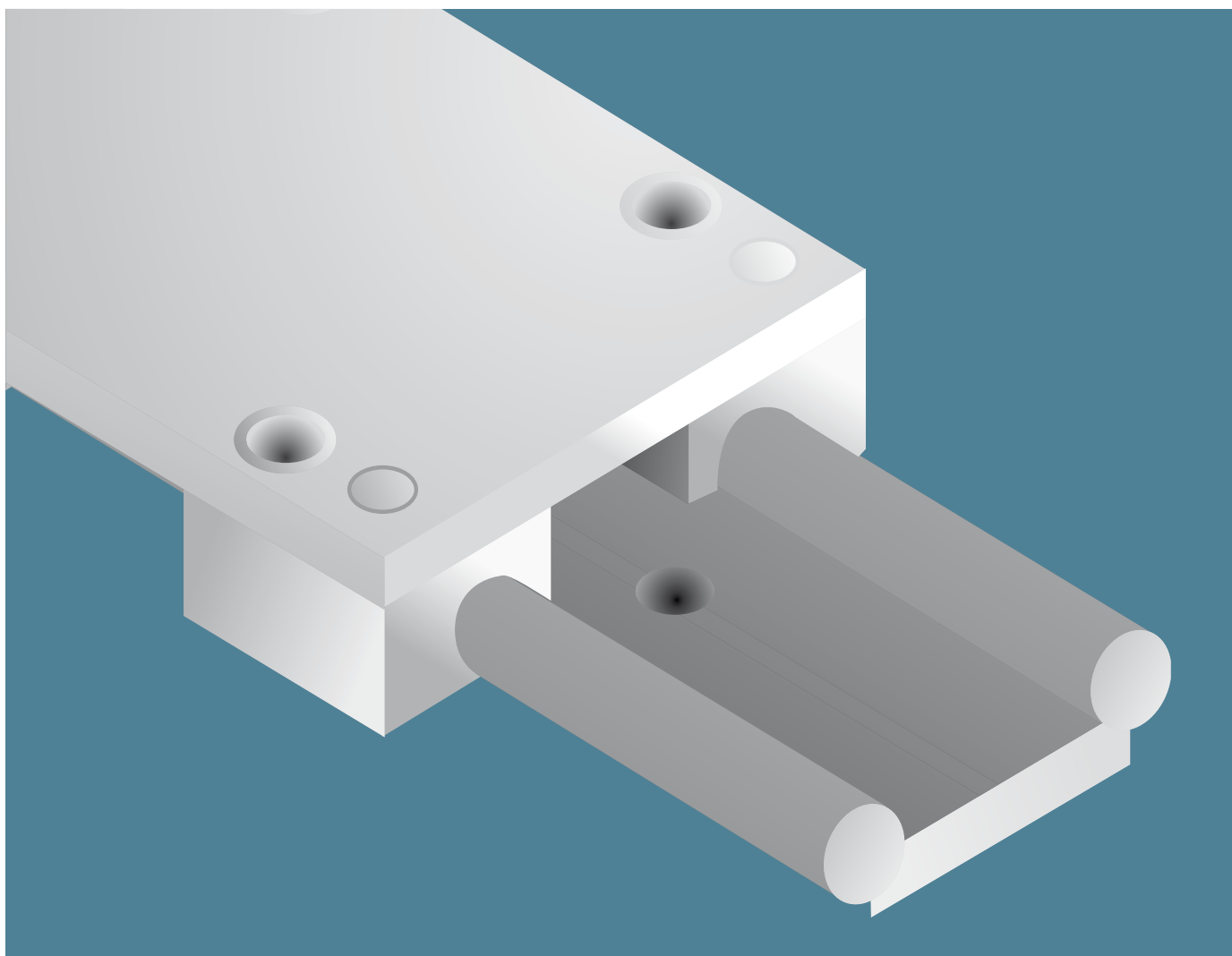




DryLin® W Modular Guide Systems



Lubrication-free

Different carriage lengths available

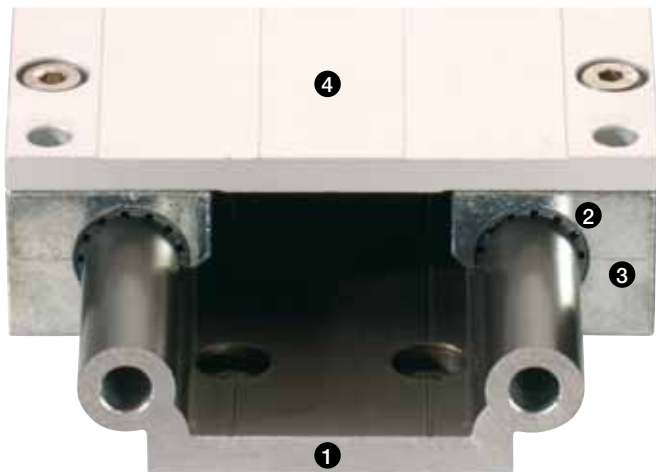
Different rail widths available

Low installation height

Corrosion-resistant

DryLin® W | Modular Guide Systems

DryLin® W is offered as a cost-effective, fully assembled system. The design of DryLin® W promotes design flexibility and ease of assembly, with both single and double rail configurations. Hard anodized aluminum is used as the rail material, and DryLin® W also offers low wear, low friction without lubrication, resistance to dirt and dust, low weight and quiet operation.



- ❶ Hard anodized aluminum rail
- ❷ Liners made from iglidur® J200
- ❸ Zinc chromed die cast housing
(Option: Stainless steel version V4A
► page 780)
- ❹ Anodized aluminium mounting plate
in 2 widths and 3 lengths for each size



Advantages:

- Easy installation, maintenance-free
- Dry running properties make the system dirt resistant
- Lightweight and quiet operation
- Angular rail with floating bearing function for diagonal assembly
- Manually adjustable bearing clearance (optional)
- VA stainless steel version (optional)



When not to use it?

