

drylin® N replacement plastic sliders (set)

Material iglidur® J

Carriage type	Part No. Sliding part set
NW-01/02/27	NEK-01-27
NW-01/02-27P	NEK-01-27-P
NW-01/02-27-LLY	NEK-01-27-LLY
NW-01/02-27-LLZ	NEK-01-27-LLZ
NW-01/02-40	NEK-02-40
NW-01/02-40P	NEK-01-40-P
NW-01/02-40-LLY	NEK-02-40-LLY
NW-01/02-40-LLZ	NEK-02-40-LLZ
NW-02-80	NEK-02-80
NW-02-80-LLY	NEK-02-80-LLY
NW-02-80-LLZ	NEK-02-80-LLZ

drylin® linear technology –
drylin® T rail guides

Robust linear guides

Adjustable bearing clearance

Wear-resistant and durable

Dimensionally identical to recirculating
ball-bearing guides

Lubrication and maintenance-free





Lubrication-free rail guides – drylin® T

drylin® T rail guides were originally developed for applications in both automation and materials handling. The goal was to create a robust linear guide for use in the most diverse, even extreme environments. Their dimensions are identical to most recirculating ball bearing guides.

- 100 % lubrication-free
- Adjustable bearing clearance
- Automatic clearance adjustment
- High static load capacity
- Service life up to 50,000km
- Resistant to dirt
- Low vibration and quiet

Typical application areas

- Mechanical engineering
- Wood working industry
- Machine tools
- Handling



Available from stock

Detailed information about delivery time online.



Price breaks online

No minimum order value. No minimum order quantity.



Max. +90°C
Min. -40°C



7 carriage types
Rail length up to 4,000mm



Service life calculation
► www.igus.eu/drylin-expert



Cleanroom certified
IPA Fraunhofer



Free from toxins
2011/65/EU (RoHS)
ESD-compatible
(electrostatic discharge)



High performance

- 50% longer service life due to iglidur® J200 sliding elements
- Fast assembly
- Adjustable bearing clearance
- **From page 1001**



Standard / with manual clamp

- Manual clearance adjustment on the carriage
- Long service life with iglidur® J-sliding elements
- Manual clamp on carriage (optional)
- **From page 1002**



Automatic

- Automatic clearance adjustment
- Easy assembly with pre-load key
- Long service life with iglidur® J-sliding elements
- **Page 1003**



Heavy duty

- Robust design, factory clearance adjustment
- Long service life with iglidur® J-sliding elements
- Quick assembly
- **Page 1005**



Compact

- Narrow guide carriages for small spaces
- Captive plastic sliders
- Corrosion-free
- **Page 1006**



Miniature guides / Adjustable miniature guides

- Small compact design
- Easy to fit
- Individual clearance adjustment on carriage
- **Page 1008**



Clamps

- Compact or heavy duty design
- Available for installation sizes 15-30mm
- Holding force up to 500N
- **Page 1007**



drylin® T rails

- Lightweight, aluminium extruded section
- Robust and corrosion-resistant hard-anodised surfaces
- Shaft length delivered with millimetre precision up to max. 4,000mm
- **Page 1000**



Based on drylin® T

- drylin® SLT linear module
- **From Page 1335**



Long service life and food grade quality are also prerequisites for the application like insensitivity to pungent detergents and humidity.



The adjustment of the pressing roller and the compensation of the imbalance of the grinding tools are implemented with drylin® T in place of recirculating ball bearing guides.



The drylin® T linear guides are used in these enveloping machines to guide an envelope suction opener that is mounted on one side.



