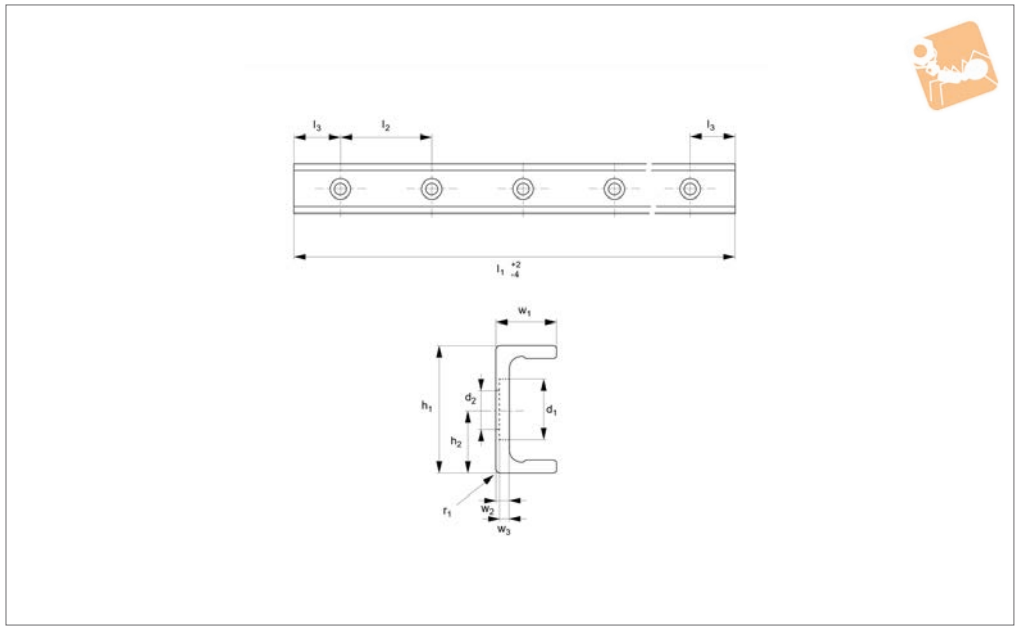
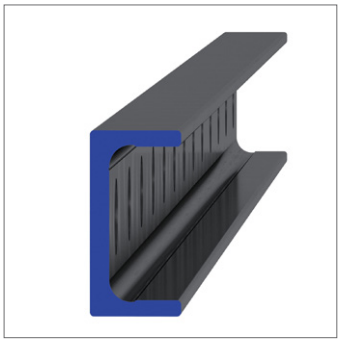




L1918.18U-C

Material
Carbon steel. Raceways induction hardened and ground.
Electrolytic zinc-plated (excluding race-ways).

Technical Notes
The U rail is a slave rail and is usually used with a T master rail.
This is the U-C counterbored rail type (most popular), which is usually used with a corresponding T-C rail.
Special low profile Torx head screws provided free of charge.
Weight: 0,55 Kg/m.

Tips
Standard carriages are the L1918.CL series.

Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1918.18U-0160-C	9.5	M4	18	9	160	80	40	1	8.25	2.6	1.9
L1918.18U-0240-C	9.5	M4	18	9	240	80	40	1	8.25	2.6	1.9
L1918.18U-0320-C	9.5	M4	18	9	320	80	40	1	8.25	2.6	1.9
L1918.18U-0400-C	9.5	M4	18	9	400	80	40	1	8.25	2.6	1.9
L1918.18U-0480-C	9.5	M4	18	9	480	80	40	1	8.25	2.6	1.9
L1918.18U-0560-C	9.5	M4	18	9	560	80	40	1	8.25	2.6	1.9
L1918.18U-0640-C	9.5	M4	18	9	640	80	40	1	8.25	2.6	1.9
L1918.18U-0720-C	9.5	M4	18	9	720	80	40	1	8.25	2.8	1.9
L1918.18U-0800-C	9.5	M4	18	9	800	80	40	1	8.25	2.6	1.9
L1918.18U-0880-C	9.5	M4	18	9	880	80	40	1	8.25	2.6	1.9
L1918.18U-0960-C	9.5	M4	18	9	960	80	40	1	8.25	2.6	1.9
L1918.18U-1040-C	9.5	M4	18	9	1040	80	40	1	8.25	2.6	1.9
L1918.18U-1120-C	9.5	M4	18	9	1120	80	40	1	8.25	2.6	1.9
L1918.18U-1200-C	9.5	M4	18	9	1200	80	40	1	8.25	2.6	1.9
L1918.18U-1280-C	9.5	M4	18	9	1280	80	40	1	8.25	2.6	1.9
L1918.18U-1360-C	9.5	M4	18	9	1360	80	40	1	8.25	2.6	1.9
L1918.18U-1440-C	9.5	M4	18	9	1440	80	40	1	8.25	2.6	1.9
L1918.18U-1520-C	9.5	M4	18	9	1520	80	40	1	8.25	2.6	1.9
L1918.18U-1600-C	9.5	M4	18	9	1600	80	40	1	8.25	2.6	1.9
L1918.18U-1680-C	9.5	M4	18	9	1680	80	40	1	8.25	2.6	1.9
L1918.18U-1760-C	9.5	M4	18	9	1760	80	40	1	8.25	2.6	1.9
L1918.18U-1840-C	9.5	M4	18	9	1840	80	40	1	8.25	2.6	1.9
L1918.18U-1920-C	9.5	M4	18	9	1920	80	40	1	8.25	2.6	1.9
L1918.18U-2000-C	9.5	M4	18	9	2000	80	40	1	8.25	2.6	1.9
L1918.18U-2080-C	9.5	M4	18	9	2080	80	40	1	8.25	2.6	1.9
L1918.18U-2160-C	9.5	M4	18	9	2160	80	40	1	8.25	2.6	1.9
L1918.18U-2240-C	9.5	M4	18	9	2240	80	40	1	8.25	2.6	1.9
L1918.18U-2320-C	9.5	M4	18	9	2320	80	40	1	8.25	2.6	1.9
L1918.18U-2400-C	9.5	M4	18	9	2400	80	40	1	8.25	2.6	1.9
L1918.18U-2480-C	9.5	M4	18	9	2480	80	40	1	8.25	2.6	1.9
L1918.18U-2560-C	9.5	M4	18	9	2560	80	40	1	8.25	2.6	1.9

Light Duty U Rail
counterbored holes

Order No.	d_1	d_2 for screws	h_1	h_2	l_1	l_2	l_3	r_1	w_1	w_2	w_3
L1918.18U-2640-C	9.5	M4	18	9	2640	80	40	1	8.25	2.6	1.9
L1918.18U-2720-C	9.5	M4	18	9	2720	80	40	1	8.25	2.6	1.9
L1918.18U-2800-C	9.5	M4	18	9	2800	80	40	1	8.25	2.6	1.9
L1918.18U-2880-C	9.5	M4	18	9	2880	80	40	1	8.25	2.6	1.9
L1918.18U-2960-C	9.5	M4	18	9	2960	80	40	1	8.25	2.6	1.9
L1918.18U-3040-C	9.5	M4	18	9	3040	80	40	1	8.25	2.6	1.9

The compact rail systems are unique. They have many major advantages over other rail systems.