- When I require the same dimension as in roller bearing solutions
 - DryLin® T, page 727
 - DryLin® R, page 787
- When I require an integrated drive
 - DryLin® SHT/SLW, page 889



DryLin® W with digital measuring system
chapter "specialists" ► page 868



WJUME



WJRM

Product range

12 rail profiles,
more than 30 carriages types

Clean-
Room

Cleanroom certificated –
IPA Fraunhofer

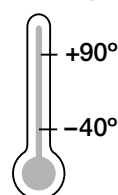


Free of toxins
ROHS 2002/95/EC

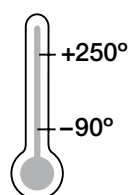


ESD compatible
(electrostatic
discharge)

Temperatures



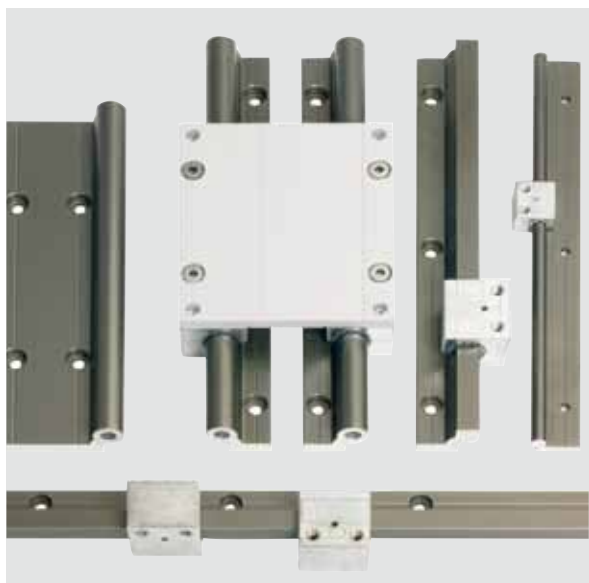
Standard



Stainless steel



DryLin® W | Application Examples



Typical sectors of industry and application areas

- Agricultural ● Vehicle manufacturing
- Medical ● Structural-facings sector
- Packaging ● Furniture
- Robotics ● Sheet metal industry etc.

Improve technology and reduce costs –
170 exciting examples online

► www.igus.co.uk/DryLinPraxis



Flatbed ink-jet printer



Mobile saw mill



► www.igus.co.uk/safety-door



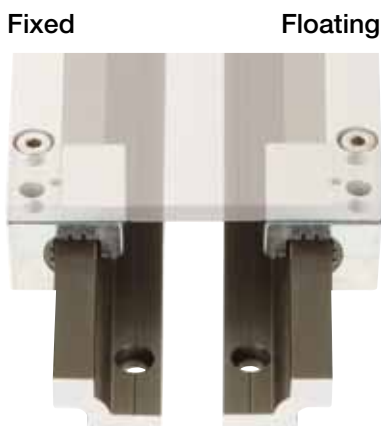
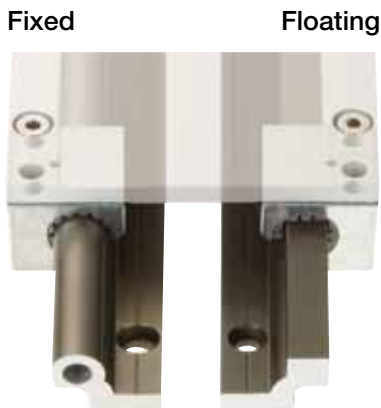
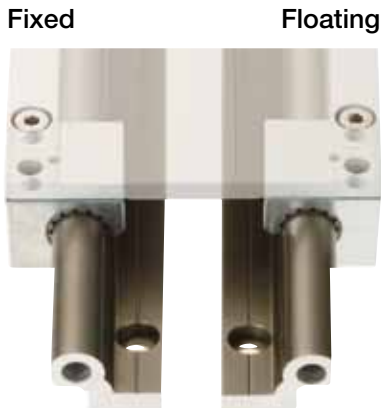
► www.igus.co.uk/packaging

DryLin® W | Design Notes



**Floating bearings for all directions (± 1 mm)
compensate misalignments and parallelism errors**

Possible combinations in mounted rail systems

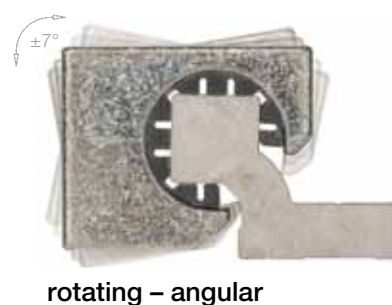


Floating bearings facilitate assembly – only necessary for individual rails.

Assembly is easy with the DryLin® WQ – a square profile. Floating bearings for all directions (± 1 mm) compensate misalignments and parallelism errors between rails. This precludes jamming, otherwise only prevented by time-consuming parallel alignment of the system.

Although DryLin® W is a profile rail system, it is able to compensate angular rotation errors about the x-axis. An angular adjustment of $\pm 7^\circ$ is possible here. This effectively eliminates the strain known to occur when fitting to sheet metal fabrications.

Available floating bearing blocks



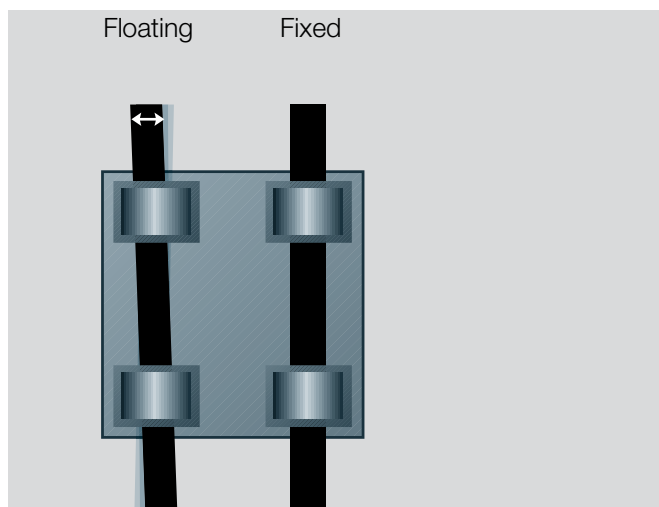
DryLin® W | Design Rules

Floating bearings for linear slide guides

In the case of a system with two parallel guides, one side needs to be configured with floating bearings.

A suitable solution comprising fixed & floating bearings is available for every orientation, whether horizontal, vertical or lateral. This type of assembly prevents jamming and blockage on the guides resulting from discrepancies in parallelism. Floating bearings are created through a controlled extension of play in the direction of the expected parallelism error. This creates an additional degree of freedom on one side.

During assembly, it must be ensured that the floating bearings exhibit a similar degree of play in both directions. The contact surfaces on the guides and carriages should be sufficiently flat (for instance, milled down) to prevent strains from occurring in the system.

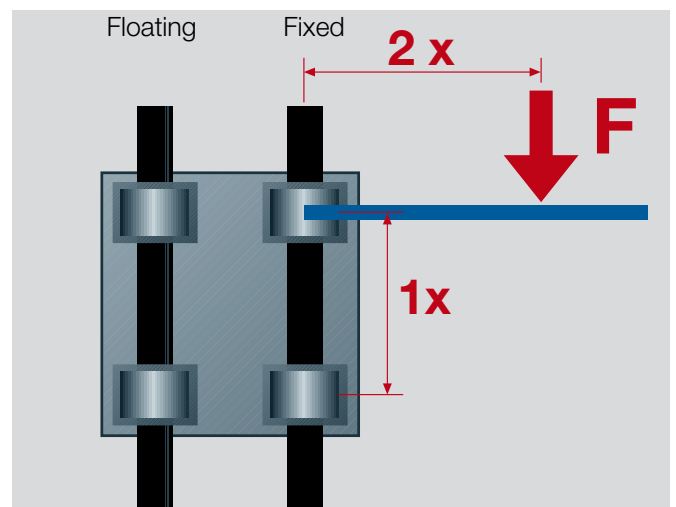


Graph 01: Automatic compensation of parallelism errors

Eccentric Forces

To ensure successful use of maintenance-free DryLin® linear bearings, it is necessary to follow certain recommendations: If the distance between the driving force point and the fixed bearings is more than twice the bearing spacing (2:1 rule), a static friction value of 0.25 can theoretically result in seizure. This principle applies regardless of the value of the load or drive force.

