

## COMPACT RAIL LINEAR GUIDES: The Ideal Solution from Rollon for Compensating Misalignment and for Environments with impurities



*Rollon's Compact Rail system is inherently tolerant of misalignment, thanks to a rail geometry that can absorb alignment errors in one or two axes.*

Compact Rail stands out in the extensive range of solutions for linear motion from Rollon, an international group based in Vimercate (MB-Italy) and present in India with a branch in Bangalore. Compact Rail is a system created by using linear rails in cold drawn steel with induction hardened and ground raceways and ball bearing sliders, the result of excellent know-how gained in over 40 years of experience. These products are known for their reliability, and for the several ways in which they can be customized. The linear rails are fitted with ball bearing sliders, also made of hardened steel.

Compact Rail has compact dimensions, and is silent and fast (up to 9 m/sec). It is easy and convenient to install on all surfaces, even if rough, thanks to its capability to deal with misalignment of up to 4 mm. Compact Rail offers several advantages and proves to be the best

choice in comparison with other types of rails, like recirculating ball guides, if it is necessary to manage an imprecise or irregular structure. These rails from Rollon are perfect in particular for long strokes, but also when the rail is mounted in environments with impurities or debris, or for outdoor applications (for example, in special vehicles, trains, and platforms for disabled users). The use of ball bearings keeps sliding quality at the optimal level, even with dirt residue, while Rollon's surface treatments guarantee resistance to weather and corrosion.

In several types of applications involving linear movement inside industrial machines (such as lateral sliding protection guards or the movement of control panels) or in cutting machines, wood and ceramics working machines, and the packaging sector, Compact Rail is more and more often the best choice as opposed to rails with recirculating ball.

### SAVINGS ENSURED WITH COMPACT RAIL

**It compensates for misalignment without additional processes and it lengthens life span.**

Compact Rail can compensate for misalignment in a range of up to 4 mm, no other processes are required and there is no need to even add bases to guarantee perfect efficiency of the linear motion. This lowers the comprehensive cost considerably. Rails with recirculating balls, on the contrary, are extremely precise and require an alignment in the range of tenths of millimeters. In case of misalignment, the stress generated increases the load up to double the actual load, which reduces the system's lifespan to one eighth of what it should be, and causes a difficult situation of instability.

**Dirt is no problem**

Compact Rail, thanks to its bearings, works without problems even in contaminated environments or in presence of debris. No specific protections are required, unlike rails with recirculating balls.

#### Easy, fast assembly

Thanks again to self-alignment capacity, even assembling the rails is easier and quicker: rails with recirculating balls require twice the time to mount.

#### OTHER ADVANTAGES OF ROLLON RAILS

##### Low noise

Compact Rail operates silently, thanks to its ground raceways, while rails with recirculating balls require specific spacers to reduce noise, but their operation becomes problematic if dirt is present.

##### Simple effective lubrication

Rollon guides, unlike with rails with recirculating balls, can manage lubricants in low and high temperatures, without derailing in freezing temperatures or reductions in sliding performance.

##### Standard and customized surface treatments

Rollon provides electrolytic galvanizing as a standard treatment for protection against corrosion, in case of use indoors. On request from clients, the anti-corrosion treatment RollonAloy is available, which strengthens resistance to weather in case of outdoor applications, and rails with chemical nickel plating



The Compact Rail system offers three different rail profiles, which can be combined to compensate for different types of misalignment.

are able to resist to corrosion caused by chemical substances.

#### Sidebar:

**RollonAloy anti-corrosion treatment: 720 hours in saline mist, in compliance with standard ISO 9227**

The Rollon R&D department is specialized in researching surface treatments to guarantee maximum resistance of components to corrosion: RollonAloy was created from this research. It is a particularly effective formula for contrasting humidity, exposure to weather and drastic temperature differences. Treated components resist up to 720 hours in saline mist (test done according to the ISO 9227 standard). This makes them particularly suitable for outdoor applications such as for special vehicles or train underfloors (for instance, extracting the battery housing) and fire-fighting or air-conditioning plants.

#### The various test phases

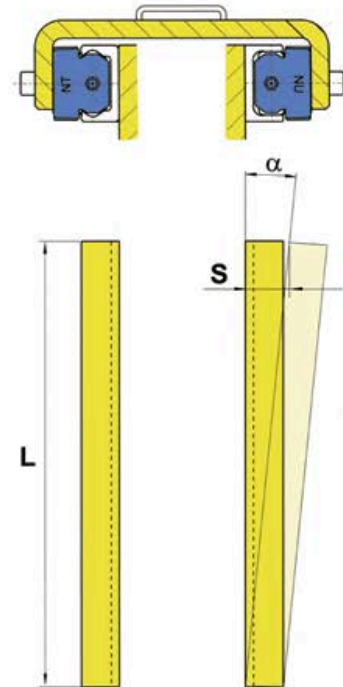
Inside a test chamber, the samples are covered in a (5%) sodium chloride solution with a pH of 6.5 (at a temperature of 35°C) by a misting nozzle. The evaluation is done at preset time intervals. The quality of the surface protection is measured based on the test time and the integrity conditions.

Market demands can vary greatly, depending on the type of application and the working environment: for this reason Rollon also offers other types of surface treatments, such as electrolytic galvanizing and chemical nickel plating, always in conformity to current international standards.

#### Sidebar:

**Rollon: constant linear evolution since 1975!**

Rollon, an international group based in Vimercate (MB-Italy), has a thriving research and development department and has recently finalized strategic acquisitions (five in the last six years). The company can offer a range of mechanical



#### Axial Parallelism Error

solutions based on integrated, highly customizable product lines, which are among the most complete on the market. Rollon is the ideal technological partner for companies operating in the industrial automation sector.

Rollon is present in 10 countries, with around 570 employees: their constant investments have brought about significant growth in turnover, 70% in the last three years, which peaked at 94 million Euro in 2017.

**ROLLON®**  
Linear Evolution

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