

ROLLON®

BY TIMKEN

Linear Line

Compact Rail



PROJECT
SIMPLIFICATION



PERFORMANCE



COST



DELIVERY
TIME



The
NEW
generation

Product leaflet
English

www.rollon.com

New Compact Rail

It simplifies the project, improves the performance and reduces the application cost: **8 main advantages.**



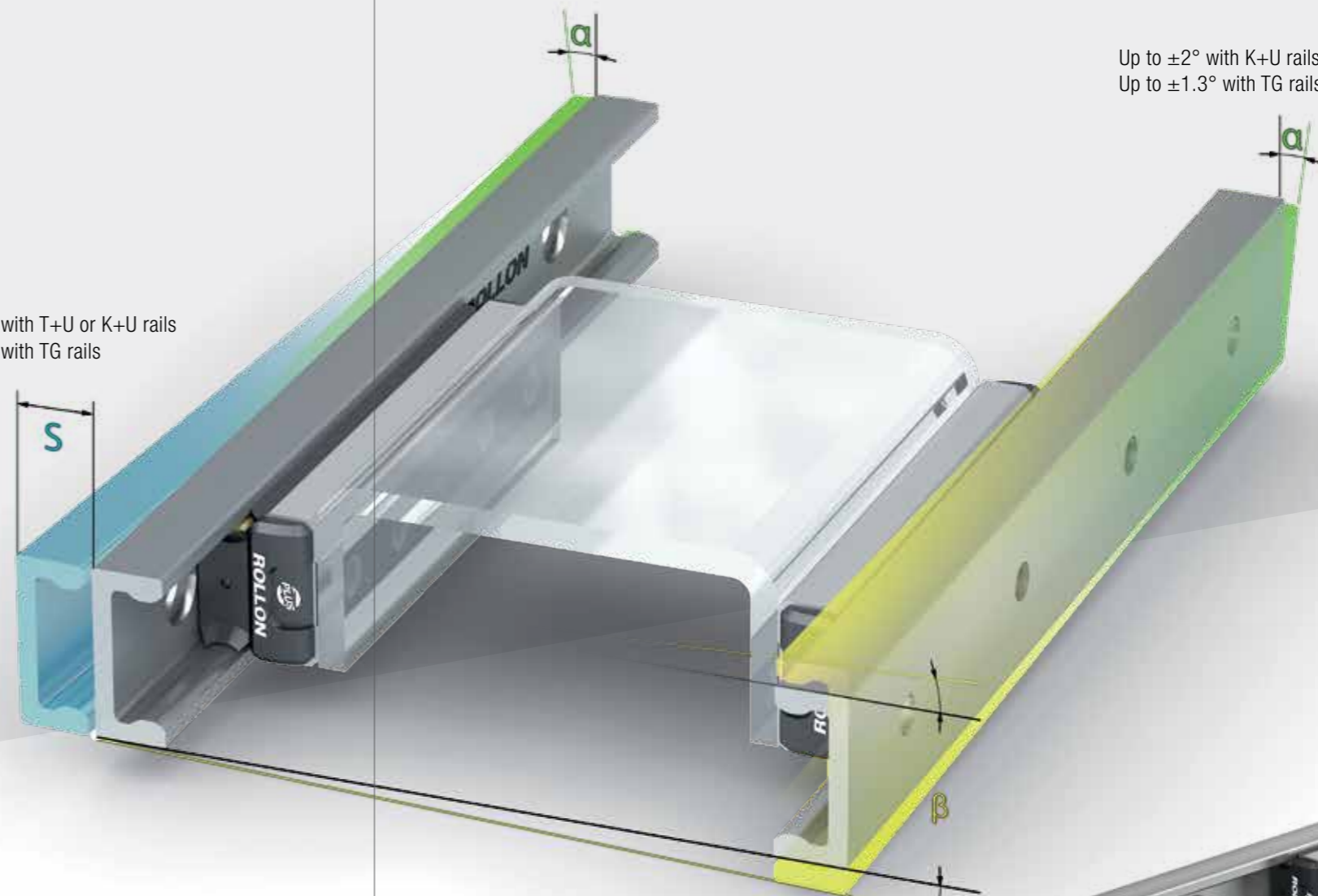
1

Self-aligning system

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

Up to 3.9 mm with T+U or K+U rails
Up to 3.5 mm with TG rails

S



Up to $\pm 2^\circ$ with K+U rails
Up to $\pm 1.3^\circ$ with TG rails

Up to $\pm 2^\circ$ with K+U rails
Up to $\pm 1.3^\circ$ with TG rails



Compact Rail

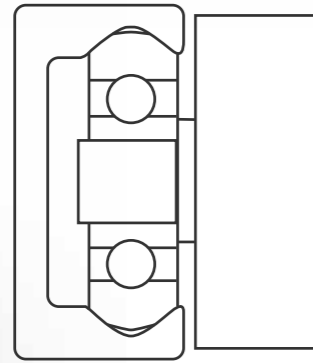


Compact Rail

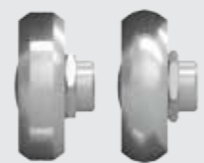


Configurations of

guides and bearings



Rails with different geometries

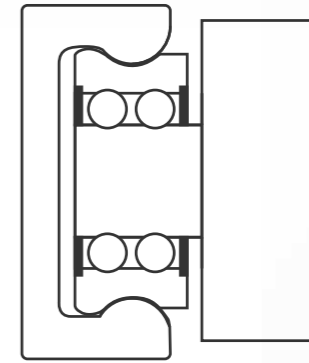


Single row ball bearings

Rail with convex raceways and higher rigidity



Double row ball bearings



+65%

+170%



* Example referred to size 43.

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

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

