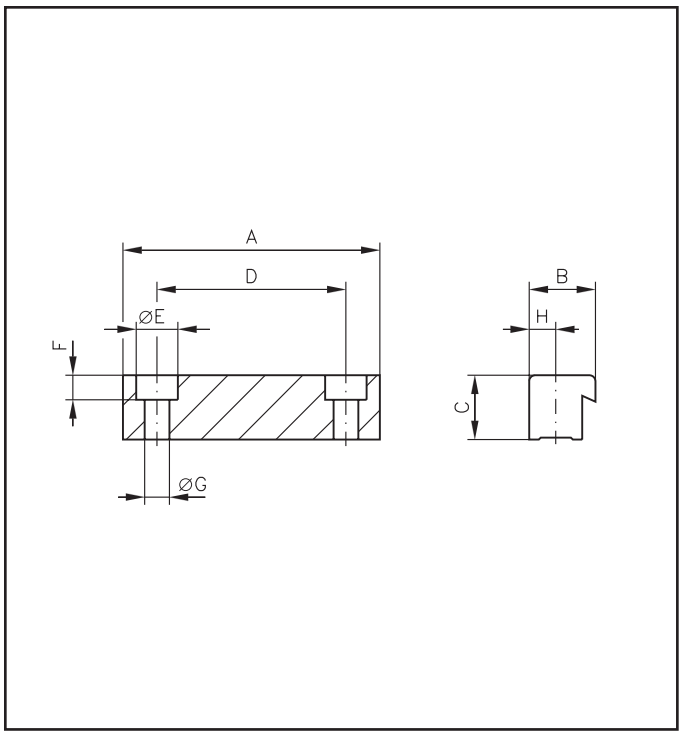
Accessories for WIESEL™ *POWER*Line®

Mounting brackets



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. This is shown in the diagrams. Increasing side forces reduces the distance between supports. **Each unit is provided with 4 pieces KAO Mounting brackets.**

Maximum torque of mounting screws

Size	Moment [Nm]
WM40	7.3–12
WM/WV60	7.3–12
WM/WV80	7.3–12
WM/WV120	17–30

KAO System brackets

Only needed for WH40. With multi-coordinate arrangements of several WIESEL™ units, this can be used to mount a WIESEL™ directly to the power bridge of a unit positioned immediately below.

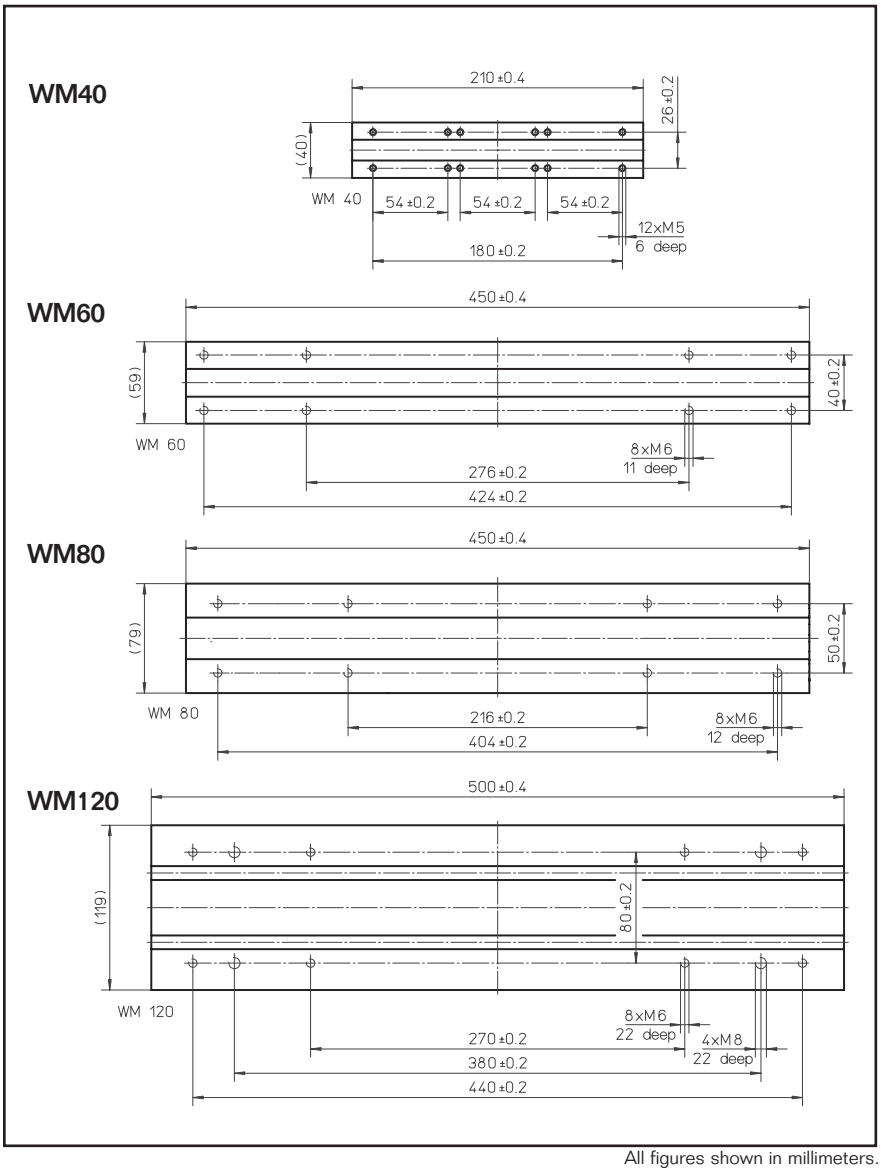
	Dimension [mm]							
Size	A	B	C	D	ø E	F	ø G	H
WM40	54	16	10	40	10	5.7	5.5	7
WM/WV60	54	17.5	17	50	11	6.5	6.6	7
WM/WV80	68	17.5	17	50	11	6.5	6.6	7
WM/WV120	80	25	18	50	15	8.5	9	10
WM40 System KAO	40	16	10	26	10	5.7	5.5	7
WM60 System KAO	58	17.5	17	40	11	6.5	6.6	7

