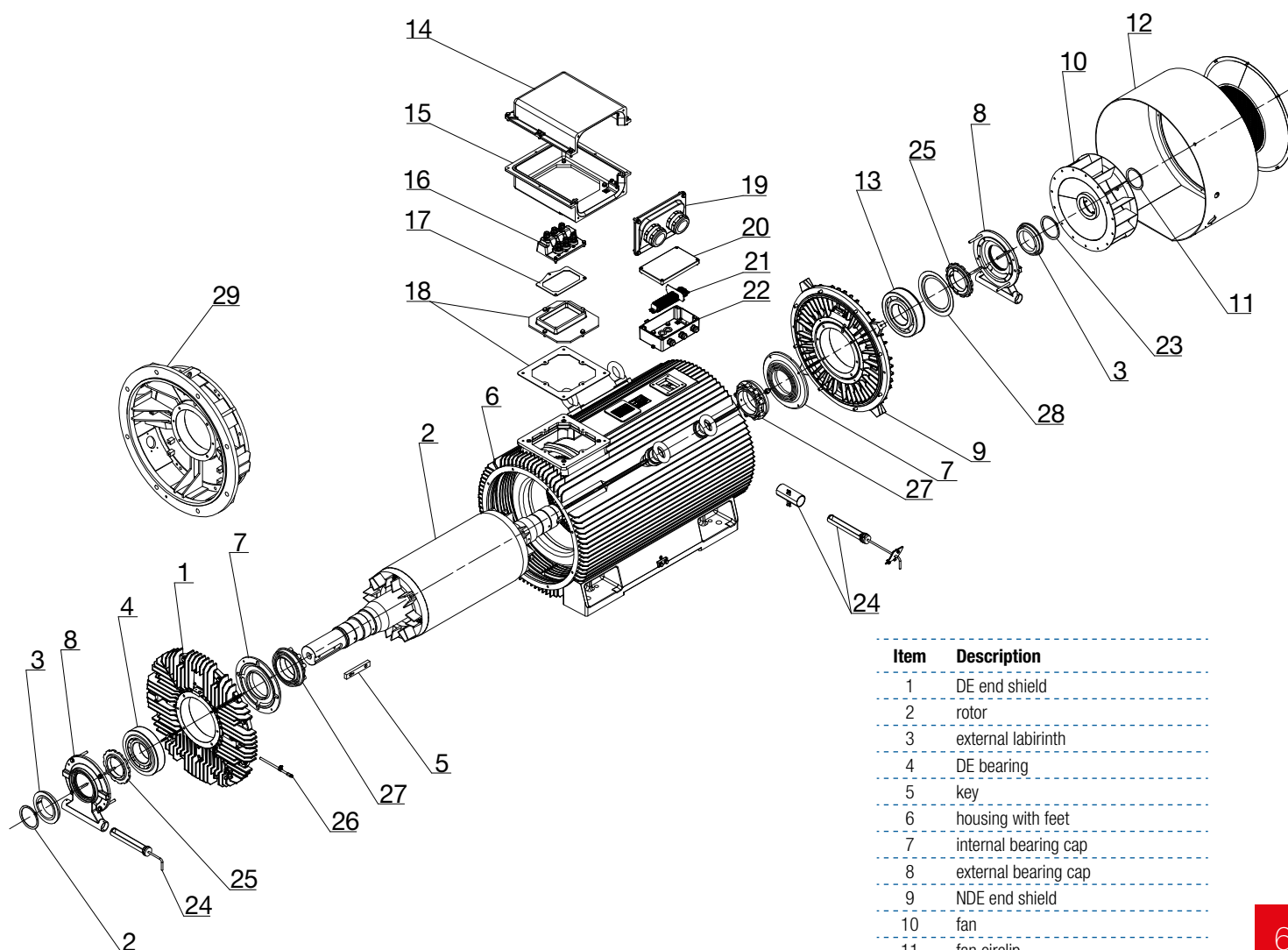
DE – drive end

NDE – non drive end

# List of Motor parts

**Frame Size: 355**

**Motor series Sh, 2-3SIE (2p = 2÷8)**



| Item | Description                    |
|------|--------------------------------|
| 1    | DE end shield                  |
| 2    | rotor                          |
| 3    | external labyrinth             |
| 4    | DE bearing                     |
| 5    | key                            |
| 6    | housing with feet              |
| 7    | internal bearing cap           |
| 8    | external bearing cap           |
| 9    | NDE end shield                 |
| 10   | fan                            |
| 11   | fan circlip                    |
| 12   | fan cover                      |
| 13   | NDE bearing                    |
| 14   | terminal box cover             |
| 15   | terminal box housing           |
| 16   | terminal board                 |
| 17   | rubber gasket                  |
| 18   | intermediate plate             |
| 19   | cable glands plate             |
| 20   | auxiliary terminal box cover   |
| 21   | terminal strip                 |
| 22   | auxiliary terminal box housing |
| 23   | circlip of labyrinth           |
| 24   | container of used grease       |
| 25   | grease retainer                |
| 26   | DE grease conduit              |
| 27   | internal labyrinth             |
| 28   | internal ring of NDE bearing   |
| 29   | flange B35                     |

