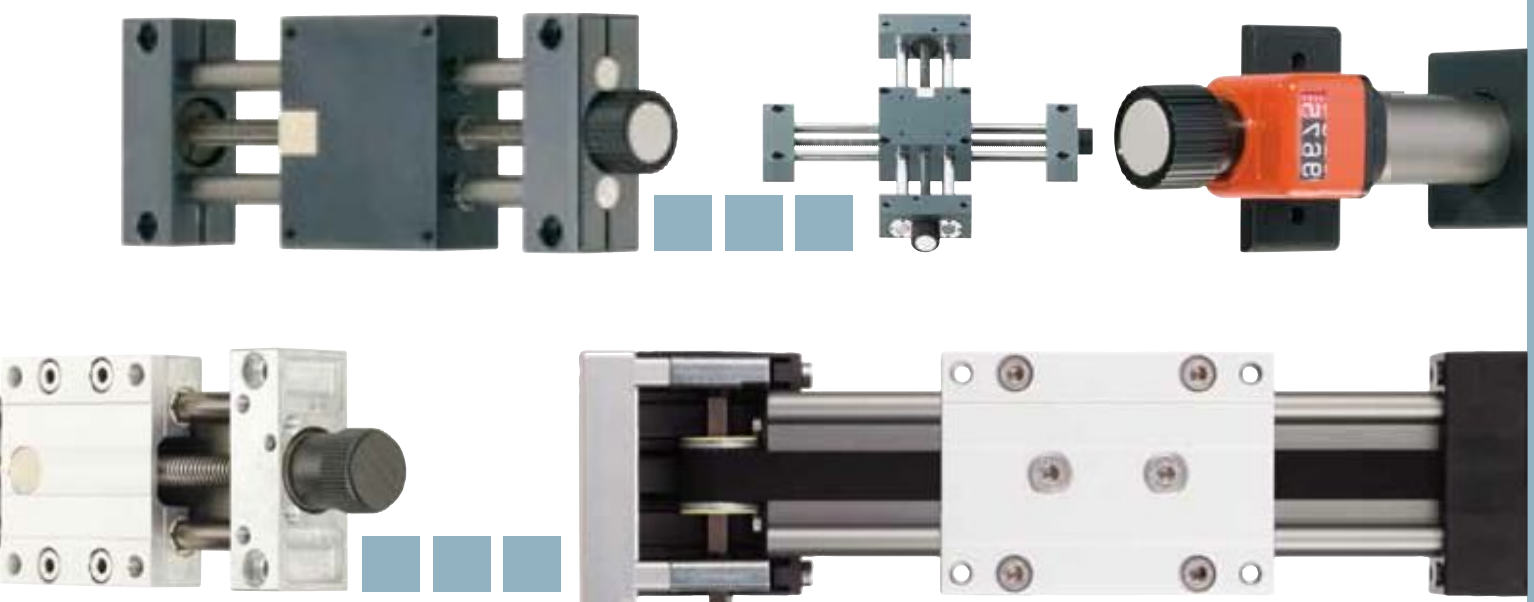
6.drylin®

Drive Technology



Lead screw tables...gear belts...lead screw drives...ready to fit.

...plastics

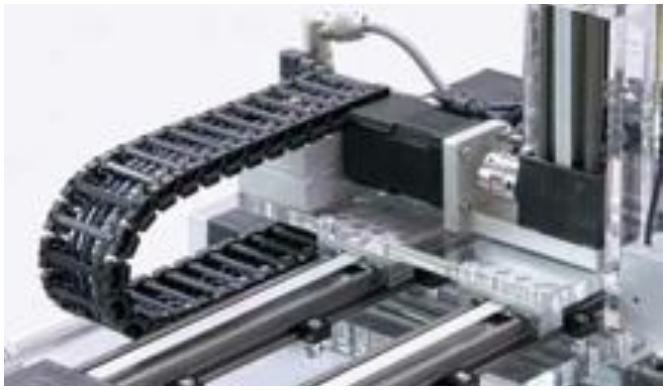
Application Examples: drylin® Drive Technology

More exciting applications examples online ▶ **www.igus.eu/drylin-applications**

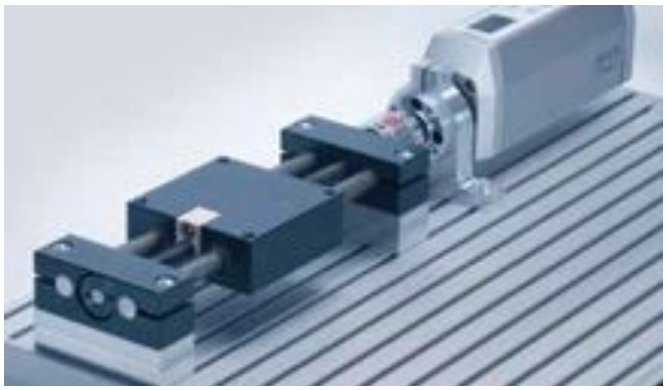
Camera/Laser adjustment in labelling system
In a labelling system the camera and laser positioning are guided with two drylin® SHT/SLWE-Xy cross slide units.
(Co. Pago Etikettiersysteme GmbH)

Positioning of milling heads
Aluminum dust and chips cannot stick due to the absence of lubricants at any of the bearing points of the drylin® lead screw table SHT.
(Berchtold GmbH)

Height adjustment of coding device
The drylin® lead screw unit gives variable and precise adjustment, free from any maintenance or lubrication.
(Filtec Europe GmbH)



Pick and place
Quick and maintenance-free handling with drylin® toothed belt axes as a room portal (X, Y, Z axis).



Electric actuator
drylin® lead screw table combined with an electric actuator for use in a variety of format adjustments.
(Festo AG & Co. KG)

Adjustment of inspection camera
drylin® ZLW toothed belt axis in an inspection camera adjustment for checking the position of sealing rings.
(OLPE Jena GmbH)

Web edge detection
The drylin® SLW lead screw unit with position indicator and handwheel adjusts the sensors which detect the edge of the webbing and any print marks.

drylin® Drive Technology | Product Overview

drylin® general drive technology

drive technology
from page 1021

SHT
Standard
▶page 1021

SHT-PL
Preload
▶page 1025

SHTC
Flexible
▶page 1026

SHT-BB
With ball bearing lead screw supports
▶page 1027

SHTS
with high helix pitch lead screw
▶page 1028

SHT-FF
Fast Forward
▶page 1029

Linear Modules SLW
from page 1035

SLW
Compact
▶page 1038

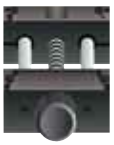
SLWE-PL
Preload
▶page 1039

SLWE-BB
With ball bearing lead screw supports
▶page 1040

SLWS
with high helix pitch lead screw
▶page 1041

SAW
Lead screw linear axis
▶page 1042

SLW-ES
Stainless steel
▶page 1043



Linear Modules “light”
SHTP from page 1047

SHTP Mini
Small and low-cost, solid plastic
▶page 1049

SHTP
Cost effective
▶page 1050

SHTP-FF
Fast Forward solid-plastic
▶page 1051

SET easytube
from page 1057

SET
▶page 1059

SET-F
with flange
▶page 1060

SETM
with scaling
▶page 1061

SETB
one-sided due to preload
▶page 1062

SETC
weight-optimized
▶page 1063

Toothed belt axes
ZLW
from page 1075

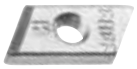
ZLW
Belt Drive
▶page 1082

ZLW-OD
Opposed Belt Drive
▶page 1084

ZLW-LT/-UW
Belt Drive: specialists
▶page 1085

ZAW
Cantilever drive
▶page 1086

Clamp
▶page 1087



Slot Nuts
▶page 1087

SHT-HTX
High temperature up to +180 °C

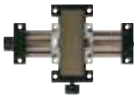
▶page 1030

SHTC-HYD
Hygienic Design

▶page 1031

SHT-XY
XY-Table
Standard/
Preload

▶page 1032



SLW-XY
XY-Table,
compact

▶page 1044

SLW-XY-ES
XY-Table,
compact
Stainless steel

▶page 1045

Miniature Linear Module
SLN from page 1053

SLN
Miniature
Linear Module

▶page
1054

drylin®
accessories

for the general drive technology
from page 1065

Position
Indicator

▶page 1068

Lead screw
Clamp

▶page 1069

Rotary Knob

▶page 1069

V-Drive

▶page 1070

Stainless
Steel
angle kit

▶page 1072

Flexshaft

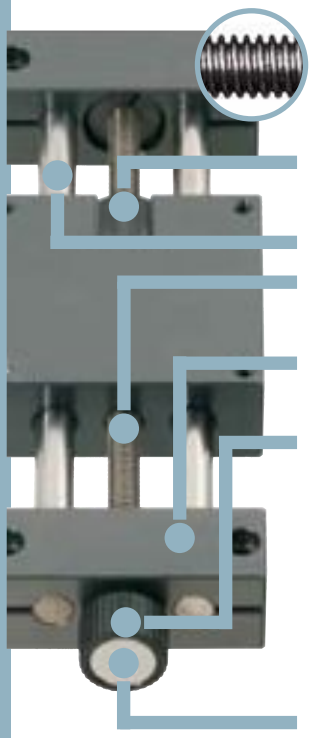
▶page 1073

drylin®
electric drive technology

Linear axes with Motor
from page 1089

drylin® Drive Technology | Linear Slide Modules

The drylin® product portfolio provides lubricant-free linear drives that are driven either by a trapezoidal thread, high helix thread or toothed belt. The user can choose a suitable individual solution from lightweight solid plastic units up to heavy duty stainless steel solutions. In all systems, the stroke length is freely selectable and the drive implemented either via handwheel or motor.



Linear slide modules with lead screw drive

Polymer bearings and lead screw nuts give lubrication free operation
3 shaft materials
8 trapezoidal thread pitches, 4 high helix thread pitches Base body material: Stainless steel, aluminum, zinc or plastic Lead screw machining according to drawing or plain drive shaft (Steel, stainless steel- or aluminum lead screws)

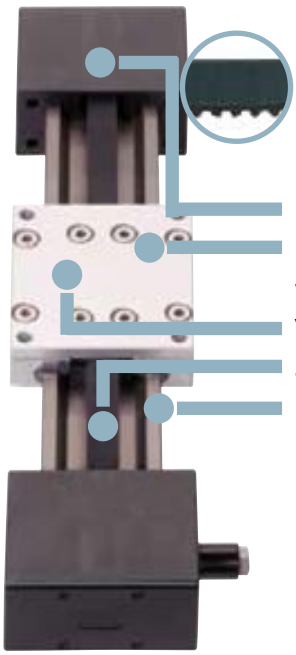
Accessories: position indicators, clamps and hand wheels

When to use it?

- For format adjustments
- In extreme environments
- When a cost-effective, ready-to-fit solution is required
- When corrosion resistance is required
- For low noise

When not to use it?

- When high loads combined with very high speeds
- When positioning accuracy < 0.1 mm is necessary
- If high running performance is required in continuous operation



Linear slide modules with belt drive

High loads with grooved ball bearings
Lubrication-free linear guide system with polymer plain bearings
Various carriage lengths Hard-anodized aluminum profile
Polyurethane or neoprene toothed belts

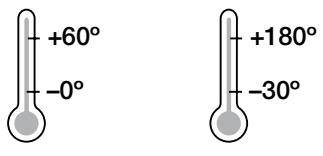
When to use it?

- Quick positioning of small loads
- Quiet running
- Flat design
- Use under water with uW-belt
- Cost-effective solution as basic version
- Long-term usage

When not to use it?

- When high loads should move highly dynamically
- When positioning accuracy < 0.1 mm is necessary

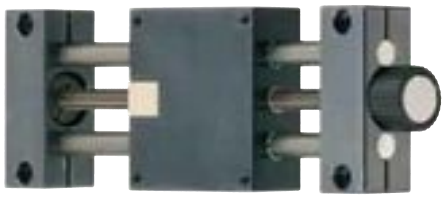
Temperature*



Standard | High temp.

*** does not apply to accessories**

drylin® Drive Technology | Product Overview



Linear Modules SHT

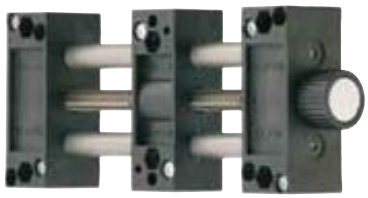
- Lubrication-free
- Trapezoidal or high-helix lead screw drives
- Ball-bearing lead screw units for increased dynamics
- Carriage in Quattro design or as a compact carriage

▶ page 1021

SLW-Compact

- Lubricant-free, on the basis of drylin® W
- Torsion-resistant dual shaft sections
- Many carriage options
- Trapezoidal or high-helix lead screw drives
- Suitable for manual and motor operated positioning

▶ page 1035



SHTP-Economical

- Solid plastic-version
- Low weight
- Cost-effective
- Corrosion-resistant

▶ page 1047

Linear Modules SET easytube

- Corrosion resistance
- Low weight through aluminum and stainless steel
- Simple, smooth design

▶ page 1057

Accessories for Linear Modules

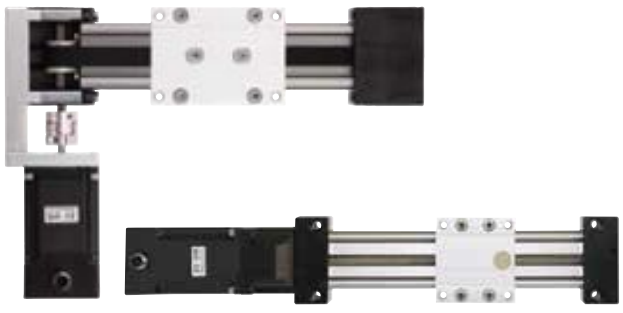
- Cursor for reproducible settings
- Hand wheels in many versions
- Lead screw clamp
- Angular drives for customized operating directions

▶ page 1065

Tooth belt axis ZLW

- Fully glide-mounted
- For quick positioning
- Deflection with grooved ball bearings

▶ page 1075



drylin® E - electrical drive technology

lubricant-free linear modules with motor

- Maintance- and lubricant-free
- Lead screw- or tooth belt axis
- Ready to install with motor, cable and initiator
- Compact and light design

▶ page 1089

drylin® Drive Technology | Technical Data

	d Ø		Screws			Carriages length
	[mm]	Thread	T	Self locking head	Mounting	[mm]
LINEAR MODULES					GL=plain bearings, KL=bell beaarings	
SHT-12(-PL)	12	TR	10x2	+	GL	85
SHT-20(-PL)	20	TR	18x4	+	GL	130
SHT-30(-PL)	30	TR	24x5	+	GL	180
SHTC-12	12	TR	10x2	+	GL	30
SHTC-20	20	TR	18x4	+	GL	36
SHTC-30	30	TR	24x5	+	GL	50
SHTC-40	40	TR	26x5	+	GL	70
SHTC-50	50	TR	30x6	+	GL	80
SHT-BB-12(-PL)	12	TR	10x2	+	KL	85
SHT-BB-20(-PL)	20	TR	18x4	+	KL	130
SHT-BB-30(-PL)	30	TR	24x5	+	KL	180
SHTS-12	12	SG	10x50	-	GL	85
SHTS-20	20	SG	18x100	-	GL	130
SLW-0630	5	TR	8x1,5	+	GL	60/100
SLW(E)-1040(-PL)	10	TR	10x2	+	GL	69/100/150
SLW(E)-1080(-PL)	10	TR	10x2	+	GL	69/100/150
SLW(E)-1660(-PL)	16	TR	14x4	+	GL	100/150/200
SLW(E)-2080(-PL)	20	TR	18x4	+	GL	150/200/250
SLW-BB-0630	5	TR	8x1,5	+	KL	60/100
SLW(E)-BB-1040(-PL)	10	TR	10x2	+	KL	69/100/150
SLW(E)-BB-1660(-PL)	16	TR	14x4	+	KL	100/150/200
SLW(E)-BB-2080(-PL)	20	TR	18x4	+	KL	150/200/250
SLWS-0630	5	SG	8x15	-	GL	60/100
SAW-0630-0015	5	TR	8x1,5	+	KL	150
SAW-0630-0150	5	SG	8x15	-	KL	150
SAW-1040-0020	10	TR	10x2	+	KL	150
SAW-1040-0030	10	TR	10x3	+	KL	150
SAW-1040-0120	10	SG	10x12	-	KL	150
SAW-1040-0500	10	SG	10x50	-	KL	150
SHTP-01-06	6	M	M8	+	GL	45
SHTP-01/02-12	12	TR	10x2	+	GL	30
SET-12	12	M	M4	+	GL	30
SET-25(-F)	25	TR	10x2	+	GL	55
SET-30(-F)	30	TR	12x3	+	GL	55

	d Ø		Belt drive			Transmission	A
	[mm]	Material	Tie beam	Tooth profile	-tension [N]		[mm]
LINEAR ACTUATORS							
ZLW-0630-B	5	Neoprene, black	GF	9 HTD 3M	75	54	60/100
ZLW-0630-S	5	PU, white	Steel	9 MTD 3 M	100	54	60/100
ZLW-1040-B	10	Neoprene, black	GF	15 RPP3	150	66	100/150/200
ZLW-1040-S	10	PU, white	Steel	16 AT 5	200	70	100/150/200
ZLW-1660-S	16	PU, white	Steel	32 AT 5	500	120	100/150/200/250
ZAW-1040-B	10	Neoprene, black	GF	15 RPP3	150	66	150
ZAW-1040-S	10	PU, white	Steel	16 AT 5	200	70	150
ZLW-OD-0630-B	5	Neoprene, black	GF	9 HTD 3M	75	54	60/100
ZLW-OD-0630-S	5	PU, white	Steel	9 MTD 3M	100	54	60/100
ZLW-OD-1040-B	10	Neoprene, black	GF	15 RPP3	150	66	100/150/200
ZLW-OD-1040-S	10	PU, white	Steel	16 AT 5	200	70	100/150/200

drylin® Drive Technology | Technical Data

Max. length of stroke* [mm]	Max. static load-bearing capacity axial [N]	radial [N]	Max. speed [U/min.]	Max. feed [m/min.]	technical options (pages 1016+1017)	compatible to drylin® E	page
750	700	2,800	500	1	PL, FF,HTX, cross slide	+	1024
1,000	1,600	6,400	300	1.2	PL, cross slide	+	1024
1,250	2,500	10,000	220	1.1	PL	+	1024
750	700	2,800	500	1		+	1026
1,000	1,600	6,400	300	1.2		+	1026
1,250	2,500	10,000	220	1.1		+	1026
1,500	4,000	16,000	160	0.8		-	1026
1,500	6,250	25,000	100	0.6		-	1026
500	350	1,400	1,500	3	PL	+	1027
900	1,000	4,000	1,500	6	PL	+	1027
1,000	1,500	6,000	1,200	6	PL	+	1027
750	100	400	200	10		+	1028
1,000	400	1,600	150	15		+	1028
300	50	200	150	0.2	cross slide	-	1038
750	700	2,800	500	1	PL, cross slide, Stop+Go	+	1038
750	700	2,800	500	1	PL, cross slide, Stop+Go	+	1038
750	1,200	4,600	400	1.6	PL	+	1038
1,000	1,600	6,400	300	1.2	PL	+	1038
300	100	200	1,000	1.5		+	1040
500	500	2,000	1,500	3	PL	+	1040
750	700	2,800	1,500	6	PL	+	1040
900	1,250	5,000	1,500	6	PL	+	1040
300	50	200	200	3		-	1041
300	100	400	1,000	1.5		+	1042
300	50	400	600	10		+	1042
500	500	2,000	1,500	3		+	1042
500	500	2,000	1,000	3		+	1042
500	200	2,000	400	4.8		+	1042
500	100	2,000	200	10		+	1042
300	50	200	150	0.18		-	1049
500	200	800	250	0.5	FF	-	1050
200	10	20	–	–	only manual adjustments	-	1059
850	150	300	–	–	Manual adjustment, flanged shaft end supports	-	1059
850	200	400	–	–	Manual adjustment, flanged shaft end supports	-	1059

Max. length of stroke* [mm]	Max. radial stress [N]	Max. speed [m/s]	Max. position accuracy [mm]	Idle torque [Nm]	Max. drive torque [Nm]	drylin® E compatible	page
1,000	100	2	± 0.35	0.1	0.75	+	1083
1,000	150	2	± 0.3	0.15	1	+	1083
2,000	200	3	± 0.3	0.15	1.75	+	1083
2,000	300	5	± 02	0.25	2.4	+	1083
3,000	2,000	5	± 0.3	0.4	10	+	1083
1,000	12 Nm	0.5	± 0.3	0.2	1.75	+	1086
1,000	12 Nm	0.5	± 0.2	0.3	2.4	+	1086
1,000	50	1	± 0.35	0.1	0.75	+	1084
1,000	75	1	± 0.3	0.15	1	+	1084
1,500	100	1.5	± 0.3	0.15	1.75	+	1084
1,500	150	2.5	± 0.2	0.25	2.4	+	1084

* * When configuring your linear module, we ask that you note the igus® specifications for maximum stroke lengths. The performance and load specifications shown above for all drive units are based exclusively on stroke lengths within the recommended values. Exceeding these can result in undesirable impairments to the function such as increased wear and noise. Belt or lead screw contact cannot be excluded, and the rated performance and load specifications may not be attainable.

drylin® Drive Technology | Technical Options

With the trapezoidal screw driven linear table options, the drylin® SHT product portfolio offers numerous solutions for the many requirements of different applications.

Adjustable radial clearance

The “turn to fit” feature allows individual clearance adjustment by hand. The adjustment is done in 0.01-mm increments and cannot be triggered unintentionally during the operation (SLW type series 10-20).

For Linear Modules Type SLW und SAW

For Linear Modules Type SHT

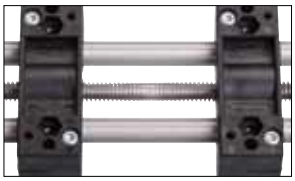
Preload

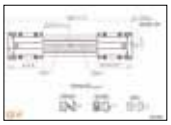
The optional axial pretension reduces the backlash of the system. Positioning and repeatability can be optimized. The required driving torque increases only slightly.

For linear modules Type SHT, SLW and SAW

Right-left and reverse

In addition to the standard right-handed lead screws, lefthand thread lead screws and counter lead screws can also be used. This option often used in format adjustments can be implemented for all diameters and type series.





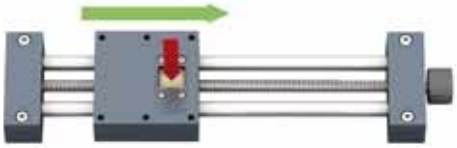
Online customer drawing
▶ www.igus.eu/customerdrawing

Linear modules with ball-bearing mounted lead screw

Quiet operation, reduced vibration tendencies as well as increased dynamics characterize the SHT and SLW linear drives with ball bearing mounted lead screws. These are also suitable for applications with motor drives.

Fast Forward (FF)

SHT linear modules and SHTP plastic linear modules offer a combination of accurate positioning and quick manual adjustment.

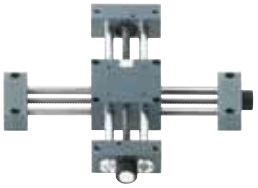


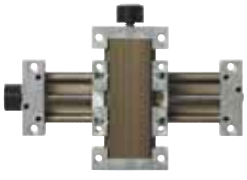
drylin® SLW “Stop and Go”

This additional function for linear carriages enables the use of an unlimited number of carriages on one guide – controlled by only one lead screw. The connection to the lead screw is engaged or released via the button.

Cross slides

The SHT and SLW linear modules can also be configured as XY cross-slide tables. XY adjustments can therefore be accomplished with a single unit.





drylin® Drive Technology | Technical Options

Shaft materials

When using linear axes of the SHT series, you can choose a shaft material from steel, stainless steel, or hard-anodized aluminum (standard). The short delivery time and excellent coefficients of friction and wear make the aluminum version the most common choice.

Lead screw materials

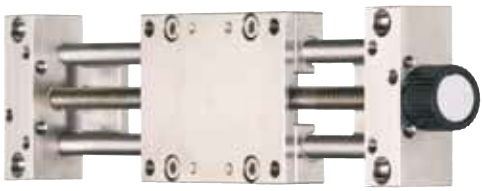
All drylin® linear modules can be delivered with self-locking trapezoidal steel and stainless steel lead screws; upon request, these can also be made from hard-coated aluminum. The SHT and SLW series can also be optionally configured with high-helix stainless steel lead screws. This allows for much higher pitches and drive speeds, but without the self-locking feature.

Bearing materials (HTX)

The bearing surfaces of the drylin® drive units are equipped with lubricant- and maintenance-free igus® high performance polymers. Optionally available are materials for high temperature application up to 180° C (iglidur® X, series HTX), and also for FDA compliant environments (iglidur® A180).

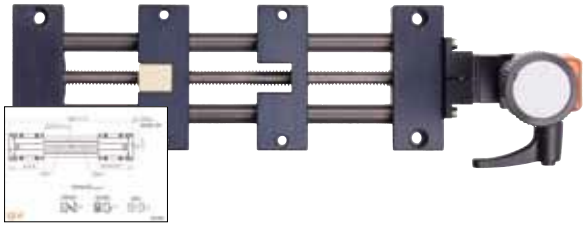
Complete solutions stainless steel

The usage of 1.4571 and 1.4301 makes most of the listed guides resistant to seawater and chemical contact corrosion, as the guide shafts are also made of 1.4571.



Linear modules with several carriages

All drylin® linear modules can be configured with multiple carriages. The short carriages from the SHTC series are ideally suited for this. The second (or additional) carriage can be installed as a freely adjustable unit without lead screw, or as a fixed unit with its own trapezoidal lead screw.

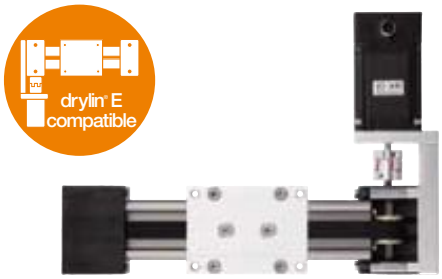


Online customer drawing

▶ www.igus.eu/customerdrawing

Linear modules with motor

Several drylin® drive units are compatible with the drylin® E modular kit. As linear axes, they can be easily and quickly configured directly to the matching igus® stepper motors, power cables and initiators - assembled and tested from one source.

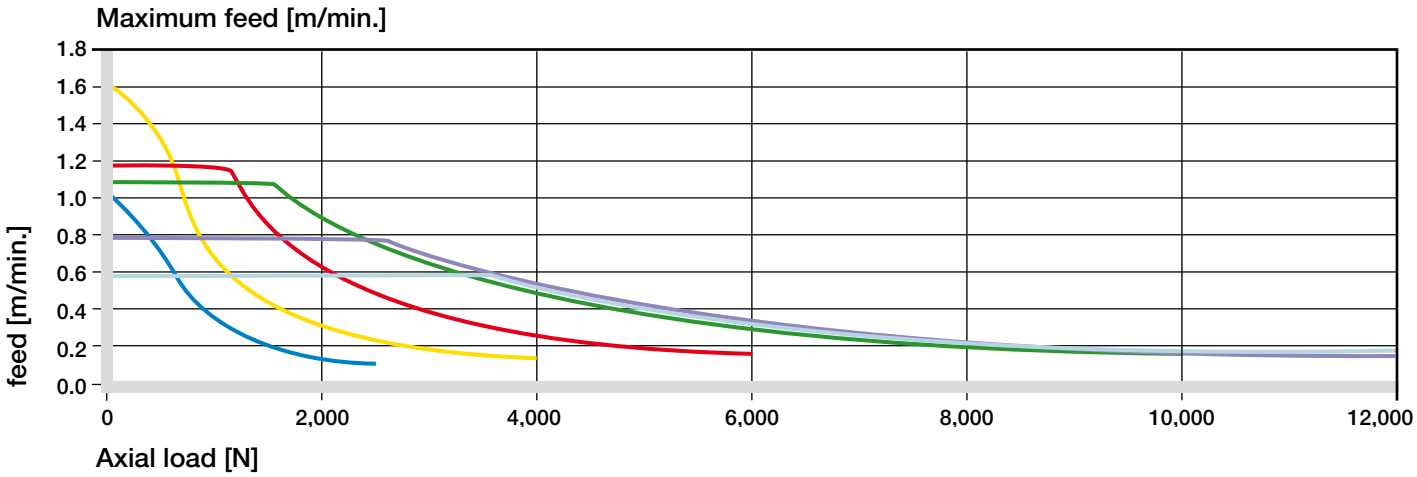


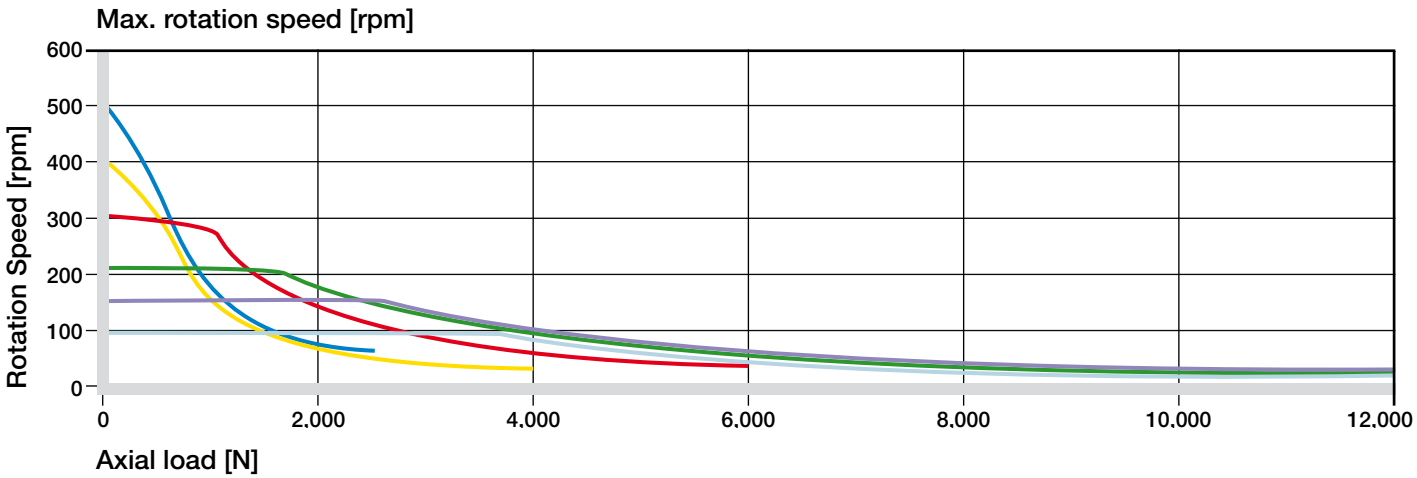
drylin® Drive Technology | Design and Calculation

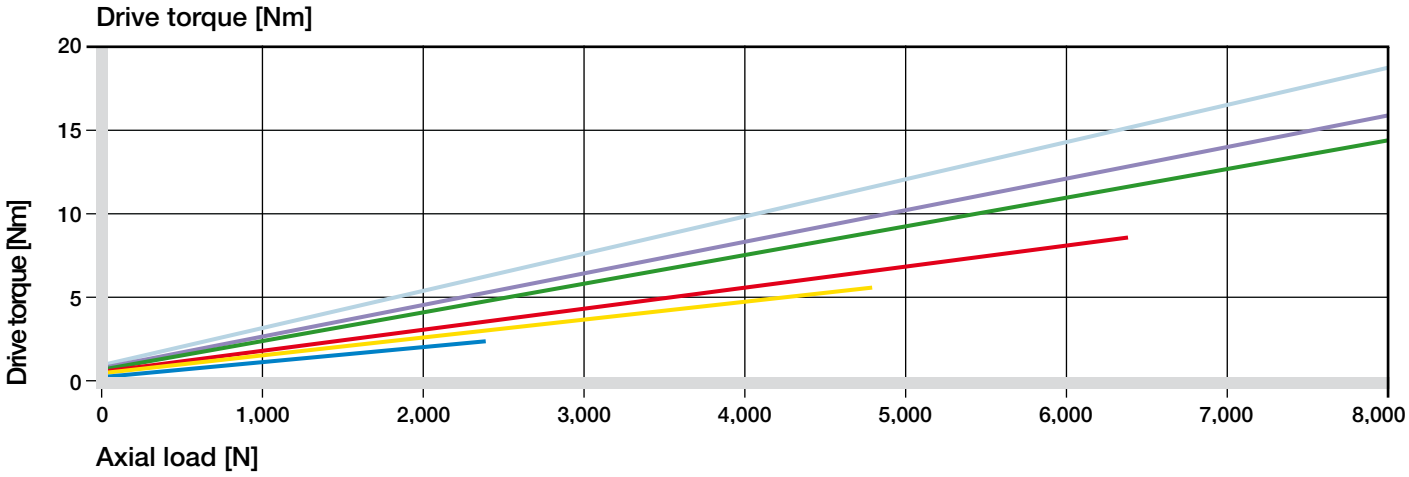
drylin® linear lead screw units have been developed for position settings of all types. The linear setting is achieved by means of trapezoidal lead screw that can be operated manually or by motor. The maximum linear continuous speed is 1m/min. The suitability of the linear slide unit for an application can be checked using the graphs below.