Note: It is advisable to secure the linear drive unit at intervals of at least 750 mm.

This ensures that all the permissible loads can be absorbed without significantly deforming the tubular aluminum profile.

Accessories for WIESEL™ *POWER*Line®

Long power bridge



All figures shown in millimeters.

LKB Long power bridge
The long power bridge increases the maximum permissible load moments My and Mz of a WIESEL™ 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™ unit.

Overall length of the WIESEL™ unit:

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

C* = Specific additional length
L_{tot} = Overall length WIESEL™ unit
Stroke = Required stroke length
ΔKb = Difference in length between long and standard power bridge

* Calculation in depency of stroke and ΔKb. The dimension C is shown in the charts of technical data of the corresponding actuator.

Size	Length of power bridge [mm]	My [Nm]	Mz [Nm]
WM40-000	210	50	50
WM60-000	450	500	500
WM80-000	450	750	750
WM120-000	500	1500	1500

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

Note: All other limit values according to executions with standard power bridge.

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

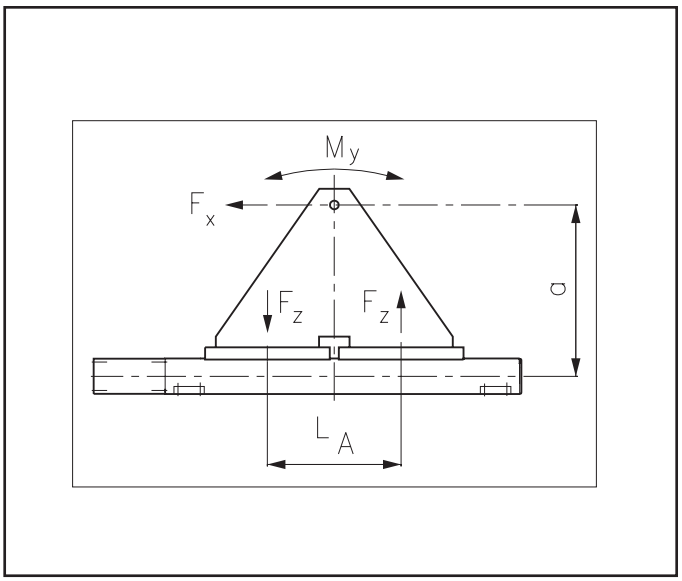
Geometrical moment of inertia: 1 $m^4=10^{12}$ $mm^4=2.4025 \times 10^6$ in^4

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

Accessories for WIESEL™ *POWER*Line®

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 = Distance between center of driven power bridge and center of free-sliding power bridge [mm]
M = Load moment My or Mz [mm]
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™ 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]
WM40*	min 175 max 600
WM60	335
WM80	360
WM120	450

*For stroke lengths of more than 1700 mm please contact our product specialists for the maximum screw rotational speed.

