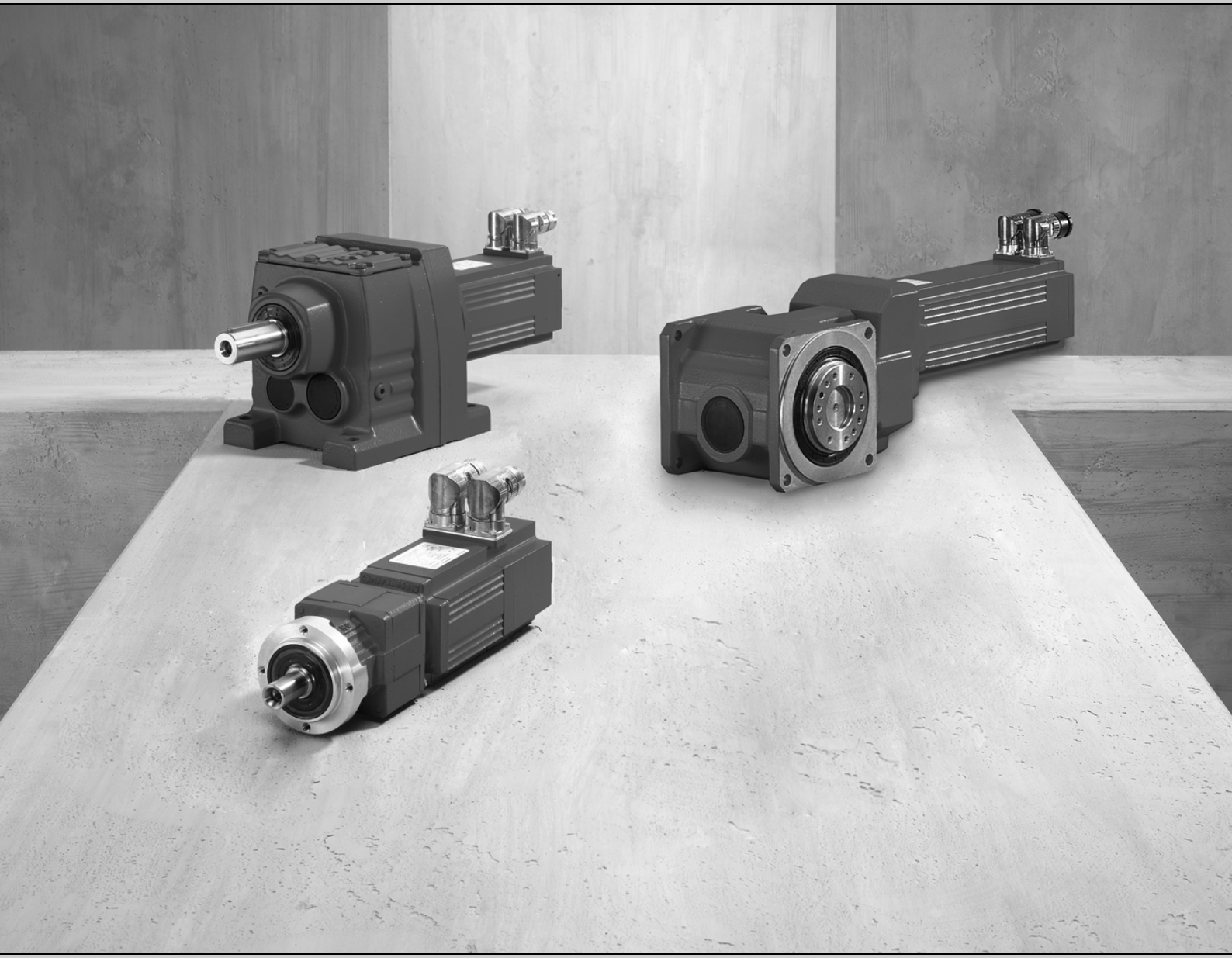
SEW EURODRIVE

# Addendum to the Catalog

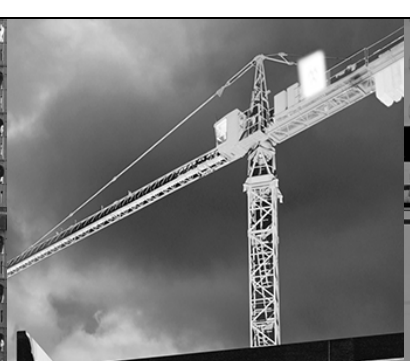


## Synchronous Servo Gearmotors

CMP50L, CMP80S and CMP80M with Reduced Pinion Shaft End
with F-, K-, S-, W- and BS.F-Series Gear Units

Edition 04/2011

17097215 / EN



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**1 Introduction ..... 4**
1.1 Contents of this publication ..... 4
1.2 Copyright ..... 4

**2 Important Notes – Selection Tables and Dimension Sheets ..... 5**
2.1 Information on selection tables ..... 5
2.2 Important notes regarding the dimension sheets ..... 6
2.3 Gearmotor dimensions ..... 9
2.4 Information regarding the dimensions of CMPZ motors ..... 10

**3 Helical Gearmotors – R-Series Gear Units ..... 11**
3.1 Variants ..... 11
3.2 R17/CMP – selection tables, dimension sheets ..... 12

**4 Parallel-Shaft Helical Gearmotors – F-Series Gear Units ..... 18**
4.1 Variants ..... 18
4.2 F27 – 47/CMP – selection tables, dimension sheets ..... 20

**5 Helical-Bevel Gearmotors – K-Series Gear Units ..... 43**
5.1 Variants ..... 43
5.2 K37 – 47/CMP – selection tables, dimension sheets ..... 45

**6 Helical-Worm Gearmotors – S-Series Gear Units ..... 60**
6.1 Variants ..... 60
6.2 S47 – 57/CMP – selection tables, dimension sheets ..... 62

**7 SPIROPLAN® Gearmotors – W-Series Gear Units ..... 76**
7.1 Variants ..... 76
7.2 W37/CMP – selection tables, dimension sheets ..... 78

**8 Helical-Bevel Gearmotors – BS.F-Series Gear Units ..... 85**
8.1 Variants ..... 85
8.2 BS.F/CMP – selection tables, dimension sheets ..... 87

**9 Main Technical Data of Servomotors ..... 94**
9.1 Technical data of CMP motors ..... 95
9.2 Technical data of CMPZ motors ..... 99

# 1 Introduction

## *1.1 Contents of this publication*

This addendum to the (price) catalog "Synchronous Servo Gearmotors" comprises new information regarding the following:

- The motor/gear unit combinations of the CMP50L, CMP80S and CMP80M motors with reduced pinion shaft end
- The possible combination of the R17 gear unit with the CMP50M and CMP63S motors

For any further information regarding synchronous servo gearmotors, refer to the (price) catalog "Synchronous Servo Gearmotors".

## *1.2 Copyright*

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# 2 Important Notes – Selection Tables and Dimension Sheets

## 2.1 Information on selection tables

| $M_{aDyn}$ in Nm | | CMP | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | i | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M |
| PSF321 1 | 3.00 | | 31 | 46 | 33 | 64 | 90 | 57 | 91 |
| | 4.00 | 21 | 41 | 61 | 44 | 85 | 120 | 76 | 122 |
| | 5.00 | 26 | 51 | 76 | 55 | 106 | 150 | 95 | 152 |
| | 7.00 | 36 | 71 | 107 | 77 | 148 | >168 | 133 | >168 |
| | 10.00 | 51 | 102 | >121 | 110 | | | | |

Dynamic output torque $M_{aDyn}$ of the drive

Gear unit reduction ratio

Gear unit size with number of gear unit stages

| | |
|---|---|
| | The dark-gray fields contain preferred combinations |
| | Light-gray fields mean: Consult SEW-EURODRIVE. |
| | White fields mean: Combination not possible |

**INFORMATION**

In fields marked with ">...", $M_{aDyn}$ must not exceed the maximum permitted torque $M_{apk}$ in short-term duty because the motor may overload the gear unit. The motor current $I_{max}$ must be limited during startup.

| m in kg | | CMP | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | s | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M |
| PSF321 | 1 | 6.7 | 7.6 | 8.5 | 8.0 | 9.5 | 11 | 12 | 13 |
| PSF322 | 2 | 8.2 | 9.1 | 10.0 | 9.5 | 11 | 12 | 14 | 15 |

**m** Mass of the drive

**s** Number of gear unit stages

| CMP.. | | | | M1;M3;M5-6 | | | M2 | | | M4 | | | φ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | i | $n_{epk}$ rpm | η % | $a_0$ | $a_1$ | $a_2$ | $a_0$ | $a_1$ | $a_2$ | $a_0$ | $a_1$ | $a_2$ | ' | /R ' | /M ' |
| PSF321 1 | 3.00 | 7000 | 99 | 205 | -0.222 | 0 | 234 | -0.327 | 0 | 288 | -0.595 | 0 | 6 | 3 | 1 |
| | 4.00 | 7000 | 99 | 276 | -0.316 | 0 | 312 | -0.455 | 0 | 387 | -0.833 | 0 | 6 | 3 | 1 |
| | 5.00 | 7000 | 99 | 290 | -0.355 | 0 | 328 | -0.501 | 0 | 414 | -0.930 | 0 | 6 | 3 | 1 |
| | 7.00 | 7000 | 99 | 296 | -0.418 | 0 | 335 | -0.581 | 0 | 422 | -1.036 | 0 | 6 | 3 | 1 |
| | 10.00 | 7000 | 99 | 269 | -0.477 | 0 | 302 | -0.617 | 0 | 374 | -1.016 | 0 | 6 | 3 | 1 |

**i** Gear unit reduction ratio

**$n_{epk}$** Maximum permitted input speed for short-time duty

η Efficiency of the gear unit (at $M_{apk}$, $n_e$=1500 rpm, mounting position M1, S1 duty cycle)

φ Circumferential backlash

**$a_0$, $a_1$, $a_2$** Gear unit constants as regards the rise in temperature in the gear unit

| CMP.. $n_e$ = 1500 | i | $M_{amax}$ Nm | $M_{apk}$ Nm | $M_{aNotaus}$ Nm | $n_{ak}$ rpm | $J_{GA}$ $10^{-4}$ $kgm^2$ | $c_T$ PSF Nm/' | $F_{Ramax}$ PSF N | $F_{Rapk}$ PSF N |
|---|---|---|---|---|---|---|---|---|---|
| PSF321 1 | 3.00 | 85 | 125 | 188 | 2333 | 0.69 | 11 | 4380 | 5280 |
| | 4.00 | 110 | 170 | 255 | 1750 | 0.35 | 12 | 4770 | 4420 |
| | 5.00 | 110 | 169 | 250 | 1400 | 0.22 | 12 | 5100 | 4450 |
| | 7.00 | 110 | 168 | 250 | 1000 | 0.12 | 10 | 5480 | 4470 |
| | 10.00 | 110 | 121 | 182 | 700 | 0.059 | 7.6 | 5480 | 5330 |

| | |
|---|---|
| **i** | Gear unit reduction ratio |
| **$M_{amax}$** | Maximum permitted output torque for continuous duty |
| **$M_{apk}$** | Maximum permitted output torque for short-time duty |
| **$M_{aNotaus}$** | Maximum permitted output emergency stop torque, max. 1000 emergency stops |
| **$n_{ak}$** | Breakpoint speed (output) |
| **$J_{GA}$** | Mass moment of inertia of the gear unit with reference to the input shaft |
| **$c_T$** | Torsional rigidity of the gear unit |
| **$F_{Ramax}$** | Maximum permitted overhung load at the output shaft for continuous duty, load application point is the center of the shaft end |
| **$F_{Rapk}$** | Maximum permitted overhung load at the output shaft for short-time duty, load application point is the center of the shaft end |

## *2.2 Important notes regarding the dimension sheets*

### *Scope of delivery*

= Standard parts supplied by SEW-EURODRIVE.

= Standard parts not supplied by SEW-EURODRIVE.

### *Tolerances*

*Shaft heights*

The following tolerances apply to the indicated dimensions:

| | | |
|---|---|---|
| h | ≤ 250 mm | → -0.5 mm |
| h | > 250 mm | → -1 mm |

**Foot-mounted gear units:** Check the mounted motor because it may project below the mounting surface.

*Shaft ends*

Diameter tolerance:

| | | |
|---|---|---|
| ∅ | ≤ 50 mm | → ISO k6 |
| ∅ | > 50 mm | → ISO m6 |

Center bores according to DIN 332, shape DR:

| | | | | | |
|---|---|---|---|---|---|
| ∅ | = 7 - 10 mm | → M3 | ∅ | > 30 - 38 mm | → M12 |
| ∅ | > 10 - 13 mm | → M4 | ∅ | > 38 - 50 mm | → M16 |
| ∅ | > 13 - 16 mm | → M5 | ∅ | > 50 - 85 mm | → M20 |
| ∅ | > 16 - 21 mm | → M6 | ∅ | > 85 - 130 mm | → M24 |
| ∅ | > 21 - 24 mm | → M8 | ∅ | > 130 mm | → M30 |
| ∅ | > 24 - 30 mm | → M10 | | | |

Keys: according to DIN 6885 (domed type)

*Hollow shafts*

Diameter tolerance:

∅ → ISO H7 measured with plug gauge

Keys: according to DIN 6885 (domed type)

Exception: Key for WA37 with shaft ∅ 25 mm according to DIN 6885-3 (low form)

*Multiple-spline shafts*

Dm = Measuring roller diameter

Me = Check size

*Flanges*

Centering shoulder tolerance:

∅ ≤ 230 mm (flange sizes A120 Ð A300) → ISO j6

∅ > 230 mm (flange sizes A350  A660) → ISO h6

Up to three different flange dimensions are available for each size of helical gear unit, SPIROPLAN® gear unit, AC (brake) motor and explosion-proof AC (brake) motor. The respective dimension drawings will show the flanges approved for each size.

***Eyebolts, lifting eyes***

R07 - R27 helical gear units and SPIROPLAN® gearmotors W..10 to W..30 are delivered without special transportation fixtures. All other gear units and motors are equipped with cast-on suspension eye lugs, screw-on suspension eye lugs or screw-on lifting eyebolts.

| Gear unit/motor type | screw-on, | | cast-on eyebolts |
|---|---|---|---|
| | Eyebolts | Lifting eyes | |
| **R..37-R..57** | - | • | - |
| **R..67-R..107** | • | - | - |
| **RX57-RX67** | - | • | - |
| **RX77-RX107** | • | - | - |
| **F..27-F..157** | - | - | • |
| **K..37-K..157** | - | - | • |
| **K..167-K..187** | • | - | - |
| **W..37, W..47** | - | • | - |
| S..37-S..47 | - | • | - |
| **S..57-S..97** | - | - | • |
| **BS.F502 - 802** | - | • | - |
| **PS.F621 - 921** | - | • | - |
| **PS.F622 - 922** | - | • | - |

***Breather valves***

The gear unit dimension drawings always show the screw plugs. The corresponding screw plug is replaced by an activated breather valve at the factory depending on the ordered mounting position M1 to M6. The result may be slightly altered contour dimensions.

***Shrink disk connection***

Hollow shaft gear unit with shrink disk connection: If required, please request a detailed data sheet on shrink disks, data sheet no. 33 753 ..95.

***Splined shaft***

FV.. hollow shaft gear unit sizes 27 to 107, and KV.. sizes 37 to 107 are supplied with splining according to DIN 5480.

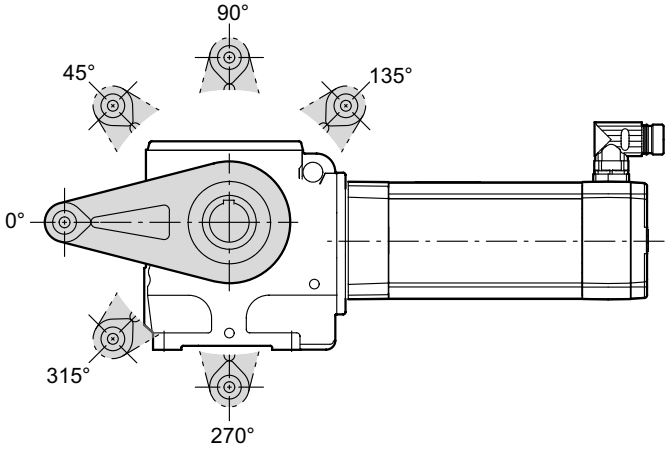
***Rubber buffers for FA/FH/FV/FT***

Preload rubber buffer by the indicated value mL. The characteristic curve of spring for the rubber buffers is available at SEW-EURODRIVE on request.

***Position of the torque arm***

The following illustration shows the possible torque arm positions for helical-worm, SPIROPLAN® and BS.F gear units as well as the respective angles:

Position of the torque arm for S and W gear units:

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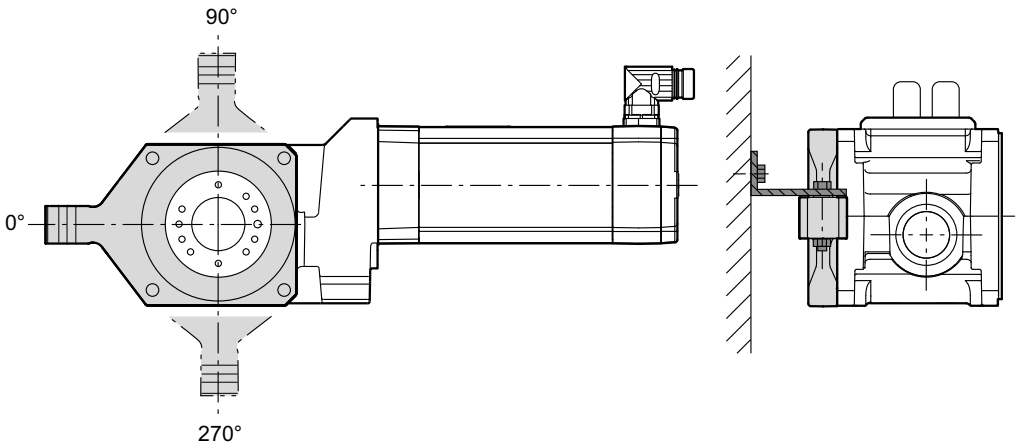
Specifications regarding torque arms of helical-worm gearmotors are provided in the dimension sheets from Seite 440, for specifications regarding the torque arms for SPIROPLAN® gearmotors, refer to the catalog "Synchronous Servo Gearmotors".

Position of the torque arm for BS.F gear units:

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For specifications regarding the torque arms for helical-bevel gearmotors, refer to the catalog "Synchronous Servo Gearmotors"

***Tolerances and chamfers of flange block gear units***

| | |
|---|---|
| Internal centering | → ISO H7 |
| External centering | → ISO h7 |

For further information, refer to the catalog "Synchronous Servo Gearmotors".

***Front and foot-end mounting of BS.F..B gear units***

For further information, refer to the catalog "Synchronous Servo Gearmotors"

## 2.3 Gearmotor dimensions

***Motor options***

The motor dimensions may change when installing motor options. Refer to the dimension drawings of the motor options.

***Special designs***

The terminal box dimensions in special designs might vary from the standard.

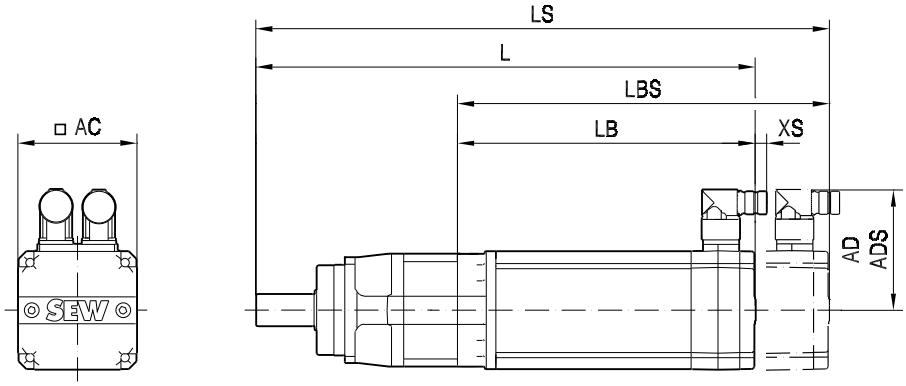
***EN 50347***

European standard EN 50347 became effective in August 2001. This standard adopts the dimension designations for three-phase AC motors for sizes 56 to 315M and flange sizes 65 to 740 from the IEC 72-1 standard.

The new dimension designations given in EN 50347 / IEC 72-1 are used for the dimensions in question in the dimension tables of the dimensions sheets.

***Gearmotor dimensions***

The dimensions of the gearmotors are described below:

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| | | | |
|---|---|---|---|
| L | Total length of gearmotor | AC | Diameter of motor |
| LS | Total length of gearmotor including brake | AD | Center of motor shaft to top part of terminal box |
| LB | Length of motor | ADS | Center of brakemotor shaft to top part of terminal box |
| LBS | Length of brakemotor | XS | Projecting length of the plug connector beyond the motor housing |

| | |
|---|---|
| | **INFORMATION** |
| | For motors with other feedback systems than resolvers, possible additional lengths must be considered. |

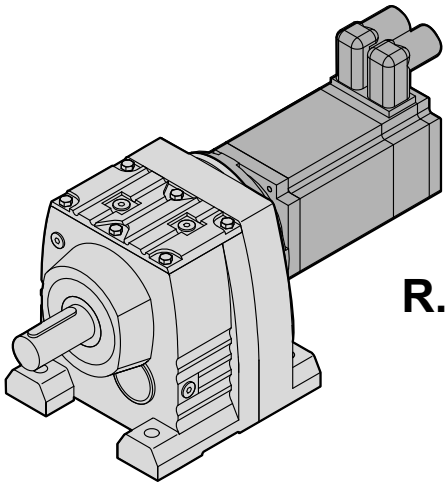
## 2.4 Information regarding the dimensions of CMPZ motors

CMPZ motors differ from CMP motors in the additional rotor mass. This additional rotor mass makes CMPZ motors longer than CMP motors.

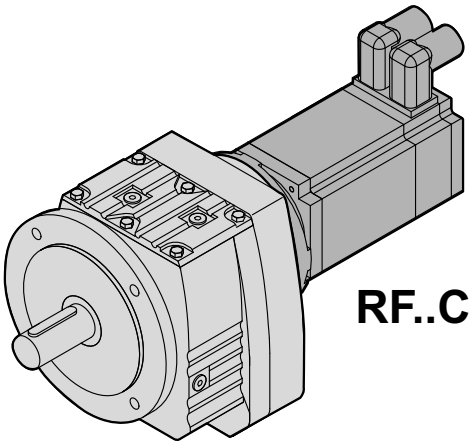
For additional lengths of CMPZ motors, refer to the tables in chapter "Technical data of CMPZ motors" on Seite 99 and subsequent pages.

# 3 Helical Gearmotors – R-Series Gear Units

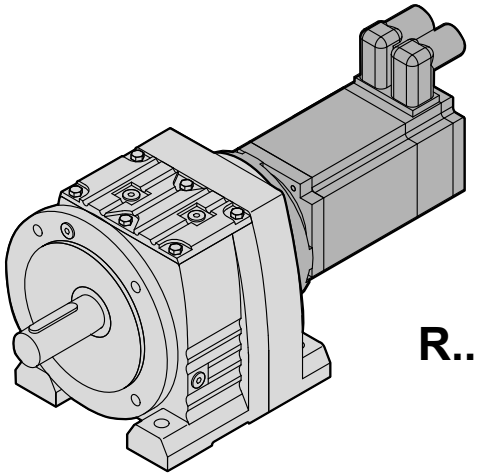
## *3.1 Variants*



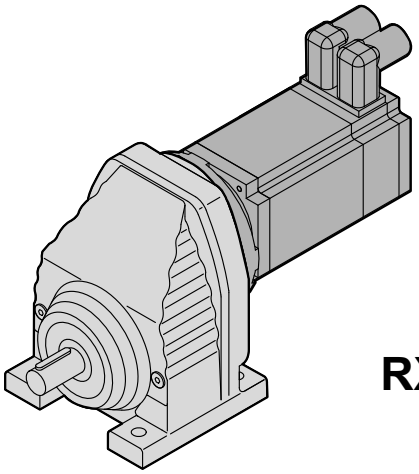
**R..CMP..**



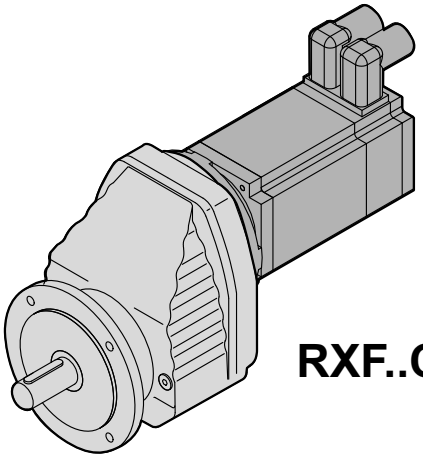
**RF..CMP..**



**R..F CMP..**



**RX..CMP..**



**RXF..CMP..**

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## *3.2 R17/CMP – selection tables, dimension sheets*

### 3.2.1 R 17

| $M_{aDyn}$ [Nm] | | CMP | | |
|---|---|---|---|---|
| | i | 50S | 50M | 63S |
| R17 2 | 3.83 | 19 | 38 | 41 |
| | 4.51 | 23 | 45 | 49 |
| | 5.09 | 26 | 51 | 55 |
| | 5.76 | 29 | 58 | >59 |
| | 6.15 | 31 | >57 | >57 |
| | 7.04 | 36 | >58 | >58 |
| | 7.55 | 38 | >59 | >59 |
| | 8.63 | 43 | 85 | >86 |
| | 10.15 | 51 | >86 | >86 |
| | 11.45 | 57 | >86 | >86 |
| | 12.98 | 65 | >86 | >86 |
| | 13.84 | 69 | >86 | >86 |
| | 15.84 | 79 | >86 | >86 |
| | 16.99 | 85 | >86 | >86 |
| | 19.71 | >86 | >86 | >86 |
| | 23.15 | >86 | | |
| | 25.23 | >86 | | |
| R17 3 | 24.07 | >86 | >86 | >86 |
| | 28.32 | >86 | >86 | >86 |
| | 31.94 | >86 | >86 | >86 |
| | 36.20 | >86 | >86 | >86 |
| | 38.61 | >86 | >86 | >86 |
| | 44.18 | >86 | >86 | >86 |
| | 47.44 | >86 | >86 | >86 |
| | 53.76 | >86 | >86 | >86 |
| | 57.35 | >86 | >86 | >86 |
| | 65.61 | >86 | >86 | >86 |
| | 70.39 | >86 | >86 | >86 |
| | 81.64 | >86 | >86 | >86 |

| m [kg] | | CMP | | |
|---|---|---|---|---|
| | s | 50S | 50M | 63S |
| R17 | 2 | 6.8 | 8.2 | 9.2 |
| R17 | 3 | 7.1 | 8.5 | 9.5 |
| RF: + -0.1 kg | | | | |

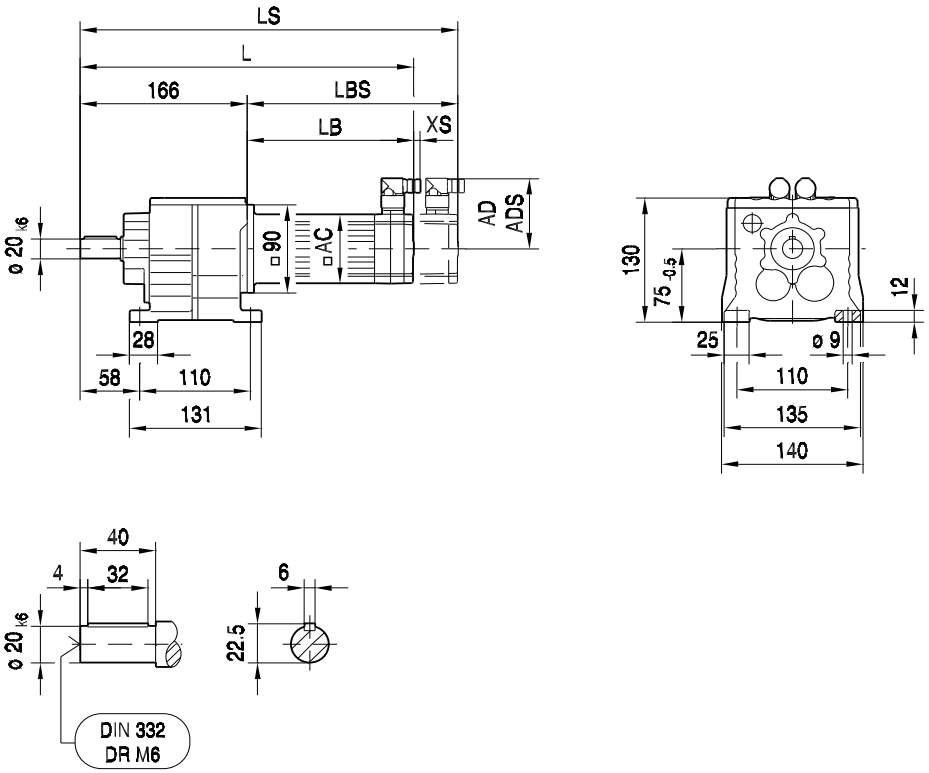
| CMP.. | i | $n_{epk}$ [1/min] | $\eta$ [%] | $c_{TG}$ R [Nm/'] | $c_{TG}$ RF [Nm/'] |
|---|---|---|---|---|---|
| R17 2 | 3.83 | 4500 | 97 | 3.0 | 3.0 |
| | 4.51 | 4500 | 97 | 3.0 | 3.0 |
| | 5.09 | 4500 | 97 | 3.0 | 3.0 |
| | 5.76 | 4500 | 97 | 3.0 | 3.0 |
| | 6.15 | 4500 | 97 | 3.0 | 3.0 |
| | 7.04 | 4500 | 97 | 3.0 | 3.0 |
| | 7.55 | 4500 | 97 | 3.0 | 3.0 |
| | 8.63 | 4500 | 96 | 4.4 | 4.3 |
| | 10.15 | 4500 | 96 | 4.4 | 4.3 |
| | 11.45 | 4500 | 96 | 4.4 | 4.3 |
| | 12.98 | 4500 | 96 | 4.4 | 4.3 |
| | 13.84 | 4500 | 96 | 4.4 | 4.3 |
| | 15.84 | 4500 | 96 | 4.4 | 4.3 |
| | 16.99 | 4500 | 96 | 4.4 | 4.3 |
| | 19.71 | 4500 | 96 | 4.4 | 4.3 |
| | 23.15 | 4500 | 96 | 4.4 | 4.3 |
| | 25.23 | 4500 | 96 | 4.4 | 4.3 |
| R17 3 | 24.07 | 4500 | 93 | 4.6 | 4.4 |
| | 28.32 | 4500 | 93 | 4.6 | 4.4 |
| | 31.94 | 4500 | 93 | 4.6 | 4.4 |
| | 36.20 | 4500 | 93 | 4.6 | 4.4 |
| | 38.61 | 4500 | 93 | 4.6 | 4.4 |
| | 44.18 | 4500 | 93 | 4.6 | 4.4 |
| | 47.44 | 4500 | 92 | 4.6 | 4.4 |
| | 53.76 | 4500 | 92 | 4.6 | 4.4 |
| | 57.35 | 4500 | 92 | 4.6 | 4.4 |
| | 65.61 | 4500 | 92 | 4.6 | 4.4 |
| | 70.39 | 4500 | 91 | 4.6 | 4.4 |
| | 81.64 | 4500 | 91 | 4.6 | 4.4 |

| CMP.. | | | | | | | $F_{Ramax}$ | | $F_{Rapk}$ | |
|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | R [N] | RF [N] | R [N] | RF [N] |
| R17 2 | 3.83 | 45 | 52 | 77 | 366 | 0.46 | 820 | 755 | 2500 | 2200 |
| | 4.51 | 48 | 54 | 82 | 310 | 0.35 | 870 | 795 | 2500 | 2200 |
| | 5.09 | 51 | 55 | 87 | 275 | 0.29 | 890 | 820 | 2500 | 2190 |
| | 5.76 | 53 | 59 | 90 | 243 | 0.24 | 930 | 860 | 2500 | 2180 |
| | 6.15 | 54 | 57 | 92 | 228 | 0.22 | 950 | 880 | 2500 | 2190 |
| | 7.04 | 55 | 58 | 94 | 227 | 0.18 | 1010 | 930 | 2500 | 2180 |
| | 7.55 | 56 | 59 | 95 | 225 | 0.16 | 1040 | 950 | 2500 | 2180 |
| | 8.63 | 72 | 86 | 122 | 162 | 0.39 | 1090 | 1000 | 1700 | 1510 |
| | 10.15 | 77 | 86 | 131 | 138 | 0.30 | 1140 | 1050 | 1700 | 1510 |
| | 11.45 | 81 | 86 | 138 | 122 | 0.26 | 1180 | 1080 | 1700 | 1510 |
| | 12.98 | 85 | 86 | 145 | 108 | 0.21 | 1230 | 1130 | 1700 | 1510 |
| | 13.84 | 85 | 86 | 145 | 108 | 0.20 | 1270 | 1160 | 1700 | 1510 |
| | 15.84 | 85 | 86 | 145 | 114 | 0.16 | 1350 | 1240 | 1700 | 1510 |
| | 16.99 | 85 | 86 | 145 | 112 | 0.15 | 1400 | 1280 | 1700 | 1510 |
| | 19.71 | 85 | 86 | 145 | 117 | 0.12 | 1500 | 1380 | 1700 | 1510 |
| | 23.15 | 85 | 86 | 145 | 117 | 0.090 | 1620 | 1480 | 1700 | 1510 |
| | 25.23 | 85 | 86 | 145 | 119 | 0.080 | 1680 | 1540 | 1700 | 1510 |

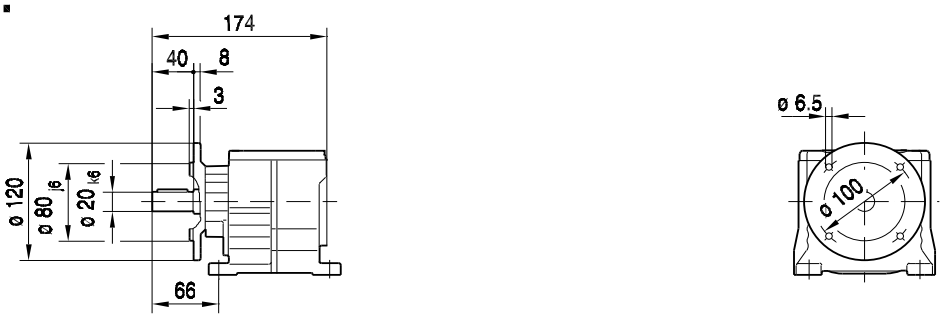
| CMP.. | | | | | | | $F_{Ramax}$ | | $F_{Rapk}$ | |
|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | R [N] | RF [N] | R [N] | RF [N] |
| R17 3 | 24.07 | 85 | 86 | 145 | 104 | 0.41 | 1650 | 1510 | 1700 | 1510 |
| | 28.32 | 85 | 86 | 145 | 106 | 0.32 | 1770 | 1560 | 1700 | 1510 |
| | 31.94 | 85 | 86 | 145 | 103 | 0.27 | 1770 | 1560 | 1700 | 1510 |
| | 36.20 | 85 | 86 | 145 | 105 | 0.22 | 1770 | 1560 | 1700 | 1510 |
| | 38.61 | 85 | 86 | 145 | 104 | 0.20 | 1770 | 1560 | 1700 | 1510 |
| | 44.18 | 85 | 86 | 145 | 104 | 0.17 | 1770 | 1560 | 1700 | 1510 |
| | 47.44 | 85 | 86 | 145 | 110 | 0.25 | 1770 | 1560 | 1700 | 1510 |
| | 53.76 | 85 | 86 | 145 | 108 | 0.21 | 1770 | 1560 | 1700 | 1510 |
| | 57.35 | 85 | 86 | 145 | 108 | 0.19 | 1770 | 1560 | 1700 | 1510 |
| | 65.61 | 85 | 86 | 145 | 107 | 0.16 | 1770 | 1560 | 1700 | 1510 |
| | 70.39 | 85 | 86 | 145 | 99 | 0.14 | 1770 | 1560 | 1700 | 1510 |
| | 81.64 | 85 | 86 | 145 | 86 | 0.11 | 1770 | 1560 | 1700 | 1510 |

01 028 00 07

## R17..



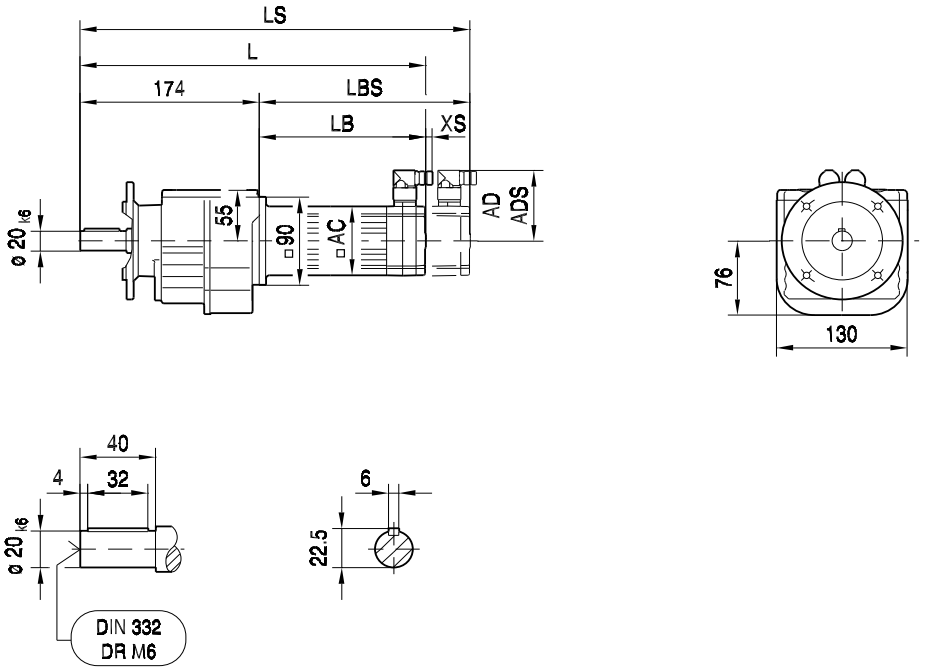

## R17F..



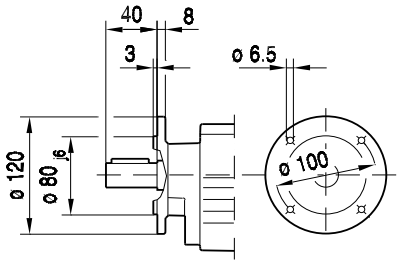

| (→ 📖 9) | CMP50S | CMP50M | CMP63S | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 88 | | | | | |
| **AD** | 86 | 86 | 92 | | | | | |
| **ADS** | 86 | 86 | 92 | | | | | |
| **L** | 312 | 351 | 347 | | | | | |
| **LS** | 341 | 380 | 376 | | | | | |
| **LB** | 146 | 185 | 181 | | | | | |
| **LBS** | 175 | 214 | 210 | | | | | |
| **XS** | 18 | 18 | 14 | | | | | |

**01 029 00 07**

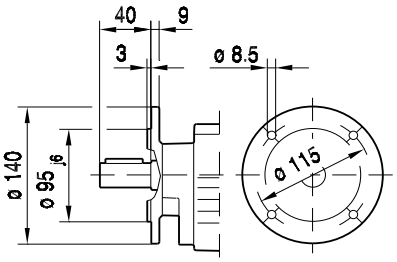
## RF17..



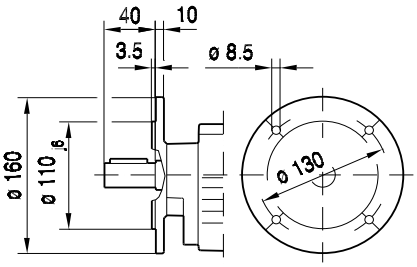

### ø 120




### ø 140



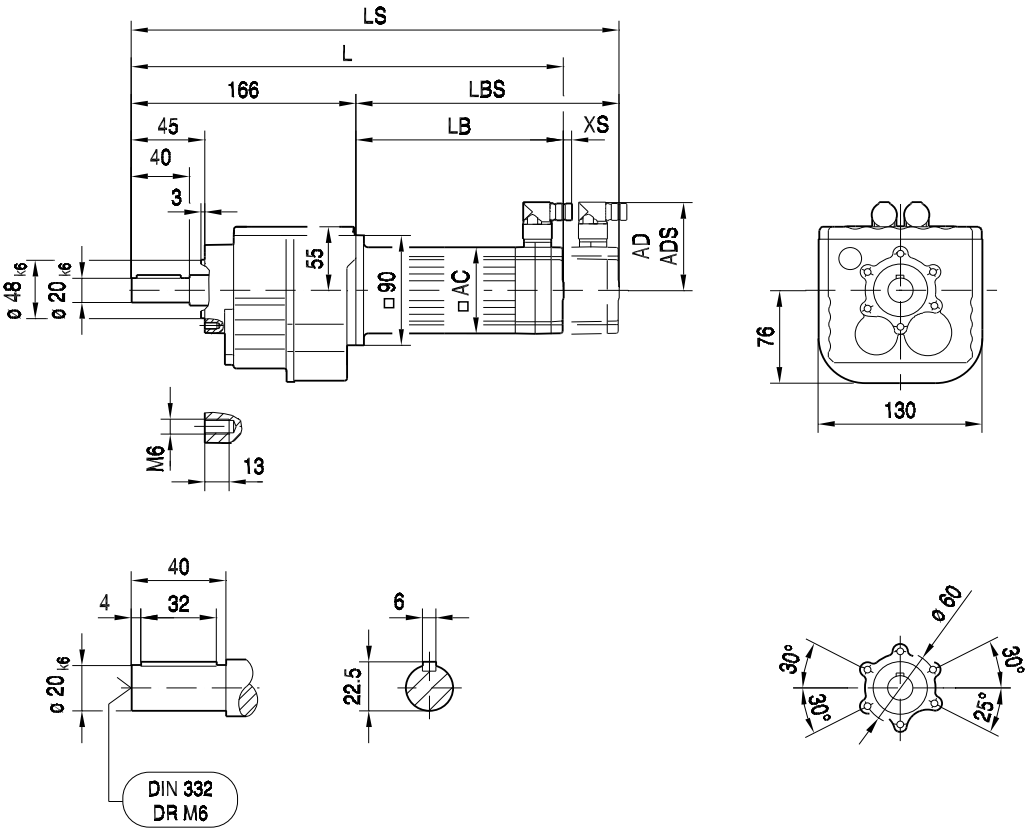

### ø 160




| (→ 📖 9) | CMP50S | CMP50M | CMP63S | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 88 | | | | | |
| **AD** | 86 | 86 | 92 | | | | | |
| **ADS** | 86 | 86 | 92 | | | | | |
| **L** | 320 | 359 | 355 | | | | | |
| **LS** | 349 | 388 | 384 | | | | | |
| **LB** | 146 | 185 | 181 | | | | | |
| **LBS** | 175 | 214 | 210 | | | | | |
| **XS** | 18 | 18 | 14 | | | | | |

01 030 00 07

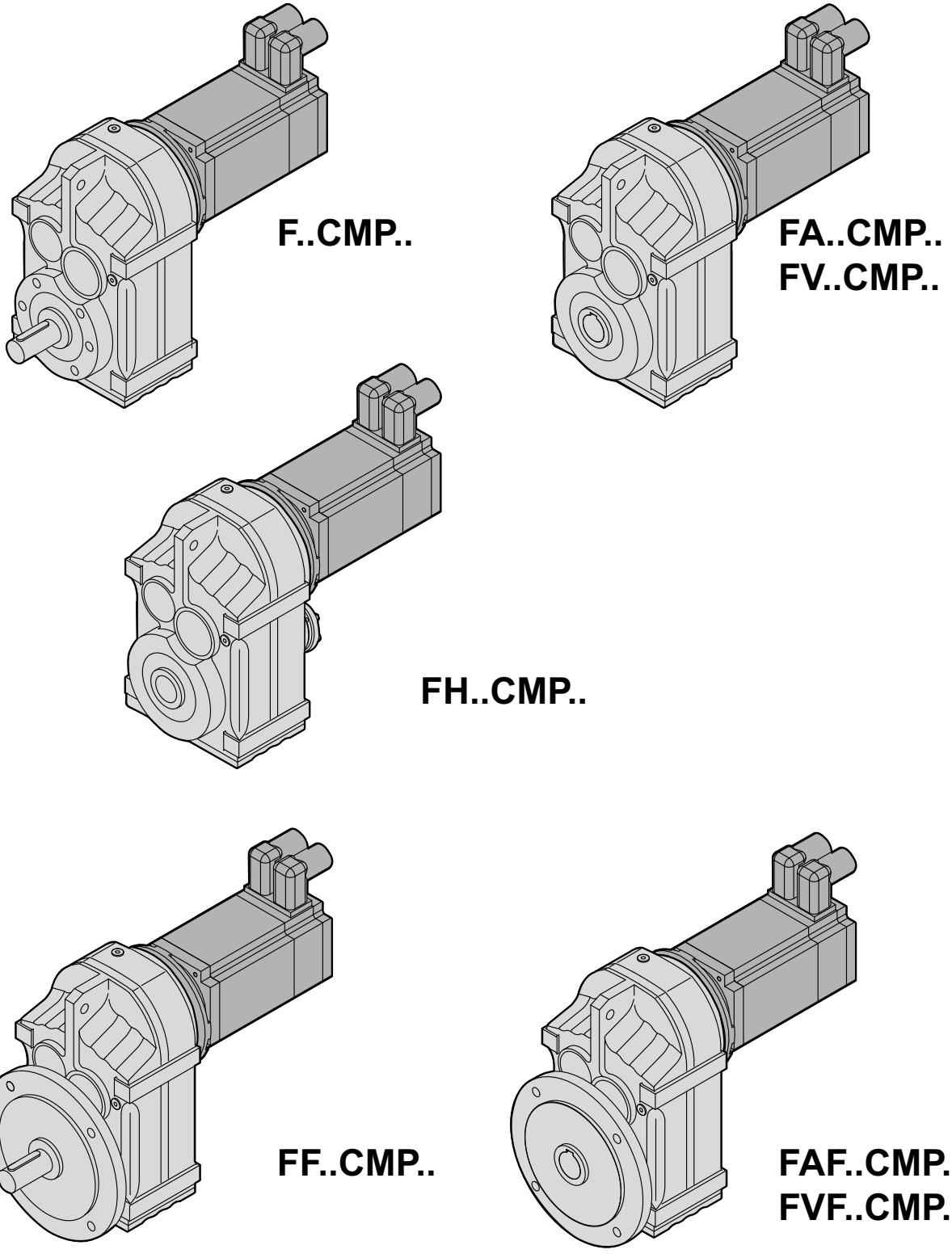
**RZ17..**

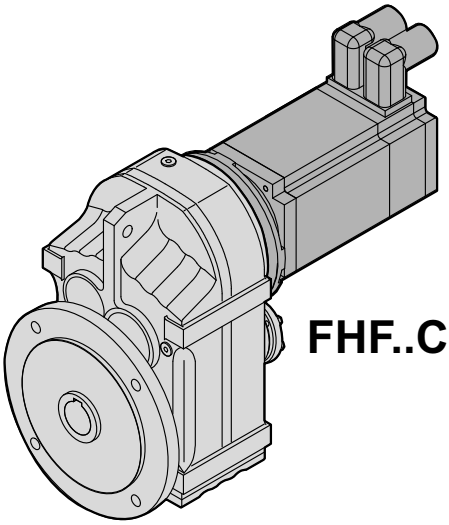



| (→ 📖 9) | CMP50S | CMP50M | CMP63S | | | | | |
|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 88 | | | | | |
| **AD** | 86 | 86 | 92 | | | | | |
| **ADS** | 86 | 86 | 92 | | | | | |
| **L** | 312 | 351 | 347 | | | | | |
| **LS** | 341 | 380 | 376 | | | | | |
| **LB** | 146 | 185 | 181 | | | | | |
| **LBS** | 175 | 214 | 210 | | | | | |
| **XS** | 18 | 18 | 14 | | | | | |

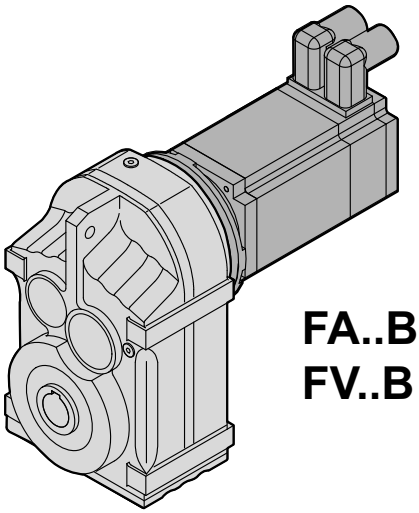
# 4 Parallel-Shaft Helical Gearmotors – F-Series Gear Units

