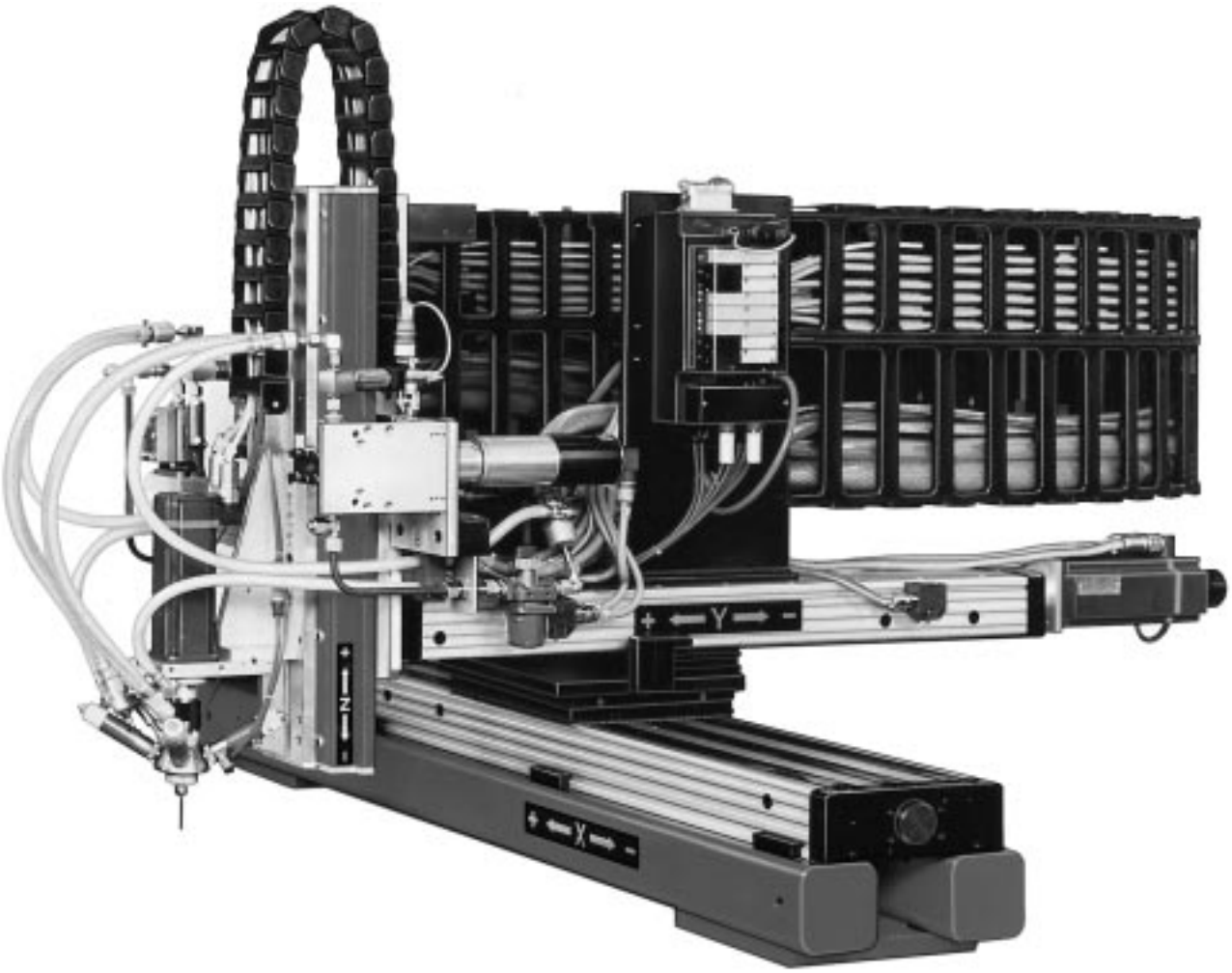
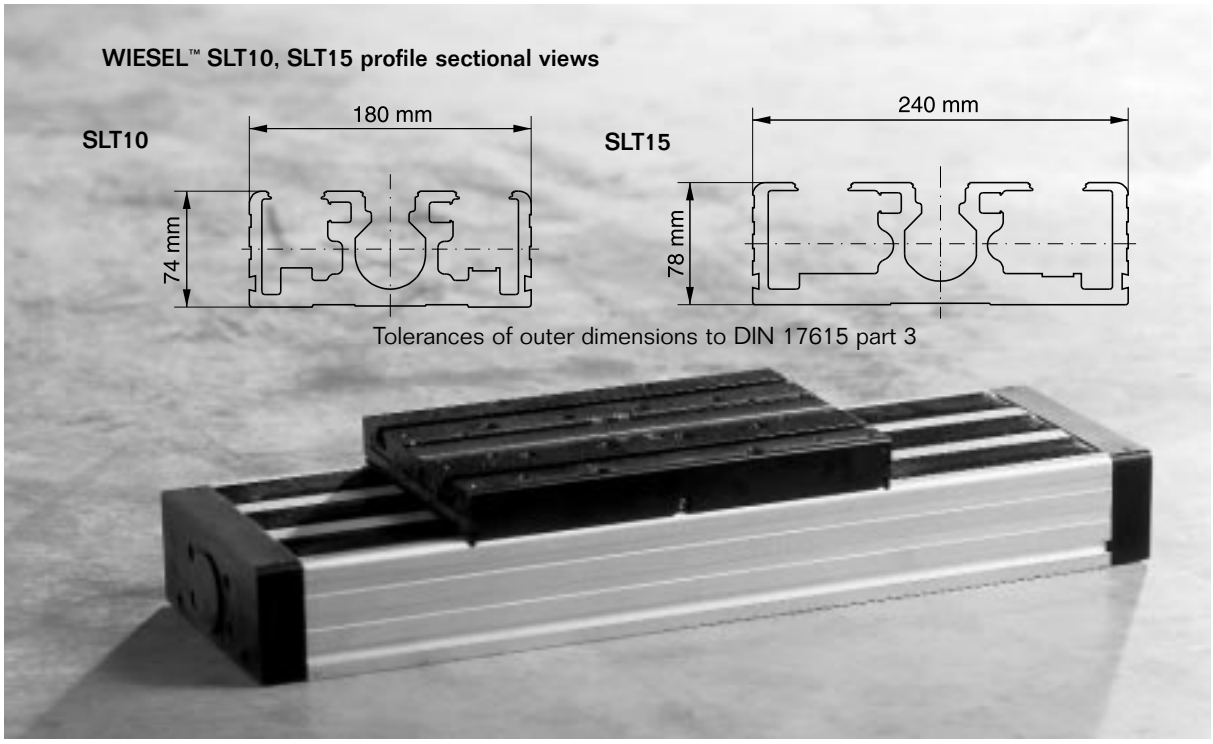


