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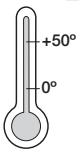
DryLin® ZLW | **Belt Drive**



DryLin® toothed belt drives have been developed for the fast positioning of small loads. The linear units with toothed belt drive are corrosion resistant, light and compact, besides having a low mass inertia due to low deadweight of guide and sliding carriage.

Technical Data

Material, slider:
● iglidur® J ▶ P. 3.2
Radial bearing:
● Version 01: iglidur® L250 ▶ P. 16.1
● Version 02: grooved ball bearing
Axial bearing:
● iglidur® J ▶ P. 3.2
Drive belt:
● 1040 Basic: Neoprene with GF
● 1040 Standard: PU toothed belt with steel cord
● 0630 Standard: Neoprene with GF
● up to 5 m/s

Special properties

- Lubricant-free version with plain bearings
- Multi-purpose and simple assembly
- Freely variable stroke length
- Flat and sturdy
- Light and corrosion resistant
- Two installation sizes in 2 versions (Basic and standard series)
- Delivered off the shelf

The use of polymer plain bearings on all moving parts makes the toothed belt drive 100% free of maintenance and lubricants. The avoidance of lubricants means a high insensitivity to dirt as particles do not get stuck on the moving parts. Consequently the drive offers a high degree of robustness in many applications. You can choose which type according to the application area and requirement:

Basic series – Version 02
This linear system is driven by a black neoprene glass fibre reinforced toothed belt, and is totally free from lubrication. The square pulley shafts are stainless steel, and the high performance polymer gear wheel is fitted onto two deep groove ball bearings. The square drive shaft is also stainless steel, and measures 6mm across flats. A plastic adapter is supplied with the unit which fits onto the square drive shaft, and has an outside diameter of 10mm. This linear system is available in the size 1040.

Standard series – Version 02
This linear system is driven by a white polyurethane steel reinforced toothed belt, and is also totally free from lubrication. The pulley shafts and pulleys are made of plated steel, with an option to change to stainless steel, and are fitted onto two deep groove ball bearings. This linear system is available in sizes 0630 and 1040.

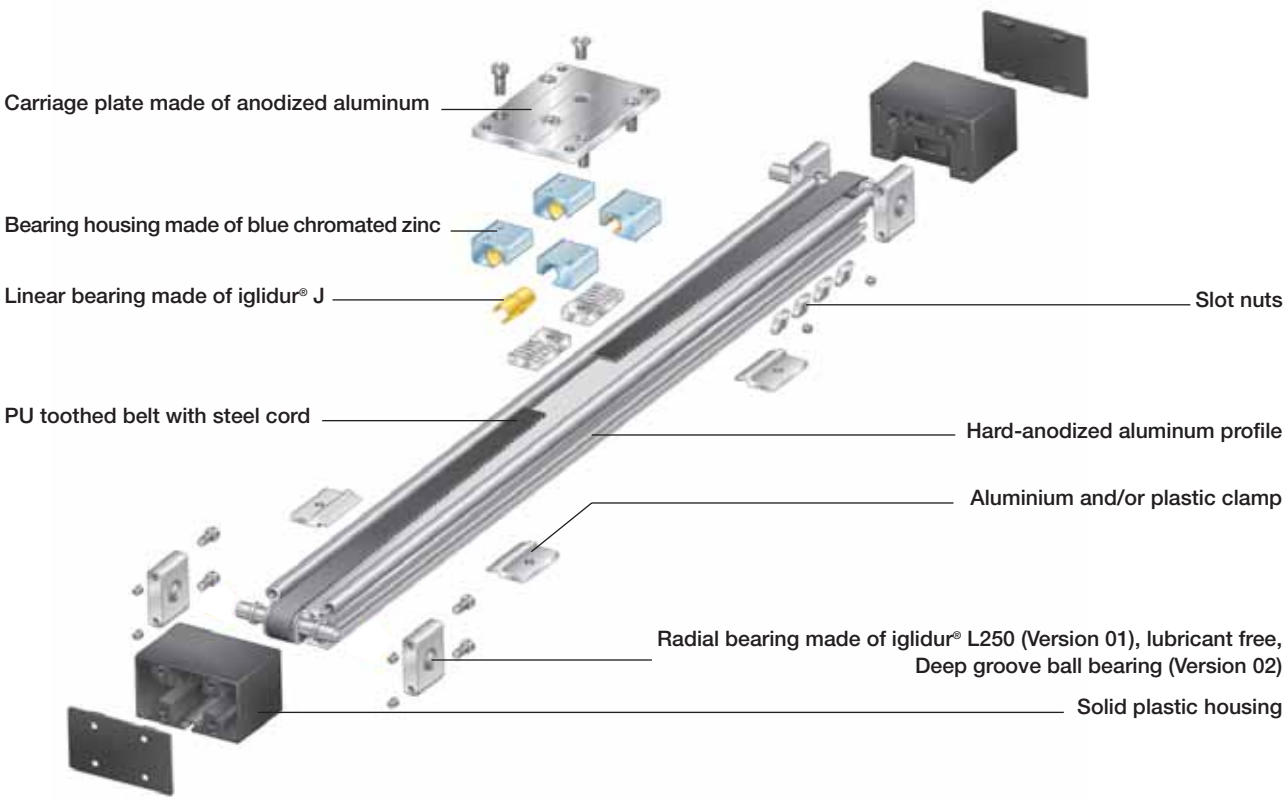
Both types are available upon request as Version 01, which means that the deep groove ball bearings are replaced by iglidur® plastic bearings, making the system 100% free from lubrication.

