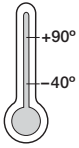




# DryLin® N | Low-Profile Linear Guide System

The low-profile range DryLin® N offers extremely low profiles in several widths. Like all DryLin® products the carriages run without grease or oil in an anodized aluminium profile. The selected materials and the unique design make DryLin® N a cost-effective and flexible guide system.

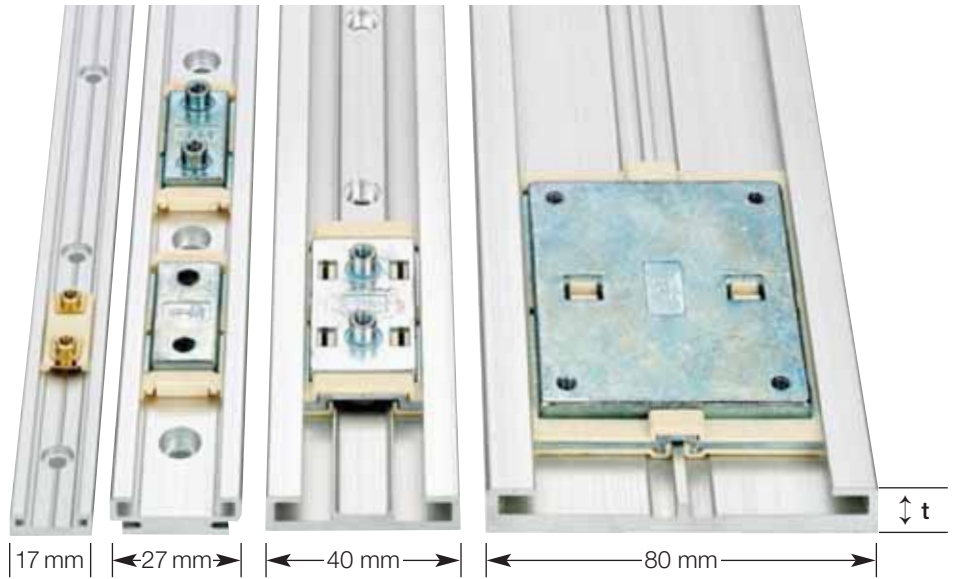


## Technical Data

<b>Sliding elements:</b>
Maintenance-free
<b>Material:</b>
iglidur® J*
<b>Max. surface speed:</b>
15 m/s
<b>Temperature range:</b>
-40 °C to +90 °C

\* Other materials upon request

DryLin® N	Height t
N17	6,0 mm
N27	9,5 mm
N40	9,5 mm
N80	12,0 mm



## Advantages of DryLin® N

- Small mounting height and width
- Maintenance-free and self-lubricating
- High resistance to dirt
- Corrosion resistant
- Low wear at a low coefficient of friction
- Lightweight due to aluminium polymer combination
- Very high speed and acceleration possible
- Replaceable iglidur® J polymer sliding elements
- Zinc chromed slide carriage (Sizes 27, 40 and 80) or a solid polymer slide carriage (Size 17)
- Anodized aluminium rails
- Available from stock

- 1 Anodized aluminium rails
- 2 iglidur® J plain bearing liner
- 3 Zinc chromed carriage Type 01 (with mounting hole)
- 4 Zinc chromed carriage Type 02 (with thread)



DryLin® N40 in a closed-loop drive conveyor



DryLin® N80, black anodized used for adjusting spot-lights



DryLin® N80 in a belt-driven linear actuator for high-speed handling up to 12 m/s

## Telescopic-system

- Mounted rails: anodized aluminium
- Middle rail: Polymer
- Variations: full extension, overextension (+ 20 mm), partial extension
- Continuously adjustable up to 1200 mm total length
- Lubrication free
- Low noise
- Corrosion-free
- Ex stock



More information: ► Page 62.11

mm

DryLin® N

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Fax +44 (0) 16 04 - 67 72 45

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Internet [www.igus.co.uk](http://www.igus.co.uk)  
E-mail [sales\\_uk@igus.co.uk](mailto:sales_uk@igus.co.uk)

# DryLin® N | Material Table



System	N17	N27	N40	N80
Rail width	17 mm	27 mm	40 mm	80 mm
Installation height	6 mm	9,5 mm	9,5 mm	12 mm
Part No. Carriage	NW-02-17	NW-01-27	NW-02-40	NW-02-80
Part No. Rail	NS-01-17	NS-01-27	NS-01-40	NS-01-80

