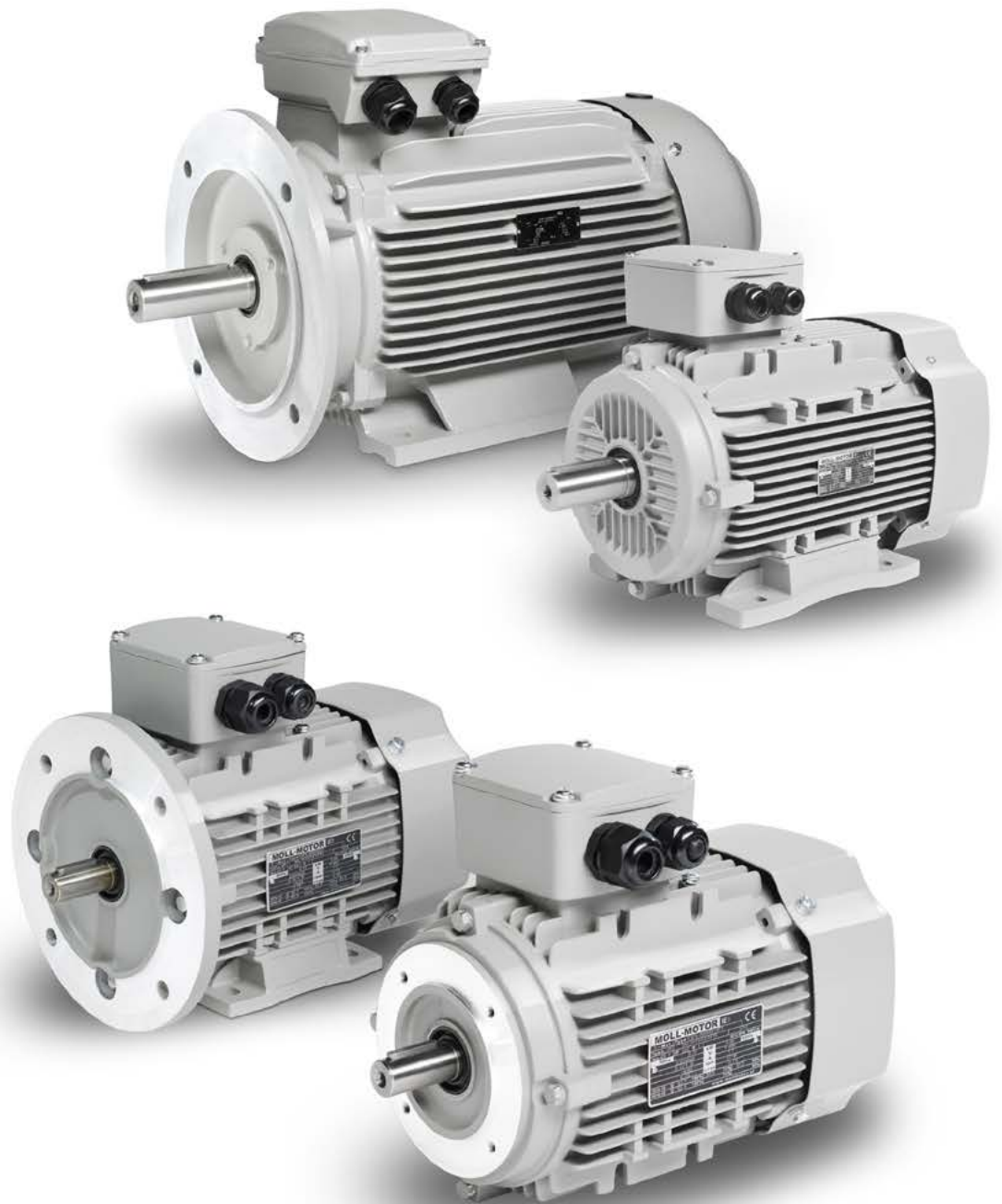


# Three-Phase-Squirrel-Cage Induction Motors

IE3 Y3PE / Y2PE series



# MOLL-MOTOR

## Our history, a source of power for the future

MOLL-MOTOR has been a family business for four generations. Alphons MOLL began manufacturing mechanical agricultural machinery as early as 1900. His son Norbert ran the company from 1948, primarily as a repair workshop, but also traded in electric motors.

In 1971, under the third-generation leadership of Gerald MOLL, MOLL-MOTOR began trading in all mechatronic products, adding a new focus for the company. However, individual solutions and service remained our trademark. Since 1997, ISO9001 certification has been testimony of a modern company that is now being led into a future of "Industry 4.0", digitalisation and other new challenges by Gerulf MOLL.

After more than a century of development, the name MOLL-MOTOR is now closely associated with mechatronic drive technology throughout Europe. Globally operating manufacturers and their products are available to our customers. MOLL-MOTOR realises customers' demands from joint planning and design of the components of a drive system through to implementation and commissioning. No problem is too big and no delivery too small.

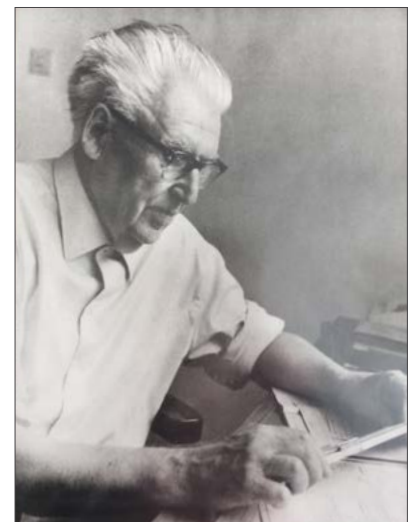
Experienced employees are available around the clock to live up to our company philosophy: Mechatronic drive technology from a single source.

We successfully meet the requirements for best quality and flexible pricing, deliveries on time, large warehousing on an area of over 5800m<sup>2</sup> with more than 5000 pallet spaces, more than 70000 motors, gears, frequency converters and output elements.

MOLL-MOTOR, your partner for a good future.



Price list dated 1908



Norbert Moll



Worm gear drive approx. 1960

## **GENERAL INFORMATION**

**5**

International Efficiency IE, performance characteristics and other details on motor construction

General

## **TECHNICAL DATA**

**16**

Table of technical data and weights for motor power and rpm

Technical

## **DIMENSIONS**

**20**

Geometrical data of connections for motors with mount or flange

Dimensions

## **AVAILABLE OPTIONS**

**27**

Design options and codes (Z-)

Options

## **SPARE PARTS**

**28**

Exploded view with spare parts numbers and names

Spare parts

## **PRODUCT PORTFOLIO**

**30**

Overview of MOLL-MOTOR product and range of services provided

Product portfolio



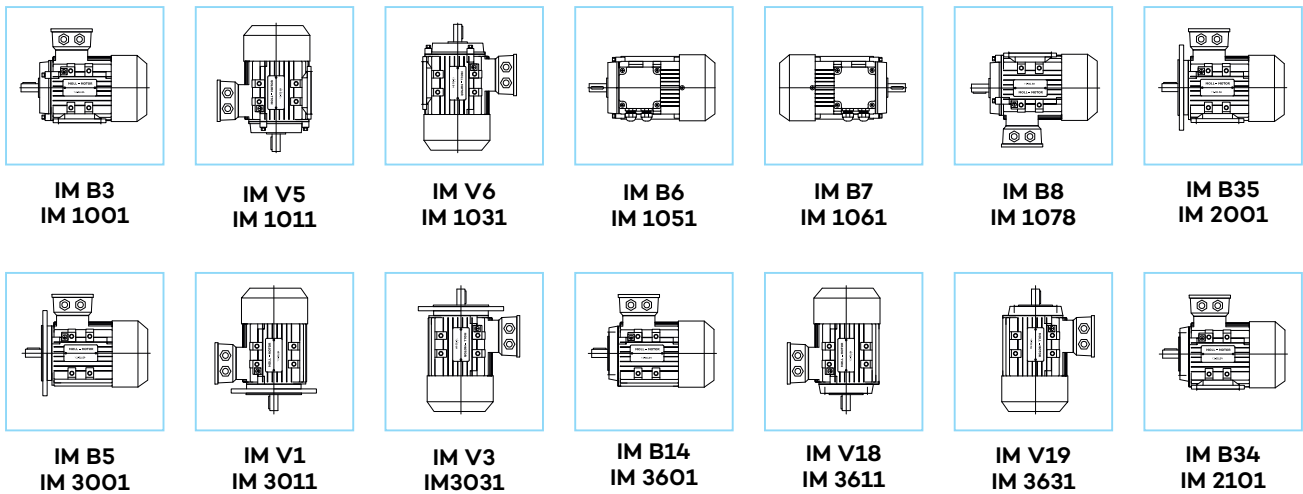
## Introduction

This catalogue contains technical data of our motor series Y3PE, Y2PE. These motors are surface-cooled three-phase squirrel-cage induction motors, built according to the current international IEC and EN standards. The production sites are certified to comply with the international quality standard ISO 9001.

Technical terms	DIN EN	IEC
Rotating electrical machines	DIN EN 60034-1	IEC 60034-1
Terminal markings and direction of rotation	DIN EN 60034-8	IEC 60034-8
Methods of cooling (IC Code)	DIN EN 60034-6	IEC 60034-6
Dimensions and output series for rotating electrical machines	DIN EN 50347	IEC 60072
Degrees of protection provided by the integral design of rotating electrical machines (IP code) - Classification	DIN EN 60034-5	IEC 60034-5
Noise limits	DIN EN 60034-9	IEC 60034-9
Classification of types of construction, mounting arrangements and terminal box position (IM Code)	DIN EN 60034-7	IEC 60034-7
IEC standard voltages	DIN EN 60038	IEC 60038
Mechanical vibration of certain machines with shaft heights 56 mm and higher Measurement, evaluation and limits of vibration severity	DIN EN 60034-14	IEC 60034-14
Standard methods for determining losses and efficiency from tests	DIN EN 60034-2-1	IEC 60034-2-1
Efficiency classes of line operated AC motors (IE code)	DIN EN 60034-30	IEC 60034-30

## Construction types

The motors are available in the construction types IM B3, IM B5, IM B14 and IM B9 (without DE end shield) and derived versions. They were made according to DIN EN 60034 as specified in the table below:



## Direction of rotation

The motors can be operated in both directions of rotation. If the clamps U1, V1, W1 are connected to phases L1, L2, L3, the motor will rotate clockwise (when looking at the motor shaft). Counterclockwise direction of rotation can be realised by switching of two phases.

## Type of duty cycle

The standard motor version is designed for continuous operation at regular conditions, i.e. S1 – continuous duty with constant load. Any other duty cycle (S2 to S9) can be realised optionally as well.

## Paint

The standard paint is RAL 7030 silk-matt. Any other colour (Z-xxxx), epoxy resin coating (Z-EP) or different categories of corrosivity according to DIN EN ISO 12944-2 C1-C5M are available on request.

## Special constructions

Special shafts according to plans and material requirements of customers (Z-SW), oil-proof construction (Z-WD), encapsulated, potted windings (Z-VW), encoders (Z-DG), wiring according to customer's requirements, etc. are available on request.

## Motor designation

**Y3PE 112M 2 B14F1 Z-DK**

**motor series**  
(PE IE3, SE IE4)

**frame size**  
(63 - 355)

**number of poles**  
(2, 4, 6, 8)

**additional options**  
see page 21 for abbreviations

**construction**  
(without specification means  
standard construction B3)

## Motor series

**Y3PE** frame size 63 - 160

**Y2PE** frame size 160 - 355

Aluminium housing



Cast iron housing



## Name plate

1. type of machine: three-phase A.C. low voltage motor
2. type of motor
3. construction
4. ambient temperature
5. serial number
6. thermal class
7. protection class
8. mode of operation
9. standards, rules and regulations
10. nominal power [kW]
11. nominal voltage [V]
12. nominal current [A]
13. nominal revolutions per minute [rpm]
14. power factor
15. efficiency

1 ~Mot.		Type 2		3
Tamb. 4		5		
Iso-Cl 6		IP 7	S 8	9 IEC/EN 60034
50Hz				60Hz
		10 kW		
		11 V		
		12 A		
		13 rpm		
		14 cos φ		
50Hz-IE3 η	15	100%	75%	50%
60Hz-IE3 η		100%	75%	50%

**www.mollmotor.at**

## Efficiency levels IE (International Efficiency)

The European Union EuP guideline 2009/125/EC requires (according to Regulation (EU) 2019/1781), that from 1 July 2021, three-phase motors with a rated output equal to or above 0,75 kW and equal to or below 1 000 kW, with 2, 4, 6 or 8 poles (which are not Ex eb increased safety motors), may only be placed in the market, if they correspond to at least the IE3 efficiency level. The energy efficiency of three-phase motors with a rated output equal to or above 0,12 kW and below 0,75 kW, with 2, 4, 6 or 8 poles (which are not Ex eb increased safety motors), shall correspond to at least the IE2 efficiency level.