## *4.1 Variants*

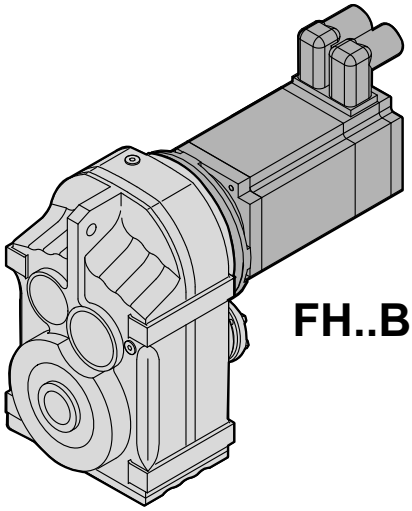




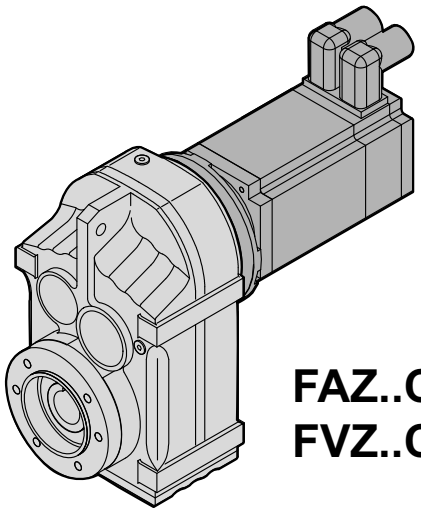
**FHF..CMP..**



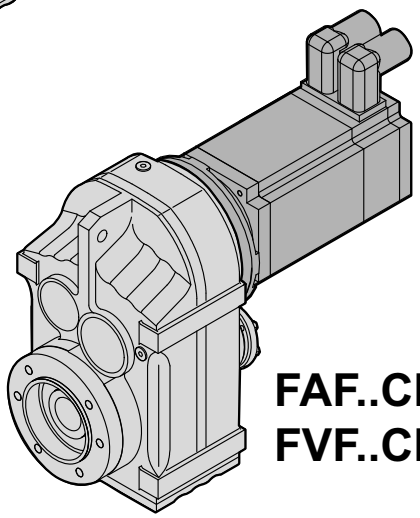
**FA..B CMP..**
**FV..B CMP..**



**FH..B CMP..**



**FAZ..CMP..**
**FVZ..CMP..**



**FAF..CMP..**
**FVF..CMP..**

65962axx

## *4.2 F27 – 47/CMP – selection tables, dimension sheets*

### 4.2.1 F 27

| $M_{aDyn}$ [Nm] | | CMP | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | i | 40M | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| FA27 2 | 4.16 | 15 | 21 | 42 | 62 | 45 | 86 | 123 | 77 | 124 | 111 |
| | 4.93 | 18 | 25 | 49 | 74 | 53 | 102 | >144 | 92 | >144 | 132 |
| | 5.27 | 19 | 27 | 53 | 79 | 57 | 109 | >150 | 98 | >150 | 141 |
| | 6.17 | 23 | 31 | 62 | 92 | 66 | 128 | >163 | 115 | >163 | >163 |
| | 6.91 | 25 | 35 | 69 | 103 | 74 | 143 | >163 | 129 | >163 | >163 |
| | 8.13 | 30 | 41 | 81 | 121 | 88 | >163 | >163 | 151 | >163 | >163 |
| | 9.40 | 35 | 47 | 94 | 140 | 101 | >163 | | >163 | | |
| | 9.88 | 36 | 50 | 99 | 148 | 106 | >157 | >157 | >157 | >157 | >157 |
| | 10.55 | 39 | 53 | 105 | >157 | 114 | >157 | >157 | >157 | >157 | >157 |
| | 12.35 | 46 | 62 | 123 | >157 | 133 | >157 | >157 | >157 | >157 | >157 |
| | 13.84 | 51 | 70 | 138 | >157 | 149 | >157 | >157 | >157 | >157 | >157 |
| | 16.28 | 60 | 82 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 |
| | 18.84 | 69 | 95 | >157 | >157 | >157 | >157 | | >157 | | |
| | 20.15 | 74 | 102 | >157 | >157 | >157 | >157 | | >157 | | |
| | 23.25 | 86 | 117 | >157 | | >157 | | | | | |
| | 27.18 | 99 | 136 | | | | | | | | |
| | 29.56 | 108 | 148 | | | | | | | | |
| FA27 3 | 33.83 | 122 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 |
| | 38.33 | 138 | >157 | >157 | >157 | >157 | >157 | | >157 | | |
| | 40.89 | 148 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 |
| | 46.78 | >157 | >157 | >157 | >157 | >157 | >157 | | >157 | | |
| | 50.19 | >157 | >157 | >157 | >157 | >157 | >157 | | >157 | | |
| | 56.62 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 |
| | 63.86 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 |
| | 72.37 | >157 | >157 | >157 | >157 | >157 | >157 | | >157 | | |
| | 77.21 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 | >157 |
| | 88.32 | >157 | >157 | >157 | >157 | >157 | >157 | | >157 | | |
| | 94.76 | >157 | >157 | >157 | >157 | >157 | >157 | | >157 | | |
| | 109.90 | >157 | >157 | >157 | | >157 | | | | | |
| | 129.09 | >157 | >157 | | | | | | | | |
| | 140.74 | >157 | >157 | | | | | | | | |

| m [kg] | | CMP | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | 40M | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| FA27 | 2 | 7.1 | 8.8 | 9.7 | 11 | 11 | 12 | 14 | 14 | 15 | 21 |
| FA27 | 3 | 7.4 | 9.1 | 10.0 | 11 | 11 | 13 | 14 | 14 | 15 | 22 |
| FAF: + 0.7 kg / F: + 0.5 kg / FF: + 1.3 kg | | | | | | | | | | | |

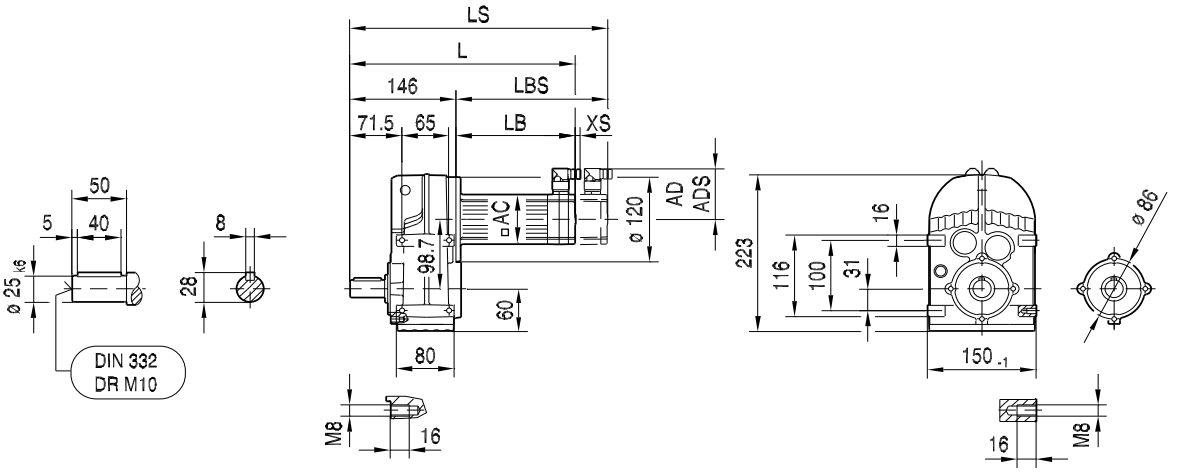
| CMP.. | i | $n_{epk}$ [1/min] | $\eta$ [%] | $c_{TG}$ FA [Nm/'] | FAF [Nm/'] | F [Nm/'] | FF [Nm/'] |
|---|---|---|---|---|---|---|---|
| | 4.16 | 4120 | 97 | 46 | 46 | 21 | 18 |
| | 4.93 | 4500 | 97 | 46 | 46 | 21 | 18 |
| | 5.27 | 4500 | 97 | 46 | 46 | 21 | 18 |
| | 6.17 | 4500 | 97 | 46 | 46 | 21 | 18 |
| | 6.91 | 4500 | 97 | 46 | 46 | 21 | 18 |
| | 8.13 | 4500 | 97 | 46 | 46 | 21 | 18 |
| | 9.40 | 4500 | 97 | 46 | 46 | 21 | 18 |
| FA27 | 9.88 | 4500 | 97 | 83 | 83 | 26 | 22 |
| 2 | 10.55 | 4500 | 97 | 83 | 83 | 26 | 22 |
| | 12.35 | 4500 | 97 | 83 | 83 | 26 | 22 |
| | 13.84 | 4500 | 97 | 83 | 83 | 26 | 22 |
| | 16.28 | 4500 | 97 | 83 | 83 | 26 | 22 |
| | 18.84 | 4500 | 97 | 83 | 83 | 26 | 22 |
| | 20.15 | 4500 | 97 | 83 | 83 | 26 | 22 |
| | 23.25 | 4500 | 97 | 83 | 83 | 26 | 22 |
| | 27.18 | 4500 | 96 | 83 | 83 | 26 | 22 |
| | 29.56 | 4500 | 96 | 83 | 83 | 26 | 22 |
| | 33.83 | 4500 | 95 | 95 | 95 | 27 | 23 |
| | 38.33 | 4500 | 95 | 95 | 95 | 27 | 23 |
| | 40.89 | 4500 | 95 | 95 | 95 | 27 | 23 |
| | 46.78 | 4500 | 94 | 95 | 95 | 27 | 23 |
| | 50.19 | 4500 | 94 | 95 | 95 | 27 | 23 |
| | 56.62 | 4500 | 94 | 99 | 99 | 27 | 23 |
| FA27 | 63.86 | 4500 | 94 | 99 | 99 | 27 | 23 |
| 3 | 72.37 | 4500 | 93 | 99 | 99 | 27 | 23 |
| | 77.21 | 4500 | 93 | 99 | 99 | 27 | 23 |
| | 88.32 | 4500 | 93 | 99 | 99 | 27 | 23 |
| | 94.76 | 4500 | 92 | 99 | 99 | 27 | 23 |
| | 109.90 | 4500 | 92 | 99 | 99 | 27 | 23 |
| | 129.09 | 4500 | 91 | 99 | 99 | 27 | 23 |
| | 140.74 | 4500 | 90 | 99 | 99 | 27 | 23 |

| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | FA [N] | FAF [N] | F [N] | FF [N] | FA [N] | FAF [N] | F [N] | FF [N] |
| | 4.16 | 87 | 130 | 148 | 361 | 1.4 | 1810 | 1810 | 1380 | 1180 | 4500 | 4500 | 4500 | 4500 |
| | 4.93 | 96 | 144 | 163 | 304 | 1.0 | 1860 | 1860 | 1420 | 1210 | 4500 | 4500 | 4500 | 4500 |
| | 5.27 | 100 | 150 | 170 | 266 | 0.90 | 1880 | 1880 | 1440 | 1220 | 4500 | 4500 | 4500 | 4500 |
| | 6.17 | 109 | 163 | 185 | 227 | 0.68 | 1940 | 1940 | 1480 | 1260 | 4500 | 4500 | 4500 | 4500 |
| | 6.91 | 114 | 163 | 194 | 217 | 0.56 | 2000 | 2000 | 1530 | 1300 | 4500 | 4500 | 4500 | 4500 |
| | 8.13 | 123 | 163 | 209 | 172 | 0.42 | 2080 | 2080 | 1580 | 1350 | 4500 | 4500 | 4500 | 4500 |
| | 9.40 | 130 | 163 | 221 | 160 | 0.33 | 2170 | 2170 | 1660 | 1410 | 4500 | 4500 | 4500 | 4500 |
| FA27 | 9.88 | 130 | 157 | 221 | 202 | 0.74 | 2400 | 2400 | 1830 | 1560 | 4500 | 4500 | 4500 | 4500 |
| 2 | 10.55 | 130 | 157 | 221 | 209 | 0.67 | 2490 | 2490 | 1900 | 1620 | 4500 | 4500 | 4500 | 4500 |
| | 12.35 | 130 | 157 | 221 | 211 | 0.51 | 2700 | 2700 | 2060 | 1760 | 4500 | 4500 | 4500 | 4500 |
| | 13.84 | 130 | 157 | 221 | 210 | 0.43 | 2860 | 2860 | 2180 | 1860 | 4500 | 4500 | 4500 | 4500 |
| | 16.28 | 130 | 157 | 221 | 209 | 0.32 | 3110 | 3110 | 2370 | 2020 | 4500 | 4500 | 4500 | 4500 |
| | 18.84 | 130 | 157 | 221 | 212 | 0.26 | 3340 | 3340 | 2550 | 2170 | 4500 | 4500 | 4500 | 4500 |
| | 20.15 | 130 | 157 | 221 | 213 | 0.23 | 3450 | 3450 | 2630 | 2240 | 4500 | 4500 | 4500 | 4500 |
| | 23.25 | 130 | 157 | 221 | 215 | 0.19 | 3690 | 3690 | 2820 | 2400 | 4500 | 4500 | 4500 | 4500 |
| | 27.18 | 130 | 157 | 221 | 217 | 0.15 | 3970 | 3970 | 3030 | 2580 | 4500 | 4500 | 4500 | 4500 |
| | 29.56 | 130 | 157 | 221 | 220 | 0.13 | 4120 | 4120 | 3140 | 2680 | 4500 | 4500 | 4500 | 4500 |

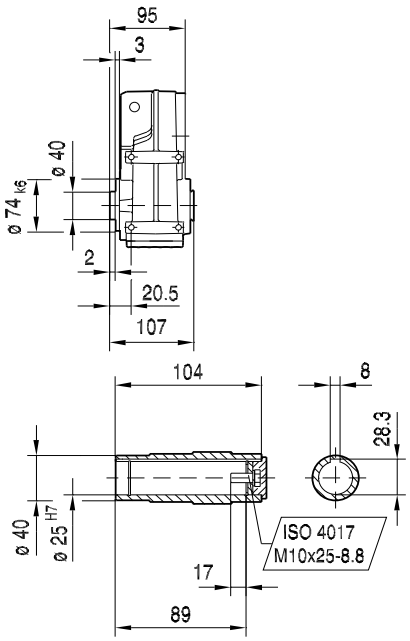
| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | FA [N] | FAF [N] | F [N] | FF [N] | FA [N] | FAF [N] | F [N] | FF [N] |
| FA27 3 | 33.83 | 130 | 157 | 221 | 166 | 0.31 | 4380 | 4380 | 3340 | 2850 | 4500 | 4500 | 4500 | 4500 |
| | 38.33 | 130 | 157 | 221 | 167 | 0.26 | 4500 | 4500 | 3530 | 3010 | 4500 | 4500 | 4500 | 4500 |
| | 40.89 | 130 | 157 | 221 | 166 | 0.23 | 4500 | 4500 | 3640 | 3100 | 4500 | 4500 | 4500 | 4500 |
| | 46.78 | 130 | 157 | 221 | 150 | 0.18 | 4500 | 4500 | 3860 | 3290 | 4500 | 4500 | 4500 | 4500 |
| | 50.19 | 130 | 157 | 221 | 139 | 0.17 | 4500 | 4500 | 3980 | 3390 | 4500 | 4500 | 4500 | 4500 |
| | 56.62 | 130 | 157 | 221 | 124 | 0.31 | 4500 | 4500 | 4180 | 3570 | 4500 | 4500 | 4500 | 4500 |
| | 63.86 | 130 | 157 | 221 | 110 | 0.26 | 4500 | 4500 | 4400 | 3750 | 4500 | 4500 | 4500 | 4500 |
| | 72.37 | 130 | 157 | 221 | 97 | 0.22 | 4500 | 4500 | 4500 | 3960 | 4500 | 4500 | 4500 | 4500 |
| | 77.21 | 130 | 157 | 221 | 91 | 0.20 | 4500 | 4500 | 4500 | 4060 | 4500 | 4500 | 4500 | 4500 |
| | 88.32 | 130 | 157 | 221 | 79 | 0.16 | 4500 | 4500 | 4500 | 4290 | 4500 | 4500 | 4500 | 4500 |
| | 94.76 | 130 | 157 | 221 | 74 | 0.15 | 4500 | 4500 | 4500 | 4420 | 4500 | 4500 | 4500 | 4500 |
| | 109.90 | 130 | 157 | 221 | 64 | 0.12 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 |
| | 129.09 | 130 | 157 | 221 | 54 | 0.090 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 |
| | 140.74 | 130 | 157 | 221 | 50 | 0.080 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 | 4500 |

42 008 00 07

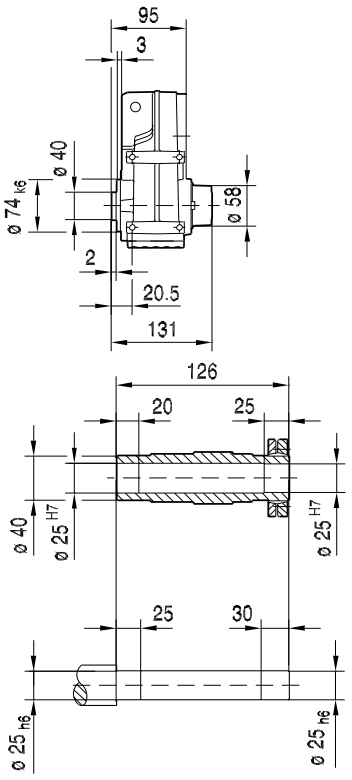
## F27..



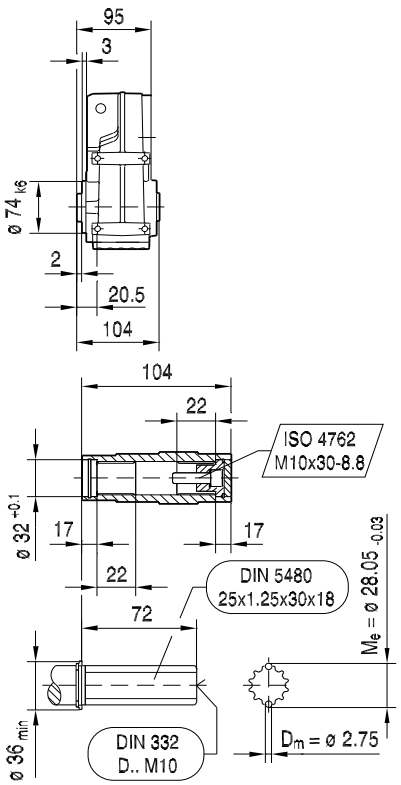

## FA27B..




## FH27B..



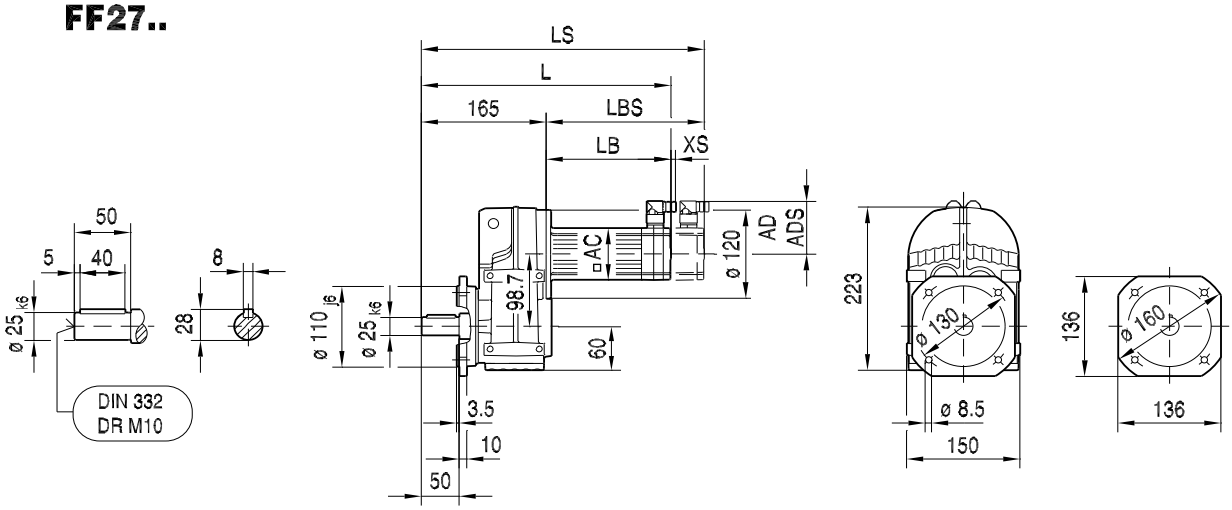

## FV27B..



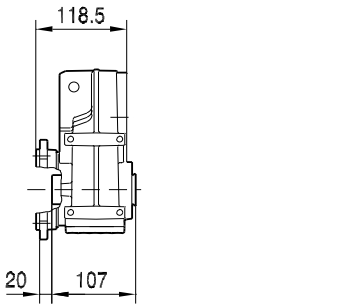

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 289 | 291 | 330 | 369 | 326 | 376 | 429 | 318 | 346 | 358 |
| **LS** | 319 | 320 | 359 | 398 | 354 | 404 | 458 | 383 | 411 | 436 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

42 009 00 07

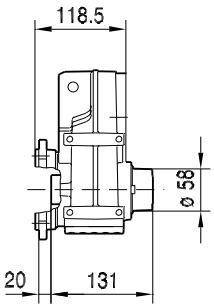
**FF27..**



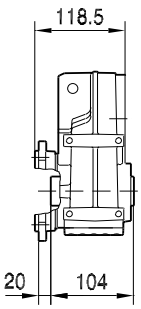

**FAF27..**

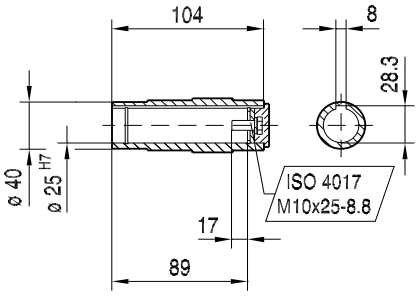


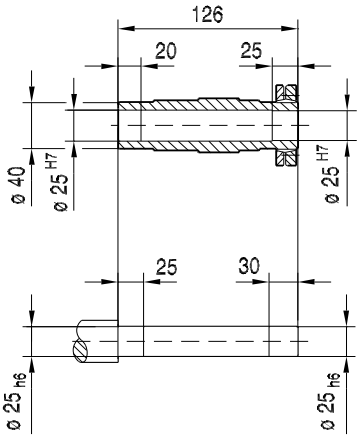

**FHF27..**

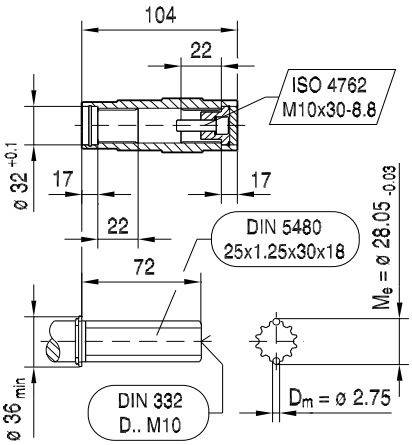



**FVF27..**



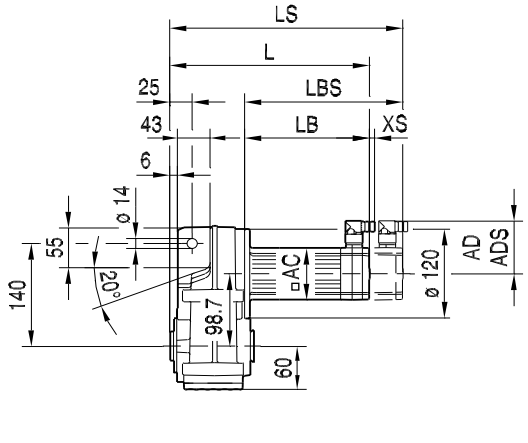



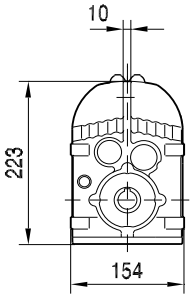



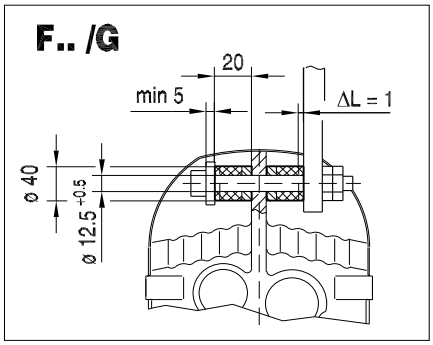

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 308 | 310 | 349 | 388 | 345 | 395 | 448 | 337 | 365 | 377 |
| **LS** | 338 | 339 | 378 | 417 | 373 | 423 | 477 | 402 | 430 | 455 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

## FA27..

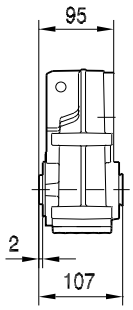
42 010 00 07

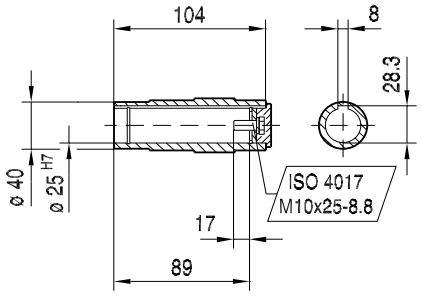


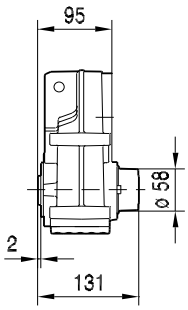



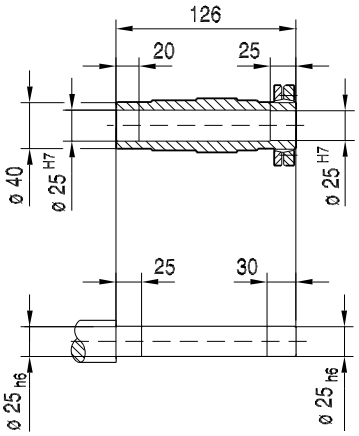

## FA27..



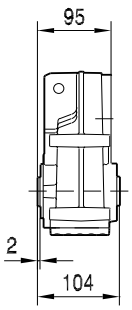



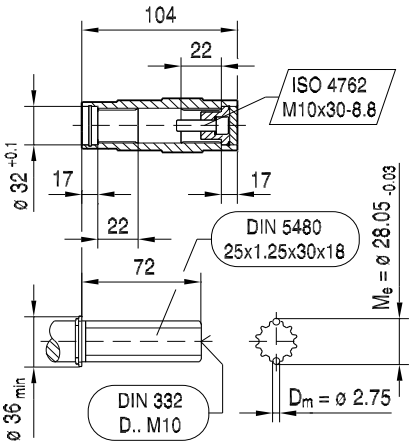

## FH27..




## FV27..

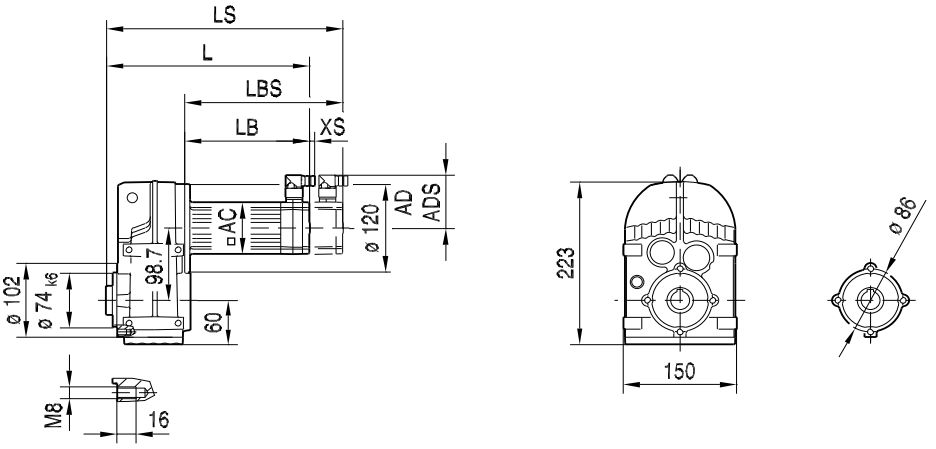


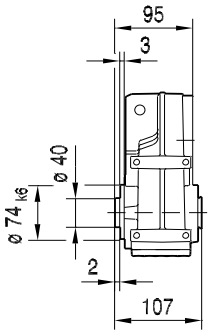

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 238 | 240 | 279 | 318 | 275 | 325 | 378 | 267 | 295 | 307 |
| **LS** | 268 | 269 | 308 | 347 | 303 | 353 | 407 | 332 | 360 | 385 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

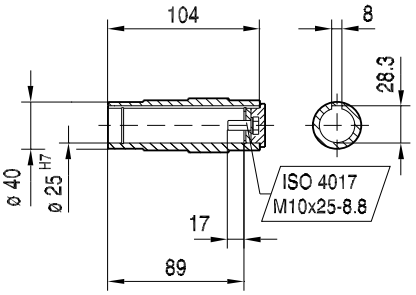
## FAZ27..

42 011 00 07

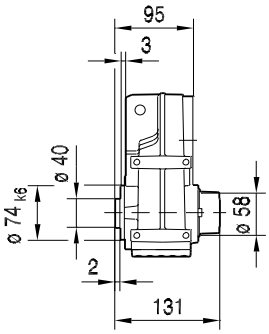


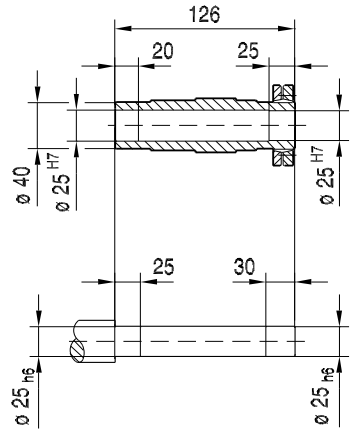

## FAZ27..



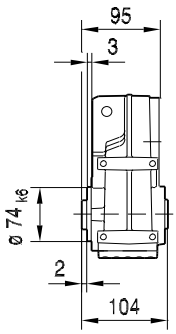



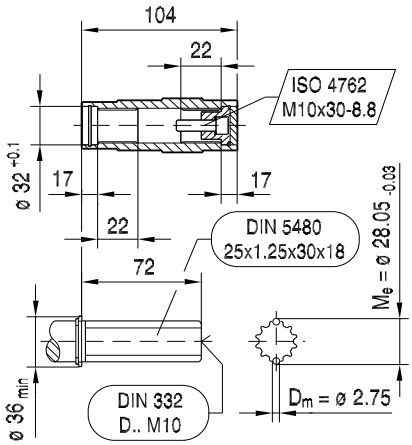

## FHZ27..




## FVZ27..




| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 238 | 240 | 279 | 318 | 275 | 325 | 378 | 267 | 295 | 307 |
| **LS** | 268 | 269 | 308 | 347 | 303 | 353 | 407 | 332 | 360 | 385 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

### 4.2.2 F 37

| $M_{aDyn}$ [Nm] | | CMP | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | i | 40M | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| FA37 2 | 3.77 | 14 | 19 | 38 | 56 | 41 | 78 | 111 | 70 | 113 | 101 |
| | 4.22 | 16 | 21 | 42 | 63 | 45 | 88 | 124 | 79 | 126 | 113 |
| | 4.90 | 18 | 25 | 49 | 73 | 53 | 102 | 144 | 91 | 146 | 131 |
| | 5.21 | 19 | 26 | 52 | 78 | 56 | 108 | 154 | 97 | 156 | 139 |
| | 6.05 | 22 | 31 | 60 | 90 | 65 | 126 | 178 | 113 | 181 | 161 |
| | 6.74 | 25 | 34 | 67 | 101 | 73 | 140 | >188 | 126 | >188 | 180 |
| | 7.44 | 27 | 38 | 74 | 111 | 80 | 154 | | 139 | | |
| | 8.01 | 30 | 40 | 80 | 120 | 86 | 166 | 235 | 149 | 235 | 210 |
| | 8.97 | 33 | 45 | 90 | 134 | 97 | 186 | >240 | 167 | >240 | 235 |
| | 10.42 | 38 | 53 | 104 | 156 | 112 | 215 | >240 | 194 | >240 | >240 |
| | 11.08 | 41 | 56 | 111 | 166 | 119 | 225 | >240 | 205 | >240 | >240 |
| | 12.87 | 47 | 65 | 129 | 192 | 139 | >240 | >240 | 235 | >240 | >240 |
| | 14.33 | 53 | 72 | 143 | 210 | 154 | >240 | >240 | >240 | >240 | >240 |
| | 15.81 | 58 | 80 | 158 | 235 | 170 | >240 | | >240 | | |
| | 17.03 | 63 | 86 | 170 | >240 | 183 | >240 | >240 | >240 | >240 | >240 |
| | 19.27 | 71 | 97 | 193 | >240 | 205 | >240 | | >240 | | |
| | 20.57 | 76 | 104 | 205 | >240 | 220 | >240 | | >240 | | |
| | 23.63 | 87 | 119 | 235 | | >240 | | | | | |
| FA37 3 | 23.88 | 87 | 119 | 235 | >240 | >240 | >240 | >240 | >240 | >240 | >240 |
| | 28.09 | 102 | 140 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 |
| | 31.69 | 116 | 158 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 |
| | 35.91 | 130 | 177 | >240 | >240 | >240 | >240 | | >240 | | |
| | 38.31 | 138 | 189 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 |
| | 43.83 | 158 | 215 | >240 | >240 | >240 | >240 | | >240 | | |
| | 47.02 | 170 | 230 | >240 | >240 | >240 | >240 | | >240 | | |
| | 51.70 | 187 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 |
| | 54.54 | 197 | >240 | >240 | | >240 | | | | | |
| | 58.32 | 210 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 |
| | 66.09 | 235 | >240 | >240 | >240 | >240 | >240 | | >240 | | |
| | 70.50 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 | >240 |
| | 80.65 | >240 | >240 | >240 | >240 | >240 | >240 | | >240 | | |
| | 86.53 | >240 | >240 | >240 | >240 | >240 | >240 | | >240 | | |
| | 100.36 | >240 | >240 | >240 | | >240 | | | | | |
| | 117.88 | >240 | >240 | | | | | | | | |
| | 128.51 | >240 | >240 | | | | | | | | |

| m [kg] | | CMP | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | 40M | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| FA37 | 2 | 13 | 15 | 16 | 17 | 17 | 19 | 20 | 20 | 21 | 28 |
| FA37 | 3 | 13 | 15 | 16 | 17 | 17 | 19 | 20 | 20 | 22 | 28 |
| FAF: + 1.5 kg / F: + 0.5 kg / FF: + 2.3 kg | | | | | | | | | | | |

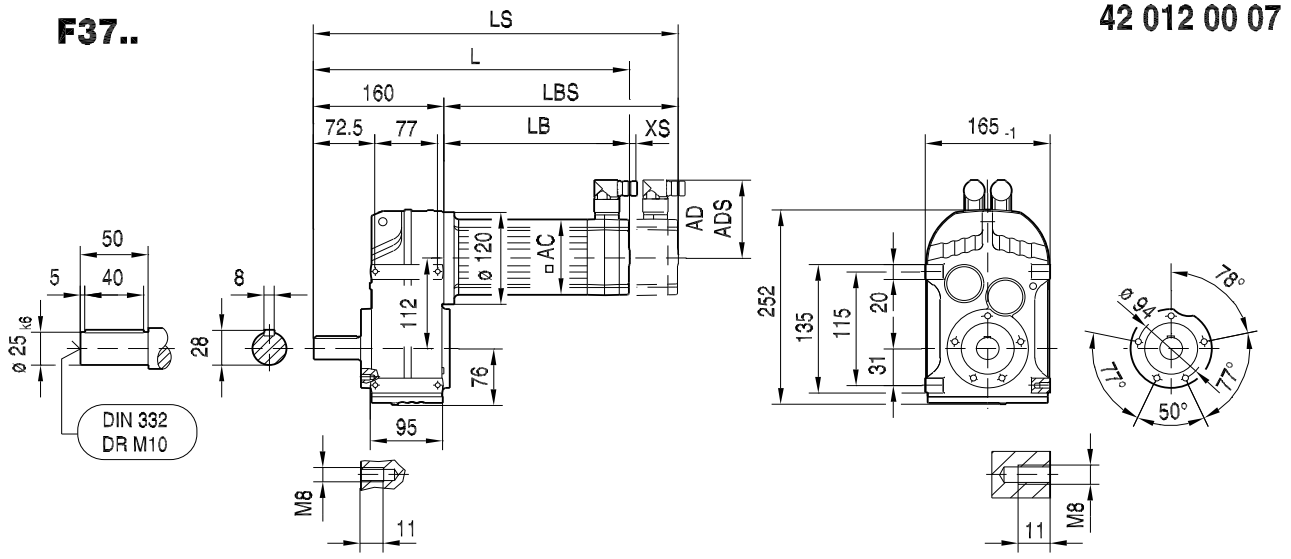
| CMP.. | i | $n_{epk}$ [1/min] | η [%] | $c_{TG}$ FA [Nm/'] | FAF [Nm/'] | F [Nm/'] | FF [Nm/'] | φ /R ['] |
|---|---|---|---|---|---|---|---|---|
| FA37 2 | 3.77 | 4500 | 97 | 41 | 41 | 20 | 15 | 12 |
| | 4.22 | 4500 | 97 | 41 | 41 | 20 | 15 | 11 |
| | 4.90 | 4500 | 97 | 41 | 41 | 20 | 15 | 11 |
| | 5.21 | 4500 | 97 | 41 | 41 | 20 | 15 | 10 |
| | 6.05 | 4500 | 97 | 41 | 41 | 20 | 15 | 10 |
| | 6.74 | 4500 | 97 | 41 | 41 | 20 | 15 | 10 |
| | 7.44 | 4500 | 97 | 41 | 41 | 20 | 15 | 10 |
| | 8.01 | 4500 | 97 | 84 | 84 | 26 | 19 | 7 |
| | 8.97 | 4500 | 97 | 84 | 84 | 26 | 19 | 7 |
| | 10.42 | 4500 | 97 | 84 | 84 | 26 | 19 | 7 |
| | 11.08 | 4500 | 97 | 84 | 84 | 26 | 19 | 7 |
| | 12.87 | 4500 | 97 | 84 | 84 | 26 | 19 | 7 |
| | 14.33 | 4500 | 97 | 84 | 84 | 26 | 19 | 7 |
| | 15.81 | 4500 | 97 | 84 | 84 | 26 | 19 | 6 |
| | 17.03 | 4500 | 97 | 84 | 84 | 26 | 19 | 6 |
| | 19.27 | 4500 | 97 | 84 | 84 | 26 | 19 | 6 |
| | 20.57 | 4500 | 97 | 84 | 84 | 26 | 19 | 6 |
| | 23.63 | 4500 | 97 | 84 | 84 | 26 | 19 | 6 |
| FA37 3 | 23.88 | 4500 | 96 | 94 | 94 | 27 | 19 | 8 |
| | 28.09 | 4500 | 96 | 94 | 94 | 27 | 19 | 8 |
| | 31.69 | 4500 | 96 | 94 | 94 | 27 | 19 | 8 |
| | 35.91 | 4500 | 95 | 94 | 94 | 27 | 19 | 8 |
| | 38.31 | 4500 | 95 | 94 | 94 | 27 | 19 | 8 |
| | 43.83 | 4500 | 95 | 94 | 94 | 27 | 19 | 8 |
| | 47.02 | 4500 | 95 | 94 | 94 | 27 | 19 | 8 |
| | 51.70 | 4500 | 95 | 97 | 97 | 27 | 19 | 7 |
| | 54.54 | 4500 | 95 | 94 | 94 | 27 | 19 | 8 |
| | 58.32 | 4500 | 95 | 97 | 97 | 27 | 19 | 7 |
| | 66.09 | 4500 | 95 | 97 | 97 | 27 | 19 | 7 |
| | 70.50 | 4500 | 94 | 97 | 97 | 27 | 19 | 7 |
| | 80.65 | 4500 | 94 | 97 | 97 | 27 | 19 | 7 |
| | 86.53 | 4500 | 94 | 97 | 97 | 27 | 19 | 7 |
| | 100.36 | 4500 | 94 | 97 | 97 | 27 | 19 | 7 |
| | 117.88 | 4500 | 93 | 97 | 97 | 27 | 19 | 7 |
| | 128.51 | 4500 | 93 | 97 | 97 | 27 | 19 | 7 |

| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | FA [N] | FAF [N] | F [N] | FF [N] | FA [N] | FAF [N] | F [N] | FF [N] |
| FA37 2 | 3.77 | 105 | 157 | 179 | 451 | 2.8 | 2470 | 2470 | 1970 | 2220 | 7000 | 7000 | 4810 | 5860 |
| | 4.22 | 110 | 165 | 187 | 427 | 2.3 | 2550 | 2550 | 2030 | 2300 | 7000 | 7000 | 4730 | 5820 |
| | 4.90 | 120 | 180 | 204 | 367 | 1.8 | 2630 | 2630 | 2100 | 2380 | 7000 | 7000 | 4560 | 5740 |
| | 5.21 | 125 | 187 | 213 | 326 | 1.6 | 2660 | 2660 | 2120 | 2410 | 7000 | 7000 | 4470 | 5700 |
| | 6.05 | 135 | 188 | 230 | 281 | 1.2 | 2750 | 2750 | 2190 | 2510 | 7000 | 7000 | 4460 | 5700 |
| | 6.74 | 140 | 188 | 238 | 267 | 1.0 | 2850 | 2850 | 2270 | 2600 | 7000 | 7000 | 4460 | 5700 |
| | 7.44 | 145 | 188 | 247 | 242 | 0.83 | 2940 | 2940 | 2350 | 2680 | 7000 | 7000 | 4460 | 5700 |
| | 8.01 | 170 | 240 | 289 | 200 | 1.5 | 2960 | 2960 | 2360 | 2710 | 7000 | 7000 | 3610 | 4100 |
| | 8.97 | 175 | 240 | 298 | 190 | 1.3 | 3080 | 3080 | 2460 | 2820 | 7000 | 7000 | 3610 | 4100 |
| | 10.42 | 185 | 240 | 315 | 163 | 1.0 | 3230 | 3230 | 2580 | 2960 | 7000 | 7000 | 3610 | 4100 |
| | 11.08 | 190 | 240 | 323 | 144 | 0.94 | 3290 | 3290 | 2620 | 3020 | 7000 | 7000 | 3610 | 4100 |
| | 12.87 | 200 | 240 | 340 | 124 | 0.74 | 3450 | 3450 | 2750 | 3170 | 7000 | 7000 | 3610 | 4100 |
| | 14.33 | 200 | 240 | 340 | 126 | 0.63 | 3650 | 3650 | 2910 | 3330 | 7000 | 7000 | 3610 | 4100 |
| | 15.81 | 200 | 240 | 340 | 127 | 0.52 | 3840 | 3840 | 3070 | 3490 | 7000 | 7000 | 3610 | 4100 |
| | 17.03 | 200 | 240 | 340 | 129 | 0.48 | 3990 | 3990 | 3180 | 3610 | 7000 | 7000 | 3610 | 4100 |
| | 19.27 | 200 | 240 | 340 | 130 | 0.40 | 4250 | 4250 | 3390 | 3820 | 7000 | 7000 | 3610 | 4100 |
| | 20.57 | 200 | 240 | 340 | 131 | 0.36 | 4390 | 4390 | 3500 | 3940 | 7000 | 7000 | 3610 | 4100 |
| | 23.63 | 200 | 240 | 340 | 135 | 0.29 | 4690 | 4690 | 3740 | 4190 | 7000 | 7000 | 3610 | 4100 |

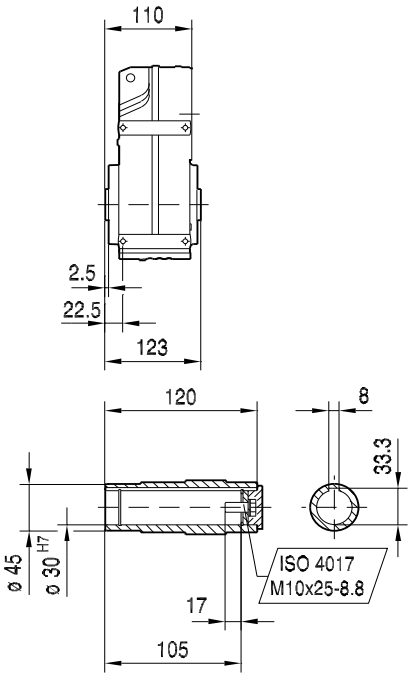
| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | FA [N] | FAF [N] | F [N] | FF [N] | FA [N] | FAF [N] | F [N] | FF [N] |
| FA37 3 | 23.88 | 200 | 240 | 340 | 96 | 0.60 | 4720 | 4720 | 3760 | 4210 | 7000 | 7000 | 3610 | 4100 |
| | 28.09 | 200 | 240 | 340 | 96 | 0.45 | 5090 | 5090 | 4060 | 4520 | 7000 | 7000 | 3610 | 4100 |
| | 31.69 | 200 | 240 | 340 | 95 | 0.35 | 5380 | 5380 | 4290 | 4760 | 7000 | 7000 | 3610 | 4100 |
| | 35.91 | 200 | 240 | 340 | 97 | 0.29 | 5700 | 5700 | 4290 | 5020 | 7000 | 7000 | 3610 | 4100 |
| | 38.31 | 200 | 240 | 340 | 97 | 0.26 | 5870 | 5870 | 4290 | 5160 | 7000 | 7000 | 3610 | 4100 |
| | 43.83 | 200 | 240 | 340 | 96 | 0.21 | 6240 | 6240 | 4290 | 5460 | 7000 | 7000 | 3610 | 4100 |
| | 47.02 | 200 | 240 | 340 | 96 | 0.19 | 6430 | 6430 | 4290 | 5620 | 7000 | 7000 | 3610 | 4100 |
| | 51.70 | 200 | 240 | 340 | 95 | 0.34 | 6710 | 6710 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |
| | 54.54 | 200 | 240 | 340 | 97 | 0.15 | 6860 | 6860 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |
| | 58.32 | 200 | 240 | 340 | 96 | 0.27 | 7000 | 7000 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |
| | 66.09 | 200 | 240 | 340 | 95 | 0.23 | 7000 | 7000 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |
| | 70.50 | 200 | 240 | 340 | 95 | 0.21 | 7000 | 7000 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |
| | 80.65 | 200 | 240 | 340 | 87 | 0.17 | 7000 | 7000 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |
| | 86.53 | 200 | 240 | 340 | 81 | 0.15 | 7000 | 7000 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |
| | 100.36 | 200 | 240 | 340 | 70 | 0.12 | 7000 | 7000 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |
| | 117.88 | 200 | 240 | 340 | 59 | 0.10 | 7000 | 7000 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |
| | 128.51 | 200 | 240 | 340 | 54 | 0.080 | 7000 | 7000 | 4290 | 5670 | 7000 | 7000 | 3610 | 4100 |

**F37..**

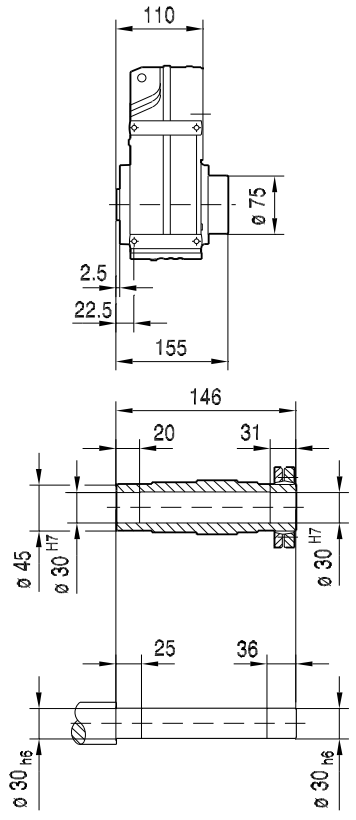
42 012 00 07



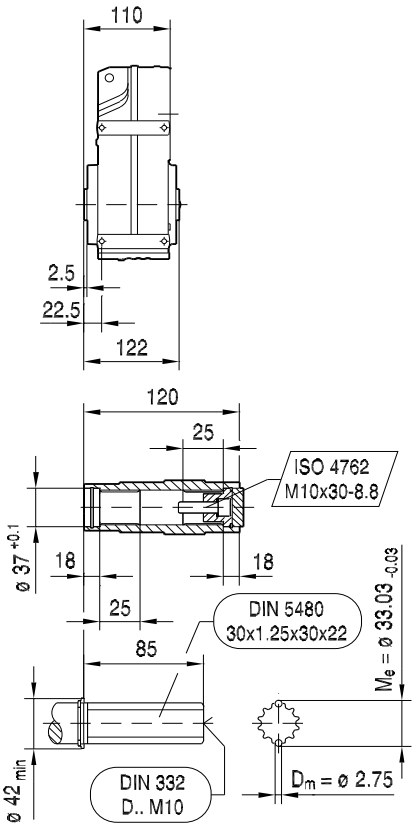

**FA37B..**




**FH37B..**



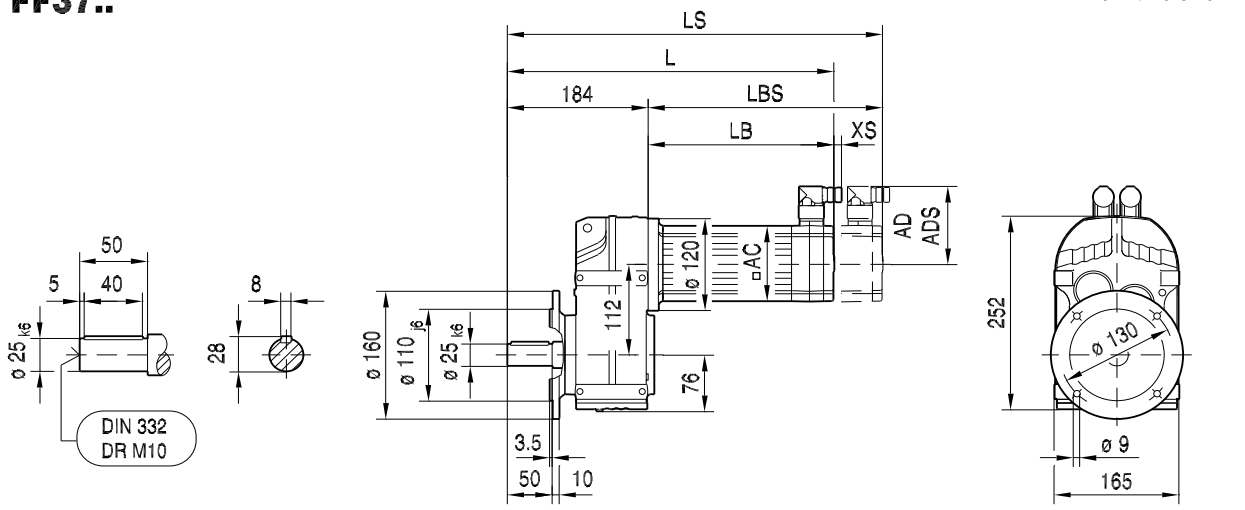

**FV37B..**



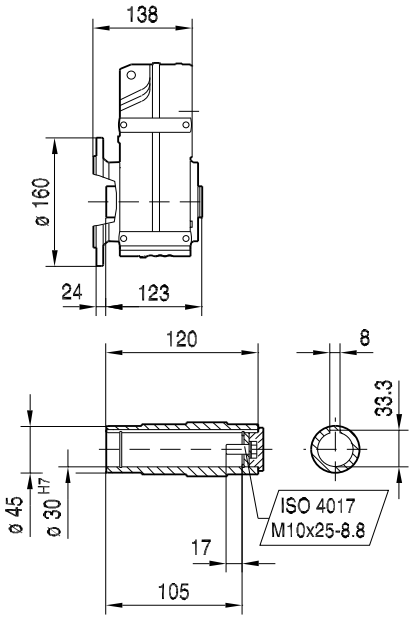

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 303 | 305 | 344 | 383 | 340 | 390 | 443 | 332 | 360 | 372 |
| **LS** | 333 | 334 | 373 | 412 | 368 | 418 | 472 | 397 | 425 | 450 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