## General Properties

Rail weight	150 g/m	290 g/m	450 g/m	1140 g/m
Carriage weight	1,7 g	10,8 g/12,5 g	30 g	100 g
Max. Rail length	1960 mm	3000 mm	3000 mm	3960 mm

## Load capacities

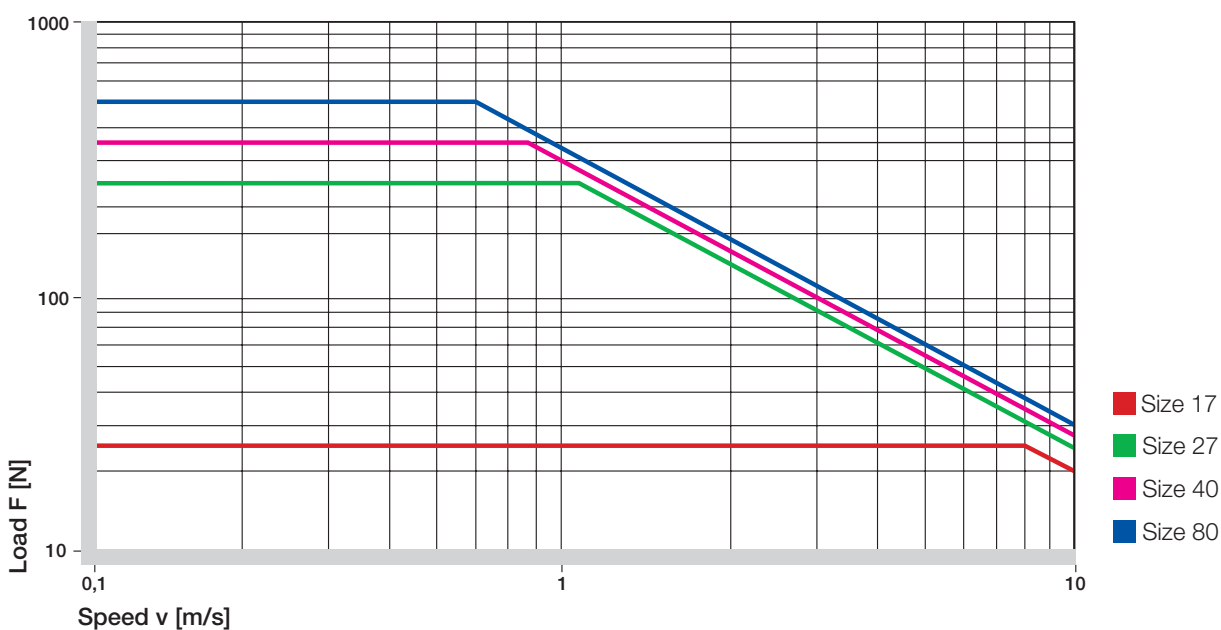
Fy	50 N	500 N	700 N	1000 N
Fz	50 N	500 N	700 N	1000 N
Mx	0,31 Nm	5 Nm	10 Nm	32,4 Nm
My, Mz	0,18 Nm	2,5 Nm	6 Nm	15 Nm

## Available from stock

Floating bearing Y	●	●	●	●
Floating bearing Z	●	●	●	●
Floating bearing YZ	●	●	●	●
Preload (1N)	●	●	-	-
Moulded version	-	●	●	-
Carriage with plain bore	-	●	-	-
Carriage with threaded bore	●	●	●	●

● Available from stock

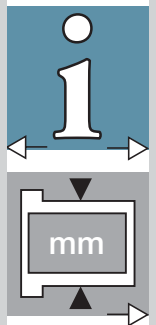
Table 62.1: Material Data



Graph 62.1: F x v Diagram, maximum permissible dynamic loads

DryLin® N  
mm

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# DryLin® N | Low-Profile Linear Guide

mm

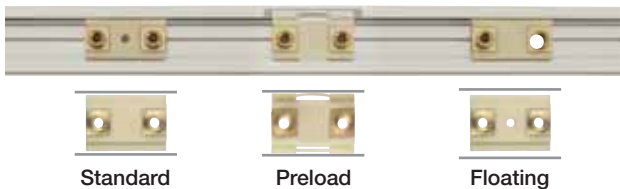
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62.4



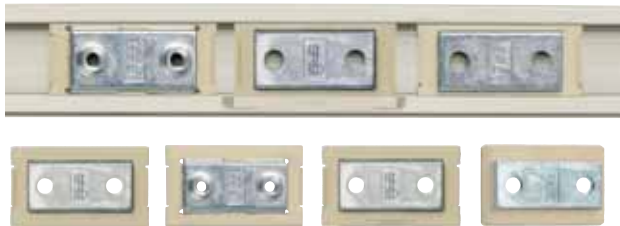
DryLin® NW-17 = 17 mm Rail width

## NW 17

The smallest size of the DryLin® N range is designed to have minimum dimensions coupled with a high load capacity. In addition, this range is free from lubrication and can run at high speeds.