From 1 July 2023, the energy efficiency of Ex eb increased safety motors with a rated output equal to or above 0,12 kW and equal to or below 1 000 kW, with 2, 4, 6 or 8 poles (and single-phase motors with a rated output equal to or above 0,12 kW) shall correspond to at least the IE2 efficiency level.

kW	IE1 Standard Efficiency				IE2 High Efficiency			
	2-pole	4-pole	6-pole	8-pole	2-pole	4-pole	6-pole	8-pole
0.12	45.0	50.0	38.3	31.0	53.6	59.1	50.6	39.8
0.18	52.8	57.0	45.5	38.0	60.4	64.7	56.6	45.9
0.25	58.2	61.5	52.1	43.4	64.8	68.5	61.6	50.6
0.37	63.9	66.0	59.7	49.7	69.5	72.7	67.6	56.1
0.55	69.0	70.0	65.8	56.1	74.1	77.1	73.1	61.7
0.75	72.1	72.1	70.0	61.2	77.4	79.6	75.9	66.2
1.1	75.0	75.0	72.9	66.5	79.6	81.4	78.1	70.8
1.5	77.2	77.2	75.2	70.2	81.3	82.8	79.8	74.1
2	79.7	79.7	77.7	74.2	83.2	84.3	81.8	77.6
3	81.5	81.5	79.7	77.0	84.6	85.5	83.3	80.0
4	83.1	83.1	81.4	79.2	85.8	86.6	84.6	81.9
5.5	84.7	84.7	83.1	81.4	87.0	87.7	86.0	83.8
7.5	86.0	86.0	84.7	83.1	88.1	88.7	87.2	85.3
11	87.6	87.6	86.4	85.0	89.4	89.8	88.7	86.9
15	88.7	88.7	87.7	86.2	90.3	90.6	89.7	88.0
18.5	89.3	89.3	88.6	86.9	90.9	91.2	90.4	88.6
22	89.9	89.9	89.2	87.4	91.3	91.6	90.9	89.1
30	90.7	90.7	90.2	88.3	92.0	92.3	91.7	89.8
37	91.2	91.2	90.8	88.8	92.5	92.7	92.2	90.3
45	91.7	91.7	91.4	89.2	92.9	93.1	92.7	90.7
55	92.1	92.1	91.9	89.7	93.2	93.5	93.1	91.0
75	92.7	92.7	92.6	90.3	93.8	94.0	93.7	91.6
90	93.0	93.0	92.9	90.7	94.1	94.2	94.0	91.9
110	93.3	93.3	93.3	91.1	94.3	94.5	94.3	92.3
132	93.5	93.5	93.5	91.5	94.6	94.7	94.6	92.6
160	93.7	93.8	93.8	91.9	94.8	94.9	94.8	93.0
200	94.0	94.0	94.0	92.5	95.0	95.1	95.0	93.5
250	94.0	94.0	94.0	92.5	95.0	95.1	95.0	93.5
315	94.0	94.0	94.0	92.5	95.0	95.1	95.0	93.5
355 to 1000	94.0	94.0	94.0	92.5	95.0	95.1	95.0	93.5



The energy efficiency of three-phase motors with a rated output equal to or above 75 kW and equal to or below 200 kW, with 2, 4, or 6 poles (which are not brake motors, Ex eb increased safety motors, or other explosion-protected motors), shall correspond to at least the IE4 efficiency level.

MOLL-MOTOR supplies motors of the classes IE1 (standard efficiency), IE2 (high efficiency), IE3 (premium efficiency) and IE4 (super premium efficiency) out of their own store. Furthermore, reluctance motors and torque motors with matching frequency converters, as well as motors for North America according to UL/CSA (EISA) standards in IEC or NEMA frame can be supplied. Other country-specific MEPS (Minimum Energy Performance Standards) always need to be observed.

kW	IE3 Premium Efficiency				IE4 Super-Premium Efficiency			
	2-pole	4-pole	6-pole	8-pole	2-pole	4-pole	6-pole	8-pole
0.12	60.8	64.8	57.7	50.7	66.5	69.8	64.9	62.3
0.18	65.9	69.9	63.9	58.7	70.8	74.7	70.1	67.2
0.25	69.7	73.5	68.6	64.1	74.3	77.9	74.1	70.8
0.37	73.8	77.3	73.5	69.3	78.1	81.1	78.0	74.3
0.55	77.8	80.8	77.2	73.0	81.5	83.9	80.9	77.0
0.75	80.7	82.5	78.9	75.0	83.5	85.7	82.7	78.4
1.1	82.7	84.1	81.0	77.7	85.2	87.2	84.5	80.8
1.5	84.2	85.3	82.5	79.7	86.5	88.2	85.9	82.6
2	85.9	86.7	84.3	81.9	88.0	89.5	87.4	84.5
3	87.1	87.7	85.6	83.5	89.1	90.4	88.6	85.9
4	88.1	88.6	86.8	84.8	90.0	91.1	89.5	87.1
5.5	89.2	89.6	88.0	86.2	90.9	91.9	90.5	88.3
7.5	90.1	90.4	89.1	87.3	91.7	92.6	91.3	89.3
11	91.2	91.4	90.3	88.6	92.6	93.3	92.3	90.4
15	91.9	92.1	91.2	89.6	93.3	93.9	92.9	91.2
18.5	92.4	92.6	91.7	90.1	93.7	94.2	93.4	91.7
22	92.7	93.0	92.2	90.6	94.0	94.5	93.7	92.1
30	93.3	93.6	92.9	91.3	94.5	94.9	94.2	92.7
37	93.7	93.9	93.3	91.8	94.8	95.2	94.5	93.1
45	94.0	94.2	93.7	92.2	95.0	95.4	94.8	93.4
55	94.3	94.6	94.1	92.5	95.3	95.7	95.1	93.7
75	94.7	95.0	94.6	93.1	95.6	96.0	95.4	94.2
90	95.0	95.2	94.9	93.4	95.8	96.1	95.6	94.4
110	95.2	95.4	95.1	93.7	96.0	96.3	95.8	94.7
132	95.4	95.6	95.4	94.0	96.2	96.4	96.0	94.9
160	95.6	95.8	95.6	94.3	96.3	96.6	96.2	95.1
200	95.8	96.0	95.8	94.6	96.5	96.7	96.3	95.4
250	95.8	96.0	95.8	94.6	96.5	96.7	96.5	95.4
315	95.8	96.0	95.8	94.6	96.5	96.7	96.6	95.4
355 to 1000	95.8	96.0	95.8	94.6	96.5	96.7	96.6	95.4

## Terminal Box

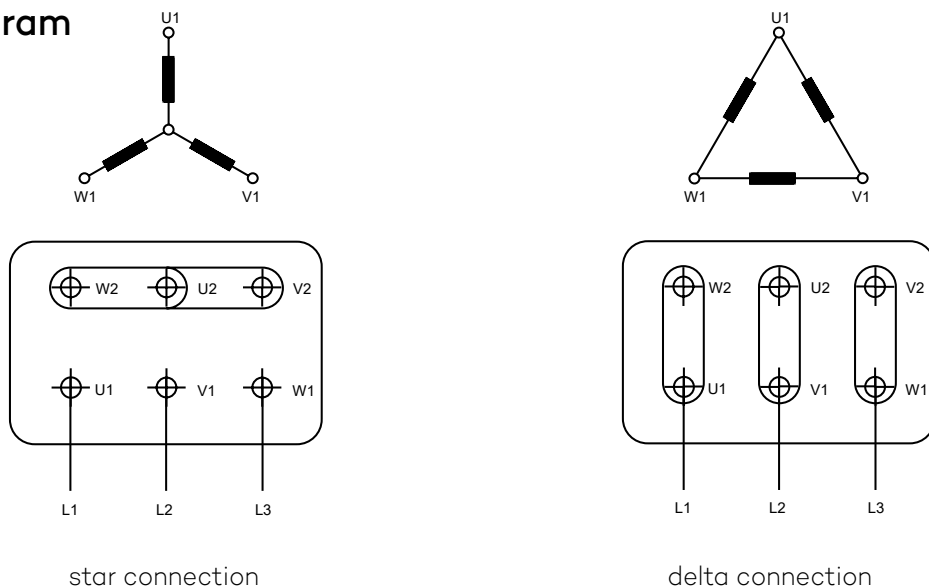
The terminal box material is identical to the material of the motor housing. The terminal box can be turned in 90° increments. From frame size 160, separate cable glands for sensor cables are installed.

Frame size	Cable glands Connection cable	Clamping range	Cable glands signal	Connecting bolt
63	1xM20x1.5 - 1x M16x1.5	6-12mm - 5-10mm		M4 x 14mm
71	1xM20x1.5 - 1x M16x1.5	6-12mm - 5-10mm		M4 x 14mm
80	1x M25x1.5 - 1x M20x1.5	9-16mm - 6-12mm		M4 x 14mm
90	1x M25x1.5 - 1x M20x1.5	9-16mm - 6-12mm		M4 x 14mm
100	1x M25x1.5 - 1x M20x1.5	9-16mm - 6-12mm		M4 x 14mm
112	1x M25x1.5 - 1x M20x1.5	9-16mm - 6-12mm		M5 x 18mm
132	1x M32x1.5 - 1x M25x1.5	13-20mm - 9-16mm		M5 x 18mm
160	1x M40x1.5 - 1x M32x1.5	20-26mm - 13-20mm	1x M20x1.5 - 5-9mm	M6 x 29mm
180	1x M40x1.5 - 1x M32x1.5	20-26mm - 13-20mm	1x M20x1.5 - 5-9mm	M6 x 29mm
200	1x M40x1.5 - 1x M32x1.5	20-26mm - 13-20mm	1x M20x1.5 - 5-9mm	M8 x 35mm
225	2x M50x1.5	25-31mm	1x M20x1.5 - 5-9mm	M8 x 35mm
250	2x M63x1.5	29-35mm	1x M20x1.5 - 5-9mm	M10 x 39mm
280	2x M63x1.5	29-35mm	1x M20x1.5 - 5-9mm	M10 x 39mm
315	2x M63x1.5	29-35mm	1x M20x1.5 - 5-9mm	M16 x 65mm
355	2x M63x1.5	29-35mm	1x M20x1.5 - 5-9mm	M20 x 70mm

## Position of the Terminal Box

The mounts of motors in the range of size 56 to size 160 (aluminium) can be removed. They are attached to the frame with two screws each. With the possibility to attach them on either side, the connection box can be positioned left or right. Adaptation to B35 or B34 can be easily achieved.

## Wiring diagram



## Voltage

The standard voltage is 230 V (delta connection) / 400 V (star connection) (< 3 kW) and 400 V (delta connection) / 690 V (star connection) ( $\geq 3$  kW); frequency 50 Hz. Motors with windings designed for these standards can be operated in a 60 Hz grid at 460 V. Nominal revolutions per minute will increase by a factor of 1.2, and nominal power will increase by a factor of 1.15.

Different voltages and frequencies can be provided on request (option Z-UF).

## Overload

At ambient temperature  $\leq 40^{\circ}\text{C}$ , 1.5-fold overload is tolerable for up to 15 seconds according to EN6004-1. With insulation class F, permanent overload of 12% or operation at an ambient temperature of up to  $55^{\circ}\text{C}$  are possible.

## Insulation Class

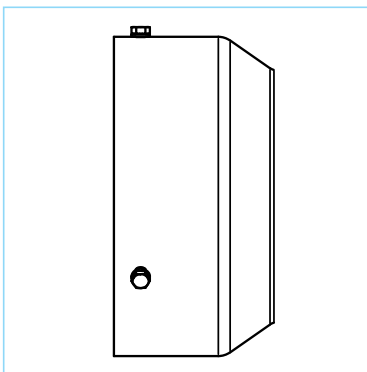
The motors standard equipment is with class F insulation materials (enamelled wire, insulation, impregnating resin). When operated in S1 conditions at standard load, the motor's temperature will never rise to more than 80K above ambient temperature. At  $+40^{\circ}\text{C}$  ambient temperature, maximum will be  $120^{\circ}\text{C}$ , as required for class B. Careful selection of insulation system components allows usage of motors in frequency inverter operations, in tropical conditions and at a normal level of vibrations.

We recommend to contact our customer service office for help with choosing the right equipment, if operation in areas with aggressive chemical substances or high humidity is planned. On request, motors can also be delivered to the specifications of thermal class H.

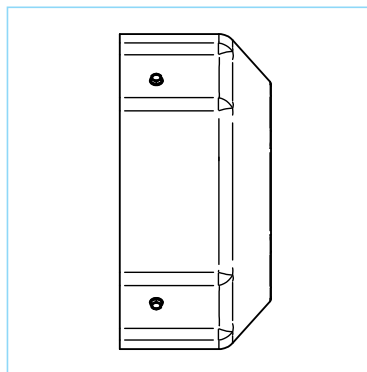
## Type of Protection

Standard design motors are supplied with type IP55 protection. A higher level of protection is available on request (Z-IP56, Z-IP65). All motors installed outdoors must be protected from direct sunlight, irrespective of the specific type of protection. In case of vertical mounting with the shaft pointing down, the attachment of a protective cover (Z-RD) preventing entry of water or objects is recommended.

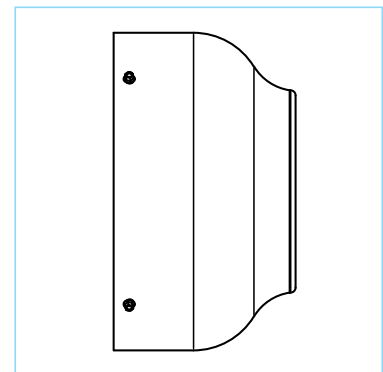
## Fan covers / designs depend on series and size



Y3PE series alu  
frame size 63 to 71



Y3PE series alu  
frame size 80 to 132



Y3PE series alu frame size 160  
Y2PE series cast iron  
frame size 160 to 355

## Thermal Winding Protection Provisions

Motors can be fitted with integrated temperature sensors to protect the winding from overheating in case of overload or poor ventilation. When motors are operated in combination with frequency converters, they should always have such temperature control protection. Available options include:

### Z-TO: Three bimetal sensors with a response temperature of 150°C in the windings

These sensors contain an encapsulated bimetal plate, which opens the circuit contact when the nominal temperature is reached. When the temperature goes down, the electric contacts will automatically re-connect. Three such bimetal sensors are usually connected in series on an auxiliary terminal block.

### Z-DK: Three PTC-thermistors with a response temperature of 150°C

This overheating protection is the standard for IE3 and IE4 motors from frame size 132 to 355. These thermistors contain a semi-conductor, which shows a big change in resistance at the temperature set for overheating protection. Generally, thermistors with a positive temperature coefficient, known as PTC, are used. The advantages of these sensors are their small size, and their precisely defined switching time and temperature. They never show signs of wear. Unlike bimetal temperature probes, thermistors do not switch the circuit relay directly, and must be combined with a special tripping unit. The three PTC-thermistors are connected in series on an auxiliary terminal block.

