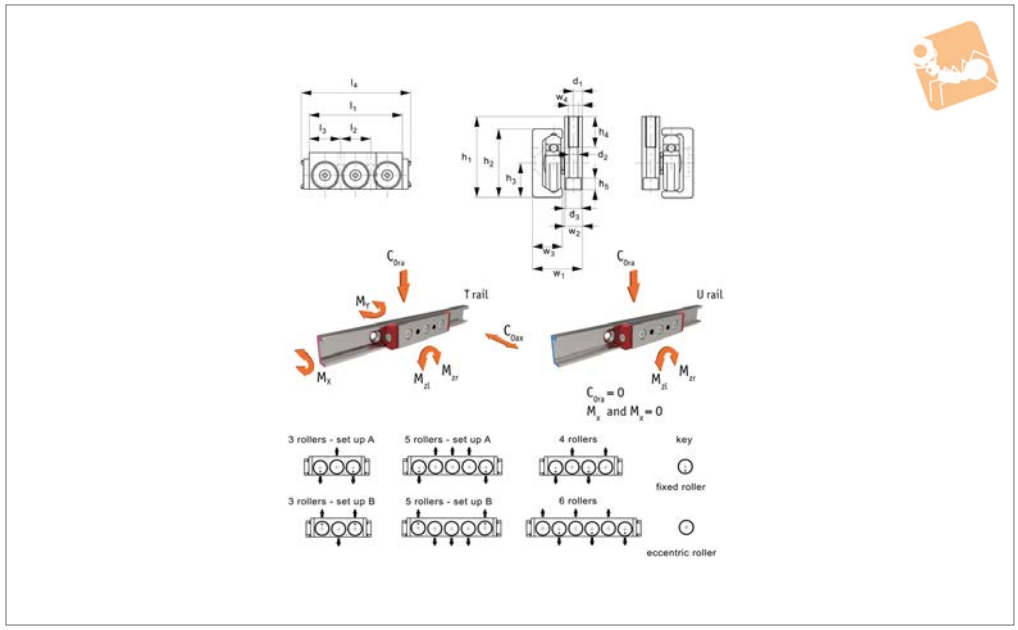
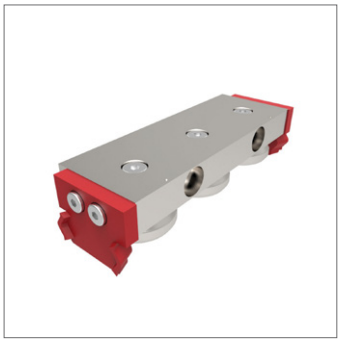




L1935.CR

Material
Zinc plated steel body.
Steel rollers (100Cr6) with rubber seals.

Technical Notes
To be used with compact rail size 35.

Select the relevant carriage for the rail and the required number of carriages to carry the load (taking into account any moment loads).

Tips
Easy to install (one or more rollers are eccentric allowing for adjustable preload).
Coefficient of friction (without seals) 0.003.
Quiet and fast (up to 5 m/s).

Order No.	For rail type	No. of rollers	d_1 for screw	d_2	d_3	h_1	h_2	h_3	h_4	h_5	l_1	l_2	l_3	l_4	M_x Nm
L1935.35CR-100-TA	T	3	M8	6.7	11	35	17.5	37	15	5.5	100	114	45	27.5	13.1
L1935.35CR-100-UA	U	3	M8	6.8	12	35	17.5	37	15	5.5	100	114	45	27.5	0
L1935.35CR-120-TA	T	4	M8	6.9	13	35	17.5	37	15	5.5	120	134	60	30.0	24.3
L1935.35CR-120-UA	U	4	M8	6.10	14	35	17.5	37	15	5.5	120	134	60	30.0	0
L1935.35CR-120-TB	T	4	M8	6.11	15	35	17.5	37	15	5.5	120	134	60	30.0	24.3
L1935.35CR-120-UB	U	4	M8	6.12	16	35	17.5	37	15	5.5	120	134	60	30.0	0
L1935.35CR-150-TA	T	5	M8	6.13	17	35	17.5	37	15	5.5	150	164	30	30.0	24.3
L1935.35CR-150-UA	U	5	M8	6.14	18	35	17.5	37	15	5.5	150	164	30	30.0	0
L1935.35CR-180-TA	T	6	M8	6.15	19	35	17.5	37	15	5.5	180	194	60	30.0	29.0
L1935.35CR-180-UA	U	6	M8	6.16	20	35	17.5	37	15	5.5	180	194	60	30.0	0
L1935.35CR-180-TB	T	6	M8	6.17	21	35	17.5	37	15	5.5	180	194	60	30.0	29.0
L1935.35CR-180-UB	U	6	M8	6.18	22	35	17.5	37	15	5.5	180	194	60	30.0	0

Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1935.35CR-100-TA	34.3	62.7	62.7	29.9	16.5	12	6	8200	1080	3580
L1935.35CR-100-UA	0	62.7	62.7	29.9	16.5	12	6	8200	0	3580
L1935.35CR-120-TA	44.1	53.7	161.2	29.9	16.5	12	6	8200	1240	3580
L1935.35CR-120-UA	0	53.7	161.2	29.9	16.5	12	6	8200	0	3580
L1935.35CR-120-TB	44.1	161.2	53.7	29.9	16.5	12	6	8200	1240	3580
L1935.35CR-120-UB	0	161.2	53.7	29.9	16.5	12	6	8200	0	3580
L1935.35CR-150-TA	58.8	161.2	161.2	29.9	16.5	12	6	9576	1490	4280

Medium Duty Sliders, size 35

no side seal, side fixing, with wiper

Order No.	M_y Nm	M_{zr} Nm	M_{zl} Nm	w_1	w_2	w_3	w_4	Dyn. load C N max.	Static load $C_{0\ ax.}$ N max.	Static load $C_{0\ rad.}$ N max.
L1935.35CR-150-UA	0	161.2	161.2	29.9	16.5	12	6	9576	0	4280
L1935.35CR-180-TA	73.6	161.2	268.6	29.9	16.5	12	6	9576	1810	4280
L1935.35CR-180-UA	0	161.2	268.6	29.9	16.5	12	6	9576	0	4280
L1935.35CR-180-TB	73.6	268.6	161.2	29.9	16.5	12	6	9576	1810	4280
L1935.35CR-180-UB	0	268.6	161.2	29.9	16.5	12	6	9576	0	4280