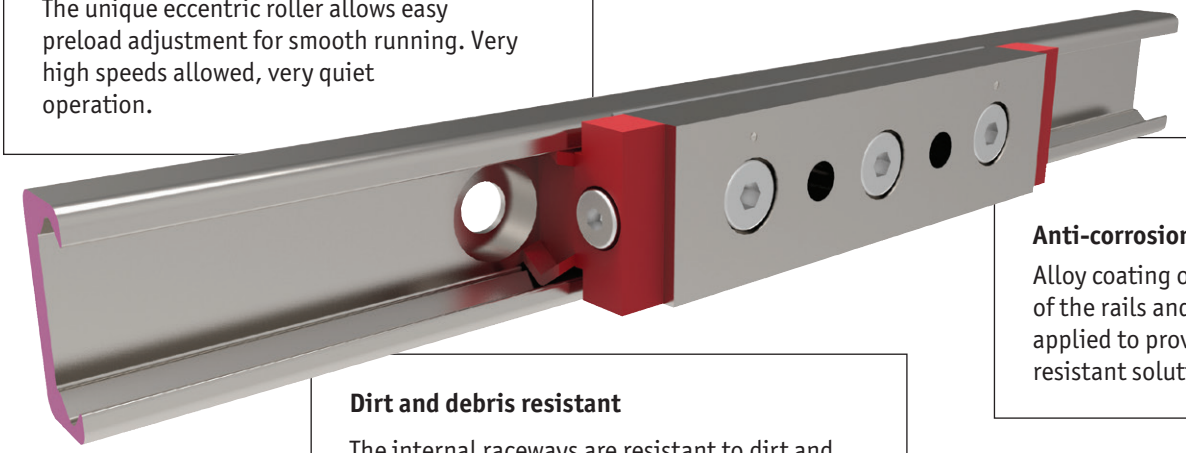
Easy and cost-effective to set up

The rails are easy to set up and can adjust for some misalignment of the structure on which it is being used. The compact rail system achieves this by using a master (T type) rail, and a slave (U type) rail. This allows the sliders in the T rail to remain fixed in place but allows lateral movement of the sliders in the U rail to adapt to any misalignment and avoid any issues of stiction.

Slave (U) rails have flat, parallel raceways that allow free lateral movement of the sliders. This flexibility can mean a large saving in the machining of the structure surface making it a very cost-effective solution.

Fast, smooth and quiet

The unique eccentric roller allows easy preload adjustment for smooth running. Very high speeds allowed, very quiet operation.



Anti-corrosion option

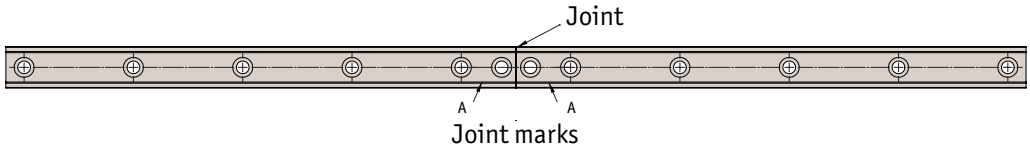
Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.

Dirt and debris resistant

The internal raceways are resistant to dirt and debris, larger roller bearings with seals and wipers are used (compared to small ball bearings on other systems).

Unlimited rail lengths

Rails can be easily joined together for unlimited rail lengths, and extra hole needs to be machined at the joint area. The rails need to be selected so they are “matched” and a joining tool needs to be used to align the rails.



Compact Rails

Specifications and applications

Specifications

- Maximum speed 9 m/s.
- Maximum acceleration 20 m/s^2.
- Maximum unjoined rail length 3600 mm.
- 4 rail sizes – 18, 28, 35 and 43.
- Three rail types - T rail, U rail and K rail.
- Rail lengths from 160mm upwards.
- Rail raceways hardened and ground.
- Accuracy 0,15mm over 3,5 metres.
- Maximum radial load per slider is 15,000 N.
- Temperature range -30°C to +120°C.
- Roller bearings seals either 2Z (dust proof) or 2RS (splash proof), lubricated for life.
- Roller bearings from 100Cr6.
- Easy adjustment of preload.
- Three slider body types.
- Rails can be joined together, please contact our Technical Department for details.
- Special anti-corrosion coatings and finishes on request.

Applications

Special purpose & packaging machines
Precision positioning systems
handling units
robotic systems • cutting machines

Seating
Sliding seats
disability ramps
seat extensions

Safety guarding
Extending protective systems
sliding gates
automatic pick & place

Sliding doors & windows
Internal sliding doors
gates • roof lights
display cases

Photography & lighting
Sliding tracks
positioning of lights
shielding systems

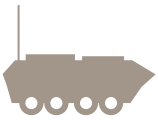
Medical technology
X-ray equipment
dental chairs
bed extensions

Food, drink & pharmaceuticals
Food handling conveyors
pharmaceutical factories
stainless display equipment