## Ambient Temperature

The tables in the catalogue list operation characteristics for 50 Hz for operation conditions according to DIN EN60034-1 (temperature range: -20°C to 40°C and altitude below 1000m above sea level). The motors can also be operated at temperatures between 40°C and 60°C. However, in that case, power deviations according to the table must be observed. Operation at ambient temperatures higher than 60°C require special motors (option Z-TA).

Ambient temperature (°C)	Level above sea (m)								
	1000	1500	2000	2500	3000	3500	4000	4500	5000
-20	1.17	1.14	1.12	1.09	1.05	1.02	0.98	1.00	1.00
-15	1.17	1.14	1.12	1.09	1.05	1.02	0.98	1.00	1.00
-10	1.17	1.14	1.12	1.09	1.05	1.02	0.98	1.00	0.97
-5	1.17	1.14	1.12	1.09	1.05	1.02	0.98	0.98	0.94
0	1.17	1.14	1.12	1.09	1.05	1.02	0.98	0.96	0.93
5	1.17	1.14	1.12	1.09	1.05	1.02	0.98	0.95	0.92
10	1.17	1.14	1.12	1.09	1.05	1.02	0.98	0.94	0.91
15	1.14	1.12	1.09	1.06	1.03	0.99	0.95	0.91	0.88
20	1.12	1.09	1.06	1.03	1.00	0.96	0.92	0.88	0.85
25	1.09	1.06	1.03	1.00	0.96	0.94	0.90	0.85	0.81
30	1.06	1.03	1.00	0.97	0.93	0.91	0.87	0.82	0.78
35	1.03	1.00	0.96	0.94	0.91	0.88	0.85	0.81	0.77
40	1.00	0.97	0.94	0.91	0.88	0.84	0.82	0.80	0.76
45	0.96	0.93	0.91	0.89	0.86	0.83	0.80	0.76	0.72
50	0.93	0.90	0.87	0.85	0.82	0.80	0.77	0.72	0.67
55	0.89	0.86	0.84	0.82	0.79	0.77	0.74	0.67	0.62
60	0.85	0.83	0.81	0.78	0.76	0.74	0.71	0.65	0.61

## Cooling

Motors are cooled through self-ventilation (IC 411 in acc. with DIN EN 60034-6) and are fitted with a synthetic two-way axial fan. Motors must be mounted paying attention to a minimum distance between the fan cap and the closest object, so that the air circulation is not compromised. As a rule of thumb, this minimum distance should be half the axle height. For easier access for servicing, it is recommended to keep a minimum distance matching the size of the fan cap.

Starting with frame size 63, motors can be supplied with an independently driven external ventilator if required. In this case, cooling is provided by an axial ventilator mounted in place of the standard fan cap. This design should be used in cases where the motor is operated using a frequency converter with a frequency lower than 25 Hz. A motor with forced ventilation can be operated at constant torque at low rotation velocity, or when there is a broad range of rotation velocity. This option is not available for motors with second shaft end.

## Bearings

Motors of the Y3PE series with aluminium frame have rotors which are centered with spring washers. Sizes 71 to 132 can be constructed with a fixed bearing on the DE side (option Z-FA and FAS). For Y2PE series, sizes 160 and up, the NDE-side has a fixed bearing. A fixed bearing on the DE-side is possible as option (Z-FAS), but causes a reduction of maximum tolerable radial load.

The following table shows the bearings used in our standard motors: Reinforced bearings for sizes 160 and up (option Z-VL), grease nipples (Z-NE) and electrically insulated bearings (Z-IL) are optionally available on request.

Frame size	Number of poles	Type of bearing DE	Type of bearing NDE
63	2-8	6201-2RZ CM	6201-2RZ CM
71	2-8	6202-2RZ CM	6202-2RZ CM
80	2-8	6204-2RZ CM	6204-2RZ CM
90	2-8	6205-2RZ CM	6205-2RZ CM
100	2-8	6206-2RZ CM	6206-2RZ CM
112	2-8	6306-2RZ C3	6306-2RZ C3
132	2-8	6308-2RZ C3	6308-2RZ C3
160 (aluminium)	2-8	6309-2RZ C3	6309-2RZ C3
160 (cast iron)	2-8	6309-2Z C3	6309-2Z C3
180	2-8	6311-2Z C3	6311-2Z C3
200	2-8	6312-2Z C3	6312-2Z C3
225	2-8	6313-2Z C3	6313-2Z C3
250	2-8	6314-2Z C3	6314-2Z C3
280	2	6314 C3	6314 C3
	4-8	6317 C3	6317 C3
315	2	6317 C3	6317 C3 (IMB3, IMB35) 7317 C3 (IMV1)
	4-8	6319 C3	6319 C3
355	2	6319 C3	6319 C3 (IMB3, IMB35) 7319 C3 (IMV1)
	4-8	6322 C3	6322 C3 (IMB3, IMB35) 7322 C3 (IMV1)

## Lubrication

Motors of frame size 80 to 250 have permanent lubrication bearings and can be used in a dry or damp environment. Motors of frame size 280 to 355 have grease nipples for re-lubrication. The recommended lubricant is mineral oil based grease with a lithium thickener according to DIN 51825 K2K30, such as SKF LGMT2, Esso/Mobil Unirex N2/N3, Shell Gadus S 2, or similar.

## Tolerable bearing load

frame size	Tolerable radial load point for load $X = E/2$				Tolerable axial load B3 / horizontal shaft				Tolerable axial load V1 / vertical shaft pointing down downward load				Tolerable axial load V3 / vertical shaft pointing up upward load			
	2-p kN	4-p kN	6-p kN	8-p kN	2-p kN	4-p kN	6-p kN	8-p kN	2-p kN	4-p kN	6-p kN	8-p kN	2-p kN	4-p kN	6-p kN	8-p kN
63M	0.39	0.49	0.53		0.19	0.26	0.28		0.16	0.23	0.26		0.21	0.29	0.31	
71M	0.45	0.56	0.66	0.71	0.23	0.34	0.34	0.36	0.20	0.32	0.30	0.35	0.26	0.37	0.37	0.40
80M	0.64	0.84	0.86	0.98	0.34	0.45	0.48	0.52	0.29	0.45	0.45	0.48	0.36	0.48	0.50	0.56
90S	0.69	0.99	1.01	1.12	0.40	0.55	0.58	0.63	0.36	0.50	0.52	0.59	0.43	0.57	0.62	0.67
90L	0.72	1.02	1.03	1.15	0.38	0.52	0.55	0.59	0.33	0.49	0.51	0.56	0.41	0.55	0.58	0.63
100L	0.93	1.34	1.39	1.49	0.50	0.70	0.72	0.80	0.45	0.66	0.67	0.72	0.57	0.77	0.79	0.84
112M	0.98	1.42	1.47	1.56	0.52	0.74	0.75	0.83	0.45	0.62	0.64	0.76	0.63	0.82	0.85	0.94
132S	1.43	1.98	2.08	2.24	0.86	1.18	1.21	1.35	0.64	0.90	0.95	1.10	1.06	1.42	1.45	1.52
132M	1.47	2.03	2.12	2.32	0.83	1.14	1.19	1.32	0.61	0.86	0.93	1.06	1.04	1.37	1.41	1.50
160M	1.57	2.19	2.26	2.54	0.86	1.17	1.23	1.35	0.50	0.81	0.85	1.00	1.22	1.57	1.65	1.68
160L	1.62	2.23	2.31	2.59	0.83	1.14	1.20	1.30	0.46	0.77	0.83	0.96	1.17	1.54	1.62	1.65
180M	2.95	4.41	4.57	4.68	0.85	1.16	1.25	1.32	0.45	0.77	0.82	0.95	1.21	1.62	1.68	1.67
180L	2.98	4.46	4.61	4.71	0.83	1.13	1.23	1.28	0.43	0.76	0.80	0.92	1.18	1.59	1.65	1.63
200L	5.18	6.83	8.09	8.85	0.83	1.18	1.24	1.36	0.42	0.73	0.80	0.99	1.30	1.63	1.67	1.72
225S	6.15	7.83	9.01	10.15	1.12	1.63	1.93	2.40	0.32	0.71	1.05	1.57	2.14	2.64	2.95	3.45
225M	6.18	7.85	9.05	10.19	1.08	1.60	1.89	2.35	0.31	0.70	1.00	1.52	2.08	2.58	2.87	3.40
250M	6.85	8.80	10.43	11.56	1.02	1.63	2.00	2.60	0.21	0.60	1.12	1.55	2.28	2.70	3.20	3.70
280S	7.78	11.85 15.7(VL)	13.78 15.6(VL)	15.37 15.6(VL)	1.74	1.95	2.45	2.95	0.16	0.32	0.84	1.05	2.94	3.15	3.65	3.90
280M	7.83	11.92 15.7(VL)	13.86 15.6(VL)	15.46 15.6(VL)	1.71	1.90	2.40	2.85	0.15	0.30	0.78	1.00	2.90	3.08	3.55	3.85
315S	7.06	9.93 11.43(VL)	11.23 13.45(VL)	12.78 15.28(VL)	2.06	5.40	6.60	7.70	1.05	1.90	2.45	2.90	3.65	8.10	9.25	7.50
315M	7.03	9.72 11.48(VL)	11.05 13.41(VL)	12.59 15.22(VL)	2.00	5.40	6.60	7.70	1.00	1.85	2.35	2.83	3.55	7.90	9.15	7.40
315L	7.03	9.72 11.48(VL)	11.05 13.41(VL)	12.59 15.22(VL)	2.00	5.40	6.60	7.70	1.00	1.85	2.35	2.83	3.55	7.90	9.15	7.40
355M	8.45	10.96 13.28(VL)	13.26 14.86(VL)	14.75 17.03(VL)	3.95	5.80	7.00	7.00	1.25	2.13	3.05	3.86	4.40	10.30	12.40	9.60
355L	8.45	10.96 13.28(VL)	13.26 14.86(VL)	14.75 17.03(VL)	3.95	5.80	7.00	7.00	1.25	2.13	3.05	3.86	4.40	10.30	12.40	9.60
355L	8.45	10.96 13.28(NU)	13.26 14.86(VL)	14.75 17.03(NU)	3.95	5.80	7.00	7.00	1.25	2.13	3.05	3.86	4.40	10.30	12.40	9.60

## Rotor Balancing

Motors are dynamically balanced with half a parallel key mounted and classify in vibration grade „A“ according to DIN EN 60034-14. In case there are special requirements for balancing, a version Z-VR with reduced vibration according to grade „B“ is available. The table summarises maximum vibration quantity as vibration amplitude  $s$ , vibration velocity  $v$ , and vibration acceleration  $a$ , per axle height, for the vibration classes „A“ and „B“.

The data refer to a freely suspended motor running without load. Tolerance range:  $\pm 10\%$

Vibration grade	Limits per vibration grade								
	56 < H ≤ 132			132 < H ≤ 280			H > 280		
	s[ $\mu\text{m}$ ]	v[mm/s]	a[mm/s <sup>2</sup> ]	s[ $\mu\text{m}$ ]	v[mm/s]	a[mm/s <sup>2</sup> ]	s[ $\mu\text{m}$ ]	v[mm/s]	a[mm/s <sup>2</sup> ]
A	25	1.6	2.5	35	2.2	3.5	45	2.8	4.4
B	11	0.7	1.1	18	1.1	1.7	29	1.8	2.8

## Tolerance for technical data according to DIN EN 60034-1

Level of efficiency	-0.15(1- $\eta$ ) P ≤ 150kW
Power factor	(1-cos $\varphi$ )/6 min. 0.02 max. 0.07
Slip	$\pm 20\%$ P ≥ 1 kW; $\pm 30\%$ ≤ 1 kW
Starting current	+20%
Starting torque	-15% +25%
Max. torque	-10%

# 2 pole IE3

# 400V/50Hz

# 3000 rpm

$P_N$ [kW]	Motor type	$n$ [rpm]	Voltage [V]	$\eta$ 100%	$\eta$ 75%	$\eta$ 50%	$\cos \varphi$	Inertia [kgm <sup>2</sup> ]	$I_N$ (at 400V)	Mfn	LpA 50Hz (dB(A))	Weight B3 [kg]
0.18	Y3PE63A2	2730	230/400	66.0	66.2	64.1	0.80	0.0003	0.49	0.63	49	4.5
0.25	Y3PE63B2	2730	230/400	69.8	69.9	68.2	0.81	0.0006	0.64	0.87	49	4.7
0.37	Y3PE71A2	2770	230/400	73.9	74.0	72.3	0.81	0.0008	0.89	1.28	50	6.8
0.55	Y3PE71B2	2790	230/400	77.9	78.1	76.7	0.82	0.0009	1.24	1.88	50	7.1
0.75	Y3PE80A2	2890	230/400	81.0	81.3	79.6	0.82	0.0011	1.64	2.48	51	9.5
1.1	Y3PE80B2	2890	230/400	82.8	83.5	82.1	0.83	0.0014	2.31	3.63	51	11
1.5	Y3PE90S2	2890	230/400	84.3	85.5	83.8	0.84	0.0022	3.06	4.96	56	16
2.2	Y3PE90L2	2890	230/400	86.1	86.7	85.4	0.85	0.0028	4.35	7.27	56	20
3	Y3PE100L2	2895	400/690	87.2	87.9	86.6	0.87	0.0046	5.71	9.90	63	26
4	Y3PE112M2	2910	400/690	88.2	88.6	87.4	0.88	0.0063	7.45	13.1	66	34
5.5	Y3PE132SA2	2940	400/690	89.4	89.7	88.6	0.88	0.0139	10.1	17.9	68	45
7.5	Y3PE132SB2	2940	400/690	90.3	90.9	89.6	0.89	0.0164	13.5	24.4	68	51
11	Y3PE160MA2	2950	400/690	91.3	91.5	89.9	0.89	0.0540	19.6	35.6	70	98
15	Y3PE160MB2	2950	400/690	92.0	92.3	91.2	0.89	0.0618	26.5	48.6	70	108
18.5	Y3PE160L2	2950	400/690	92.6	92.8	91.6	0.89	0.0716	32.5	59.9	70	128
11	Y2PE160MA2	2950	400/690	91.3	91.5	89.9	0.89	0.0540	19.6	35.6	70	126
15	Y2PE160MB2	2950	400/690	92.0	92.3	91.2	0.89	0.0618	26.5	48.6	70	136
18.5	Y2PE160L2	2950	400/690	92.6	92.8	91.6	0.89	0.0716	32.5	59.9	70	161
22	Y2PE180M2	2960	400/690	92.7	92.9	91.8	0.89	0.0892	38.5	71.0	72	202
30	Y2PE200LA2	2970	400/690	93.4	93.6	92.2	0.89	0.1800	52.1	96.5	73	259
37	Y2PE200LB2	2970	400/690	93.7	93.9	92.6	0.89	0.1900	64.0	119	73	276
45	Y2PE225M2	2970	400/690	94.1	94.0	92.7	0.90	0.3335	76.8	145	75	359
55	Y2PE250M2	2980	400/690	94.3	94.5	92.9	0.90	0.4638	93.5	176	78	394
75	Y22PE280S2Z-NE	2980	400/690	94.7	94.5	93.6	0.90	1.0889	127	240	80	537
90	Y22PE280M2Z-NE	2980	400/690	95.0	95.2	94.3	0.90	1.1487	152	288	80	583
110	Y2PE315S2Z-NE	2980	400/690	95.2	95.3	94.5	0.90	1.4952	185	353	81	861
132	Y2PE315M2Z-NE	2980	400/690	95.4	95.5	94.6	0.90	2.1107	222	423	81	948
160	Y2PE315LA2Z-NE	2980	400/690	95.7	95.6	94.8	0.91	2.3939	265	513	81	1020
200	Y2PE315LB2Z-NE	2980	400/690	95.9	95.8	94.9	0.91	2.6537	331	641	81	1112
250	Y2PE355M2Z-NE	2980	400/690	95.9	95.8	94.9	0.91	3.3450	414	801	89	1650
315	Y2PE355LA2Z-NE	2980	400/690	95.9	95.8	94.9	0.91	3.9025	522	1009	89	1843