Assembly of the part number

ZLW	-1040	-01	-B	-100	L	XX

- XX = Stroke length in mm
- L = drive shaft on the left
- R = drive shaft on the right
- L/R = drive shafts left and right
- -100 = Slide length in mm (Standard: 100, on request: 50/200 mm)
- -1040 = Size 1040: 100 (optional 150/200 mm)
- -0630 = Size 0630: 60
- -B = B = Basic series
- -S = S = Standard series
- -01 = Version 01 (The original) – Deflection and drive shafts with plain bearings
- -02 = Version 02 (The quick one) – Deflection and drive shafts with ball bearings
- -1040 = Size 1040 (Guide shaft diameter 10 / Shaft distance 40 mm)
- -0630 = Size 0630 (Guide shaft diameter 6 / Shaft distance 30 mm)
- ZLW = DryLin® W Toothed belt linear drive

Further information to this product: ▶ +44 (0) 16 04 - 67 72 40 · www.igus.co.uk/en/zlw



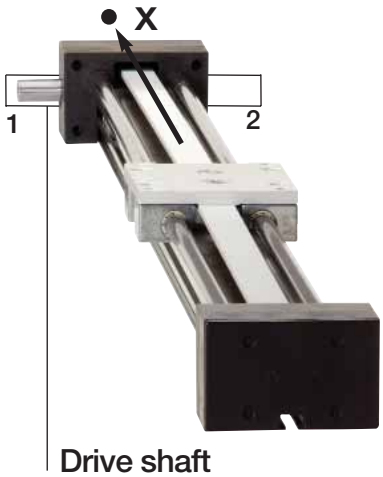
Technical Data

ZLW-1040	Weight without stroke [kg]	Weight 100 mm stroke [kg]	max. stroke length* [mm]	Trans-mission [mm/U]	Gear-teeth	Toothed belt-material	Toothed belt-width [mm]	Toothed belt-tension [N]	max. radial stress [N]	Guide-bearing	max. speed at 60% on-time [m/s]	Max. position variations of the carriage, load dependent.**
Basic 02	0,9	0,14	2.000	66	RPP 3M	Neoprene with GF	15	150	200	ball bearing	3	±0,35
Standard 02	1,0	0,14	2.000	70	AT 5	PU + steel cord	16	200	300	ball bearing	5	±0,2