### NW 17 Preload

The NW 17 Preload model of the DryLin® N series, in addition to the properties of the regular NW 17, this also provides for automatic pretension in the rail. The lubrication free design is capable of running at high linear speeds.



DryLin® NW-27 = 27 mm Rail width

## NW 27

The NW 27 series is available in 2 different versions: As a slide with a plain bore, and as a slide with a threaded bore. The lubrication free design is capable of running at high linear speeds.

### NW 27 Preload

Like NW 17 Preload, this larger NW 27 Preload model of DryLin® N possesses the special feature of automatic pre-tension.

### Overmoulded

This version is practically identical to the proven DryLin® standard slide designated NW-01/02-27. Overmoulded with iglidur® J, however, it is easier to assemble and store large quantities. Needless to say, the high wear resistance and low coefficient of friction are retained.

- Quick assembly
- Easier handling



Standard 02 with thread      Overmoulded with thread

DryLin® NW-40 = 40 mm Rail width

## NW 40

Compared with smaller series, NW 40 is able to withstand significantly higher loads. The slides of this range come with threaded bores. Like all other DryLin® N series, the lubrication free design is capable of running at high linear speeds.

## NW 80



DryLin® NW-80 = 80 mm Rail width

The largest of the DryLin® N series permits low installation heights while offering high load-bearing capacity. The lubrication free design is capable of running at high linear speeds.

Floating bearing	NW-17	NW-27	NW-40	NW-80
LL Y	0,6	0,45	0,4	0,6
LL Z	0,5	0,8	1	0,8
LL YZ	Y: 0,6, Z: 0,5	Y: 0,3, Z: 0,4	Y: 0,4, Z: 1	Y: 0,6, Z: 0,8

Table 62.2: Available floating bearings in mm

## Schematic representation of floating bearings



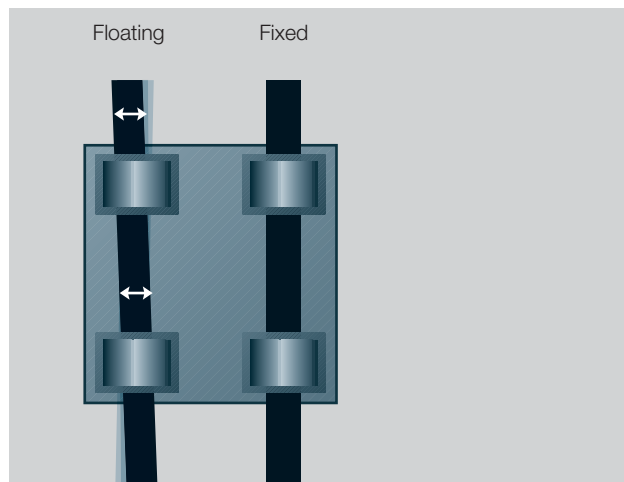
## Floating bearings for linear slide guides

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.



Automatic compensation of parallelism errors

## Eccentric Forces

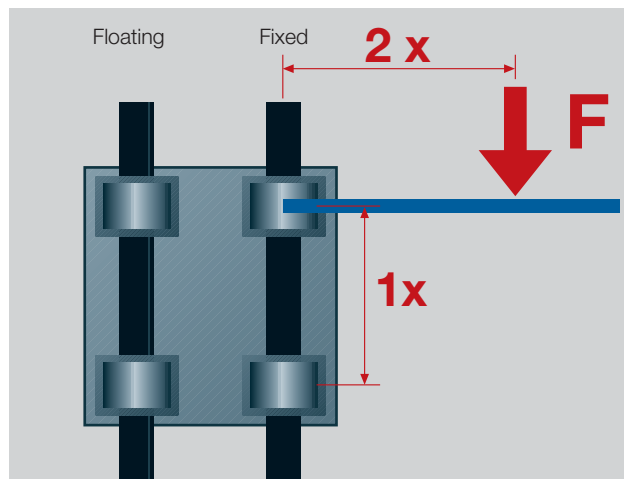
To ensure successful use of maintenance-free DryLin® linear bearings, it is necessary to follow certain recommendations:

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 jamming on the guides. 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.