## FF37..

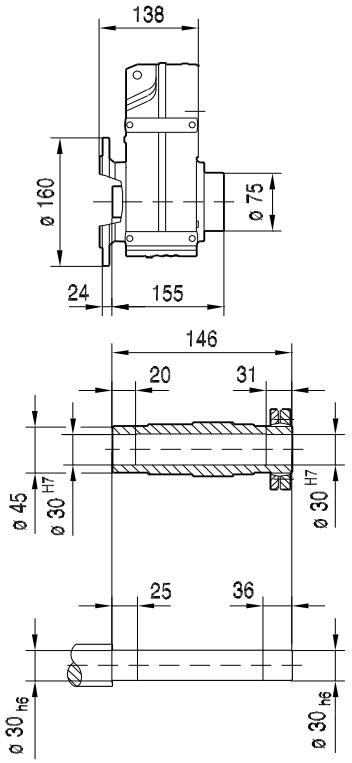
42 013 00 07



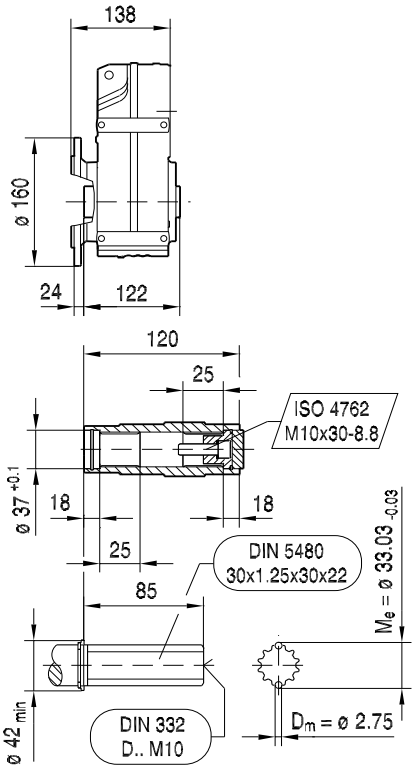

## FAF37..




## FHF37..



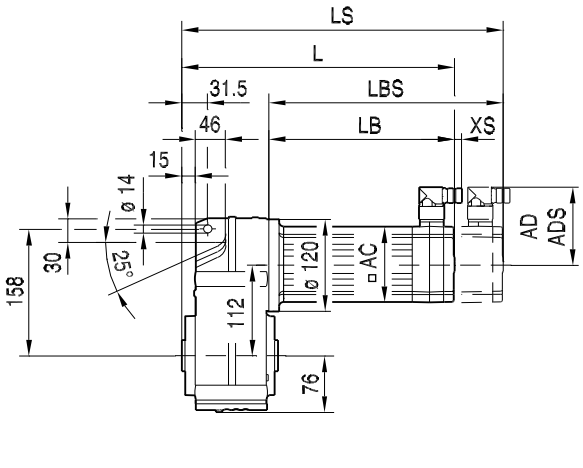

## FVF37..

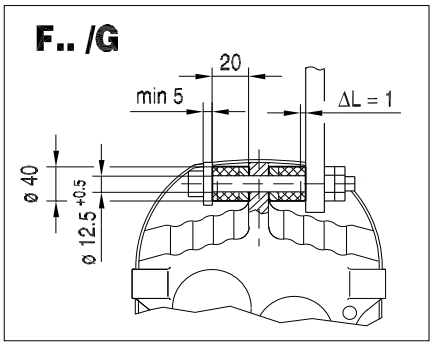



| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 327 | 329 | 368 | 407 | 364 | 414 | 467 | 356 | 384 | 396 |
| **LS** | 357 | 358 | 397 | 436 | 392 | 442 | 496 | 421 | 449 | 474 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

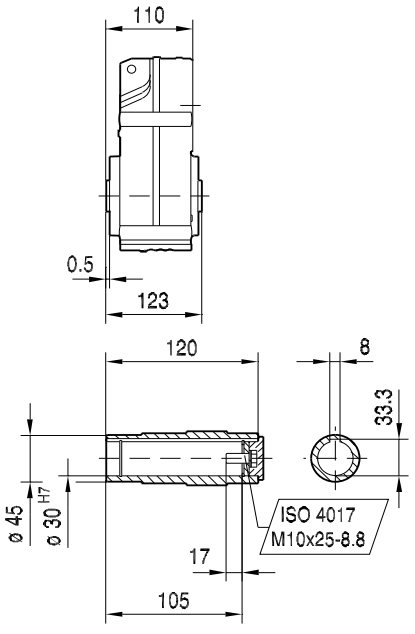
**FA37..**

42 014 00 07

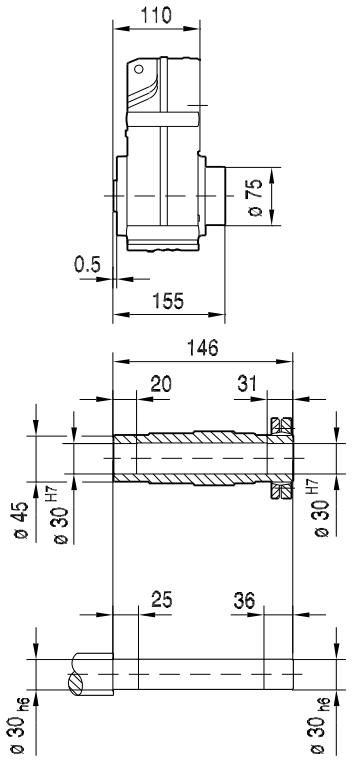


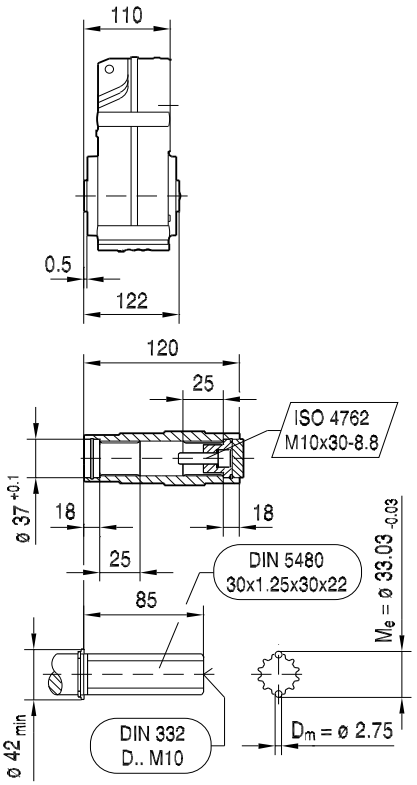

**FA37..**




**FH37..**



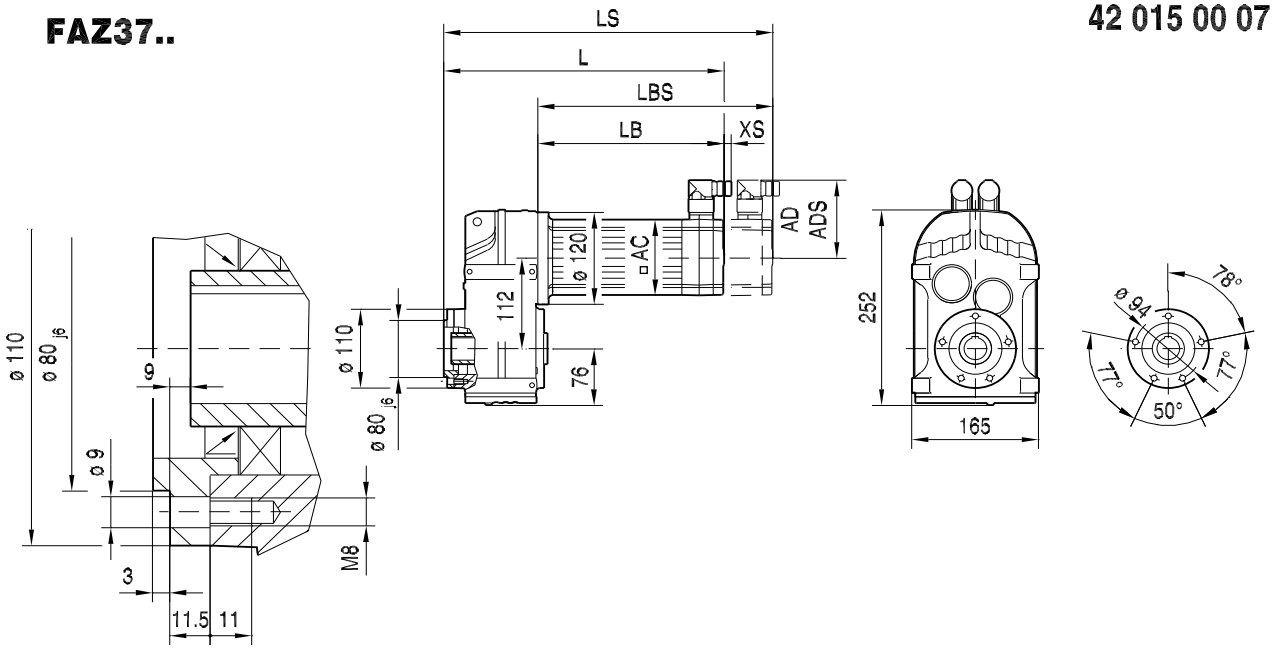

**FV37..**



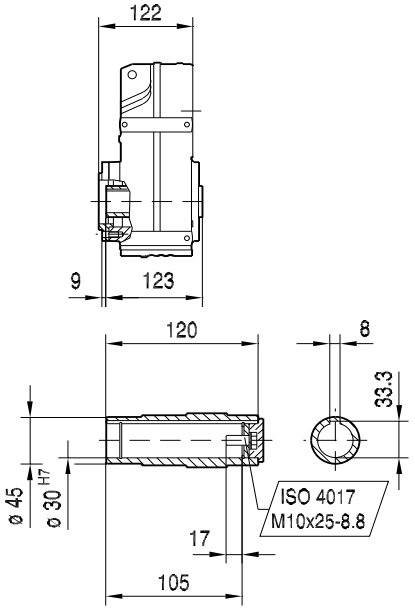

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 253 | 255 | 294 | 333 | 290 | 340 | 393 | 282 | 310 | 322 |
| **LS** | 283 | 284 | 323 | 362 | 318 | 368 | 422 | 347 | 375 | 400 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

## FAZ37..

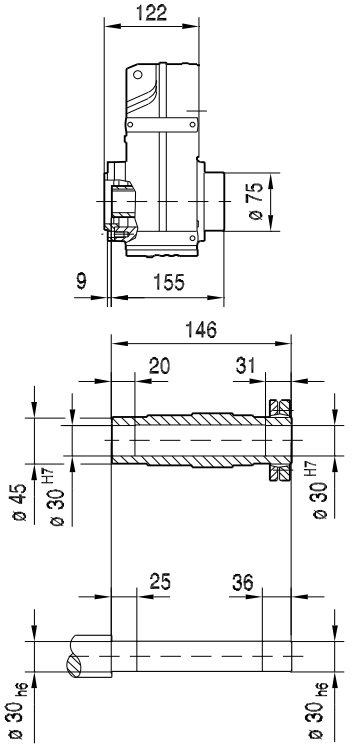
42 015 00 07



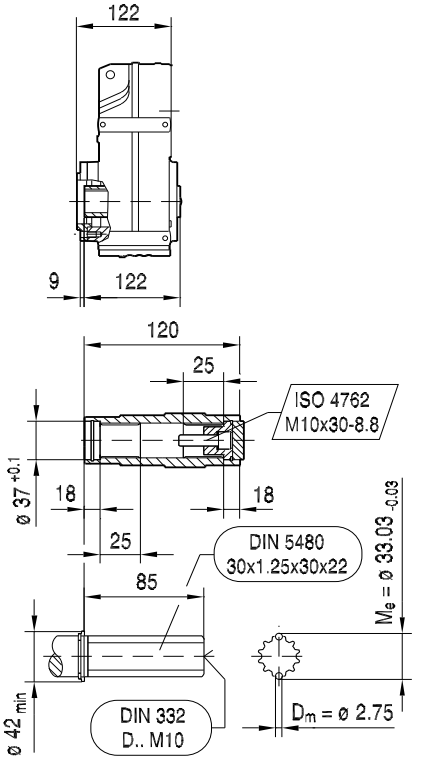

## FAZ37..




## FHZ37..



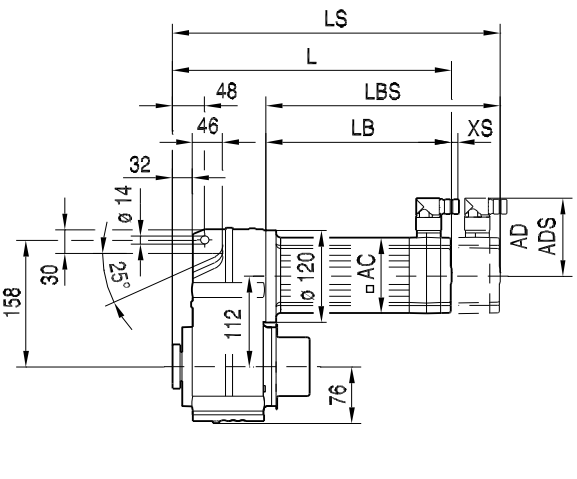

## FVZ37..

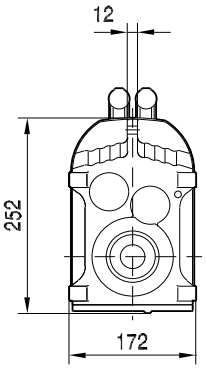


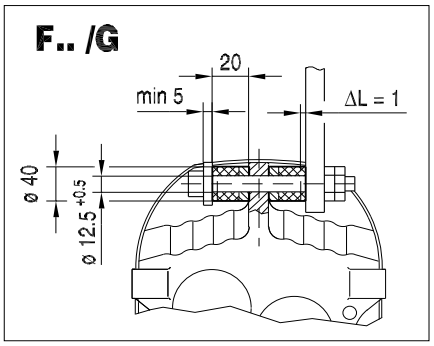

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 265 | 267 | 306 | 345 | 302 | 352 | 405 | 294 | 322 | 334 |
| **LS** | 295 | 296 | 335 | 374 | 330 | 380 | 434 | 359 | 387 | 412 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

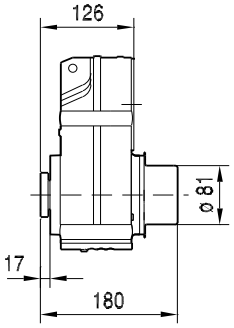
**FT37..**

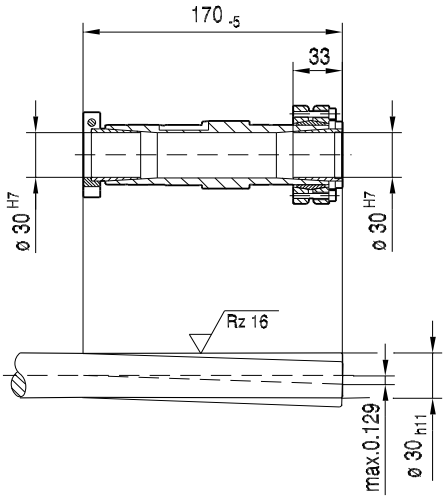
42 016 00 07

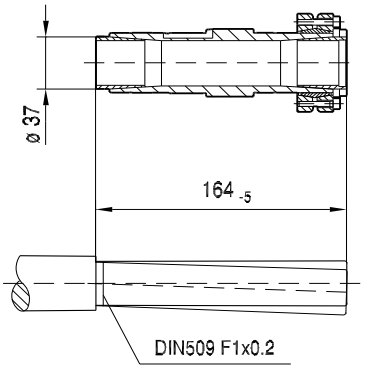



| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 269 | 271 | 310 | 349 | 306 | 356 | 409 | 298 | 326 | 338 |
| **LS** | 299 | 300 | 339 | 378 | 334 | 384 | 438 | 363 | 391 | 416 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

### 4.2.3 F 47

| $M_{aDyn}$ [Nm] | | CMP | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | i | 40M | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S | 80M |
| FA47 2 | 4.99 | 18 | 25 | 50 | 75 | 54 | 104 | 147 | 93 | 149 | 200 | 205 |
| | 5.76 | 21 | 29 | 58 | 86 | 62 | 120 | 170 | 107 | 172 | 235 | 235 |
| | 6.34 | 23 | 32 | 63 | 95 | 68 | 132 | 187 | 118 | 189 | 255 | 260 |
| | 7.44 | 27 | 38 | 74 | 111 | 80 | 154 | 215 | 139 | 220 | 300 | 305 |
| | 7.88 | 29 | 40 | 79 | 118 | 85 | 164 | 230 | 147 | 235 | 320 | 320 |
| | 8.96 | 33 | 45 | 90 | 134 | 96 | 186 | 260 | 167 | 265 | 365 | 365 |
| | 10.97 | 40 | 55 | 110 | 164 | 118 | 225 | 320 | 200 | 325 | >435 | >435 |
| | 12.66 | 47 | 64 | 126 | 189 | 136 | 260 | 370 | 235 | 375 | >435 | >435 |
| | 13.93 | 51 | 70 | 139 | 205 | 150 | 285 | 410 | 255 | 415 | >435 | >435 |
| | 16.36 | 60 | 83 | 163 | 240 | 176 | 335 | >435 | 300 | >435 | >435 | >435 |
| | 17.33 | 64 | 87 | 173 | 255 | 187 | 355 | >435 | 320 | >435 | >435 | >435 |
| | 19.70 | 73 | 99 | 197 | 290 | 210 | 405 | >435 | 365 | >435 | >435 | >435 |
| | 21.82 | 80 | 110 | 215 | 325 | 230 | >435 | >435 | 405 | >435 | >435 | >435 |
| | 25.72 | 95 | 130 | 255 | 380 | 275 | >435 | >435 | >435 | >435 | | |
| | 29.32 | 108 | 148 | 290 | >435 | 315 | >435 | | >435 | | | |
| | 30.86 | 114 | 156 | 305 | >435 | 330 | >435 | | >435 | | | |
| FA47 3 | 28.88 | 105 | 144 | 285 | 425 | 305 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 34.29 | 125 | 171 | 335 | >435 | 365 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 36.61 | 134 | 183 | 360 | >435 | 390 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 42.86 | 156 | 210 | 420 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 48.00 | 173 | 235 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 56.49 | 200 | 275 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | | |
| | 65.36 | 235 | 320 | >435 | >435 | >435 | >435 | | >435 | | | |
| | 68.09 | 245 | 335 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | | |
| | 79.72 | 285 | 390 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | | |
| | 89.29 | 320 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | | |
| | 105.09 | 375 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | | |
| | 121.57 | 430 | >435 | >435 | >435 | >435 | >435 | | >435 | | | |
| | 130.07 | >435 | >435 | >435 | >435 | >435 | >435 | | >435 | | | |
| | 150.06 | >435 | >435 | >435 | | >435 | | | | | | |
| | 175.38 | >435 | >435 | | | | | | | | | |
| | 190.76 | >435 | >435 | | | | | | | | | |

| m [kg] | | CMP | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | 40M | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S | 80M |
| FA47 | 2 | 18 | 19 | 20 | 21 | 21 | 23 | 24 | 24 | 26 | 32 | 34 |
| FA47 | 3 | 18 | 20 | 21 | 22 | 22 | 24 | 25 | 25 | 26 | 33 | 35 |
| FAF: + 2.7 kg / F: + 0.8 kg / FF: + 3.9 kg | | | | | | | | | | | | |

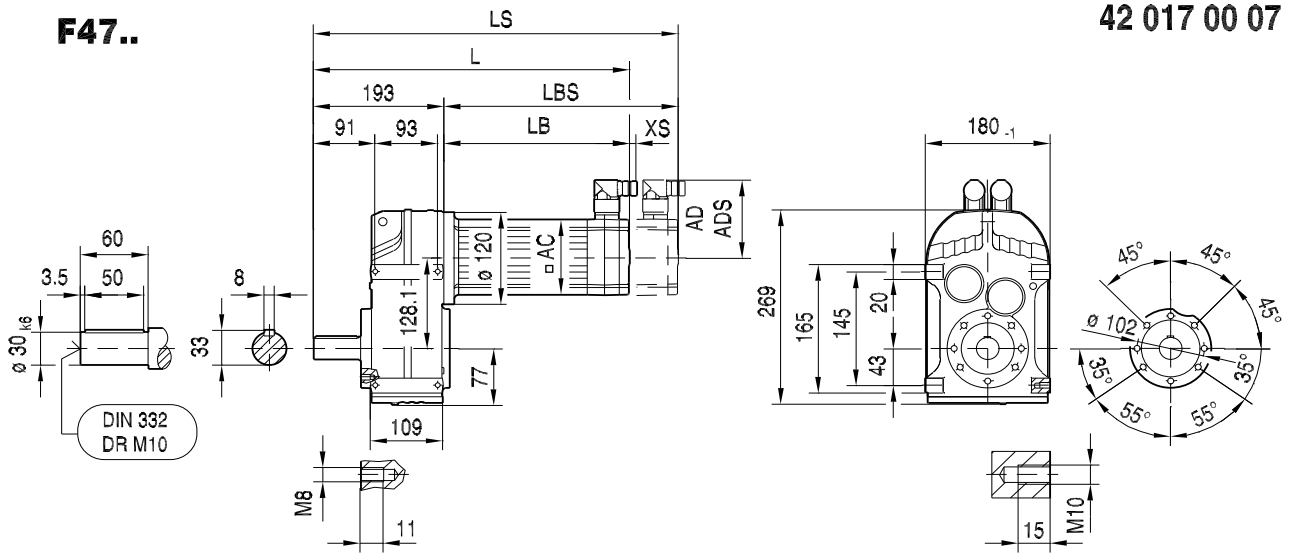
| CMP.. | | | | $c_{TG}$ | | | | φ |
|---|---|---|---|---|---|---|---|---|
| | i | $n_{epk}$ [1/min] | η [%] | FA [Nm/'] | FAF [Nm/'] | F [Nm/'] | FF [Nm/'] | /R ['] |
| FA47 2 | 4.99 | 4500 | 97 | 99 | 99 | 34 | 30 | 9 |
| | 5.76 | 4500 | 97 | 99 | 99 | 34 | 30 | 9 |
| | 6.34 | 4500 | 97 | 99 | 99 | 34 | 30 | 8 |
| | 7.44 | 4500 | 97 | 99 | 99 | 34 | 30 | 8 |
| | 7.88 | 4500 | 97 | 99 | 99 | 34 | 30 | 8 |
| | 8.96 | 4500 | 97 | 99 | 99 | 34 | 30 | 8 |
| | 10.97 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| | 12.66 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| | 13.93 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| | 16.36 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| | 17.33 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| | 19.70 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| | 21.82 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| | 25.72 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| | 29.32 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| | 30.86 | 4500 | 97 | 125 | 125 | 37 | 32 | 6 |
| FA47 3 | 28.88 | 4500 | 96 | 136 | 136 | 38 | 33 | 7 |
| | 34.29 | 4500 | 96 | 136 | 136 | 38 | 33 | 7 |
| | 36.61 | 4500 | 96 | 136 | 136 | 38 | 33 | 7 |
| | 42.86 | 4500 | 96 | 136 | 136 | 38 | 33 | 7 |
| | 48.00 | 4500 | 95 | 136 | 136 | 38 | 33 | 7 |
| | 56.49 | 4500 | 95 | 136 | 136 | 38 | 33 | 7 |
| | 65.36 | 4500 | 95 | 136 | 136 | 38 | 33 | 7 |
| | 68.09 | 4500 | 95 | 138 | 138 | 38 | 33 | 6 |
| | 79.72 | 4500 | 95 | 138 | 138 | 38 | 33 | 6 |
| | 89.29 | 4500 | 95 | 138 | 138 | 38 | 33 | 6 |
| | 105.09 | 4500 | 94 | 138 | 138 | 38 | 33 | 6 |
| | 121.57 | 4500 | 94 | 138 | 138 | 38 | 33 | 6 |
| | 130.07 | 4500 | 94 | 138 | 138 | 38 | 33 | 6 |
| | 150.06 | 4500 | 93 | 138 | 138 | 38 | 33 | 6 |
| | 175.38 | 4500 | 93 | 138 | 138 | 38 | 33 | 6 |
| | 190.76 | 4500 | 92 | 138 | 138 | 38 | 33 | 6 |

| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | FA [N] | FAF [N] | F [N] | FF [N] | FA [N] | FAF [N] | F [N] | FF [N] |
| FA47 2 | 4.99 | 320 | 435 | 544 | 341 | 4.4 | 1160 | 1160 | 2310 | 2410 | 10000 | 10000 | 900 | 900 |
| | 5.76 | 340 | 435 | 578 | 295 | 3.4 | 1180 | 1180 | 2390 | 2500 | 10000 | 10000 | 900 | 900 |
| | 6.34 | 350 | 435 | 595 | 284 | 2.9 | 1230 | 1230 | 2470 | 2580 | 10000 | 10000 | 900 | 900 |
| | 7.44 | 380 | 435 | 646 | 242 | 2.3 | 1190 | 1190 | 2530 | 2660 | 10000 | 10000 | 900 | 900 |
| | 7.88 | 380 | 435 | 646 | 254 | 2.1 | 1280 | 1280 | 2630 | 2750 | 10000 | 10000 | 900 | 900 |
| | 8.96 | 330 | 435 | 561 | 424 | 1.6 | 1970 | 1970 | 3250 | 3310 | 10000 | 10000 | 900 | 900 |
| | 10.97 | 400 | 435 | 680 | 346 | 2.6 | 2060 | 2060 | 3440 | 3510 | 10000 | 10000 | 900 | 900 |
| | 12.66 | 400 | 435 | 680 | 371 | 2.1 | 2320 | 2320 | 3740 | 3790 | 10000 | 10000 | 900 | 900 |
| | 13.93 | 400 | 435 | 680 | 388 | 1.8 | 2510 | 2510 | 3950 | 3990 | 10000 | 10000 | 900 | 900 |
| | 16.36 | 400 | 435 | 680 | 403 | 1.5 | 2840 | 2840 | 4320 | 4340 | 10000 | 10000 | 900 | 900 |
| | 17.33 | 400 | 435 | 680 | 398 | 1.4 | 2960 | 2960 | 4450 | 4470 | 10000 | 10000 | 900 | 900 |
| | 19.70 | 400 | 435 | 680 | 355 | 1.1 | 3230 | 3230 | 4770 | 4770 | 10000 | 10000 | 900 | 900 |
| | 21.82 | 400 | 435 | 680 | 321 | 0.96 | 3460 | 3460 | 5030 | 5020 | 10000 | 10000 | 900 | 900 |
| | 25.72 | 400 | 435 | 680 | 272 | 0.75 | 3850 | 3850 | 5460 | 5430 | 10000 | 10000 | 900 | 900 |
| | 29.32 | 400 | 435 | 680 | 239 | 0.52 | 4170 | 4170 | 5830 | 5780 | 10000 | 10000 | 900 | 900 |
| | 30.86 | 400 | 435 | 680 | 227 | 0.46 | 4300 | 4300 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |

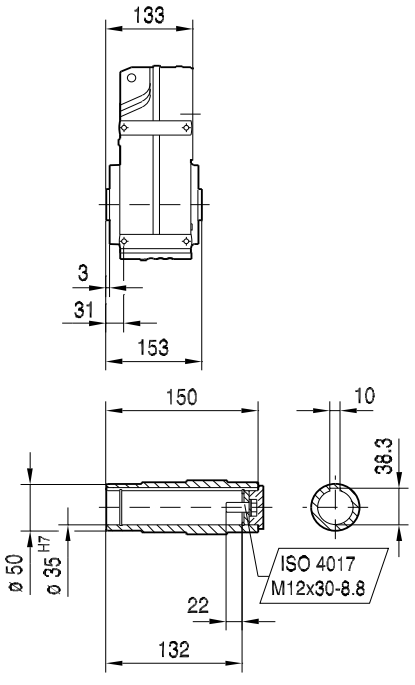
| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | FA [N] | FAF [N] | F [N] | FF [N] | FA [N] | FAF [N] | F [N] | FF [N] |
| FA47 3 | 28.88 | 400 | 435 | 680 | 111 | 1.1 | 4130 | 4130 | 5790 | 5740 | 10000 | 10000 | 900 | 900 |
| | 34.29 | 400 | 435 | 680 | 111 | 0.85 | 4580 | 4580 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 36.61 | 400 | 435 | 680 | 112 | 0.76 | 4750 | 4750 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 42.86 | 400 | 435 | 680 | 112 | 0.58 | 5190 | 5190 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 48.00 | 400 | 435 | 680 | 113 | 0.48 | 5520 | 5520 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 56.49 | 400 | 435 | 680 | 113 | 0.36 | 6020 | 6020 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 65.36 | 400 | 435 | 680 | 107 | 0.29 | 6490 | 6490 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 68.09 | 400 | 435 | 680 | 103 | 0.61 | 6620 | 6620 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 79.72 | 400 | 435 | 680 | 88 | 0.48 | 7160 | 7160 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 89.29 | 400 | 435 | 680 | 78 | 0.40 | 7570 | 7570 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 105.09 | 400 | 435 | 680 | 67 | 0.30 | 8180 | 8180 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 121.57 | 400 | 435 | 680 | 58 | 0.25 | 8760 | 8760 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 130.07 | 400 | 435 | 680 | 54 | 0.23 | 9040 | 9040 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 150.06 | 400 | 435 | 680 | 47 | 0.18 | 9640 | 9640 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 175.38 | 400 | 435 | 680 | 40 | 0.14 | 10000 | 10000 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |
| | 190.76 | 400 | 435 | 680 | 37 | 0.13 | 10000 | 10000 | 5920 | 5920 | 10000 | 10000 | 900 | 900 |

**F47..**

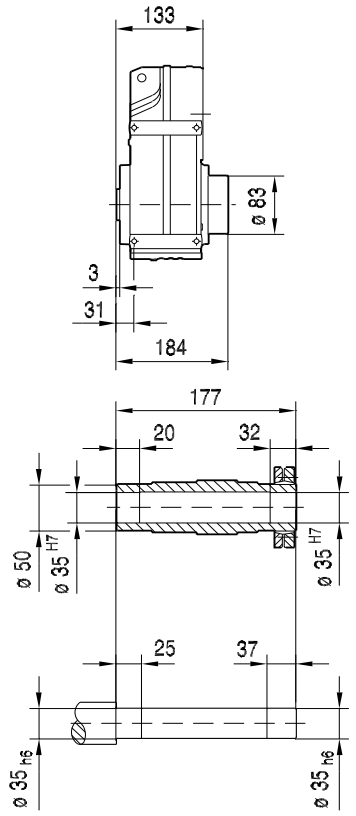
42 017 00 07



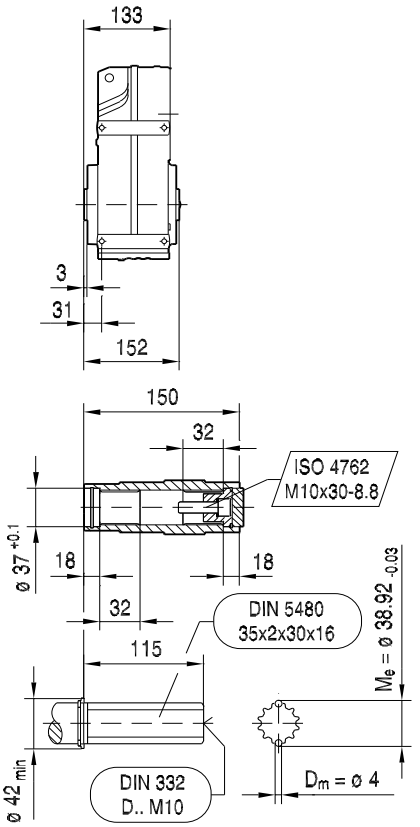

**FA47B..**




**FH47B..**



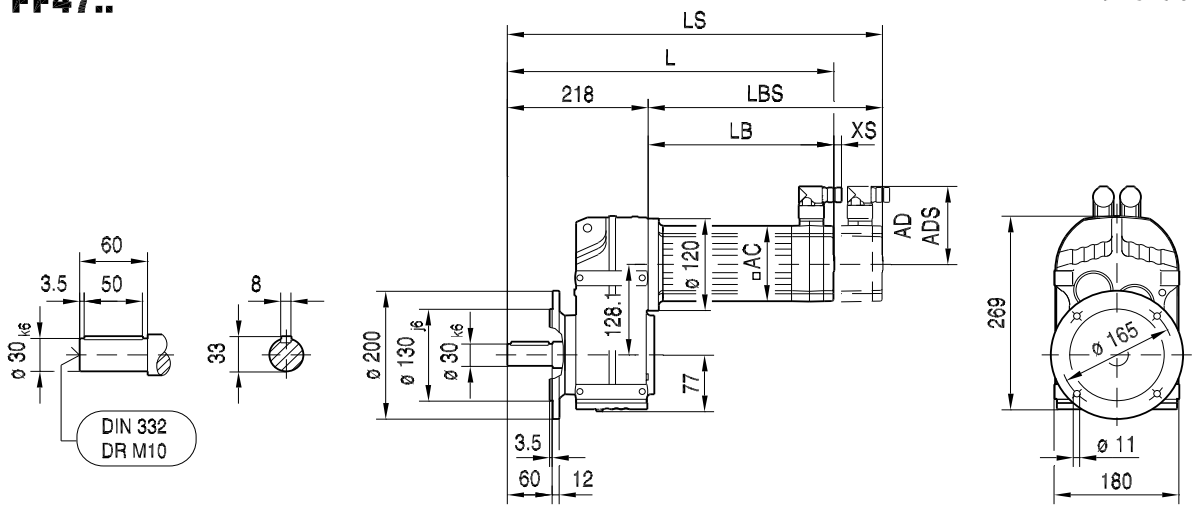

**FV47B..**



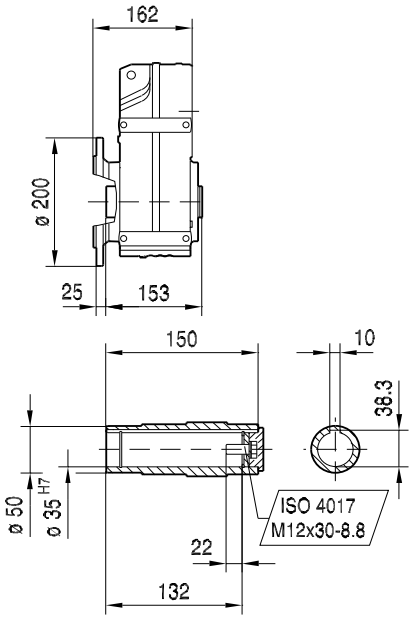

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 336 | 338 | 377 | 416 | 373 | 423 | 476 | 365 | 393 | 440 | 405 | 442 |
| **LS** | 366 | 367 | 406 | 445 | 401 | 451 | 505 | 430 | 458 | 505 | 483 | 520 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

42 018 00 07

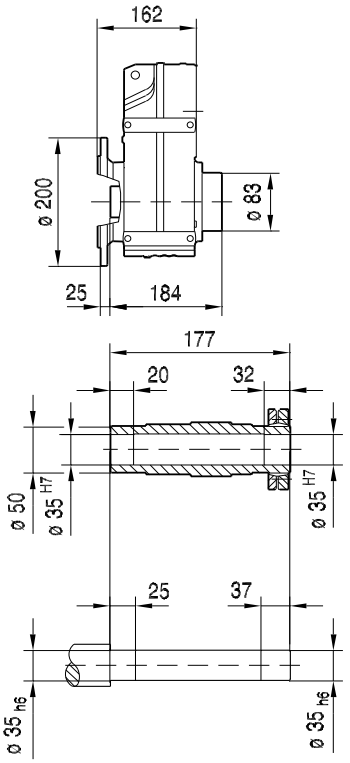
## FF47..



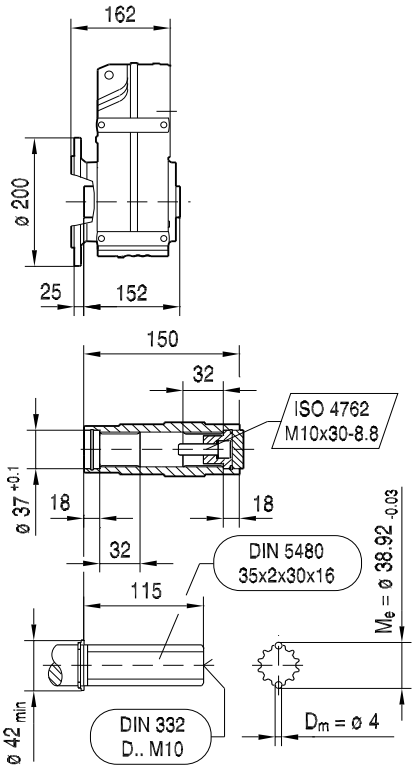

## FAF47..




## FHF47..



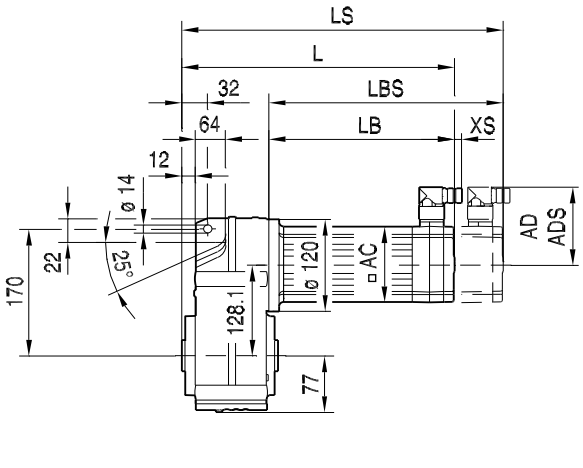

## FVF47..

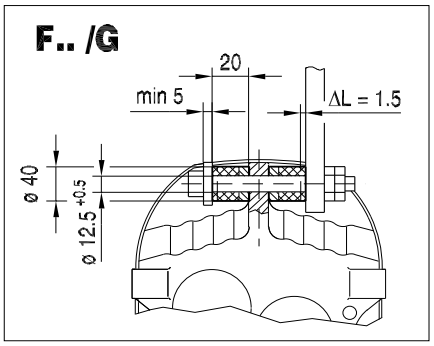



| (→ 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 361 | 363 | 402 | 441 | 398 | 448 | 501 | 390 | 418 | 465 | 430 | 467 |
| **LS** | 391 | 392 | 431 | 470 | 426 | 476 | 530 | 455 | 483 | 530 | 508 | 545 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

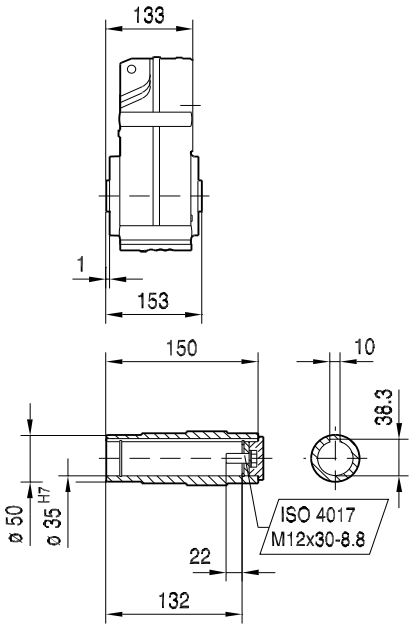
42 019 00 07

## FA47..

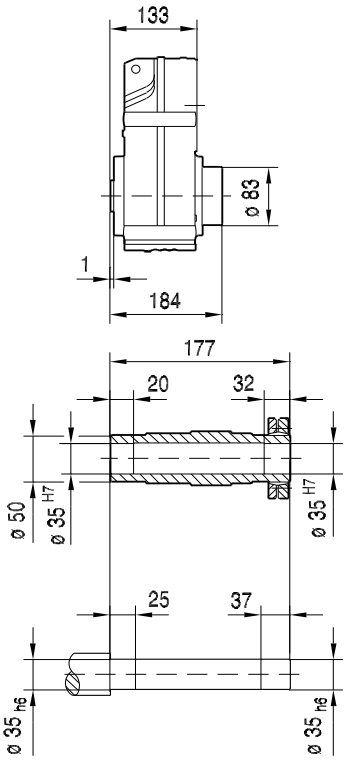


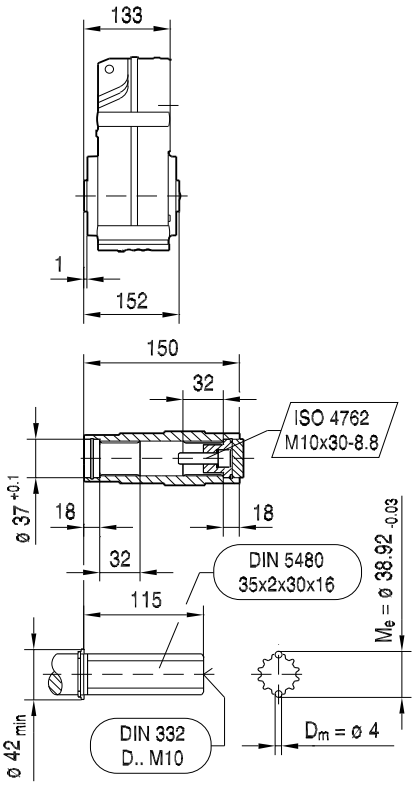

## FA47..




## FH47..



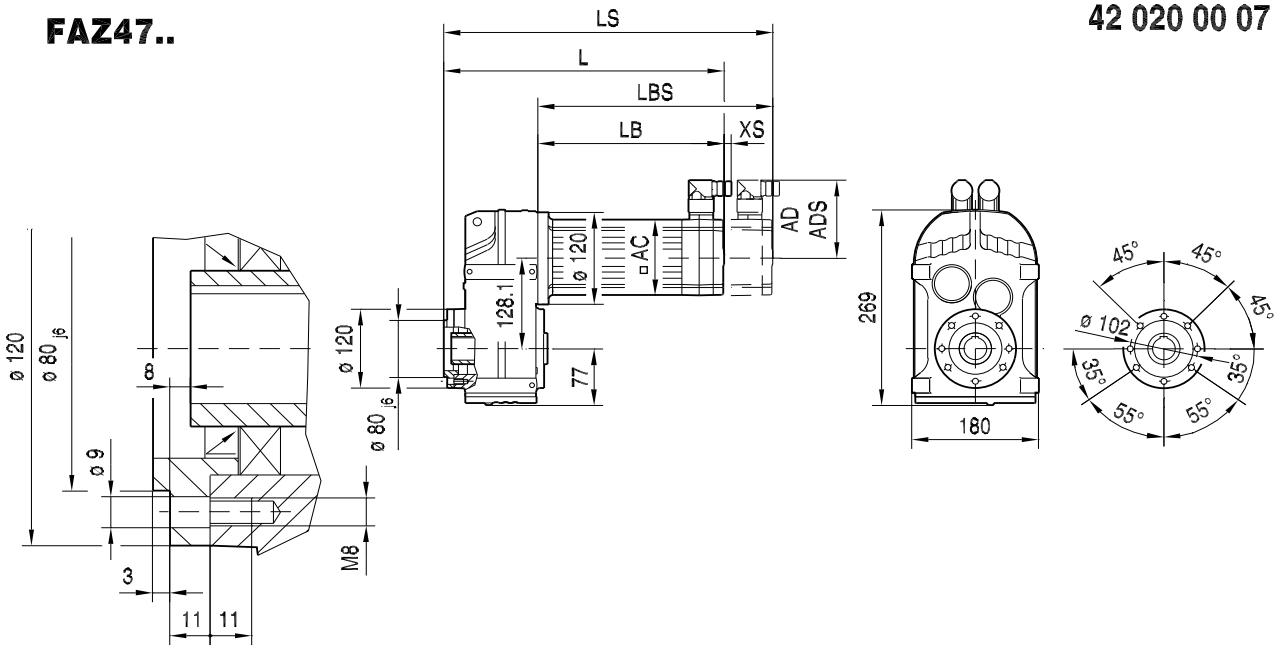

## FV47..



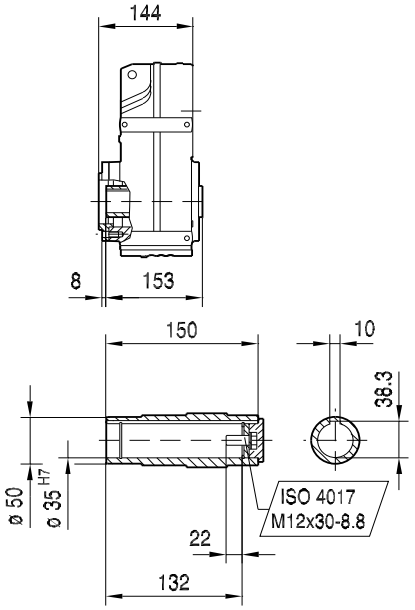

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 276 | 278 | 317 | 356 | 313 | 363 | 416 | 305 | 333 | 380 | 345 | 382 |
| **LS** | 306 | 307 | 346 | 385 | 341 | 391 | 445 | 370 | 398 | 445 | 423 | 460 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

## FAZ47..

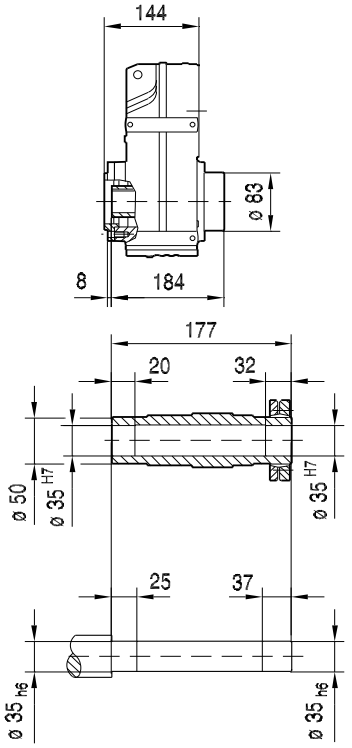
42 020 00 07



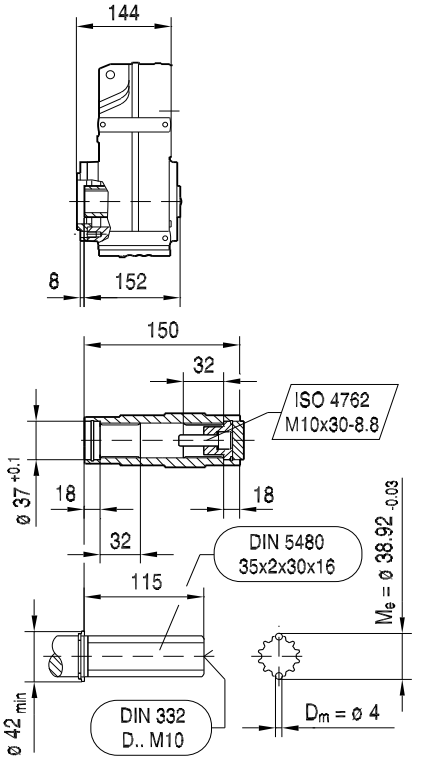

## FAZ47..




## FHZ47..



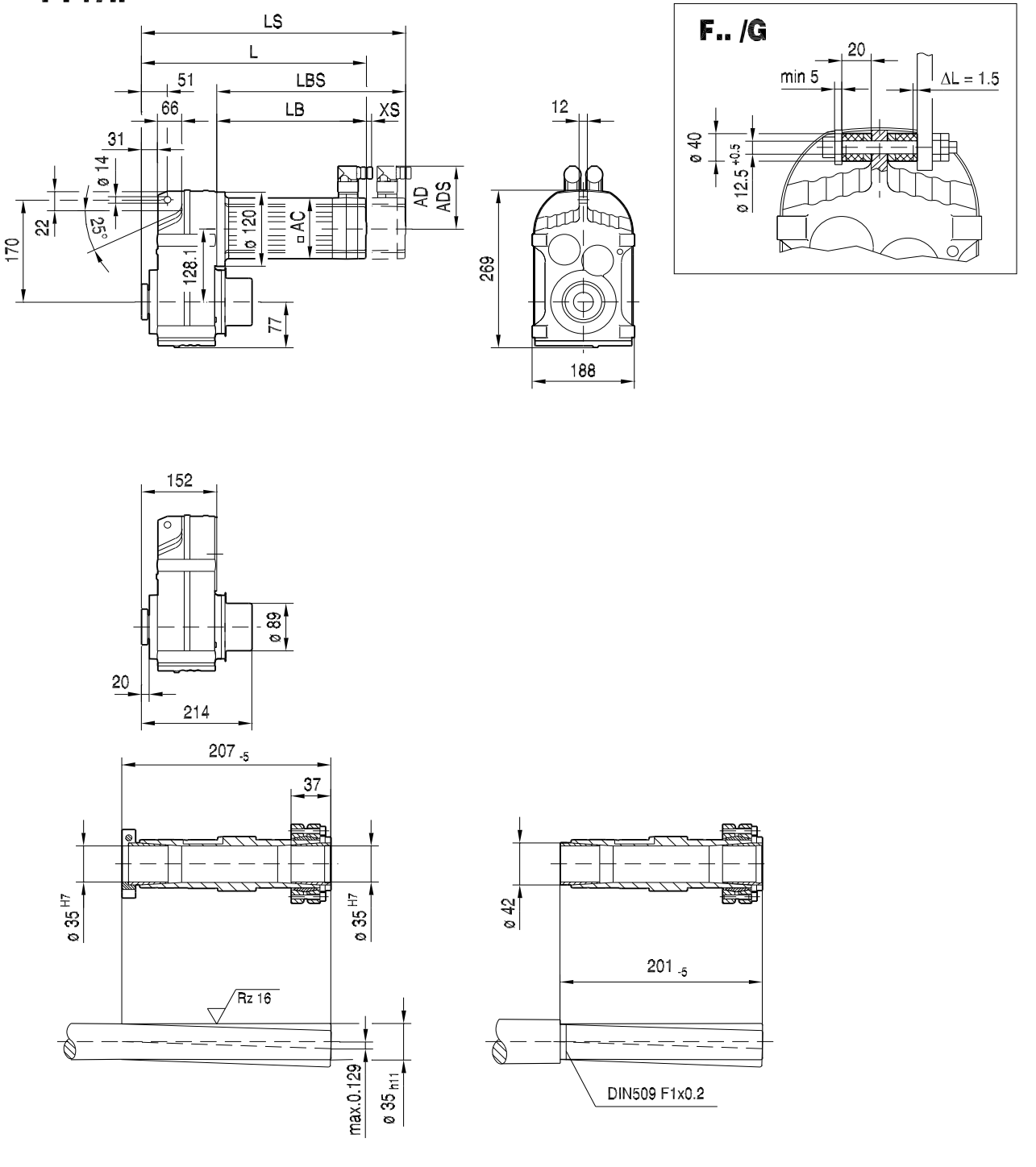

## FVZ47..




| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 287 | 289 | 328 | 367 | 324 | 374 | 427 | 316 | 344 | 391 | 356 | 393 |
| **LS** | 317 | 318 | 357 | 396 | 352 | 402 | 456 | 381 | 409 | 456 | 434 | 471 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