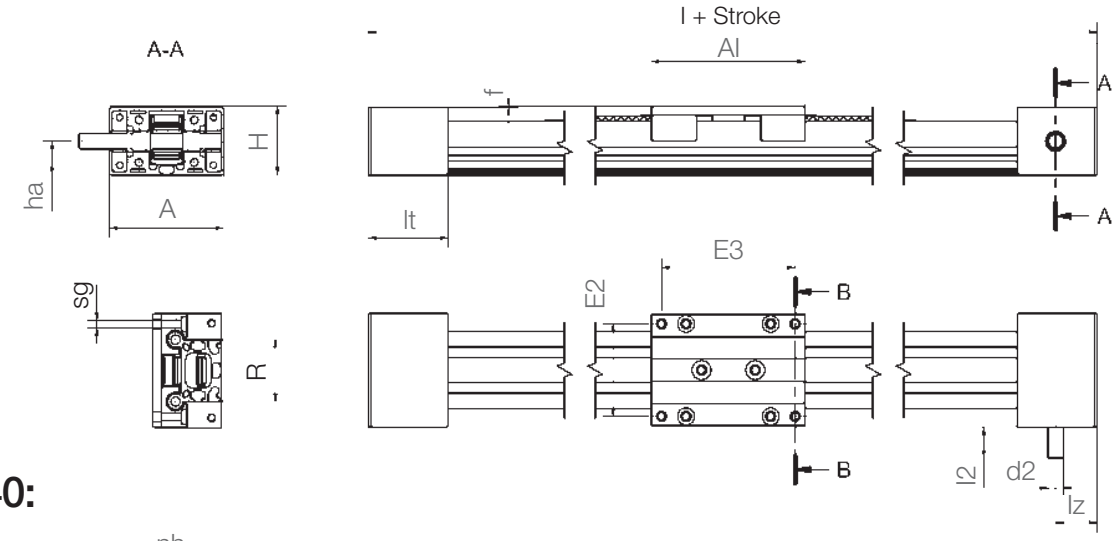
ZLW-0630	Weight without stroke [kg]	Weight 100 mm stroke [kg]	max. stroke length* [mm]	Trans-mission [mm/U]	Gear-teeth	Toothed belt-material	Toothed belt-width [mm]	Toothed belt-tension [N]	max. radial stress [N]	Guide-bearing	max. speed at 60% on-time [m/s]	Max. position variations of the carriage, load dependent.**
Basic 02	0,43	0,08	1.000	54	AT 5	Neoprene with GF	9	70	100	ball bearing	2,5	±0,2

* Larger stroke lengths upon request.

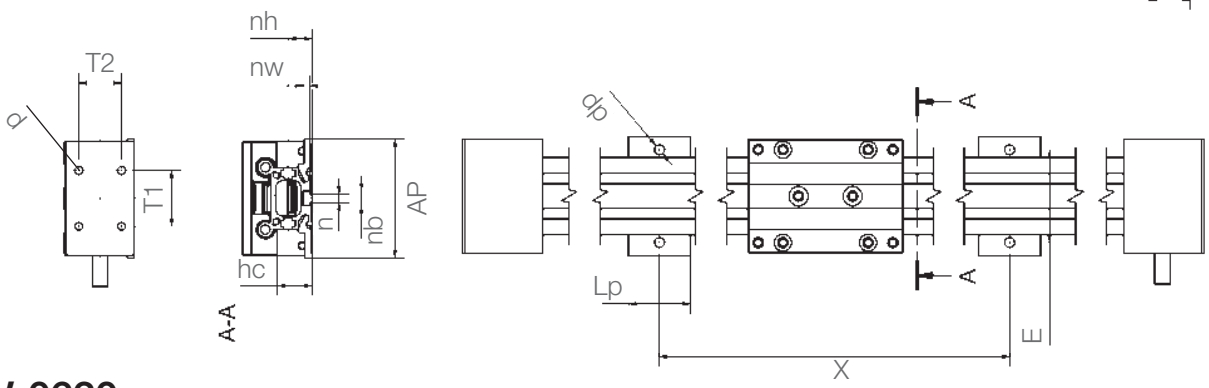
** these values were measured with maximum load in horizontal orientation



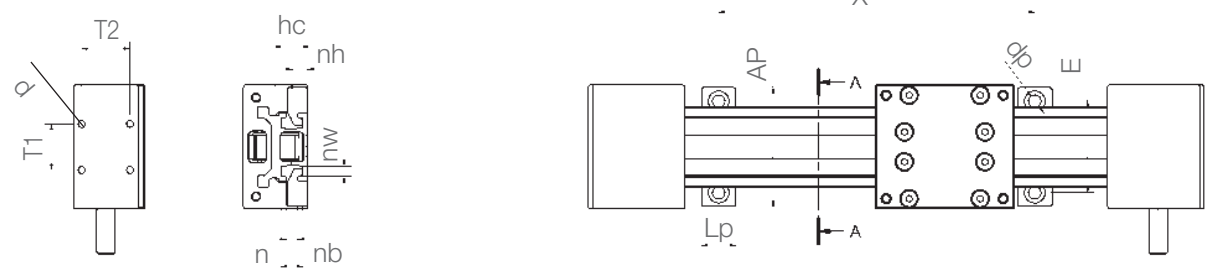
Right or left positioning for drive shaft.
Position determined by view towards x!
1 = Left drive shaft
2 = Right drive shaft
x = Line of vision



ZLW-1040:



ZLW-0630:



Dimensions [mm]