DE – drive end

NDE – non drive end

## Ordering information

**In order to select the proper motor and provide you the most accurate offer as the requirements of customer's applications are various, we ask you to specify below motor details:**

### **Orders for motors should specify**

- » motor type designation,
- » rated output,
- » rated speed,
- » operating duty,
- » supply voltage and connection,
- » frequency,
- » mounting arrangements, end shield material,
- » degree of protection,
- » type of driven machine,
- » other details regarding special requests,

### **and information concerning additional accessories e.g.**

- » thermal protection,
- » anticondensation heaters,
- » vibration sensors,
- » etc.

### **When ordering high-power or special purpose motors one should also indicate:**

- » required direction of rotation,
- » required degree of interior protection,
- » method of start-up,
- » method of coupling with the driven unit (gears, dimensions of belt pulleys, etc.),
- » type of driven machine (type of load), including the moment of inertia J or flywheel effect GD2 calculated to motor shaft,
- » other customer's specifications.

### **When ordering spare parts one should specify:**

- » full designation of the motor type including its serial number (provided on the nameplate) or catalogue number,
- » degree of protection,
- » mounting arrangement,
- » name of part,
- » number of pieces.

**As part of our development program, we reserve the right to alter or amend any of the specifications without giving prior notice.**

# Order form

|              |                      |                |                      |
|--------------|----------------------|----------------|----------------------|
| Company name | <input type="text"/> | Contact person | <input type="text"/> |
| Country      | <input type="text"/> | City           | <input type="text"/> |
| Address      | <input type="text"/> |                |                      |
| Phone        | <input type="text"/> | E-mail         | <input type="text"/> |
| Subject      | <input type="text"/> |                |                      |
| Message      | <input type="text"/> |                |                      |
|              | <input type="text"/> |                |                      |
|              | <input type="text"/> |                |                      |
|              | <input type="text"/> |                |                      |

|                        |                      |          |                      |    |                      |                  |                      |    |                      |
|------------------------|----------------------|----------|----------------------|----|----------------------|------------------|----------------------|----|----------------------|
| Frame size             | <input type="text"/> | Poles    | <input type="text"/> | kW | <input type="text"/> | Voltage          | <input type="text"/> | Hz | <input type="text"/> |
| Number of pieces       | <input type="text"/> |          |                      |    |                      |                  |                      |    |                      |
| Duty                   | <input type="text"/> | Mounting | <input type="text"/> | IP | <input type="text"/> | Insulation class | <input type="text"/> |    |                      |
| Number of terminals    | <input type="text"/> |          |                      |    |                      |                  |                      |    |                      |
| Efficiency             | <input type="text"/> | RAL      | <input type="text"/> |    |                      |                  |                      |    |                      |
| PTC                    | <input type="text"/> | Yes      | <input type="text"/> | No |                      |                  |                      |    |                      |
| PT100                  | <input type="text"/> | Yes      | <input type="text"/> | No |                      |                  |                      |    |                      |
| Additional information | <input type="text"/> |          |                      |    |                      |                  |                      |    |                      |
|                        | <input type="text"/> |          |                      |    |                      |                  |                      |    |                      |
|                        | <input type="text"/> |          |                      |    |                      |                  |                      |    |                      |
|                        | <input type="text"/> |          |                      |    |                      |                  |                      |    |                      |
|                        | <input type="text"/> |          |                      |    |                      |                  |                      |    |                      |



Dear Customer,  
Please complete the above Order Form and send it to [motor@cantonigroup.com](mailto:motor@cantonigroup.com). In case you need assistance, do not hesitate to contact us at phone number: 0048 33 813 87 00. It will be our pleasure to help you.

Cantoni Motor Team

Download editable .pdf file from the website.

## Certifications

### Cantoni Group's factory, Celma Indukta was one of the first companies obtaining ISO 9001 certificate in Poland

All Cantoni Group manufacturing plants comply with the most important standards.

**ISO 9001** is based on a number of quality management principles including a strong customer focus, the motivation and involvement of top management, the process approach and continuous improvement. Using ISO 9001 helps to ensure that customers get consistent, good quality products and services. Our aim is to produce high quality products certified according to the most important standards. We always focus our work to provide a product that meets the customer requirements, define the approach to continuous improvement and monitor

customer satisfaction. All employees in our Group are fully engaged and motivated to provide the top quality products. We achieve this thanks to skilled technicians, trained workers and customer oriented attitude.

As a demonstration of our aim to meet all high level international standard requirements, we are also certified ISO 14001 and OHSAS 18001 to prove our internal processes and behaviour.