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

Up to $\pm 1.3^\circ$ with RP+RA or RU+RA sliders

Up to $\pm 1.3^\circ$ with RP+RA or RU+RA sliders

Up to 3.5 mm with RP+RV or RU+RV sliders





2

Optimal reliability in dirty environments

Lateral sealing for greater protection against contaminants

New self-centering wiper for optimal cleaning of the raceways



3

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 finish
- **Corrosive environments (humidity):** electrolytic plating with high resistance passivation Rollon Alloy
- **Corrosive environments (acidic or basic):** nickel-plating



4

Long lifetime

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



5

High dynamics

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



6

Low maintenance

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



7

Uniquely quiet

Ground raceways for smooth and silent movement



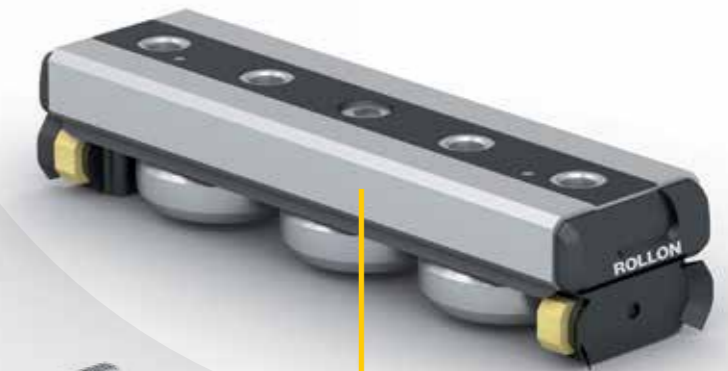
8

Strength and sturdiness

Thanks to a steel slider body

New Compact Rail slider

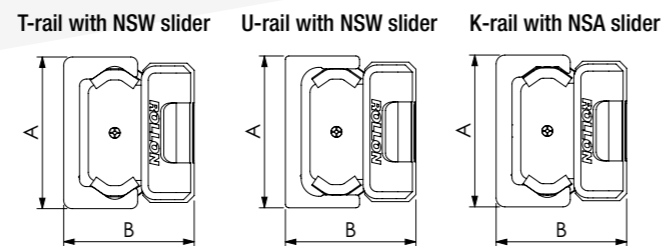
Improved performance and a new look designed to fit every project perfectly.