**FT47..**

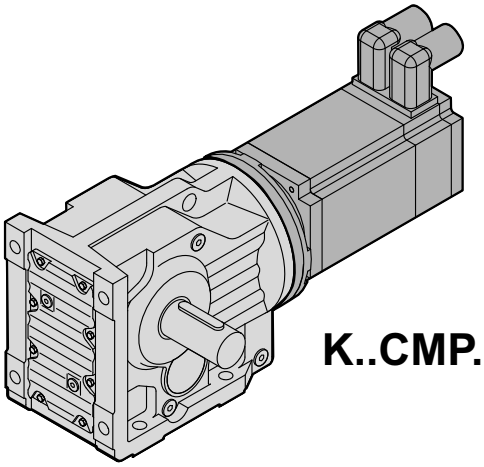
42 021 00 07



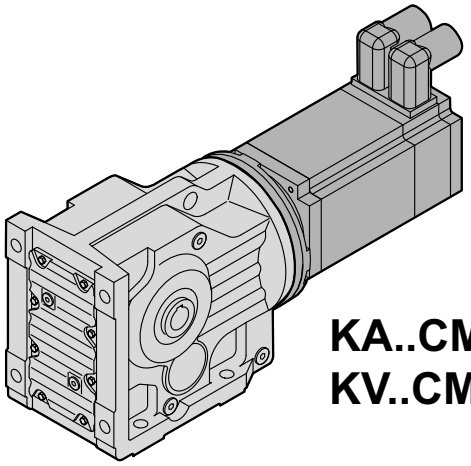

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 295 | 297 | 336 | 375 | 332 | 382 | 435 | 324 | 352 | 399 | 364 | 401 |
| **LS** | 325 | 326 | 365 | 404 | 360 | 410 | 464 | 389 | 417 | 464 | 442 | 479 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

# 5 Helical-Bevel Gearmotors – K-Series Gear Units

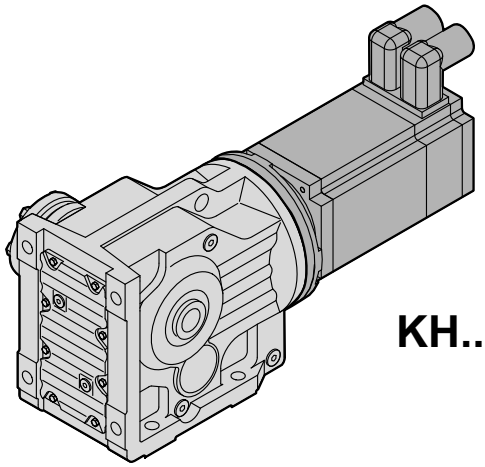
## *5.1 Variants*



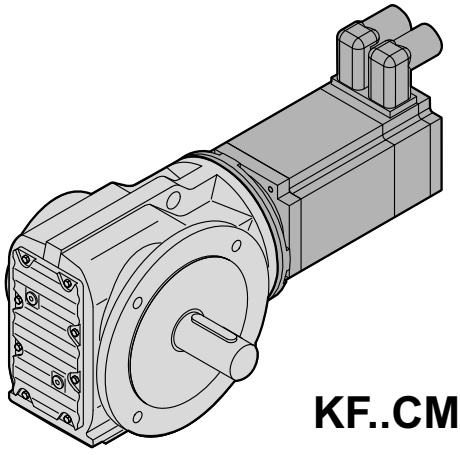
**K..CMP..**



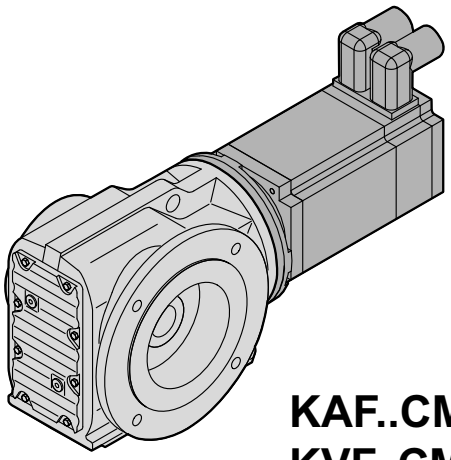
**KA..CMP..**
**KV..CMP..**



**KH..CMP..**

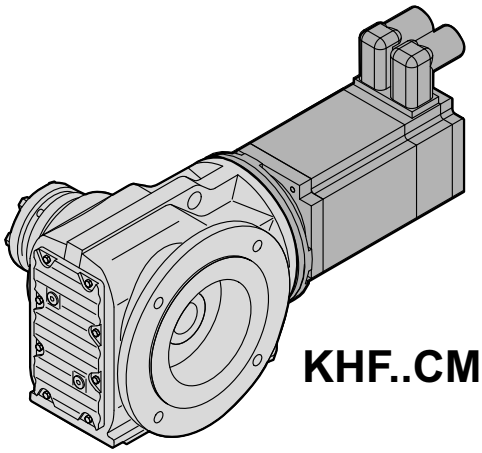


**KF..CMP..**

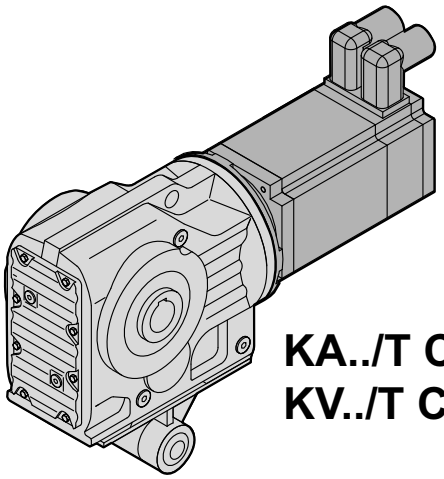


**KAF..CMP..**
**KVF..CMP..**

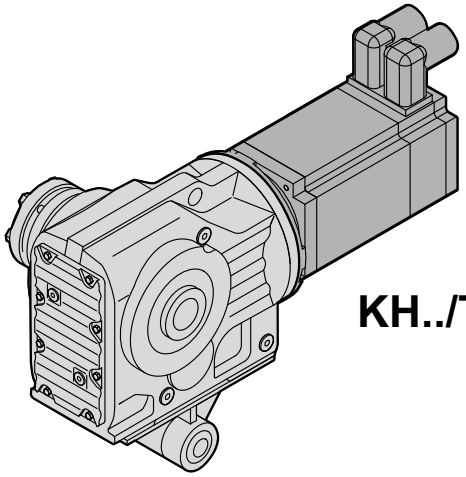
65963axx



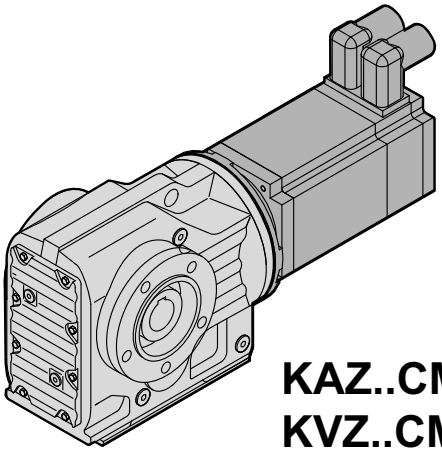
**KHF..CMP..**



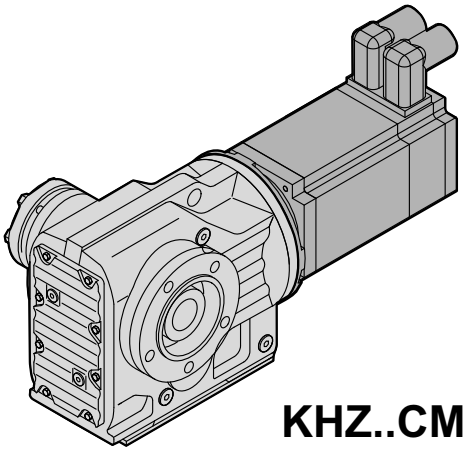
**KA../T CMP..**
**KV../T CMP..**



**KH../T CMP..**



**KAZ..CMP..**
**KVZ..CMP..**



**KHZ..CMP..**

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## 5.2 K37 – 47/CMP – selection tables, dimension sheets

### 5.2.1 K 37

| $M_{aDyn}$ [Nm] | | CMP | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | i | 40M | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| K37 3 | 3.98 | 15 | 20 | 39 | 59 | 42 | 82 | 116 | 73 | 118 | 105 |
| | 5.36 | 20 | 27 | 53 | 79 | 57 | 110 | 156 | 99 | 158 | 142 |
| | 6.37 | 23 | 32 | 63 | 94 | 68 | 131 | 186 | 117 | 188 | 168 |
| | 6.80 | 25 | 34 | 67 | 101 | 72 | 140 | 198 | 125 | >199 | 180 |
| | 7.96 | 29 | 40 | 79 | 118 | 85 | 164 | >199 | 147 | >199 | >199 |
| | 8.91 | 33 | 44 | 88 | 132 | 95 | 183 | >199 | 164 | >199 | >199 |
| | 10.49 | 38 | 52 | 104 | 155 | 112 | >199 | >199 | 193 | >199 | >199 |
| | 12.14 | 44 | 61 | 120 | 179 | 129 | >199 | | >199 | | |
| | 13.08 | 48 | 65 | 129 | 193 | 139 | >240 | >240 | >240 | >240 | >240 |
| | 15.31 | 56 | 76 | 151 | 225 | 163 | >240 | >240 | >240 | >240 | >240 |
| | 17.15 | 63 | 86 | 170 | >240 | 183 | >240 | >240 | >240 | >240 | >240 |
| | 20.19 | 74 | 101 | 200 | >240 | 215 | >240 | >240 | >240 | >240 | >240 |
| | 23.36 | 85 | 117 | 230 | >240 | >240 | >240 | | >240 | | |
| | 24.99 | 91 | 125 | >240 | >240 | >240 | >240 | | >240 | | |
| | 28.83 | 105 | 144 | >240 | | >240 | | | | | |
| | 29.96 | 107 | 146 | >230 | >230 | >230 | >230 | >230 | >230 | >230 | >230 |
| | 35.57 | 127 | 174 | >230 | >230 | >230 | >230 | >230 | >230 | >230 | >230 |
| | 37.97 | 136 | 186 | >230 | >230 | >230 | >230 | >230 | >230 | >230 | >230 |
| | 44.46 | 159 | 215 | >230 | >230 | >230 | >230 | >230 | >230 | >230 | >230 |
| | 49.79 | 178 | >230 | >230 | >230 | >230 | >230 | >230 | >230 | >230 | >230 |
| | 58.60 | 205 | >230 | >230 | >230 | >230 | >230 | >230 | >230 | >230 | >230 |
| | 67.80 | >230 | >230 | >230 | >230 | >230 | >230 | | >230 | | |
| | 72.54 | >230 | >230 | >230 | >230 | >230 | >230 | | >230 | | |
| | 83.69 | >230 | >230 | >230 | | >230 | | | | | |
| | 97.81 | >230 | >230 | | | | | | | | |
| | 106.38 | >230 | >230 | | | | | | | | |

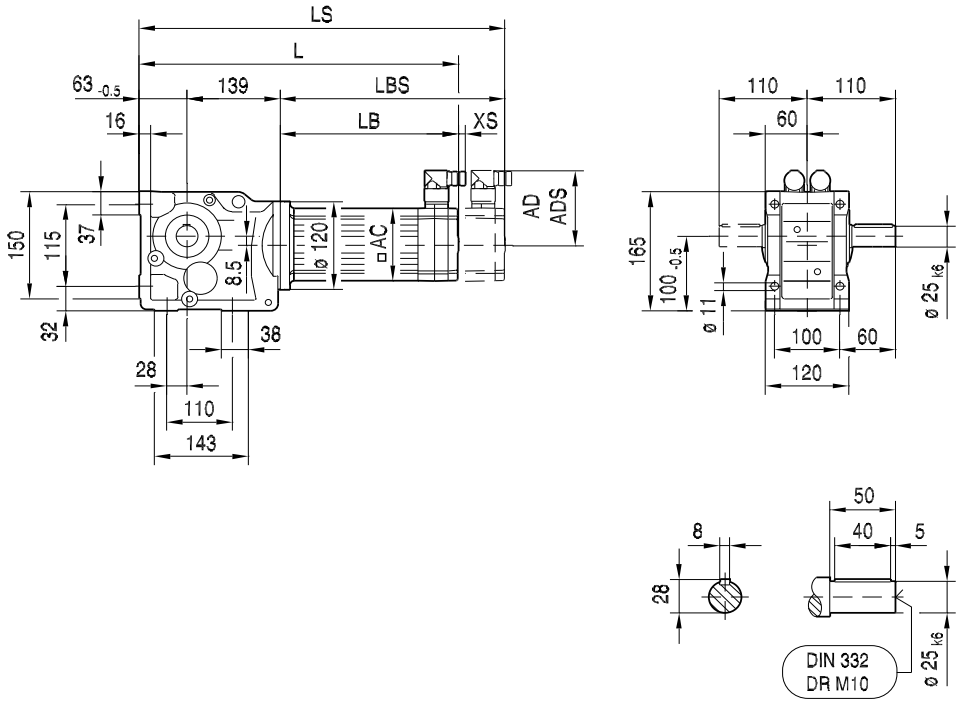
| m [kg] | | CMP | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | 40M | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| K37 | 3 | 13 | 15 | 16 | 17 | 17 | 19 | 20 | 20 | 22 | 28 |
| **KF: + 2.3 kg / KA: + -0.2 kg / KAF: + 1.5 kg** | | | | | | | | | | | |

| CMP.. | i | $n_{epk}$ [1/min] | η [%] | $c_{TG}$ K [Nm/'] | KF [Nm/'] | KA [Nm/'] | KAF [Nm/'] | φ /R ['] |
|---|---|---|---|---|---|---|---|---|
| K37 3 | 3.98 | 4500 | 96 | 13 | 13 | 29 | 29 | 13 |
| | 5.36 | 4500 | 96 | 13 | 13 | 29 | 29 | 13 |
| | 6.37 | 4500 | 96 | 13 | 13 | 29 | 29 | 13 |
| | 6.80 | 4500 | 96 | 13 | 13 | 29 | 29 | 13 |
| | 7.96 | 4500 | 96 | 13 | 13 | 29 | 29 | 13 |
| | 8.91 | 4500 | 96 | 13 | 13 | 29 | 29 | 12 |
| | 10.49 | 4500 | 96 | 13 | 13 | 29 | 29 | 12 |
| | 12.14 | 4500 | 96 | 13 | 13 | 29 | 29 | 12 |
| | 13.08 | 4500 | 96 | 17 | 17 | 63 | 63 | 9 |
| | 15.31 | 4500 | 96 | 17 | 17 | 63 | 63 | 9 |
| | 17.15 | 4500 | 96 | 17 | 17 | 63 | 63 | 8 |
| | 20.19 | 4500 | 96 | 17 | 17 | 63 | 63 | 8 |
| | 23.36 | 4500 | 96 | 17 | 17 | 63 | 63 | 8 |
| | 24.99 | 4500 | 96 | 17 | 17 | 63 | 63 | 8 |
| | 28.83 | 4500 | 96 | 17 | 17 | 63 | 63 | 8 |
| | 29.96 | 4500 | 94 | 18 | 19 | 85 | 85 | 7 |
| | 35.57 | 4500 | 94 | 18 | 19 | 85 | 85 | 7 |
| | 37.97 | 4500 | 94 | 18 | 19 | 85 | 85 | 7 |
| | 44.46 | 4500 | 94 | 18 | 19 | 85 | 85 | 7 |
| | 49.79 | 4500 | 94 | 18 | 19 | 85 | 85 | 7 |
| | 58.60 | 4500 | 94 | 18 | 19 | 85 | 85 | 7 |
| | 67.80 | 4500 | 94 | 18 | 19 | 85 | 85 | 7 |
| | 72.54 | 4500 | 94 | 18 | 19 | 85 | 85 | 7 |
| | 83.69 | 4500 | 93 | 18 | 19 | 85 | 85 | 7 |
| | 97.81 | 4500 | 93 | 18 | 19 | 85 | 85 | 7 |
| | 106.38 | 4500 | 93 | 18 | 19 | 85 | 85 | 7 |

| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | K [N] | KF [N] | KA [N] | KAF [N] | K [N] | KF [N] | KA [N] | KAF [N] |
| K37 3 | 3.98 | 125 | 187 | 213 | 377 | 2.6 | 1660 | 2130 | 2310 | 2310 | 5780 | 5710 | 7000 | 7000 |
| | 5.36 | 140 | 199 | 238 | 317 | 1.7 | 1810 | 2340 | 2530 | 2530 | 5650 | 5640 | 7000 | 7000 |
| | 6.37 | 145 | 199 | 247 | 314 | 1.3 | 1950 | 2500 | 2720 | 2720 | 5650 | 5640 | 7000 | 7000 |
| | 6.80 | 150 | 199 | 255 | 294 | 1.1 | 1980 | 2540 | 2760 | 2760 | 5650 | 5640 | 7000 | 7000 |
| | 7.96 | 155 | 199 | 264 | 276 | 0.85 | 2110 | 2700 | 2940 | 2940 | 5650 | 5640 | 7000 | 7000 |
| | 8.91 | 160 | 199 | 272 | 258 | 0.70 | 2200 | 2810 | 3070 | 3070 | 5650 | 5640 | 7000 | 7000 |
| | 10.49 | 160 | 199 | 272 | 276 | 0.51 | 2410 | 3030 | 3340 | 3340 | 5650 | 5640 | 7000 | 7000 |
| | 12.14 | 160 | 199 | 272 | 297 | 0.40 | 2600 | 3240 | 3600 | 3600 | 5650 | 5640 | 7000 | 7000 |
| | 13.08 | 165 | 240 | 281 | 420 | 1.0 | 2650 | 3310 | 3660 | 3660 | 4100 | 4100 | 7000 | 7000 |
| | 15.31 | 175 | 240 | 298 | 346 | 0.76 | 2780 | 3480 | 3850 | 3850 | 4100 | 4100 | 7000 | 7000 |
| | 17.15 | 180 | 240 | 306 | 315 | 0.62 | 2900 | 3630 | 4020 | 4020 | 4100 | 4100 | 7000 | 7000 |
| | 20.19 | 185 | 240 | 315 | 287 | 0.46 | 3110 | 3870 | 4300 | 4300 | 4100 | 4100 | 7000 | 7000 |
| | 23.36 | 195 | 240 | 332 | 240 | 0.37 | 3260 | 4060 | 4510 | 4510 | 4100 | 4100 | 7000 | 7000 |
| | 24.99 | 200 | 240 | 340 | 220 | 0.33 | 3330 | 4150 | 4600 | 4600 | 4100 | 4100 | 7000 | 7000 |
| | 28.83 | 200 | 240 | 340 | 222 | 0.26 | 3580 | 4420 | 4940 | 4940 | 4100 | 4100 | 7000 | 7000 |
| | 29.96 | 200 | 230 | 340 | 157 | 0.76 | 3650 | 4500 | 5030 | 5030 | 5140 | 5140 | 7000 | 7000 |
| | 35.57 | 200 | 230 | 340 | 157 | 0.60 | 3970 | 4860 | 5460 | 5460 | 5140 | 5140 | 7000 | 7000 |
| | 37.97 | 200 | 230 | 340 | 158 | 0.54 | 4100 | 5000 | 5630 | 5630 | 5140 | 5140 | 7000 | 7000 |
| | 44.46 | 200 | 230 | 340 | 157 | 0.42 | 4420 | 5350 | 6060 | 6060 | 5140 | 5140 | 7000 | 7000 |
| | 49.79 | 200 | 230 | 340 | 141 | 0.36 | 4660 | 5610 | 6380 | 6380 | 5140 | 5140 | 7000 | 7000 |
| | 58.60 | 200 | 230 | 340 | 119 | 0.27 | 5020 | 5630 | 6860 | 6860 | 5140 | 5140 | 7000 | 7000 |
| | 67.80 | 200 | 230 | 340 | 103 | 0.23 | 5360 | 5630 | 7000 | 7000 | 5140 | 5140 | 7000 | 7000 |
| | 72.54 | 200 | 230 | 340 | 96 | 0.21 | 5520 | 5630 | 7000 | 7000 | 5140 | 5140 | 7000 | 7000 |
| | 83.69 | 200 | 230 | 340 | 84 | 0.17 | 5640 | 5630 | 7000 | 7000 | 5140 | 5140 | 7000 | 7000 |
| | 97.81 | 200 | 230 | 340 | 72 | 0.13 | 5640 | 5630 | 7000 | 7000 | 5140 | 5140 | 7000 | 7000 |
| | 106.38 | 200 | 230 | 340 | 66 | 0.12 | 5640 | 5630 | 7000 | 7000 | 5140 | 5140 | 7000 | 7000 |

33 009 00 07

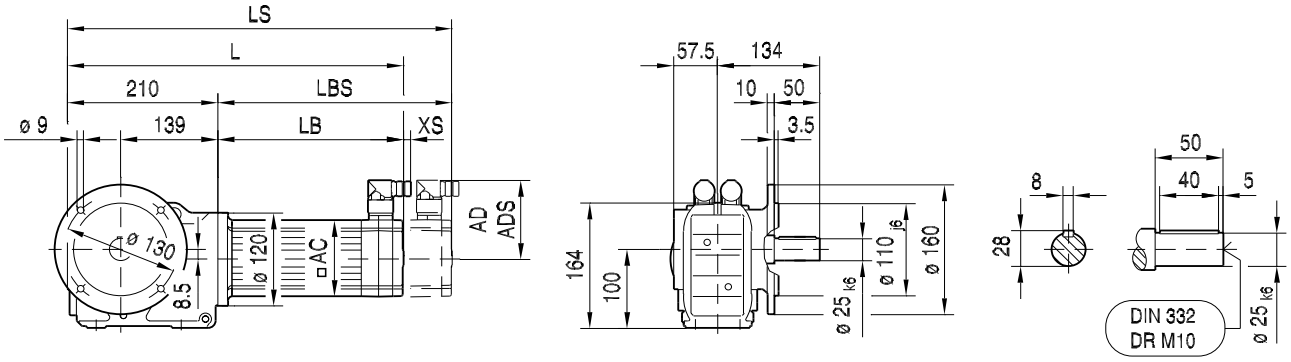
## K37..



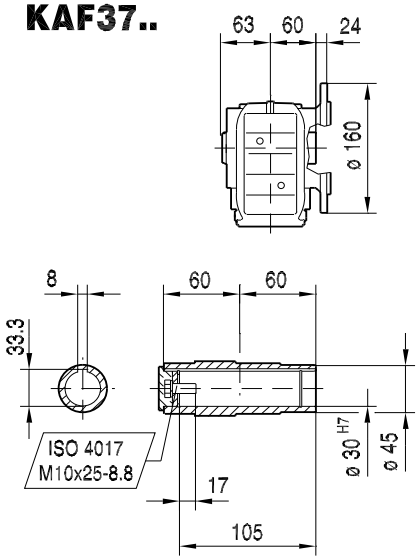

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 345 | 347 | 386 | 425 | 382 | 432 | 485 | 374 | 402 | 414 |
| **LS** | 375 | 376 | 415 | 454 | 410 | 460 | 514 | 439 | 467 | 492 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

33 010 00 07

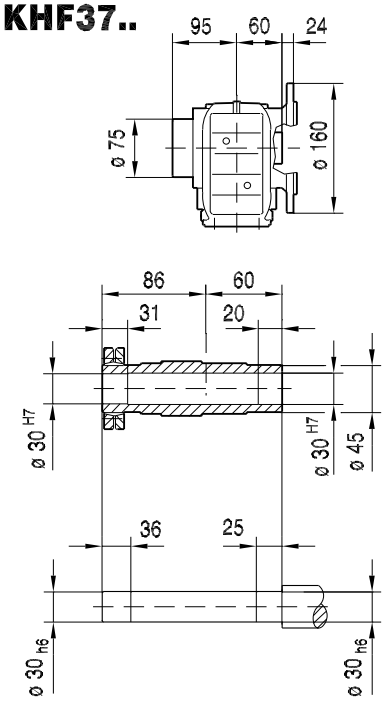
## KF37..



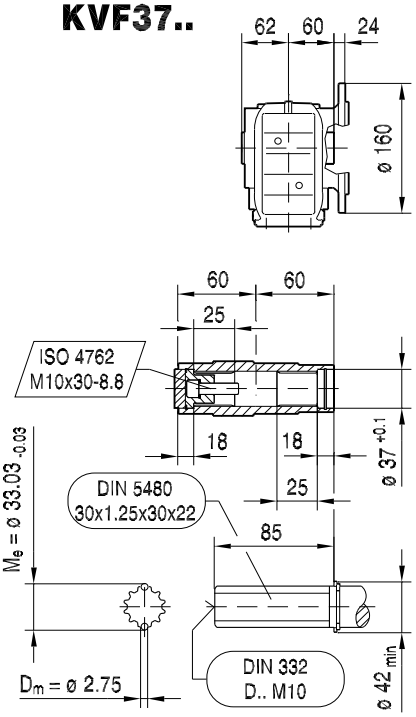

## KAF37..




## KHF37..



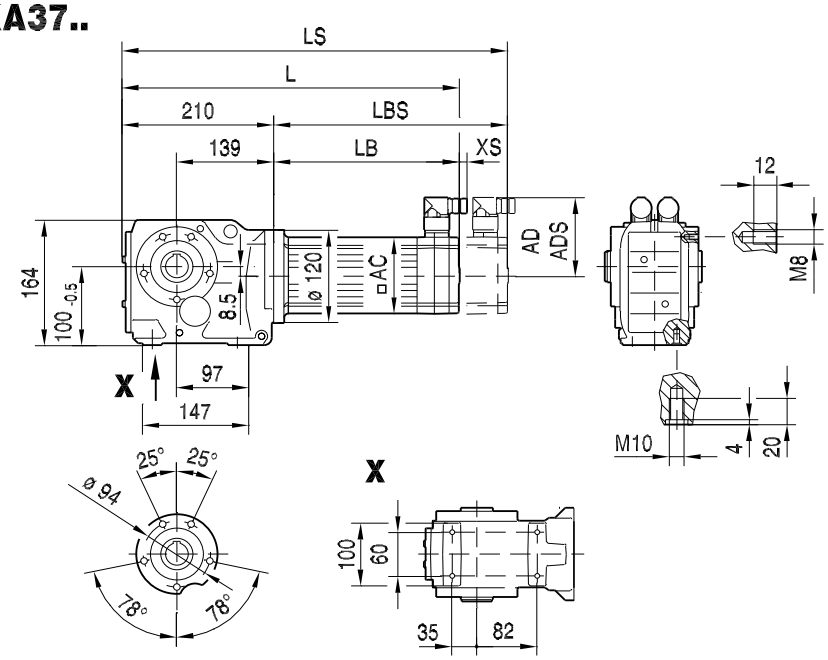

## KVF37..

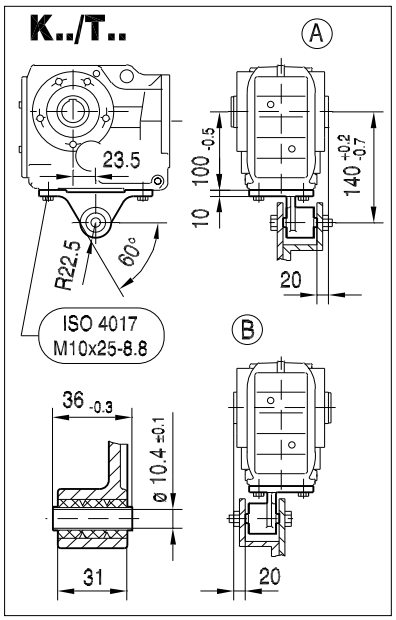



| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 353 | 355 | 394 | 433 | 390 | 440 | 493 | 382 | 410 | 422 |
| **LS** | 383 | 384 | 423 | 462 | 418 | 468 | 522 | 447 | 475 | 500 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

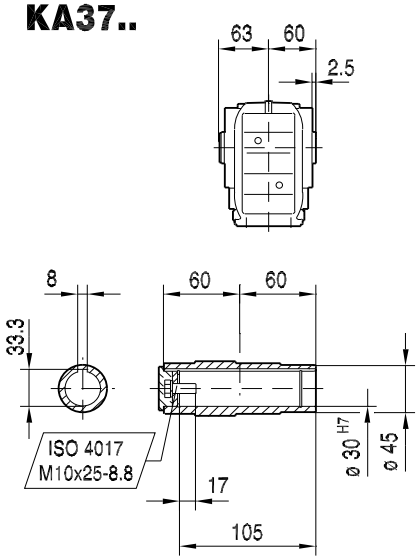
## KA37..

33 011 00 07

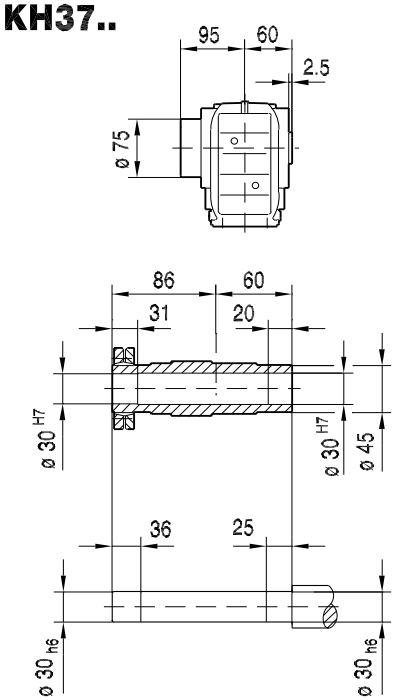


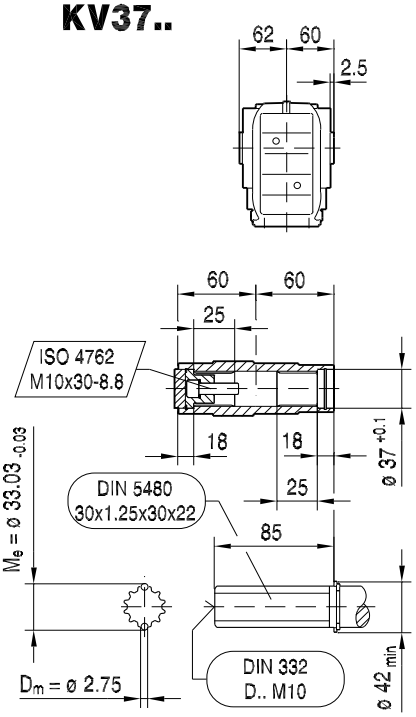

## KA37..




## KH37..



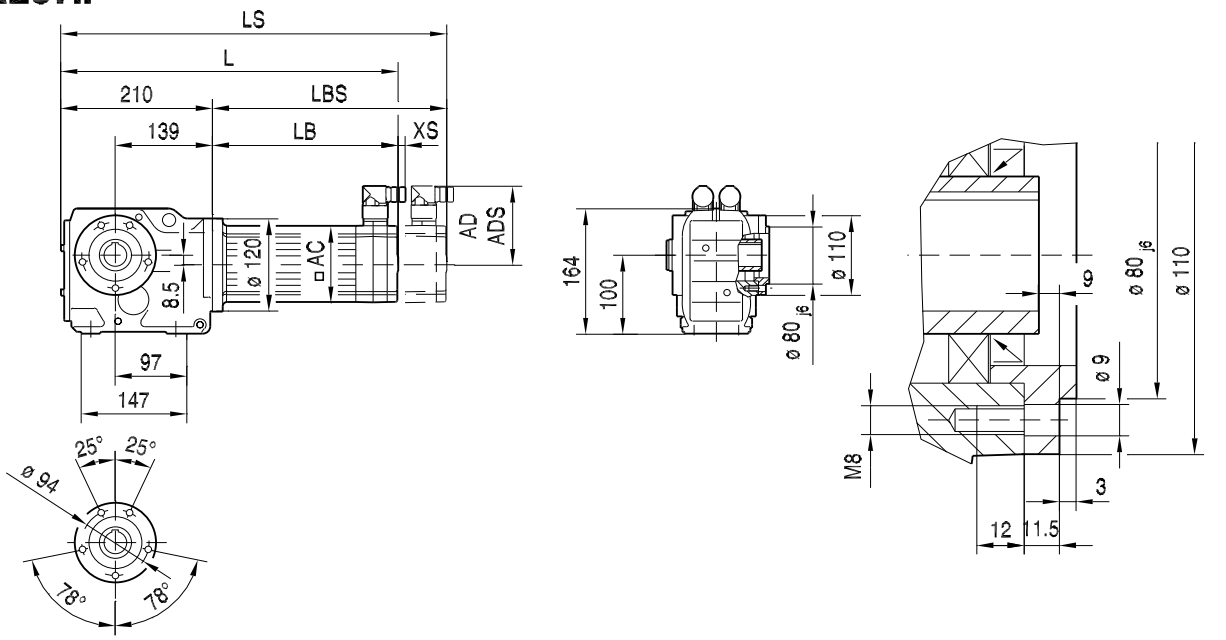

## KV37..



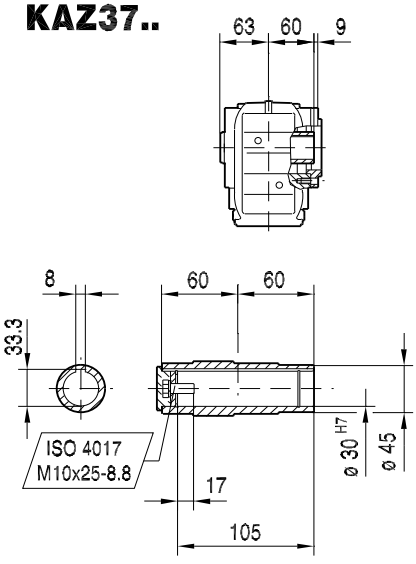

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 353 | 355 | 394 | 433 | 390 | 440 | 493 | 382 | 410 | 422 |
| **LS** | 383 | 384 | 423 | 462 | 418 | 468 | 522 | 447 | 475 | 500 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

## KAZ37..

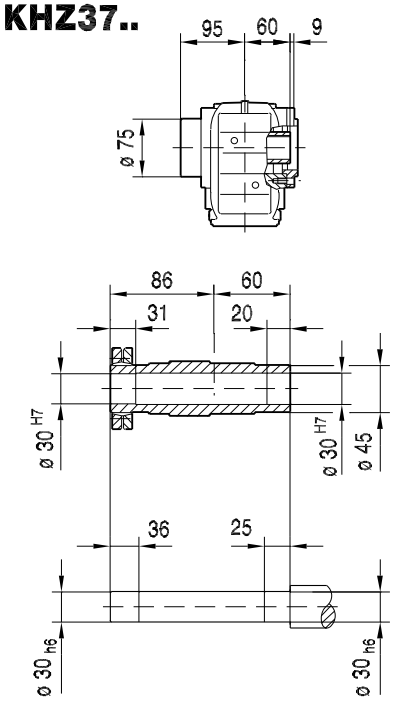
33 012 00 07



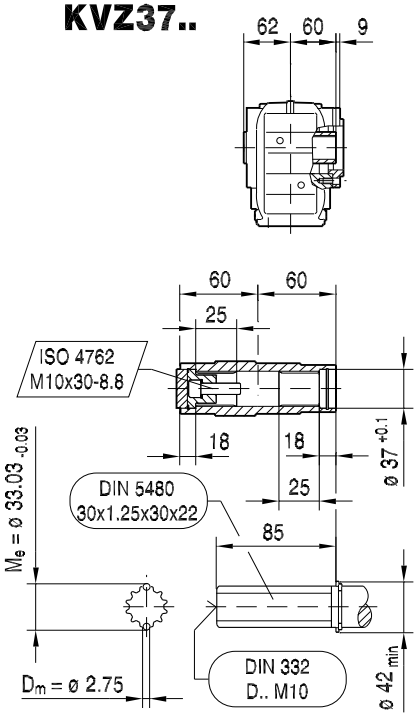

## KAZ37..




## KHZ37..



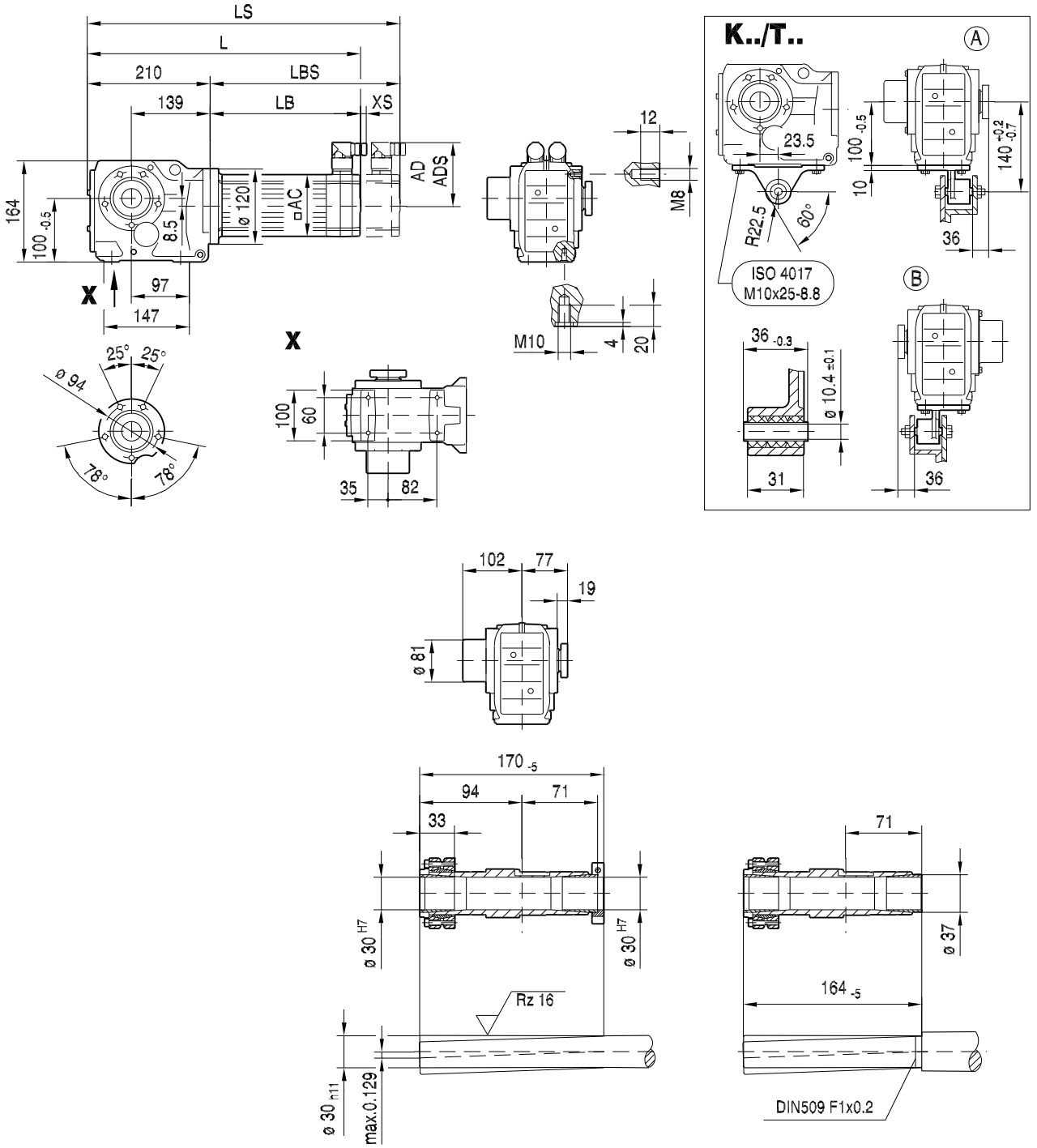

## KVZ37..




| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 353 | 355 | 394 | 433 | 390 | 440 | 493 | 382 | 410 | 422 |
| **LS** | 383 | 384 | 423 | 462 | 418 | 468 | 522 | 447 | 475 | 500 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

**KT37..**

33 013 00 07



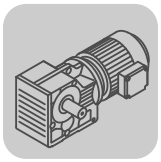

| (→ 📖 9) | CMP40M | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 57 | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 78 | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 353 | 355 | 394 | 433 | 390 | 440 | 493 | 382 | 410 | 422 |
| **LS** | 383 | 384 | 423 | 462 | 418 | 468 | 522 | 447 | 475 | 500 |
| **LB** | 143 | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 173 | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 19 | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

### 5.2.2 K 47

| $M_{aDyn}$ [Nm] | | CMP | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | i | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 71L | 80S | 80M |
| | 4.64 | | 46 | 69 | 49 | 95 | 135 | 86 | 137 | 205 | 188 | 189 |
| | 5.81 | 29 | 57 | 86 | 62 | 119 | 170 | 107 | 172 | 260 | 230 | 235 |
| | 6.58 | 33 | 65 | 97 | 70 | 135 | 192 | 121 | 195 | 295 | 265 | 265 |
| | 7.36 | 37 | 73 | 109 | 78 | 151 | 210 | 136 | 215 | >310 | 295 | 300 |
| | 8.56 | 43 | 85 | 127 | 91 | 176 | 245 | 158 | 250 | >310 | >310 | >310 |
| | 9.10 | 45 | 90 | 135 | 97 | 187 | 265 | 168 | 265 | >310 | >310 | >310 |
| | 10.56 | 53 | 104 | 156 | 113 | 215 | 305 | 195 | 310 | >315 | >315 | >315 |
| | 11.77 | 59 | 116 | 174 | 125 | 240 | >315 | 215 | >315 | >315 | >315 | >315 |
| | 12.19 | 61 | 121 | 180 | 130 | 250 | 355 | 220 | 360 | >435 | >435 | >435 |
| | 13.65 | 68 | 135 | 200 | 145 | 280 | 395 | 250 | 400 | >435 | >435 | >435 |
| | 15.86 | 79 | 157 | 230 | 169 | 325 | >435 | 290 | >435 | >435 | >435 | >435 |
| | 16.86 | 84 | 167 | 245 | 180 | 345 | >435 | 310 | >435 | >435 | >435 | >435 |
| | 19.58 | 98 | 194 | 285 | 205 | 400 | >435 | 360 | >435 | >435 | >435 | >435 |
| | 21.81 | 109 | 215 | 320 | 230 | >435 | >435 | 400 | >435 | >435 | >435 | >435 |
| **K47** | 24.06 | 120 | 235 | 355 | 255 | >435 | | >435 | | | | |
| **3** | 25.91 | 129 | 255 | 380 | 275 | >435 | >435 | >435 | >435 | | | |
| | 29.32 | 146 | 285 | 430 | 310 | >435 | | >435 | | | | |
| | 31.30 | 156 | 305 | >435 | 330 | >435 | | >435 | | | | |
| | 35.39 | 173 | 340 | >435 | 365 | >435 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 39.61 | 194 | 380 | >435 | 410 | >435 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 46.03 | 220 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 48.95 | 235 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 56.83 | 275 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 63.30 | 305 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | >435 |
| | 69.84 | 340 | >435 | >435 | >435 | >435 | | >435 | | | | |
| | 75.20 | 365 | >435 | >435 | >435 | >435 | >435 | >435 | >435 | | | |
| | 85.12 | 415 | >435 | >435 | >435 | >435 | | >435 | | | | |
| | 90.86 | >435 | >435 | >435 | >435 | >435 | | >435 | | | | |
| | 104.37 | >435 | >435 | | >435 | | | | | | | |
| | 121.48 | >435 | | | | | | | | | | |
| | 131.87 | >435 | | | | | | | | | | |

| m [kg] | | CMP | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 71L | 80S | 80M |
| **K47** | 3 | 21 | 22 | 23 | 23 | 25 | 26 | 27 | 28 | 30 | 33 | 35 |
| **KF: + 3.2 kg / KA: + -0.9 kg / KAF: + 2.0 kg** | | | | | | | | | | | | |

| CMP.. | i | $n_{epk}$ [1/min] | η [%] | $c_{TG}$ K [Nm/'] | KF [Nm/'] | KA [Nm/'] | KAF [Nm/'] | φ /R ['] |
|---|---|---|---|---|---|---|---|---|
| | 4.64 | 4500 | 96 | 26 | 23 | 50 | 50 | 12 |
| | 5.81 | 4500 | 96 | 26 | 23 | 50 | 50 | 12 |
| | 6.58 | 4500 | 96 | 26 | 23 | 50 | 50 | 12 |
| | 7.36 | 4500 | 96 | 26 | 23 | 50 | 50 | 11 |
| | 8.56 | 4500 | 96 | 26 | 23 | 50 | 50 | 11 |
| | 9.10 | 4500 | 96 | 26 | 23 | 50 | 50 | 11 |
| | 10.56 | 4500 | 96 | 26 | 23 | 50 | 50 | 11 |
| | 11.77 | 4500 | 96 | 26 | 23 | 50 | 50 | 10 |
| | 12.19 | 4500 | 96 | 33 | 29 | 90 | 90 | 8 |
| | 13.65 | 4500 | 96 | 33 | 29 | 90 | 90 | 8 |
| | 15.86 | 4500 | 96 | 33 | 29 | 90 | 90 | 8 |
| | 16.86 | 4500 | 96 | 33 | 29 | 90 | 90 | 8 |
| | 19.58 | 4500 | 96 | 33 | 29 | 90 | 90 | 8 |
| | 21.81 | 4500 | 96 | 33 | 29 | 90 | 90 | 8 |
| **K47** | 24.06 | 4500 | 96 | 33 | 29 | 90 | 90 | 8 |
| **3** | 25.91 | 4500 | 96 | 33 | 29 | 90 | 90 | 8 |
| | 29.32 | 4500 | 96 | 33 | 29 | 90 | 90 | 8 |
| | 31.30 | 4500 | 96 | 33 | 29 | 90 | 90 | 7 |
| | 35.39 | 4500 | 94 | 36 | 32 | 117 | 117 | 7 |
| | 39.61 | 4500 | 94 | 36 | 32 | 117 | 117 | 7 |
| | 46.03 | 4500 | 94 | 36 | 32 | 117 | 117 | 7 |
| | 48.95 | 4500 | 94 | 36 | 32 | 117 | 117 | 7 |
| | 56.83 | 4500 | 94 | 36 | 32 | 117 | 117 | 7 |
| | 63.30 | 4500 | 94 | 36 | 32 | 117 | 117 | 7 |
| | 69.84 | 4500 | 94 | 36 | 32 | 117 | 117 | 6 |
| | 75.20 | 4500 | 94 | 36 | 32 | 117 | 117 | 6 |
| | 85.12 | 4500 | 94 | 36 | 32 | 117 | 117 | 6 |
| | 90.86 | 4500 | 94 | 36 | 32 | 117 | 117 | 6 |
| | 104.37 | 4500 | 93 | 36 | 32 | 117 | 117 | 6 |
| | 121.48 | 4500 | 93 | 36 | 32 | 117 | 117 | 6 |
| | 131.87 | 4500 | 93 | 36 | 32 | 117 | 117 | 6 |