3-axis coordinate traversing; Kern Liebers in Schramberg, Germany

Heavy duty linear table
WIESEL™ SLT10, SLT15

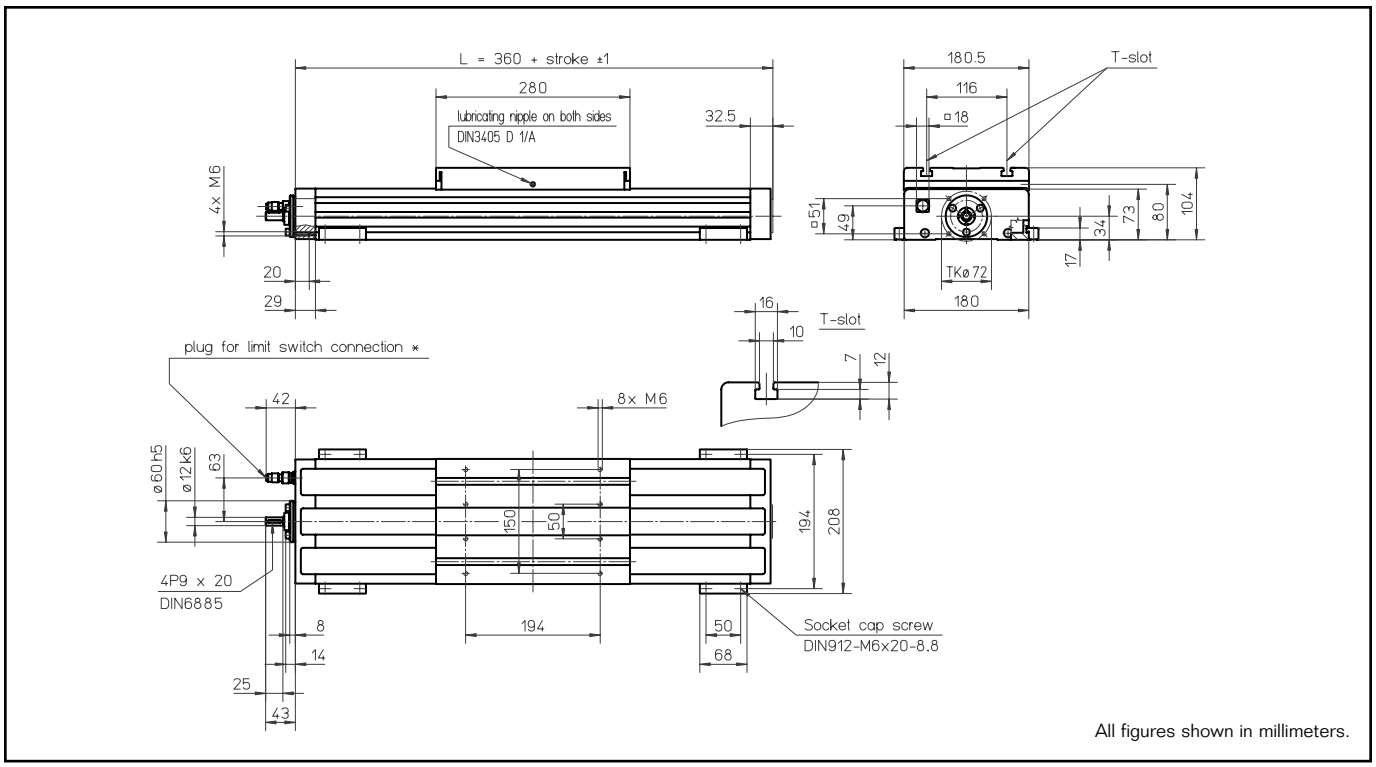
WIESEL™ SLT

- Weight-optimized aluminum profile with integrated, high-load linear double guide.
- Rigid power bridge made of high-strength aluminum with diverse mounting options.
- High traverse speeds and long strokes thanks to patented spindle supports.
- Precise ball screw drive.
- Protected against dirt and dust by patented profile sealing strip.



WIESEL™ SLT10

with ball screw drive and linear guides



All figures shown in millimeters.