HORIZONTAL

HORIZONTAL







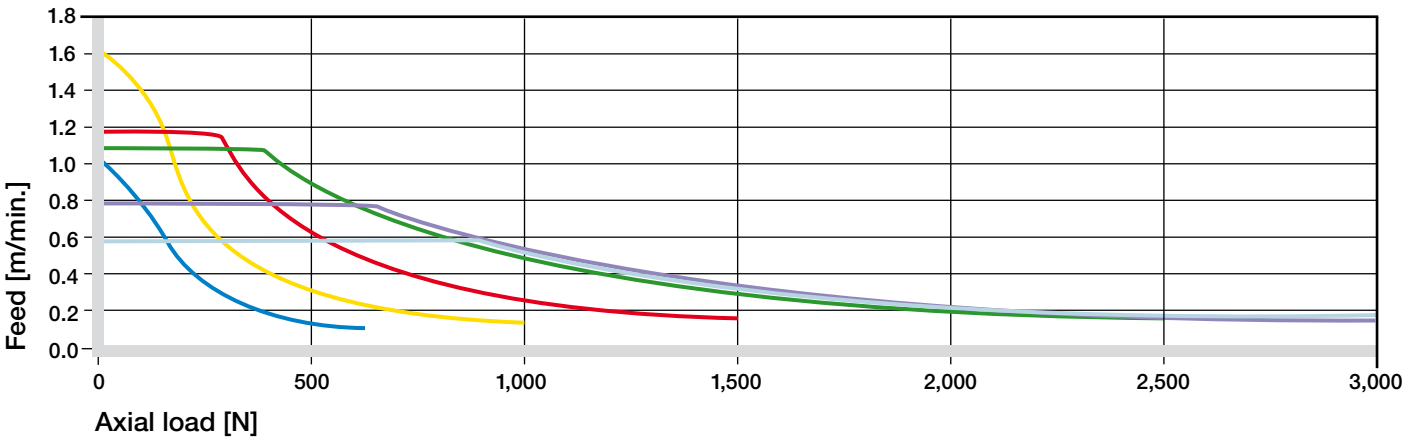
drylin® Drive Technology | Design and Calculation

The following trapezodial lead screw drive sizes are used in SHT linear tables:

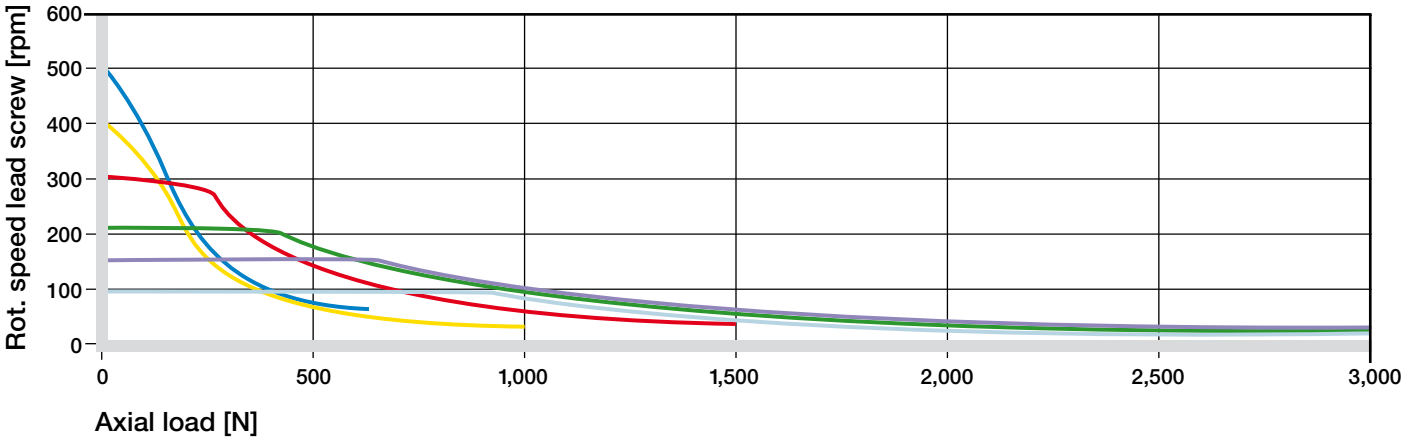
- TR 10x2: SHT-12, SHTC-12, SHTP-12, SLW-1040, SLW-1080, SLW-1040-ES, SET-25
- TR 14x4: SLW-1660
- TR 18x4: SHT-20, SHTC-20, SLW-2080
- TR 24x5: SHT-30, SHTC-30
- TR 26x5: SHTC-40
- TR 30x6: SHTC-50

VERTICAL

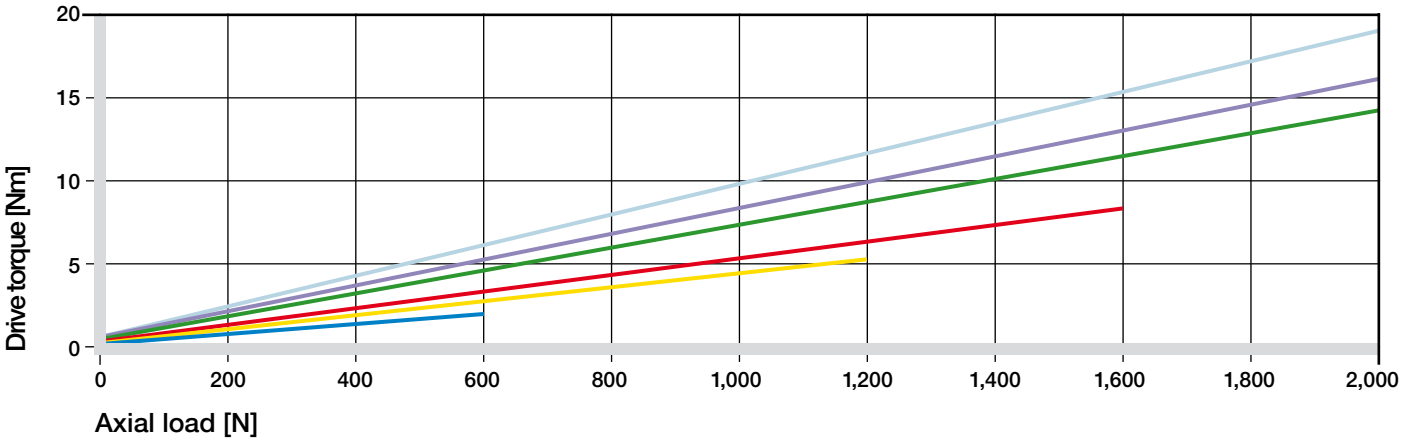
Maximum feed [m/min.]



Max. rotation speed [rpm]



Drive torque [Nm]



drylin® Drive Technology | Product Finder

Product finder for drylin® linear modules ▶ page 1138

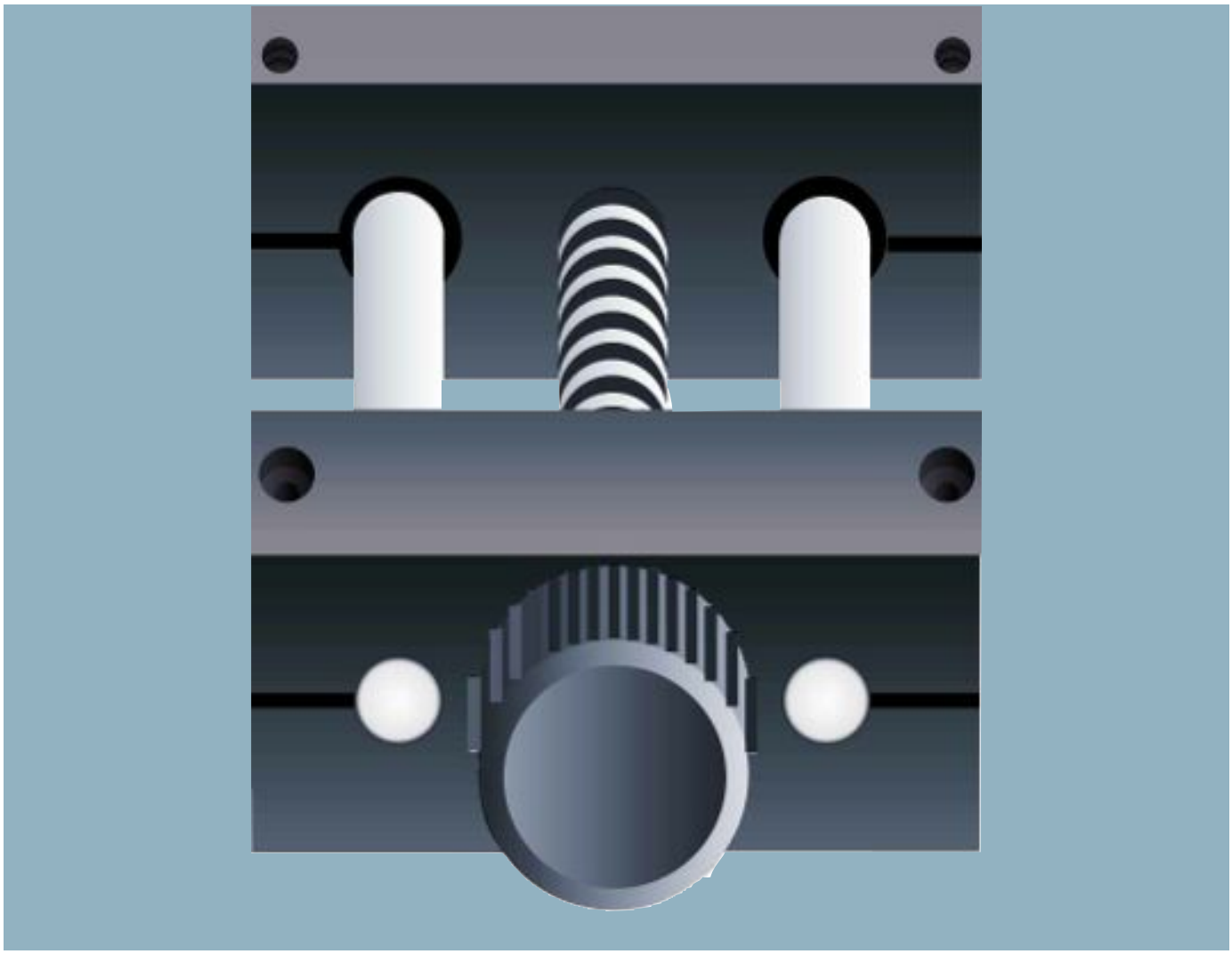
Just enter useful application-data and compare adequate Linear Slide Tables online and configure them.

New: You can configurate complete linear axes with motor now online.

Also online:

- Price information
- Delivery time
- Online catalog
- Online order
- CAD-data

www.igus.eu/sht-productfinder



drylin® general drive technology: linear modules SHT

- 100 % lubricant-free
- trapezoidal or high-helix lead screw drives
- ball-bearing mounted lead screw units for higher dynamic forces
- Carriage in Quattro design or as a compact carriage

drylin® SHT | Linear Modules

The drylin® SHT linear modules can be actuated entirely without lubricants while concurrently maintaining high precision and robustness of all components. The units can be flexibly configured with various shaft and lead screw materials, carriage lengths and comprehensive accessories. The SHT can be delivered as a pre-loaded version, but also with a ball bearing supported lead screw.

Basic elements (shaft end supports/carriages) are made from machined aluminum with anodized surfaces

All sliding surfaces are completely free of lubricants due to the use of iglidur® liners and drylin® trapezoidal lead screw

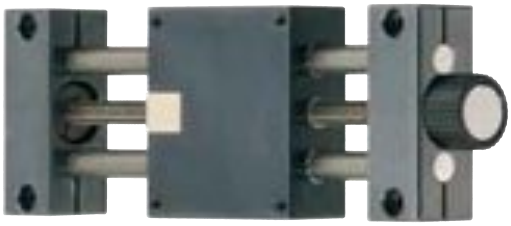
3 shaft materials

5 trapezoidal thread pitches,
2 high helix thread pitches

Large range of accessories available ▶ **page 1065**

Configurable with motor as a ready to install linear axis (drylin® E ▶ **page 1089**)

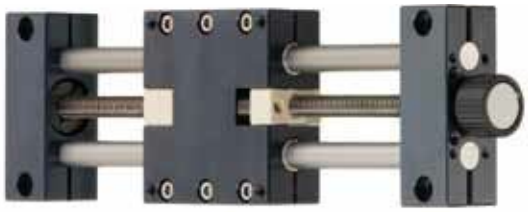
drylin® SHT | Product Overview



SHT – Standard

- Solid design
- Three different sizesn
- Various materials for shaft and lead screw
- Maintenance-free and corrosion-resistant

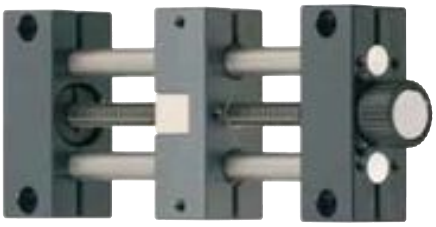
▶ **page 1024**



SHT-PL “preload”

- Totally lubrication-free
- Preloaded trapezoidal lead screw nuts, preload force: 50 N
- Manually and continuously adjustable radial clearance
- Low weight due to aluminum and plastic

▶ **page 1025**



SHTC – Flexible

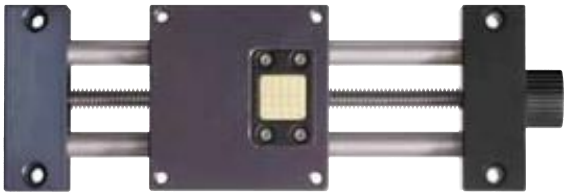
- High flexibility due to two short carriages
- Ideal for 2 carriages
- Maintenance-free, dry-running
- 5 installation types from Ø 12 up to 50 mm

▶ **page 1026**

Linear module SHT-BB “ball-bearing supported”

- Higher rotation speed, high precision
- Belt drive permits radial loads
- Constant drive torque
- Less axial clearance

▶ **page 1027**



Linear module SHT-FF “Fast-Forward”

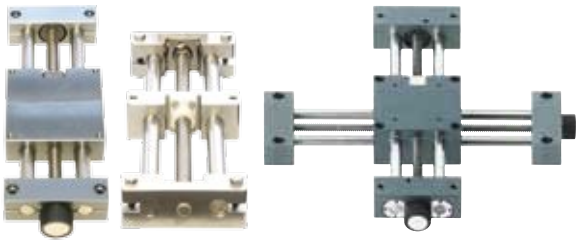
- With quick-release mechanism
- Precise and fast positioning
- Including self-locking brake
- Recommended only for horizontal applications

▶ **page 1029**

Linear module SHTS – The fast One

- With high helix lead screw
- High-Speed-solution for quick positioning
- Maintenance-free dry operation
- Up to 100 mm travel/rotation.

▶ **page 1028**



Linear modules special designs

- SHT-HX for temperatures up to +180 °C
- SHTC-HYD: Hygienic Design, light, washable
- SHT-XY: cross slides Standard and Preload

▶ **from page 1030**

drylin® SHT | Delivery Program | Trapezoidal Thread

SHT – Standard

- Solid design
- Three different installation sizes
- Various materials for shaft and lead screw
- Maintenance-free and corrosion-resistant
- TR 10 x 2, TR 18 x 4, TR 24 x 5
- Temperature-resistant up to +80 °C
- Available accessories
  ▶ page 1065
- Lead screw nuts are available separately ▶ page 976

drylin E compatible

▶ page 1089

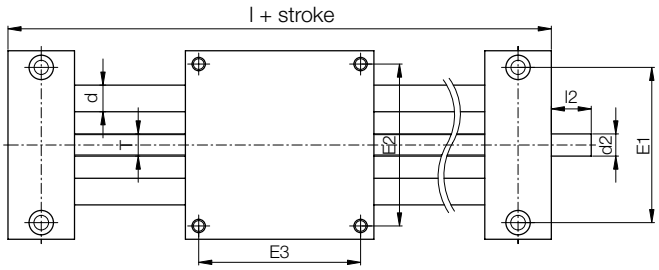
reddot design award winner 2006

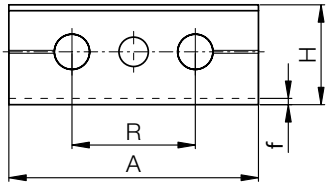
Order key

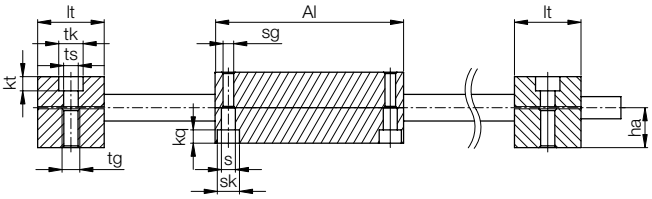
complete ▶ page 1033

SHT-12-AWM

Shaft material
Type
Basic







technical Data

Part number	Max. length of stroke	Aluminum shaft		Steel shaft		Max. static load-bearing capacity	
		Weight	Additional (per 100 mm)	Weight	Additional (per 100 mm)	axial	radial
	[mm]	[kg]	[kg]	[kg]	[kg]	[N]	[N]
SHT-12-AWM	750	1.1	0.1	1.3	0.2	700	2,800
SHT-20-AWM	1,000	3.2	0.3	3.9	0.6	1,600	6,400
SHT-30-AWM	1,250	8.6	0.6	10.9	1.4	2,500	10,000

Dimensions [mm]

Part number	A	Al	H	E1	E2	E3	l	R	f	lt	tk	ts
	-0.3	-0.3		±0.15	±0.15	±0.15				±0.1		
SHT-12-AWM	85	85	34	70	73	73	145	42	2	30	11	6.6
SHT-20-AWM	130	130	48	108	115	115	202	72	2	36	15	9.0
SHT-30-AWM	180	180	68	150	158	158	280	96	4	50	20	13.5

Part number	tg	kt	s	sk	sg	kq	d	T	l2	d2	ha
		±0.1								Standard	
SHT-12-AWM	M8	6.4	6.3	10	M6	6.0	12	TR10x2	17	TR10x2*	18
SHT-20-AWM	M10	8.6	6.4	11	M8	7.0	20	TR18x4	26	12h9	23
SHT-30-AWM	M16	12.6	11.0	18	M12	10.6	30	TR24x5	38	14h9	36

* TR10x2 lead screw end unmachined

delivery time 2–3 days

prices price list online
www.igus.eu/eu/drylinSHT

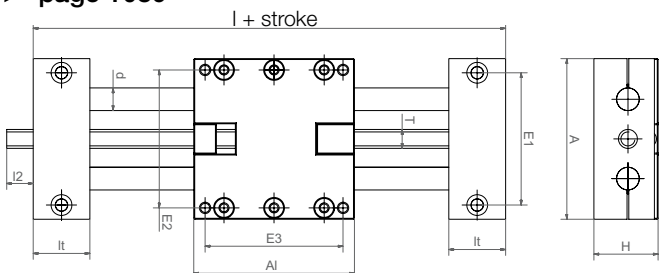
drylin® SHT | Delivery Program | Trapezoidal Thread

SHT-PL – Preload

Preloaded trapezoidal lead screw nut, Radial clearance adjustable from both sides

drylin E compatible

▶ page 1089



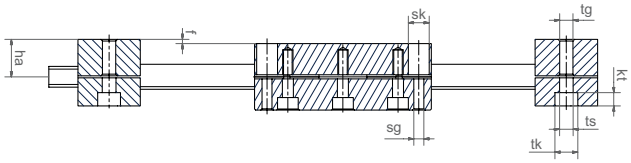
Order key

complete ▶ page 1033

SHT-12-AWM-PL

- Preload
- Shaft material
- Type
- Basic

- Totally lubrication-free
- Pre-tensioned trapezoidal nut, preload force: 50 N
- Manually and continuously adjustable radial clearance
- Low weight due to aluminum and plasticf
- Machined lead screw ends to allow operation by hand wheel or motor
- Temperature resistance up to +80 °C
- Available accessories ▶ page 1065
- Lead screw nuts are available separately ▶ page 976



Technical Data

Part number	Max. length of stroke	Aluminum shaft		Steel shaft		Max. static load-bearing capacity	
		Weight	Additional (per 100 mm)	Weight	Additional (per 100 mm)	axial	radial
	[mm]	[kg]	[kg]	[kg]	[kg]	[N]	[N]
SHT-12-AWM-PL	750	1.1	0.1	1.3	0.2	700	2,800
SHT-20-AWM-PL	1,000	3.2	0.3	3.9	0.6	1,600	6,400
SHT-30-AWM-PL	1,250	8.6	0.6	10.9	1.4	2,500	10,000

Dimensions [mm]

Part number	A	Al	H	E1	E2	E3	l	R	f	lt	tk	ts
	-0.3	-0.3		±0.15	±0.15	±0.15				±0.1		
SHT-12-AWM-PL	85	85	34	70	73	73	145	42	2	30	11	6.6
SHT-20-AWM-PL	130	130	48	108	115	115	202	72	2	36	15	9.0
SHT-30-AWM-PL	180	180	68	150	158	158	280	96	4	50	20	13.5

Part number	tg	kt	sk	sg	d	T	l2	d2	ha
		±0.1						Standard	
SHT-12-AWM-PL	M8	6.4	10	M6	12	TR10x2	17	TR10x2*	18
SHT-20-AWM-PL	M10	8.6	11	M8	20	TR18x4	26	12h9	23
SHT-30-AWM-PL	M16	12.6	18	M12	30	TR24x5	38	14h9	36

* TR10x2 lead screw end unmachined

delivery time 2–3 days

prices price list online
www.igus.eu/eu/drylinSHT

drylin® SHT | Delivery Program | Trapezoidal Thread

SHTC – Flexible

- High flexibility
- Ideal for 2 carriages
- Maintenance-free dry operation
- 5 types
- Adjustable bearing clearance
- Available accessories ▶ page 1065
- Lead screw nuts are available separately ▶ page 976

drylin E compatible

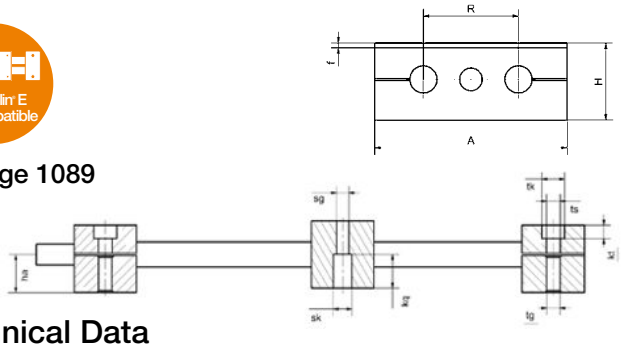
▶ page 1089

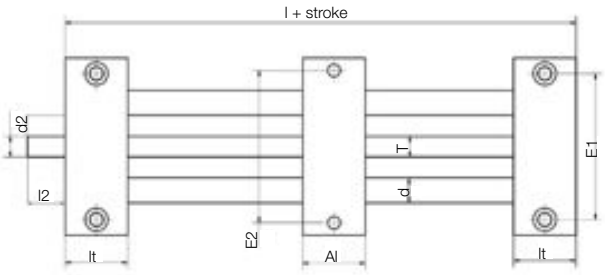
Order key

complete ▶ page 1033

SHTC-12-AWM

Shaft material
Type
Fexibel





Technical Data

Part number	Max. length of stroke	Aluminum shaft		Steel shaft		Max. static load-bearing capacity	
		Weight	Additional (per 100 mm)	Weight	Additional (per 100 mm)	axial	radial
	[mm]	[kg]	[kg]	[kg]	[kg]	[N]	[N]
SHTC-12-AWM	750	0.7	0.1	0.8	0.2	700	2,800
SHTC-20-AWM	1,000	1.9	0.3	2.3	0.6	1,600	6,400
SHTC-30-AWM	1,250	4.6	0.6	5.8	1.4	2,500	10,000
SHTC-40-AWM	1,500	11.0	0.9	16.0	2.4	4,000	16,000
SHTC-50-AWM	1,500	17.0	1.2	26.3	3.5	6,250	25,000

Dimensions [mm]

Part number	A	Al	H	E1	E2	l	R	f	lt	tk	ts	tg
	-0.3	-0.3		±0.15	±0.15				±0.1			
SHTC-12-AWM	85	30	34	70	73	90	42	2	30	11	6.6	M8
SHTC-20-AWM	130	36	48	108	115	108	72	2	36	15	9.0	M10
SHTC-30-AWM	180	50	68	150	158	150	96	4	50	20	13.5	M16
SHTC-40-AWM	230	70	84	202	202	210	122	4	70	20	13.5	M16
SHTC-50-AWM	280	80	100	250	250	240	152	4	80	20	13.5	M16

Part number	kt	sk	sg	kq	d	T	l2	d2	ha
	±0.1							Standard	
SHTC-12-AWM	6.4	10	M6	6.0	12	TR10x2	17	TR10x2*	18
SHTC-20-AWM	8.6	11	M8	7.0	20	TR18x4	26	12h9	23
SHTC-30-AWM	12.6	18	M12	10.6	30	TR24x5	38	14h9	36
SHTC-40-AWM	12.6	20	M16	39	40	TR26x5	45	16	44
SHTC-50-AWM	12.6	20	M16	49	50	TR30x6	50	20	52

* TR10x2 lead screw end unmachined

delivery time 2–3 days

prices price list online
www.igus.eu/eu/drylinSHT

drylin® SHT | Delivery Program | Trapezoidal Thread

SHT-BB - Linear modules with ball-bearing lead screw supports

- Higher speeds
- Higher precision
- Less axial clearance
- Belt drive permits radial loads
- Constant torque
- Freely selectable stroke lengths
- Available accessories
▶ page 1065
- Lead screw nuts are available separately ▶ page 976

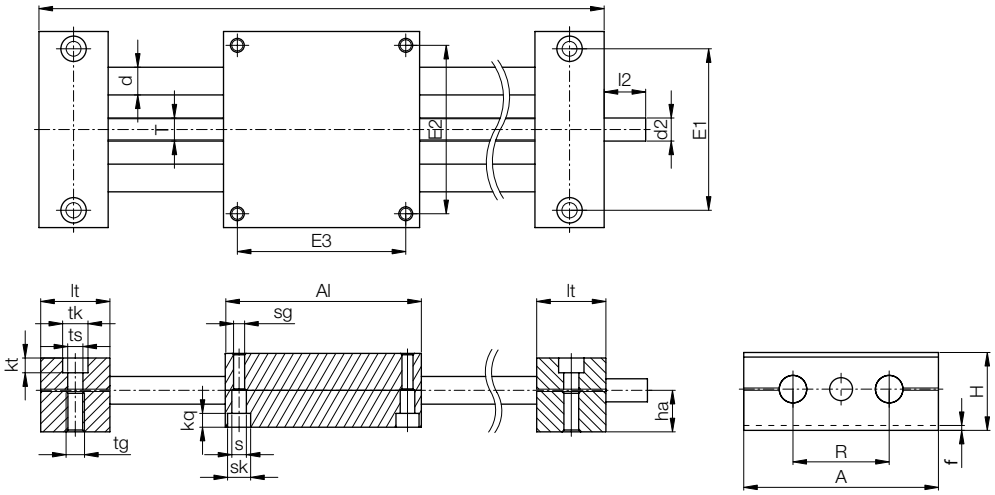
drylin E compatible

▶ page 1089

Order key
complete ▶ page 1033

SHT-BB-12

Pre-loaded, low clearance
Shaft material
Installation size
Type Standard



Technical Data

Part number	Max. length of stroke	Aluminum shaft		Steel shaft		Max. static load-bearing capacity	
		Weight	Additional (per 100 mm)	Weight	Additional (per 100 mm)	axial	radial
	[mm]	[kg]	[kg]	[kg]	[kg]	[N]	[N]
SHT-BB-12	500	0.7	0.1	0.8	0.2	350	1,400
SHT-BB-20	900	1.9	0.3	2.3	0.6	1,000	4,000
SHT-BB-30	1,000	4.6	0.6	5.8	1.4	1,500	6,000

Dimensions [mm]

Part number	A -0.3	Al -0.3	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	R	f	lt ±0.1	tk	ts
SHT-BB-12-AWM-stroke	85	85	34	70	73	73	145	42	2	30	11	6.6
SHT-BB-20-AWM-stroke	130	130	48	108	115	115	202	72	2	36	15	9.0
SHT-BB-30-AWM-stroke	180	189	68	150	158	158	280	96	4	50	20	13.5

Part number	tg	kt ±0.1	s	sk	sg	kq	d	T	l2	d2 Standard	ha
SHT-BB-12-AWM-stroke	M8	6.4	6.3	10	M6	6.0	12	TR10x2	17	TR10x2*	18
SHT-BB-20-AWM-stroke	M10	8.6	6.4	11	M8	7.0	20	TR18x4	26	12 h9	23
SHT-BB-30-AWM-stroke	M16	12.6	11.0	18	M12	10.6	30	TR24x5	38	14 h9	36

* TR10x2 lead screw end unmachined

delivery time 2-3 days

prices price list online
www.igus.eu/eu/drylinSHT

drylin® SHT | Delivery Program | Trapezoidal Thread

SHTS – the fast with steep thread

- Pitch 10 x 12, 10 x 50, 18 x 100
- High-helix lead screw
- High-Speed-Solution
- Maintenance-free dry operation
- Available accessories
  ▶ **page 1065**
- Lead screw nuts are available separately ▶ **page 976**

reddot design award
winner 2006

drylin E compatible

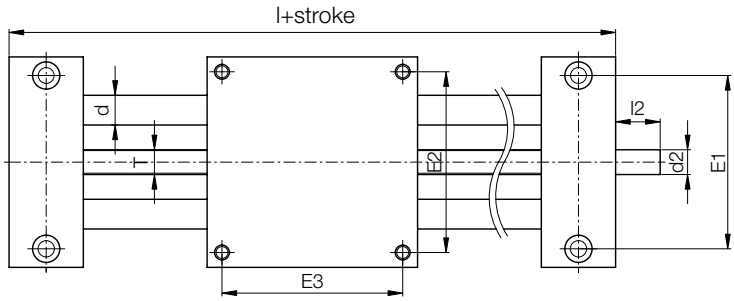
▶ **page 1089**

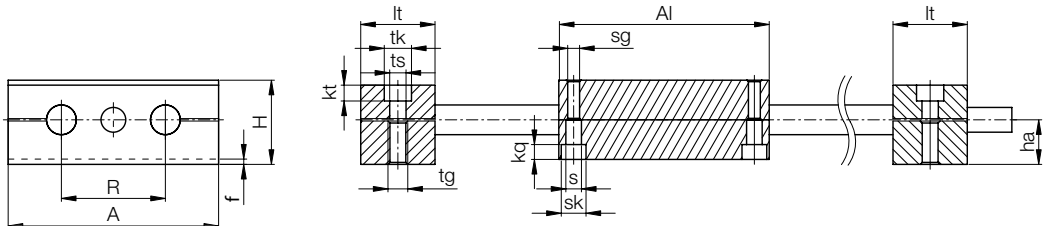
Order key

complete ▶ page 1033

SHTS-12-AWM

- Shaft material
- Dimension
- steep thread
- Type Standard





Technical Data

Part number	Max. length of stroke	Aluminum shaft		Max. static load-bearing capacity	
		Weight	Additional (per 100 mm)	axial	radial
		[kg]	[kg]	[N]	[N]
SHTS-12-AWM	750	1.1	0.1	100	400
SHTS-20-AWM	1,000	3.2	0.3	400	1,600

Dimensions [mm]

Part number	A	Al	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	R	f	lt ±0.1	tk	ts	tg
SHTS-12-AWM	85	85	34	70	73	73	145	42	2	30	11	6.6	M8
SHTS-20-AWM	130	130	48	108	115	115	202	72	2	36	15	9.0	M10

Part number	kt ±0.1	s	sk	sg	kq	d	T	l2	d2 Standard	ha
SHTS-12-AWM	6.4	6.3	10	M6	6.0	12	10 x 50**	17	TR10x50*	18
SHTS-20-AWM	8.6	6.4	11	M8	7.0	20	18 x 100	26	12h9	23

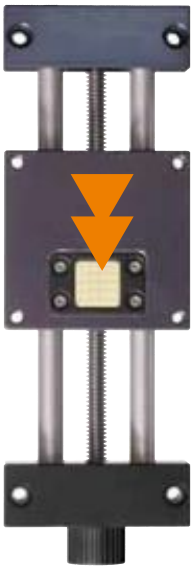
*** TR10x50 lead screw end unmachined; ** alternatively as TR10 x 12 on request**

delivery time **2-3 days**

prices **price list online**
www.igus.eu/eu/drylinSHT

drylin® SHT | Delivery Program | Trapezoidal Thread

SHT-FF – Fast Forward



SHT linear tables with quick release mechanism offer a combination of accurate positioning and quick manual adjustment.

- Aluminum model
- For fast format adjustments
- Including self-locking brake
- Variable stroke length
- Only recommended for horizontal applications
- Max. stat. axial load 200 N (horizontal installation position
- Max. dyn. axial load 50 N
- Available accessories ▶ page 1065

drylin E compatible

▶ page 1089

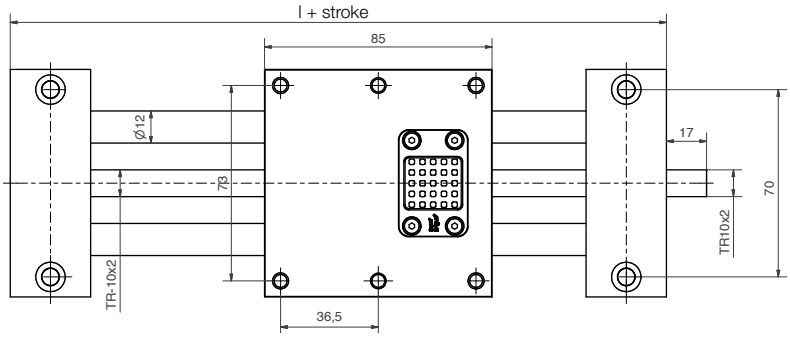
Order key

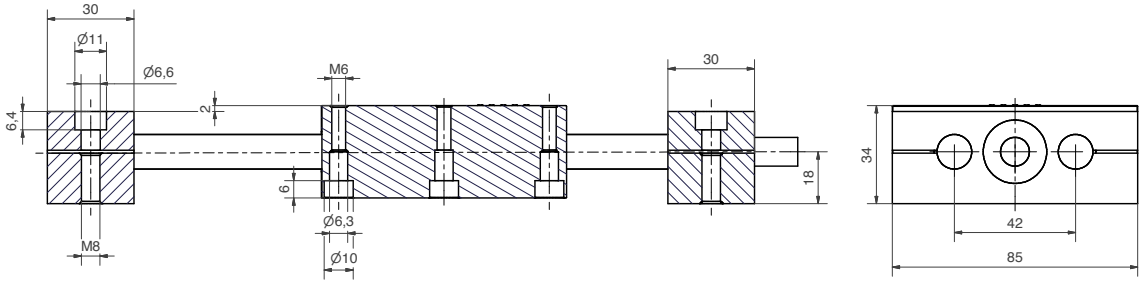
complete ▶ page 1033

SHT-12-AWM-FF

- Fast Forward
- Shaft material
- Type
- Basic

product design award 2011

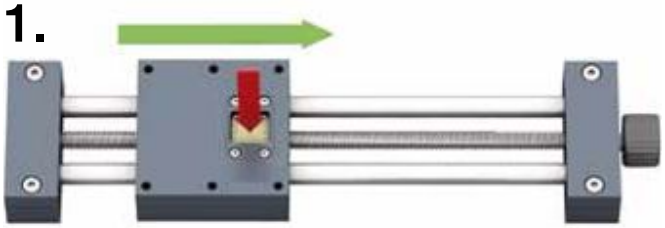




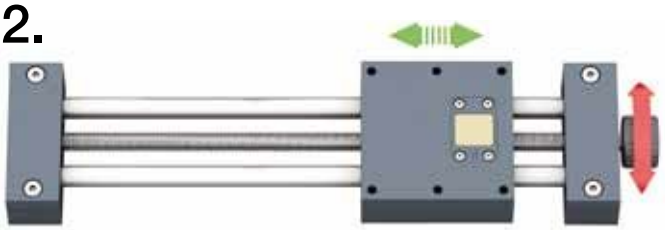
Technical Data

Part number	Max. length of stroke [mm]	Weight [kg]	Additional Weight per 100 mm
SHT-12-AWM-FF	750	1.1	0.1

1.



2.



Press > disengage > move manually > click into place > fine-tune

delivery time 3-8 days

prices price list online
www.igus.eu/eu/drylinSHT

drylin® SHT | Delivery Program | Trapezoidal Thread

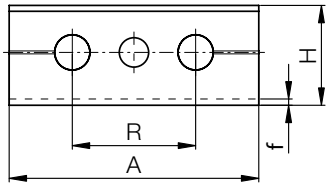
SHT-HTX – High temperature up to +180 °C

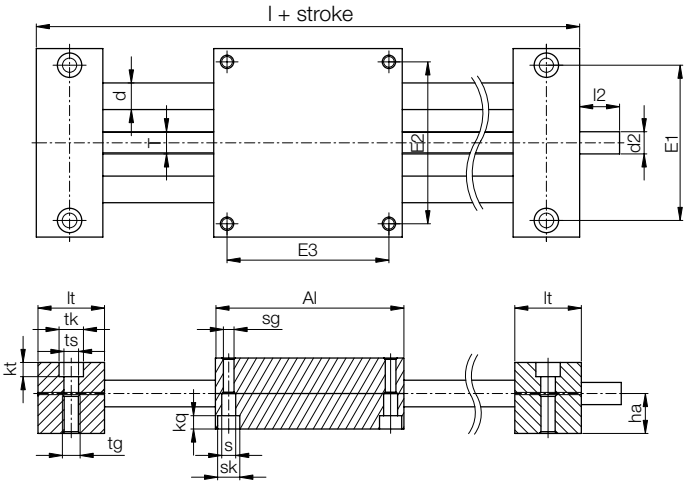
- Shaft and lead screw made of stainless steel, shaft material iglidur® X
- Carriages and shaft ends made of anodized aluminum
- Absolutely lubrication-free
- Available as SHT – Standard; SHTC – Flexible, ideal for two carriages; SHT-XY – the XY-table
- Available accessories ▶ page 1065

Order key
complete ▶ page 1033

SHT-20-EWM-HTX

- High temperature
- Shaft material
- Dimension
- Standard





Technical Data

Part number	Max. length of stroke	Steel shaft		Max. static load-bearing capacity	
		Weight	Additional (per 100 mm)	axial	radial
	[mm]	[kg]	[kg]	[N]	[N]
SHT-12-EWM-HTX	750	1.3	0.2	700	2,800
SHT-20-EWM-HTX	1,000	3.9	0.6	1,600	6,400

Dimensions [mm]

Part number	A	Al	H	E1	E2	E3	l	R	f	lt	tk	ts
	-0.3	-0.3		±0.15	±0.15	±0.15				±0.1		
SHT-12-EWM-HTX	85	85	34	70	73	73	145	42	2	30	11	6.6
SHT-20-EWM-HTX	130	130	48	108	115	115	202	72	2	36	15	9.0

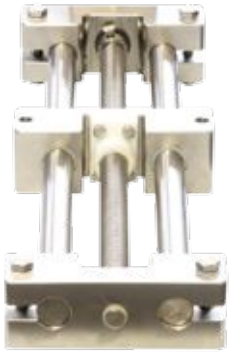
Part number	tg	kt	s	sk	sg	kq	d	T	l2	d2	ha
		±0.1								Standard	
SHT-12-EWM-HTX	M8	6.4	6.3	10	M6	6.0	12	TR 10 x 2	17	TR 10 x 2*	18
SHT-20-EWM-HTX	M10	8.6	6.4	11	M8	7.0	20	TR 18 x 4	26	12 h9	23

* TR 10 x 2 lead screw end unmachined

delivery time 2–3 days

prices price list online
www.igus.eu/eu/drylinSHT

SHTC-HYD – Hygienic design



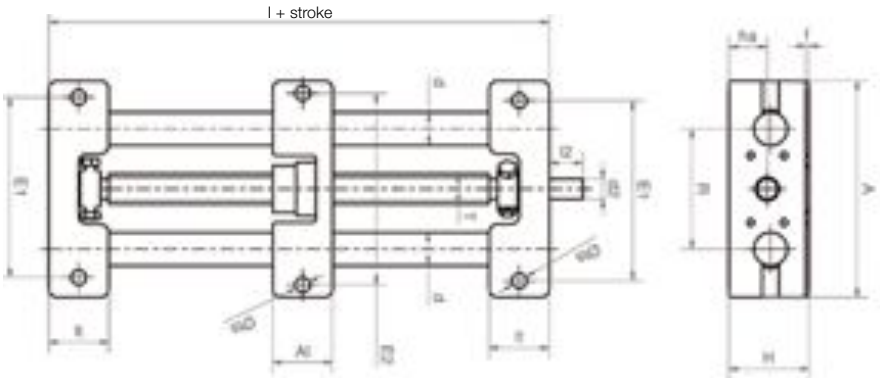
STAIN-LESS STEEL

Order key
complete ▶ page 1033

SHTC-20-EWM-HYD

- Hygienic Design
- Shaft material
- Dimension
- Flexibel

Based on the “hygienic design” idea, this version offers an easily cleaned solution. Even screw connections are designed easily accessible and the gap dimensions accordingly generous. The materials used are plastic and VA stainless steel.



