# Helical worm geared motors

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## Orientation

### Overview

MOTOX helical worm gearboxes are part of the MOTOX modular system. With helical, bevel helical, helical worm, or variable speed gearboxes and three-phase AC motors with or without brakes, this system covers all possible drive combinations, right up to electronic variable speed drives.

MOTOX helical worm gearboxes are designed for continuous duty. The sealed gearbox housings, made from gray cast iron or aluminum, are strong and absorb vibrations. A housing cover is not required for installing toothed components, which means that the housings are extremely rigid. Radial shaft seals with dust-protection lips prevent oil from leaking out of the housing and dust and water from entering it.
The gear wheels of the helical gear stages are milled and their surfaces hardened. The tooth flanks are ground or honed so that they are convex and corrected in terms of the profile.

## Overview (continued)

Helical worm gearboxes are designated as follows:

Gearbox type:

**C** Hel ical worm gearbox

Transmission stage (-) Unspecified

Type:

Shaft (-) Solid shaft
**A** Hollow shaft

Mounting (-) Foot-mounted design
**F** Flange-mounted design (A-type)
**Z** Housing flange (C-type)
**D** Torque arm
**G** Flange (A-type) on opposite side to output shaft

Connections (-) Feather key
**S** Shrink disk
**T** Hollow shaft with splined shaft

Type of intermediate gearbox

(-) Hel ical gearbox

Transmission stage **Z** 2-stage
**D** 3-stage

Input unit

**K2** Coupling lantern with flexible coupling for connecting an IEC motor

**K2TC** Coupling lantern with flexible coupling for connecting a NEMA motor [1)]

**K4** Short coupling lantern with clamp connection for connecting an IEC motor

**K5** Short coupling lantern with clamp connection for connecting a NEMA motor [1)]

**KQ** Lantern for servomotor with feather key and zero-backlash flexible coupling for connecting a servomotor

**KQS** Lantern for servomotor without feather key and zero-backlash flexible coupling for connecting a servomotor

**A** Input unit with free input shaft

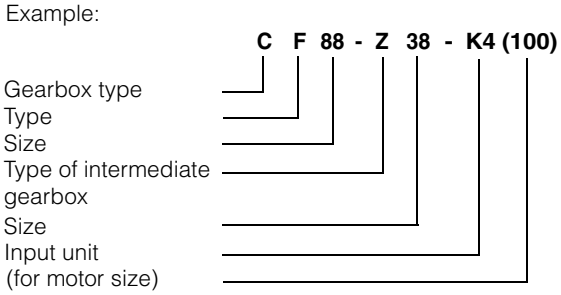
**A5** Input unit with free input shaft (NEMA design) [1)]

**P** Input unit with free input shaft and piggy back for connecting an IEC motor

**P5** Input unit with free input shaft and piggy back for connecting a NEMA motor [1)]

**PS** Input unit with free input shaft and piggy back with protection cover

Example:




The series currently comprises 4 gearbox sizes.

Helical worm gearboxes are available in a 2-stage version.

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[1)] These designs can be selected from our MOTOX Configurator electronic catalog.

**Overview** (continued)

***Worm and wheel sets with CAVEX gearing***

CAVEX concave-profile worm and wheel sets are used for size 38 and above. The concave-profile cylindrical worm with its enveloping worm wheel is very much different to conventional designs. The worm threads have a concave profile instead of an involute or convex one.

The concave-profile teeth are subject to only low specific tooth pressure. The retention of a separating oil film between the tooth flanks is facilitated in particular, as the hollow flanks are in contact with convex mating flanks. Therefore, profile contact is much more favorable than in conventional gear teeth systems.

The concave-profile teeth provide a particularly favorable position for the instantaneous axes, which extend mainly at right angles to the sliding direction. This assists the build-up of lubricating pressure, i.e. the generation of an oil film between the tooth flanks.

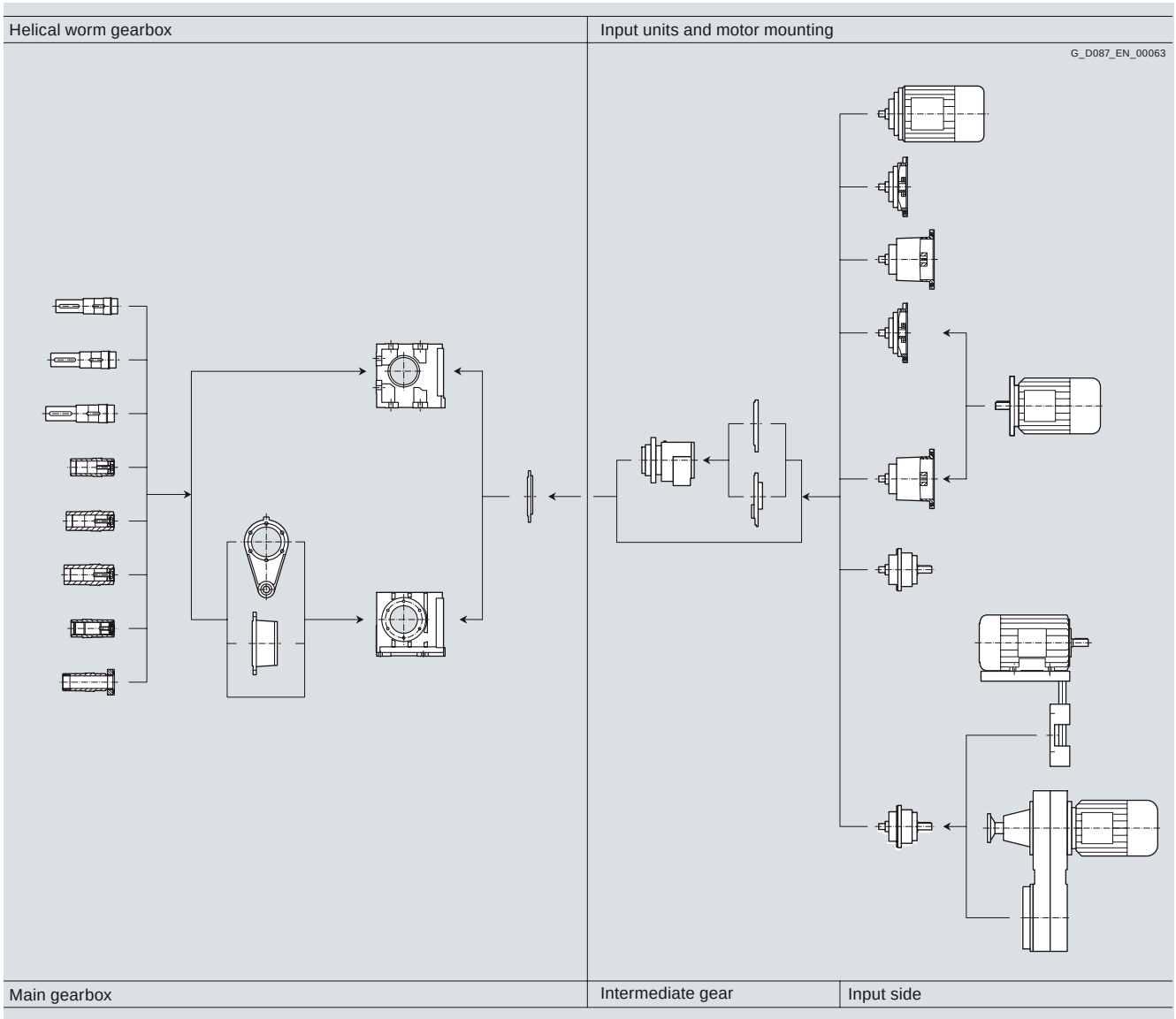
The tooth flanks on new gearboxes will not yet be fully smoothed, meaning that the friction angle will be greater and efficiency lower during initial operation. The smaller the lead angle or, in other words, the higher the transmission ratio, the more pronounced the effect. The run-in procedure should take approximately 24 to 30 hours of operation at full load.

Starting efficiency is never as great as the efficiency at operating speed. This fact should be taken into account when starting a machine at full load, depending on the starting characteristics of the motor.

Attention: In respect of torque driving back from the output shaft, please take into account the reduced gear tooth efficiency $\eta' = 2 - 1/\eta$, particularly with high transmission ratios of the worm gear stage ($\eta$ = efficiency with driving worm).

Self-locking only occurs at high worm transmission ratios, which are not used for sizes 28 to 88.

*Modular system*




## Use

MOTOX helical worm gearboxes are also ideal in difficult installation conditions. They reach high transmission ratios despite their extremely compact dimensions.

Helical worm gearboxes allow output flanges or torque arms to be attached in accordance with the relevant requirements.

Output shafts are available in different versions and diameters, as solid or hollow shafts.

Helical worm gearboxes are characterized by their very low noise emissions.

## Oil quantities

The oil quantities corresponding to the applicable mounting positions are specified in the operating instructions and on the rating plate.

## General technical data

### Permissible radial force $F_{Rperm1}$

2-stage helical worm gearbox – standard bearing arrangement

| Gearbox type | d mm | l mm | y mm | z mm | a kNmm | $F_{Rperm}$ in N with x = l/2 for output speeds $n_2$ in rpm: Direction of rotation when viewing the output shaft | ≤ 16 | ≤ 25 | ≤ 40 | ≤ 63 | ≤ 100 | ≤ 160 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CF28 | 20 | 40 | 138 | 118 | 64.2 | Left | 3 210 | 3 210 | 3 210 | 3 210 | – | – |
| | | | | | | Right | 3 210 | 3 210 | 3 210 | 3 210 | – | – |
| CF38 | 25 | 50 | 146 | 121 | 152.5 | Left | 5 240 | 5 380 | 4 060 | 3 440 | 2 800 | 2 420 |
| | | | | | | Right | 5 540 | 5 570 | 4 560 | 3 940 | 3 260 | 2 800 |
| CF48 | 30 | 60 | 176 | 146 | 255.0 | Left | 8 500 | 8 500 | 6 700 | 5 500 | 4 730 | 4 090 |
| | | | | | | Right | 8 500 | 8 500 | 7 350 | 6 010 | 5 190 | 4 480 |
| CF68 | 40 | 80 | 213 | 173 | 440.0 | Left | 10 060 | 7 830 | 6 660 | 5 750 | 4 630 | 4 670 |
| | | | | | | Right | 10 450 | 8 650 | 7 410 | 6 390 | 5 330 | 5 220 |
| CF88 | 50 | 100 | 262 | 212 | 845.0 | Left | 13 980 | 12 390 | 10 560 | 9 040 | 7 460 | 6 820 |
| | | | | | | Right | 14 640 | 13 270 | 11 300 | 9 680 | 8 400 | 7 620 |

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2-stage helical worm gearbox – reinforced bearing arrangement

| Gearbox type | d mm | l mm | y mm | z mm | a kNmm | $F_{Rperm}$ in N with x = l/2 for output speeds $n_2$ in rpm: Direction of rotation when viewing the output shaft | ≤ 16 | ≤ 25 | ≤ 40 | ≤ 63 | ≤ 100 | ≤ 160 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CF68 | 40 | 80 | 213 | 173 | 440 | Left | 11 000 | 11 000 | 11 000 | 11 000 | 11 000 | 11 000 |
| | | | | | | Right | 11 000 | 11 000 | 11 000 | 11 000 | 11 000 | 11 000 |
| CF88 | 50 | 100 | 262 | 212 | 845 | Left | 16 900 | 16 900 | 16 900 | 16 900 | 16 900 | 16 900 |
| | | | | | | Right | 16 900 | 16 900 | 16 900 | 16 900 | 16 900 | 16 900 |

The values in the table apply to the worst-case scenario.
The output shaft bearing arrangement can be calculated using our MOTOX Configurator electronic catalog.
See Chapter 1 of the configuring guide for more information on calculating the permissible radial force.

For worm gearboxes, the values are the same whether they refer to a "clockwise" or "counterclockwise" direction of rotation, when viewing the output shaft.

The calculation does not include additional axial forces.
If the direction of rotation of the output shaft and the additional axial forces are known or the values in the table are insufficient, a calculation can be performed on request.

## Selection and ordering data

The selection tables show the most common variants and combinations. Other combinations can be selected using our MOTOX Configurator or made available on request.

At an identical power rating and output speed, priority is given in the selection tables to 4-pole geared motors.

At the available transmission ratios, they cover the majority of output speeds.

Due to their prevalence, 4-pole geared motors are easily available, with short delivery times and at a low cost. They also feature a favorable size / power ratio.

| Power rating $P_{Motor}$ | Output speed | | Output torque | Service factor | Gearbox ratio | | Order No. | Order code | Weight *) |
|---|---|---|---|---|---|---|---|---|---|
| kW | $n_2$ (50 Hz) rpm | $n_2$ (60 Hz) rpm | $T_2$ Nm | $f_B$ | $i_{tot}$ | | | (No. of poles) | kg |
| **0.09** (50 Hz) | **C.48-LA71M8** | | | | | | | | |
| 0.11 (60 Hz) | **2.0** | **2.4** | 241 | 1.5 | 320.67 | ★ | **2KJ1602 - ■CE13 - ■■K2** | **P02** | 30 |
| | **2.2** | **2.6** | 217 | 1.7 | 284.70 | | **2KJ1602 - ■CE13 - ■■J2** | **P02** | 30 |
| | **2.5** | **3.0** | 194 | 1.9 | 249.60 | ★ | **2KJ1602 - ■CE13 - ■■H2** | **P02** | 30 |
| | **2.8** | **3.4** | 180 | 2.0 | 320.67 | ★ | **2KJ1602 - ■CB13 - ■■K2** | **P02** | 30 |
| | **C.38-LA71M8** | | | | | | | | |
| | **2.0** | **2.4** | 230 | 0.97 | 320.67 | ★ | **2KJ1601 - ■CE13 - ■■K2** | **P02** | 22 |
| | **2.2** | **2.6** | 207 | 1.1 | 284.70 | | **2KJ1601 - ■CE13 - ■■J2** | **P02** | 22 |
| | **2.5** | **3.0** | 185 | 1.2 | 249.60 | ★ | **2KJ1601 - ■CE13 - ■■H2** | **P02** | 22 |
| | **C.38-LA71B6** | | | | | | | | |
| | **2.8** | **3.4** | 171 | 1.3 | 320.67 | ★ | **2KJ1601 - ■CB13 - ■■K2** | **P01** | 22 |
| | **3.1** | **3.7** | 155 | 1.4 | 284.70 | | **2KJ1601 - ■CB13 - ■■J2** | **P01** | 22 |
| | **3.5** | **4.2** | 139 | 1.6 | 249.60 | ★ | **2KJ1601 - ■CB13 - ■■H2** | **P01** | 22 |
| | **4.0** | **4.8** | 126 | 1.8 | 223.36 | | **2KJ1601 - ■CB13 - ■■G2** | **P01** | 22 |
| **0.12** (50 Hz) | **C.88-D28-LA71B4** | | | | | | | | |
| 0.14 (60 Hz) | **0.21** | **0.25** | 1 913 | 0.83 | 6 722 | | **2KJ1615 - ■CB13 - ■■A1** | | 77 |
| | **C.88-Z28-LA71B4** | | | | | | | | |
| | **0.23** | **0.28** | 1 739 | 0.91 | 6 016 | ★ | **2KJ1614 - ■CB13 - ■■B2** | | 76 |
| | **0.26** | **0.31** | 1 554 | 1.0 | 5 342 | | **2KJ1614 - ■CB13 - ■■A2** | | 76 |
| | **0.30** | **0.36** | 1 374 | 1.2 | 4 683 | ★ | **2KJ1614 - ■CB13 - ■■X1** | | 76 |
| | **0.33** | **0.40** | 1 239 | 1.3 | 4 191 | | **2KJ1614 - ■CB13 - ■■W1** | | 76 |
| | **0.38** | **0.46** | 1 109 | 1.4 | 3 719 | ★ | **2KJ1614 - ■CB13 - ■■V1** | | 76 |
| | **0.43** | **0.52** | 983 | 1.6 | 3 260 | | **2KJ1614 - ■CB13 - ■■U1** | | 76 |
| | **0.49** | **0.59** | 874 | 1.8 | 2 866 | ★ | **2KJ1614 - ■CB13 - ■■T1** | | 76 |
| | **0.54** | **0.65** | 798 | 2.0 | 2 589 | | **2KJ1614 - ■CB13 - ■■S1** | | 76 |
| | **C.68-Z28-LA71B4** | | | | | | | | |
| | **0.51** | **0.61** | 846 | 0.80 | 2 745 | | **2KJ1610 - ■CB13 - ■■U1** | | 49 |
| | **0.58** | **0.70** | 751 | 0.90 | 2 414 | ★ | **2KJ1610 - ■CB13 - ■■T1** | | 49 |
| | **0.64** | **0.77** | 683 | 0.99 | 2 180 | | **2KJ1610 - ■CB13 - ■■S1** | | 49 |
| | **0.74** | **0.89** | 602 | 1.1 | 1 900 | ★ | **2KJ1610 - ■CB13 - ■■R1** | | 49 |
| | **0.82** | **0.98** | 545 | 1.2 | 1 706 | | **2KJ1610 - ■CB13 - ■■Q1** | | 49 |
| | **0.91** | **1.1** | 497 | 1.4 | 1 541 | ★ | **2KJ1610 - ■CB13 - ■■P1** | | 49 |
| | **1.0** | **1.2** | 455 | 1.5 | 1 397 | | **2KJ1610 - ■CB13 - ■■N1** | | 49 |
| | **1.1** | **1.3** | 419 | 1.6 | 1 271 | ★ | **2KJ1610 - ■CB13 - ■■M1** | | 49 |
| | **1.2** | **1.4** | 376 | 1.8 | 1 124 | | **2KJ1610 - ■CB13 - ■■L1** | | 49 |
| | **1.3** | **1.6** | 350 | 1.9 | 1 038 | ★ | **2KJ1610 - ■CB13 - ■■K1** | | 49 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **0.12** (50 Hz) 0.14 (60 Hz) | **C.68-LA71MB8** | | | | | | | | |
| | **1.8** | **2.2** | 380 | 1.8 | 364.00 | ★ | **2KJ1603 - ■CF13 - ■■U2** | **P02** | 47 |
| | **2.0** | **2.4** | 344 | 2.0 | 323.70 | | **2KJ1603 - ■CF13 - ■■T2** | **P02** | 47 |
| | **C.48-Z28-LA71B4** | | | | | | | | |
| | **0.98** | **1.2** | 432 | 0.84 | 1 422 | | **2KJ1607 - ■CB13 - ■■Q1** | | 34 |
| | **1.1** | **1.3** | 394 | 0.93 | 1 284 | ★ | **2KJ1607 - ■CB13 - ■■P1** | | 34 |
| | **1.2** | **1.4** | 360 | 1.0 | 1 164 | | **2KJ1607 - ■CB13 - ■■N1** | | 34 |
| | **1.3** | **1.6** | 331 | 1.1 | 1 059 | ★ | **2KJ1607 - ■CB13 - ■■M1** | | 34 |
| | **1.5** | **1.8** | 297 | 1.2 | 937 | | **2KJ1607 - ■CB13 - ■■L1** | | 34 |
| | **1.6** | **1.9** | 277 | 1.3 | 865 | ★ | **2KJ1607 - ■CB13 - ■■K1** | | 34 |
| | **1.9** | **2.3** | 243 | 1.5 | 745 | | **2KJ1607 - ■CB13 - ■■J1** | | 34 |
| | **C.48-LA71MB8** | | | | | | | | |
| | **2.0** | **2.4** | 315 | 1.2 | 320.67 | ★ | **2KJ1602 - ■CF13 - ■■K2** | **P02** | 30 |
| | **2.3** | **2.8** | 284 | 1.3 | 284.70 | | **2KJ1602 - ■CF13 - ■■J2** | **P02** | 30 |
| | **2.6** | **3.1** | 254 | 1.4 | 249.60 | ★ | **2KJ1602 - ■CF13 - ■■H2** | **P02** | 30 |
| | **C.48-LA71C6** | | | | | | | | |
| | **2.7** | **3.2** | 246 | 1.5 | 320.67 | ★ | **2KJ1602 - ■CC13 - ■■K2** | **P01** | 30 |
| | **3.0** | **3.6** | 223 | 1.6 | 284.70 | | **2KJ1602 - ■CC13 - ■■J2** | **P01** | 30 |
| | **3.4** | **4.1** | 200 | 1.8 | 249.60 | ★ | **2KJ1602 - ■CC13 - ■■H2** | **P01** | 30 |
| | **3.9** | **4.7** | 182 | 2.0 | 223.36 | | **2KJ1602 - ■CC13 - ■■G2** | **P01** | 30 |
| | **C.38-Z28-LA71B4** | | | | | | | | |
| | **1.6** | **1.9** | 264 | 0.84 | 865 | ★ | **2KJ1605 - ■CB13 - ■■K1** | | 25 |
| | **1.9** | **2.3** | 231 | 0.96 | 745 | | **2KJ1605 - ■CB13 - ■■J1** | | 25 |
| | **C.38-LA71MB8** | | | | | | | | |
| | **2.3** | **2.8** | 271 | 0.83 | 284.70 | | **2KJ1601 - ■CF13 - ■■J2** | **P02** | 22 |
| | **2.6** | **3.1** | 242 | 0.93 | 249.60 | ★ | **2KJ1601 - ■CF13 - ■■H2** | **P02** | 22 |
| | **C.38-LA71C6** | | | | | | | | |
| | **2.7** | **3.2** | 234 | 0.96 | 320.67 | ★ | **2KJ1601 - ■CC13 - ■■K2** | **P01** | 22 |
| | **3.0** | **3.6** | 212 | 1.1 | 284.70 | | **2KJ1601 - ■CC13 - ■■J2** | **P01** | 22 |
| | **3.4** | **4.1** | 189 | 1.2 | 249.60 | ★ | **2KJ1601 - ■CC13 - ■■H2** | **P01** | 22 |
| | **3.9** | **4.7** | 173 | 1.3 | 223.36 | | **2KJ1601 - ■CC13 - ■■G2** | **P01** | 22 |
| | **C.38-LA71B4** | | | | | | | | |
| | **4.4** | **5.3** | 155 | 1.4 | 320.67 | ★ | **2KJ1601 - ■CB13 - ■■K2** | | 22 |
| | **4.9** | **5.9** | 141 | 1.6 | 284.70 | | **2KJ1601 - ■CB13 - ■■J2** | | 22 |
| | **5.6** | **6.7** | 126 | 1.8 | 249.60 | ★ | **2KJ1601 - ■CB13 - ■■H2** | | 22 |
| | **6.3** | **7.6** | 114 | 2.0 | 223.36 | | **2KJ1601 - ■CB13 - ■■G2** | | 22 |
| | **C.28-LA71B4** | | | | | | | | |
| | **5.6** | **6.7** | 134 | 0.88 | 248.00 | | **2KJ1600 - ■CB13 - ■■M1** | | 10 |
| | **6.9** | **8.3** | 109 | 0.91 | 202.24 | | **2KJ1600 - ■CB13 - ■■L1** | | 10 |
| | **9.0** | **10.8** | 94 | 1.2 | 155.00 | | **2KJ1600 - ■CB13 - ■■K1** | | 10 |
| | **11.1** | **13.3** | 77 | 1.2 | 126.40 | | **2KJ1600 - ■CB13 - ■■J1** | | 10 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **0.12** (50 Hz) 0.14 (60 Hz) | **C.28-LA71B4** | | | | | | | | |
| | **15.1** | **18.1** | 63 | 1.9 | 93.00 | | **2KJ1600 - ■CB13 - ■■H1** | | 10 |
| | **18.5** | **22** | 51 | 1.9 | 75.84 | | **2KJ1600 - ■CB13 - ■■G1** | | 10 |
| | **23** | **28** | 44 | 2.7 | 62.00 | | **2KJ1600 - ■CB13 - ■■F1** | | 10 |
| | **28** | **34** | 36 | 2.6 | 50.56 | | **2KJ1600 - ■CB13 - ■■E1** | | 10 |
| | **30** | **36** | 34 | 3.2 | 46.50 | | **2KJ1600 - ■CB13 - ■■D1** | | 10 |
| | **37** | **44** | 28 | 3.2 | 37.92 | | **2KJ1600 - ■CB13 - ■■C1** | | 10 |
| | **45** | **54** | 23 | 4.3 | 31.00 | | **2KJ1600 - ■CB13 - ■■B1** | | 10 |
| | **55** | **66** | 19 | 4.3 | 25.28 | | **2KJ1600 - ■CB13 - ■■A1** | | 10 |
| **0.18** (50 Hz) 0.22 (60 Hz) | **C.88-Z28-LA71C4** | | | | | | | | |
| | **0.37** | **0.44** | 1 885 | 0.84 | 3 719 | ★ | **2KJ1614 - ■CC13 - ■■V1** | | 76 |
| | **0.42** | **0.50** | 1 671 | 0.95 | 3 260 | | **2KJ1614 - ■CC13 - ■■U1** | | 76 |
| | **0.48** | **0.58** | 1 486 | 1.1 | 2 866 | ★ | **2KJ1614 - ■CC13 - ■■T1** | | 76 |
| | **0.53** | **0.64** | 1 356 | 1.2 | 2 589 | | **2KJ1614 - ■CC13 - ■■S1** | | 76 |
| | **0.61** | **0.73** | 1 199 | 1.3 | 2 256 | ★ | **2KJ1614 - ■CC13 - ■■R1** | | 76 |
| | **0.68** | **0.82** | 1 091 | 1.5 | 2 026 | | **2KJ1614 - ■CC13 - ■■Q1** | | 76 |
| | **0.75** | **0.9** | 998 | 1.6 | 1 829 | ★ | **2KJ1614 - ■CC13 - ■■P1** | | 76 |
| | **0.83** | **1.0** | 917 | 1.7 | 1 659 | | **2KJ1614 - ■CC13 - ■■N1** | | 76 |
| | **0.91** | **1.1** | 846 | 1.9 | 1 510 | ★ | **2KJ1614 - ■CC13 - ■■M1** | | 76 |
| | **C.68-Z28-LA71C4** | | | | | | | | |
| | **0.89** | **1.1** | 845 | 0.80 | 1 541 | ★ | **2KJ1610 - ■CC13 - ■■P1** | | 49 |
| | **0.98** | **1.2** | 774 | 0.87 | 1 397 | | **2KJ1610 - ■CC13 - ■■N1** | | 49 |
| | **1.1** | **1.3** | 711 | 0.95 | 1 271 | ★ | **2KJ1610 - ■CC13 - ■■M1** | | 49 |
| | **1.2** | **1.4** | 638 | 1.1 | 1 124 | | **2KJ1610 - ■CC13 - ■■L1** | | 49 |
| | **1.3** | **1.6** | 595 | 1.1 | 1 038 | ★ | **2KJ1610 - ■CC13 - ■■K1** | | 49 |
| | **1.5** | **1.8** | 522 | 1.3 | 893 | | **2KJ1610 - ■CC13 - ■■J1** | | 49 |
| | **1.7** | **2.0** | 481 | 1.4 | 812 | ★ | **2KJ1610 - ■CC13 - ■■H1** | | 49 |
| | **C.68-LA80S8** | | | | | | | | |
| | **2.1** | **2.5** | 497 | 1.4 | 323.70 | | **2KJ1603 - ■DB13 - ■■T2** | **P02** | 51 |
| | **C.68-LA71S6** | | | | | | | | |
| | **2.3** | **2.8** | 452 | 1.5 | 364.00 | ★ | **2KJ1603 - ■CD13 - ■■U2** | **P01** | 47 |
| | **2.6** | **3.1** | 409 | 1.7 | 323.70 | | **2KJ1603 - ■CD13 - ■■T2** | **P01** | 47 |
| | **3.0** | **3.6** | 363 | 1.9 | 280.80 | ★ | **2KJ1603 - ■CD13 - ■■S2** | **P01** | 47 |
| | **3.2** | **3.8** | 343 | 2.0 | 262.36 | | **2KJ1603 - ■CD13 - ■■R2** | **P01** | 47 |
| | **C.48-Z28-LA71C4** | | | | | | | | |
| | **1.8** | **2.2** | 412 | 0.89 | 745 | | **2KJ1607 - ■CC13 - ■■J1** | | 34 |
| | **C.48-LA80S8** | | | | | | | | |
| | **2.1** | **2.5** | 454 | 0.81 | 320.67 | ★ | **2KJ1602 - ■DB13 - ■■K2** | **P02** | 34 |
| | **2.4** | **2.9** | 410 | 0.89 | 284.70 | | **2KJ1602 - ■DB13 - ■■J2** | **P02** | 34 |
| | **2.7** | **3.2** | 373 | 0.98 | 320.67 | ★ | **2KJ1602 - ■CD13 - ■■K2** | **P02** | 30 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **0.18** (50 Hz) 0.22 (60 Hz) | **C.48-LA71S6** | | | | | | | | |
| | **3.0** | **3.6** | 337 | 1.1 | 284.70 | | **2KJ1602 - ■CD13 - ■■J2** | **P01** | 30 |
| | **3.4** | **4.1** | 302 | 1.2 | 249.60 | ★ | **2KJ1602 - ■CD13 - ■■H2** | **P01** | 30 |
| | **3.8** | **4.6** | 275 | 1.3 | 223.36 | | **2KJ1602 - ■CD13 - ■■G2** | **P01** | 30 |
| | **C.48-LA71C4** | | | | | | | | |
| | **4.3** | **5.2** | 250 | 1.5 | 320.67 | ★ | **2KJ1602 - ■CC13 - ■■K2** | | 30 |
| | **4.8** | **5.8** | 226 | 1.6 | 284.70 | | **2KJ1602 - ■CC13 - ■■J2** | | 30 |
| | **5.5** | **6.6** | 202 | 1.8 | 249.60 | ★ | **2KJ1602 - ■CC13 - ■■H2** | | 30 |
| | **6.1** | **7.3** | 184 | 2.0 | 223.36 | | **2KJ1602 - ■CC13 - ■■G2** | | 30 |
| | **C.38-LA71S6** | | | | | | | | |
| | **3.8** | **4.6** | 261 | 0.86 | 223.36 | | **2KJ1601 - ■CD13 - ■■G2** | **P01** | 22 |
| | **C.38-LA71C4** | | | | | | | | |
| | **4.3** | **5.2** | 237 | 0.95 | 320.67 | ★ | **2KJ1601 - ■CC13 - ■■K2** | | 22 |
| | **4.8** | **5.8** | 215 | 1.0 | 284.70 | | **2KJ1601 - ■CC13 - ■■J2** | | 22 |
| | **5.5** | **6.6** | 192 | 1.2 | 249.60 | ★ | **2KJ1601 - ■CC13 - ■■H2** | | 22 |
| | **6.1** | **7.3** | 175 | 1.3 | 223.36 | | **2KJ1601 - ■CC13 - ■■G2** | | 22 |
| | **6.9** | **8.3** | 158 | 1.4 | 198.25 | ★ | **2KJ1601 - ■CC13 - ■■F2** | | 22 |
| | **7.9** | **9.5** | 140 | 1.6 | 173.73 | | **2KJ1601 - ■CC13 - ■■E2** | | 22 |
| | **9.0** | **10.8** | 125 | 1.8 | 152.75 | ★ | **2KJ1601 - ■CC13 - ■■D2** | | 22 |
| | **9.9** | **11.9** | 114 | 2.0 | 138.00 | | **2KJ1601 - ■CC13 - ■■C2** | | 22 |
| | **C.28-LA71C4** | | | | | | | | |
| | **8.8** | **10.6** | 144 | 0.81 | 155.00 | | **2KJ1600 - ■CC13 - ■■K1** | | 10 |
| | **10.8** | **13.0** | 118 | 0.8 | 126.40 | | **2KJ1600 - ■CC13 - ■■J1** | | 10 |
| | **14.7** | **17.6** | 96 | 1.2 | 93.00 | | **2KJ1600 - ■CC13 - ■■H1** | | 10 |
| | **18.1** | **22** | 78 | 1.2 | 75.84 | | **2KJ1600 - ■CC13 - ■■G1** | | 10 |
| | **22** | **26** | 68 | 1.7 | 62.00 | | **2KJ1600 - ■CC13 - ■■F1** | | 10 |
| | **27** | **32** | 55 | 1.7 | 50.56 | | **2KJ1600 - ■CC13 - ■■E1** | | 10 |
| | **30** | **36** | 52 | 2.1 | 46.50 | | **2KJ1600 - ■CC13 - ■■D1** | | 10 |
| | **36** | **43** | 43 | 2.1 | 37.92 | | **2KJ1600 - ■CC13 - ■■C1** | | 10 |
| | **44** | **53** | 36 | 2.8 | 31.00 | | **2KJ1600 - ■CC13 - ■■B1** | | 10 |
| | **54** | **65** | 29 | 2.8 | 25.28 | | **2KJ1600 - ■CC13 - ■■A1** | | 10 |
| **0.25** (50 Hz) 0.30 (60 Hz) | **C.88-Z28-LA71S4** | | | | | | | | |
| | **0.60** | **0.72** | 1 782 | 0.89 | 2 256 | ★ | **2KJ1614 - ■CD13 - ■■R1** | | 76 |
| | **0.67** | **0.80** | 1 621 | 0.98 | 2 026 | | **2KJ1614 - ■CD13 - ■■Q1** | | 76 |
| | **0.74** | **0.89** | 1 482 | 1.1 | 1 829 | ★ | **2KJ1614 - ■CD13 - ■■P1** | | 76 |
| | **0.81** | **0.97** | 1 362 | 1.2 | 1 659 | | **2KJ1614 - ■CD13 - ■■N1** | | 76 |
| | **0.89** | **1.1** | 1 257 | 1.3 | 1 510 | ★ | **2KJ1614 - ■CD13 - ■■M1** | | 76 |
| | **1.0** | **1.2** | 1 132 | 1.4 | 1 335 | | **2KJ1614 - ■CD13 - ■■L1** | | 76 |
| | **1.1** | **1.3** | 1 058 | 1.5 | 1 232 | ★ | **2KJ1614 - ■CD13 - ■■K1** | | 76 |
| | **1.3** | **1.6** | 934 | 1.7 | 1 061 | | **2KJ1614 - ■CD13 - ■■J1** | | 76 |
| | **1.4** | **1.7** | 863 | 1.8 | 964 | ★ | **2KJ1614 - ■CD13 - ■■H1** | | 76 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ | Output speed | | Output torque | Service factor | Gearbox ratio | | Order No. | Order code | Weight *) |
|---|---|---|---|---|---|---|---|---|---|
| kW | $n_2$ (50 Hz) rpm | $n_2$ (60 Hz) rpm | $T_2$ Nm | $f_B$ | $i_{tot}$ | | | (No. of poles) | kg |
| **0.25** (50 Hz) | **C.88-Z28-LA71S4** | | | | | | | | |
| 0.30 (60 Hz) | **1.5** | **1.8** | 894 | 1.8 | 877 | ★ | **2KJ1614 - ■CD13 - ■■G1** | | 76 |
| | **C.88-LA80M8** | | | | | | | | |
| | **1.6** | **1.9** | 928 | 1.6 | 440.70 | | **2KJ1604 - ■DC13 - ■■T2** | **P02** | 78 |
| | **1.8** | **2.2** | 840 | 1.9 | 390.00 | ★ | **2KJ1604 - ■DC13 - ■■S2** | **P02** | 78 |
| | **1.9** | **2.3** | 777 | 2.0 | 354.55 | | **2KJ1604 - ■DC13 - ■■R2** | **P02** | 78 |
| | **C.88-LA71M6** | | | | | | | | |
| | **2** | **2.4** | 771 | 2.0 | 440.70 | | **2KJ1604 - ■CE13 - ■■T2** | **P01** | 74 |
| | **C.68-Z28-LA71S4** | | | | | | | | |
| | **1.5** | **1.8** | 775 | 0.87 | 893 | | **2KJ1610 - ■CD13 - ■■J1** | | 49 |
| | **1.7** | **2.0** | 714 | 0.95 | 812 | ★ | **2KJ1610 - ■CD13 - ■■H1** | | 49 |
| | **C.68-LA80M8** | | | | | | | | |
| | **2.1** | **2.5** | 681 | 0.99 | 323.70 | | **2KJ1603 - ■DC13 - ■■T2** | **P02** | 51 |
| | **C.68-LA71M6** | | | | | | | | |
| | **2.4** | **2.9** | 621 | 1.1 | 364.00 | ★ | **2KJ1603 - ■CE13 - ■■U2** | **P01** | 47 |
| | **2.7** | **3.2** | 563 | 1.2 | 323.70 | | **2KJ1603 - ■CE13 - ■■T2** | **P01** | 47 |
| | **3.1** | **3.7** | 499 | 1.4 | 280.80 | ★ | **2KJ1603 - ■CE13 - ■■S2** | **P01** | 47 |
| | **3.3** | **4.0** | 472 | 1.4 | 262.36 | | **2KJ1603 - ■CE13 - ■■R2** | **P01** | 47 |
| | **C.68-LA71S4** | | | | | | | | |
| | **3.7** | **4.4** | 425 | 1.6 | 364.00 | ★ | **2KJ1603 - ■CD13 - ■■U2** | | 47 |
| | **4.2** | **5.0** | 385 | 1.8 | 323.70 | | **2KJ1603 - ■CD13 - ■■T2** | | 47 |
| | **4.8** | **5.8** | 340 | 2.0 | 280.80 | ★ | **2KJ1603 - ■CD13 - ■■S2** | | 47 |
| | **5.1** | **6.1** | 321 | 2.1 | 262.36 | | **2KJ1603 - ■CD13 - ■■R2** | | 47 |
| | **C.48-LA71M6** | | | | | | | | |
| | **3.4** | **4.1** | 416 | 0.88 | 249.60 | ★ | **2KJ1602 - ■CE13 - ■■H2** | **P01** | 30 |
| | **3.9** | **4.7** | 379 | 0.97 | 223.36 | | **2KJ1602 - ■CE13 - ■■G2** | **P01** | 30 |
| | **C.48-LA71S4** | | | | | | | | |
| | **4.2** | **5.0** | 352 | 1.0 | 320.67 | ★ | **2KJ1602 - ■CD13 - ■■K2** | | 30 |
| | **4.7** | **5.6** | 318 | 1.2 | 284.70 | | **2KJ1602 - ■CD13 - ■■J2** | | 30 |
| | **5.4** | **6.5** | 285 | 1.3 | 249.60 | ★ | **2KJ1602 - ■CD13 - ■■H2** | | 30 |
| | **6.0** | **7.2** | 259 | 1.4 | 223.36 | | **2KJ1602 - ■CD13 - ■■G2** | | 30 |
| | **6.8** | **8.2** | 234 | 1.6 | 198.25 | ★ | **2KJ1602 - ■CD13 - ■■F2** | | 30 |
| | **7.8** | **9.4** | 208 | 1.8 | 173.73 | | **2KJ1602 - ■CD13 - ■■E2** | | 30 |
| | **8.8** | **10.6** | 185 | 2.0 | 152.75 | ★ | **2KJ1602 - ■CD13 - ■■D2** | | 30 |
| | **C.38-LA71S4** | | | | | | | | |
| | **5.4** | **6.5** | 270 | 0.83 | 249.60 | ★ | **2KJ1601 - ■CD13 - ■■H2** | | 22 |
| | **6.0** | **7.2** | 246 | 0.92 | 223.36 | | **2KJ1601 - ■CD13 - ■■G2** | | 22 |
| | **6.8** | **8.2** | 222 | 1.0 | 198.25 | ★ | **2KJ1601 - ■CD13 - ■■F2** | | 22 |
| | **7.8** | **9.4** | 198 | 1.1 | 173.73 | | **2KJ1601 - ■CD13 - ■■E2** | | 22 |
| | **8.8** | **10.6** | 176 | 1.3 | 152.75 | ★ | **2KJ1601 - ■CD13 - ■■D2** | | 22 |
| | **9.8** | **11.8** | 161 | 1.4 | 138.00 | | **2KJ1601 - ■CD13 - ■■C2** | | 22 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **0.25** (50 Hz) 0.30 (60 Hz) | **C.38-LA71S4** | | | | | | | | |
| | **11.2** | **13.4** | 141 | 1.6 | 120.25 | ★ | **2KJ1601 - ■CD13 - ■■B2** | | 22 |
| | **12.5** | **15.0** | 128 | 1.8 | 108.00 | | **2KJ1601 - ■CD13 - ■■A2** | | 22 |
| | **13.8** | **16.6** | 116 | 2.0 | 97.50 | ★ | **2KJ1601 - ■CD13 - ■■X1** | | 22 |
| | **15.3** | **18.4** | 105 | 2.1 | 88.40 | | **2KJ1601 - ■CD13 - ■■W1** | | 22 |
| | **16.8** | **20** | 96 | 2.3 | 80.44 | ★ | **2KJ1601 - ■CD13 - ■■V1** | | 22 |
| | **22** | **26** | 91 | 2.2 | 60.30 | ★ | **2KJ1601 - ■CD13 - ■■S1** | | 22 |
| | **C.28-LA71S4** | | | | | | | | |
| | **14.5** | **17.4** | 136 | 0.87 | 93.00 | | **2KJ1600 - ■CD13 - ■■H1** | | 10 |
| | **17.8** | **21** | 111 | 0.86 | 75.84 | | **2KJ1600 - ■CD13 - ■■G1** | | 10 |
| | **22** | **26** | 95 | 1.2 | 62.00 | | **2KJ1600 - ■CD13 - ■■F1** | | 10 |
| | **27** | **32** | 78 | 1.2 | 50.56 | | **2KJ1600 - ■CD13 - ■■E1** | | 10 |
| | **29** | **35** | 74 | 1.5 | 46.50 | | **2KJ1600 - ■CD13 - ■■D1** | | 10 |
| | **36** | **43** | 60 | 1.5 | 37.92 | | **2KJ1600 - ■CD13 - ■■C1** | | 10 |
| | **44** | **53** | 50 | 2.0 | 31.00 | | **2KJ1600 - ■CD13 - ■■B1** | | 10 |
| | **53** | **64** | 41 | 2.0 | 25.28 | | **2KJ1600 - ■CD13 - ■■A1** | | 10 |
| **0.37** (50 Hz) 0.44 (60 Hz) | **C.88-Z28-LA71M4** | | | | | | | | |
| | **0.91** | **1.1** | 1 918 | 0.83 | 1 510 | ★ | **2KJ1614 - ■CE13 - ■■M1** | | 76 |
| | **1.0** | **1.2** | 1 728 | 0.92 | 1 335 | | **2KJ1614 - ■CE13 - ■■L1** | | 76 |
| | **1.1** | **1.3** | 1 615 | 0.98 | 1 232 | ★ | **2KJ1614 - ■CE13 - ■■K1** | | 76 |
| | **1.3** | **1.6** | 1 426 | 1.1 | 1 061 | | **2KJ1614 - ■CE13 - ■■J1** | | 76 |
| | **1.4** | **1.7** | 1 318 | 1.2 | 964 | ★ | **2KJ1614 - ■CE13 - ■■H1** | | 76 |
| | **C.88-LA90SA8** | | | | | | | | |
| | **1.7** | **2.0** | 1 258 | 1.3 | 390.00 | ★ | **2KJ1604 - ■EB13 - ■■S2** | **P02** | 81 |
| | **1.9** | **2.3** | 1 164 | 1.4 | 354.55 | | **2KJ1604 - ■EB13 - ■■R2** | **P02** | 81 |
| | **C.88-LA80S6** | | | | | | | | |
| | **2.1** | **2.5** | 1 079 | 1.4 | 440.70 | | **2KJ1604 - ■DB13 - ■■T2** | **P01** | 78 |
| | **2.4** | **2.9** | 976 | 1.6 | 390.00 | ★ | **2KJ1604 - ■DB13 - ■■S2** | **P01** | 78 |
| | **2.6** | **3.1** | 902 | 1.8 | 354.55 | | **2KJ1604 - ■DB13 - ■■R2** | **P01** | 78 |
| | **2.9** | **3.5** | 824 | 1.9 | 318.50 | ★ | **2KJ1604 - ■DB13 - ■■Q2** | **P01** | 78 |
| | **C.68-LA80S6** | | | | | | | | |
| | **2.8** | **3.4** | 787 | 0.86 | 323.70 | | **2KJ1603 - ■DB13 - ■■T2** | **P01** | 51 |
| | **3.3** | **4.0** | 698 | 0.97 | 280.80 | ★ | **2KJ1603 - ■DB13 - ■■S2** | **P01** | 51 |
| | **3.5** | **4.2** | 659 | 1.0 | 262.36 | | **2KJ1603 - ■DB13 - ■■R2** | **P01** | 51 |
| | **C.68-LA71M4** | | | | | | | | |
| | **3.8** | **4.6** | 621 | 1.1 | 364.00 | ★ | **2KJ1603 - ■CE13 - ■■U2** | | 47 |
| | **4.2** | **5.0** | 562 | 1.2 | 323.70 | | **2KJ1603 - ■CE13 - ■■T2** | | 47 |
| | **4.9** | **5.9** | 497 | 1.4 | 280.80 | ★ | **2KJ1603 - ■CE13 - ■■S2** | | 47 |
| | **5.2** | **6.2** | 468 | 1.5 | 262.36 | | **2KJ1603 - ■CE13 - ■■R2** | | 47 |
| | **5.9** | **7.1** | 418 | 1.6 | 230.75 | ★ | **2KJ1603 - ■CE13 - ■■Q2** | | 47 |
| | **6.8** | **8.2** | 370 | 1.8 | 202.09 | | **2KJ1603 - ■CE13 - ■■P2** | | 47 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **0.37** (50 Hz) 0.44 (60 Hz) | **C.68-LA71M4** | | | | | | | | |
| | **7.7** | **9.2** | 331 | 2.0 | 178.75 | ★ | **2KJ1603 - ■CE13 - ■■N2** | | 47 |
| | **8.5** | **10.2** | 301 | 2.1 | 162.00 | | **2KJ1603 - ■CE13 - ■■M2** | | 47 |
| | **C.48-LA71M4** | | | | | | | | |
| | **5.5** | **6.6** | 416 | 0.89 | 249.60 | ★ | **2KJ1602 - ■CE13 - ■■H2** | | 30 |
| | **6.1** | **7.3** | 378 | 0.98 | 223.36 | | **2KJ1602 - ■CE13 - ■■G2** | | 30 |
| | **6.9** | **8.3** | 341 | 1.1 | 198.25 | ★ | **2KJ1602 - ■CE13 - ■■F2** | | 30 |
| | **7.9** | **9.5** | 304 | 1.2 | 173.73 | | **2KJ1602 - ■CE13 - ■■E2** | | 30 |
| | **9.0** | **10.8** | 270 | 1.4 | 152.75 | ★ | **2KJ1602 - ■CE13 - ■■D2** | | 30 |
| | **9.9** | **11.9** | 246 | 1.5 | 138.00 | | **2KJ1602 - ■CE13 - ■■C2** | | 30 |
| | **11.4** | **13.7** | 217 | 1.7 | 120.25 | ★ | **2KJ1602 - ■CE13 - ■■B2** | | 30 |
| | **12.7** | **15.2** | 195 | 1.9 | 108.00 | | **2KJ1602 - ■CE13 - ■■A2** | | 30 |
| | **14.1** | **16.9** | 177 | 2.1 | 97.50 | ★ | **2KJ1602 - ■CE13 - ■■X1** | | 30 |
| | **15.5** | **18.6** | 161 | 2.2 | 88.40 | | **2KJ1602 - ■CE13 - ■■W1** | | 30 |
| | **17.0** | **20.0** | 147 | 2.3 | 80.44 | ★ | **2KJ1602 - ■CE13 - ■■V1** | | 30 |
| | **C.38-LA71M4** | | | | | | | | |
| | **9** | **10.8** | 257 | 0.88 | 152.75 | ★ | **2KJ1601 - ■CE13 - ■■D2** | | 22 |
| | **9.9** | **11.9** | 234 | 0.97 | 138.00 | | **2KJ1601 - ■CE13 - ■■C2** | | 22 |
| | **11.4** | **13.7** | 206 | 1.1 | 120.25 | ★ | **2KJ1601 - ■CE13 - ■■B2** | | 22 |
| | **12.7** | **15.2** | 186 | 1.2 | 108.00 | | **2KJ1601 - ■CE13 - ■■A2** | | 22 |
| | **14.1** | **16.9** | 169 | 1.4 | 97.50 | ★ | **2KJ1601 - ■CE13 - ■■X1** | | 22 |
| | **15.5** | **18.6** | 154 | 1.5 | 88.40 | | **2KJ1601 - ■CE13 - ■■W1** | | 22 |
| | **17.0** | **20** | 140 | 1.6 | 80.44 | ★ | **2KJ1601 - ■CE13 - ■■V1** | | 22 |
| | **19.3** | **23** | 124 | 1.7 | 71.12 | | **2KJ1601 - ■CE13 - ■■U1** | | 22 |
| | **21** | **25** | 115 | 1.8 | 65.68 | ★ | **2KJ1601 - ■CE13 - ■■T1** | | 22 |
| | **23** | **28** | 132 | 1.5 | 60.30 | ★ | **2KJ1601 - ■CE13 - ■■S1** | | 22 |
| | **26** | **31** | 118 | 2.0 | 53.53 | | **2KJ1601 - ■CE13 - ■■R1** | | 22 |
| | **29** | **35** | 104 | 2.2 | 46.93 | ★ | **2KJ1601 - ■CE13 - ■■Q1** | | 22 |
| | **33** | **40** | 94 | 2.3 | 42.00 | | **2KJ1601 - ■CE13 - ■■P1** | | 22 |
| | **42** | **50** | 74 | 2.6 | 32.67 | | **2KJ1601 - ■CE13 - ■■M1** | | 22 |
| | **C.28-LA71M4** | | | | | | | | |
| | **22** | **26** | 139 | 0.84 | 62.00 | | **2KJ1600 - ■CE13 - ■■F1** | | 10 |
| | **27** | **32** | 113 | 0.83 | 50.56 | | **2KJ1600 - ■CE13 - ■■E1** | | 10 |
| | **30** | **36** | 108 | 1.0 | 46.50 | | **2KJ1600 - ■CE13 - ■■D1** | | 10 |
| | **36** | **43** | 88 | 1.0 | 37.92 | | **2KJ1600 - ■CE13 - ■■C1** | | 10 |
| | **44** | **53** | 73 | 1.4 | 31.00 | | **2KJ1600 - ■CE13 - ■■B1** | | 10 |
| | **54** | **65** | 60 | 1.4 | 25.28 | | **2KJ1600 - ■CE13 - ■■A1** | | 10 |
| **0.55** (50 Hz) 0.66 (60 Hz) | **C.88-LA90LA8** | | | | | | | | |
| | **1.7** | **2.0** | 1 870 | 0.85 | 390.00 | ★ | **2KJ1604 - ■EE13 - ■■S2** | **P02** | 84 |
| | **1.9** | **2.3** | 1 730 | 0.92 | 354.55 | | **2KJ1604 - ■EE13 - ■■R2** | **P02** | 84 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **0.55** (50 Hz) 0.66 (60 Hz) | **C.88-LA80M6** | | | | | | | | |
| | **2.1** | **2.5** | 1 618 | 0.94 | 440.70 | | **2KJ1604 - ■DC13 - ■■T2** | **P01** | 78 |
| | **2.3** | **2.8** | 1 464 | 1.1 | 390.00 | ★ | **2KJ1604 - ■DC13 - ■■S2** | **P01** | 78 |
| | **2.6** | **3.1** | 1 353 | 1.2 | 354.55 | | **2KJ1604 - ■DC13 - ■■R2** | **P01** | 78 |
| | **2.9** | **3.5** | 1 236 | 1.3 | 318.50 | ★ | **2KJ1604 - ■DC13 - ■■Q2** | **P01** | 78 |
| | **C.88-LA71ZMP4** | | | | | | | | |
| | **3.1** | **3.7** | 1 151 | 1.4 | 440.70 | | **2KJ1604 - ■CG13 - ■■T2** | | 74 |
| | **3.5** | **4.2** | 1 036 | 1.5 | 390.00 | ★ | **2KJ1604 - ■CG13 - ■■S2** | | 74 |
| | **3.9** | **4.7** | 953 | 1.7 | 354.55 | | **2KJ1604 - ■CG13 - ■■R2** | | 74 |
| | **4.3** | **5.2** | 865 | 1.8 | 318.50 | ★ | **2KJ1604 - ■CG13 - ■■Q2** | | 74 |
| | **5.0** | **6.0** | 751 | 2.0 | 273.00 | | **2KJ1604 - ■CG13 - ■■P2** | | 74 |
| | **5.5** | **6.6** | 684 | 2.1 | 247.00 | ★ | **2KJ1604 - ■CG13 - ■■N2** | | 74 |
| | **C.68-LA71ZMP4** | | | | | | | | |
| | **4.2** | **5** | 835 | 0.81 | 323.70 | | **2KJ1603 - ■CG13 - ■■T2** | | 47 |
| | **4.9** | **5.9** | 739 | 0.92 | 280.80 | ★ | **2KJ1603 - ■CG13 - ■■S2** | | 47 |
| | **5.2** | **6.2** | 696 | 0.98 | 262.36 | | **2KJ1603 - ■CG13 - ■■R2** | | 47 |
| | **5.9** | **7.1** | 621 | 1.1 | 230.75 | ★ | **2KJ1603 - ■CG13 - ■■Q2** | | 47 |
| | **6.8** | **8.2** | 551 | 1.2 | 202.09 | | **2KJ1603 - ■CG13 - ■■P2** | | 47 |
| | **7.7** | **9.2** | 492 | 1.3 | 178.75 | ★ | **2KJ1603 - ■CG13 - ■■N2** | | 47 |
| | **8.5** | **10.2** | 448 | 1.4 | 162.00 | | **2KJ1603 - ■CG13 - ■■M2** | | 47 |
| | **9.6** | **11.5** | 398 | 1.5 | 143.00 | ★ | **2KJ1603 - ■CG13 - ■■L2** | | 47 |
| | **10.6** | **12.7** | 360 | 1.7 | 129.00 | | **2KJ1603 - ■CG13 - ■■K2** | | 47 |
| | **11.7** | **14.0** | 327 | 1.8 | 117.00 | ★ | **2KJ1603 - ■CG13 - ■■J2** | | 47 |
| | **12.9** | **15.5** | 299 | 1.9 | 106.60 | | **2KJ1603 - ■CG13 - ■■H2** | | 47 |
| | **14.1** | **16.9** | 273 | 2.0 | 97.50 | ★ | **2KJ1603 - ■CG13 - ■■G2** | | 47 |
| | **15.2** | **18.2** | 294 | 2.1 | 90.00 | ★ | **2KJ1603 - ■CG13 - ■■F2** | | 47 |
| | **16.3** | **19.6** | 276 | 2.3 | 84.09 | | **2KJ1603 - ■CG13 - ■■E2** | | 47 |
| | **C.48-LA71ZMP4** | | | | | | | | |
| | **7.9** | **9.5** | 451 | 0.82 | 173.73 | | **2KJ1602 - ■CG13 - ■■E2** | | 30 |
| | **9.0** | **10.8** | 402 | 0.93 | 152.75 | ★ | **2KJ1602 - ■CG13 - ■■D2** | | 30 |
| | **9.9** | **11.9** | 366 | 1.0 | 138.00 | | **2KJ1602 - ■CG13 - ■■C2** | | 30 |
| | **11.4** | **13.7** | 322 | 1.2 | 120.25 | ★ | **2KJ1602 - ■CG13 - ■■B2** | | 30 |
| | **12.7** | **15.2** | 291 | 1.3 | 108.00 | | **2KJ1602 - ■CG13 - ■■A2** | | 30 |
| | **14.1** | **16.9** | 263 | 1.4 | 97.50 | ★ | **2KJ1602 - ■CG13 - ■■X1** | | 30 |
| | **15.5** | **18.6** | 239 | 1.5 | 88.40 | | **2KJ1602 - ■CG13 - ■■W1** | | 30 |
| | **17.0** | **20** | 218 | 1.6 | 80.44 | ★ | **2KJ1602 - ■CG13 - ■■V1** | | 30 |
| | **19.3** | **23** | 193 | 1.7 | 71.12 | | **2KJ1602 - ■CG13 - ■■U1** | | 30 |
| | **21** | **25** | 178 | 1.8 | 65.68 | ★ | **2KJ1602 - ■CG13 - ■■T1** | | 30 |
| | **24** | **29** | 154 | 2.0 | 56.55 | | **2KJ1602 - ■CG13 - ■■S1** | | 30 |
| | **27** | **32** | 140 | 2.1 | 51.41 | ★ | **2KJ1602 - ■CG13 - ■■R1** | | 30 |
| | **29** | **35** | 157 | 1.8 | 46.93 | ★ | **2KJ1602 - ■CG13 - ■■Q1** | | 30 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **0.55** (50 Hz) 0.66 (60 Hz) | **C.48-LA71ZMP4** | | | | | | | | |
| | **33** | **40** | 141 | 2.2 | 42.00 | | **2KJ1602 - ■CG13 - ■■P1** | | 30 |
| | **37** | **44** | 126 | 2.1 | 37.28 | ★ | **2KJ1602 - ■CG13 - ■■N1** | | 30 |
| | **42** | **50** | 110 | 2.4 | 32.67 | | **2KJ1602 - ■CG13 - ■■M1** | | 30 |
| | **C.38-LA71ZMP4** | | | | | | | | |
| | **12.7** | **15.2** | 277 | 0.83 | 108.00 | | **2KJ1601 - ■CG13 - ■■A2** | | 22 |
| | **14.1** | **16.9** | 251 | 0.91 | 97.50 | ★ | **2KJ1601 - ■CG13 - ■■X1** | | 22 |
| | **15.5** | **18.6** | 228 | 0.98 | 88.40 | | **2KJ1601 - ■CG13 - ■■W1** | | 22 |
| | **17.0** | **20.0** | 208 | 1.0 | 80.44 | ★ | **2KJ1601 - ■CG13 - ■■V1** | | 22 |
| | **19.3** | **23** | 185 | 1.1 | 71.12 | | **2KJ1601 - ■CG13 - ■■U1** | | 22 |
| | **21** | **25** | 171 | 1.2 | 65.68 | ★ | **2KJ1601 - ■CG13 - ■■T1** | | 22 |
| | **23** | **28** | 197 | 1.0 | 60.30 | ★ | **2KJ1601 - ■CG13 - ■■S1** | | 22 |
| | **26** | **31** | 176 | 1.4 | 53.53 | | **2KJ1601 - ■CG13 - ■■R1** | | 22 |
| | **29** | **35** | 155 | 1.5 | 46.93 | ★ | **2KJ1601 - ■CG13 - ■■Q1** | | 22 |
| | **33** | **40** | 140 | 1.6 | 42.00 | | **2KJ1601 - ■CG13 - ■■P1** | | 22 |
| | **37** | **44** | 124 | 1.8 | 37.28 | ★ | **2KJ1601 - ■CG13 - ■■N1** | | 22 |
| | **42** | **50** | 109 | 1.7 | 32.67 | | **2KJ1601 - ■CG13 - ■■M1** | | 22 |
| | **48** | **58** | 96 | 2.1 | 28.72 | ★ | **2KJ1601 - ■CG13 - ■■L1** | | 22 |
| | **53** | **64** | 87 | 2.3 | 25.95 | | **2KJ1601 - ■CG13 - ■■K1** | | 22 |
| | **61** | **73** | 76 | 2.7 | 22.61 | ★ | **2KJ1601 - ■CG13 - ■■J1** | | 22 |
| | **68** | **82** | 68 | 2.8 | 20.31 | | **2KJ1601 - ■CG13 - ■■H1** | | 22 |
| | **C.28-LA71ZMP4** | | | | | | | | |
| | **44** | **53** | 109 | 0.91 | 31.00 | | **2KJ1600 - ■CG13 - ■■B1** | | 10 |
| | **54** | **65** | 89 | 0.91 | 25.28 | | **2KJ1600 - ■CG13 - ■■A1** | | 10 |
| **0.75** (50 Hz) 0.90 (60 Hz) | **C.88-LA90S6** | | | | | | | | |
| | **2.3** | **2.8** | 1 987 | 0.80 | 390.00 | ★ | **2KJ1604 - ■EC13 - ■■S2** | **P01** | 81 |
| | **2.6** | **3.1** | 1 836 | 0.87 | 354.55 | | **2KJ1604 - ■EC13 - ■■R2** | **P01** | 81 |
| | **2.9** | **3.5** | 1 678 | 0.95 | 318.50 | ★ | **2KJ1604 - ■EC13 - ■■Q2** | **P01** | 81 |
| | **C.88-LA80M4** | | | | | | | | |
| | **3.2** | **3.8** | 1 545 | 1.0 | 440.70 | | **2KJ1604 - ■DC13 - ■■T2** | | 78 |
| | **3.6** | **4.3** | 1 390 | 1.1 | 390.00 | ★ | **2KJ1604 - ■DC13 - ■■S2** | | 78 |
| | **3.9** | **4.7** | 1 278 | 1.2 | 354.55 | | **2KJ1604 - ■DC13 - ■■R2** | | 78 |
| | **4.4** | **5.3** | 1 161 | 1.4 | 318.50 | ★ | **2KJ1604 - ■DC13 - ■■Q2** | | 78 |
| | **5.1** | **6.1** | 1 007 | 1.5 | 273.00 | | **2KJ1604 - ■DC13 - ■■P2** | | 78 |
| | **5.6** | **6.7** | 917 | 1.6 | 247.00 | ★ | **2KJ1604 - ■DC13 - ■■N2** | | 78 |
| | **6.1** | **7.3** | 850 | 1.6 | 228.00 | | **2KJ1604 - ■DC13 - ■■M2** | | 78 |
| | **7.0** | **8.4** | 742 | 1.8 | 198.25 | ★ | **2KJ1604 - ■DC13 - ■■L2** | | 78 |
| | **7.8** | **9.4** | 675 | 1.9 | 180.00 | | **2KJ1604 - ■DC13 - ■■K2** | | 78 |
| | **8.5** | **10.2** | 618 | 2.0 | 164.36 | ★ | **2KJ1604 - ■DC13 - ■■J2** | | 78 |
| | **9.3** | **11.2** | 567 | 2.1 | 150.80 | | **2KJ1604 - ■DC13 - ■■H2** | | 78 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **0.75** (50 Hz) 0.90 (60 Hz) | **C.68-LA80M4** | | | | | | | | |
| | **6.0** | **7.2** | 833 | 0.82 | 230.75 | ★ | **2KJ1603 - ■DC13 - ■■Q2** | | 51 |
| | **6.9** | **8.3** | 739 | 0.93 | 202.09 | | **2KJ1603 - ■DC13 - ■■P2** | | 51 |
| | **7.8** | **9.4** | 659 | 1.0 | 178.75 | ★ | **2KJ1603 - ■DC13 - ■■N2** | | 51 |
| | **8.6** | **10.3** | 601 | 1.1 | 162.00 | | **2KJ1603 - ■DC13 - ■■M2** | | 51 |
| | **9.8** | **11.8** | 533 | 1.1 | 143.00 | ★ | **2KJ1603 - ■DC13 - ■■L2** | | 51 |
| | **10.8** | **13.0** | 482 | 1.2 | 129.00 | | **2KJ1603 - ■DC13 - ■■K2** | | 51 |
| | **11.9** | **14.3** | 438 | 1.3 | 117.00 | ★ | **2KJ1603 - ■DC13 - ■■J2** | | 51 |
| | **13.1** | **15.7** | 400 | 1.4 | 106.60 | | **2KJ1603 - ■DC13 - ■■H2** | | 51 |
| | **14.3** | **17.2** | 366 | 1.5 | 97.50 | ★ | **2KJ1603 - ■DC13 - ■■G2** | | 51 |
| | **15.5** | **18.6** | 395 | 1.5 | 90.00 | ★ | **2KJ1603 - ■DC13 - ■■F2** | | 51 |
| | **16.6** | **19.9** | 370 | 1.7 | 84.09 | | **2KJ1603 - ■DC13 - ■■E2** | | 51 |
| | **18.9** | **23** | 327 | 1.8 | 73.96 | ★ | **2KJ1603 - ■DC13 - ■■D2** | | 51 |
| | **22** | **26** | 288 | 2.2 | 64.77 | | **2KJ1603 - ■DC13 - ■■C2** | | 51 |
| | **37** | **44** | 172 | 2.5 | 38.00 | | **2KJ1603 - ■DC13 - ■■V1** | | 51 |
| | **46** | **55** | 138 | 2.8 | 30.46 | | **2KJ1603 - ■DC13 - ■■Q1** | | 51 |
| | **C.48-LA80M4** | | | | | | | | |
| | **11.6** | **13.9** | 431 | 0.87 | 120.25 | ★ | **2KJ1602 - ■DC13 - ■■B2** | | 34 |
| | **12.9** | **15.5** | 389 | 0.96 | 108.00 | | **2KJ1602 - ■DC13 - ■■A2** | | 34 |
| | **14.3** | **17.2** | 353 | 1.0 | 97.50 | ★ | **2KJ1602 - ■DC13 - ■■X1** | | 34 |
| | **15.8** | **19** | 320 | 1.1 | 88.40 | | **2KJ1602 - ■DC13 - ■■W1** | | 34 |
| | **17.3** | **21** | 292 | 1.2 | 80.44 | ★ | **2KJ1602 - ■DC13 - ■■V1** | | 34 |
| | **19.6** | **24** | 259 | 1.3 | 71.12 | | **2KJ1602 - ■DC13 - ■■U1** | | 34 |
| | **21** | **25** | 239 | 1.3 | 65.68 | ★ | **2KJ1602 - ■DC13 - ■■T1** | | 34 |
| | **25** | **30** | 206 | 1.5 | 56.55 | | **2KJ1602 - ■DC13 - ■■S1** | | 34 |
| | **27** | **32** | 187 | 1.6 | 51.41 | ★ | **2KJ1602 - ■DC13 - ■■R1** | | 34 |
| | **30** | **36** | 211 | 1.4 | 46.93 | ★ | **2KJ1602 - ■DC13 - ■■Q1** | | 34 |
| | **33** | **40** | 189 | 1.7 | 42.00 | | **2KJ1602 - ■DC13 - ■■P1** | | 34 |
| | **37** | **44** | 168 | 1.6 | 37.28 | ★ | **2KJ1602 - ■DC13 - ■■N1** | | 34 |
| | **43** | **52** | 148 | 1.8 | 32.67 | | **2KJ1602 - ■DC13 - ■■M1** | | 34 |
| | **49** | **59** | 130 | 2.2 | 28.72 | ★ | **2KJ1602 - ■DC13 - ■■L1** | | 34 |
| | **54** | **65** | 118 | 2.3 | 25.95 | | **2KJ1602 - ■DC13 - ■■K1** | | 34 |
| | **62** | **74** | 103 | 2.6 | 22.61 | ★ | **2KJ1602 - ■DC13 - ■■J1** | | 34 |
| | **69** | **83** | 92 | 3.0 | 20.31 | | **2KJ1602 - ■DC13 - ■■H1** | | 34 |
| | **C.38-LA80M4** | | | | | | | | |
| | **19.6** | **24** | 247 | 0.84 | 71.12 | | **2KJ1601 - ■DC13 - ■■U1** | | 26 |
| | **21** | **25** | 228 | 0.89 | 65.68 | ★ | **2KJ1601 - ■DC13 - ■■T1** | | 26 |
| | **26** | **31** | 236 | 1.0 | 53.53 | | **2KJ1601 - ■DC13 - ■■R1** | | 26 |
| | **30** | **36** | 208 | 1.1 | 46.93 | ★ | **2KJ1601 - ■DC13 - ■■Q1** | | 26 |
| | **33** | **40** | 187 | 1.2 | 42.00 | | **2KJ1601 - ■DC13 - ■■P1** | | 26 |
| | **37** | **44** | 167 | 1.4 | 37.28 | ★ | **2KJ1601 - ■DC13 - ■■N1** | | 26 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — 1 to 9

