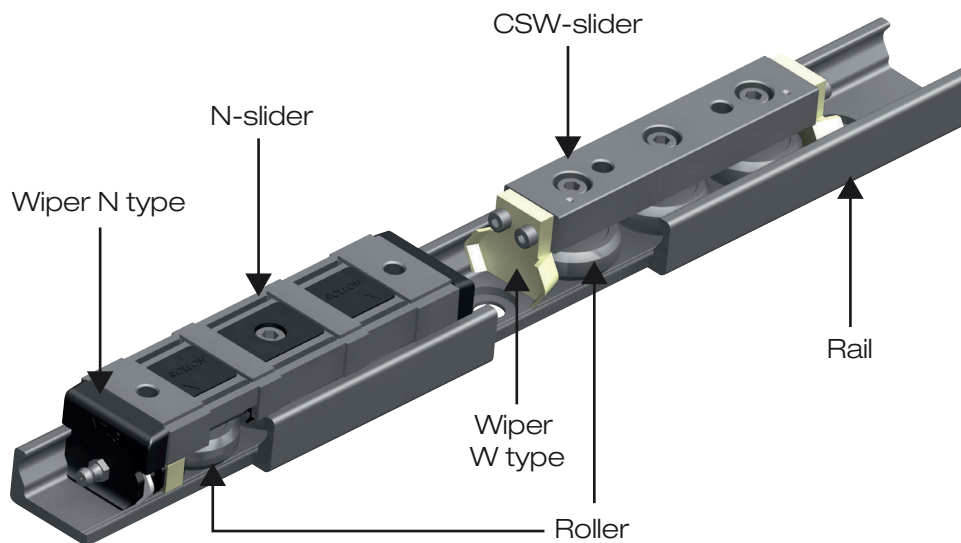


Product Overview



Compact rail is a product family of guide rails consisting of roller sliders with radial bearings which roll on 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 rail. All products are available in zinc plating. Nickel plating is also available as an option. There are four different sizes of guide rails and many different version and lengths of the slide bearing.

Characteristics

- Compact size.
- Corrosion resistant surface.
- Not sensitive to dirt due to internal tracks.
- Hardened and ground raceways.
- Custom design TR-rail, also ground on the back of the rail and one side surface on request.
- Self-aligning in two planes.
- Quieter than recirculating ball systems.
- High operation speeds.
- Wide temperature range.
- Easy adjustment of slider in the guide rail.
- Zinc plated surface, on request chemically nickel plated.

Application areas

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

System components

- T-Rails – Fixed bearing rails used as the main load bearing in radial and axial forces.
- U-Rails – Floating bearing rails used for load bearing of radial forces and, in combination with the fixed bearing rail or compensation rail, as a support bearing for occurring moments.
- K-Rails – Compensation bearing rails used for the load bearing of radial and axial forces. Tolerance compensation in two planes can be implemented in combination with the compensating rail.
- N-slider – Closed design, available for sizes 18, 28, 43 and 63. Spring preloaded wipers and a self-lubrication kit are integrated in the end caps (except for size 18). Configurable with three rollers as standard, in sizes 28 and 43. A longer carriage with up to five rollers is also available on request.
- CSW-slider – Available for all sizes. Depending on the load case, slider is configurable with up to six rollers. Wipers available as option.
- Rollers – Available individually in all sizes as eccentric or concentric rollers. Optionally available with splash-proof plastic seal or with steel cover disc.
- Wipers – Available for slider type CSW to keep the raceways free of contamination and ensure a longer service life.
- Alignment fixture – Used during installation of joined rails for precise alignment of the rail transition from one to another.
- Manual clamp elements



Technical data

- Available sizes for T-rail and U-rail: 18, 28, 43, 63. For K-rail: 43, 63.
- Max. operating speed: 9 m/s for size 63 (depending on application)
- Max. acceleration: 20 m/s² (depending on application)
- Max. radial load capacity: 15.000 N (per slider)
- Temperature range: -30°C to +120°C, briefly up to max. +170°C
- Rail material of T- and U-rails sizes 18 to 43: cold-drawn roller bearing steel C43 F. All K-rails, as well as T- and U-rails in size 63: CF53.
- Rail raceways induction hardened and ground
- Slider material of N-slider: Chemically nickel plated aluminium die cast body. CSW-slider: zinc-plated steel body.
- Rails and slider bodies are standard zinc-plated according to ISO 2081
- Roller material: steel 100Cr6
- Roller seal/shield: 2RS (splash-proof), 2Z (steel cover disk)
- Roller pins lubricated for life
- Wipers made of sturdy polyamide.

Axial deviations in parallelism

This problem occurs fundamentally by insufficient precision in the axial parallelism of the mounting surfaces, which results in an excessive load on the slider and thus causes drastically reduced service life. The use of fixed bearing and compensating bearing rail (T+U-system) solves the unique problem of aligning two track, parallel guide systems. By using a T+U-system, the T-rail takes over the motion of the track while the U-rail serves as a support bearing and takes only radial forces and Mz moments. A combination of compensation rail and floating bearing rail (K+U-system) also allows for deviations in parallelism and height offset.