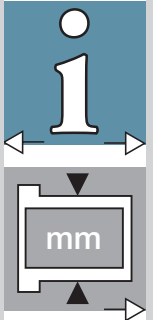


The 2:1 Rule

## Clean room suitability and ESD-compatibility



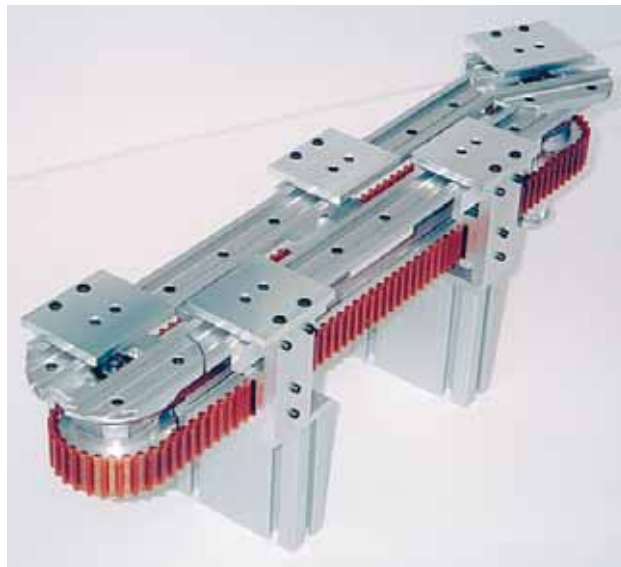
You can find detailed information on  
 ▶ Page 61.17





### Part No. for single carriages:

NW-02-17	Sz. 17 with thread
NW-02-17P	Sz. 17 with pre-tension
NW-01-27	Sz. 27 with mounting hole
NW-01-27P	Sz. 27 with pre-tension
NW-02-27	Sz. 27 with thread
NW-02-27P	Sz. 27 with pre-tension
NW-11-27	Sz. 27 with mounting hole, overmoulded
NW-12-27	Sz. 27 with thread, overmoulded
NW-02-40	Sz. 40 with thread
NW-12-40	Sz. 40 with thread, overmoulded
NW-02-80	Sz. 80 with thread
NW-12-80	Sz. 80 with thread, overmoulded



Picture 62.1: DryLin® N for in a closed loop conveyor

### Part No. for single rails:

NS-01-17, length (mm)	Width of rail 17 mm
NS-01-27, length (mm)	Width of rail 27 mm
NS-01-40, length (mm)	Width of rail 40 mm
NS-01-80, length (mm)	Width of rail 80 mm

### Structure of the Part No. for assembled systems:

NK -02 -27 -02 ,500 LLZ C5=20

Assembled system

Type of carriage

- 01 with plain bore
- 02 with thread
- 11 with plain bore, overmoulded, size 27
- 12 with thread, overmoulded, size 27, 40

Size

17/27/40/80

No. of carriages

Length of rail in mm

Carriage options

- Leave blank: Standard
- LLZ: Floating z-direction
- LLY: Floating y-direction
- LLYZ: Floating y- and z-direction
- P: Preload (max. 1 N), only sizes 17/27

Rail options

- Leave blank: Standard with holes
- No holes: Without holes
- C5 = ... mm If hole spacing is not symmetrical



mm

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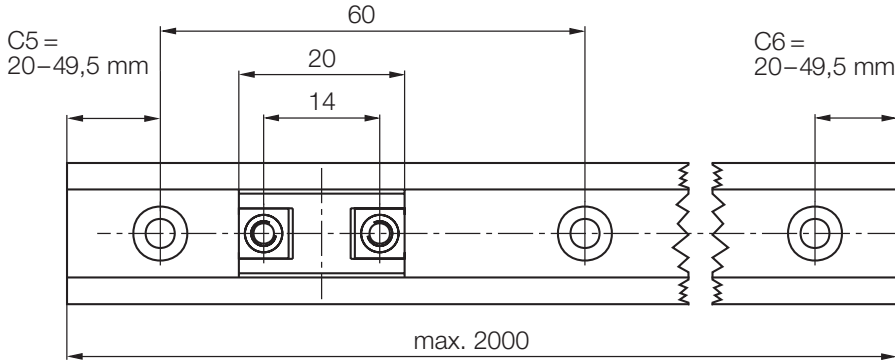
Internet [www.igus.co.uk](http://www.igus.co.uk)

E-mail [sales\\_uk@igus.co.uk](mailto:sales_uk@igus.co.uk)