The friction product is always related to the fixed bearings. The greater the distance between the drive and guide bearings, the higher the degree of wear and required drive force. Failure to observe the 2:1 rule during a use of linear slide bearings can result in uneven motion or even system blockage. Such situations can often be remedied with relatively simple modifications. If you have any questions on design and/or assembly, please contact our application engineers.



Graph 02: The 2:1 Rule



DryLin® expert & lifetime calculation:
► www.igus.co.uk/drylin-expert



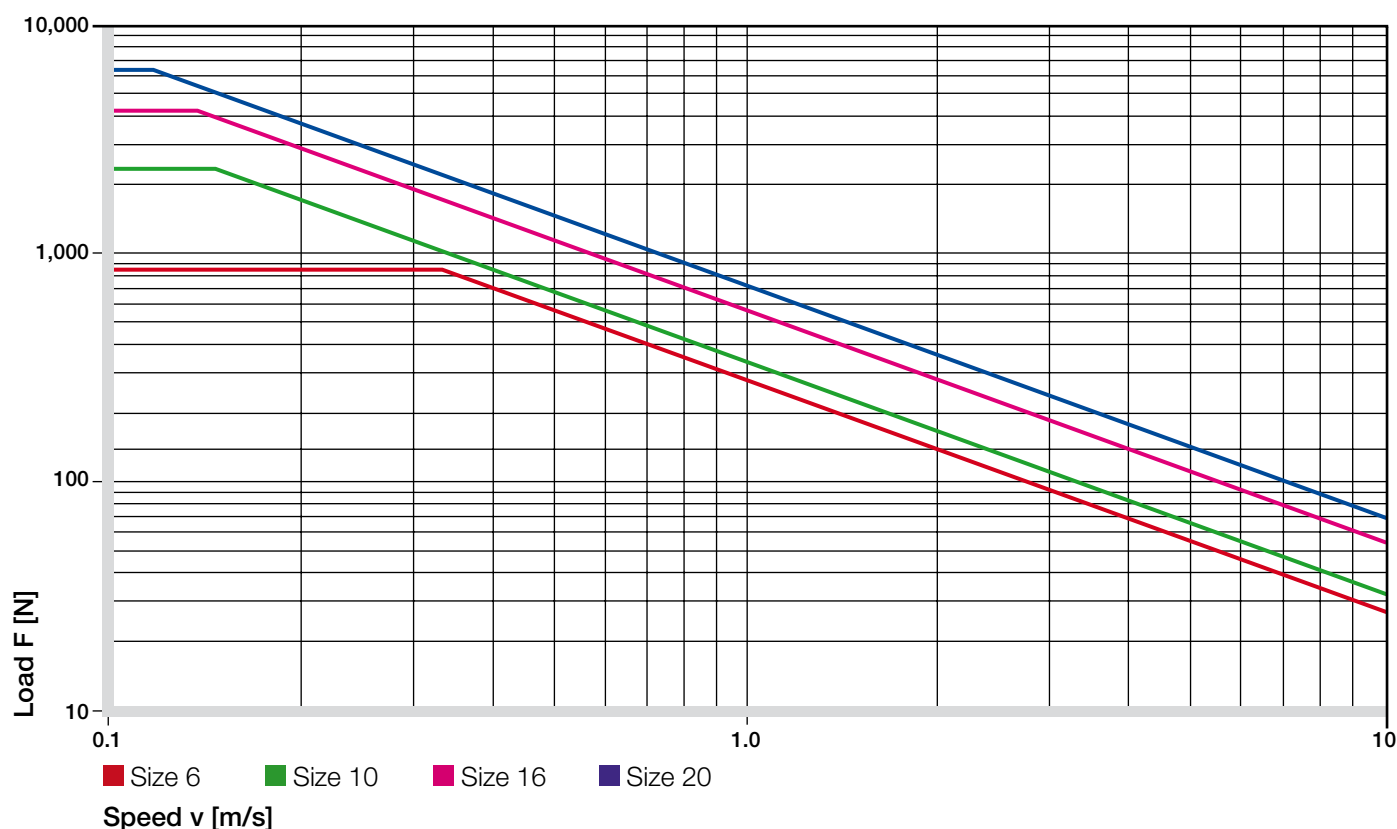
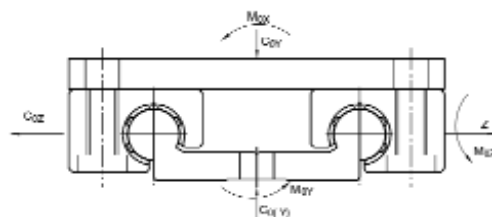
DryLin® CAD configurator:
► www.igus.co.uk/drylin-cad-expert

DryLin® W | Technical Data

Type	Carriage length [mm]	Carriage width [mm]	Coy [N]	Coz [N]	Mox [Nm]	Moy [Nm]	Moz [Nm]
WW-06-30-06	60	54	1,680	1,680	25	34	34
WW-06-30-08	80	54	1,680	1,680	25	51	51
WW-06-30-10	100	54	1,680	1,680	25	68	68
WW-10-40-10	100	73	4,800	4,800	96	170	170
WW-10-40-15	150	73	4,800	4,800	96	290	290
WW-10-40-20	200	73	4,800	4,800	96	410	410
WW-10-80-10	100	107	4,800	4,800	178	170	170
WW-10-80-15	150	107	4,800	4,800	178	290	290
WW-10-80-20	200	107	4,800	4,800	178	410	410
WW-16-60-10	100	104	8,400	8,400	240	270	270
WW-16-60-15	150	104	8,400	8,400	240	480	480
WW-16-60-20	200	104	8,400	8,400	240	690	690
WW-20-80-15	150	134	12,800	12,800	525	670	670
WW-20-80-20	200	134	12,800	12,800	525	990	990
WW-20-80-25	250	134	12,800	12,800	525	1,250	1,250

Table 01: Load capacities for complete carriage plates, confirm each with 4 housing bearings and plate

	Size 6 [mm]	Size 10 [mm]	Size 16 [mm]	Size 20 [mm]
Single Rail, Roand		●	●	●
Single Rail, Square	●	●	●	●
Double Rail	●	●	●	●
Complete system	●	●	●	●



Graph 03: Fv-Diagramm, maximum permissible dynamic loads (4 bearing system)

DryLin® W | Product Overview



DryLin® W Single rail – square geometry

The individual rails in square shape are flexible to use and reduce the installation costs. Floating bearings (± 1 mm) are available in all directions and can compensate for rotation angle errors. Individual rail and bearing housings are available in the installation sizes 06, 10, 16, 20.