# 4 pole IE3

# 400V/50Hz

# 1500 rpm

P [kW]	Motor type	n [rpm]	Voltage [V]	$\eta$ 100%	$\eta$ 75%	$\eta$ 50%	cos $\phi$	Inertia [kgm <sup>2</sup> ]	I <sub>N</sub> (at 400V)	MIn	LpA 50Hz (100%)	Weight B3 [kg]
0.12	Y3PE63A4	1320	230/400	64.9	65.1	61.9	0.72	0.0005	0.37	0.87	41	4.5
0.18	Y3PE63B4	1320	230/400	70.0	70.2	67.5	0.73	0.0006	0.51	1.30	41	4.7
0.25	Y3PE71A4	1350	230/400	73.6	73.8	70.4	0.74	0.0008	0.66	1.77	44	6.8
0.37	Y3PE71B4	1350	230/400	77.4	77.5	74.6	0.75	0.0013	0.92	2.62	44	7.1
0.55	Y3PE80A4	1400	230/400	80.9	81.1	79.4	0.75	0.0018	1.31	3.75	45	12
0.75	Y3PE80B4	1430	230/400	82.7	82.9	81.5	0.75	0.0027	1.75	5.01	45	13
1.1	Y3PE90S4	1440	230/400	84.3	84.9	83.0	0.76	0.0033	2.48	7.30	48	16
1.5	Y3PE90L4	1440	230/400	85.4	86.2	84.8	0.77	0.0041	3.30	9.95	48	19
2.2	Y3PE100LA4	1455	230/400	86.9	87.4	85.9	0.81	0.0084	4.52	14.4	53	28
3	Y3PE100LB4	1455	400/690	87.8	88.2	87.1	0.82	0.0101	6.02	19.7	53	32
4	Y3PE112M4	1460	400/690	88.7	89.4	87.9	0.82	0.0139	7.95	26.2	54	39
5.5	Y3PE132S4	1470	400/690	89.8	90.2	89.1	0.83	0.0310	10.7	35.7	60	56
7.5	Y3PE132M4	1470	400/690	90.4	91.0	90.0	0.84	0.0398	14.3	48.7	60	65
11	Y3PE160M4	1470	400/690	91.4	91.7	90.8	0.85	0.0852	20.4	71.5	62	108
15	Y3PE160L4	1470	400/690	92.2	92.5	91.5	0.86	0.1116	27.3	97.4	62	127
11	Y2PE160M4	1470	400/690	91.4	91.7	90.8	0.85	0.0852	20.4	71.5	62	136
15	Y2PE160L4	1470	400/690	92.2	92.5	91.5	0.86	0.1116	27.3	97.4	62	160
18.5	Y2PE180M4	1475	400/690	92.7	93.0	92.1	0.86	0.1679	33.5	120	65	195
22	Y2PE180L4	1475	400/690	93.0	93.3	92.4	0.86	0.2065	39.7	142	65	220
30	Y2PE200L4	1480	400/690	93.6	93.4	92.4	0.86	0.3147	53.8	194	65	278
37	Y2PE225S4	1485	400/690	93.9	94.0	93.2	0.86	0.5224	66.1	238	67	343
45	Y2PE225M4	1485	400/690	94.3	94.6	93.4	0.86	0.6118	80.2	289	67	373
55	Y2PE250M4	1485	400/690	94.6	94.8	93.6	0.86	0.8294	97.6	354	68	433
75	Y22PE280S4Z-NE	1485	400/690	95.0	95.1	94.2	0.88	2.1199	129	482	69	600
90	Y22PE280M4Z-NE	1485	400/690	95.2	95.4	94.5	0.88	2.5634	155	579	69	683
110	Y2PE315S4Z-NE	1485	400/690	95.5	95.4	94.7	0.89	3.6260	187	707	77	922
132	Y2PE315M4Z-NE	1485	400/690	95.7	95.6	94.8	0.89	4.2102	224	849	77	1020
160	Y2PE315LA4Z-NE	1485	400/690	95.9	95.8	94.9	0.89	4.6050	271	1029	77	1120
200	Y2PE315LB4Z-NE	1485	400/690	96.0	95.9	94.9	0.90	5.2740	334	1286	77	1194
250	Y2PE355M4Z-NE	1490	400/690	96.0	95.9	95.0	0.90	7.2475	418	1602	84	1630
315	Y2PE355LA4Z-NE	1490	400/690	96.0	95.9	95.0	0.90	9.1430	526	2019	84	1780
355	Y2PE355LB4Z-NE	1490	400/690	96.0	95.9	95.0	0.90	9.1430	593	2275	84	1990

# 6 pole IE3

# 400V/50Hz

# 1000 rpm

$P$ [kW]	Motor type	$n$ [rpm]	Voltage [V]	$\eta$ 100%	$\eta$ 75%	$\eta$ 50%	$\cos \varphi$	Inertia [kgm <sup>2</sup> ]	$I_N$ (at 400V)	MIn	LpA <sub>50Hz</sub> (dB(A))	Weight B3 [kg]
0.18	Y3PE71A6	875	230/400	64.0	64.1	60.8	0.66	0.0011	0.62	1.96	41	6.8
0.25	Y3PE71B6	875	230/400	68.7	68.9	65.9	0.68	0.0014	0.77	2.73	41	7.1
0.37	Y3PE80A6	885	230/400	73.6	73.8	69.8	0.70	0.0016	1.04	3.99	43	12
0.55	Y3PE80B6	885	230/400	77.2	77.4	75.1	0.71	0.0019	1.45	5.94	43	13
0.75	Y3PE90S6	955	230/400	79.1	79.8	77.9	0.71	0.0041	1.93	7.50	46	16
1.1	Y3PE90L6	955	230/400	81.0	81.8	79.8	0.73	0.0058	2.69	11.0	46	21
1.5	Y3PE100L6	955	230/400	82.7	83.4	81.7	0.73	0.0116	3.60	15.0	50	27
2.2	Y3PE112M6	970	230/400	84.4	84.7	83.0	0.74	0.0164	5.09	21.7	54	33
3	Y3PE132S6	970	400/690	85.7	86.4	84.9	0.74	0.0346	6.84	29.5	58	45
4	Y3PE132MA6	970	400/690	86.9	87.5	86.2	0.74	0.0429	8.99	39.4	58	57
5.5	Y3PE132MB6	970	400/690	88.1	88.5	87.5	0.75	0.0537	12.0	54.1	58	63
7.5	Y3PE160M6	980	400/690	89.2	89.6	88.4	0.79	0.1064	15.4	73.1	62	96
11	Y3PE160L6	980	400/690	90.4	90.9	89.6	0.80	0.1403	22.0	107	62	127
7.5	Y2PE160M6	980	400/690	89.2	89.6	88.4	0.79	0.1064	15.4	73.1	62	124
11	Y2PE160L6	980	400/690	90.4	90.9	89.6	0.80	0.1403	22.0	107	62	160
15	Y2PE180L6	980	400/690	91.3	91.5	90.3	0.81	0.2504	29.3	146	62	211
18.5	Y2PE200LA6	985	400/690	91.7	92.0	90.7	0.81	0.3699	36.0	179	62	260
22	Y2PE200LB6	985	400/690	92.3	92.6	91.2	0.81	0.4207	42.5	213	62	282
30	Y2PE225M6	985	400/690	92.9	93.2	92.2	0.83	0.6236	56.2	291	63	392
37	Y2PE250M6	990	400/690	93.4	93.5	92.7	0.84	0.9685	68.1	357	65	416
45	Y22PE280S6Z-NE	990	400/690	93.8	93.7	92.9	0.85	1.9119	81.6	434	67	522
55	Y22PE280M6Z-NE	990	400/690	94.1	94.2	93.2	0.86	2.3411	98.1	531	67	585
75	Y2PE315S6Z-NE	990	400/690	94.7	94.6	93.4	0.84	4.5827	136	723	72	791
90	Y2PE315M6Z-NE	990	400/690	95.0	94.9	93.6	0.85	5.3297	161	868	72	901
110	Y2PE315LA6Z-NE	990	400/690	95.1	95.0	93.9	0.85	6.0768	196	1061	72	1009
132	Y2PE315LB6Z-NE	990	400/690	95.5	95.4	94.1	0.86	6.8238	232	1273	72	1102
160	Y2PE355MA6Z-NE	990	400/690	95.6	95.5	94.2	0.86	10.592	281	1543	74	1492
200	Y2PE355MB6Z-NE	990	400/690	95.8	95.7	94.5	0.87	11.596	346	1929	74	1630
250	Y2PE355LA6Z-NE	990	400/690	95.8	95.7	94.6	0.87	13.826	433	2412	74	1810

# 8 pole IE3

# 400V/50Hz

# 750 rpm

$P_N$ [kW]	Motor type	$n$ [rpm]	Voltage [V]	$\eta$ 100%	$\eta$ 75%	$\eta$ 50%	$\cos \varphi$	Inertia [kgmm <sup>2</sup> ]	$I_N$ (at 400V)	Mfn	LpA 50Hz [dB(A)]	Weight B3 [kg]
0.18	Y3PE80A8	645	230/400	58.8	58.9	54.1	0.61	0.0028	0.73	2.67	41	11
0.25	Y3PE80B8	645	230/400	64.2	64.3	60.2	0.61	0.0034	0.92	3.70	41	12
0.37	Y3PE90S8	675	230/400	69.4	69.5	65.4	0.61	0.0058	1.26	5.23	45	14
0.55	Y3PE90L8	680	230/400	73.1	73.3	69.2	0.61	0.0074	1.78	7.72	45	17
0.75	Y3PE100LA8	680	230/400	75.2	75.3	71.5	0.67	0.0102	2.15	10.5	48	25
1.1	Y3PE100LB8	680	230/400	77.8	78.0	74.3	0.69	0.0124	2.96	15.4	48	27
1.5	Y3PE112M8	690	230/400	79.8	79.9	74.6	0.70	0.0277	3.88	20.8	50	30
2.2	Y3PE132S8	710	230/400	82.0	82.2	77.4	0.71	0.0355	5.46	29.6	53	43
3	Y3PE132M8	710	400/690	83.6	83.8	80.5	0.73	0.0446	7.10	40.4	53	51
4	Y3PE160MA8	720	400/690	84.9	85.1	81.7	0.73	0.0851	9.33	53.1	57	82
5.5	Y3PE160MB8	720	400/690	86.2	86.4	83.6	0.74	0.1052	12.4	73.0	57	96
7.5	Y3PE160L8	720	400/690	87.4	87.6	85.1	0.75	0.1424	16.5	99.5	57	116
4	Y2PE160MA8	720	400/690	84.9	85.1	81.7	0.73	0.0851	9.33	53.1	57	105
5.5	Y2PE160MB8	720	400/690	86.2	86.4	83.6	0.74	0.1052	12.4	73.0	57	117
7.5	Y2PE160L8	720	400/690	87.4	87.6	85.1	0.75	0.1424	16.5	99.5	57	141
11	Y2PE180L8	730	400/690	88.6	88.9	86.7	0.75	0.2294	23.9	144	59	186
15	Y2PE200L8	730	400/690	89.7	89.9	88.5	0.76	0.3831	31.8	196	62	260
18.5	Y2PE225S8	730	400/690	90.2	90.4	88.7	0.76	0.5548	39.0	242	62	302
22	Y2PE225M8	730	400/690	90.7	90.9	89.4	0.78	0.6181	44.9	288	62	319
30	Y2PE250M8	735	400/690	91.4	91.5	90.6	0.79	0.9424	60.0	390	64	407
37	Y22PE280S8Z-NE	735	400/690	91.8	91.9	90.9	0.79	1.8645	73.6	481	65	537
45	Y22PE280M8Z-NE	735	400/690	92.2	92.3	91.2	0.79	2.1809	89.2	585	65	619
55	Y2PE315S8Z-NE	735	400/690	93.0	93.0	91.5	0.81	5.4127	106	715	71	937
75	Y2PE315M8Z-NE	735	400/690	93.5	93.5	92.0	0.81	6.3054	144	974	71	1026
90	Y2PE315LA8Z-NE	735	400/690	93.7	93.5	92.0	0.82	7.1981	170	1169	71	1130
110	Y2PE315LB8Z-NE	735	400/690	94.1	94.5	92.0	0.82	8.1699	207	1429	71	1229
132	Y2PE355MA8Z-NE	740	400/690	94.7	94.4	93.1	0.82	8.9270	247	1704	79	1638
160	Y2PE355MB8Z-NE	740	400/690	94.7	94.4	93.2	0.82	11.639	299	2065	79	1725
200	Y2PE355LA8Z-NE	740	400/690	94.7	94.2	92.2	0.83	13.899	368	2581	79	1907