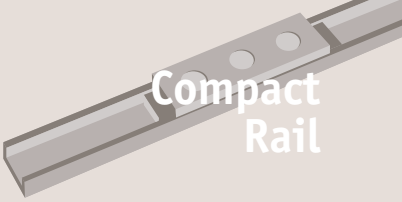
Transport (naval)
Sliding hatches
pull-out storage

Transport (rail)
Seat adjustment
sliding doors
battery removal units

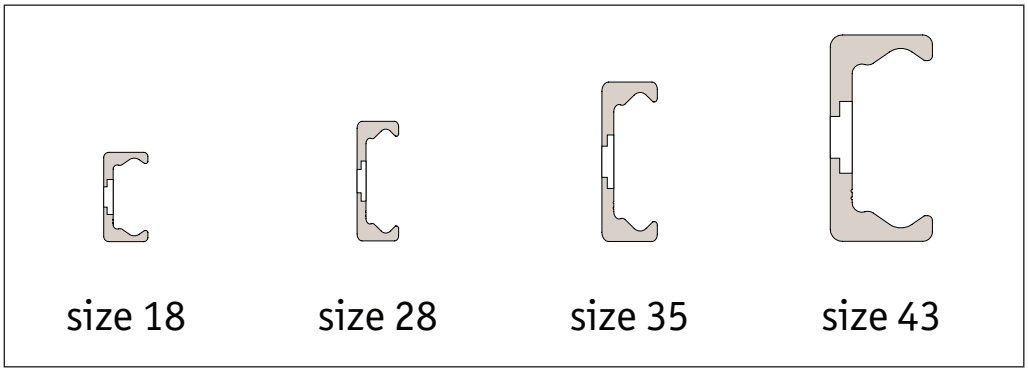
Transport (automotive)
Ambulance sliding systems
fire fighting vehicles
sliding panels



Transport (military)
Sliding seats
protective hatches
stretcher extensions

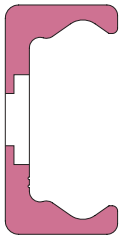


Rail sizes



Rail types

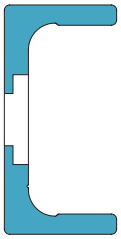
T Rail (master)



Master rail

Accepts radial and axial loads

U Rail (slave)



Slave rail

Compensates for misalignment in one plane

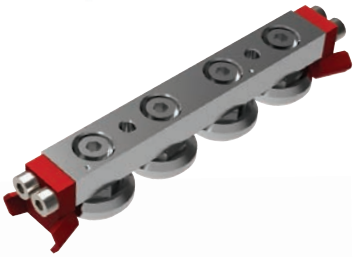
Sliders

Solid body, front mount - Type CL

Solid steel, zinc plated body
with removable end wipers
side seals, fixing in top face

Solid body, front mount - Type CS

Narrow body, solid steel
zinc plated
with removable end wipers
no side seals, fixing on top face



Solid body, side mount - Type CR

Solid steel, zinc plated body
with removable end wipers
side seals, fixing in side of body