DryLin® W Single rail – round geometry

The individual rail allows a flexible utilization of installation space. In parallel operation it offers a good torque support and is very resistant against dirt and dust. Individual rail and bearing housings are available in the installation sizes 10, 16 and 20, optionally with manual clearance adjustment, manual clamp, stainless steel housing or supporting roller.



DryLin® W Double rail

The DryLin® W double rails offer a high torque support as well as extreme torsional rigidity. Due to the given parallelism the installation is simple and fast. Available in various widths in the installation sizes 06, 10, 16, and 20.



DryLin® W Complete Carriage

For all double rails, complete carriages in various lengths are available. You get an assembled system ready for installation. Optionally with adjustable bearing housings as well as with manual clamp.



DryLin® W Stainless Steel

DryLin® W stainless steel systems combine guide shafts made of material 1.4571 (V4A) with milling parts made of V4A and/or stainless steel precision casting parts made of material 1.4408 and make this system a chemical and corrosion resistant linear guide.



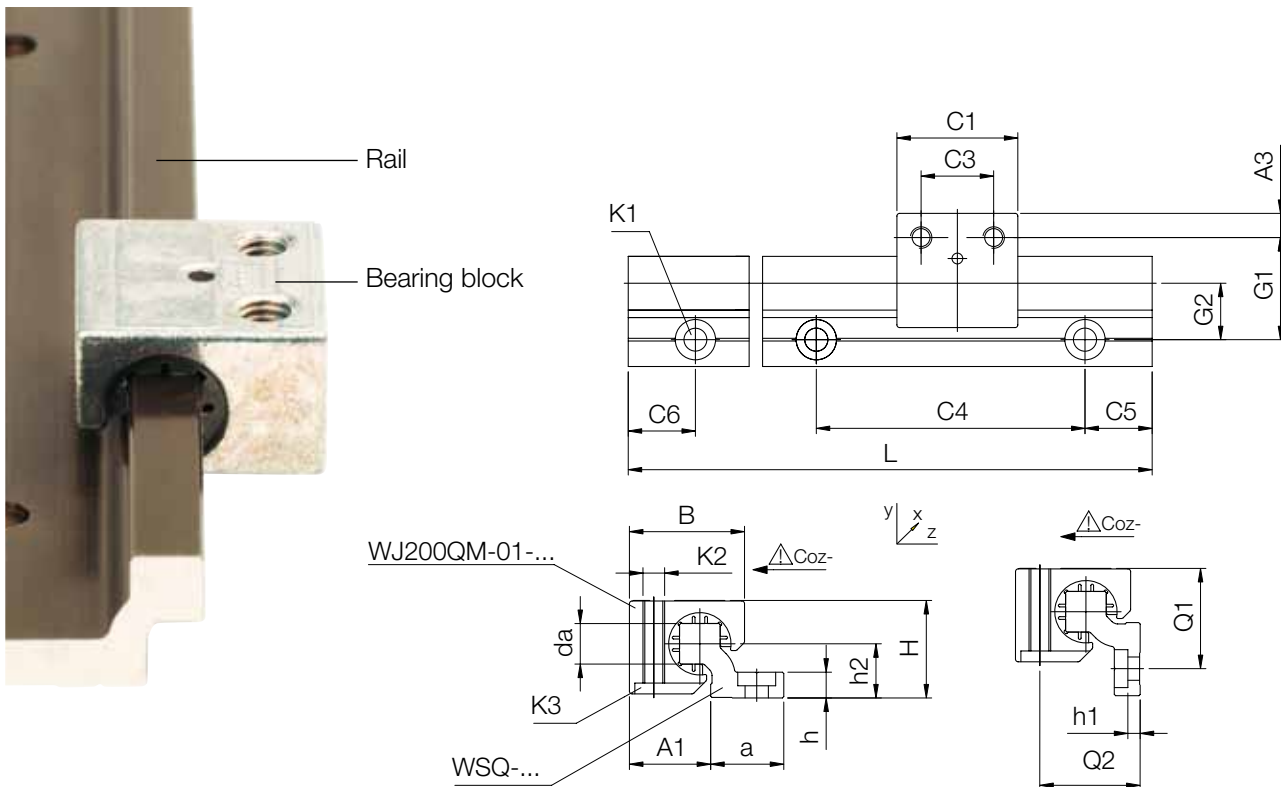
DryLin® W Specialists

On all round rail shapes, either clearance-adjustable bearings or bearings with support rollers – for smooth running in manual mode – can be used.

Single rail and housing bearing, square



Order key
complete ► page 785



Illustrated rails may vary in color due to the technical coating!

DryLin® W Guide Rails, Square – Load Data and Dimensions [mm]

Part number	Weight	H	da	L	a	h	h1	h2	G1	G2	A1	Q1	Q2
	[kg/m]	±0.07	-0.1	max.	-0.3								
WSQ-06	0.23	14	5	3,000	14	4	4*	7.5	18	10.5	13.5	17	15
WSQ-10	0.54	20	7.5	4,000	25	5.5	5.5*	11	27	17	18.5	26	21
WSQ-16	0.94	27	11.5	4,000	27	7.5	3.5	14	33	19	25	32	28
WSQ-20	1.41	36	15	4,000	27	9.5	4.5	20	38	21	30	37	37

Part number	C4	C5 min.	C5 max.	C6 min.	C6 max.	K1 for Screw DIN 912	ly [mm ⁴]	lz [mm ⁴]	Wby [mm ³]	Wbz [mm ³]
WSQ-06	60	20	49.5	20	49.5	M4*	2,200	640	220	100
WSQ-10	120	20	79.5	20	79.5	M6*	16,100	3,300	950	350
WSQ-16	120	20	79.5	20	79.5	M8	33,000	10,800	1,700	910
WSQ-20	120	20	79.5	20	79.5	M8	56,500	34,000	2,600	2,100

Standard bore pattern symmetrical: C5 = C6; please order C5 ≠ C6 with drawing

* Trough bore



delivery
time available
from stock



prices
price list online
www.igus.co.uk/en/DryLinW



order
example part number
WSQ-06

DryLin® W Modular Guide Systems | Product Range

Single rail and housing bearing, square



Order key
complete ► page 785



All parts can be ordered individually
or as an assembled system



DryLin® W Housing Bearings, Square – Load Data and Dimensions [mm]

