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ATEK

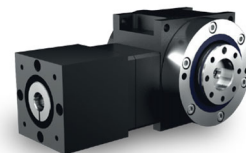
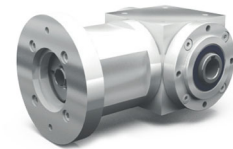
ANTRIEBSTECHNIK

Das Winkelgetriebe



Servo gearboxes
(precision gearboxes)

Type: LC, VC, HC, SC



Miniature
bevel gearboxes

Bevel
gearboxes

Hygiene-design
gearboxes

Hypoid
gearboxes

Worm
gearboxes

Gearbox
motors

Servo gearboxes
(precision gearboxes)

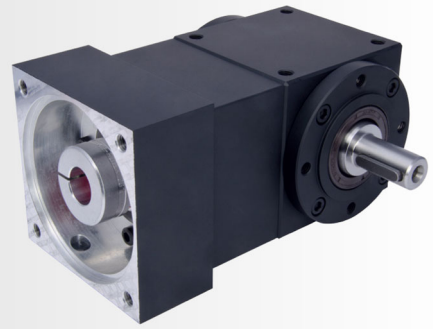
Special
gearboxes

ATEX
gearboxes

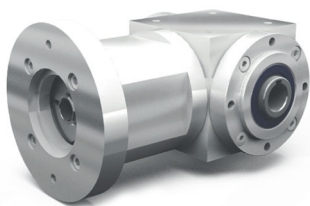
Gear sets

Service

11 Servo gearboxes (precision gearboxes)



11.1 Type overview



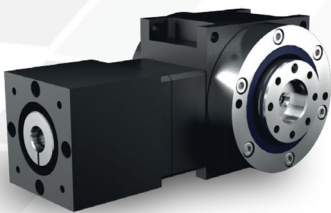
Type LC – Servo miniatur bevel gearboxes

Gear ratios: $i = 1:1$ to $4:1$
Maximum output torque: 16 Nm
2 gearbox sizes with edge lengths of 035 to 45 mm
Suitable for fitting IEC standard motors
Low-backlash construction < 10 angular minutes possible
Housing made of aluminium



Type VC – Servo bevel gearboxes

Gear ratios: $i = 1:1$ to $6:1$
Maximum acceleration torque on output: 700 Nm
6 gearbox sizes with edge lengths of 065 to 200 mm
Minimised circumferential backlash (optional)
Housing made of grey cast iron
Bevel gearboxes suitable for fitting servo-motors
Non-positive connection between motor and gearbox



Type HC – Servo hypoid gearboxes

Gear ratios: $i = 3:1$ to $15:1$
Maximum acceleration torque on output: 2160 Nm
6 gearbox sizes; centre-to-centre distance: 090 to 260 mm
Minimised circumferential backlash (optional)
Housing made of aluminium
Hypoid gearboxes suitable for fitting servo-motors
Non-positive connection between motor and gearbox



Type SC – Servo worm gearboxes

Gear ratios: $i = 5:1$ to $26:1$ ($i > 26$ upon request)
Maximum acceleration torque on output: 1100 Nm
5 gearbox sizes; centre-to-centre distance: 040 to 100 mm
Minimised circumferential backlash (optional)
Housing made of grey cast iron
Worm gearboxes suitable for fitting servo-motors
Non-positive connection between motor and gearbox

11.1.1 General

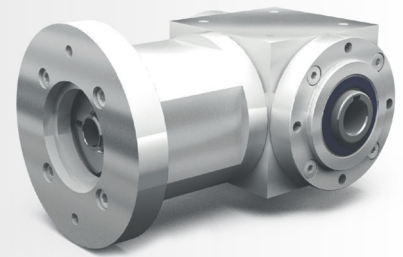
Special servo gearboxes have been developed for the requirements of highly dynamic servo-motors. The proven ATEK bevel gearbox and worm gearbox series form the basis for them. The combination of a large number of motor flanges and an insertable, zero-play clamp coupling enables the adaptation to the most servo-motors.

Due to the modular system, a later replacement of the motor flange and the coupling half on the motor side is very easy.

11.2 Type LC – Servo miniatur bevel gearboxes

11.2.1 Features

- Gear ratios: $i = 1:1$ to $4:1$
- Maximum output torque: 16 Nm
- 2 gearbox sizes with edge lengths of 035 to 45 mm
- Suitable for fitting IEC standard motors
- Low-backlash construction < 10 angular minutes possible
- Housing made of aluminium



The L-series miniature bevel gearboxes can be extended by a flange to attach a motor.