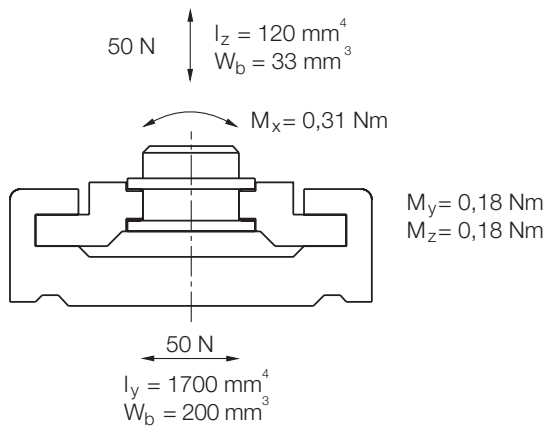
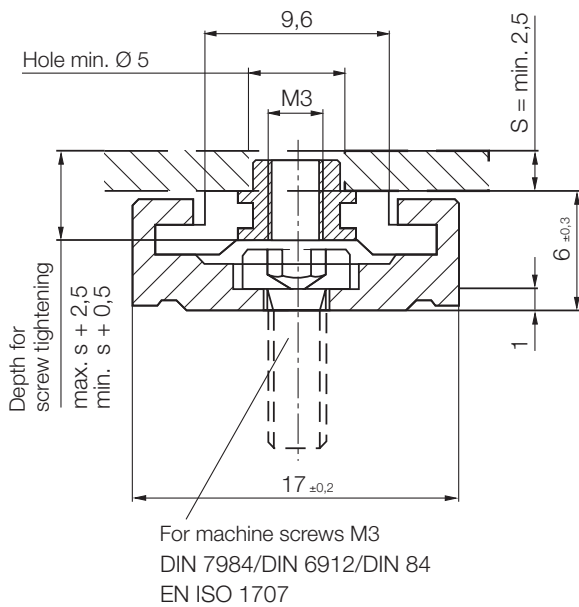


### Data:

Part No. carriage	NW-02-17
Part No. rail	NS-01-17
Rail weight	150 g/m
Carriage weight	1,7 g
Max. rail length	1960 mm
Standard bore pattern	symmetrical (C5 = C6)
Preload available	1N



### Static load-bearing capacity and geometric moment of inertia



DryLin® N

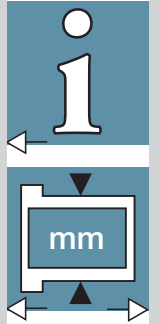
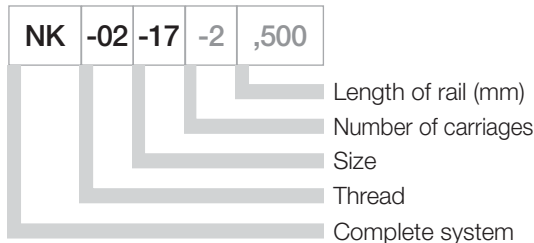
mm

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### DryLin® NK – Complete system



#### Structure of the Part No. – Standard version





# DryLin® N | Low-Profile Linear Guide NK-01/02-27

mm

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 E-mail [sales\\_uk@igus.co.uk](mailto:sales_uk@igus.co.uk)



### Data, version 01:

Part No. carriage	NW-01-27
Part No. rail	NS-01-27
Rail weight	290 g/m
Carriage weight	10,8 g
Max. rail length	3000 mm
Standard bore pattern	symmetrical (C5 = C6)
Preload available	1N

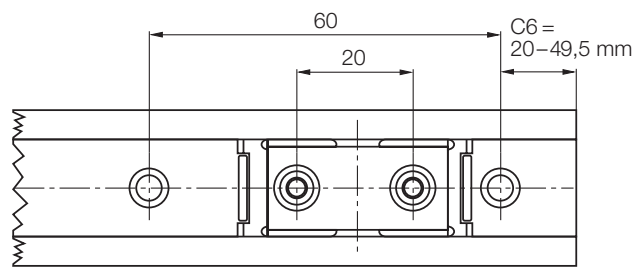
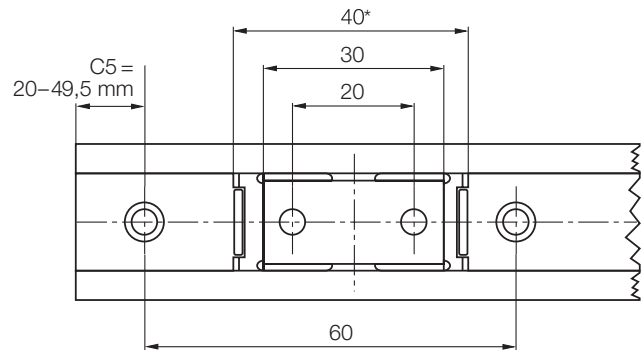