Frequency and voltage, see page 8/20 — 1 to 9

Gearbox housing mounting position, see page 5/48 — A, D, F or H

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **0.75** (50 Hz) 0.90 (60 Hz) | **C.38-LA80M4** | | | | | | | | |
| | **43** | **52** | 147 | 1.3 | 32.67 | | **2KJ1601 - ■DC13 - ■■M1** | | 26 |
| | **49** | **59** | 129 | 1.6 | 28.72 | ★ | **2KJ1601 - ■DC13 - ■■L1** | | 26 |
| | **54** | **65** | 117 | 1.8 | 25.95 | | **2KJ1601 - ■DC13 - ■■K1** | | 26 |
| | **62** | **74** | 102 | 2.0 | 22.61 | ★ | **2KJ1601 - ■DC13 - ■■J1** | | 26 |
| | **69** | **83** | 92 | 2.1 | 20.31 | | **2KJ1601 - ■DC13 - ■■H1** | | 26 |
| | **76** | **91** | 83 | 2.5 | 18.33 | ★ | **2KJ1601 - ■DC13 - ■■G1** | | 26 |
| | **84** | **101** | 75 | 2.6 | 16.62 | | **2KJ1601 - ■DC13 - ■■F1** | | 26 |
| | **92** | **110** | 68 | 2.7 | 15.13 | ★ | **2KJ1601 - ■DC13 - ■■E1** | | 26 |
| | **104** | **125** | 60 | 2.7 | 13.37 | | **2KJ1601 - ■DC13 - ■■D1** | | 26 |
| | **113** | **136** | 56 | 3.0 | 12.35 | ★ | **2KJ1601 - ■DC13 - ■■C1** | | 26 |
| | **131** | **157** | 48 | 3.6 | 10.63 | | **2KJ1601 - ■DC13 - ■■B1** | | 26 |
| | **144** | **173** | 44 | 3.8 | 9.67 | ★ | **2KJ1601 - ■DC13 - ■■A1** | | 26 |
| **1.1** (50 Hz) 1.3 (60 Hz) | **C.88-LA90S4** | | | | | | | | |
| | **4.0** | **4.8** | 1 851 | 0.86 | 354.55 | | **2KJ1604 - ■EL13 - ■■R2** | | 81 |
| | **4.4** | **5.3** | 1 681 | 0.94 | 318.50 | ★ | **2KJ1604 - ■EL13 - ■■Q2** | | 81 |
| | **5.2** | **6.2** | 1 458 | 1.0 | 273.00 | | **2KJ1604 - ■EL13 - ■■P2** | | 81 |
| | **5.7** | **6.8** | 1 327 | 1.1 | 247.00 | ★ | **2KJ1604 - ■EL13 - ■■N2** | | 81 |
| | **6.2** | **7.4** | 1 229 | 1.1 | 228.00 | | **2KJ1604 - ■EL13 - ■■M2** | | 81 |
| | **7.1** | **8.5** | 1 074 | 1.2 | 198.25 | ★ | **2KJ1604 - ■EL13 - ■■L2** | | 81 |
| | **7.9** | **9.5** | 977 | 1.3 | 180.00 | | **2KJ1604 - ■EL13 - ■■K2** | | 81 |
| | **8.6** | **10.3** | 893 | 1.4 | 164.36 | ★ | **2KJ1604 - ■EL13 - ■■J2** | | 81 |
| | **9.4** | **11.3** | 820 | 1.5 | 150.80 | | **2KJ1604 - ■EL13 - ■■H2** | | 81 |
| | **10.2** | **12.2** | 756 | 1.6 | 138.94 | ★ | **2KJ1604 - ■EL13 - ■■G2** | | 81 |
| | **11.2** | **13.4** | 687 | 1.7 | 126.18 | | **2KJ1604 - ■EL13 - ■■F2** | | 81 |
| | **12.3** | **14.8** | 626 | 1.8 | 114.95 | ★ | **2KJ1604 - ■EL13 - ■■E2** | | 81 |
| | **13.0** | **15.6** | 684 | 1.9 | 108.50 | | **2KJ1604 - ■EL13 - ■■D2** | | 81 |
| | **15.6** | **18.7** | 573 | 2.2 | 90.62 | | **2KJ1604 - ■EL13 - ■■B2** | | 81 |
| | **C.68-LA90S4** | | | | | | | | |
| | **11.0** | **13.2** | 698 | 0.85 | 129.00 | | **2KJ1603 - ■EL13 - ■■K2** | | 54 |
| | **12.1** | **14.5** | 634 | 0.90 | 117.00 | ★ | **2KJ1603 - ■EL13 - ■■J2** | | 54 |
| | **13.3** | **16.0** | 578 | 0.96 | 106.60 | | **2KJ1603 - ■EL13 - ■■H2** | | 54 |
| | **14.5** | **17.4** | 530 | 1.0 | 97.50 | ★ | **2KJ1603 - ■EL13 - ■■G2** | | 54 |
| | **15.7** | **18.8** | 571 | 1.1 | 90.00 | ★ | **2KJ1603 - ■EL13 - ■■F2** | | 54 |
| | **16.8** | **20** | 535 | 1.2 | 84.09 | | **2KJ1603 - ■EL13 - ■■E2** | | 54 |
| | **19.1** | **23** | 473 | 1.3 | 73.96 | ★ | **2KJ1603 - ■EL13 - ■■D2** | | 54 |
| | **22** | **26** | 416 | 1.5 | 64.77 | | **2KJ1603 - ■EL13 - ■■C2** | | 54 |
| | **25** | **30** | 369 | 1.8 | 57.29 | ★ | **2KJ1603 - ■EL13 - ■■B2** | | 54 |
| | **27** | **32** | 335 | 1.9 | 51.92 | | **2KJ1603 - ■EL13 - ■■A2** | | 54 |
| | **31** | **37** | 296 | 2.1 | 45.83 | ★ | **2KJ1603 - ■EL13 - ■■X1** | | 54 |
| | **34** | **41** | 267 | 2.2 | 41.35 | | **2KJ1603 - ■EL13 - ■■W1** | | 54 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **1.1** (50 Hz) 1.3 (60 Hz) | **C.68-LA90S4** | | | | | | | | |
| | **37** | **44** | 249 | 1.7 | 38.00 | | **2KJ1603 - ■EL13 - ■■V1** | | 54 |
| | **38** | **46** | 243 | 2.4 | 37.50 | ★ | **2KJ1603 - ■EL13 - ■■U1** | | 54 |
| | **41** | **49** | 221 | 2.5 | 34.17 | | **2KJ1603 - ■EL13 - ■■T1** | | 54 |
| | **42** | **50** | 221 | 1.9 | 33.61 | ★ | **2KJ1603 - ■EL13 - ■■S1** | | 54 |
| | **45** | **54** | 202 | 2.7 | 31.25 | ★ | **2KJ1603 - ■EL13 - ■■R1** | | 54 |
| | **46** | **55** | 200 | 1.9 | 30.46 | | **2KJ1603 - ■EL13 - ■■Q1** | | 54 |
| | **53** | **64** | 177 | 2.3 | 26.89 | ★ | **2KJ1603 - ■EL13 - ■■N1** | | 54 |
| | **58** | **70** | 159 | 2.5 | 24.26 | | **2KJ1603 - ■EL13 - ■■L1** | | 54 |
| | **64** | **77** | 145 | 2.9 | 22.00 | ★ | **2KJ1603 - ■EL13 - ■■J1** | | 54 |
| | **C.48-LA90S4** | | | | | | | | |
| | **17.6** | **21** | 422 | 0.81 | 80.44 | ★ | **2KJ1602 - ■EL13 - ■■V1** | | 37 |
| | **19.9** | **24** | 374 | 0.88 | 71.12 | | **2KJ1602 - ■EL13 - ■■U1** | | 37 |
| | **22** | **26** | 345 | 0.92 | 65.68 | ★ | **2KJ1602 - ■EL13 - ■■T1** | | 37 |
| | **25** | **30** | 298 | 1.00 | 56.55 | | **2KJ1602 - ■EL13 - ■■S1** | | 37 |
| | **28** | **34** | 271 | 1.10 | 51.41 | ★ | **2KJ1602 - ■EL13 - ■■R1** | | 37 |
| | **30** | **36** | 305 | 0.94 | 46.93 | ★ | **2KJ1602 - ■EL13 - ■■Q1** | | 37 |
| | **34** | **41** | 274 | 1.1 | 42.00 | | **2KJ1602 - ■EL13 - ■■P1** | | 37 |
| | **38** | **46** | 244 | 1.1 | 37.28 | ★ | **2KJ1602 - ■EL13 - ■■N1** | | 37 |
| | **43** | **52** | 214 | 1.2 | 32.67 | | **2KJ1602 - ■EL13 - ■■M1** | | 37 |
| | **49** | **59** | 188 | 1.5 | 28.72 | ★ | **2KJ1602 - ■EL13 - ■■L1** | | 37 |
| | **54** | **65** | 170 | 1.6 | 25.95 | | **2KJ1602 - ■EL13 - ■■K1** | | 37 |
| | **63** | **76** | 148 | 1.8 | 22.61 | ★ | **2KJ1602 - ■EL13 - ■■J1** | | 37 |
| | **70** | **84** | 133 | 2.1 | 20.31 | | **2KJ1602 - ■EL13 - ■■H1** | | 37 |
| | **77** | **92** | 120 | 2.5 | 18.33 | ★ | **2KJ1602 - ■EL13 - ■■G1** | | 37 |
| | **85** | **102** | 109 | 2.6 | 16.62 | | **2KJ1602 - ■EL13 - ■■F1** | | 37 |
| | **94** | **113** | 99 | 2.6 | 15.13 | ★ | **2KJ1602 - ■EL13 - ■■E1** | | 37 |
| | **106** | **127** | 88 | 2.6 | 13.37 | | **2KJ1602 - ■EL13 - ■■D1** | | 37 |
| | **115** | **138** | 81 | 3.0 | 12.35 | ★ | **2KJ1602 - ■EL13 - ■■C1** | | 37 |
| | **133** | **160** | 70 | 3.6 | 10.63 | | **2KJ1602 - ■EL13 - ■■B1** | | 37 |
| | **146** | **175** | 64 | 3.8 | 9.67 | ★ | **2KJ1602 - ■EL13 - ■■A1** | | 37 |
| | **C.38-LA90S4** | | | | | | | | |
| | **34** | **41** | 271 | 0.80 | 42.00 | | **2KJ1601 - ■EL13 - ■■P1** | | 29 |
| | **38** | **46** | 241 | 0.94 | 37.28 | ★ | **2KJ1601 - ■EL13 - ■■N1** | | 29 |
| | **43** | **52** | 212 | 0.89 | 32.67 | | **2KJ1601 - ■EL13 - ■■M1** | | 29 |
| | **49** | **59** | 187 | 1.1 | 28.72 | ★ | **2KJ1601 - ■EL13 - ■■L1** | | 29 |
| | **54** | **65** | 169 | 1.2 | 25.95 | | **2KJ1601 - ■EL13 - ■■K1** | | 29 |
| | **63** | **76** | 148 | 1.4 | 22.61 | ★ | **2KJ1601 - ■EL13 - ■■J1** | | 29 |
| | **70** | **84** | 133 | 1.5 | 20.31 | | **2KJ1601 - ■EL13 - ■■H1** | | 29 |
| | **77** | **92** | 120 | 1.7 | 18.33 | ★ | **2KJ1601 - ■EL13 - ■■G1** | | 29 |
| | **85** | **102** | 109 | 1.8 | 16.62 | | **2KJ1601 - ■EL13 - ■■F1** | | 29 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — 1 to 9

Frequency and voltage, see page 8/20 — 1 to 9

Gearbox housing mounting position, see page 5/48 — A, D, F or H

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **1.1** (50 Hz) 1.3 (60 Hz) | **C.38-LA90S4** | | | | | | | | |
| | **94** | **113** | 99 | 1.9 | 15.13 | ★ | **2KJ1601 - ■EL13 - ■■E1** | | 29 |
| | **106** | **127** | 87 | 1.9 | 13.37 | | **2KJ1601 - ■EL13 - ■■D1** | | 29 |
| | **115** | **138** | 81 | 2.1 | 12.35 | ★ | **2KJ1601 - ■EL13 - ■■C1** | | 29 |
| | **133** | **160** | 70 | 2.5 | 10.63 | | **2KJ1601 - ■EL13 - ■■B1** | | 29 |
| | **146** | **175** | 63 | 2.6 | 9.67 | ★ | **2KJ1601 - ■EL13 - ■■A1** | | 29 |
| **1.5** (50 Hz) 1.8 (60 Hz) | **C.88-LA90L4** | | | | | | | | |
| | **6.2** | **7.4** | 1 671 | 0.83 | 228.00 | | **2KJ1604 - ■EP13 - ■■M2** | | 84 |
| | **7.2** | **8.6** | 1 459 | 0.91 | 198.25 | ★ | **2KJ1604 - ■EP13 - ■■L2** | | 84 |
| | **7.9** | **9.5** | 1 327 | 0.97 | 180.00 | | **2KJ1604 - ■EP13 - ■■K2** | | 84 |
| | **8.6** | **10.3** | 1 214 | 1.0 | 164.36 | ★ | **2KJ1604 - ■EP13 - ■■J2** | | 84 |
| | **9.4** | **11.3** | 1 114 | 1.1 | 150.80 | | **2KJ1604 - ■EP13 - ■■H2** | | 84 |
| | **10.2** | **12.2** | 1 027 | 1.1 | 138.94 | ★ | **2KJ1604 - ■EP13 - ■■G2** | | 84 |
| | **11.3** | **13.6** | 933 | 1.2 | 126.18 | | **2KJ1604 - ■EP13 - ■■F2** | | 84 |
| | **12.4** | **14.9** | 850 | 1.3 | 114.95 | ★ | **2KJ1604 - ■EP13 - ■■E2** | | 84 |
| | **13.1** | **15.7** | 929 | 1.4 | 108.50 | | **2KJ1604 - ■EP13 - ■■D2** | | 84 |
| | **14.5** | **17.4** | 843 | 1.7 | 98.17 | ★ | **2KJ1604 - ■EP13 - ■■C2** | | 84 |
| | **15.7** | **18.8** | 779 | 1.6 | 90.62 | | **2KJ1604 - ■EP13 - ■■B2** | | 84 |
| | **18.0** | **22** | 679 | 1.9 | 78.79 | ★ | **2KJ1604 - ■EP13 - ■■A2** | | 84 |
| | **19.8** | **24** | 617 | 2.1 | 71.54 | | **2KJ1604 - ■EP13 - ■■X1** | | 84 |
| | **22** | **26** | 563 | 2.2 | 65.32 | ★ | **2KJ1604 - ■EP13 - ■■W1** | | 84 |
| | **24** | **29** | 517 | 2.3 | 59.93 | | **2KJ1604 - ■EP13 - ■■V1** | | 84 |
| | **26** | **31** | 477 | 2.4 | 55.22 | ★ | **2KJ1604 - ■EP13 - ■■U1** | | 84 |
| | **42** | **50** | 309 | 2.6 | 33.85 | | **2KJ1604 - ■EP13 - ■■P1** | | 84 |
| | **C.68-LA90L4** | | | | | | | | |
| | **16.9** | **20** | 728 | 0.86 | 84.09 | | **2KJ1603 - ■EP13 - ■■E2** | | 57 |
| | **19.2** | **23** | 643 | 0.93 | 73.96 | ★ | **2KJ1603 - ■EP13 - ■■D2** | | 57 |
| | **22** | **26** | 566 | 1.1 | 64.77 | | **2KJ1603 - ■EP13 - ■■C2** | | 57 |
| | **25** | **30** | 502 | 1.3 | 57.29 | ★ | **2KJ1603 - ■EP13 - ■■B2** | | 57 |
| | **27** | **32** | 455 | 1.4 | 51.92 | | **2KJ1603 - ■EP13 - ■■A2** | | 57 |
| | **31** | **37** | 402 | 1.5 | 45.83 | ★ | **2KJ1603 - ■EP13 - ■■X1** | | 57 |
| | **34** | **41** | 363 | 1.6 | 41.35 | | **2KJ1603 - ■EP13 - ■■W1** | | 57 |
| | **37** | **44** | 339 | 1.3 | 38.00 | | **2KJ1603 - ■EP13 - ■■V1** | | 57 |
| | **38** | **46** | 330 | 1.7 | 37.50 | ★ | **2KJ1603 - ■EP13 - ■■U1** | | 57 |
| | **42** | **50** | 300 | 1.4 | 33.61 | ★ | **2KJ1603 - ■EP13 - ■■S1** | | 57 |
| | **42** | **50** | 300 | 1.8 | 34.17 | | **2KJ1603 - ■EP13 - ■■T1** | | 57 |
| | **45** | **54** | 275 | 2.0 | 31.25 | ★ | **2KJ1603 - ■EP13 - ■■R1** | | 57 |
| | **47** | **56** | 272 | 1.4 | 30.46 | | **2KJ1603 - ■EP13 - ■■Q1** | | 57 |
| | **51** | **61** | 246 | 2.1 | 27.94 | | **2KJ1603 - ■EP13 - ■■P1** | | 57 |
| | **53** | **64** | 240 | 1.7 | 26.89 | ★ | **2KJ1603 - ■EP13 - ■■N1** | | 57 |
| | **55** | **66** | 226 | 2.2 | 25.66 | ★ | **2KJ1603 - ■EP13 - ■■M1** | | 57 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **1.5** (50 Hz) 1.8 (60 Hz) | **C.68-LA90L4** | | | | | | | | |
| | **58** | **70** | 217 | 1.8 | 24.26 | | **2KJ1603 - ■EP13 - ■■L1** | | 57 |
| | **61** | **73** | 203 | 2.4 | 23.13 | | **2KJ1603 - ■EP13 - ■■K1** | | 57 |
| | **64** | **77** | 196 | 2.1 | 22.00 | ★ | **2KJ1603 - ■EP13 - ■■J1** | | 57 |
| | **71** | **85** | 175 | 2.7 | 19.89 | ★ | **2KJ1603 - ■EP13 - ■■G1** | | 57 |
| | **71** | **85** | 179 | 2.4 | 20.04 | | **2KJ1603 - ■EP13 - ■■H1** | | 57 |
| | **78** | **94** | 164 | 2.5 | 18.33 | ★ | **2KJ1603 - ■EP13 - ■■F1** | | 57 |
| | **87** | **104** | 146 | 2.7 | 16.39 | | **2KJ1603 - ■EP13 - ■■E1** | | 57 |
| | **94** | **113** | 134 | 2.9 | 15.05 | ★ | **2KJ1603 - ■EP13 - ■■D1** | | 57 |
| | **105** | **126** | 121 | 3.4 | 13.57 | | **2KJ1603 - ■EP13 - ■■C1** | | 57 |
| | **122** | **146** | 104 | 3.6 | 11.67 | ★ | **2KJ1603 - ■EP13 - ■■B1** | | 57 |
| | **C.48-LA90L4** | | | | | | | | |
| | **28** | **34** | 368 | 0.80 | 51.41 | ★ | **2KJ1602 - ■EP13 - ■■R1** | | 40 |
| | **34** | **41** | 372 | 0.84 | 42.00 | | **2KJ1602 - ■EP13 - ■■P1** | | 40 |
| | **44** | **53** | 291 | 0.9 | 32.67 | | **2KJ1602 - ■EP13 - ■■M1** | | 40 |
| | **49** | **59** | 256 | 1.1 | 28.72 | ★ | **2KJ1602 - ■EP13 - ■■L1** | | 40 |
| | **55** | **66** | 231 | 1.2 | 25.95 | | **2KJ1602 - ■EP13 - ■■K1** | | 40 |
| | **63** | **76** | 202 | 1.3 | 22.61 | ★ | **2KJ1602 - ■EP13 - ■■J1** | | 40 |
| | **70** | **84** | 181 | 1.5 | 20.31 | | **2KJ1602 - ■EP13 - ■■H1** | | 40 |
| | **78** | **94** | 164 | 1.8 | 18.33 | ★ | **2KJ1602 - ■EP13 - ■■G1** | | 40 |
| | **85** | **102** | 148 | 1.9 | 16.62 | | **2KJ1602 - ■EP13 - ■■F1** | | 40 |
| | **94** | **113** | 135 | 1.9 | 15.13 | ★ | **2KJ1602 - ■EP13 - ■■E1** | | 40 |
| | **106** | **127** | 119 | 1.9 | 13.37 | | **2KJ1602 - ■EP13 - ■■D1** | | 40 |
| | **115** | **138** | 110 | 2.2 | 12.35 | ★ | **2KJ1602 - ■EP13 - ■■C1** | | 40 |
| | **134** | **161** | 95 | 2.6 | 10.63 | | **2KJ1602 - ■EP13 - ■■B1** | | 40 |
| | **147** | **176** | 86 | 2.8 | 9.67 | ★ | **2KJ1602 - ■EP13 - ■■A1** | | 40 |
| | **C.38-LA90L4** | | | | | | | | |
| | **49** | **59** | 254 | 0.80 | 28.72 | ★ | **2KJ1601 - ■EP13 - ■■L1** | | 32 |
| | **55** | **66** | 230 | 0.89 | 25.95 | | **2KJ1601 - ■EP13 - ■■K1** | | 32 |
| | **63** | **76** | 201 | 1.0 | 22.61 | ★ | **2KJ1601 - ■EP13 - ■■J1** | | 32 |
| | **70** | **84** | 180 | 1.1 | 20.31 | | **2KJ1601 - ■EP13 - ■■H1** | | 32 |
| | **78** | **94** | 163 | 1.2 | 18.33 | ★ | **2KJ1601 - ■EP13 - ■■G1** | | 32 |
| | **85** | **102** | 148 | 1.3 | 16.62 | | **2KJ1601 - ■EP13 - ■■F1** | | 32 |
| | **94** | **113** | 134 | 1.4 | 15.13 | ★ | **2KJ1601 - ■EP13 - ■■E1** | | 32 |
| | **106** | **127** | 119 | 1.4 | 13.37 | | **2KJ1601 - ■EP13 - ■■D1** | | 32 |
| | **115** | **138** | 110 | 1.5 | 12.35 | ★ | **2KJ1601 - ■EP13 - ■■C1** | | 32 |
| | **134** | **161** | 94 | 1.8 | 10.63 | | **2KJ1601 - ■EP13 - ■■B1** | | 32 |
| | **147** | **176** | 86 | 1.9 | 9.67 | ★ | **2KJ1601 - ■EP13 - ■■A1** | | 32 |
| **2.2** (50 Hz) 2.6 (60 Hz) | **C.88-LA100L4** | | | | | | | | |
| | **11.3** | **13.6** | 1 369 | 0.83 | 126.18 | | **2KJ1604 - ■FL13 - ■■F2** | | 92 |
| | **12.4** | **14.9** | 1 247 | 0.88 | 114.95 | ★ | **2KJ1604 - ■FL13 - ■■E2** | | 92 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ | Output speed | | Output torque | Service factor | Gearbox ratio | | Order No. | Order code | Weight *) |
|---|---|---|---|---|---|---|---|---|---|
| kW | $n_2$ (50 Hz) rpm | $n_2$ (60 Hz) rpm | $T_2$ Nm | $f_B$ | $i_{tot}$ | | | (No. of poles) | kg |
| **2.2** (50 Hz) | **C.88-LA100L4** | | | | | | | | |
| 2.6 (60 Hz) | **13.1** | **15.7** | 1 363 | 0.97 | 108.50 | | **2KJ1604 - ■FL13 - ■■D2** | | 92 |
| | **14.5** | **17.4** | 1 236 | 1.1 | 98.17 | ★ | **2KJ1604 - ■FL13 - ■■C2** | | 92 |
| | **15.7** | **18.8** | 1 143 | 1.1 | 90.62 | | **2KJ1604 - ■FL13 - ■■B2** | | 92 |
| | **18.0** | **22** | 996 | 1.3 | 78.79 | ★ | **2KJ1604 - ■FL13 - ■■A2** | | 92 |
| | **19.8** | **24** | 905 | 1.4 | 71.54 | | **2KJ1604 - ■FL13 - ■■X1** | | 92 |
| | **22** | **26** | 826 | 1.5 | 65.32 | ★ | **2KJ1604 - ■FL13 - ■■W1** | | 92 |
| | **24** | **29** | 758 | 1.6 | 59.93 | | **2KJ1604 - ■FL13 - ■■V1** | | 92 |
| | **26** | **31** | 699 | 1.7 | 55.22 | ★ | **2KJ1604 - ■FL13 - ■■U1** | | 92 |
| | **28** | **34** | 635 | 1.8 | 50.15 | | **2KJ1604 - ■FL13 - ■■T1** | | 92 |
| | **31** | **37** | 578 | 1.9 | 45.68 | ★ | **2KJ1604 - ■FL13 - ■■S1** | | 92 |
| | **34** | **41** | 530 | 2.0 | 41.85 | | **2KJ1604 - ■FL13 - ■■R1** | | 92 |
| | **38** | **46** | 473 | 2.2 | 37.34 | ★ | **2KJ1604 - ■FL13 - ■■Q1** | | 92 |
| | **42** | **50** | 453 | 1.8 | 33.85 | | **2KJ1604 - ■FL13 - ■■P1** | | 92 |
| | **43** | **52** | 422 | 2.3 | 33.33 | | **2KJ1604 - ■FL13 - ■■N1** | | 92 |
| | **46** | **55** | 414 | 1.9 | 30.90 | ★ | **2KJ1604 - ■FL13 - ■■M1** | | 92 |
| | **50** | **60** | 358 | 2.6 | 28.30 | | **2KJ1604 - ■FL13 - ■■K1** | | 92 |
| | **50** | **60** | 380 | 2.1 | 28.36 | | **2KJ1604 - ■FL13 - ■■L1** | | 92 |
| | **54** | **65** | 350 | 2.3 | 26.13 | ★ | **2KJ1604 - ■FL13 - ■■J1** | | 92 |
| | **60** | **72** | 298 | 2.9 | 23.56 | ★ | **2KJ1604 - ■FL13 - ■■G1** | | 92 |
| | **60** | **72** | 318 | 2.4 | 23.73 | | **2KJ1604 - ■FL13 - ■■H1** | | 92 |
| | **66** | **79** | 289 | 2.8 | 21.61 | ★ | **2KJ1604 - ■FL13 - ■■F1** | | 92 |
| | **72** | **86** | 265 | 3.0 | 19.80 | | **2KJ1604 - ■FL13 - ■■E1** | | 92 |
| | **C.68-LA100L4** | | | | | | | | |
| | **25** | **30** | 736 | 0.89 | 57.29 | ★ | **2KJ1603 - ■FL13 - ■■B2** | | 65 |
| | **27** | **32** | 668 | 0.95 | 51.92 | | **2KJ1603 - ■FL13 - ■■A2** | | 65 |
| | **31** | **37** | 590 | 1.00 | 45.83 | ★ | **2KJ1603 - ■FL13 - ■■X1** | | 65 |
| | **34** | **41** | 533 | 1.10 | 41.35 | | **2KJ1603 - ■FL13 - ■■W1** | | 65 |
| | **37** | **44** | 497 | 0.87 | 38.00 | | **2KJ1603 - ■FL13 - ■■V1** | | 65 |
| | **38** | **46** | 484 | 1.20 | 37.50 | ★ | **2KJ1603 - ■FL13 - ■■U1** | | 65 |
| | **42** | **50** | 440 | 0.97 | 33.61 | ★ | **2KJ1603 - ■FL13 - ■■S1** | | 65 |
| | **42** | **50** | 441 | 1.30 | 34.17 | | **2KJ1603 - ■FL13 - ■■T1** | | 65 |
| | **45** | **54** | 403 | 1.30 | 31.25 | ★ | **2KJ1603 - ■FL13 - ■■R1** | | 65 |
| | **47** | **56** | 399 | 0.97 | 30.46 | | **2KJ1603 - ■FL13 - ■■Q1** | | 65 |
| | **51** | **61** | 360 | 1.4 | 27.94 | | **2KJ1603 - ■FL13 - ■■P1** | | 65 |
| | **53** | **64** | 352 | 1.1 | 26.89 | ★ | **2KJ1603 - ■FL13 - ■■N1** | | 65 |
| | **55** | **66** | 331 | 1.5 | 25.66 | ★ | **2KJ1603 - ■FL13 - ■■M1** | | 65 |
| | **58** | **70** | 318 | 1.2 | 24.26 | | **2KJ1603 - ■FL13 - ■■L1** | | 65 |
| | **61** | **73** | 298 | 1.6 | 23.13 | | **2KJ1603 - ■FL13 - ■■K1** | | 65 |
| | **64** | **77** | 288 | 1.5 | 22.00 | ★ | **2KJ1603 - ■FL13 - ■■J1** | | 65 |
| | **71** | **85** | 257 | 1.8 | 19.89 | ★ | **2KJ1603 - ■FL13 - ■■G1** | | 65 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **2.2** (50 Hz) 2.6 (60 Hz) | **C.68-LA100L4** | | | | | | | | |
| | **71** | **85** | 263 | 1.6 | 20.04 | | **2KJ1603 - ■FL13 - ■■H1** | | 65 |
| | **78** | **94** | 240 | 1.7 | 18.33 | ★ | **2KJ1603 - ■FL13 - ■■F1** | | 65 |
| | **87** | **104** | 215 | 1.8 | 16.39 | | **2KJ1603 - ■FL13 - ■■E1** | | 65 |
| | **94** | **113** | 197 | 2.0 | 15.05 | ★ | **2KJ1603 - ■FL13 - ■■D1** | | 65 |
| | **105** | **126** | 178 | 2.3 | 13.57 | | **2KJ1603 - ■FL13 - ■■C1** | | 65 |
| | **122** | **146** | 153 | 2.4 | 11.67 | ★ | **2KJ1603 - ■FL13 - ■■B1** | | 65 |
| | **C.48-LA100L4** | | | | | | | | |
| | **78** | **94** | 240 | 1.2 | 18.33 | ★ | **2KJ1602 - ■FL13 - ■■G1** | | 48 |
| | **85** | **102** | 218 | 1.3 | 16.62 | | **2KJ1602 - ■FL13 - ■■F1** | | 48 |
| | **94** | **113** | 198 | 1.3 | 15.13 | ★ | **2KJ1602 - ■FL13 - ■■E1** | | 48 |
| | **106** | **127** | 175 | 1.3 | 13.37 | | **2KJ1602 - ■FL13 - ■■D1** | | 48 |
| | **115** | **138** | 162 | 1.5 | 12.35 | ★ | **2KJ1602 - ■FL13 - ■■C1** | | 48 |
| | **134** | **161** | 139 | 1.8 | 10.63 | | **2KJ1602 - ■FL13 - ■■B1** | | 48 |
| | **147** | **176** | 127 | 1.9 | 9.67 | ★ | **2KJ1602 - ■FL13 - ■■A1** | | 48 |
| | **C.38-LA100L4** | | | | | | | | |
| | **78** | **94** | 239 | 0.85 | 18.33 | ★ | **2KJ1601 - ■FL13 - ■■G1** | | 40 |
| | **85** | **102** | 217 | 0.89 | 16.62 | | **2KJ1601 - ■FL13 - ■■F1** | | 40 |
| | **94** | **113** | 197 | 0.93 | 15.13 | ★ | **2KJ1601 - ■FL13 - ■■E1** | | 40 |
| | **106** | **127** | 174 | 0.93 | 13.37 | | **2KJ1601 - ■FL13 - ■■D1** | | 40 |
| | **115** | **138** | 161 | 1.1 | 12.35 | ★ | **2KJ1601 - ■FL13 - ■■C1** | | 40 |
| | **134** | **161** | 139 | 1.2 | 10.63 | | **2KJ1601 - ■FL13 - ■■B1** | | 40 |
| | **147** | **176** | 126 | 1.3 | 9.67 | ★ | **2KJ1601 - ■FL13 - ■■A1** | | 40 |
| **3.0** (50 Hz) 3.6 (60 Hz) | **C.88-LA100LB4** | | | | | | | | |
| | **14.5** | **17.4** | 1 686 | 0.83 | 98.17 | ★ | **2KJ1604 - ■FM13 - ■■C2** | | 92 |
| | **18.0** | **22** | 1 358 | 0.96 | 78.79 | ★ | **2KJ1604 - ■FM13 - ■■A2** | | 92 |
| | **19.8** | **24** | 1 234 | 1.0 | 71.54 | | **2KJ1604 - ■FM13 - ■■X1** | | 92 |
| | **22** | **26** | 1 127 | 1.1 | 65.32 | ★ | **2KJ1604 - ■FM13 - ■■W1** | | 92 |
| | **24** | **29** | 1 034 | 1.2 | 59.93 | | **2KJ1604 - ■FM13 - ■■V1** | | 92 |
| | **26** | **31** | 953 | 1.2 | 55.22 | ★ | **2KJ1604 - ■FM13 - ■■U1** | | 92 |
| | **28** | **34** | 866 | 1.3 | 50.15 | | **2KJ1604 - ■FM13 - ■■T1** | | 92 |
| | **31** | **37** | 789 | 1.4 | 45.68 | ★ | **2KJ1604 - ■FM13 - ■■S1** | | 92 |
| | **34** | **41** | 723 | 1.5 | 41.85 | | **2KJ1604 - ■FM13 - ■■R1** | | 92 |
| | **38** | **46** | 645 | 1.6 | 37.34 | ★ | **2KJ1604 - ■FM13 - ■■Q1** | | 92 |
| | **42** | **50** | 618 | 1.3 | 33.85 | | **2KJ1604 - ■FM13 - ■■P1** | | 92 |
| | **43** | **52** | 575 | 1.7 | 33.33 | | **2KJ1604 - ■FM13 - ■■N1** | | 92 |
| | **46** | **55** | 564 | 1.4 | 30.90 | ★ | **2KJ1604 - ■FM13 - ■■M1** | | 92 |
| | **50** | **60** | 489 | 1.9 | 28.30 | | **2KJ1604 - ■FM13 - ■■K1** | | 92 |
| | **50** | **60** | 518 | 1.6 | 28.36 | | **2KJ1604 - ■FM13 - ■■L1** | | 92 |
| | **54** | **65** | 477 | 1.7 | 26.13 | ★ | **2KJ1604 - ■FM13 - ■■J1** | | 92 |
| | **60** | **72** | 407 | 2.1 | 23.56 | ★ | **2KJ1604 - ■FM13 - ■■G1** | | 92 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ | Output speed | | Output torque | Service factor | Gearbox ratio | | Order No. | Order code | Weight *) |
|---|---|---|---|---|---|---|---|---|---|
| kW | $n_2$ (50 Hz) rpm | $n_2$ (60 Hz) rpm | $T_2$ Nm | $f_B$ | $i_{tot}$ | | | (No. of poles) | kg |
| **3.0** (50 Hz) | **C.88-LA100LB4** | | | | | | | | |
| 3.6 (60 Hz) | **60** | **72** | 433 | 1.7 | 23.73 | | **2KJ1604 - ■FM13 - ■■H1** | | 92 |
| | **66** | **79** | 395 | 2.0 | 21.61 | ★ | **2KJ1604 - ■FM13 - ■■F1** | | 92 |
| | **72** | **86** | 361 | 2.2 | 19.80 | | **2KJ1604 - ■FM13 - ■■E1** | | 92 |
| | **80** | **96** | 323 | 2.4 | 17.67 | ★ | **2KJ1604 - ■FM13 - ■■D1** | | 92 |
| | **90** | **108** | 288 | 2.7 | 15.77 | | **2KJ1604 - ■FM13 - ■■C1** | | 92 |
| | **106** | **127** | 244 | 3.1 | 13.39 | | **2KJ1604 - ■FM13 - ■■B1** | | 92 |
| | **127** | **152** | 204 | 3.3 | 11.15 | ★ | **2KJ1604 - ■FM13 - ■■A1** | | 92 |
| | **C.68-LA100LB4** | | | | | | | | |
| | **34** | **41** | 727 | 0.81 | 41.35 | | **2KJ1603 - ■FM13 - ■■W1** | | 65 |
| | **38** | **46** | 659 | 0.87 | 37.50 | ★ | **2KJ1603 - ■FM13 - ■■U1** | | 65 |
| | **42** | **50** | 601 | 0.92 | 34.17 | | **2KJ1603 - ■FM13 - ■■T1** | | 65 |
| | **45** | **54** | 550 | 0.98 | 31.25 | ★ | **2KJ1603 - ■FM13 - ■■R1** | | 65 |
| | **51** | **61** | 492 | 1.10 | 27.94 | | **2KJ1603 - ■FM13 - ■■P1** | | 65 |
| | **53** | **64** | 480 | 0.83 | 26.89 | ★ | **2KJ1603 - ■FM13 - ■■N1** | | 65 |
| | **55** | **66** | 451 | 1.10 | 25.66 | ★ | **2KJ1603 - ■FM13 - ■■M1** | | 65 |
| | **58** | **70** | 433 | 0.91 | 24.26 | | **2KJ1603 - ■FM13 - ■■L1** | | 65 |
| | **61** | **73** | 407 | 1.2 | 23.13 | | **2KJ1603 - ■FM13 - ■■K1** | | 65 |
| | **64** | **77** | 393 | 1.1 | 22.00 | ★ | **2KJ1603 - ■FM13 - ■■J1** | | 65 |
| | **71** | **85** | 350 | 1.3 | 19.89 | ★ | **2KJ1603 - ■FM13 - ■■G1** | | 65 |
| | **71** | **85** | 358 | 1.2 | 20.04 | | **2KJ1603 - ■FM13 - ■■H1** | | 65 |
| | **78** | **94** | 327 | 1.3 | 18.33 | ★ | **2KJ1603 - ■FM13 - ■■F1** | | 65 |
| | **87** | **104** | 293 | 1.3 | 16.39 | | **2KJ1603 - ■FM13 - ■■E1** | | 65 |
| | **94** | **113** | 269 | 1.5 | 15.05 | ★ | **2KJ1603 - ■FM13 - ■■D1** | | 65 |
| | **105** | **126** | 242 | 1.7 | 13.57 | | **2KJ1603 - ■FM13 - ■■C1** | | 65 |
| | **122** | **146** | 208 | 1.8 | 11.67 | ★ | **2KJ1603 - ■FM13 - ■■B1** | | 65 |
| | **C.48-LA100LB4** | | | | | | | | |
| | **78** | **94** | 327 | 0.90 | 18.33 | ★ | **2KJ1602 - ■FM13 - ■■G1** | | 48 |
| | **85** | **102** | 297 | 0.97 | 16.62 | | **2KJ1602 - ■FM13 - ■■F1** | | 48 |
| | **94** | **113** | 270 | 0.97 | 15.13 | ★ | **2KJ1602 - ■FM13 - ■■E1** | | 48 |
| | **106** | **127** | 239 | 0.97 | 13.37 | | **2KJ1602 - ■FM13 - ■■D1** | | 48 |
| | **115** | **138** | 221 | 1.1 | 12.35 | ★ | **2KJ1602 - ■FM13 - ■■C1** | | 48 |
| | **134** | **161** | 190 | 1.3 | 10.63 | | **2KJ1602 - ■FM13 - ■■B1** | | 48 |
| | **147** | **176** | 173 | 1.4 | 9.67 | ★ | **2KJ1602 - ■FM13 - ■■A1** | | 48 |
| | **C.38-LA100LB4** | | | | | | | | |
| | **134** | **161** | 189 | 0.91 | 10.63 | | **2KJ1601 - ■FM13 - ■■B1** | | 40 |
| | **147** | **176** | 172 | 0.97 | 9.67 | ★ | **2KJ1601 - ■FM13 - ■■A1** | | 40 |
| **4.0** (50 Hz) | **C.88-LA112MB4** | | | | | | | | |
| 4.8 (60 Hz) | **22** | **26** | 1 482 | 0.82 | 65.32 | ★ | **2KJ1604 - ■GH13 - ■■W1** | | 99 |
| | **24** | **29** | 1 360 | 0.87 | 59.93 | | **2KJ1604 - ■GH13 - ■■V1** | | 99 |
| | **26** | **31** | 1 253 | 0.92 | 55.22 | ★ | **2KJ1604 - ■GH13 - ■■U1** | | 99 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — **1 to 9**

Frequency and voltage, see page 8/20 — **1 to 9**

Gearbox housing mounting position, see page 5/48 — **A, D, F or H**

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ kW | Output speed $n_2$ (50 Hz) rpm | Output speed $n_2$ (60 Hz) rpm | Output torque $T_2$ Nm | Service factor $f_B$ | Gearbox ratio $i_{tot}$ | | Order No. | Order code (No. of poles) | Weight *) kg |
|---|---|---|---|---|---|---|---|---|---|
| **4.0** (50 Hz) | **C.88-LA112MB4** | | | | | | | | |
| 4.8 (60 Hz) | **29** | **35** | 1 138 | 0.98 | 50.15 | | **2KJ1604 - ■GH13 - ■■T1** | | 99 |
| | **32** | **38** | 1 037 | 1.00 | 45.68 | ★ | **2KJ1604 - ■GH13 - ■■S1** | | 99 |
| | **34** | **41** | 950 | 1.10 | 41.85 | | **2KJ1604 - ■GH13 - ■■R1** | | 99 |
| | **39** | **47** | 848 | 1.20 | 37.34 | ★ | **2KJ1604 - ■GH13 - ■■Q1** | | 99 |
| | **42** | **50** | 812 | 0.99 | 33.85 | | **2KJ1604 - ■GH13 - ■■P1** | | 99 |
| | **43** | **52** | 757 | 1.3 | 33.33 | | **2KJ1604 - ■GH13 - ■■N1** | | 99 |
| | **47** | **56** | 742 | 1.1 | 30.90 | ★ | **2KJ1604 - ■GH13 - ■■M1** | | 99 |
| | **51** | **61** | 642 | 1.4 | 28.30 | | **2KJ1604 - ■GH13 - ■■K1** | | 99 |
| | **51** | **61** | 681 | 1.2 | 28.36 | | **2KJ1604 - ■GH13 - ■■L1** | | 99 |
| | **55** | **66** | 627 | 1.3 | 26.13 | ★ | **2KJ1604 - ■GH13 - ■■J1** | | 99 |
| | **61** | **73** | 535 | 1.6 | 23.56 | ★ | **2KJ1604 - ■GH13 - ■■G1** | | 99 |
| | **61** | **73** | 570 | 1.3 | 23.73 | | **2KJ1604 - ■GH13 - ■■H1** | | 99 |
| | **67** | **80** | 519 | 1.5 | 21.61 | ★ | **2KJ1604 - ■GH13 - ■■F1** | | 99 |
| | **73** | **88** | 475 | 1.7 | 19.80 | | **2KJ1604 - ■GH13 - ■■E1** | | 99 |
| | **82** | **98** | 424 | 1.8 | 17.67 | ★ | **2KJ1604 - ■GH13 - ■■D1** | | 99 |
| | **91** | **109** | 379 | 2.0 | 15.77 | | **2KJ1604 - ■GH13 - ■■C1** | | 99 |
| | **108** | **130** | 321 | 2.4 | 13.39 | | **2KJ1604 - ■GH13 - ■■B1** | | 99 |
| | **129** | **155** | 268 | 2.5 | 11.15 | ★ | **2KJ1604 - ■GH13 - ■■A1** | | 99 |
| | **C.68-LA112MB4** | | | | | | | | |
| | **52** | **62** | 646 | 0.80 | 27.94 | | **2KJ1603 - ■GH13 - ■■P1** | | 72 |
| | **56** | **67** | 594 | 0.85 | 25.66 | ★ | **2KJ1603 - ■GH13 - ■■M1** | | 72 |
| | **62** | **74** | 535 | 0.91 | 23.13 | | **2KJ1603 - ■GH13 - ■■K1** | | 72 |
| | **66** | **79** | 517 | 0.81 | 22.00 | ★ | **2KJ1603 - ■GH13 - ■■J1** | | 72 |
| | **72** | **86** | 460 | 1.00 | 19.89 | ★ | **2KJ1603 - ■GH13 - ■■G1** | | 72 |
| | **72** | **86** | 471 | 0.90 | 20.04 | | **2KJ1603 - ■GH13 - ■■H1** | | 72 |
| | **79** | **95** | 431 | 0.97 | 18.33 | ★ | **2KJ1603 - ■GH13 - ■■F1** | | 72 |
| | **88** | **106** | 385 | 1.0 | 16.39 | | **2KJ1603 - ■GH13 - ■■E1** | | 72 |
| | **96** | **115** | 353 | 1.1 | 15.05 | ★ | **2KJ1603 - ■GH13 - ■■D1** | | 72 |
| | **106** | **127** | 319 | 1.3 | 13.57 | | **2KJ1603 - ■GH13 - ■■C1** | | 72 |
| | **123** | **148** | 274 | 1.4 | 11.67 | ★ | **2KJ1603 - ■GH13 - ■■B1** | | 72 |
| | **C.48-LA112MB4** | | | | | | | | |
| | **117** | **140** | 290 | 0.84 | 12.35 | ★ | **2KJ1602 - ■GH13 - ■■C1** | | 55 |
| | **135** | **162** | 250 | 1.0 | 10.63 | | **2KJ1602 - ■GH13 - ■■B1** | | 55 |
| | **149** | **179** | 227 | 1.1 | 9.67 | ★ | **2KJ1602 - ■GH13 - ■■A1** | | 55 |
| **5.5** (50 Hz) | **C.88-LA132SB4** | | | | | | | | |
| 6.6 (60 Hz) | **35** | **42** | 1 293 | 0.81 | 41.85 | | **2KJ1604 - ■HF13 - ■■R1** | | 109 |
| | **39** | **47** | 1 153 | 0.88 | 37.34 | ★ | **2KJ1604 - ■HF13 - ■■Q1** | | 109 |
| | **44** | **53** | 1 030 | 0.95 | 33.33 | | **2KJ1604 - ■HF13 - ■■N1** | | 109 |
| | **47** | **56** | 1 009 | 0.80 | 30.90 | ★ | **2KJ1604 - ■HF13 - ■■M1** | | 109 |
| | **51** | **61** | 874 | 1.10 | 28.30 | | **2KJ1604 - ■HF13 - ■■K1** | | 109 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — 1 to 9
Frequency and voltage, see page 8/20 — 1 to 9
Gearbox housing mounting position, see page 5/48 — A, D, F or H