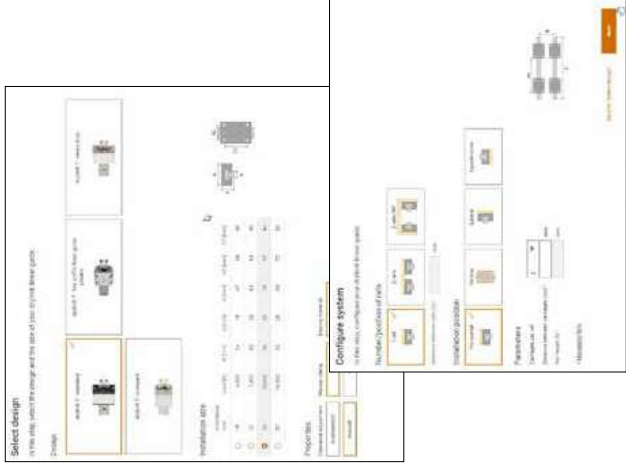
Due to the welding spatter and dust, the use of the extremely dirt-resistant drylin® T linear guide finds the balance between high service life and low costs.



drylin® T rail guides with adjustable clearance change the height of the work table silently and precisely.



Time saving: Reduced tool changing time due to this measuring system. The gauge is guided on a drylin® T rail. This solution works also without problems in dusty environments.



Expert for linear guides: System selection and service life calculation with CAD
Configure linear bearings and calculate their service life – constantly expanded by new sizes and products
Easily calculate the service life of your required linear guide and configure with a few clicks. Select a drylin® system and add the relevant environmental parameters. Select the bearing size, carriage, number and position. Then enter the distance between the rails and the mounting. Define the coordinates for the drive location and the centre of gravity, or enter these via the keyboard. Define the weight, acceleration, and distance of the bearing and select a rail length. The results are displayed.



► www.igus.eu/drylin-expert



drylin® CAD configurator: Generate complete 3D models for drylin® linear technology according to your specifications

The igus® CAD online configurator gives you the ability to design and save your linear guide as a system, individual components directly as a 3D model in all commonly used formats, or to have these sent by e-mail – free of charge and without registration.



► www.igus.eu/drylin-CAD

More information about the products can be found in the igus® download area

- Assembly instructions
- Assembly videos
- System design
- Catalogues



► www.igus.eu/downloads

Design tip

The compensation of parallelism errors up to a maximum of 0.5mm between mounted rails is possible with a fixed/floating bearing. During installation, take care that the floating bearing has approximately the same clearance on both sides.

In the adjacent designs you can see the version of the fixed/floating bearing system recommended by us.

The mounting surfaces of the rails and guide carriages should be very flat (e.g. machined surface) to prevent twisting in the system. Small discrepancies in the mounting surfaces can be compensated up to a certain amount (0.5mm) by a greater clearance adjustment. The clearance adjustment is possible only in unloaded state. If you have any questions on design and/or assembly, please make use of our technical support.



Technical details on floating bearings

► Page 907 ► Page 907
The 2:1 Rule ► Page 907

Installation drylin® T linear guide system

Make sure to assemble the side of the carriage saying "Reset Clearance" onto the rail first (see picture).



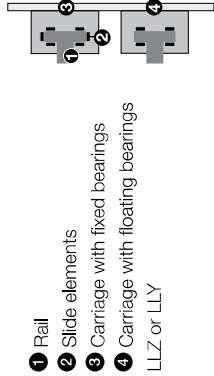
TW series, adjustable clearance

Tightening torque for drylin® connections between metal parts

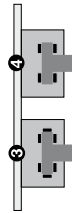
Metric thread (Da)	Torque [Nm]	Recommended tightening torque [Nm]
M3	0.5 – 1.1	0.7
M4	1.0 – 2.8	1.5
M5	2.0 – 5.5	3.0
M6	4.0 – 10.0	6.0
M8	8.0 – 23.0	15.0
M10	22.0 – 46.0	30.0

Minimal screw-in depth for aluminium and zinc die-casting parts: 1.5 x Da

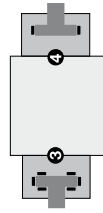
Version with floating bearing in z-direction



Horizontal version with floating bearing in z-direction



Horizontal version with floating bearing in the y-direction and lateral guide carriage



TWA series, automatic

Floating bearing clearances for drylin® T miniature guides

LLZ: Floating bearing in z-direction
LLY: Floating bearing in y-direction

	TW-04-07	TW-04-09	TW-04-12	TW-04-15
Floating bearing clearances				
LLY	–	0.4	0.5	0.7
LLZ	0.4	0.4	0.5	0.7