The required force to move the additional free sliding power bridge must be taken into account when selecting the drive.

Size	F [N]
WM40	40
WM60	200
WM80	250
WM120	300

Note: High load moments lead to major deformation of the tubular aluminum profile. In order to minimize this deformation, the distance between the fixing points should be reduced.

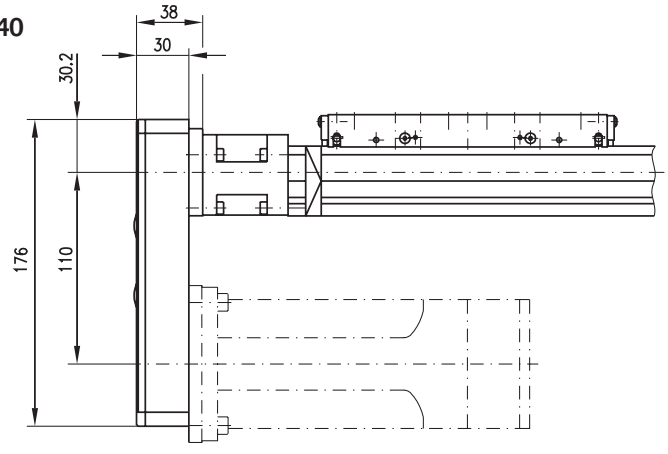
Unit conversions

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™ *POWER*Line®, *DYNA*Line®

Timing belt drive

RT40



All figures shown in millimeters.

RT Belt drive

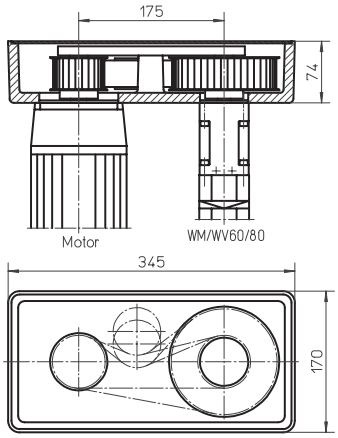
The RT 40/60/80 belt drive is a transmission designed to minimize the overall length. The RT housing (which is both belt guard and motor support) can be mounted in positions offset by 90°. The drive is provided via standard tooth belt drives.

Transmission ratios of i = 1 : 1 and i = 2 : 1 are possible. (RT 40 only i = 1:1)

Technical data

Size	M_{max} [Nm]	n_{max} input [rpm]	M_{idle} [Nm]	Efficiency η	Mass inertia J [kgcm²] 1 : 1	Weight [kg] 1 : 1
RT40	1.75	3000	app. 0.3	0.8	0.25	0.62

RT60/80



All figures shown in millimeters.

Technical data

Size	M_{max} [Nm]	n_{max} input [rpm]	M_{idle} [Nm]	Efficiency η	Mass inertia J [kgcm²] 1 : 1	Mass inertia J [kgcm²] 2 : 1	Weight [kg] 1 : 1	Weight [kg] 2 : 1
RT60	15	3000	app. 0.7	0.85	4.38	10.11	5.6	7.1
RT80	30	3000	app. 0.7	0.85	4.65	10.38	5.5	7.0

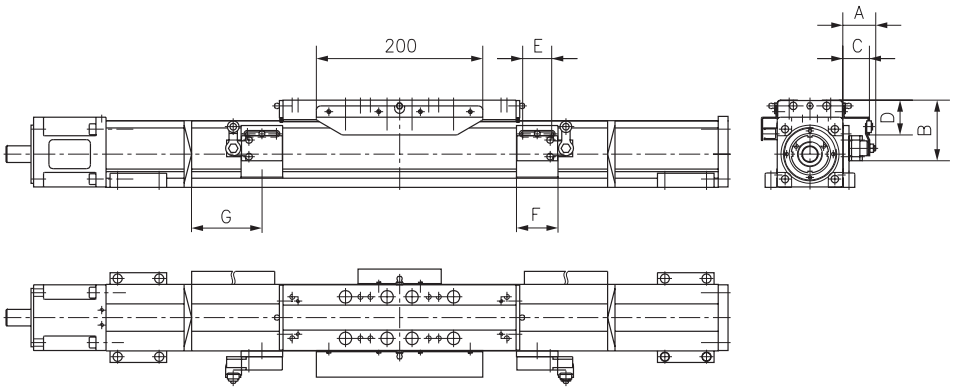
M_{max} = Maximum torque at the output shaft [Nm]
n_{max} = Maximum input speed [rpm]
M_{idle} = Idle torque [Nm]
J = Mass inertia referred to input shaft [kgcm²]

Unit conversions

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™ *POWERLine*®, *DYNA*Line®

Mechanical limit switches



All figures shown in millimeters.