## Geometric Tolerance

The shaft ends, parallel keys and flanges meet the dimension and tolerance requirements specified in EN 50347 and IEC 60072. The shaft ends have a threaded borehole according to UNI 3221 and DIN 332 and a mounted parallel key. The following table specifies the tolerances for the various parts:

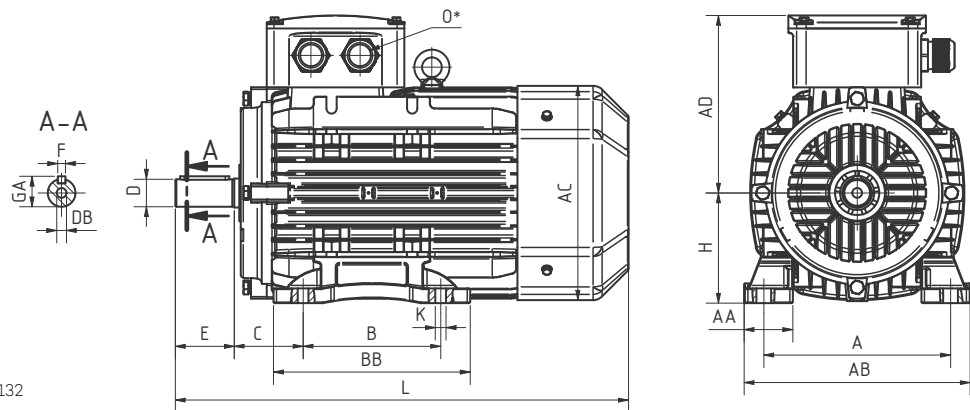
Component	Dimensions	Tolerance	
Shaft height	H	up to frame size 250 above frame size 250	0.5 mm 1 mm
Shaft end	D	$\varnothing 11 - 28$ $\varnothing 38 - 48$ $\geq \varnothing 55$	j6 k6 m6
Key	F		h9
Flange	N	$\varnothing < 250$ $\varnothing \geq 250$	j6 h6

# Y3PE B3

Aluminium

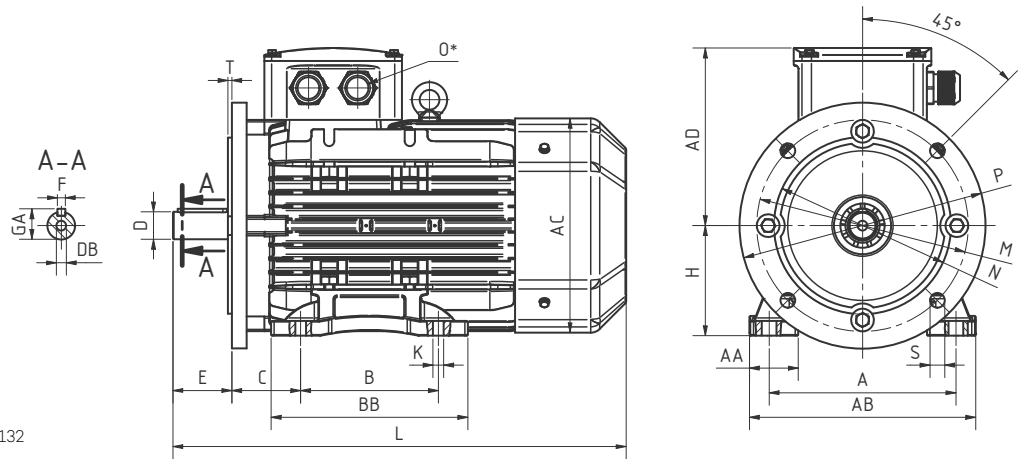
Design according to frame size 80-132

\* see table on terminal box, page 10



Frame size	Poles	A	B	C	D	E	F	H	K	L	AA	AB	AC	AD	BB	GA	DB
63	2/4/6/8	100	80	40	11	23	4	63	7	221	32	137	123	109	105	12.5	M4x12
71	2/4/6/8	112	90	45	14	30	5	71	7	245	33	150	137	123	112	16	M5x12
80	2/4/6/8	125	100	50	19	40	6	80	10	295	37	165	157	138	130	21.5	M6x16
90S	2/4/6/8	140	100	56	24	50	8	90	10	353	37	180	177	151	140	27	M8x19
90L	2/4/6/8	140	125	56	24	50	8	90	10	373	37	180	177	151	170	27	M8x19
100L	2/4/6/8	160	140	63	28	60	8	100	12	433	40	205	197	180	190	31	M10x22
112M	2/4/6/8	190	140	70	28	60	8	112	12	461	50	230	218	181	200	31	M10x22
132S	2/4/6/8	216	140	89	38	80	10	132	12	499	60	260	258	212	216	41	M12x28
132M	2/4/6/8	216	178	89	38	80	10	132	12	521	60	260	258	212	256	41	M12x28
160M	2/4/6/8	254	210	108	42	110	12	160	15	631	60	314	314	251	260	45	M16x36
160L	2/4/6/8	254	254	108	42	110	12	160	15	677	60	314	314	251	304	45	M16x36

# Y3PE B35

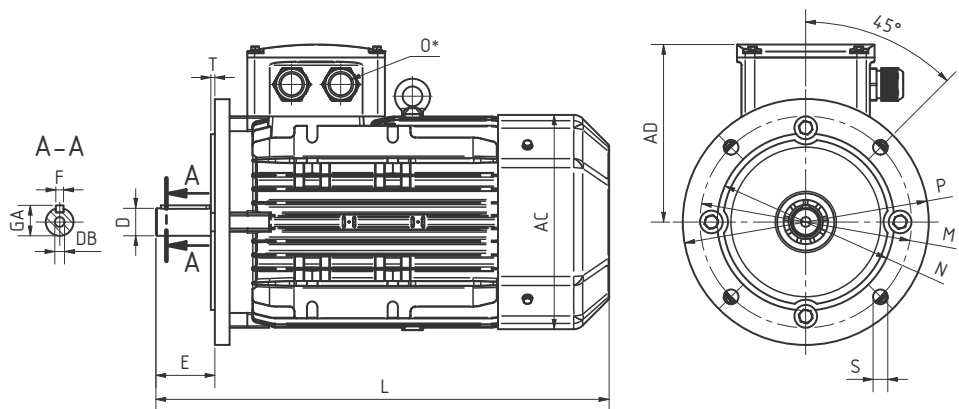


Aluminium

Design according to frame size 80-132  
\* see table on terminal box, page 10

Frame size	Poles	A	B	C	D	E	F	H	K	M	N	P	S	T	L	AA	AB	AC	AD	BB	GA	DB
63	2/4/6/8	100	80	40	11	23	4	63	7	115	95	140	10	3	221	32	137	123	109	105	12.5	M4x12
71	2/4/6/8	112	90	45	14	30	5	71	7	130	110	160	10	4	245	33	150	137	123	112	16	M5x12
80	2/4/6/8	125	100	50	19	40	6	80	10	165	130	200	12	4	295	37	165	157	138	130	21.5	M6x16
90S	2/4/6/8	140	100	56	24	50	8	90	10	165	130	200	12	4	353	37	180	177	151	140	27	M8x19
90L	2/4/6/8	140	125	56	24	50	8	90	10	165	130	200	12	4	373	37	180	177	151	170	27	M8x19
100L	2/4/6/8	160	140	63	28	60	8	100	12	215	180	250	15	4	433	40	205	197	180	190	31	M10x22
112M	2/4/6/8	190	140	70	28	60	8	112	12	215	180	250	15	4	461	50	230	218	181	200	31	M10x22
132S	2/4/6/8	216	140	89	38	80	10	132	12	265	230	300	15	4	499	60	260	258	212	216	41	M12x28
132M	2/4/6/8	216	178	89	38	80	10	132	12	265	230	300	15	4	521	60	260	258	212	256	41	M12x28
160M	2/4/6/8	254	210	108	42	110	12	160	15	300	250	350	19	5	631	60	314	314	251	260	45	M16x36
160L	2/4/6/8	254	254	108	42	110	12	160	15	300	250	350	19	5	677	60	314	314	251	304	45	M16x36

# Y3PE B5

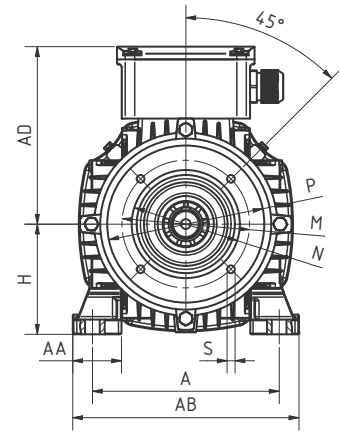
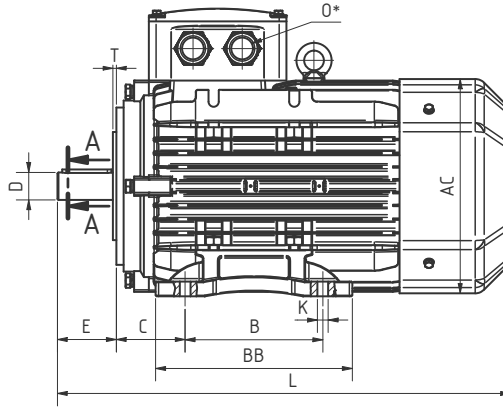
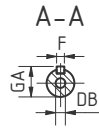


Aluminium

Design according to frame size 80-132  
\* see table on terminal box, page 10

Frame size	Poles	D	E	F	M	N	P	S	T	L	AC	AD	GA	DB
63	2/4/6/8	11	23	4	115	95	140	10	3	221	123	109	12.5	M4x12
71	2/4/6/8	14	30	5	130	110	160	10	4	245	137	123	16	M5x12
80	2/4/6/8	19	40	6	165	130	200	12	4	295	157	138	21.5	M6x16
90S	2/4/6/8	24	50	8	165	130	200	12	4	353	177	151	27	M8x19
90L	2/4/6/8	24	50	8	165	130	200	12	4	373	177	151	27	M8x19
100L	2/4/6/8	28	60	8	215	180	250	15	4	433	197	180	31	M10x22
112M	2/4/6/8	28	60	8	215	180	250	15	4	461	218	181	31	M10x22
132S	2/4/6/8	38	80	10	265	230	300	15	4	499	258	212	41	M12x28
132M	2/4/6/8	38	80	10	265	230	300	15	4	521	258	212	41	M12x28
160M	2/4/6/8	42	110	12	300	250	350	19	5	631	314	251	45	M16x36
160L	2/4/6/8	42	110	12	300	250	350	19	5	677	314	251	45	M16x36

# Y3PE B34F1

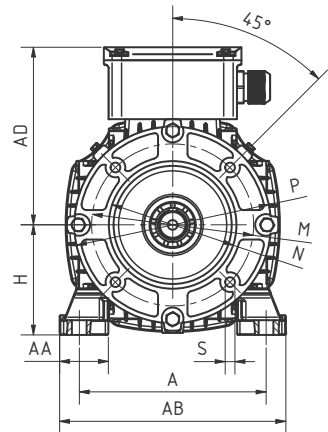
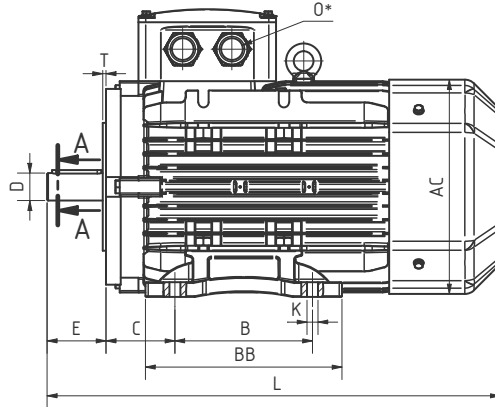
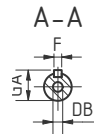


Aluminium

Design according to frame size 80-132  
\* see table on terminal box, page 10

Frame size	Poles	A	B	C	D	E	F	H	K	M	N	P	S	T	L	AA	AB	AC	AD	BB	GA	DB
63	2/4/6/8	100	80	40	11	23	4	63	7	75	60	90	M5	3	221	32	137	123	109	105	12.5	M4x12
71	2/4/6/8	112	90	45	14	30	5	71	7	85	70	105	M6	3	245	33	150	137	123	112	16	M5x12
80	2/4/6/8	125	100	50	19	40	6	80	10	100	80	120	M6	3	295	37	165	157	138	130	21.5	M6x16
90S	2/4/6/8	140	100	56	24	50	8	90	10	115	95	140	M8	3	353	37	180	177	151	140	27	M8x19
90L	2/4/6/8	140	125	56	24	50	8	90	10	115	95	140	M8	3	373	37	180	177	151	170	27	M8x19
100L	2/4/6/8	160	140	63	28	60	8	100	12	130	110	160	M8	4	433	40	205	197	180	190	31	M10x22
112M	2/4/6/8	190	140	70	28	60	8	112	12	130	110	160	M8	4	461	50	230	218	181	200	31	M10x22
132S	2/4/6/8	216	140	89	38	80	10	132	12	165	130	200	M10	4	499	60	260	258	212	216	41	M12x28
132M	2/4/6/8	216	178	89	38	80	10	132	12	165	130	200	M10	4	521	60	260	258	212	256	41	M12x28