*) For mounting type B3

## Selection and ordering data (continued)

| Power rating $P_{Motor}$ | Output speed | | Output torque | Service factor | Gearbox ratio | | Order No. | Order code | Weight *) |
|---|---|---|---|---|---|---|---|---|---|
| kW | $n_2$ (50 Hz) rpm | $n_2$ (60 Hz) rpm | $T_2$ Nm | $f_B$ | $i_{tot}$ | | | (No. of poles) | kg |
| **5.5** (50 Hz) | **C.88-LA132SB4** | | | | | | | | |
| 6.6 (60 Hz) | **51** | **61** | 926 | 0.87 | 28.36 | | **2KJ1604 - ■HF13 - ■■L1** | | 109 |
| | **56** | **67** | 854 | 0.94 | 26.13 | ★ | **2KJ1604 - ■HF13 - ■■J1** | | 109 |
| | **61** | **73** | 775 | 0.97 | 23.73 | | **2KJ1604 - ■HF13 - ■■H1** | | 109 |
| | **62** | **74** | 728 | 1.2 | 23.56 | ★ | **2KJ1604 - ■HF13 - ■■G1** | | 109 |
| | **67** | **80** | 706 | 1.1 | 21.61 | ★ | **2KJ1604 - ■HF13 - ■■F1** | | 109 |
| | **74** | **89** | 647 | 1.2 | 19.80 | | **2KJ1604 - ■HF13 - ■■E1** | | 109 |
| | **82** | **98** | 577 | 1.4 | 17.67 | ★ | **2KJ1604 - ■HF13 - ■■D1** | | 109 |
| | **92** | **110** | 515 | 1.5 | 15.77 | | **2KJ1604 - ■HF13 - ■■C1** | | 109 |
| | **109** | **131** | 437 | 1.7 | 13.39 | | **2KJ1604 - ■HF13 - ■■B1** | | 109 |
| | **130** | **156** | 364 | 1.8 | 11.15 | ★ | **2KJ1604 - ■HF13 - ■■A1** | | 109 |
| | **C.68-LA132SB4** | | | | | | | | |
| | **97** | **116** | 481 | 0.82 | 15.05 | ★ | **2KJ1603 - ■HF13 - ■■D1** | | 82 |
| | **107** | **128** | 434 | 0.95 | 13.57 | | **2KJ1603 - ■HF13 - ■■C1** | | 82 |
| | **125** | **150** | 373 | 1.0 | 11.67 | ★ | **2KJ1603 - ■HF13 - ■■B1** | | 82 |
| **7.5** (50 Hz) | **C.88-LA132M4** | | | | | | | | |
| 9.0 (60 Hz) | **62** | **74** | 992 | 0.87 | 23.56 | ★ | **2KJ1604 - ■HH13 - ■■G1** | | 117 |
| | **67** | **80** | 963 | 0.83 | 21.61 | ★ | **2KJ1604 - ■HH13 - ■■F1** | | 117 |
| | **74** | **89** | 882 | 0.9 | 19.80 | | **2KJ1604 - ■HH13 - ■■E1** | | 117 |
| | **82** | **98** | 787 | 1.0 | 17.67 | ★ | **2KJ1604 - ■HH13 - ■■D1** | | 117 |
| | **92** | **110** | 702 | 1.1 | 15.77 | | **2KJ1604 - ■HH13 - ■■C1** | | 117 |
| | **109** | **131** | 596 | 1.3 | 13.39 | | **2KJ1604 - ■HH13 - ■■B1** | | 117 |
| | **130** | **156** | 497 | 1.4 | 11.15 | ★ | **2KJ1604 - ■HH13 - ■■A1** | | 117 |
| **9.2** (50 Hz) | **C.88-LA132ZMP4** | | | | | | | | |
| 11.0 (60 Hz) | **82** | **98** | 972 | 0.81 | 17.67 | ★ | **2KJ1604 - ■HT13 - ■■D1** | | 117 |
| | **92** | **110** | 868 | 0.89 | 15.77 | | **2KJ1604 - ■HT13 - ■■C1** | | 117 |
| | **108** | **130** | 737 | 1.0 | 13.39 | | **2KJ1604 - ■HT13 - ■■B1** | | 117 |
| | **130** | **156** | 613 | 1.1 | 11.15 | ★ | **2KJ1604 - ■HT13 - ■■A1** | | 117 |
| **11.0** (50 Hz) | **C.88-LA160MB4** | | | | | | | | |
| 13.2 (60 Hz) | **109** | **131** | 872 | 0.87 | 13.39 | | **2KJ1604 - ■JP13 - ■■B1** | | 141 |
| | **131** | **157** | 726 | 0.92 | 11.15 | ★ | **2KJ1604 - ■JP13 - ■■A1** | | 141 |

★ Preferred transmission ratio

Shaft designs, see page 5/46 — 1 to 9
Frequency and voltage, see page 8/20 — 1 to 9
Gearbox housing mounting position, see page 5/48 — A, D, F or H

*) For mounting type B3

## Transmission ratios and maximum torques

### Selection and ordering data

*Efficiency table C.28*

| Transmission ratio | Ratio code | Output speed $n_{mot}$ = 2 500 rpm | | | | Output speed $n_{mot}$ = 1750 rpm | | | | Output speed $n_{mot}$ = 1 450 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **372.00** | **P1** | 6.7 | 119 | 0.15 | 56 | 4.7 | 119 | 0.10 | 56 | 3.9 | 118 | 0.09 | 56 | | • | | | | | | |
| **303.36** | **N1** | 8.2 | 109 | 0.17 | 56 | 5.8 | 109 | 0.12 | 56 | 4.8 | 108 | 0.10 | 56 | | • | | | | | | |
| **248.00** | **M1** | 10.1 | 118 | 0.19 | 66 | 7.1 | 118 | 0.13 | 66 | 5.8 | 118 | 0.11 | 66 | | • | | | | | | |
| **202.24** | **L1** | 12.4 | 100 | 0.20 | 66 | 8.7 | 100 | 0.14 | 66 | 7.2 | 100 | 0.11 | 66 | | • | | | | | | |
| **155.00** | **K1** | 16.1 | 116 | 0.26 | 74 | 11.3 | 116 | 0.19 | 74 | 9.4 | 116 | 0.15 | 74 | | • | | | | | | |
| **126.40** | **J1** | 19.8 | 94 | 0.26 | 74 | 13.8 | 95 | 0.18 | 74 | 11.5 | 95 | 0.15 | 74 | | • | | | | | | |
| **93.00** | **H1** | 27.0 | 118 | 0.40 | 83 | 18.8 | 118 | 0.28 | 83 | 15.6 | 118 | 0.23 | 83 | | • | | | | | | |
| **75.84** | **G1** | 33.0 | 96 | 0.40 | 83 | 23.0 | 96 | 0.28 | 83 | 19.1 | 96 | 0.23 | 83 | | • | | | | | | |
| **62.00** | **F1** | 40.0 | 117 | 0.57 | 87 | 28.0 | 117 | 0.40 | 87 | 23.0 | 117 | 0.32 | 87 | | • | | | | | | |
| **50.56** | **E1** | 49.0 | 94 | 0.56 | 87 | 35.0 | 95 | 0.40 | 87 | 29.0 | 95 | 0.33 | 87 | | • | | | | | | |
| **46.50** | **D1** | 54.0 | 110 | 0.70 | 90 | 38.0 | 110 | 0.49 | 90 | 31.0 | 110 | 0.40 | 90 | | • | | | | | | |
| **37.92** | **C1** | 66.0 | 90 | 0.69 | 90 | 46.0 | 90 | 0.48 | 90 | 38.0 | 90 | 0.40 | 90 | | • | | | | | | |
| **31.00** | **B1** | 81.0 | 99 | 0.92 | 92 | 56.0 | 100 | 0.64 | 92 | 47.0 | 99 | 0.53 | 92 | | • | | | | | | |
| **25.28** | **A1** | 99.0 | 81 | 0.91 | 92 | 69.0 | 81 | 0.64 | 92 | 57.0 | 81 | 0.53 | 92 | | • | | | | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

*Efficiency table C.28*

| Transmission ratio | Ratio code | Output speed $n_{mot}$ = 1 150 rpm | | | | Output speed $n_{mot}$ = 950 rpm | | | | Size for motor and input units | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 | | | | |
| **372.00** | **P1** | 3.1 | 117 | 0.07 | 55 | 2.6 | 116 | 0.06 | 55 | | • | | | | | | |
| **303.36** | **N1** | 3.8 | 108 | 0.08 | 55 | 3.1 | 107 | 0.06 | 55 | | • | | | | | | |
| **248.00** | **M1** | 4.6 | 118 | 0.09 | 66 | 3.8 | 117 | 0.07 | 65 | | • | | | | | | |
| **202.24** | **L1** | 5.7 | 99 | 0.09 | 66 | 4.7 | 99 | 0.07 | 65 | | • | | | | | | |
| **155.00** | **K1** | 7.4 | 116 | 0.12 | 74 | 6.1 | 116 | 0.10 | 74 | | • | | | | | | |
| **126.40** | **J1** | 9.1 | 94 | 0.12 | 74 | 7.5 | 94 | 0.10 | 74 | | • | | | | | | |
| **93.00** | **H1** | 12.4 | 118 | 0.19 | 83 | 10.2 | 118 | 0.15 | 82 | | • | | | | | | |
| **75.84** | **G1** | 15.2 | 95 | 0.18 | 83 | 12.5 | 95 | 0.15 | 82 | | • | | | | | | |
| **62.00** | **F1** | 18.5 | 117 | 0.26 | 87 | 15.3 | 117 | 0.22 | 87 | | • | | | | | | |
| **50.56** | **E1** | 23.0 | 94 | 0.26 | 87 | 18.8 | 94 | 0.21 | 87 | | • | | | | | | |
| **46.50** | **D1** | 25.0 | 110 | 0.32 | 90 | 20.0 | 110 | 0.26 | 89 | | • | | | | | | |
| **37.92** | **C1** | 30.0 | 90 | 0.31 | 90 | 25.0 | 89 | 0.26 | 89 | | • | | | | | | |
| **31.00** | **B1** | 37.0 | 99 | 0.42 | 92 | 31.0 | 99 | 0.35 | 92 | | • | | | | | | |
| **25.28** | **A1** | 45.0 | 81 | 0.42 | 92 | 38.0 | 81 | 0.35 | 92 | | • | | | | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

### *Efficiency table C.28*

| Transmission ratio | Ratio code | Output speed $n_{mot}$ = 850 rpm | | | | Output speed $n_{mot}$ = 700 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **372.00** | **P1** | 2.3 | 116 | 0.05 | 54 | 1.9 | 114 | <0.05 | 54 | | • | | | | | | |
| **303.36** | **N1** | 2.8 | 106 | 0.06 | 54 | 2.3 | 104 | <0.05 | 54 | | • | | | | | | |
| **248.00** | **M1** | 3.4 | 117 | 0.06 | 65 | 2.8 | 116 | 0.05 | 65 | | • | | | | | | |
| **202.24** | **L1** | 4.2 | 98 | 0.07 | 65 | 3.5 | 97 | 0.06 | 65 | | • | | | | | | |
| **155.00** | **K1** | 5.5 | 115 | 0.09 | 73 | 4.5 | 115 | 0.07 | 73 | | • | | | | | | |
| **126.40** | **J1** | 6.7 | 94 | 0.09 | 73 | 5.5 | 93 | 0.07 | 73 | | • | | | | | | |
| **93.00** | **H1** | 9.1 | 118 | 0.14 | 82 | 7.5 | 117 | 0.11 | 82 | | • | | | | | | |
| **75.84** | **G1** | 11.2 | 95 | 0.14 | 82 | 9.2 | 95 | 0.11 | 82 | | • | | | | | | |
| **62.00** | **F1** | 13.7 | 117 | 0.19 | 87 | 11.3 | 117 | 0.16 | 86 | | • | | | | | | |
| **50.56** | **E1** | 16.8 | 94 | 0.19 | 87 | 13.8 | 94 | 0.16 | 86 | | • | | | | | | |
| **46.50** | **D1** | 18.3 | 110 | 0.24 | 89 | 15.1 | 110 | 0.19 | 89 | | • | | | | | | |
| **37.92** | **C1** | 22.0 | 89 | 0.23 | 89 | 18.5 | 89 | 0.19 | 89 | | • | | | | | | |
| **31.00** | **B1** | 27.0 | 99 | 0.31 | 91 | 23.0 | 99 | 0.26 | 91 | | • | | | | | | |
| **25.28** | **A1** | 34.0 | 81 | 0.31 | 91 | 28.0 | 80 | 0.26 | 91 | | • | | | | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Transmission ratios and maximum torques

### Selection and ordering data (continued)

*Efficiency table C.38-D/Z28*

| Transmission ratio | Ratio code | Output speed $n_{mot}$ = 1 750 rpm | | | | Output speed $n_{mot}$ = 1 450 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **23 503** | **N1** | 0.07 | 222 | <0.06 | 45 | 0.06 | 222 | <0.06 | 45 | | • | | | | | | |
| **20 276** | **M1** | 0.09 | 222 | <0.06 | 45 | 0.07 | 222 | <0.06 | 45 | | • | | | | | | |
| **17 420** | **L1** | 0.10 | 222 | <0.06 | 45 | 0.08 | 222 | <0.06 | 45 | | • | | | | | | |
| **16 037** | **K1** | 0.11 | 222 | <0.06 | 45 | 0.09 | 222 | <0.06 | 45 | | • | | | | | | |
| **14 579** | **J1** | 0.12 | 222 | <0.06 | 45 | 0.10 | 222 | <0.06 | 45 | | • | | | | | | |
| **12 904** | **H1** | 0.14 | 222 | <0.06 | 45 | 0.11 | 222 | <0.06 | 45 | | • | | | | | | |
| **10 808** | **G1** | 0.16 | 222 | <0.06 | 45 | 0.13 | 222 | <0.06 | 45 | | • | | | | | | |
| **9 216** | **F1** | 0.19 | 222 | <0.06 | 46 | 0.16 | 222 | <0.06 | 45 | | • | | | | | | |
| **7 833** | **E1** | 0.22 | 222 | <0.06 | 46 | 0.19 | 222 | <0.06 | 46 | | • | | | | | | |
| **6 807** | **D1** | 0.26 | 222 | <0.06 | 46 | 0.21 | 222 | <0.06 | 46 | | • | | | | | | |
| **5 925** | **C1** | 0.30 | 222 | <0.06 | 46 | 0.24 | 222 | <0.06 | 46 | | • | | | | | | |
| **5 345** | **B1** | 0.33 | 222 | <0.06 | 46 | 0.27 | 222 | <0.06 | 46 | | • | | | | | | |
| **4 717** | **A1** | 0.37 | 222 | <0.06 | 46 | 0.31 | 222 | <0.06 | 46 | | • | | | | | | |
| **4 222** | **B2** | 0.41 | 222 | <0.06 | 47 | 0.34 | 222 | <0.06 | 46 | | • | | | | | | |
| **3 749** | **A2** | 0.47 | 222 | <0.06 | 47 | 0.39 | 222 | <0.06 | 46 | | • | | | | | | |
| **3 286** | **X1** | 0.53 | 222 | <0.06 | 47 | 0.44 | 222 | <0.06 | 47 | | • | | | | | | |
| **2 941** | **W1** | 0.60 | 222 | <0.06 | 47 | 0.49 | 222 | <0.06 | 47 | | • | | | | | | |
| **2 610** | **V1** | 0.67 | 222 | <0.06 | 48 | 0.56 | 222 | <0.06 | 47 | | • | | | | | | |
| **2 288** | **U1** | 0.76 | 223 | <0.06 | 48 | 0.63 | 222 | <0.06 | 47 | | • | | | | | | |
| **2 011** | **T1** | 0.87 | 223 | <0.06 | 48 | 0.72 | 222 | <0.06 | 48 | | • | | | | | | |
| **1 817** | **S1** | 0.96 | 223 | <0.06 | 49 | 0.80 | 223 | <0.06 | 48 | | • | | | | | | |
| **1 583** | **R1** | 1.11 | 223 | <0.06 | 49 | 0.92 | 223 | <0.06 | 49 | | • | | | | | | |
| **1 422** | **Q1** | 1.23 | 223 | <0.06 | 50 | 1.02 | 223 | <0.06 | 49 | | • | | | | | | |
| **1 284** | **P1** | 1.36 | 223 | 0.06 | 50 | 1.13 | 223 | <0.06 | 49 | | • | | | | | | |
| **1 164** | **N1** | 1.50 | 223 | 0.07 | 51 | 1.25 | 223 | <0.06 | 50 | | • | | | | | | |
| **1 059** | **M1** | 1.65 | 223 | 0.08 | 51 | 1.37 | 223 | 0.06 | 50 | | • | | | | | | |
| **937** | **L1** | 1.87 | 223 | 0.08 | 52 | 1.55 | 223 | 0.07 | 51 | | • | | | | | | |
| **865** | **K1** | 2.02 | 223 | 0.09 | 53 | 1.68 | 223 | 0.08 | 51 | | • | | | | | | |
| **745** | **J1** | 2.35 | 223 | 0.10 | 54 | 1.95 | 223 | 0.09 | 52 | | • | | | | | | |
| **677** | **H1** | 2.59 | 224 | 0.11 | 54 | 2.14 | 223 | 0.09 | 53 | | • | | | | | | |
| **615** | **G1** | 2.84 | 224 | 0.12 | 55 | 2.36 | 223 | 0.10 | 54 | | • | | | | | | |
| **558** | **F1** | 3.14 | 224 | 0.13 | 56 | 2.60 | 224 | 0.11 | 55 | | • | | | | | | |
| **508** | **E1** | 3.45 | 224 | 0.14 | 57 | 2.86 | 224 | 0.12 | 55 | | • | | | | | | |
| **449** | **D1** | 3.90 | 224 | 0.16 | 58 | 3.23 | 224 | 0.13 | 56 | | • | | | | | | |
| **414** | **C1** | 4.22 | 225 | 0.17 | 59 | 3.50 | 224 | 0.14 | 57 | | • | | | | | | |
| **357** | **B1** | 4.90 | 225 | 0.19 | 60 | 4.06 | 225 | 0.16 | 58 | | • | | | | | | |
| **324** | **A1** | 5.40 | 225 | 0.21 | 61 | 4.47 | 225 | 0.18 | 59 | | • | | | | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

*Efficiency table C.38*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 1 750 rpm | | | | Output speed $n_{mot}$ = 1 450 rpm | | | | Output speed $n_{mot}$ = 1 150 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **320.67** | ★ | **K2** | 5.5 | 225 | 0.21 | 62 | 4.5 | 225 | 0.18 | 60 | 3.6 | 224 | 0.15 | 58 | • | • | • | | | | | |
| **284.70** | | **J2** | 6.1 | 226 | 0.23 | 63 | 5.1 | 225 | 0.20 | 62 | 4.0 | 224 | 0.16 | 59 | • | • | • | | | | | |
| **249.60** | ★ | **H2** | 7.0 | 226 | 0.26 | 64 | 5.8 | 226 | 0.22 | 63 | 4.6 | 225 | 0.18 | 61 | • | • | • | • | | | | |
| **223.36** | | **G2** | 7.8 | 227 | 0.28 | 65 | 6.5 | 226 | 0.24 | 64 | 5.1 | 225 | 0.20 | 62 | • | • | • | • | | | | |
| **198.25** | ★ | **F2** | 8.8 | 227 | 0.32 | 66 | 7.3 | 226 | 0.27 | 65 | 5.8 | 225 | 0.22 | 63 | • | • | • | • | | | | |
| **173.73** | | **E2** | 10.1 | 228 | 0.36 | 67 | 8.3 | 227 | 0.30 | 66 | 6.6 | 226 | 0.24 | 64 | • | • | • | • | | | | |
| **152.75** | ★ | **D2** | 11.5 | 228 | 0.41 | 68 | 9.5 | 227 | 0.34 | 67 | 7.5 | 226 | 0.27 | 65 | • | • | • | • | | | | |
| **138.00** | | **C2** | 12.7 | 229 | 0.45 | 68 | 10.5 | 228 | 0.37 | 67 | 8.3 | 227 | 0.30 | 66 | • | • | • | • | | | | |
| **120.25** | ★ | **B2** | 14.6 | 230 | 0.51 | 68 | 12.1 | 229 | 0.43 | 68 | 9.6 | 228 | 0.34 | 67 | • | • | • | • | | | | |
| **108.00** | | **A2** | 16.2 | 226 | 0.56 | 69 | 13.4 | 229 | 0.47 | 68 | 10.6 | 228 | 0.38 | 67 | • | • | • | • | | | | |
| **97.50** | ★ | **X1** | 17.9 | 219 | 0.60 | 69 | 14.9 | 230 | 0.53 | 68 | 11.8 | 229 | 0.42 | 68 | • | • | • | • | • | | | |
| **88.40** | | **W1** | 19.8 | 211 | 0.64 | 69 | 16.4 | 224 | 0.56 | 69 | 13.0 | 229 | 0.46 | 68 | • | • | • | • | • | | | |
| **80.44** | ★ | **V1** | 22.0 | 203 | 0.68 | 69 | 18.0 | 217 | 0.60 | 69 | 14.3 | 230 | 0.50 | 68 | • | • | • | • | • | | | |
| **71.12** | | **U1** | 25.0 | 195 | 0.74 | 69 | 20.0 | 210 | 0.64 | 69 | 16.2 | 225 | 0.56 | 69 | • | • | • | • | • | | | |
| **65.68** | ★ | **T1** | 27.0 | 191 | 0.78 | 69 | 22.0 | 204 | 0.68 | 69 | 17.5 | 220 | 0.59 | 69 | • | • | • | • | • | | | |
| **60.30** | ★ | **S1** | 29.0 | 204 | 0.71 | 87 | 24.0 | 202 | 0.59 | 87 | 19.1 | 199 | 0.47 | 85 | • | • | • | | | | | |
| **53.53** | | **R1** | 33.0 | 245 | 0.96 | 88 | 27.0 | 243 | 0.79 | 87 | 21.0 | 239 | 0.61 | 86 | • | • | • | | | | | |
| **46.93** | ★ | **Q1** | 37.0 | 232 | 1.02 | 88 | 31.0 | 231 | 0.85 | 88 | 25.0 | 228 | 0.69 | 87 | • | • | • | • | | | | |
| **42.00** | | **P1** | 42.0 | 222 | 1.10 | 89 | 35.0 | 220 | 0.92 | 88 | 27.0 | 218 | 0.71 | 87 | • | • | • | • | | | | |
| **37.28** | ★ | **N1** | 47.0 | 232 | 1.28 | 89 | 39.0 | 231 | 1.07 | 89 | 31.0 | 229 | 0.85 | 88 | • | • | • | • | | | | |
| **32.67** | | **M1** | 54.0 | 192 | 1.22 | 89 | 44.0 | 192 | 0.99 | 89 | 35.0 | 190 | 0.79 | 88 | • | • | • | • | | | | |
| **28.72** | ★ | **L1** | 61.0 | 208 | 1.49 | 89 | 50.0 | 207 | 1.22 | 89 | 40.0 | 206 | 0.97 | 89 | • | • | • | • | | | | |
| **25.95** | | **K1** | 67.0 | 209 | 1.64 | 89 | 56.0 | 208 | 1.37 | 89 | 44.0 | 207 | 1.08 | 89 | • | • | • | • | | | | |
| **22.61** | ★ | **J1** | 77.0 | 206 | 1.86 | 89 | 64.0 | 206 | 1.55 | 89 | 51.0 | 205 | 1.23 | 89 | • | • | • | • | | | | |
| **20.31** | | **H1** | 86.0 | 196 | 1.98 | 89 | 71.0 | 196 | 1.63 | 89 | 57.0 | 196 | 1.31 | 89 | • | • | • | • | | | | |
| **18.33** | ★ | **G1** | 95.0 | 199 | 2.21 | 89 | 79.0 | 206 | 1.91 | 89 | 63.0 | 206 | 1.52 | 89 | • | • | • | • | • | | | |
| **16.62** | | **F1** | 105.0 | 191 | 2.34 | 89 | 87.0 | 196 | 2.00 | 89 | 69.0 | 196 | 1.59 | 89 | • | • | • | • | • | | | |
| **15.13** | ★ | **E1** | 116.0 | 183 | 2.49 | 89 | 96.0 | 187 | 2.10 | 89 | 76.0 | 187 | 1.66 | 89 | • | • | • | • | • | | | |
| **13.37** | | **D1** | 131.0 | 165 | 2.53 | 89 | 108.0 | 165 | 2.09 | 89 | 86.0 | 165 | 1.66 | 89 | • | • | • | • | • | | | |
| **12.35** | ★ | **C1** | 142.0 | 169 | 2.81 | 89 | 117.0 | 172 | 2.36 | 89 | 93.0 | 172 | 1.88 | 89 | • | • | • | • | • | | | |
| **10.63** | | **B1** | 165.0 | 155 | 3.00 | 89 | 136.0 | 173 | 2.76 | 89 | 108.0 | 183 | 2.31 | 89 | • | • | • | • | • | | | |
| **9.67** | ★ | **A1** | 181.0 | 141 | 3.00 | 89 | 150.0 | 170 | 3.00 | 89 | 119.0 | 176 | 2.46 | 89 | • | • | • | • | • | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Transmission ratios and maximum torques

### Selection and ordering data (continued)

*Efficiency table C.38*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 950 rpm | | | | Output speed $n_{mot}$ = 850 rpm | | | | Output speed $n_{mot}$ = 700 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **320.67** | ★ | **K2** | 3.0 | 224 | 0.12 | 56 | 2.7 | 224 | 0.11 | 56 | 2.2 | 223 | 0.10 | 54 | • | • | • | | | | | |
| **284.70** | | **J2** | 3.3 | 224 | 0.13 | 58 | 3.0 | 224 | 0.12 | 57 | 2.5 | 224 | 0.11 | 55 | • | • | • | | | | | |
| **249.60** | ★ | **H2** | 3.8 | 224 | 0.15 | 59 | 3.4 | 224 | 0.14 | 58 | 2.8 | 224 | 0.12 | 56 | • | • | • | • | | | | |
| **223.36** | | **G2** | 4.3 | 225 | 0.17 | 60 | 3.8 | 224 | 0.15 | 59 | 3.1 | 224 | 0.13 | 57 | • | • | • | • | | | | |
| **198.25** | ★ | **F2** | 4.8 | 225 | 0.19 | 61 | 4.3 | 225 | 0.17 | 60 | 3.5 | 224 | 0.14 | 58 | • | • | • | • | | | | |
| **173.73** | | **E2** | 5.5 | 225 | 0.21 | 62 | 4.9 | 225 | 0.19 | 61 | 4.0 | 224 | 0.16 | 59 | • | • | • | • | | | | |
| **152.75** | ★ | **D2** | 6.2 | 226 | 0.23 | 63 | 5.6 | 225 | 0.21 | 62 | 4.6 | 225 | 0.18 | 61 | • | • | • | • | | | | |
| **138.00** | | **C2** | 6.9 | 226 | 0.25 | 64 | 6.2 | 226 | 0.23 | 63 | 5.1 | 225 | 0.20 | 62 | • | • | • | • | | | | |
| **120.25** | ★ | **B2** | 7.9 | 227 | 0.29 | 65 | 7.1 | 226 | 0.26 | 65 | 5.8 | 226 | 0.22 | 63 | • | • | • | • | | | | |
| **108.00** | | **A2** | 8.8 | 227 | 0.32 | 66 | 7.9 | 227 | 0.29 | 65 | 6.5 | 226 | 0.24 | 64 | • | • | • | • | | | | |
| **97.50** | ★ | **X1** | 9.7 | 228 | 0.35 | 67 | 8.7 | 227 | 0.31 | 66 | 7.2 | 226 | 0.26 | 65 | • | • | • | • | • | | | |
| **88.40** | | **W1** | 10.7 | 228 | 0.38 | 67 | 9.6 | 228 | 0.34 | 67 | 7.9 | 227 | 0.29 | 65 | • | • | • | • | • | | | |
| **80.44** | ★ | **V1** | 11.8 | 229 | 0.42 | 68 | 10.6 | 228 | 0.38 | 67 | 8.7 | 227 | 0.31 | 66 | • | • | • | • | • | | | |
| **71.12** | | **U1** | 13.4 | 229 | 0.47 | 68 | 12.0 | 229 | 0.42 | 68 | 9.8 | 228 | 0.35 | 67 | • | • | • | • | • | | | |
| **65.68** | ★ | **T1** | 14.5 | 230 | 0.51 | 68 | 12.9 | 229 | 0.46 | 68 | 10.7 | 228 | 0.38 | 67 | • | • | • | • | • | | | |
| **60.30** | ★ | **S1** | 15.8 | 196 | 0.39 | 84 | 14.1 | 195 | 0.34 | 84 | 11.6 | 192 | 0.28 | 82 | • | • | • | | | | | |
| **53.53** | | **R1** | 17.7 | 236 | 0.52 | 85 | 15.9 | 234 | 0.46 | 84 | 13.1 | 231 | 0.38 | 83 | • | • | • | | | | | |
| **46.93** | ★ | **Q1** | 20.0 | 225 | 0.55 | 86 | 18.1 | 223 | 0.50 | 85 | 14.9 | 220 | 0.41 | 84 | • | • | • | • | | | | |
| **42.00** | | **P1** | 23.0 | 216 | 0.60 | 86 | 20.0 | 214 | 0.52 | 86 | 16.7 | 211 | 0.44 | 85 | • | • | • | • | | | | |
| **37.28** | ★ | **N1** | 25.0 | 227 | 0.68 | 87 | 23.0 | 225 | 0.63 | 86 | 18.8 | 222 | 0.51 | 85 | • | • | • | • | | | | |
| **32.67** | | **M1** | 29.0 | 189 | 0.65 | 87 | 26.0 | 188 | 0.59 | 87 | 21.0 | 185 | 0.47 | 86 | • | • | • | • | | | | |
| **28.72** | ★ | **L1** | 33.0 | 205 | 0.80 | 88 | 30.0 | 204 | 0.73 | 88 | 24.0 | 202 | 0.58 | 87 | • | • | • | • | | | | |
| **25.95** | | **K1** | 37.0 | 206 | 0.90 | 88 | 33.0 | 205 | 0.81 | 88 | 27.0 | 204 | 0.66 | 87 | • | • | • | • | | | | |
| **22.61** | ★ | **J1** | 42.0 | 205 | 1.01 | 89 | 38.0 | 204 | 0.92 | 88 | 31.0 | 202 | 0.75 | 88 | • | • | • | • | | | | |
| **20.31** | | **H1** | 47.0 | 195 | 1.08 | 89 | 42.0 | 195 | 0.96 | 89 | 34.0 | 193 | 0.78 | 88 | • | • | • | • | | | | |
| **18.33** | ★ | **G1** | 52.0 | 206 | 1.26 | 89 | 46.0 | 205 | 1.11 | 89 | 38.0 | 204 | 0.92 | 88 | • | • | • | • | • | | | |
| **16.62** | | **F1** | 57.0 | 196 | 1.31 | 89 | 51.0 | 195 | 1.17 | 89 | 42.0 | 195 | 0.96 | 89 | • | • | • | • | • | | | |
| **15.13** | ★ | **E1** | 63.0 | 186 | 1.38 | 89 | 56.0 | 186 | 1.22 | 89 | 46.0 | 186 | 1.01 | 89 | • | • | • | • | • | | | |
| **13.37** | | **D1** | 71.0 | 165 | 1.37 | 89 | 64.0 | 165 | 1.24 | 89 | 52.0 | 164 | 1.00 | 89 | • | • | • | • | • | | | |
| **12.35** | ★ | **C1** | 77.0 | 172 | 1.55 | 89 | 69.0 | 172 | 1.39 | 89 | 57.0 | 172 | 1.15 | 89 | • | • | • | • | • | | | |
| **10.63** | | **B1** | 89.0 | 183 | 1.90 | 89 | 80.0 | 183 | 1.71 | 89 | 66.0 | 182 | 1.41 | 89 | • | • | • | • | • | | | |
| **9.67** | ★ | **A1** | 98.0 | 176 | 2.02 | 89 | 88.0 | 176 | 1.82 | 89 | 72.0 | 176 | 1.49 | 89 | • | • | • | • | • | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

*Efficiency table C.38*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 500 rpm | | | | Output speed $n_{mot}$ = 250 rpm | | | | Output speed $n_{mot}$ = 10 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **320.67** | ★ | **K2** | 1.6 | 223 | 0.07 | 52 | 0.78 | 223 | <0.05 | 49 | 0.031 | 222 | <0.05 | 46 | • | • | • | | | | | |
| **284.70** | | **J2** | 1.8 | 223 | 0.08 | 53 | 0.88 | 223 | <0.05 | 49 | 0.035 | 222 | <0.05 | 46 | • | • | • | | | | | |
| **249.60** | ★ | **H2** | 2.0 | 223 | 0.09 | 53 | 1.00 | 223 | <0.05 | 50 | 0.040 | 222 | <0.05 | 46 | • | • | • | • | | | | |
| **223.36** | | **G2** | 2.2 | 223 | 0.09 | 54 | 1.10 | 223 | 0.05 | 50 | 0.045 | 222 | <0.05 | 46 | • | • | • | • | | | | |
| **198.25** | ★ | **F2** | 2.5 | 224 | 0.11 | 55 | 1.30 | 223 | 0.06 | 51 | 0.050 | 222 | <0.05 | 46 | • | • | • | • | | | | |
| **173.73** | | **E2** | 2.9 | 224 | 0.12 | 56 | 1.40 | 223 | 0.06 | 51 | 0.058 | 222 | <0.05 | 46 | • | • | • | • | | | | |
| **152.75** | ★ | **D2** | 3.3 | 224 | 0.13 | 57 | 1.60 | 223 | 0.07 | 52 | 0.065 | 222 | <0.05 | 46 | • | • | • | • | | | | |
| **138.00** | | **C2** | 3.6 | 224 | 0.15 | 58 | 1.80 | 223 | 0.08 | 53 | 0.072 | 222 | <0.05 | 46 | • | • | • | • | | | | |
| **120.25** | ★ | **B2** | 4.2 | 225 | 0.17 | 60 | 2.10 | 223 | 0.09 | 54 | 0.083 | 222 | <0.05 | 46 | • | • | • | • | | | | |
| **108.00** | | **A2** | 4.6 | 225 | 0.18 | 61 | 2.30 | 223 | 0.10 | 54 | 0.093 | 222 | <0.05 | 46 | • | • | • | • | | | | |
| **97.50** | ★ | **X1** | 5.1 | 225 | 0.20 | 62 | 2.60 | 224 | 0.11 | 55 | 0.100 | 222 | <0.05 | 46 | • | • | • | • | • | | | |
| **88.40** | | **W1** | 5.7 | 225 | 0.22 | 63 | 2.80 | 224 | 0.12 | 56 | 0.110 | 222 | <0.05 | 46 | • | • | • | • | • | | | |
| **80.44** | ★ | **V1** | 6.2 | 226 | 0.23 | 63 | 3.10 | 224 | 0.13 | 57 | 0.120 | 222 | <0.05 | 46 | • | • | • | • | • | | | |
| **71.12** | | **U1** | 7.0 | 226 | 0.26 | 64 | 3.50 | 224 | 0.14 | 58 | 0.140 | 222 | <0.05 | 46 | • | • | • | • | • | | | |
| **65.68** | ★ | **T1** | 7.6 | 226 | 0.28 | 65 | 3.80 | 224 | 0.15 | 59 | 0.150 | 222 | <0.05 | 46 | • | • | • | • | • | | | |
| **60.30** | ★ | **S1** | 8.3 | 188 | 0.20 | 80 | 4.10 | 181 | 0.10 | 78 | 0.170 | 173 | <0.05 | 74 | • | • | • | | | | | |
| **53.53** | | **R1** | 9.3 | 226 | 0.27 | 81 | 4.70 | 217 | 0.14 | 78 | 0.190 | 206 | <0.05 | 74 | • | • | • | | | | | |
| **46.93** | ★ | **Q1** | 10.7 | 215 | 0.29 | 82 | 5.30 | 206 | 0.15 | 78 | 0.210 | 194 | <0.05 | 74 | • | • | • | • | | | | |
| **42.00** | | **P1** | 11.9 | 206 | 0.31 | 82 | 6.00 | 197 | 0.16 | 79 | 0.240 | 185 | <0.05 | 74 | • | • | • | • | | | | |
| **37.28** | ★ | **N1** | 13.4 | 217 | 0.37 | 83 | 6.70 | 207 | 0.18 | 79 | 0.270 | 193 | <0.05 | 74 | • | • | • | • | | | | |
| **32.67** | | **M1** | 15.3 | 181 | 0.35 | 84 | 7.70 | 173 | 0.17 | 80 | 0.310 | 160 | <0.05 | 74 | • | • | • | • | | | | |
| **28.72** | ★ | **L1** | 17.4 | 197 | 0.42 | 85 | 8.70 | 188 | 0.21 | 81 | 0.350 | 172 | <0.05 | 74 | • | • | • | • | | | | |
| **25.95** | | **K1** | 19.3 | 199 | 0.47 | 85 | 9.60 | 190 | 0.23 | 81 | 0.390 | 173 | <0.05 | 74 | • | • | • | • | | | | |
| **22.61** | ★ | **J1** | 22.0 | 199 | 0.53 | 86 | 11.10 | 189 | 0.27 | 82 | 0.440 | 171 | <0.05 | 74 | • | • | • | • | | | | |
| **20.31** | | **H1** | 25.0 | 190 | 0.57 | 87 | 12.30 | 181 | 0.28 | 83 | 0.490 | 163 | <0.05 | 74 | • | • | • | • | | | | |
| **18.33** | ★ | **G1** | 27.0 | 201 | 0.65 | 87 | 13.60 | 192 | 0.33 | 83 | 0.550 | 172 | <0.05 | 74 | • | • | • | • | • | | | |
| **16.62** | | **F1** | 30.0 | 192 | 0.69 | 88 | 15.00 | 184 | 0.34 | 84 | 0.600 | 163 | <0.05 | 74 | • | • | • | • | • | | | |
| **15.13** | ★ | **E1** | 33.0 | 184 | 0.72 | 88 | 16.50 | 176 | 0.36 | 84 | 0.660 | 155 | <0.05 | 74 | • | • | • | • | • | | | |
| **13.37** | | **D1** | 37.0 | 163 | 0.71 | 88 | 18.70 | 157 | 0.36 | 85 | 0.750 | 138 | <0.05 | 75 | • | • | • | • | • | | | |
| **12.35** | ★ | **C1** | 40.0 | 171 | 0.81 | 89 | 20.00 | 165 | 0.40 | 86 | 0.810 | 144 | <0.05 | 75 | • | • | • | • | • | | | |
| **10.63** | | **B1** | 47.0 | 182 | 1.00 | 89 | 24.00 | 177 | 0.51 | 86 | 0.940 | 153 | <0.05 | 75 | • | • | • | • | • | | | |
| **9.67** | ★ | **A1** | 52.0 | 176 | 1.07 | 89 | 26.00 | 171 | 0.54 | 87 | 1.000 | 147 | <0.05 | 75 | • | • | • | • | • | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

*Efficiency table C.48-D/Z28*

| Transmission ratio | Ratio code | Output speed $n_{mot}$ = 1 750 rpm | | | | Output speed $n_{mot}$ = 1 450 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **23 503** | **N1** | 0.07 | 364 | <0.06 | 47 | 0.06 | 364 | <0.06 | 47 | | • | | | | | | |
| **20 276** | **M1** | 0.09 | 364 | <0.06 | 47 | 0.07 | 364 | <0.06 | 47 | | • | | | | | | |
| **17 420** | **L1** | 0.10 | 364 | <0.06 | 47 | 0.08 | 364 | <0.06 | 47 | | • | | | | | | |
| **16 037** | **K1** | 0.11 | 364 | <0.06 | 47 | 0.09 | 364 | <0.06 | 47 | | • | | | | | | |
| **14 579** | **J1** | 0.12 | 364 | <0.06 | 47 | 0.10 | 364 | <0.06 | 47 | | • | | | | | | |
| **12 904** | **H1** | 0.14 | 364 | <0.06 | 47 | 0.11 | 364 | <0.06 | 47 | | • | | | | | | |
| **10 808** | **G1** | 0.16 | 364 | <0.06 | 47 | 0.13 | 364 | <0.06 | 47 | | • | | | | | | |
| **9 216** | **F1** | 0.19 | 364 | <0.06 | 47 | 0.16 | 364 | <0.06 | 47 | | • | | | | | | |
| **7 833** | **E1** | 0.22 | 364 | <0.06 | 48 | 0.19 | 364 | <0.06 | 47 | | • | | | | | | |
| **6 807** | **D1** | 0.26 | 364 | <0.06 | 48 | 0.21 | 364 | <0.06 | 47 | | • | | | | | | |
| **5 925** | **C1** | 0.30 | 364 | <0.06 | 48 | 0.24 | 364 | <0.06 | 48 | | • | | | | | | |
| **5 345** | **B1** | 0.33 | 364 | <0.06 | 48 | 0.27 | 364 | <0.06 | 48 | | • | | | | | | |
| **4 717** | **A1** | 0.37 | 364 | <0.06 | 48 | 0.31 | 364 | <0.06 | 48 | | • | | | | | | |
| **4 222** | **B2** | 0.41 | 364 | <0.06 | 48 | 0.34 | 364 | <0.06 | 48 | | • | | | | | | |
| **3 749** | **A2** | 0.47 | 364 | <0.06 | 49 | 0.39 | 364 | <0.06 | 48 | | • | | | | | | |
| **3 286** | **X1** | 0.53 | 364 | <0.06 | 49 | 0.44 | 364 | <0.06 | 49 | | • | | | | | | |
| **2 941** | **W1** | 0.60 | 364 | <0.06 | 49 | 0.49 | 364 | <0.06 | 49 | | • | | | | | | |
| **2 610** | **V1** | 0.67 | 364 | <0.06 | 50 | 0.56 | 364 | <0.06 | 49 | | • | | | | | | |
| **2 288** | **U1** | 0.76 | 365 | <0.06 | 50 | 0.63 | 364 | <0.06 | 49 | | • | | | | | | |
| **2 011** | **T1** | 0.87 | 365 | 0.07 | 51 | 0.72 | 364 | <0.06 | 50 | | • | | | | | | |
| **1 817** | **S1** | 0.96 | 365 | 0.07 | 51 | 0.80 | 365 | 0.06 | 50 | | • | | | | | | |
| **1 583** | **R1** | 1.11 | 365 | 0.08 | 52 | 0.92 | 365 | 0.07 | 51 | | • | | | | | | |
| **1 422** | **Q1** | 1.23 | 365 | 0.09 | 52 | 1.02 | 365 | 0.08 | 51 | | • | | | | | | |
| **1 284** | **P1** | 1.36 | 365 | 0.10 | 53 | 1.13 | 365 | 0.08 | 52 | | • | | | | | | |
| **1 164** | **N1** | 1.50 | 365 | 0.11 | 53 | 1.25 | 365 | 0.09 | 52 | | • | | | | | | |
| **1 059** | **M1** | 1.65 | 366 | 0.12 | 54 | 1.37 | 365 | 0.10 | 53 | | • | | | | | | |
| **937** | **L1** | 1.87 | 366 | 0.13 | 55 | 1.55 | 365 | 0.11 | 53 | | • | | | | | | |
| **865** | **K1** | 2.02 | 366 | 0.14 | 55 | 1.68 | 366 | 0.12 | 54 | | • | | | | | | |
| **745** | **J1** | 2.35 | 366 | 0.16 | 56 | 1.95 | 366 | 0.14 | 55 | | • | | | | | | |
| **677** | **H1** | 2.59 | 367 | 0.17 | 57 | 2.14 | 366 | 0.15 | 56 | | • | | | | | | |
| **615** | **G1** | 2.84 | 367 | 0.19 | 58 | 2.36 | 366 | 0.16 | 57 | | • | | | | | | |
| **558** | **F1** | 3.14 | 367 | 0.20 | 59 | 2.60 | 367 | 0.17 | 57 | | • | | | | | | |
| **508** | **E1** | 3.45 | 368 | 0.22 | 60 | 2.86 | 367 | 0.19 | 58 | | • | | | | | | |
| **449** | **D1** | 3.90 | 368 | 0.25 | 61 | 3.23 | 367 | 0.21 | 59 | | • | | | | | | |
| **414** | **C1** | 4.22 | 368 | 0.26 | 62 | 3.50 | 368 | 0.22 | 60 | | • | | | | | | |
| **357** | **B1** | 4.90 | 369 | 0.30 | 64 | 4.06 | 368 | 0.25 | 62 | | • | | | | | | |
| **324** | **A1** | 5.40 | 370 | 0.32 | 64 | 4.47 | 369 | 0.28 | 63 | | • | | | | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

*Efficiency table C.48*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 1 750 rpm | | | | Output speed $n_{mot}$ = 1 450 rpm | | | | Output speed $n_{mot}$ = 1 150 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **320.67** | ★ | **K2** | 5.5 | 370 | 0.32 | 66 | 4.5 | 369 | 0.27 | 64 | 3.6 | 368 | 0.23 | 61 | • | • | • | | | | | |
| **284.70** | | **J2** | 6.1 | 370 | 0.35 | 67 | 5.1 | 369 | 0.30 | 65 | 4.0 | 368 | 0.25 | 63 | • | • | • | | | | | |
| **249.60** | ★ | **H2** | 7.0 | 371 | 0.40 | 68 | 5.8 | 370 | 0.34 | 66 | 4.6 | 369 | 0.28 | 64 | • | • | • | • | | | | |
| **223.36** | | **G2** | 7.8 | 372 | 0.44 | 69 | 6.5 | 371 | 0.38 | 67 | 5.1 | 369 | 0.30 | 65 | • | • | • | • | | | | |
| **198.25** | ★ | **F2** | 8.8 | 373 | 0.49 | 70 | 7.3 | 372 | 0.42 | 68 | 5.8 | 370 | 0.34 | 66 | • | • | • | • | | | | |
| **173.73** | | **E2** | 10.1 | 374 | 0.56 | 70 | 8.3 | 373 | 0.47 | 69 | 6.6 | 371 | 0.38 | 67 | • | • | • | • | | | | |
| **152.75** | ★ | **D2** | 11.5 | 375 | 0.64 | 71 | 9.5 | 374 | 0.53 | 70 | 7.5 | 372 | 0.43 | 68 | • | • | • | • | | | | |
| **138.00** | | **C2** | 12.7 | 377 | 0.70 | 71 | 10.5 | 375 | 0.58 | 71 | 8.3 | 373 | 0.47 | 69 | • | • | • | • | | | | |
| **120.25** | ★ | **B2** | 14.6 | 363 | 0.78 | 72 | 12.1 | 376 | 0.67 | 71 | 9.6 | 374 | 0.54 | 70 | • | • | • | • | | | | |
| **108.00** | | **A2** | 16.2 | 350 | 0.83 | 72 | 13.4 | 377 | 0.74 | 71 | 10.6 | 375 | 0.59 | 71 | • | • | • | • | | | | |
| **97.50** | ★ | **X1** | 17.9 | 339 | 0.88 | 72 | 14.9 | 378 | 0.82 | 72 | 11.8 | 376 | 0.65 | 71 | • | • | • | • | • | | | |
| **88.40** | | **W1** | 19.8 | 329 | 0.95 | 72 | 16.4 | 380 | 0.91 | 72 | 13.0 | 375 | 0.72 | 71 | • | • | • | • | • | | | |
| **80.44** | ★ | **V1** | 22.0 | 318 | 1.02 | 72 | 18.0 | 381 | 1.00 | 72 | 14.3 | 365 | 0.76 | 72 | • | • | • | • | • | | | |
| **71.12** | | **U1** | 25.0 | 305 | 1.11 | 72 | 20.0 | 382 | 1.11 | 72 | 16.2 | 352 | 0.83 | 72 | • | • | • | • | • | | | |
| **65.68** | ★ | **T1** | 27.0 | 297 | 1.17 | 72 | 22.0 | 384 | 1.23 | 72 | 17.5 | 343 | 0.87 | 72 | • | • | • | • | • | | | |
| **56.55** | ★ | **S1** | 31.0 | 285 | 1.28 | 72 | 26.0 | 386 | 1.46 | 72 | 20.0 | 329 | 0.96 | 72 | • | • | • | • | • | | | |
| **51.41** | | **R1** | 34.0 | 276 | 1.37 | 72 | 28.0 | 387 | 1.58 | 72 | 22.0 | 319 | 1.02 | 72 | • | • | • | • | • | | | |
| **46.93** | ★ | **Q1** | 37.0 | 293 | 1.27 | 89 | 31.0 | 292 | 1.07 | 89 | 25.0 | 289 | 0.86 | 88 | • | • | • | • | | | | |
| **42.00** | | **P1** | 42.0 | 320 | 1.57 | 90 | 35.0 | 318 | 1.31 | 89 | 27.0 | 316 | 1.01 | 88 | • | • | • | • | | | | |
| **37.28** | ★ | **N1** | 47.0 | 267 | 1.47 | 90 | 39.0 | 267 | 1.22 | 89 | 31.0 | 265 | 0.97 | 89 | • | • | • | • | | | | |
| **32.67** | | **M1** | 54.0 | 267 | 1.68 | 90 | 44.0 | 266 | 1.37 | 90 | 35.0 | 265 | 1.09 | 89 | • | • | • | • | | | | |
| **28.72** | ★ | **L1** | 61.0 | 289 | 2.05 | 90 | 50.0 | 289 | 1.68 | 90 | 40.0 | 288 | 1.35 | 89 | • | • | • | • | | | | |
| **25.95** | | **K1** | 67.0 | 277 | 2.17 | 90 | 56.0 | 277 | 1.81 | 90 | 44.0 | 277 | 1.42 | 90 | • | • | • | • | | | | |
| **22.61** | ★ | **J1** | 77.0 | 270 | 2.42 | 90 | 64.0 | 270 | 2.02 | 90 | 51.0 | 270 | 1.61 | 90 | • | • | • | • | | | | |
| **20.31** | | **H1** | 86.0 | 281 | 2.82 | 90 | 71.0 | 281 | 2.33 | 90 | 57.0 | 281 | 1.87 | 90 | • | • | • | • | | | | |
| **18.33** | ★ | **G1** | 95.0 | 300 | 3.32 | 90 | 79.0 | 300 | 2.76 | 90 | 63.0 | 300 | 2.20 | 90 | • | • | • | • | • | | | |
| **16.62** | | **F1** | 105.0 | 291 | 3.56 | 90 | 87.0 | 293 | 2.97 | 90 | 69.0 | 293 | 2.35 | 90 | • | • | • | • | • | | | |
| **15.13** | ★ | **E1** | 116.0 | 266 | 3.60 | 90 | 96.0 | 266 | 2.98 | 90 | 76.0 | 266 | 2.36 | 90 | • | • | • | • | • | | | |
| **13.37** | | **D1** | 131.0 | 236 | 3.60 | 90 | 108.0 | 236 | 2.96 | 90 | 86.0 | 236 | 2.36 | 90 | • | • | • | • | • | | | |
| **12.35** | ★ | **C1** | 142.0 | 242 | 4.00 | 90 | 117.0 | 249 | 3.39 | 90 | 93.0 | 249 | 2.69 | 90 | • | • | • | • | • | | | |
| **10.63** | | **B1** | 165.0 | 208 | 4.00 | 90 | 136.0 | 252 | 4.00 | 90 | 108.0 | 254 | 3.20 | 90 | • | • | • | • | • | | | |
| **9.67** | ★ | **A1** | 181.0 | 189 | 4.00 | 90 | 150.0 | 229 | 4.00 | 90 | 119.0 | 243 | 3.37 | 90 | • | • | • | • | • | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Transmission ratios and maximum torques

### Selection and ordering data (continued)

*Efficiency table C.48*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 950 rpm | | | | Output speed $n_{mot}$ = 850 rpm | | | | Output speed $n_{mot}$ = 750 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **320.67** | ★ | **K2** | 3.0 | 367 | 0.19 | 59 | 2.7 | 367 | 0.18 | 58 | 2.2 | 366 | 0.15 | 57 | • | • | • | | | | | |
| **284.70** | | **J2** | 3.3 | 367 | 0.21 | 61 | 3.0 | 367 | 0.19 | 59 | 2.5 | 366 | 0.17 | 58 | • | • | • | | | | | |
| **249.60** | ★ | **H2** | 3.8 | 368 | 0.24 | 62 | 3.4 | 368 | 0.22 | 61 | 2.8 | 367 | 0.18 | 59 | • | • | • | • | | | | |
| **223.36** | | **G2** | 4.3 | 368 | 0.26 | 63 | 3.8 | 368 | 0.24 | 62 | 3.1 | 367 | 0.20 | 60 | • | • | • | • | | | | |
| **198.25** | ★ | **F2** | 4.8 | 369 | 0.29 | 64 | 4.3 | 368 | 0.26 | 63 | 3.5 | 368 | 0.22 | 61 | • | • | • | • | | | | |
| **173.73** | | **E2** | 5.5 | 370 | 0.32 | 66 | 4.9 | 369 | 0.29 | 64 | 4.0 | 368 | 0.25 | 62 | • | • | • | • | | | | |
| **152.75** | ★ | **D2** | 6.2 | 370 | 0.36 | 67 | 5.6 | 370 | 0.33 | 66 | 4.6 | 369 | 0.28 | 64 | • | • | • | • | | | | |
| **138.00** | | **C2** | 6.9 | 371 | 0.40 | 68 | 6.2 | 370 | 0.36 | 67 | 5.1 | 369 | 0.30 | 65 | • | • | • | • | | | | |
| **120.25** | ★ | **B2** | 7.9 | 372 | 0.45 | 69 | 7.1 | 371 | 0.41 | 68 | 5.8 | 370 | 0.34 | 66 | • | • | • | • | | | | |
| **108.00** | | **A2** | 8.8 | 373 | 0.49 | 70 | 7.9 | 372 | 0.45 | 69 | 6.5 | 371 | 0.38 | 67 | • | • | • | • | | | | |
| **97.50** | ★ | **X1** | 9.7 | 374 | 0.54 | 70 | 8.7 | 373 | 0.49 | 69 | 7.2 | 371 | 0.41 | 68 | • | • | • | • | • | | | |
| **88.40** | | **W1** | 10.7 | 375 | 0.59 | 71 | 9.6 | 374 | 0.54 | 70 | 7.9 | 372 | 0.45 | 69 | • | • | • | • | • | | | |
| **80.44** | ★ | **V1** | 11.8 | 376 | 0.65 | 71 | 10.6 | 375 | 0.59 | 71 | 8.7 | 373 | 0.49 | 69 | • | • | • | • | • | | | |
| **71.12** | | **U1** | 13.4 | 373 | 0.73 | 71 | 12.0 | 376 | 0.66 | 71 | 9.8 | 374 | 0.55 | 70 | • | • | • | • | • | | | |
| **65.68** | ★ | **T1** | 14.5 | 363 | 0.77 | 72 | 12.9 | 377 | 0.71 | 71 | 10.7 | 375 | 0.59 | 71 | • | • | • | • | • | | | |
| **56.55** | ★ | **S1** | 16.8 | 348 | 0.85 | 72 | 15.0 | 361 | 0.79 | 72 | 12.4 | 376 | 0.69 | 71 | • | • | • | • | • | | | |
| **51.41** | | **R1** | 18.5 | 338 | 0.91 | 72 | 16.5 | 350 | 0.84 | 72 | 13.6 | 372 | 0.74 | 71 | • | • | • | • | • | | | |
| **46.93** | ★ | **Q1** | 20.0 | 286 | 0.69 | 87 | 18.1 | 284 | 0.62 | 86 | 14.9 | 280 | 0.51 | 85 | • | • | • | • | | | | |
| **42.00** | | **P1** | 23.0 | 313 | 0.86 | 88 | 20.0 | 311 | 0.75 | 87 | 16.7 | 306 | 0.62 | 86 | • | • | • | • | | | | |
| **37.28** | ★ | **N1** | 25.0 | 263 | 0.78 | 88 | 23.0 | 261 | 0.72 | 90 | 18.8 | 258 | 0.59 | 87 | • | • | • | • | | | | |
| **32.67** | | **M1** | 29.0 | 263 | 0.90 | 89 | 26.0 | 262 | 0.81 | 88 | 21.0 | 259 | 0.65 | 87 | • | • | • | • | | | | |
| **28.72** | ★ | **L1** | 33.0 | 286 | 1.11 | 89 | 30.0 | 285 | 1.01 | 89 | 24.0 | 283 | 0.81 | 88 | • | • | • | • | | | | |
| **25.95** | | **K1** | 37.0 | 276 | 1.20 | 89 | 33.0 | 275 | 1.07 | 89 | 27.0 | 273 | 0.87 | 88 | • | • | • | • | | | | |
| **22.61** | ★ | **J1** | 42.0 | 269 | 1.32 | 90 | 38.0 | 269 | 1.20 | 89 | 31.0 | 267 | 0.98 | 89 | • | • | • | • | | | | |
| **20.31** | | **H1** | 47.0 | 280 | 1.54 | 90 | 42.0 | 280 | 1.38 | 90 | 34.0 | 279 | 1.11 | 89 | • | • | • | • | | | | |
| **18.33** | ★ | **G1** | 52.0 | 299 | 1.82 | 90 | 46.0 | 299 | 1.61 | 90 | 38.0 | 298 | 1.33 | 89 | • | • | • | • | • | | | |
| **16.62** | | **F1** | 57.0 | 293 | 1.94 | 90 | 51.0 | 292 | 1.74 | 90 | 42.0 | 292 | 1.43 | 90 | • | • | • | • | • | | | |
| **15.13** | ★ | **E1** | 63.0 | 266 | 1.96 | 90 | 56.0 | 266 | 1.74 | 90 | 46.0 | 266 | 1.43 | 90 | • | • | • | • | • | | | |
| **13.37** | | **D1** | 71.0 | 235 | 1.95 | 90 | 64.0 | 235 | 1.76 | 90 | 52.0 | 235 | 1.43 | 90 | • | • | • | • | • | | | |
| **12.35** | ★ | **C1** | 77.0 | 249 | 2.23 | 90 | 69.0 | 249 | 2.00 | 90 | 57.0 | 248 | 1.65 | 90 | • | • | • | • | • | | | |
| **10.63** | | **B1** | 89.0 | 254 | 2.64 | 90 | 80.0 | 254 | 2.37 | 90 | 66.0 | 254 | 1.95 | 90 | • | • | • | • | • | | | |
| **9.67** | ★ | **A1** | 98.0 | 243 | 2.78 | 90 | 88.0 | 243 | 2.49 | 90 | 72.0 | 243 | 2.04 | 90 | • | • | • | • | • | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

*Efficiency table C.48*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 500 rpm | | | | Output speed $n_{mot}$ = 250 rpm | | | | Output speed $n_{mot}$ = 10 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **320.67** | ★ | **K2** | 1.6 | 365 | 0.11 | 54 | 0.78 | 365 | 0.06 | 51 | 0.031 | 364 | <0.05 | 47 | • | • | • | | | | | |
| **284.70** | | **J2** | 1.8 | 366 | 0.13 | 55 | 0.88 | 365 | 0.07 | 51 | 0.035 | 364 | <0.05 | 47 | • | • | • | | | | | |
| **249.60** | ★ | **H2** | 2.0 | 366 | 0.14 | 56 | 1.00 | 365 | 0.07 | 52 | 0.040 | 364 | <0.05 | 47 | • | • | • | • | | | | |
| **223.36** | | **G2** | 2.2 | 366 | 0.15 | 57 | 1.10 | 365 | 0.08 | 52 | 0.045 | 364 | <0.05 | 47 | • | • | • | • | | | | |
| **198.25** | ★ | **F2** | 2.5 | 367 | 0.17 | 58 | 1.30 | 365 | 0.09 | 53 | 0.050 | 364 | <0.05 | 47 | • | • | • | • | | | | |
| **173.73** | | **E2** | 2.9 | 367 | 0.19 | 59 | 1.40 | 365 | 0.10 | 54 | 0.058 | 364 | <0.05 | 47 | • | • | • | • | | | | |
| **152.75** | ★ | **D2** | 3.3 | 367 | 0.21 | 60 | 1.60 | 366 | 0.11 | 55 | 0.065 | 364 | <0.05 | 47 | • | • | • | • | | | | |
| **138.00** | | **C2** | 3.6 | 368 | 0.23 | 61 | 1.80 | 366 | 0.12 | 55 | 0.072 | 364 | <0.05 | 47 | • | • | • | • | | | | |
| **120.25** | ★ | **B2** | 4.2 | 368 | 0.26 | 63 | 2.10 | 366 | 0.14 | 56 | 0.083 | 364 | <0.05 | 48 | • | • | • | • | | | | |
| **108.00** | | **A2** | 4.6 | 369 | 0.28 | 64 | 2.30 | 366 | 0.15 | 57 | 0.093 | 364 | <0.05 | 48 | • | • | • | • | | | | |
| **97.50** | ★ | **X1** | 5.1 | 369 | 0.30 | 65 | 2.60 | 367 | 0.17 | 58 | 0.100 | 364 | <0.05 | 48 | • | • | • | • | • | | | |
| **88.40** | | **W1** | 5.7 | 370 | 0.33 | 66 | 2.80 | 367 | 0.18 | 59 | 0.110 | 364 | <0.05 | 48 | • | • | • | • | • | | | |
| **80.44** | ★ | **V1** | 6.2 | 370 | 0.36 | 67 | 3.10 | 367 | 0.20 | 60 | 0.120 | 364 | <0.05 | 48 | • | • | • | • | • | | | |
| **71.12** | | **U1** | 7.0 | 371 | 0.40 | 68 | 3.50 | 368 | 0.22 | 61 | 0.140 | 364 | <0.05 | 48 | • | • | • | • | • | | | |
| **65.68** | ★ | **T1** | 7.6 | 372 | 0.43 | 69 | 3.80 | 368 | 0.24 | 62 | 0.150 | 364 | <0.05 | 48 | • | • | • | • | • | | | |
| **56.55** | ★ | **S1** | 8.8 | 373 | 0.49 | 70 | 4.40 | 369 | 0.27 | 63 | 0.180 | 364 | <0.05 | 48 | • | • | • | • | • | | | |
| **51.41** | | **R1** | 9.7 | 374 | 0.54 | 70 | 4.90 | 369 | 0.29 | 64 | 0.190 | 364 | <0.05 | 48 | • | • | • | • | • | | | |
| **46.93** | ★ | **Q1** | 10.7 | 272 | 0.37 | 83 | 5.30 | 258 | 0.18 | 78 | 0.210 | 238 | <0.05 | 72 | • | • | • | • | | | | |
| **42.00** | | **P1** | 11.9 | 298 | 0.44 | 84 | 6.00 | 282 | 0.22 | 79 | 0.240 | 259 | <0.05 | 72 | • | • | • | • | | | | |
| **37.28** | ★ | **N1** | 13.4 | 252 | 0.42 | 84 | 6.70 | 238 | 0.21 | 80 | 0.270 | 216 | <0.05 | 72 | • | • | • | • | | | | |
| **32.67** | | **M1** | 15.3 | 253 | 0.48 | 85 | 7.70 | 240 | 0.24 | 81 | 0.310 | 216 | <0.05 | 73 | • | • | • | • | | | | |
| **28.72** | ★ | **L1** | 17.4 | 277 | 0.59 | 86 | 8.70 | 262 | 0.29 | 81 | 0.350 | 234 | <0.05 | 73 | • | • | • | • | | | | |
| **25.95** | | **K1** | 19.3 | 268 | 0.62 | 87 | 9.60 | 253 | 0.31 | 82 | 0.390 | 224 | <0.05 | 73 | • | • | • | • | | | | |
| **22.61** | ★ | **J1** | 22.0 | 263 | 0.69 | 87 | 11.10 | 250 | 0.35 | 83 | 0.440 | 219 | <0.05 | 73 | • | • | • | • | | | | |
| **20.31** | | **H1** | 25.0 | 275 | 0.82 | 88 | 12.30 | 262 | 0.40 | 84 | 0.490 | 228 | <0.05 | 73 | • | • | • | • | | | | |
| **18.33** | ★ | **G1** | 27.0 | 295 | 0.94 | 88 | 13.60 | 282 | 0.48 | 84 | 0.550 | 243 | <0.05 | 73 | • | • | • | • | • | | | |
| **16.62** | | **F1** | 30.0 | 289 | 1.02 | 89 | 15.00 | 277 | 0.51 | 85 | 0.600 | 238 | <0.05 | 73 | • | • | • | • | • | | | |
| **15.13** | ★ | **E1** | 33.0 | 264 | 1.02 | 89 | 16.50 | 254 | 0.51 | 86 | 0.660 | 217 | <0.05 | 73 | • | • | • | • | • | | | |
| **13.37** | | **D1** | 37.0 | 234 | 1.02 | 89 | 18.70 | 227 | 0.51 | 87 | 0.750 | 192 | <0.05 | 73 | • | • | • | • | • | | | |
| **12.35** | ★ | **C1** | 40.0 | 247 | 1.16 | 89 | 20.00 | 241 | 0.58 | 87 | 0.810 | 203 | <0.05 | 73 | • | • | • | • | • | | | |
| **10.63** | | **B1** | 47.0 | 254 | 1.39 | 90 | 24.00 | 248 | 0.71 | 88 | 0.940 | 208 | <0.05 | 73 | • | • | • | • | • | | | |
| **9.67** | ★ | **A1** | 52.0 | 243 | 1.47 | 90 | 26.00 | 239 | 0.74 | 88 | 1.000 | 199 | <0.05 | 74 | • | • | • | • | • | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 28, only possible with integrated motor or input unit KQ and KQS.