Part No.	A -0,3	Al	H	E2 ±0,15	l	E3 ±0,15	R ±0,15	f	lt ±0,3	sg	ha	lz	l2	d2 h9
ZLW-1040-02-... 74	100	45	60	204	22,5	87	40	1	52	M6	22	27	20	10
ZLW-0630-02-... 54	60	31	45	144	13,5	51	30	3	42	M4	14	22	20	8

Connecting dimensions Part No.	X	E ±0,2	AP -1	LP	dp	n	nb	nw	nh	T1	T2	d
ZLW-1040-02-...	variable	60	78	40	6,4	5,2	9,5	4,3	15,5	36	27	5,0
ZLW-0630-02-...	variable	40	52	15	5,5	5,2	9,5	4,3	7	20	21	3,2

mm
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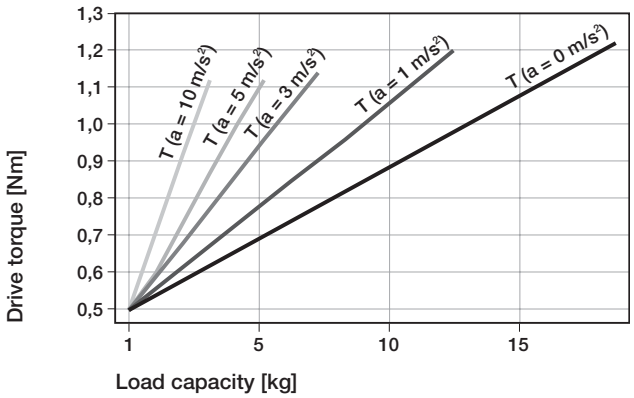
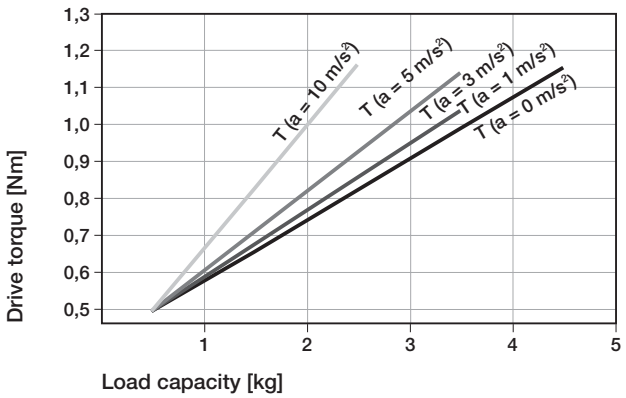
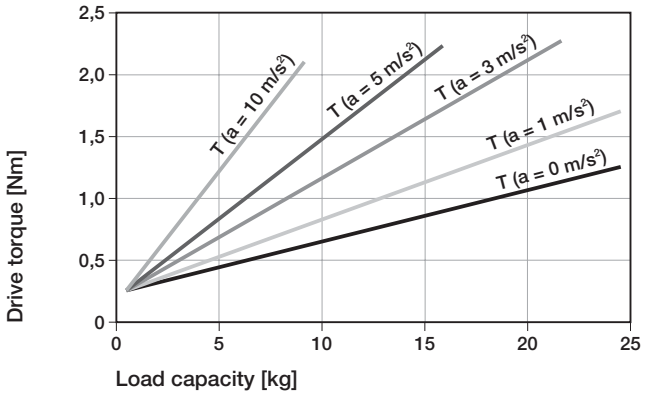
Required drive torque*
Horizontal orientation – ZLW-1040, version 01



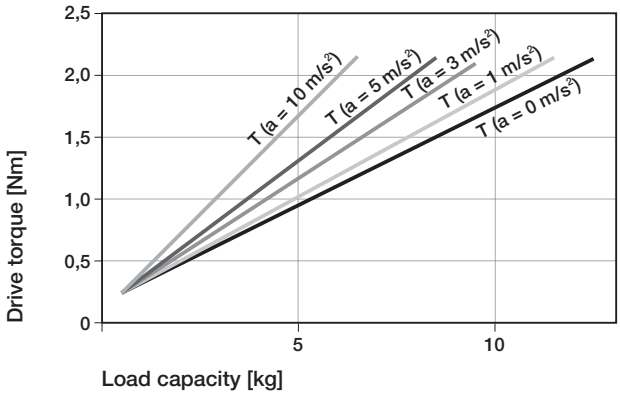
Required drive torque*
Vertical orientation – ZLW-1040, version 01