Part number	Floating bearing play	Floating bearing direction	Weight [g]	B	C1	C3	A3	K2	K3	Stat. Load Capac.		
										Coy [N]	Coz+ [N]	Coz- [N]
WJ200QM-01-06	–	–	16	18	19	10	4.5	M4	M3	420	420	140
WJ200QM-01-06-LLZ	± 0,5	z	16	18	19	10	4.5	M4	M3	420	420	140
WJ200QM-01-06-LLY	± 0,5	y	16	18	19	10	4.5	M4	M3	420	420	140
WJ200QM-01-10	–	–	41	26	29	16	6.5	M6	M5	1,200	1,200	250
WJ200QM-01-10-LLZ	± 0,7	z	41	26	29	16	6.5	M6	M5	1,200	1,200	250
WJ200QM-01-10-LLY	± 0,7	y	41	26	29	16	6.5	M6	M5	1,200	1,200	250
WJ200QM-01-16	–	–	100	34.5	36	18	9	M8	M6	2,100	2,100	400
WJ200QM-01-16-LLZ	± 1,0	z	100	34.5	36	18	9	M8	M6	2,100	2,100	400
WJ200QM-01-16-LLY	± 1,0	y	100	34.5	36	18	9	M8	M6	2,100	2,100	400
WJ200QM-01-20	–	–	190	42.5	45	27	9	M8	M6	3,200	3,200	500
WJ200QM-01-20-LLZ	± 1,0	z	190	42.5	45	27	9	M8	M6	3,200	3,200	500
WJ200QM-01-20-LLY	± 1,0	y	190	42.5	45	27	9	M8	M6	3,200	3,200	500

Order example: WJ200QM-01-06 for a housing bearing, square
WJ200QM-01-06-LLZ for a housing bearing, square with floating z-direction



delivery
time available
from stock



prices
price list online
www.igus.co.uk/en/DryLinW

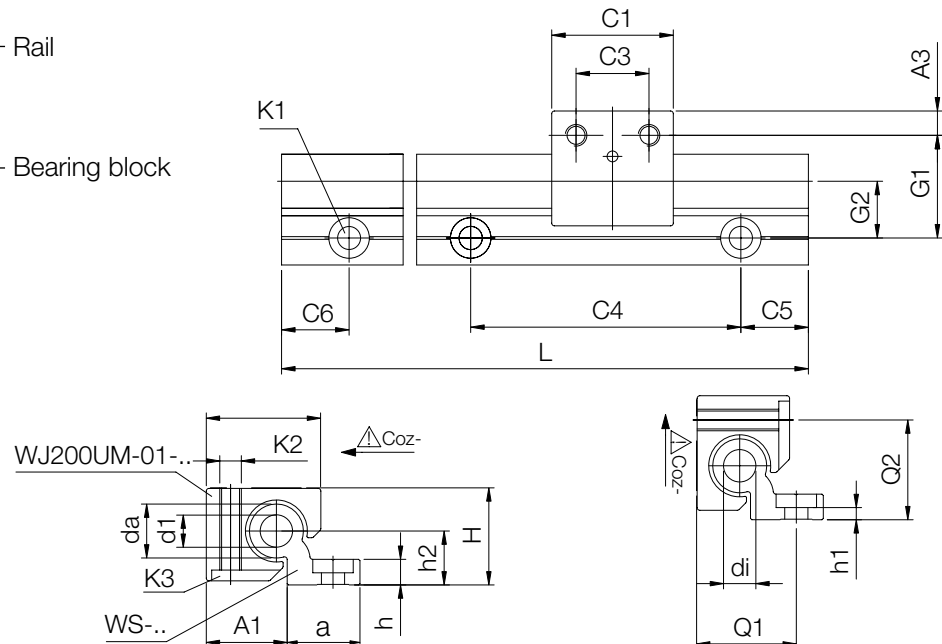


order
example part number
WSQ-06-guide rail,
square;
WJ200QM-01-06-
housing bearing, square

Single rail and housing bearing, round



Order key
complete ► page 785



Illustrated rails may vary in color due to the technical coating!

displayed assembling
position not possible
for WS-10

DryLin® W Guide Rails, Round – Load Data and Dimensions [mm]

Part number	Weight [kg/m]	H ±0.07	da -0.1	di	L max.	a -0.3	h	h1	h2	G1	G2	A1	Q1	Q2
WS-10	0.62	18	10	–	4,000	27	5.5	5.5**	9	27	17	16.5	–	–
WS-16	0.98	27	16	8.0	4,000	27	7.5	3.5	14	33	19	25	32	28
WS-20	1.32	36	20	10.2	4,000	27	9.5	4.5	20	38	21	30	37	37

Part number	C4	C5 min.	C5 max.	C6 min.	C6 max.	K1 for Screw DIN 912	ly [mm ⁴]	lz [mm ⁴]	Wby [mm ³]	Wbz [mm ³]
WS-10	120	20	79.5	20	79.5	M6**	19,000	2,850	1,000	310
WS-16	120	20	79.5	20	79.5	M8	36,000	12,900	1,800	940
WS-20	120	20	79.5	20	79.5	M8	57,100	35,000	2,700	1,900

Standard bore pattern symmetrical: C5 = C6; please order C5 ≠ C6 with drawing

** Trough bore



delivery
time available
from stock



prices
price list online
www.igus.co.uk/en/DryLinW



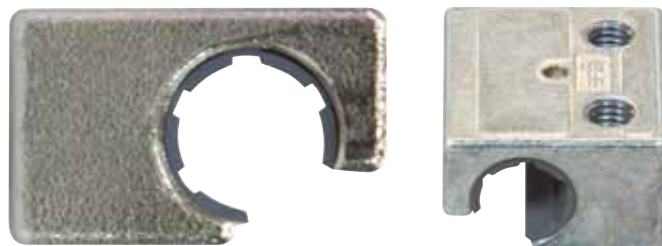
order
example part number
WS-10

DryLin® W Modular Guide Systems | Product Range

Single rail and housing bearing, round



Order key
complete ► page 785



All parts can be ordered individually
or as an assembled system

DryLin® W Housing Bearing, Round – Load Data and Dimensions [mm]

Part number	Floating bearing play	Floating-bearing direction	Weight [g]	B	C1	C3	A3	K2	K3	Stat. Load Capac.		
										Coy [N]	Coz+ [N]	Coz- [N]
WJ200UM-01-10	–	–	41	26	29	16	6.5	M6	M5	1,200	1200	250
WJ200UM-01-10-LL	±0.2	–	41	26	29	16	6.5	M6	M5	1,200	1,200	250
WJ200UM-01-16	±0.2	–	100	34.5	36	18	9	M8	M6	2,100	2,100	400
WJ200UM-01-20	–	–	190	42.5	45	27	9	M8	M6	3,200	3200	500
WJ200UM-01-20-LL	±0.25	–	190	42.5	45	27	9	M8	M6	3,200	3,200	500

Order example: WJ200UM-01-10 for a housing bearing, round

WJ200UM-01-10-LL for a housing bearing, round with floating z-direction



- Manual adjustable clearance by “Turn-To-Fit” function (allen key included in delivery)
- Adjusting screw: max. torque 0.1 Nm
- 100 % lubrication-free
- Compact dimensions
- 8 different rail profiles available