## Transmission ratios and maximum torques

### Selection and ordering data (continued)

*Efficiency table C.68-D/Z28*

| Transmission ratio | Ratio code | Output speed $n_{mot}$ = 1 750 rpm | | | | Output speed $n_{mot}$ = 1 450 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **28 203** | **N1** | 0.06 | 675 | <0.06 | 49 | 0.05 | 675 | <0.06 | 49 | | • | | | | | | |
| **24 331** | **M1** | 0.07 | 675 | <0.06 | 49 | 0.06 | 675 | <0.06 | 49 | | • | | | | | | |
| **20 903** | **L1** | 0.08 | 675 | <0.06 | 49 | 0.07 | 675 | <0.06 | 49 | | • | | | | | | |
| **19 244** | **K1** | 0.09 | 675 | <0.06 | 49 | 0.08 | 675 | <0.06 | 49 | | • | | | | | | |
| **17 495** | **J1** | 0.10 | 675 | <0.06 | 49 | 0.08 | 675 | <0.06 | 49 | | • | | | | | | |
| **15 485** | **H1** | 0.11 | 675 | <0.06 | 49 | 0.09 | 675 | <0.06 | 49 | | • | | | | | | |
| **12 970** | **G1** | 0.13 | 675 | <0.06 | 49 | 0.11 | 675 | <0.06 | 49 | | • | | | | | | |
| **11 059** | **F1** | 0.16 | 675 | <0.06 | 49 | 0.13 | 675 | <0.06 | 49 | | • | | | | | | |
| **9 400** | **E1** | 0.19 | 675 | <0.06 | 50 | 0.15 | 675 | <0.06 | 49 | | • | | | | | | |
| **8 169** | **D1** | 0.21 | 675 | <0.06 | 50 | 0.18 | 675 | <0.06 | 50 | | • | | | | | | |
| **7 110** | **C1** | 0.25 | 675 | <0.06 | 50 | 0.20 | 675 | <0.06 | 50 | | • | | | | | | |
| **6 414** | **B1** | 0.27 | 675 | <0.06 | 50 | 0.23 | 675 | <0.06 | 50 | | • | | | | | | |
| **5 661** | **A1** | 0.31 | 675 | <0.06 | 50 | 0.26 | 675 | <0.06 | 50 | | • | | | | | | |
| **5 066** | **B2** | 0.35 | 675 | <0.06 | 51 | 0.29 | 675 | <0.06 | 50 | | • | | | | | | |
| **4 498** | **A2** | 0.39 | 675 | <0.06 | 51 | 0.32 | 675 | < 0.06 | 51 | | • | | | | | | |
| **3 944** | **X1** | 0.44 | 675 | 0.06 | 51 | 0.37 | 675 | <0.06 | 51 | | • | | | | | | |
| **3 529** | **W1** | 0.50 | 675 | 0.07 | 52 | 0.41 | 675 | <0.06 | 51 | | • | | | | | | |
| **3 132** | **V1** | 0.56 | 675 | 0.08 | 52 | 0.46 | 675 | 0.06 | 51 | | • | | | | | | |
| **2 745** | **U1** | 0.64 | 675 | 0.09 | 53 | 0.53 | 675 | 0.07 | 52 | | • | | | | | | |
| **2 414** | **T1** | 0.73 | 676 | 0.10 | 53 | 0.60 | 675 | 0.08 | 52 | | • | | | | | | |
| **2 180** | **S1** | 0.80 | 676 | 0.11 | 54 | 0.67 | 675 | 0.09 | 53 | | • | | | | | | |
| **1 900** | **R1** | 0.92 | 676 | 0.12 | 54 | 0.76 | 676 | 0.10 | 53 | | • | | | | | | |
| **1 706** | **Q1** | 1.03 | 676 | 0.13 | 55 | 0.85 | 676 | 0.11 | 54 | | • | | | | | | |
| **1 541** | **P1** | 1.14 | 676 | 0.14 | 56 | 0.94 | 676 | 0.12 | 54 | | • | | | | | | |
| **1 397** | **N1** | 1.25 | 676 | 0.16 | 56 | 1.04 | 676 | 0.13 | 55 | | • | | | | | | |
| **1 271** | **M1** | 1.38 | 677 | 0.17 | 57 | 1.14 | 676 | 0.15 | 56 | | • | | | | | | |
| **1 124** | **L1** | 1.56 | 677 | 0.19 | 58 | 1.29 | 676 | 0.16 | 56 | | • | | | | | | |
| **1 038** | **K1** | 1.69 | 677 | 0.20 | 58 | 1.40 | 677 | 0.17 | 57 | | • | | | | | | |
| **893** | **J1** | 1.96 | 677 | 0.23 | 60 | 1.62 | 677 | 0.20 | 58 | | • | | | | | | |
| **812** | **H1** | 2.15 | 678 | 0.25 | 61 | 1.79 | 677 | 0.22 | 59 | | • | | | | | | |
| **738** | **G1** | 2.37 | 678 | 0.27 | 61 | 1.96 | 677 | 0.23 | 60 | | • | | | | | | |
| **669** | **F1** | 2.61 | 678 | 0.30 | 62 | 2.17 | 678 | 0.25 | 61 | | • | | | | | | |
| **609** | **E1** | 2.87 | 679 | 0.32 | 63 | 2.38 | 678 | 0.27 | 62 | | • | | | | | | |
| **539** | **D1** | 3.25 | 679 | 0.36 | 65 | 2.69 | 679 | 0.30 | 63 | | • | | | | | | |
| **497** | **C1** | 3.52 | 680 | 0.38 | 65 | 2.92 | 679 | 0.33 | 64 | | • | | | | | | |
| **428** | **B1** | 4.09 | 681 | 0.43 | 67 | 3.39 | 680 | 0.37 | 65 | | • | | | | | | |
| **389** | **A1** | 4.50 | 681 | 0.47 | 68 | 3.73 | 680 | 0.40 | 66 | | • | | | | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 18 or 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

*Efficiency table C.68*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 1 750 rpm | | | | Output speed $n_{mot}$ = 1 450 rpm | | | | Output speed $n_{mot}$ = 1 150 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **364.00** | ★ | **U2** | 4.8 | 682 | 0.49 | 70 | 4.0 | 680 | 0.42 | 68 | 3.2 | 679 | 0.35 | 65 | • | • | | | | | | |
| **323.70** | | **T2** | 5.4 | 682 | 0.55 | 71 | 4.5 | 681 | 0.47 | 69 | 3.6 | 680 | 0.38 | 67 | • | • | • | | | | | |
| **280.80** | ★ | **S2** | 6.2 | 684 | 0.62 | 72 | 5.2 | 682 | 0.53 | 70 | 4.1 | 681 | 0.43 | 68 | • | • | • | • | | | | |
| **262.36** | | **R2** | 6.7 | 684 | 0.67 | 72 | 5.5 | 683 | 0.56 | 71 | 4.4 | 681 | 0.46 | 69 | • | • | • | • | | | | |
| **230.75** | ★ | **Q2** | 7.6 | 685 | 0.75 | 73 | 6.3 | 684 | 0.63 | 72 | 5.0 | 682 | 0.51 | 70 | • | • | • | • | | | | |
| **202.09** | | **P2** | 8.7 | 654 | 0.81 | 73 | 7.2 | 685 | 0.71 | 72 | 5.7 | 683 | 0.57 | 71 | • | • | • | • | • | | | |
| **178.75** | ★ | **N2** | 9.8 | 627 | 0.87 | 74 | 8.1 | 662 | 0.77 | 73 | 6.4 | 684 | 0.64 | 72 | • | • | • | • | • | • | | |
| **162.00** | | **M2** | 10.8 | 606 | 0.93 | 74 | 9.0 | 687 | 0.88 | 73 | 7.1 | 683 | 0.70 | 72 | • | • | • | • | • | • | | |
| **143.00** | ★ | **L2** | 12.2 | 581 | 1.00 | 74 | 10.1 | 616 | 0.88 | 74 | 8.0 | 659 | 0.76 | 73 | • | • | • | • | • | • | | |
| **129.00** | | **K2** | 13.6 | 560 | 1.07 | 74 | 11.2 | 595 | 0.94 | 74 | 8.9 | 638 | 0.81 | 73 | • | • | • | • | • | • | | |
| **117.00** | ★ | **J2** | 15.0 | 542 | 1.15 | 74 | 12.4 | 691 | 1.21 | 74 | 9.8 | 619 | 0.86 | 74 | • | • | • | • | • | • | | |
| **106.60** | | **H2** | 16.4 | 526 | 1.21 | 74 | 13.6 | 559 | 1.07 | 74 | 10.8 | 601 | 0.92 | 74 | • | • | • | • | • | • | | |
| **97.50** | ★ | **G2** | 17.9 | 511 | 1.29 | 74 | 14.9 | 694 | 1.46 | 74 | 11.8 | 585 | 0.98 | 74 | • | • | • | • | • | • | | |
| **90.00** | ★ | **F2** | 19.4 | 347 | 0.80 | 88 | 16.1 | 344 | 0.67 | 87 | 12.8 | 339 | 0.53 | 86 | • | • | • | • | | | | |
| **84.09** | | **E2** | 21.0 | 531 | 1.33 | 88 | 17.2 | 528 | 1.09 | 87 | 13.7 | 521 | 0.87 | 86 | • | • | • | • | | | | |
| **73.96** | ★ | **D2** | 24.0 | 547 | 1.56 | 88 | 19.6 | 544 | 1.28 | 88 | 15.5 | 539 | 1.01 | 87 | • | • | • | • | | | | |
| **64.77** | | **C2** | 27.0 | 640 | 2.05 | 88 | 22.0 | 638 | 1.67 | 88 | 17.8 | 633 | 1.35 | 87 | • | • | • | • | • | | | |
| **57.29** | ★ | **B2** | 31.0 | 617 | 2.27 | 88 | 25.0 | 661 | 1.96 | 88 | 20.0 | 709 | 1.69 | 88 | • | • | • | • | • | • | | |
| **51.92** | | **A2** | 34.0 | 599 | 2.41 | 88 | 28.0 | 660 | 2.19 | 88 | 22.0 | 657 | 1.72 | 88 | • | • | • | • | • | • | | |
| **45.83** | ★ | **X1** | 38.0 | 578 | 2.60 | 88 | 32.0 | 681 | 2.58 | 88 | 25.0 | 661 | 1.96 | 88 | • | • | • | • | • | • | | |
| **41.35** | | **W1** | 42.0 | 559 | 2.78 | 89 | 35.0 | 594 | 2.46 | 88 | 28.0 | 639 | 2.12 | 88 | • | • | • | • | • | • | | |
| **37.50** | ★ | **U1** | 47.0 | 540 | 3.00 | 89 | 39.0 | 645 | 2.98 | 88 | 31.0 | 619 | 2.27 | 88 | • | • | • | • | • | • | | |
| **34.17** | | **T1** | 51.0 | 526 | 3.17 | 89 | 42.0 | 561 | 2.79 | 89 | 34.0 | 601 | 2.42 | 88 | • | • | • | • | • | • | | |
| **31.25** | ★ | **R1** | 56.0 | 511 | 3.38 | 89 | 46.0 | 545 | 2.97 | 89 | 37.0 | 586 | 2.57 | 88 | • | • | • | • | • | • | | |
| **27.94** | | **P1** | 63.0 | 493 | 3.67 | 89 | 52.0 | 593 | 3.65 | 89 | 41.0 | 569 | 2.76 | 89 | • | • | • | • | • | • | | |
| **25.66** | ★ | **M1** | 68.0 | 480 | 3.86 | 89 | 57.0 | 571 | 3.85 | 89 | 45.0 | 550 | 2.93 | 89 | • | • | • | • | • | • | | |
| **23.13** | | **K1** | 76.0 | 464 | 4.17 | 89 | 63.0 | 557 | 4.15 | 89 | 50.0 | 534 | 3.16 | 89 | • | • | • | • | • | • | | |
| **19.89** | ★ | **G1** | 88.0 | 444 | 4.63 | 89 | 73.0 | 534 | 4.61 | 89 | 58.0 | 511 | 3.50 | 89 | • | • | • | • | • | • | | |
| **38.00** | | **V1** | 46.0 | 437 | 2.34 | 90 | 38.0 | 436 | 1.94 | 90 | 30.0 | 435 | 1.53 | 89 | • | • | • | • | • | | | |
| **33.61** | ★ | **S1** | 52.0 | 435 | 2.64 | 90 | 43.0 | 435 | 2.18 | 90 | 34.0 | 434 | 1.72 | 90 | • | • | • | • | • | • | | |
| **30.46** | | **Q1** | 57.0 | 394 | 2.62 | 90 | 48.0 | 394 | 2.20 | 90 | 38.0 | 393 | 1.75 | 90 | • | • | • | • | • | • | | |
| **26.89** | ★ | **N1** | 65.0 | 406 | 3.07 | 90 | 54.0 | 406 | 2.55 | 90 | 43.0 | 406 | 2.03 | 90 | • | • | • | • | • | • | | |
| **24.26** | | **L1** | 72.0 | 401 | 3.36 | 90 | 60.0 | 401 | 2.80 | 90 | 47.0 | 401 | 2.20 | 90 | • | • | • | • | • | • | | |
| **22.00** | ★ | **J1** | 80.0 | 427 | 3.98 | 90 | 66.0 | 427 | 3.28 | 90 | 52.0 | 427 | 2.59 | 90 | • | • | • | • | • | • | | |
| **20.04** | | **H1** | 87.0 | 432 | 4.38 | 90 | 72.0 | 432 | 3.63 | 90 | 57.0 | 432 | 2.87 | 90 | • | • | • | • | • | • | | |
| **18.33** | ★ | **F1** | 95.0 | 422 | 4.67 | 90 | 79.0 | 422 | 3.88 | 90 | 63.0 | 422 | 3.10 | 90 | • | • | • | • | • | • | | |
| **16.39** | | **E1** | 107.0 | 401 | 5.00 | 90 | 88.0 | 401 | 4.11 | 90 | 70.0 | 401 | 3.27 | 90 | • | • | • | • | • | • | | |
| **15.05** | ★ | **D1** | 116.0 | 401 | 5.41 | 90 | 96.0 | 401 | 4.48 | 90 | 76.0 | 401 | 3.55 | 90 | • | • | • | • | • | • | | |
| **13.57** | | **C1** | 129.0 | 366 | 5.50 | 90 | 107.0 | 420 | 5.23 | 90 | 85.0 | 420 | 4.15 | 90 | • | • | • | • | • | • | | |
| **11.67** | ★ | **B1** | 150.0 | 315 | 5.50 | 90 | 124.0 | 378 | 5.45 | 90 | 99.0 | 378 | 4.35 | 90 | • | • | • | • | • | • | | |

★ Preferred transmission ratio
In the case of gearboxes of size 18 or 28, only possible with integrated motor or input unit KQ and KQS.

## Transmission ratios and maximum torques

### Selection and ordering data (continued)

*Efficiency table C.68*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 950 rpm | | | | Output speed $n_{mot}$ = 850 rpm | | | | Output speed $n_{mot}$ = 700 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **364.00** | ★ | **U2** | 2.6 | 678 | 0.29 | 63 | 2.3 | 678 | 0.26 | 62 | 1.9 | 677 | 0.22 | 60 | • | • | | | | | | |
| **323.70** | | **T2** | 2.9 | 679 | 0.32 | 65 | 2.6 | 678 | 0.29 | 63 | 2.2 | 678 | 0.25 | 62 | • | • | • | | | | | |
| **280.80** | ★ | **S2** | 3.4 | 680 | 0.37 | 66 | 3.0 | 679 | 0.33 | 65 | 2.5 | 678 | 0.28 | 63 | • | • | • | • | | | | |
| **262.36** | | **R2** | 3.6 | 680 | 0.38 | 67 | 3.2 | 679 | 0.35 | 66 | 2.7 | 678 | 0.30 | 64 | • | • | • | • | | | | |
| **230.75** | ★ | **Q2** | 4.1 | 681 | 0.43 | 68 | 3.7 | 680 | 0.39 | 67 | 3.0 | 679 | 0.33 | 65 | • | • | • | • | | | | |
| **202.09** | | **P2** | 4.7 | 681 | 0.48 | 69 | 4.2 | 681 | 0.44 | 68 | 3.5 | 680 | 0.38 | 66 | • | • | • | • | • | | | |
| **178.75** | ★ | **N2** | 5.3 | 682 | 0.54 | 70 | 4.8 | 681 | 0.49 | 69 | 3.9 | 680 | 0.41 | 68 | • | • | • | • | • | • | | |
| **162.00** | | **M2** | 5.9 | 683 | 0.59 | 71 | 5.2 | 682 | 0.53 | 70 | 4.3 | 681 | 0.45 | 69 | • | • | • | • | • | • | | |
| **143.00** | ★ | **L2** | 6.6 | 684 | 0.66 | 72 | 5.9 | 683 | 0.59 | 71 | 4.9 | 682 | 0.50 | 70 | • | • | • | • | • | • | | |
| **129.00** | | **K2** | 7.4 | 671 | 0.72 | 73 | 6.6 | 684 | 0.66 | 72 | 5.4 | 682 | 0.55 | 71 | • | • | • | • | • | • | | |
| **117.00** | ★ | **J2** | 8.1 | 654 | 0.76 | 73 | 7.3 | 672 | 0.71 | 73 | 6.0 | 683 | 0.60 | 71 | • | • | • | • | • | • | | |
| **106.60** | | **H2** | 8.9 | 637 | 0.81 | 73 | 8.0 | 656 | 0.75 | 73 | 6.6 | 684 | 0.66 | 72 | • | • | • | • | • | • | | |
| **97.50** | ★ | **G2** | 9.7 | 621 | 0.86 | 74 | 8.7 | 641 | 0.80 | 73 | 7.2 | 675 | 0.70 | 72 | • | • | • | • | • | • | | |
| **90.00** | ★ | **F2** | 10.6 | 335 | 0.44 | 85 | 9.4 | 332 | 0.39 | 84 | 7.8 | 326 | 0.32 | 82 | • | • | • | • | | | | |
| **84.09** | | **E2** | 11.3 | 515 | 0.72 | 85 | 10.1 | 510 | 0.64 | 84 | 8.3 | 502 | 0.53 | 83 | • | • | • | • | | | | |
| **73.96** | ★ | **D2** | 12.8 | 533 | 0.83 | 86 | 11.5 | 529 | 0.75 | 85 | 9.5 | 521 | 0.62 | 84 | • | • | • | • | | | | |
| **64.77** | | **C2** | 14.7 | 627 | 1.12 | 86 | 13.1 | 623 | 1.00 | 86 | 10.8 | 614 | 0.82 | 85 | • | • | • | • | • | | | |
| **57.29** | ★ | **B2** | 16.6 | 718 | 1.43 | 87 | 14.8 | 714 | 1.28 | 86 | 12.2 | 705 | 1.05 | 85 | • | • | • | • | • | • | | |
| **51.92** | | **A2** | 18.3 | 653 | 1.43 | 87 | 16.4 | 650 | 1.28 | 87 | 13.5 | 643 | 1.06 | 86 | • | • | • | • | • | • | | |
| **45.83** | ★ | **X1** | 21.0 | 676 | 1.69 | 88 | 18.5 | 673 | 1.49 | 87 | 15.3 | 667 | 1.23 | 87 | • | • | • | • | • | • | | |
| **41.35** | | **W1** | 23.0 | 669 | 1.83 | 88 | 21.0 | 667 | 1.67 | 88 | 16.9 | 662 | 1.35 | 87 | • | • | • | • | • | • | | |
| **37.50** | ★ | **U1** | 25.0 | 663 | 1.97 | 88 | 23.0 | 680 | 1.86 | 88 | 18.7 | 708 | 1.59 | 87 | • | • | • | • | • | • | | |
| **34.17** | | **T1** | 28.0 | 641 | 2.13 | 88 | 25.0 | 664 | 1.97 | 88 | 20.0 | 712 | 1.70 | 88 | • | • | • | • | • | • | | |
| **31.25** | ★ | **R1** | 30.0 | 628 | 2.23 | 88 | 27.0 | 649 | 2.08 | 88 | 22.0 | 693 | 1.81 | 88 | • | • | • | • | • | • | | |
| **27.94** | | **P1** | 34.0 | 605 | 2.44 | 88 | 30.0 | 630 | 2.24 | 88 | 25.0 | 668 | 1.98 | 88 | • | • | • | • | • | • | | |
| **25.66** | ★ | **M1** | 37.0 | 587 | 2.57 | 88 | 33.0 | 610 | 2.38 | 88 | 27.0 | 651 | 2.08 | 88 | • | • | • | • | • | • | | |
| **23.13** | | **K1** | 41.0 | 570 | 2.77 | 89 | 37.0 | 590 | 2.58 | 88 | 30.0 | 632 | 2.25 | 88 | • | • | • | • | • | • | | |
| **19.89** | ★ | **G1** | 48.0 | 544 | 3.09 | 89 | 43.0 | 564 | 2.87 | 89 | 35.0 | 604 | 2.50 | 88 | • | • | • | • | • | • | | |
| **38.00** | | **V1** | 25.0 | 433 | 1.27 | 89 | 22.0 | 431 | 1.12 | 89 | 18.4 | 427 | 0.94 | 88 | • | • | • | • | • | | | |
| **33.61** | ★ | **S1** | 28.0 | 432 | 1.42 | 89 | 25.0 | 431 | 1.27 | 89 | 21.0 | 428 | 1.06 | 88 | • | • | • | • | • | • | | |
| **30.46** | | **Q1** | 31.0 | 392 | 1.42 | 89 | 28.0 | 391 | 1.29 | 89 | 23.0 | 389 | 1.06 | 89 | • | • | • | • | • | • | | |
| **26.89** | ★ | **N1** | 35.0 | 405 | 1.66 | 90 | 32.0 | 404 | 1.51 | 89 | 26.0 | 402 | 1.23 | 89 | • | • | • | • | • | • | | |
| **24.26** | | **L1** | 39.0 | 400 | 1.82 | 90 | 35.0 | 400 | 1.64 | 90 | 29.0, | 399 | 1.36 | 89 | • | • | • | • | • | • | | |
| **22.00** | ★ | **J1** | 43.0 | 427 | 2.14 | 90 | 39.0 | 426 | 1.94 | 90 | 32.0 | 425 | 1.59 | 89 | • | • | • | • | • | • | | |
| **20.04** | | **H1** | 47.0 | 432 | 2.37 | 90 | 42.0 | 432 | 2.12 | 90 | 35.0 | 431 | 1.76 | 90 | • | • | • | • | • | • | | |
| **18.33** | ★ | **F1** | 52.0 | 422 | 2.56 | 90 | 46.0 | 422 | 2.26 | 90 | 38.0 | 421 | 1.87 | 90 | • | • | • | • | • | • | | |
| **16.39** | | **E1** | 58.0 | 401 | 2.71 | 90 | 52.0 | 401 | 2.43 | 90 | 43.0 | 400 | 2.01 | 90 | • | • | • | • | • | • | | |
| **15.05** | ★ | **D1** | 63.0 | 400 | 2.94 | 90 | 56.0 | 400 | 2.61 | 90 | 47.0 | 400 | 2.19 | 90 | • | • | • | • | • | • | | |
| **13.57** | | **C1** | 70.0 | 419 | 3.42 | 90 | 63.0 | 419 | 3.08 | 90 | 52.0 | 419 | 2.54 | 90 | • | • | • | • | • | • | | |
| **11.67** | ★ | **B1** | 81.0 | 378 | 3.56 | 90 | 73.0 | 378 | 3.21 | 90 | 60.0 | 377 | 2.64 | 90 | • | • | • | • | • | • | | |

★ Preferred transmission ratio
In the case of gearboxes of size 18 or 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

### *Efficiency table C.68*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 500 rpm | | | | Output speed $n_{mot}$ = 250 rpm | | | | Output speed $n_{mot}$ = 10 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **364.00** | ★ | **U2** | 1.4 | 677 | 0.17 | 58 | 0.69 | 676 | 0.09 | 54 | 0.027 | 674 | <0.05 | 49 | • | • | | | | | | |
| **323.70** | | **T2** | 1.5 | 677 | 0.18 | 59 | 0.77 | 676 | 0.10 | 54 | 0.031 | 674 | <0.05 | 49 | • | • | • | | | | | |
| **280.80** | ★ | **S2** | 1.8 | 677 | 0.21 | 60 | 0.89 | 676 | 0.11 | 55 | 0.036 | 610 | <0.05 | 49 | • | • | • | • | | | | |
| **262.36** | | **R2** | 1.9 | 677 | 0.22 | 60 | 0.95 | 676 | 0.12 | 55 | 0.038 | 674 | <0.05 | 49 | • | • | • | • | | | | |
| **230.75** | ★ | **Q2** | 2.2 | 678 | 0.25 | 62 | 1.10 | 676 | 0.14 | 56 | 0.043 | 675 | <0.05 | 49 | • | • | • | • | | | | |
| **202.09** | | **P2** | 2.5 | 678 | 0.28 | 63 | 1.20 | 676 | 0.15 | 57 | 0.049 | 675 | <0.05 | 49 | • | • | • | • | • | | | |
| **178.75** | ★ | **N2** | 2.8 | 679 | 0.31 | 64 | 1.40 | 677 | 0.17 | 58 | 0.056 | 675 | <0.05 | 50 | • | • | • | • | • | • | | |
| **162.00** | | **M2** | 3.1 | 679 | 0.34 | 65 | 1.50 | 677 | 0.18 | 59 | 0.062 | 675 | <0.05 | 50 | • | • | • | • | • | • | | |
| **143.00** | ★ | **L2** | 3.5 | 680 | 0.38 | 66 | 1.70 | 677 | 0.20 | 60 | 0.070 | 675 | <0.05 | 50 | • | • | • | • | • | • | | |
| **129.00** | | **K2** | 3.9 | 680 | 0.41 | 67 | 1.90 | 677 | 0.22 | 61 | 0.078 | 675 | <0.05 | 50 | • | • | • | • | • | • | | |
| **117.00** | ★ | **J2** | 4.3 | 681 | 0.45 | 68 | 2.10 | 678 | 0.24 | 61 | 0.085 | 675 | <0.05 | 50 | • | • | • | • | • | • | | |
| **106.60** | | **H2** | 4.7 | 681 | 0.48 | 69 | 2.30 | 678 | 0.26 | 62 | 0.094 | 675 | <0.05 | 50 | • | • | • | • | • | • | | |
| **97.50** | ★ | **G2** | 5.1 | 682 | 0.52 | 70 | 2.60 | 678 | 0.29 | 63 | 0.100 | 675 | <0.05 | 50 | • | • | • | • | • | • | | |
| **90.00** | ★ | **F2** | 5.6 | 317 | 0.23 | 80 | 2.80 | 300 | 0.12 | 76 | 0.110 | 279 | <0.05 | 70 | • | • | • | • | | | | |
| **84.09** | | **E2** | 5.9 | 487 | 0.37 | 80 | 3.00 | 461 | 0.19 | 76 | 0.120 | 426 | <0.05 | 70 | • | • | • | • | | | | |
| **73.96** | ★ | **D2** | 6.8 | 506 | 0.44 | 81 | 3.40 | 478 | 0.22 | 77 | 0.140 | 438 | <0.05 | 70 | • | • | • | • | | | | |
| **64.77** | | **C2** | 7.7 | 598 | 0.58 | 82 | 3.90 | 563 | 0.30 | 78 | 0.150 | 511 | <0.05 | 70 | • | • | • | • | • | | | |
| **57.29** | ★ | **B2** | 8.7 | 687 | 0.75 | 83 | 4.40 | 647 | 0.38 | 78 | 0.170 | 582 | <0.05 | 71 | • | • | • | • | • | • | | |
| **51.92** | | **A2** | 9.6 | 628 | 0.75 | 84 | 4.80 | 591 | 0.38 | 79 | 0.190 | 528 | <0.05 | 71 | • | • | • | • | • | • | | |
| **45.83** | ★ | **X1** | 10.9 | 653 | 0.88 | 85 | 5.50 | 615 | 0.44 | 80 | 0.220 | 544 | <0.05 | 71 | • | • | • | • | • | • | | |
| **41.35** | | **W1** | 12.1 | 650 | 0.96 | 85 | 6.00 | 613 | 0.48 | 81 | 0.240 | 538 | <0.05 | 71 | • | • | • | • | • | • | | |
| **37.50** | ★ | **U1** | 13.3 | 696 | 1.13 | 86 | 6.70 | 659 | 0.57 | 81 | 0.270 | 573 | <0.05 | 71 | • | • | • | • | • | • | | |
| **34.17** | | **T1** | 14.6 | 709 | 1.25 | 86 | 7.30 | 672 | 0.63 | 82 | 0.290 | 581 | <0.05 | 71 | • | • | • | • | • | • | | |
| **31.25** | ★ | **R1** | 16.0 | 695 | 1.34 | 87 | 8.00 | 661 | 0.67 | 83 | 0.320 | 567 | <0.05 | 71 | • | • | • | • | • | • | | |
| **27.94** | | **P1** | 17.9 | 663 | 1.42 | 87 | 8.90 | 634 | 0.71 | 83 | 0.360 | 539 | <0.05 | 71 | • | • | • | • | • | • | | |
| **25.66** | ★ | **M1** | 19.5 | 665 | 1.55 | 88 | 9.70 | 638 | 0.77 | 84 | 0.390 | 539 | <0.05 | 71 | • | • | • | • | • | • | | |
| **23.13** | | **K1** | 22.0 | 696 | 1.83 | 88 | 10.80 | 674 | 0.90 | 85 | 0.430 | 566 | <0.05 | 71 | • | • | • | • | • | • | | |
| **19.89** | ★ | **G1** | 25.0 | 631 | 1.87 | 88 | 12.60 | 613 | 0.94 | 86 | 0.500 | 510 | <0.05 | 71 | • | • | • | • | • | • | | |
| **38.00** | | **V1** | 13.2 | 419 | 0.67 | 86 | 6.60 | 399 | 0.34 | 82 | 0.260 | 362 | <0.05 | 75 | • | • | • | • | • | | | |
| **33.61** | ★ | **S1** | 14.9 | 420 | 0.76 | 87 | 7.40 | 400 | 0.38 | 83 | 0.300 | 361 | <0.05 | 75 | • | • | • | • | • | • | | |
| **30.46** | | **Q1** | 16.4 | 383 | 0.75 | 87 | 8.20 | 365 | 0.38 | 83 | 0.330 | 327 | <0.05 | 75 | • | • | • | • | • | • | | |
| **26.89** | ★ | **N1** | 18.6 | 397 | 0.88 | 88 | 9.30 | 380 | 0.44 | 84 | 0.370 | 337 | <0.05 | 75 | • | • | • | • | • | • | | |
| **24.26** | | **L1** | 21.0 | 394 | 0.98 | 88 | 10.30 | 378 | 0.48 | 85 | 0.410 | 334 | <0.05 | 75 | • | • | • | • | • | • | | |
| **22.00** | ★ | **J1** | 23.0 | 421 | 1.14 | 89 | 11.40 | 405 | 0.57 | 85 | 0.450 | 355 | <0.05 | 75 | • | • | • | • | • | • | | |
| **20.04** | | **H1** | 25.0 | 428 | 1.26 | 89 | 12.50 | 413 | 0.63 | 86 | 0.500 | 360 | <0.05 | 75 | • | • | • | • | • | • | | |
| **18.33** | ★ | **F1** | 27.0 | 419 | 1.33 | 89 | 13.60 | 405 | 0.67 | 86 | 0.550 | 352 | <0.05 | 75 | • | • | • | • | • | • | | |
| **16.39** | | **E1** | 31.0 | 399 | 1.45 | 89 | 15.30 | 388 | 0.71 | 87 | 0.610 | 335 | <0.05 | 75 | • | • | • | • | • | • | | |
| **15.05** | ★ | **D1** | 33.0 | 399 | 1.54 | 90 | 16.60 | 389 | 0.77 | 87 | 0.660 | 335 | <0.05 | 75 | • | • | • | • | • | • | | |
| **13.57** | | **C1** | 37.0 | 418 | 1.81 | 90 | 18.40 | 410 | 0.90 | 88 | 0.740 | 351 | <0.05 | 75 | • | • | • | • | • | • | | |
| **11.67** | ★ | **B1** | 43.0 | 377 | 1.89 | 90 | 21.00 | 372 | 0.92 | 88 | 0.860 | 317 | <0.05 | 75 | • | • | • | • | • | • | | |

★ Preferred transmission ratio
In the case of gearboxes of size 18 or 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

*Efficiency table C.88-D/Z28*

| Transmission ratio | Ratio code | Output speed $n_{mot}$ = 1 750 rpm | | | | Output speed $n_{mot}$ = 1 450 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **33 491** | **N1** | 0.05 | 1 590 | <0.06 | 47 | 0.04 | 1 590 | <0.06 | 46 | | • | | | | | | |
| **28 893** | **M1** | 0.06 | 1 590 | <0.06 | 47 | 0.05 | 1 590 | <0.06 | 47 | | • | | | | | | |
| **24 823** | **L1** | 0.07 | 1 590 | <0.06 | 47 | 0.06 | 1 590 | <0.06 | 47 | | • | | | | | | |
| **22 853** | **K1** | 0.08 | 1 590 | <0.06 | 47 | 0.06 | 1 590 | <0.06 | 47 | | • | | | | | | |
| **20 775** | **J1** | 0.08 | 1 590 | <0.06 | 47 | 0.07 | 1 590 | <0.06 | 47 | | • | | | | | | |
| **18 389** | **H1** | 0.10 | 1 590 | <0.06 | 47 | 0.08 | 1 590 | <0.06 | 47 | | • | | | | | | |
| **15 402** | **G1** | 0.11 | 1 590 | <0.06 | 47 | 0.09 | 1 590 | <0.06 | 47 | | • | | | | | | |
| **13 132** | **F1** | 0.13 | 1 590 | <0.06 | 47 | 0.11 | 1 590 | <0.06 | 47 | | • | | | | | | |
| **11 162** | **E1** | 0.16 | 1 590 | <0.06 | 48 | 0.13 | 1 590 | <0.06 | 47 | | • | | | | | | |
| **9 701** | **D1** | 0.18 | 1 590 | 0.06 | 48 | 0.15 | 1 590 | <0.06 | 48 | | • | | | | | | |
| **8 444** | **C1** | 0.21 | 1 590 | 0.07 | 48 | 0.17 | 1 590 | <0.06 | 48 | | • | | | | | | |
| **7 616** | **B1** | 0.23 | 1 590 | 0.08 | 49 | 0.19 | 1 590 | 0.07 | 48 | | • | | | | | | |
| **6 722** | **A1** | 0.26 | 1 590 | 0.09 | 49 | 0.22 | 1 590 | 0.07 | 48 | | • | | | | | | |
| **6 016** | **B2** | 0.29 | 1 590 | 0.10 | 49 | 0.24 | 1 590 | 0.08 | 49 | | • | | | | | | |
| **5 342** | **A2** | 0.33 | 1 590 | 0.11 | 50 | 0.27 | 1 590 | 0.09 | 49 | | • | | | | | | |
| **4 683** | **X1** | 0.37 | 1 590 | 0.12 | 50 | 0.31 | 1 590 | 0.10 | 49 | | • | | | | | | |
| **4 191** | **W1** | 0.42 | 1 590 | 0.14 | 51 | 0.35 | 1 590 | 0.12 | 50 | | • | | | | | | |
| **3 719** | **V1** | 0.47 | 1 590 | 0.15 | 51 | 0.39 | 1 590 | 0.13 | 50 | | • | | | | | | |
| **3 260** | **U1** | 0.54 | 1 590 | 0.17 | 52 | 0.44 | 1 590 | 0.15 | 51 | | • | | | | | | |
| **2 866** | **T1** | 0.61 | 1 590 | 0.19 | 52 | 0.51 | 1 590 | 0.16 | 51 | | • | | | | | | |
| **2 589** | **S1** | 0.68 | 1 590 | 0.21 | 53 | 0.56 | 1 590 | 0.18 | 52 | | • | | | | | | |
| **2 256** | **R1** | 0.78 | 1 590 | 0.24 | 54 | 0.64 | 1 590 | 0.20 | 53 | | • | | | | | | |
| **2 026** | **Q1** | 0.86 | 1 590 | 0.26 | 55 | 0.72 | 1 590 | 0.22 | 53 | | • | | | | | | |
| **1 829** | **P1** | 0.96 | 1 590 | 0.29 | 56 | 0.79 | 1 590 | 0.24 | 54 | | • | | | | | | |
| **1 659** | **N1** | 1.05 | 1 590 | 0.31 | 57 | 0.87 | 1 590 | 0.26 | 55 | | • | | | | | | |
| **1 510** | **M1** | 1.16 | 1 590 | 0.34 | 57 | 0.96 | 1 590 | 0.29 | 56 | | • | | | | | | |
| **1 335** | **L1** | 1.31 | 1 590 | 0.37 | 59 | 1.09 | 1 590 | 0.32 | 57 | | • | | | | | | |
| **1 232** | **K1** | 1.42 | 1 590 | 0.40 | 59 | 1.18 | 1 590 | 0.34 | 58 | | • | | | | | | |
| **1 061** | **J1** | 1.65 | 1 590 | 0.45 | 61 | 1.37 | 1 590 | 0.39 | 59 | | • | | | | | | |
| **964** | **H1** | 1.81 | 1 590 | 0.49 | 62 | 1.50 | 1 590 | 0.42 | 60 | | • | | | | | | |
| **877** | **G1** | 2.00 | 1 590 | 0.53 | 63 | 1.65 | 1 590 | 0.45 | 61 | | • | | | | | | |
| **795** | **F1** | 2.20 | 1 590 | 0.57 | 64 | 1.82 | 1 590 | 0.49 | 62 | | • | | | | | | |
| **723** | **E1** | 2.42 | 1 590 | 0.62 | 65 | 2.00 | 1 590 | 0.53 | 63 | | • | | | | | | |
| **640** | **D1** | 2.74 | 1 590 | 0.68 | 67 | 2.27 | 1 590 | 0.58 | 65 | | • | | | | | | |
| **590** | **C1** | 2.96 | 1 590 | 0.73 | 68 | 2.46 | 1 590 | 0.62 | 66 | | • | | | | | | |
| **508** | **B1** | 3.44 | 1 590 | 0.83 | 69 | 2.85 | 1 590 | 0.71 | 67 | | • | | | | | | |
| **462** | **A1** | 3.79 | 1 590 | 0.90 | 70 | 3.14 | 1 590 | 0.77 | 68 | | • | | | | | | |

★ Preferred transmission ratio
In the case of gearboxes of size 18 or 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

*Efficiency table C.88*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 1 750 rpm | | | | Output speed $n_{mot}$ = 1 450 rpm | | | | Output speed $n_{mot}$ = 1 150 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **440.70** | | **T2** | 4.0 | 1 590 | 0.93 | 71 | 3.3 | 1 590 | 0.79 | 70 | 2.6 | 1 590 | 0.64 | 67 | • | • | • | | | | | |
| **390.00** | ★ | **S2** | 4.5 | 1 591 | 1.04 | 72 | 3.7 | 1 590 | 0.87 | 71 | 2.9 | 1 590 | 0.70 | 69 | • | • | • | • | | | | |
| **354.55** | | **R2** | 4.9 | 1 582 | 1.11 | 73 | 4.1 | 1 590 | 0.95 | 72 | 3.2 | 1 590 | 0.77 | 70 | • | • | • | • | | | | |
| **318.50** | ★ | **Q2** | 5.5 | 1 517 | 1.19 | 73 | 4.6 | 1 588 | 1.06 | 72 | 3.6 | 1 590 | 0.85 | 71 | • | • | • | • | | | | |
| **273.00** | | **P2** | 6.4 | 1 427 | 1.30 | 74 | 5.3 | 1 506 | 1.14 | 73 | 4.2 | 1 591 | 0.97 | 72 | • | • | • | • | • | | | |
| **247.00** | ★ | **N2** | 7.1 | 1 366 | 1.37 | 74 | 5.9 | 1 443 | 1.34 | 74 | 4.7 | 1 534 | 1.04 | 72 | • | • | • | • | • | • | | |
| **228.00** | | **M2** | 7.7 | 1 317 | 1.43 | 74 | 6.4 | 1 394 | 1.44 | 74 | 5.0 | 1 495 | 1.07 | 73 | • | • | • | • | • | • | • | |
| **198.25** | ★ | **L2** | 8.8 | 1 260 | 1.56 | 74 | 7.3 | 1 337 | 1.38 | 74 | 5.8 | 1 431 | 1.18 | 74 | • | • | • | • | • | • | • | |
| **180.00** | | **K2** | 9.7 | 1 219 | 1.66 | 74 | 8.1 | 1 292 | 1.82 | 74 | 6.4 | 1 389 | 1.26 | 74 | • | • | • | • | • | • | • | |
| **164.36** | ★ | **J2** | 10.6 | 1 182 | 1.76 | 74 | 8.8 | 1 257 | 1.56 | 74 | 7.0 | 1 351 | 1.34 | 74 | • | • | • | • | • | • | • | |
| **150.80** | | **H2** | 11.6 | 1 146 | 1.87 | 74 | 9.6 | 1 220 | 1.65 | 74 | 7.6 | 1 315 | 1.41 | 74 | • | • | • | • | • | • | • | |
| **138.94** | ★ | **G2** | 12.6 | 1 114 | 1.97 | 74 | 10.4 | 1 187 | 1.74 | 74 | 8.3 | 1 277 | 1.49 | 74 | • | • | • | • | • | • | • | |
| **126.18** | | **F2** | 13.9 | 1 077 | 2.10 | 74 | 11.5 | 1 146 | 2.49 | 74 | 9.1 | 1 238 | 1.59 | 74 | • | • | • | • | • | • | • | |
| **114.95** | ★ | **E2** | 15.2 | 1 042 | 2.23 | 74 | 12.6 | 1 109 | 1.97 | 74 | 10.0 | 1 197 | 1.68 | 74 | • | • | • | • | • | | | |
| **108.50** | | **D2** | 16.1 | 1 353 | 2.63 | 87 | 13.4 | 1 347 | 2.19 | 86 | 10.6 | 1 336 | 1.73 | 85 | • | • | • | • | • | • | | |
| **98.17** | ★ | **C2** | 17.8 | 1 339 | 2.88 | 87 | 14.8 | 1 420 | 2.56 | 86 | 11.7 | 1 416 | 2.02 | 86 | • | • | • | • | • | • | | |
| **90.62** | | **B2** | 19.3 | 1 258 | 2.93 | 87 | 16.0 | 1 255 | 2.43 | 87 | 12.7 | 1 248 | 1.93 | 86 | • | • | • | • | • | • | • | |
| **78.79** | ★ | **A2** | 22.0 | 1 243 | 3.30 | 87 | 18.4 | 1 318 | 2.93 | 87 | 14.6 | 1 362 | 2.41 | 86 | • | • | • | • | • | • | • | |
| **71.54** | | **X1** | 24.0 | 1 207 | 3.49 | 87 | 20.0 | 1 282 | 3.09 | 87 | 16.1 | 1 301 | 2.53 | 87 | • | • | • | • | • | • | • | |
| **65.32** | ★ | **W1** | 27.0 | 1 161 | 3.78 | 87 | 22.0 | 1 242 | 3.30 | 87 | 17.6 | 1 336 | 2.84 | 87 | • | • | • | • | • | • | • | |
| **59.93** | | **V1** | 29.0 | 1 133 | 3.96 | 87 | 24.0 | 1 206 | 3.49 | 87 | 19.2 | 1 298 | 3.01 | 87 | • | • | • | • | • | • | • | |
| **55.22** | ★ | **U1** | 32.0 | 1 096 | 4.23 | 87 | 26.0 | 1 174 | 3.68 | 87 | 21.0 | 1 260 | 3.19 | 87 | • | • | • | • | • | • | • | |
| **50.15** | | **T1** | 35.0 | 1 064 | 4.49 | 87 | 29.0 | 1 132 | 4.55 | 87 | 23.0 | 1 223 | 3.39 | 87 | • | • | • | • | • | • | • | |
| **45.68** | ★ | **S1** | 38.0 | 1 031 | 4.72 | 87 | 32.0 | 1 092 | 4.82 | 87 | 25.0 | 1 186 | 3.57 | 87 | • | • | • | • | • | • | • | |
| **41.85** | | **R1** | 42.0 | 999 | 5.06 | 87 | 35.0 | 1 062 | 5.12 | 87 | 27.0 | 1 158 | 3.77 | 87 | • | • | • | • | • | • | • | |
| **37.34** | ★ | **Q1** | 47.0 | 964 | 5.46 | 87 | 39.0 | 1 026 | 5.53 | 87 | 31.0 | 1 107 | 4.14 | 87 | • | • | • | • | • | • | • | |
| **33.33** | | **N1** | 53.0 | 929 | 5.94 | 87 | 44.0 | 989 | 5.99 | 87 | 35.0 | 1 067 | 4.50 | 87 | • | | • | • | • | • | • | |
| **28.30** | | **K1** | 62.0 | 883 | 6.60 | 87 | 51.0 | 943 | 5.80 | 87 | 41.0 | 1 014 | 5.01 | 87 | • | | • | • | • | • | • | |
| **23.56** | ★ | **G1** | 74.0 | 823 | 7.34 | 87 | 62.0 | 873 | 7.48 | 87 | 49.0 | 945 | 5.58 | 87 | • | | • | • | • | | • | |
| **33.85** | | **P1** | 52.0 | 817 | 4.84 | 92 | 43.0 | 817 | 4.00 | 92 | 34.0 | 816 | 3.17 | 92 | • | • | • | • | • | • | • | |
| **30.90** | ★ | **M1** | 57.0 | 817 | 5.31 | 92 | 47.0 | 817 | 4.38 | 92 | 37.0 | 817 | 3.44 | 92 | • | • | • | • | • | • | • | |
| **28.36** | | **L1** | 62.0 | 815 | 5.76 | 92 | 51.0 | 815 | 4.74 | 92 | 41.0 | 815 | 3.81 | 92 | • | • | • | • | • | • | • | |
| **26.13** | ★ | **J1** | 67.0 | 815 | 6.22 | 92 | 56.0 | 815 | 5.20 | 92 | 44.0 | 815 | 4.09 | 92 | • | • | • | • | • | • | • | |
| **23.73** | | **H1** | 74.0 | 763 | 6.43 | 92 | 61.0 | 763 | 5.30 | 92 | 48.0 | 763 | 4.17 | 92 | • | • | • | • | • | • | • | |
| **21.61** | ★ | **F1** | 81.0 | 814 | 7.51 | 92 | 67.0 | 814 | 6.21 | 92 | 53.0 | 814 | 4.92 | 92 | • | • | • | • | • | • | • | |
| **19.80** | | **E1** | 88.0 | 802 | 8.05 | 92 | 73.0 | 802 | 6.67 | 92 | 58.0 | 802 | 5.30 | 92 | • | • | • | • | • | • | • | |
| **17.67** | ★ | **D1** | 99.0 | 795 | 8.97 | 92 | 82.0 | 795 | 7.43 | 92 | 65.0 | 795 | 5.89 | 92 | • | • | • | • | • | • | • | |
| **15.77** | | **C1** | 111.0 | 776 | 9.81 | 92 | 92.0 | 781 | 8.19 | 92 | 73.0 | 781 | 6.50 | 92 | • | | • | • | • | • | • | |
| **13.39** | | **B1** | 131.0 | 727 | 10.86 | 92 | 108.0 | 776 | 9.55 | 92 | 86.0 | 806 | 7.90 | 92 | • | | • | • | • | • | • | |
| **11.15** | ★ | **A1** | 157.0 | 656 | 11.00 | 92 | 130.0 | 681 | 10.09 | 92 | 103.0 | 681 | 7.99 | 92 | • | | • | • | • | • | • | |

★ Preferred transmission ratio
In the case of gearboxes of size 18 or 28, only possible with integrated motor or input unit KQ and KQS.