Technical data

Linear speed: . . . . . .max. 2.5 m/s
Repeatability: . . . . . .± 0.05 mm
Acceleration: . . . . . .max. 10 m/s²
Rotational speed: . . . . . .max. 3000 rpm
Drive element: . . . . . .ball screw drive
Diameter: . . . . . .20 mm
Lead: . . . . . .5, 20 or 50 mm
Total length: . . . . . .up to 3000 mm
Geometrical moment of inertia: . . .ly 2.82 x 10^6 mm⁴
lz 1.52 x 10^6 mm⁴

Weights
Base without stroke: . . . . . .7.00 kg
100 mm stroke: . . . . . .1.5 kg
Power bridge with carriage: . . . . . .6.5 kg
Provided: . . . . . .4 pieces KAO mounting brackets

Standard: 3 inductive proximity switches installed ready for connection

Unit conversions

Length:
1 m=1000 mm=39.37 inches
1 inch=25.4 mm

Force:
1 N=0.225 lbf
1 lbf=4.45 N

Moment of Force:
1 Nm=0.738 lb • ft=8.85 lb • inches
1 lb • ft=1.36 Nm

Geometrical moment of inertia:
1 m⁴=10^{12} mm⁴=2.4025 x 10^6 in⁴

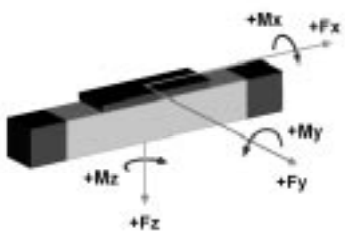
Mass moment of inertia:
1 kg • m²=10^4 kg • cm²=0.738 lb • ft • s²

Mass:
1 kg=2.2 lb

Idle torques [Nm]

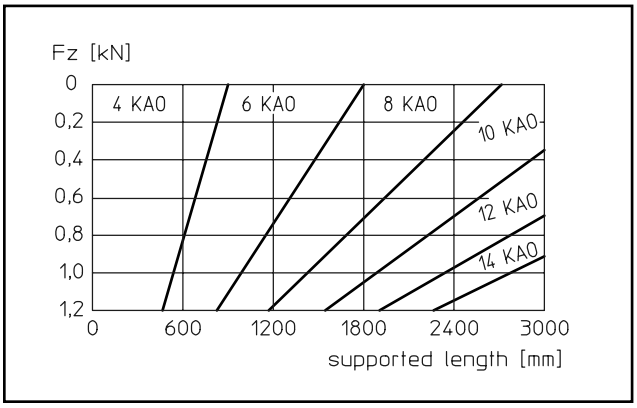
Rotational speed [rpm]	Lead P [mm] 5	20	50
150	0.4	0.8	0.7
1500	0.6	1.1	1.0
3000	1.1	1.6	1.5

Loads and load moments



Load	dynam. [N]
Fx drive 2005	5000
Fy drive 2020	4000
Fx drive 2050	4000
Fy	2600
+Fz	12000
- Fz	9600
Load moment	**dynam. [Nm]**
Mx	660
My[1)]	980
Mz[1)]	1540