FDA

The lead screw-lift unit can be supplied completely with FDA-approved materials.

Dimensions [mm]

Part number	A	Al	H	E1	E2	l	R	f	lt	ts	d	T	l2	d2	ha
	-0.3	-0.3		±0.15	±0.15										
SHTC-20-EWM-HYD	130	35	48	108	115	108	72	2	36	9.0	20	TR 18 x 4	26	12 h9	23

Available accessories ▶ page 1065

Assembly in combination with following bearing materials:

iglidur® J

Standard up to +90 °C

iglidur® X

for temperatures up to +250 °C

High chemical resistance

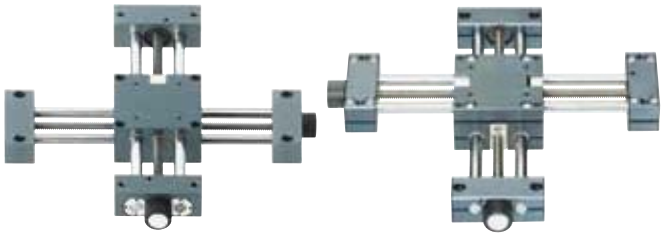
iglidur® A180

for applications with food contact (FDA)

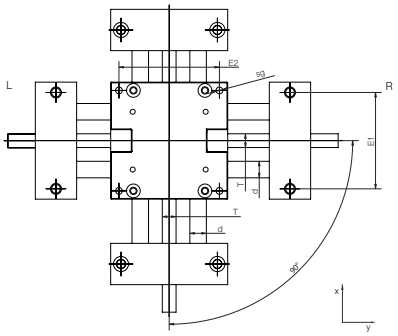
delivery time 8–14 days

prices price list online
www.igus.eu/eu/drylinSHT

SHT – XY-table Standard/Preload



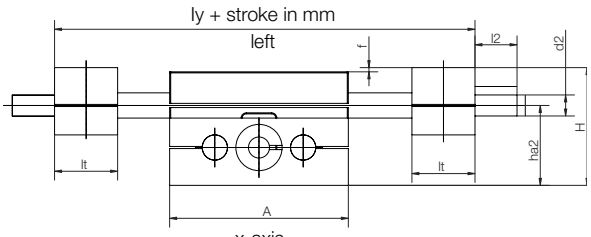
drylin® SHT drylin® SHT-PL

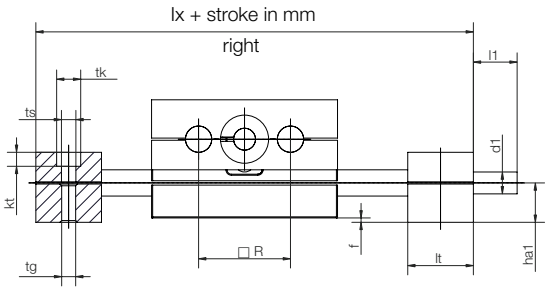


Order key
complete ▶ page 1033

SHT-XY-12-EWM-PL

- Preload (optional)
- Shaft material
- Dimension
- XY-table
- Standard





- High precision, extreme stiffness and accurate alignment due to the single-piece carriage
- Available as standard and preload version
- Lubrication-free and corrosion-resistant
- Adjustments by trapezoidal thread
- Assembly of upper unit with left or right adjustment possible
- Available accessories ▶ **page 1065**

Dimensions [mm]

Part number	A	H	E1	E2	Base length	Base length	R	f	lt	tk	ts	tg	kt
	-0.3		±0.15	±0.15	lx	ly			±0.1				
SHT-XY-12	85	56	70	73	145	145	42	2	30	11	6.6	M8	6.4
SHT-XY-12-PL	85	56	70	73	145	145	42	2	30	11	6.6	M8	6.4
SHT-XY-20-EWM-PL	130	86	108	115	202	202	72	2	36	15	9.0	M10	8.6

Dimensions [mm]

Part number	sg	d	T	l1	d1	d1	l2	d2	d2	ha1	ha2	W
					Standard	Alternative		Standard	Alternative			ha2–ha1
SHT-XY-12	M6	12	TR 10 x 2	17	TR 10 x 2	6 h9	17	TR 10 x 2	6 h9	18	38	20
SHT-XY-12-PL	M6	12	TR 10 x 2	17	TR 10 x 2	6 h9	17	TR 10 x 2	6 h9	18	38	20
SHT-XY-20-EWM-PL	M8	20	TR 18 x 4	26	TR 18 x 4	12 h9	26	12 h9	–	23	63	40

The hand wheel on the y-axis can be ordered fitted to the left or the right side
Left: SHT-Xy-12-AWm-L-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis
Right: SHT-Xy-12-AWm-r-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis

delivery time 4–8 days

prices price list online
www.igus.eu/eu/drylinSHT

drylin® SHT | Order Key

Order key complete System:

SHT-12-AWM-150-HR-ES

Lead screw material
blank: Steel C15 (standard)
ES: Stainless steel 1.4305 (Standard with EWM) AL: Hard anodized aluminum

Additional options
blank: Without extras (standard)
HK: Lead screw clamp
PA: Position indicator
HR: Hand wheel
PL: Preloaded
HTX: High temperature version up to 180 °C
HYD: Hygienic Design
Z: No machining (TR 10 x 2)
FF: Fast Forward

Length of stroke

Shaft material
AWM: Hard anodized aluminum
SWM: Cf53 (1.1213)
EWM: Stainless steel X105 (1.4125)

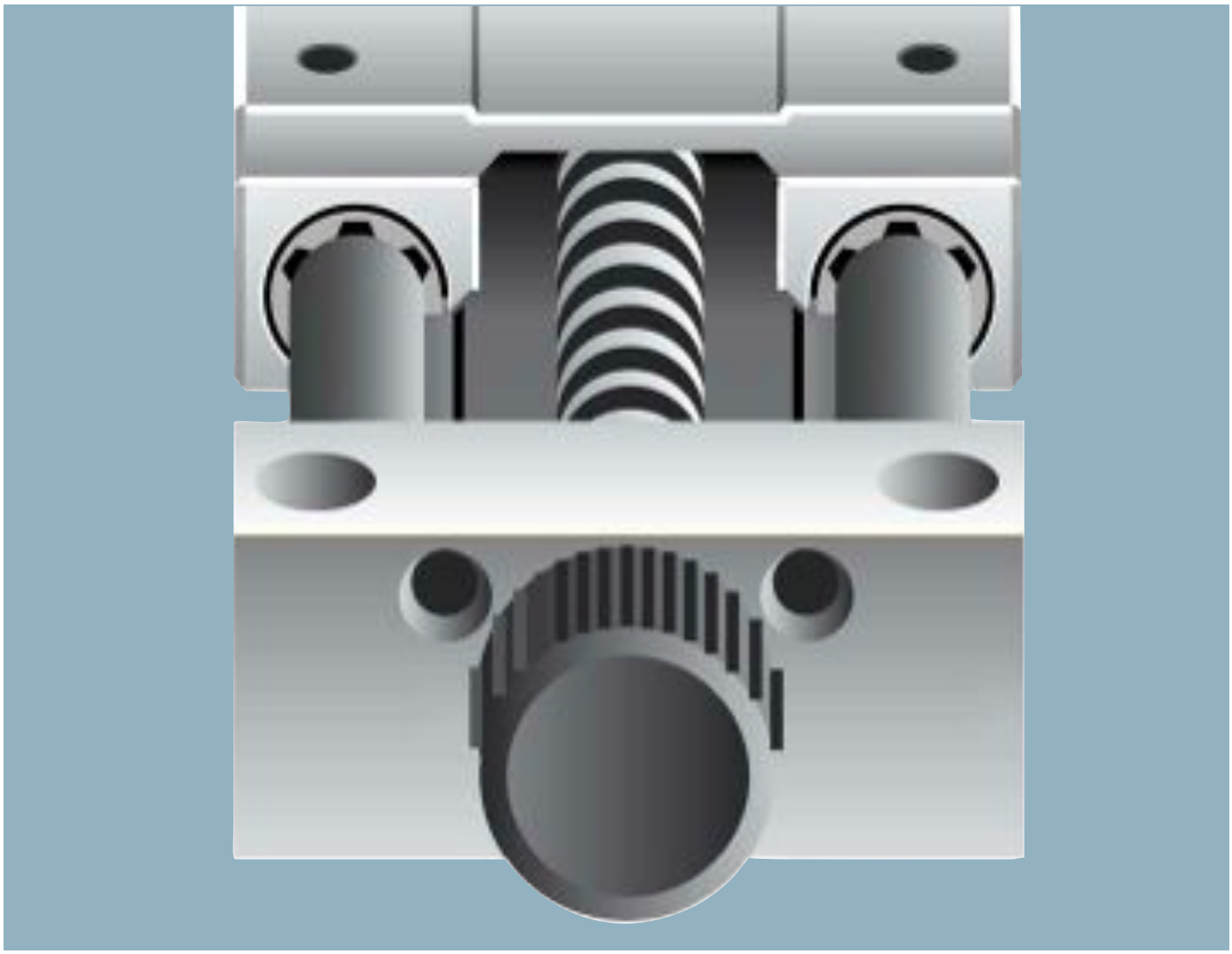
Dimensions
12: Shaft ø 12 mm (SHT, SHTC, SHTS)
20: Shaft ø 20 mm (SHT, SHTC, SHTS)
30: Shaft ø 30 mm (SHT, SHTC)
40: Shaft ø 40 mm (SHTC)
50: Shaft ø 50 mm (SHTC)

Type

SHT:	the Standard
SHT-PL:	with preload
SHTC:	the flexible
SHT-BB:	with ball-bearing mounted lead screw
SHTS:	with high-helix lead screw
SHT-XY:	cross slides

delivery time
with alu shaft AWMP: 2-3 days, with stainless steel shafts or steel shaft SWM: 3 - 8 days

My Sketches

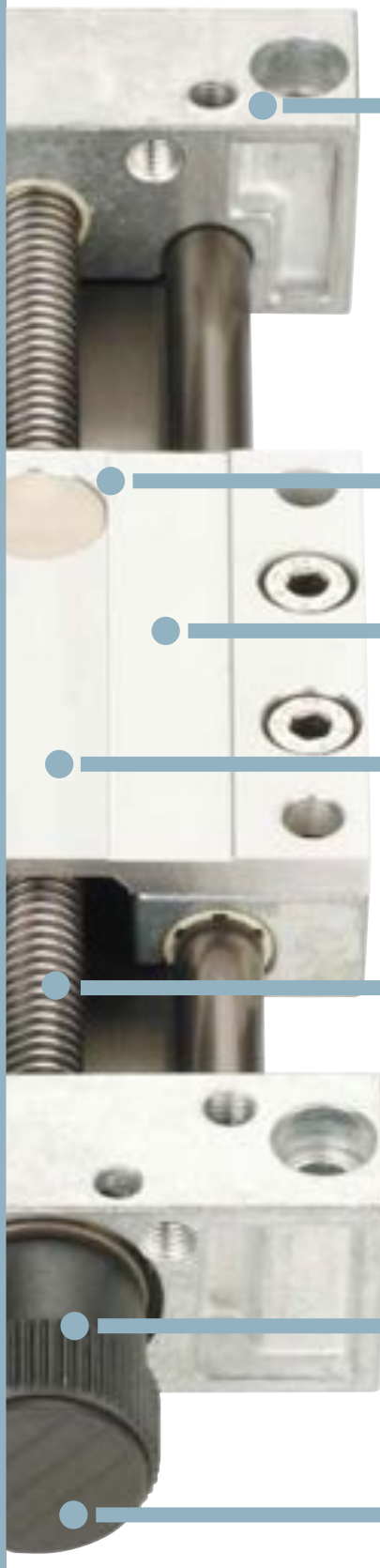


drylin® general drive technology: linear modules SLW

- lubricant-free linear modules based on drylin® W
- torsion-resistant dual shaft sections
- many carriage options
- trapezoidal or high-helix lead screw drives
- suitable for manual and motor-operated adjustments

drylin® SLW | Linear Modules

Extremely torsion-resistant aluminum double shaft profiles and many carriage versions characterize the drylin® W profile guide product line and form a well rounded modular kit for the drylin® SLW linear modules. Extremely low profile attachments are also available as is an extremely robust version. The drylin® SLW linear modules are ideally suited for manual adjustments, but can also be equipped with a motor for electric adjustmentss.



Shaft end supports are made from anodized aluminum or from chromated die-cast zinc

Fully configured carriages with four lubricant-free drylin® W individual bearing housings with mounted drylin® R liners

Mounting plates made from anodized aluminum in various lengths.

Lubricant- and maintenance-free drylin® lead screw nuts

6 trapezoidal thread pitches, 4 high-helix pitches, 2 metric threads

Large range of accessories available ▶ **page 1065**

Can be configured with motor for a ready to install linear axis (drylin® E) ▶ **page 1089**)

drylin® SLW | Product Overview

SLW –Compact

- High torsional stability stiffness, fully supported
- Cost-effective
- Shaft end supports made according to installation size of chromated zinc, anodized aluminum or plastic

▶ **page 1038**

Linear module SLWE-PL “preload”

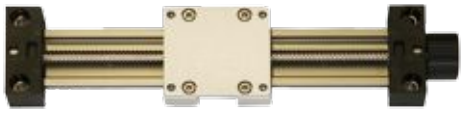
- Absolute freedom from lubricants
- Preloaded trapezoidal nut, preload force: 50 N
- Manually and continuously adjustable radial clearance
- Reduction of the axial clearance

▶ **page 1039**

SLWE-BB - Ball bearing lead screw support

- Lower drive force
- Optimized clearance
- Up to 1,500 rpm (depending on length and load)
- Quiet operation – reduced vibration of the overall system

▶ **page 1040**



Linear module SLWS with lead screw

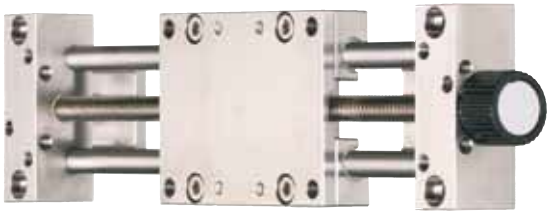
- Flat and compact
- High torsional stability stiffness
- Hard anodized aluminum rail

▶ **page 1041**

Linear module SAW

- Trapezoidal or high helix lead screw
- Threaded drive leasdscrew with ball-bearing
- Rail profile in high design, extremely torsion-resistantf

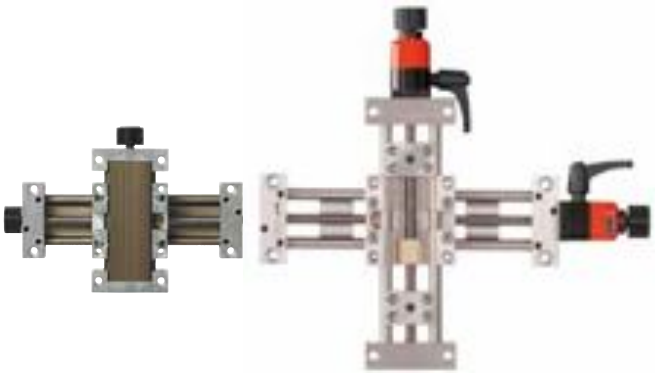
▶ **page 1042**



Linear module SLW – stainless steel version

- With corrosion-resistant steel components
- Bearing material selectable: iglidur® J (standard), iglidur® A180 (according to FDA), iglidur® X (high temperature up to +250 °C)

▶ **page 1043**



Linear modules special designs

- Low cost cross slide solution for manual adjustments
- Optionally available as a pre-loaded version or made from stainless steel
- Lubricant-free and corrosion resistant

▶ **page 1044**

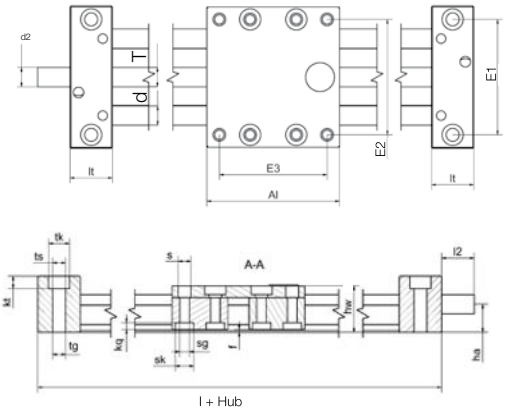
SLW – Compact

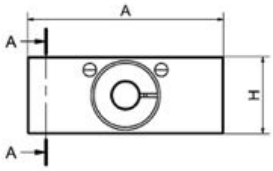
- Flat and compact
- High torsional stability stiffness
- Fully supported
- Hard anodized aluminum rail
- 5 ypes
- Available accessories ▶ **page 1065**
- Lead screw nuts are available separately ▶ **page 977**

Order key
complete ▶ page 1046

SLW-1040

Dimension
Compact





drylin E compatible

▶ page 1089

Technical Data

Part number	Max. length of stroke [mm]	Shaft weight [kg]	Additional (per 100 mm) [kg]	Max. static load-bearing capacity axial [N]	radial [N]	End block material
SLW-0630	300	0.2	0.08	50	200	Plastic
SLW-1040	750	0.7	0.10	700	2,800	Zinc diecasting
SLW-1080	750	0.9	0.20	700	2,800	Aluminum
SLW-1660	750	1.5	0.30	1,200	4,600	Aluminum
SLW-2080	1,000	3.0	0.40	1,600	6,400	Aluminum

Dimensions [mm]

Part number	A -0.3	Al** -0.3	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	hw	f	lt ±0.1	tk	ts	tg
SLW-0630	54	60	20	40	45	51	100	18	1.2	20	11	6.2	–
SLW-1040	74	69	29	60	60	56	113	24	1.5	22	11	6.8	M8
SLW-1080	108	100	29	94	94	87	144	24	1.5	22	11	6.8	M8
SLW-1660	104	100	37	84	86	82	150	35	1.5	25	15	9.0	M10
SLW-2080	134	150	46	116	116	132	206	44	1.5	28	15	8.6	M10

Part number	kt ±0.1	s	sk	sg	kq	d	T	l2	d2 Standard	ha
SLW-0630	8.0	4.5	7.0	M4	2.0	6	M8	15	M8	9.5
SLW-1040	6.4	6.6	9.5	M6	4.4	10	TR10x2	17	TR10x2*	14.5
SLW-1080	6.4	6.6	9.5	M6	4.4	10	TR10x2	17	TR10x2*	14.5
SLW-1660	8.6	9.0	11	M8	5.5	16	TR14x4	20	TR14x4*	18.5
SLW-2080	8.6	9.0	14	M8	5.5	20	TR18x4	26	12h9	23.0

*** lead screw end unmachined; ** Carriages also in 100, 150, 200 and 250 mm lengths available on request**

delivery time 2–3 days

prices price list online
www.igus.eu/eu/drylinSLW

drylin® SLW | Delivery Program | Trapezoidal Thread

SLWE-PL – Preload

drylin E compatible

▶ page 1089

The new preload version drylin® SLWE-PL linear slide table offers an additional benefit to the standard systems. In the preloaded version the axial clearance is adjusted by two trapezoidal nuts. The carriage can be regulated manually.

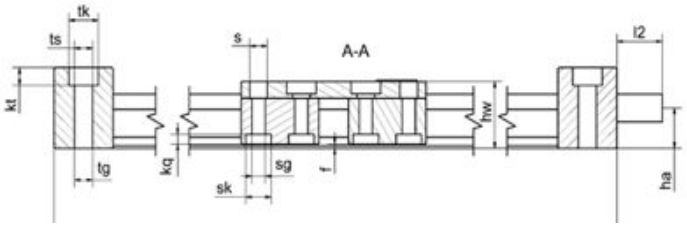
- Flat and compact
- High torsional stability stiffness
- Fully supported
- Hard anodized aluminum rail
- 4 types
- Available accessories ▶ page 1065
- Lead screw nuts are available separately ▶ page 977

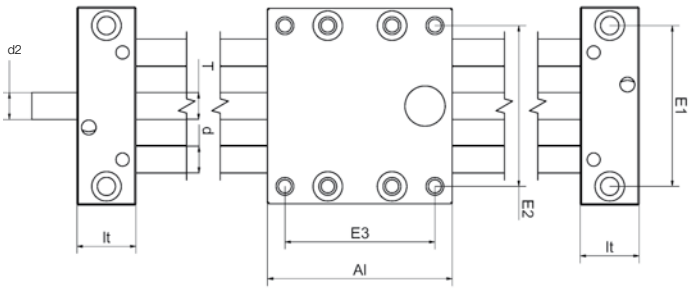
Order key

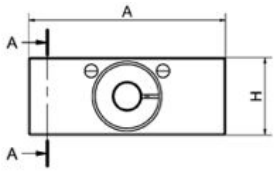
complete ▶ page 1046

SLWE-1040-PL

- Preload
- Dimension
- Adjustable bearing clearance







Technical Data ▶ see SLW on left side

Dimensions [mm]

Part number	A -0.3	Al -0.3	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	hw	f	lt ±0.1	tk	ts
SLWE-1040-PL	74	69	29	60	60	56	113	24	1.5	22	11	6.8
SLWE-1080-PL	108	100	29	94	94	87	144	24	1.5	22	11	6.8
SLWE-1660-PL	104	100	37	84	86	82	150	35	1.5	25	15	9.0
SLWE-2080-PL	134	150	46	116	116	132	206	44	1.5	28	15	8.6

Part number	tg	kt ±0.1	s	sk	sg	kq	d	T	l2	d2 Standard	ha
SLWE-1040-PL	M8	6.4	6.6	9.5	M6	4.4	10	TR10x2	17	TR10x2*	14.5
SLWE-1080-PL	M8	6.4	6.6	9.5	M6	4.4	10	TR10x2	17	TR10x2*	14.5
SLWE-1660-PL	M10	8.6	9.0	11.0	M8	5.5	16	TR14x4	20	TR14x4*	18.5
SLWE-2080-PL	M10	8.6	9.0	14.0	M8	5.5	20	TR18x4	26	12h9	23.0

* lead screw end unmachined; ** Carriages also in 100, 150, 200 and 250 mm lengths available on request

delivery time 2-3 days

prices price list online
www.igus.eu/eu/drylinSLW

SLWE-BB – With ball bearing lead screw supports

- Lower drive force
- Optimized clearance
- Up to 1.500 rpm (depending on length and load
- Quiet operation – reduced vibration of the overall system
- Ball bearings in both shaft end supports
- Available accessories ▶ **page 1065**
- Lead screw nuts are available separately ▶ **page 977**

drylin® E compatible

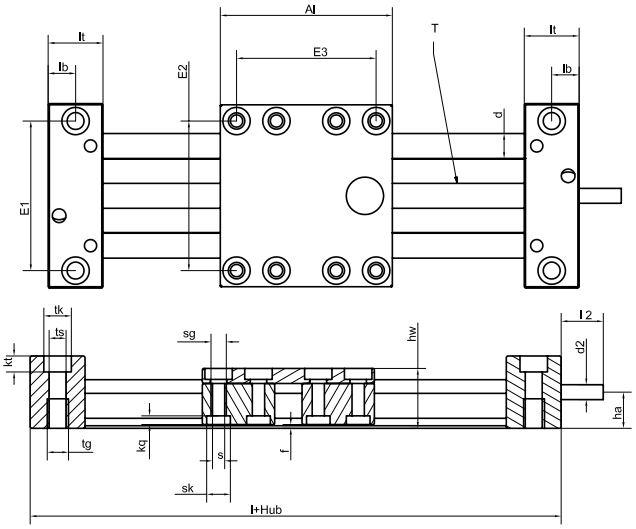
▶ **page 1089**

Order key

complete ▶ page 1046

SLWE-BB-1040

- Dimension
- Ball bearing
- Adjustable
- Compact



Technical Data

Part number		Max. length of stroke [mm]	Weight [kg]	Additional (per 100 mm) [kg]	Max. static load capacity axial [N]	Max. static load capacity radial [N]	Max. rotoation speed [1/min]	Max. feed rate [m/min]
SLW-BB-0630		300	0.25	0.08	100	200	1,000	1.5
SLWE-BB-1040		500	0.90	0.10	500	2,000	1,500	3.0
SLWE-BB-1080	New!	500	1.10	0.20	500	2,000	1,500	3.0
SLWE-BB-1660		750	1.80	0.30	700	2,800	1,500	6.0
SLWE-BB-2080		900	3.30	0.40	1,250	5,000	1,500	6.0

Dimensions [mm]

Part number		A -0.3	Al -0.3	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	hw	f	lt ±0.1	lb	tk	ts	tg
SLW-BB-0630		54	60	20	40	45	51	112	18	1.2	26	14	11	6.2	M8
SLWE-BB-1040		74	69	29	60	60	56	129	24	1.5	30	19	11	6.8	M8
SLWE-BB-1080	New!	108	100	29	94	94	87	144	24	1.5	30	19	11	6.8	M8
SLWE-BB-1660		104	100	37	84	86	82	170	35	1.5	35	22.5	15	9.0	M10
SLWE-BB-2080		134	150	46	116	116	132	230	44	1.5	40	26	15	8.6	M10

Part number		kt ±0.1	sk	sg	kq	s	d	T	l2	d2 Standard	d2*	ha
SLW-BB-0630		8.0	7.0	M4	2.0	4.5	6,0	TR08x1.5	15	TR08x1.5	–	9.5
SLWE-BB-1040		6.4	9.5	M6	4.4	6.6	10	TR10x2	17	TR10x2	6 h9	14.5
SLWE-BB-1080	New!	6.4	9.5	M6	4.4	6.6	10	TR 10x2	17	TR 10x2	6 h9	14.5
SLWE-BB-1660		8.6	11.0	M8	5.5	9.0	16	TR14x4	20	TR14x4	8 h9	18.5
SLWE-BB-2080		8.6	14.0	M8	5.5	9.0	20	TR18x4	26	12 h9	–	23.0

* optionally available configuration with machined lead screw end

drylin® SLW | Delivery Program | Trapezoidal Thread

SLWS – Compact with lead screw

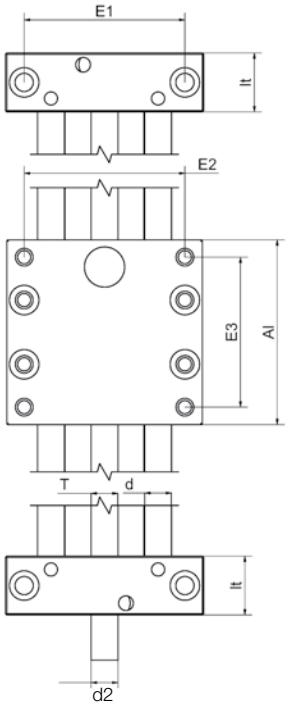
- Pitch 8 x 15 mm
- Flat and compact
- High torsional stability stiffness
- Hard anodized aluminum rail
- Available accessories ▶ **page 1065**
- Lead screw nuts are available separately ▶ **page 977**

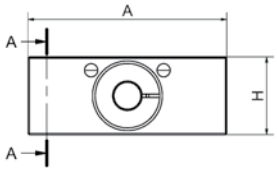
Order key

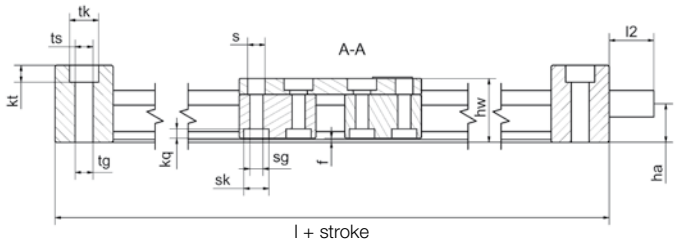
complete ▶ page 1046

SLWS-0630

Dimension
High helix threadTyp
Compact







Technical Data

Part number*	Max. length of stroke	Weight	Additional	Max. static loadbearing capacity	
			(per 100 mm)	axial	radial
		[kg]	[kg]	[N]	[N]
SLWS-0630	300	0.2	0.08	50	200

Dimensions [mm]

Part number	A	Al	H	E1	E2	E3	l	hw	f	lt	tk	ts	tg
	-0.3	-0.3		±0.15	±0.15	±0.15				±0.1			
SLWS-0630	54	60	20	40	45	51	100	17.5	1.2	20	11	6.2	–

Part number	kt	s	sk	sg	kq	d	T	l2	d2	ha
	±0.1									
SLWS-0630	8.0	4.5	7.0	M4	2.0	6	TR8x1,5**	15	8	9.5

* other sizes for SLW-type with high helix thread on request

** alternative M8 or 08x15

delivery time 2-3 days

prices price list online
www.igus.eu/eu/drylinSLW

drylin® SAW | Delivery Program

Linear axis SAW

- Trapezoidal or high helix lead screw
- Threaded drive lead screw, ball-bearing
- Rail profile in high design, extremely torsion-resistant
- High stability
- Cost-effective and 100 % maintenance-free
- Available accessories ▶ page 1065
- Lead screw nuts are available separately ▶ page 977

drylin E compatible

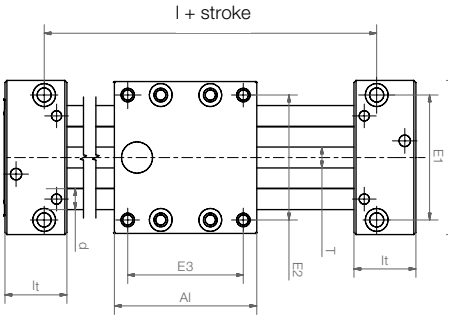
▶ page 1089

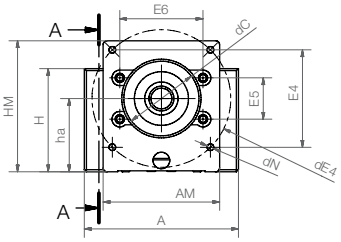
Order key

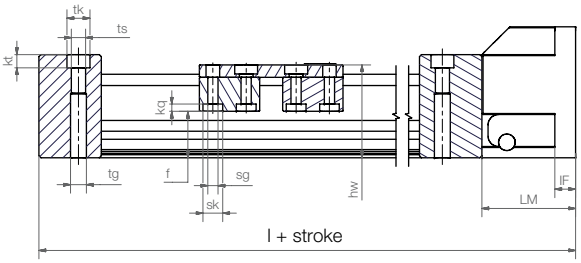
complete ▶ page 1046

SAW-0630

Dimension
Type







Technical Data

Part number		stroke length [mm]	Weight [kg]	Additional (per 100 mm)	Max. speed [U/min.]	Max. static loadbearing capacity axial [N]	radial [N]
SAW-0630		300	0.5	0.1	1,000	100	400
SAW-1040		500	1.0	0.1	1,500	500	2,000
SAW-1660	New!	750	2.8	0.6	1,500	750	3,000

Linear unit – Dimensions [mm]

Part number		A -0.3	Al -0.3	H	E1 +0.15	E2 +0.15	E3 +0.15	l	lc	hw	f	lt ±0.1
SAW-0630		54	60/100	32	40	45	51	112	92	30	13.5	26
SAW-1040		74	69/100/150	50	60	60	56	129	91	45	22.5	30
SAW-1660	New!	104	150	77	84	86	132	220	175	72	38.5	35

Part number		tk	ts	tg	kt ±0.1	sk	sg	kq	d	T Ø	ha
SAW-0630		11	6.6	–	20	–	5	10	5	8	21.5
SAW-1040		11	6.8	M8	6.4	9.5	M6	3.5	10	10	35.5
SAW-1660	New!	15	9.0	M10	8.6	11	M8	5.5	16	14	59.00

delivery time 2-3 days

prices price list online
www.igus.eu/eu/drylinSLW

drylin® SLW | Delivery Program | Trapezoidal Thread

SLW-ES – Stainless steel

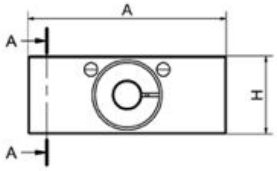
- Stainless steel version with corrosion-resistant steel components (1.4305, 1.4408 or rather 1.4571)
- Choice of bearing material:
  iglidur® J = Standard
  iglidur® A180 = FDA
  iglidur® X = High temperature
- Available accessories
  ▶ page 1065

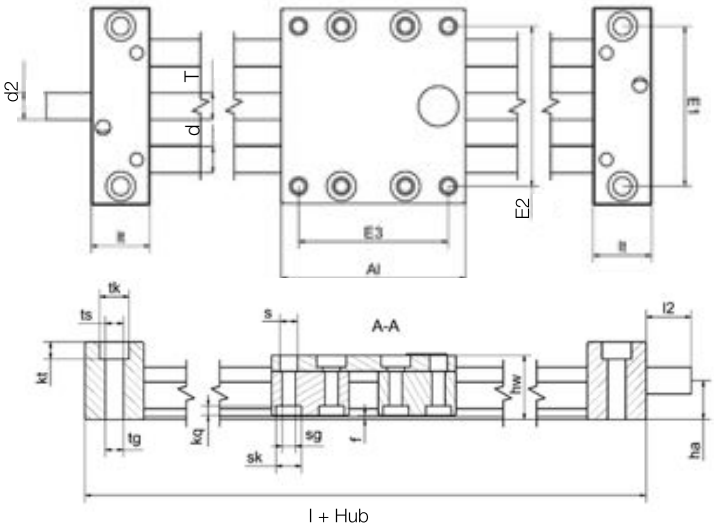
Order key
complete ▶ page 1046

SLW-ESJ-1040

- Dimension
- Bearing material iglidur® J
- Stainless Steel
- Compact

STAIN-LESS STEEL





Technical Data

Part number	Shaft-Ø	Max. stroke length	Weight	Additional (per 100 mm)	Max. static load capacity	
	[mm]	[mm]	[kg]	[kg]	axial [N]	radial [N]
SLW-ESJ-1040	10	750	1.4	0.2	700	2,800
SLW-ESX-1040	10	750	1.4	0.2	700	2,800
SLW-ESA180-1040	10	750	1.4	0.2	700	2,800
SLW-ESJ-2080	20	1,000	5.7	0.64	1,600	6,400
SLW-ESA180-2080	20	1,000	5.7	0.64	1,600	6,400

Dimensions [mm]