## Transmission ratios and maximum torques

### Selection and ordering data (continued)

*Efficiency table C.88*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 950 rpm | | | | Output speed $n_{mot}$ = 850 rpm | | | | Output speed $n_{mot}$ = 700 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **440.70** | | **T2** | 2.2 | 1 555 | 0.55 | 65 | 1.9 | 1 524 | 0.48 | 64 | 1.6 | 1 471 | 0.40 | 62 | • | • | • | | | | | |
| **390.00** | ★ | **S2** | 2.4 | 1 590 | 0.60 | 67 | 2.2 | 1 590 | 0.56 | 65 | 1.8 | 1 590 | 0.48 | 63 | • | • | • | • | | | | |
| **354.55** | | **R2** | 2.7 | 1 590 | 0.67 | 68 | 2.4 | 1 590 | 0.60 | 66 | 2.0 | 1 590 | 0.52 | 64 | • | • | • | • | | | | |
| **318.50** | ★ | **Q2** | 3.0 | 1 590 | 0.73 | 69 | 2.7 | 1 590 | 0.67 | 68 | 2.2 | 1 590 | 0.56 | 65 | • | • | • | • | | | | |
| **273.00** | | **P2** | 3.5 | 1 590 | 0.83 | 70 | 3.1 | 1 590 | 0.75 | 69 | 2.6 | 1 590 | 0.65 | 67 | • | • | • | • | • | | | |
| **247.00** | ★ | **N2** | 3.8 | 1 590 | 0.89 | 71 | 3.4 | 1 590 | 0.81 | 70 | 2.8 | 1 590 | 0.68 | 68 | • | • | • | • | • | • | | |
| **228.00** | | **M2** | 4.2 | 1 559 | 0.96 | 72 | 3.7 | 1 590 | 0.87 | 71 | 3.1 | 1 590 | 0.75 | 69 | • | • | • | • | • | • | • | |
| **198.25** | ★ | **L2** | 4.8 | 1 506 | 1.04 | 73 | 4.3 | 1 547 | 0.97 | 72 | 3.5 | 1 590 | 0.83 | 70 | • | • | • | • | • | • | • | |
| **180.00** | | **K2** | 5.3 | 1 466 | 1.11 | 73 | 4.7 | 1 513 | 1.03 | 73 | 3.9 | 1 581 | 0.91 | 71 | • | • | • | • | • | • | • | |
| **164.36** | ★ | **J2** | 5.8 | 1 428 | 1.18 | 73 | 5.2 | 1 471 | 1.10 | 73 | 4.3 | 1 543 | 0.97 | 72 | • | • | • | • | • | • | • | |
| **150.80** | | **H2** | 6.3 | 1 392 | 1.24 | 74 | 5.6 | 1 441 | 1.15 | 73 | 4.6 | 1 518 | 1.01 | 72 | • | • | • | • | • | • | • | |
| **138.94** | ★ | **G2** | 6.8 | 1 359 | 1.31 | 74 | 6.1 | 1 404 | 1.22 | 74 | 5.0 | 1 484 | 1.07 | 73 | • | • | • | • | • | • | • | |
| **126.18** | | **F2** | 7.5 | 1 317 | 1.39 | 74 | 6.7 | 1 363 | 1.29 | 74 | 5.5 | 1 444 | 1.13 | 73 | • | • | • | • | • | • | • | |
| **114.95** | ★ | **E2** | 8.3 | 1 271 | 1.49 | 74 | 7.4 | 1 318 | 1.38 | 74 | 6.1 | 1 397 | 1.21 | 74 | • | • | • | • | • | | | |
| **108.50** | | **D2** | 8.8 | 1 321 | 1.44 | 85 | 7.8 | 1 311 | 1.28 | 84 | 6.5 | 1 290 | 1.06 | 83 | • | • | • | • | • | • | | |
| **98.17** | ★ | **C2** | 9.7 | 1 403 | 1.68 | 85 | 8.7 | 1 394 | 1.50 | 85 | 7.1 | 1 373 | 1.23 | 83 | • | • | • | • | • | • | | |
| **90.62** | | **B2** | 10.5 | 1 239 | 1.59 | 85 | 9.4 | 1 231 | 1.43 | 85 | 7.7 | 1 215 | 1.17 | 84 | • | • | • | • | • | • | • | |
| **78.79** | ★ | **A2** | 12.1 | 1 354 | 2.00 | 86 | 10.8 | 1 348 | 1.78 | 86 | 8.9 | 1 334 | 1.47 | 85 | • | • | • | • | • | • | • | |
| **71.54** | | **X1** | 13.3 | 1 295 | 2.09 | 86 | 11.9 | 1 290 | 1.87 | 86 | 9.8 | 1 279 | 1.54 | 85 | • | • | • | • | • | • | • | |
| **65.32** | ★ | **W1** | 14.5 | 1 420 | 2.50 | 86 | 13.0 | 1 469 | 2.32 | 86 | 10.7 | 1 556 | 2.04 | 86 | • | • | • | • | • | • | • | |
| **59.93** | | **V1** | 15.9 | 1 379 | 2.65 | 87 | 14.2 | 1 429 | 2.46 | 86 | 11.7 | 1 515 | 2.16 | 86 | • | • | • | • | • | • | • | |
| **55.22** | ★ | **U1** | 17.2 | 1 344 | 2.79 | 87 | 15.4 | 1 392 | 2.60 | 87 | 12.7 | 1 431 | 2.21 | 86 | • | • | • | • | • | • | • | |
| **50.15** | | **T1** | 18.9 | 1 304 | 2.98 | 87 | 17.0 | 1 349 | 2.77 | 87 | 14.0 | 1 434 | 2.44 | 86 | • | • | • | • | • | • | • | |
| **45.68** | ★ | **S1** | 21.0 | 1 256 | 3.18 | 87 | 18.6 | 1 307 | 2.93 | 87 | 15.3 | 1 391 | 2.58 | 87 | • | • | • | • | • | • | • | |
| **41.85** | | **R1** | 23.0 | 1 221 | 3.39 | 87 | 20.0 | 1 279 | 3.09 | 87 | 16.7 | 1 355 | 2.74 | 87 | • | • | • | • | • | • | • | |
| **37.34** | ★ | **Q1** | 25.0 | 1 189 | 3.58 | 87 | 23.0 | 1 222 | 3.39 | 87 | 18.7 | 1 308 | 2.95 | 87 | • | • | • | • | • | • | • | |
| **33.33** | | **N1** | 29.0 | 1 136 | 3.97 | 87 | 26.0 | 1 178 | 3.69 | 87 | 21.0 | 1 264 | 3.20 | 87 | • | | • | • | • | • | • | |
| **28.30** | | **K1** | 34.0 | 1 079 | 4.42 | 87 | 30.0 | 1 125 | 4.07 | 87 | 25.0 | 1 195 | 3.60 | 87 | • | | • | • | • | • | • | |
| **23.56** | ★ | **G1** | 40.0 | 1 011 | 4.87 | 87 | 36.0, | 1 047 | 4.54 | 87 | 30.0 | 1 112 | 4.02 | 87 | • | | • | • | • | | • | |
| **33.85** | | **P1** | 28.0 | 815 | 2.61 | 92 | 25.0 | 814 | 2.33 | 92 | 21.0 | 812 | 1.96 | 91 | • | • | • | • | • | • | • | |
| **30.90** | ★ | **M1** | 31.0 | 816 | 2.89 | 92 | 28.0 | 815 | 2.61 | 92 | 23.0 | 813 | 2.14 | 91 | • | • | • | • | • | • | • | |
| **28.36** | | **L1** | 34.0 | 814 | 3.16 | 92 | 30.0 | 814 | 2.79 | 92 | 25.0 | 812 | 2.32 | 92 | • | • | • | • | • | • | • | |
| **26.13** | ★ | **J1** | 36.0 | 814 | 3.34 | 92 | 33.0 | 814 | 3.06 | 92 | 27.0 | 813 | 2.51 | 92 | • | • | • | • | • | • | • | |
| **23.73** | | **H1** | 40.0 | 763 | 3.48 | 92 | 36.0 | 762 | 3.13 | 92 | 30.0 | 762 | 2.61 | 92 | • | • | • | • | • | • | • | |
| **21.61** | ★ | **F1** | 44.0 | 814 | 4.08 | 92 | 39.0 | 813 | 3.62 | 92 | 32.0 | 813 | 2.97 | 92 | • | • | • | • | • | • | • | |
| **19.80** | | **E1** | 48.0 | 802 | 4.39 | 92 | 43.0 | 802 | 3.93 | 92 | 35.0 | 802 | 3.20 | 92 | • | • | • | • | • | • | • | |
| **17.67** | ★ | **D1** | 54.0 | 795 | 4.89 | 92 | 48.0 | 795 | 4.35 | 92 | 40.0 | 795 | 3.63 | 92 | • | • | • | • | • | • | • | |
| **15.77** | | **C1** | 60.0 | 781 | 5.34 | 92 | 54.0 | 781 | 4.81 | 92 | 44.0 | 781 | 3.92 | 92 | • | | • | • | • | • | • | |
| **13.39** | | **B1** | 71.0 | 806 | 6.53 | 92 | 63.0 | 806 | 5.79 | 92 | 52.0 | 806 | 4.78 | 92 | • | | • | • | • | • | • | |
| **11.15** | ★ | **A1** | 85.0 | 681 | 6.60 | 92 | 76.0 | 681 | 5.90 | 92 | 63.0 | 681 | 4.89 | 92 | • | | • | • | • | • | • | |

★ Preferred transmission ratio
In the case of gearboxes of size 18 or 28, only possible with integrated motor or input unit KQ and KQS.

## Selection and ordering data (continued)

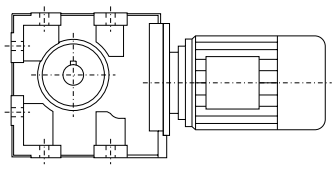
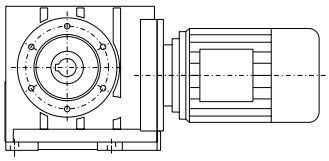
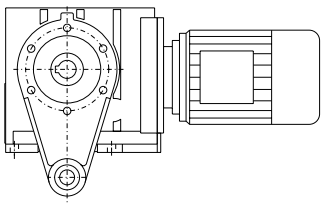
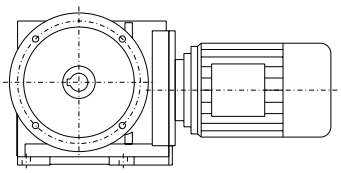
*Efficiency table C.88*

| Transmission ratio | | Ratio code | Output speed $n_{mot}$ = 500 rpm | | | | Output speed $n_{mot}$ = 250 rpm | | | | Output speed $n_{mot}$ = 10 rpm | | | | Size for motor and input units | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $i_{tot}$ | | Order No. 15th and 16th position | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | $n_2$ rpm | $T_2$ Nm | $P_{mot}$ kW | $h$ % | 63 | 71 | 80 | 90 | 100 | 112 | 132 | 160 |
| **440.70** | | **T2** | 1.1 | 1 387 | 0.28 | 58 | 0.57 | 1 262 | 0.14 | 53 | 0.023 | 1 121 | <0.05 | 47 | • | • | • | | | | | |
| **390.00** | ★ | **S2** | 1.3 | 1 590 | 0.37 | 59 | 0.64 | 1 590 | 0.20 | 54 | 0.026 | 1 450 | <0.05 | 47 | • | • | • | • | | | | |
| **354.55** | | **R2** | 1.4 | 1 590 | 0.39 | 60 | 0.71 | 1 590 | 0.22 | 54 | 0.028 | 1 590 | <0.05 | 47 | • | • | • | • | | | | |
| **318.50** | ★ | **Q2** | 1.6 | 1 590 | 0.43 | 61 | 0.78 | 1 590 | 0.24 | 55 | 0.031 | 1 459 | <0.05 | 47 | • | • | • | • | | | | |
| **273.00** | | **P2** | 1.8 | 1 590 | 0.47 | 63 | 0.92 | 1 590 | 0.27 | 56 | 0.037 | 1 440 | <0.05 | 47 | • | • | • | • | • | | | |
| **247.00** | ★ | **N2** | 2.0 | 1 590 | 0.52 | 64 | 1.0 | 1 590 | 0.29 | 57 | 0.040 | 1 590 | <0.05 | 47 | • | • | • | • | • | • | | |
| **228.00** | | **M2** | 2.2 | 1 590 | 0.56 | 65 | 1.1 | 1 590 | 0.32 | 58 | 0.044 | 1 506 | <0.05 | 47 | • | • | • | • | • | • | • | |
| **198.25** | ★ | **L2** | 2.5 | 1 590 | 0.62 | 67 | 1.3 | 1 590 | 0.37 | 59 | 0.05 | 1 590 | <0.05 | 47 | • | • | • | • | • | • | • | |
| **180.00** | | **K2** | 2.8 | 1 590 | 0.69 | 68 | 1.4 | 1 590 | 0.39 | 60 | 0.056 | 1 590 | <0.05 | 47 | • | • | • | • | • | • | • | |
| **164.36** | ★ | **J2** | 3.0 | 1 590 | 0.72 | 69 | 1.5 | 1 590 | 0.41 | 61 | 0.061 | 1 590 | <0.05 | 47 | • | • | • | • | • | • | • | |
| **150.80** | | **H2** | 3.3 | 1 590 | 0.79 | 70 | 1.7 | 1 590 | 0.46 | 62 | 0.066 | 1 590 | <0.05 | 47 | • | • | • | • | • | • | • | |
| **138.94** | ★ | **G2** | 3.6 | 1 590 | 0.85 | 71 | 1.8 | 1 590 | 0.48 | 63 | 0.072 | 1 590 | <0.05 | 47 | • | • | • | • | • | • | • | |
| **126.18** | | **F2** | 4.0 | 1 562 | 0.92 | 71 | 2.0 | 1 590 | 0.52 | 64 | 0.079 | 1 590 | <0.05 | 48 | • | • | • | • | • | • | • | |
| **114.95** | ★ | **E2** | 4.3 | 1 535 | 0.96 | 72 | 2.2 | 1 590 | 0.56 | 65 | 0.087 | 1590 | <0.05 | 48 | • | • | • | • | • | | | |
| **108.50** | | **D2** | 4.6 | 1 248 | 0.75 | 80 | 2.3 | 1 162 | 0.38 | 74 | 0.092 | 1 034 | <0.05 | 66 | • | • | • | • | • | • | | |
| **98.17** | ★ | **C2** | 5.1 | 1 331 | 0.88 | 81 | 2.5 | 1 239 | 0.43 | 75 | 0.10 | 1 092 | <0.05 | 66 | • | • | • | • | • | • | | |
| **90.62** | | **B2** | 5.5 | 1 179 | 0.83 | 81 | 2.8 | 1 097 | 0.43 | 76 | 0.11 | 961 | <0.05 | 66 | • | • | • | • | • | • | • | |
| **78.79** | ★ | **A2** | 6.3 | 1 299 | 1.04 | 82 | 3.2 | 1 210 | 0.53 | 77 | 0.13 | 1 045 | <0.05 | 66 | • | • | • | • | • | • | • | |
| **71.54** | | **X1** | 7.0 | 1 249 | 1.1 | 83 | 3.5 | 1 165 | 0.55 | 78 | 0.14 | 997 | <0.05 | 66 | • | • | • | • | • | • | • | |
| **65.32** | ★ | **W1** | 7.7 | 1 532 | 1.47 | 84 | 3.8 | 1 432 | 0.73 | 78 | 0.15 | 1 215 | <0.05 | 66 | • | • | • | • | • | • | • | |
| **59.93** | | **V1** | 8.3 | 1 580 | 1.63 | 84 | 4.2 | 1 481 | 0.82 | 79 | 0.17 | 1 247 | <0.05 | 67 | • | • | • | • | • | • | • | |
| **55.22** | ★ | **U1** | 9.1 | 1 409 | 1.58 | 85 | 4.5 | 1 325 | 0.78 | 80 | 0.18 | 1 106 | <0.05 | 67 | • | • | • | • | • | • | • | |
| **50.15** | | **T1** | 10.0 | 1 496 | 1.84 | 85 | 5.0 | 1 413 | 0.92 | 81 | 0.20 | 1 170 | <0.05 | 67 | • | • | • | • | • | • | • | |
| **45.68** | ★ | **S1** | 10.9 | 1 541 | 2.05 | 86 | 5.5 | 1 522 | 1.08 | 81 | 0.22 | 1 249 | <0.05 | 67 | • | • | • | • | • | • | • | |
| **41.85** | | **R1** | 11.9 | 1 505 | 2.18 | 86 | 6.0 | 1 513 | 1.16 | 82 | 0.24 | 1 233 | <0.05 | 67 | • | • | • | • | • | • | • | |
| **37.34** | ★ | **Q1** | 13.4 | 1 454 | 2.37 | 86 | 6.7 | 1 516 | 1.28 | 83 | 0.27 | 1 225 | 0.05 | 67 | • | • | • | • | • | • | • | |
| **33.33** | | **N1** | 15.0 | 1 409 | 2.56 | 86 | 7.5 | 1 502 | 1.41 | 84 | 0.30 | 1 205 | 0.06 | 67 | • | | • | • | • | • | • | |
| **28.30** | | **K1** | 17.7 | 1 339 | 2.86 | 87 | 8.8 | 1 570 | 1.71 | 85 | 0.35 | 1 249 | 0.07 | 67 | • | | • | • | • | • | • | |
| **23.56** | ★ | **G1** | 21.0 | 1 252 | 3.17 | 87 | 10.6 | 1 339 | 1.74 | 85 | 0.42 | 1 059 | 0.07 | 68 | • | | • | • | • | | • | |
| **33.85** | | **P1** | 14.8 | 803 | 1.38 | 90 | 7.4 | 772 | 0.69 | 87 | 0.30 | 688 | <0.05 | 77 | • | • | • | • | • | • | • | |
| **30.90** | ★ | **M1** | 16.2 | 806 | 1.51 | 91 | 8.1 | 777 | 0.75 | 87 | 0.32 | 688 | <0.05 | 77 | • | • | • | • | • | • | • | |
| **28.36** | | **L1** | 17.6 | 806 | 1.63 | 91 | 8.8 | 779 | 0.82 | 88 | 0.35 | 687 | <0.05 | 77 | • | • | • | • | • | • | • | |
| **26.13** | ★ | **J1** | 19.1 | 808 | 1.77 | 91 | 9.6 | 783 | 0.89 | 88 | 0.38 | 688 | <0.05 | 78 | • | • | • | • | • | • | • | |
| **23.73** | | **H1** | 21.0 | 758 | 1.83 | 91 | 10.5 | 738 | 0.91 | 89 | 0.42 | 644 | <0.05 | 78 | • | • | • | • | • | • | • | |
| **21.61** | ★ | **F1** | 23.0 | 810 | 2.13 | 91 | 11.6 | 791 | 1.08 | 89 | 0.46 | 688 | <0.05 | 78 | • | • | • | • | • | • | • | |
| **19.80** | | **E1** | 25.0 | 800 | 2.29 | 92 | 12.6 | 783 | 1.15 | 90 | 0.51 | 679 | <0.05 | 78 | • | • | • | • | • | • | • | |
| **17.67** | ★ | **D1** | 28.0 | 794 | 2.54 | 92 | 14.2 | 781 | 1.29 | 90 | 0.57 | 674 | 0.05 | 78 | • | • | • | • | • | • | • | |
| **15.77** | | **C1** | 32.0 | 780 | 2.85 | 92 | 15.9 | 770 | 1.41 | 91 | 0.63 | 663 | 0.06 | 78 | • | | • | • | • | • | • | |
| **13.39** | | **B1** | 37.0 | 806 | 3.4 | 92 | 18.7 | 799 | 1.72 | 91 | 0.75 | 687 | 0.07 | 78 | • | | • | • | • | • | • | |
| **11.15** | ★ | **A1** | 45.0 | 681 | 3.49 | 92 | 22.0 | 678 | 1.71 | 91 | 0.90 | 582 | 0.07 | 79 | • | | • | • | • | • | • | |

★ Preferred transmission ratio
In the case of gearboxes of size 18 or 28, only possible with integrated motor or input unit KQ and KQS.

## Mounting types

### Selection and ordering data

| Mounting type | Order No. 14th position | Code in type designation 2nd position for solid shaft, 3rd position for hollow shaft | Representation |
|---|---|---|---|
| **Foot-mounted design** | **A** | – |  |
| **Housing flange (C-type)** | **H** | Z |  |
| **Design with torque arm** | **D** | D |  |
| **Flange-mounted design (A-type)** | **F** | F |  |

## Selection and ordering data (continued)

### *Helical worm gearbox with torque arm*

The torque arm consists of an arm with an eye; it can be screwed onto the gearbox housing at an angular pitch of 30° in any one of nine positions around the output.

The basic material of the torque arm is natural rubber with 60° Shore A, so it is suitable for all mounting positions and can withstand temperatures of between –45 °C and +70 °C.

See the dimension drawings in the Dimensions section for the torque arm dimensions.

If **D** appears in the **14th position** of the order number, the torque arm will be delivered loose.

The shafts and mounting positions correspond to the design featuring a housing flange.

Order code:
Figure 1 **G09**
Figure 2 **G10**

Figure 1

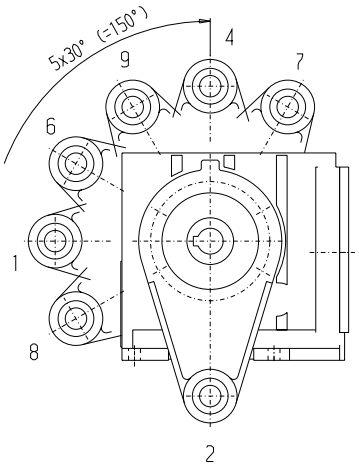
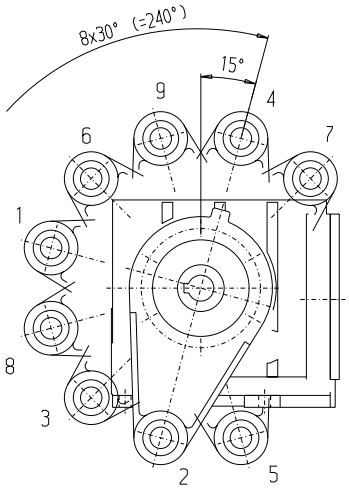



Figure 2



## Shaft designs

### Selection and ordering data

| Shaft design | Order No. 8th position | Order No. suffix | Shaft dimensions | | | | |
|---|---|---|---|---|---|---|---|
| **Helical worm gearbox C, foot-mounted design** | | | | | | | |
| **Size** | | | **C.28** | **C.38** | **C.48** | **C.68** | **C.88** |
| Solid shaft with feather key | **1** | | V20 x 40 *) | V25 x 50 *) | V30 x 60 *) | V35 x 70 *) | V45 x 90 *) |
| | **3** | | | V35 x 70 | V40 x 80 | V40 x 80 | V50 x 100 |
| | **4** | | | | | V50 x 100 | V70 x 140 |
| Hollow shaft | **5** | | H20 x 120 *) | H25 x 120 *) | H30 x 150 *) | H40 x 180 *) | H50 x 210 *) |
| | **6** | | H25 x 120 | H30 x 120 | H35 x 150 | H45 x 180 | H60 x 210 |
| | **7** | | | | H40 x 150 | | |
| Hollow shaft with shrink disk | **9** | **H3A** | H20 x 142 *) | H30 x 146 *) | H40 x 177 | H50 x 209 | H60 x 241 |
| | **9** | **H3C** | | | H35 x 177 | H40 x 209 | H50 x 241 |
| | **9** | **H3D** | | | | H40/42 x 209 | H50/52 x 241 |
| Hollow shaft with splined shaft | **9** | **H4A** | | N35x1.25x30x26x 9Hx 120 | N40x2x30x18x 9H x 150 | N50x2x30x24x 9H x 180 | N60x2x30x28x 9H x 210 |
| **Helical worm gearbox C with housing flange** | | | | | | | |
| **Size** | | | **C.28** | **C.38** | **C.48** | **C.68** | **C.88** |
| Solid shaft with feather key | **1** | | V20 x 40 *) | V25 x 50 *) | V30 x 60 *) | V35 x 70 *) | V45 x 90 *) |
| | **3** | | | V35 x 70 | V40 x 80 | V40 x 80 | V50 x 100 |
| | **4** | | | | | V50 x 100 | V70 x 140 |
| Hollow shaft | **5** | | H20 x 120 *) | H25 x 120 *) | H30 x 150 *) | H40 x 180 *) | H50 x 210 *) |
| | **6** | | H25 x 120 | H30 x 120 | H35 x 150 | H45 x 180 | H60 x 210 |
| | **7** | | | | H40 x 150 | | |
| Hollow shaft with shrink disk | **9** | **H3A** | H20 x 142 *) | H30 x 146 *) | H40 x 177 | H50 x 209 | H60 x 241 |
| | **9** | **H3C** | | | H35 x 177 | H40 x 209 | H50 x 241 |
| | **9** | **H3D** | | | | H40/42 x 209 | H50/52 x 241 |
| Hollow shaft with splined shaft | **9** | **H4A** | | N35x1.25x30x26x 9Hx 120 | N40x2x30x18x 9H x 150 | N50x2x30x24x 9H x 180 | N60x2x30x28x 9H x 210 |
| **Helical worm gearbox C with torque arm** | | | | | | | |
| **Size** | | | **C.28** | **C.38** | **C.48** | **C.68** | **C.88** |
| Hollow shaft | **5** | | H20 x 120 *) | H25 x 120 *) | H30 x 150 *) | H40 x 180 *) | H50 x 210 *) |
| | **6** | | H25 x 120 | H30 x 120 | H35 x 150 | H45 x 180 | H60 x 210 |
| | **7** | | | | H40 x 150 | | |
| Hollow shaft with shrink disk | **9** | **H3A** | H20 x 142 *) | H30 x 146 *) | H40 x 177 | H50 x 209 | H60 x 241 |
| | **9** | **H3C** | | | H35 x 177 | H40 x 209 | H50 x 241 |
| | **9** | **H3D** | | | | H40/42 x 209 | H50/52 x 241 |
| Hollow shaft with splined shaft | **9** | **H4A** | | N35x1.25x30x26x 9Hx 120 | N40x2x30x18x 9H x 150 | N50x2x30x24x 9H x 180 | N60x2x30x28x 9H x 210 |
| **Helical worm gearbox C, flange-mounted design (A-type)** | | | | | | | |
| **Size** | | | **C.28** | **C.38** | **C.48** | **C.68** | **C.88** |
| Solid shaft with feather key | **2** | | V20 x 40 (i2=I) *) | V25 x 50 (i2=I) *) | V30 x 60 (i2=I) *) | V35 x 70 (i2=I) *) | V45 x 90 (i2=I) *) |
| | **7** | | | | | V40 x 80 (i2=I) | V50 x 100 (i2=I) |
| Hollow shaft | **5** | | H20 x 120 *) | H25 x 120 *) | H30 x 150 *) | H40 x 180 *) | H50 x 210 *) |
| | **6** | | H25 x 120 | H30 x 120 | H35 x 150 | H45 x 180 | H60 x 210 |
| | **7** | | | | H40 x 150 | | |
| Hollow shaft with shrink disk | **9** | **H3A** | H20 x 142 *) | H30 x 146 *) | H40 x 177 | H50 x 209 | H60 x 241 |
| | **9** | **H3C** | | | H35 x 177 | H40 x 209 | H50 x 241 |
| | **9** | **H3D** | | | | H40/42 x 209 | H50/52 x 241 |
| Hollow shaft with splined shaft | **9** | **H4A** | | N35x1.25x30x26x 9Hx 120 | N40x2x30x18x 9H x 150 | N50x2x30x24x 9H x 180 | N60x2x30x28x 9H x 210 |

*) Preferred series

## Selection and ordering data

| Order code | Flange diameter | | | | |
|---|---|---|---|---|---|
| **Size** | **C.28** | **C.38** | **C.48** | **C.68** | **C.88** |
| **H02** | | 160 | | 200 | 250 |
| **H03** | 120 | | 200 | | 300 |
| **H04** | 160 | | | 250 | |
| **H05** | | | | | |

## Mounting types and mounting positions

### Selection and ordering data

The mounting type / mounting position must be specified when you place your order to ensure that the gearbox is supplied with the correct quantity of oil.

Please contact customer service to discuss the oil quantity if you wish to use a mounting position which is not shown here.

#### *Position of the terminal box*

The terminal box of the motor can be mounted in four different positions. See Chapter 8 for an accurate representation of the terminal box position and the corresponding order codes.

#### *Helical worm gearbox C, foot-mounted design*

**Oil control valves:**

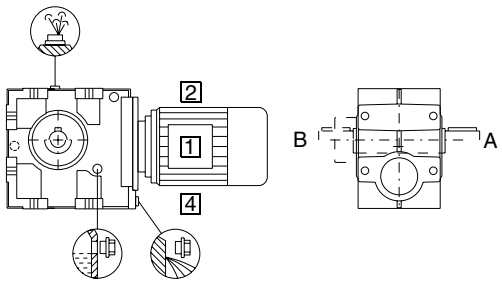
- Size 28: These types are lubricated for life. No ventilation, oil level, or drain plugs are present.
- From size 38 up: Oil level, Ventilation, Oil drain, * On opposite side

A,B position of the customer's solid/plug-in shaft

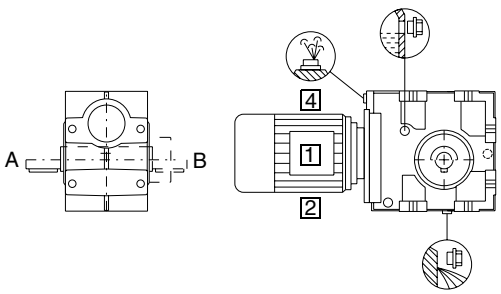
1 ... 4 Position of the terminal box, see Chapter 8

1) Standard mounting type

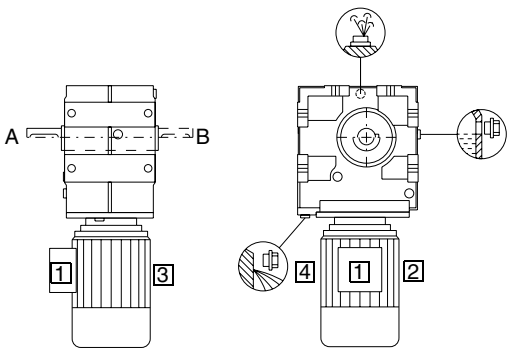
C: B3-00 (IM B3-00) 1)
Order code: Output side A **D06**, output side B **D08**
CA: H-01 1)
Order code: Output side A **D76**, output side B **D77**



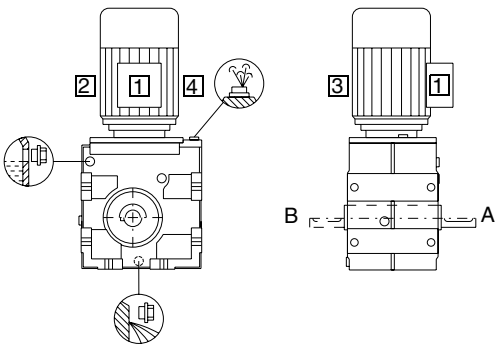

C: B8-00 (IM B8-00)
Order code: Output side A **D68**, output side B **D70**
CA: H-02
Order code: Output side A **D78**, output side B **D79**



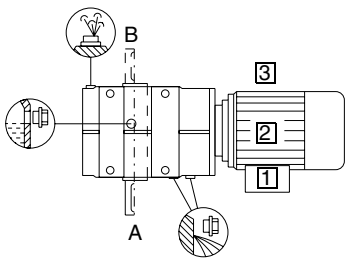

C: B6-00 (IM B6-00)
Order code: Output side A **D38**, output side B **D40**
CA: H-04
Order code: Output side A **D82**, output side B **D83**



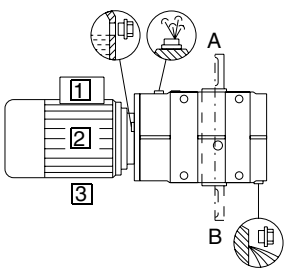

C: B7-00 (IM B7-00)
Order code: Output side A **D59**, output side B **D61**
CA: H-03
Order code: Output side A **D80**, output side B **D81**




C: V5-00 (IM V5-00)
Order code: Output side A **E03**, output side B **E05**
CA: H-05
Order code: Output side A **D84**, output side B **D85**




C: V6-00 (IM V6-00)
Order code: Output side A **E15**, output side B **E17**
CA: H-06
Order code: Output side A **D86**, output side B **D87**



## Selection and ordering data (continued)

*Helical worm gearbox C, flange-mounted design (C.F), with housing flange (C.Z) or torque arm (C.D)*

**Oil control valves:**

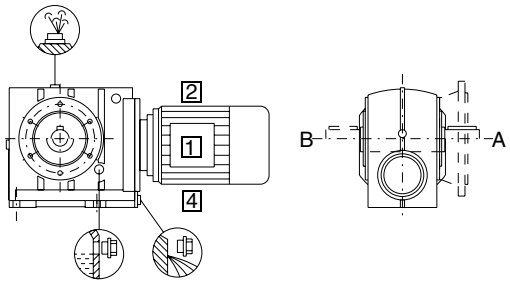
- Size 28: These types are lubricated for life. No ventilation, oil level, or drain plugs are present.
- From size 38 up: Oil level Ventilation Oil drain * On opposite side

A,B position of the customer's solid/plug-in shaft

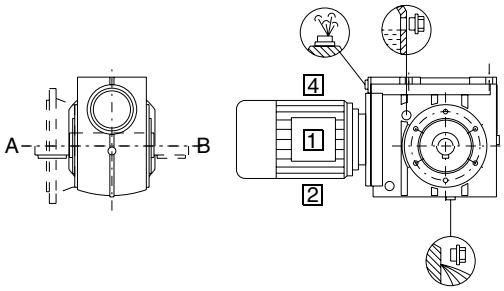
1 ... 4 Position of the terminal box, see Chapter 8

1) Standard mounting type

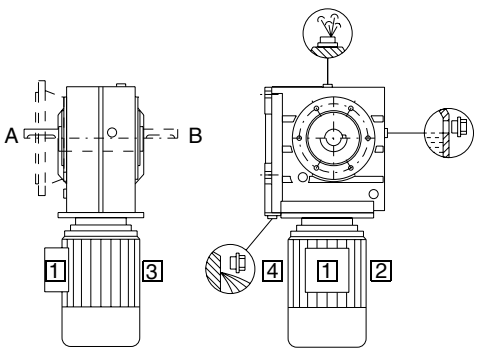
CF: B5-01 (IM B5-01) 1)
Order code: Output side A **D22**, output side B **D24**
CAD, CAF, CAZ: H-01 1)
Order code: Output side A **D76**, output side B **D77**



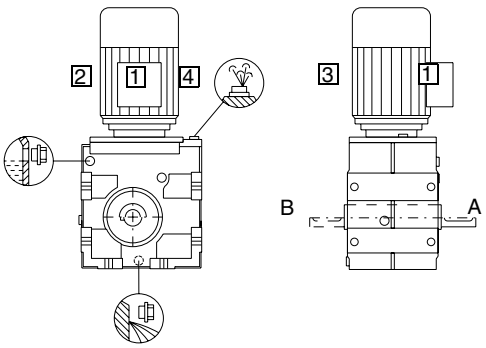

CF: B5-03 (IM B5-03)
Order code: Output side A **D32**, output side B **D34**
CAD, CAF, CAZ: H-02
Order code: Output side A **D78**, output side B **D79**



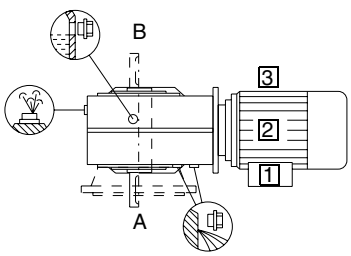

CF: B5-00 (IM B5-00)
Order code: Output side A **D18**, output side B **D20**
CAD, CAF, CAZ: H-04
Order code: Output side A **D82**, output side B **D83**



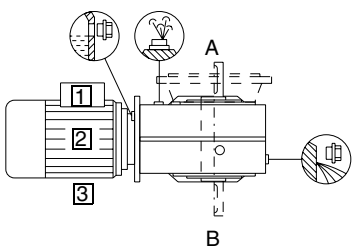

CF: B5-02 (IM B5-02)
Order code: Output side A **D68**, output side B **D70**
CAD, CAF, CAZ: H-03
Order code: Output side A **D80**, output side B **D81**




CF: V1-00 (IM V1-00)
Order code: Output side A **D90**, output side B **D92**
CAD, CAF, CAZ: H-05
Order code: Output side A **D84**, output side B **D85**




CF: V3-00 (IM V3-00)
Order code: Output side A **D98**, output side B **E00**
CAD, CAF, CAZ: H-06
Order code: Output side A **D86**, output side B **D87**



## Mounting types and mounting positions

**Selection and ordering data** (continued)

### *Helical worm tandem gearbox*

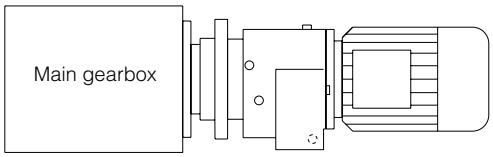
The mounting type / mounting position of the tandem gearbox corresponds to that of the main gearbox.
The figures below are only designed to show the position of the oil control valves of the 2nd gearbox.

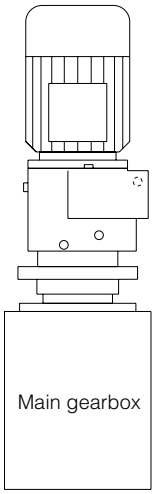
Note:

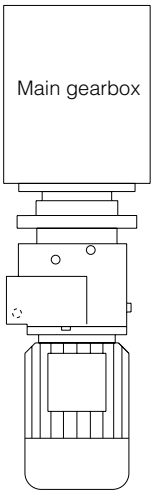
In a horizontal operating position the bulging part of the housing of the 2nd gearbox generally faces vertically downwards.

**Oil control valves:**

- Frame size 28: These types are lubricated for life. No ventilation, oil level, or drain plugs are present.



## Lubricants

Helical worm gearbox C is always filled with synthetic lubricant prior to despatch and is supplied ready for use. The rating plate contains information about the appropriate type of oil (PGLP) and ISO viscosity class.

If the gearbox is to be used in an application with special requirements, the lubricants listed in the table below can be used.

| Area of application | Ambient temperature [1] | DIN ISO designation | Order code |
|---|---|---|---|
| **Standard oils** | | | |
| Standard temperature | 0 … +60 °C | CLP ISO PG VG460 | **K08** |
| Low temperature usage | -20 … +5 0 °C | CLP ISO PG VG220 | **K07** |
| Lowest temperature usage | -40 … +40 °C | CLP ISO PAO VG220 | [2] |
| **Physiologically safe oils (for use in the food industry) in acc. with NSF(USDA)-H1** | | | |
| Standard temperature | -30 … +40 °C | CLP ISO H1 VG460 | **K11** |
| **Biologically degradable oils** | | | |
| Standard temperature | -20 … +40 °C | CLP ISO E VG220 | **K10** |

1) Recommendation
2) On request

Size 28 does not feature any ventilation, oil level, or drain plugs. The lubricant does not need to be changed, due to the low thermal load the gearbox is subjected to.

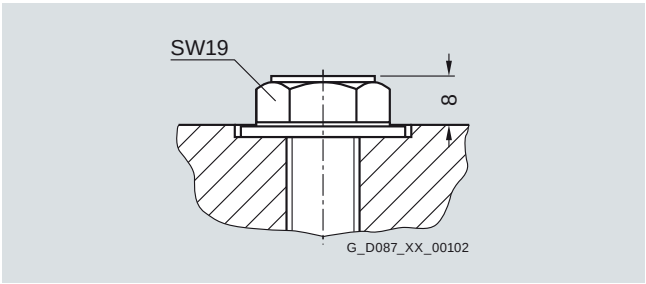
Gearboxes of sizes 38 to 88 are fitted with filler, oil level, and drain plugs as standard. The ventilation and vent filter, which is delivered loose, must be attached in place of the filler plug prior to startup.

## Oil level control

### *Oil sight glass*

For size 38 and above, helical worm gearbox C can be equipped with a visual oil level indicator (oil sight glass) for most mounting types and mounting positions.

Order code:
Oil sight glass **G34**




SW = Wrench width

| Gearbox | Size |
|---|---|
| Helical worm gearbox | C.38 … C.88 |

### *Electrical oil level monitoring system*

If required, the gearbox can be supplied with an electrical oil level monitoring system, which enables the oil level of the gearbox to be monitored remotely. The oil level is monitored by a capacitive sensor only when the gearbox starts up; it is not measured continuously during operation.

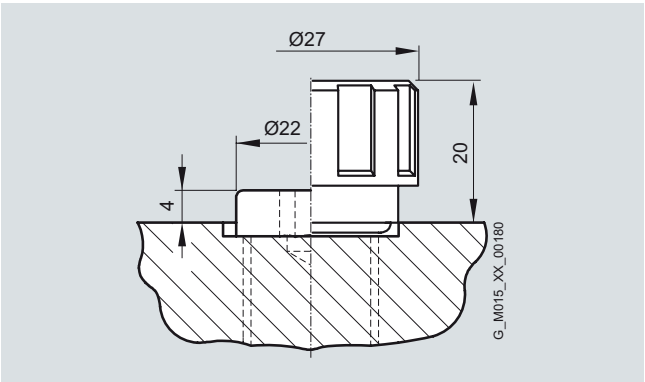
## Special versions

### Gearbox ventilation

The positions of the ventilation and ventilation elements can be seen on the mounting position diagrams.

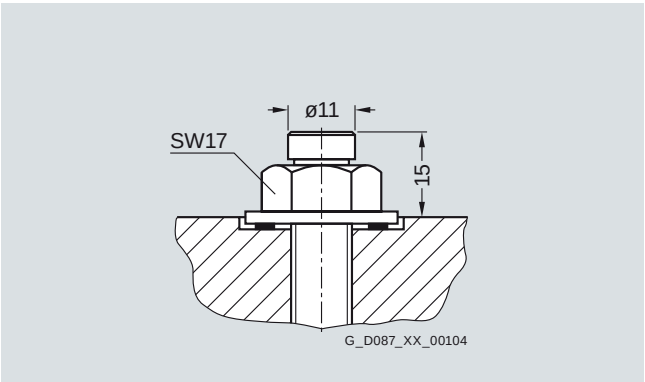
If required, a pressure breather valve can be used for helical worm gearbox C, size 38 and above.

Vent filter




Order code:
Vent filter **G44**

Pressure breather valve




SW = Wrench width

Order code:
Pressure breather valve **G45**

5

### Oil drain

#### *Magnetic screw plug*

A magnetic screw plug for inserting in the oil drainage hole is available on request for helical worm gearboxes of size 48 and above. This serves to collect any grit contained in the gear lubricant.

Order code:
Magnetic screw plug **G53**

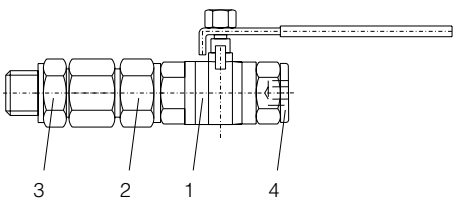
#### *Oil drain valve*

An oil drain valve is available on request for helical worm gearboxes of size 48 and above.

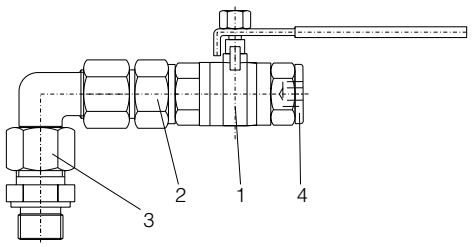
The plug valve may be designed as a complete unit featuring a screw plug, depending on the corresponding mounting position.

Order code:
Oil drain valve, straight **G54**

An angled oil drain valve is also available on request.




Item 3 Screwed connection GE
Item 2 Screwed connection EGE
Item 1 Oil drain valve
Item 4 Screw plug

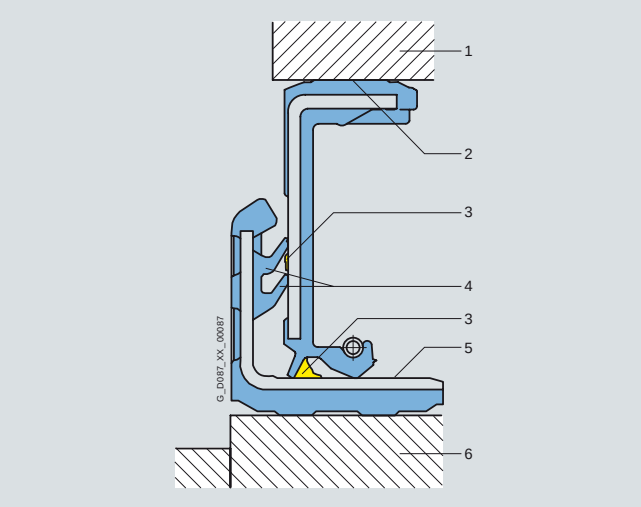



Item 3 Screwed connection GE
Item 2 Screwed connection EGE
Item 1 Oil drain valve
Item 4 Screw plug

## Sealing

### *Combination shaft sealing*

Combination shaft sealing, which helps to prevent oil from leaking, is available for helical worm gearboxes of sizes 38 to 88.




Combination shaft sealing is particularly well suited to external use.

Order code:
Combination shaft sealing **G24**

1 • Housing

2 • Rubberized inner and outer diameter

3 • Grease filling prevents dry running of the sealing lips

4 • Additional sealing lips to protect against dirt
• Decoupled sealing system prevents scoring of the shaft as a result of corrosion or dirt

5 • Protected running surface for radial shaft sealing ring
• No damage when mounting

6 • Shaft

### *Double sealing*

Double sealing is possible for helical worm gearboxes of size 28. Double sealing is particularly well suited to external use.

Order code:

| | |
|---|---|
| Double sealing MSS1 (size 28) | **G23** |
| Double radial shaft seal (size 188) | **G22+G31** |

### *High temperature resistant sealing*

High temperature resistant sealing (Viton/fluorinated rubber) for higher operating temperatures of +60 °C and above are available for helical worm gearboxes.

Order code:
High temperature resistant sealing **G25**

## Hollow shaft cover (protection cover)

Gearboxes with hollow shafts can be fitted with a fixed protection cover made of cast iron or steel. Gearboxes of size 28 are fitted with a steel protection cover as standard.

The steel protection cover can only be used for gearboxes with hollow shaft and shrink disk.

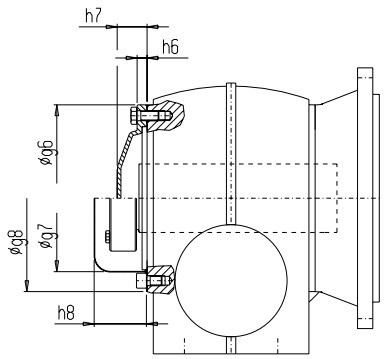
For outdoor applications we recommend the ATEX versions.

Order codes:

| | |
|---|---|
| Protection cover | **G62** |
| Protection cover (ATEX) | **G63** |
| Steel protection cover | **G60** |
| Steel protection cover (ATEX) | **G61** |

Protection cover

Protection cover Steel




| Gearbox type | Steel protection cover | | | Protection cover | | |
|---|---|---|---|---|---|---|
| | g7 | g8 | h8 | g6 | h6 | h7 |
| C.28 | 58.0 | 102 | 36.0 | – | – | – |
| C.38 | 82.2 | 115 | 40.0 | 120 | 10 | 33 |
| C.48 | 99.0 | 130 | 44.0 | 132 | 10 | 33 |
| C.68 | 115.0 | 150 | 62.5 | 150 | 10 | 37 |
| C.88 | 137.0 | 190 | 70.0 | 190 | 13 | 50 |

CAF, CAZ, CAD, CAFS[1)], CAZS[1)], CADS[1)], CAFT, CAZT, CADT

1) Only a steel protection cover is available for CAFS, CAZS, and CADS

## Special versions

### Radially reinforced output shaft bearings

The bearings of the MOTOX gearboxes are dimensioned such that they are strong enough to withstand most application cases.

However, the gearboxes can be fitted with a reinforced output shaft bearing arrangement for applications with particularly high radial and axial forces.

Order code:
Radially reinforced output shaft bearings **G20**

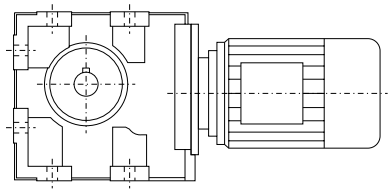
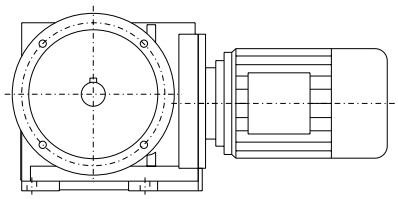
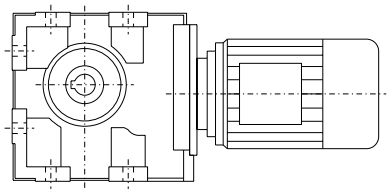
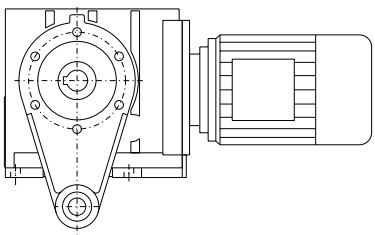
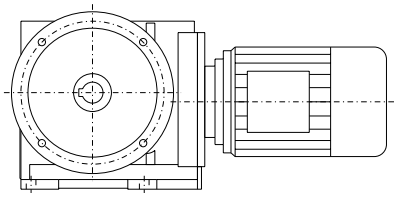
### 2nd output shaft extension

If required, helical worms in a foot-mounted design with solid shaft are available with a 2nd shaft extension.

See the dimension drawings for the corresponding design for the relevant dimensions.

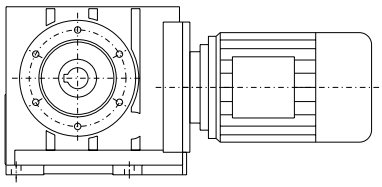
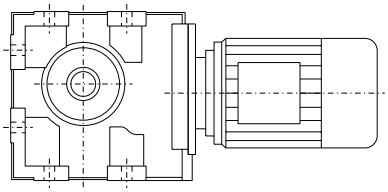
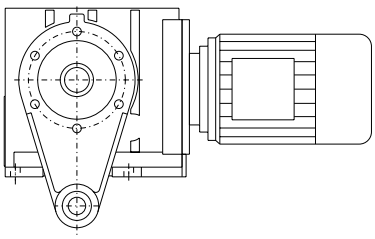
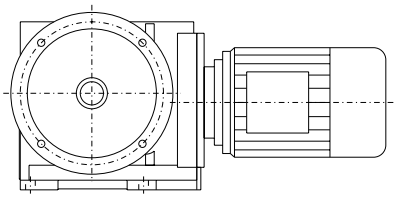
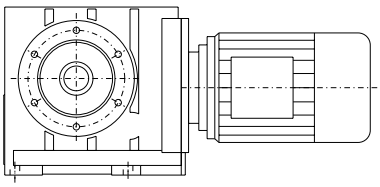
Order code:
2nd output shaft extension **G73**

## Dimension drawing overview

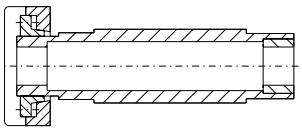
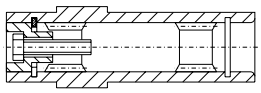
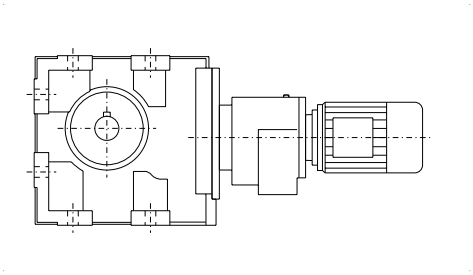
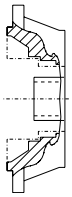
| Representation | Gearbox type | Dimension drawing on page |
|---|---|---|
|  | C28 / CZ28 | 5/58 |
| | C38 | 5/66 |
| | C48 | 5/76 |
| | C68 | 5/86 |
| | C88 | 5/96 |
|  | CF28 | 5/59 |
| | CF38 | 5/67 |
| | CF48 | 5/77 |
| | CF68 | 5/87 |
| | CF88 | 5/97 |
|  | CA28 / CAZ28 | 5/60 |
| | CA38 | 5/68 |
| | CA48 | 5/78 |
| | CA68 | 5/88 |
| | CA88 | 5/98 |
|  | CAD28 | 5/61 |
| | CAD38 | 5/69 |
| | CAD48 | 5/79 |
| | CAD68 | 5/89 |
| | CAD88 | 5/99 |
|  | CAF28 | 5/62 |
| | CAF38 | 5/70 |
| | CAF48 | 5/80 |
| | CAF68 | 5/90 |
| | CAF88 | 5/100 |

## Dimensions

### Dimension drawing overview (continued)

| Representation | Gearbox type | Dimension drawing on page |
|---|---|---|
|  | CAZ38 | 5/71 |
| | CAZ48 | 5/81 |
| | CAZ68 | 5/91 |
| | CAZ88 | 5/101 |
|  | CAS28 / CAZS28 | 5/63 |
| | CAS38 | 5/72 |
| | CAS48 | 5/82 |
| | CAS68 | 5/92 |
| | CAS88 | 5/102 |
|  | CADS28 | 5/64 |
| | CADS38 | 5/73 |
| | CADS48 | 5/83 |
| | CADS68 | 5/93 |
| | CADS88 | 5/103 |
|  | CAFS28 | 5/65 |
| | CAFS38 | 5/74 |
| | CAFS48 | 5/84 |
| | CAFS68 | 5/94 |
| | CAFS88 | 5/104 |
|  | CAZS38 | 5/75 |
| | CAZS48 | 5/85 |
| | CAZS68 | 5/95 |
| | CAZS88 | 5/105 |

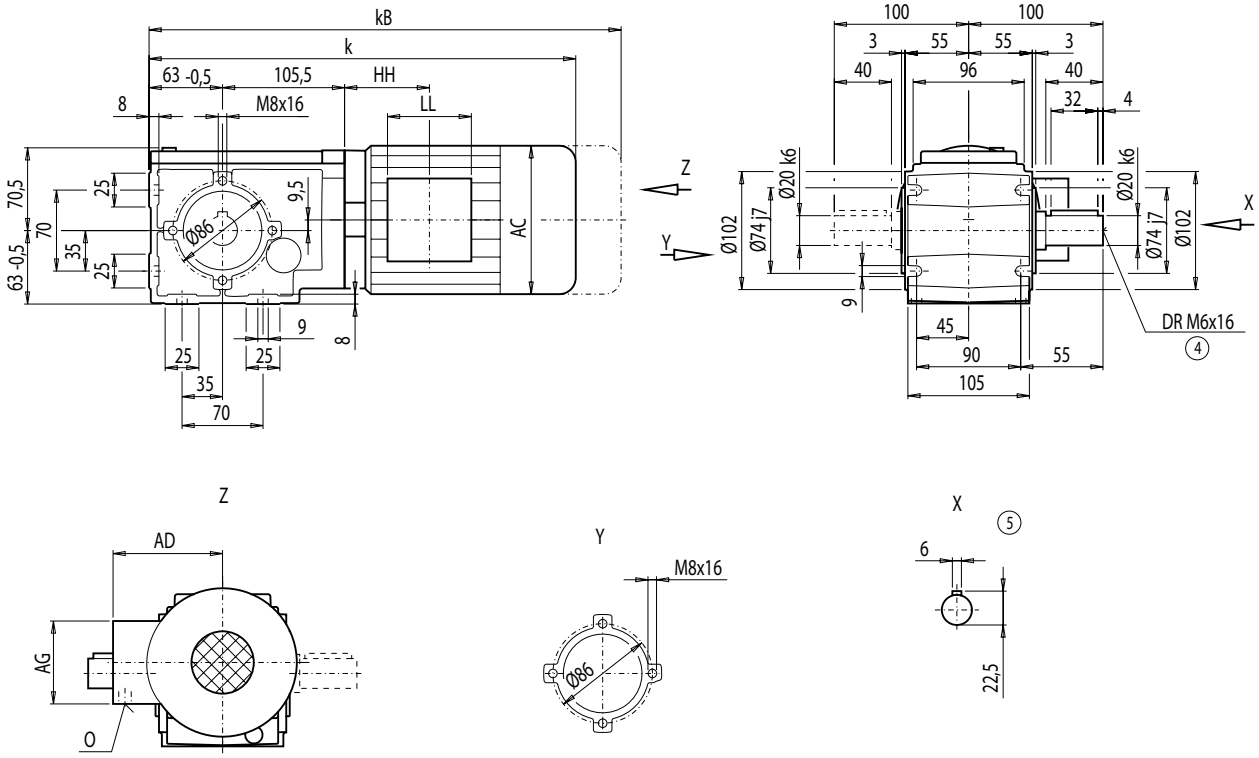
## Dimension drawing overview (continued)

| Representation | Gearbox type | Dimension drawing on page |
|---|---|---|
|  | CA.S38 ... CA.S88 | 5/106 |
|  | CA.T38 ... CA.T88 | 5/107 |
|  | C.38-Z28 ... C.88-D/Z38 | 5/108 |
|  | Additional flange-mounted design | 5/109 |