### Data, version 02:

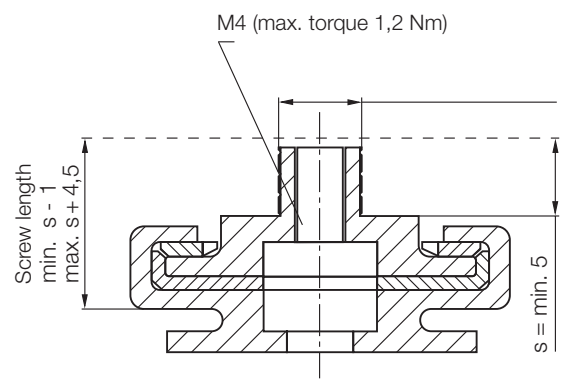
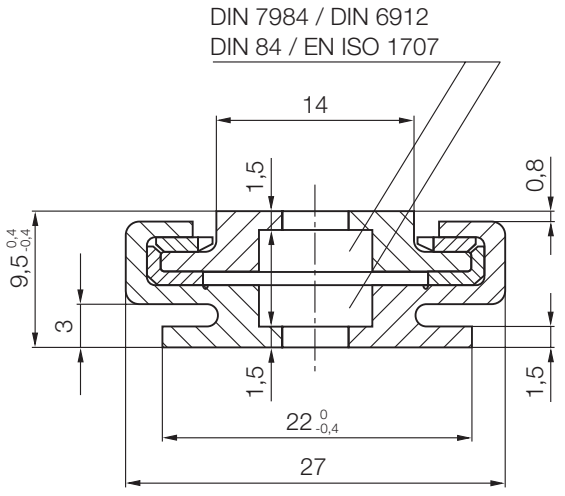
Part No. carriage	NW-02-27
Part No. rail	NS-01-27
Rail weight	290 g/m
Carriage weight	12,5 g
Max. rail length	3000 mm
Standard bore pattern	symmetrical (C5 = C6)
Preload available	1N

Version 01: Carriages with plain bore

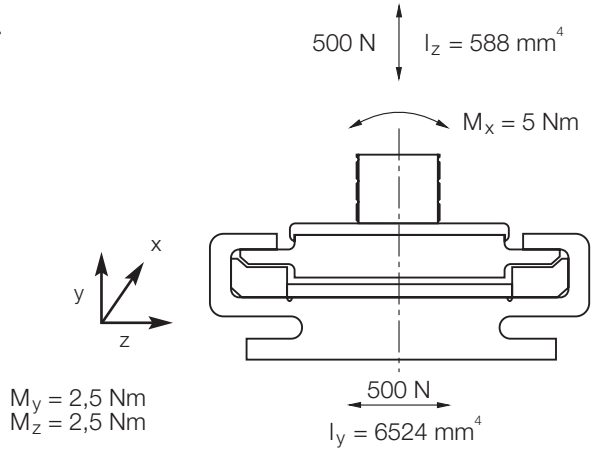
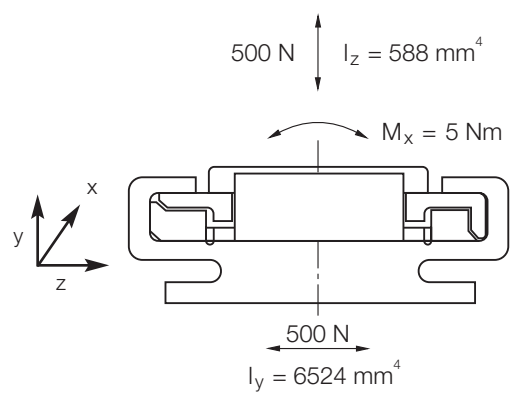
Version 02: Carriages with threaded boss