ES Mechanical limit switches
Mechanical limit switches must be used wherever people may be jeopardized if the electric drive does not cut out. They are fitted in the groove which also accommodates the KAO mounting brackets in the aluminum profile and can be adjusted by means of the oblong hole provided.

Technical data
CAM-actuated mechanical limit switch XCM-B516 with roller lever.

Dual-circuit NC + NO

NC contact forcibly opened in accordance with DIN EN 60 204
Type of protection: IP 67
Max. perm. starting speed: 1.5 m/s

Size	Dimensions [mm]							
	A	B	C	D	E	F	G for WM	G for WV
WM/WV60	40	70	32	38	35	50	94	64
WM/WV80	40	73	32	42	35	50	104	64
WM/WV120	40	90	32	58	35	50	119	84

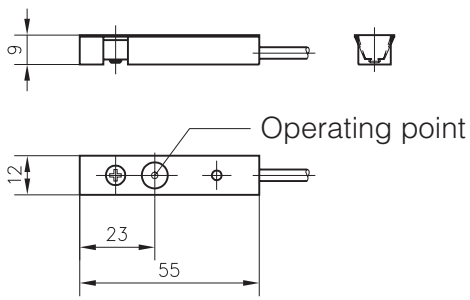
Note: Fixing of the linear unit by means of the KAO mounting brackets is not possible in the area of the base plates of the mechanical limit switches.

Unit conversions

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

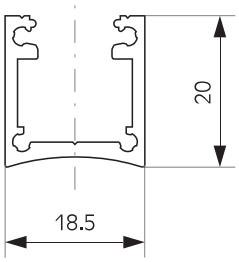
General accessories

Inductive proximity switch

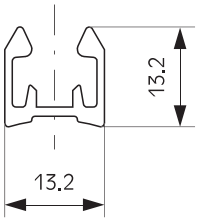


All figures shown in millimeters.

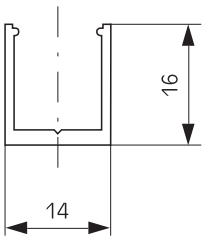
ENT 18.5x20



ENT 13.2x13.2



ENT 14x16



All figures shown in millimeters.

EN inductive proximity switch
Inductive proximity switches are used to shut down the electric drive before the mechanical limit position has been reached.

The braking path depends on the linear speed and time-lag. This path must at least be allowed between the operating point of the proximity switch and the actual mechanical limit position. Inductive proximity switches are also used to identify reference points or to signal operating points to the control system. Normally-closed versions are used for limit positions and normally-open versions for operating points.

The proximity switches can be infinitely adjusted in the guide rails.

Technical data
Contactless inductive proximity switch with LED display in plastic housing.
Operating distance: 2 mm
Type of protection: IP 67
Power supply: 10–30 V DC
Max. load current: 200 mA
Screened connection cable, length 2 m or 10 m.

Size	Type	Cable length [m]	Weight [kg]
EN2	O-normally closed	2	0.04
EN2	S-normally open	2	0.04
EN2	O-normally closed	10	0.19
EN2	S-normally open	10	0.19

ENT limit switch bracket
A support profile for mounting and adjusting inductive proximity switch EN. The hollow provides space to route cables for the cable harness of a proximity switch and can be concealed with cover tape.