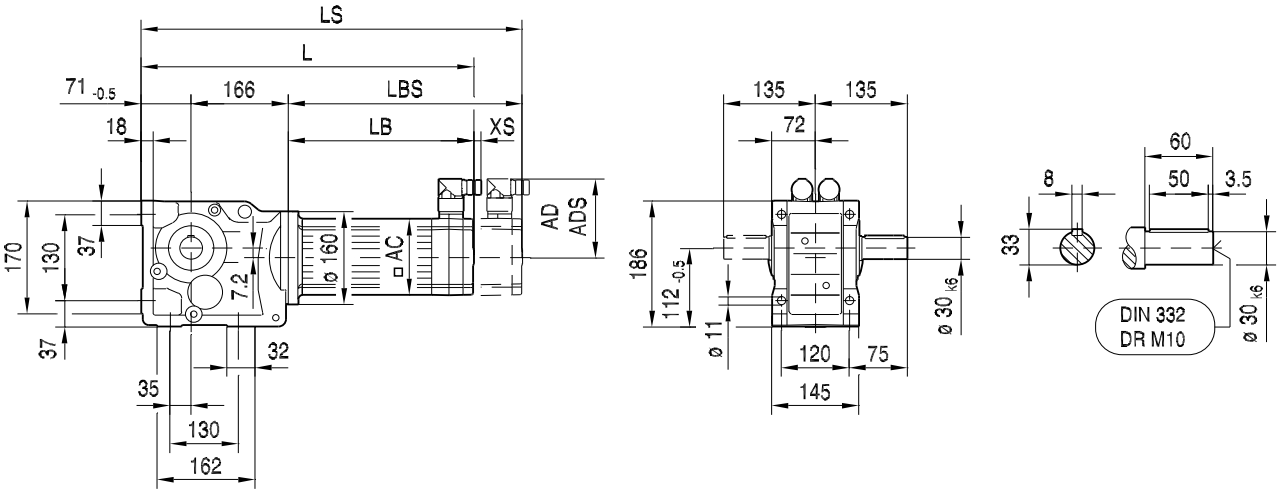




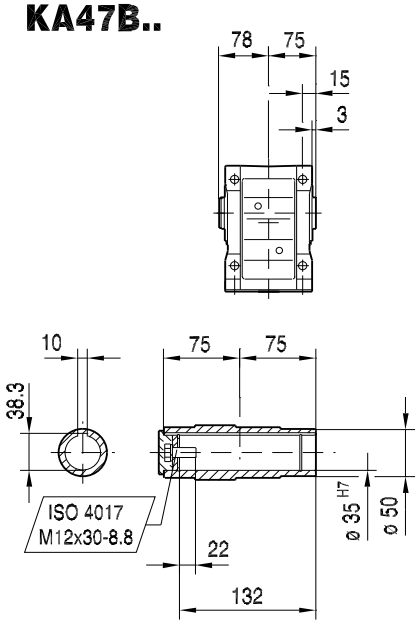
| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | K [N] | KF [N] | KA [N] | KAF [N] | K [N] | KF [N] | KA [N] | KAF [N] |
| K47 3 | 4.64 | 205 | 300 | 349 | 302 | 4.4 | 2980 | 2970 | 2040 | 2040 | 7060 | 7060 | 10000 | 10000 |
| | 5.81 | 230 | 305 | 391 | 258 | 3.6 | 3140 | 3140 | 2100 | 2100 | 7020 | 7020 | 10000 | 10000 |
| | 6.58 | 240 | 310 | 408 | 228 | 2.8 | 3270 | 3270 | 2190 | 2190 | 6970 | 6970 | 10000 | 10000 |
| | 7.36 | 250 | 310 | 425 | 217 | 2.3 | 3380 | 3390 | 2270 | 2270 | 6970 | 6970 | 10000 | 10000 |
| | 8.56 | 270 | 310 | 459 | 175 | 1.8 | 3500 | 3520 | 2310 | 2310 | 6970 | 6970 | 10000 | 10000 |
| | 9.10 | 280 | 310 | 476 | 165 | 1.6 | 3540 | 3560 | 2310 | 2310 | 6970 | 6970 | 10000 | 10000 |
| | 10.56 | 280 | 315 | 476 | 170 | 1.2 | 3830 | 3840 | 2580 | 2580 | 6920 | 6920 | 10000 | 10000 |
| | 11.77 | 280 | 315 | 476 | 178 | 1.0 | 4060 | 4050 | 2770 | 2770 | 6920 | 6920 | 10000 | 10000 |
| | 12.19 | 350 | 435 | 595 | 279 | 2.4 | 3720 | 3770 | 2330 | 2330 | 900 | 900 | 10000 | 10000 |
| | 13.65 | 360 | 435 | 612 | 249 | 2.0 | 3890 | 3940 | 2450 | 2450 | 900 | 900 | 10000 | 10000 |
| | 15.86 | 380 | 435 | 646 | 208 | 1.6 | 4080 | 4130 | 2570 | 2570 | 900 | 900 | 10000 | 10000 |
| | 16.86 | 380 | 435 | 646 | 214 | 1.4 | 4220 | 4270 | 2690 | 2690 | 900 | 900 | 10000 | 10000 |
| | 19.58 | 400 | 435 | 680 | 179 | 1.1 | 4440 | 4480 | 2820 | 2820 | 900 | 900 | 10000 | 10000 |
| | 21.81 | 400 | 435 | 680 | 179 | 0.91 | 4710 | 4740 | 3070 | 3070 | 900 | 900 | 10000 | 10000 |
| | 24.06 | 400 | 435 | 680 | 179 | 0.75 | 4970 | 4990 | 3300 | 3300 | 900 | 900 | 10000 | 10000 |
| | 25.91 | 400 | 435 | 680 | 178 | 0.68 | 5170 | 5180 | 3470 | 3470 | 900 | 900 | 10000 | 10000 |
| | 29.32 | 400 | 435 | 680 | 177 | 0.55 | 5520 | 5500 | 3780 | 3780 | 900 | 900 | 10000 | 10000 |
| | 31.30 | 400 | 435 | 680 | 179 | 0.50 | 5700 | 5680 | 3940 | 3940 | 900 | 900 | 10000 | 10000 |
| | 35.39 | 400 | 435 | 680 | 93 | 1.3 | 5920 | 5920 | 4270 | 4270 | 900 | 900 | 10000 | 10000 |
| | 39.61 | 400 | 435 | 680 | 96 | 1.1 | 5920 | 5920 | 4580 | 4580 | 900 | 900 | 10000 | 10000 |
| | 46.03 | 400 | 435 | 680 | 100 | 0.88 | 5920 | 5920 | 5000 | 5000 | 900 | 900 | 10000 | 10000 |
| | 48.95 | 400 | 435 | 680 | 100 | 0.80 | 5920 | 5920 | 5190 | 5190 | 900 | 900 | 10000 | 10000 |
| | 56.83 | 400 | 435 | 680 | 104 | 0.64 | 5920 | 5920 | 5640 | 5640 | 900 | 900 | 10000 | 10000 |
| | 63.30 | 400 | 435 | 680 | 104 | 0.54 | 5920 | 5920 | 5990 | 5990 | 900 | 900 | 10000 | 10000 |
| | 69.84 | 400 | 435 | 680 | 100 | 0.45 | 5920 | 5920 | 6320 | 6320 | 900 | 900 | 10000 | 10000 |
| | 75.20 | 400 | 435 | 680 | 93 | 0.42 | 5920 | 5920 | 6570 | 6570 | 900 | 900 | 10000 | 10000 |
| | 85.12 | 400 | 435 | 680 | 82 | 0.35 | 5920 | 5920 | 7000 | 7000 | 900 | 900 | 10000 | 10000 |
| | 90.86 | 400 | 435 | 680 | 77 | 0.32 | 5920 | 5920 | 7240 | 7240 | 900 | 900 | 10000 | 10000 |
| | 104.37 | 400 | 435 | 680 | 67 | 0.26 | 5920 | 5920 | 7760 | 7760 | 900 | 900 | 10000 | 10000 |
| | 121.48 | 400 | 435 | 680 | 58 | 0.21 | 5920 | 5920 | 8360 | 8360 | 900 | 900 | 10000 | 10000 |
| | 131.87 | 400 | 435 | 680 | 53 | 0.18 | 5920 | 5920 | 8700 | 8700 | 900 | 900 | 10000 | 10000 |

33 014 00 07

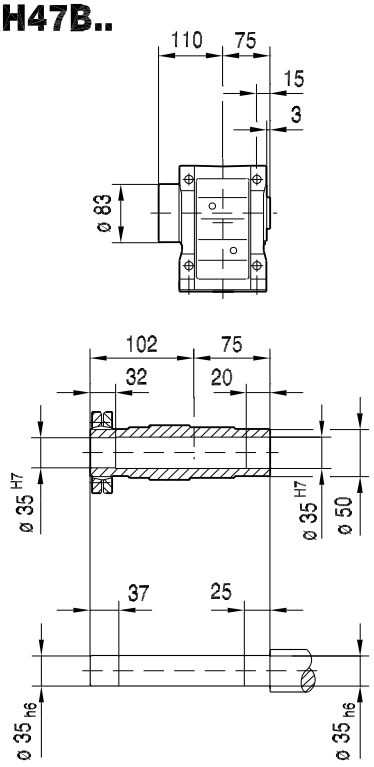
## K47..



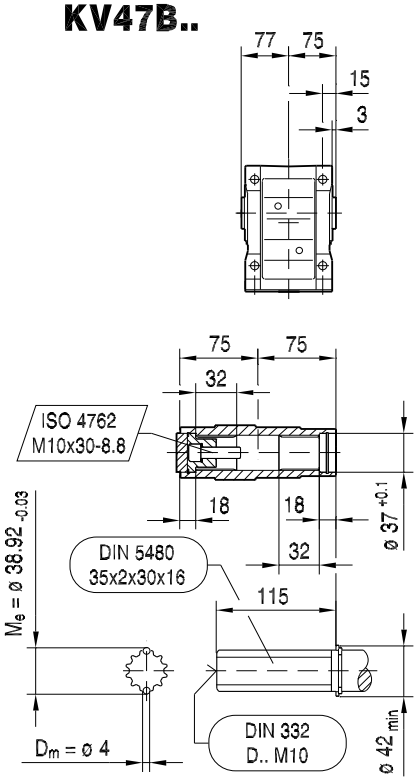

## KA47B..




## KH47B..



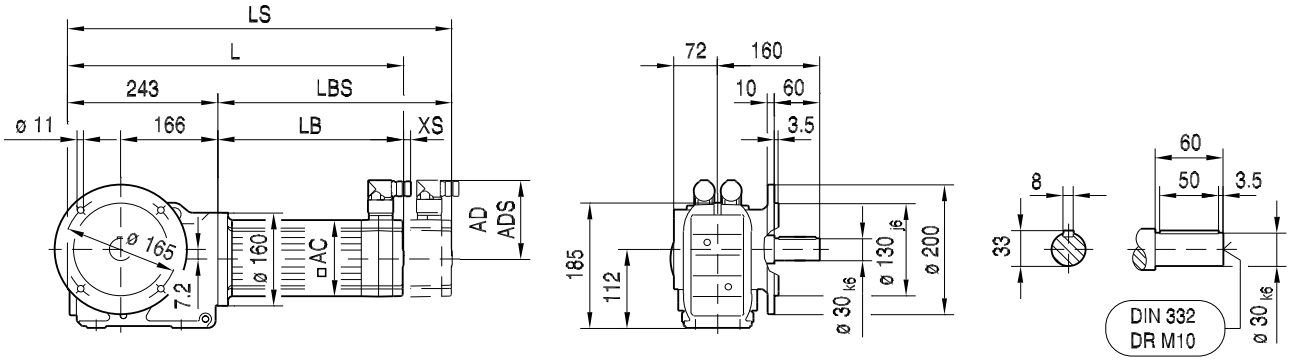

## KV47B..



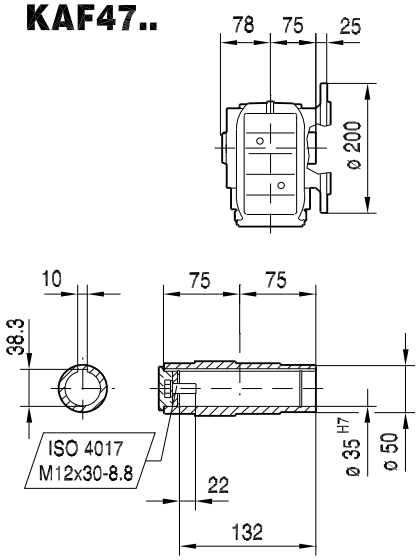

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 376 | 415 | 454 | 410 | 460 | 510 | 403 | 428 | 478 | 443 | 481 |
| **LS** | 405 | 444 | 483 | 439 | 489 | 539 | 468 | 493 | 543 | 521 | 559 |
| **LB** | 139 | 178 | 217 | 173 | 223 | 273 | 166 | 191 | 241 | 206 | 244 |
| **LBS** | 168 | 207 | 246 | 202 | 252 | 302 | 231 | 256 | 306 | 284 | 322 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

33 015 00 07

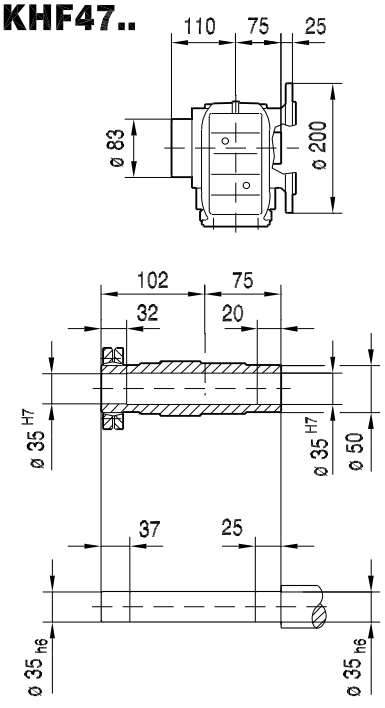
## KF47..



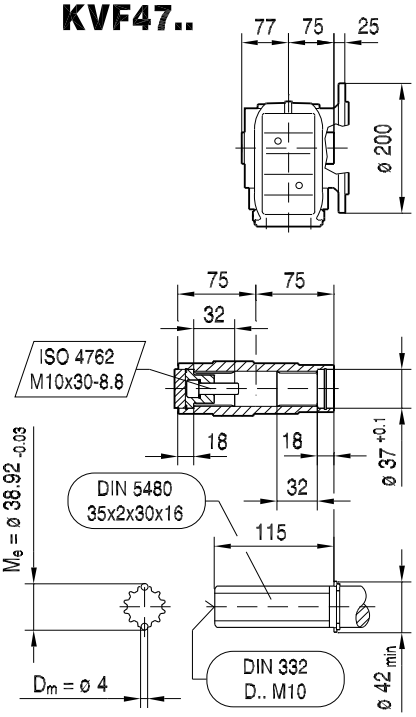

## KAF47..




## KHF47..



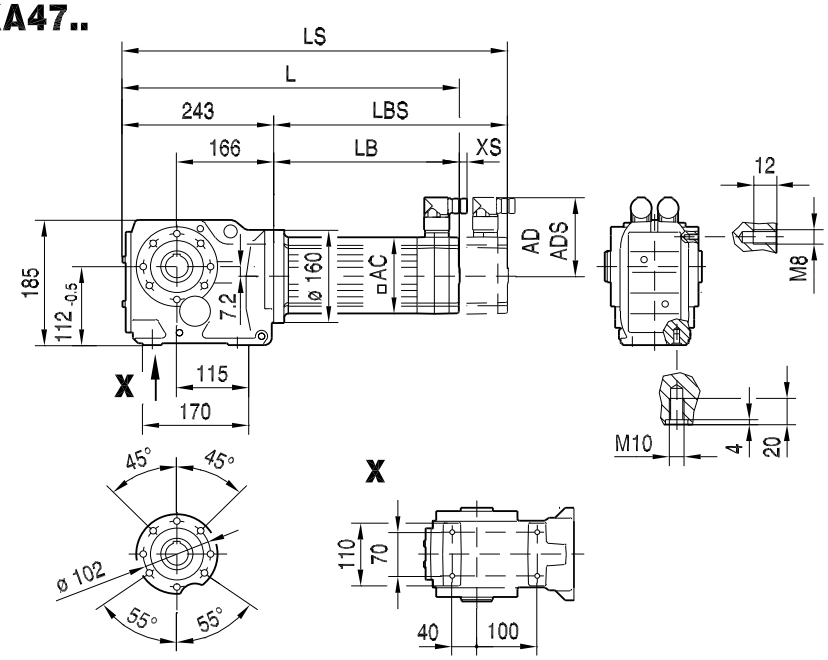

## KVF47..

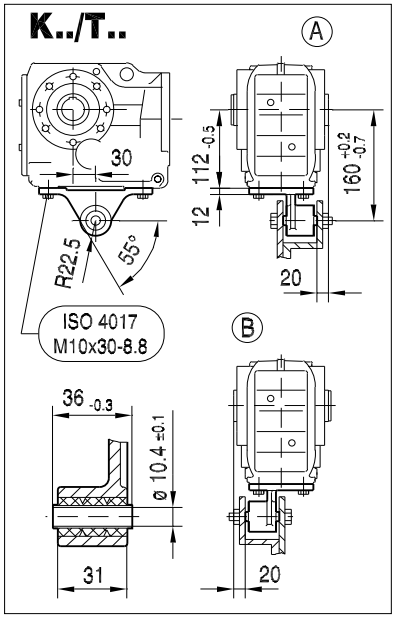



| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 382 | 421 | 460 | 416 | 466 | 516 | 409 | 434 | 484 | 449 | 487 |
| **LS** | 411 | 450 | 489 | 445 | 495 | 545 | 474 | 499 | 549 | 527 | 565 |
| **LB** | 139 | 178 | 217 | 173 | 223 | 273 | 166 | 191 | 241 | 206 | 244 |
| **LBS** | 168 | 207 | 246 | 202 | 252 | 302 | 231 | 256 | 306 | 284 | 322 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

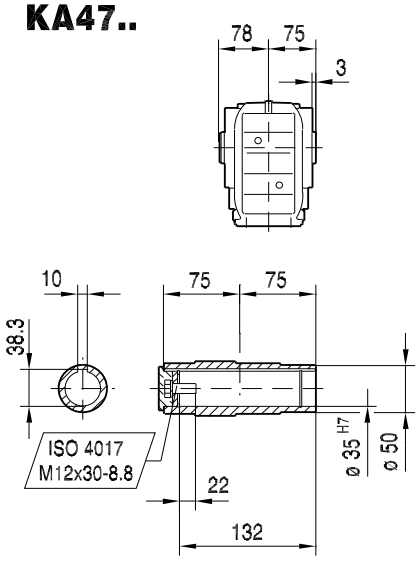
33 016 00 07

## KA47..

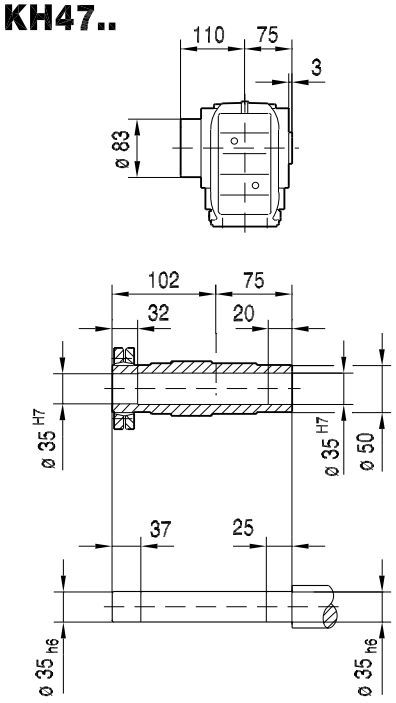


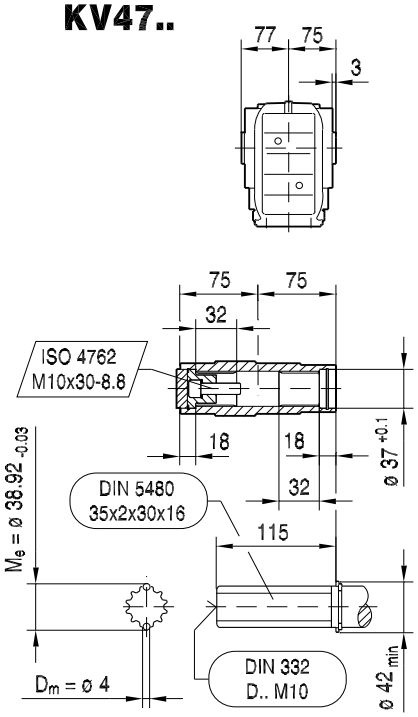

## KA47..




## KH47..



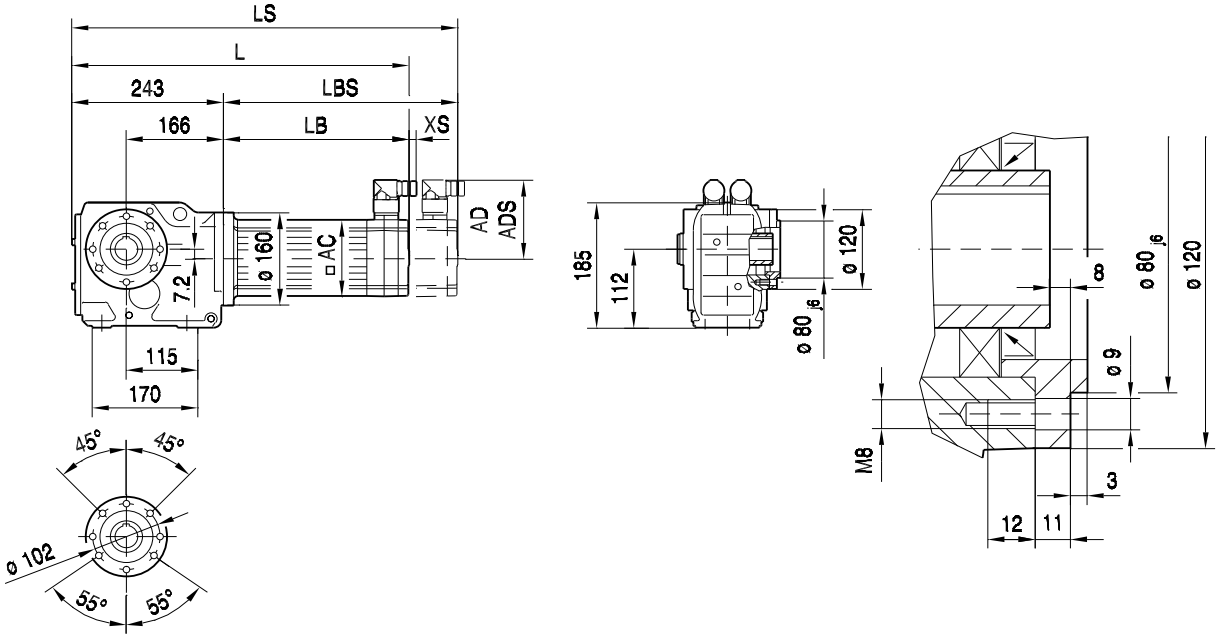

## KV47..



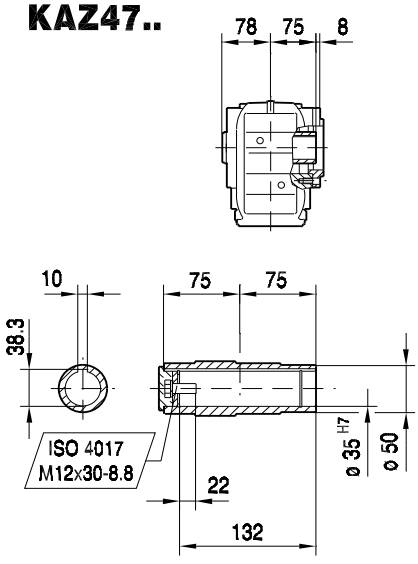

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 382 | 421 | 460 | 416 | 466 | 516 | 409 | 434 | 484 | 449 | 487 |
| **LS** | 411 | 450 | 489 | 445 | 495 | 545 | 474 | 499 | 549 | 527 | 565 |
| **LB** | 139 | 178 | 217 | 173 | 223 | 273 | 166 | 191 | 241 | 206 | 244 |
| **LBS** | 168 | 207 | 246 | 202 | 252 | 302 | 231 | 256 | 306 | 284 | 322 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

## KAZ47..

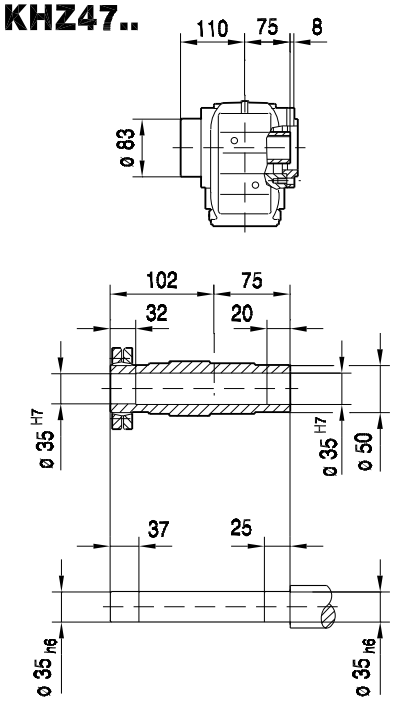
33 017 00 07



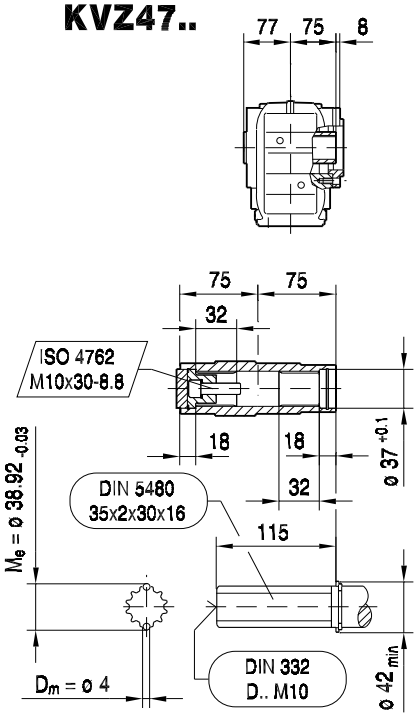

## KAZ47..




## KHZ47..



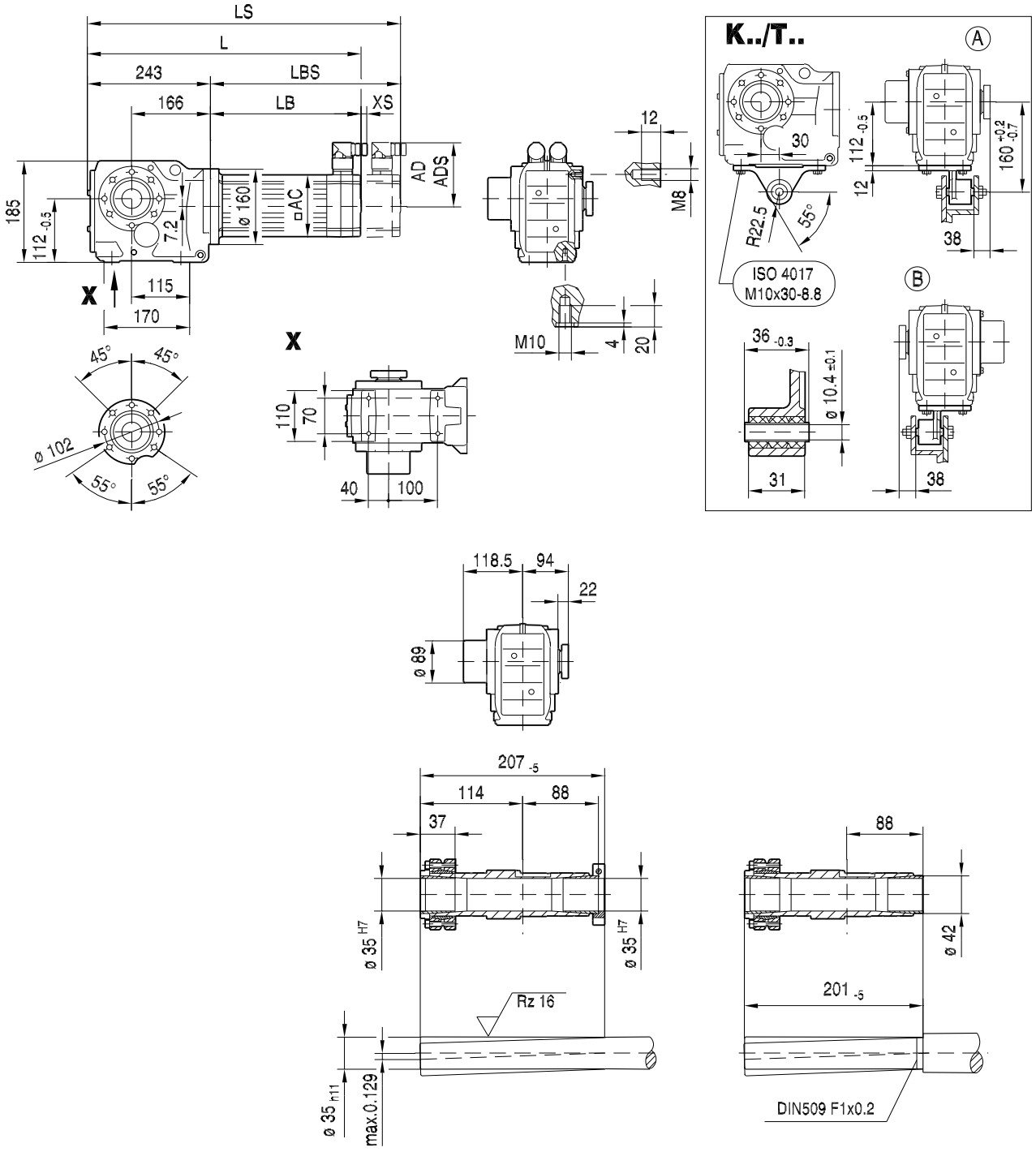

## KVZ47..




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 382 | 421 | 460 | 416 | 466 | 516 | 409 | 434 | 484 | 449 | 487 |
| **LS** | 411 | 450 | 489 | 445 | 495 | 545 | 474 | 499 | 549 | 527 | 565 |
| **LB** | 139 | 178 | 217 | 173 | 223 | 273 | 166 | 191 | 241 | 206 | 244 |
| **LBS** | 168 | 207 | 246 | 202 | 252 | 302 | 231 | 256 | 306 | 284 | 322 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

**KT47..**

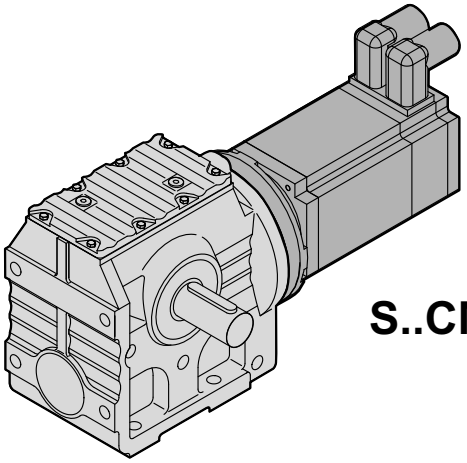
33 018 00 07



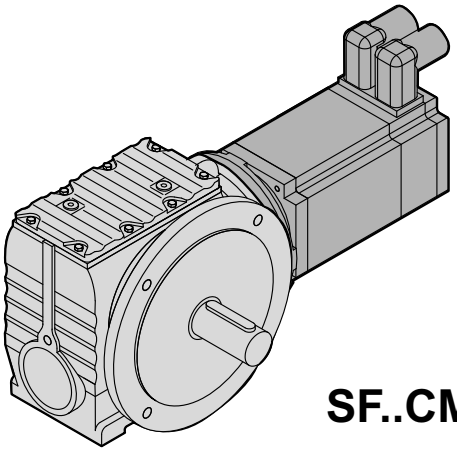

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 382 | 421 | 460 | 416 | 466 | 516 | 409 | 434 | 484 | 449 | 487 |
| **LS** | 411 | 450 | 489 | 445 | 495 | 545 | 474 | 499 | 549 | 527 | 565 |
| **LB** | 139 | 178 | 217 | 173 | 223 | 273 | 166 | 191 | 241 | 206 | 244 |
| **LBS** | 168 | 207 | 246 | 202 | 252 | 302 | 231 | 256 | 306 | 284 | 322 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

# 6 Helical-Worm Gearmotors – S-Series Gear Units

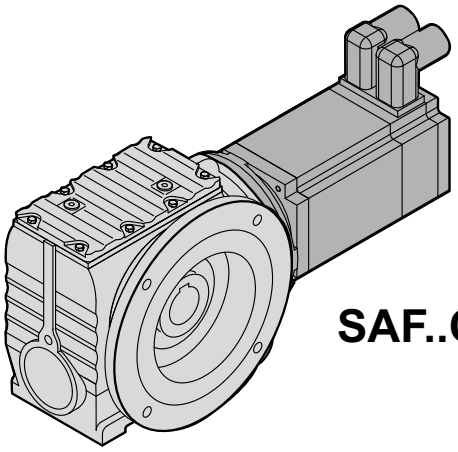
## *6.1 Variants*



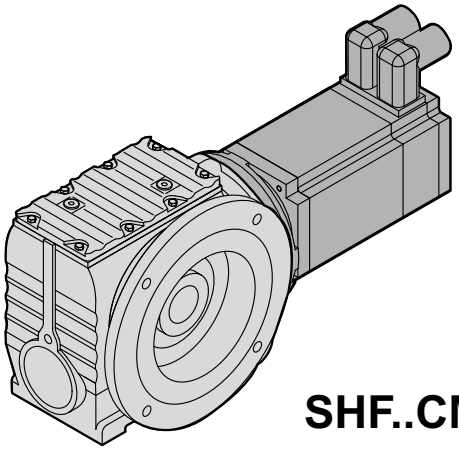
**S..CMP..**



**SF..CMP..**

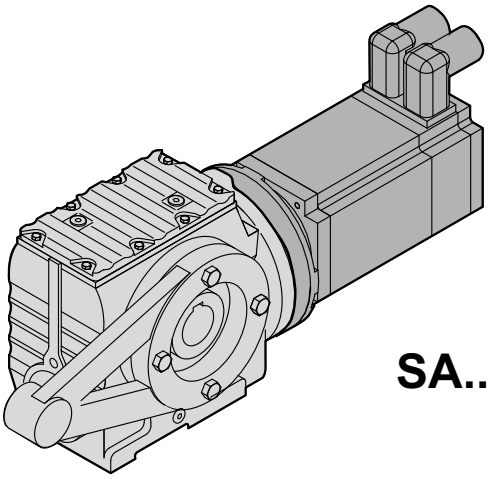


**SAF..CMP..**

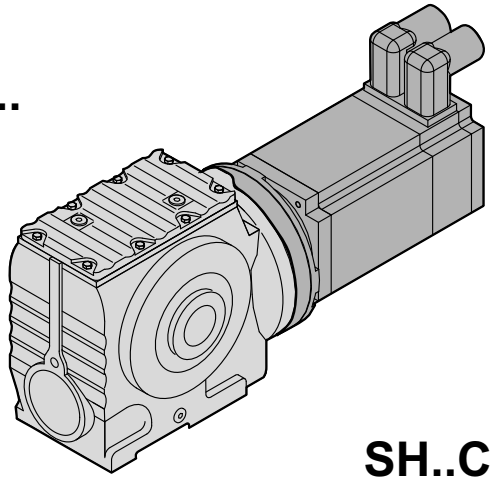


**SHF..CMP..**

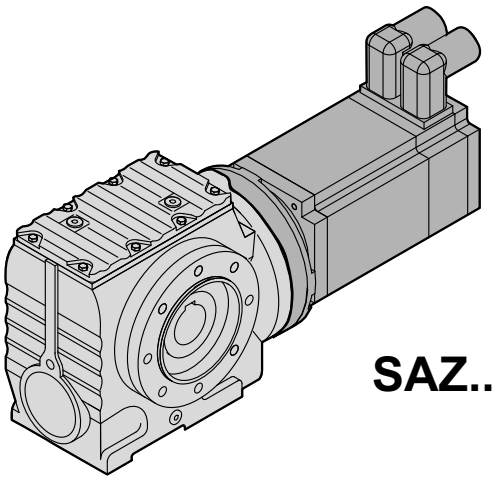
65965axx



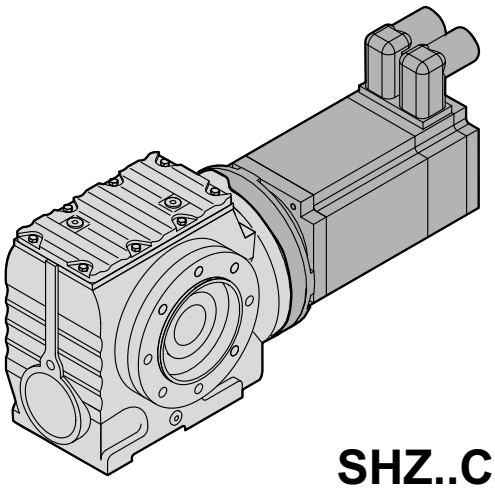
**SA../T CMP..**



**SH..CMP..**



**SAZ..CMP..**



**SHZ..CMP..**

65966axx

## *6.2 S47 – 57/CMP – selection tables, dimension sheets*

### 6.2.1 S 47

| $M_{aDyn}$ [Nm] | | CMP | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | i | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| S47 2 | 4.00 | 19 | 37 | 55 | 40 | >72 | >72 | 69 | >72 | >72 |
| | 4.76 | 22 | 44 | 66 | 48 | >87 | >87 | 82 | >87 | >87 |
| | 5.39 | 25 | 49 | 74 | 53 | >97 | >97 | 92 | >97 | >97 |
| | 6.40 | 30 | 59 | 88 | 63 | >114 | >114 | 109 | >114 | >114 |
| | 6.83 | 32 | 63 | 94 | 67 | >117 | >117 | 117 | >117 | >117 |
| | 7.28 | 33 | 65 | 98 | 70 | >129 | >129 | 122 | >129 | >129 |
| | 8.64 | 39 | 77 | 116 | 83 | >146 | >146 | 144 | >146 | >146 |
| | 9.23 | 42 | 83 | 124 | 89 | >146 | >146 | >146 | >146 | >146 |
| | 10.80 | 49 | 97 | 145 | 104 | >145 | >145 | >145 | >145 | >145 |
| | 12.10 | 55 | 108 | >145 | 117 | >145 | >145 | >145 | >145 | >145 |
| | 14.24 | 64 | 126 | >144 | 136 | >144 | >144 | >144 | >144 | >144 |
| | 16.47 | 74 | >144 | >144 | >144 | >144 | | >144 | | |
| | 17.62 | 79 | >144 | >144 | >144 | >144 | | >144 | | |
| | 19.54 | | 159 | >184 | 171 | >184 | >184 | >184 | >184 | >184 |
| | 20.33 | 90 | >143 | | >143 | | | | | |
| | 23.20 | 95 | 189 | >200 | >200 | >200 | >200 | >200 | >200 | >200 |
| | 24.77 | 102 | 200 | >205 | >205 | >205 | >205 | >205 | >205 | >205 |
| | 29.00 | 118 | >215 | >215 | >215 | >215 | >215 | >215 | >215 | >215 |
| | 32.48 | 130 | >215 | >215 | >215 | >215 | >215 | >215 | >215 | >215 |
| | 38.23 | 153 | >215 | >215 | >215 | >215 | >215 | >215 | >215 | >215 |
| | 44.22 | 175 | >210 | >210 | >210 | >210 | | >210 | | |
| | 47.32 | 185 | >210 | >210 | >210 | >210 | | >210 | | |
| | 54.59 | >210 | >210 | | >210 | | | | | |
| | 63.80 | >210 | | | | | | | | |
| | 69.39 | >210 | | | | | | | | |

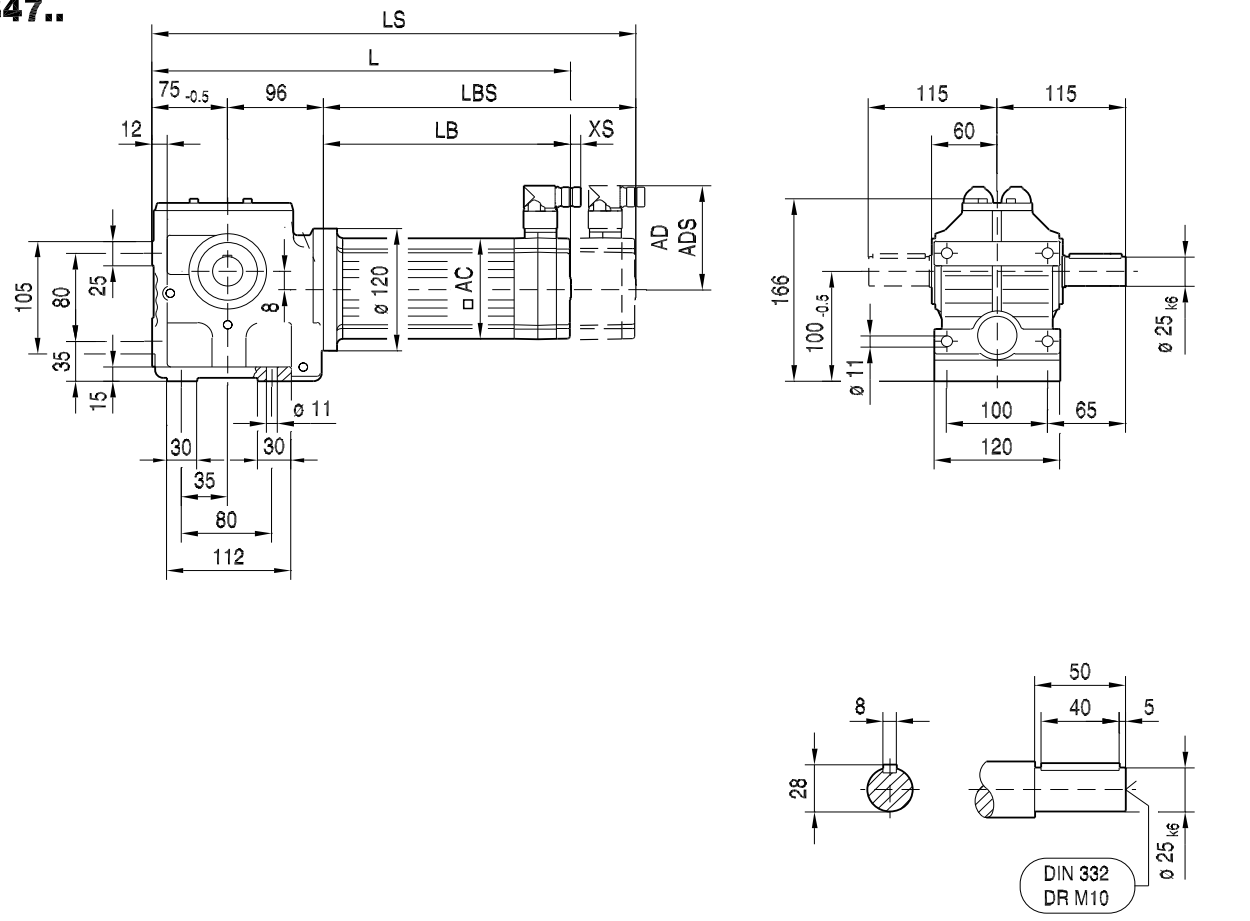
| m [kg] | | CMP | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | s | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| S47 | | 13 | 14 | 15 | 15 | 16 | 18 | 18 | 19 | 25 |
| **SF: + 3.6 kg / SA: + 1.1 kg / SAF: + 2.8 kg** | | | | | | | | | | |

| CMP.. | i | $n_{epk}$ [1/min] | η [%] | $c_{TG}$ S [Nm/'] | SF [Nm/'] | SA [Nm/'] | SAF [Nm/'] |
|---|---|---|---|---|---|---|---|
| S47 2 | 4.00 | 4500 | 90 | - | - | - | - |
| | 4.76 | 4500 | 90 | - | - | - | - |
| | 5.39 | 4500 | 89 | - | - | - | - |
| | 6.40 | 4500 | 89 | - | - | - | - |
| | 6.83 | 4500 | 89 | - | - | - | - |
| | 7.28 | 4500 | 87 | - | - | - | - |
| | 8.64 | 4500 | 87 | - | - | - | - |
| | 9.23 | 4500 | 87 | - | - | - | - |
| | 10.80 | 4500 | 87 | - | - | - | - |
| | 12.10 | 4500 | 87 | - | - | - | - |
| | 14.24 | 4500 | 86 | - | - | - | - |
| | 16.47 | 4500 | 86 | - | - | - | - |
| | 17.62 | 4500 | 86 | - | - | - | - |
| | 19.54 | 4500 | 79 | - | - | - | - |
| | 20.33 | 4500 | 85 | - | - | - | - |
| | 23.20 | 4500 | 79 | - | - | - | - |
| | 24.77 | 4500 | 79 | - | - | - | - |
| | 29.00 | 4500 | 78 | - | - | - | - |
| | 32.48 | 4500 | 77 | - | - | - | - |
| | 38.23 | 4500 | 77 | - | - | - | - |
| | 44.22 | 4500 | 76 | - | - | - | - |
| | 47.32 | 4500 | 75 | - | - | - | - |
| | 54.59 | 4500 | 75 | - | - | - | - |
| | 63.80 | 4500 | 74 | - | - | - | - |
| | 69.39 | 4500 | 73 | - | - | - | - |

| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | S [N] | SF [N] | SA [N] | SAF [N] | S [N] | SF [N] | SA [N] | SAF [N] |
| S47 2 | 4.00 | 61 | 72 | 108 | 225 | 2.5 | 1980 | 2420 | 2740 | 2740 | 5660 | 6140 | 7000 | 7000 |
| | 4.76 | 72 | 87 | 130 | 231 | 1.8 | 2010 | 2490 | 2780 | 2780 | 5580 | 6070 | 7000 | 7000 |
| | 5.39 | 74 | 97 | 146 | 204 | 1.5 | 2110 | 2600 | 2920 | 2920 | 5530 | 6030 | 7000 | 7000 |
| | 6.40 | 76 | 114 | 171 | 172 | 1.1 | 2260 | 2780 | 3120 | 3120 | 5440 | 5940 | 7000 | 7000 |
| | 6.83 | 78 | 117 | 176 | 161 | 1.0 | 2300 | 2840 | 3190 | 3190 | 5420 | 5930 | 7000 | 7000 |
| | 7.28 | 103 | 129 | 175 | 27 | 1.1 | 2110 | 2690 | 2940 | 2940 | 5360 | 5870 | 7000 | 7000 |
| | 8.64 | 109 | 146 | 185 | 23 | 0.83 | 2230 | 2840 | 3110 | 3110 | 5260 | 5780 | 7000 | 7000 |
| | 9.23 | 109 | 146 | 185 | 22 | 0.74 | 2310 | 2930 | 3210 | 3210 | 5260 | 5780 | 7000 | 7000 |
| | 10.80 | 109 | 145 | 185 | 19 | 0.57 | 2500 | 3150 | 3480 | 3480 | 5270 | 5790 | 7000 | 7000 |
| | 12.10 | 109 | 145 | 185 | 17 | 0.47 | 2650 | 3310 | 3670 | 3670 | 5270 | 5790 | 7000 | 7000 |
| | 14.24 | 110 | 144 | 187 | 14 | 0.35 | 2850 | 3540 | 3950 | 3950 | 5270 | 5790 | 7000 | 7000 |
| | 16.47 | 110 | 144 | 187 | 12 | 0.28 | 3060 | 3770 | 4230 | 4230 | 5270 | 5790 | 7000 | 7000 |
| | 17.62 | 110 | 144 | 187 | 11 | 0.26 | 3160 | 3880 | 4360 | 4360 | 5270 | 5790 | 7000 | 7000 |
| | 19.54 | 144 | 184 | 245 | 10 | 0.94 | 3370 | 4120 | 4660 | 4660 | 5200 | 5710 | 7000 | 7000 |
| | 20.33 | 110 | 143 | 187 | 10 | 0.20 | 3370 | 4130 | 4650 | 4650 | 5280 | 5800 | 7000 | 7000 |
| | 23.20 | 152 | 200 | 258 | 9 | 0.72 | 3570 | 4360 | 4940 | 4940 | 5110 | 5620 | 7000 | 7000 |
| | 24.77 | 155 | 205 | 264 | 8 | 0.65 | 3650 | 4460 | 5050 | 5050 | 5080 | 5590 | 7000 | 7000 |
| | 29.00 | 155 | 215 | 264 | 7 | 0.49 | 3920 | 4760 | 5420 | 5420 | 5020 | 5530 | 7000 | 7000 |
| | 32.48 | 155 | 215 | 264 | 6 | 0.41 | 4120 | 4990 | 5690 | 5690 | 5020 | 5530 | 7000 | 7000 |
| | 38.23 | 155 | 215 | 264 | 5 | 0.31 | 4420 | 5330 | 6100 | 6100 | 5020 | 5530 | 7000 | 7000 |
| | 44.22 | 155 | 210 | 264 | 5 | 0.25 | 4710 | 5660 | 6490 | 6490 | 5050 | 5560 | 7000 | 7000 |
| | 47.32 | 155 | 210 | 264 | 4 | 0.23 | 4850 | 5810 | 6680 | 6680 | 5050 | 5560 | 7000 | 7000 |
| | 54.59 | 155 | 210 | 264 | 9 | 0.18 | 5150 | 5870 | 7000 | 7000 | 5050 | 5560 | 7000 | 7000 |
| | 63.80 | 155 | 210 | 264 | 8 | 0.15 | 5370 | 5870 | 7000 | 7000 | 5050 | 5560 | 7000 | 7000 |
| | 69.39 | 155 | 210 | 264 | 7 | 0.13 | 5370 | 5870 | 7000 | 7000 | 5050 | 5560 | 7000 | 7000 |

02 005 01 07

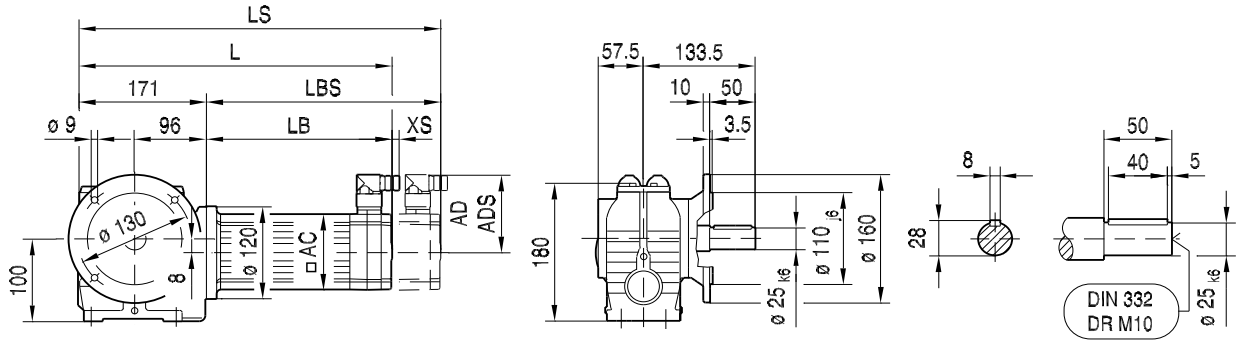
**S47..**



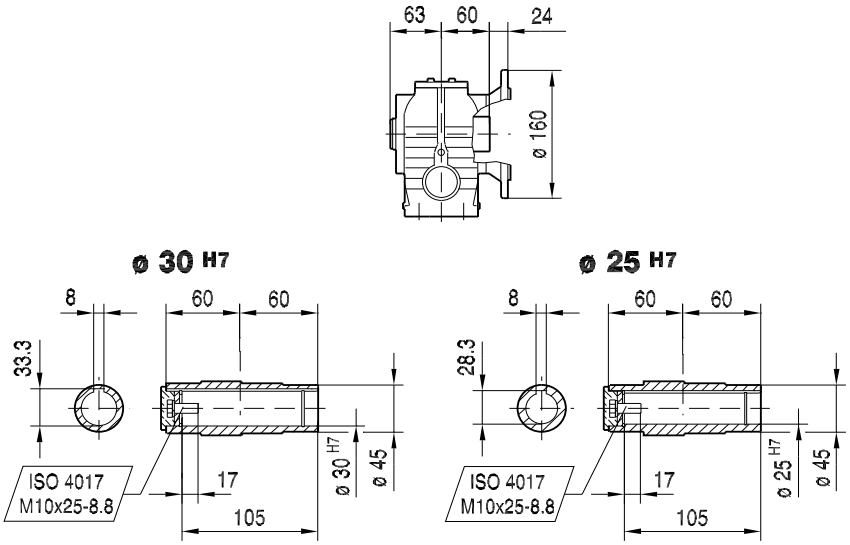

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 316 | 355 | 394 | 351 | 401 | 454 | 343 | 371 | 383 |
| **LS** | 345 | 384 | 423 | 379 | 429 | 483 | 408 | 436 | 461 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

02 006 01 07

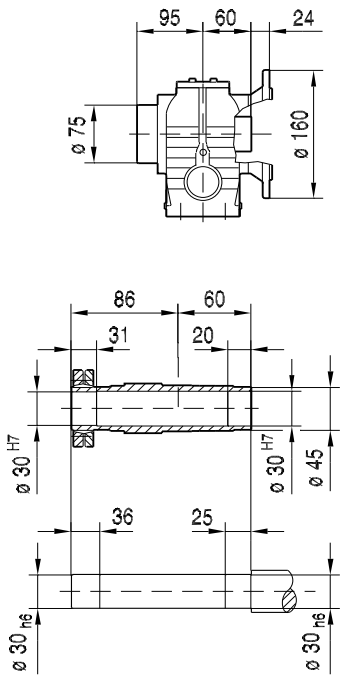
## SF47..