\* Length of carriages version NW-11-27 and NW-12-27: 34 ± 0,7 mm



### Static load-bearing capacity and geometric moment of inertia

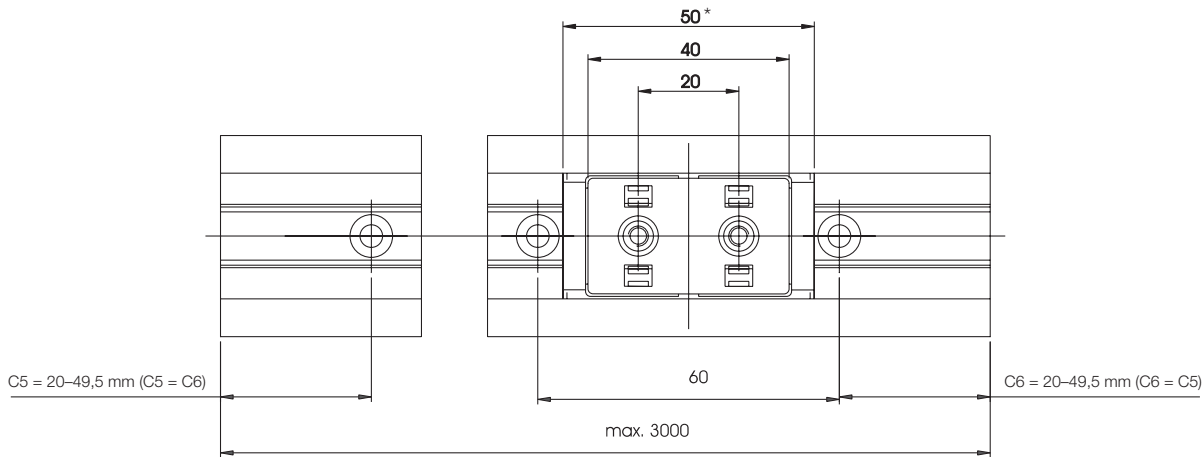


Order example: NK-01-27-2, 500  
 Additional ordering instructions: ▶ Page 62.6



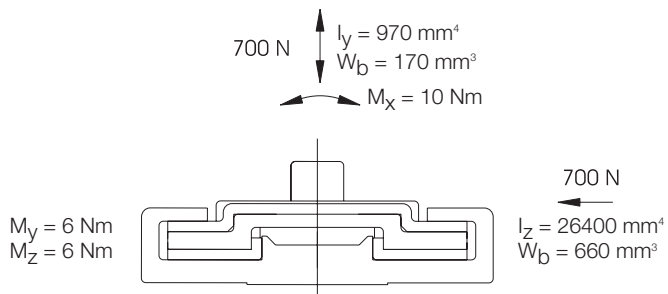
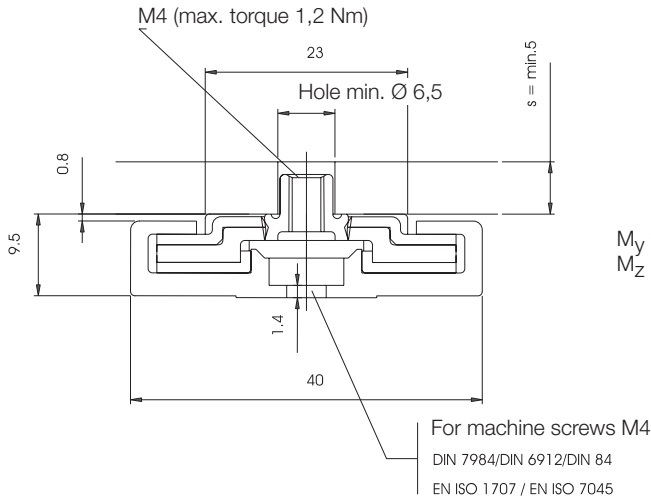
### Data:

Part No. carriage	NW-02-40
Part No. rail	NS-01-40
Rail weight	450 g/m
Carriage weight	30 g
Max. rail length	3000 mm
Standard bore pattern	symmetrical (C5 = C6)



\* Length of carriages version NW-12-40: 52 mm

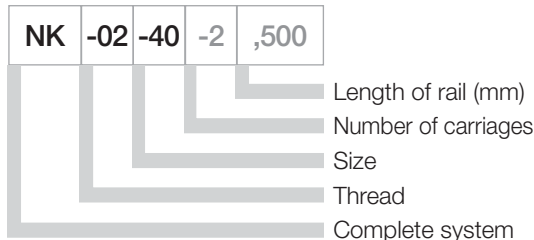
### Static load-bearing capacity and geometric moment of inertia



### DryLin® NK – Complete system



#### Structure of the Part No. – Standard version



### Option:

Polymer End cap for rail,  
Part No. NSK-40



DryLin® N

mm

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# DryLin® N | Low-Profile Linear Guide NK-02-27