# Y3PE B34F2

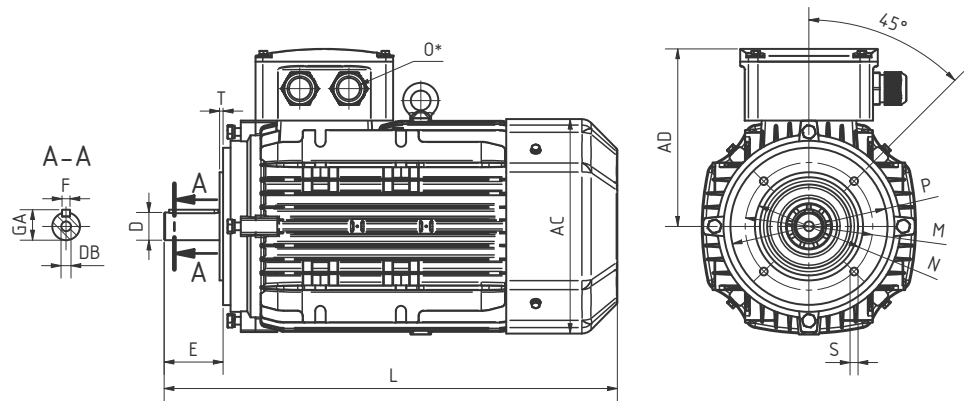


Aluminium

Design according to frame size 80-132  
\* see table on terminal box, page 10

Frame size	Poles	A	B	C	D	E	F	H	K	M	N	P	S	T	L	AA	AB	AC	AD	BB	GA	DB
63	2/4/6/8	100	80	40	11	23	4	63	7	100	80	120	M6	3	221	32	137	123	109	105	12.5	M4x12
71	2/4/6/8	112	90	45	14	30	5	71	7	115	95	140	M8	3	245	33	150	137	123	112	16	M5x12
80	2/4/6/8	125	100	50	19	40	6	80	10	130	110	160	M8	4	295	37	165	157	138	130	21.5	M6x16
90S	2/4/6/8	140	100	56	24	50	8	90	10	130	110	160	M8	4	353	37	180	177	151	140	27	M8x19
90L	2/4/6/8	140	125	56	24	50	8	90	10	130	110	160	M8	4	373	37	180	177	151	170	27	M8x19
100L	2/4/6/8	160	140	63	28	60	8	100	12	165	130	200	M10	4	433	40	205	197	180	190	31	M10x22
112M	2/4/6/8	190	140	70	28	60	8	112	12	165	130	200	M10	4	461	50	230	218	181	200	31	M10x22
132S	2/4/6/8	216	140	89	38	80	10	132	12	215	180	250	M12	4	499	60	260	258	212	216	41	M12x28
132M	2/4/6/8	216	178	89	38	80	10	132	12	215	180	250	M12	4	521	60	260	258	212	256	41	M12x28

# Y3PE B14F1

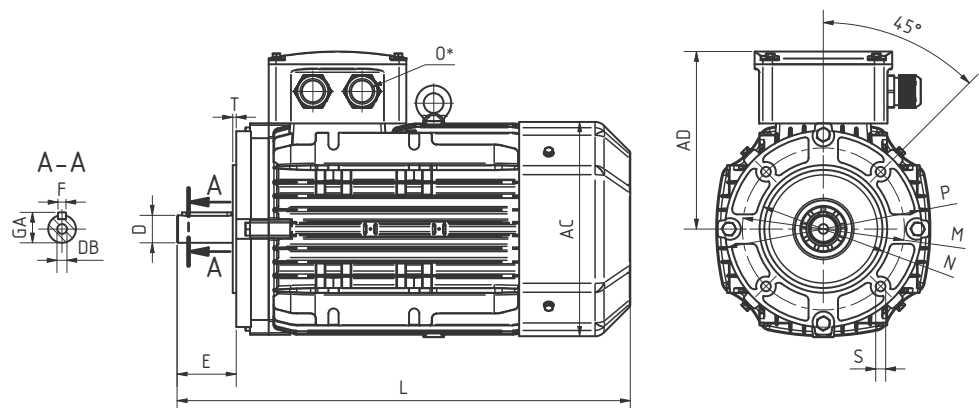


Aluminium

Design according to frame size 80-132  
\* see table on terminal box, page 10

Frame size	Poles	D	E	F	M	N	P	S	T	L	AC	AD	GA	DB
63	2/4/6/8	11	23	4	75	60	90	M5	3	221	123	109	12.5	M4x12
71	2/4/6/8	14	30	5	85	70	105	M6	3	245	137	123	16	M5x12
80	2/4/6/8	19	40	6	100	80	120	M6	3	295	157	138	21.5	M6x16
90S	2/4/6/8	24	50	8	115	95	140	M8	3	353	177	151	27	M8x19
90L	2/4/6/8	24	50	8	115	95	140	M8	3	373	177	151	27	M8x19
100L	2/4/6/8	28	60	8	130	110	160	M8	4	433	197	180	31	M10x22
112M	2/4/6/8	28	60	8	130	110	160	M8	4	461	218	181	31	M10x22
132S	2/4/6/8	38	80	10	165	130	200	M10	4	499	258	212	41	M12x28
132M	2/4/6/8	38	80	10	165	130	200	M10	4	521	258	212	41	M12x28

# Y3PE B14F2



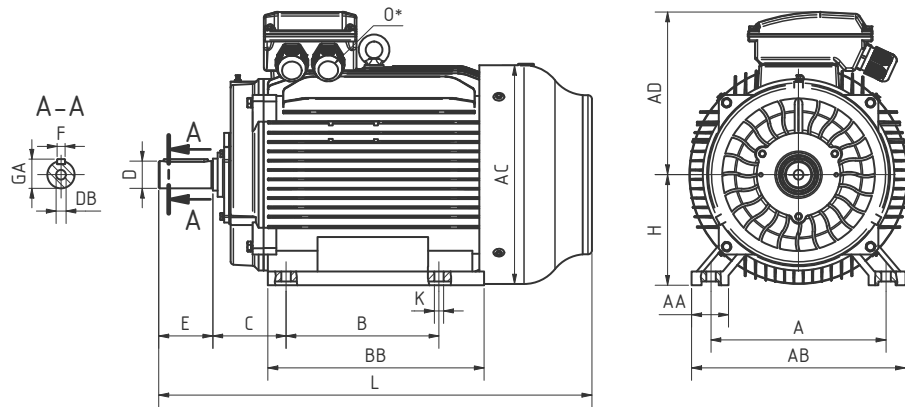
Aluminium

Design according to frame size 80-132  
\* see table on terminal box, page 10

Frame size	Poles	D	E	F	M	N	P	S	T	L	AC	AD	GA	DB
63	2/4/6/8	11	23	4	100	80	120	M6	3	221	123	109	12.5	M4x12
71	2/4/6/8	14	30	5	115	95	140	M8	3	245	137	123	16	M5x12
80	2/4/6/8	19	40	6	130	110	160	M8	4	295	157	138	21.5	M6x16
90S	2/4/6/8	24	50	8	130	110	160	M8	4	353	177	151	27	M8x19
90L	2/4/6/8	24	50	8	130	110	160	M8	4	373	177	151	27	M8x19
100L	2/4/6/8	28	60	8	165	130	200	M10	4	433	197	180	31	M10x22
112M	2/4/6/8	28	60	8	165	130	200	M10	4	461	218	181	31	M10x22
132S	2/4/6/8	38	80	10	215	180	250	M12	4	499	258	212	41	M12x28
132M	2/4/6/8	38	80	10	215	180	250	M12	4	521	258	212	41	M12x28

# Y2PE B3

Cast iron

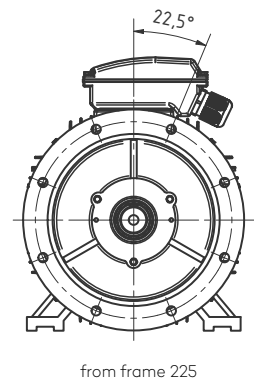
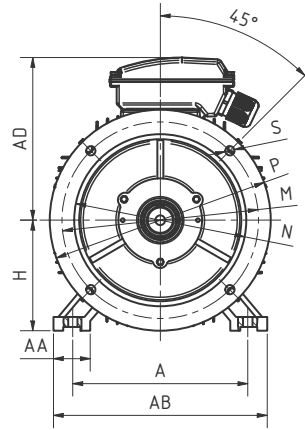
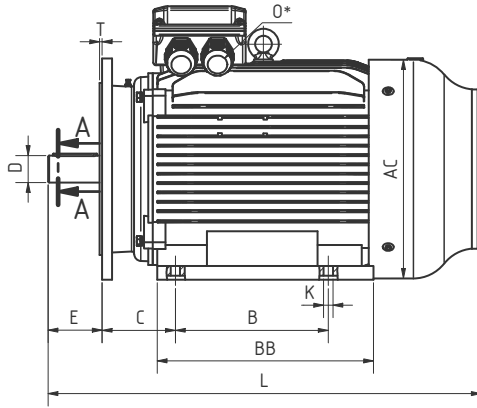
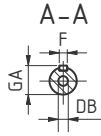


\* see table on terminal box, page 10

Frame size	Poles	A	B	C	D	E	F	H	K	L	AA	AB	AC	AD	BB	GA	DB
160M	2/4/6/8	254	210	108	42	110	12	160	15	657	60	315	314	255	260	45	M16x36
160L	2/4/6/8	254	254	108	42	110	12	160	15	725	70	320	314	255	340	45	M16x36
180M	2/4/6/8	279	241	121	48	110	14	180	15	740	70	355	355	280	350	51.5	M16x36
180L	2/4/6/8	279	279	121	48	110	14	180	15	801	70	355	355	275	275	51.5	M16x36
200L	2/4/6/8	318	305	133	55	110	16	200	19	775	70	395	397	305	370	59	M20x42
225S	4/8	356	286	149	60	140	18	225	19	848	75	435	445	323	395	64	M20x42
225M	2	356	311	149	55	110	16	225	19	882	75	435	445	323	440	59	M20x42
	4/6/8	356	311	149	60	140	18	225	19	912	75	435	445	323	440	64	M20x42
250M	2	406	349	168	60	140	18	250	24	925	80	490	483	372	440	64	M20x42
	4/6/8	406	349	168	65	140	18	250	24	925	80	490	483	372	440	69	M20x42
280S	2	457	368	190	65	140	18	280	24	991	85	542	546	398	485	69	M20x42
	4/6/8	457	368	190	65	140	18	280	24	991	85	542	546	398	485	69	M20x43
280M	2	457	419	190	65	140	18	280	24	1046	85	542	546	398	536	69	M20x42
	4/6/8	457	419	190	75	140	20	280	24	1046	85	542	546	398	536	79.5	M20x42
315S	2	508	406	216	65	140	18	315	28	1185	120	628	620	537	570	69	M20x42
	4/6/8	508	406	216	80	170	22	315	28	1225	120	628	620	537	570	85	M20x42
315M	2	508	457 & 508	216	65	140	18	315	28	1290	120	628	620	537	680	69	M20x42
	4/6/8	508	457 & 508	216	80	170	22	315	28	1320	120	628	620	537	680	85	M20x42
315L	2	508	457 & 508	216	65	140	18	315	28	1290	120	628	620	537	680	69	M20x42
	4/6/8	508	457 & 508	216	80	170	22	315	28	1320	120	628	620	537	680	85	M20x42
355M	2	610	560 & 630	254	75	140	20	355	28	1484	116	726	700	642	750	79.5	M20x42
	4/6/8	610	560 & 630	254	95	170	25	355	28	1514	116	726	700	642	750	100	M20x42
355M Z-SW	2	610	560 & 630	254	80	170	22	355	28	1514	116	726	700	642	750	85	M20x42
	4/6/8	610	560 & 630	254	100	210	28	355	28	1554	116	726	700	642	750	106	M24x56
355L	2	610	560 & 630	254	75	140	20	355	28	1484	116	726	700	642	750	79.5	M20x42
	4/6/8	610	560 & 630	254	95	170	25	355	28	1514	116	726	700	642	750	100	M20x42
355L Z-SW	2	610	560 & 630	254	80	170	22	355	28	1514	116	726	700	642	750	85	M20x42
	4/6/8	610	560 & 630	254	100	210	28	355	28	1554	116	726	700	642	750	106	M24x56



# Y2PE B35

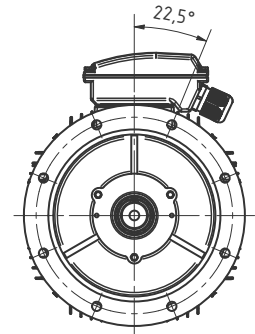
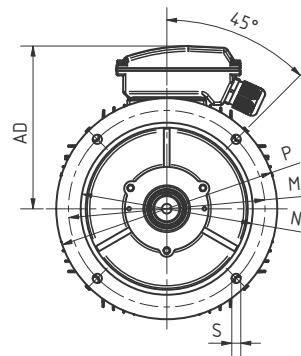
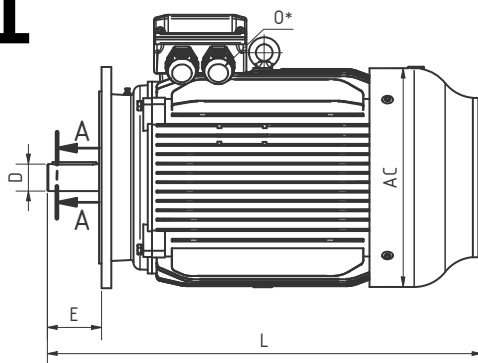
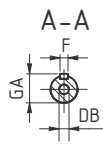