## SAF47..



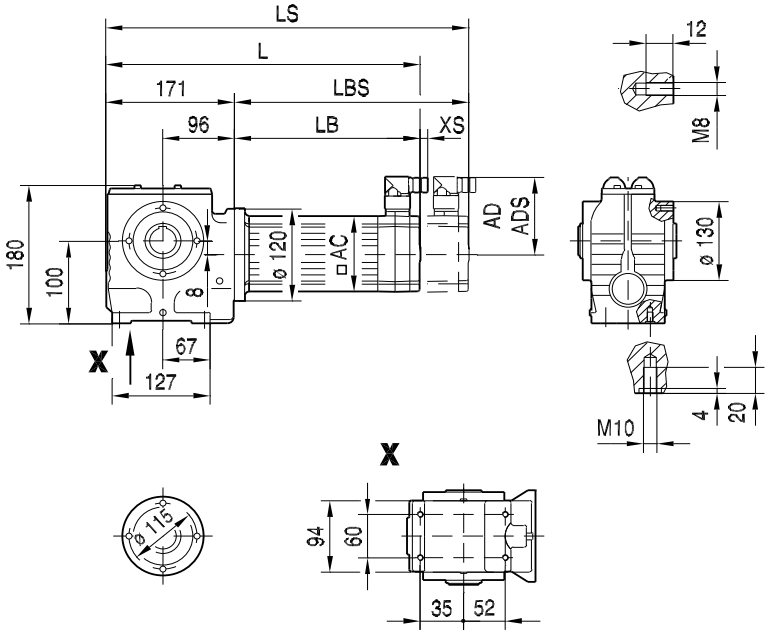

## SHF47..

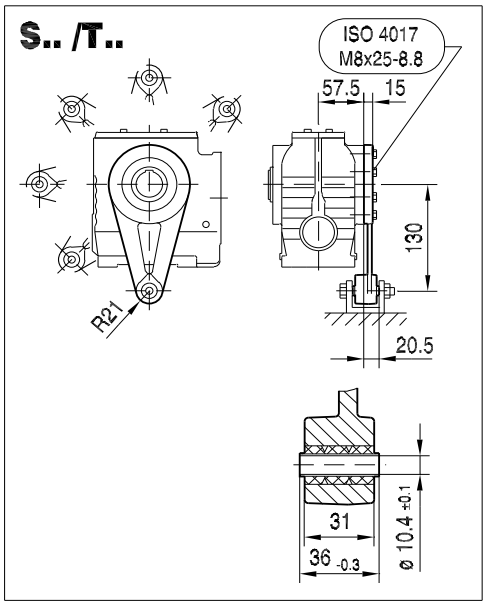



| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 316 | 355 | 394 | 351 | 401 | 454 | 343 | 371 | 383 |
| **LS** | 345 | 384 | 423 | 379 | 429 | 483 | 408 | 436 | 461 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

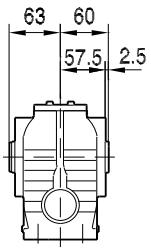
02 007 01 07

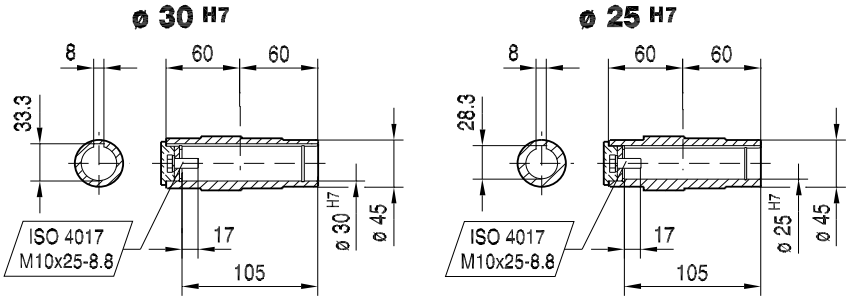
## SA47..



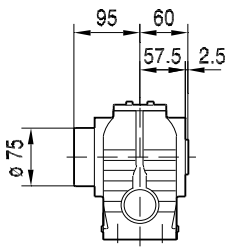



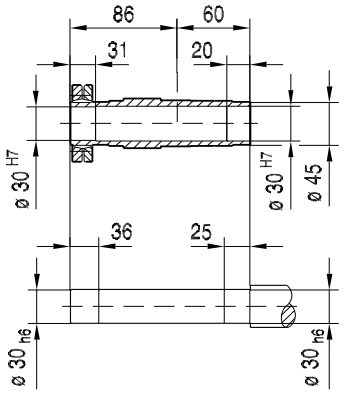

## SA47..




## SH47..

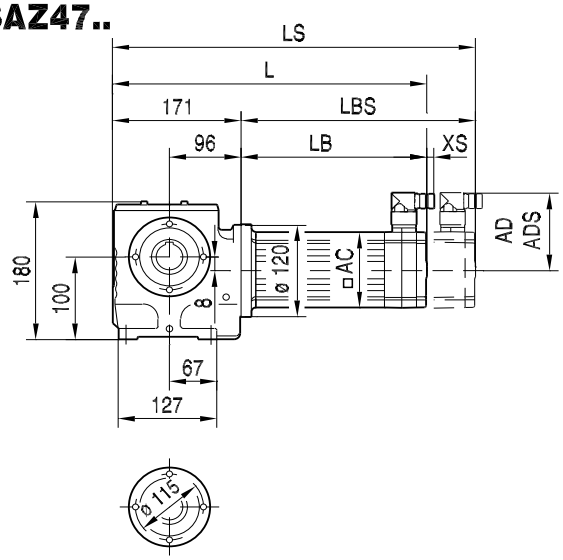


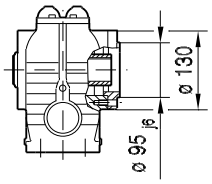



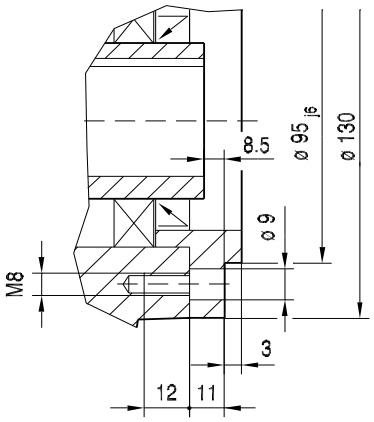

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 316 | 355 | 394 | 351 | 401 | 454 | 343 | 371 | 383 |
| **LS** | 345 | 384 | 423 | 379 | 429 | 483 | 408 | 436 | 461 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

02 008 01 07

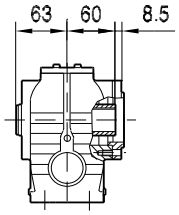
**SAZ47..**



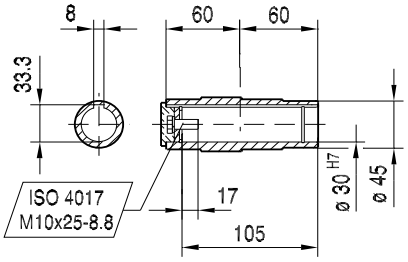



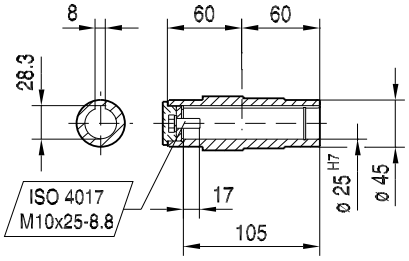

**SAZ47..**



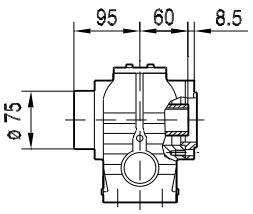

**ø 30 H7**

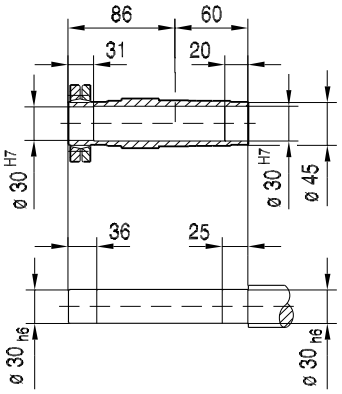



**ø 25 H7**




**SHZ47..**

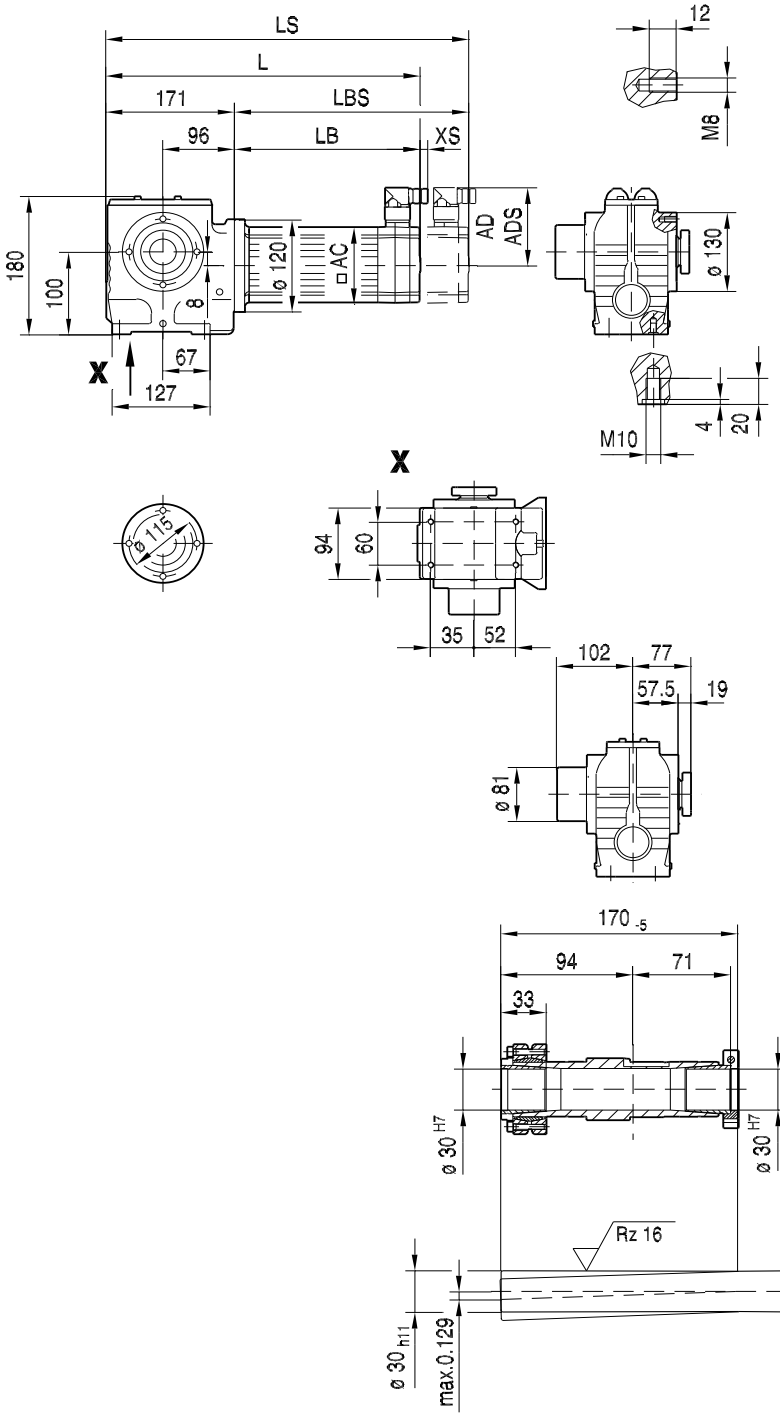


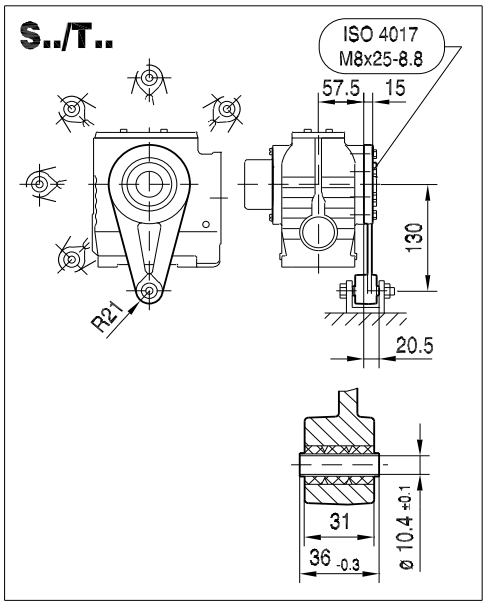




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 316 | 355 | 394 | 351 | 401 | 454 | 343 | 371 | 383 |
| **LS** | 345 | 384 | 423 | 379 | 429 | 483 | 408 | 436 | 461 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

02 009 01 07

**ST47..**




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 316 | 355 | 394 | 351 | 401 | 454 | 343 | 371 | 383 |
| **LS** | 345 | 384 | 423 | 379 | 429 | 483 | 408 | 436 | 461 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

### 6.2.2 S 57

| $M_{aDyn}$ [Nm] | | CMP | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | i | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 71L | 80S | 80M |
| S57 2 | 4.00 | 19 | 37 | 55 | 40 | 77 | >106 | 69 | >106 | >106 | >106 | >106 |
| | 4.76 | 22 | 44 | 66 | 48 | 92 | >126 | 82 | >126 | >126 | >126 | >126 |
| | 5.39 | 25 | 50 | 75 | 54 | 104 | >142 | 93 | >142 | >142 | >142 | >142 |
| | 6.40 | 30 | 59 | 88 | 63 | 122 | >147 | 109 | >147 | >147 | >147 | >147 |
| | 6.83 | 32 | 63 | 94 | 67 | 130 | >150 | 117 | >150 | >150 | >150 | >150 |
| | 7.28 | 34 | 67 | 100 | 72 | 139 | >183 | 124 | >183 | >183 | >183 | >183 |
| | 8.64 | 40 | 78 | 117 | 84 | 163 | >210 | 146 | >210 | >210 | >210 | >210 |
| | 9.23 | 42 | 84 | 125 | 90 | 174 | >220 | 156 | >220 | >220 | >220 | >220 |
| | 10.80 | 49 | 98 | 146 | 105 | 200 | >220 | 182 | >220 | >220 | >220 | >220 |
| | 12.10 | 55 | 110 | 164 | 118 | >220 | >220 | 200 | >220 | >220 | >220 | >220 |
| | 14.24 | 64 | 128 | 191 | 138 | >220 | >220 | >220 | >220 | | | |
| | 16.47 | 75 | 148 | >220 | 159 | >220 | | >220 | | | | |
| | 17.62 | 79 | 156 | >215 | 168 | >215 | | >215 | | | | |
| | 19.54 | | 163 | 240 | 176 | >270 | >270 | >270 | >270 | >270 | >270 | >270 |
| | 20.33 | 91 | 180 | | 194 | | | | | | | |
| | 23.20 | 98 | 194 | 285 | 205 | >315 | >315 | >315 | >315 | >315 | >315 | >315 |
| | 24.77 | 103 | 200 | 305 | 215 | >330 | >330 | >330 | >330 | >330 | >330 | >330 |
| | 29.00 | 121 | 235 | 355 | 255 | >360 | >360 | >360 | >360 | >360 | >360 | >360 |
| | 32.48 | 133 | 260 | >365 | 280 | >365 | >365 | >365 | >365 | >365 | >365 | >365 |
| | 38.23 | 155 | 305 | >365 | 330 | >365 | >365 | >365 | >365 | | | |
| | 44.22 | 179 | 355 | >365 | >365 | >365 | | >365 | | | | |
| | 47.32 | 189 | >365 | >365 | >365 | >365 | | >365 | | | | |
| | 54.59 | 215 | >365 | | >365 | | | | | | | |
| | 63.80 | 250 | | | | | | | | | | |
| | 69.39 | 270 | | | | | | | | | | |

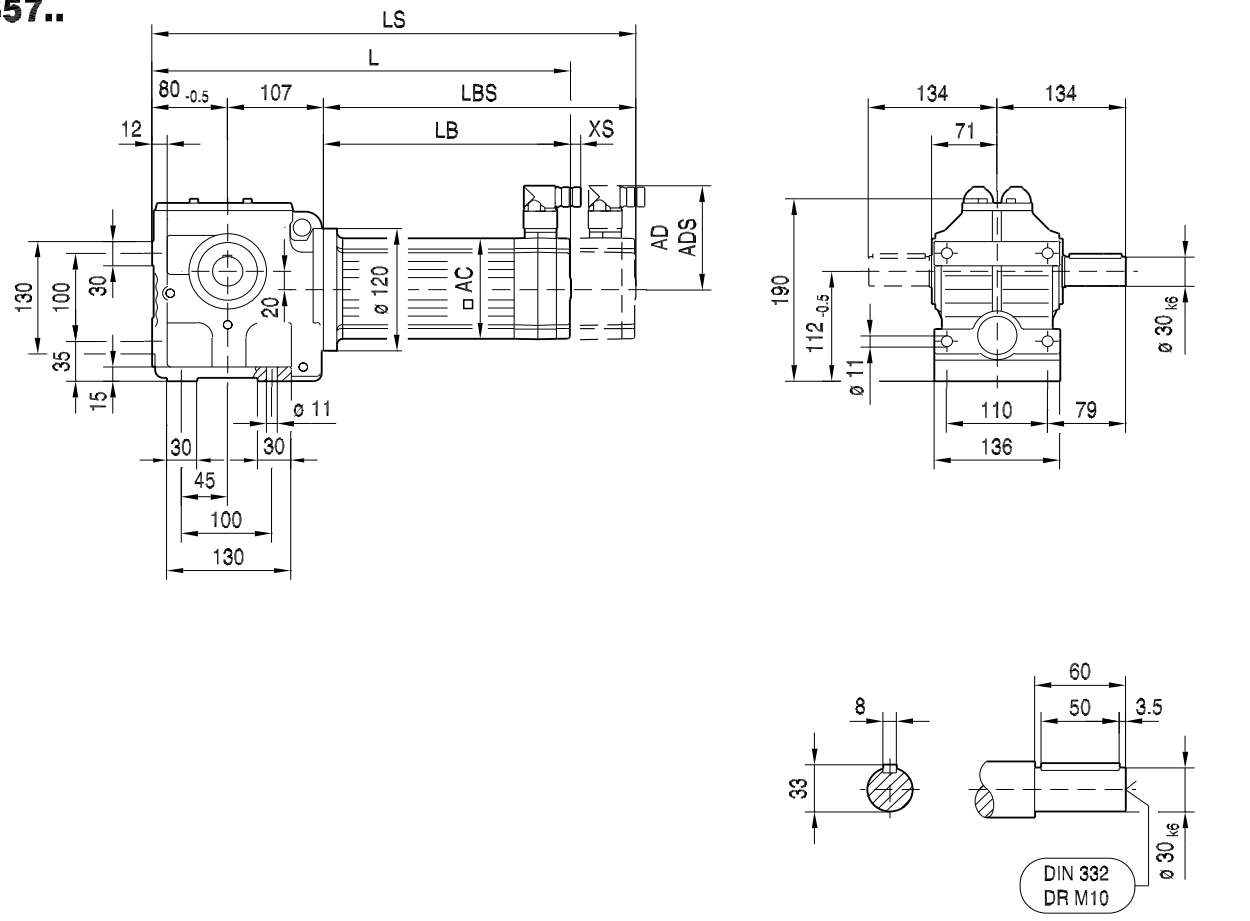
| m [kg] | | CMP | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | s | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 71L | 80S | 80M |
| S57 | $\phi_2$ | 17 | 17 | 18 | 19 | 20 | 22 | 22 | 23 | 25 | 29 | 31 |
| SF: + 3.8 kg / SA: + -0.3 kg / SAF: + 2.6 kg | | | | | | | | | | | | |

| CMP.. | i | $n_{epk}$ [1/min] | η [%] | $c_{TG}$ S [Nm/'] | SF [Nm/'] | SA [Nm/'] | SAF [Nm/'] |
|---|---|---|---|---|---|---|---|
| S57 2 | 4.00 | 4500 | 90 | - | - | - | - |
| | 4.76 | 4500 | 90 | - | - | - | - |
| | 5.39 | 4500 | 90 | - | - | - | - |
| | 6.40 | 4500 | 89 | - | - | - | - |
| | 6.83 | 4500 | 89 | - | - | - | - |
| | 7.28 | 4500 | 89 | - | - | - | - |
| | 8.64 | 4500 | 88 | - | - | - | - |
| | 9.23 | 4500 | 88 | - | - | - | - |
| | 10.80 | 4500 | 88 | - | - | - | - |
| | 12.10 | 4500 | 88 | - | - | - | - |
| | 14.24 | 4500 | 87 | - | - | - | - |
| | 16.47 | 4500 | 87 | - | - | - | - |
| | 17.62 | 4500 | 86 | - | - | - | - |
| | 19.54 | 4500 | 81 | - | - | - | - |
| | 20.33 | 4500 | 86 | - | - | - | - |
| | 23.20 | 4500 | 81 | - | - | - | - |
| | 24.77 | 4500 | 80 | - | - | - | - |
| | 29.00 | 4500 | 80 | - | - | - | - |
| | 32.48 | 4500 | 79 | - | - | - | - |
| | 38.23 | 4500 | 78 | - | - | - | - |
| | 44.22 | 4500 | 78 | - | - | - | - |
| | 47.32 | 4500 | 77 | - | - | - | - |
| | 54.59 | 4500 | 77 | - | - | - | - |
| | 63.80 | 4500 | 76 | - | - | - | - |
| | 69.39 | 4500 | 75 | - | - | - | - |

| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | S [N] | SF [N] | SA [N] | SAF [N] | S [N] | SF [N] | SA [N] | SAF [N] |
| S57 2 | 4.00 | 88 | 106 | 159 | 275 | 4.5 | 3380 | 3320 | 2730 | 2730 | 8170 | 8170 | 10000 | 10000 |
| | 4.76 | 93 | 126 | 189 | 231 | 3.3 | 3590 | 3520 | 2900 | 2900 | 8110 | 8110 | 10000 | 10000 |
| | 5.39 | 95 | 142 | 210 | 204 | 2.6 | 3760 | 3690 | 3040 | 3040 | 8060 | 8060 | 10000 | 10000 |
| | 6.40 | 98 | 147 | 220 | 172 | 1.9 | 4010 | 3930 | 3250 | 3250 | 8040 | 8040 | 10000 | 10000 |
| | 6.83 | 100 | 150 | 225 | 161 | 1.7 | 4100 | 4010 | 3330 | 3330 | 8030 | 8030 | 10000 | 10000 |
| | 7.28 | 146 | 183 | 248 | 27 | 1.7 | 3790 | 3770 | 2620 | 2620 | 7880 | 7880 | 10000 | 10000 |
| | 8.64 | 166 | 211 | 282 | 23 | 1.3 | 3900 | 3890 | 2430 | 2430 | 7730 | 7730 | 10000 | 10000 |
| | 9.23 | 169 | 223 | 287 | 22 | 1.1 | 3990 | 3980 | 2530 | 2530 | 7660 | 7660 | 10000 | 10000 |
| | 10.80 | 169 | 220 | 287 | 19 | 0.85 | 4290 | 4270 | 3000 | 3000 | 7680 | 7680 | 10000 | 10000 |
| | 12.10 | 169 | 220 | 287 | 17 | 0.70 | 4520 | 4490 | 3360 | 3360 | 7680 | 7680 | 10000 | 10000 |
| | 14.24 | 169 | 220 | 287 | 14 | 0.51 | 4860 | 4820 | 3810 | 3810 | 7680 | 7680 | 10000 | 10000 |
| | 16.47 | 168 | 220 | 286 | 12 | 0.40 | 5200 | 5130 | 4120 | 4120 | 7680 | 7680 | 10000 | 10000 |
| | 17.62 | 168 | 215 | 286 | 11 | 0.36 | 5350 | 5280 | 4260 | 4260 | 7710 | 7710 | 10000 | 10000 |
| | 19.54 | 215 | 274 | 366 | 26 | 1.3 | 5720 | 5620 | 4610 | 4610 | 7300 | 7300 | 10000 | 10000 |
| | 20.33 | 168 | 215 | 286 | 10 | 0.28 | 5690 | 5600 | 4560 | 4560 | 7710 | 7710 | 10000 | 10000 |
| | 23.20 | 245 | 315 | 417 | 9 | 0.95 | 5930 | 5840 | 4710 | 4710 | 6950 | 6950 | 10000 | 10000 |
| | 24.77 | 245 | 330 | 417 | 8 | 0.85 | 6100 | 6000 | 4870 | 4870 | 6800 | 6800 | 10000 | 10000 |
| | 29.00 | 245 | 360 | 417 | 7 | 0.65 | 6520 | 6410 | 5250 | 5250 | 6470 | 6470 | 10000 | 10000 |
| | 32.48 | 245 | 367 | 417 | 6 | 0.54 | 6840 | 6710 | 5540 | 5540 | 6380 | 6380 | 10000 | 10000 |
| | 38.23 | 245 | 367 | 417 | 5 | 0.39 | 7320 | 7170 | 5970 | 5970 | 6380 | 6380 | 10000 | 10000 |
| | 44.22 | 245 | 367 | 417 | 11 | 0.32 | 7520 | 7520 | 6380 | 6380 | 6380 | 6380 | 10000 | 10000 |
| | 47.32 | 245 | 367 | 417 | 11 | 0.28 | 7520 | 7520 | 6580 | 6580 | 6380 | 6380 | 10000 | 10000 |
| | 54.59 | 245 | 367 | 417 | 9 | 0.23 | 7520 | 7520 | 7000 | 7000 | 6380 | 6380 | 10000 | 10000 |
| | 63.80 | 245 | 360 | 417 | 8 | 0.18 | 7520 | 7520 | 7500 | 7500 | 6470 | 6470 | 10000 | 10000 |
| | 69.39 | 245 | 360 | 417 | 7 | 0.15 | 7520 | 7520 | 7770 | 7770 | 6470 | 6470 | 10000 | 10000 |

**S57..**

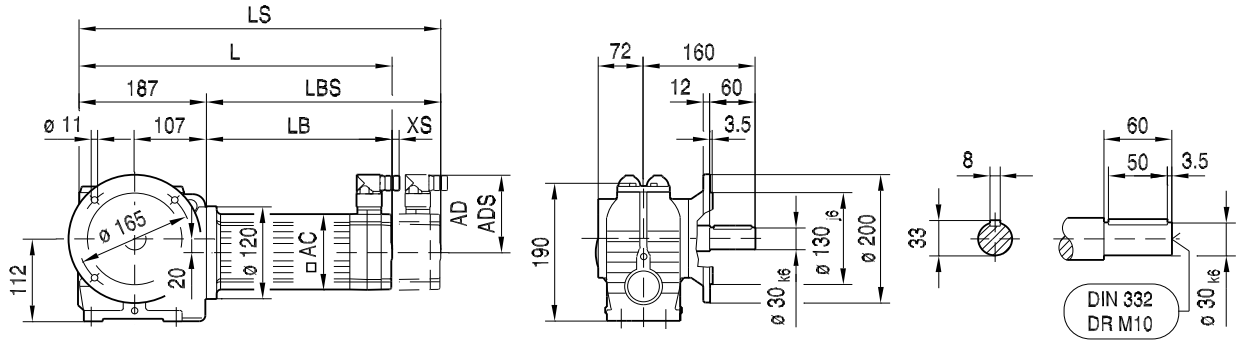
02 010 01 07




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 332 | 371 | 410 | 367 | 417 | 470 | 359 | 387 | 434 | 399 | 436 |
| **LS** | 361 | 400 | 439 | 395 | 445 | 499 | 424 | 452 | 499 | 477 | 514 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

02 011 01 07

## SF57..

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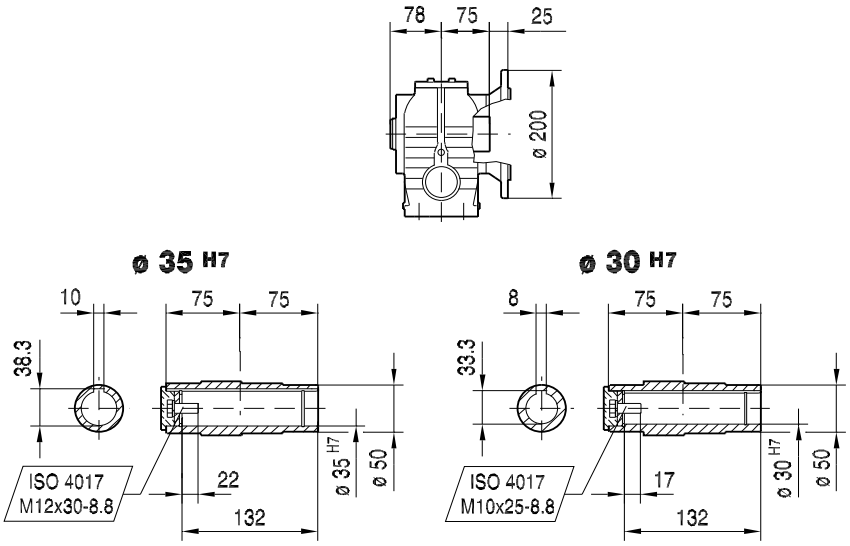
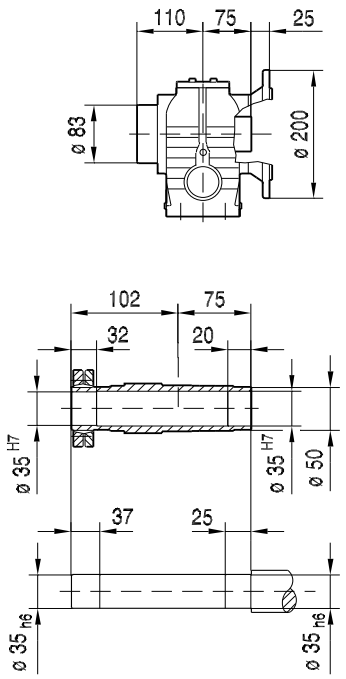


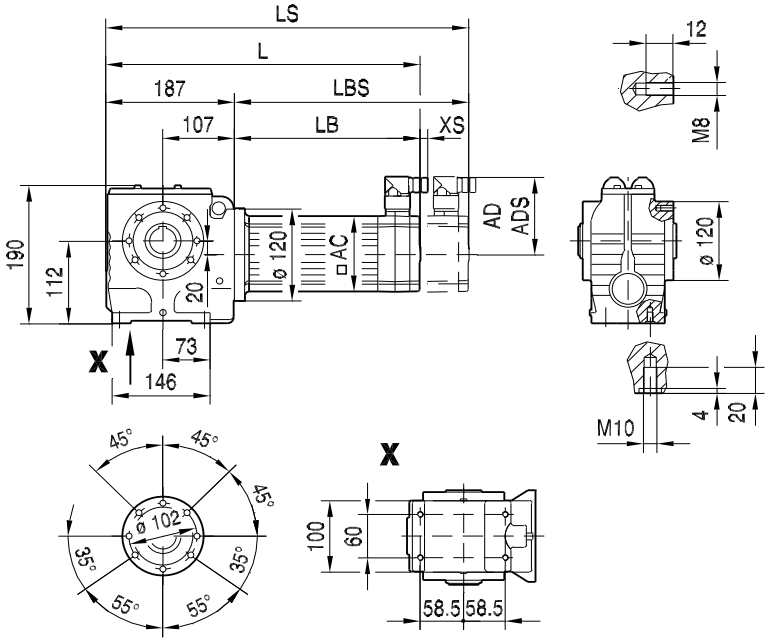

## SHF57..



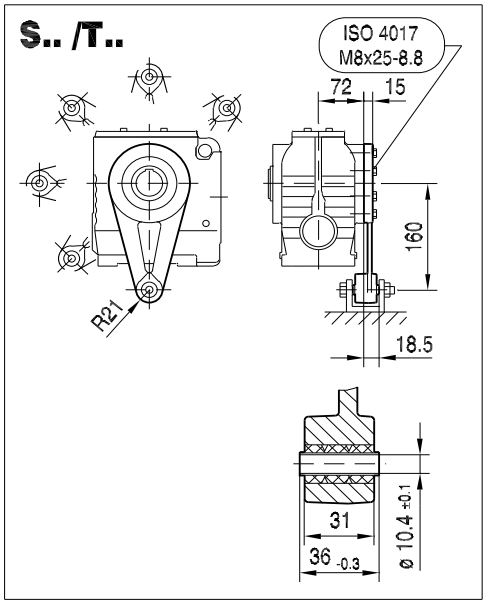

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 332 | 371 | 410 | 367 | 417 | 470 | 359 | 387 | 434 | 399 | 436 |
| **LS** | 361 | 400 | 439 | 395 | 445 | 499 | 424 | 452 | 499 | 477 | 514 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

02 012 01 07

## SA57..




## S.. /T..

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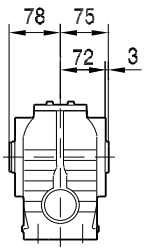
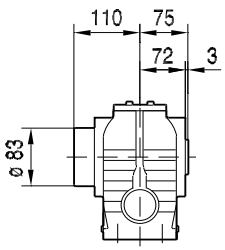
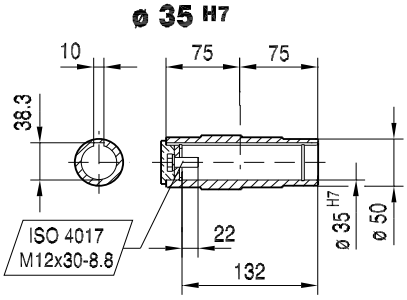
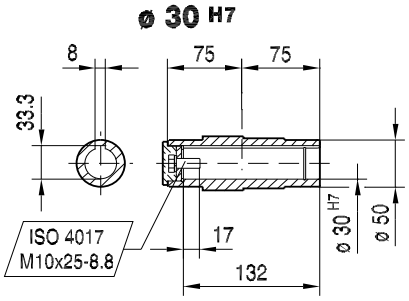
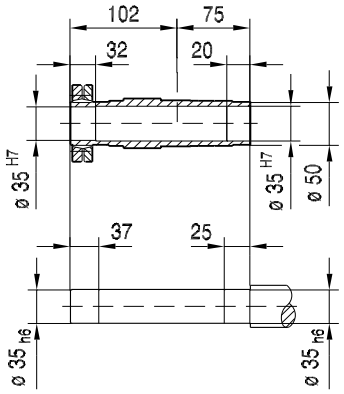



## SH57..



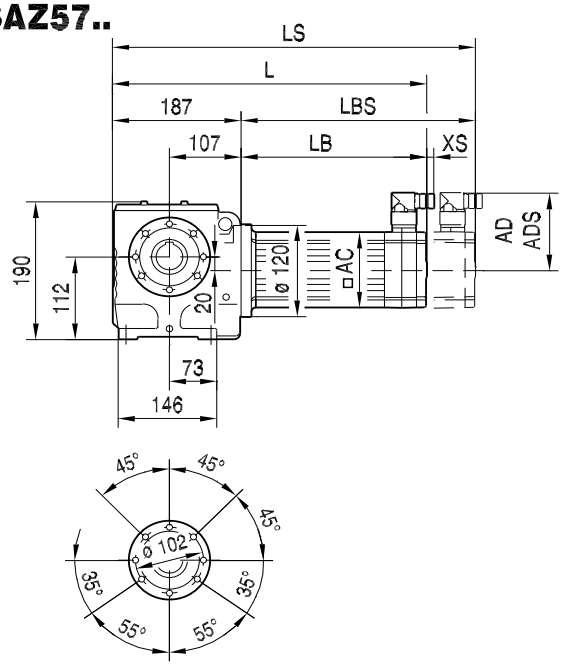



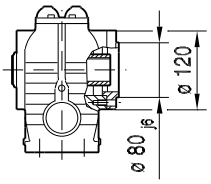



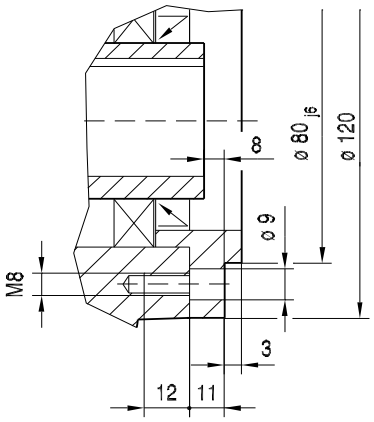

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 332 | 371 | 410 | 367 | 417 | 470 | 359 | 387 | 434 | 399 | 436 |
| **LS** | 361 | 400 | 439 | 395 | 445 | 499 | 424 | 452 | 499 | 477 | 514 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

02 013 01 07

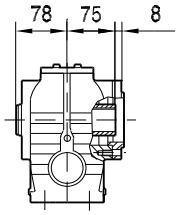
## SAZ57..

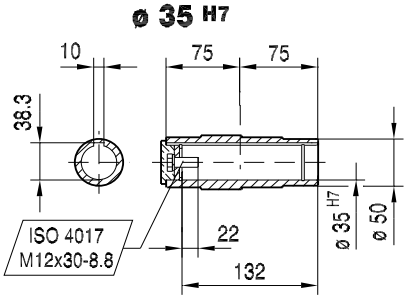


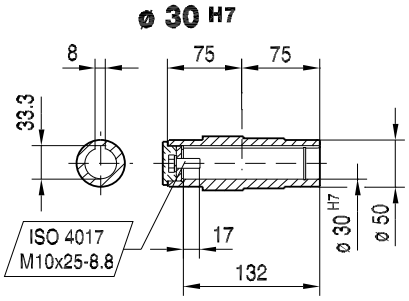



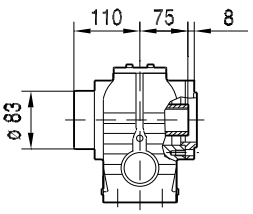

## SAZ57..

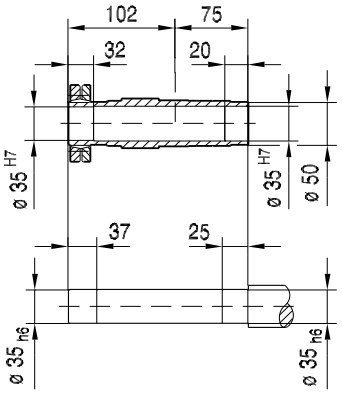



## SHZ57..




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 332 | 371 | 410 | 367 | 417 | 470 | 359 | 387 | 434 | 399 | 436 |
| **LS** | 361 | 400 | 439 | 395 | 445 | 499 | 424 | 452 | 499 | 477 | 514 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

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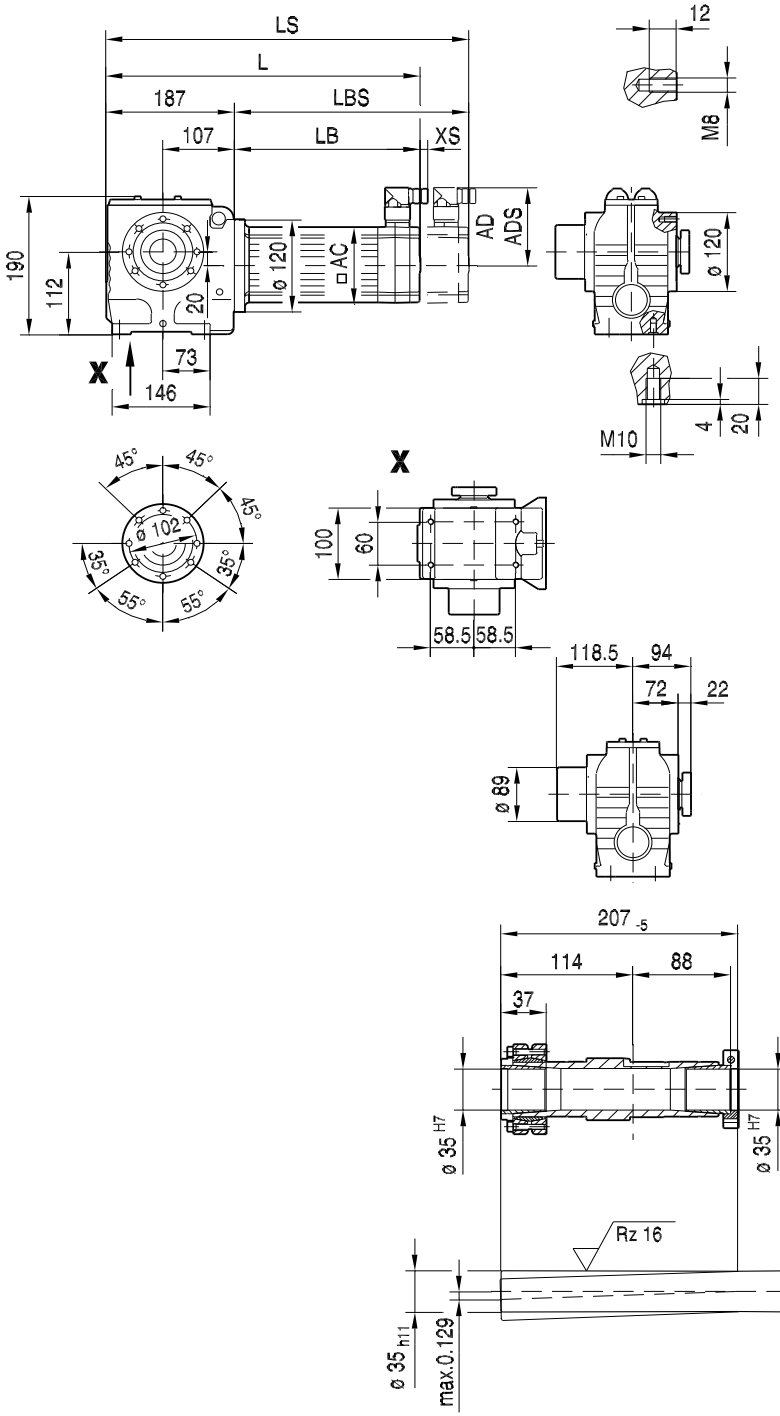
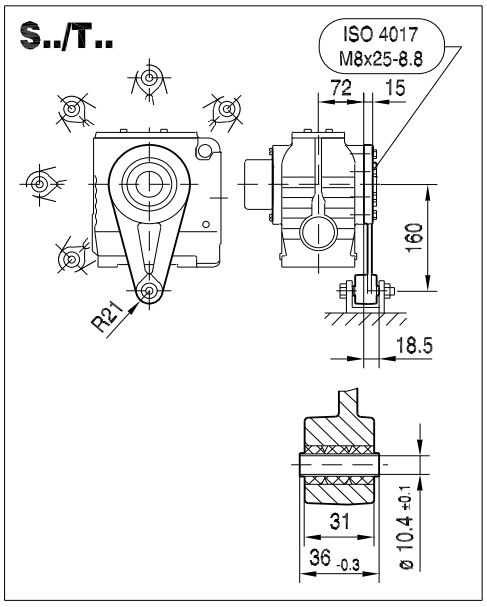
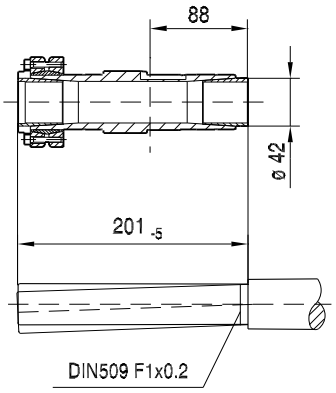
**ST57..**



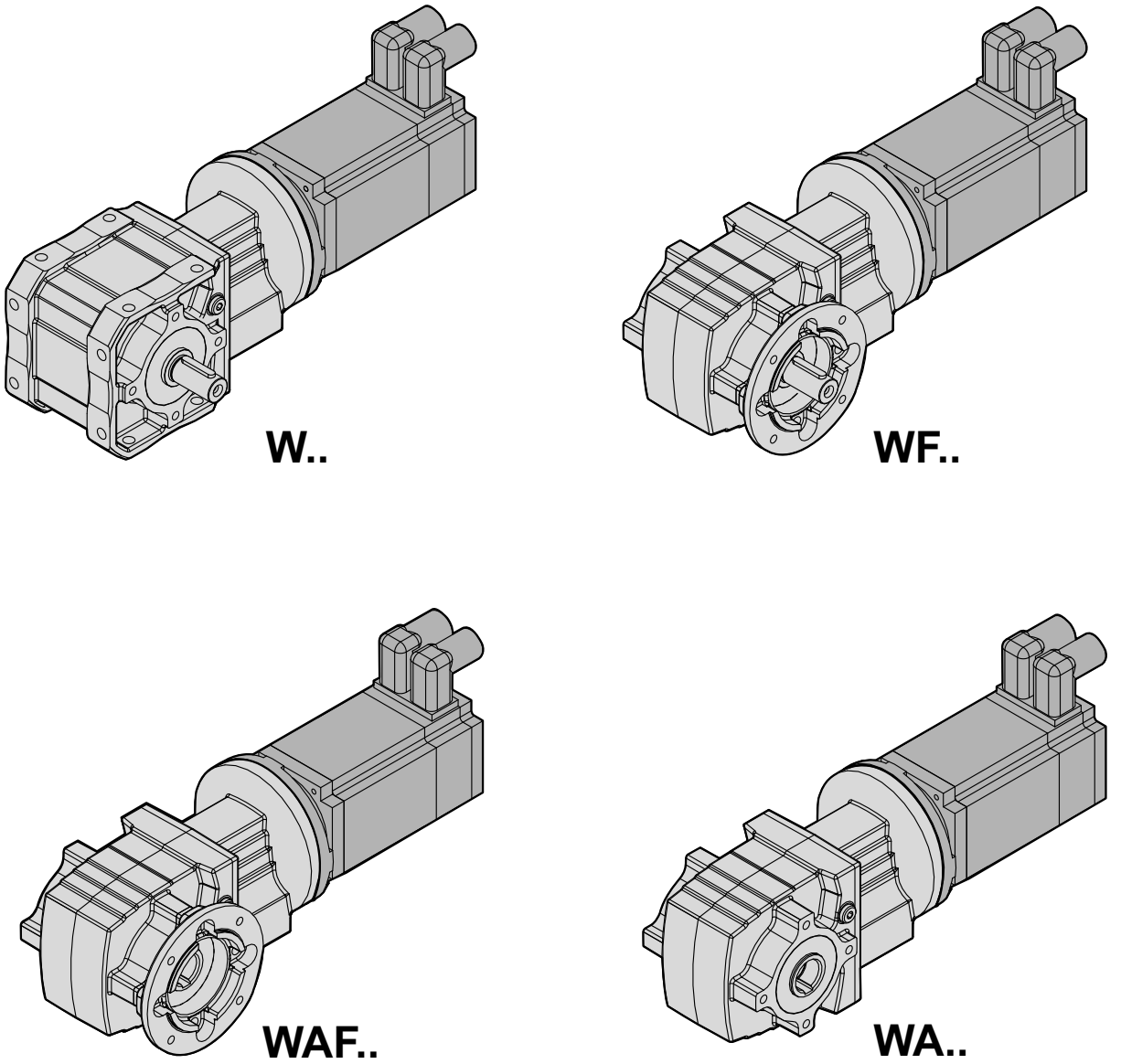



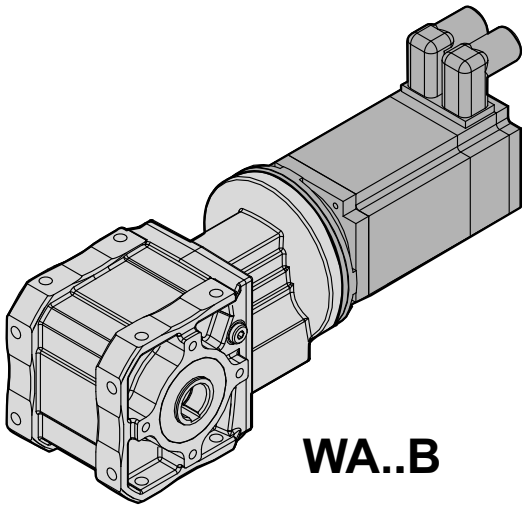




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP71L | CMP80S | CMP80M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 115 | 137 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 102 | 134 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 104 | 137 | 137 |
| **L** | 332 | 371 | 410 | 367 | 417 | 470 | 359 | 387 | 434 | 399 | 436 |
| **LS** | 361 | 400 | 439 | 395 | 445 | 499 | 424 | 452 | 499 | 477 | 514 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 247 | 212 | 249 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 312 | 290 | 327 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 11 | 37 | 37 |

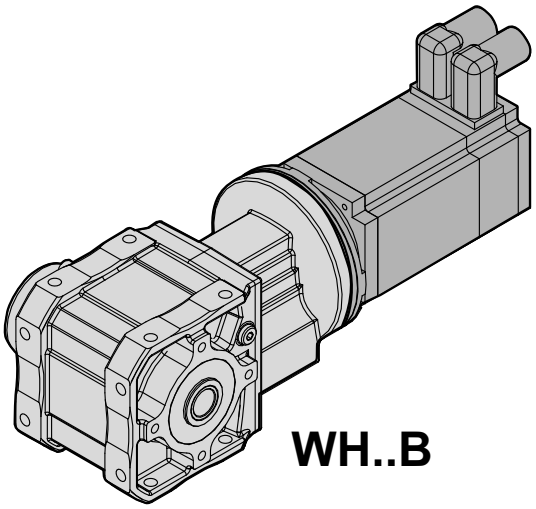
# 7 SPIROPLAN® Gearmotors – W-Series Gear Units

## *7.1 Variants*

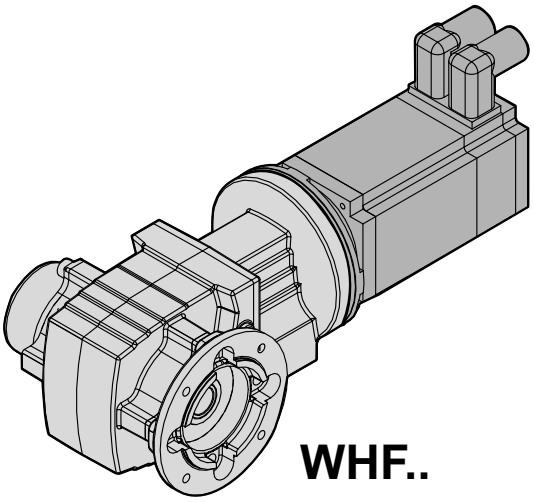




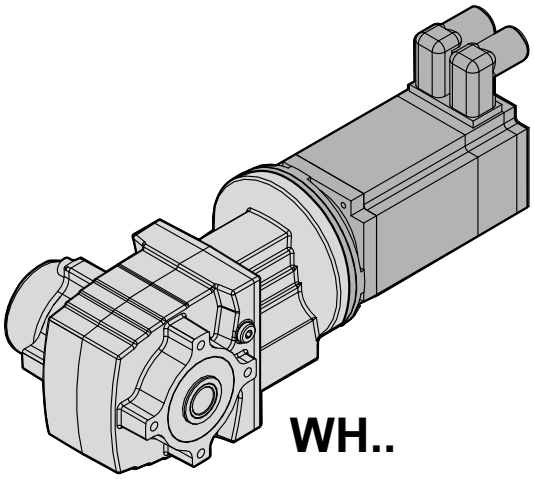
WA..B



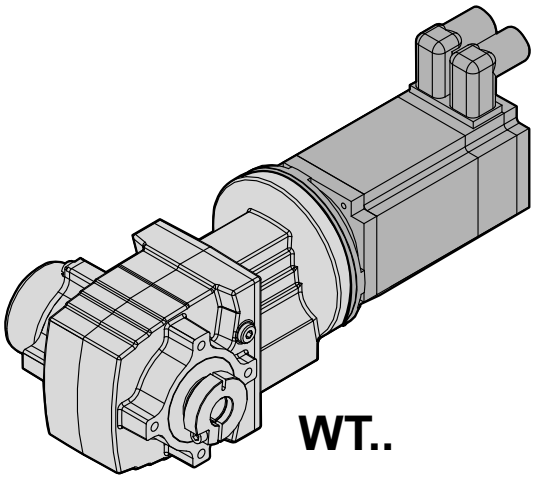
WH..B



WHF..