Table 01: drylin® – technical data

Type	C _{0Y} [kN]	C _{0(-Y)} [kN]	M _{0X} [Nm]	M _{0Y} [Nm]	M _{0Z} [Nm]
04-07	0.2	0.2	0.1	1.2	0.6
04-09	0.48	0.48	0.24	3.4	1.8
04-12	0.96	0.96	0.48	9.2	4.4
04-12 (TWE)	0.48	0.48	0.24	4.6	2.2
04-15	1.4	1.4	0.7	17	8
04-15 (TWE)	0.7	0.7	0.35	8.5	4
01-/12-15	4	4	2	32	25
01-/02-/12-20	7.4	7.4	3.7	85	45
01-/02-/03-/12-25	10	10	5	125	65
01-/02-/12-30	14	14	7	200	100

Table 02: drylin® – permissible static load capacity

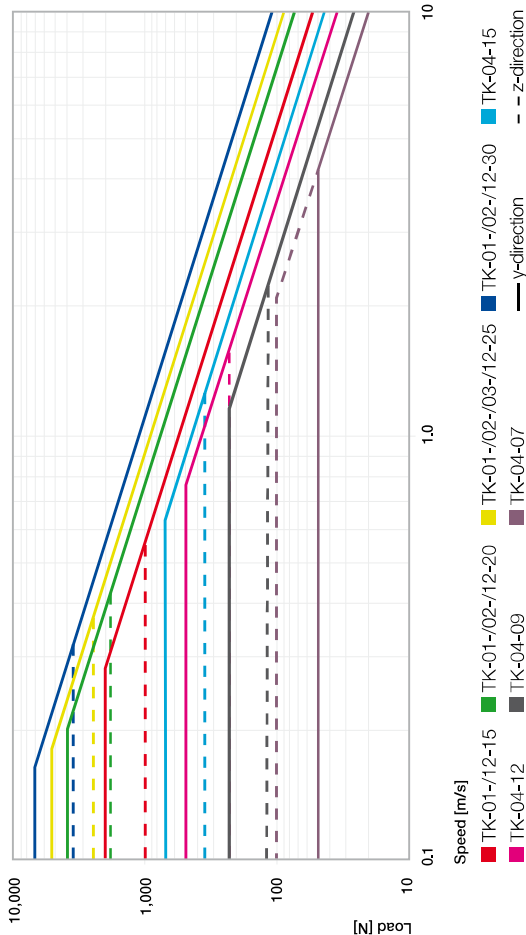
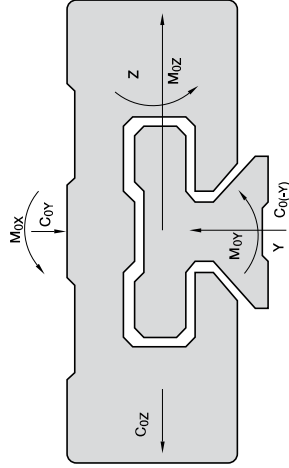


Diagram 01: Marking of the directions





TS-01



TS-11

Curved rail profiles
► Page 906



Order key

Type	Options
Guide rails	
Standard	
Installation size	
Rail length [mm]	

TS - 01 - 15 - 1000

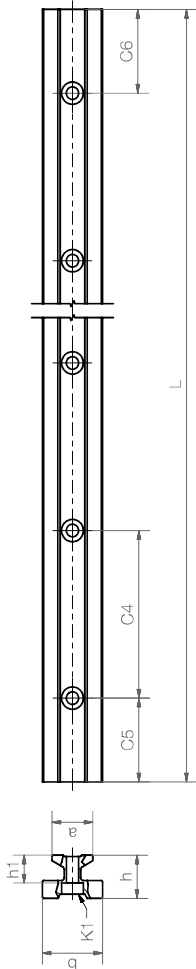
Options:

TS-01: Standard rail, hard-anodised

TS-11: Weight-reduced rail, clear-anodised

Hartanodierte Oberflächen

► Page 902



Dimensions [mm]