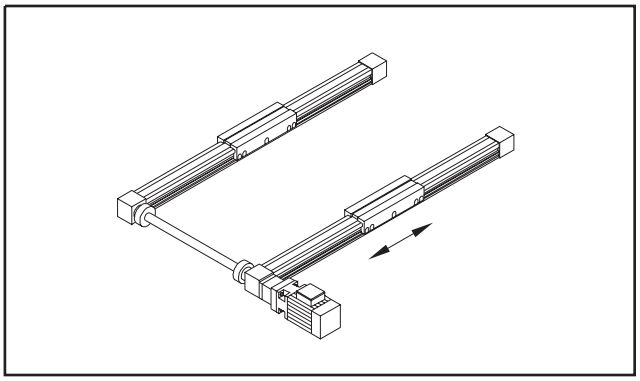
Size	Type
WH40/50/80/120	ENT 14x16
WHZ50/80	ENT 14x16
WM40/60/80/120	ENT 14x16
WV60/80	ENT 14x16

Unit conversions

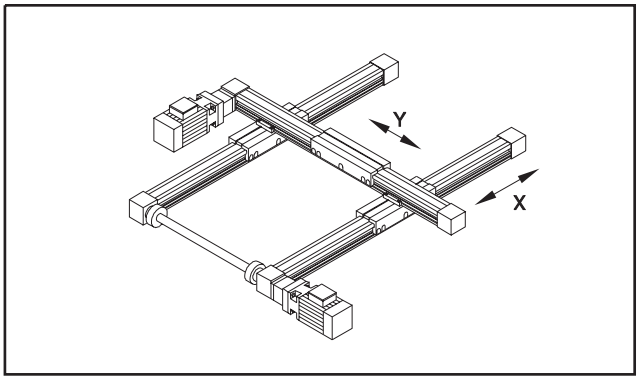
Length:	1 m=1000 mm=39.37 inches 1 inch=25.4 mm	**Geometrical moment of inertia:**	1 $m^4=10^{12}$ $mm^4=2.4025 \times 10^6$ in^4
Force:	1 N=0.225 lbf 1 lbf=4.45 N	**Mass moment of inertia:**	1 kg • $m^2=10^4$ kg • $cm^2=0.738$ lb • ft • s^2
Moment of Force:	1 Nm=0.738 lb • ft=8.85 lb • inches 1 lb •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

Precision Technology USA, Inc. WIESEL™ modular system

Examples

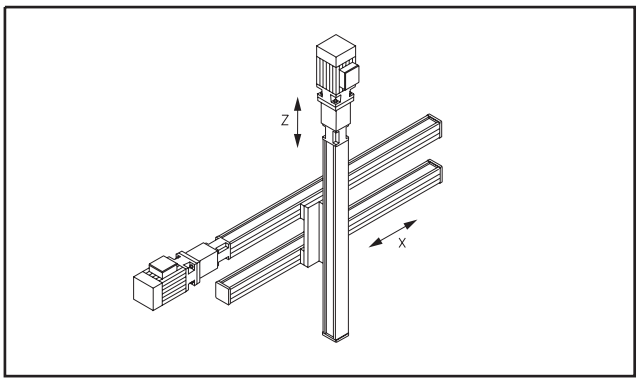


Parallel arrangement:
2 WIESEL™ *SPEEDLine*®
1 Universal joint shaft
1 Drive package



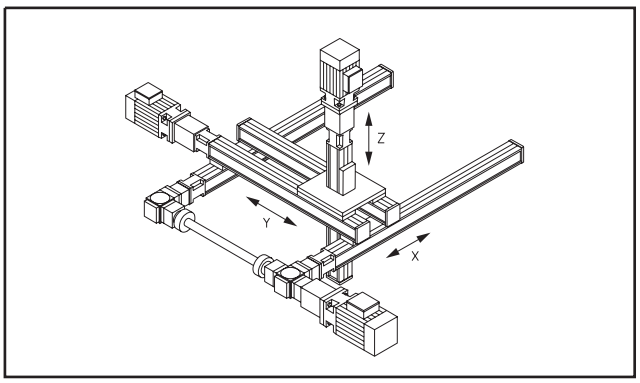
2-axis arrangement:
X-axis:
2 WIESEL™ *SPEEDLine*®
1 Universal joint shaft
1 Drive package

Y-axis:
1 WIESEL™ *SPEEDLine*®
1 Drive package



2-axis arrangement:
X-axis:
1 WIESEL™ *POWERLine*®
1 WIESEL™ *POWERLine*® as guide tube
1 Drive package

Z-axis:
1 WIESEL™ *POWERLine*®
1 Drive package



3-axis arrangement:
X-axis:
2 WIESEL™ *POWERLine*®
with bevel gearbox
1 Universal joint shaft
1 Drive package

Y-axis:
1 WIESEL™ *POWERLine*®
1 WIESEL™ *POWERLine*® as guide tube
1 Drive package

Z-axis:
1 WIESEL™ *POWERLine*®
1 Drive package