DryLin® W Linear Guides with “Turn-to-Fit” – Dimensions [mm]

Part number	Weight [g]	B	C1	C3	A3	K2	H	SW	G1
WJUME-01-10	43	26	20	16	6.5	M6	18	1.5	27
WJ200UME-01-16	110	34.5	36	18	0	M8	27	2.5	33
WJ200UME-01-20	222	42.5	45	27	0	M8	36	2.5	38



delivery available
time from stock



prices price list online
www.igus.co.uk/en/DryLinW

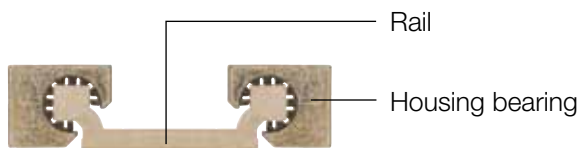
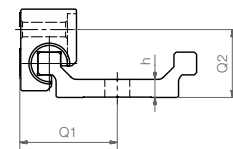
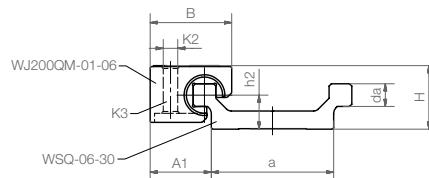
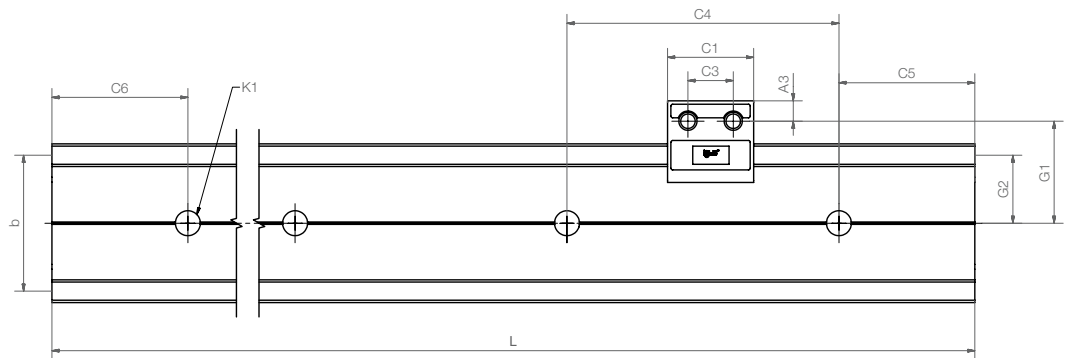


order part number
example WJ200UM-... Housing bearing, round
WJUME-... Turn-To-Fit Linear Guide

Double rail and housing bearing, square



Order key
complete ► page 785



DryLin® W Guide Rails – Dimensions [mm]

Part number	Weight [kg/m]	H ±0.07	da -0.1	di	L max.	a -0.3	b	h	h1	h2	G1	G2	a1*
WSQ-06-30	0.45	14	5	–	3,000	27	30	4	4	7.5	22.5	10.5	–

Part number	C4	C5 min. max.	C6 min. max.	K1 for Screw DIN 912	ly [mm ⁴]	lz [mm ⁴]	Wby [mm ³]	Wbz [mm ³]
WSQ-06-30	60	20 49.5	20 49.5	M5***	19,000	1250	1,100	200

Standard bore pattern symmetrical: C5 = C6; please order C5 ≠ C6 with drawing

** Trough bore

Load Data and Dimensions [mm] – DryLin® W Housing Bearing – Square

Part number	Weight [g]	B	C1	C3	A3	K2	K3	Stat. Load Capac.		
								Coy [N]	Coz+ [N]	Coz- [N]
WJ200QM-01-06	16	18	19	10	4.5	M4	M3	420	420	140



delivery
time available
from stock



prices price list online
www.igus.co.uk/en/DryLinW



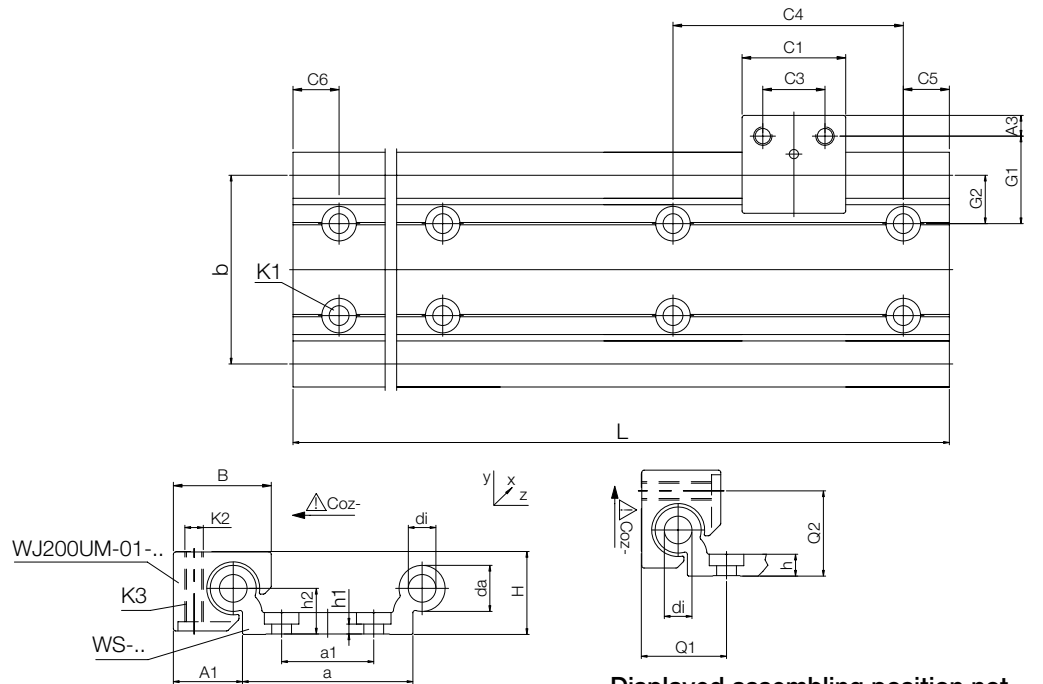
order part number
example WSQ-06-30

DryLin® W Modular Guide Systems | Product Range

Double rail and housing bearing, round



Order key
complete ► page 785



Displayed assembling position not
possible for WS-10-40 and WS-10-80

DryLin® W Guide Rails – Dimensions [mm]

Part number	Weight [kg/m]	H ±0.07	da -0.1	di	L max.	a -0.3	b	h	h1	h2	G1	G2	a1*
WS-10-40	1.00	18	10	–	4,000	40	40	5.5	5.5**	9	27	17	–
WS-10-80	1.50	18	10	–	4,000	74	74	5.5	5.5**	9	27	17	40
WS-16-60	1.96	27	16	8.0	4,000	54	58	7.5	3.5	14	33	19	–
WS-20-80	3.30	36	20	10.2	4,000	74	82	9.5	4.5	20	38	21	40