Part No.	Weight	L	a	C4	C5	C6	C6	h	h1	K1 for screw	b	ly	Iz	Wby	Wbz	
	[kg/m]	Max.	-0.2		Min.	Max.	Min.	Max.		DIN 912		[mm ³]	[mm ³]	[mm ³]	[mm ³]	
TS-01-15	0.6	4,000	15	60	20	49.5	20	49.5	15.5	10.0	M4	22	6,440	4,290	585	488
TS-01-20	1.0	4,000	20	60	20	49.5	20	49.5	19.0	12.3	M5	31	22,570	11,520	1,456	1,067
TS-11-20	0.5	4,000	20	120	20	79.5	20	79.5	19.0	12.3	M5	31	12,140	6,360	780	620
TS-01-25	1.3	4,000	23	60	20	49.5	20	49.5	21.5	13.8	M6	34	34,700	19,300	2,041	1,608
TS-01-30	1.9	4,000	28	80	20	59.5	20	59.5	26.0	15.8	M8	40	70,040	40,780	3,502	2,832

Standard hole pattern symmetric C5 = C6

For rails without mounting holes, please use part number suffix "UNGEBOHRT"

Can be combined with:



Technical data
► Page 999

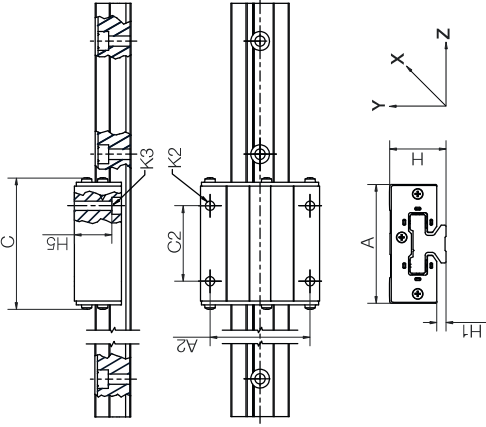
1000 Online tools and more information ► www.igus.eu/drylinT



Order key

Type	Options
Guide carriages	
High performance	
Installation size	

TW - 12 - 15



Dimensions [mm]

Part No.	Weight	H	H5	A	C	A2	C2	H1	K2- th- read	K3 for cap screw	Sliding elements
	[kg]	±0.35						±0.35			
TW-12-15	0.11	24	16.0	47	63	38	30	4.0	M5	M4	iglidur® J200
TW-12-20	0.19	30	19.8	63	72	53	40	5.0	M6	M5	iglidur® J200
TW-12-25	0.29	36	24.8	70	82	57	45	5.0	M8	M6	iglidur® J200
TW-12-30	0.50	42	27.0	90	94	72	52	6.5	M10	M8	iglidur® J200

Can only be combined with:



Technical data
► Page 999

3D CAD files, prices and delivery time online ► www.igus.eu/drylinT 1001

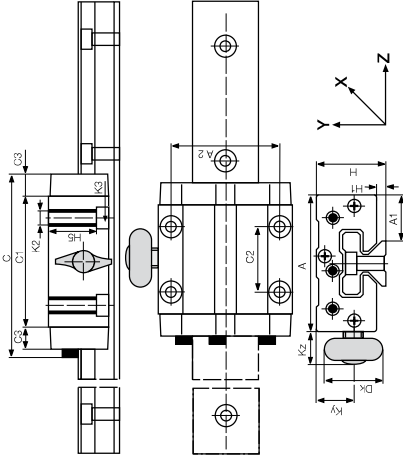
drylin® T rail guides | Product range

Guide carriage – with manual clamp

TW-01-HKA
Complete system
online

Order key

Type	Options
TW - 01 - 15 - HKA	
Guide carriages	Standard
Installation size	Manual clamp

Other dimensions as standard design
TW-01-... ► Page 1003

Dimensions [mm]

Part No.	Size	Kz	Ky	Dk	Manual clamp thread
TW-01-15-HKA	15	19,0	11,5	20,0	M6
TW-01-20-HKA	20	18,0	15,0	28,0	M8
TW-01-25-HKA	25	17,0	19,0	28,0	M8
TW-01-30-HKA	30	20,0	21,5	28,0	M8



All elements can be ordered individually or as assembled systems

TW-01-20-HKA: Guide carriage with manually adjustable clearance, installation size 20 and manual clamp

TK-01-20-HKA-2-500: Complete system with two standard guide carriages type 01 with manual clamp,

installation size 20 and standard guide rail, 500mm length



The manual clamp thread was developed for simple tasks. The creep behaviour of the clamped plastic causes a reduction in damping force over time (up to 70%). Therefore no safety-relevant parts may be clamped. Please contact our technical consultant, if you require other options for the clamping.