## Dimensions

### Gearbox C/CZ28, foot- and housing-flange-mounted designs (C-type)

*C012*
*CZ012*



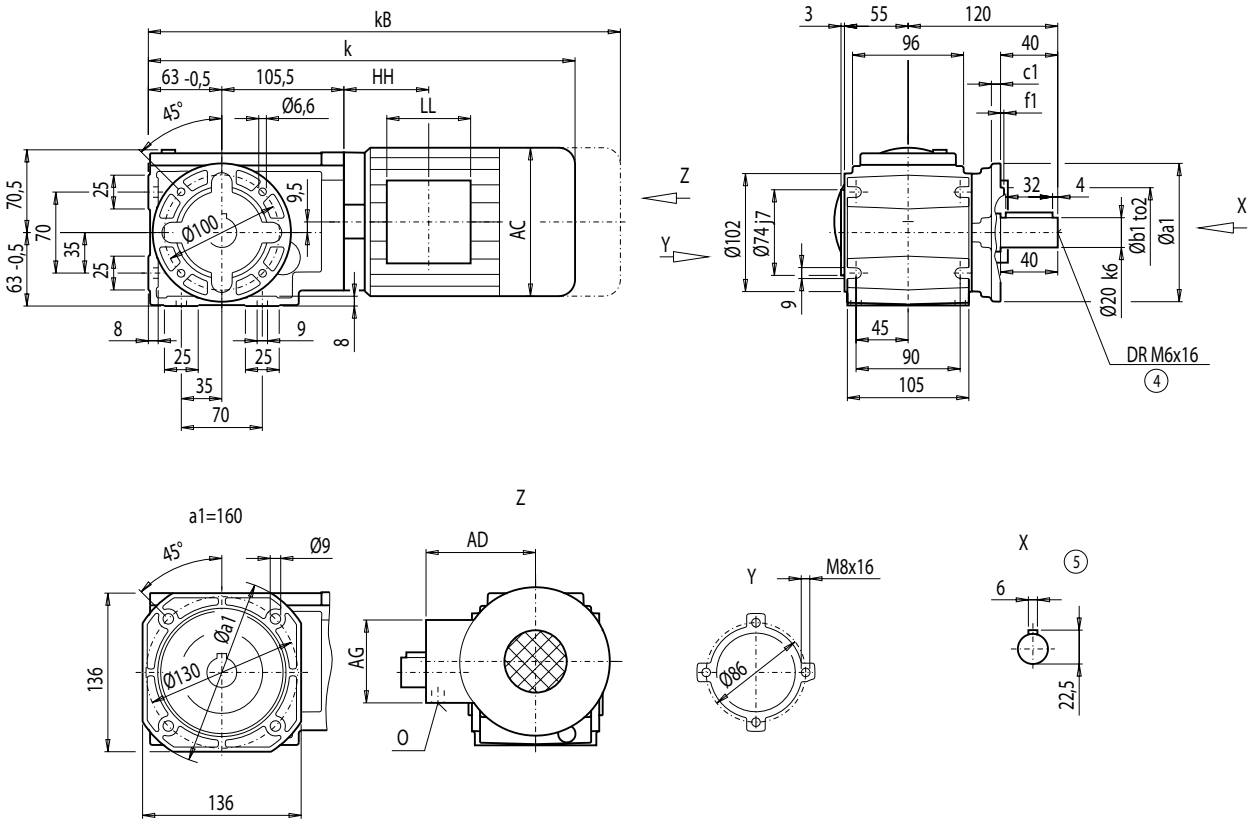

| Motor | C.28 k | kB | AC | AD | AG | LL | HH | O | Weight C.28 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 353 | 408 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 10 |
| LA71Z | 372 | 427 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 11 |

④ DIN 332

⑤ Feather key / keyway DIN 6885

## Gearbox CF28, flange-mounted design (A-type)

*CF012*




| Flange | a1 | b1 | to2 | c1 | f1 |
|---|---|---|---|---|---|
| **A120** | 120 | 80 | j6 | 8 | 3.0 |
| **A160** | 160 | 110 | j6 | 9 | 3.5 |

| Motor | CF28 k | kB | AC | AD | AG | LL | HH | O | Weight CF28 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 353 | 408 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 12 |
| LA71Z | 372 | 427 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 12 |

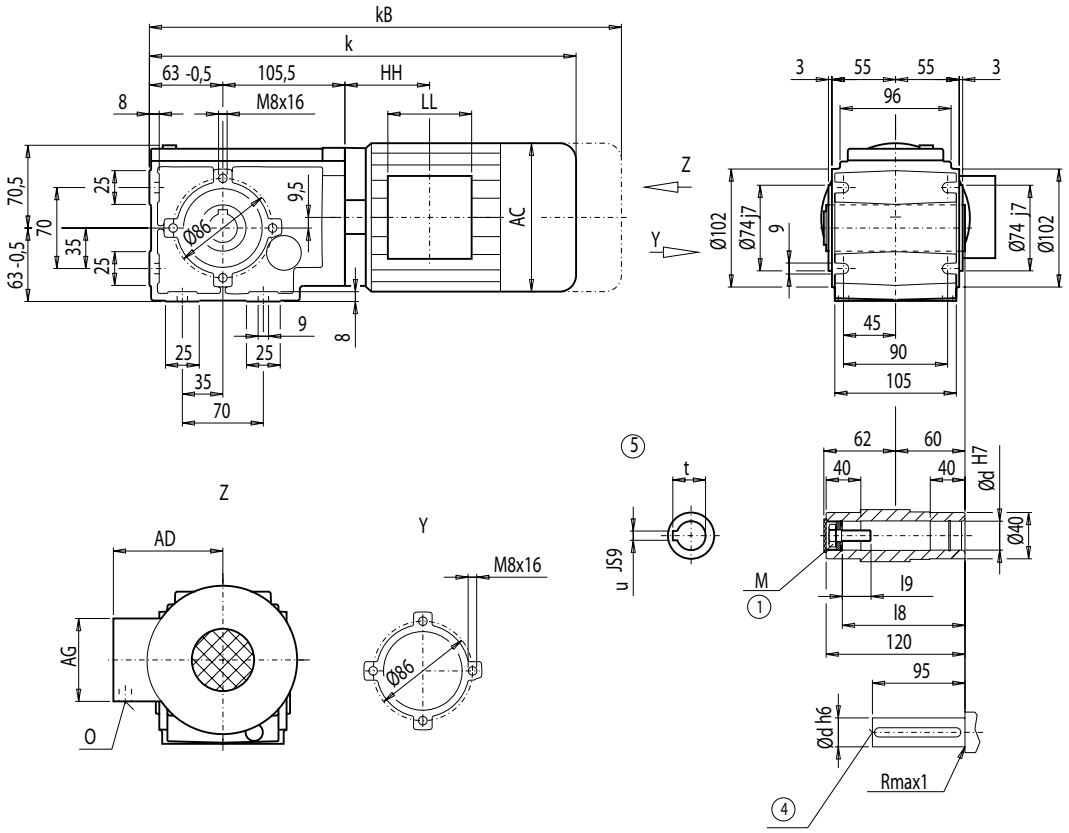
④ DIN 332

⑤ Feather key / keyway DIN 6885

## Dimensions

### Gearbox CA/CAZ28, housing-flange-mounted design (C-type)

*CA012*
*CAZ012*




| d | l9 | l8 | M | t | u |
|---|---|---|---|---|---|
| **20** *) | 23.4 | 106 | M6 | 22.8 | 6 |
| **25** | 27.6 | 105 | M10 | 28.3 | 8 |

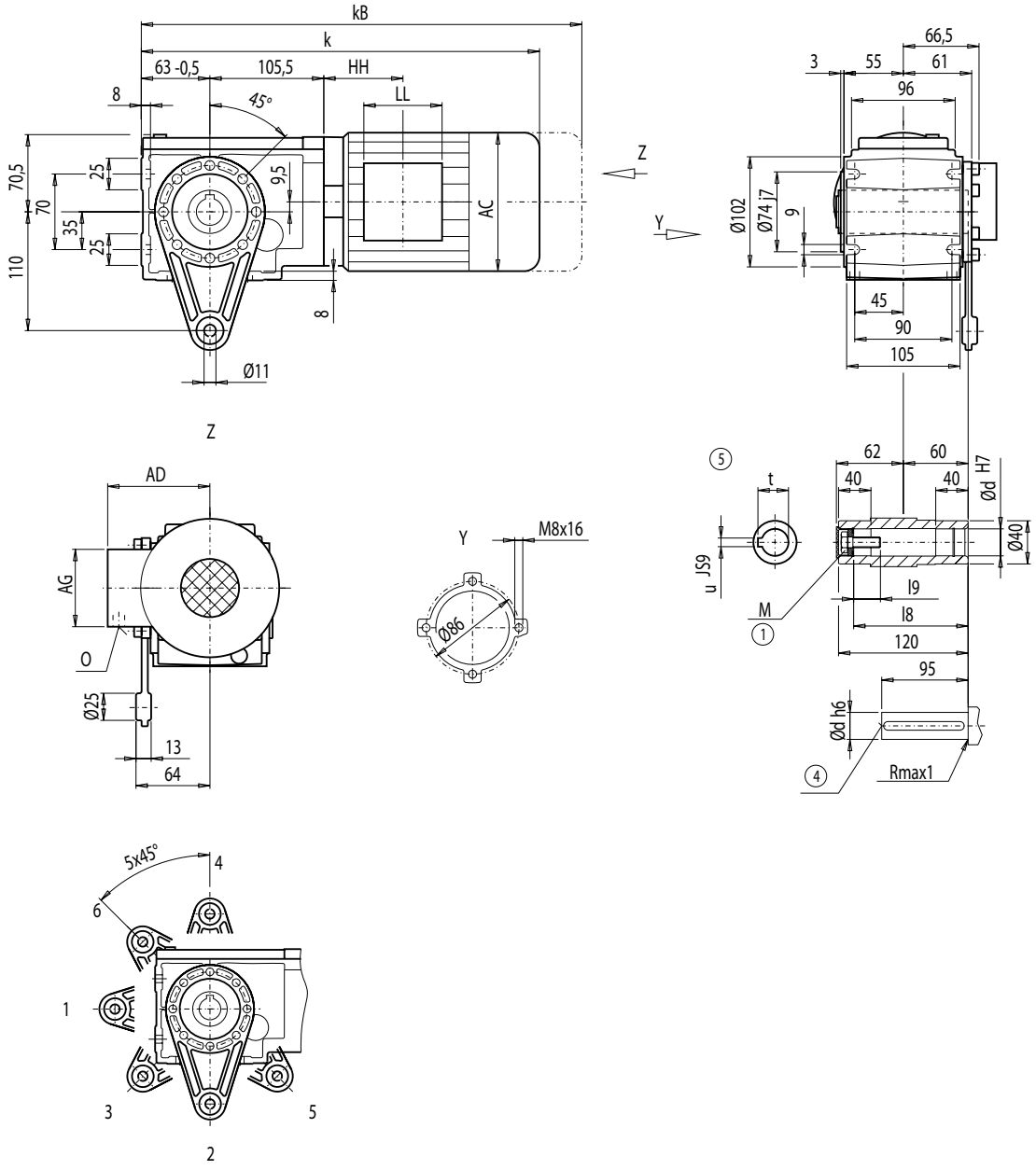
*) Preferred series

| Motor | CA.28 k | kB | AC | AD | AG | LL | HH | O | Weight CA.28 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 353 | 408 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 9 |
| LA71Z | 372 | 427 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 10 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Gearbox CAD28, shaft-mounted design with torque arm

*CAD012*




| d | l9 | l8 | M | t | u |
|---|---|---|---|---|---|
| **20** *) | 23.4 | 106 | M6 | 22.8 | 6 |
| **25** | 27.6 | 105 | M10 | 28.3 | 8 |

*) Preferred series

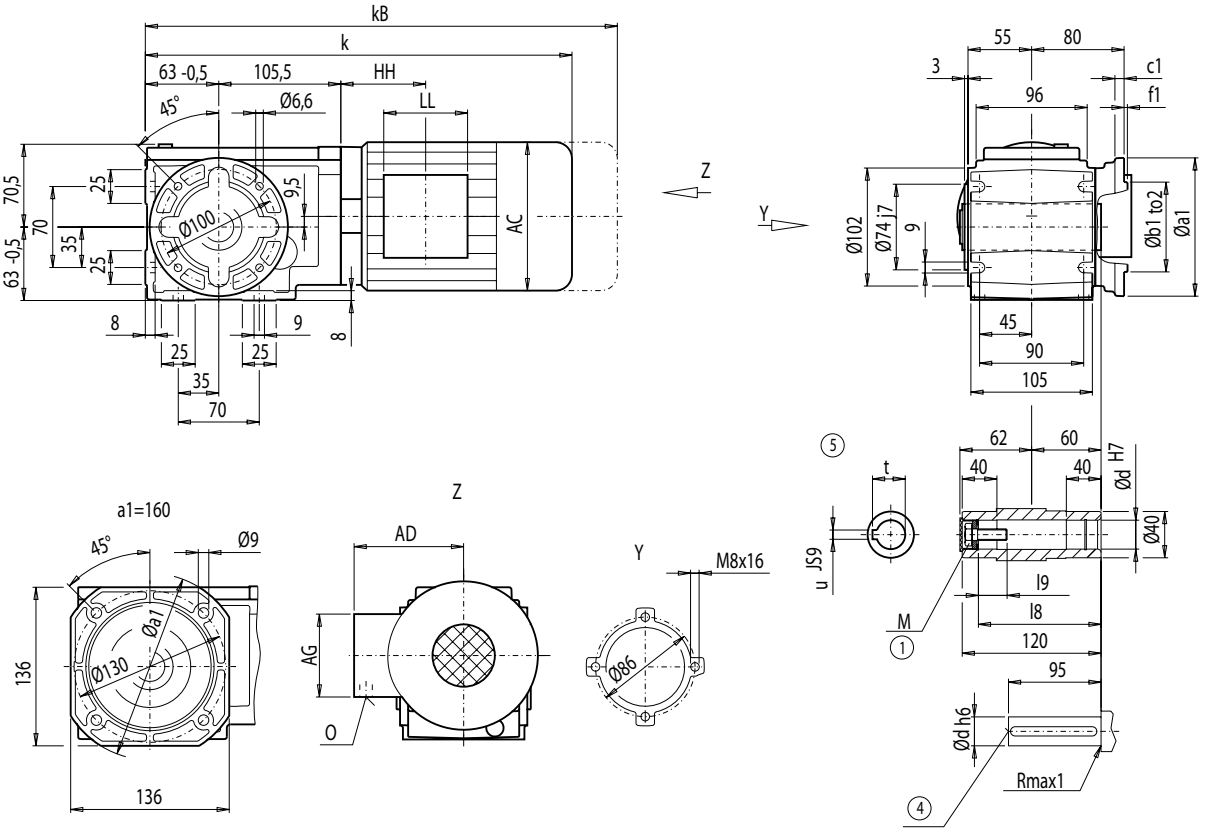
| Motor | CAD28 k | kB | AC | AD | AG | LL | HH | O | Weight CAD28 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 353 | 408 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 10 |
| LA71Z | 372 | 427 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 11 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Dimensions

### Gearbox CAF28, shaft-mounted design with flange

*CAF012*




| Flange | a1 | b1 | to2 | c1 | f1 | d | M | l9 | l8 | t | u |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **A120** | 120 | 80 | j6 | 8 | 3.0 | 20 *) | M6 | 23.4 | 106 | 22.8 | 6 |
| | | | | | | 25 | M10 | 27.6 | 105 | 28.3 | 8 |
| **A160** | 160 | 110 | j6 | 9 | 3.5 | 20 *) | M6 | 23.4 | 106 | 22.8 | 6 |
| | | | | | | 25 | M10 | 27.6 | 105 | 28.3 | 8 |

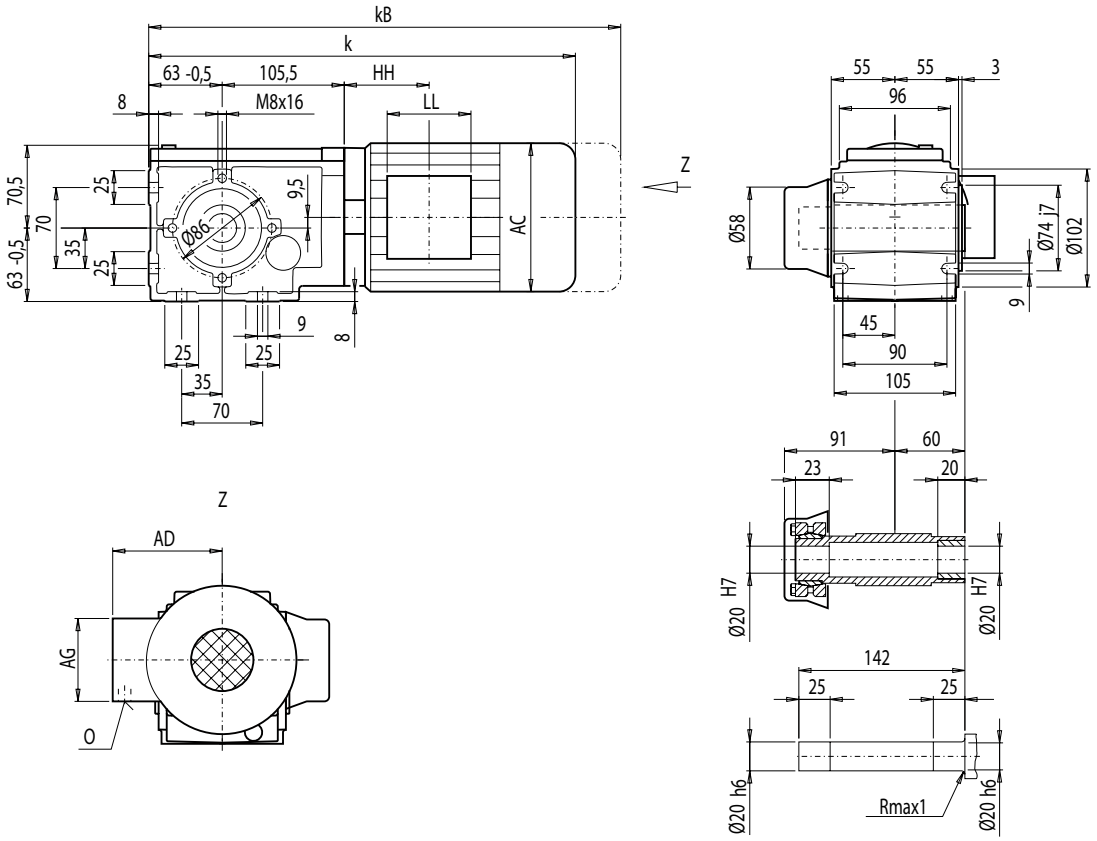
*) Preferred series

| | CAF28 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAF28** |
| LA71 | 353 | 408 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 11 |
| LA71Z | 372 | 427 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 12 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Gearbox CAS/CAZS28, shaft-mounted design with housing flange (C-type) and shrink disk

*CAS012*
*CAZS012*

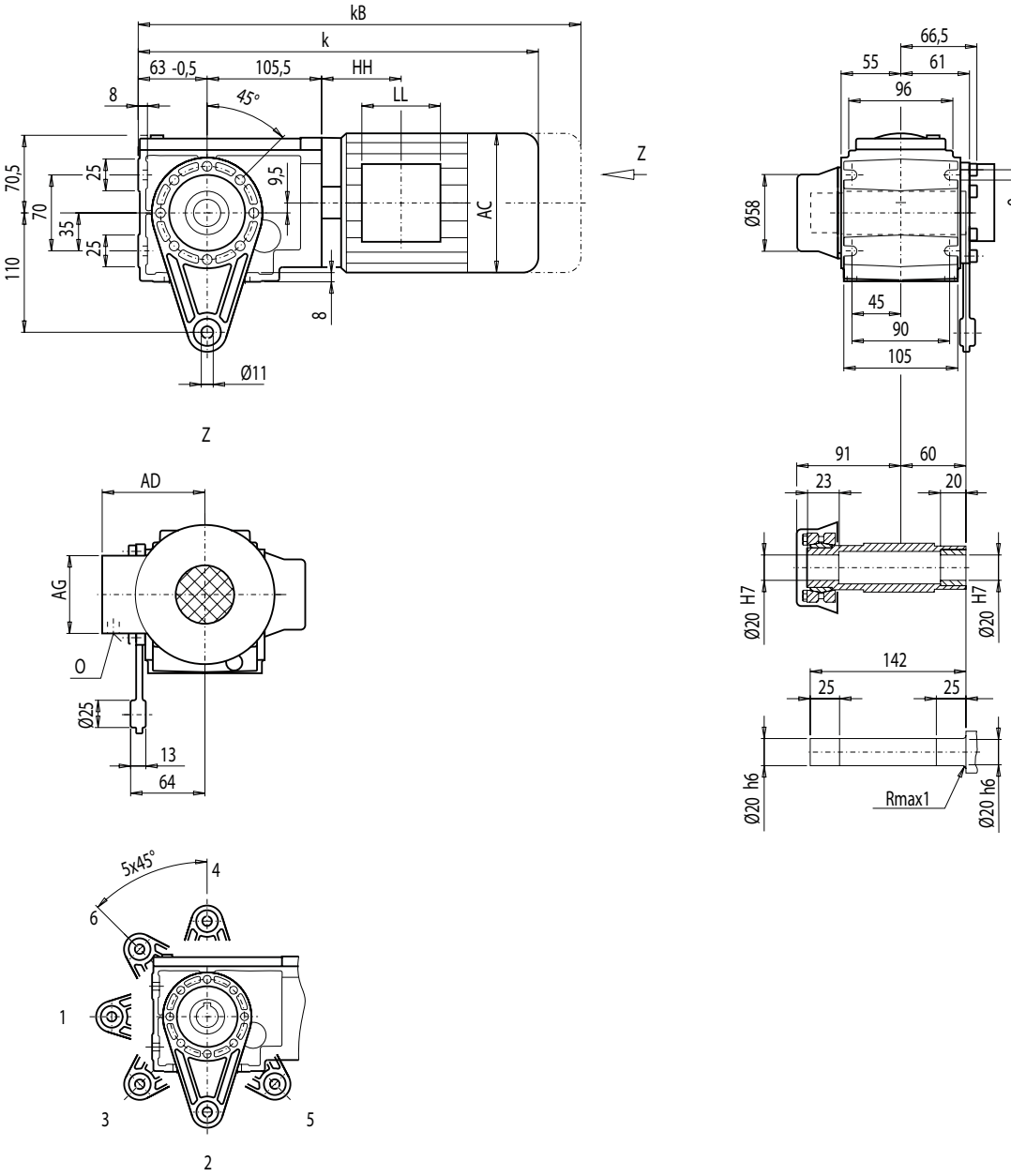



| Motor | CA.S28 k | kB | AC | AD | AG | LL | HH | O | Weight CA.S28 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 353 | 408 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 9 |
| LA71Z | 372 | 427 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 10 |

## Dimensions

### Gearbox CADS28, shaft-mounted design with torque arm and shrink disk

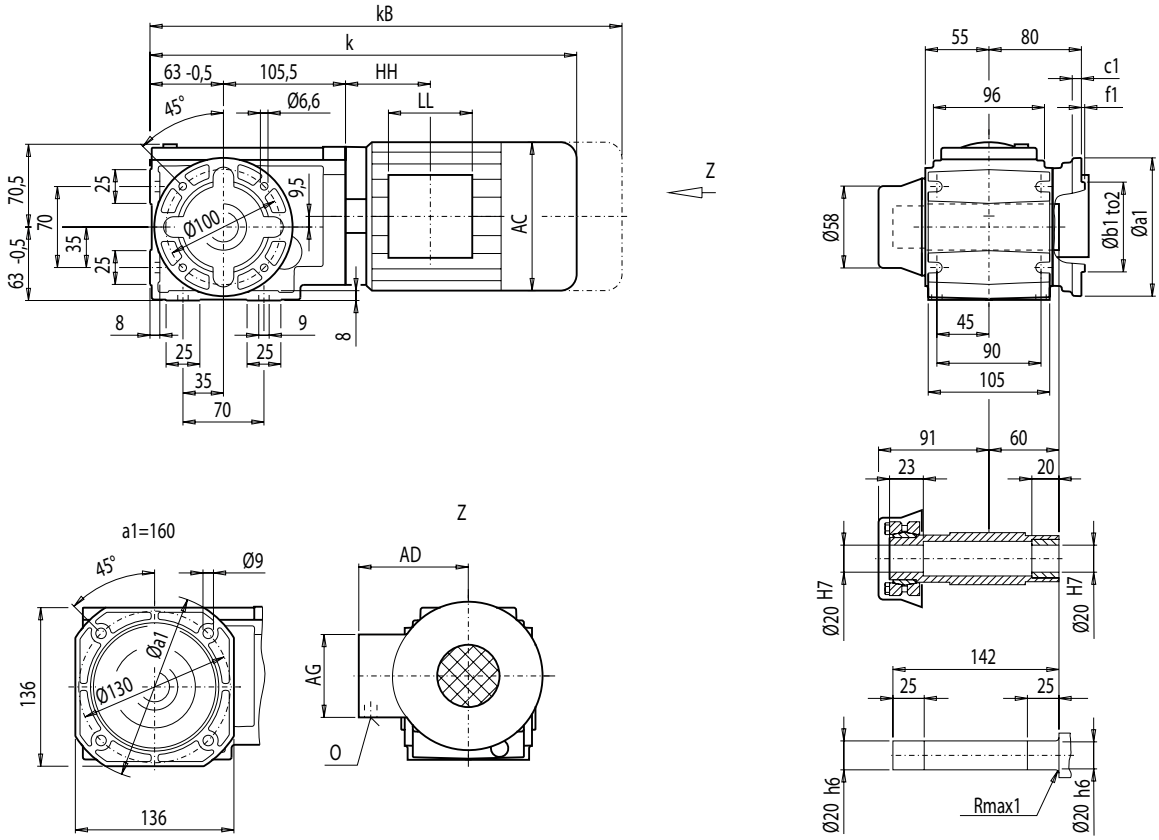
*CADS012*




| Motor | CADS28 k | kB | AC | AD | AG | LL | HH | O | Weight CADS28 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 353 | 408 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 10 |
| LA71Z | 372 | 427 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 11 |

## Gearbox CAFS28, shaft-mounted design with flange and shrink disk

*CAFS012*



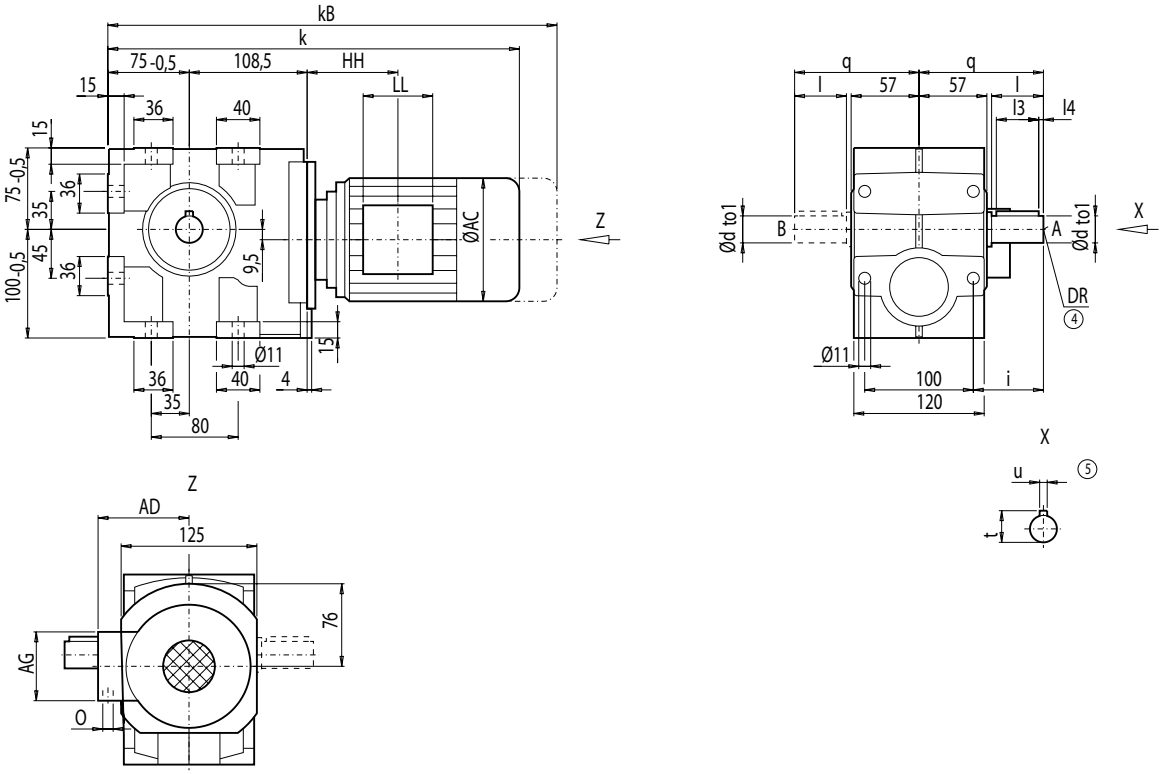

| Flange | a1 | b1 | to2 | c1 | f1 |
|---|---|---|---|---|---|
| **A120** | 120 | 80 | j6 | 8 | 3.0 |
| **A160** | 160 | 110 | j6 | 9 | 3.5 |

| | CAFS28 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAFS28** |
| LA71 | 353 | 408 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 11 |
| LA71Z | 372 | 427 | 139 | 146 | 90 | 90 | 40.5 | M20x1.5/M25x1.5 | 12 |

## Dimensions

### Gearbox C38, foot- and housing-flange-mounted designs (C-type)

*C012*




| d | to1 | l | l3 | l4 | t | u | i | q | DR |
|---|---|---|---|---|---|---|---|---|---|
| **25** *) | k6 | 50 | 40 | 5 | 28 | 8 | 60 | 110 | M10x22 |
| **35** | k6 | 70 | 56 | 5 | 38 | 10 | 80 | 130 | M12x28 |

*) Preferred series

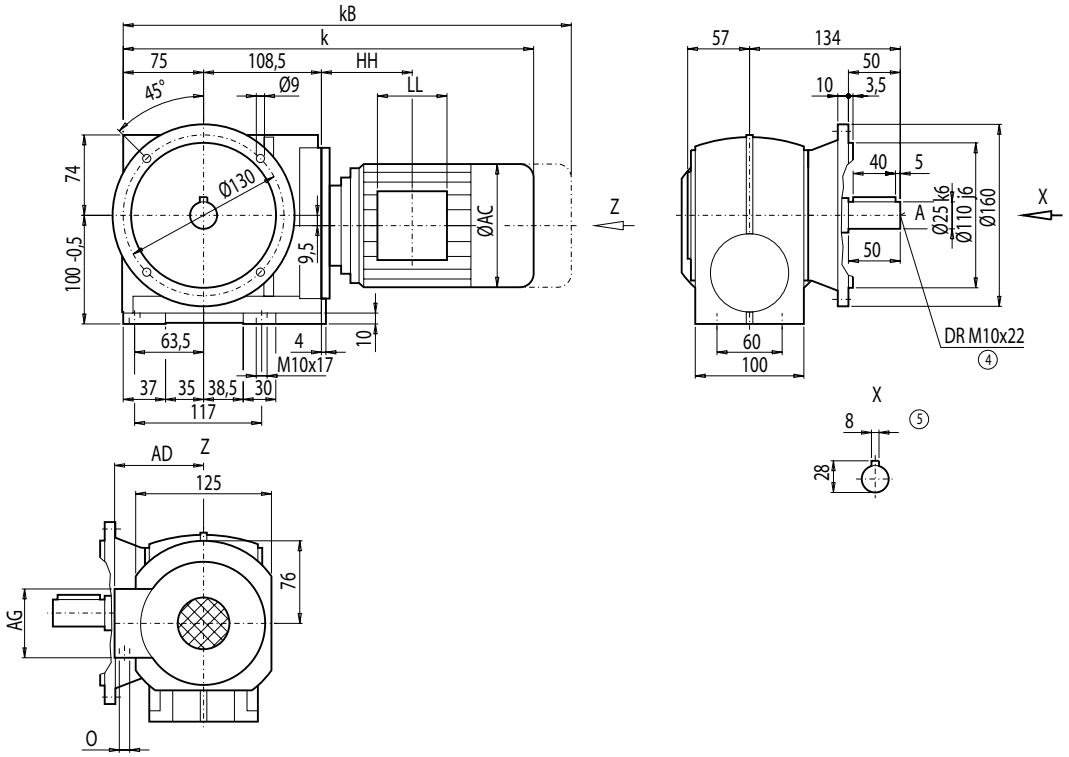
| Motor | C38 k | kB | AC | AD | AG | LL | HH | O | Weight C38 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 21 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 21 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 26 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 31 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 31 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 40 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 50 |

④ DIN 332

⑤ Feather key / keyway DIN 6885

## Gearbox CF38, flange-mounted design (A-type)

*CF012*




| Motor | CF38 k | kB | AC | AD | AG | LL | HH | O | Weight CF38 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 25 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 25 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 30 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 34 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 34 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 44 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 54 |

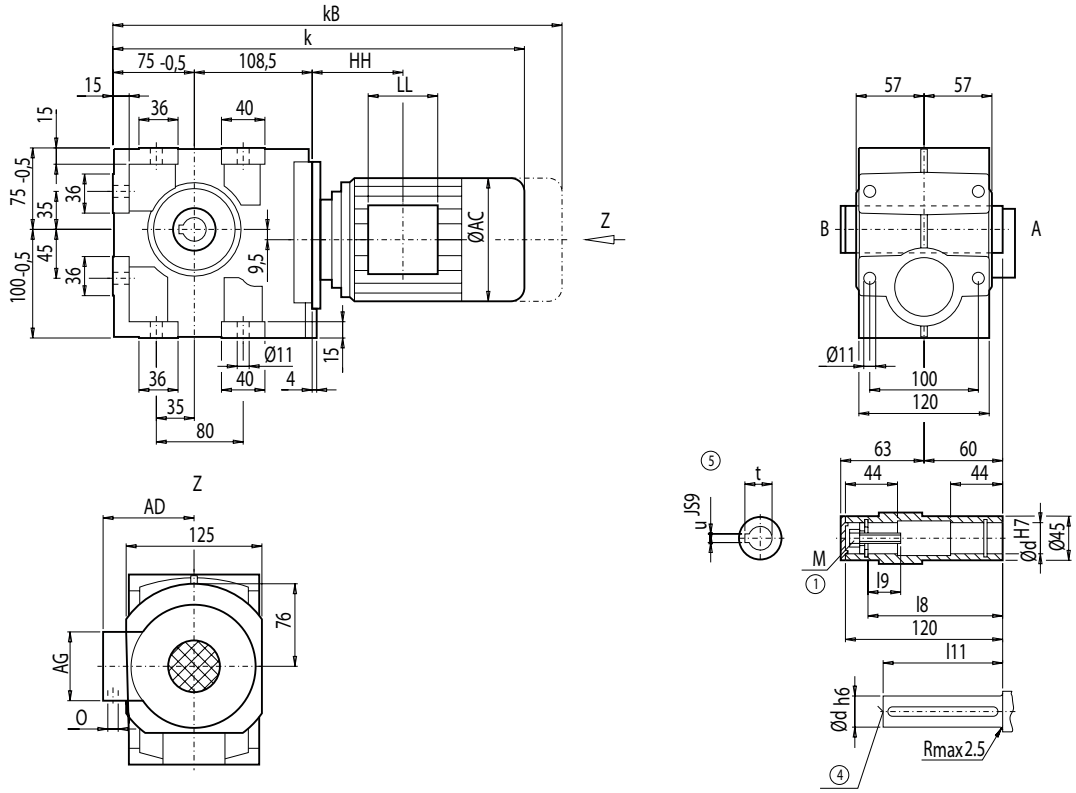
④ DIN 332

⑤ Feather key / keyway DIN 6885

## Dimensions

### Gearbox CA38, shaft-mounted design

*CA012*




| d | l9 | l8 | l11 | M | t | u |
|---|---|---|---|---|---|---|
| **25** *) | 17 | 105 | 100 | M10 | 28.3 | 8 |
| **30** | 31 | 102 | 90 | M10 | 33.3 | 8 |

*) Preferred series

| Motor | CA38 k | kB | AC | AD | AG | LL | HH | O | Weight CA38 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 20 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 20 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 25 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 30 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 30 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 39 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 49 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Gearbox CAD38, shaft-mounted design with torque arm

*CAD012*

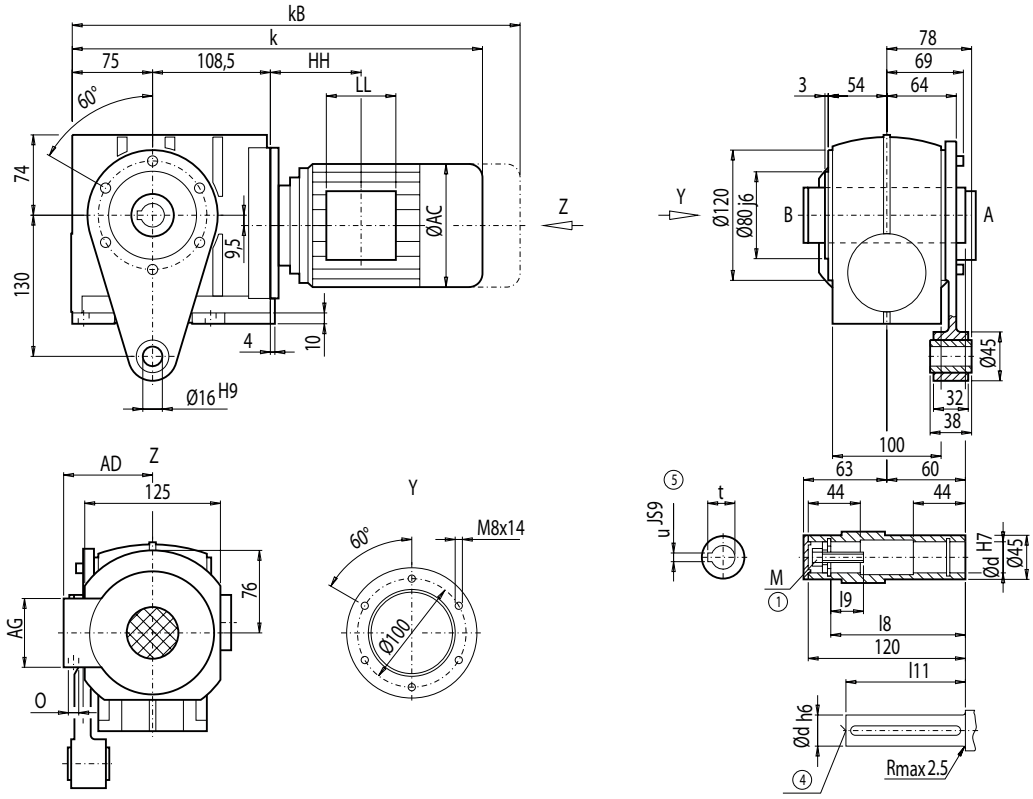



Fig.1

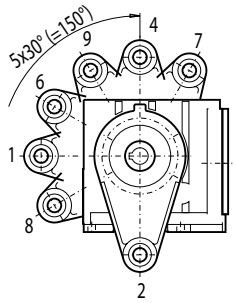
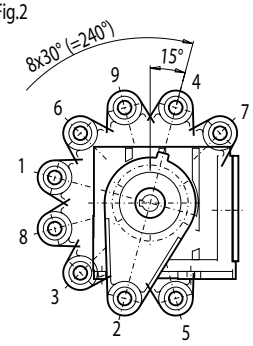



Fig.2




| d | l9 | l8 | l11 | M | t | u |
|---|---|---|---|---|---|---|
| **25** *) | 17 | 105 | 100 | M10 | 28.3 | 8 |
| **30** | 31 | 102 | 90 | M10 | 33.3 | 8 |

*) Preferred series

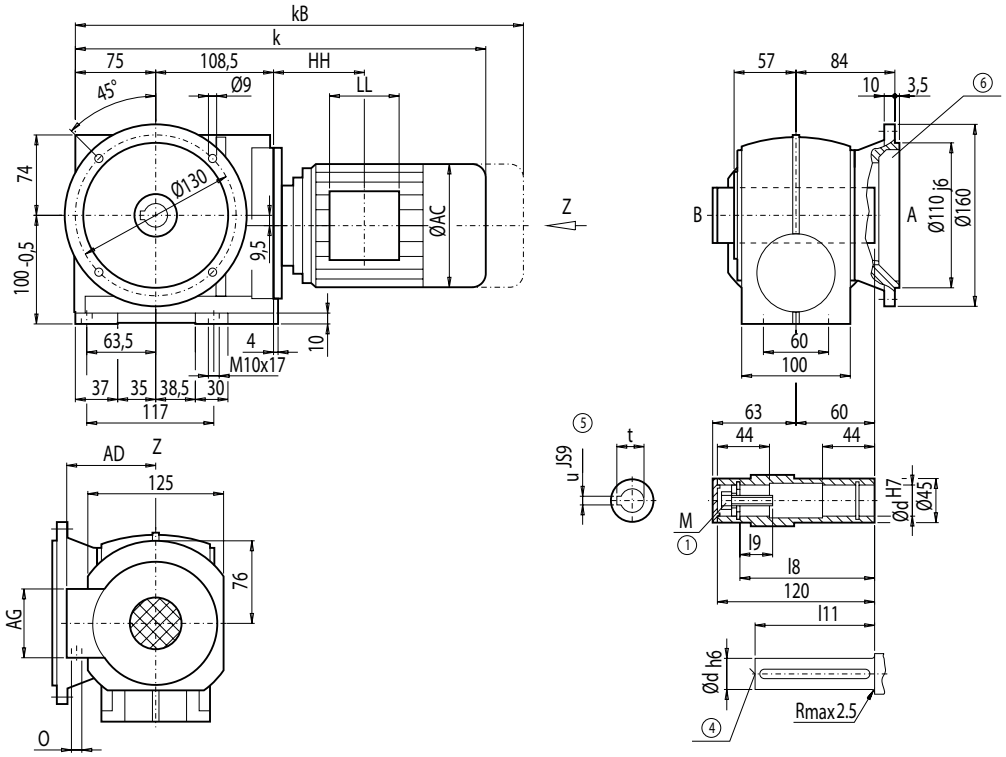
| | CAD38 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAD38** |
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 23 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 23 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 28 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 32 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 32 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 41 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 52 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Dimensions

### Gearbox CAF38, shaft-mounted design with flange

*CAF012*




| d | l9 | l8 | l11 | M | t | u |
|---|---|---|---|---|---|---|
| **25** *) | 17 | 105 | 100 | M10 | 28.3 | 8 |
| **30** | 31 | 102 | 90 | M10 | 33.3 | 8 |

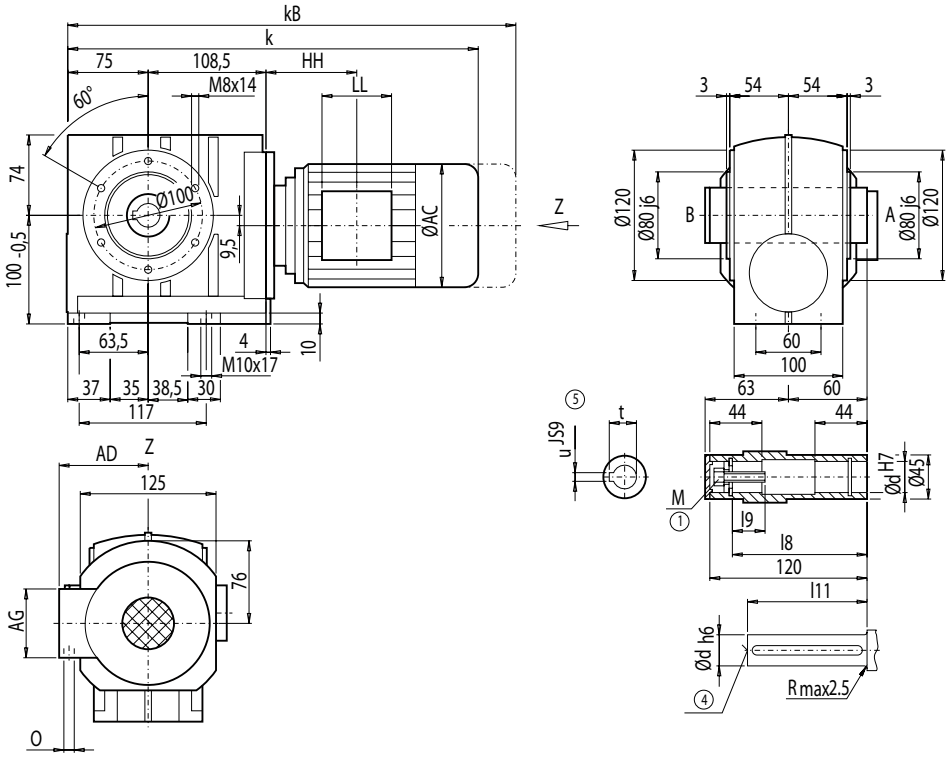
*) Preferred series

| Motor | CAF38 k | kB | AC | AD | AG | LL | HH | O | Weight CAF38 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 24 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 24 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 29 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 33 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 33 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 42 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 53 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014 ⑥ For note, see page 5/109

## Gearbox CAZ38, shaft-mounted design with housing flange (C-type)

*CAZ012*




| d | l9 | l8 | l11 | M | t | u |
|---|---|---|---|---|---|---|
| **25** *) | 17 | 105 | 100 | M10 | 28.3 | 8 |
| **30** | 31 | 102 | 90 | M10 | 33.3 | 8 |

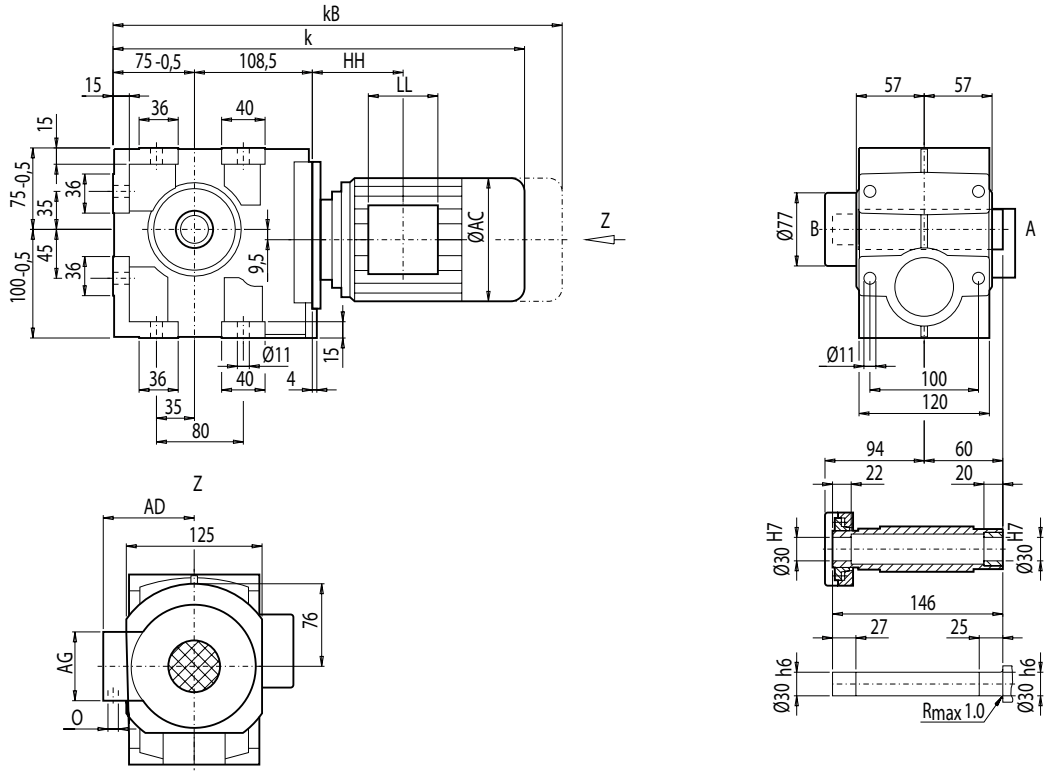
*) Preferred series

| Motor | CAZ38 k | kB | AC | AD | AG | LL | HH | O | Weight CAZ38 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 22 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 22 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 27 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 32 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 32 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 41 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 51 |

## Dimensions

### Gearbox CAS38, shaft-mounted design with shrink disk

*CAS012*




| Motor | CAS38 k | kB | AC | AD | AG | LL | HH | O | Weight CAS38 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 21 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 21 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 25 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 30 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 30 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 39 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 50 |

## Gearbox CADS38, shaft-mounted design with torque arm and shrink disk

*CADS012*

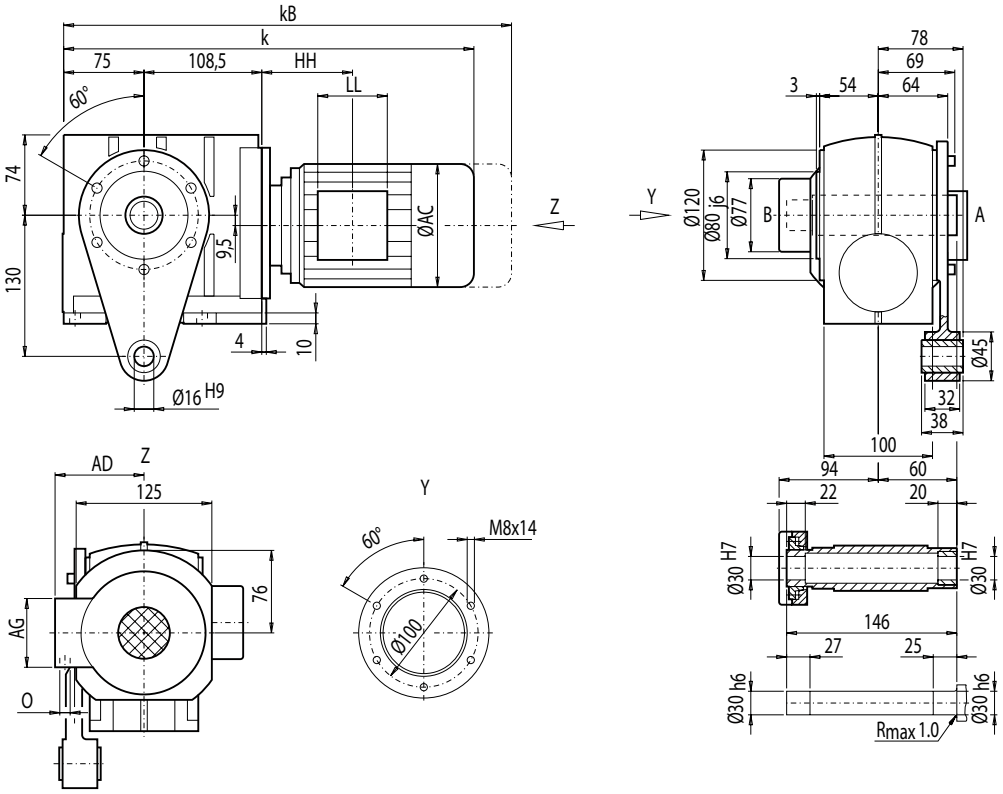



Fig.1

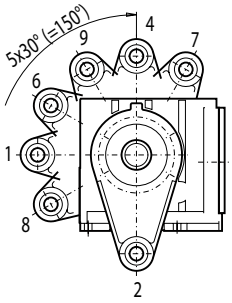
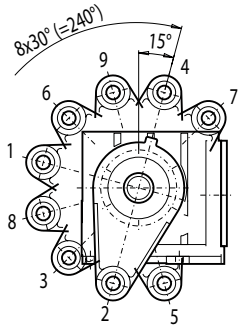



Fig.2

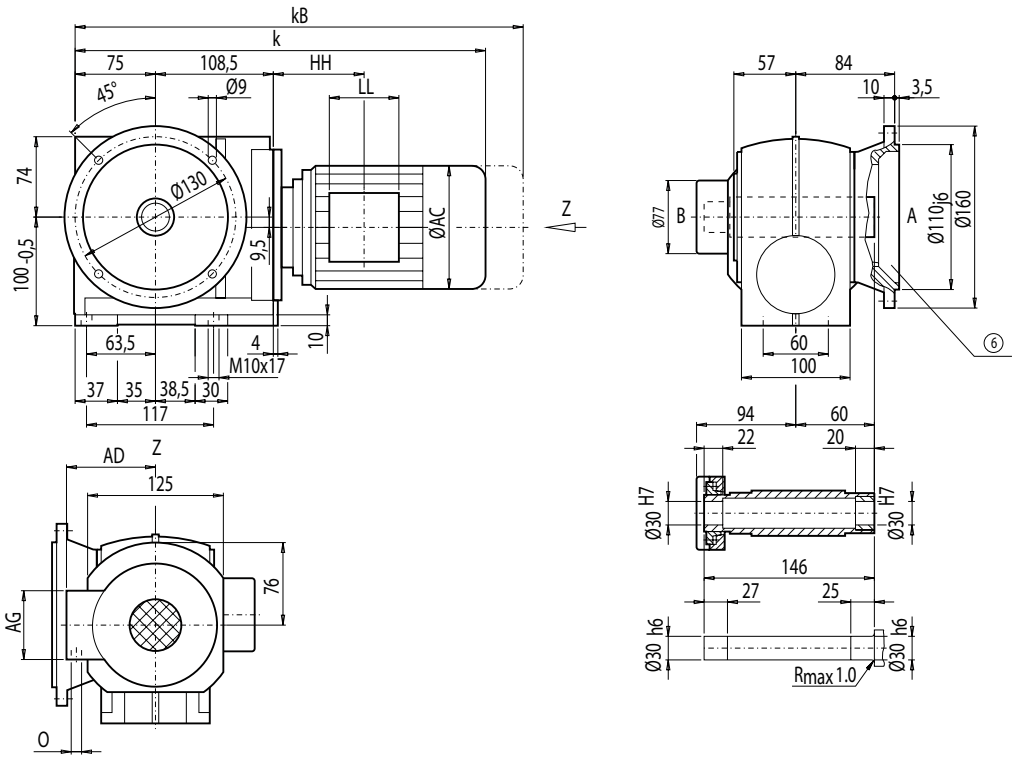



| | CADS38 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| Motor | k | kB | AC | AD | AG | LL | HH | O | CADS38 |
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 23 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 23 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 28 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 33 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 33 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 42 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 52 |

## Dimensions

### Gearbox CAFS38, shaft-mounted design with flange and shrink disk

*CAFS012*

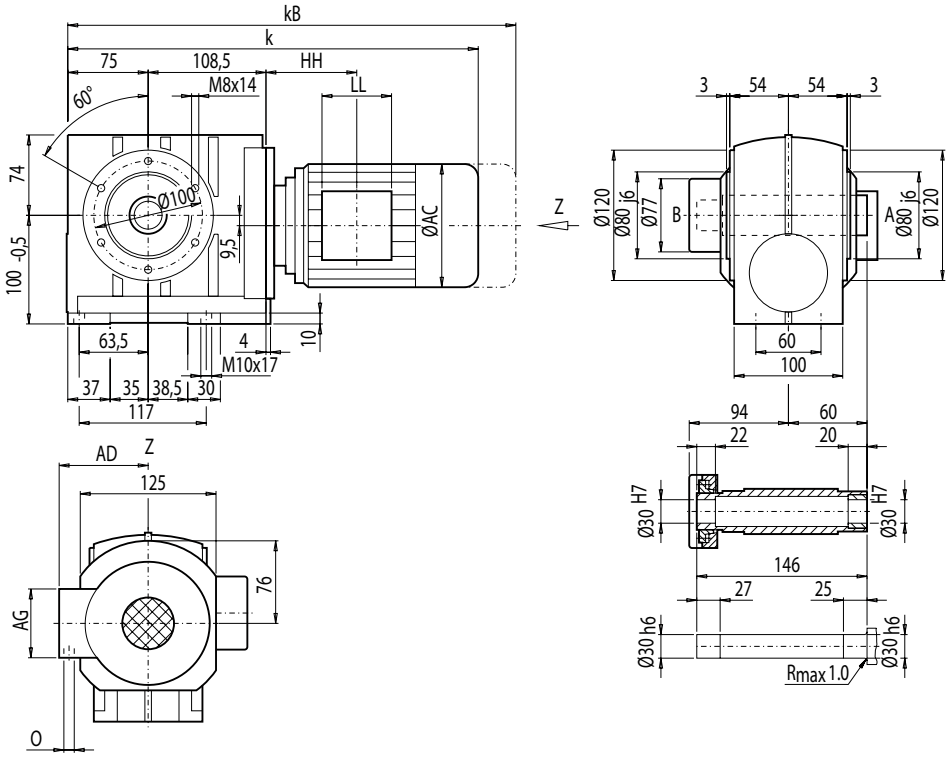



| Motor | CAFS38 k | kB | AC | AD | AG | LL | HH | O | Weight CAFS38 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 24 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 24 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 29 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 34 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 34 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 43 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 53 |

⑥ For note, see page 5/109

## Gearbox CAZS38, shaft-mounted design with housing flange (C-type) and shrink disk

*CAZS012*

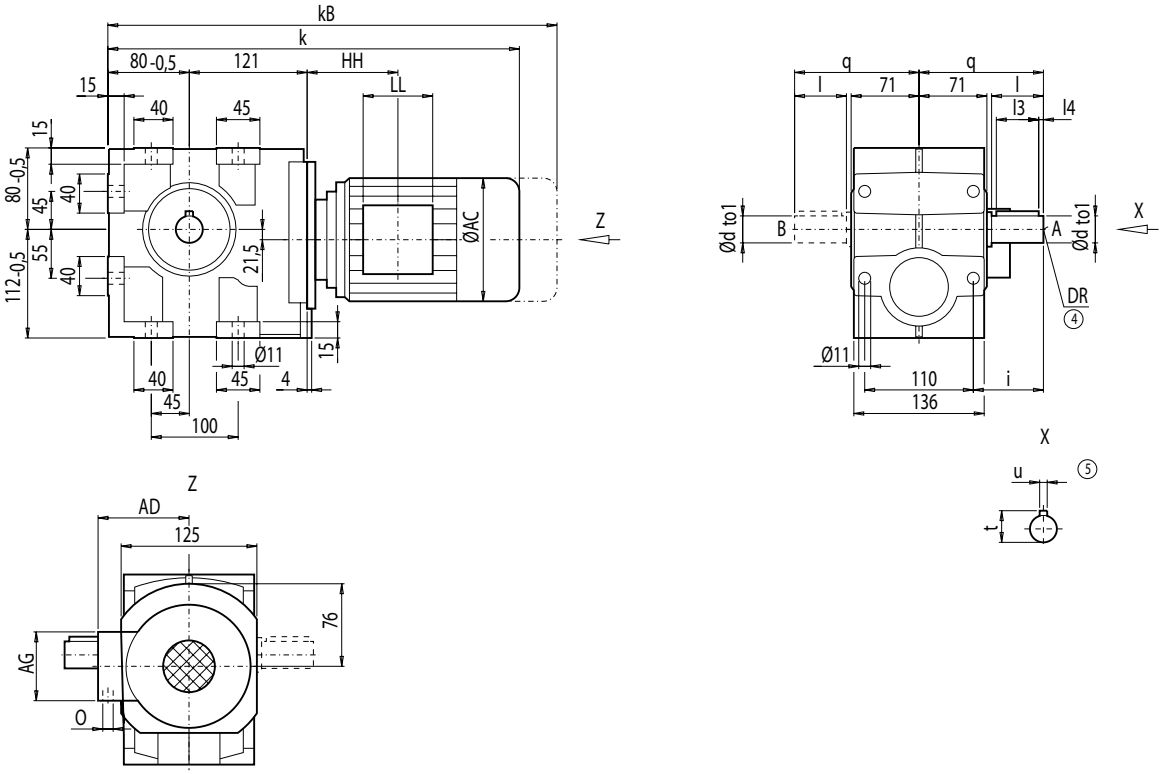



| Motor | CAZS38 k | kB | AC | AD | AG | LL | HH | O | Weight CAZS38 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 442.0 | 497.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 23 |
| LA71Z | 461.0 | 516.0 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 23 |
| LA80 | 479.0 | 542.5 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 27 |
| LA90S | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 32 |
| LA90L | 510.0 | 581.0 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 32 |
| LA100L | 556.0 | 637.0 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 41 |
| LA112M | 585.5 | 666.5 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 52 |