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

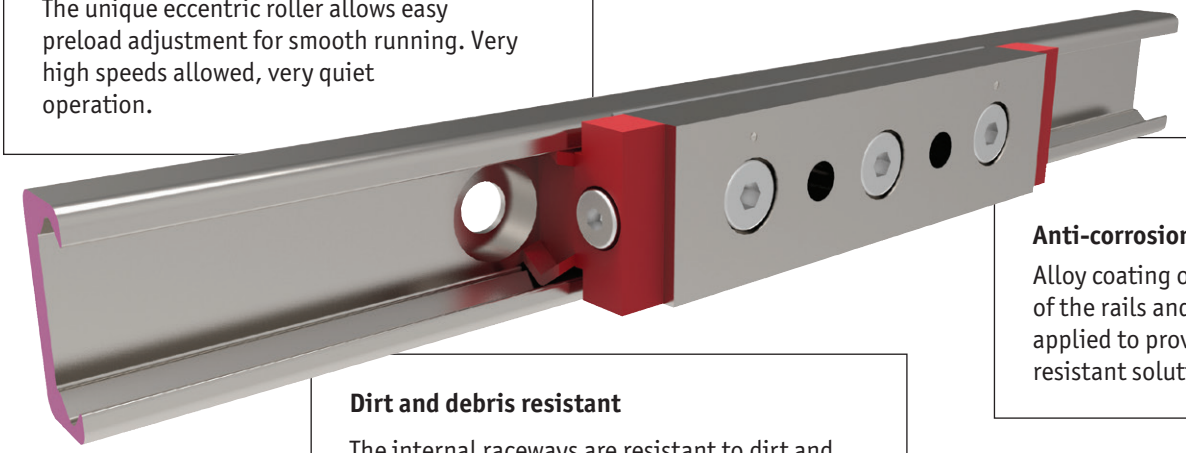
Easy and cost-effective to set up

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

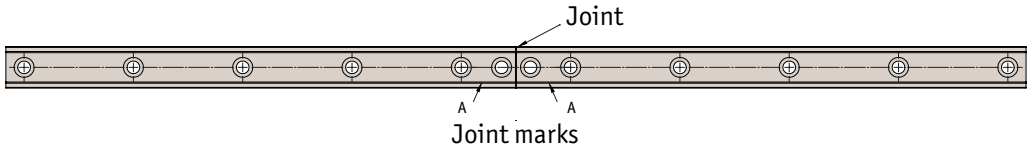
Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.

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

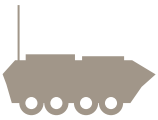
Medical technology
X-ray equipment
dental chairs
bed extensions

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

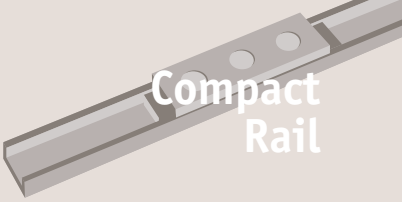
Transport (naval)
Sliding hatches
pull-out storage

Transport (rail)
Seat adjustment
sliding doors
battery removal units

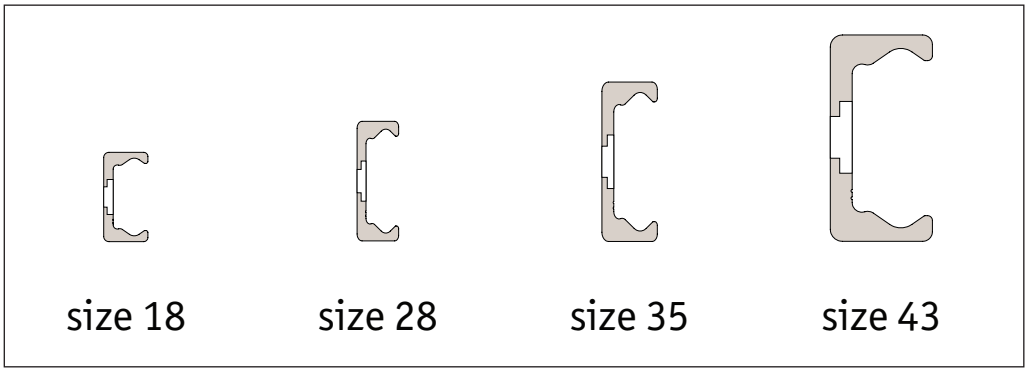
Transport (automotive)
Ambulance sliding systems
fire fighting vehicles
sliding panels



Transport (military)
Sliding seats
protective hatches
stretcher extensions

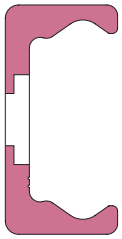


Rail sizes



Rail types

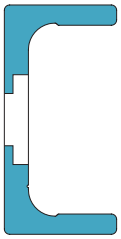
T Rail (master)



Master rail

Accepts radial and axial loads

U Rail (slave)