**ISO 14001** certification confirms that the organization manages their environmental responsibilities in an effective and internationally accepted way.

**In Cantoni Group we know that taking care of the environment means taking care of our present and future.**



With **OHSAS 18001** certificate, Cantoni Group confirms the necessity of controlling and improving health and safety aspects within the organization.

**Employees are Cantoni Group's main asset, thus, their well-being and safety are our priority.**

Our laboratory Celma Indukta is also **ISO 17025** certified by Canadian Standard Association (CSA) for two aspects: safety and energy efficiency verification requirements as independent unit.

The safety part – Supervised Manufacturers Testing Certification (SMTC) confirms that our laboratory is allowed for supervised manufactured safety certification program.

The energy efficiency part confirms that energy verification program for motors operating as SMTC can be performed according to CSA 390 standard at our facilities.

All our prototype motors are tested and approved before series production and samples of our final products are tested periodically to check compliance with all parameters defined. Our production range has also different types of products certifications based on specific technical requirements, like UL-CSA, GOST, EAC, ATEX, IEC Ex, CCC, Bureau Veritas, DNV-GL, etc.

Our technicians are constantly updated, informed and trained about every new regulation in order to provide all possible solutions to meet final customer requirements and also study and engineer ad-hoc products with customers developers.





## Top quality electric motors

Cantoni Group's electric motors are manufactured in such a way as to provide a durable product that our customers can rely on:

- motors manufactured using high quality raw materials and components
- long-life bearings
- robust and tough construction
- raw materials only from European qualified suppliers
- production process from the beginning to the end at our facilities
- proven electrical performance

## Our motors for many applications

Our motors are produced with the aim to be flexible and adaptable to many different applications. The long tradition and experience of our technical departments, supported by a flexible and strong organization, can assure an engineering of the motor series that meet the most common requirements and the more and more specific requests from the manufacturers of cutting-edge machines.

Our long collaboration with some of the most important players in the global industrial market has built a strong and stable organization that is able to support the customer in the development of the best solutions for its applications.

## Cantoni Group continuous investments

The strategy of Cantoni Group is to realize a strong and continuous plan of investments with the aim to constantly increase the range of products, quality level and high productivity. Cantoni Group international market leadership has been created thanks to such open and future oriented attitude. Investments into the new professional machinery, equipment and infrastructure increase the quality control, capacity and save the environment.

The use of world class CNC, automatic and semi-automatic machinery guarantees precision, repeatability and accuracy. Such considerable development plan of Cantoni Group enhances the already wide range of production, maximizes the quality of offered products and has led to a growing number of innovations (new series for specific applications, new design and solutions) and international approvals.





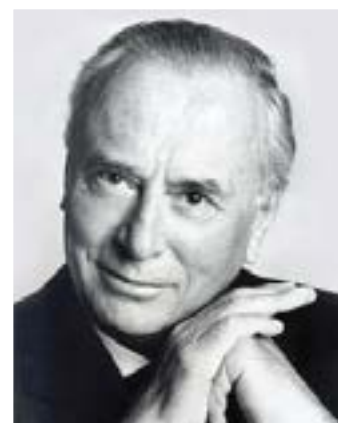
# Cantoni Group



## Giampiero Cantoni, Founder of Cantoni Group

Since almost a century, the Cantoni Group has been known worldwide as a leader in manufacturing and supplying electric motors, components and tools.

Thanks to the entrepreneurial commitment and great talent, the founder of the Group, **Prof. Giampiero Cantoni**, created diversified Group Enterprise that has gained outstanding success on the Domestic and International markets, placing us among the most important European manufacturers.



# Cantoni Motor



## Cantoni Motor, the International Sales Office and Headquarters, coordinates the sales and purchasing for the whole Cantoni Group.

The history of Cantoni Motor goes back to 1945 when Elektrim Export Office in Poland was created. Through the next years, many internal changes had occurred, the Office changed its name to Elektrim Motor, to become finally in the year 2000 – Cantoni Motor S.A. – a company with Italian ownership.

Cantoni Motor provides complete customer service, from offer submission until shipment, after-sales and full technical support. Thanks to the flexible organization, our technical and sales team

is able to face all requirements of modern market and realize the most challenging projects.

As the Headquarters, the company not only coordinates the sales and purchasing of key materials for the production of electric motors in the Group, but also is responsible for marketing and promotion actions as well as for certification processes, trademarks and patents.

Cantoni Group produces and exports high quality industrial electric motors – from 0,04 kW up to 6000 kW, in standard and special executions. Our motors are tough and reliable and operate in almost all industrial segments from pumps, fans, compressors, conveyors, mining, processing to power plants, etc.



## From the project to the application



## Driving Your Business





**CANTONI**  
MOTOR



**CANTONI**  
**MOTOR**



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