Self-aligning linear guides with bearings and C-Profile, featuring a newly designed robust steel slider.

Compact Rail is part of the guide rail product family, consisting of roller sliders with radial bearings, which slide on an internal induction hardened and ground C-profile raceway, made from cold-drawn carbon steel. Compact Rail consists of three product series: the fixed bearing rail (T), the floating bearing rail (U) and a compensating bearing rail (K). They can be combined to create self-aligning systems:

- **T+U system:** pairing a fixed bearing rail (T) with a floating bearing rail (U), allows for the absorption of deviations in parallelism of the mounting surfaces. The T-rail takes on the full load while the U-rail allows for axial translation up to 3.9 mm.
- **K+U system:** pairing a compensating bearing rail (K) with a floating bearing rail (U), allows for the absorption of deviations in parallelism of the mounting surfaces and height offset. With its particular shape, the K-rail takes on the load and allows the slider a rotation around its longitudinal axis up to $\pm 2^\circ$, while the U-rail allows for axial translation up to 3.9 mm.



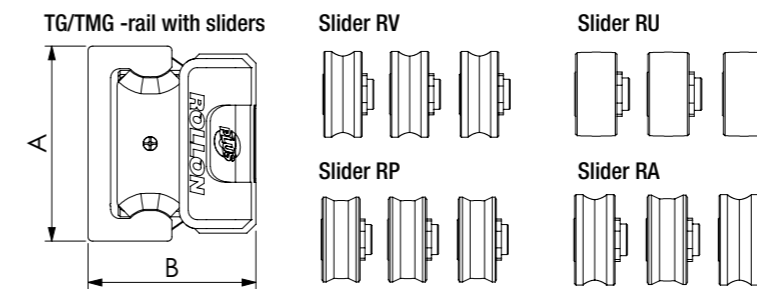
Rail type	Slider type	Size	Overall dimensions		Max. load capacity [N]		Dynamic coefficient C 100 [N]	Max. moment Capacity [Nm]			Max. rail Length ^{*1} [mm]	Max. Speed ^{*2} [m/s]	Max. Acceleration [m/s ²]	Operating temperature [°C]	Misalignment compensation		
			A [mm]	B [mm]	C _{orad}	C _{oax}		M _x	M _y	M _z					Axial [mm]	Radial [°]	
TLC	NSW	18	18	16,5	975	440	1830	3.3	11.8	41.1	2000	3	10	-20/ +120	*3		
		28	28	23.9	2580	1070	5065	13.7	36.2	136.1	3200	5	15				
		35	35	30.2	4180	1780	9565	28.5	72.2	263.4	3600	6	15				
		43	43	37	6540	2645	14675	52	135.8	522.5	3600	7	15				
		63	63	50.5	15000	10000	36600	350	689	1830	3600	9	20				
ULC	NSW	18	18	16,5	975	0	1830	3.3	0	0	2000	3	10	-20 / +120	*4	1.4	
		28	28	23.9	2580	0	5065	13.7	0	0	3200	5	15			1.9	
		35	35	30.2	4180	0	9565	28.5	0	0	3600	6	15			3.9	
		43	43	37	6540	0	14675	52	0	0	3600	7	15			3.9	
		63	63	50.5	15000	0	36600	350	0	0	3600	9	20			3.9	
KLC	NSA	43	43	37	6065	1570	14675	0	108.7	484.5	3600	7	15	-20 +120	*3	*2	
		63	63	50.5	13745	6000	36660	0	589	1560	3600	9	20			*1	

*1 Longer single rails up to max. 4080 mm on request. Longer strokes are available joining profiles.
 *2 The maximum value is defined by the application.
 *3 Compensates axial misalignment in combination with ULC.
 *4 Compensates radial misalignment in combination with KLC.