Part number	A -0.3	Al -0.3	H	E1 ±0.15	E2 ±0.15	E3 ±0.15	l	hw	f	lt ±0.1	tk	ts	tg
SLW-ES-1040	74	100	29	60	60	87	144	24	1.5	22	11	6.8	M8
SLW-ES-2080	134	150	46	116	116	132	206	44	1.5	28	15	8.6	M10

Part number	kt ±0.1	s	sk	sg	kq	d	T	l2	d2 Standard	ha
SLW-ES-1040	6.4	6.6	9.5	M6	4.4	10	TR10x2	17	TR10x2*	14.5
SLW-ES-2080	8.6	9.0	14	M8	5.5	20	TR18x4	26	12h9	23.0

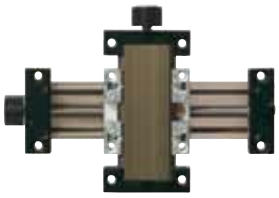
* lead screw end unmachined

delivery time 2-3 days

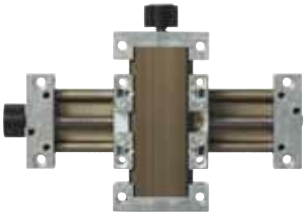
prices price list online
www.igus.eu/eu/drylinSLW

drylin® SLW | Delivery Program | Cross Slide

SLW – compact Xy-table



SLW-XY-0630



SLW-XY-1040

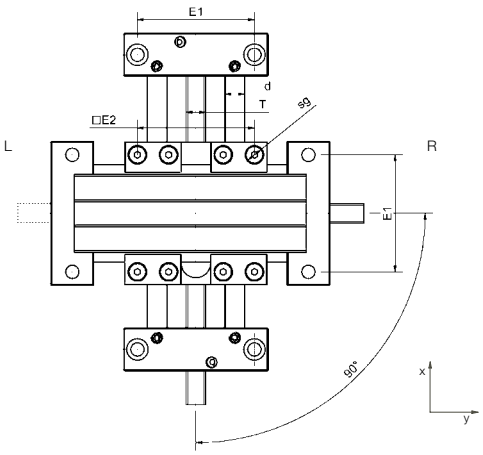
SLW-XY-1080

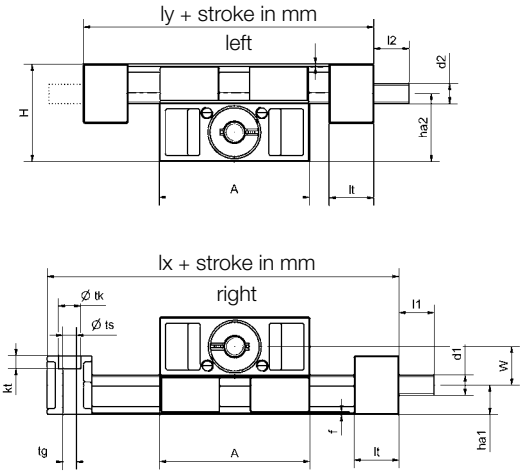
- Low-cost solution for manual adjustments
- Lubrication-free and corrosion-resistant
- Max. stroke length at XY-tables 300 mm
- Preload version SLWEXY-PL also available (optional, sizes: 1040/1080)
- Available accessories ▶ page 1065

Order key
complete ▶ page 1046

SLW-XY-1040-PL

- Preload (optional with size 1040 and 1080)
- Dimension
- XY-table
- Compact





Dimensions [mm]

Part number	A	H	E1	E2	Base length	Base length	f	lt	tk	ts	tg	kt
	–0.3		±0.15	±0.15	lx	ly			±0.1			
SLW-XY-0630	54	37.4	40	45	94	94	1.2	20	11	8	M8	8
SLW-XY-1040	74	48	60	60	118	118	1.5	22	11	6.6	M8	6.4
SLW-XY-1080	108	48	94	94	152	152	1.5	22	11	6.6	M8	6.4

Dimensions [mm]

Part number	sg	d	T	l1	d1	d1	l2	d2	d2	ha1	ha2	W
					Standard	Alternative		Standard	Alternative			ha2–ha1
SLW-XY-0630	M4	5	M8	15	M8	–	15	M8	–	9.5	27.9	18.4
SLW-XY-1040	M6	10	TR 10 x 2	17	TR 10 x 2	6 h9	17	TR 10 x 2	6 h9	14.5	33.5	20
SLW-XY-1080	M6	10	TR 10 x 2	17	TR 10 x 2	6 h9	17	TR 10 x 2	6 h9	14.5	33.5	19

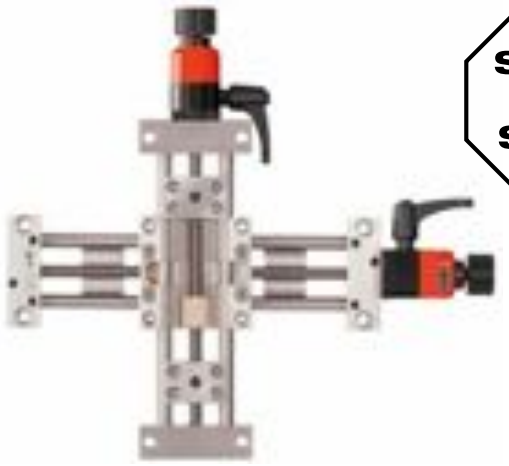
The hand wheel on the y-axis can be ordered fitted to the left or the right side.
Left: SLW-Xy-0630-AWm-L-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis
Right: SLW-Xy-0630-AWm-r-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis

delivery time 2–3 days

prices price list online
www.igus.eu/eu/drylinSLW

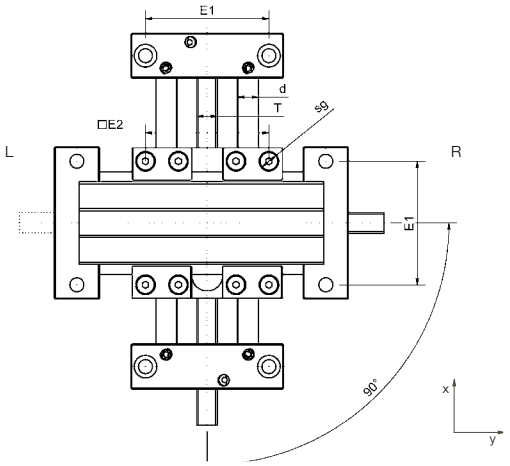
drylin® SLW | Delivery Program | Cross Slide

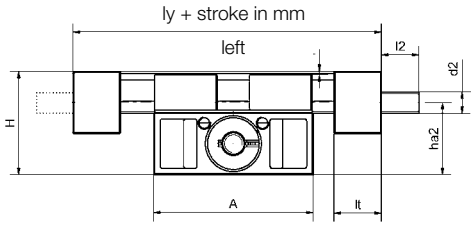
SLW – compact XY-table – stainless steel

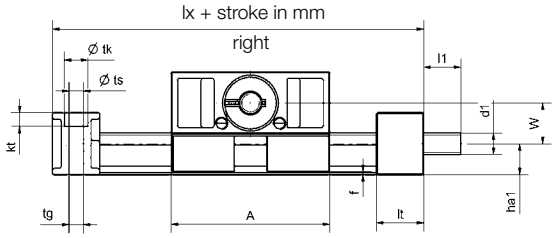


STAIN-LESS STEEL

- For manual adjustments
- Flat and compact
- High torsional stability stiffness
- Complete design with stainless steel 316
- 100 % lubrication-freei
- Chemical- and corrosion-resistant
- Available accessories ▶ page 1065







Dimensions [mm]

Part number	A	H	E1	E2	Base length	Base length	f	lt	tk	ts	tg	kt
	-0.3		±0.15	±0.15	lx	ly			±0.1			
SLW-XY-ESJ-1040	74	48	60	60	118	118	1.5	22	11	6.6	M8	6.4

Dimensions [mm]

Part number	sg	d	T	l1	d1	d1	l2	d2	d2	ha1	ha2	W
					Standard	Alternative		Standard	Alternative			ha2–ha1
SLW-XY-ESJ-1040	M6	10	TR 10 x 2	17	TR 10 x 2	6 h9	17	TR 10 x 2	6 h9	14.5	33.5	19

The hand wheel on the y-axis can be ordered fitted to the left or the right side.
Left: SHT-Xy-ESj-1040-AWm-L-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis
Right: SHT-Xy-ESj-1040-AWm-r-200-300 for 200 mm stroke length on the x-axis and 300 mm on the y-axis

delivery time 8–14 days

prices price list online
www.igus.eu/eu/drylinSLW

drylin® SLW | Order Key

Order key complete System:

SLW-1040-AWM-150-HR-ES

Lead screw material
- blank: Steel C15 (standard)
- ES: Stainless steel 1.4305 (Standard with EWM)
- AL: Hard anodized aluminum

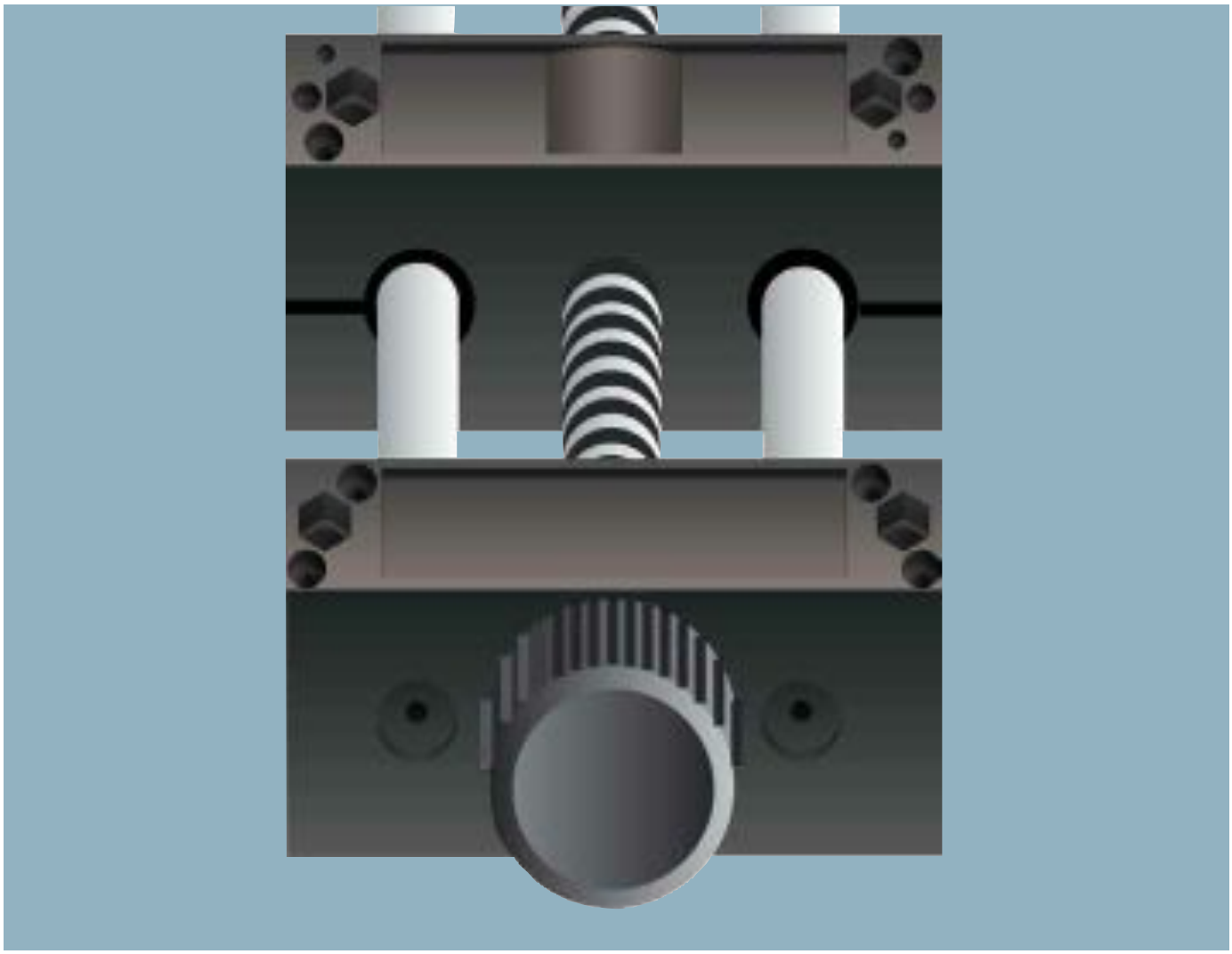
Additional options
- blank Without extras (standard)
- HK: Lead screw clamp
- PA: Position indicator
- HR: Hand wheel
- PL: Preloaded
- Z: No machining (TR 10 x 2)
- WT: V-drive

Length of stroke in mm

Shaft material
- AWM: hartanodisiertes Aluminum

Dimensions
- 0630: Shaft ø 6 mm, Br. 30 mm (SLW, SLWS)
- 1040: Shaft ø 10 mm, Br. 40 mm (SLW, SLWE)
- 1080: Shaft ø 10 mm, Br. 80 mm (SLW, SLWE)
- 1660: Shaft ø 16 mm, Br. 60 mm (SLW, SLWE)
- 2080: Shaft ø 20 mm, Br. 80 mm (SLW, SLWE)

Type
- SLW: Standard
- SLWE-PL: with preload
- SLWE-BB: lead screw with ball bearing
- SLWS: with high pitch lead screw
- SAW: high design
- SLW-ES: stainless steel version
- SLW-XY: cross slides

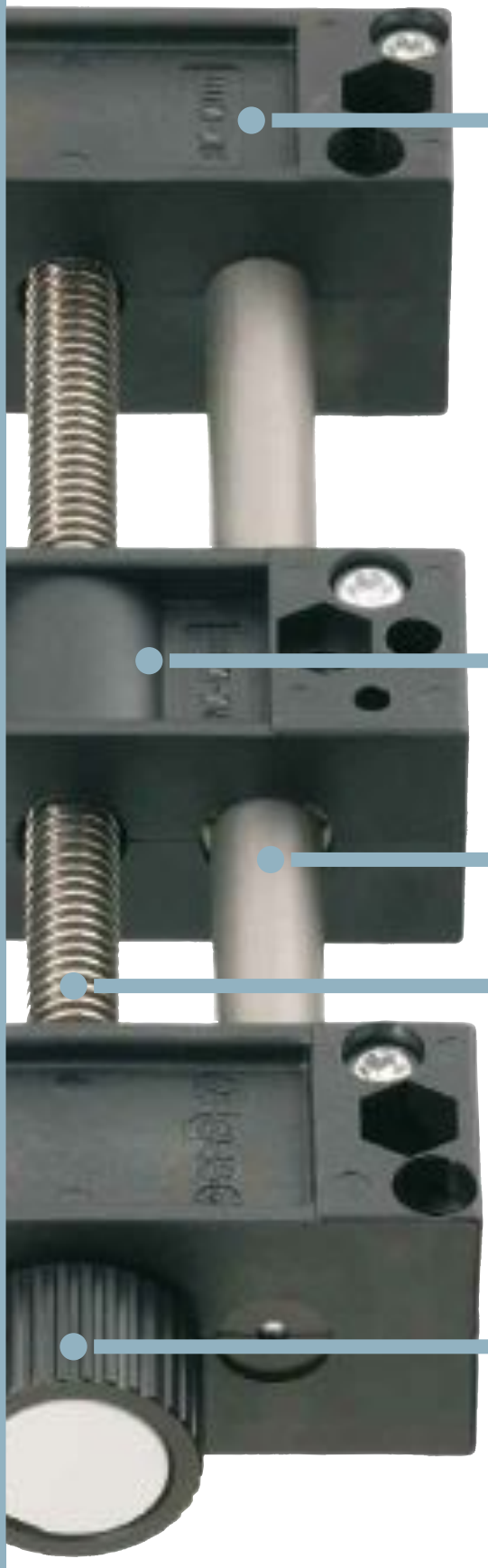


drylin® general drive technology: linear modules “light” SHTP

- Completely lubricant-free linear modules
- Lightweight
- Low priced
- Corrosion-resistant

drylin® SHTP | Linear Modules “Light”

The drylin® SHTP series is characterized by the weight reducing use of solid plastic components as shaft end supports and carriages. This inexpensive alternative with many optional accessories is suited for simple motion control tasks, such as sensor motion control.



Shaft blocks from corrosion-resistant, robust plastic

Plastic guide carriages are available with threads integrated into the housing, and also with completely lubricant-free drylin® R liners and drylin® trapezoidal lead screw nuts

3 Shaft materials

lead screws (trapezoidal thread 10x2, metrical thread M8) made of C15 or stainless steel.

Large range of accessories available ▶ **page 1065**

drylin® SHTP | Delivery Program | Trapezoidal Thread

SHTP mini – Small and low-cost – Solid plastic

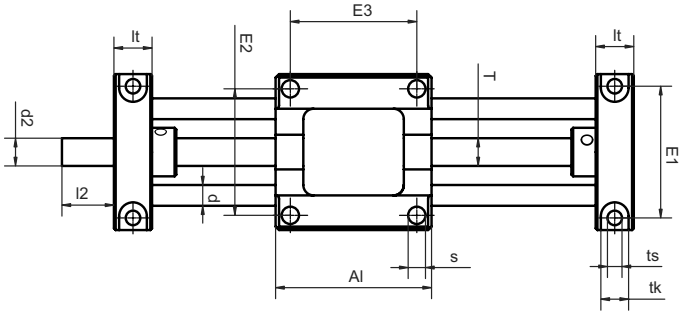
- Miniature version
- Very low weight
- Very low price
- Corrosion resistant
- Carriages and shaft end supports made of high performance polymers
- Available accessories

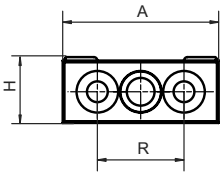
▶ page 1065

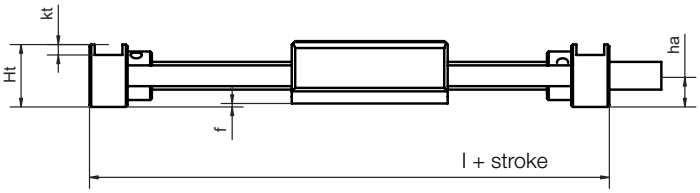
Order key

SHTP-01-06-AWM

- Shaft material
- Dimension
- Type
- SHT-Polymer







Technical Data

Part number	Max. length of stroke	Aluminum shaft		Max. static load-bearing capacity		more Information
		Weight	Additional [kg]	axial	radial	
	[mm]	[kg]	(per 100 mm)	[N]	[N]	
SHTP-01-06-AWM	300	0.11	0.06	50	50	Carriage, square, with four symmetrical mounting bores

Dimensions [mm]

Part number	A	Al	H	Ht	E1	E2	E3	l	R	f	lt	tk	ts
SHTP-01-06-AWM	45	45	19	18	38	36.5	36.5	67	25	1	11	8	42

Part number	s	d	T	l2	d2*	ha
SHTP-01-06-AWM	5.1	6	M8	15	M8	9

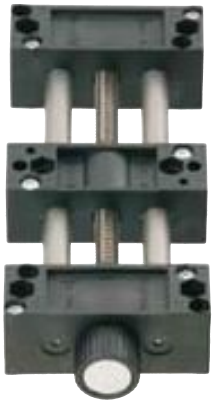
*** Standard versions supplied with lead screw end unmachined**

delivery time 2–3 days

prices price list online
www.igus.eu/eu/drylinSHTP

drylin® SHTP | Delivery Program | Trapezoidal Thread

SHTP – Economical – Solid plastic



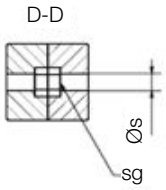
- Solid polymer design
- Low weight
- Cost-effective
- Corrosion-resistant
- Available accessories

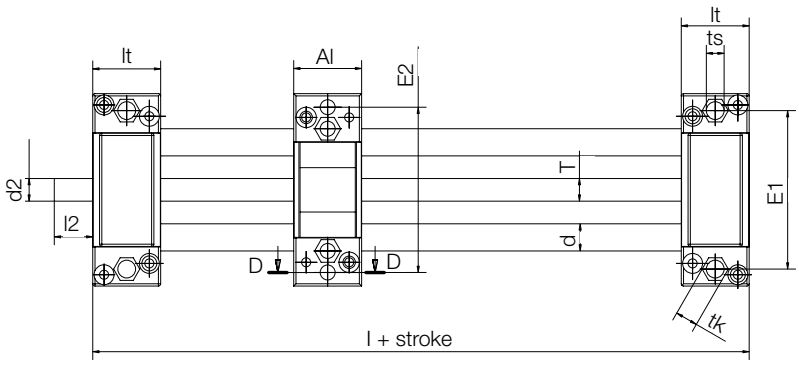
▶ page 1065

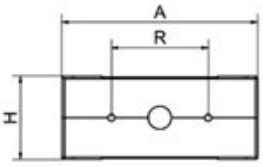
Order key

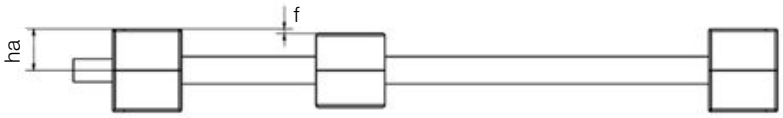
SHTP-01-12-AWM

- Shaft material
- Dimension
- Type
- SHT-Polymer









Technical Data

Part number	Max. stroke	Aluminum shaft		More Information
		Weight	Additional [kg]	
	[mm]	[kg]	(per 100 mm)	
SHTP-01-12	500	0.35	0.11	Liners and trapezoidal lead screw nut made of iglidur® J
SHTP-02-12	500	0.35	0.11	Bearing and nut integrated into the carriage

Dimensions [mm]

Part number	A	Al	H	E1	E2	l	R	f	lt	tk	ts
									±0.1		+0.15
SHTP-01-12	85	30	36	70	73	90	42	2	30	10	6.0
SHTP-02-12	85	30	36	70	73	90	42	2	30	10	6.0

Part number	s	sg	d	T	l2	d2*	ha	Max. static load-bearing capacity	
								axial	radial
								[N]	[N]
SHTP-01-12	6.3	M6	12	TR 10 x 2	17	TR 10 x 2	18	200	400
SHTP-02-12	6.3	M6	12	TR 10 x 2	17	TR 10 x 2	18	200	800

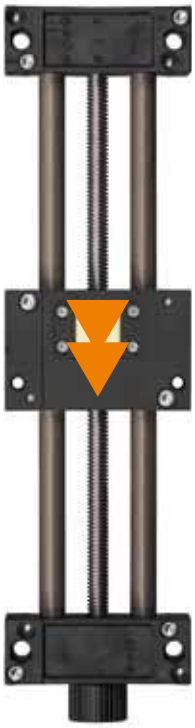
* Standard versions supplied with lead screw end unmachined

delivery time 2–3 days

prices price list online
www.igus.eu/eu/drylinSHTP

drylin® SHTP | Delivery Program | Trapezoidal Thread

SHTP-FF – Fast Forward



SHTP linear tables with quick release mechanism offer a combi- nation of accurate positioning and quick manual adjustment.

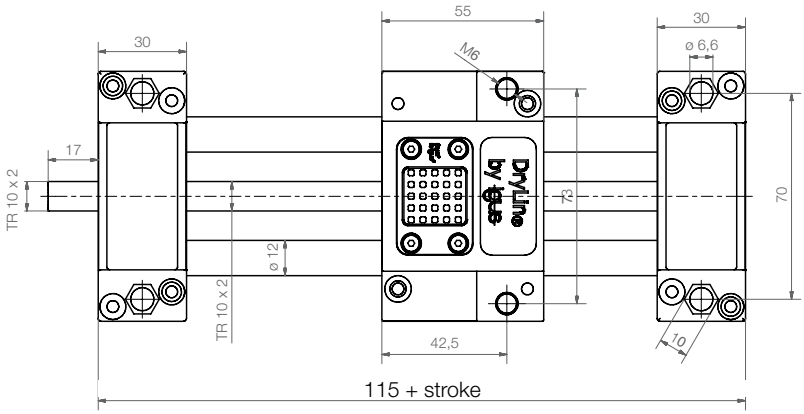
- Light solid polymer model
- For fast format adjustments
- Including self-locking brake
- Variable stroke length
- Only recommended for horizontal applications
- Max. stat. axial load 200 N
- Max. dynamic. axial load 50 N
- Available accessories

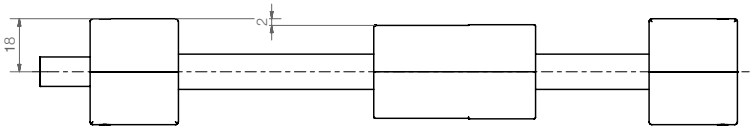
▶ page 1065

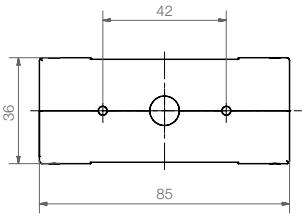
Order key

SHTP-01-12-AWM-FF

- Fast Forward
- Shaft material
- Dimension
- Type
- SHT-Polymer





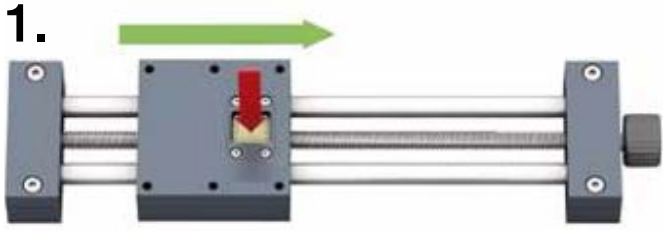


Technical Data

Part number	Max. length of stroke [mm]	Weight [kg]	Additional Weight (per 100 mm)
SHTP-01-12-AWM-FF*	500	0.35	0.11

* Liners and trapezoidal lead screw nut made of iglidur® J

1.



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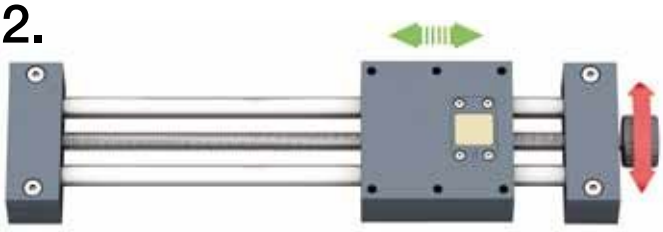
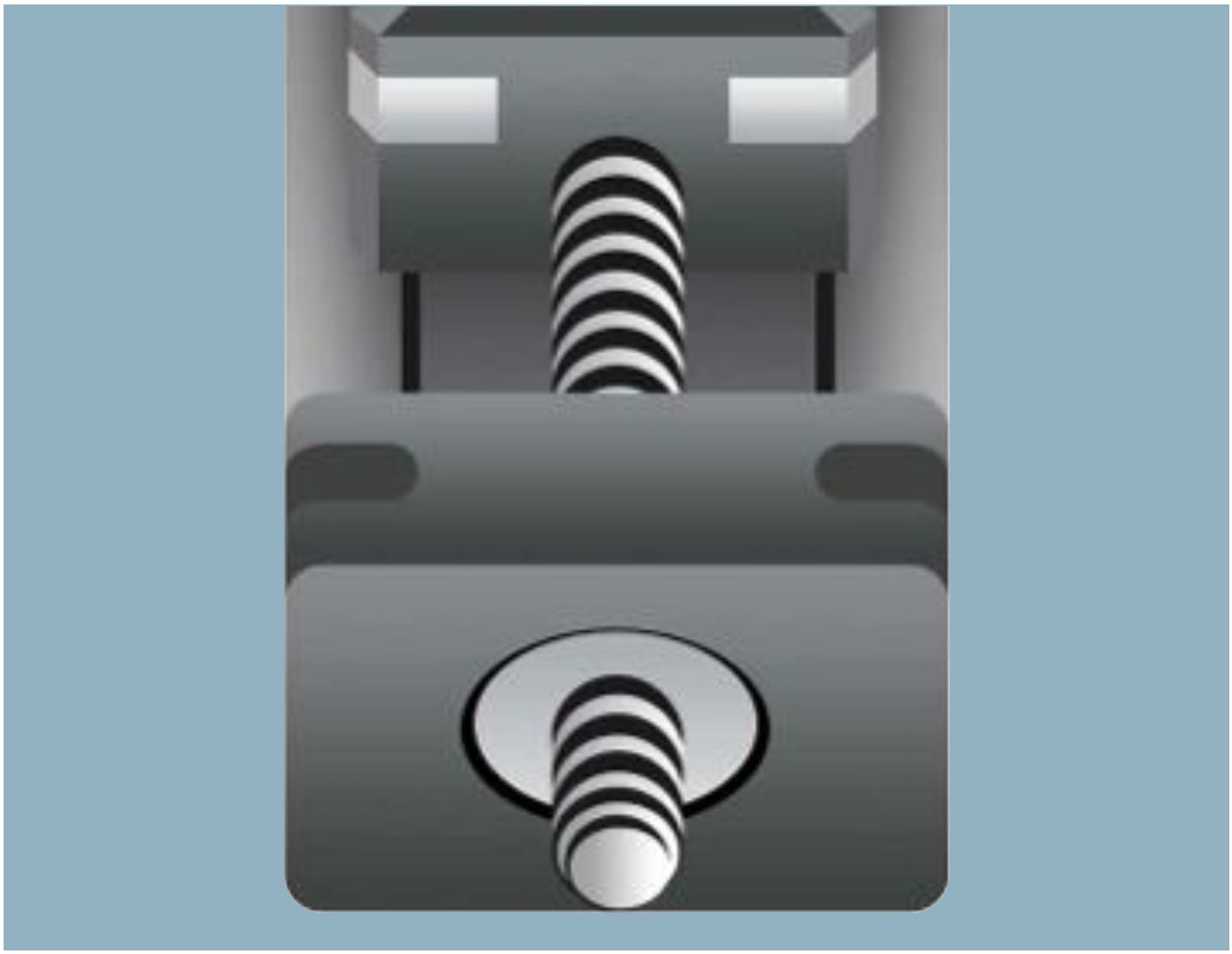


Press > disengage > move manually > click into place > fine-tune

delivery time 8–14 days

prices price list online
www.igus.eu/eu/drylinSHTP

My Sketches



drylin® general drive technology: low profile linear modules SLN

- Small and compact
- Based on system drylin® N size 27
- 100 % lubrication-free
- Manual and motorized operation

New in this catalog!

drylin® SLN | Miniatur Linear Modules

drylin® N linear axes provide a solution for restricted installation space. The axis measures 28x22 mm and is available with stroke lengths up to 250 mm. Due to the plastic glides, the axis runs extremely quietly and smoothly. The base of the axis is formed by the proven drylin® N system at installation size 27. It can be combined with a NEMA 11 step motor. The completely lubricant-free operation is implemented by polymer plain bearings in the lead screw supports and the carriages.

Shaft blocks from corrosion-resistant, robust plastic

Carriages made from plastics, adjustable height clearance

Metal mounting threads

Guiding rail made from anodized aluminum

Lead screws made from stainless steel with pitch M5 or 5x5 high helix thread

Large range of accessories available ▶ **page 1065**

Configurable with motor as a ready to install linear axis (drylin® E ▶ **page 1089)**

drylin® SLN | Delivery Program

SLN Miniatur Linear Module

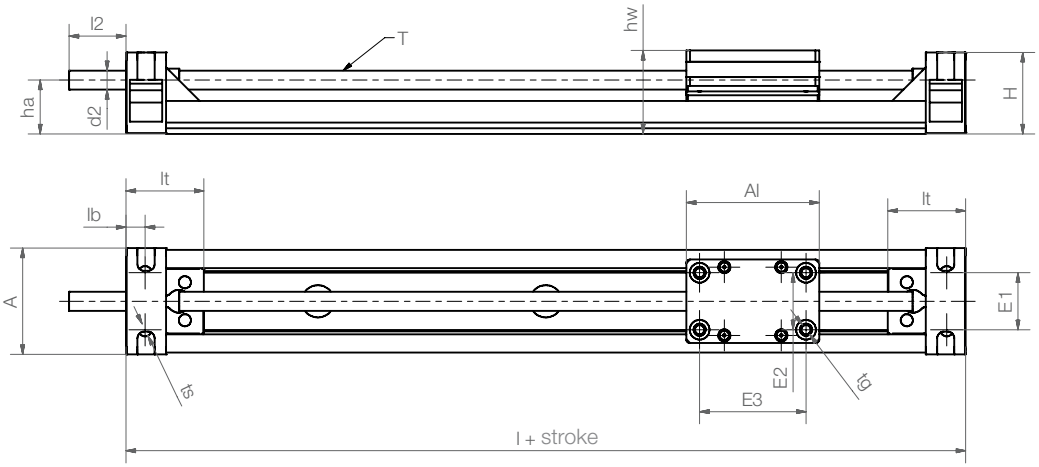
- Small and compact
- Based on drylin® N size 27
- 100% lubrication-free
- Polymer plain bearings
- Manual and motorized operation possible
- Available accessories

▶ page 1065

Order key

SLN-27-01

- Version
  - 01: manual
  - 02: with motor
- Dimension
- Type



drylin® E compatible

▶ page 1089

Technical Data

Part number		Max. length of stroke	Weight	Additional	max. stat. load-bearing capacity		max. Speed	max. drive torque
				[kg]	axial	radial		
		[mm]	[kg]	(per 100 mm)	[N]	[N]	[U/min]	[Nm]
SLN-27-01	New!	250	0.06	0.04	10	40	300	0.1

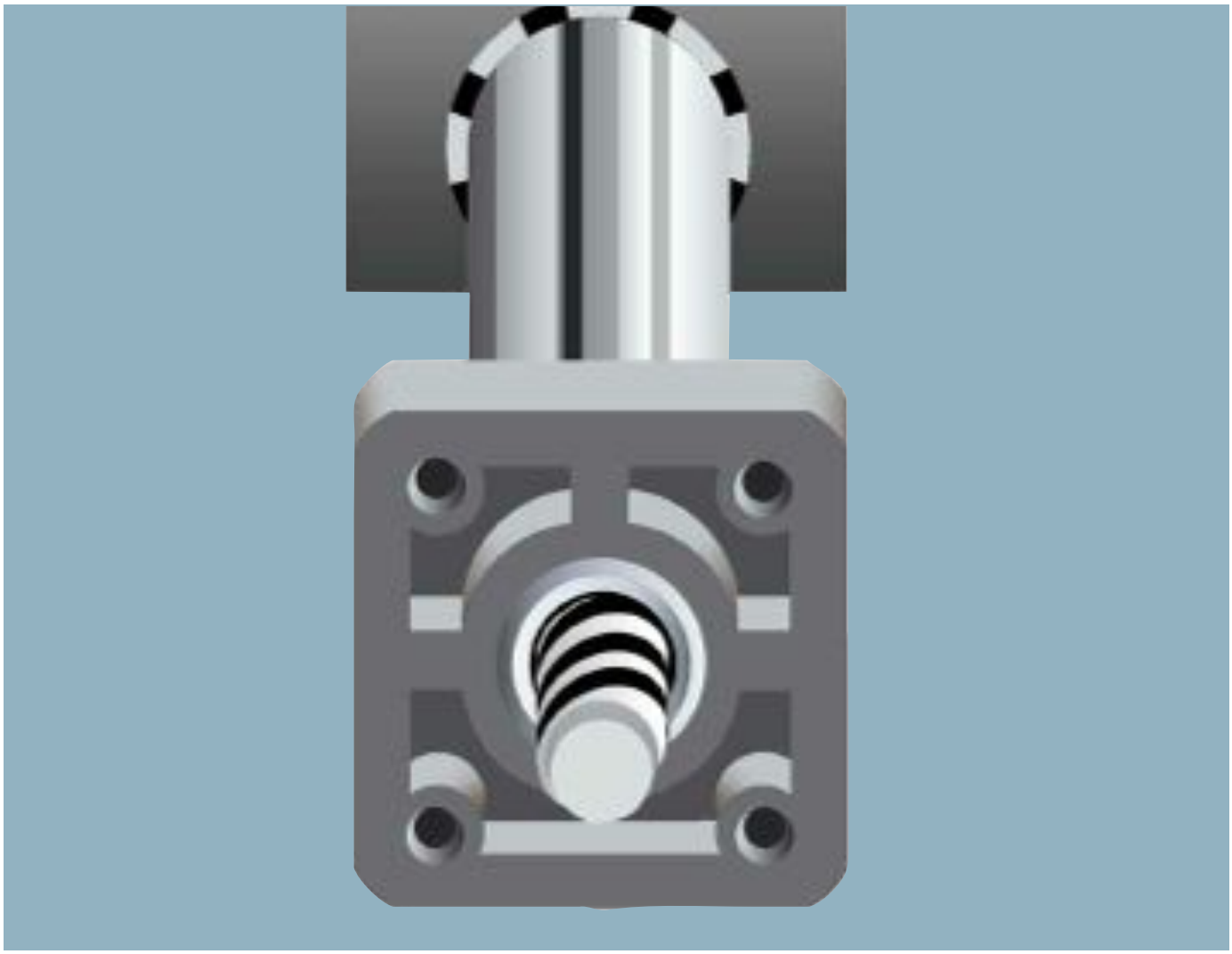
Dimension [mm]