Can be combined with:



TS-01-...

Technical data
► Page 999

drylin® T rail guides | Product range

Guide carriage – heavy duty for extreme conditions

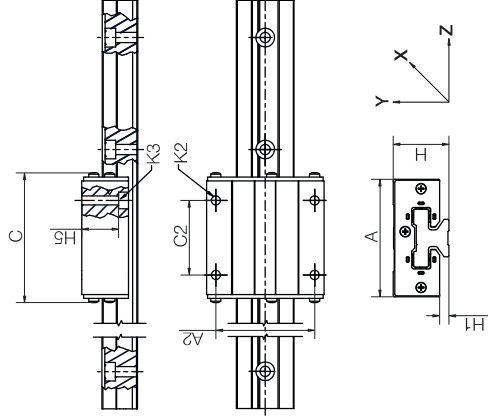
TW-02
Complete system
online

Order key

Type	Options
TW - 02 - 20	
Guide carriages	Heavy duty
Installation size	



Floating bearing upon request



Dimensions [mm]

Part No.	Weight	H	H5	A	C	A2	C2	H1	K2	K3
		±0,35						±0,35		
TW-02-20	0.19	30	19,8	63	70	53	40	5,0	M6	M5
TW-02-25	0.29	36	24,8	70	77	57	45	5,0	M8	M6
TW-02-30	0.50	42	27,0	90	92	72	52	6,5	M10	M8



All elements can be ordered individually or as assembled systems

TW-02-20: Heavy duty guide carriage, installation size 20

TK-02-20-2-500: Complete system with two heavy duty guide carriages type 02, installation size 20 and

standard guide rail, 500mm length

Can be combined with:



TS-01-...

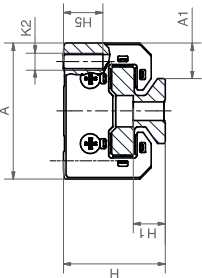
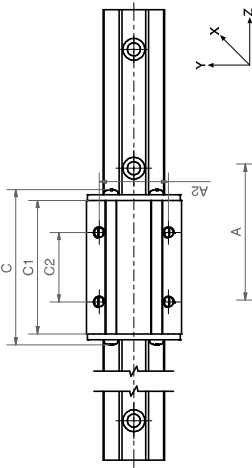
Technical data
► Page 999



TW-03



Complete system
online



Dimensions [mm]

Part No.	Weight [kg]	H ±0,35	A	C	A1	A2	C1	C2	H1	H5	K2	Tightening torque Max. [Nm]
TW-03-25	0.16	36	48	81	14	35	67.4	35	5	13	M6	6.0



All elements can be ordered individually or as assembled systems

TW-03-25: Compact guide carriage, installation size 25

TK-03-25-2-500: Complete system with two compact guide carriages type 03, installation size 25 and standard guide rail, 500mm length

Can only be combined with:



TS-01-20



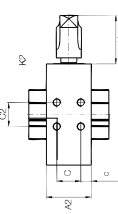
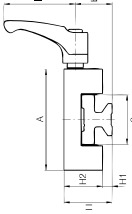
Technical data
► Page 999

Compact design

Plastic clamping elements



TWBM-11



Dimensions [mm]

Part No.	Clamp force [N]	A	a	A2	H	H1	H2	K	K2	C	C2	lg	b
TWBM-11-15	180	47	22	23	24	4	20	30	M4	15	15	4	44
TWBM-11-20	180	63	31	28	30	5	24	30	M5	15	15	4	23.0
TWBM-11-25	400	70	34	35	36	5	31	39	M6	20	20	7.5	63.63
TWBM-11-30	500	90	40	38	42	6.5	35.5	47	M6	20	20	9	78
													32.4



