

Product Overview

Compact Rail

It simplifies the design, improves the performance and reduces the application cost with 8 main advantages.



Self-aligning system

- Select the most suitable structure for your project
- Avoid machining the mounting surface
- Reduce the assembly time



Up to $\pm 2^\circ$ with K+U rails

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Up to 3.9 mm with T+U or K+U rails

Configurations of rails and rollers



Rails with different geometries + single row ball bearings



Optimal reliability in dirty environments

- Lateral sealing for a greater protection against contaminants
- New self-centering wiper for an optimal cleansing of the raceways



Long lifetime

- Induction hardened raceways with 1.2 mm effective depth and hardness between 58 and 62 HRC



Resistant to corrosion

Different surface treatments make Compact Rail reliable even in the harsher environments

- Indoor applications: zinc-plating ISO 2081. Also available with electro-painted black finishing
- Corrosive environments (humidity): electrolytic plating with high resistance passivation alloy
- Corrosive environments (acidic or basic): nickel-plating



Strength and sturdiness

Robust steel slider body



Low maintenance

Integrated lubrication system with slow release felt and front-access for greasing



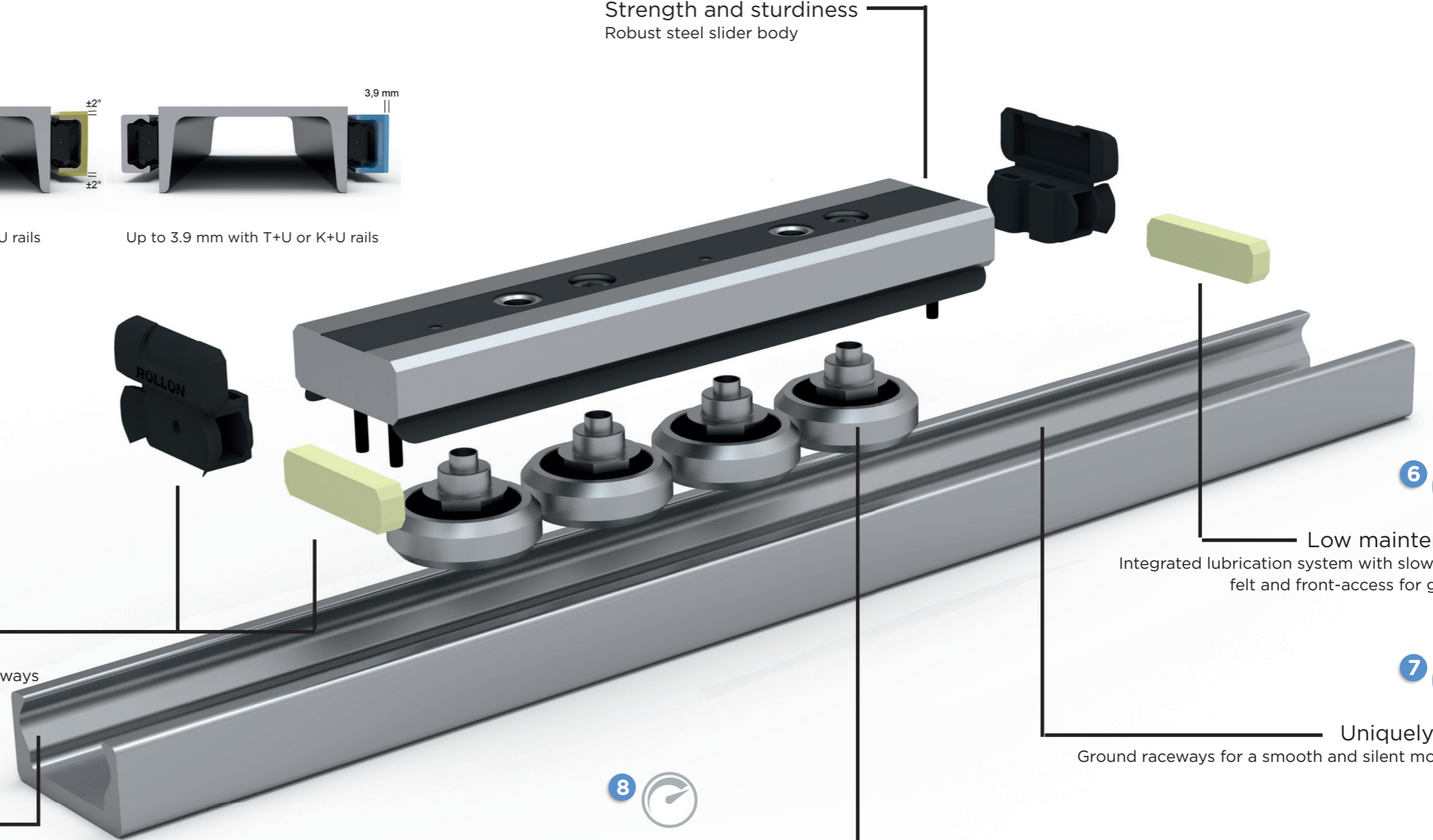
Uniquely quiet

Ground raceways for a smooth and silent movement

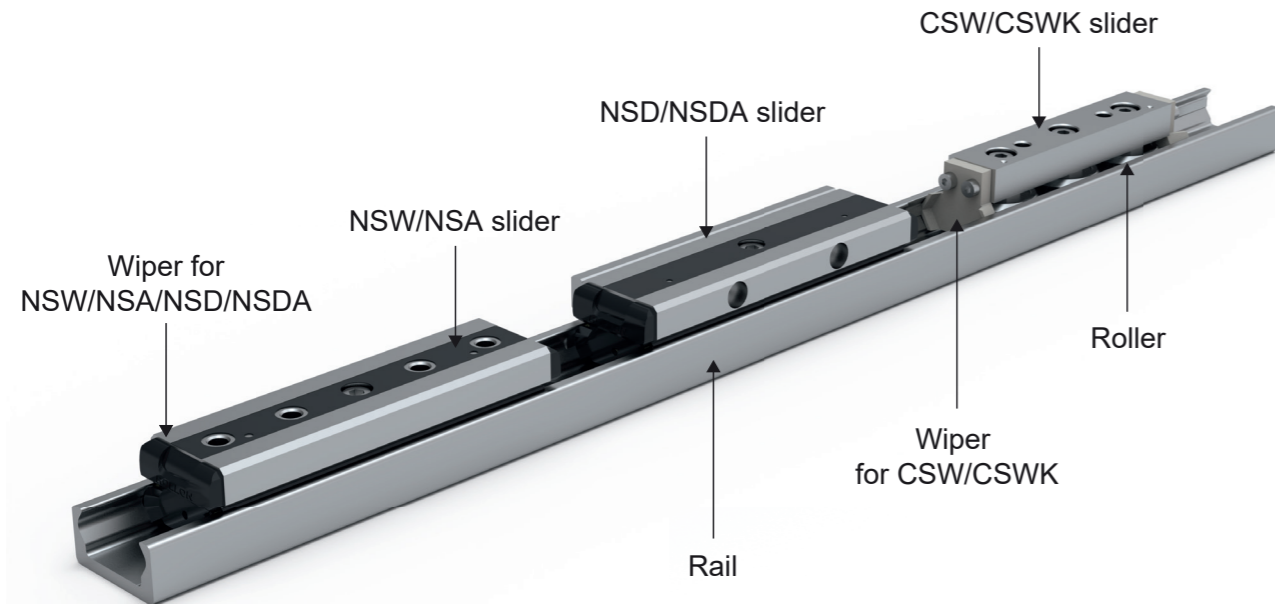


High dynamics

Speed up to 9 m/s. Acceleration up to 20 m/s²



Self-aligning system with rails and robust steel sliders



Compact Rail is a product family of guide rails consisting of roller sliders with radial bearings which roll in the internal, induction hardened and ground raceways of a C-profile made from cold-drawn roller bearing carbon steel.