## Dimensions

### Gearbox C48, foot- and housing-flange-mounted designs (C-type)

*C012*




| d | to1 | l | l3 | l4 | t | u | i | q | DR |
|---|---|---|---|---|---|---|---|---|---|
| **30** *) | k6 | 60 | 50 | 3.5 | 33 | 8 | 80 | 135 | M10x22 |
| **40** | k6 | 80 | 70 | 5.0 | 43 | 12 | 100 | 155 | M16x36 |

*) Preferred series

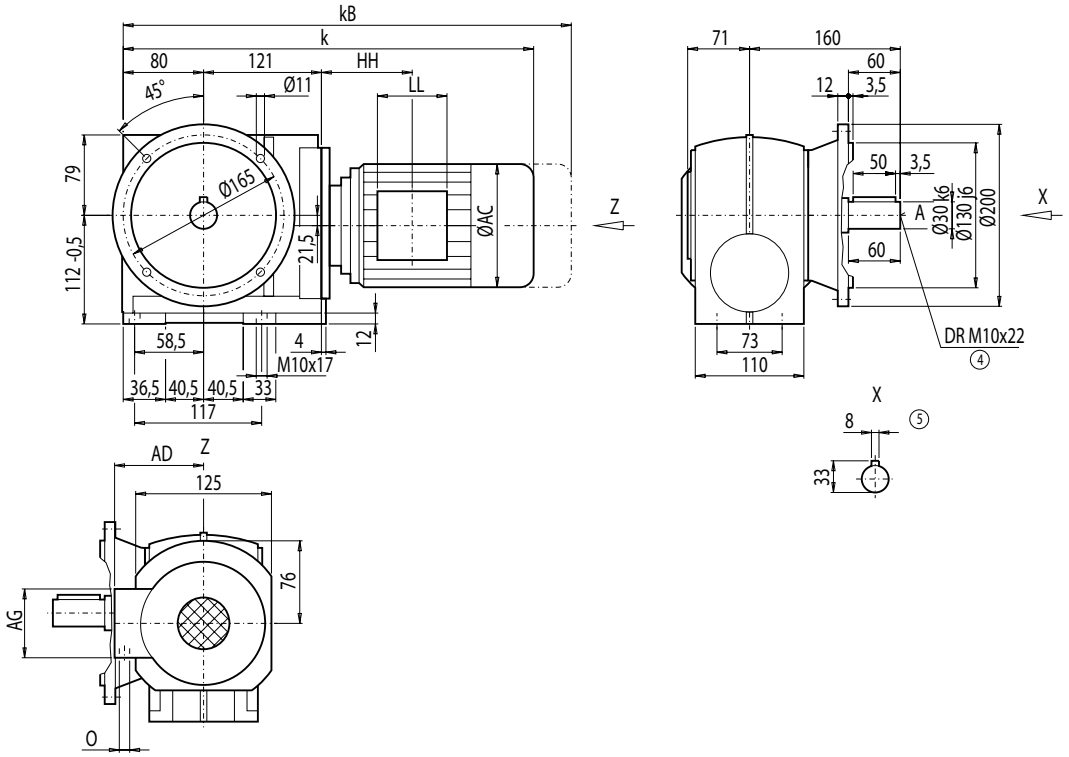
| | C48 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **C48** |
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 30 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 30 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 34 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 39 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 39 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 48 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 59 |

④ DIN 332

⑤ Feather key / keyway DIN 6885

## Gearbox CF48, flange-mounted design (A-type)

*CF012*




| Motor | CF48 k | kB | AC | AD | AG | LL | HH | O | Weight CF48 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 34 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 34 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 39 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 43 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 43 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 52 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 63 |

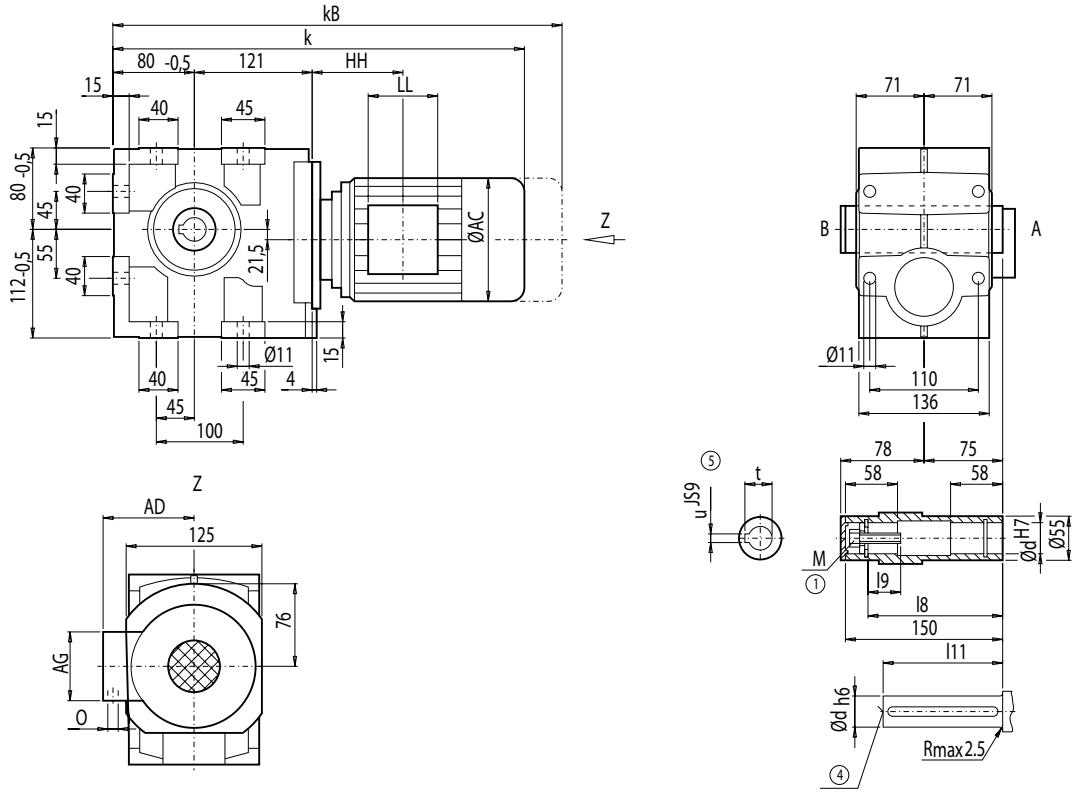
④ DIN 332

⑤ Feather key / keyway DIN 6885

## Dimensions

### Gearbox CA48, shaft-mounted design

*CA012*




| d | l9 | l8 | l11 | M | t | u |
|---|---|---|---|---|---|---|
| **30** *) | 17 | 132 | 127 | M10 | 33.3 | 8 |
| **35** | 40 | 128 | 115 | M12 | 38.3 | 10 |
| **40** | 48 | 128 | 115 | M16 | 43.3 | 12 |

*) Preferred series

| | CA48 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| Motor | k | kB | AC | AD | AG | LL | HH | O | CA48 |
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 28 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 28 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 33 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 38 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 38 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 47 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 57 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Gearbox CAD48, shaft-mounted design with torque arm

*CAD012*

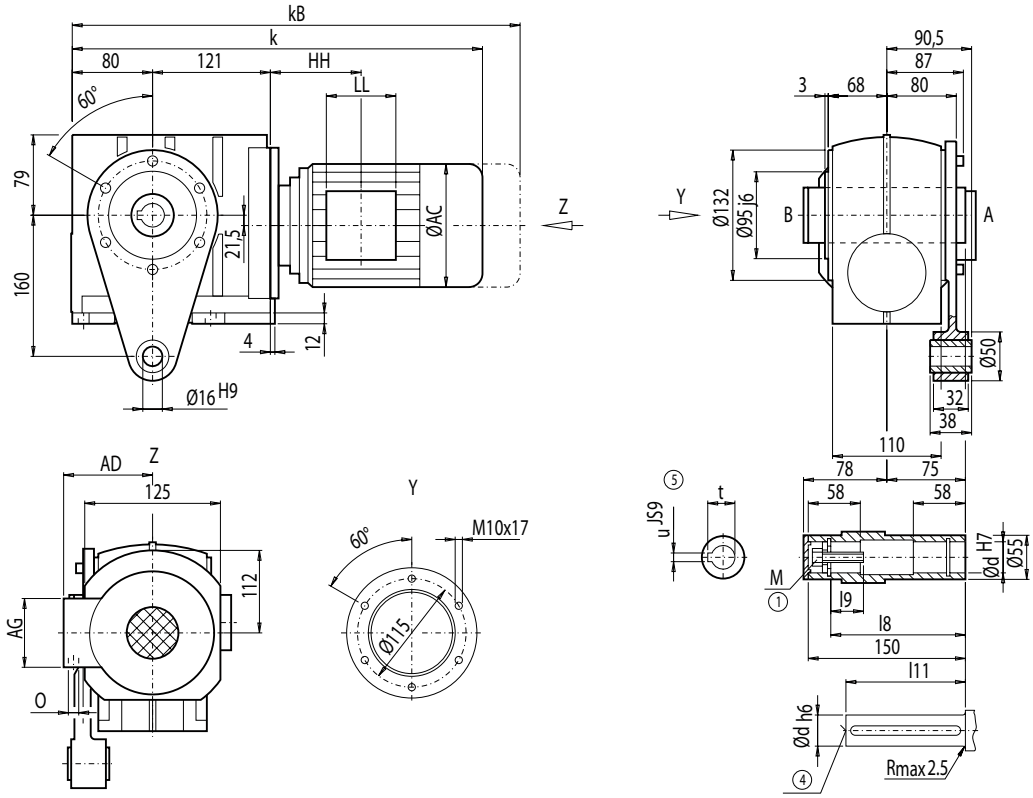



Fig.1

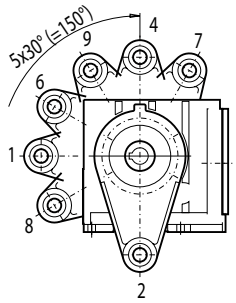
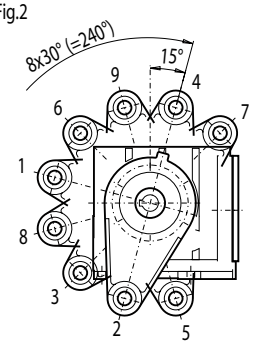



Fig.2




| d | l9 | l8 | l11 | M | t | u |
|---|---|---|---|---|---|---|
| **30** *) | 17 | 132 | 127 | M10 | 33.3 | 8 |
| **35** | 40 | 128 | 115 | M12 | 38.3 | 10 |
| **40** | 48 | 128 | 115 | M16 | 43.3 | 12 |

*) Preferred series

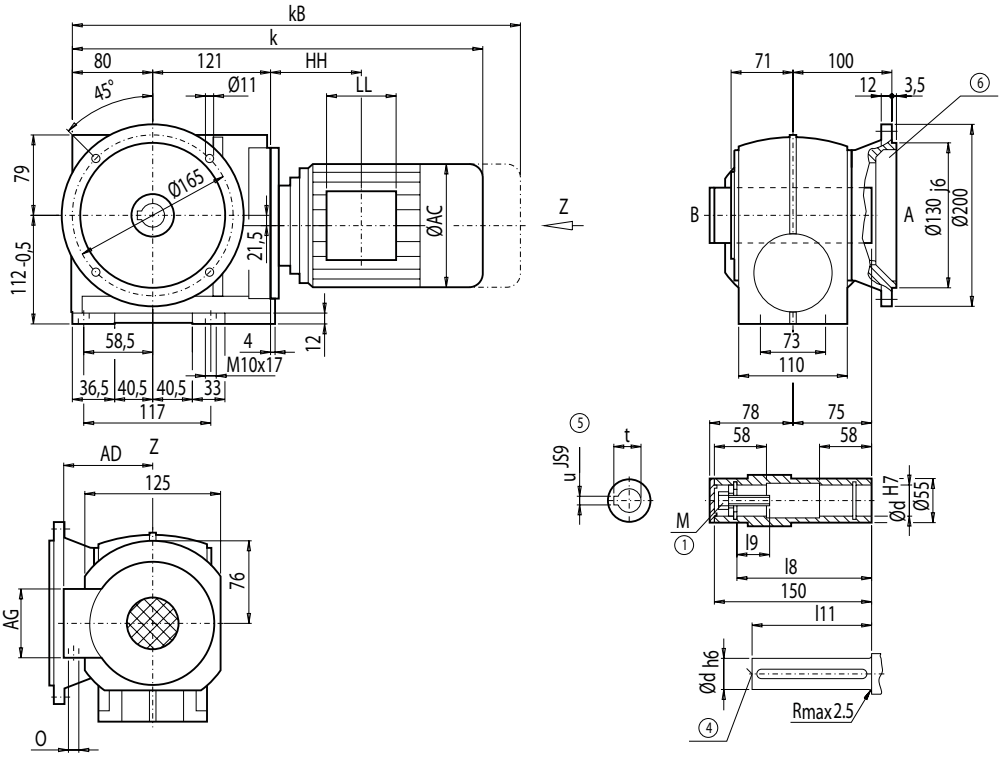
| | CAD48 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAD48** |
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 31 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 31 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 36 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 40 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 40 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 49 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 60 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Dimensions

### Gearbox CAF48, shaft-mounted design with flange

*CAF012*




| d | l9 | l8 | l11 | M | t | u |
|---|---|---|---|---|---|---|
| **30** *) | 17 | 132 | 127 | M10 | 33.3 | 8 |
| **35** | 40 | 128 | 115 | M12 | 38.3 | 10 |
| **40** | 48 | 128 | 115 | M16 | 43.3 | 12 |

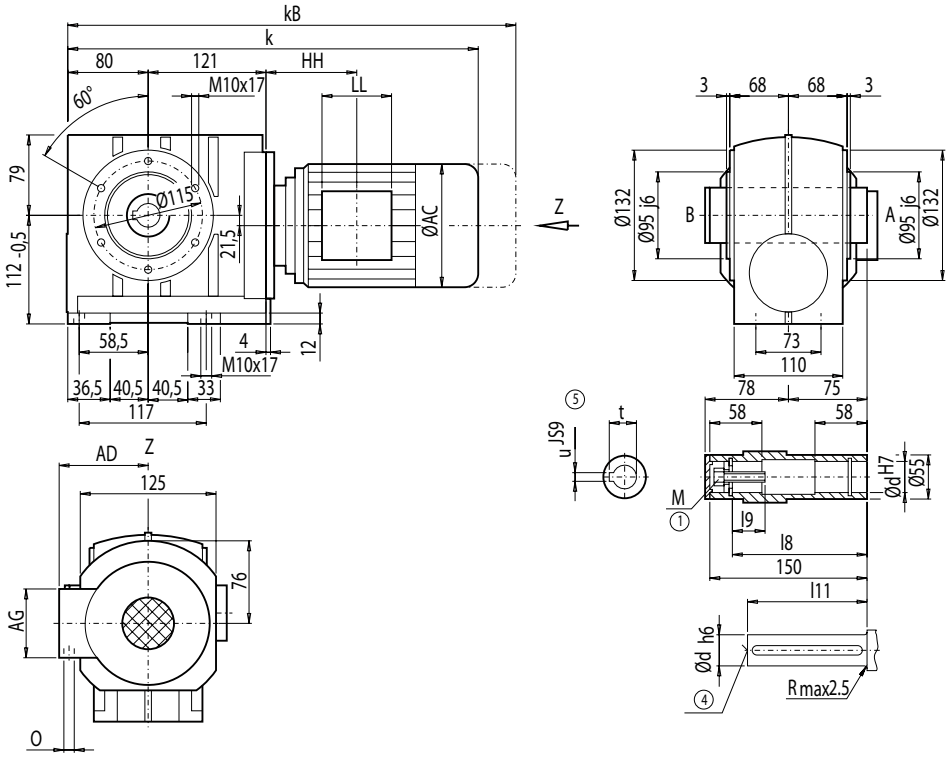
*) Preferred series

| | CAF48 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAF48** |
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 32 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 32 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 37 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 42 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 42 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 51 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 61 |

① EN ISO 4014 ④ DIN 332 ⑤ Feather key / keyway DIN 6885 ⑥ For note, see page 5/109

## Gearbox CAZ48, shaft-mounted design with housing flange (C-type)

*CAZ012*




| d | l9 | l8 | l11 | M | t | u |
|---|---|---|---|---|---|---|
| **30** *) | 17 | 132 | 127 | M10 | 33.3 | 8 |
| **35** | 40 | 128 | 115 | M12 | 38.3 | 10 |
| **40** | 48 | 128 | 115 | M16 | 43.3 | 12 |

*) Preferred series

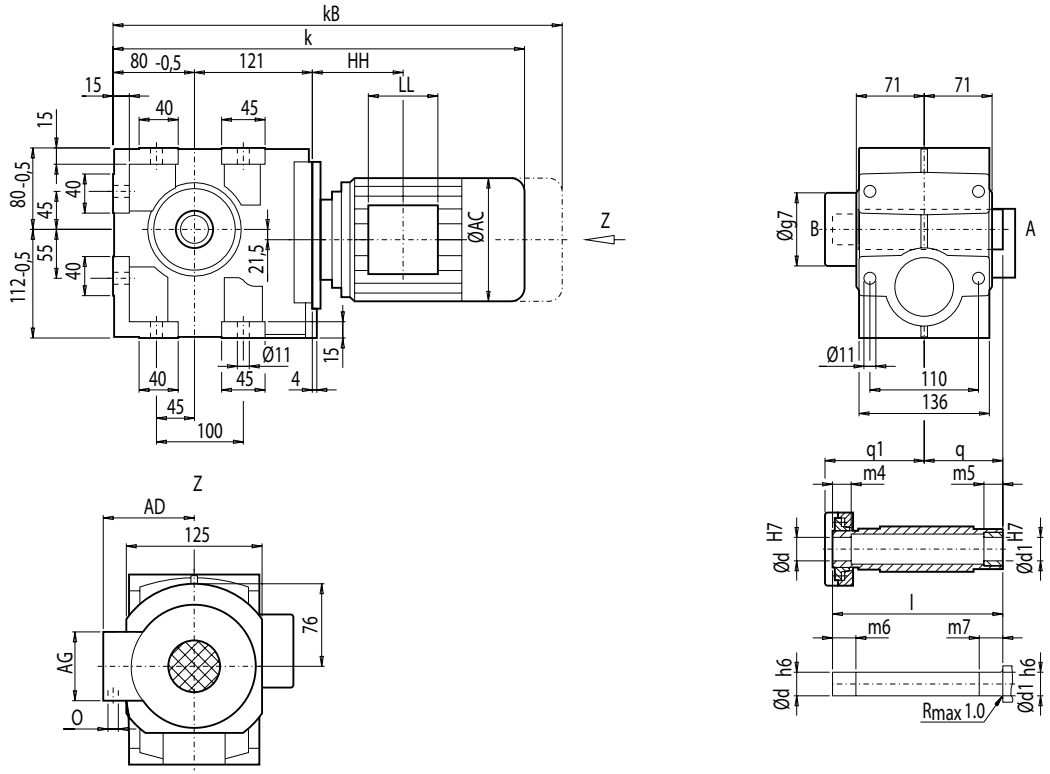
| | CAZ48 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| Motor | k | kB | AC | AD | AG | LL | HH | O | CAZ48 |
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 30 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 30 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 34 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 39 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 39 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 48 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 59 |

① EN ISO 4014 ④ DIN 332 ⑤ Feather key / keyway DIN 6885

## Dimensions

### Gearbox CAS48, shaft-mounted design with shrink disk

*CAS012*




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **35** *) | 35 | 177 | 32 | 20 | 37 | 25 | 109 | 75 | 93 |
| **40** | 40 | 177 | 25 | 20 | 30 | 25 | 109 | 75 | 93 |

*) Preferred series

| | CAS48 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAS48** |
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 29 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 29 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 34 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 38 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 38 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 47 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 58 |

## Gearbox CADS48, shaft-mounted design with torque arm and shrink disk

*CADS012*

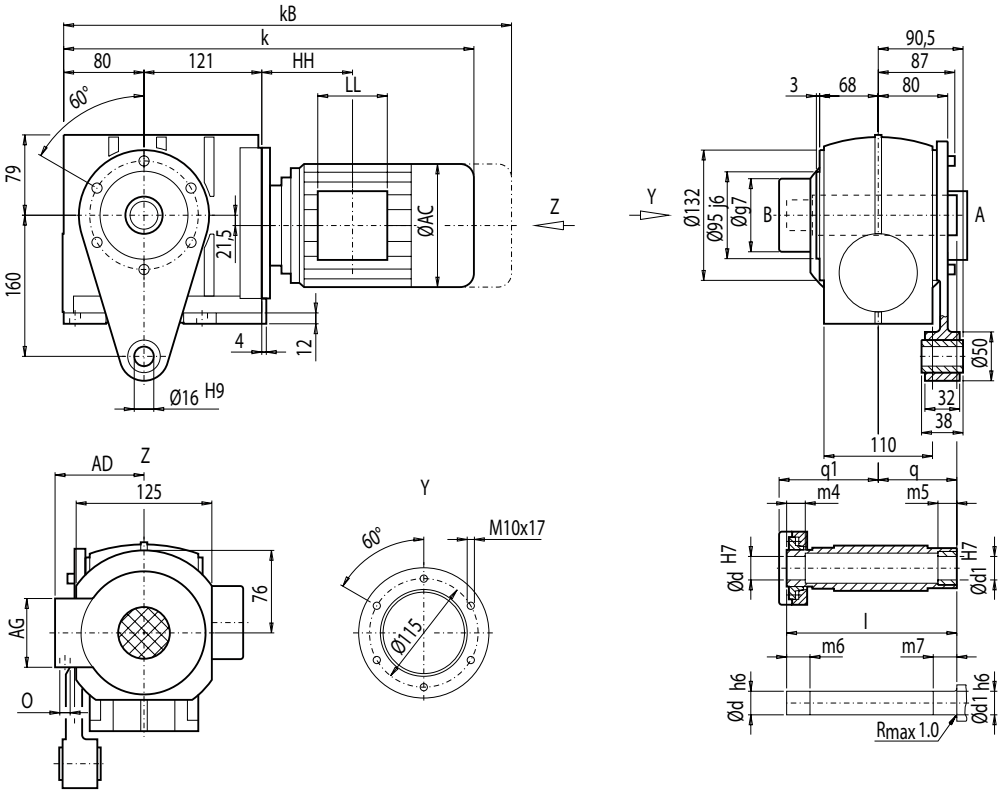



Fig.1

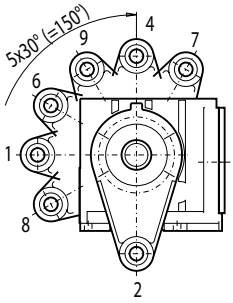
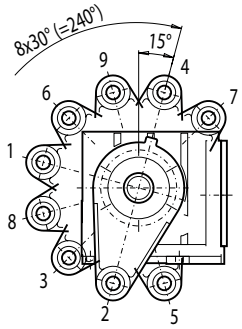



Fig.2




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **35** *) | 35 | 177 | 32 | 20 | 37 | 25 | 109 | 75 | 93 |
| **40** | 40 | 177 | 25 | 20 | 30 | 25 | 109 | 75 | 93 |

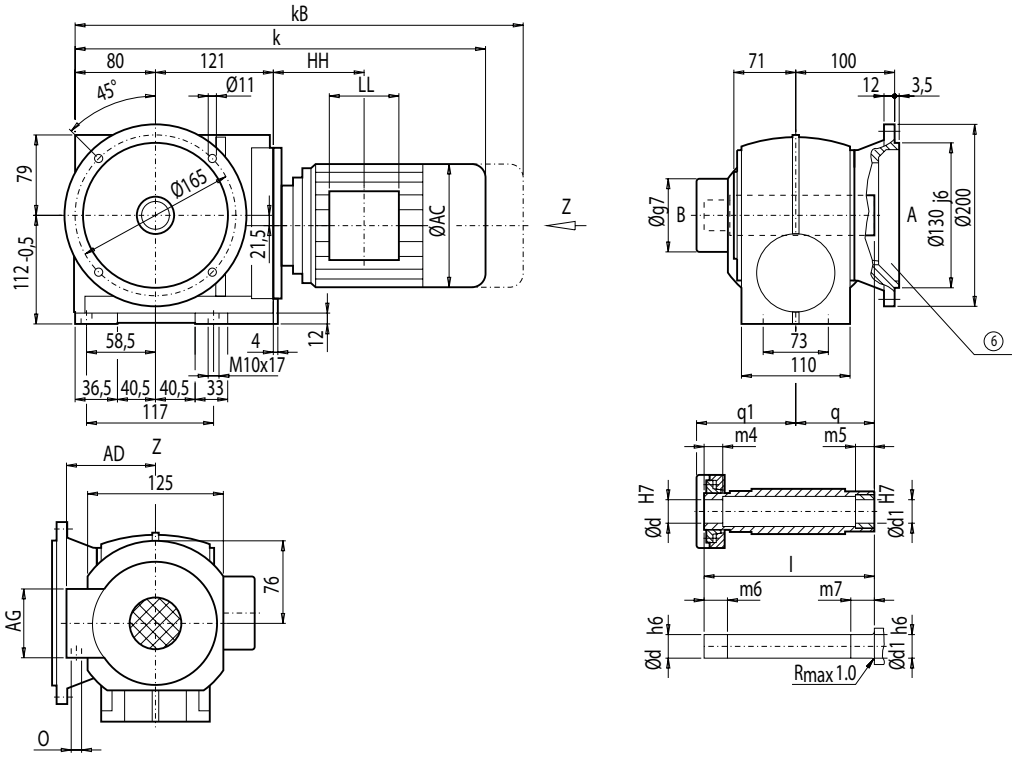
*) Preferred series

| | CADS48 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CADS48** |
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 32 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 32 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 37 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 41 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 41 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 50 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 61 |

## Dimensions

### Gearbox CAFS48, shaft-mounted design with flange and shrink disk

*CAFS012*




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **35** *) | 35 | 177 | 32 | 20 | 37 | 25 | 109 | 75 | 93 |
| **40** | 40 | 177 | 25 | 20 | 30 | 25 | 109 | 75 | 93 |

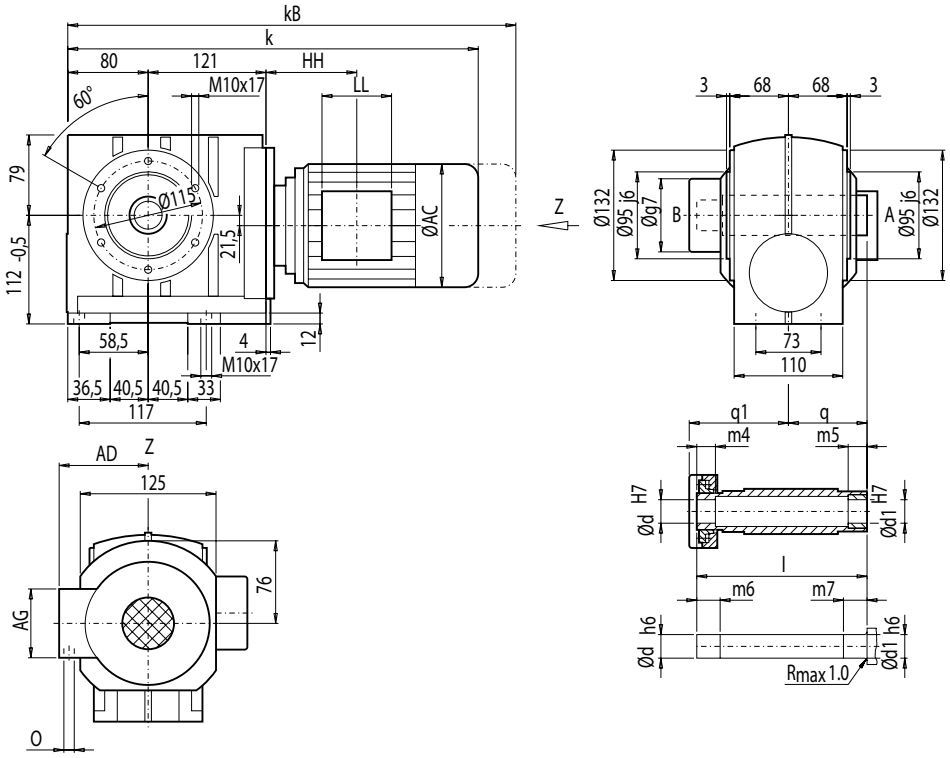
*) Preferred series

| | CAFS48 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAFS48** |
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 33 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 33 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 38 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 42 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 42 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 52 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 62 |

⑥ For note, see page 5/109

## Gearbox CAZS48, shaft-mounted design with housing flange (C-type) and shrink disk

*CAZS012*




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **35** *) | 35 | 177 | 32 | 20 | 37 | 25 | 109 | 75 | 93 |
| **40** | 40 | 177 | 25 | 20 | 30 | 25 | 109 | 75 | 93 |

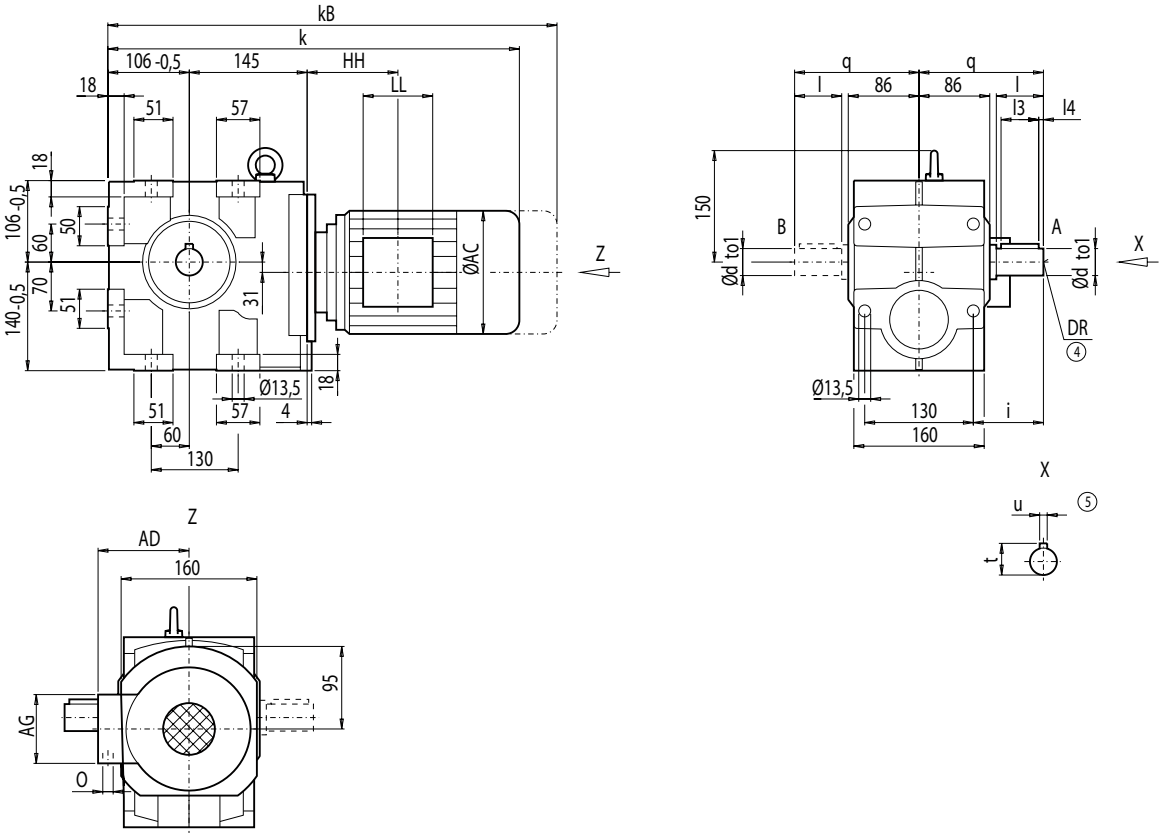
*) Preferred series

| | CAZS48 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAZS48** |
| LA71 | 459.5 | 514.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 30 |
| LA71Z | 478.5 | 533.5 | 139.0 | 146 | 90 | 90 | 114.5 | M20x1.5/M25x1.5 | 30 |
| LA80 | 496.5 | 560.0 | 156.5 | 155 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 35 |
| LA90S | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 40 |
| LA90L | 527.5 | 598.5 | 174.0 | 163 | 90 | 90 | 114.0 | M20x1.5/M25x1.5 | 40 |
| LA100L | 573.5 | 654.5 | 195.0 | 168 | 120 | 120 | 154.5 | 2xM32x1.5 | 49 |
| LA112M | 603.0 | 684.0 | 219.0 | 181 | 120 | 120 | 160.0 | 2xM32x1.5 | 60 |

## Dimensions

### Gearbox C68, foot- and housing-flange-mounted designs (C-type)

*C012*




| d | to1 | l | l3 | l4 | t | u | i | q | DR |
|---|---|---|---|---|---|---|---|---|---|
| **35** *) | k6 | 70 | 56 | 5 | 38.0 | 10 | 95 | 160 | M12x28 |
| **40** | k6 | 80 | 70 | 5 | 43.0 | 12 | 105 | 170 | M16x36 |
| **50** | k6 | 100 | 80 | 10 | 53.5 | 14 | 125 | 190 | M16x36 |

*) Preferred series

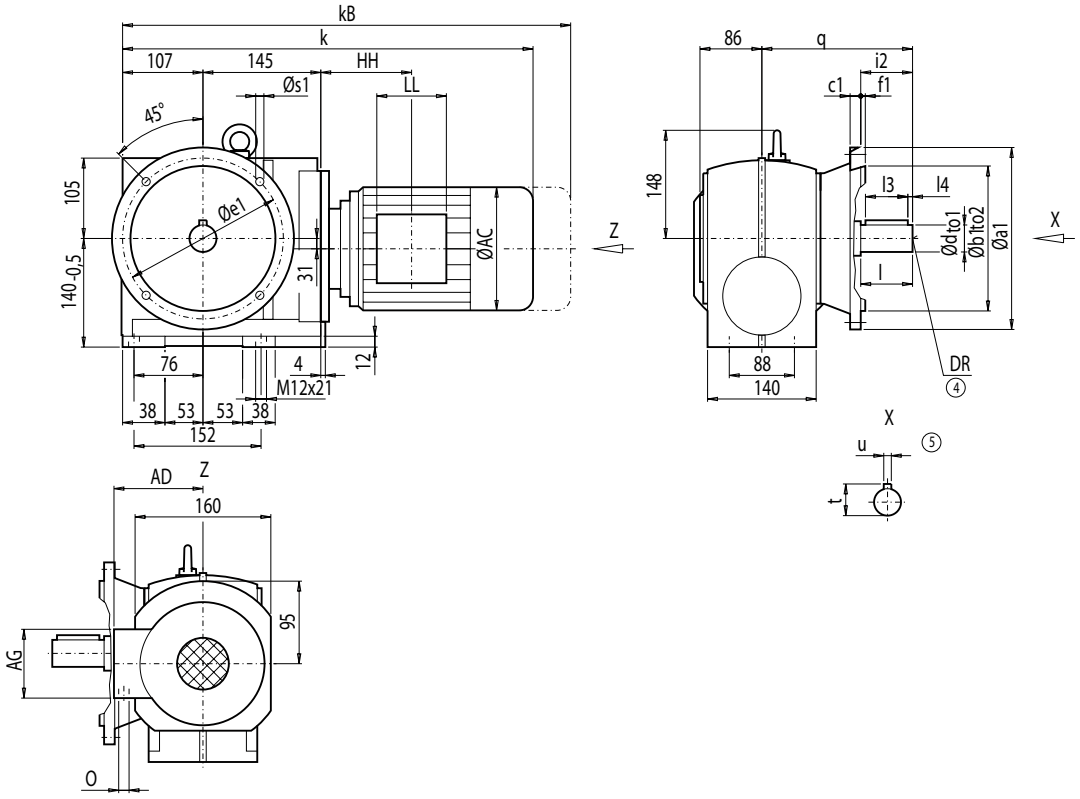
| | C68 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **C68** |
| LA71 | 504 | 559.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 46 |
| LA71Z | 523 | 578.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 46 |
| LA80 | 541 | 604.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 51 |
| LA90S | 572 | 643.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 56 |
| LA90L | 572 | 643.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 56 |
| LA100L | 618 | 699.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 65 |
| LA112M | 647 | 728.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 76 |
| LA132S | 709 | 811.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 86 |
| LA132M | 709 | 811.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 86 |
| LA132ZM | 755 | 857.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 95 |

④ DIN 332

⑤ Feather key / keyway DIN 6885

## Gearbox CF68, flange-mounted design (A-type)

*CF012*




| Flange | a1 | b1 | to2 | c1 | e1 | f1 | s1 | d | to1 | l | l3 | l4 | t | u | i2 | q | DR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A200** | 200 | 130 | j6 | 12 | 165 | 4 | 11.0 | 35 *) | k6 | 70 | 56 | 5 | 38 | 10 | 70 | 202.5 | M12x28 |
| **A250** | 250 | 180 | j6 | 15 | 215 | 4 | 13.5 | 40 | k6 | 80 | 70 | 5 | 43 | 12 | 80 | 193.0 | M16x36 |

*) Preferred series

| | CF68 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CF68** |
| LA71 | 505 | 560.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 55 |
| LA71Z | 524 | 579.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 55 |
| LA80 | 542 | 605.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 60 |
| LA90S | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 65 |
| LA90L | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 65 |
| LA100L | 619 | 700.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 74 |
| LA112M | 648 | 729.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 85 |
| LA132S | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 95 |
| LA132M | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 95 |
| LA132ZM | 756 | 858.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 104 |

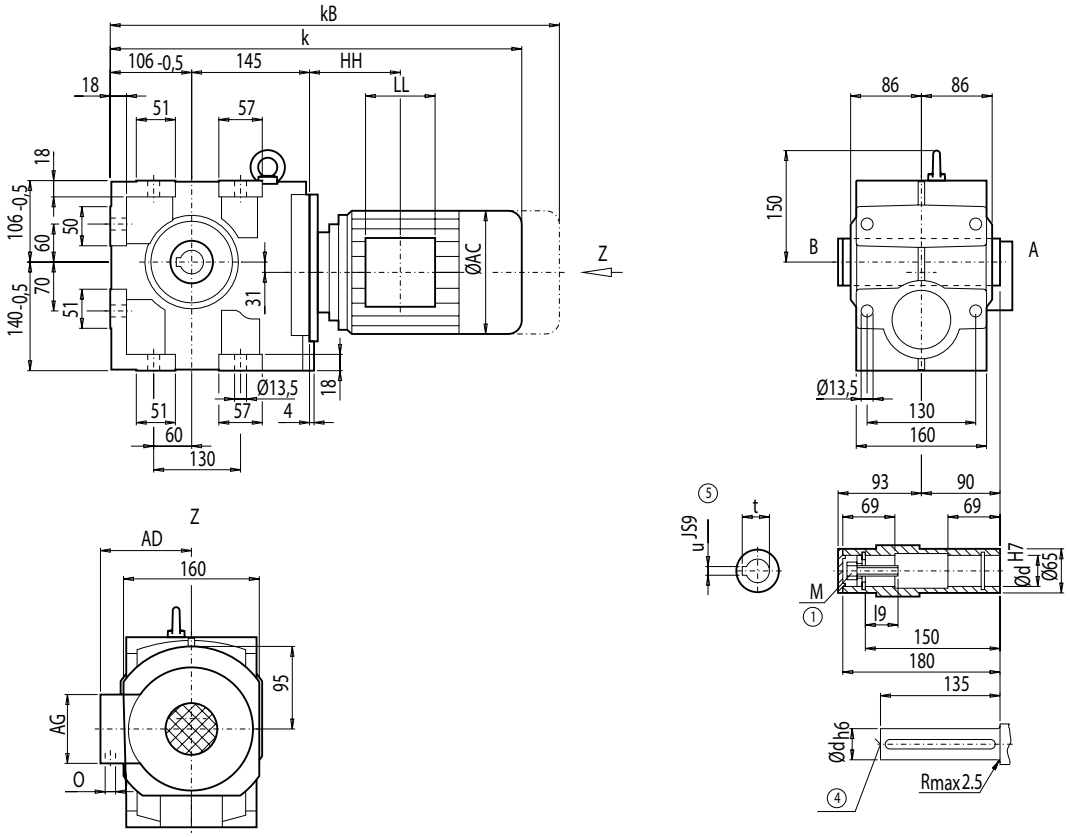
④ DIN 332

⑤ Feather key / keyway DIN 6885

## Dimensions

### Gearbox CA68, shaft-mounted design

*CA012*




| d | l9 | M | t | u |
|---|---|---|---|---|
| **40** *) | 48 | M16 | 43.3 | 12 |
| **45** | 47 | M16 | 48.3 | 14 |

*) Preferred series

| Motor | CA68 k | kB | AC | AD | AG | LL | HH | O | Weight CA68 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 504 | 559.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 43 |
| LA71Z | 523 | 578.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 43 |
| LA80 | 541 | 604.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 48 |
| LA90S | 572 | 643.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 52 |
| LA90L | 572 | 643.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 52 |
| LA100L | 618 | 699.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 61 |
| LA112M | 647 | 728.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 73 |
| LA132S | 709 | 811.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 83 |
| LA132M | 709 | 811.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 83 |
| LA132ZM | 755 | 857.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 92 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Gearbox CAD68, shaft-mounted design with torque arm

*CAD012*

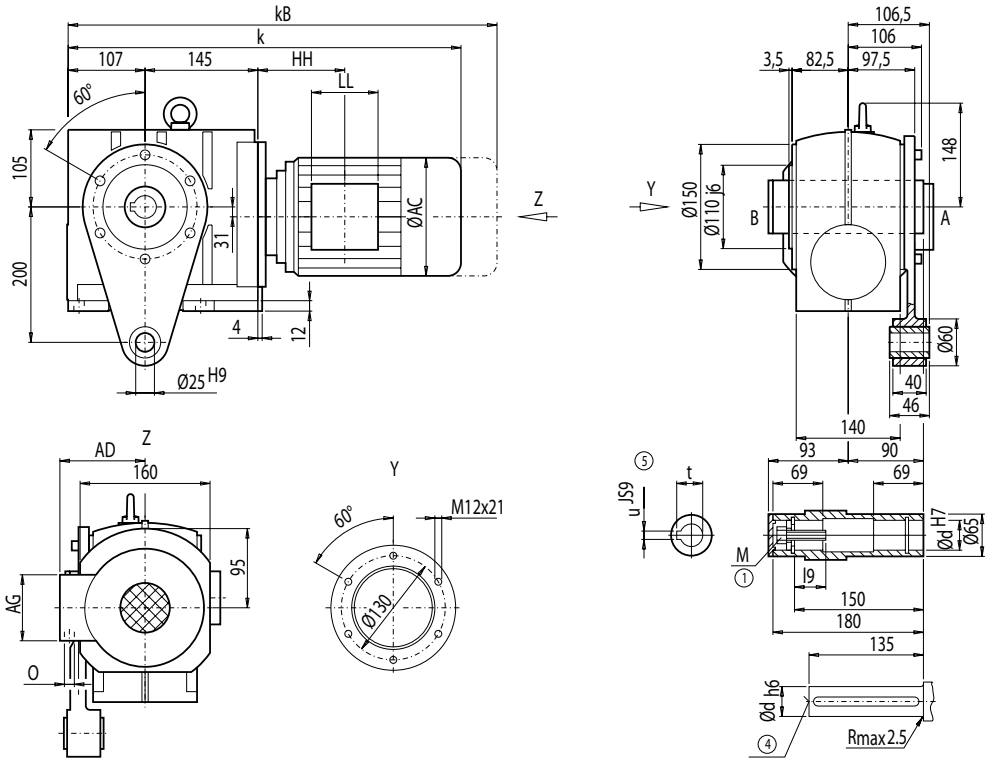



Fig.1

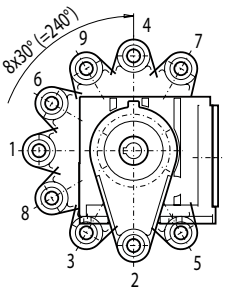
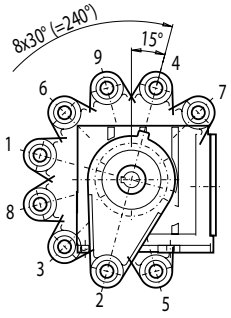



Fig.2




| d | l9 | M | t | u |
|---|---|---|---|---|
| **40** *) | 48 | M16 | 43.3 | 12 |
| **45** | 47 | M16 | 48.3 | 14 |

*) Preferred series

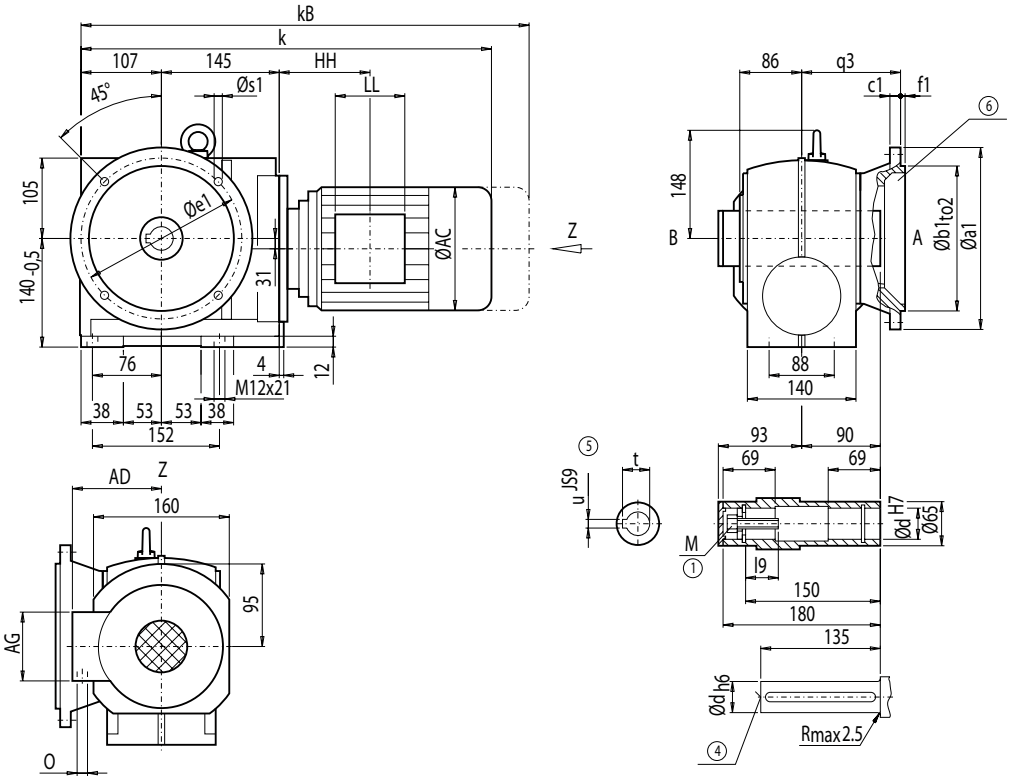
| | CAD68 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAD68** |
| LA71 | 505 | 560.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 48 |
| LA71Z | 524 | 579.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 48 |
| LA80 | 542 | 605.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 53 |
| LA90S | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 57 |
| LA90L | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 57 |
| LA100L | 619 | 700.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 67 |
| LA112M | 648 | 729.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 78 |
| LA132S | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 88 |
| LA132M | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 88 |
| LA132ZM | 756 | 858.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 97 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Dimensions

### Gearbox CAF68, shaft-mounted design with flange

*CAF012*




| Flange | a1 | b1 | to2 | c1 | e1 | f1 | s1 | q3 | d | l9 | M | t | u |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A200** | 200 | 130 | j6 | 12 | 165 | 4 | 11.0 | 132.5 | 40 *) | 48 | M16 | 43.3 | 12 |
| | | | | | | | | | 45 | 47 | M16 | 48.3 | 14 |
| **A250** | 250 | 180 | j6 | 15 | 215 | 4 | 13.5 | 113.0 | 40 *) | 48 | M16 | 43.3 | 12 |
| | | | | | | | | | 45 | 47 | M16 | 48.3 | 14 |

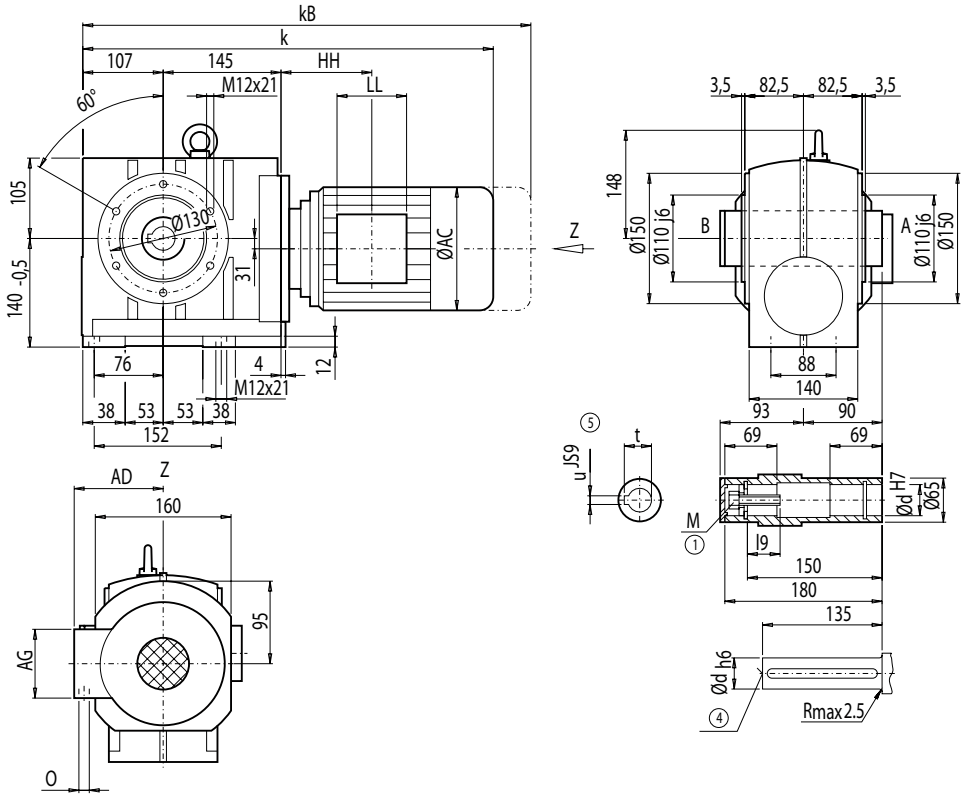
*) Preferred series

| | CAF68 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAF68** |
| LA71 | 505 | 560.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 52 |
| LA71Z | 524 | 579.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 52 |
| LA80 | 542 | 605.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 57 |
| LA90S | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 61 |
| LA90L | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 61 |
| LA100L | 619 | 700.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 70 |
| LA112M | 648 | 729.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 82 |
| LA132S | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 92 |
| LA132M | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 92 |
| LA132ZM | 756 | 858.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 101 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014 ⑥ For note, see page 5/109

## Gearbox CAZ68, shaft-mounted design with housing flange (C-type)

*CAZ012*




| d | l9 | M | t | u |
|---|---|---|---|---|
| **40** *) | 48 | M16 | 43.3 | 12 |
| **45** | 47 | M16 | 48.3 | 14 |

*) Preferred series

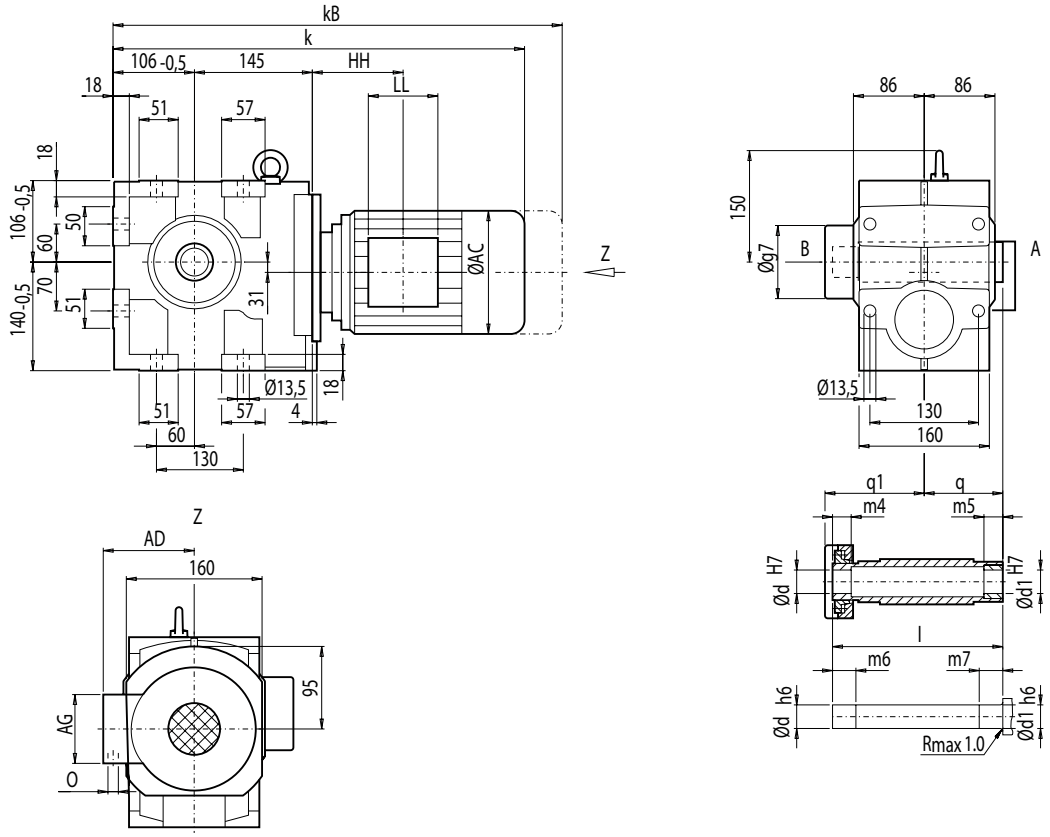
| Motor | CAZ68 k | kB | AC | AD | AG | LL | HH | O | Weight CAZ68 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 505 | 560.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 47 |
| LA71Z | 524 | 579.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 47 |
| LA80 | 542 | 605.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 52 |
| LA90S | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 57 |
| LA90L | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 57 |
| LA100L | 619 | 700.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 66 |
| LA112M | 648 | 729.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 77 |
| LA132S | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 87 |
| LA132M | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 87 |
| LA132ZM | 756 | 858.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 96 |

① EN ISO 4014 ④ DIN 332 ⑤ Feather key / keyway DIN 6885

## Dimensions

### Gearbox CAS68, shaft-mounted design with shrink disk

*CAS012*




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **40** *) | 40 | 209 | 35 | 20 | 40 | 25 | 126 | 90 | 112 |
| **50** | 50 | 209 | 27 | 20 | 32 | 25 | 126 | 90 | 112 |

*) Preferred series

| | CAS68 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAS68** |
| LA71 | 504 | 559.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 44 |
| LA71Z | 523 | 578.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 44 |
| LA80 | 541 | 604.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 49 |
| LA90S | 572 | 643.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 54 |
| LA90L | 572 | 643.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 54 |
| LA100L | 618 | 699.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 63 |
| LA112M | 647 | 728.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 74 |
| LA132S | 709 | 811.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 84 |
| LA132M | 709 | 811.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 84 |
| LA132ZM | 755 | 857.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 93 |