Part number		A	Al	H	E1	E2	E3	l	hw	lt	lb	ts	tg	T / d2	l2	ha
		±0.2	-0.1	±0.2	±0.15	±0.15	±0.15		±0.2	±0.2						
SLN-27-01	New!	28	35	21.5	15	15	28	76	22	20.2	5	3.5	M3	M5	15	14

delivery time **from stock**

prices **price list online** www.igus.eu/eu/drylinSLN

My Sketches

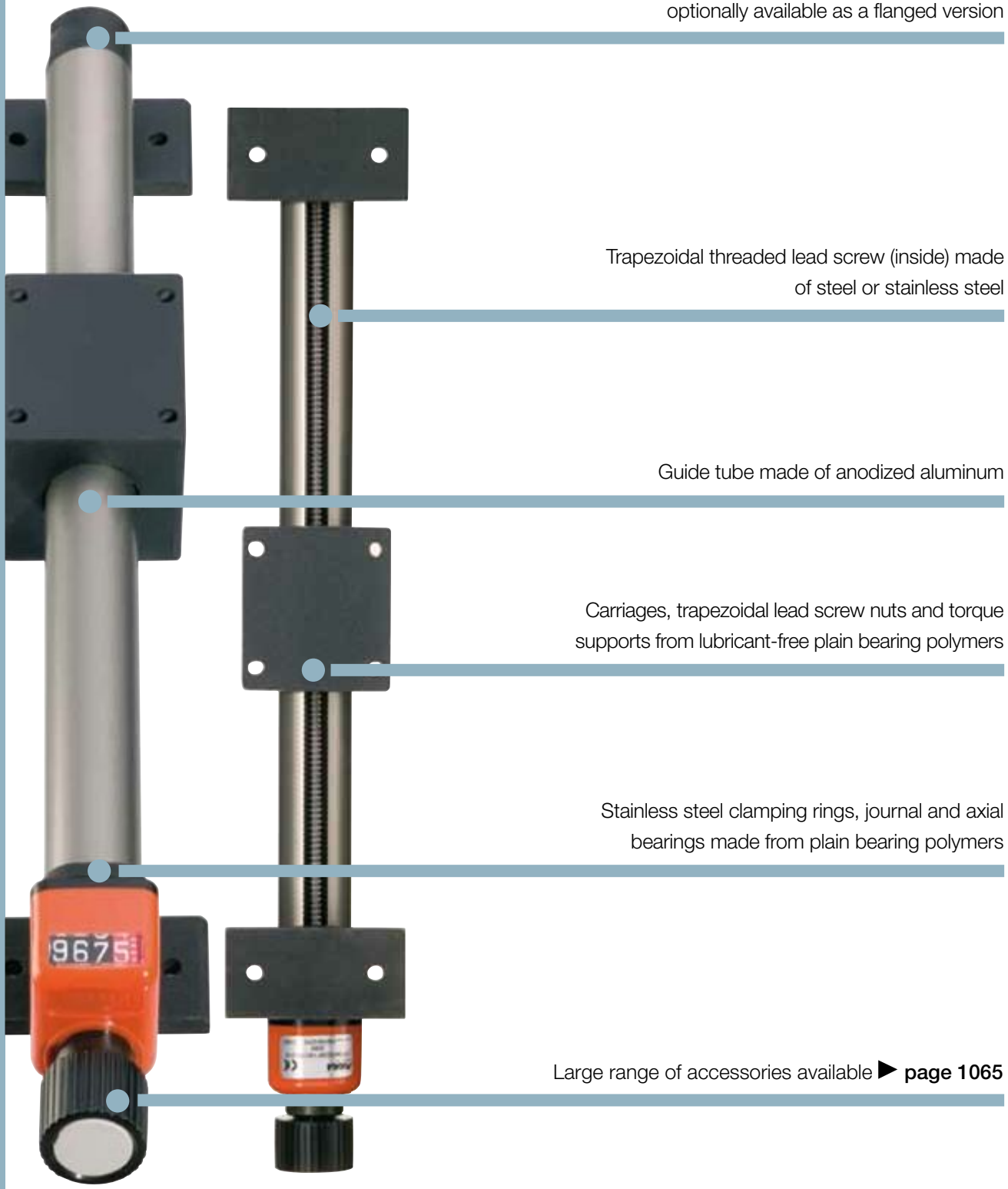


drylin® general drive technology: SET easytube

- Absolute freedom from lubricants
- Corrosion-resistance
- Low weight through aluminum and stainless steel
- Temperature resistance up to +50 °C
- Extensive accessories
- simple, smooth design

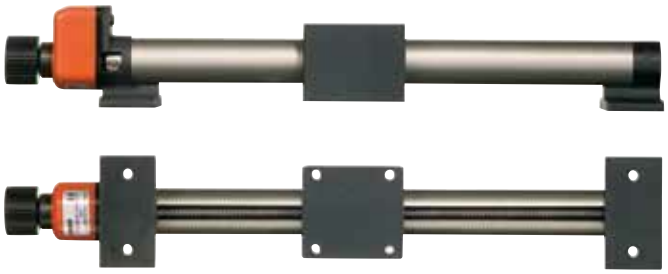
drylin® SET | Easytube

The new linear unit for easy adjustment functions is characterized by a simple but effective and solid structure. A complete system is built up from few components. The outer anodized aluminum tube guides the carriage/s and at the same time protects the trapezoidal lead screw and lead screw nut from external influences. Carriage, torque support and trapezoidal lead screw nut in one component and are made of a special plain bearing high-performance polymer. This guarantees freedom from lubrication with simultaneously low coefficient of friction and optimal wear rates. The iglidur® bearing materials are also used in the axial bearings of the lead screw.



drylin® SET | Delivery Program

easytube



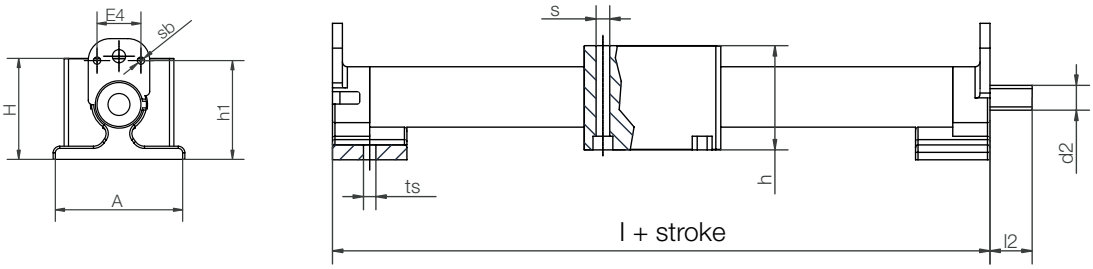
Order key

SET-25-AWM

- Shaft material
- Dimension
- easytube

drylin® SET easytube for light duty motion control with interior lead screw.

- Totally lubrication-free
- Corrosion-free version with stainless lead screw
- Low weight due to aluminum and plastic
- Temperature resistance up to +60 °C
- Extensive accessories ▶ **page 1065**



Technical Data

Part number	Max. length of stroke	Aluminum shaft		Max. static loadbearing capacity	
		Weight shaft end supports and carriage	Additional (per 100 mm)	axial	radial
		[kg]	[kg]	[N]	[N]
SET-12-AWM	200	0.05	0.03	10	20
SET-25-AWM	750	0.15	0.12	150	300
SET-30-AWM	850	0.20	0.21	200	400

Dimensions [mm]

Part number	A	Al	H	E1	E2	E3	E4	l	h	h1	lt	ts	s	sb	l2	d2
SET-12-AWM	30	30	23.5	20	20	20	_	60	22	_	15	3.3	4.2	_	10	M4*
SET-25-AWM	60	55	44	40	40	40	20	115	39	45	30	5.2	5.2	M4	17	TR10x2*
SET-30-AWM	80	55	49	60	40	40	20	125	39	50	35	6.5	5.2	M4	20	TR12x3*

*** lead screw end unmachined**

delivery time **2–3 days**

prices **price list online**
www.igus.eu/eu/drylinSET

drylin® SET | Delivery Program

easytube with Flange

drylin® SET easytube as flanged version for axial mounting

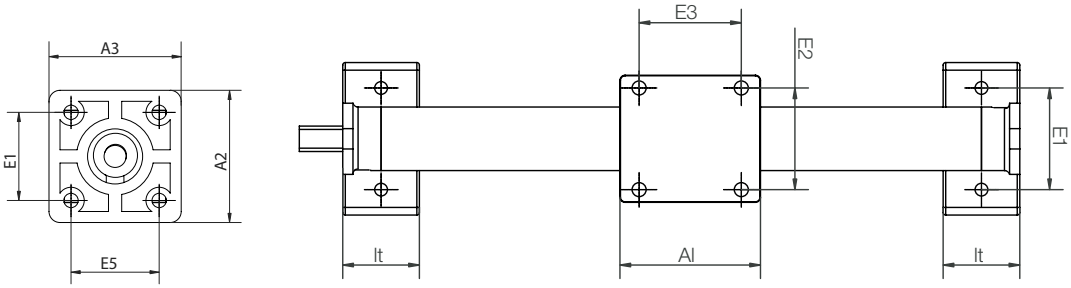
- Lubricant-free
- Simple, smooth design according to specifications of our customers
- Available accessories

▶ page 1065

Order key

SET-25-AWM-F

- Flange (optional)
- Shaft material
- Dimension
- easytube



Technical Data

Part number	Max. length of stroke	Aluminum shaft		Max. static loadbearing capacity	
		Weight shaft end supports and carriage	Additional (per 100 mm)	axial	radial
		[kg]	[kg]	[N]	[N]
SET-25-AWM-F	750	0.15	0.12	150	300
SET-30-AWM-F	850	0.20	0.21	200	400

Dimensions [mm] – Flange version

Part number	A2	A3	H	E1	E2	E3	E5	l	h	lt	ts	s	l2	d2
SET-25-AWM-F	60	60	49	40	40	40	40	117	39	30	5.2	5.2	27	TR10x2*
SET-30-AWM-F	80	60	59	60	40	40	40	125	39	35	6.5	5.2	30	TR12x3*

* lead screw end unmachined

delivery time 2-3 days

prices price list online
www.igus.eu/eu/drylinSET

drylin® SHT | Delivery program

easytube with scaling

Order key

SETM-25-AWM-200-SC

- Scaling
- Stroke length
- Shaft material
- Dimension
- manuell without lead screw (optional)
- easytube

drylin® SET easytube with lasered, wash-proof scale

- Totally lubrication-free
- Corrosion-resistant
- Continuously clamped
- Available with/without scaling
- Three stroke lengths available from stock: 200, 400 and 600 mm

Technical Data		
F radial	**N**	300
Max. extension at maximum load	**mm**	66
Max. extension at nominal load 100 N	**mm**	200
Max. shifting force without load	**N**	10
Max. holding strength	**N**	100
Max. stroke length	**mm**	600

Part number with scaling without lead screw	Part number with scaling and trapezoidal lead screw 10 x 2	Stroke length [mm]
SETM-25-AWM-200-SC	**SET-25-AWM-200-SC**	200
SETM-25-AWM-400-SC	**SET-25-AWM-400-SC**	400
SETM-25-AWM-600- SC	**SET-25-AWM-600-SC**	600

Dimensions see ▶ page 1059

delivery time **2-3 days**

prices **price list online**
www.igus.eu/eu/drylinSHT

New in this catalog!

drylin® SET | Delivery Program

easytube inserted on one side

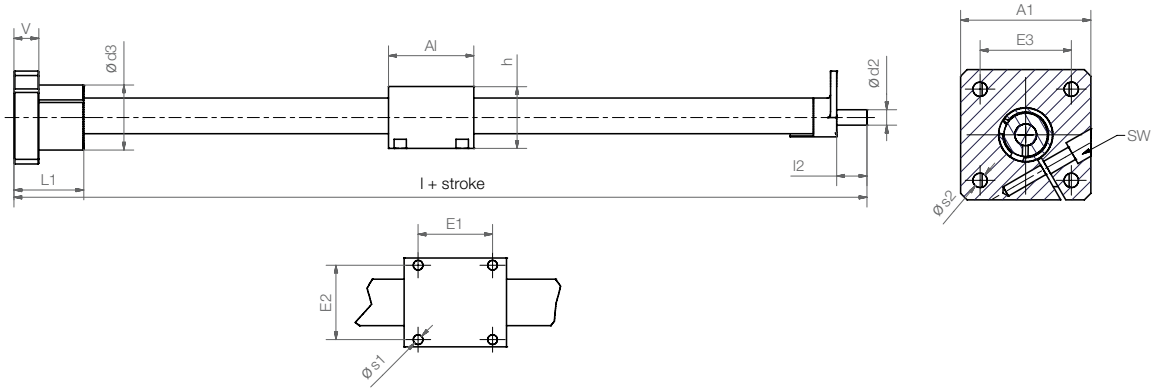
The new carrier flange enables the horizontal and vertical installation of the easytube on one side. Ideal for the positioning of sensors and cameras in format adjustments.

- Easy to handle
- Flexible installation
- Space saving
- Lubrication-free inside lead screw

Order key

SETB-25-AWM

- Shaft material
- Dimension
- easytube



Technical Data

Part number	Max. length of stroke	Max. static loadbearing capacity	
		axial	radial at arm
	[mm]	[N]	[N]
SETB-25-AWM	300	150	12.5

Dimensions [mm]

Part number	A1	Al	h	E1	E2	E3	V	L1	l2	d2	d3	l max.	s1	s2	SW
SETB-25-AWM	60	55	39	40	40	42	16	45	17	TR10x2*	42	147	5.2	6.6	5

* lead screw end unmachined

More dimensions on request

Lieferzeit 2-3 days

prices price list online
www.igus.eu/eu/drylinSET

weight-optimized carriage option

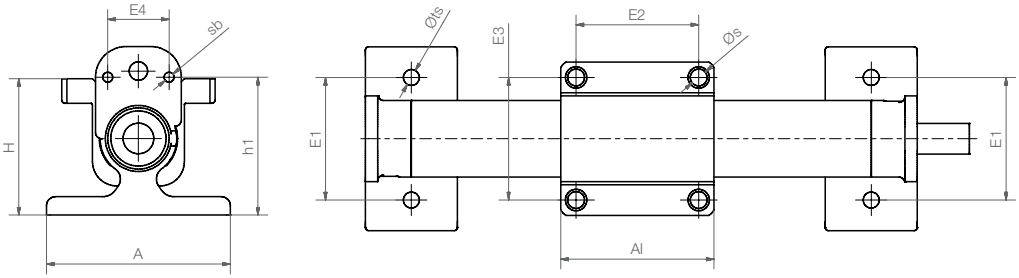
The weight-optimized carriage option of the SET-25 for all cost-sensitive adjustment movements.

- Reduce weight and costs
- Simplified seld assembly
- Light, clean and low noise

Order key

SETC-25-AWM

- Shaft material
- Dimension
- easytube



Technical Data

Part number	Weight	Max. length of stroke	Max. static loadbearing capacity	
			axial	radial
	[kg]	[mm]	[N]	[N]
SETC-25-AWM	0.15	750	150	300

Dimensions [mm]

Part number	A	Al	H	E1	E2	E3	E4	l Max.	h1	lt	ts	s	sb	l2	d2
SETC-25-AWM	60	55	44	40	40	40	20	115	45	30	5.2	5.2	M4	17	TR10x2*

* lead screw end unmachined

More dimensions on request

delivery time 2-3 days

prices price list online
www.igus.eu/eu/drylinSET

My Sketches

Accessories for drylin® drive technology

- Absolute freedom from lubricants
- Cursor for reproducible settings
- Hand wheels in many versions
- Lead screw clamps
- Angular drives for customized operating directions

drylin® Drive Technology | Accessories

An extensive list of accessories is available for many drylin® drive units to perform manual adjustments quickly and conveniently. When directly configuring the linear unit with the order, the units are shipped completely assembled. Any subsequent reconfiguration may result in the lead screw having to be exchanged because the lead screw ends may be too short.

Hand wheels in many versions (diameter, types of handles, ...)

Cursors are available for various pitches, readouts and counting directions

A lead screw clamp secures the lead screw against unintentional movement

Angular drives for continuously adjustable operation

drylin® Drive Technology | Accessories

Position Indicator

- Analog cursor for adjusting and direct read-out of the carriage position for the lead screw unit
- All available reduction bushing are included in the product line

▶ page 1068

Lead screw Clamp

- For a clamping of the threaded lead screw
- Provides a mechanical brake to the lead screw
- Material: plastic housing with aluminum shaft clamp

▶ page 1069

Hand Wheel

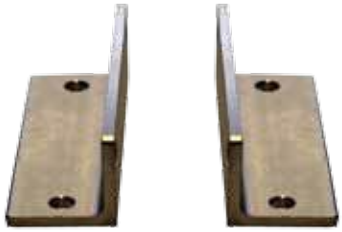
- Hand wheel: defined standard for complete systems
- Different outer-diameters available
- Different handles available

▶ page 1069

V-drive

- 360° s continuously adjustable
- Fixing of setting angle with clamp
- Small flange saves installation space

▶ page 1070



Angle kit

- Angle kit for series SHT
- For 3-axis-systems XYZ
- Material: Stainless Steel
- 2 different sizes (12 and 20)

▶ page 1072

Flexshaft

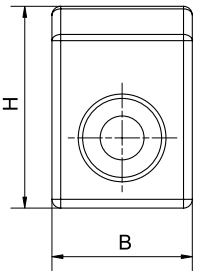
- Optional offset operation of the drylin® linear modules
- Operating elements can be positioned independently
- Available in length 500 and 1,000 mm
- Can be combined with other accessories,

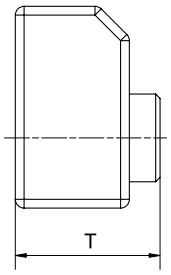
▶ page 1073

drylin® Drive Technology | Accessories

Position indicator

To keep downtime to a minimum and make adjustments quickly and precisely, the cursor is used to create reproducible values. These can be shipped from stock for almost any linear unit in the matching pitch, in the desired counting and viewing direction and in a variety of colors.





- Plastic digital indicator for adjustment and direct reading of slide position
- 4-digit counter (red digit indicates tenths))
- Can be combined with hand clamps and hand wheels
- Reduction sleeves included

Order key

SHT-P3-A-2-DX-O

- Housing colour
  - O = Orange (Standard)
- Direction of rotation
  - DX =clockwise
  - SX = anti clockwise
- Pitch
- Display orientation
- Size
- Standard

Installation possibilities

0 degrees | 90 degrees | 180 degrees | 270 degrees

Display orientation

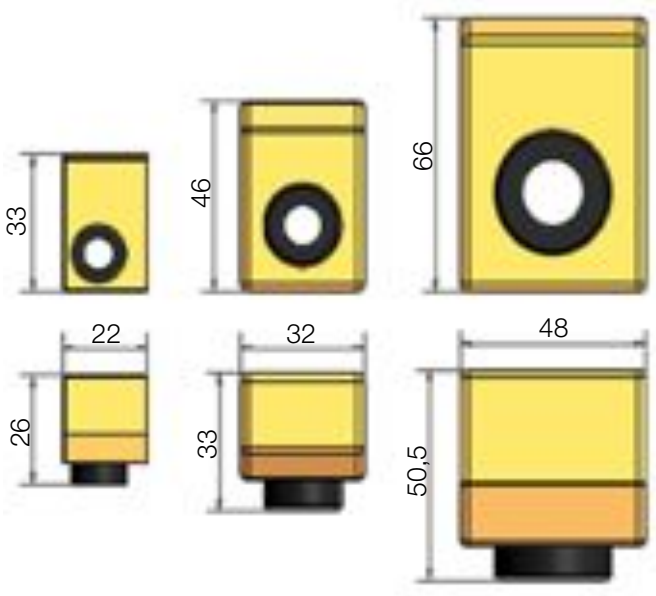
A*
* Standard

B (optional)
for vertical fitting position: display turned 180

Dimensions [mm]

Pitch	for lead screw	Display after 1 rotation
1.25	M8 x 1.25	001.25
2	TR 10 x 2	002.0
3	TR 10 x 3; TR 12 x 3	003.0
4	TR 18 x 4; TR 14 x 4	004.0
5	TR 24 x 5	005.0
12	10 x 12	012.0
50	10 x 50	005.0
100	18 x 100	001.0

The pitch depends on the lead screw used.



P1
SLW-0630
SHTP-01-06

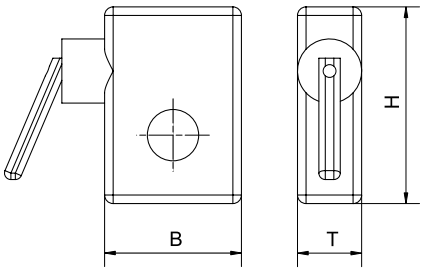
P3
all other linear tables

P6
SHTC-40
SHTC-50

drylin® Drive Technology | Accessories

Lead screw clamp

Linear modules with trapezoidal threads are equipped with a self locking mechanism. Many applications call for an additional clamping option as an additional safeguard against unintentional movement.



- Shaft clamping flange for attachment to the position indicator and subsequent mounting on the lead screw
- Provides a mechanical brake to the lead screw
- Material: plastic housing with aluminum shaft clamp
- Colour: black

Dimensions [mm]

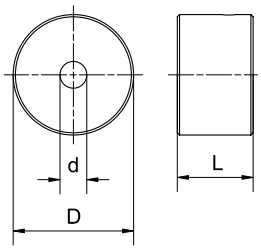
Part number	SHT-HK-12	SHT-HK-16	SHT-HK-20	SHT-HK-30
Lead screw	TR10x2	TR14x4	TR18x4	TR24x5
Dimensions (B x H x T)	32 x 46 x 15	32 x 46 x 15	32 x 46 x 15	32 x 46 x 15

Hand wheel

We have an extensive selection of hand-wheels available to ship from stock for the most varied requirements. These range from small compact sizes up to ø 125 with/without grips, and in various configurations.

Standard

with handle (optional)



- Hand wheel: defined standard for complete systems
- Different handles available
- Different diameters available

Order key

SHT-HR-8-27-17-OG

- Handle (optional)
  - OG = without handle
  - FG = fixed handle
  - UG = stowable handle
  - SG = security handle
- Length
- Outer diameter D
- Inner diameter d
- Hand wheel
- Standard

Dimensions [mm]

d	D	L	OG	FG	UG	SG*
8	27	17	●	–	–	–
10	27	17	●	–	–	–
12	42	23	●	–	–	–
14	42	23	●	–	–	–
6	50	52	–	●	–	–
8	80	75	–	●	●	●

d	D	L	OG	FG	UG	SG*
10	80	75	–	●	●	●
12	80	75	–	●	●	●
12	125	109	–	●	●	●
14	125	109	–	●	●	●
18	125	109	–	●	●	●

*** The automatic panning will return on release..**

drylin® Drive Technology | Accessories

V-drive

In addition to safety technology aspects, limited operating space requires drylin® drives to be operated with flexibility and ease. We provide a product line of continuously adjustable angular drives for adjustment options from a defined direction. For manual adjustments, the angular drives can also be configured with cursor, clamp and hand-wheel, and are shipped pre-assembled. Angular drives with keyed/grooved shafts are available for motor interfaces with increased torque transfers.

V-drives WT-3

Angular drive with hand-wheel, cursor and lead screw clamp (optional)

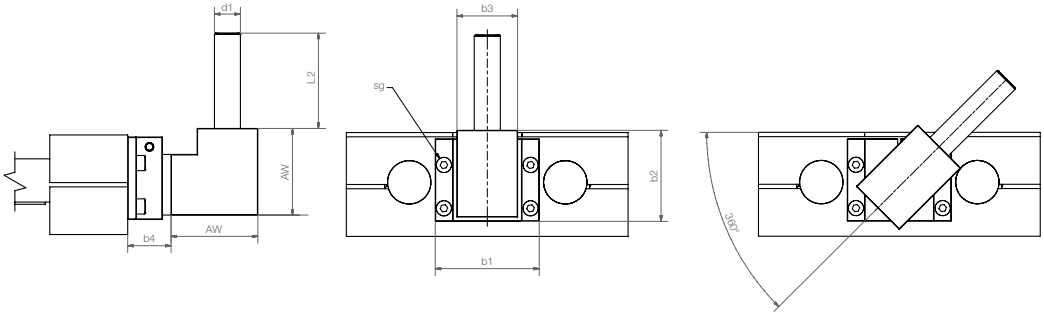
- Flexible adjusting to your installation scenario with continuously variable adjustment (can be oscillated 360°)
- Motor or manual operation
- Max. torque 3 Nm
- Clamping using set screw
- Ø 12 mm h7 output shaft
- Compatible with drylin® linear modules SHT/SHTC (installation sizes 12 and 20) and SLW-1040, - 1660 and - 2080
- SHT-30 on request
- Position indicator, lead screw clamp, hand wheel available

▶ page 1068

Order key

WT-3100

- Ready for use with drylin® linear slide table::
  - 0: SHT-/SHTC-12
  - 1: SHT-/SHTC-20
  - 5: SLW-1040/-1080
  - 6: SLW-1660
  - 7: SLW-2080
- Type of angular drive
  - 1: WT1
  - 3: WT3
  - 4: WT4
- V-drive



Dimensions [mm]

Part number	l	AW	b1	b2	b3	b4	L2	d1	sg
WT-3000 | 3100 | 3500	1:1	40	48	42	28	20	26	12	M4
WT-3600 | 3700	1:1	40	48	42	28	30	26	12	M4

delivery time **8-14 days**

drylin® Drive Technology | Accessories

Heavy Duty V-drive WT-4

drylin® angular drives provide for a maximum of positioning flexibility. The form fitting connection can attain a maximum torque of up to 6 Nm.

- Flexible adjusting to your installation scenario with continuously variable adjustment (can be oscillated 360°)
- Motor or manual operations
- Max. torque 6 Nm throgh coupling
- Fixation over feather key groove
- Base shaft Ø14 mm h7 with size
- Compatible with drylin® SHT/SHTC/SLW (installation sizes 16, 20 and 30)
- Position indicator, lead screw clamp, hand wheel available ▶ page 1068

Dimensions [mm]

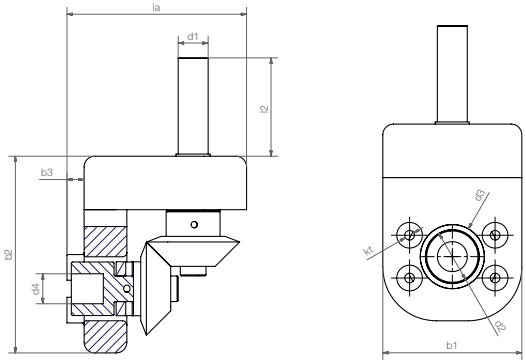
Part number	l	AW	b1	b2	b3	b4	L2	d1	sg
WT-4000 | 4100 | 4200 | 4700	1:1	60	52	51	48	23	26	14	M4
WT-4600	1:1	60	52	51	48	33	26	14	M4

Hygienic-Design-angular drive WT-1

angular drive with hand wheel (optional)

Following the idea of “Hygienic Design” the V-drive is available as maintenance-free and washable stainless steel/ polymer system.

- Lubrication-free
- Max. torque 3 Nm
- Single parts made of stainless steel
- Easy to clean with water
- Compatible with drylin® SHTC-20-EWM-HYD ▶ page 1031
- Position indicator, lead screw clamp, hand wheel available ▶ page 1068



Dimension [mm]

Part number	l	kt	b1	b2	b3	d4	l2	d1	d2	d3	sg
WT-1100	1:1	45	65	92	8	8	26	14	25	30	14

delivery time **from stock**

drylin® Drive Technology | Accessories

Stainless steel angle kit for linear modules, XZ-axis

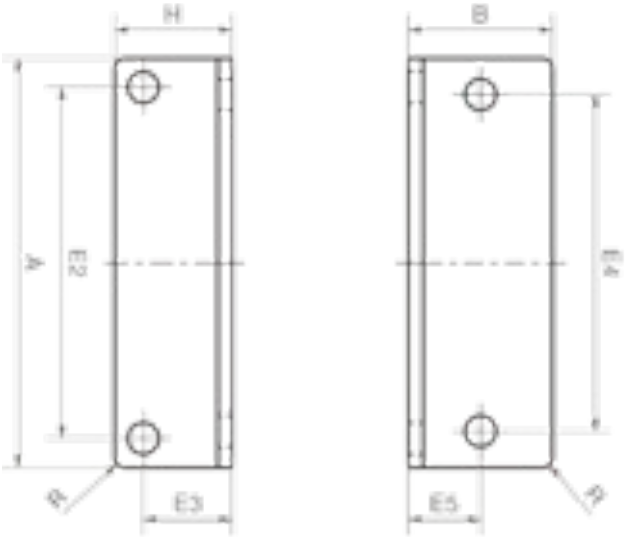
Order key

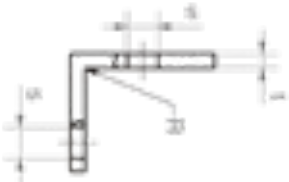
SHT-WS-12

- Dimension
- Angle kit
- Standard

drylin® SHT-WS is the new angle kit for the SHT linear sliding tables range. Stainless steel angle brackets for the dimensions 12 and 20 make any combination possible.

- Two different sizes
- Can be combined with all drylin® linear slide tables SHT/SHTC/SHTS in the dimensions 12 and 20





Dimensions [mm]

Part number.	A	H	B	E2	E3	E4	E5	s	t
SHT-WS-12	85	26.5	30	73	20.5	70	15	6.5	3
SHT-WS-20	130	36	35	108	18	115	35	8.5	5

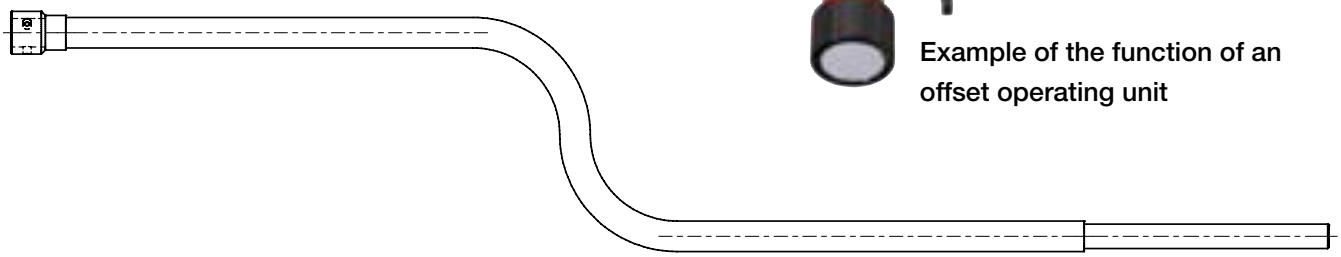
delivery time 2-3 days

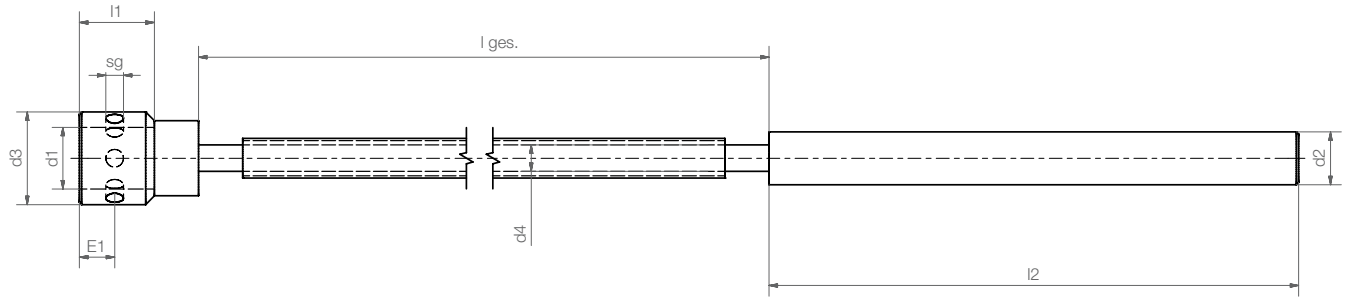
Flexshaft

The ideal complement to drylin® linear modules. The flexshaft enables the positioning of the hand wheel independent of the installation position of the linear unit. Distance of 500 mm and offset by 85°? No problem!