Number of KAO mounting brackets

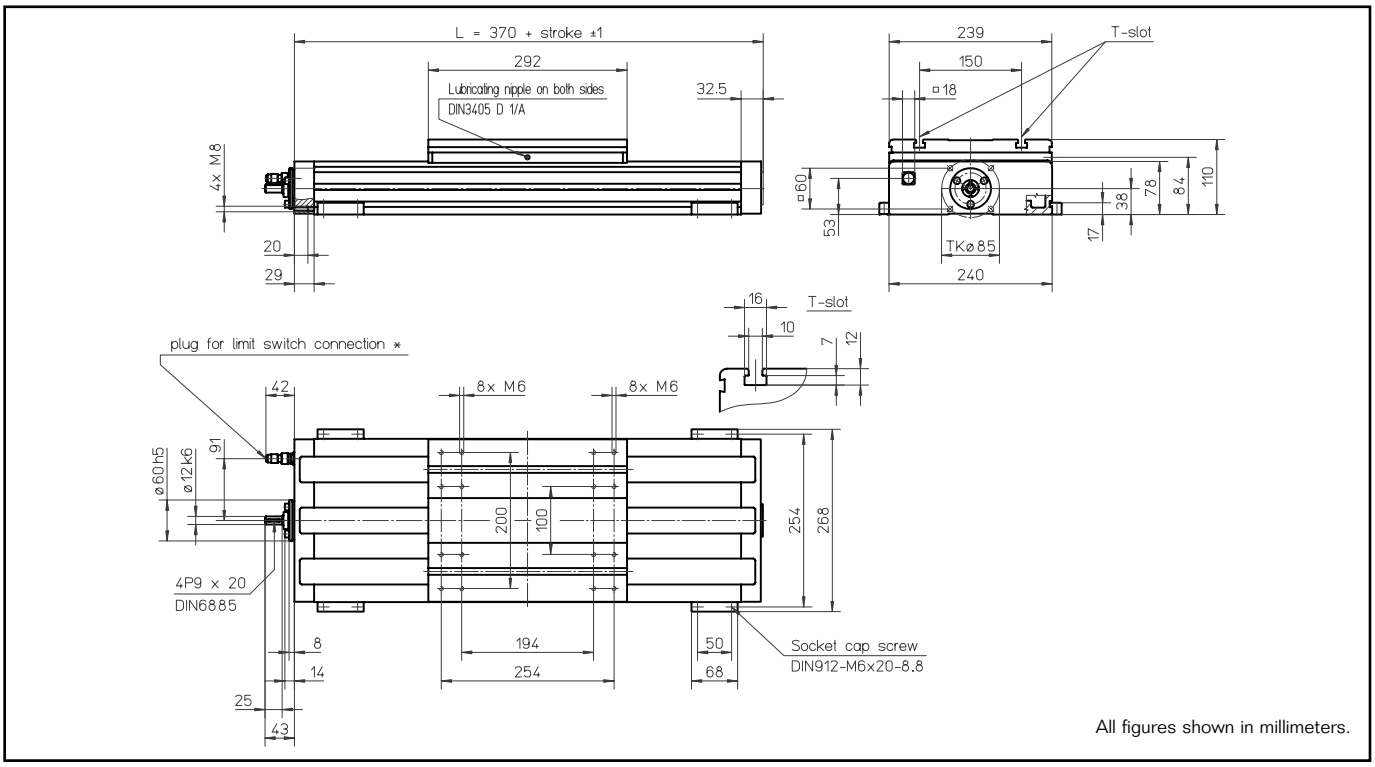


Order Code see page 101

1) Increase of the admissible values by the use of a long power bridge or additional free-sliding power bridge (pages 82 and 83).

WIESEL™ SLT15

with ball screw drive and linear guides



All figures shown in millimeters.

Technical data

Linear speed: . . . . . .max. 2.5 m/s
Repeatability: . . . . . .± 0.05 mm
Acceleration: . . . . . .max. 10 m/s²
Rotational speed: . . . . . .max. 3000 rpm
Drive element: . . . . . .ball screw drive
Diameter: . . . . . .20 mm
Lead: . . . . . .5, 20 or 50 mm
Spindle supports: . . . . . .see SA diagram
Total length: . . . . . .up to 3000 mm
Geometrical moment of inertia: . . .ly 4.52 x 10^6 mm⁴
lz 3.56 x 10^7 mm⁴

Weights
Base without stroke: . . . . . .12.00 kg
100 mm stroke: . . . . . .3.00 kg
Power bridge with carriage: . . . . . .7.00 kg
Provided: . . . . . .4 pieces KAO mounting brackets

Standard: 3 inductive proximity switches installed ready for connection

Unit conversions

Length:
1 m=1000 mm=39.37 inches
1 inch=25.4 mm

Force:
1 N=0.225 lbf
1 lbf=4.45 N

Moment of Force:
1 Nm=0.738 lb • ft=8.85 lb • inches
1 lb • ft=1.36 Nm

Geometrical moment of inertia:
1 $m^4=10^{12}$ $mm^4=2.4025 \times 10^6$ in^4

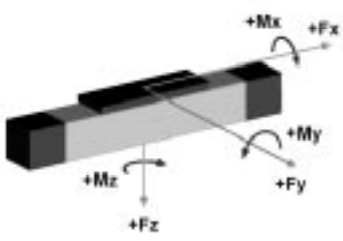
Mass moment of inertia:
1 kg • $m^2=10^4$ kg • $cm^2=0.738$ lb • ft • s^2

Mass:
1 kg=2.2 lb

Idle torques [Nm]

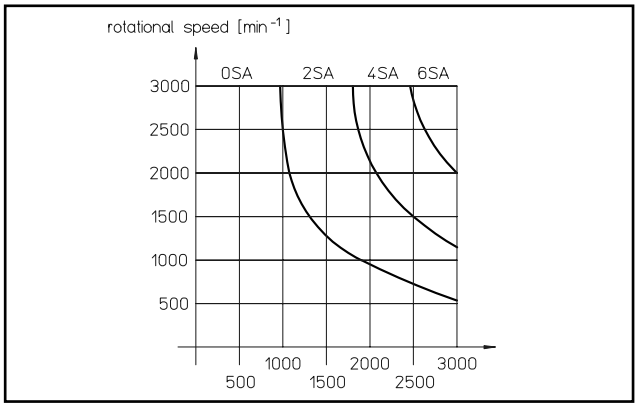
Rotational speed [rpm]	Lead P [mm] 5	20	50
150	0.6	1.1	0.9
1500	0.9	1.4	1.3
3000	1.4	2.1	2.0

Loads and load moments



Load	dynam. [N]
Fx drive 2005	5000
Fy drive 2020	4000
Fx drive 2050	4000
Fy	4200
+Fz	20000
- Fz	19000
Load moment	**dynam. [Nm]**
Mx	1050
My[1)]	1200
Mz[1)]	2000

Number of SA spindle supports

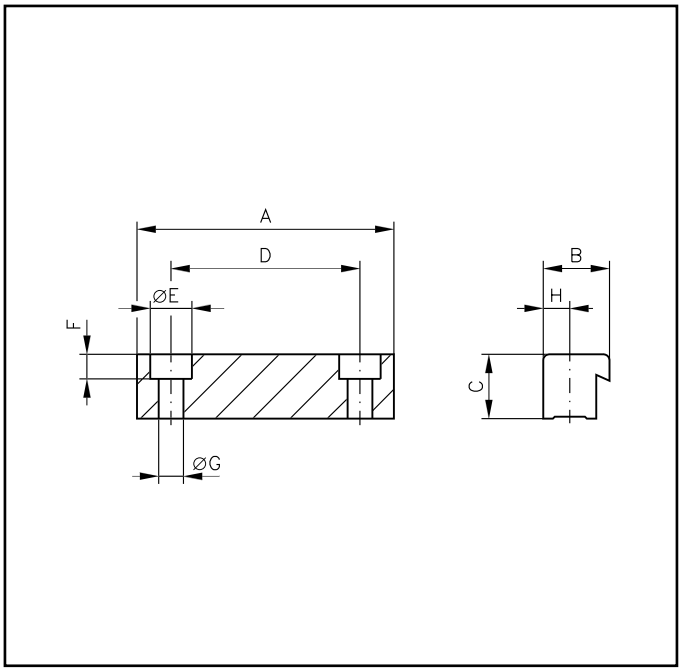


1) Increase of the admissible values by the use of a long power bridge or additional free-sliding power bridge (pages 82 and 83).