Cast iron

\* see table on terminal box, page 10

Frame size	Poles	A	B	C	D	E	F	H	K	M	N	P	S	T	L	AA	AB	AC	AD	BB	GA	DB
160M	2/4/6/8	254	210	108	42	110	12	160	15	300	250	350	19	5	657	60	315	314	255	260	45	M16x36
160L	2/4/6/8	254	254	108	42	110	12	160	15	300	250	350	19	5	725	70	320	314	255	340	45	M16x36
180M	2/4/6/8	279	241	121	48	110	14	180	15	300	250	350	19	5	740	70	355	355	280	350	51.5	M16x36
180L	2/4/6/8	279	279	121	48	110	14	180	15	300	250	350	19	5	801	70	355	355	275	275	51.5	M16x36
200L	2/4/6/8	318	305	133	55	110	16	200	19	350	300	400	19	5	775	70	395	397	305	370	59	M20x42
225S	4/8	356	286	149	60	140	18	225	19	400	350	450	19	5	848	75	435	445	323	395	64	M20x42
225M	2	356	311	149	55	110	16	225	19	400	350	450	19	5	882	75	435	445	323	440	59	M20x42
	4/6/8	356	311	149	60	140	18	225	19	400	350	450	19	5	912	75	435	445	323	440	64	M20x42
250M	2	406	349	168	60	140	18	250	24	500	450	550	19	5	925	80	490	483	372	440	64	M20x42
	4/6/8	406	349	168	65	140	18	250	24	500	450	550	19	5	925	80	490	483	372	440	69	M20x42
280S	2	457	368	190	65	140	18	280	24	500	450	550	19	5	991	85	542	546	398	485	69	M20x42
	4/6/8	457	368	190	65	140	18	280	24	500	450	550	19	5	991	85	542	546	398	485	69	M20x43
280M	2	457	419	190	65	140	18	280	24	500	450	550	19	5	1046	85	542	546	398	536	69	M20x42
	4/6/8	457	419	190	75	140	20	280	24	500	450	550	19	5	1046	85	542	546	398	536	79.5	M20x42
315S	2	508	406	216	65	140	18	315	28	600	550	660	24	6	1185	120	628	620	537	570	69	M20x42
	4/6/8	508	406	216	80	170	22	315	28	600	550	660	24	6	1225	120	628	620	537	570	85	M20x42
315M	2	508	457 & 508	216	65	140	18	315	28	600	550	660	24	6	1290	120	628	620	537	680	69	M20x42
	4/6/8	508	457 & 508	216	80	170	22	315	28	600	550	660	24	6	1320	120	628	620	537	680	85	M20x42
315L	2	508	457 & 508	216	65	140	18	315	28	600	550	660	24	6	1290	120	628	620	537	680	69	M20x42
	4/6/8	508	457 & 508	216	80	170	22	315	28	600	550	660	24	6	1320	120	628	620	537	680	85	M20x42
355M	2	610	560 & 630	254	75	140	20	355	28	740	680	800	24	6	1484	116	726	700	642	750	79.5	M20x42
	4/6/8	610	560 & 630	254	95	170	25	355	28	740	680	800	24	6	1514	116	726	700	642	750	100	M20x42
355M Z-SW	2	610	560 & 630	254	80	170	22	355	28	740	680	800	24	6	1514	116	726	700	642	750	106	M20x42
	4/6/8	610	560 & 630	254	100	210	28	355	28	740	680	800	24	6	1554	116	726	700	642	750	106	M24x56
355L	2	610	560 & 630	254	75	140	20	355	28	740	680	800	24	6	1484	116	726	700	642	750	79.5	M20x42
	4/6/8	610	560 & 630	254	95	170	25	355	28	740	680	800	24	6	1514	116	726	700	642	750	100	M20x42
355L Z-SW	2	610	560 & 630	254	80	170	22	355	28	740	680	800	24	6	1514	116	726	700	642	750	106	M20x42
	4/6/8	610	560 & 630	254	100	210	28	355	28	740	680	800	24	6	1554	116	726	700	642	750	106	M24x56

# Y2PE B5/V1



from frame 225

Cast iron

\* see table on terminal box, page 10

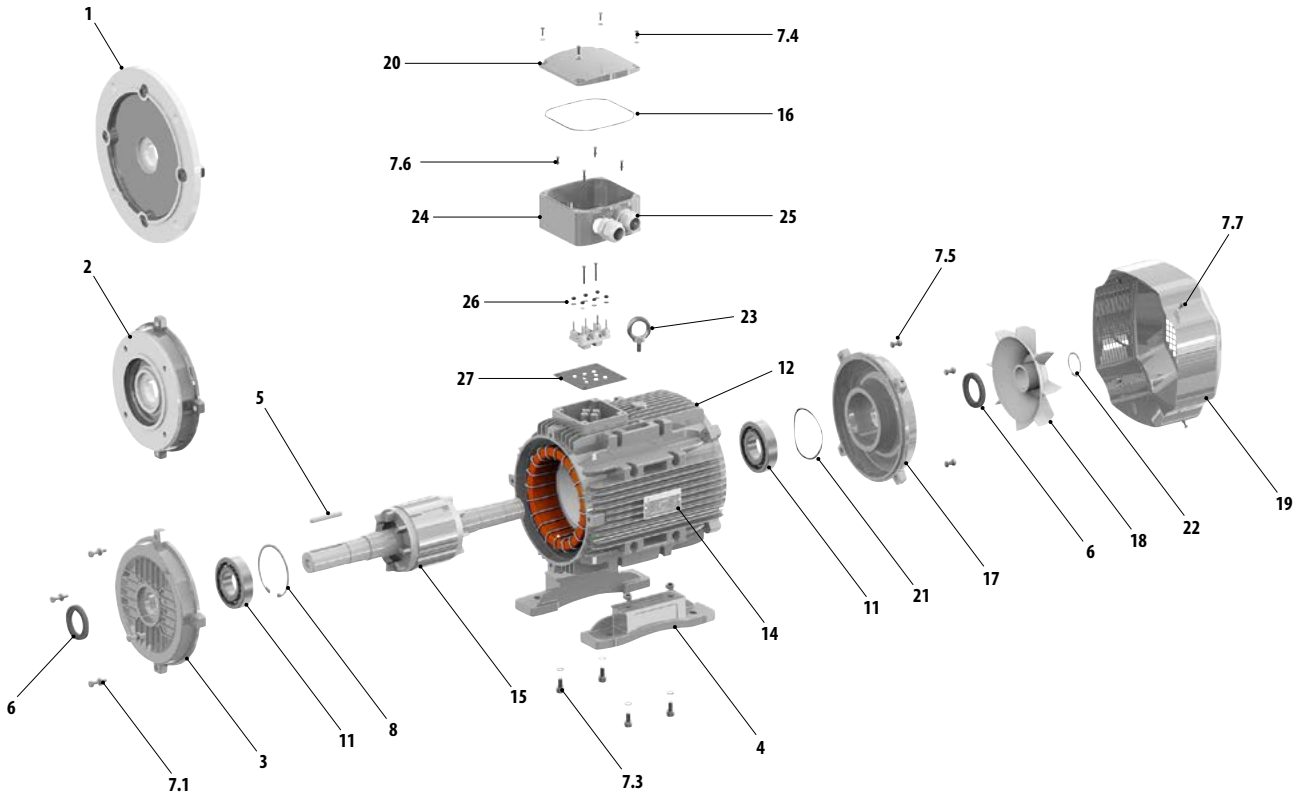
Frame size	Poles	D	E	F	M	N	P	S	T	L	AC	AD	GA	DB
160M	2/4/6/8	42	110	12	300	250	350	19	5	657	314	255	45	M16x36
160L	2/4/6/8	42	110	12	300	250	350	19	5	725	314	255	45	M16x36
180M	2/4/6/8	48	110	14	300	250	350	19	5	740	355	280	51.5	M16x36
180L	2/4/6/8	48	110	14	300	250	350	19	5	801	355	275	51.5	M16x36
200L	2/4/6/8	55	110	16	350	300	400	19	5	775	397	305	59	M20x42
225S	4/8	60	140	18	400	350	450	19	5	848	445	323	64	M20x42
225M	2	55	110	16	400	350	450	19	5	882	445	323	59	M20x42
	4/6/8	60	140	18	400	350	450	19	5	912	445	323	64	M20x42
250M	2	60	140	18	500	450	550	19	5	925	483	372	64	M20x42
	4/6/8	65	140	18	500	450	550	19	5	925	483	372	69	M20x42
280S	2	65	140	18	500	450	550	19	5	991	546	398	69	M20x42
	4/6/8	65	140	18	500	450	550	19	5	991	546	398	69	M20x43
280M	2	65	140	18	500	450	550	19	5	1046	546	398	69	M20x42
	4/6/8	75	140	20	500	450	550	19	5	1046	546	398	79.5	M20x42
315S	2	65	140	18	600	550	660	24	6	1185	620	537	69	M20x42
	4/6/8	80	170	22	600	550	660	24	6	1225	620	537	85	M20x42
315M	2	65	140	18	600	550	660	24	6	1290	620	537	69	M20x42
	4/6/8	80	170	22	600	550	660	24	6	1320	620	537	85	M20x42
315L	2	65	140	18	600	550	660	24	6	1290	620	537	69	M20x42
	4/6/8	80	170	22	600	550	660	24	6	1320	620	537	85	M20x42
355M	2	75	140	20	740	680	800	24	6	1484	700	642	79.5	M20x42
	4/6/8	95	170	25	740	680	800	24	6	1514	700	642	100	M20x42
355M Z-SW	2	80	170	22	740	680	800	24	6	1514	700	642	106	M20x42
	4/6/8	100	210	28	740	680	800	24	6	1554	700	642	106	M24x56
355L	2	75	140	20	740	680	800	24	6	1484	700	642	79.5	M20x42
	4/6/8	95	170	25	740	680	800	24	6	1514	700	642	100	M20x42
355L Z-SW	2	80	170	22	740	680	800	24	6	1514	700	642	106	M20x42
	4/6/8	100	210	28	740	680	800	24	6	1554	700	642	106	M24x56

## Available Options with Description

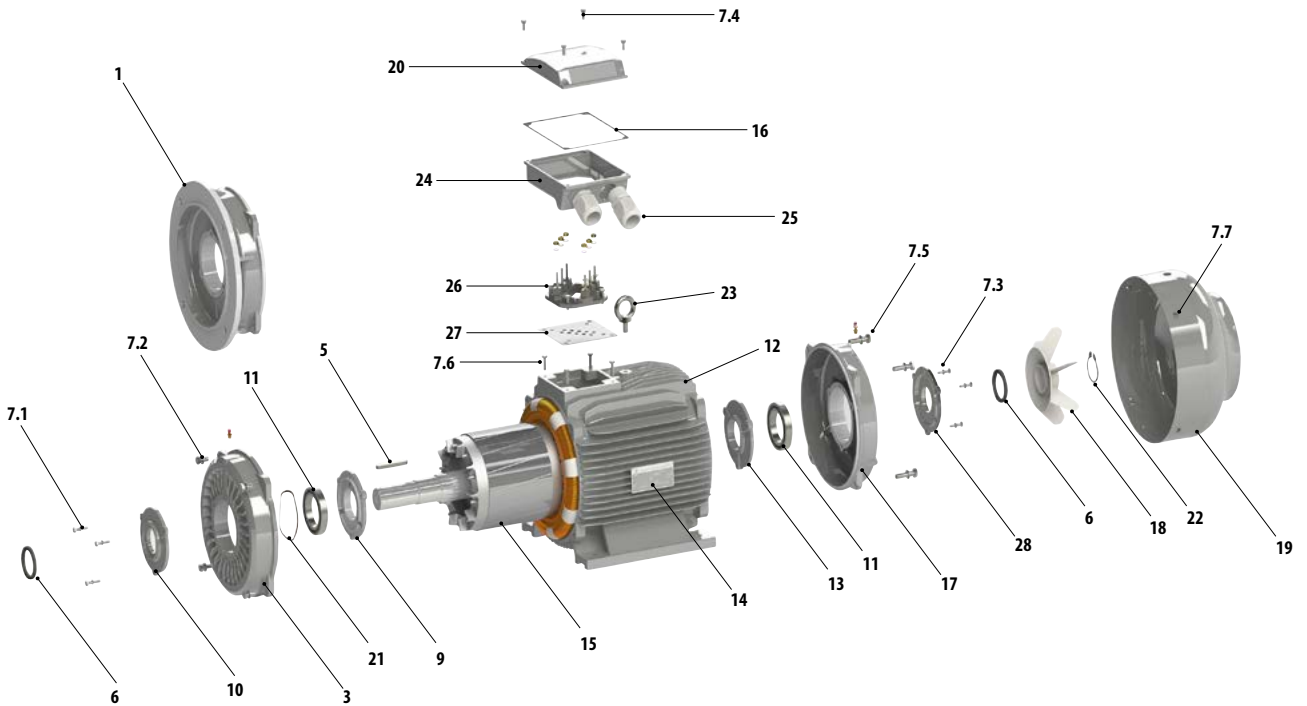
Z-UF	Special voltage and/or frequency ( $\neq$ 230-400V or 400-690V/50Hz)
Z-S2	Temporary duty xx min
Z-S3	Intermittent duty xx %
Z-EF	Self-manufactured
Z-TA	execution for increased ambient temperature
Z-EA	execution for altitude > 1000m above sea level
Z-LN	Neutral name plate
Z-LK	Customer name plate
Z-LO	Customer related name plate
Z-LZ	Second additional name plate loose in the packaging
Z-LM	Metal name plate
Z-ML	Metal fan
Z-MH	Metal fan cover
Z-MK	Metal terminal box
Z-LG	End shields cast iron
Z-SR	Special rotor
Z-NT	Ambient temperatur -20°C to -40°C
Z-IH	Winding Insulation class H
Z-HM	Motor housing suitable for Insulation class H
Z-WF	Winding suitable for inverter duty
Z-WTI	Winding tropicalized
Z-WT	Water-repellent winding varnishing
Z-KT	Water-repellent motor-inside varnishing
Z-TG	Motor tropicalized
Z-MA	Marine version
Z-VK	Terminal box with potting compound
Z-55	IP55 protection
Z-56	IP56 protection
Z-65	IP65 protection
Z-66	IP66 protection
Z-UB	Totally enclosed, non-ventilated
Z-VW	Winding with potting compound
Z-TM	Encapsulated motors IP67
Z-OK	Oil resistant insulation system
Z-WV	Viton shaft seals
Z-WD	Oil-tight shaft seal
Z-WDN	Shaft seal with stainless steel spring
Z-WSL	Shaft seal with dust and sealing lip
Z-LD	Labyrinth seal AS/BS
Z-VL	Forced bearing for increased radial load DE
Z-SK	Angular ball bearing NDE for increased axial load construction type V1
Z-IL	Insulated bearing NDE
Z-FA	Locked bearing DE adhesive bond
Z-FAS	Locked bearing DE grooved ring
Z-FB	Locked bearing NDE
Z-RS	Back stop
Z-SL	Special bearing
Z-SKF	SKF bearing
Z-SPM	SPM transducer, specified by customer
Z-SPB	Drilling to mount SPM transducer
Z-ST	Vibration transmitter, specified by customer
Z-NE	Greasing device DE/NDE
Z-KB	Drain holes DE/NDE
Z-SR	Stainless steel screws
Z-VB	Reduced balance grade B
Z-ZW	Double shaft extension
Z-SW	Customised shaft