Compact Rail consists of three product series: the fixed bearing rail, the compensating bearing rail and the floating bearing rail. They can be combined to create self-aligning systems to compensate misalignment errors on two planes: axially up to 3.9 mm and radially up to 2°. All products are available in zinc plating, with other treatments for higher corrosion resistance as an option. There are four different sizes of guide rails and many different versions and lengths of the slide bearings, depending on the size and load requirement.

Characteristics

- Compact size
- Corrosion resistant surface
- Not sensitive to dirt due to internal raceways and large rollers
- Hardened and ground raceways
- Self-aligning in two planes
- Quieter than recirculating ball systems
- High operating speeds
- Wide temperature range
- Easy adjustment of slider in the guide rail
- Different anticorrosion treatments available for rails and slider bodies

Application areas

- Cutting machines
- Medical equipment
- Packaging machines
- Photographic lighting equipment
- Construction and machine technology (doors, protective covers)
- Robots and manipulators
- Automation
- Handling
- Special vehicles

System components

T-Rails

Fixed rails used as the main load carrier in radial and axial forces.

U-Rails

Floating rails are used for load carrier of radial forces and, in combination with the fixed bearing T-rail or compensation K-rail, as a support carrier for occurring moment loads.

K-Rails

The compensation rails are used for the load carrier of radial and axial forces. Tolerance compensation in two planes in combination with the U-rail.