Order Code see page 101

Accessories for WIESEL™ SLT

Mounting brackets, long power bridge



KAO Mounting brackets

The WIESEL™ unit is secured to mounting surface by means of the KAO mounting brackets which are inserted in the grooves provided in the sides of the tubular aluminum profile and screwed onto the mounting surface with the aid of socket head cap screws. The number of mounting brackets required depends on the load and overall length of the WIESEL™ unit. It is shown in the diagrams. Increasing transverse forces reduce the distance between supports.

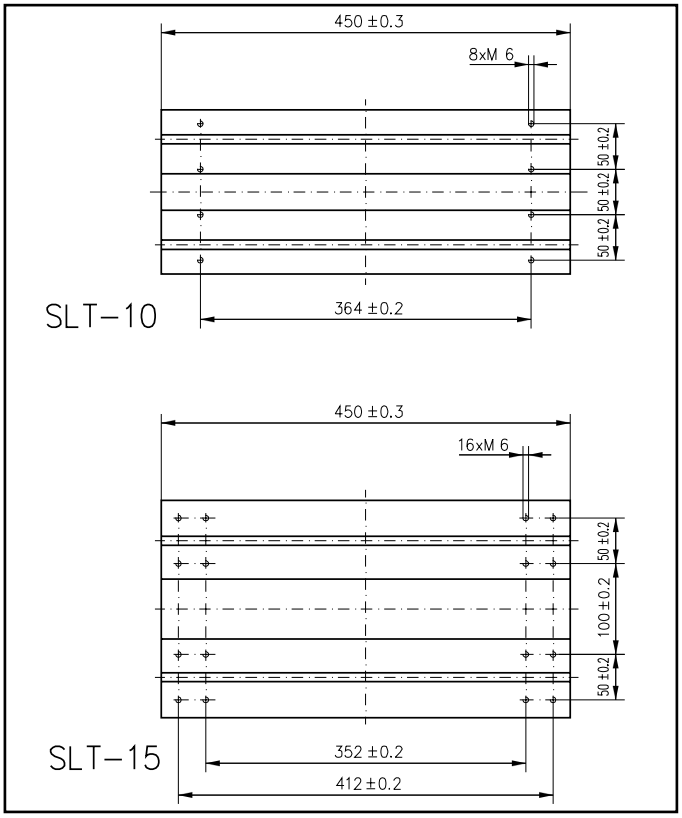
Each unit is provided with 4 pieces KAO mounting brackets.

Moment of mounting screws

Size	Moment [Nm]
SLT 10/15	7.3-12

Dimensions KAO [mm]

Size	A	B	C	D	øE	F	øG	H
SLT10	68	17.5	15.5	50	11	6.5	6.6	7
SLT15	68	17.5	15.5	50	11	6.5	6.6	7



LKB Long power bridge

The long power bridge increases the maximum permissible load moments My and Mz of a WIESEL™ SLT unit without requiring to step up a size. The difference in length between the long power bridge and the standard power bridge must be taken into account when calculating the overall length of the WIESEL™ SLT unit.

Overall length of SLT unit:

$$L_{tot} = \text{Stroke} + C + \Delta Kb$$

L_{tot} = Overall length of the WIESEL™ SLT unit
C = SLT10 : 360 mm
SLT15 : 370 mm
Stroke = Required stroke length
ΔKb = Difference in length between long and standard power bridge [mm]

Note: High load moments lead to major deformation of the tubular aluminum profile. The distance between supports should be reduced in order to minimize this deformation. All other limit values are comparable to those of versions with standard power bridge.

Dimensions KAO [mm]

Size	Length of power bridge [mm]	My [Nm]	Mz [Nm]
SLT10	450	1500	2400
SLT15	450	1800	3000

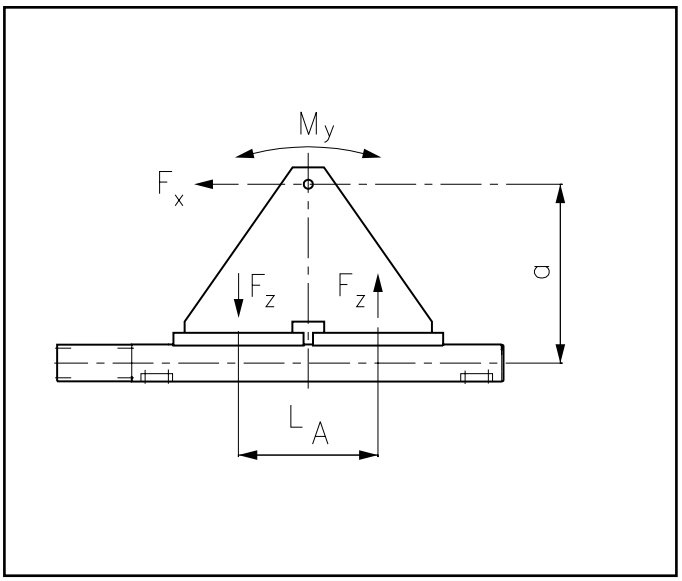
Unit conversions

Order Code see page 101

Length:	1 m=1000 mm=39.37 inches 1 inch=25.4 mm	**Geometrical moment of inertia:**	1 $m^4=10^{12}$ $mm^4=2.4025 \times 10^6$ in^4
Force:	1 N=0.225 lbf 1 lbf=4.45 N	**Mass moment of inertia:**	1 kg • $m^2=10^4$ kg • $cm^2=0.738$ lb • ft • s^2
Moment of Force:	1 Nm=0.738 lb • ft=8.85 lb • inches 1 lb • ft=1.36 Nm	**Mass:**	1 kg=2.2 lb