WH..



WT..

65969axx

## *7.2 W37/CMP – selection tables, dimension sheets*

### 7.2.1 W 37

| $M_{aDyn}$ [Nm] | | CMP | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | i | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| W37 2 | 3.20 | 15 | 31 | 46 | 33 | 64 | >84 | 57 | >84 | 82 |
| | 3.93 | 19 | 37 | 56 | 40 | 77 | >84 | 69 | >84 | >84 |
| | 5.11 | 24 | 48 | 72 | 52 | >84 | >84 | >84 | >84 | >84 |
| | 5.77 | 28 | 55 | 82 | 59 | >84 | >84 | >84 | >84 | >84 |
| | 6.97 | 33 | 66 | >84 | 71 | >84 | >84 | >84 | >84 | >84 |
| | 8.55 | 40 | 80 | >84 | >84 | >84 | | >84 | | |
| | 9.92 | 47 | >84 | | >84 | | | | | |
| | 10.67 | 48 | 96 | >108 | 103 | >108 | >108 | >108 | >108 | >108 |
| | 11.65 | 55 | | | | | | | | |
| | 12.70 | 60 | | | | | | | | |
| | 13.89 | 62 | >108 | >108 | >108 | >108 | >108 | >108 | >108 | >108 |
| | 15.67 | 70 | >108 | >108 | >108 | >108 | >108 | >108 | >108 | >108 |
| | 18.94 | 84 | >108 | >108 | >108 | >108 | >108 | >108 | >108 | >108 |
| | 21.33 | 84 | >110 | >110 | >110 | >110 | >110 | >110 | >110 | >110 |
| | 23.25 | 102 | >108 | >108 | >108 | >108 | | >108 | | |
| | 26.96 | >108 | >108 | | >108 | | | | | |
| | 27.78 | 107 | >111 | >111 | >111 | >111 | >111 | >111 | >111 | >111 |
| | 31.33 | >117 | >117 | >117 | >117 | >117 | >117 | >117 | >117 | >117 |
| | 31.67 | >108 | | | | | | | | |
| | 34.52 | >108 | | | | | | | | |
| | 37.88 | >126 | >126 | >126 | >126 | >126 | >126 | >126 | >126 | >126 |
| | 46.49 | >130 | >130 | >130 | >130 | >130 | | >130 | | |
| | 53.92 | >130 | >130 | | >130 | | | | | |
| | 63.33 | >126 | | | | | | | | |
| | 69.05 | >130 | | | | | | | | |

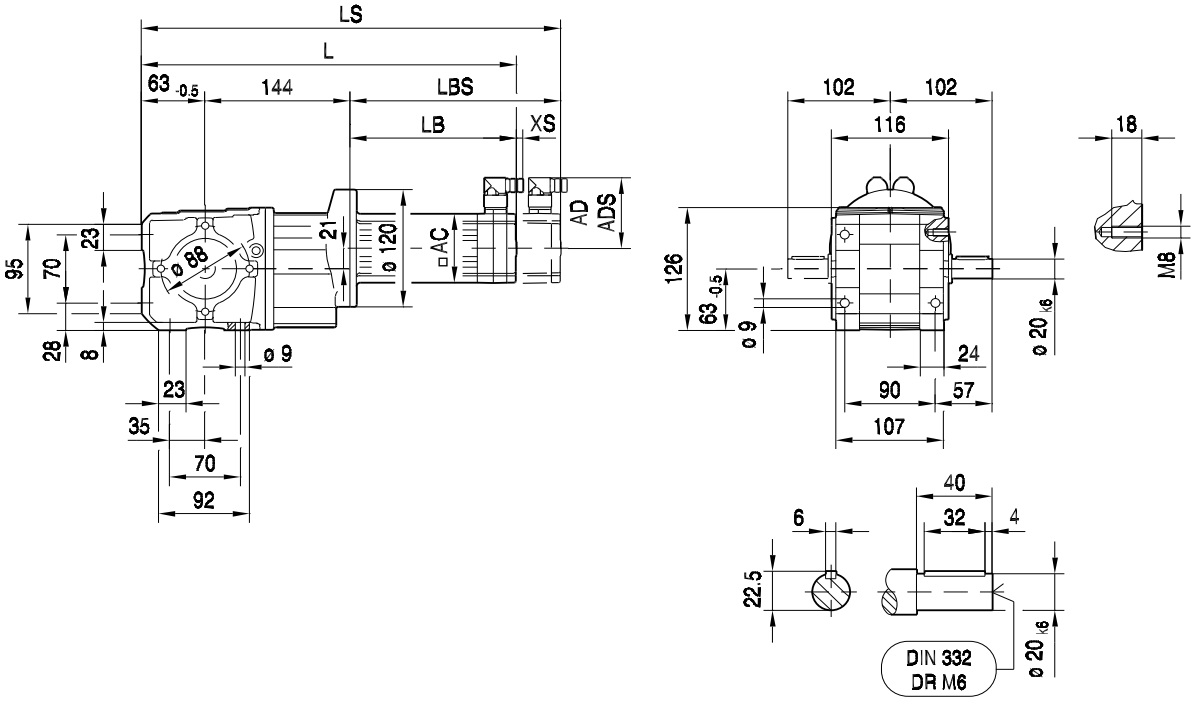
| m [kg] | | CMP | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | s | 50S | 50M | 50L | 63S | 63M | 63L | 71S | 71M | 80S |
| W37 | 2 | 9.2 | 10 | 11 | 11 | 13 | 14 | 14 | 16 | 22 |
| **WF: + 0.0 kg / WA: + 0.0 kg / WAF: + 0.0 kg** | | | | | | | | | | |

| CMP.. | i | $n_{epk}$ [1/min] | η [%] | $c_{TG}$ W [Nm/'] | WF [Nm/'] | WA [Nm/'] | WAF [Nm/'] |
|---|---|---|---|---|---|---|---|
| W37 2 | 3.20 | 4500 | 93 | - | - | - | - |
| | 3.93 | 4500 | 92 | - | - | - | - |
| | 5.11 | 4500 | 92 | - | - | - | - |
| | 5.77 | 4500 | 92 | - | - | - | - |
| | 6.97 | 4500 | 92 | - | - | - | - |
| | 8.55 | 4500 | 91 | - | - | - | - |
| | 9.92 | 4500 | 91 | - | - | - | - |
| | 10.67 | 4500 | 87 | - | - | - | - |
| | 11.65 | 4500 | 91 | - | - | - | - |
| | 12.70 | 4500 | 91 | - | - | - | - |
| | 13.89 | 4500 | 86 | - | - | - | - |
| | 15.67 | 4500 | 86 | - | - | - | - |
| | 18.94 | 4500 | 85 | - | - | - | - |
| | 21.33 | 4500 | 76 | - | - | - | - |
| | 23.25 | 4500 | 84 | - | - | - | - |
| | 26.96 | 4500 | 83 | - | - | - | - |
| | 27.78 | 4500 | 74 | - | - | - | - |
| | 31.33 | 4500 | 73 | - | - | - | - |
| | 31.67 | 4500 | 82 | - | - | - | - |
| | 34.52 | 4500 | 81 | - | - | - | - |
| | 37.88 | 4500 | 72 | - | - | - | - |
| | 46.49 | 4500 | 70 | - | - | - | - |
| | 53.92 | 4500 | 69 | - | - | - | - |
| | 63.33 | 4500 | 67 | - | - | - | - |
| | 69.05 | 4500 | 67 | - | - | - | - |

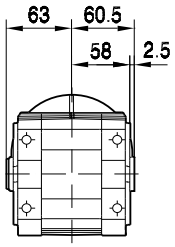
| CMP.. | | | | | | | $F_{Ramax}$ | | | | $F_{Rapk}$ | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1400 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_G$ $10^{-4}$ [kgm$^2$] | W [N] | WF [N] | WA [N] | WAF [N] | W [N] | WF [N] | WA [N] | WAF [N] |
| W37 2 | 3.20 | 70 | 84 | 119 | 2188 | 2.3 | 2220 | 2350 | 2050 | 2050 | 3690 | 3690 | 5000 | 5000 |
| | 3.93 | 70 | 84 | 119 | 1781 | 1.6 | 2410 | 2550 | 2240 | 2240 | 3690 | 3690 | 5000 | 5000 |
| | 5.11 | 70 | 84 | 119 | 1370 | 0.96 | 2680 | 2820 | 2490 | 2490 | 3690 | 3690 | 5000 | 5000 |
| | 5.77 | 70 | 84 | 119 | 1213 | 0.77 | 2810 | 2950 | 2620 | 2620 | 3690 | 3690 | 5000 | 5000 |
| | 6.97 | 70 | 84 | 119 | 1004 | 0.54 | 3020 | 3170 | 2830 | 2830 | 3690 | 3690 | 5000 | 5000 |
| | 8.55 | 70 | 84 | 119 | 819 | 0.37 | 3270 | 3420 | 3070 | 3070 | 3690 | 3690 | 5000 | 5000 |
| | 9.92 | 70 | 84 | 119 | 706 | 0.28 | 3460 | 3620 | 3250 | 3250 | 3690 | 3690 | 5000 | 5000 |
| | 10.67 | 90 | 108 | 153 | 150 | 0.80 | 2880 | 3140 | 2530 | 2530 | 3360 | 3360 | 5000 | 5000 |
| | 11.65 | 70 | 84 | 119 | 601 | 0.21 | 3680 | 3830 | 3460 | 3460 | 3690 | 3690 | 5000 | 5000 |
| | 12.70 | 70 | 84 | 119 | 551 | 0.18 | 3800 | 3830 | 3580 | 3580 | 3690 | 3690 | 5000 | 5000 |
| | 13.89 | 90 | 108 | 153 | 151 | 0.52 | 3250 | 3510 | 2890 | 2890 | 3360 | 3360 | 5000 | 5000 |
| | 15.67 | 90 | 108 | 153 | 147 | 0.42 | 3430 | 3610 | 3070 | 3070 | 3360 | 3360 | 5000 | 5000 |
| | 18.94 | 90 | 108 | 153 | 148 | 0.30 | 3610 | 3610 | 3360 | 3360 | 3360 | 3360 | 5000 | 5000 |
| | 21.33 | 110 | 110 | 144 | 66 | 0.71 | 3320 | 3320 | 2940 | 2940 | 3320 | 3320 | 5000 | 5000 |
| | 23.25 | 90 | 108 | 153 | 146 | 0.21 | 3610 | 3610 | 3690 | 3690 | 3360 | 3360 | 5000 | 5000 |
| | 26.96 | 90 | 108 | 153 | 145 | 0.16 | 3610 | 3610 | 3950 | 3950 | 3360 | 3360 | 5000 | 5000 |
| | 27.78 | 110 | 111 | 158 | 50 | 0.46 | 3320 | 3320 | 3400 | 3400 | 3300 | 3300 | 5000 | 5000 |
| | 31.33 | 110 | 117 | 166 | 45 | 0.38 | 3320 | 3320 | 3620 | 3620 | 2960 | 2960 | 5000 | 5000 |
| | 31.67 | 90 | 108 | 153 | 145 | 0.13 | 3610 | 3610 | 4240 | 4240 | 3360 | 3360 | 5000 | 5000 |
| | 34.52 | 90 | 108 | 153 | 145 | 0.11 | 3610 | 3610 | 4410 | 4410 | 3360 | 3360 | 5000 | 5000 |
| | 37.88 | 110 | 126 | 178 | 37 | 0.27 | 3320 | 3320 | 3990 | 3990 | 2080 | 2080 | 5000 | 5000 |
| | 46.49 | 110 | 130 | 187 | 32 | 0.19 | 3320 | 3320 | 4410 | 4410 | 1490 | 1490 | 5000 | 5000 |
| | 53.92 | 110 | 130 | 187 | 32 | 0.15 | 3320 | 3320 | 4730 | 4730 | 1490 | 1490 | 5000 | 5000 |
| | 63.33 | 110 | 126 | 178 | 36 | 0.12 | 3320 | 3320 | 5000 | 5000 | 2080 | 2080 | 5000 | 5000 |
| | 69.05 | 110 | 130 | 187 | 32 | 0.10 | 3320 | 3320 | 5000 | 5000 | 1490 | 1490 | 5000 | 5000 |

**20 031 00 07**

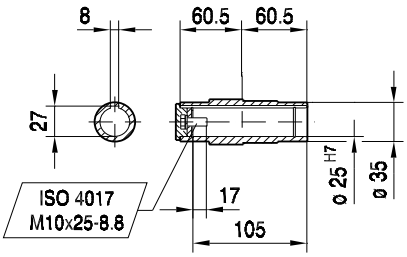
## W37..



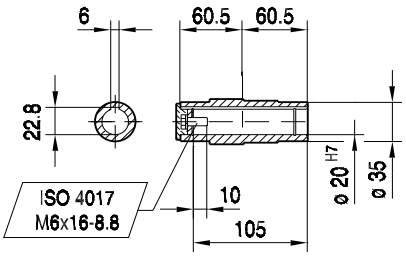

## WA37B..



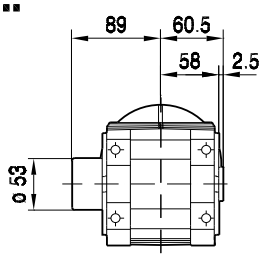

**ø 25 H7**
**DIN 6885-3**

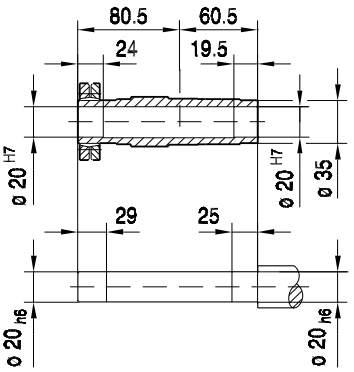



**ø 20 H7**




## WH37B..

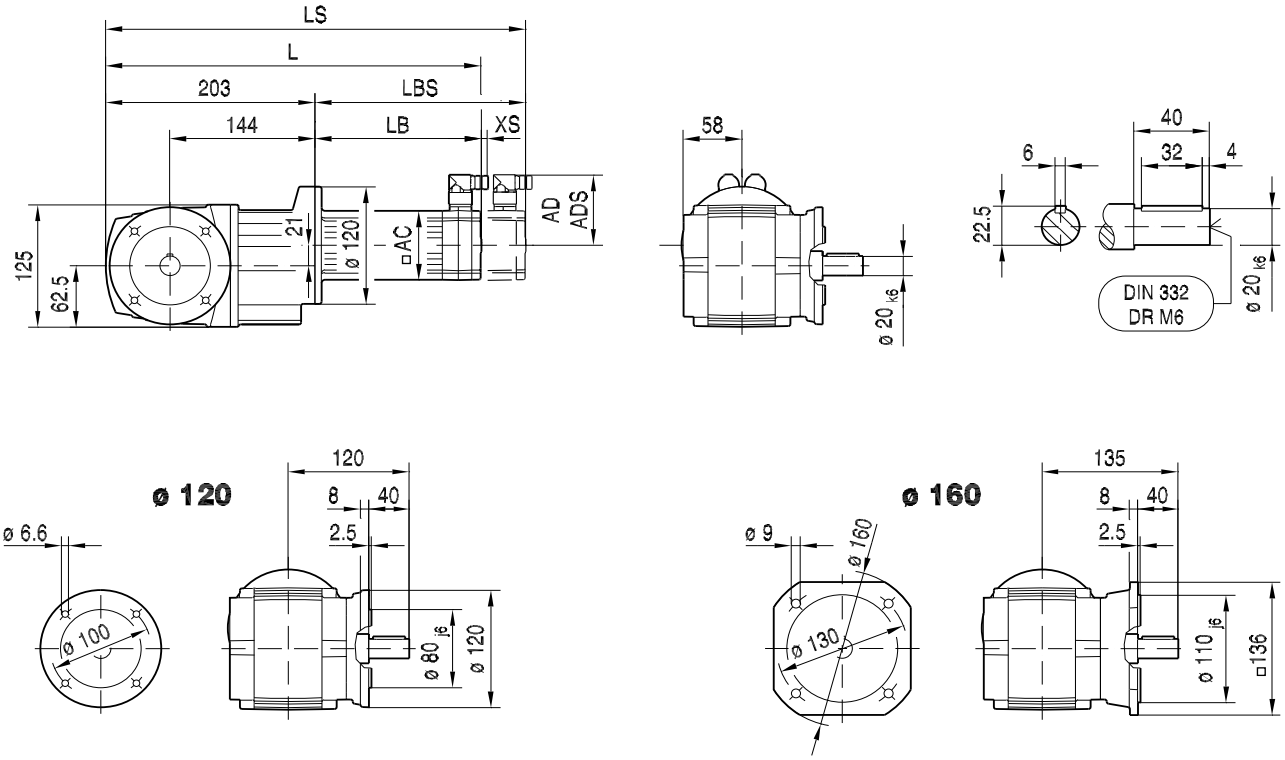


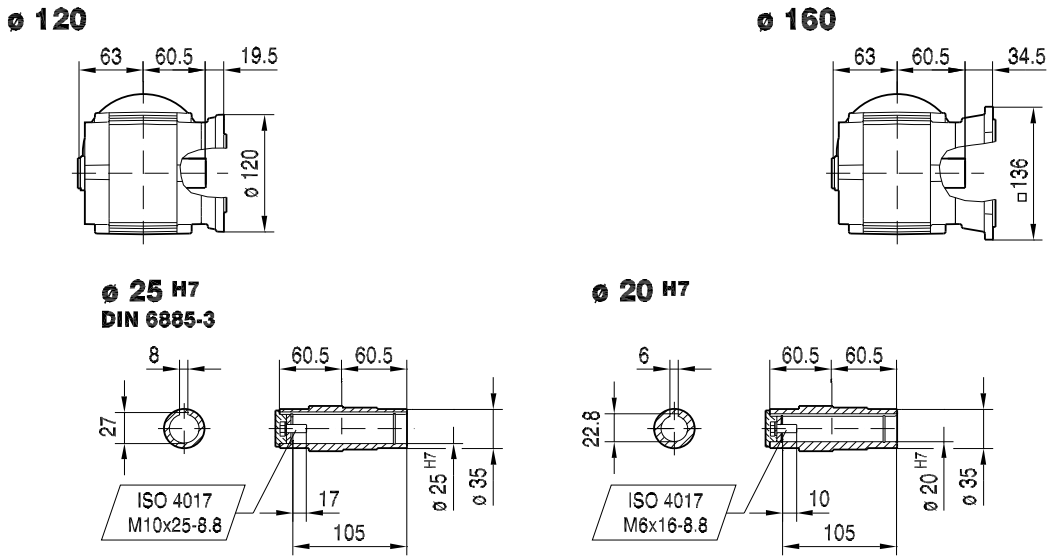

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 352 | 391 | 430 | 387 | 437 | 490 | 379 | 407 | 419 |
| **LS** | 381 | 420 | 459 | 415 | 465 | 519 | 444 | 472 | 497 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

20 032 00 07

## WF37..



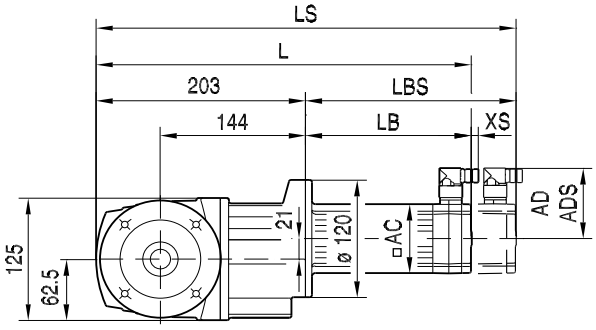

## WAF37..



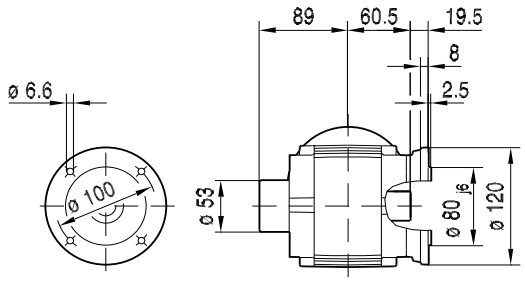

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 348 | 387 | 426 | 383 | 433 | 486 | 375 | 403 | 415 |
| **LS** | 377 | 416 | 455 | 411 | 461 | 515 | 440 | 468 | 493 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

20 033 00 07

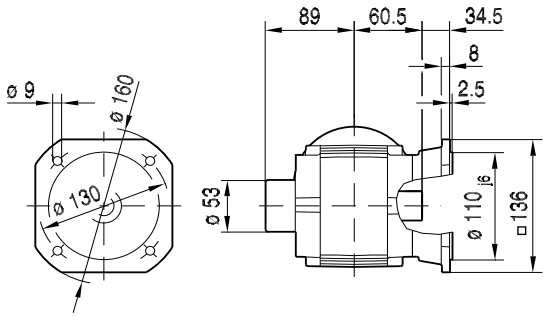
## WHF37..

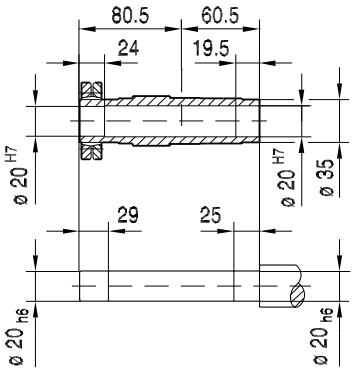



### ø 120




### ø 160

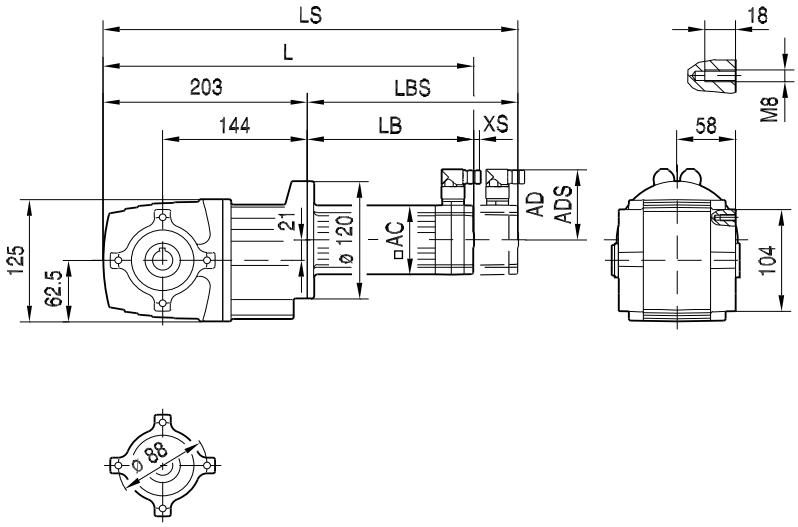


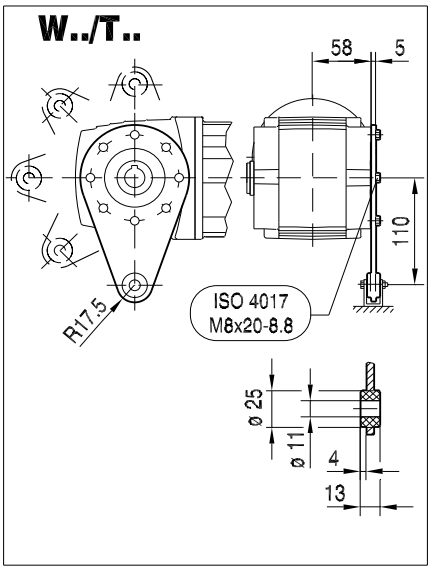

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 348 | 387 | 426 | 383 | 433 | 486 | 375 | 403 | 415 |
| **LS** | 377 | 416 | 455 | 411 | 461 | 515 | 440 | 468 | 493 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

20 034 00 07

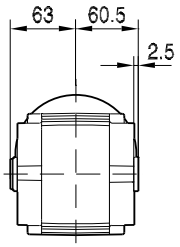
## WA37..



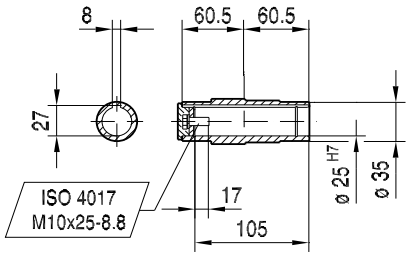

## W../T..



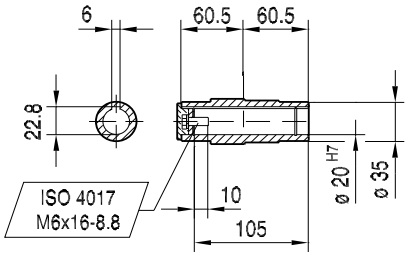

## WA37..



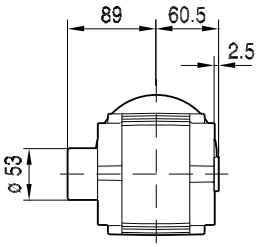

**ø 25 H7**
**DIN 6885-3**

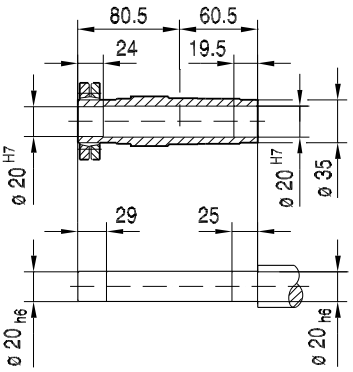



**ø 20 H7**




## WH37..

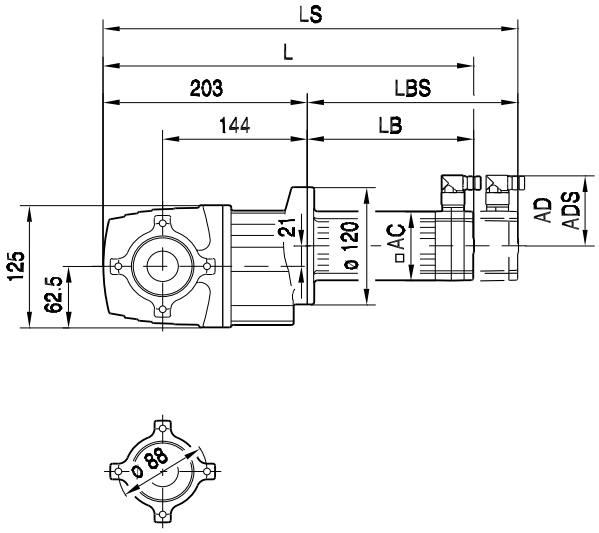


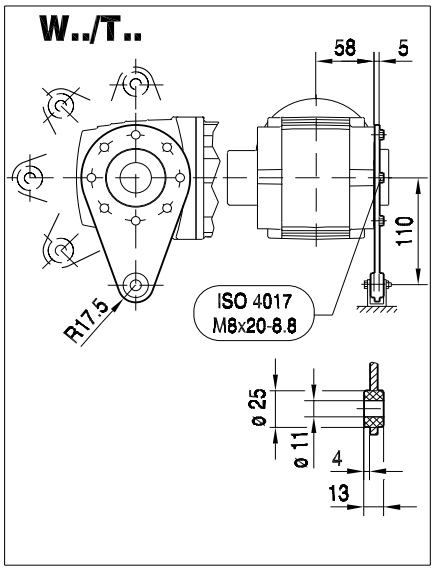

| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 348 | 387 | 426 | 383 | 433 | 486 | 375 | 403 | 415 |
| **LS** | 377 | 416 | 455 | 411 | 461 | 515 | 440 | 468 | 493 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

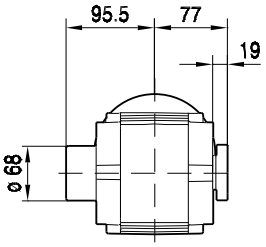
**20 035 00 07**

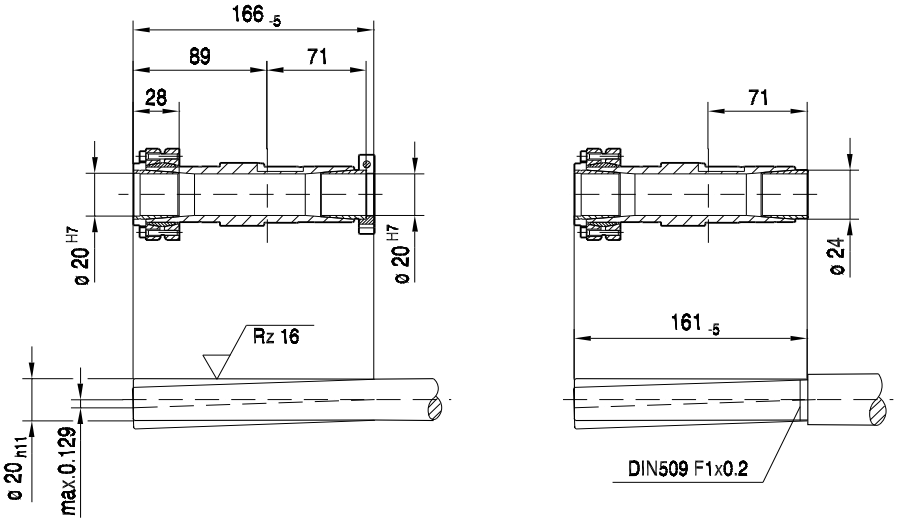
**WT37..**




**W../T..**



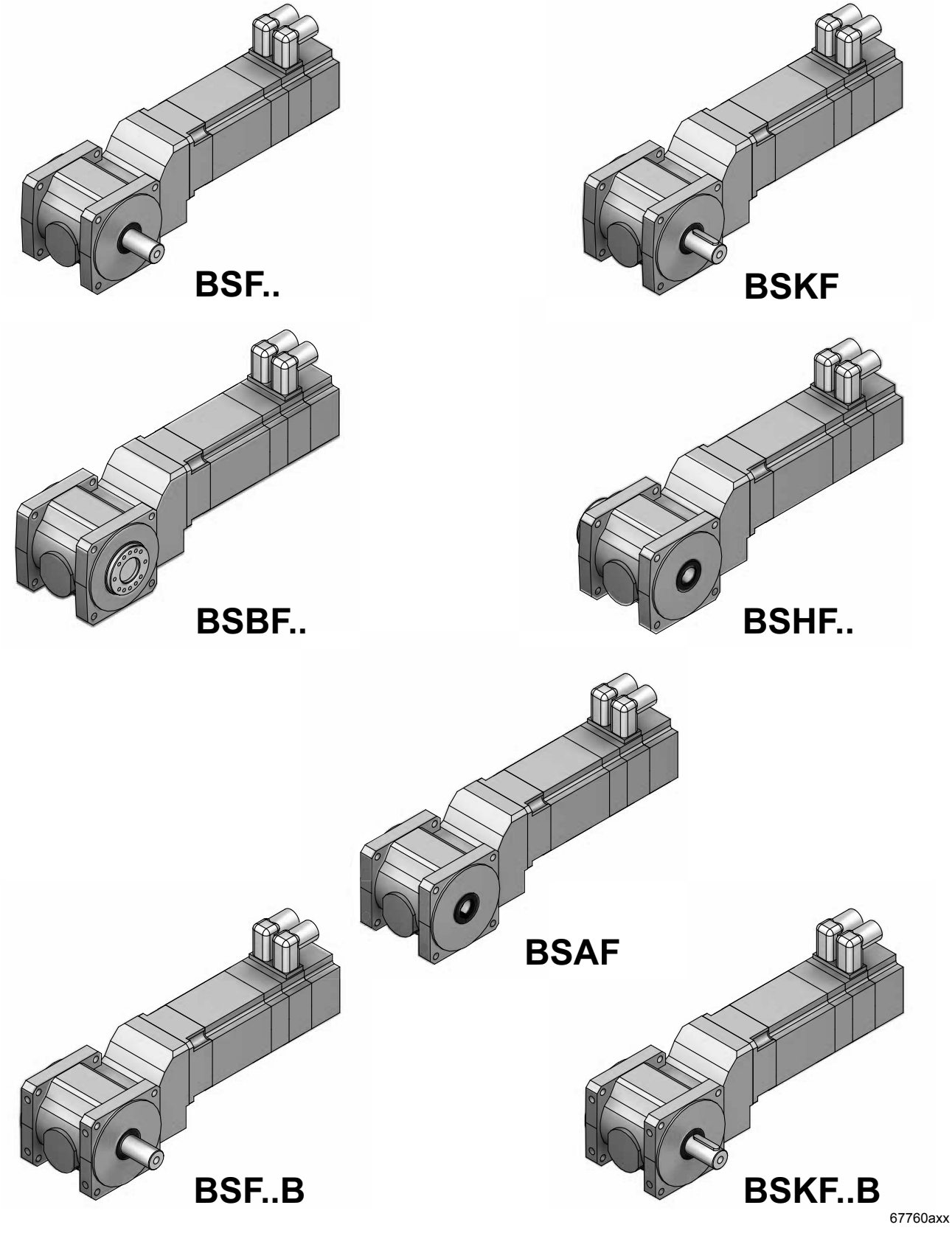



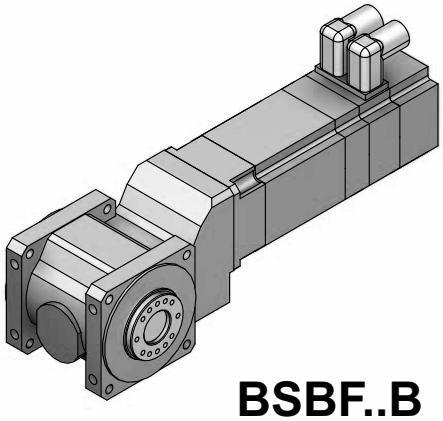




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | CMP63M | CMP63L | CMP71S | CMP71M | CMP80S |
|---|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | 88 | 88 | 115 | 115 | 137 |
| **AD** | 86 | 86 | 86 | 92 | 92 | 92 | 102 | 102 | 134 |
| **ADS** | 86 | 86 | 86 | 92 | 92 | 92 | 104 | 104 | 137 |
| **L** | 348 | 387 | 426 | 383 | 433 | 486 | 375 | 403 | 415 |
| **LS** | 377 | 416 | 455 | 411 | 461 | 515 | 440 | 468 | 493 |
| **LB** | 145 | 184 | 223 | 180 | 230 | 283 | 172 | 200 | 212 |
| **LBS** | 174 | 213 | 252 | 208 | 258 | 312 | 237 | 265 | 290 |
| **XS** | 18 | 18 | 18 | 14 | 14 | 14 | 11 | 11 | 37 |

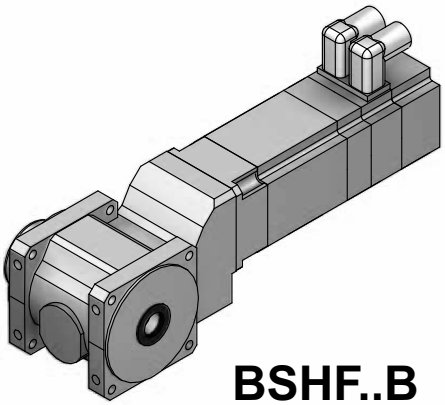
# 8 Helical-Bevel Gearmotors – BS.F-Series Gear Units

## *8.1 Variants*

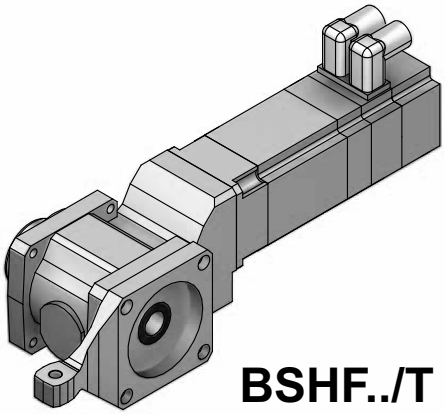




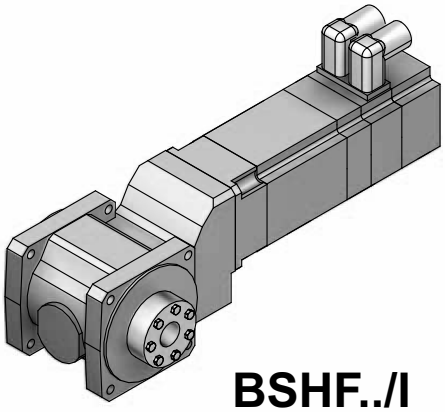
**BSBF..B**



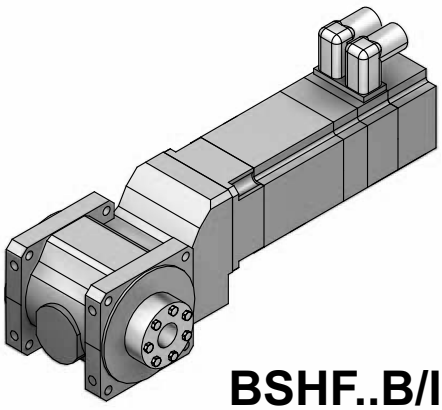
**BSHF..B**



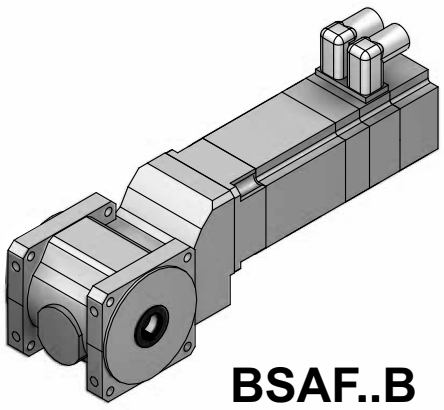
**BSHF../T**



**BSHF../I**



**BSHF..B/I**



**BSAF..B**

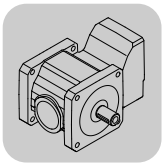
67761axx

## 8.2 BS.F/CMP – selection tables, dimension sheets

### 8.2.1 BS.F 202

| $M_{aDyn}$ [Nm] | | CMP | | | |
|---|---|---|---|---|---|
| | i | 50S | 50M | 50L | 63S |
| BSF202 2 | 3.00 | 15 | 29 | 39 | 31 |
| | 4.00 | 19 | 39 | 52 | 42 |
| | 6.00 | 29 | 58 | >60 | >60 |
| | 8.00 | 39 | >60 | >60 | >60 |
| | 10.00 | 47 | >51 | >51 | >51 |
| | 15.00 | >51 | >51 | >51 | >51 |
| | 20.00 | >51 | >51 | >51 | >51 |
| | 25.00 | >51 | | | |

| m [kg] | | CMP | | | |
|---|---|---|---|---|---|
| | s | 50S | 50M | 50L | 63S |
| BSF202 | 2 | 7.2 | 8.1 | 9.0 | 8.5 |
| BSBF: + 0.0 kg / BSHF: + 0.0 kg | | | | | |



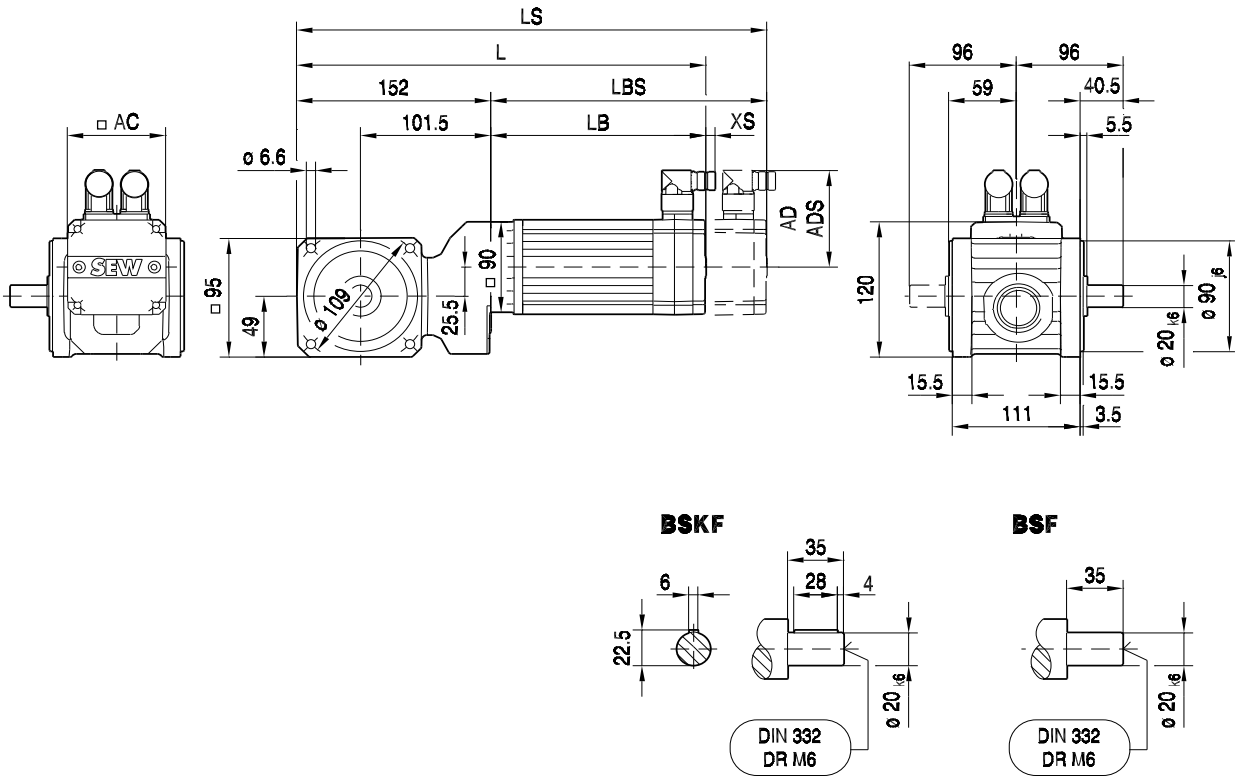


| CMP.. | | | | M1 | | | M2;M4 | | | M3;M5-6 | | | φ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | i | $n_{epk}$ [1/min] | η [%] | $a_0$ | $a_1$ | $a_2$ | $a_0$ | $a_1$ | $a_2$ | $a_0$ | $a_1$ | $a_2$ | ['] | /R ['] | /M ['] |
| BSF202 2 | 3.00 | 4500 | 93.7 | 4.10 | -0.011 | 77457 | 14.47 | -0.020 | 66498 | 6.12 | -0.013 | 75323 | 6 | 3 | - |
| | 4.00 | 4500 | 93.7 | 4.26 | -0.014 | 76815 | 20.11 | -0.028 | 60846 | 7.52 | -0.017 | 73532 | 6 | 3 | - |
| | 6.00 | 4500 | 93.7 | 4.50 | -0.019 | 75905 | 30.66 | -0.042 | 51203 | 10.05 | -0.024 | 70662 | 6 | 3 | - |
| | 8.00 | 4500 | 93.8 | 4.70 | -0.022 | 75309 | 37.13 | -0.052 | 46240 | 12.10 | -0.029 | 68596 | 6 | 3 | - |
| | 10.00 | 4500 | 90.1 | 3.31 | -0.057 | 47656 | 52.73 | -0.146 | 26432 | 19.70 | -0.083 | 39837 | 6 | 3 | - |
| | 15.00 | 4500 | 90.2 | 4.09 | -0.076 | 46683 | 56.52 | -0.189 | 28536 | 31.62 | -0.125 | 34857 | 6 | 3 | - |
| | 20.00 | 4500 | 90.3 | 3.77 | -0.089 | 46508 | 53.03 | -0.210 | 32477 | 42.49 | -0.161 | 30764 | 6 | 3 | - |
| | 25.00 | 4500 | 90.5 | 3.67 | -0.098 | 46334 | 47.99 | -0.221 | 36133 | 51.81 | -0.191 | 27469 | 6 | 3 | - |

| CMP.. | | | | | | | $c_T$ | | | $F_{Ramax}$ | | | $F_{Rapk}$ | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| $n_e$ = 1500 | i | $M_{amax}$ [Nm] | $M_{apk}$ [Nm] | $M_{aNotaus}$ [Nm] | $n_{ak}$ [1/min] | $J_{GA}$ $10^{-4}$ [kgm$^2$] | BSF [Nm/'] | BSBF [Nm/'] | BSHF [Nm/'] | BSF [N] | BSBF [N] | BSHF [N] | BSF [N] | BSBF [N] | BSHF [N] |
| BSF202 2 | 3.00 | 40 | 60 | 90 | 767 | 0.76 | 2.1 | 2.3 | 2.3 | 2680 | 2970 | 2600 | 4200 | 4200 | 4200 |
| | 4.00 | 40 | 60 | 90 | 775 | 0.47 | 2.2 | 2.4 | 2.4 | 3000 | 3330 | 2900 | 4200 | 4200 | 4200 |
| | 6.00 | 40 | 60 | 90 | 783 | 0.23 | 2.2 | 2.5 | 2.5 | 3500 | 3880 | 3390 | 4200 | 4200 | 4200 |
| | 8.00 | 40 | 60 | 90 | 875 | 0.14 | 2.3 | 2.5 | 2.5 | 3900 | 4200 | 3780 | 4200 | 4200 | 4200 |
| | 10.00 | 40 | 51 | 77 | 320 | 0.27 | 4.1 | 4.7 | 4.7 | 4150 | 4200 | 4020 | 4200 | 4200 | 4200 |
| | 15.00 | 40 | 51 | 77 | 327 | 0.14 | 4.2 | 4.8 | 4.7 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 |
| | 20.00 | 40 | 51 | 77 | 350 | 0.092 | 4.2 | 4.8 | 4.7 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 |
| | 25.00 | 40 | 51 | 77 | 280 | 0.066 | 4.2 | 4.8 | 4.8 | 4200 | 4200 | 4200 | 4200 | 4200 | 4200 |