Order key

Type

TWBM - 11 - 15

Manual clamp

Compact

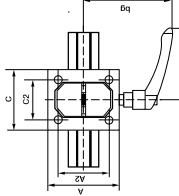
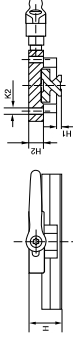
Installation size

Standard design

with brass clamp



TWBM-01



Order key

Type

TWBM - 01 - 25

Manual clamp

Standard

Installation size

Dimensions [mm]

Part No.	Clamp force [N]	A	A2	H	H1	H2	K2	C	C2	lg	bg
TWBM-01-25	500	80	57	36	5	16	M8	68	45	80	99

Can only be combined with:



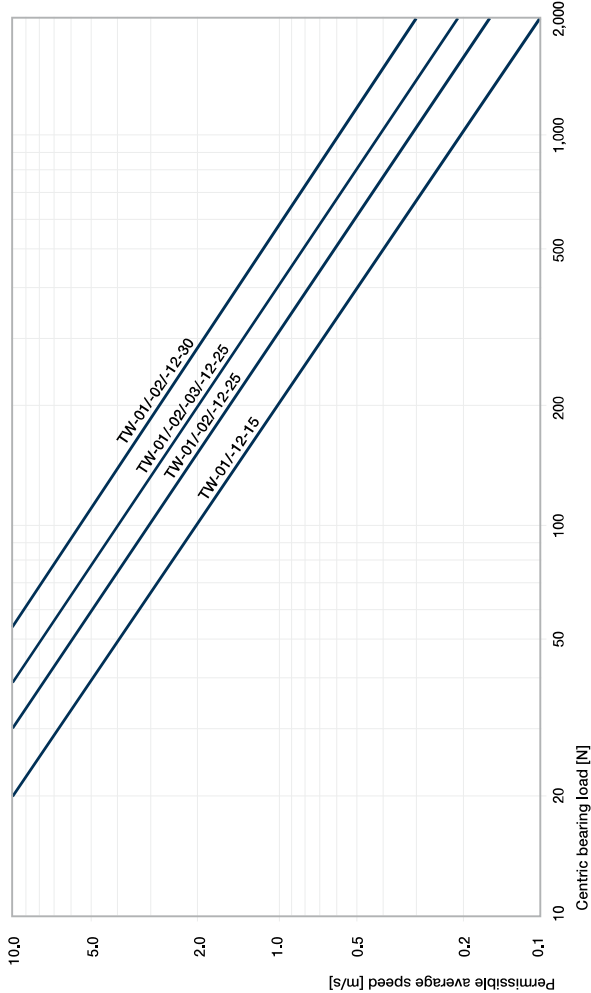
TS-01-...



drylin® T replacement plastic slide elements (set)
igidur® J material ▶ Page 159
igidur® A180 material ▶ Page 385

Guide carriages	Part No. Sliding part set
TW-01-15	TEK-01-15
TW-01-20	TEK-01-20
TW-01-25	TEK-01-25
TW-01-30	TEK-01-30
TW-02-20	TEK-02-20
TW-02-25	TEK-02-25
TW-02-30	TEK-02-30
TW-12-20	TEK-12-20
TW-04-09	TEK-04-09
TW-04-12	TEK-04-12
TW-04-15	TEK-04-15

drylin® T – system design



Part No.	F _{ymax} , F _{zmax} [N]
TW-01/-12-15	2,000
TW-01/-02/-12-20	3,700
TW-01/-02/-03/-12-25	5,000
TW-01/-02/-12-30	7,000

drylin® T end caps for series 01 guide rail
holes:

Rail	Part No. End cap
TS-01-15	TSZ-011501
TS-01-20	TSZ-012001
TS-01-25	TSZ-012501
TS-01-30	TSZ-013001

When using the end caps, screws with a low screw head must be used to attach the rail.



drylin® linear technology – drylin® R shaft guides



Lubrication-free drylin® liners

Resistance to dust and dirt

Low coefficient of friction

Extremely quiet operation

Many adapter and housing options