Accessories for WIESEL™ SLT

Additional free-sliding power bridge



OKB Additional free-sliding power bridge
The additional free-sliding power bridge provides:

- individual increase of the load moments My and Mz of a WIESEL™ unit. Load moment My is limited by force ± Fz, Mz is limited by force ±Fy.
- Longer and therefore improved guidance.
- Particularly suitable as a vertical guide and lifting module.

The required center distance between the driven and the free-sliding power bridge is calculated as follows:

$$L_A = \frac{M}{F_{max}}$$

L_A = Center distance between driven and free-sliding power bridge [mm]
M = Load moment My or Mz [Nm]
F_{max} = Maximum force Fz or Fy of the WIESEL™ unit concerned [N]

The center distance between the two power bridges must be taken into account when calculating the overall length of the WIESEL™ SLT unit.

Overall length of WIESEL™ unit
L_{tot} = **Stroke** + L_C + L_A

L_C = Specific additional length [mm] between long and standard power bridge. (see technical data of the respective WIESEL™)

Minimum center distance between driven and free-sliding power bridge (given for standard power bridge).

Size	L_A [mm]
SLT10	380
SLT15	390

The force required for moving the additional free-sliding power bridge must be taken into account when carrying out the drive calculation.

Size	F [N]
SLT10	350
SLT15	400

Note: High load moments lead to major deformation of the tubular aluminum profile. The distance between supports should be reduced in order to minimize this deformation.

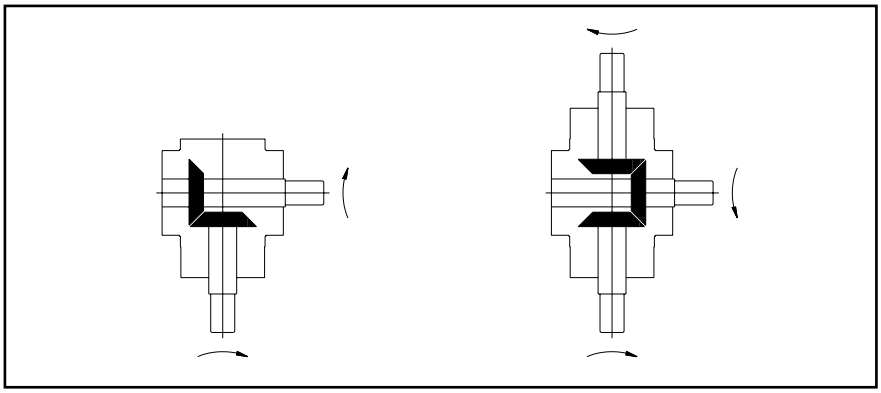
Unit conversions

Order Code see page 101

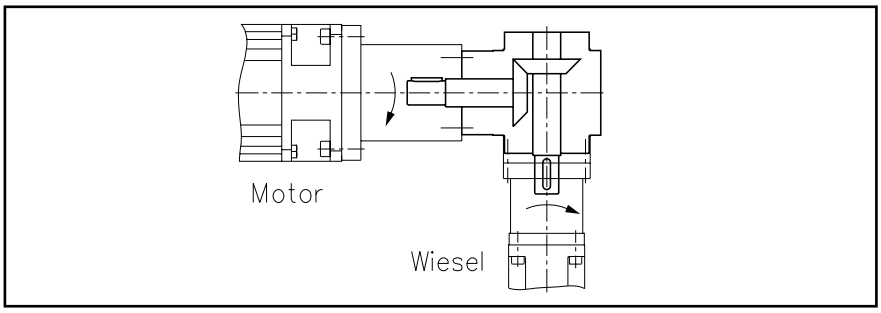
Length:	1 m=1000 mm=39.37 inches 1 inch=25.4 mm	**Geometrical moment of inertia:**	1 m^4=10^{12} mm^4=2.4025 x 10^6 in^4
Force:	1 N=0.225 lbf 1 lbf=4.45 N	**Mass moment of inertia:**	1 kg • m^2=10^4 kg • cm^2=0.738 lb • ft • s^2
Moment of Force:	1 Nm=0.738 lb • ft=8.85 lb • inches 1 lb • ft=1.36 Nm	**Mass:**	1 kg=2.2 lb