* WS-10-40 and WS-16-60 a single row of mounting holes down the centreline;

** WS-10-80 and WS-20-80 two parallel rows of mounting holes

Part number	C4	C5 min.	C5 max.	C6 min.	C6 max.	K1 for Screw DIN 912	ly [mm ⁴]	lz [mm ⁴]	Wby [mm ³]	Wbz [mm ³]
WS-10-40	120	20	79.5	20	79.5	M6***	91,000	5,100	3,600	590
WS-10-80	120	20	79.5	20	79.5	M6***	388,000	6,100	9,200	650
WS-16-60	120	20	79.5	20	79.5	M8	367,600	26,100	9,900	1,900
WS-20-80	120	20	79.5	20	79.5	M8	1,080,000	78,700	21,000	4,000

Standard bore pattern symmetrical: C5 = C6; please order C5 ≠ C6 with drawing *** Trough bore

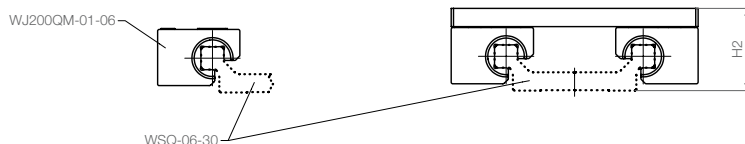
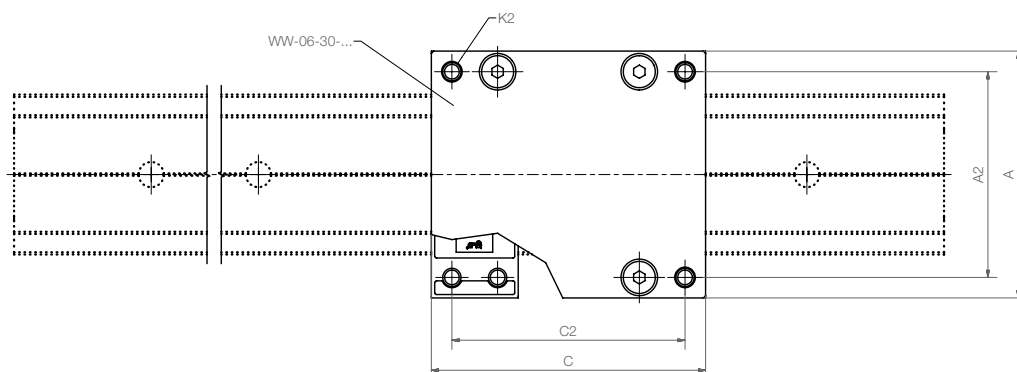
Load Data and Dimensions [mm] – DryLin® W Housing Bearings – Round

Part number	Weight [g]	B	C1	C3	A3	K2	K3	Stat. Load Capac.		
								Coy [N]	Coz+ [N]	Coz- [N]
WJ200UM-01-10	41	26	29	16	6.5	M5	M5	1,200	1,200	250
WJ200UM-01-16	100	34.5	36	18	9	M8	M6	2,100	2,100	400
WJ200UM-01-20	190	42.5	45	27	9	M8	M6	3,200	3,200	500

Guide carriage, fitted, square



Order key
complete ► page 785



DryLin® W Guide Carriage – Load Data and Dimensions [mm]

Part number	Part number Suitable Rail	Weight [kg]	A Wide	C Length	A2	C2	K2	H2 ±0.17	Stat. Load Capacity				
									Coy [N]	Coz [N]	Mox [Nm]	Moy [Nm]	Moz [Nm]
WW-06-30-06	WSQ-06-30	0.10	54	60	45	51	M4	18	1,680	840	25	34	34
WW-06-30-08	WSQ-06-30	0.11	54	80	45	71	M4	18	1,680	840	25	51	51
WW-06-30-10	WSQ-06-30	0.12	54	100	45	91	M4	18	1,680	840	25	68	68



delivery available
time from stock



prices price list online
www.igus.co.uk/en/DryLinW



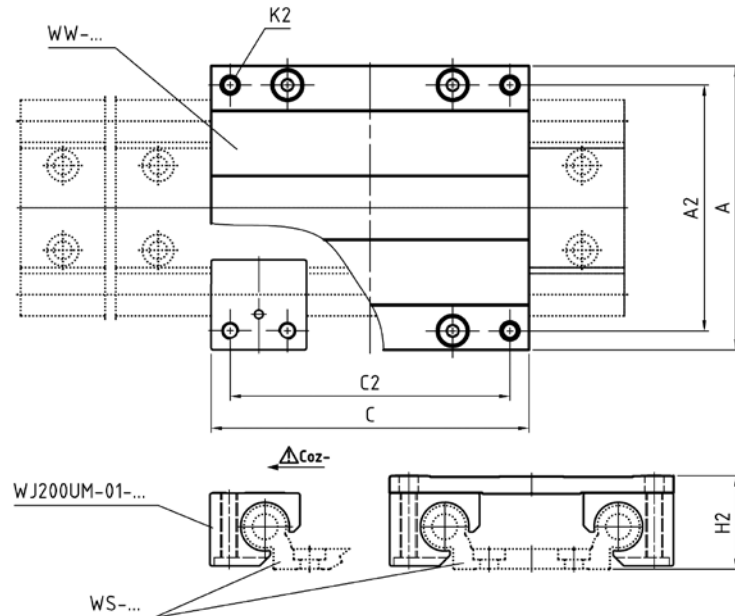
order example
part number
WW-06-30-06
WSQ-06-30

DryLin® W Modular Guide Systems | Product Range

Guide carriage, fitted, round



Order key
complete ► page 785



DryLin® W Guide Carriage, Fitted – Load Data and Dimensions [mm]

Part number	Part number Suitable Rail	Weight [kg]	A Wide	C Length	A2	C2	K2	H2 ±0.17	Coy [N]	Stat. Load Capacity Coz [N]	Mox [Nm]	Moy [Nm]	Moz [Nm]
WW-10-40-10*	WS-10-40	0.29	73	100	60	87	M6	24	4,800	2,400	96	170	170
WW-10-40-15*	WS-10-40	0.34	73	150	60	137	M6	24	4,800	2,400	96	290	290
WW-10-40-20*	WS-10-40	0.40	73	200	60	187	M6	24	4,800	2,400	96	410	410
WW-10-80-10*	WS-10-80	0.34	107	100	94	87	M6	24	4,800	2,400	178	170	170
WW-10-80-15*	WS-10-80	0.42	107	150	94	137	M6	24	4,800	2,400	178	290	290
WW-10-80-20*	WS-10-80	0.50	107	200	94	187	M6	24	4,800	2,400	178	410	410
WW-16-60-10	WS-16-60	0.71	104	100	86	82	M8	35	8,400	4,200	240	270	270
WW-16-60-15*	WS-16-60	0.84	104	150	86	132	M8	35	8,400	4,200	240	480	480
WW-16-60-20*	WS-16-60	0.97	104	200	86	182	M8	35	8,400	4,200	240	690	690
WW-20-80-15*	WS-20-80	1.20	134	150	116	132	M8	44	12,800	6,400	525	670	670
WW-20-80-20*	WS-20-80	1.30	134	200	116	182	M8	44	12,800	6,400	525	990	990
WW-20-80-25*	WS-20-80	1.50	134	250	116	232	M8	44	12,800	6,400	525	1,250	1,250