NSW/NSA-slider

Robust zinc plated steel slider with roller bearings, self-centering heads with wipers, longitudinal seals to protect the internal components and a top sealing strip to prevent accidental tampering of the fixed rollers. The slider body is accurately finished with matte longitudinal edge chamfer and a shining ground flat surface. It is available for all sizes, configurable with up to six rollers depending on the load requirement. This slider type is also available with long slider body, NSW...L/NSA...L.

NSD/NSDA-slider

Constructed as the NSW/NSA-slider with mounting holes parallel to the direction of preferred loading. It is available for sizes 28 and 43, with three or five rollers, depending on load case and load direction set with the corresponding configuration.

CSW/CSWK-slider

Constructed with zinc-plated steel body and sturdy wipers made of polyamide. Available for all sizes. Depending on the load requirement, slider is configurable with up to six rollers.

Rollers

Available individually in all sizes as eccentric or concentric rollers. Optionally available with splash-proof rubber seal 2RS or with steel cover disc 2Z.

Wipers

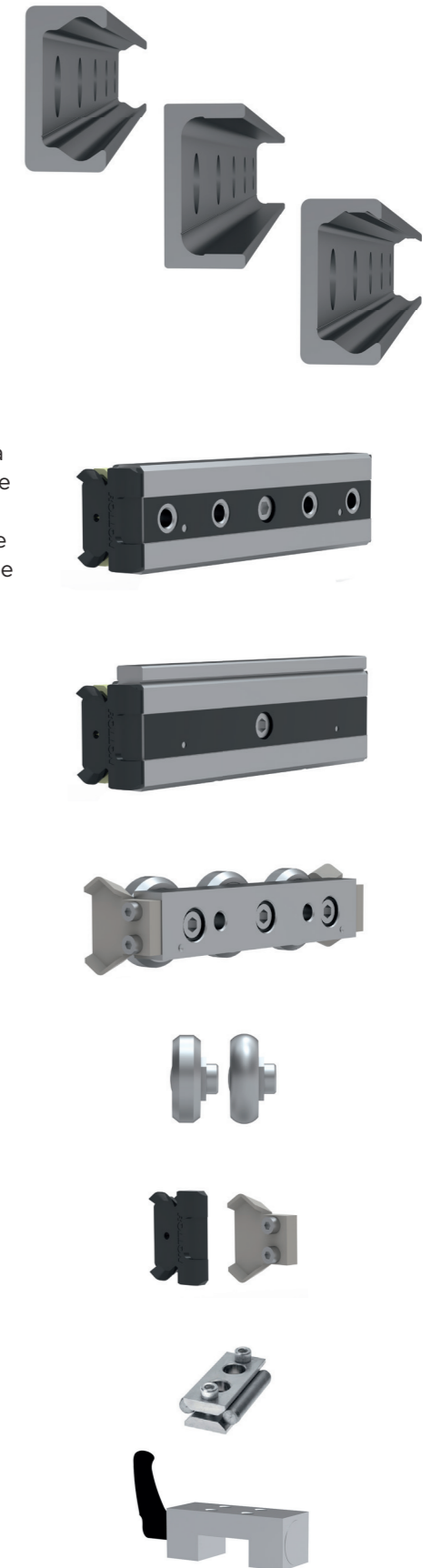
The NS-slider heads are equipped with special slow release felt pads and are free to rotate with respect to the slider body, so that the felts are always in contact with the raceways to ensure a perfect lubrication. The felts can be grased through a dedicated oil refilling access on the front of the head, simply by means of a syringe oiler. The wipers for the CSW/CSWK-sliders keep the raceways free of contamination and ensure a longer service life.