Slave rail

Compensates for misalignment in one plane

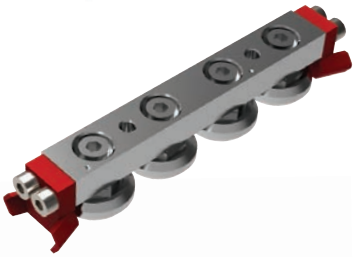
Sliders

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

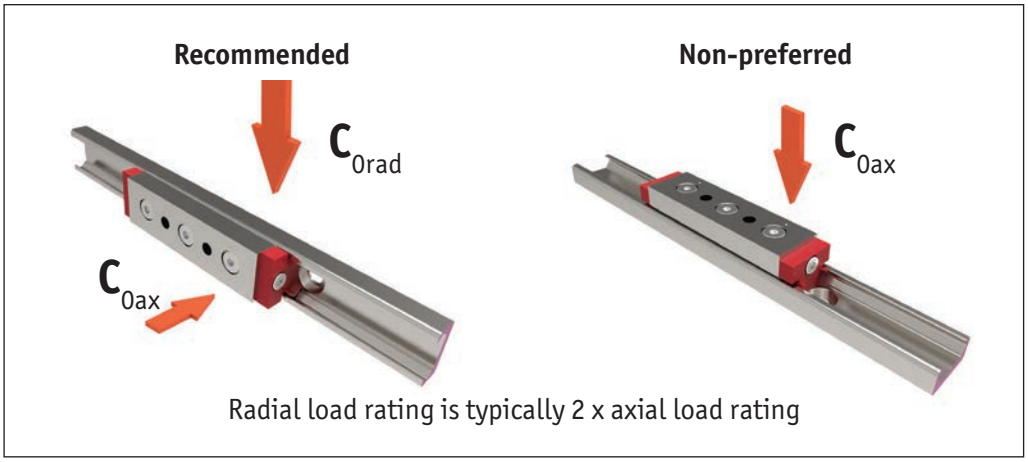
Compact Rail from Automotion Components

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.

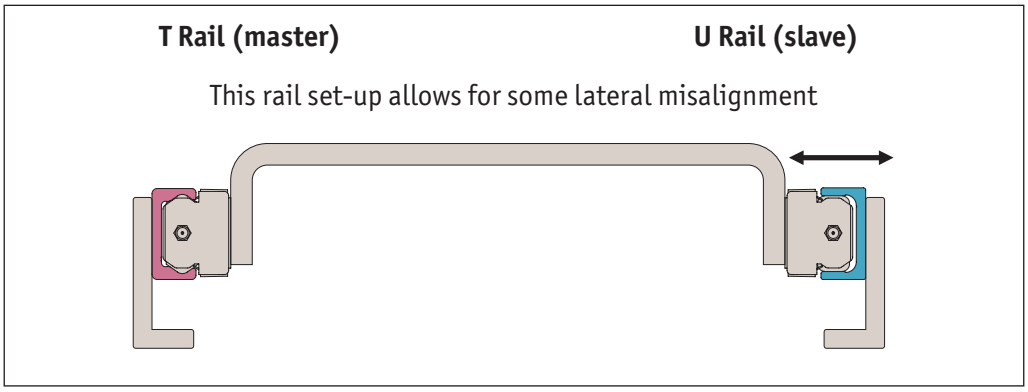


Radial load rating is typically 2 x axial load rating

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.

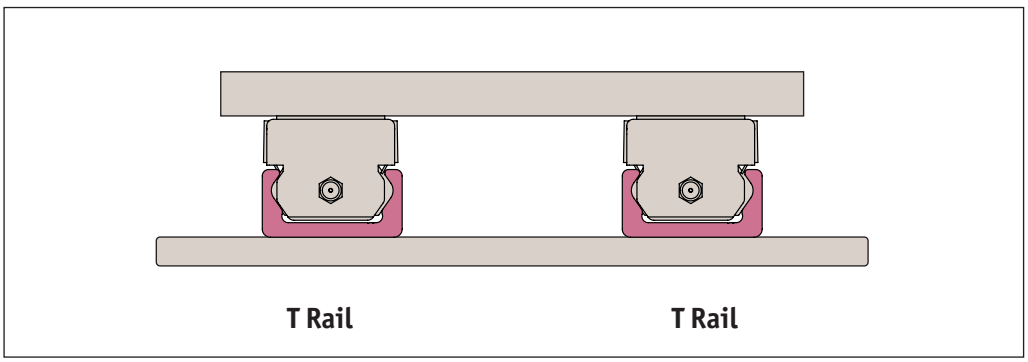
U rails have flat, parallel raceways that allow free lateral movement of the sliders.
The maximum lateral movement for each size is shown in later tables.



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