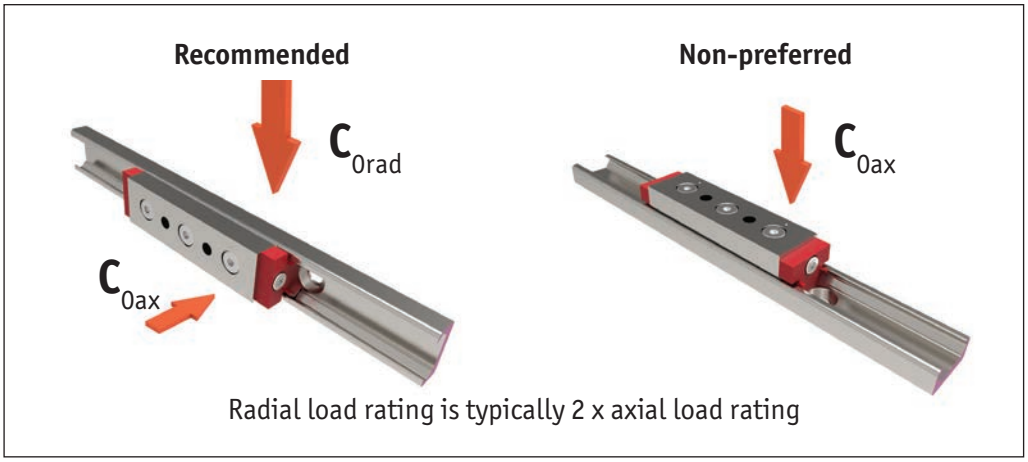
Compact Rail from Automotion Components

Compact Rail

Set-up

Orientation of rails

The radial load that the sliders can take is significantly higher than the axial load, so where possible the rails should be set up with the sliders taking the loads in this plane.

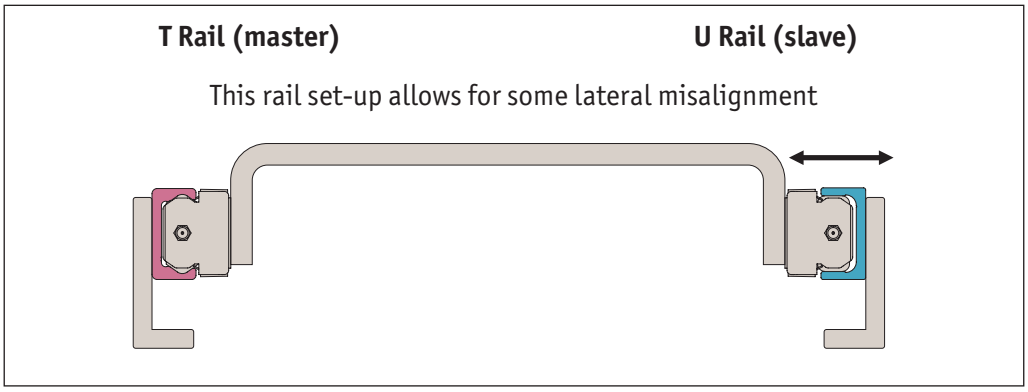


Radial load rating is typically 2 x axial load rating

One of the key benefits of the compact rail system is that it compensates for misalignment in the structure. This often results in a major cost saving when compared to the use of other guideways which have to be very accurately installed.

The compact rail system achieves this by using a master (T type) rail, and a slave (U type) rail. This allows the slides in the T rail to remain fixed in place but allows lateral movement of the sliders in the U rail to adapt to any misalignment and avoid any issues of stiction.

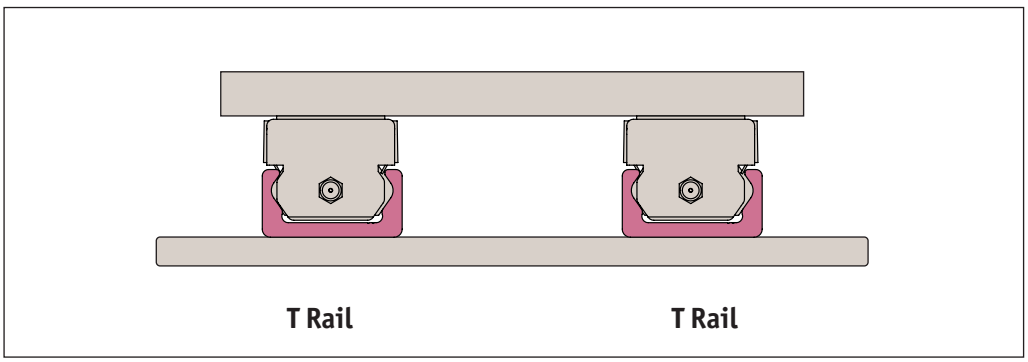
U rails have flat, parallel raceways that allow free lateral movement of the sliders.
The maximum lateral movement for each size is shown in later tables.



Using flat rails

It is acceptable (but not the preferred method), to use rails as below but the alignment accuracy needed is slightly greater and in this set-up only T type rails can be used.

In this case the axial load figure C_{0ax} should be used in any calculations (which is considerably less than the radial load figure C_{0rad}).



ov-compact-rails-set-up-a-lnh - Updated - 09-03-2023