The newly designed Rollon guide with double row ball bearings for higher load capacities.

Compact Rail Plus linear guides feature double row ball bearings for higher load capacities and rigid rails with convex raceways. They have been designed for the most demanding applications in terms of load capacities, dynamics and work environment. All while maintaining the self-aligning capabilities that make this product family unique. Sliders are available in four versions: guiding slider (RV), floating slider (RP), extra-floating slider (RU) and rotating slider (RA). Combining two rails with different sliders makes it possible to create self-aligning systems:

- **V + P (or U) system:** pairing two rails, one featuring a guiding slider RV and one with a floating slider RP (or extra-floating slider RU), allows for the absorption of deviations in parallelism of the mounting surfaces. The RV slider takes on the full load while the RP (or RU) slider allows for axial translation up to 3.5 mm.
- **A + P (or U) system:** pairing two rails, one featuring a rotating slider RA and one with a floating slider RP (or extra-floating slider RU), allows for the absorption of deviations in parallelism of the mounting surfaces and height offset. With its special bearings configuration, the RA slider takes on the load and is able to rotate around its longitudinal axis up to $\pm 1.3^\circ$, while the RP (or RU) slider allows for axial translation up to 3.5 mm.



Rail type	Size	Slider type ^{*1}	Overall dimensions		Max. load capacity [N]		Dynamic coefficient C 100 [N]	Max. moment Capacity [Nm]			Max. rail Length ^{*2} [mm]	Max. Speed ^{*3} [m/s]	Max. Acceleration [m/s ²]	Operating temperature [°C]	Misalignment compensation	
			A [mm]	B [mm]	C _{orad}	C _{oax}		M _x	M _y	M _z					Axial [mm]	Radial [°]
TMG	18	RVG	18	16.5	2160	1380	4455	9	23	80	2960	3	10	-20 / +120	*4	
		RAG			2160	690	4455	0	23	80					*4	± 1
		RPG			2160	0	4455	0	0	80					0.8	*5
		RUG			1512	0	3105	0	0	56					1.4	*5
TG	28	RV...G	28	24	4320	2760	8100	27.6	57.5	200	3600	5	15	-20°C / +120°C	*4	
		RA...G			4320	1380	8100	0	57.5	200					*4	± 0.85
		RP...G			4320	0	8100	0	0	200					0.8	*5
		RU...G			3024	0	5670	0	0	140					2.4	*5
	43	RV...G	43	37	10800	7140	20520	110.7	224.3	754	3600	7	15	-20°C / +120°C	*4	
RA...G	10800	3570			20520	0	224.3	754	*4	± 1.3						
RP...G	10800	0			20520	0	0	754	2.0	*5						
RU...G	7560	0			15390	0	0	527.8	3.5	*5						

*1 The functional characteristic is related to the nominal floating capacity of the different type of sliders.
 *2 Longer single rails up to max. 4080 mm on request. Longer strokes are available joining profiles.
 *3 The maximum value is defined by the application.
 *4 Compensates axial misalignment with RP or RU slider.
 *5 Compensates radial misalignment with RA slider.



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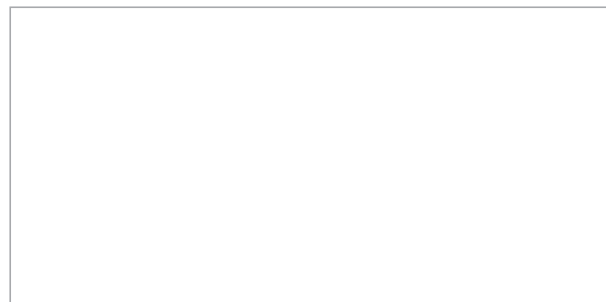
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