**BSF202..**

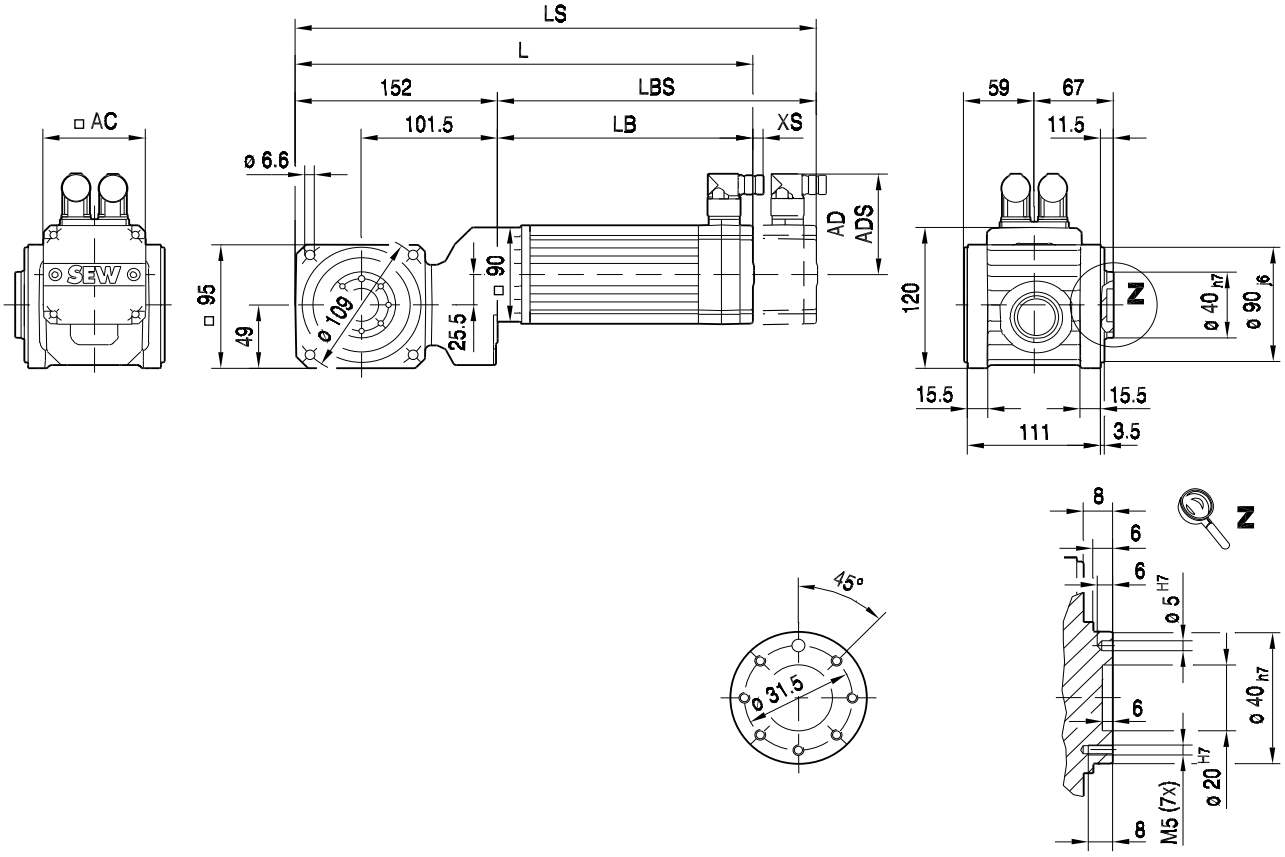
**55 002 00 06**




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | | | | |
|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | | | | |
| **AD** | 86 | 86 | 86 | 92 | | | | |
| **ADS** | 86 | 86 | 86 | 92 | | | | |
| **L** | 298 | 337 | 376 | 333 | | | | |
| **LS** | 326 | 365 | 404 | 361 | | | | |
| **LB** | 146 | 185 | 224 | 181 | | | | |
| **LBS** | 175 | 214 | 253 | 210 | | | | |
| **XS** | 18 | 18 | 18 | 14 | | | | |

**BSBF202..**

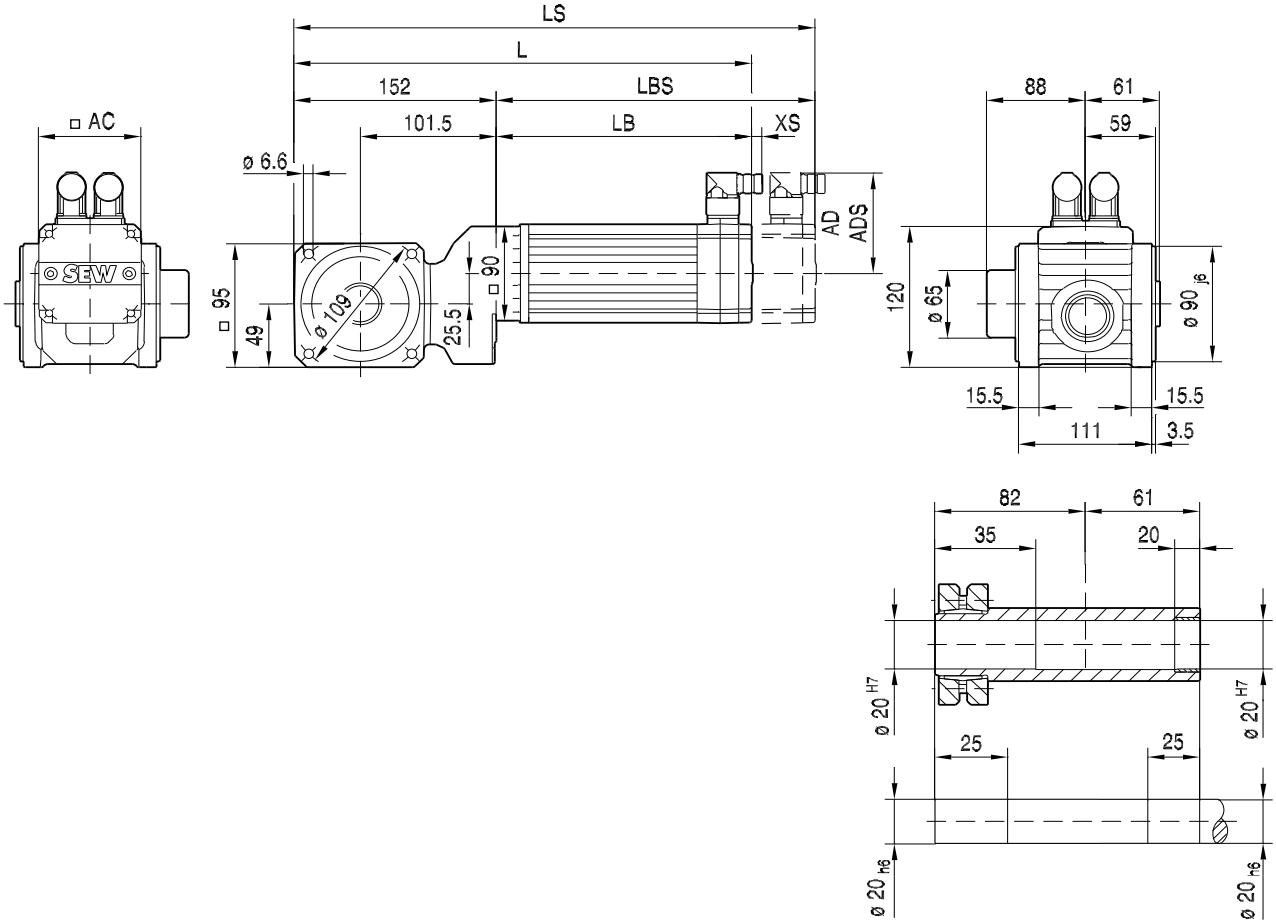
**55 003 00 06**




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | | | | |
|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | | | | |
| **AD** | 86 | 86 | 86 | 92 | | | | |
| **ADS** | 86 | 86 | 86 | 92 | | | | |
| **L** | 298 | 337 | 376 | 333 | | | | |
| **LS** | 326 | 365 | 404 | 361 | | | | |
| **LB** | 146 | 185 | 224 | 181 | | | | |
| **LBS** | 175 | 214 | 253 | 210 | | | | |
| **XS** | 18 | 18 | 18 | 14 | | | | |

**BSHF202..**

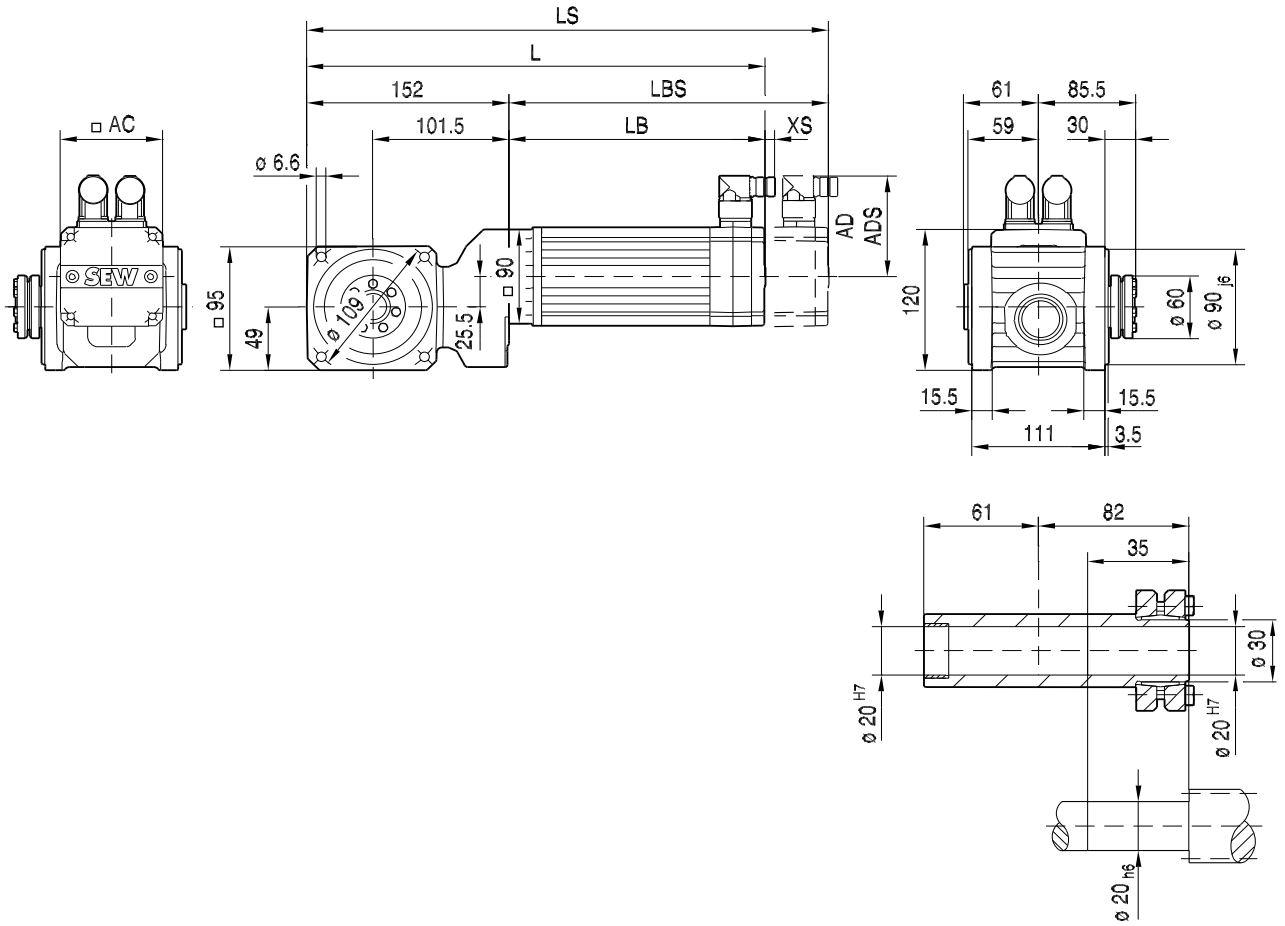
**55 004 00 06**




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | | | | |
|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | | | | |
| **AD** | 86 | 86 | 86 | 92 | | | | |
| **ADS** | 86 | 86 | 86 | 92 | | | | |
| **L** | 298 | 337 | 376 | 333 | | | | |
| **LS** | 326 | 365 | 404 | 361 | | | | |
| **LB** | 146 | 185 | 224 | 181 | | | | |
| **LBS** | 175 | 214 | 253 | 210 | | | | |
| **XS** | 18 | 18 | 18 | 14 | | | | |

## BSHF202/I..

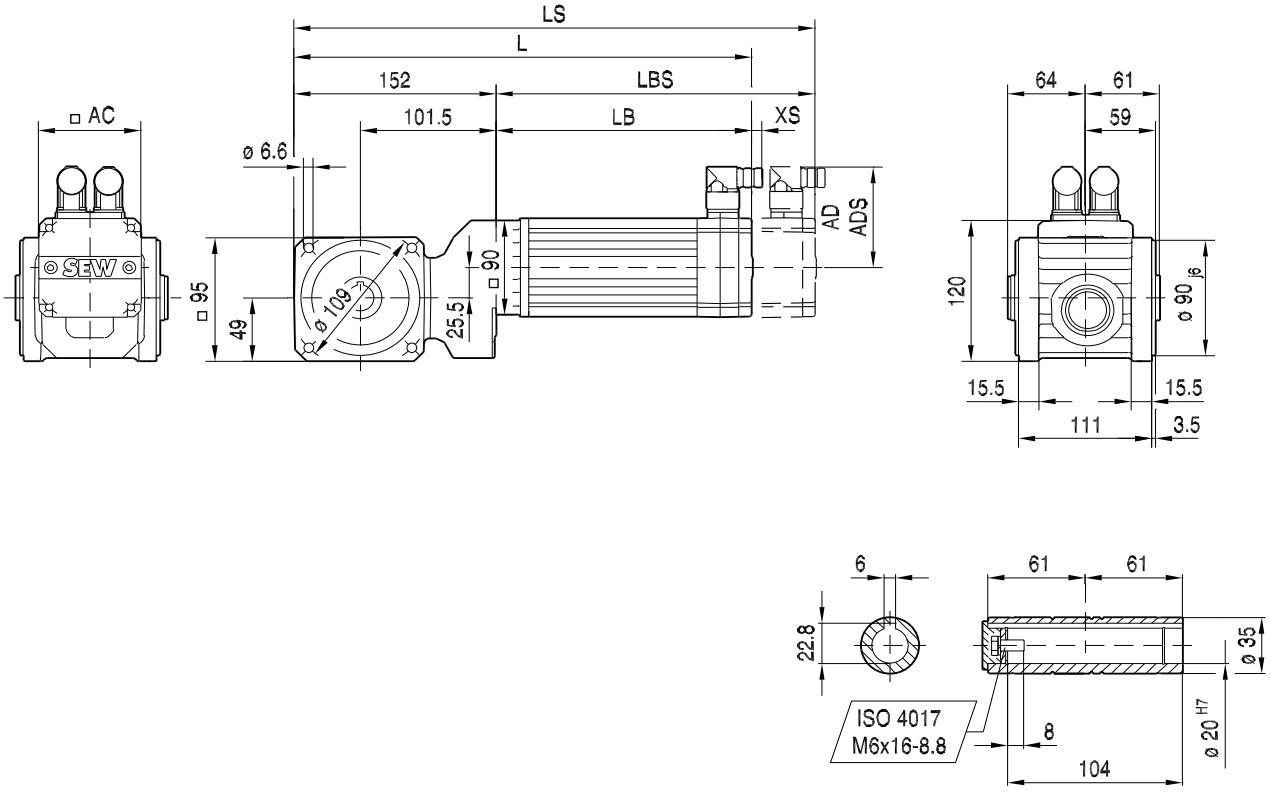
55 005 00 06




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | | | | |
|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | | | | |
| **AD** | 86 | 86 | 86 | 92 | | | | |
| **ADS** | 86 | 86 | 86 | 92 | | | | |
| **L** | 298 | 337 | 376 | 333 | | | | |
| **LS** | 326 | 365 | 404 | 361 | | | | |
| **LB** | 146 | 185 | 224 | 181 | | | | |
| **LBS** | 175 | 214 | 253 | 210 | | | | |
| **XS** | 18 | 18 | 18 | 14 | | | | |

**BSAF202..**

**55 015 00 07**




| (→ 📖 9) | CMP50S | CMP50M | CMP50L | CMP63S | | | | |
|---|---|---|---|---|---|---|---|---|
| **AC** | 73 | 73 | 73 | 88 | | | | |
| **AD** | 86 | 86 | 86 | 92 | | | | |
| **ADS** | 86 | 86 | 86 | 92 | | | | |
| **L** | 298 | 337 | 376 | 333 | | | | |
| **LS** | 326 | 365 | 404 | 361 | | | | |
| **LB** | 146 | 185 | 224 | 181 | | | | |
| **LBS** | 175 | 214 | 253 | 210 | | | | |
| **XS** | 18 | 18 | 18 | 14 | | | | |

# 9 Main Technical Data of Servomotors

***Key to the technical data***

| | |
|---|---|
| $n_N$ | Rated speed |
| $M_0$ | Standstill torque (thermal continuous torque at low speeds) |
| $I_0$ | Standstill current |
| $M_{pk}$ | Dynamic limit torque |
| $I_{max}$ | Maximum permitted motor current |
| $M_{0VR}$ | Standstill torque with forced cooling fan |
| $I_{0VR}$ | Standstill current with forced cooling fan |
| $J_{mot}$ | Mass moment of inertia of the motor |
| $J_{bmot}$ | Mass moment of inertia of the brakemotor |
| $M_{B1}$ | Standard braking torque |
| $M_{B2}$ | Optional braking torque |
| $W_{max1}$ | Maximum permitted braking work per braking operation |
| $W_{max2}$ | Maximum permitted braking work per braking operation with optional braking torque |
| $L_1$ | Inductance between connection phase and star point |
| $R_1$ | Resistance between connection phase and star point |
| $U_{p0}$ cold | Internal voltage at 1000 rpm |
| $m_{mot}$ | Weight of the motor |
| $m_{bmot}$ | Weight of the brakemotor |

## 9.1 Technical data of CMP motors

***Synchronous servomotors with 400 V system voltage***

| $n_N$ rpm | Motor | $M_0$ Nm | $I_0$ A | $M_{pk}$ Nm | $I_{max}$ A | $M_{0VR}$ Nm | $I_{0VR}$ A | m kg | $J_{mot}$ $10^{-4}$ kgm$^2$ |
|---|---|---|---|---|---|---|---|---|---|
| 2000 | **CMP71S** | 6.4 | 3.4 | 19.2 | 17 | 8.7 | 4.6 | 7 | 3.04 |
| | **CMP71M** | 9.4 | 5 | 30.8 | 26 | 13.7 | 7.3 | 8.4 | 4.08 |
| | **CMP71L** | 13.1 | 6.3 | 46.9 | 39 | 21 | 10.1 | 11.4 | 6.18 |
| | **CMP80S** | 13.4 | 6.9 | 42.1 | 33 | 18.5 | 9.5 | 12.8 | 8.78 |
| | **CMP80S*** | 13.4 | 6.9 | 27.5 | 14.9 | 18.5 | 9.5 | 12.8 | 8.78 |
| | **CMP80M** | 18.7 | 9.3 | 62.6 | 48 | 27 | 13.4 | 16.5 | 11.9 |
| | **CMP80M*** | 18.7 | 9.3 | 42.5 | 22.9 | 27 | 13.4 | 16.5 | 11.9 |
| | **CMP80L** | 27.5 | 12.5 | 107 | 72 | 44 | 20 | 21.4 | 18.1 |
| | **CMP100S** | 25.5 | 13.3 | 68.3 | 49 | 36 | 18.8 | 19.8 | 19.59 |
| | **CMP100M** | 31 | 14.7 | 108 | 69 | 47 | 22.3 | 24.8 | 26.49 |
| | **CMP100L** | 47 | 21.8 | 178.8 | 113 | 70 | 32.5 | 34.6 | 40.24 |
| 3000 | **CMP40S** | 0.5 | 1.2 | 1.9 | 6.1 | - | - | 1.3 | 0.1 |
| | **CMP40M** | 0.8 | 0.95 | 3.8 | 6.0 | - | - | 1.6 | 0.15 |
| | **CMP50S** | 1.3 | 0.96 | 5.2 | 5.1 | 1.7 | 1.25 | 2.3 | 0.42 |
| | **CMP50M** | 2.4 | 1.68 | 10.3 | 9.6 | 3.5 | 2.45 | 3.3 | 0.67 |
| | **CMP50L** | 3.3 | 2.2 | 15.4 | 13.6 | 4.8 | 3.2 | 4.1 | 0.92 |
| | **CMP50L*** | 3.3 | 2.2 | 14 | 11.6 | 4.8 | 3.2 | 4.1 | 0.92 |
| | **CMP63S** | 2.9 | 2.15 | 11.1 | 12.9 | 4 | 3 | 4.0 | 1.15 |
| | **CMP63M** | 5.3 | 3.6 | 21.4 | 21.6 | 7.5 | 5.1 | 5.7 | 1.92 |
| | **CMP63L** | 7.1 | 4.95 | 30.4 | 29.7 | 10.3 | 7.2 | 7.5 | 2.69 |
| | **CMP71S** | 6.4 | 4.9 | 19.2 | 25 | 8.7 | 6.7 | 7 | 3.04 |
| | **CMP71M** | 9.4 | 7.5 | 30.8 | 39 | 13.7 | 10.9 | 8.4 | 4.08 |
| | **CMP71L** | 13.1 | 9.4 | 46.9 | 58 | 21 | 15.1 | 11.4 | 6.18 |
| | **CMP80S** | 13.4 | 10 | 42.1 | 47 | 18.5 | 13.8 | 12.8 | 8.78 |
| | **CMP80S*** | 13.4 | 10 | 27.5 | 21.6 | 18.5 | 13.8 | 12.8 | 8.78 |
| | **CMP80M** | 18.7 | 13.4 | 62.6 | 69 | 27 | 19.3 | 16.5 | 11.9 |
| | **CMP80M*** | 18.7 | 13.4 | 42.5 | 33 | 27 | 19.3 | 16.5 | 11.9 |
| | **CMP80L** | 27.5 | 18.7 | 107 | 107 | 44 | 30 | 21.4 | 18.1 |
| | **CMP100S** | 25.5 | 19.6 | 68.3 | 73 | 36 | 27.5 | 19.8 | 19.34 |
| | **CMP100M** | 31 | 21.8 | 108 | 102 | 47 | 33 | 24.8 | 26.25 |
| | **CMP100L** | 47 | 32.3 | 178.8 | 167 | 70 | 48 | 34.6 | 40 |
| 4500 | **CMP40S** | 0.5 | 1.2 | 1.9 | 6.1 | - | - | 1.3 | 0.1 |
| | **CMP40M** | 0.8 | 0.95 | 3.8 | 6.0 | - | - | 1.6 | 0.15 |
| | **CMP50S** | 1.3 | 1.32 | 5.2 | 7.0 | 1.7 | 1.7 | 2.3 | 0.42 |
| | **CMP50M** | 2.4 | 2.3 | 10.3 | 13.1 | 3.5 | 3.35 | 3.3 | 0.67 |
| | **CMP50L** | 3.3 | 3.15 | 15.4 | 19.5 | 4.8 | 4.6 | 4.1 | 0.92 |
| | **CMP50L*** | 3.3 | 3.15 | 14 | 16.6 | 4.8 | 4.6 | 4.1 | 0.92 |
| | **CMP63S** | 2.9 | 3.05 | 11.1 | 18.3 | 4 | 4.2 | 4.0 | 1.15 |
| | **CMP63M** | 5.3 | 5.4 | 21.4 | 32.4 | 7.5 | 7.6 | 5.7 | 1.92 |
| | **CMP63L** | 7.1 | 6.9 | 30.4 | 41.4 | 10.3 | 10 | 7.5 | 2.69 |
| | **CMP71S** | 6.4 | 7.3 | 19.2 | 38 | 8.7 | 9.9 | 7 | 3.04 |
| | **CMP71M** | 9.4 | 10.9 | 30.8 | 57 | 13.7 | 15.9 | 8.4 | 4.08 |
| | **CMP71L** | 13.1 | 14.1 | 46.9 | 87 | 21 | 22.5 | 11.4 | 6.18 |
| | **CMP80S** | 13.4 | 15.3 | 42.1 | 73 | 18.5 | 21 | 12.8 | 8.78 |
| | **CMP80S*** | 13.4 | 15.3 | 27.5 | 33 | 18.5 | 21 | 12.8 | 8.78 |
| | **CMP80M** | 18.7 | 20.1 | 62.6 | 103 | 27 | 29 | 16.5 | 11.9 |
| | **CMP80M*** | 18.7 | 20.1 | 42.5 | 49.5 | 27 | 29 | 16.5 | 11.9 |
| | **CMP80L** | 27.5 | 27.8 | 107 | 159 | 44 | 44.5 | 21.4 | 18.1 |
| | **CMP100S** | 25.5 | 30 | 68.3 | 111 | 36 | 42.5 | 19.8 | 19.34 |
| | **CMP100M** | 31 | 33.1 | 108 | 154 | - | - | 24.8 | 26.25 |
| | **CMP100L** | 47 | 48.4 | 178.8 | 251 | - | - | 34.6 | 40 |

| $n_N$ rpm | Motor | $M_0$ Nm | $I_0$ A | $M_{pk}$ Nm | $I_{max}$ A | $M_{0VR}$ Nm | $I_{0VR}$ A | m kg | $J_{mot}$ $10^{-4}$ kgm$^2$ |
|---|---|---|---|---|---|---|---|---|---|
| 6000 | **CMP40S** | 0.5 | 1.2 | 1.9 | 6.1 | - | - | 1.3 | 0.1 |
| | **CMP40M** | 0.8 | 1.1 | 3.8 | 6.9 | - | - | 1.6 | 0.15 |
| | **CMP50S** | 1.3 | 1.7 | 5.2 | 9.0 | 1.7 | 2.2 | 2.3 | 0.42 |
| | **CMP50M** | 2.4 | 3 | 10.3 | 17.1 | 3.5 | 4.4 | 3.3 | 0.67 |
| | **CMP50L** | 3.3 | 4.2 | 15.4 | 26 | 4.8 | 6.1 | 4.1 | 0.92 |
| | **CMP50L*** | 3.3 | 4.2 | 14 | 22.1 | 4.8 | 6.1 | 4.1 | 0.92 |
| | **CMP63S** | 2.9 | 3.9 | 11.1 | 23.4 | 4 | 5.4 | 4.0 | 1.15 |
| | **CMP63M** | 5.3 | 6.9 | 21.4 | 41.4 | 7.5 | 9.8 | 5.7 | 1.92 |
| | **CMP63L** | 7.1 | 9.3 | 30.4 | 55.8 | 10.3 | 13.5 | 7.5 | 2.69 |
| | **CMP71S** | 6.4 | 9.6 | 19.2 | 50 | 8.7 | 13.1 | 7 | 3.04 |
| | **CMP71M** | 9.4 | 14.7 | 30.8 | 76 | 13.7 | 21.5 | 8.4 | 4.08 |
| | **CMP71L** | 13.1 | 18.8 | 46.9 | 115 | 21 | 30 | 11.4 | 6.18 |
| | **CMP80S** | 13.4 | 20 | 42.1 | 95 | 18.5 | 27.5 | 12.8 | 8.78 |
| | **CMP80S*** | 13.4 | 20 | 27.5 | 43.2 | 18.5 | 27.5 | 12.8 | 8.78 |
| | **CMP80M** | 18.7 | 26.4 | 62.6 | 135 | 27 | 38 | 16.5 | 11.9 |
| | **CMP80M*** | 18.7 | 26.4 | 42.5 | 65 | 27 | 38 | 16.5 | 11.9 |
| | **CMP80L** | 27.5 | 37.6 | 107 | 215 | - | - | 21.4 | 18.1 |

The motors marked with * can only be combined with the following gear units:

| Motor | Gear unit |
|---|---|
| CMP50L | BSF202 |
| CMP80S | F27, F37, K37, S47, W37 |
| CMP80M | F47, K47, S57 |

| $n_N$ rpm | Motor | $L_1$ mH | $R_1$ Ω | $U_{p0}$ cold V | $m_{bmot}$ kg | $J_{bmot}$ $10^{-4}$ kgm$^2$ | $M_{B1}$ Nm | $M_{B2}$ Nm |
|---|---|---|---|---|---|---|---|---|
| 2000 | **CMP71S** | 33.5 | 3.48 | 128 | 9 | 3.44 | 7 | 14 |
| | **CMP71M** | 21.5 | 1.87 | 127 | 10.4 | 4.5 | 14 | 7 |
| | **CMP71L** | 16.2 | 1.2 | 142 | 13.4 | 6.6 | 14 | 7 |
| | **CMP80S** | 15.3 | 1.1 | 133 | 16.8 | 10.04 | 16 | 31 |
| | **CMP80S*** | 15.3 | 1.1 | 133 | 16.8 | 10.04 | 16 | 31 |
| | **CMP80M** | 10.5 | 0.69 | 136 | 20.5 | 13.16 | 31 | 16 |
| | **CMP80M*** | 10.5 | 0.69 | 136 | 20.5 | 13.16 | 31 | 16 |
| | **CMP80L** | 7.6 | 0.44 | 149 | 24.4 | 19.36 | 31 | 16 |
| | **CMP100S** | 8.5 | 0.44 | 130 | 22.8 | 21.34 | 24 | 47 |
| | **CMP100M** | 6.6 | 0.3 | 141 | 27.8 | 28.25 | 47 | 24 |
| | **CMP100L** | 4.15 | 0.169 | 145 | 37.6 | 42.82 | 47 | 24 |
| 3000 | **CMP40S** | 23 | 11.94 | 27.5 | 1.7 | 0.13 | 0.95 | - |
| | **CMP40M** | 46 | 19.93 | 56 | 2.0 | 0.18 | 0.95 | - |
| | **CMP50S** | 71 | 22.49 | 86 | 2.9 | 0.48 | 3.1 | 4.3 |
| | **CMP50M** | 38.5 | 9.96 | 90 | 3.9 | 0.73 | 4.3 | 3.1 |
| | **CMP50L** | 30.5 | 7.42 | 98 | 4.7 | 0.98 | 4.3 | 3.1 |
| | **CMP50L*** | 30.5 | 7.42 | 98 | 4.7 | 0.98 | 4.3 | 3.1 |
| | **CMP63S** | 36.5 | 6.79 | 90 | 5.0 | 1.49 | 7 | 9.3 |
| | **CMP63M** | 22 | 3.56 | 100 | 6.7 | 2.26 | 9.3 | 7 |
| | **CMP63L** | 14.2 | 2.07 | 100 | 8.5 | 3.03 | 9.3 | 7 |
| | **CMP71S** | 15.7 | 1.48 | 87.5 | 9 | 3.44 | 7 | 14 |
| | **CMP71M** | 9.7 | 0.81 | 85 | 10.4 | 4.5 | 14 | 7 |
| | **CMP71L** | 7.3 | 0.56 | 96 | 13.4 | 6.6 | 14 | 7 |
| | **CMP80S** | 7.2 | 0.54 | 91 | 16.8 | 10.04 | 16 | 31 |
| | **CMP80S*** | 7.2 | 0.54 | 91 | 16.8 | 10.04 | 16 | 31 |
| | **CMP80M** | 5 | 0.345 | 94 | 20.5 | 13.16 | 31 | 16 |
| | **CMP80M*** | 5 | 0.345 | 94 | 20.5 | 13.16 | 31 | 16 |
| | **CMP80L** | 3.35 | 0.21 | 99 | 24.4 | 19.36 | 31 | 16 |
| | **CMP100S** | 3.9 | 0.215 | 88 | 22.8 | 21.34 | 24 | 47 |
| | **CMP100M** | 3.05 | 0.142 | 95.5 | 27.8 | 28.25 | 47 | 24 |
| | **CMP100L** | 1.9 | 0.081 | 98 | 37.6 | 42 | 47 | 24 |
| 4500 | **CMP40S** | 23 | 11.94 | 27.5 | 1.7 | 0.13 | 0.95 | - |
| | **CMP40M** | 46 | 19.93 | 56 | 2.0 | 0.18 | 0.95 | - |
| | **CMP50S** | 37 | 11.61 | 62 | 2.9 | 0.48 | 3.1 | 4.3 |
| | **CMP50M** | 20.5 | 5.28 | 66 | 3.9 | 0.73 | 4.3 | 3.1 |
| | **CMP50L** | 14.6 | 3.57 | 68 | 4.7 | 0.98 | 4.3 | 3.1 |
| | **CMP50L*** | 14.6 | 3.57 | 68 | 4.7 | 0.98 | 4.3 | 3.1 |
| | **CMP63S** | 18.3 | 3.34 | 64 | 5.0 | 1.49 | 7 | 9.3 |
| | **CMP63M** | 9.8 | 1.48 | 67 | 6.7 | 2.26 | 9.3 | 7 |
| | **CMP63L** | 7.2 | 1.07 | 71 | 8.5 | 3.03 | 9.3 | 7 |
| | **CMP71S** | 7.1 | 0.72 | 59 | 9 | 3.44 | 7 | 14 |
| | **CMP71M** | 4.55 | 0.385 | 58 | 10.4 | 4.5 | 14 | 7 |
| | **CMP71L** | 3.25 | 0.24 | 64 | 13.4 | 6.6 | 14 | 7 |
| | **CMP80S** | 3.05 | 0.22 | 59 | 16.8 | 10.04 | 16 | 31 |
| | **CMP80S*** | 3.05 | 0.22 | 59 | 16.8 | 10.04 | 16 | 31 |
| | **CMP80M** | 2.25 | 0.148 | 63 | 20.5 | 13.16 | 31 | 16 |
| | **CMP80M*** | 2.25 | 0.148 | 63 | 20.5 | 13.16 | 31 | 16 |
| | **CMP80L** | 1.54 | 0.085 | 67 | 24.4 | 19.36 | 31 | 16 |
| | **CMP100S** | 1.68 | 0.086 | 58 | 22.8 | 21.34 | 24 | 47 |
| | **CMP100M** | 1.32 | 0.058 | 63 | 27.8 | 28.25 | 47 | 24 |
| | **CMP100L** | 0.84 | 0.038 | 65 | 37.6 | 42.82 | 47 | 24 |

| $n_N$ rpm | Motor | $L_1$ mH | $R_1$ Ω | $U_{p0}$ cold V | $m_{bmot}$ kg | $J_{bmot}$ $10^{-4}$ kgm$^2$ | $M_{B1}$ Nm | $M_{B2}$ Nm |
|---|---|---|---|---|---|---|---|---|
| 6000 | **CMP40S** | 23 | 11.94 | 27.5 | 1.7 | 0.13 | 0.95 | - |
| | **CMP40M** | 34 | 14.95 | 48.5 | 2.0 | 0.18 | 0.95 | - |
| | **CMP50S** | 22.5 | 7.11 | 48.5 | 2.9 | 0.48 | 3.1 | 4.3 |
| | **CMP50M** | 12 | 3.21 | 50.5 | 3.9 | 0.73 | 4.3 | 3.1 |
| | **CMP50L** | 8.2 | 1.91 | 51 | 4.7 | 0.98 | 4.3 | 3.1 |
| | **CMP50L*** | 8.2 | 1.91 | 51 | 4.7 | 0.98 | 4.3 | 3.1 |
| | **CMP63S** | 11.2 | 2.1 | 50 | 5.0 | 1.49 | 7 | 9.3 |
| | **CMP63M** | 5.9 | 0.92 | 52 | 6.7 | 2.26 | 9.3 | 7 |
| | **CMP63L** | 4 | 0.62 | 53 | 8.5 | 3.03 | 9.3 | 7 |
| | **CMP71S** | 4.15 | 0.395 | 45 | 9 | 3.44 | 7 | 14 |
| | **CMP71M** | 2.55 | 0.205 | 43.5 | 10.4 | 4.5 | 14 | 7 |
| | **CMP71L** | 1.84 | 0.145 | 48 | 13.4 | 6.6 | 14 | 7 |
| | **CMP80S** | 1.8 | 0.136 | 46 | - | - | - | - |
| | **CMP80S*** | 1.8 | 0.136 | 46 | - | - | - | - |
| | **CMP80M** | 1.3 | 0.087 | 48 | - | - | - | - |
| | **CMP80M*** | 1.3 | 0.087 | 48 | - | - | - | - |
| | **CMP80L** | 0.84 | 0.051 | 50 | - | - | - | - |

## 9.2 Technical data of CMPZ motors

***Synchronous servomotors with 400 V system voltage***

| $n_N$ | Motor | $M_0$ | $I_0$ | $M_{pk}$ | $I_{max}$ | $M_{0VR}$ | $I_{0VR}$ | m | $J_{mot}$ |
|---|---|---|---|---|---|---|---|---|---|
| rpm | | Nm | A | Nm | A | Nm | A | kg | $10^{-4}$ kgm$^2$ |
| 2000 | **CMPZ71S** | 6.4 | 3.4 | 19.2 | 17 | 8.7 | 4.6 | 8.6 | 9.32 |
| | **CMPZ71M** | 9.4 | 5 | 30.8 | 26 | 13.7 | 7.3 | 10 | 10.37 |
| | **CMPZ71L** | 13.1 | 6.3 | 46.9 | 39 | 21 | 10.1 | 13 | 12.47 |
| | **CMPZ80S** | 13.4 | 6.9 | 42.1 | 33 | 18.7 | 9.5 | 15.8 | 27.18 |
| | **CMPZ80S*** | 13.4 | 6.9 | 27.5 | 14.9 | 18.7 | 9.5 | 15.8 | 27.18 |
| | **CMPZ80M** | 18.7 | 9.3 | 62.6 | 48 | 27 | 13.4 | 19.5 | 30.3 |
| | **CMPZ80M*** | 18.7 | 9.3 | 42.5 | 22.9 | 27 | 13.4 | 19.5 | 30.3 |
| | **CMPZ80L** | 27.5 | 12.5 | 107 | 72 | 44 | 20 | 24.4 | 36.51 |
| | **CMPZ100S** | 25.5 | 13.3 | 68.3 | 49 | 36 | 18.8 | 24.2 | 79.76 |
| | **CMPZ100M** | 31 | 14.7 | 108 | 69 | 47 | 22.3 | 29.2 | 86.66 |
| | **CMPZ100L** | 47 | 21.8 | 178.8 | 113 | 70 | 32.5 | 39 | 100.41 |
| 3000 | **CMPZ71S** | 6.4 | 4.9 | 19.2 | 25 | 8.7 | 6.7 | 8.6 | 9.32 |
| | **CMPZ71M** | 9.4 | 7.5 | 30.8 | 39 | 13.7 | 10.9 | 10 | 10.37 |
| | **CMPZ71L** | 13.1 | 9.4 | 46.9 | 58 | 21 | 15.1 | 13 | 12.47 |
| | **CMPZ80S** | 13.4 | 10 | 42.1 | 47 | 18.5 | 13.8 | 15.8 | 27.18 |
| | **CMPZ80S*** | 13.4 | 10 | 27.5 | 21.6 | 18.5 | 13.8 | 15.8 | 27.18 |
| | **CMPZ80M** | 18.7 | 13.4 | 62.6 | 69 | 27 | 19.3 | 19.5 | 30.3 |
| | **CMPZ80M*** | 18.7 | 13.4 | 42.5 | 33 | 27 | 19.3 | 19.5 | 30.3 |
| | **CMPZ80L** | 27.5 | 18.7 | 107 | 107 | 44 | 30 | 24.4 | 36.51 |
| | **CMPZ100S** | 25.5 | 19.6 | 68.3 | 73 | 36 | 27.5 | 24.2 | 79.76 |
| | **CMPZ100M** | 31 | 21.8 | 108 | 102 | 47 | 33 | 29.2 | 86.66 |
| | **CMPZ100L** | 47 | 32.3 | 178.8 | 167 | 70 | 48 | 39 | 100.41 |
| 4500 | **CMPZ71S** | 6.4 | 7.3 | 19.2 | 38 | 8.7 | 9.9 | 8.6 | 9.32 |
| | **CMPZ71M** | 9.4 | 10.9 | 30.8 | 57 | 13.7 | 15.9 | 10 | 10.37 |
| | **CMPZ71L** | 13.1 | 14.1 | 46.9 | 87 | 21 | 22.5 | 13 | 12.47 |
| | **CMPZ80S** | 13.4 | 15.3 | 42.1 | 73 | 18.5 | 21 | 15.8 | 27.18 |
| | **CMPZ80S*** | 13.4 | 15.3 | 27.5 | 33 | 18.5 | 21 | 15.8 | 27.18 |
| | **CMPZ80M** | 18.7 | 20.1 | 62.6 | 103 | 27 | 29 | 19.5 | 30.3 |
| | **CMPZ80M*** | 18.7 | 20.1 | 42.5 | 49.5 | 27 | 29 | 19.5 | 30.3 |
| | **CMPZ80L** | 27.5 | 27.8 | 107 | 159 | 44 | 44.5 | 24.4 | 36.51 |
| | **CMPZ100S** | 25.5 | 30 | 68.3 | 111 | 36 | 42.5 | 24.2 | 79.76 |
| | **CMPZ100M** | 31 | 33.1 | 108 | 154 | - | - | 29.2 | 86.66 |
| | **CMPZ100L** | 47 | 48.4 | 178.8 | 251 | - | - | 39 | 100.41 |
| 6000 | **CMPZ71S** | 6.4 | 9.6 | 19.2 | 50 | 8.7 | 13.1 | 8.6 | 9.32 |
| | **CMPZ71M** | 9.4 | 14.7 | 30.8 | 76 | 13.7 | 21.5 | 10 | 10.37 |
| | **CMPZ71L** | 13.1 | 18.8 | 46.9 | 115 | 21 | 30 | 13 | 12.47 |
| | **CMPZ80S** | 13.4 | 20 | 42.1 | 95 | 18.5 | 27.5 | 15.8 | 27.18 |
| | **CMPZ80S*** | 13.4 | 20 | 27.5 | 43.2 | 18.5 | 27.5 | 15.8 | 27.18 |
| | **CMPZ80M** | 18.7 | 26.4 | 62.6 | 135 | 27 | 38 | 19.5 | 30.3 |
| | **CMPZ80M*** | 18.7 | 26.4 | 42.5 | 65 | 27 | 38 | 19.5 | 30.3 |
| | **CMPZ80L** | 27.5 | 37.6 | 107 | 215 | - | - | 24.4 | 36.51 |

The motors marked with * can only be combined with the following gear units:

| Motor | Gear unit |
|---|---|
| CMP50L | BSF202 |
| CMP80S | F27, F37, K37, S47, W37 |
| CMP80M | F47, K47, S57 |

| $n_N$ | Motor | $L_1$ | $R_1$ | $U_{p0}$ cold | ?LB[1)] | $m_{bmot}$ | $J_{bmot}$ | $M_{B1}$ | $M_{B2}$ | ?LBS[2)] |
|---|---|---|---|---|---|---|---|---|---|---|
| rpm | | mH | Ω | V | mm | kg | $10^{-4}$ kgm$^2$ | Nm | | mm |
| 2000 | **CMPZ71S** | 33.5 | 3.48 | 128 | 64.8 | 11.2 | 11.04 | 14 | 10 | 56.2 |
| | **CMPZ71M** | 21.5 | 1.87 | 127 | 64.8 | 12.6 | 12.09 | 20 | 14 | 56.2 |
| | **CMPZ71L** | 16.2 | 1.2 | 142 | 64.8 | 15.6 | 14.19 | 20 | 14 | 56.2 |
| | **CMPZ80S** | 15.3 | 1.1 | 133 | 77.5 | 20.8 | 30.95 | 28 | 20 | 60.5 |
| | **CMPZ80S*** | 15.3 | 1.1 | 133 | 77.5 | 20.8 | 30.95 | 28 | 20 | 60.5 |
| | **CMPZ80M** | 10.5 | 0.69 | 136 | 77.5 | 24.5 | 34.07 | 40 | 28 | 60.5 |
| | **CMPZ80M*** | 10.5 | 0.69 | 136 | 77.5 | 24.5 | 34.07 | 40 | 28 | 60.5 |
| | **CMPZ80L** | 7.6 | 0.44 | 149 | 77.5 | 29.4 | 40.28 | 40 | 28 | 60.5 |
| | **CMPZ100S** | 8.5 | 0.44 | 130 | 96.2 | 34.7 | 84.19 | 55 | 40 | 60.8 |
| | **CMPZ100M** | 6.6 | 0.3 | 141 | 96.2 | 39.7 | 91.1 | 80 | 55 | 60.8 |
| | **CMPZ100L** | 4.15 | 0.169 | 145 | 96.2 | 49.5 | 104.85 | 80 | 55 | 60.8 |
| 3000 | **CMPZ71S** | 15.7 | 1.48 | 87.5 | 64.8 | 11.2 | 11.04 | 14 | 10 | 56.2 |
| | **CMPZ71M** | 9.7 | 0.81 | 85 | 64.8 | 12.6 | 12.09 | 20 | 14 | 56.2 |
| | **CMPZ71L** | 7.3 | 0.56 | 96 | 64.8 | 15.6 | 14.19 | 20 | 14 | 56.2 |
| | **CMPZ80S** | 7.2 | 0.54 | 91 | 77.5 | 20.8 | 30.95 | 28 | 20 | 60.5 |
| | **CMPZ80S*** | 7.2 | 0.54 | 91 | 77.5 | 20.8 | 30.95 | 28 | 20 | 60.5 |
| | **CMPZ80M** | 5 | 0.345 | 94 | 77.5 | 24.5 | 34.07 | 40 | 28 | 60.5 |
| | **CMPZ80M*** | 5 | 0.345 | 94 | 77.5 | 24.5 | 34.07 | 40 | 28 | 60.5 |
| | **CMPZ80L** | 3.35 | 0.21 | 99 | 77.5 | 29.4 | 40.28 | 40 | 28 | 60.5 |
| | **CMPZ100S** | 3.9 | 0.215 | 88 | 96.2 | 34.7 | 84.19 | 55 | 40 | 60.8 |
| | **CMPZ100M** | 3.05 | 0.142 | 95.5 | 96.2 | 39.7 | 91.1 | 80 | 55 | 60.8 |
| | **CMPZ100L** | 1.9 | 0.081 | 98 | 96.2 | 49.5 | 104.85 | 80 | 55 | 60.8 |
| 4500 | **CMPZ71S** | 7.1 | 0.72 | 59 | 64.8 | 11.2 | 11.04 | 14 | 10 | 56.2 |
| | **CMPZ71M** | 4.55 | 0.385 | 58 | 64.8 | 12.6 | 12.09 | 20 | 14 | 56.2 |
| | **CMPZ71L** | 3.25 | 0.24 | 64 | 64.8 | 15.6 | 14.19 | 20 | 14 | 56.2 |
| | **CMPZ80S** | 3.05 | 0.22 | 59 | 77.5 | 20.8 | 30.95 | 28 | 20 | 60.5 |
| | **CMPZ80S*** | 3.05 | 0.22 | 59 | 77.5 | 20.8 | 30.95 | 28 | 20 | 60.5 |
| | **CMPZ80M** | 2.25 | 0.148 | 63 | 77.5 | 24.5 | 34.07 | 40 | 28 | 60.5 |
| | **CMPZ80M*** | 2.25 | 0.148 | 63 | 77.5 | 24.5 | 34.07 | 40 | 28 | 60.5 |
| | **CMPZ80L** | 1.54 | 0.085 | 67 | 77.5 | 29.4 | 40.28 | 40 | 28 | 60.5 |
| | **CMPZ100S** | 1.68 | 0.086 | 58 | 96.2 | 34.7 | 84.19 | 55 | 40 | 60.8 |
| | **CMPZ100M** | 1.32 | 0.058 | 63 | 96.2 | 39.7 | 91.1 | 80 | 55 | 60.8 |
| | **CMPZ100L** | 0.84 | 0.038 | 65 | 96.2 | 49.5 | 104.85 | 80 | 55 | 60.8 |
| 6000 | **CMPZ71S** | 4.15 | 0.395 | 45 | 64.8 | 11.2 | 11.04 | 14 | 10 | 56.2 |
| | **CMPZ71M** | 2.55 | 0.205 | 43.5 | 64.8 | 12.6 | 12.09 | 20 | 14 | 56.2 |
| | **CMPZ71L** | 1.84 | 0.145 | 48 | 64.8 | 15.6 | 14.19 | 20 | 14 | 56.2 |
| | **CMPZ80S** | 1.8 | 0.136 | 46 | 77.5 | - | - | - | - | 60.5 |
| | **CMPZ80S*** | 1.8 | 0.136 | 46 | 77.5 | - | - | - | - | 60.5 |
| | **CMPZ80M** | 1.3 | 0.087 | 48 | 77.5 | - | - | - | - | 60.5 |
| | **CMPZ80M*** | 1.3 | 0.087 | 48 | 77.5 | - | - | - | - | 60.5 |
| | **CMPZ80L** | 0.84 | 0.051 | 50 | 77.5 | - | - | - | - | 60.5 |

1) Length difference between CMPZ.. motor and the respective CMP.. motor

2) Length difference between the CMPZ../BY brakemotor and the corresponding CMP../BP brakemotor

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