Accessories for WIESEL™ SLT

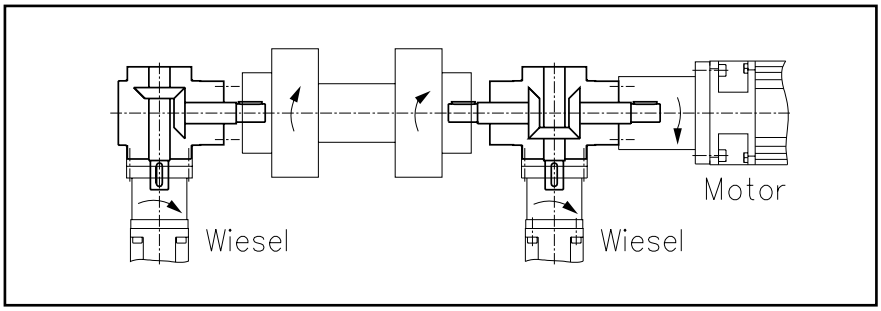
Bevel gearbox



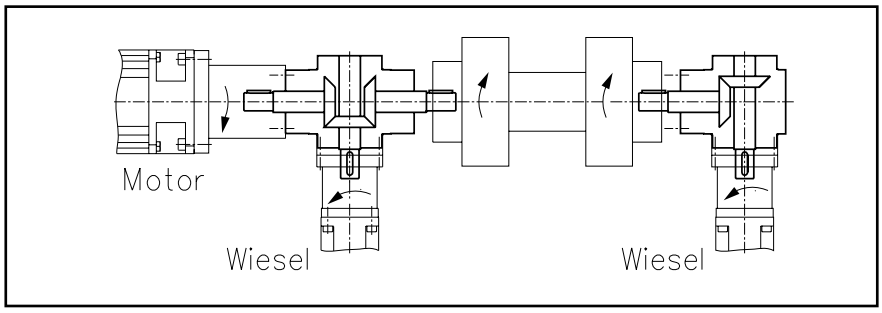
KRG Bevel gearbox
Bevel gearboxes are used to install a motor at right angles to the linear drive unit or to operate two linear drive units in parallel.



Direction of rotation

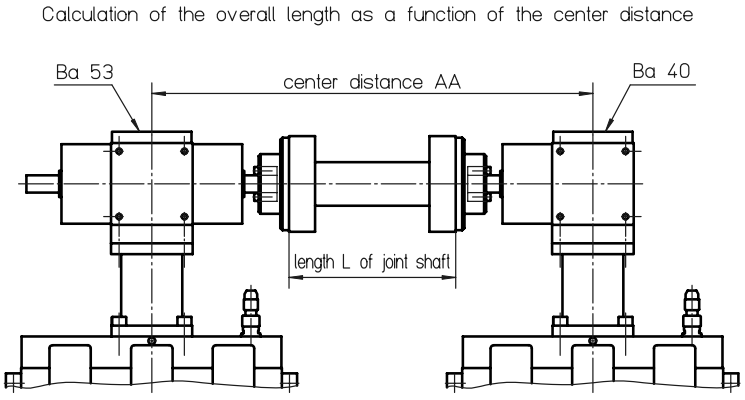


Direction of rotation – Motor right



Direction of rotation – Motor left

Accessories for WIESEL™ SLT
Universal joint shaft



SLT10/15-VL1 Ba53/VL1 Ba40 GX2 with two DKWN-tensioning elements L=AA-200

GX Universal joint shaft
The universal joint shaft GX connects two WIESEL™ SLT units with ball screw drive and top-mounted bevel gearboxes in parallel.

The universal joint shaft GX transmits the torque from one WIESEL™ unit to another.

Long connecting shafts should be supported over their length. The required pillow blocks are available upon request.

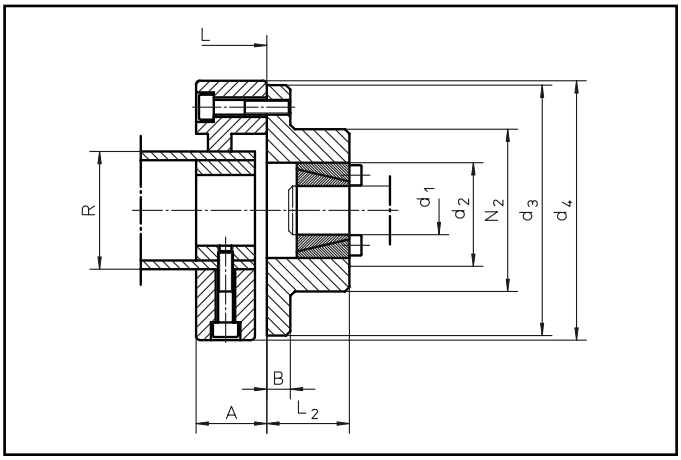
Universal joint shaft GZ: Upon request – for high claims on quiet running and speed (center part with essentric ring).

Technical data

Size	GX2
Transmittable torque [Nm]	30
Max. input torque at the input shaft of the linear drive unit [Nm]	60
Weight without middle part [kg]	1.06
Weight of middle part [kg/m]	1.42
Mass inertia of the two connectors [kgcm²]	13.8
Mass inertia of the shaft [kgcm²/m]	5.29
Starting torque of the tensioning screws of the DKWN-tensioning element [Nm]	9.7

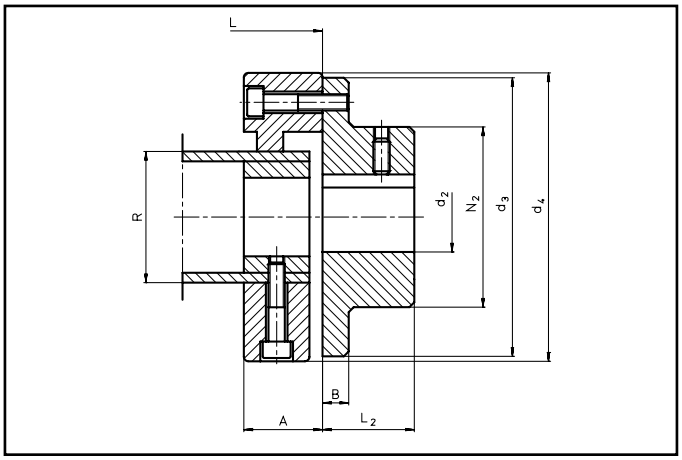
Execution with tensioner (standard feature)