11.2.2 Models

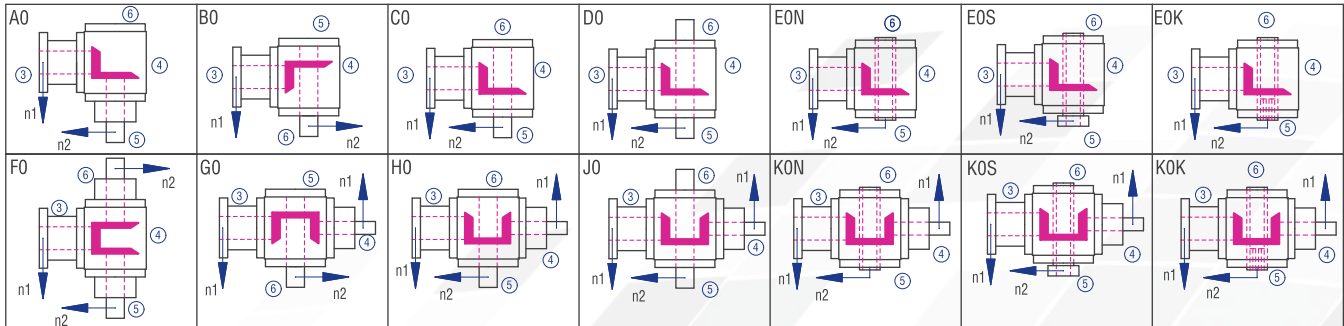


Figure 11.2.2-1; Models

11.2.3 Gearbox sides

The example shows the Model C0

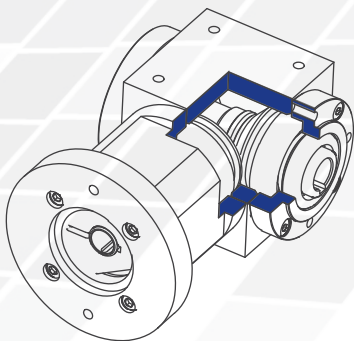


Figure 11.2.3-1; Gearbox sides

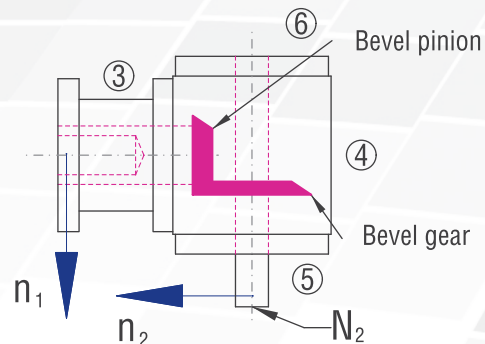


Figure 11.2.3-2; Shaft designations

11.2.4 Order code

The order code reflects the customer specifications. Example:

Type	Size	Gear ratio	Model	Fixing side	Installation position	Speed n_2	Design
LC	045	1:1	CO-	1.	1-	1500	/0000
Description	Housing edge length;		Figure 5.3.2-1; Models;	Gearbox side on which fixing is made; Figure 4.3.1-1 Gearbox sides	Gearbox side directed downwards; Figure 4.3.1-1 Gearbox sides	Slowly rotating shaft;	Standard

Table 11.2.4-1

11.2.5 Characteristics

Characteristic	Standard	Option
Toothing	Bevel gear set, spiral-toothed	See chapter 5.2
Housing / Flanges	Aluminium	See chapter 5.2
Threaded mounting holes	On all housing surfaces without flange and on all flanges.	See chapter 5.2.2
Shaft	Drive shaft with clamping hub; fit with ISO 6 tolerance with parallel keyway: according to DIN 6885	See chapter 4.6.2
Hollow shaft	Fit with ISO H7 tolerance with parallel keyway: according to DIN 6885	See chapter 4.6.3
Radial shaft seal ring	NBR, form A	See chapter 4.8
Ambient temperature	-10°C to +90°C. The values of the performance tables are valid for +20°C	See chapter 4.9.3
Circumferential backlash	< 30 arcmin	See chapter 5.2.9
Protection class	IP 54	See chapter 4.5
Corrosion protection	-	See chapter 5.2.10
Bearing life L10h	more than 15,000h	See chapter 4.9.1
Oil change intervals	Not required	See chapter 5.2.7
Lubricants	Synthetic lubricants	See chapter 5.2.7

11.2.6 Dimensions

The dimensions of the gearboxes are identical with those of the L-type gearboxes

The motor-specific adapter flanges are under development. Please enquire gearboxes for your case of application.