Also available as version with adjustable clearance in installation sizes 10, 16 and 20:

Order example, WWE-10-40-15



* DryLin® W manual clamp, assembled (optional)
suffix -HKA
► page 783



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prices price list online
www.igus.co.uk/en/DryLinW

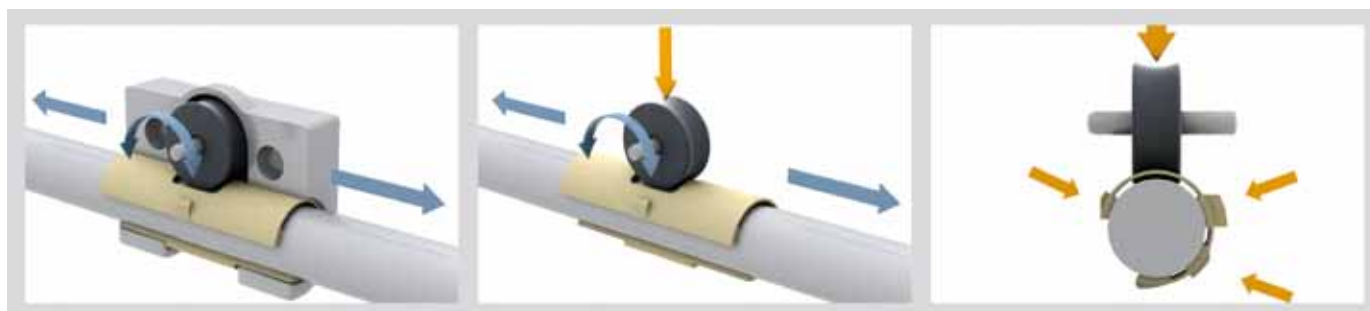


order part number
example WW-10-40-10
WS-10-40

Hybrid linear bearing – roll and slide

DryLin® W Hybrid bearings offer a unique combination of plain and roller bearings. At a defined installation position, the required driving torque reduces itself significantly by the maintenance-free roller bearings. Shear forces and abuse forces are absorbed by the glider. The hybrid bearing is ideal for manual adjustments, especially in door adjustments.

- Glide-mounted plastic rollers
- Liner made of iglidur® J
- Low drive force needed, friction: 0.04–0.05 μ
- Cost-effective
- Can be combined with 7 linear profile rails



► www.igus.co.uk/en/WJRM-video

DryLin® W Hybrid Linear Bearings – Load Data and Dimensions [mm]

Part number	Stat. load capacity Co	Dyn. load capacity Cz+ at total running distance (km)				F · v max. [N · m/s]
		10	100	200		
	[N]	[N]	[N]	[N]		
WJRM-01-10	250	250	90	50		50
WJRM-01-16	400	400	140	70		80
WJRM-01-20	550	550	200	100		80

DryLin® W, Compatible Guide Rails – Dimensions [mm]

Part number	Weight [g]	H	da	L	a	h	h2	G1	G2	C4	C5 min.	C5 max.	C6 min.	C6 max.	K1 for Screw DIN 912
WS-10	0.62	18	10	4,000	27	5.5	9	27	17	120	20	79.5	20	79.5	M6
WS-10-40	1.00	18	10	4,000	40	5.5	9	30	20	120	20	79.5	20	79.5	M6
WS-10-80	1.50	18	10	4,000	74	5.5	9	27	17	120	20	79.5	20	79.5	M6
WS-16	0.98	27	16	4,000	27	7.5	14	33	19	120	20	79.5	20	79.5	M8
WS-16-60	1.96	27	16	4,000	54	7.5	14	43	29	120	20	79.5	20	79.5	M8
WS-20	1.32	36	20	4,000	27	9.5	20	38	21	120	20	79.5	20	79.5	M8
WS-20-80	3.38	36	20	4,000	74	9.5	20	38	21	120	20	79.5	20	79.5	M8



delivery
time

available
from stock



prices

price list online

www.igus.co.uk/en/DryLinW



order
example

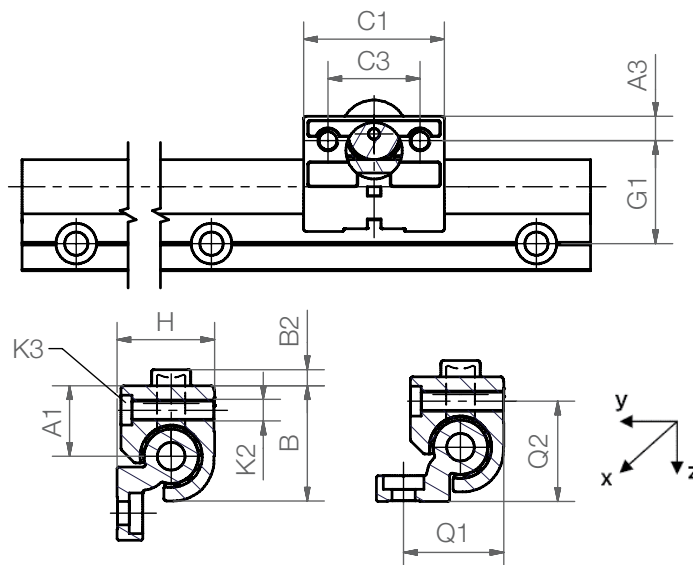
part number
WJRM-01-10

DryLin® W Modular Guide Systems | Product Range

Hybrid linear bearing – roll and slide



Order key
complete ► page 785



Shown installation position is
not possible for combination of
WJRM-01-10 with rail WS-10/
WS-10-40/WS-10-80

DryLin® W Hybrid Linear Bearings – Load Data and Dimensions [mm]

Part number	Friction in +z direction	Weight [g]	B	B2	C1	C3	G1	A3	A1	K2	K3	Q1	Q2
												[N]	
WJRM-01-10	< 0,1	46	26	2,5	35	22	27	6,5	16,5	M6	M5	–	–
WJRM-01-16	< 0,1	131	34.5	5	48	30	33	9	25	M8	M6	32	28
WJRM-01-20	< 0,1	232	42.5	6	52	34	38	9	30	M8	M6	37	37



Adjustment sliding door at tool magazine



Adjustment camera slider ► www.igus.co.uk/camera