- 2 lengths (500 + 1,000 mm)
- For all journal diameters (10, 12, 14 mm)
- Flexible installation
- Space saving
- Can be combined with a bearing block ▶ **page 980**
- Position indicator, lead screw clamp, hand wheel available ▶ **page 1068**

Example of the function of an offset operating unit



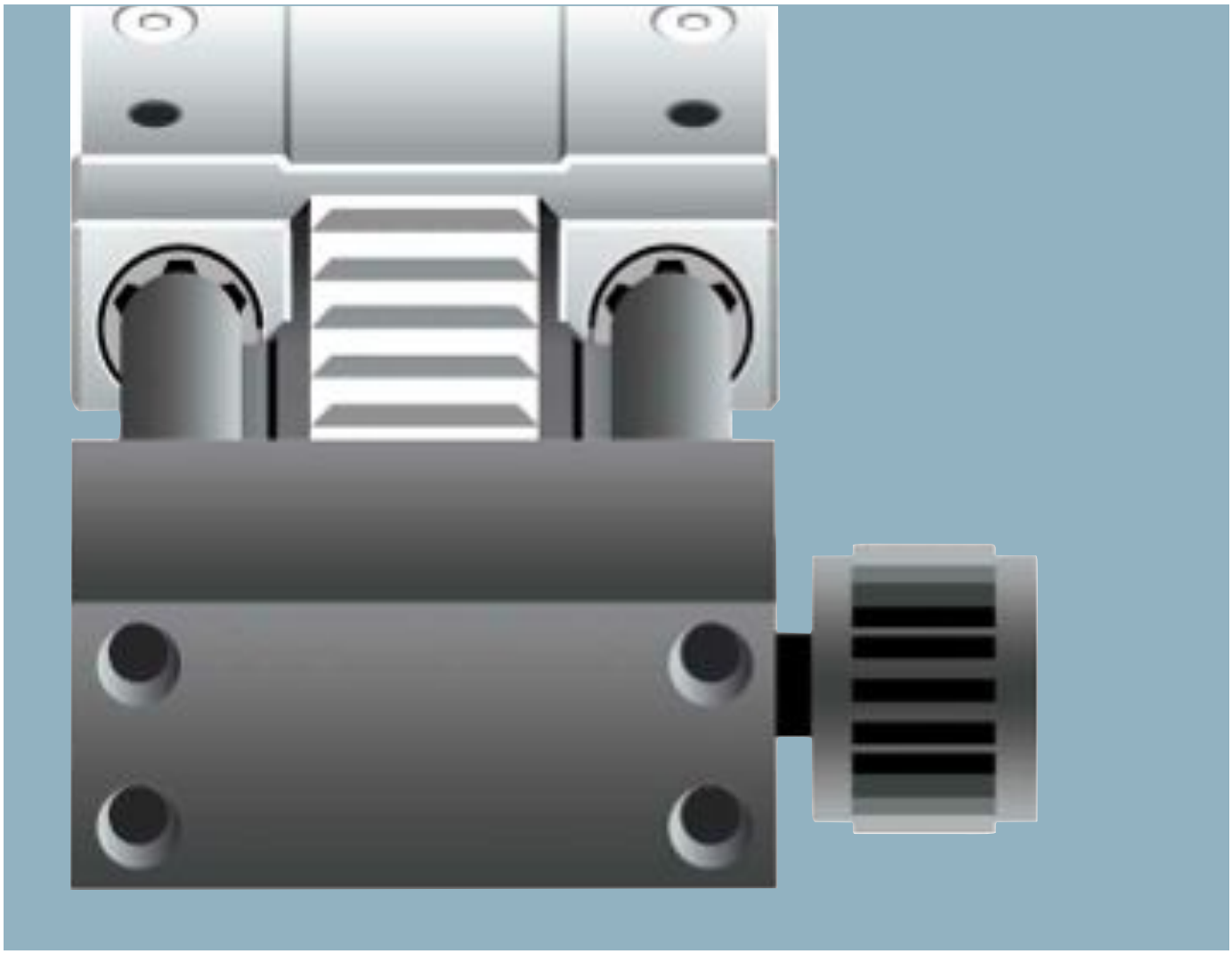


Dimensions [mm]

Part number	d1	d2	d3	d4	sg	E1	l1	l ges.	T max [Nm]	min. bending radius
FS-06-500-Z12X120-AA	14H7	12h7	21	6	M4	8	17	500	1.8	70
FS-08-1000-Z12X120-AA	14H7	12h7	21	8	M4	8	17	1,000	2.7	90

delivery time **2-3 days**

My Sketches

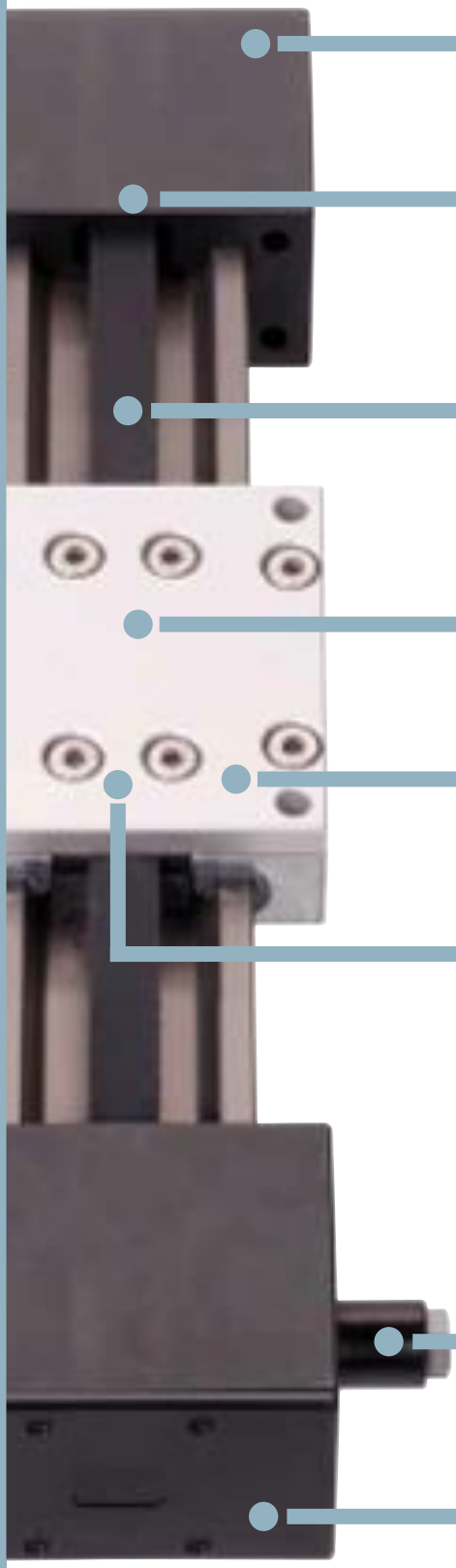


drylin® general drive technology: toothed belt axes ZLW

- Maintenance-free solution
- Fully glide-mounted
- For quick positioning
- Deflection with grooved ball bearing
- Lubrication-free linear guide

drylin® ZLW | Toothed Belt Axes

The use of polymer plain bearings on all moving parts makes the toothed belt axis 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 axis offers a high degree of robustness in many applications. You can select between basic and standard according to the application area and requirement:.



Shaft end supports made from robust plastic with integrated grooved ball bearing

Basic pulley shaft (square with high performance polymer sprocket, multiple components) or standard (one piece stainless steel shaft with sprocket)

Wear-resistant PU timing belts with steel reinforcement (standard) or Neopren with fiberglass (basic)

The complete carriage consists of four lubricant-free drylin® W individual bearing housings with installed drylin® R liners

Anodized aluminum assembly plates in various lengths

High profile, torsion-resistant drylin® W double shaft profile, made from hard anodized aluminum

Left or right hand one-sided drive pin, also configurable as dual-sided upon request (portal configuration)

drylin E compatible

Configurable with motor as a ready to install linear axis (drylin® E) ▶ **page 1089**)

drylin® ZLW | Toothed Belt Axes

ZLW-0630 – Belt drive axis

- For easy adjustment and positioning functions
- Low space requirement, installation height: 31 mm
- Stroke lengths freely selectable (Max. 1,000 mm)
- Type series “Basic 02” and “Standard 02”

▶ page 1082

ZLW-1040 – Belt drive axis

- For many positioning functions
- Installation height: 45 mm
- Stroke lengths freely selectable (Max. 2,000 mm)
- Carriages in three lengths available

▶ page 1082

ZLW-1660 – Belt drive axis

- For adjustment and positioning functions
- Installation height: 72 mm
- Stroke lengths freely selectable (Max. 3,000 mm)
- Type series “Basic 02”

▶ page 1082

ZLW-OD – Opposite belt drive axis

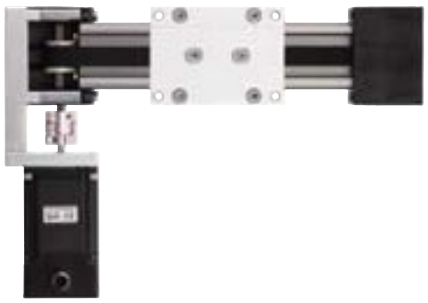
- For quick reverse positioning
- Fast right/left adjustment
- Compact and light
- Lubrication-free

▶ page 1084

ZAW – Cantilever axis

- Drive unit firmly mounted, only profile and load are moved
- Hard-anodized aluminum axis profile
- Absolutely lubricant-free and corrosion resistant
- Low weight

▶ page 1086



drylin® E - Electrical drive technology

Lubricant-free toothed belt axis with motor

- Maintenance- and lubricant-free
- Ready to install with motor, cable and initiator
- 3 installation sizes

▶ page 1089

drylin® ZLW | Toothed Belt Axes

Basic series

“Basic” is the designation of the low-priced option of the toothed belt axis. A black neoprene belt with glass fibre reinforcement is used. The toothed belt is supported at each end by a square stainless steel and polymer drive shaft running in two deep grooved ball bearings.

Standard series

The lubricant-free linear guide is also driven by a toothed belt made of polyurethane (white) with steel cable. Deflection shaft and drive pulley – single-piece – are made of plated steel or stainless steel. The pulley shafts are mounted in two grooved ball bearings.

Technical Data ZLW-0630

	Weight without stroke [kg]	Weight 100 mm stroke [kg]	Max. length of stroke [mm]	Trans mission [mm/U]	Tooth profile	Belt drive -material	-width [mm]	-tension [N]
Basic 02	0.38	0.08	1,000	54	HTD 3M	Neopren mit GF	9	75
Standard 02	0.43	0.08	1,000	54	MTD3	PU mit Steel	9	100

	Max. radial stress [N]	Pulley bearing	Max. speed [m/s]	Max.position accuracy** [mm]
Basic 02	100	ball bearing	2	±0.35
Standard 02	150	ball bearing	2	±0.3

Technical Data ZLW-1040

	Weight without stroke [kg]	Weight 100 mm stroke [kg]	Max.length of stroke [mm]	Trans- mission [mm/U]	Tooth profile	Belt dirve -material	-width [mm]	-tension [N]
Basic 02	0.9	0.14	2,000	66	RPP 3M	Neoprene with GF	15	150
Standard 02	1.0	0.14	2,000	70	AT5	PU with Steel	16	200

	Max. radial stress [N]	Pulley bearing	ma. speed [m/s]	Max. position accuracy** [mm]
Basic 02	200	ball bearing	3	±0.3
Standard 02	300	ball bearing	5	±0.2

Technical Data ZLW-1660

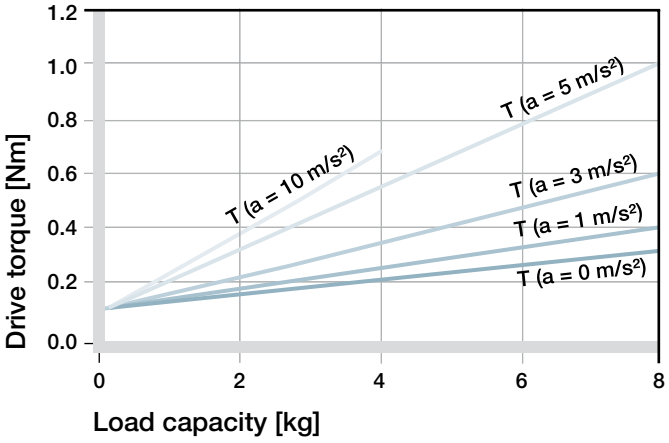
	Weight without stroke [kg]	Weight 100 mm stroke [kg]	Max.length of stroke [mm]	Trans- mission [mm/U]	Tooth profile	Belt drive -material	-width [mm]	-tension [N]
Standard 02	4.0	0.5	3,000	120	AT5	PU with Steel	32	500

	Max. radial stress [N]	Pulley bearing	Max. speed [m/s]	Max. position accuracy** [mm]
Standard 02	2,000	ball bearing	5	±0.2

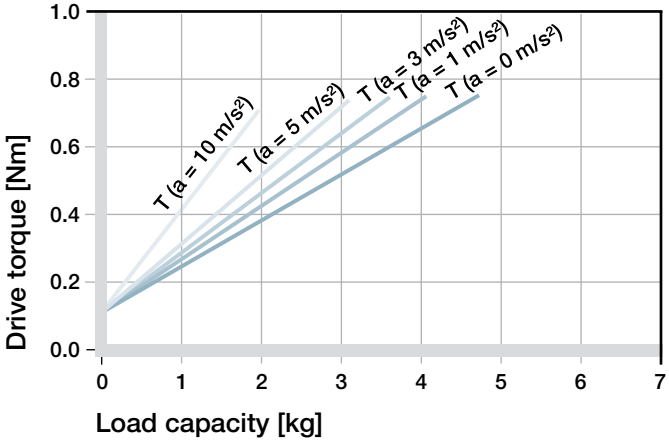
* Longer stroke lengths on request

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

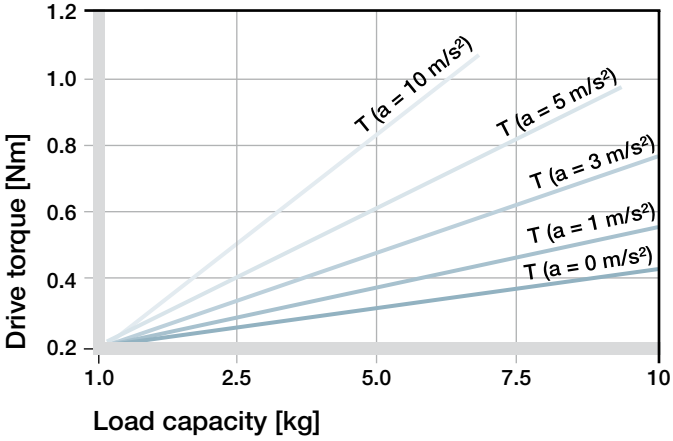
drylin® ZLW-0630 | Technical Data



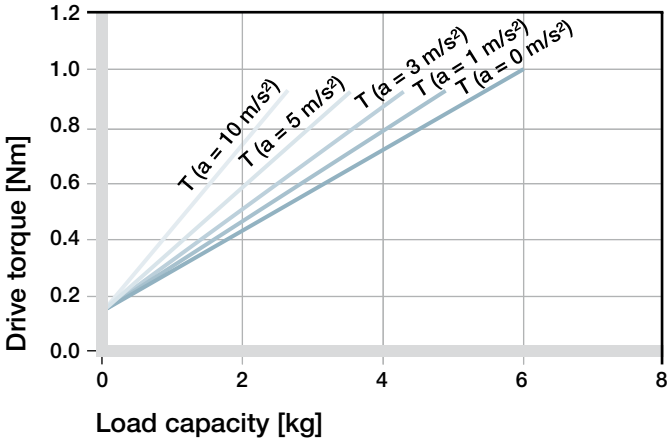
Graph 01: required drive torque*; horizontal orientation– ZLW-0630, Version basic 02



Graph 02: required drive torque*; vertical orientation – ZLW-0630, Version basic 02

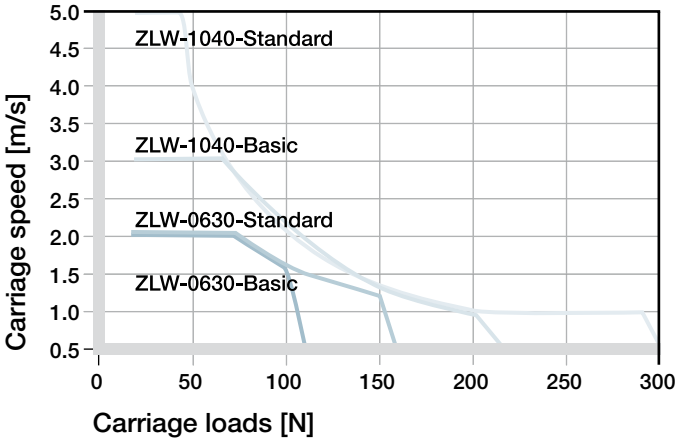


Graph 03: required drive torque*; horizontal orientation – ZLW-0630, Version standard 02

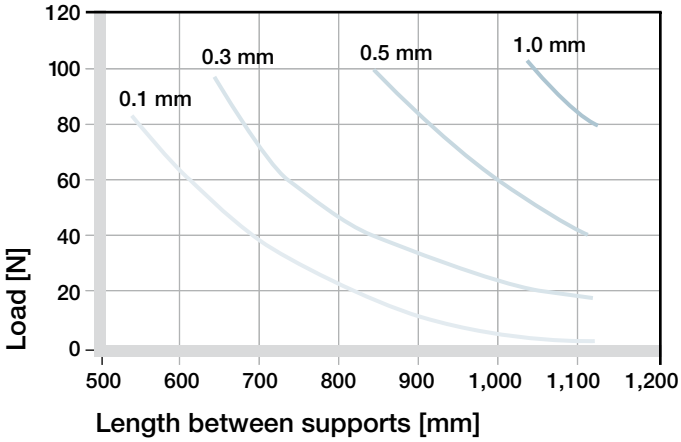


Graph 04: required drive torque*; vertical orientation – ZLW-0630, Version standard 02

* Assumption: The moving mass is located in a circumscribed circle with a Max. r = 100 mm to the middle of the guiding rail, Max. permissable torque ZLW-0630 Basic 02: 0.75 nm, a = 0 m/s² , ZLW-0630 Standard 02: 1 nm, a = 0 m/s², constant drive without nominal acceleration value

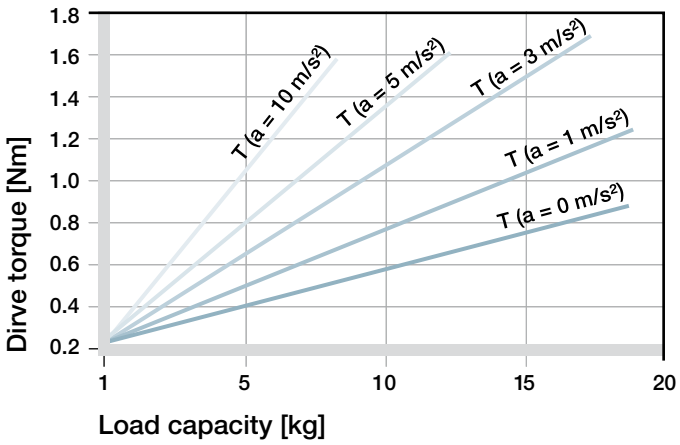


Graph 05: maximum load compared: ZLW-0630 and ZLW-1040, 100 % OT (On-time). The graph accounts for the sum of all forces active on the carriage.

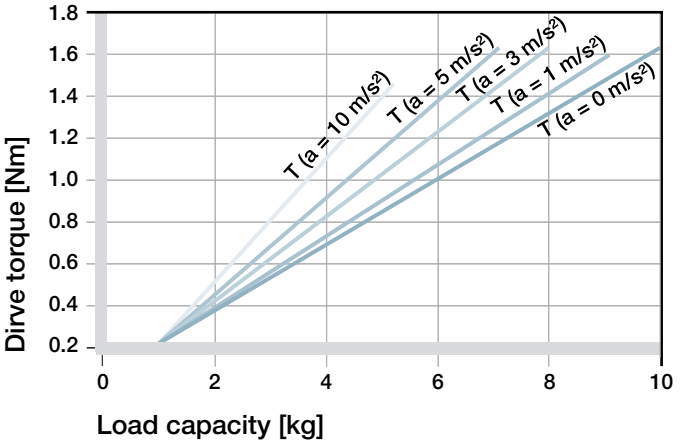


Graph 06: Sag between unsupported end blocks ZLW-0630, Version basic 02 and standard 02. Sag permissible up to 2 mm maximum.

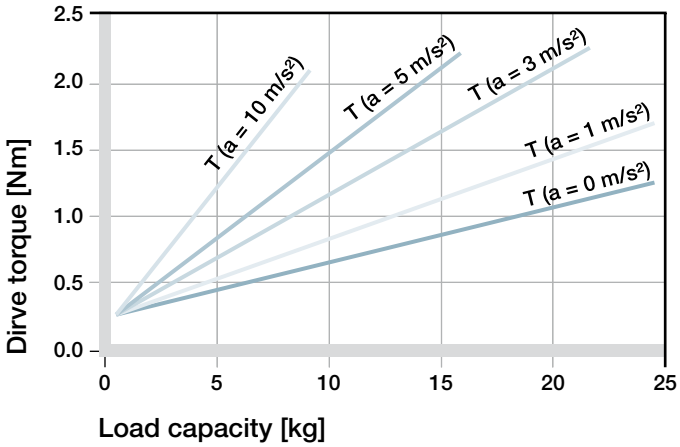
drylin® ZLW-1040 | Technical Data



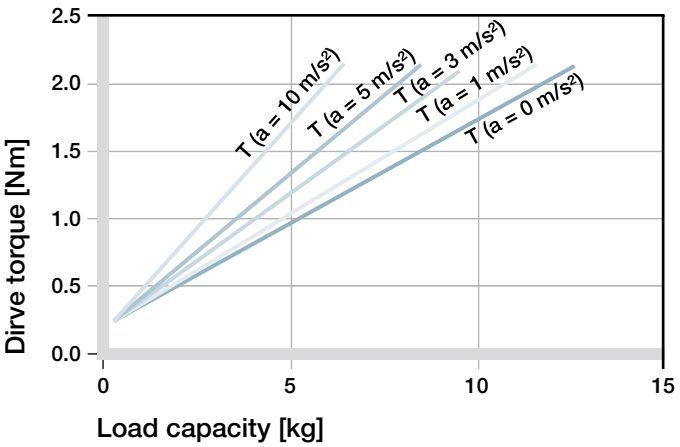
Graph 07: required drive torque*; horizontal orientation– ZLW-1040, Version basic 02



Graph 08: required drive torque*; vertical orientation – -ZLW-1040 Version basic 02

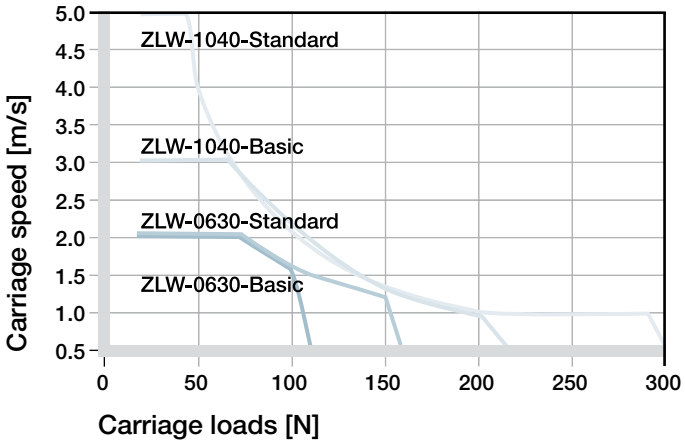


Graph 09:required drive torque*; horizontal orientation– ZLW-1040, Version standard 02

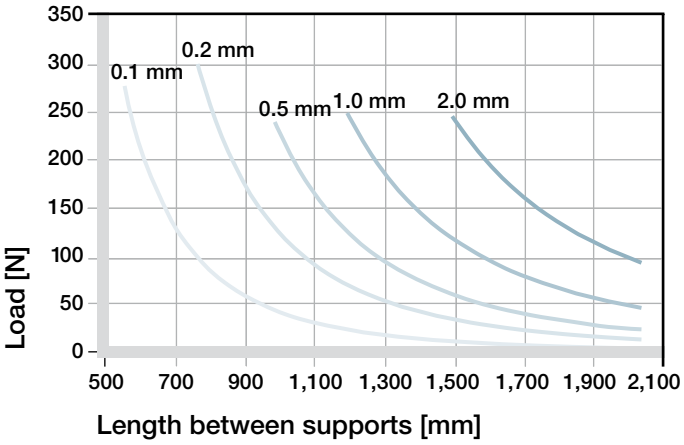


Graph 10: required drive torque*; vertical orientation – ZLW-1040, Version standard 02

* Assumption: The moving mass is located in a circumscribed circle with a Max. r = 100 mm to the middle of the guiding rail, Max. permissable torque ZLW-1040 Basic 02: 1.75 nm, a = 0 m/s² , ZLW-1040 Standard 02: 2.4 nm, a = 0 m/s², constant drive without nominal acceleration value



Graph 11: maximum load compared: ZLW-0630 and ZLW-1040, 100 % OT (On-time). The graph accounts for the sum of all forces active on the carriage.



Graph 12: Sag between unsupported end blocks ZLW-1040, Version basic 02 and standard 02. Sag permissible up to 2mm maximum.

My Sketches

drylin® ZLW | Delivery Program

ZLW-0630 – Belt drive axis

The drylin® ZLW-0630 toothed belt axis is the ideal solution for easy adjustment and positioning tasks in confined spaces. The installation height is only 31 mm. The stroke length is variable (maximum 1,000 mm).
drylin® ZLW-0630 is available in the “Basic 02” and “Standard 02” type series.

ZLW-1040 – Belt drive axis

The drylin® ZLW-1040 toothed belt axis is the ideal solution for many positioning tasks. The installation height is only 45 mm. The stroke length is variable (maximum 2,000 mm). The carriage is available In 3 lengths.
drylin® ZLW-1040 is available in the “Basic 02” and “Standard 02” type series.

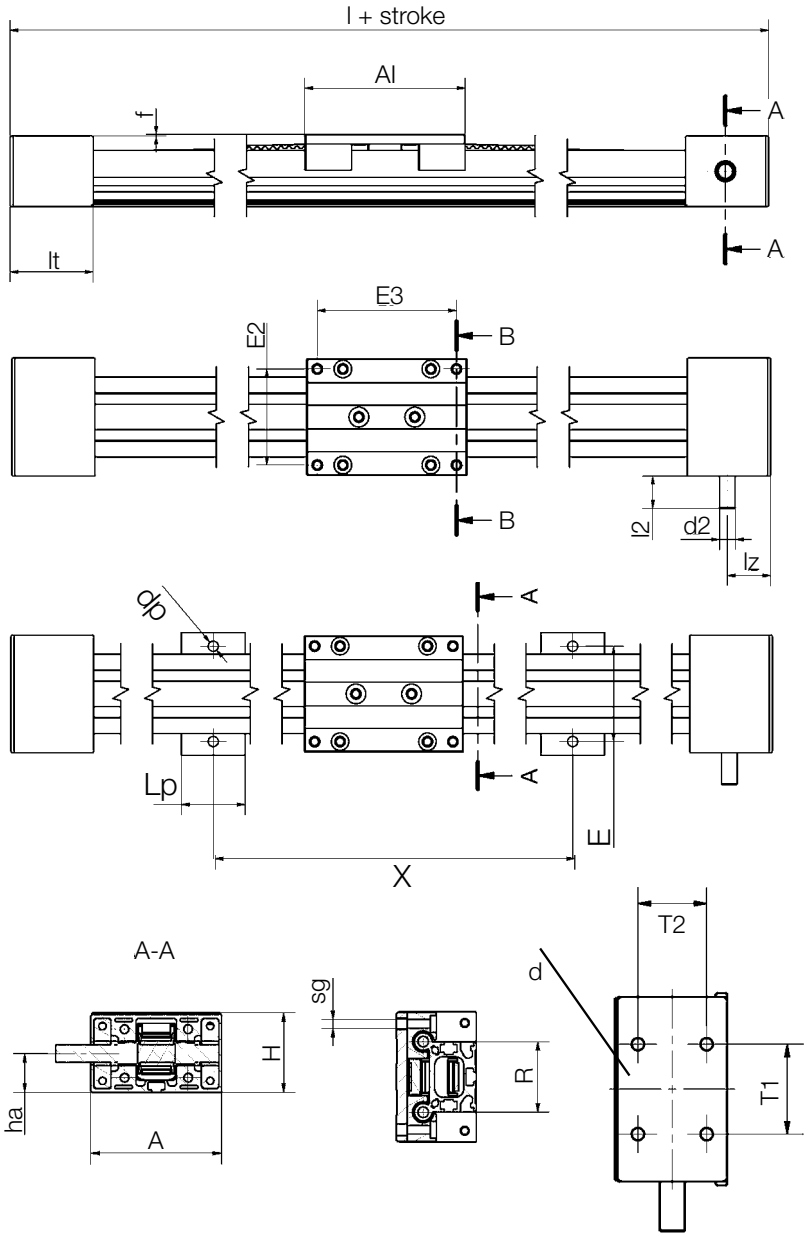
Toothed belt axis ZLW-1660

The toothed belt axis drylin® ZLW-1040 is the ideal solution for easy adjustment and positioning functions in restricted space conditions and expands the product range of drylin® ZLW belt drive axes by an aditional size. The installation height is only 45 mm. The stroke length can be chosen freely (Max. 3,000 mm). The carriage is available in 3 type series. drylin® ZLW-1040 is available in the “Basic 02” and “Standard 02” type series.

Order key
complete ▶ page 1088

drylin E compatible
▶ page 1089

drylin® ZLW | Delivery Program



Dimensions [mm]

Part number	A	Al	H	E2	E3	l	R	f	lt	sg	ha	lz	l2	d2*
	-0.3			±0.15	±0.15		±0.15		±0.3					h9
ZLW-0630-02-...	54	60	31	45	51	144	30	3	42	M4	14	22	20	8
ZLW-1040-02-...	74	100	45	60	87	204	40	1	52	M6	22	27	20	10
ZLW-1660-02-... New!*	104	100	72	86	82	252	60	2	76	M8	43	38	20	14

Connecting dimensions [mm]

Part number	X	E	LP	dp	T1	T2	d
		±0.2			±0.25	±0.25	
ZLW-0630-02-...	variable	40	15	5.5	20	21	3.2
ZLW-1040-02-...	variable	60	40	6.4	36	26.5	5.0
ZLW-1660-02-... New!*	variable	100	40	9	65	60	M5

* in this catalog

delivery time 3-4 days

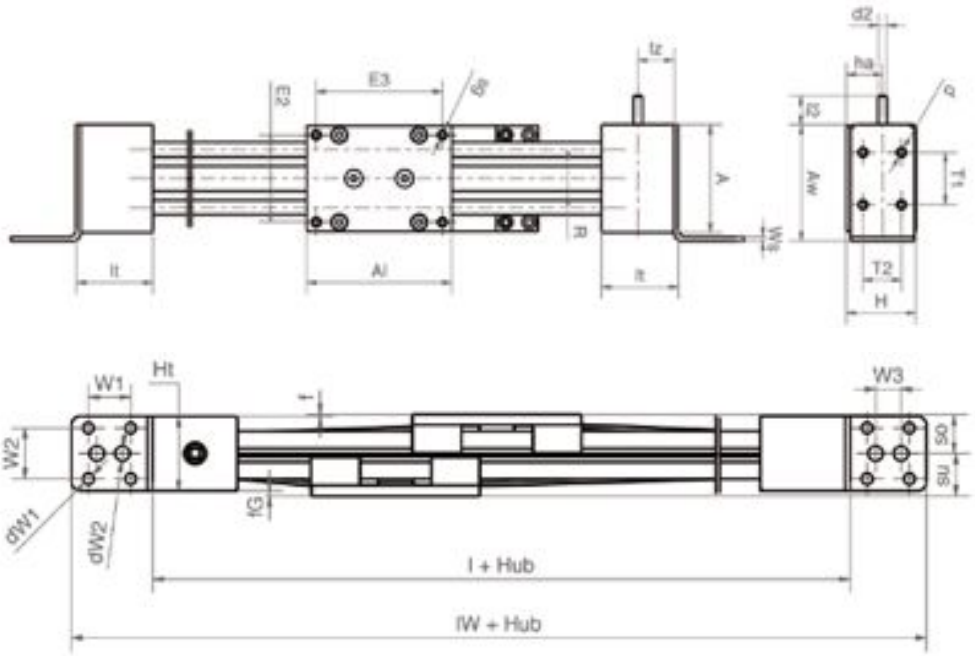
prices price list online
www.igus.eu/eu/drylinZLW

drylin® ZLW | Delivery Program

ZLW-OD – Opposite

- Quick reverse positioning
- Fast right/left adjustment
- Compact and light
- Motor flange for NEMA23 available from stock
- Available as standard and basic version
- Angle flange for fixing

Order key
complete ▶ page 1088



Dimensions [mm]

Part number	A	Al	H	Ht	E2	E3	l	R	f	fG	lt	sg	ha	l2	d2
	-0.3				±0.15	±0.15		±0.15			±0.3				h9
ZLW-0630-OD*	54	60	31	28	45	51	144	30	3	7	42	M4	14	20	8
ZLW-1040-OD	74	100	45	44	60	87	204	40	1	3	52	M6	22	20	10

Part number	d	SU	SO	T1	T2	lz	Ws	W1	W2	W3	dw1	dw2	lW	AW
Anschlussmaße				±0.2	–1.0								±0.25	±0.25
ZLW-0630-OD*	4	21	17	20	21	22	2	20	2	10	5.5	6.6	260	60
ZLW-1040-OD	5	25	23	36	26.5	27	3	25	3	15	6.6	8.8	296	80

*** Basic version: 6 mm square, plastic adapter for pin diameter 10 mm included**

delivery time **2-3 days**

prices **price list online**
www.igus.eu/eu/drylinZLW

drylin® ZLW | Delivery Program

ZLW-1040 Belt drive – specialists

Version LT for cold storage down to –30 °C
Version uW for under water use

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

Order key
complete ▶ page 1088

Technical Data

		Einheit	ZLW-1040-LT for cold storage	ZLW-1040-UW for under water use
Weight without stroke		**kg**	1.0	1.0
Weight 100 mm stroke		**kg**	0.14	0.14
Max. length of stroke		**mm**	2,000	1,000
Transmission		**mm/U**	70	70
Gear Teeth			AT 5	AT 5
Belt drive	-material		TPUKF2	PU + stainless steel-reinforcement
	-width	**mm**	16	16
	-tension	**N**	200	50
Max. radial load		**N**	300	100
Guide bearing			steel ball bearing	xiros®-ball bearing
Max. speed		**m/s**	5	1
position variants of carriage load dependent		**mm**	±0.2	±0.5

Dimensions [mm]

Part number	x	E	AP	Lp	dp	n	nb	nw	nh	T1	T2	d
Connecting dimensions		**±0.2**	**–1.0**							**±0.25**	**±0.25**	
ZLW-1040-...-100-L-x	variable	60	78	40	6.4	5.2	9.5	4.3	15.5	36	26.5	5.0

Drawing and dimensions as ZLW-1040 Standard ▶ page 1082

delivery time 2-3 days

prices price list online
www.igus.eu/eu/drylinZLW

drylin® ZLW | Delivery Program

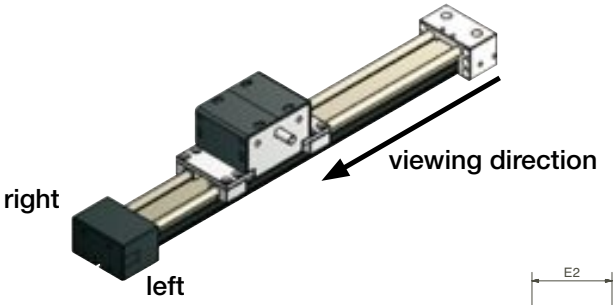
ZAW – Cantilever axis

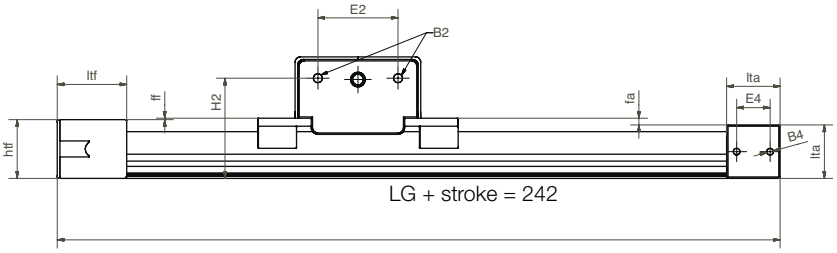
- Drive unit firmly mounted, only profile and load are moved
- Hard-anodized aluminum axis profile
- Totally lubricant-free and corrosion-resistant
- Low weight
- Max. stroke: 750 mm
- Max. axial load 50 N
- Available as standard version
- Allowed moment for carriage My max: 15 Nm

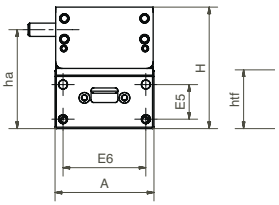
Order key

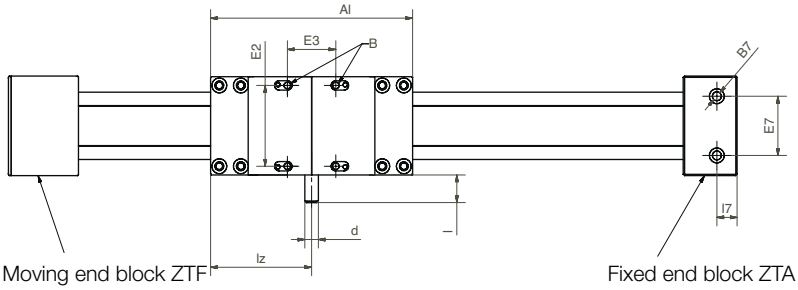
ZAW-1040-02-S-150-L-xxx

- Stroke length in mm
  1040: Max. 2,000
- drive shaft
  - L = drive shaft left
  - R = drive shaft right
  - L/R = drive shaft both-sides
- Length of carriage in mm
- Design
  - S: Size Standard
- Version 02 with deep-groove ball bearings
- Installation size
- Cantilever axis









Dimensions [mm]

Part number	A	H	LG	Al	ha	d	l	lz	E2	E3
	–0.3		stroke	±0.3	±0.1	h9	+1		±0.15	±0.15
ZAW-1040	74	91	242	150	74	10	20	75	60	60

Part number	B	B2	htf	ltf	ff	fa	lta	E4	B4	E5	E6
Connecting dimensions	–0.3			±0.3	±0.1	h9	±0.1		±0.15	±0.15	
ZAW-1040	M6	M8	44	52	2	5	40	25	M6	26	62

delivery time 8-14 days

prices price list online
www.igus.eu/eu/drylinZLW

drylin® ZLW | Accessories | Delivery Program

The drylin® ZLW belt drive can be mounted in different ways (clamp and slot nuts included in delivery):
The orientation of the drive is optional. Overhead installation is the best option against contamination.Directions for installation: The end blocks should not be used as a mechanical stop under any circumstances. A buffer length is to be provided on both sides which corresponds to at least one revolution of the drive shaft 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 pleased to provide you with more information on the fastening and connecting of the belt drive.