Required drive torque*
Horizontal orientation – ZLW-1040, version 02

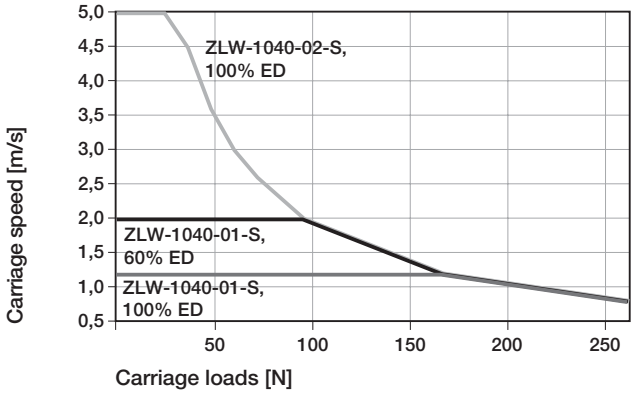


Required drive torque*
Vertical orientation – ZLW-1040, version 02



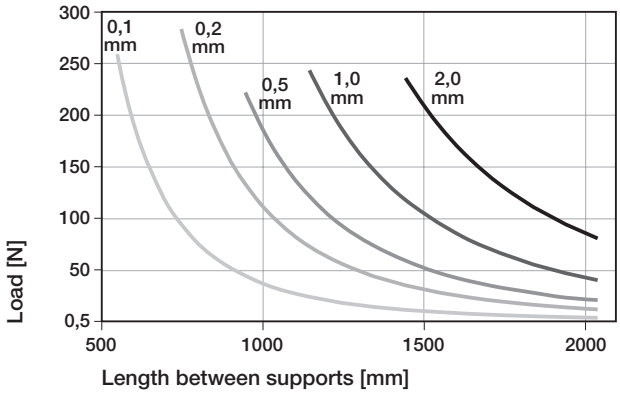
* Assumption: The moving mass is located in a circumscribed circle with a max. R = 100 mm to the middle of the guiding rail, max. permissible torque version 01: 1.3 Nm, a = 0 m/s²; version 02: 2,4 Nm, a = 0 m/s²; constant drive without nominal value acceleration

Maximum load
ZLW-1040, versions 01 and 02



The diagram accounts for the sum of all forces active on the carriage.
OT = On-time

Sag due to width between supports
ZLW-1040, versions 01 and 02



Sag permissible up to maximum 2 mm.

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DryLin® ZLW | **Belt Drive**

The DryLin® ZLW belt drive can be fastened in different ways (clamp and slot nuts included in delivery):
The orientation of the drive is optional. Overhead installation is the best option against fouling.

1. Clamping offers an easy fastening option for the drive, among other things, on aluminum machine profiles. Part No. 75.40.
2. Slot nuts enable the installation of 3 sides (1040: left, right, below) or 2 sides (0630: left, right) as well as the fixing of sensors and proximity switches.
3. Screw connection: Threaded holes for individual screws are located at each end block face.

Clamp

Included in delivery

Slot nuts

Included in delivery

Screw connection

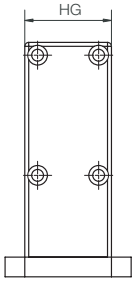
4 x M6/M4 (optional)

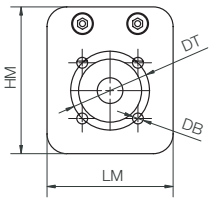
Directions for installation: The end blocks should not be used as a mechanical stop under any circumstances. A minimum spacing of 10 mm should be provided on both sides. The safety distance provided at both sides of the guide carriage can be reduced provided that it is ensured that the housings of the drive and end blocks do not collide with the mechanical parts. The igus® staff would be glad to provide you with more information on the fastening and connecting of the belt drive. Call 01604 677240, or write to sales_uk@igus.co.uk

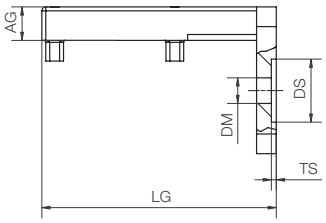
Motor flange

The motor flange can be fastened onto the end block with four screws. Different types of motor flanges are available.
Item no. SAX-104005

The DryLin® ZLW belt drive is also available with hand crank.







Suitable for	Part No.	Base plate			Motor mounting plate						
		LG	HG	AG	HM	LM	DT	DM	DS	TS	DB
ZLW-1040	MF-1040-xx	138	44	17	____*	____*	____*	____*	____*	____*	____*
ZLW-0630	MF-0630-xx	110,5	28	12	____*	____*	____*	____*	____*	____*	____*

____*: Please request individual values for each motor type