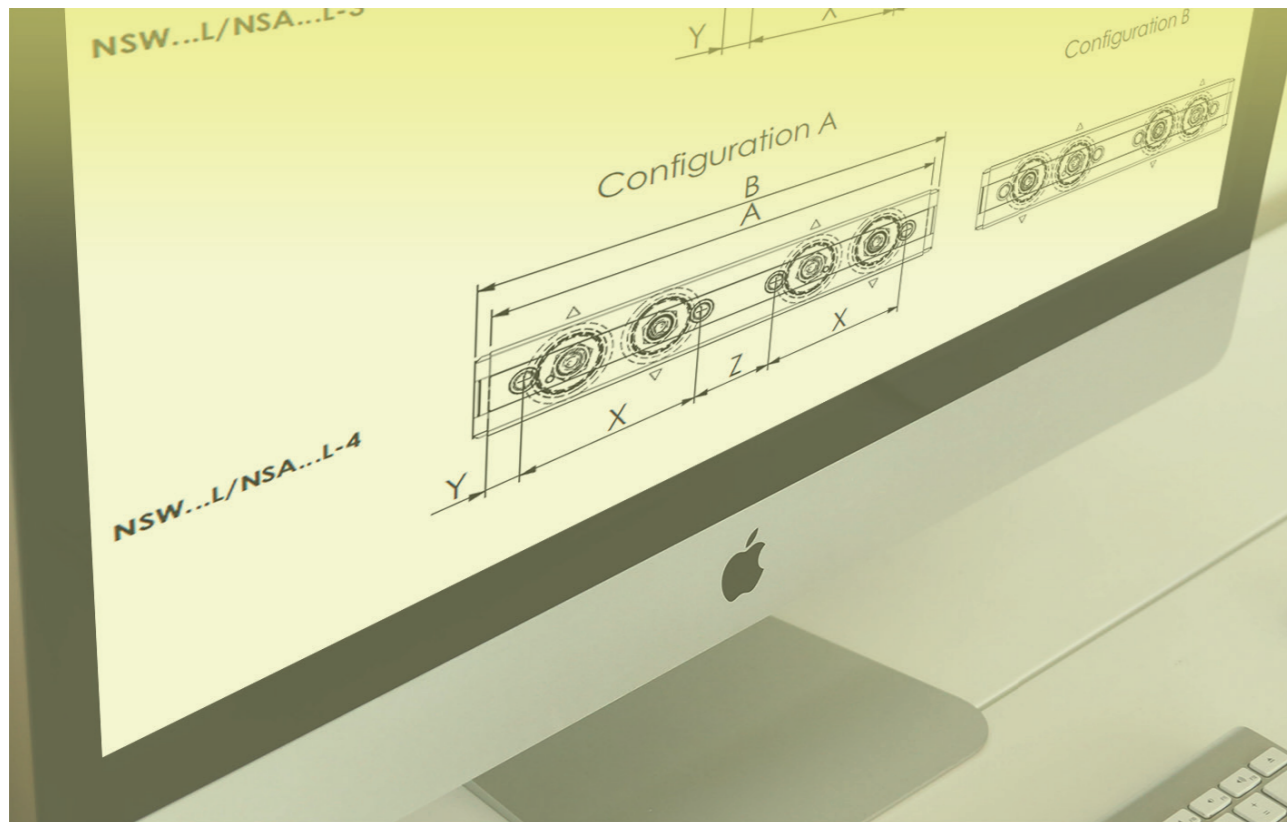
Joining rail alignment fixture

The joining rail alignment fixture AT / AK is used during installation of joined rails in order to precisely align the rails with each other.

Manual clamp elements

Typically used for table cross beams and sliding beds, and during positioning optical equipment and measuring tables.





NEED FOR LONGER SLIDERS?

The robust NSW/NSA sliders are accessible on request in versions with long slider body. They are available in sizes 28 and 43, configurable with 3 to 5 rollers.

Contact us for more information!

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Norway
Rollco Norge AS
+47 32 84 00 34
www.rollco.no

Technical data

- Available sizes for T-rail and U-rail: 18, 28, 43, 63
- Available sizes for K-rail: 43, 63
- Max. operating speed: 9 m/s (depending on application)
- Max. acceleration: 20 m/s² (depending on application)
- Max. radial load capacity: 15,000 N (per slider)
- Temperature range: -20 °C to +120 °C, briefly up to max. +150 °C
- Available rail lengths from 160 mm to 3 600 mm in longer single rails. Up to max. 4 080 mm on request depending on size. Rails can be joined.
- Roller pins lubricated for life
- Roller seal/shield: standard 2Z (steel cover disk), 2RS (splash-proof)
- Rollers material: steel 100Cr6 (also available stainless steel AISI 440)
- Rail raceways are induction hardened and ground
- Rails and slider bodies are standard zinc-plated according to ISO 2081
- Rail material of T- and U-rails in sizes 18: cold-drawn roller bearing carbon steel C43 F
- Rail material of K-rails, as well as T- and U-rails in size 28 to 63: Cf53

Notes

- The sliders are equipped with rollers that are in alternating contact with both sides of the raceway. Markings on the body around the roller pins indicate correct arrangement of the rollers to the external load.
- With a simple adjustment of the eccentric rollers, the desired clearance or preload on the rail and slider can be set.
- Rails in joined design are available for longer transverse distances.
- The K rails are not suitable for vertical installation.
- Screws of property class 10.9 must be used.
- Differences in screw sizes must be observed.
- When mounting the rails, it is crucial to ensure that the mounting holes in the structure are properly chamfered.
- The general illustrations show NSW-sliders as an example.
- Rollers are available also in stainless steel version.