Z-DK	PTC protection
Z-DW	PTC for warning/switch off
Z-TO	PTO protection
Z-TS	PTS protection
Z-TOA	PTO protection/single phase motor
Z-PW	PT100 for winding monitoring
Z-KTY	Winding temperature measuring KTY 84-130
Z-PL	PT100 bearing monitoring DE/NDE
Z-PLA	PT100 bearing monitoring DE
Z-PLB	PT100 bearing monitoring NDE
Z-PL4	PT100 bearing monitoring DE/NDE (four-wire circuit)
Z-SH	Anti condensation heating 230V
Z-RD	Rain canopy
Z-TK	Fan cover for textile application
Z-RAL	Special painting RALxxxx
Z-RAL 00	Unpainted, sandblasted
Z-0000	Transparent paint
Z-EP	Epoxy paint RALxxxx C5-M (offshore)
Z-CL	Outer chemical protective paint coat
Z-SF	Customised flange according description
Z-KR	Terminal box on the right side
Z-KL	Terminal box on the left side
Z-KGA	Terminal box on the NDE side
Z-KZB	Terminal box with second terminal board (inverter duty brake motor)
Z-GF	removeable feet
Z-SA	Motor with cam switch
Z-SU	Motor with cam switch for both directions
Z-SD	Motor with star/delta switch
Z-DU	Motor with star/delta switch for both directions
Z-MS	Motor with motor protection switch
Z-KS	Motor with plug/switch-combination
Z-KG	Motor with mounted cable and plug
Z-KV	Metal cable glands
Z-KD	Cable connection
Z-LA	20cm leads, no terminal box and -board
Z-KAM	Motor with mounted cable
Z-FLD	Forced ventilation 3x400V
Z-FLE	Forced ventilation 1x230V
Z-DG	Rotary pulse encoder
Z-RE	Resolver
Z-SC	Sinus-cosinus Encoder
Z-GD	Motor for Zone 1 and 21
Z-NS	Ex protection zone 21,22 non sparking IP65
Z-HE	Ex protection Zone 22 IP55
Z-PZ	Approval EN 10204
Z-CS	CSA approval
Z-CSM	CSA/UL material approval
Z-UL	UL approval
Z-CC	China Energy Label sticker
Z-CCC	DOE/CC number (USA)
Z-GO	GOST approval
Z-EG	Extended warranty
Z-KXXX	Customised execution (first characters of customer name)
Z-Z	Special motor with multiple options according to item additional text
Z-MA	Marine execution
Z-LG	Endshields cast iron

Spare parts for motor series Y3PE



Spare parts for motor series Y2PE





# Our product portfolio

## MOTORS

- Three-phase motors**  
IE1, IE2, IE3, IE4, IE5  
0,06 – 2.400 kW in frame 56 – 630  
3.000/1.500/1.000/750/600/500 rpm  
and further
- DC-motors**  
0,24 - 112 kW in frame 71 - 180  
higher powers on request
- Brake motors**  
0,09 – 90 kW in frame 63 – 280  
3.000/1.500/1.000/750 rpm  
double-speed for theater applications
- Double-speed constant torque motors**  
frame 63 – 315
- Motors for high ambient temperature**
- Crane motors**
- Servo motors**
- Shaded pole motors**
- Torque motors**
- Spindle motors**
- Single-phase motors**  
0,09 – 5,5 kW in frame 56–132  
3.000/1.500/1.000 rpm also with increased  
starting torque
- Permanent magnet DC-motors**  
30 - 4.400 W in frame 63 - 90  
12/24/48/90/180 V
- Vibration motors**  
centrifugal force: 0 – 200.000 N  
3.000/1.500/1.000/750/600/500 rpm.
- Frequency inverter motors**  
0,37 – 7,5 kW
- Water cooled motors**
- Medium- and high-voltage motors**
- Built-in and special motor**
- Rotating frequency converters**
- Synchron motors**
- Unterwater motors**
- Explosion proof motors**  
Zone 1, 2, 21 & 22  
0,09 – 315 kW in frame 56 – 355  
3.000/1.500/1.000/750 rpm  
double-speed execution also available
- Circular saw motors**  
1,5 – 9 kW  
3.000/1.500 rpm
- Drum motors**  
0,025 – 132 kW  
Belt speed: 0,05 – 4,50 m/s  
diameter: 72 – 800mm
- Double-speed fan-rated motors**  
frame 63 – 315
- Reluctance motors**
- Rotating field magnets**
- Cooling fluid pumps**
- Motor switch & motor protection switch**
- High frequency motors**
- Small-power motors**

## GEARBOXES

- Helical gearboxes & -motors**  
also ex-proof  
Output torque M2: 45 – 12.000 Nm  
Ratio: 1:2,6 – 1:1.481
- Parallel shaft gearboxes & -motors**  
also ex-proof  
Output torque M2: 140 - 14.000 Nm  
Ratio: 1:6,4 - 1:2.188
- Bevel helical gearboxes & -motors**  
Output torque M2: 28.200 - 210.000 Nm  
Ratio: 1:5,6 - 1:400
- Industrial gearboxes & -motors**  
Output torque M2: 5000 - 21.000 Nm
- Planetary gearboxes for hydraulic motors**
- Low-backlash planetary gearboxes & -motors**  
Output torque M2: 12 - 1.000 Nm  
Ratio:  
1:3,0 (1-stage) - 1:1.000 (3-stage)
- Bevel gearboxes & -motors**  
also ex-proof  
Output torque M2: 100 - 14.000 Nm  
Ratio: 1:5,4 - 1:1.715
- Shaft mounted gearboxes**  
Output torque M2: 150 - 16.000 Nm  
Ratio: 1:5,0 - 1:31,5
- Extruder gearboxes & -motors**  
Output torque M2: 4650 - 75.000 Nm
- Spindle gears & -motors**
- Worm gearboxes & -motors**  
also ex-proof  
Output torque M2: 13 - 7.100 Nm  
Ratio: 1:7 - 1:10.000
- Planetary gearboxes & -motors**  
also ex-proof  
Output torque M2: 1250 – 1286700 Nm  
Ratio: 1:3,4 - 1:5234
- Shaded-pole gear motors**
- Small geared motors**
- Right angle gearboxes**  
Output torque M2: 3 - 3.000 Nm
- Customised gearboxes**

## SPEEDVARIATORS/INVERTERS

- Mechanical speed variators & -motors**  
1,5 – 9 kW 3.000/1.500 rpm  
(reduction by a differential unit)
- Speedcontroller for DC-motors**  
0,01 – 3,7 kW
- Frequency inverter motors**  
0,37 – 7,5 kW
- Digital inverters**  
0,2 – 800 kW detached-mounting,  
cabinet-mounting, motor-mounting
- Servodrive inverter**
- Encoders**  
Absolute and incremental encoders
- Mains-unit (feed-in/feed-back)**

## DRIVE COMPONENTS

### Hydro dynamic couplings

P 0,37 - 1.000 kW  
suitable for couplings- and belt-drive

### Couplings

6 - 55.000 Nm

### Flexible couplings

23 - 2454 Nm

### Torque couplings

70 - 10.000 Nm

### Electromagnetic brake couplings

8 - 75 Nm

### Zero backlash steel couplings

18 - 46.000 Nm

### Conical clamping elements

14 - 365.000 Nm

### Screw-on-hubs and weld-on-hubs

Ø 105 - 350 mm

### V-belt pulleys aluminium

SPA, SPB, SPZ Ø 40 - 500 mm

### V-belt pulleys cast Iron

SPA, SPB, SPC, SPZ Ø 40 - 1.200 mm

### Extruder gearboxes & -motors

Torque M2: 4650 Nm - 75.000 Nm

### Poly-V-belt pulley with taper bush

Profile J,L,M Ø 62 - 720 mm

### Timing pulley for taper bush

Ø 60 - 909 mm

### Belts

### Sprockets and wheels for taper bush

Ø 50 - 933 mm

### Motor slide rails

for frame 63 - 355 Motors

### Adjustable base plates

0,37 - 7,5 kW

## GENERATORS

### Generating sets with petrol-, diesel- and gasengines

0,8 - 2000 kVA.

### Power take-off driven generators

self-produced  
8,0 - 60 kVA

### Windalternators

0,4 - 5 kW

### Dynamic voltage- and frequency inverters

(for network simulation in test panels)

### Synchronous alternators

1,0 - 2.500 kVA  
3.000/1.500 rpm

### Asynchronous alternators

### Welding alternators

130 - 500 A, 4 - 15 kVA

### Welding gen sets

### DC-Alternators

### 400 Hz Alternators

## SERVICES

### 24h-SERVICE-HOTLINE 0900 150060\*

(only available for direct calls from Austria)

### Repairs

### Rewindings and special design

### Dynamically balancing up to 3 tons

### Express-service

### Customer service – industrial facilities

### Customer service – pumps

### Control- and feedbacksystems

### Automation

### Panelbuilding

### SIEMENS Solution Partner

Standard Drives Motors - SIMOLOG

### SIEMENS Servo motors repair

SIMODRIVE RRC / SERCO

### Laser-aided alignment of couplings and belt transmissions

(also on-site service)

### Bearing and windingconduction measuring

(also on-site service)

### Energy efficiency consultation

### Development and implementation of automation projects

### Pickup- and delivery service (only in Austria)

24-hours delivery guarantee for stock articles 24- hours

delivery guarantee for "Best" gears

Just-in-time delivery by frame contracts

Best price guarantee (same product, same brand)



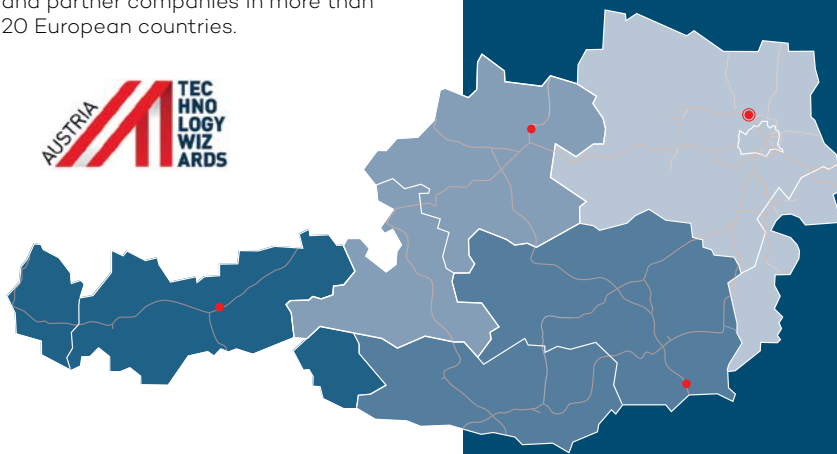
# MOLL-MOTOR Mechatronische Antriebstechnik GmbH

A-2000 Stockerau, Industriestraße 8  
Telefon: +43 2266 63421-0  
Fax: +43 2266 63421-80

**office@mollmotor.at**  
**www.mollmotor.at**  
**Service-Hotline: 0900 150060\***

## DISTRIBUTION

Our goods are available at our headquarter, at three regional sales offices in Austria and at sales offices and partner companies in more than 20 European countries.



### GERMANY

Phone: +49 6023 96909-11  
Fax: +49 6023 96909-09  
Email: info@mollmotor.de

### POLAND

Phone: +48 61 6604 666  
Email: info@mollmotor.pl

### BALTICS

Phone: +371 27 00 77 22  
Email: info@energostar.lv

## YOUR INQUIRY IS WHAT DRIVES US!

Regardless what challenge in drive technology is ahead of you – you can always rely on our well-stocked product portfolio and our know-how!

### MOTORS

Three-phase motors in a power range from 0,06kW up to 355kW and a speed range from 750rpm to 3000rpm are ready for delivery on day-to-day basis. Beyond that, single-phase-, EX-proof-, vibration-, circular saw-, double-speed motors and many more are available on stock or to order.

### GEARS

All common types of gear boxes, like helical-, worm-, planetary-, bevel-, or parallel shaft gearboxes are being mounted in our workshop according to customer needs. Our experienced sales team helps you to find the perfect fit for your application.

### SPEEDVARIATORS/INVERTERS

Your application can run on variable speed either by using a mechanical speed variator or a digital inverter. Our experienced employees can advice you accordingly.

### DRIVE COMPONENTS

A wide range of couplings, pulleys, sprockets and clamping elements are available at your MOLL-MOTOR contact person and help you to transmit the force of your drive to your application.

### GENERATORS

We produce generating sets to be driven by a tractor's power-take-off. Furthermore we are able to cover your demand for diesel- or wind alternators as well.

### SERVICES

We repair and rewind gears and motors – not only for you, but also for SIEMENS. We provide our service in our workshop as well as in the field. Call us for diagnosis, for laser-aided alignment of couplings and belt transmissions and much more. In Austria you can even call us 24/7 at our Service-Hotline!

Another highly appreciated service is project planning by our sales engineers, e.g. for special executions (with 3D drawings), for cabinets or assemblies.



# MOLL-MOTOR

DIE MECHATRONISCHE ANTRIEBSTECHNIK

†All data is subject to change without prior notice.  
\*with costs – only available in Austria