Clamp

Clamping elements offer an easy fastening potential of the axis, among other things, on aluminum profiles

4 pieces included in delivery:
Part number 75.40ZLW (Size 1040)
Part number ZTZ-063006 (Size 0630)

Slot nuts

Slot nuts enable the installation in 3 sides (1040: left, right, below) or 2 sides (0630: left, right) as well as the affixing of sensors and proximity switches for the positioning.

8 pieces, 4 for each side, included in delivery:
Part number NOR-20602

Screw connection

Frontal screw connection: Threaded holes for individual- ly insertable screws are located at the extreme shaft end

4 x M6/M4 (optional)

delivery time **2-3 days**

prices **price list online**
www.igus.eu/eu/drylinZLW

drylin® ZLW | Order key

Order key complete System:

ZLW-0630-OD-02-B-60-L-2000

Stroke length in mm
- ZLW-0630: Max. 1,000 mm
- ZLW-1040: Max. 2,000 mm
- ZLW-1660: Max. 3,000 mm

Drive shaft
- L: Drive shaft left
- R: Drive shaft right
- L/R: Driveshaftbothsides

Carriage length
- 60: 60 mm
- 100: 100 mm
- 150: 150 mm
- 200: 200 mm
- 250: 250 mm

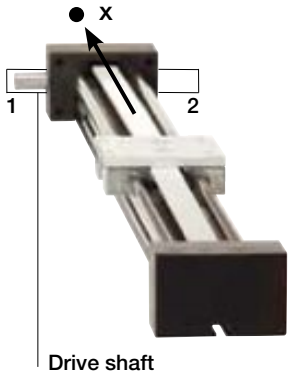
Design
- S: Type Standard
- B: Type Basic

Version
- 02: with grooved ball bearingsn

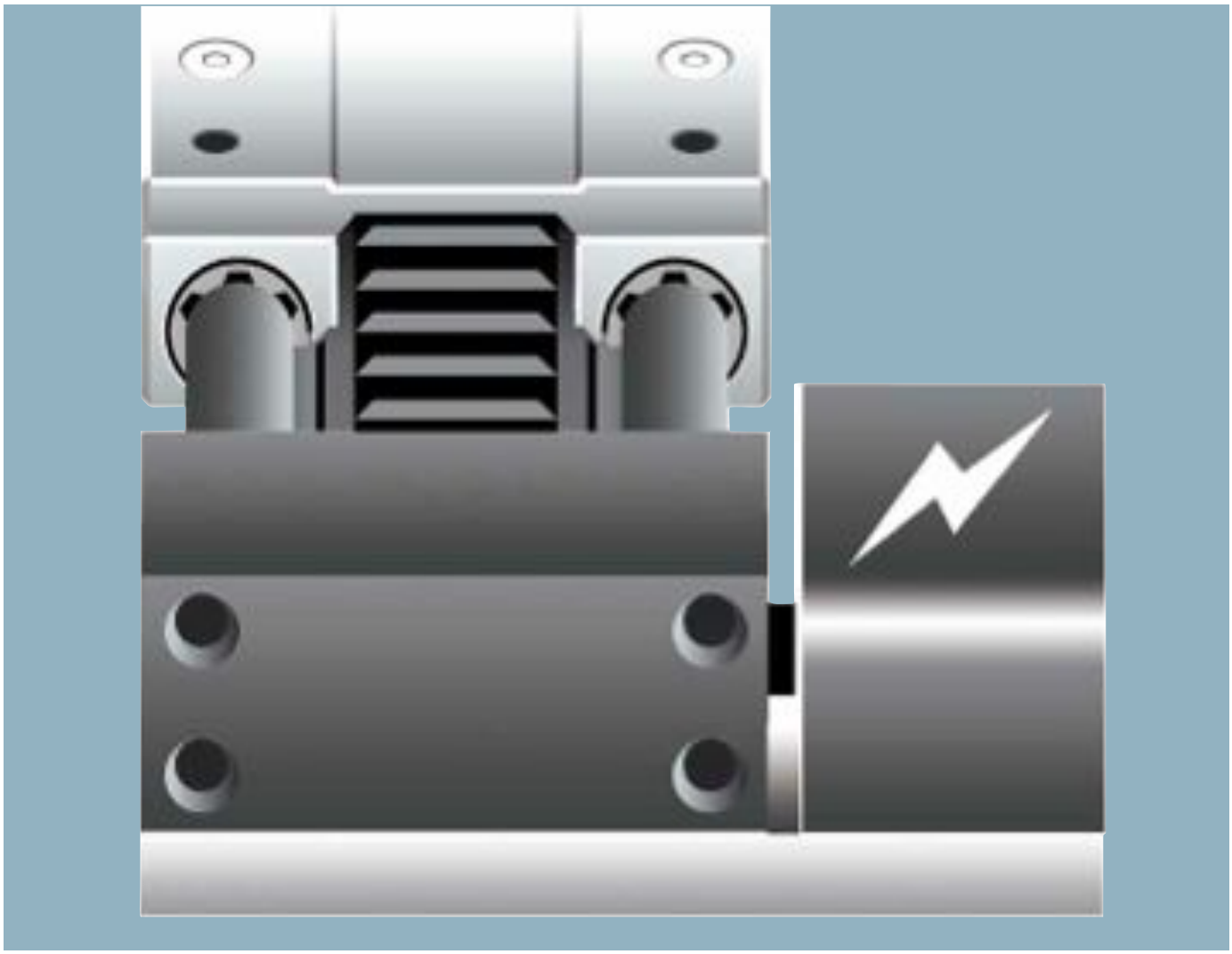
Options (optional)
- OD: Reverse
- LT: For freeze applications
- UW: For underwater applications

Type
- 0630
- 1040
- 1660

Belt drive axis



Determination of the position of the drive shaft (right or left), in the line of vision x!
1 = drive shaft left
2 = drive shaft right
x = in the line of vision of drive shaft



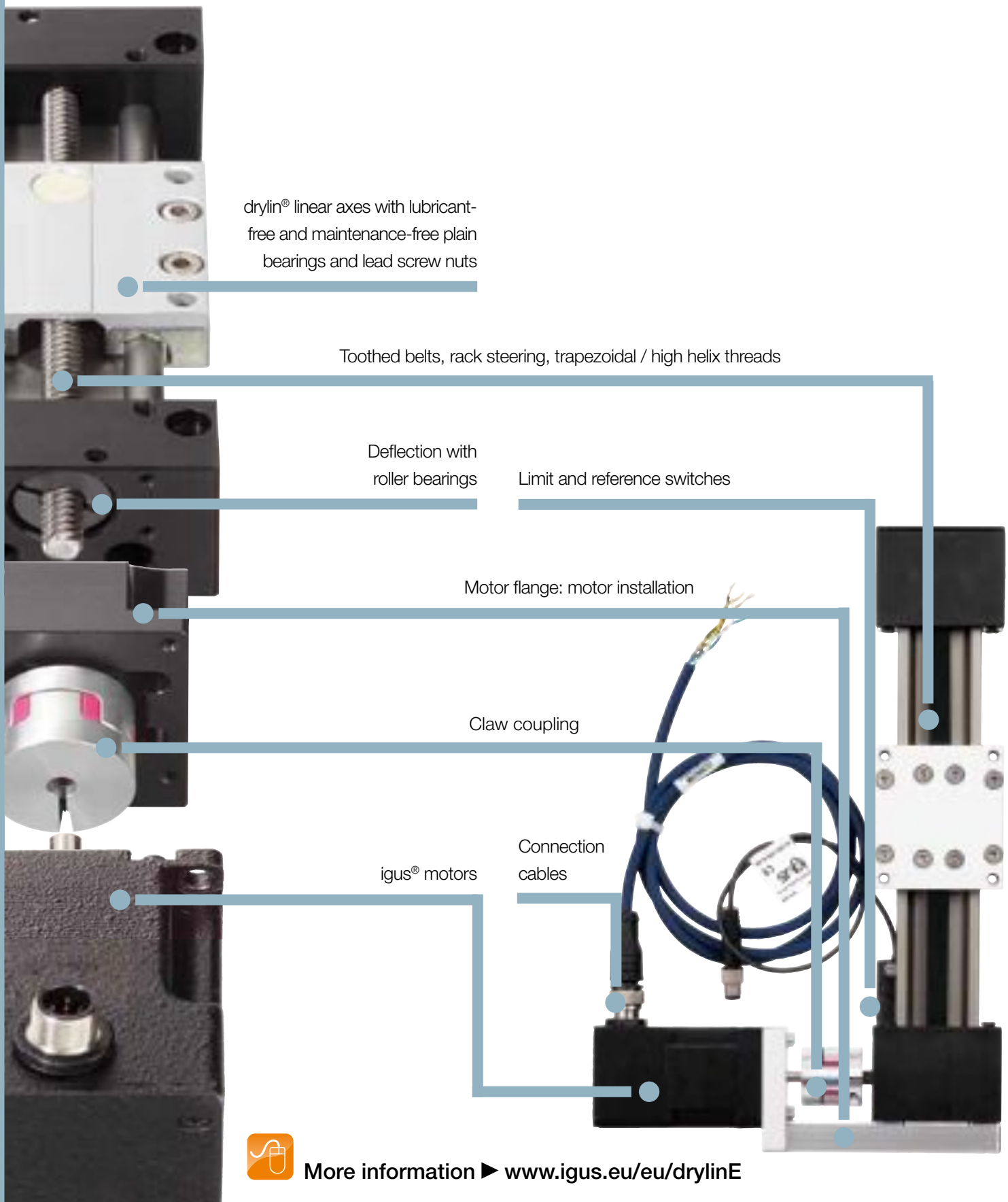
drylin® E electrical drive technology: Linear axes with motor

- lubricant-free linear modules
- clean and dirt insensitive operation
- toothed belts, rack steering, trapezoidal / high helix threads
- large range of accessories
- cost-effective
- configurable online

New in this catalog!

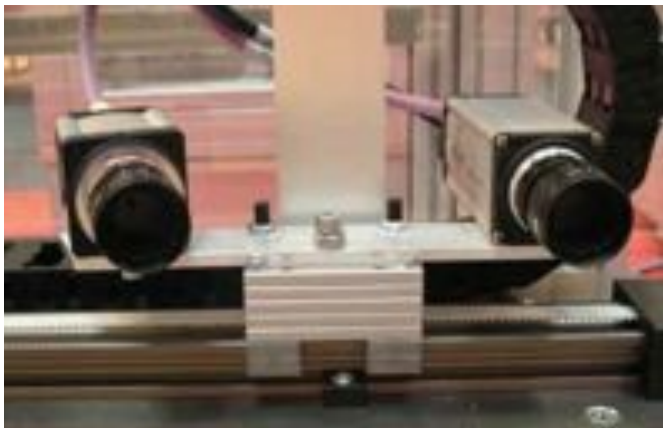
drylin® E | Linear Axes with Motor

“E” means electrical and is a logical design extension of the drylin® drive technology construction kit. The lubricant-free linear axes ensure clean and also dirt insensitive operation. Ready to install linear actuators and drive units can be optionally equipped with a lead screw drive or toothed belt. In addition to the accessories for manual adjustments (hand wheel, cursor, etc.), the drylin® E with hybrid step motors, DC motors, initiators and the proven chainflex® motor cables complete the igus® product range.

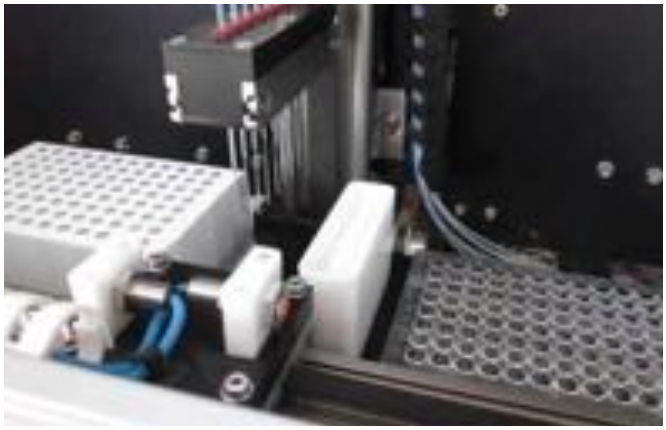


More information ▶ www.igus.eu/eu/drylinE

drylin® E | Application examples

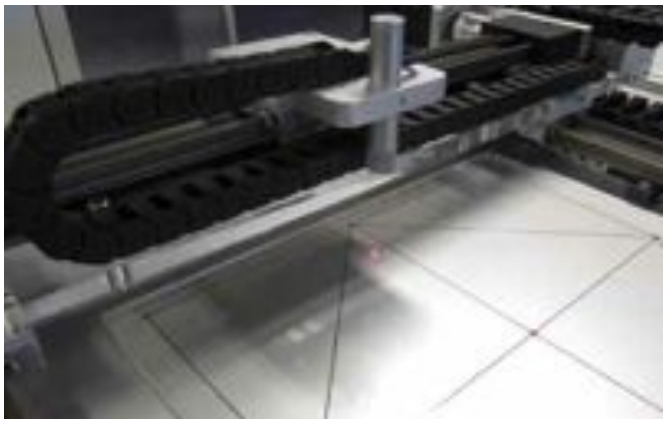


Camera adjustment
Quiet, vibration and lubricant-free operation is realized on this camera adjustment on a conveyor belt using a drylin® ZLW toothed belt axis.



Sampler/pipettor
Space-saving telescope adjustment through compact and lubricant-free drylin® ZLW toothed belt axes.
(Sierra Sensors GmbH)

Adjustment of inspection equipment
drylin® ZLW toothed belt axis in the inspection camera adjustment for the position inspection of seal rings.
(OLPE Jena GmbH)



Sensor adjustment/Measuring systems
drylin® ZLW-0630 toothed belt axes as a two-dimensional gantry (X,Y axis) to adjust a laser measuring head. Compact, lightweight and maintenance-free due to polymer plain bearings.

Pick and place
Fast and maintenance-free handling with drylin® toothed belt as as a three-dimensional gantry (X,Y,Z axis).

Handling of small parts
The tough and lubricant-free structure of the ZLW and drylin® W profiles allows a long and maintenance-free process cycle.

www.igus.eu/drylinE-applications

drylin® E | Linear Axes with Motor | SAW

Linear axes with lead screw drive

When to use it?

- For format adjustments and to position medium loads
- In extreme environments
- When a cost-effective, ready-to-install solution is needed
- When it should be low noise
- For unsupported installations

When not to use it?

- When high loads need to travel at highly dynamic forces
- When positioning accuracy < 0.1 mm is required
- When high running performance is required in continuous operation

Lubricant and maintenance-free drylin® W linear guide systems

Hard anodized drylin® W aluminum profile (high profile shape)

4 trapezoidal thread pitches
3 high helix thread pitches

Shaft end support from aluminum or plastics

Motor flange: motor connections

Claw coupling

igus® DC motors
- Cost-effective
- Maintenance-free
- 4 versions
- Battery operation possible

igus® step motors
- Cost-effective
- Maintenance-free
- 5 installation sizes
- 17 versions

Drawings, dimensions, technical specifications, such as SAW ▶ page 1042

More information ▶ www.igus.eu/eu/drylinSAW

drylin® E | Linear Axes with Motor | SAW

Order key

SAW-1040-EPL-07-S0020RG-450-17-M-S-000

Type

Installation size
- 0630
- 1040
- 1660

Design

SAW-0630
- **S:** Standard
- **M:** Mono carriage (plastic)

SAW-1040/1660
- **S:** Standard
- **E:** Adjustable linear bearing
- **PL:** Pretensioned (50N)
- **EPL:** Adjustable, pretensioned (50 N)

Carriage length

SAW-0630
- **06:** 60 mm (Standard)

SAW-1040
- **07:** 69 mm (Standard)
- **10:** 100 mm
- **15:** 150 mm

SAW-1660
- **15:** 150 mm (Standard)

Lead screw material:
- **S:** steel
- **E:** stainless steel

Lead screw pitch

SAW-0630
- **0015:** TR8x1,5 mm (steel)
- **0150:** SG8x15 mm (stainless steel)

SAW-1040
- **0020:** TR10x2 mm (steel/stainless steel)
- **0030:** TR10x3 mm (steel/stainless steel)
- **0120:** SG10x12 mm (stainless steel)
- **0500:** SG10x50 mm (stainless steel)

SAW-1660
- **0040:** TR14x4 mm (steel/stainless steel)

Thread
- **R:** Right | **L:** Left

Lead screw end
- **G:** Threaded end

Stroke length
- **SAW-0630:** max. 300 mm
- **SAW-1040:** max. 500 mm
- **SAW-1660:** max 750 mm

Motor size
- **17:** NEMA17: recommended axis 0630
- **23:** NEMA23: recommended axis 1040
- **23XL:** NEMA23XL: recommended axis 1040
- **DC01:** DC-Motor: 0,1 Nm recommended axis 0630
- **DC03:** DC-Motor: 0,3 Nm recommended axis 0630/1040
- **DC07:** DC-Motor: 0,7 Nm recommended axis 0630
- **DC15:** DC-Motor: 1,5 Nm recommended axis 1040/1660

Motor option
- **L:** Litz wires
- **M:** Metric connectors
- **C:** Encoders
- **D:** Encoder and brake
- **F:** Low profile connector (DC-Motor)

Assembly
- **S:** Assembly on the drive pin (standard)

Electrical connection alignment
- **000:** 0° (Standard)
- **090:** 90°
- **180:** 180°
- **270:** 270°

drylin® E | Linear Axes with Motor | SLW

Linear axes with lead screw drive

Lubricant and maintenance-free drylin® W linear profile guides

Hard anodized drylin® W aluminum profile (plain profile shape)

4 trapezoidal thread pitches
3 high helix thread pitches

Shaft end supports are made from anodized aluminum or from plastics

Motor flange: motor connections

Claw coupling

igus® DC motors
- Cost-effective
- Maintenance-free
- 4 versions
- Battery operation possible

igus® step motors
- Cost-effective
- Maintenance-free
- 5 installation sizes
- 17 versions

When to use it?

- For format adjustments and to position medium loads
- In extreme environments
- When a cost-effective, ready-to-install solution is needed
- When it should be low noisel
- When installation space is limited

When not to use it?

- When high loads must be motion controlled in a highly dynamic manner
- When positioning accuracy < 0.1 mm is necessary
- When high running performance is required in continuous operation

Drawings, dimensions, technical specifications, such as SLW ▶ page 1038

More information ▶ www.igus.eu/eu/drylinSLW

drylin® E | Linear Axes with Motor | SLW

Order key

SLW-1040-EPL-07-S 0020 R G-750-17-L-S-000

Type

Installation size
- 0630
- 1040/1080
- 1660
- 2080

Design

SLW-0630
- **BB:** Ball bearing

SLW-1040/1080/1660/2080
- **S:** Standard
- **E:** Adjustable linear bearing
- **PL:** Pretensioned (50N)
- **EPL:** Adjustable, pretensioned (50 N)
- **BB:** Ball bearing
- **BBE:** Ball bearing, Adjustable linear bearing
- **BBPL:** Ball bearing, Pretensioned (50 Nm)
- **BBEPL:** Ball bearing, adjustable linear bearing, Pretensioned (50N)

Carriage length

SLW-0630
- **06:** 60 mm (Standard)

SLW-1040
- **07:** 69 mm (Standard)
- **10:** 100 mm
- **15:** 150 mm

SLW-1080/1660/2080
- **15:** 150 mm (Standard)

Lead screw material:
- **S:** steel
- **E:** stainless steel

Lead screw pitch

SLW-0630
- **0015:** TR8x1.5 mm (steel)
- **0150:** SG8x15 mm (stainless steel)

SLW-1040/1080
- **0020:** TR10x2 mm (steel/stainless steel)
- **0030:** TR10x3 mm (steel/stainless steel)
- **0120:** SG10x12 mm (stainless steel)
- **0500:** SG10x50 mm (stainless steel)

SLW-1660
- **0040:** TR14x4 mm (steel/stainless steel)

SLW-2080
- **0040:** TR18x4 mm (steel/stainless steel)

Thread
- **R:** Right | **L:** Left

Lead screw end
- **G:** Threaded end
- **Z:** End 12h9 (with SLW-2080)

Stroke length
- **SLW-0630:** max. 300 mm
- **SLW-1040/1080:** max. 750 mm (BB: max.500 mm)
- **SLW-1660:** max 750 mm
- **SLW-2080:** max. 1000 mm (BB: 900 mm)

Motor size/Recommended axis
- **17:** NEMA17 / 0630
- **23:** NEMA23 / 1040, 1080
- **23XL:** NEMA23XL / 1040, 1080, 1660
- **34:** NEMA 34 / 2080
- **DC01:** DC-Motor: 0.1 Nm / 0630
- **DC03:** DC-Motor: 0.3 Nm / 0630, 1040
- **DC07:** DC-Motor: 0.7 Nm / 1040
- **DC15:** DC-Motor: 1.5 Nm / 1040, 1660

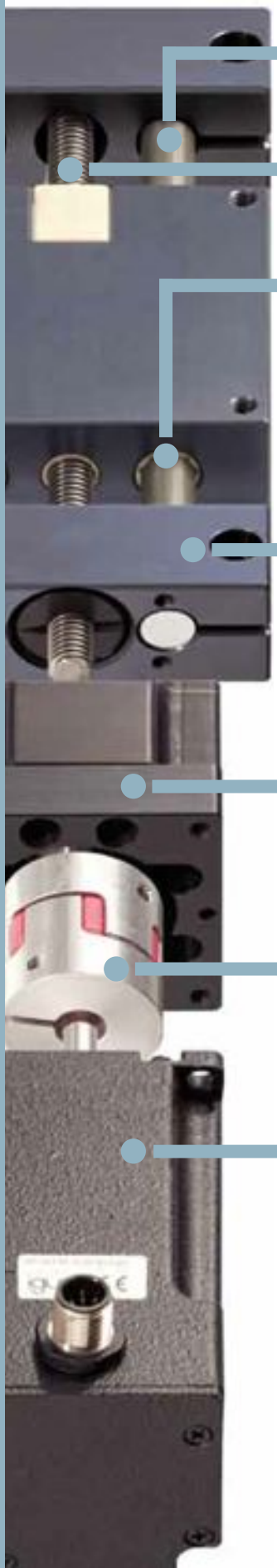
Motor option
- **L:** Litz wires
- **M:** Metric connectors
- **C:** Encoders
- **D:** Encoder and brake
- **F:** Low profile connector (DC motor)

Assembly
- **S:** Assembly on the drive pin (standard)

Electrical connection alignment
- **000:** 0° (standard)
- **090:** 90°
- **180:** 180°
- **270:** 270°

drylin® E | Linear Axes with Motor | SHT

Linear axes with lead screw drive



3 shaft materials

4 trapezoidal thread pitches
3 high helix thread pitches

Lubricant and maintenance-free with drylin® liners and lead screw nuts

Carriages and shaft end supports from anodized aluminum

Motor flange: motor connections

Claw coupling

igus® DC motors
- Cost-effective
- Maintenance-free
- 4 versions
- Battery operation possible

igus® step motors
- Cost-effective
- Maintenance-free
- 5 installation sizes
- 17 versions

When to use it?

- For format adjustments and for positioning medium loads
- In extreme environments
- When a cost-effective, ready-to-install solution is needed
- When it should be low noise
- With low profile installation space

When not to use it?

- When high loads must be motion controlled in a highly dynamic manner
- When positioning accuracy < 0.1 mm is necessary
- If high running performance is required in continuous operation

Drawings, dimensions, technical specifications, such as SHT ▶ page 1024

More information ▶ www.igus.eu/eu/drylinSHT

drylin® E | Linear Axes with Motor | SHT

Order key

SHT-12-BBZB-AWM-S0020RG-750-17-L-S-000

Type

Installation size
- 12
- 20
- 30

Design
- **S:** Standard
- **PL:** Pretensioned (50 Nm)
- **BB:** Ball bearing
- **BBPL:** Ball bearing, vorgesp. (50 Nm)
- **BBZB:** Ball bearing, zero backslash (only SHT-12 with SG10x12)

Shaft material
- **AWM:** Hard-anodized aluminum
- **SWM:** Cf53 (1.1213)
- **EWM:** stainless steel X105 (1.4125)

Lead screw material:
- **S:** steel
- **E:** stainless steel

Lead screw pitch

SHT-12
- **0020:** T10x2 mm (steel/stainless steel)
- **0030:** TR10x3 mm (steel/stainless steel)
- **0120:** SG10x12 mm (stainless steel)
- **0500:** SG10x50 mm (stainless steel)

SHT-20
- **0040:** TR18x4 mm (steel/stainless steel)

SHT-30
- **0050:** TR24x5 mm (steel/stainless steel)

Thread
- **R:** Right | **L:** Left

Lead screw end
- **G:** Threaded end (with SHT-12)
- **Z:** End 12h9 (with SHT-20)
- **Z:** End 14h9 (with SHT-30)

Stroke length
- **SHT-12:** max. 750 mm (BB max. 500 mm)
- **SHT-20:** max. 1,000 mm (BB max. 900 mm)
- **SHT-30:** max 1250 mm (BB max. 1,000 mm)

Motor size
- **17:** NEMA17: recommended axis 12
- **23:** NEMA23: recommended axis 12/20
- **23XL:** NEMA23XL: recommended axis 20
- **34:** NEMA34: recommended axis 20/30
- **DC01:** DC-Motor: 0.1 Nm recommended axis 12
- **DC03:** DC-Motor: 0.3 Nm recommended axis 12
- **DC07:** DC-Motor: 0.7 Nm recommended axis 12
- **DC15:** DC-Motor: 1.5 Nm recommended axis 12

Motor option
- **L:** Litz wires
- **M:** Metric connectors
- **C:** Encoders
- **D:** Encoder and brake
- **F:** Low profile connector (DC motor)

Assembly
- **S:** Assembly on the drive pin (standard)

Electrical connection alignment
- 000: 0° (standard)
- 090: 90°
- 180: 180°
- 270: 270°

drylin® E | Linear Axes with Motor | ZLW

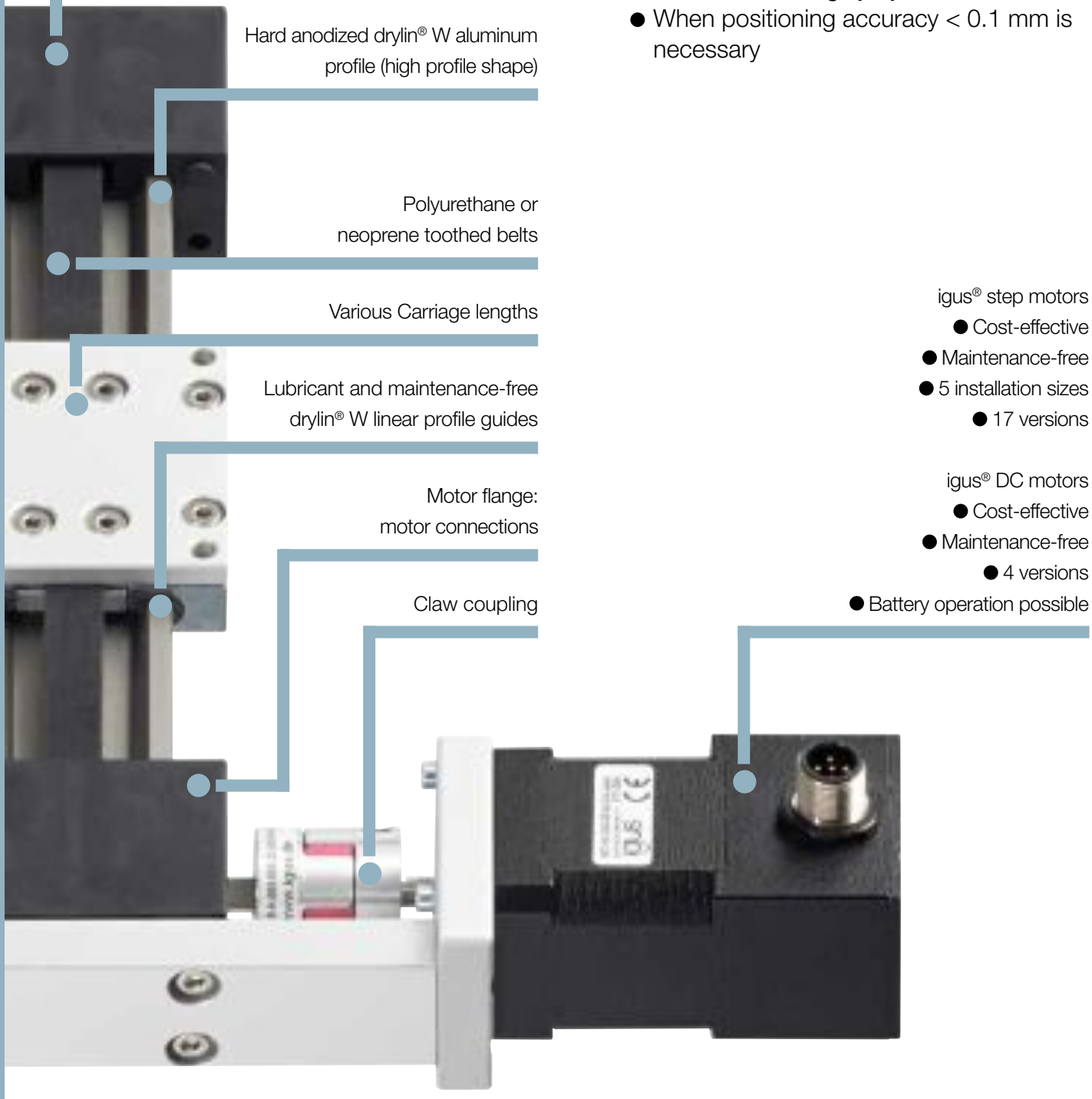
Linear axes with toothed belt

When to use it?

- Quick positioning of small loads
- Quiet operation
- Slim structure
- Continuous operation

When not to use it?

- When high loads must be motion controlled in a highly dynamic manner
- When positioning accuracy < 0.1 mm is necessary



Drawings, dimensions, technical specifications, such as ZLW ▶ page 1075

drylin® E | Linear Axes with Motor | ZLW

Order key

ZLW-1040-02-B-60-L-750-17-M-S-000

Type
ZLW

Installation size
0630
1040
1660

Version
02: With grooved ball bearings

Design
S: Type series - standard
B: Type series - basic

Carriage length
60: 60 mm (only ZLW 0630)
100: 100 mm
150: 150 mm
200: 200 mm
250: 250 mm

Drive pins
L: Left-hand drive pin
R: Right-hand drive pin
L/R: Drive both sides

Stroke length
ZLW-0630: max. 1,000 mm
ZLW-1040: max. 2,000 mm
ZLW-1660: max. 3,000 mm

Motor size
17: NEMA17: recommended axis 0630
23: NEMA23: recommended axis 1040
23XL: NEMA23XL: recommended axis 1040
34: NEMA34: empf. Achse 1040/1660
DC01: DC-Motor 0.1 Nm: recommended axis 0630
DC03: DC-Motor: 0.3 Nm: recommended axis 0630
DC07: DC-Motor: 0.7 Nm recommended axis 1040
DC15: DC-Motor: 1.5 Nm recommended axis 1040

Motor option
L: Litz wires
M: Metric connectors
C: Encoders
D: Encoder and brake
F: Low profile connector (DC motor)

Assembly
S: Assembly with one drive pin (standard)

Electrical connection alignment
000: 0° (standard)
090: 90°
180: 180°
270: 270°

drylin® E | Linear Axes with Motor | SLN

New: Miniature linear axis with lead screw drive

Base body made from corrosion resistant rugged plastic

Lubricant-free linear guide using polymer plain bearings

Lubricant and maintenance-free drylin® N low profile linear guides

1 trapezoidal thread pitch, 1 high helix thread pitch

Motor flange: motor connections

igus® step motors
- Cost-effective
- Maintenance-free
- 1 installation size
- 2 versions

Order key:

SLN-27-02-0050-100-11-L-S-000

Type
SLN

Installation size
27

Design
02: With motor

Lead screw pitch
SLN-27:
0008: M5x0,8 mm (stainless steel)
0050: SG5x5 mm (stainless steel)

Stroke length
SLN-27: max. 250 mm

Motor size
11: NEMA11

Motor option
L: Litz wires
C: Encoders

Assembly
S: Assembly with one drive pin (standard)

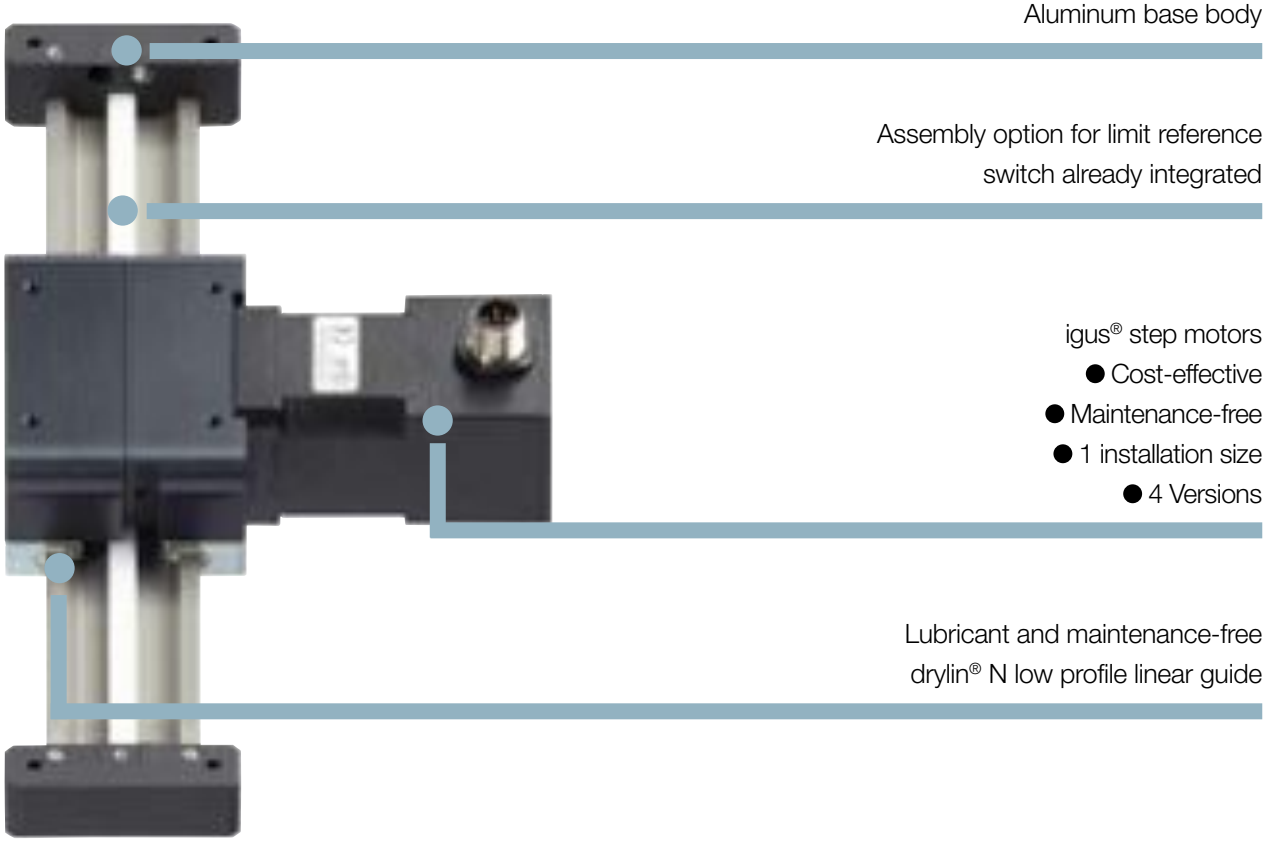
Motor pin alignment
000: 0° (standard)
090: 90°
180: 180°
270: 270°

Drawings, dimensions, technical specifications, such as SLN ▶ page 1053

 More information ▶ www.igus.eu/eu/drylin SLN

drylin® E | Linear Axes with Motor | GRW

New: Cantilever axis with rack dri



Order key:

GRW-0630-A-80-150-17-L-S-000

Type
GRW

Installation size
0630

Design
A: Standard

Carriage length
80: 80 mm

Stroke length
GRW-0630: max. 150 mm

Motor size
17: NEMA17

Motor option
L: Litz wires
M: Metric connectors
C: Encoders
D: Encoder and brake

Assembly
S: Assembly with one drive pin (standard)

Motor pin alignment
000: 0° (standard)
090: 90°
180: 180°
270: 270°

More information ▶ www.igus.eu/eu/drylinGRW

drylin® E | Online-Tools

Complete drive technology configurable, incl. motors

In addition to calculating the correct linear unit, the product finder for drylin® drive technology also provides for the option to calculate the correct motors, incl. service life. The identified solutions can be directly configured and ordered using the same tool.