### Data:

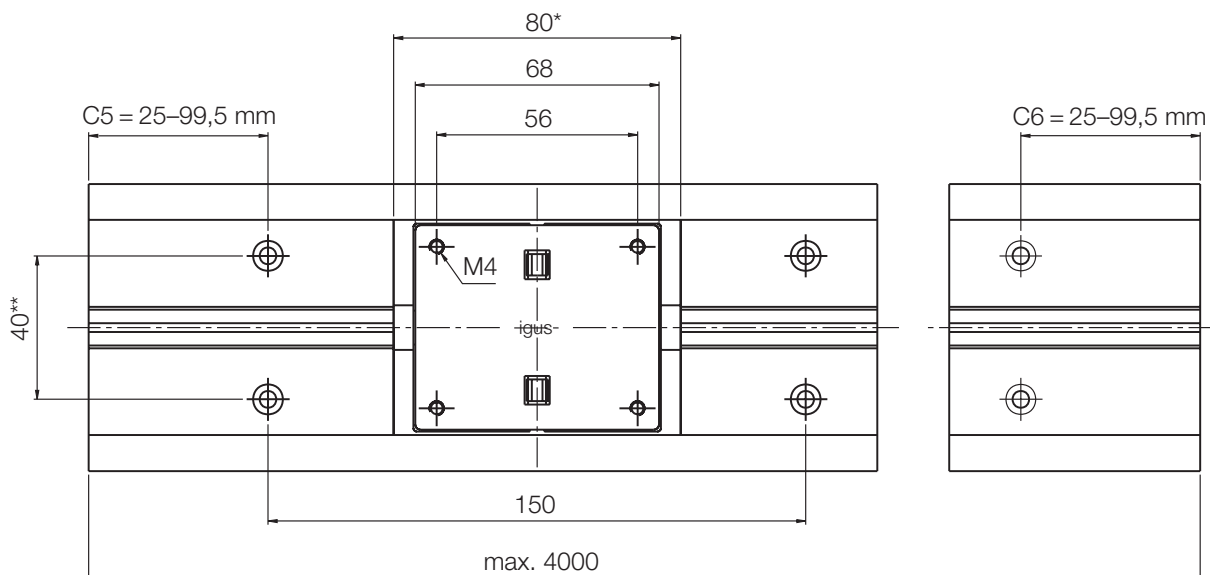
Part No. carriage	NW-02-80
Part No. rail	NS-01-80
Rail weight	1140 g/m
Carriage weight	100 g
Max. rail length	4000 mm
Standard bore pattern	symmetrical (C5 = C6)

mm

DryLin® N

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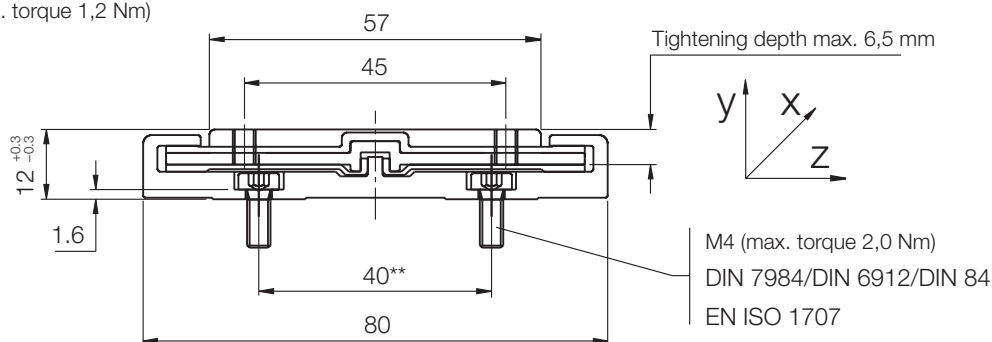
Fax +44 (0) 16 04 - 67 72 45



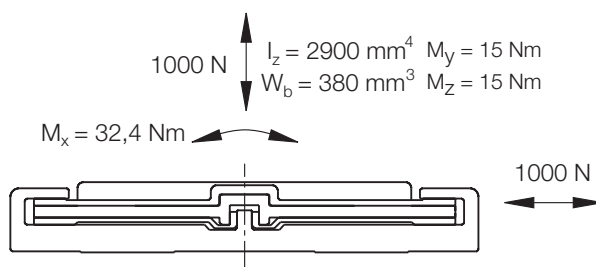
\* carriage length for NW-12-80 = 83 mm

\*\* size 45 on request

M4 (max. torque 1,2 Nm)



### Static load-bearing capacity and geometric moment of inertia



Order example: NK-02-80-2, 500

More details on part no. options: ► Page 62.6

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