Size	Dimensions [mm]								
	A	B	$d_{2min.}$	$d_{2max.}$	d_3	d_4	L_2	N_2	R
GX2	24	8	14	38	85	88	28	55	40



Execution with groove (on request)

Size	Dimensions [mm]								
	A	B	$d_{2min.}$	$d_{2max.}$	d_3	d_4	L_2	N_2	R
GX2	24	8	14	38	85	88	28	55	40



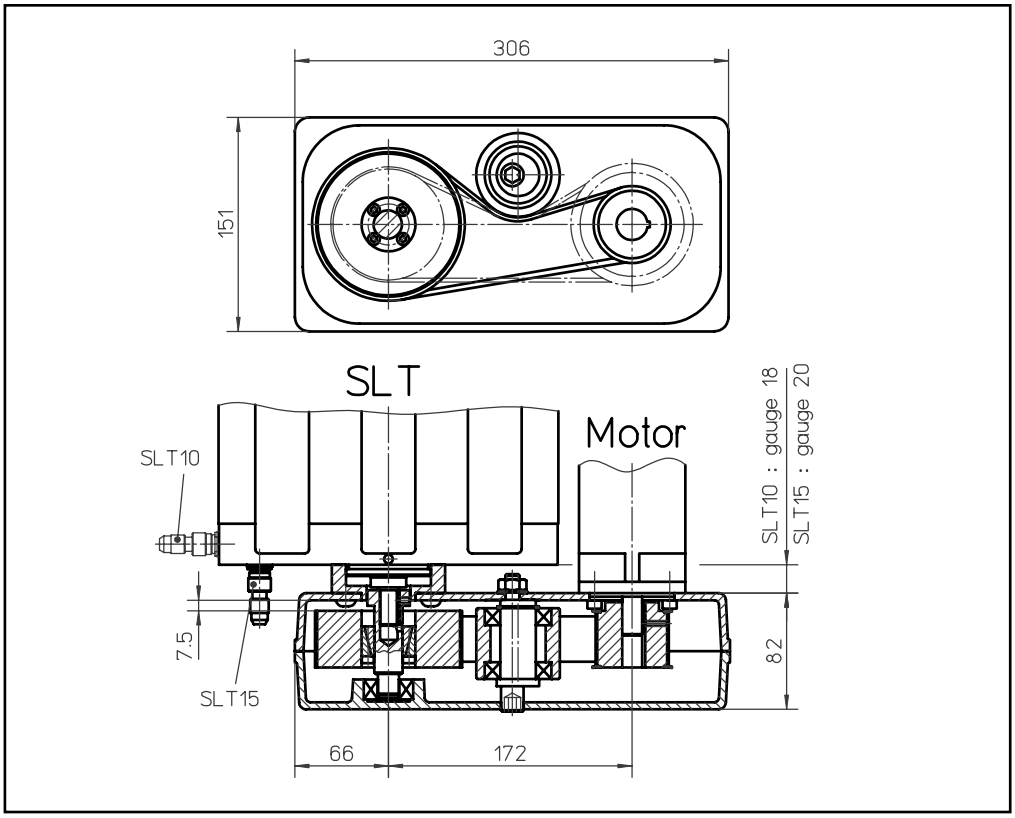
Unit conversions

Order Code see page 101

Length:	1 m=1000 mm=39.37 inches 1 inch=25.4 mm	**Geometrical moment of inertia:**	1 $m^4=10^{12}$ $mm^4=2.4025 \times 10^6$ in^4
Force:	1 N=0.225 lbf 1 lbf=4.45 N	**Mass moment of inertia:**	1 kg • $m^2=10^4$ kg • $cm^2=0.738$ lb • ft • s^2
Moment of Force:	1 Nm=0.738 lb • ft=8.85 lb • inches 1 lb • ft=1.36 Nm	**Mass:**	1 kg=2.2 lb

Accessories for WIESEL™ SLT

Timing belt drive



RT890 Belt drive for SLT10/15
The RT 890 drive is a transmission designed to minimize the overall length. The RT housing is both belt guard and motor support. The drive is provided via standard toothed belts. Transmission ratios.
Ratios:
i = 1 : 1
2 : 1
3 : 1
1 : 2
1 : 3

Transmittable torque:
max. 12 Nm

Size	$M_{max.}$	$n_{max.}$ Input	M_{idle}	Gear factor	Mass inertia [η]			Weight [kg]		
	[Nm]	[rpm]	[Nm]	η	i = 1:1	i = 2:1	i = 3:1	i = 1:1	i = 2:1	i = 3:1
SLT10/15	12	3000	0.7	0.85	8.56	4.08	2.60	3.5	3.7	3.9

Unit conversions

Order Code see page 101

Length:	1 m=1000 mm=39.37 inches 1 inch=25.4 mm	**Geometrical moment of inertia:**	1 $m^4=10^{12}$ $mm^4=2.4025 \times 10^6$ in^4
Force:	1 N=0.225 lbf 1 lbf=4.45 N	**Mass moment of inertia:**	1 kg • $m^2=10^4$ kg • $cm^2=0.738$ lb • ft • s^2
Moment of Force:	1 Nm=0.738 lb • ft=8.85 lb • inches 1 lb • ft=1.36 Nm	**Mass:**	1 kg=2.2 lb