- Linear solutions tailored to your application, incl. motor if desired
- Configurable accessories and order function
- When selecting motor incl. load calculation
- Easy to understand results screen to select the ideal solution
- Convenient access to other functions, such as online catalog, shopping cart, downloads, etc.

www.igus.eu/drylinE-finder

drylin® E | Accessories

Spacer

The spacer is an aluminum standoff that brings the selected drylin® linear unit to a height that matches your NEMA motor. An attachment feature for proximity switches is already integrated. Later assembly is also possible.

Part number	matching linear modules	Specification
STY-104001	SLW-1040	
STY-108002	SLW-1080	
STY-166006	SLW-1660	1 spacer with integrated proximity switch tab.
STY-20805	SLW-2080	Material: anodized aluminum
STY-121001	SHT-12	
STY-201801	SHT-20	

Part number	matching linear modules	Specification
AK-0001	SLW-1040	
AK-0002	SLW-1080	
AK-0003	SLW-1660	2 spacers each, with integrated proximity switch tab.
AK-0004	SLW-2080	incl. screws. Material: anodized aluminum
AK-0006	SHT-12	
AK-0007	SHT-20	

Adapter kit for simple gantry setup

Using the new adapter kits, multi-axis gantries can be built simply and quickly. The assembly preparation for energy chains is already in place.

- Simple and fast multi-axes gantry setup
- For lead screw and toothed belt axes
- Energy chain assembly preparation
- Anodized aluminum
- Space and weight reducing

Typical application areas:
Handling systems, filling and retrieval equipment, feed equipment, feeders, pick and place, interlinkage systems, gantries, “intelligent” conveyor belts and transportation systems

Part number	matching linear modules	Specification
AK-0011	ZLW-0630	2 assembly plates for XXY gantry setup, length: 100 mm
AK-0012	ZLW-1040	incl. 12 screws

More information ▶ www.igus.eu/eu/drylinE

drylin® E | Step Motor Cables

Connecting cables

The ideal compliment to the drylin® E product range provides chainflex® connecting cables

- Suitable for energy chains
- Shielded and oil resistant
- Straight and angled connectors

Flange size 42 (NEMA17), 56 (NEMA23), 60 (NEMA23XL)

Part number	Jacket	Type	Cable length [m]	Connectors
Power cable				
MAT9043737	TPE	CF9-CF.INI	3.0	straight
MAT9043738	TPE	CF9-CF.INI	5.0	straight
MAT9043740	TPE	CF9-CF.INI	10.0	straight
MAT9043742	TPE	CF9-CF.INI	3.0	angled
MAT9043743	TPE	CF9-CF.INI	5.0	angled
MAT9043745	TPE	CF9-CF.INI	10.0	angled
Encoder (harnessed)				
MAT90432594-3	PVC	CF240	3.0	straight
MAT90432594-5	PVC	CF240	5.0	straight
MAT90432594-10	PVC	CF240	10.0	straight
MAT90436430-3	PVC	CF240	3.0	angled
MAT90436430-5	PVC	CF240	5.0	angled
MAT90436430-10	PVC	CF240	10.0	angled

Flange size 42 (NEMA17), 56 (NEMA23), 60 (NEMA23XL)

Part number	Jacket	Type	Cable length [m]	Connectors
Power cable				
MAT90439520-3	PUR	CF78.UL	3.0	straight
MAT90439520-5	PUR	CF78.UL	5.0	straight
MAT90439520-10	PUR	CF78.UL	10.0	straight
Encoder (harnessed)				
MAT90439519-3	PVC	CF211	3.0	straight
MAT90439519-5	PVC	CF211	5.0	straight
MAT90439519-10	PVC	CF211	10.0	straight

Flange size 86 (NEMA34)

Part number	Jacket	Type	Cable length [m]	Connectors
Brake cable				
MAT9043716	TPE	CF9-CF.INI	3.0	straight
MAT9043717	TPE	CF9-CF.INI	5.0	straight
MAT9043719	TPE	CF9-CF.INI	10.0	straight
MAT9043724	TPE	CF9-CF.INI	3.0	angled
MAT9043725	TPE	CF9-CF.INI	5.0	angled
MAT9043727	TPE	CF9-CF.INI	10.0	angled

drylin® E | Limit Reference Switch

Proximity switches: Limit and reference switches

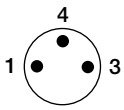
The compact and easy assembly of the proximity switches represent a logical extension of the kit approach for the drylin® E series. The plastic housing makes the proximity switches, which can be used as limit, position or reference switches, particularly light and rugged.

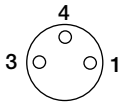
Technical Data

Proximity switches	Unit	
Operating voltage	[VDC]	10...30
Max. trigger current	[mA]	100
Ambient temperature	[°C]	–25 to+70
Trigger distance	[SN]	2.5
Protection class		IP67
Connector		M8

Pin assignment

Initiator	M8 3 pin	Proximity switch cable	
PIN	Signal	PIN	Color
1	+	1	Brown
3	-	3	Blue
4	Load	4	Black





20-30 mm of extra stroke length is needed for each limit reference switch.

Axis	Part number Proximity switch kit Opener	Part number Proximity switch kit Closer
SAW-0630	IK-0001	IK-0002
SAW-1040	IK-0001	IK-0002
SAW-1660	IK-0003	IK-0004
SLW-BB-0630	-	-
SLW-BB-1040	IK-0005	IK-0017
SLW-BB-1080	IK-0007	IK-0018
SLW-BB-1660	IK-0008	IK-0019
SLW-BB-2080	IK-0009	IK-0020
SHT-BB-12	IK-0011	IK-0022
SHT-BB-20	IK-0012	IK-0023
SHT-BB-30	-	-
SLW-1040	IK-0005	IK-0017
SLW-1040-AL	IK-0005	IK-0017
SLW-1080	IK-0007	IK-0018
SLW-1660	IK-0008	IK-0019
SLW-2080	IK-0009	IK-0020
SHT-12	IK-0011	IK-0022
SHT-20	IK-0012	IK-0023
SHT-30	-	-
ZLW-0630-B	IK-0001	IK-0002
ZLW-0630-S	IK-0001	IK-0002
ZLW-1040-B	IK-0001	IK-0002
ZLW-1040-S	IK-0001	IK-0002
ZAW-1040-B	IK-0001	IK-0002
ZAW-1040-S	IK-0001	IK-0002
ZLW-1660-S	IK-0003	IK-0004

Matching cables are added by harnessing the following attachments:

IK-0010-BG-3

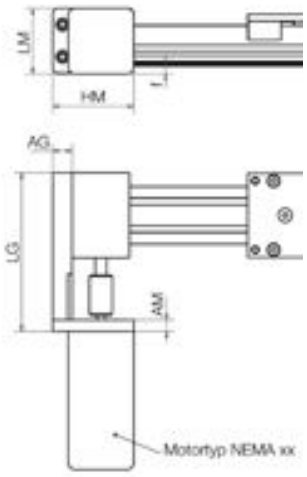
- Cable length = 3m, 5m, 10m
- Connector description
  - BG = straight socket
- Assignment number
- IK = proximity switch kit

A proximity switch kit for SAW & ZLW includes a proximity switch, a bracket and mounting screws

A proximity switch kit for SLW & SHT includes a proximity switch, two spacers and mounting screws.

drylin® E | Motor Flanges

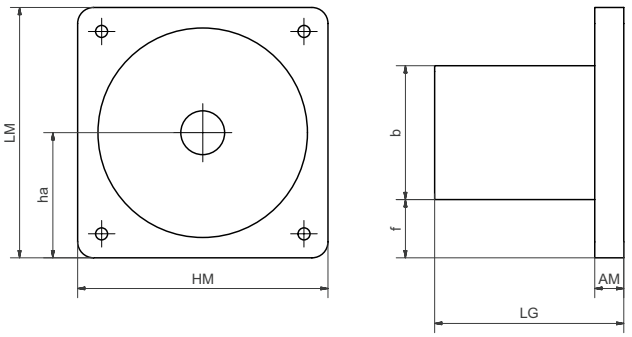
Motor flange for toothed belt axes



- 2 base plate lengths for each NEMA motor flange, others on request
- Matches the igus® coupling ▶ **page 1107**

Part number	matching linear modules	Base plate				Motor flange		
		AG	LG	LK	AM	HM	LM	f
MF-0630-NEMA17-S	ZLW-0630	12	99.5	35.5	10	53	42	7
MF-0630-NEMA23-S	ZLW-0630	12	99.5	35.5	10	59	56	14
MF-1040-NEMA17-S	ZLW-1040	17	119	35	10	63	44	-
MF-1040-NEMA23-S	ZLW-1040	17	119	35	10	70.7	56.4	7
MF-1040-NEMA34-L	ZLW-1040	17	138	54	10	85	85	20.5
MF-1660-NEMA34-S	ZLW-1660	10	166	52	10	86	86	-
MF-2260-NEMA23-S	ZLW-1040	10	108	35	10	70.7	56.4	-
MF-0630-DC0310	ZLW-0630	12	99.5	35.5	10	53	42	7
MF-1040-DC0310	ZLW-1040	17	119	35	10	63	44	-

Motor flange for lead screw axes



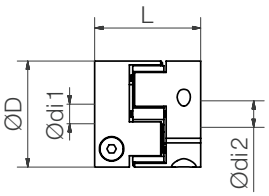
The motor flange, also called motor enclosure, encloses and protects the coupling and provides the matching mounting dimensions for your NEMA motor.

- Matches the igus® coupling ▶ **page 1107**

Part number	matching linear modules	LG	AM	HM	LM	b	f	ha
MF-1123-NEMA17	SAW/SLW-BB-0630	45	-	43	43	43	-	21.5
MF-2040-NEMA17	SAW/SLW-1040, SHT-12	47	12	43	43	43	-	21.5
MF-2040-NEMA23-S	SAW/SLW-1040, SHT-12/20	48	13	56	56	56	-	28
MF-3648-NEMA23	SHT-20, SHT-BB-20	56	13	56	56	56	-	28
MF-3648-NEMA34	SLW-1660/2080, SLW-BB-1660/2080	65	10	86	86	46	20	43
MF-3648-NEMA34-XL	SHT-30, SHT-BB-30	76	10	86	86	56	15	43
MF-1123-DC0310	SAW/SLW-BB-0630	45	-	43	43	43	-	21.5
MF-2040-DC0310	SAW/SLW-1040, SHT12	47	12	43	43	43	-	21.5

drylin® E | Couplings

Claw couplings



The coupling connects the drive pin of the axis and the motor pin. An elastic plastic element in the center of the coupling transfers the motor torque.
This damping element compensates for radial andaxial clearance.

- 20 versions from stock
- Vibration dampening and connectable

Coupling material: aluminum. TPU elastomeric crown. Shore hardness: 98 Sh A. Temperature range -30 °C to +100 °C.

			Techn. data - coupling				
Toothed belt axis	**Motor type**	**Coupling**	**D**	**di1**	**di2**	**L**	**Weight**
				[mm]	[mm]	[mm]	[kg]
ZLW-0630-B	NEMA17	COU-AR-K-050-000-25-26-B-AAAB	25.00	5.00	6.00 □	26.00	0.02
	NEMA23	COU-AR-K-063-000-25-26-B-AAAB	25.00	6.35	6.00 □	26.00	0.02
	DC-Motor31	COU-AR-K-060-000-25-26-B-AAAB	25.00	6.00	6.00 □	26.00	0.02
ZLW-0630-S	NEMA17	COU-AR-K-050-080-25-26-B-AAAA	25.00	5.00	8.00	26.00	0.02
	NEMA23	COU-AR-K-063-080-25-26-B-AAAA	25.00	6.35	8.00	26.00	0.02
	DC-Motor31	COU-AR-K-060-080-25-26-B-AAAA	25.00	6.00	8.00	26.00	0.02
ZLW-1040-B / ZAW	NEMA17	COU-AR-K-050-000-25-26-B-AAAB	25.00	5.00	6.00 □	26.00	0.02
	NEMA23	COU-AR-K-063-000-25-26-B-AAAB	25.00	6.35	6.00 □	26.00	0.02
	NEMA23XL	COU-AR-K-080-000-25-26-B-AAAB	25.00	8.00	6.00 □	26.00	0.02
	DC-Motor31	COU-AR-K-060-000-25-26-B-AAAB	25.00	6.00	6.00 □	26.00	0.02
ZLW-1040-S / ZAW	NEMA23	COU-AR-K-063-100-32-32-B-AAAA	32.00	6.35	10.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-100-32-32-B-AAAA	32.00	8.00	10.00	32.00	0.05
	NEMA34	COU-AR-K-140-100-32-32-B-AAAA	32.00	14.00	10.00	32.00	0.05
	DC-Motor31	COU-AR-K-060-100-32-32-B-AAAA	32.00	6.00	10.00	32.00	0.05
ZLW-1660-S	NEMA 34	COU-AR-K-140-140-32-32-B-AAAA	32.00	14.00	14.00	32.00	0.05
Lead screw axis	**Motor type**	**Coupling**	**D**	**di1**	**di2**	**L**	**Weight**
				[mm]	[mm]	[mm]	[kg]
SAW-0630 / SLW-BB-0630	NEMA17	COU-AR-K-050-080-25-26-B-AAAA	25.00	5.00	8.00	26.00	0.02
	DC-Motor31	COU-AR-K-060-080-25-26-B-AAAA	25.00	6.00	8.00	26.00	0.02
SAW-1040 / SLW-(BB)-1040	NEMA17	COU-AR-K-050-100-32-32-B-AAAA	32.00	5.00	10.00	32.00	0.05
	NEMA23	COU-AR-K-063-100-32-32-B-AAAA	32.00	6.35	10.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-100-32-32-B-AAAA	32.00	8.00	10.00	32.00	0.05
	DC-Motor31	COU-AR-K-060-100-32-32-B-AAAA	32.00	6.00	10.00	32.00	0.05
SLW-(BB)-1660	NEMA23	COU-AR-K-063-140-32-32-B-AAAA	32.00	6.35	14.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-140-32-32-B-AAAA	32.00	8.00	14.00	32.00	0.05
SLW-(BB)-2080	NEMA23	COU-AR-K-063-120-32-32-B-AAAA	32.00	6.35	12.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-120-32-32-B-AAAA	32.00	8.00	12.00	32.00	0.05
	NEMA34	COU-AR-K-140-120-32-32-B-AAAA	32.00	14.00	12.00	32.00	0.05
SHT-(BB)-12	NEMA17	COU-AR-K-050-100-32-32-B-AAAA	32.00	5.00	10.00	32.00	0.05
	NEMA23	COU-AR-K-063-100-32-32-B-AAAA	32.00	6.35	10.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-100-32-32-B-AAAA	32.00	8.00	10.00	32.00	0.05
	DC-Motor31	COU-AR-K-060-100-32-32-B-AAAA	32.00	6.00	10.00	32.00	0.05
SHT-(BB)-20	NEMA23	COU-AR-K-063-120-32-32-B-AAAA	32.00	6.35	12.00	32.00	0.05
	NEMA23XL	COU-AR-K-080-120-32-32-B-AAAA	32.00	8.00	12.00	32.00	0.05
	NEMA34	COU-AR-K-140-120-32-32-B-AAAA	32.00	14.00	12.00	32.00	0.05
SHT-(BB)-30	NEMA34	COU-AR-K-140-140-32-32-B-AAAA	32.00	14.00	14.00	32.00	0.05

drylin® E | NEMA Step Motors

Various step motor versions

Motor with litz cables

Litz motors are the least expensive and the most used step motors. The connecting wires for this type directly exit from the housing. They are preferably installed in machines and equipment that have an additional housing or are used in clean environments.

Motor with connector

The connector interface provides a high IP65 protection level (IP: International Protection). The higher the IP rating, the better the motor is protected from the ingress of dirt and water.

Motor with connector and encoder

The encoder sends signals from the motor to the motor control. The encoder verifies that the desired linear motion has occurred precisely as desired.
Encoder = increased machine reliability.

Motor with connector, encoder and brake

The brake can hold the payload in position when the motor is not under power. This is used as a safety feature during power failures – recommended for vertically mounted systems.

Installation sizes of NEMA step motors

NEMA11: Tiny but with plenty of power

This motor compels with its small installation size. Nonetheless, heavy loads can be moved with the suitable lead screw pitch. This motor is typically used on small test and analysis equipment and miniature adjustments.

- The holding moment, Mo, is 0.13 Nm
- The connection size is 28 x 28 mm

NEMA17: Small, but lots of power

This little motor has impressive torque and high RPMs.
It reliably performs fast travel with small loads

- The holding moment, Mo, is 0.5 Nm
- The connection size is 42 x 42 mm

NEMA23: The best known step motor size

It shines with high torque and high RPMs.
This motor is the best choice for most applications with medium loads.

- The holding moment, Mo, is 2.0 Nm
- The connection size is 56 x 56 mm

NEMA23XL: The power motor in the medium installation size

A development extension of the typical NEMA23 with nearly twice the torque.
The assembly dimensions are identical to the NEMA23, allowing this motor to be used very flexibly.

- The holding moment, Mo, is 3.5 Nm
- The connection size is 60 x 60 mm

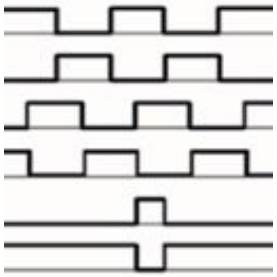
NEMA34: The power pack in the large installation size

Applications with higher loads are implemented using the largest installation size.
Heavy-duty format adjustments or parallel dual axis setups are among its primary duties

- The holding moment, Mo, is 5,9 Nm
- The connection size is 86 x 86 mm

drylin® E | Step Motors | Technical Data

Technical Data

Distance over hubs		28	42	56	60	86
Motor		**NEMA11**	**NEMA17**	**NEMA23**	**NEMA23XL**	**NEMA34**
Maximum voltage	[VDC]	60	60	60	60	60
Nominal voltage	[VDC]	24-48	24-48	24-48	24-48	24-48
Nominal current	[A]	1.0	1.8	4.2	4.2	6.4
Holding torque	[Nm]	0.13	0.5	2.0	3.5	5.9
Ratchet torque	[Nm]	0.004	0.022	0.068	0.075	0.210
Step angle	°	1.8	1.8	1.8	1.8	1.8
Resistance/phase	[Ω]	2.30 ±10%	1.75 ±10%	0.5 ±10%	0.65 ±10%	0.33 ±10%
Inductivity/phase	[mH]	1.40 ±20%	3.30 ±20%	1.90 ±20%	3.20 ±20%	3.00 ±20%
Mass moment of inertia - rotor	[kgcm³]	0.02	0.08	0.48	0.84	2.70
Shaft load, axial	[N]	7	7	15	15	65
Shaft load, radial	[N]	20	20	52	63	200
Encoder						
Operating voltage	[VDC]	5				
Signals/rotation	[1/min]	500				
Zero signal/index		yes				
Line driver		RS422 Protocol				
Signal shape (Clock-wise motor rotation)	[CW]	A, A/, B, B/, N, N/ 				

Distance over hubs			28 (NEMA11)	42 (NEMA17)	56 (NEMA23)	60 (NEMA23XL)	86 (NEMA34)
Brake							
Operating voltage	[VDC]	-		24 ±10%	24 ±10%	24 ±10%	24 ±10%
Output rating	[W]	-		8	10	10	11
Holding torque	[Nm]	-		0.4	1.0	1.0	2.0
Mass moment of inertia	[kgcm³]	-		0.01	0.02	0.02	0.07

Distance over hubs		28 (NEMA11)	42 (NEMA17)	56 (NEMA23)	60 (NEMA23XL)	86 (NEMA34)
Gewichte						
Product weight	[kg]	0.25	0.32	1.12	1.56	3.20
With Encoder	[kg]	0.27	0.34	1.14	1.58	3.30
With Encoder and brake	[kg]	-	0.58	1.36	1.82	3.60

Operating data		
Ambient temperature	[°C]	-10 to +50
Max. allowable temp. increase	[°C]	80
Insulation class		B
Air humidity (non condensing)	[%]	85
IP rating – motor housing		IP65 (shaft seal IO52, litz wire motor IP40)
CE conformity		EVM directive

characteristic curves

Flange size 28 (NEMA11)

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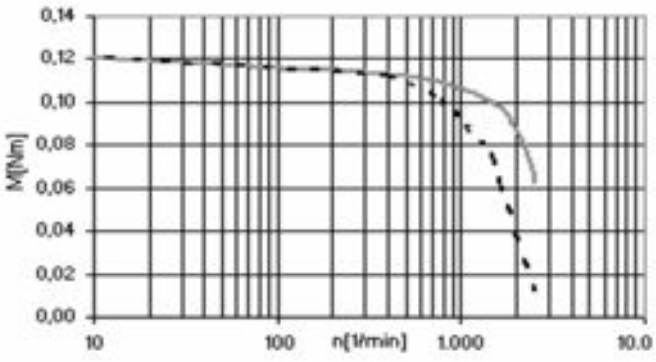

Flange size 42 (NEMA17)

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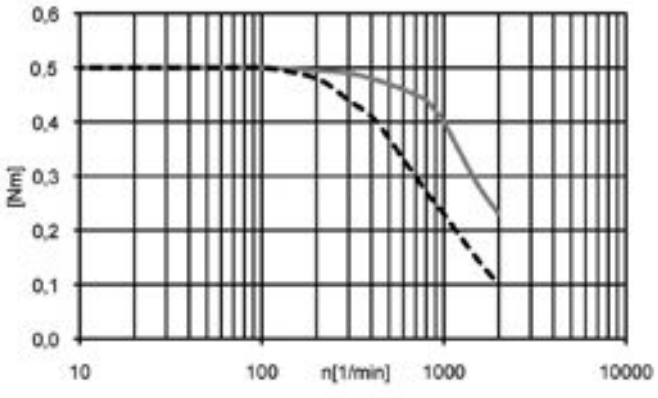

Flange size 56 (NEMA23)

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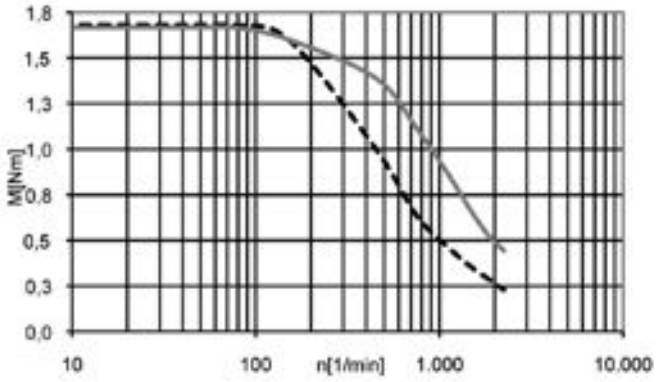

Flange size 60 (NEMA23XL)

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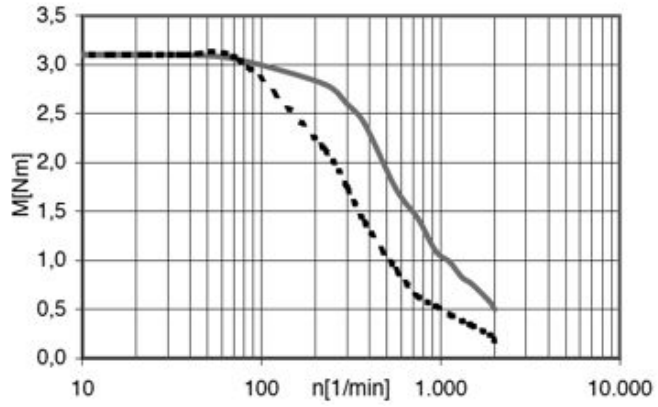

Flange size 86 (NEMA34)

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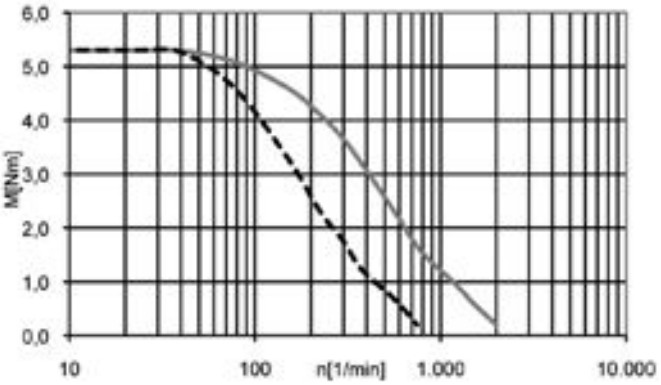


------- 24 VDC ——— 48 VDC

The characteristic progressions are determined in quarter step mode

drylin® E | Step Motors | Order key

Order key:

MOT-AN-S-060-020-056-M-A-AAAA

Specification
- **AAAA:** Standard
- **AAAC:** Encoders
- **AAAD:** Encoder & Bremse

Options
- **A:** Without
- **C:** Incremental encoder
- **D:** Incremental encoder & brake

Motor connection
- **M:** Metric connector
- **L:** Litz wires

Distance over hubs
- **028:** 28 mm (NEMA11)
- **042:** 42 mm (NEMA17)
- **056:** 56 mm (NEMA23)
- **060:** 60 mm (NEMA23XL)
- **086:** 86 mm (NEMA34)

Holding torque
- **001:** 0.1 Nm
- **005:** 0.5 Nm
- **020:** 2.0 Nm
- **035:** 3.5 Nm
- **059:** 5.9 Nm

Maximum voltage
- **060:** 60 V/DC

Motor type
- **S:** Step motor

Type
- **AN:** Design

Product type
- **MOT:** Motor

More information ▶ www.igus.eu/eu/drylinE

drylin® E | DC Motors

DC motor with spur gear

This small DC motor can be powered directly with a power source, such as a battery. It reverses direction by changing the polarity. Typical applications are sensor/camera travel and light-duty format adjustments with drylin® lead screw or toothed belt axes.

- Torque Mn from 0.1 Nm to 1.5 Nm
- Up to 440 RPM
- Can be operated at 12 & 24 VDC

Technical Data

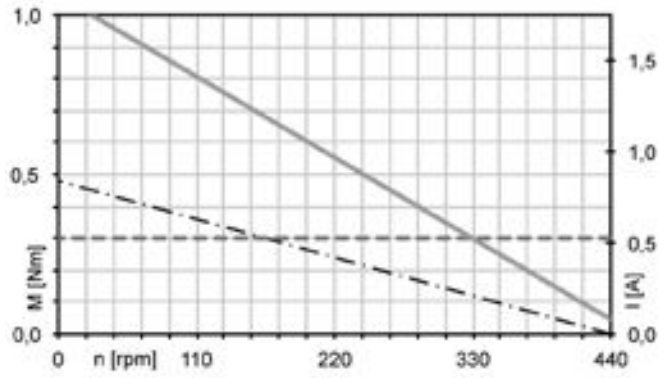
		MOT-AE-B-024-001-037-F-A-AAAA	MOT-AE-B-024-003-037-F-A-AAAA	MOT-AE-B-024-007-037-F-A-AAAA	MOT-AE-B-024-015-037-F-A-AAAA
Motor					
Maximum voltage	[VDC]	24	24	24	24
Nominal voltage	[VDC]	24	24	24	24
Nominal current	[A]	0.5	0.5	0.5	0.5
Nominal torque	[Nm]	0.1	0.3	0.7	1.5
Startup torque	[Nm]	0.3	0.5	1.0	1.8
Shaft load, axial	[N]	6.8	6.8	6.8	6.8
Shaft load, radial	[N]	9.8	9.8	9.8	9.8
Reduction gearing	[N]	10	30	75	200
Weights					
Product weight	[kg]	0.207	0.213	0.221	0.270

Operating data		
Ambient temperature	[°C]	-10 to +60
Max. allowable temperature increase	[°C]	60
Humidity (non-condensing)	[%]	85
IP protection class - motor housing		IP30
Operating mode		S2 (Short term operation)
Motor connector assigments		
Low profile connector		Length 7 mm, Width 4 mm, Thickness 0.45 mm

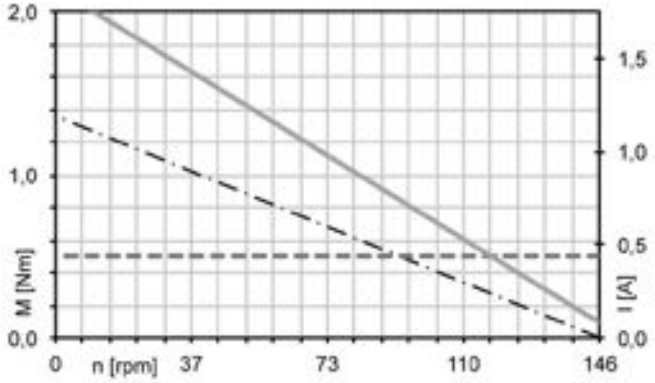
drylin® E | DC Motors | Characteristic Curves

Characteristic curves - 24 VDC

MOT-AE-B-024-001-037-F-A-AAAA



MOT-AE-B-024-003-037-F-A-AAAA



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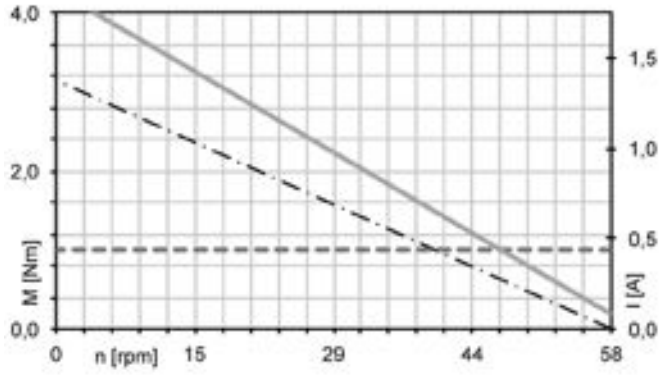

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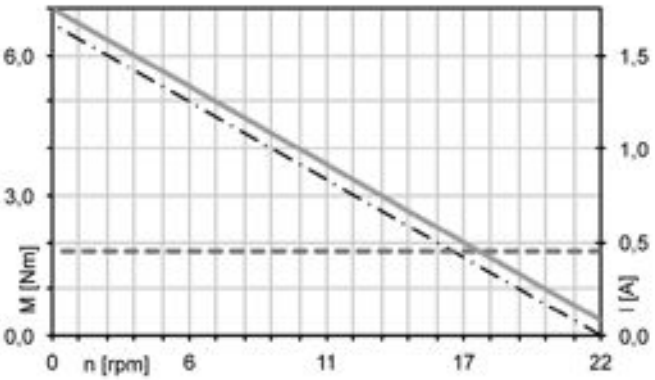
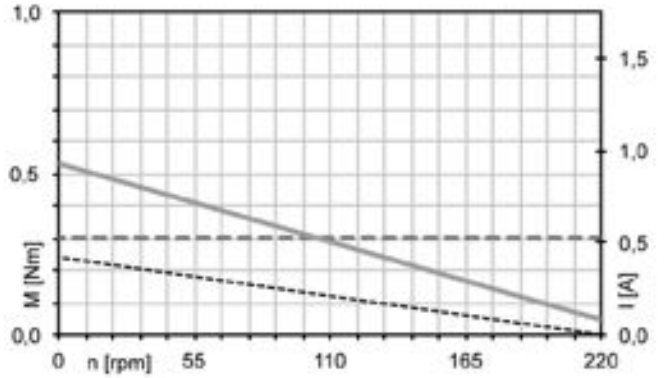


Characteristic curves - 12 VDC

MOT-AE-B-024-001-037-F-A-AAAA



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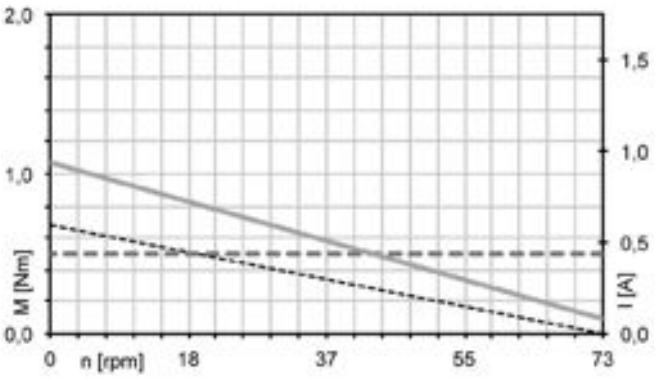

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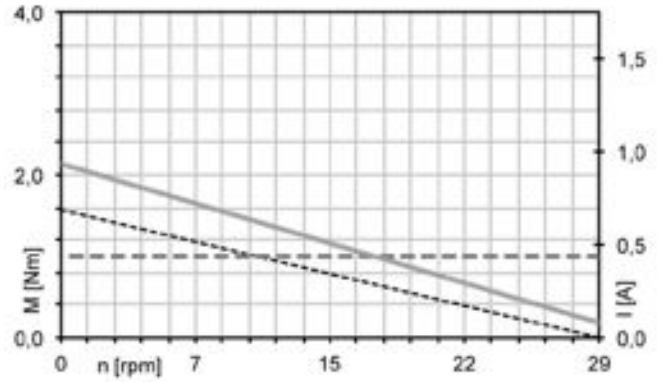

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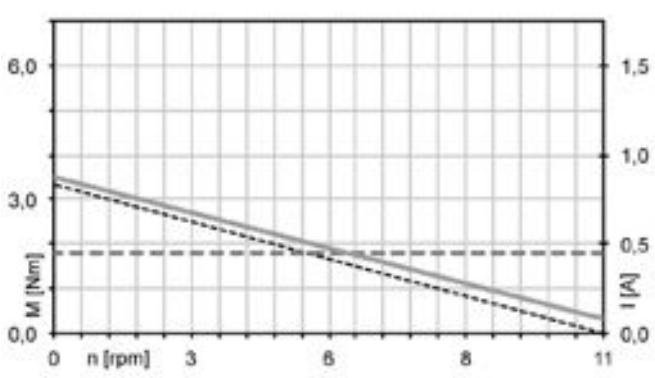
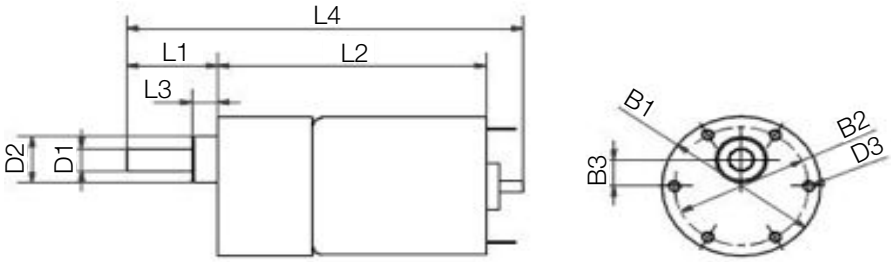


------- Torque ------- max. Continuous torque ——— Motor current

drylin® E | DC Motors

DC motor with spur gear



Dimensions [mm]

Part number	B1	B1	B2 ±0.2	B3 ±0.1	D1 -0.013	D2 ±0.025	D3	L1 ±1	L2 ±1	L3	L4
MOT-AE-B-024-001-037-F-A-AAAA	37.0	38.0	31	7	6	12	M3	21.0	59.5	6.0	92.5
MOT-AE-B-024-003-037-F-A-AAAA	37.0	38.0	31	7	6	12	M3	21.0	62.0	6.0	95
MOT-AE-B-024-007-037-F-A-AAAA	37.0	38.0	31	7	6	12	M3	21.0	64.5	6.0	97.5
MOT-AE-B-024-015-037-F-A-AAAA	37.0	38.0	31	7	6	12	M3	21.0	67.0	6.0	100.0

Order key:

MOT-AE-B-024-015-037-F-A-AAAA

Specification
AAAA: Standard
Options
A: Without
Motor connection
F: Low profile connector
Outer diameter
037: 37 mm
Nominal torque
001: 0,1 Nm
003: 0,3 Nm
007: 0,7 Nm
015: 1,5 Nm
Operating voltage
024: 24 V/DC
Motor type
B: DC motor
Type
AE: Design
Product type
MOT: Motor

My Sketches