## Gearbox CADS68, shaft-mounted design with torque arm and shrink disk

*CADS012*

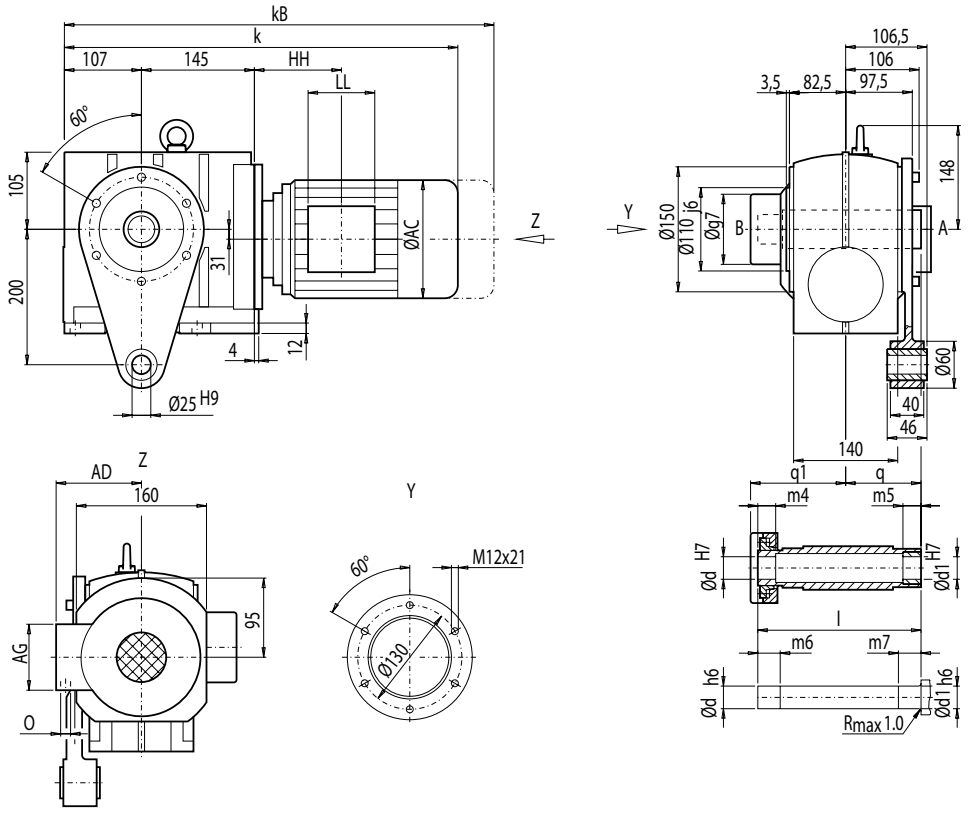



Fig.1

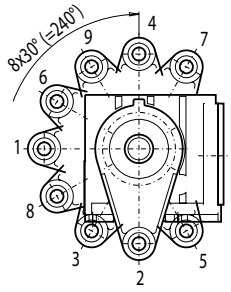
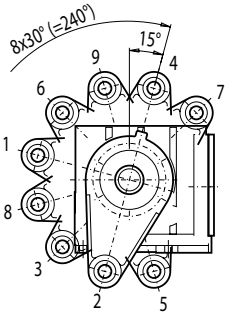



Fig.2




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **40** *) | 40 | 209 | 35 | 20 | 40 | 25 | 126 | 90 | 112 |
| **50** | 50 | 209 | 27 | 20 | 32 | 25 | 126 | 90 | 112 |

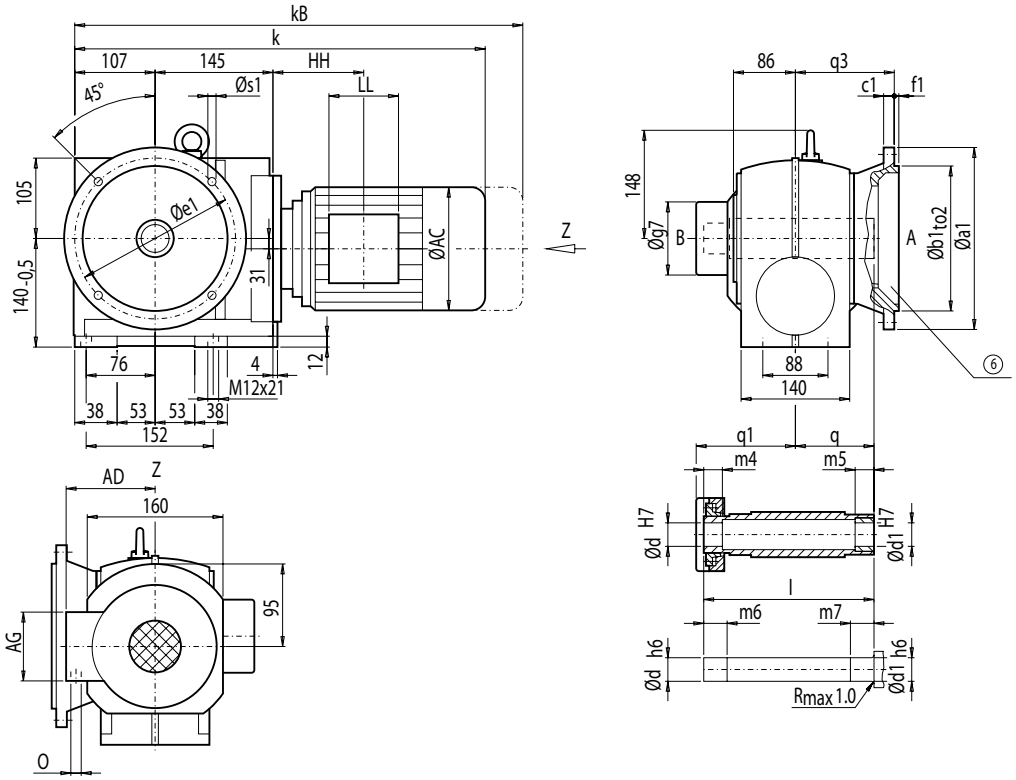
*) Preferred series

| | CADS68 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CADS68** |
| LA71 | 505 | 560.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 50 |
| LA71Z | 524 | 579.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 50 |
| LA80 | 542 | 605.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 55 |
| LA90S | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 60 |
| LA90L | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 60 |
| LA100L | 619 | 700.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 69 |
| LA112M | 648 | 729.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 80 |
| LA132S | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 90 |
| LA132M | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 90 |
| LA132ZM | 756 | 858.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 99 |

## Dimensions

### Gearbox CAFS68, shaft-mounted design with flange and shrink disk

*CAFS012*




| Flange | a1 | b1 | to2 | c1 | e1 | f1 | s1 | q3 | d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A200** | 200 | 130 | j6 | 12 | 165 | 4 | 11.0 | 132.5 | 40 *) | 40 | 209 | 35 | 20 | 40 | 25 | 126 | 90 | 112 |
| | | | | | | | | | 50 | 50 | 209 | 27 | 20 | 32 | 25 | 126 | 90 | 112 |
| **A250** | 250 | 180 | j6 | 15 | 215 | 4 | 13.5 | 113.0 | 40 *) | 40 | 209 | 35 | 20 | 40 | 25 | 126 | 90 | 112 |
| | | | | | | | | | 50 | 50 | 209 | 27 | 20 | 32 | 25 | 126 | 90 | 112 |

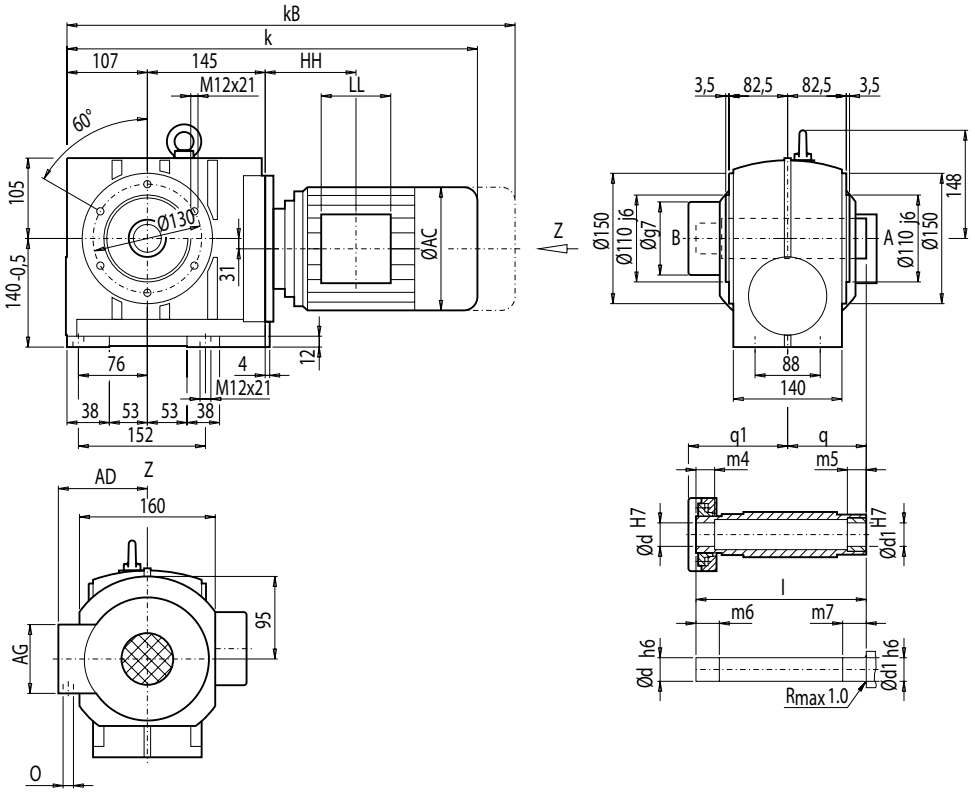
*) Preferred series

| | CAFS68 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAFS68** |
| LA71 | 505 | 560.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 53 |
| LA71Z | 524 | 579.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 53 |
| LA80 | 542 | 605.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 58 |
| LA90S | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 63 |
| LA90L | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 63 |
| LA100L | 619 | 700.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 72 |
| LA112M | 648 | 729.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 83 |
| LA132S | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 93 |
| LA132M | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 93 |
| LA132ZM | 756 | 858.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 102 |

⑥ For note, see page 5/109

## Gearbox CAZS68, shaft-mounted design with housing flange (C-type) and shrink disk

*CAZS012*




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **40** *) | 40 | 209 | 35 | 20 | 40 | 25 | 126 | 90 | 112 |
| **50** | 50 | 209 | 27 | 20 | 32 | 25 | 126 | 90 | 112 |

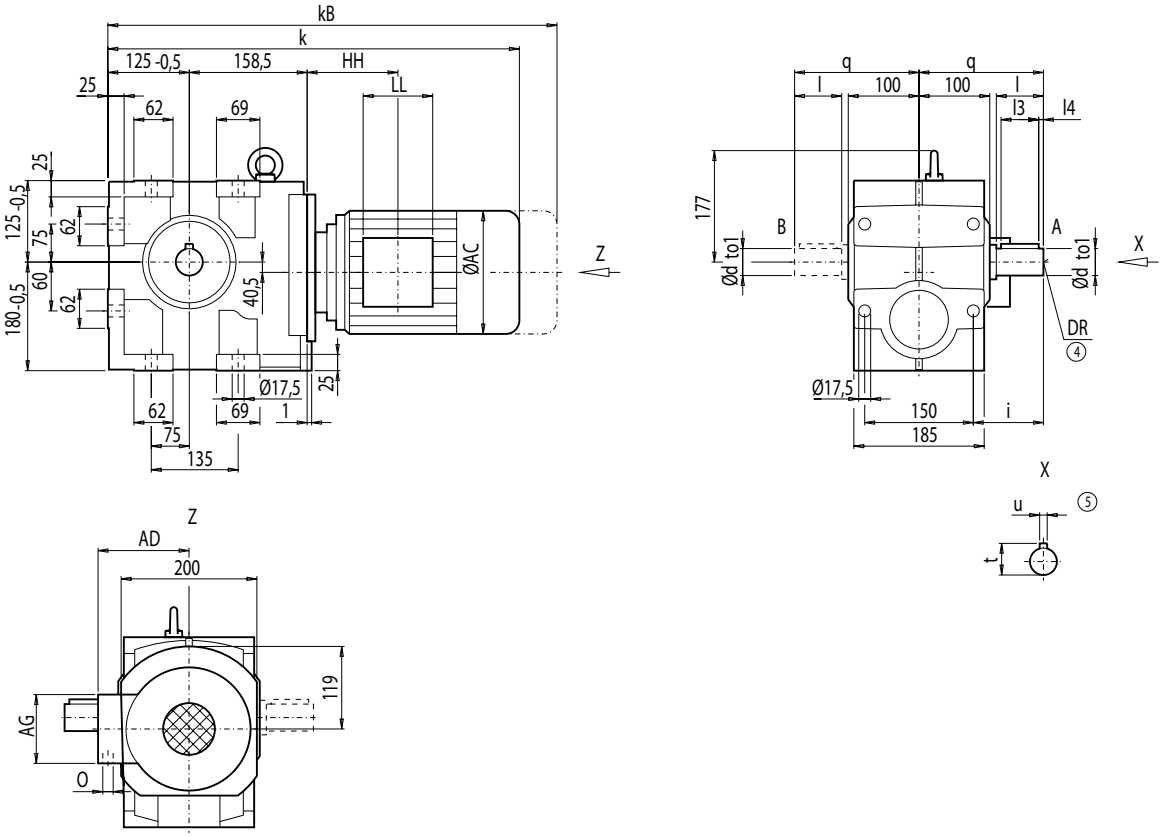
*) Preferred series

| | CAZS68 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAZS68** |
| LA71 | 505 | 560.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 49 |
| LA71Z | 524 | 579.0 | 139.0 | 146 | 90 | 90 | 109.0 | M20x1.5/M25x1.5 | 49 |
| LA80 | 542 | 605.5 | 156.5 | 155 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 53 |
| LA90S | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 58 |
| LA90L | 573 | 644.0 | 174.0 | 163 | 90 | 90 | 108.5 | M20x1.5/M25x1.5 | 58 |
| LA100L | 619 | 700.0 | 195.0 | 168 | 120 | 120 | 149.0 | 2xM32x1.5 | 67 |
| LA112M | 648 | 729.0 | 219.0 | 181 | 120 | 120 | 154.0 | 2xM32x1.5 | 79 |
| LA132S | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 89 |
| LA132M | 710 | 812.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 89 |
| LA132ZM | 756 | 858.0 | 259.0 | 195 | 140 | 140 | 196.5 | 2xM32x1.5 | 98 |

## Dimensions

### Gearbox C88, foot- and housing-flange-mounted designs (C-type)

*C012*




| d | to1 | l | l3 | l4 | t | u | i | q | DR |
|---|---|---|---|---|---|---|---|---|---|
| **45** *) | k6 | 90 | 80 | 2.5 | 48.0 | 14 | 120 | 195 | M16x36 |
| **50** | k6 | 100 | 80 | 10.0 | 53.5 | 14 | 130 | 205 | M16x36 |
| **70** | m6 | 140 | 110 | 15.0 | 74.5 | 20 | 170 | 245 | M20x42 |

*) Preferred series

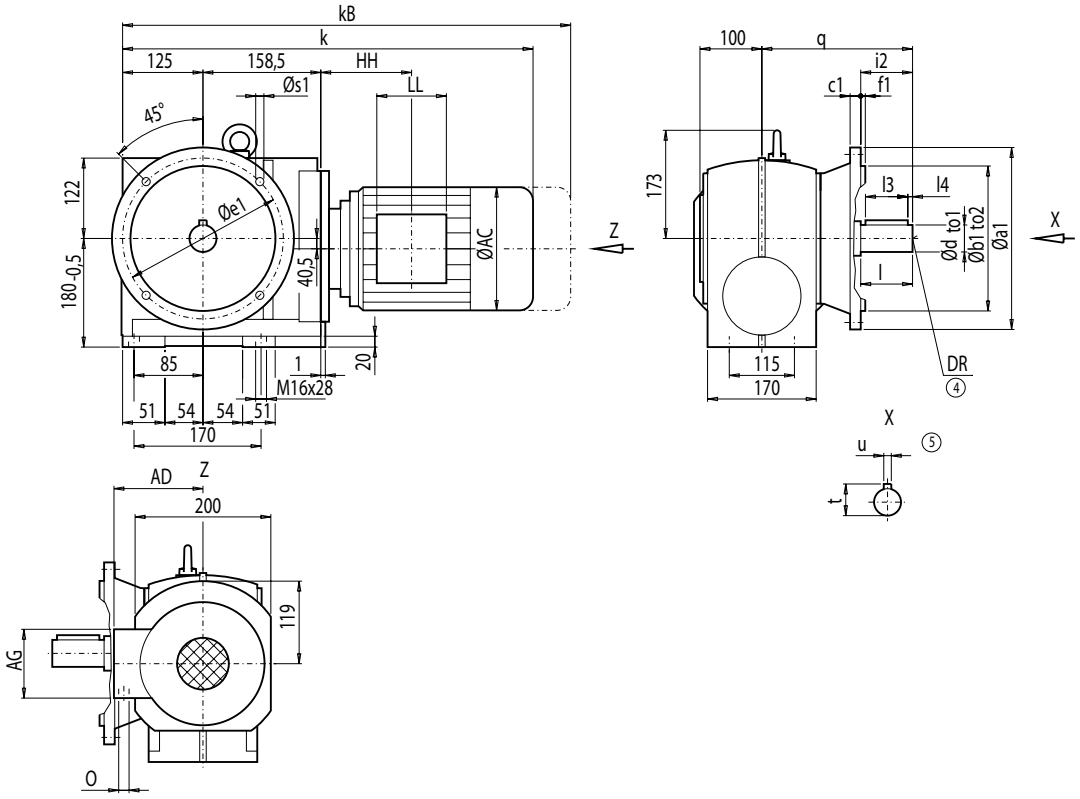
| | C88 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **C88** |
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 74 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 74 |
| LA80 | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 78 |
| LA90S | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 83 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 83 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 92 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 104 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 117 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 117 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 126 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 150 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 150 |

④ DIN 332

⑤ Feather key / keyway DIN 6885

## Gearbox CF88, flange-mounted design (A-type)

*CF012*




| Flange | a1 | b1 | to2 | c1 | e1 | f1 | s1 | d | to1 | l | l3 | l4 | t | u | i2 | q | DR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A250** | 250 | 180 | j6 | 15 | 215 | 4 | 13.5 | 45 *) | k6 | 90 | 80 | 2.5 | 48.0 | 14 | 90 | 240.5 | M16x36 |
| **A300** | 300 | 230 | j6 | 16 | 265 | 4 | 13.5 | 50 | k6 | 100 | 80 | 10.0 | 53.5 | 14 | 100 | 242.0 | M16x36 |

*) Preferred series

| | CF88 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| Motor | k | kB | AC | AD | AG | LL | HH | O | CF88 |
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 87 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 87 |
| LA90S | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 92 |
| LA80 | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 97 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 97 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 106 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 118 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 131 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 131 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 140 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 164 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 164 |

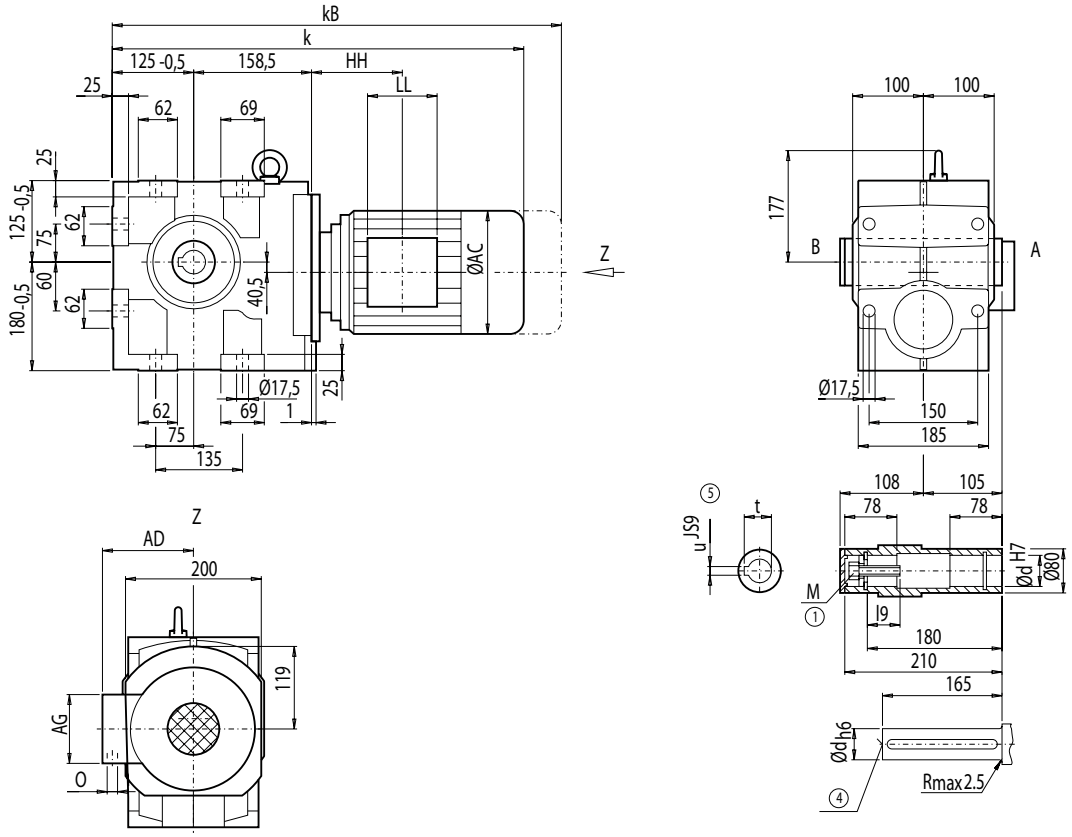
④ DIN 332

⑤ Feather key / keyway DIN 6885

## Dimensions

### Gearbox CA88, shaft-mounted design

*CA012*




| d | l9 | M | t | u |
|---|---|---|---|---|
| **50** *) | 44.5 | M16 | 53.8 | 14 |
| **60** | 54.0 | M20 | 64.4 | 18 |

*) Preferred series

| Motor | CA88 k | kB | AC | AD | AG | LL | HH | O | Weight CA88 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 65 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 65 |
| LA80 | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 70 |
| LA90S | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 75 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 75 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 84 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 96 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 109 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 109 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 118 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 142 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 142 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Gearbox CAD88, shaft-mounted design with torque arm

*CAD012*

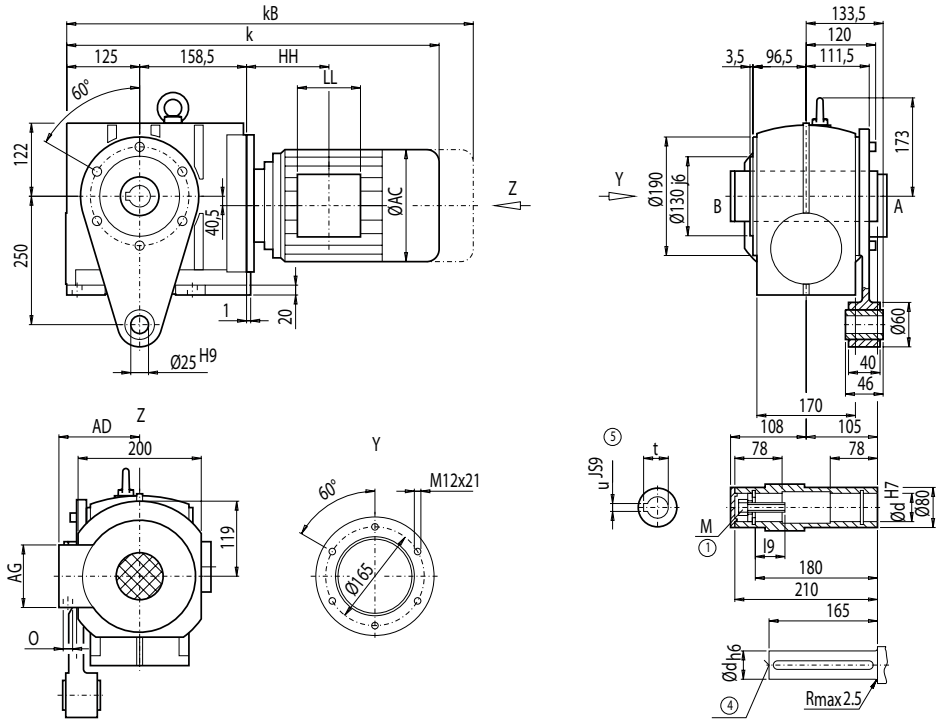



Fig.1

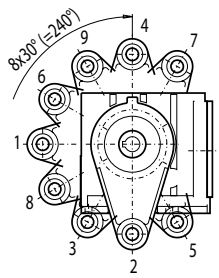
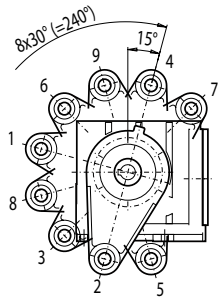



Fig.2




| d | l9 | M | t | u |
|---|---|---|---|---|
| **50** *) | 44.5 | M16 | 53.8 | 14 |
| **60** | 54.0 | M20 | 64.4 | 18 |

*) Preferred series

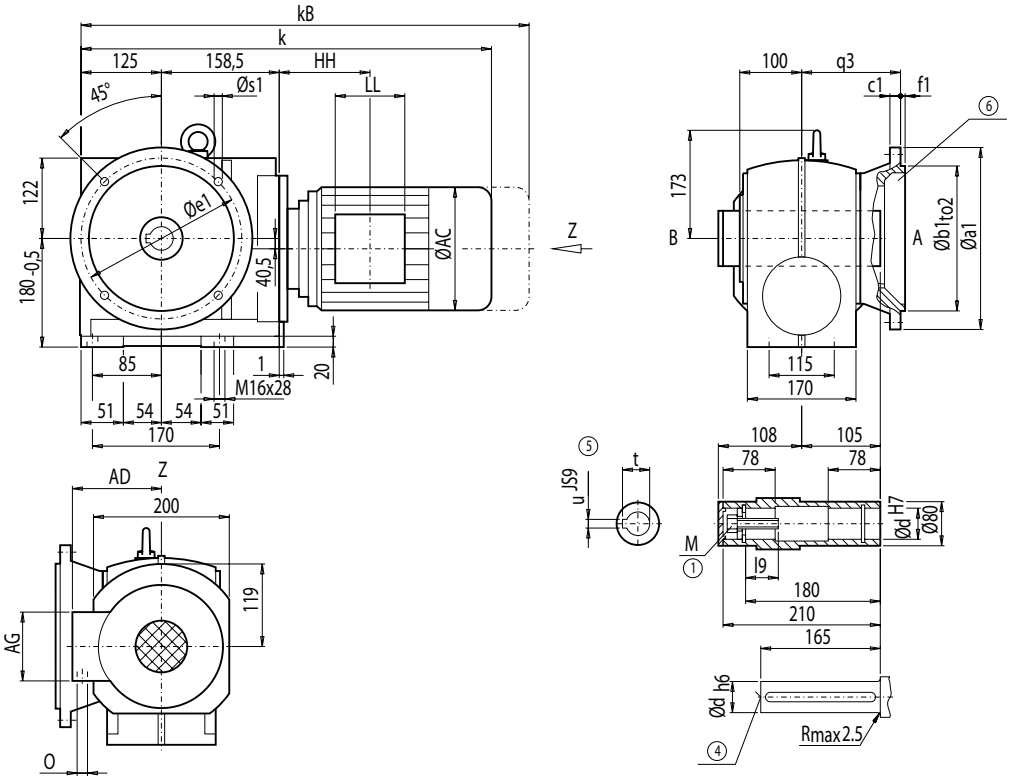
| Motor | CAD88 k | kB | AC | AD | AG | LL | HH | O | Weight CAD88 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 75 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 75 |
| LA80 | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 80 |
| LA90S | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 85 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 85 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 94 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 106 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 119 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 119 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 128 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 151 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 151 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014

## Dimensions

### Gearbox CAF88, shaft-mounted design with flange

*CAF012*




| Flange | a1 | b1 | to2 | c1 | e1 | f1 | q3 | s1 | d | l9 | M | t | u |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A250** | 250 | 180 | j6 | 15 | 215 | 4 | 150.5 | 13.5 | 50 *) | 44.5 | M16 | 53.8 | 14 |
| | | | | | | | | | 60 | 54.0 | M20 | 64.4 | 18 |
| **A300** | 300 | 230 | j6 | 16 | 265 | 4 | 142.0 | 13.5 | 50*) | 44.5 | M16 | 53.8 | 14 |
| | | | | | | | | | 60 | 54.0 | M20 | 64.4 | 18 |

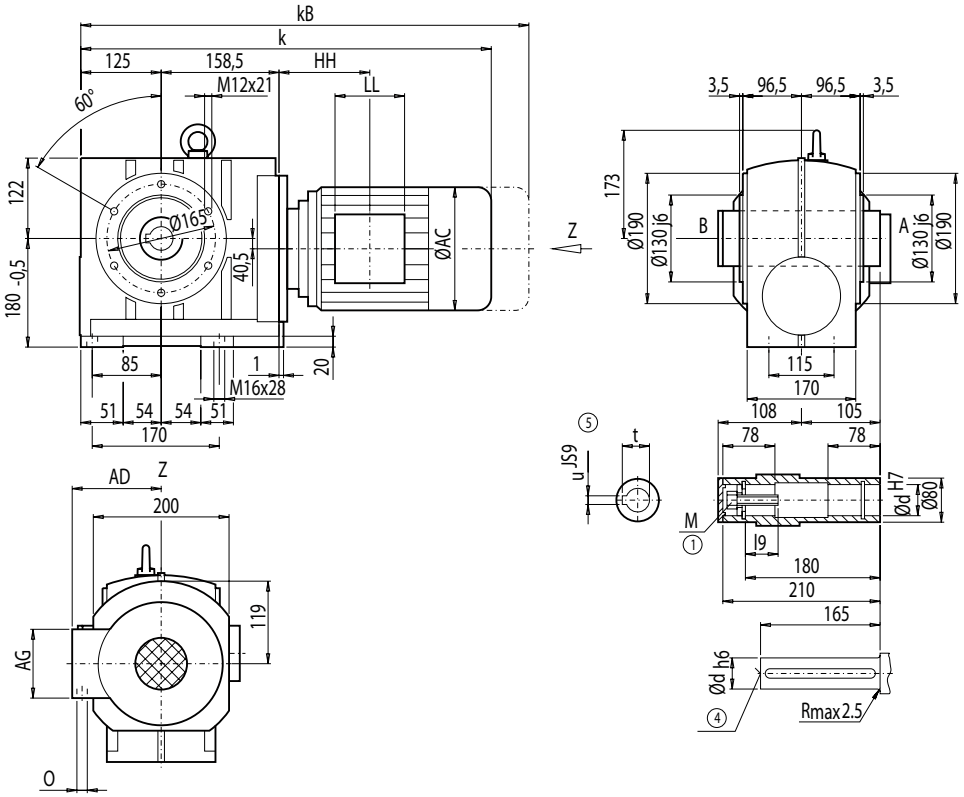
*) Preferred series

| | CAF88 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAF88** |
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 79 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 79 |
| LA80 | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 84 |
| LA90S | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 89 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 89 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 98 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 110 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 123 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 123 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 132 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 155 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 155 |

④ DIN 332 ⑤ Feather key / keyway DIN 6885 ① EN ISO 4014 ⑥ For note, see page 5/109

## Gearbox CAZ88, shaft-mounted design with housing flange (C-type)

*CAZ012*




| d | l9 | M | t | u |
|---|---|---|---|---|
| **50** *) | 44.5 | M16 | 53.8 | 14 |
| **60** | 54.0 | M20 | 64.4 | 18 |

*) Preferred series

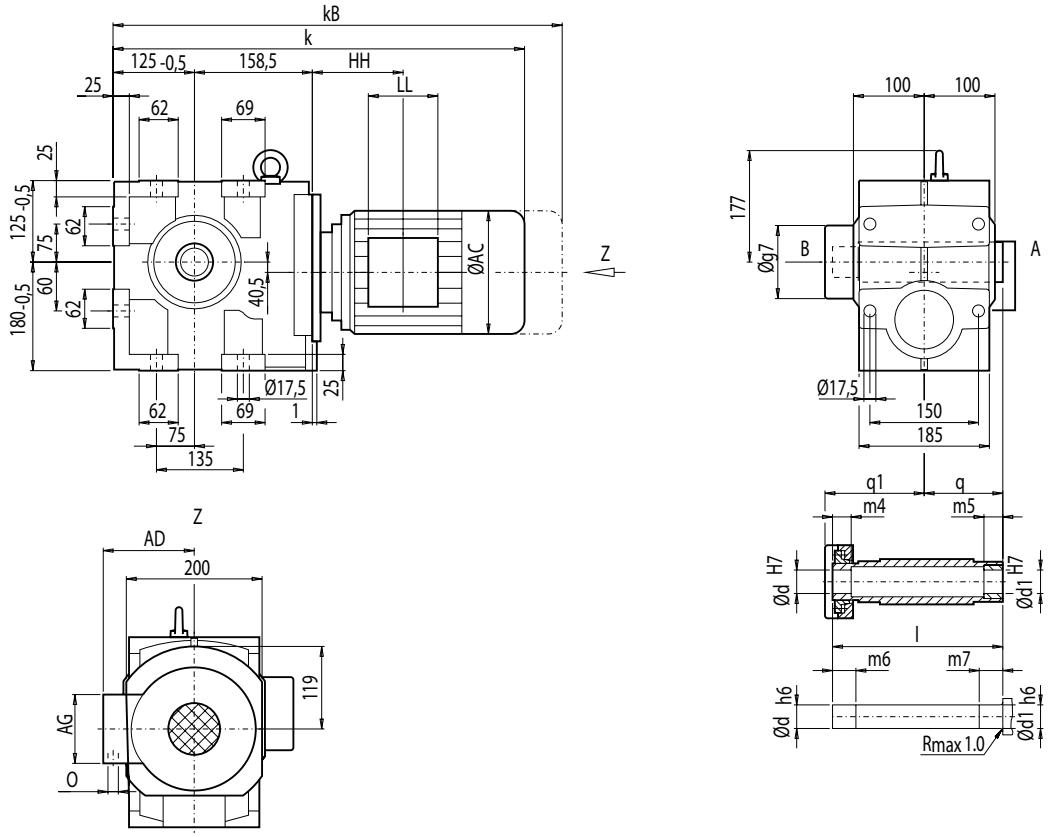
| Motor | CAZ88 k | kB | AC | AD | AG | LL | HH | O | Weight CAZ88 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 72 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 72 |
| LA80 | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 77 |
| LA90S | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 82 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 82 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 91 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 103 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 116 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 116 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 125 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 149 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 149 |

① EN ISO 4014 ④ DIN 332 ⑤ Feather key / keyway DIN 6885

## Dimensions

### Gearbox CAS88, shaft-mounted design with shrink disk

*CAS012*




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **50** *) | 50 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |
| **60** | 60 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |

*) Preferred series

| | CAS88 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAS88** |
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 67 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 67 |
| LA80 | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 72 |
| LA90S | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 77 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 77 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 86 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 98 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 111 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 111 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 120 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 143 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 143 |

## Gearbox CADS88, shaft-mounted design with torque arm and shrink disk

*CADS012*

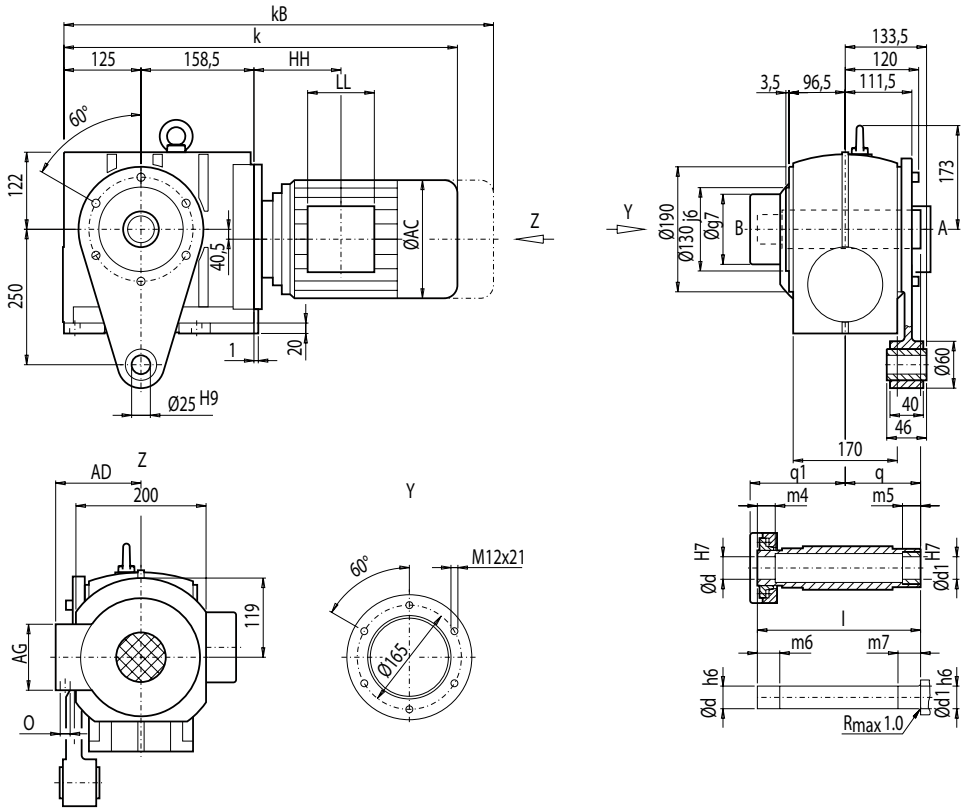



Fig.1

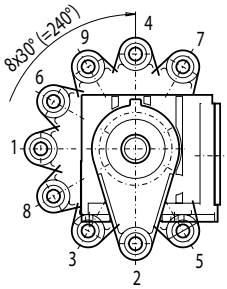
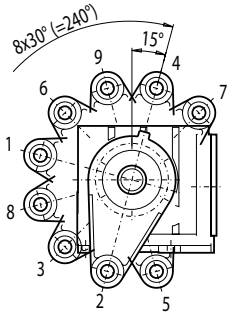



Fig.2




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **50** *) | 50 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |
| **60** | 60 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |

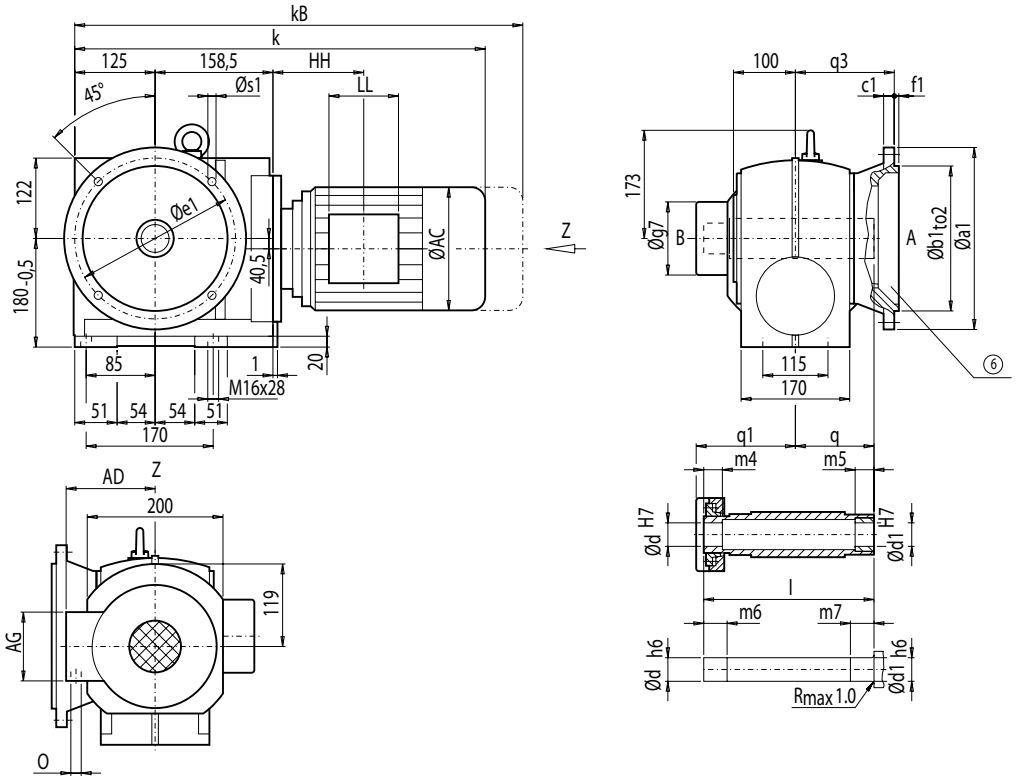
*) Preferred series

| Motor | CADS88 k | kB | AC | AD | AG | LL | HH | O | Weight CADS88 |
|---|---|---|---|---|---|---|---|---|---|
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 77 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 77 |
| LA80 | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 82 |
| LA90S | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 87 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 87 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 96 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 108 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 121 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 121 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 130 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 153 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 153 |

## Dimensions

### Gearbox CAFS88, shaft-mounted design with flange and shrink disk

*CAFS012*




| Flange | a1 | b1 | to2 | c1 | e1 | f1 | s1 | q3 | d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **A250** | 250 | 180 | j6 | 15 | 215 | 4 | 13.5 | 150.5 | 50 *) | 50 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |
| | | | | | | | | | 60 | 60 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |
| **A300** | 300 | 230 | j6 | 16 | 265 | 4 | 13.5 | 142.0 | 50 *) | 50 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |
| | | | | | | | | | 60 | 60 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |

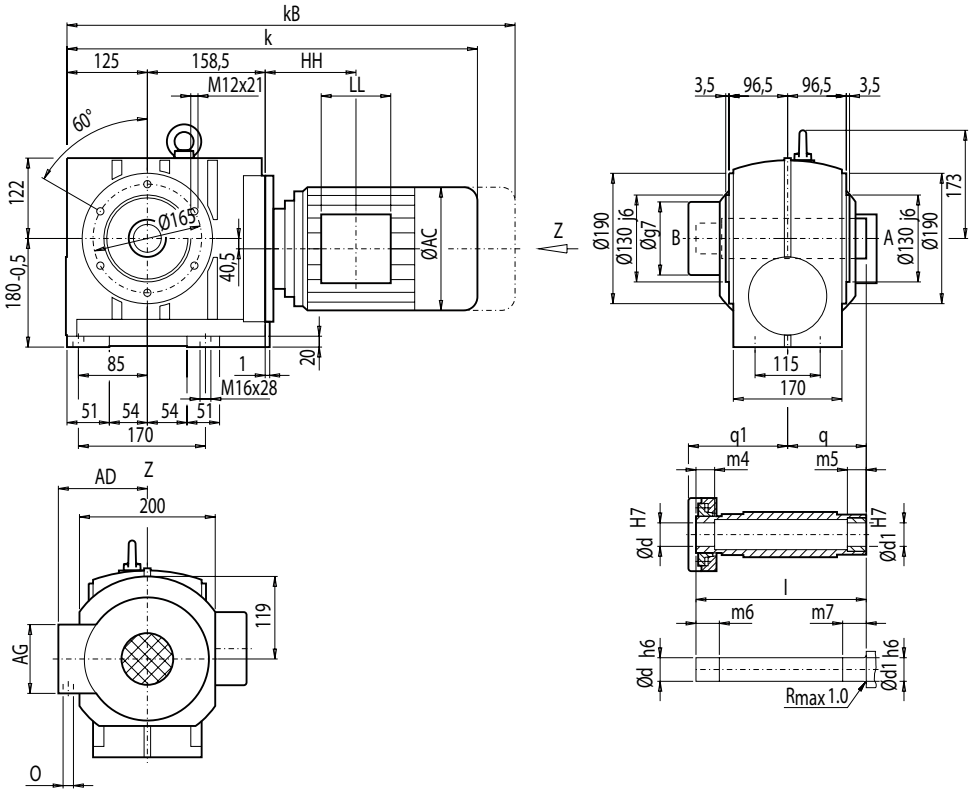
*) Preferred series

| | CAFS88 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAFS88** |
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 81 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 81 |
| LA80 | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 86 |
| LA90S | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 91 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 91 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 100 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 112 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 125 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 125 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 134 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 157 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 157 |

⑥ For note, see page 5/109

## Gearbox CAZS88, shaft-mounted design with housing flange (C-type) and shrink disk

*CAZS012*




| d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 |
|---|---|---|---|---|---|---|---|---|---|
| **50** *) | 50 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |
| **60** | 60 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 |

*) Preferred series

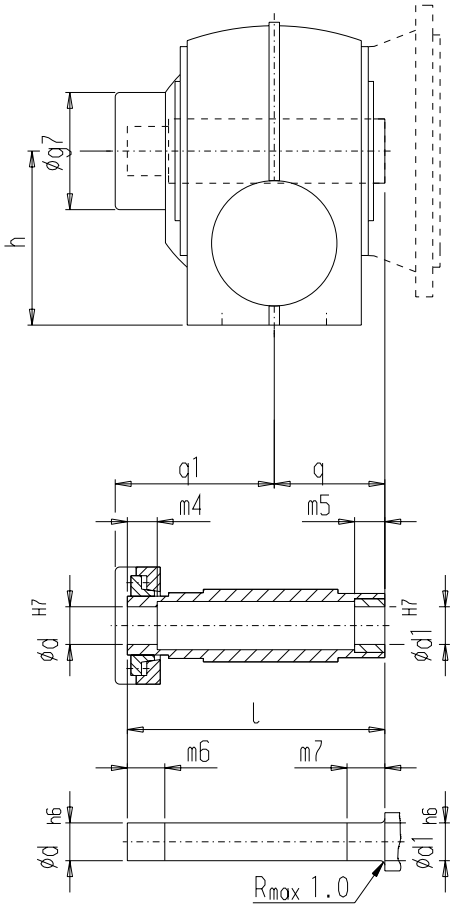
| | CAZS88 | | | | | | | | Weight |
|---|---|---|---|---|---|---|---|---|---|
| **Motor** | **k** | **kB** | **AC** | **AD** | **AG** | **LL** | **HH** | **O** | **CAZS88** |
| LA71 | 530.5 | 585.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 74 |
| LA71Z | 549.5 | 604.5 | 139.0 | 146 | 90 | 90 | 103.0 | M20x1.5/M25x1.5 | 74 |
| LA80 | 567.5 | 631.0 | 156.5 | 155 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 79 |
| LA90S | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 84 |
| LA90L | 598.5 | 669.5 | 174.0 | 163 | 90 | 90 | 102.5 | M20x1.5/M25x1.5 | 84 |
| LA100L | 644.5 | 725.5 | 195.0 | 168 | 120 | 120 | 143.0 | 2xM32x1.5 | 93 |
| LA112M | 671.5 | 752.5 | 219.0 | 181 | 120 | 120 | 146.0 | 2xM32x1.5 | 105 |
| LA132S | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 118 |
| LA132M | 731.5 | 833.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 118 |
| LA132ZM | 777.5 | 879.5 | 259.0 | 195 | 140 | 140 | 186.5 | 2xM32x1.5 | 127 |
| LA160M | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 150 |
| LA160L | 834.0 | 952.5 | 313.5 | 227 | 165 | 165 | 212.0 | 2xM40x1.5 | 150 |

## Dimensions

### Offset hollow shafts with shrink disk

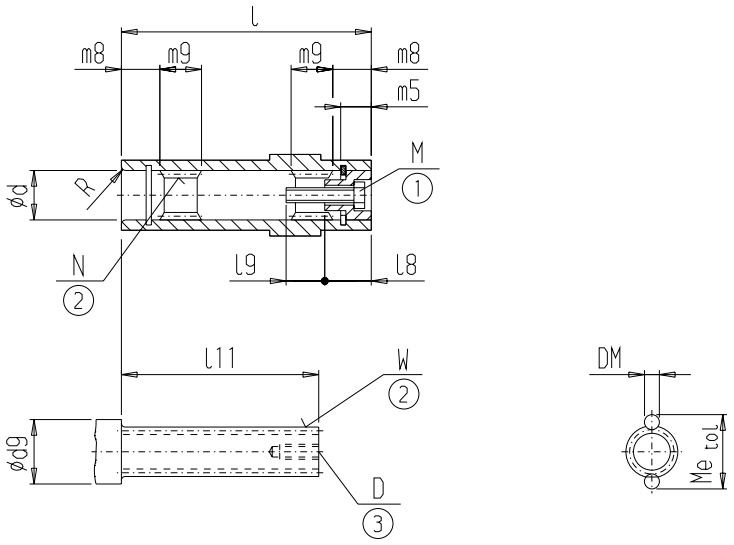
Optional hollow shafts for helical worm gearbox with shrink disk.

*CA.S*




| Gearbox | d | d1 | l | m4 | m5 | m6 | m7 | q1 | q | g7 | h |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CAS/CAFS38 | 30 | 31 | 146 | 22 | 20 | 27 | 25 | 94 | 60 | 77 | 100 |
| CAS/CAFS48 | 40 | 41 | 177 | 25 | 20 | 30 | 25 | 109 | 75 | 93 | 112 |
| CAS/CAFS68 | 40 | 42 | 209 | 35 | 20 | 40 | 25 | 126 | 90 | 112 | 140 |
| | 50 | 51 | 209 | 27 | 20 | 32 | 25 | 126 | 90 | 112 | 140 |
| CAS/CAFS88 | 50 | 52 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 | 180 |
| | 60 | 61 | 241 | 29 | 30 | 34 | 35 | 144 | 105 | 132 | 180 |

## Shaft-mounted design with splined shaft in acc. with DIN 5480



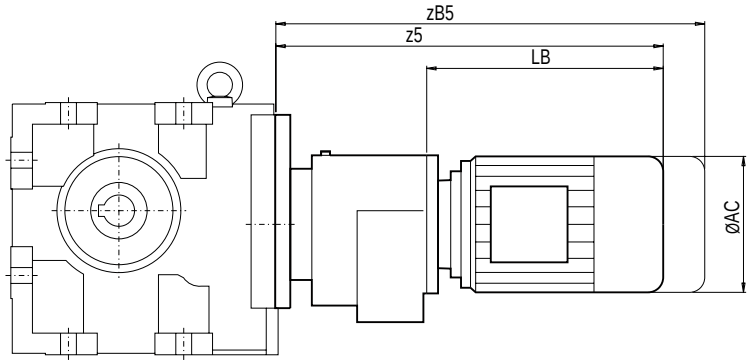

| Gearbox type | d | l | d9 min. | l11 | W | D | R | m8 | m9 |
|---|---|---|---|---|---|---|---|---|---|
| CA.T38 | 35 | 120 | 45 | 95 | W35x1.25x30x26 8f | M10 | R2 | 17.0 | 27 |
| CA.T48 | 40 | 150 | 52 | 120 | W40x2x30x18 8f | M12 | R3 | 22.0 | 34 |
| CA.T68 | 55 | 180 | 65 | 142 | W50x2x30x24 8f | M16 | R2 | 21.0 | 40 |
| CA.T88 | 65 | 210 | 80 | 172 | W60x2x30x28 8f | M16 | R2 | 22.5 | 49 |

| Gearbox type | N | m5 | l8 | l9 | M | DM | Me | tol |
|---|---|---|---|---|---|---|---|---|
| CA.T38 | N35x1.25x30x26 9H | 12.0 | 18 | 27.0 | M10x35 | 2.5 | 37.423 | - 0.041 |
| CA.T48 | N40x2x30x18 9H | 14.0 | 20 | 37.0 | M12x45 | 4.5 | 45.083 | - 0.043 |
| CA.T68 | N50x2x30x24 9H | 16.0 | 23 | 49.5 | M16x55 | 4.0 | 54.156 | - 0.049 |
| CA.T88 | N60x2x30x28 9H | 16.5 | 26 | 46.5 | M16x55 | 4.0 | 63.918 | - 0.053 |

① DIN 912 ② DIN 5480 ③ DIN 332-D

## Dimensions

### Helical worm tandem gearbox



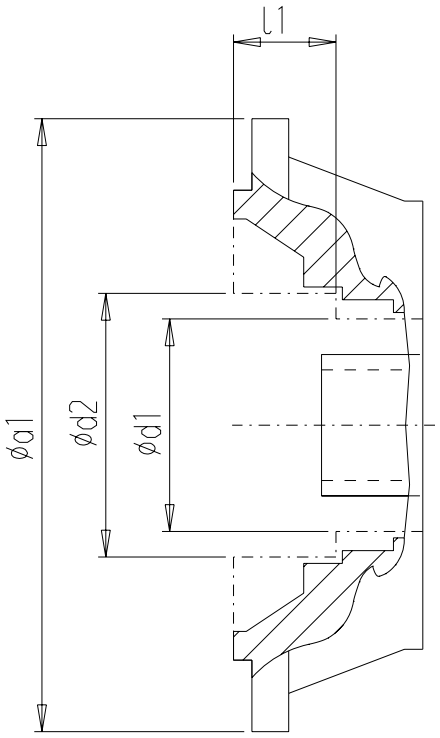



| Gearbox | Motor | AC | z5 | zB5 | LB |
|---|---|---|---|---|---|
| C38-Z28 | LA71 | 139 | 363 | 418 | 202.5 |
| | LA71Z | 139 | 382 | 437 | 221.5 |
| | LA90S | 174 | 460 | 531 | 299.5 |
| | LA90L | 174 | 460 | 531 | 299.5 |
| | LA90ZL | 174 | 505 | 576 | 344.5 |
| | LA100L | 195 | 542 | 623 | 381.5 |
| C38-D28 | LA71 | 139 | 363 | 418 | 202.5 |
| | LA71Z | 139 | 382 | 437 | 221.5 |
| | LA90S | 174 | 460 | 531 | 299.5 |
| | LA90L | 174 | 460 | 531 | 299.5 |
| | LA90ZL | 174 | 505 | 576 | 344.5 |
| C48-Z28 | LA71 | 139 | 363 | 418 | 202.5 |
| | LA71Z | 139 | 382 | 437 | 221.5 |
| | LA90S | 174 | 460 | 531 | 299.5 |
| | LA90L | 174 | 460 | 531 | 299.5 |
| | LA90ZL | 174 | 505 | 576 | 344.5 |
| | LA100L | 195 | 542 | 623 | 381.5 |
| C48-D28 | LA71 | 139 | 363 | 418 | 202.5 |
| | LA71Z | 139 | 382 | 437 | 221.5 |
| | LA90S | 174 | 460 | 531 | 299.5 |
| | LA90L | 174 | 460 | 531 | 299.5 |
| | LA90ZL | 174 | 505 | 576 | 344.5 |

| Gearbox | Motor | AC | z5 | zB5 | LB |
|---|---|---|---|---|---|
| C68-Z28 | LA71 | 139 | 357.5 | 412.5 | 202.5 |
| | LA71Z | 139 | 376.5 | 431.5 | 221.5 |
| | LA90S | 174 | 454.5 | 525.5 | 299.5 |
| | LA90L | 174 | 454.5 | 525.5 | 299.5 |
| | LA90ZL | 174 | 499.5 | 570.5 | 344.5 |
| | LA100L | 195 | 536.5 | 617.5 | 381.5 |
| C68-D28 | LA71 | 139 | 357.5 | 412.5 | 202.5 |
| | LA71Z | 139 | 376.5 | 431.5 | 221.5 |
| | LA90S | 174 | 454.5 | 525.5 | 299.5 |
| | LA90L | 174 | 454.5 | 525.5 | 299.5 |
| | LA90ZL | 174 | 499.5 | 570.5 | 344.5 |
| C88-Z28 | LA71 | 139 | 351.5 | 406.5 | 202.5 |
| | LA71Z | 139 | 370.5 | 425.5 | 221.5 |
| | LA90S | 174 | 448.5 | 519.5 | 299.5 |
| | LA90L | 174 | 448.5 | 519.5 | 299.5 |
| | LA90ZL | 174 | 493.5 | 564.5 | 344.5 |
| | LA100L | 195 | 530.5 | 611.5 | 381.5 |
| C88-D28 | LA71 | 139 | 351.5 | 406.5 | 202.5 |
| | LA71Z | 139 | 370.5 | 425.5 | 221.5 |
| | LA90S | 174 | 448.5 | 519.5 | 299.5 |
| | LA90L | 174 | 448.5 | 519.5 | 299.5 |
| | LA90ZL | 174 | 493.5 | 564.5 | 344.5 |

## Inside contour of the flange-mounted design (A-type)

Design notes for the customer's interface, e.g. plug-in shaft for hollow shaft design




| Gearbox | a1 | d1 | d2 | l1 |
|---|---|---|---|---|
| CAF.28 | 120 | 70 | 72 | 24.0 |
| CAF.28 | 160 | 70 | 103 | 8.5 |
| CAF.38 | 160 | 70 | 77 | 20.0 |
| CAF.48 | 200 | 84 | 90 | 22.5 |
| CAF.68 | 200 | 100 | 100 | – |
| CAF.68 | 250 | 96 | 96 | – |
| CAF.88 | 250 | 124 | 124 | – |
| CAF.88 | 300 | 126 | 138 | 31.0 |