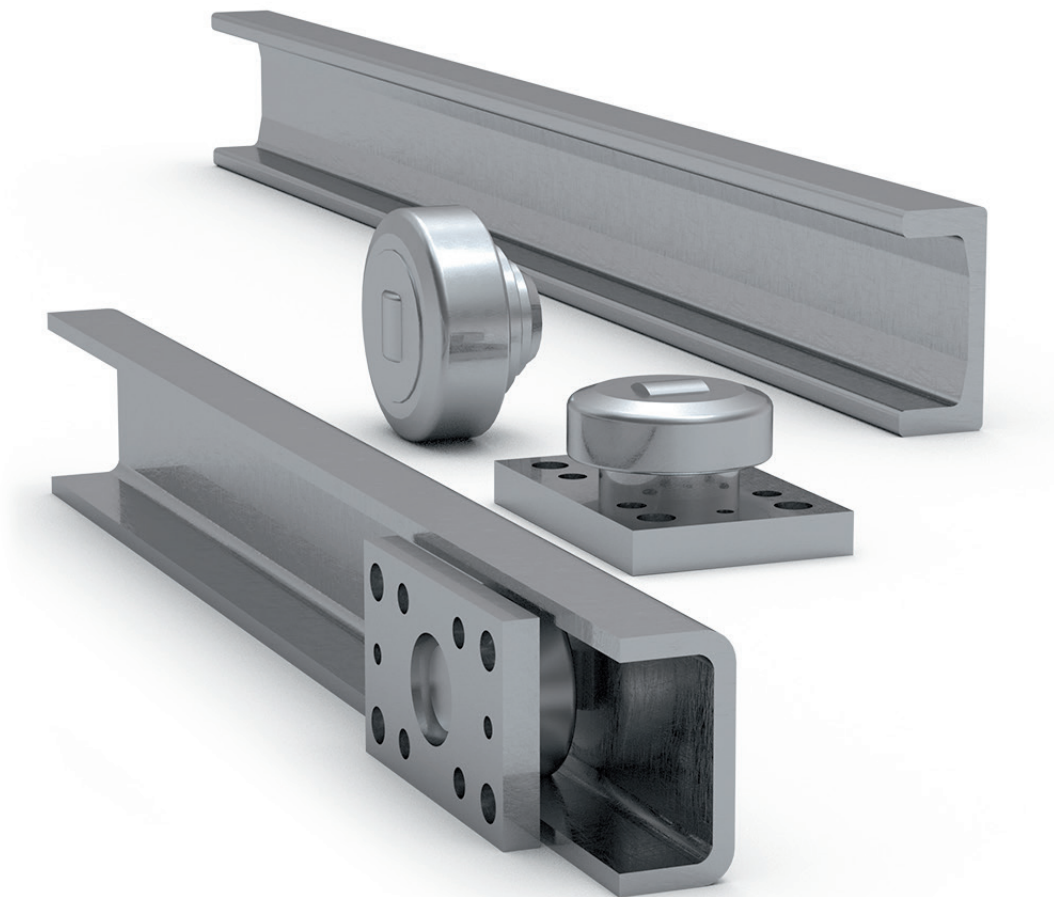


# **TECHNICAL INFORMATION**

## **U-RAIL**

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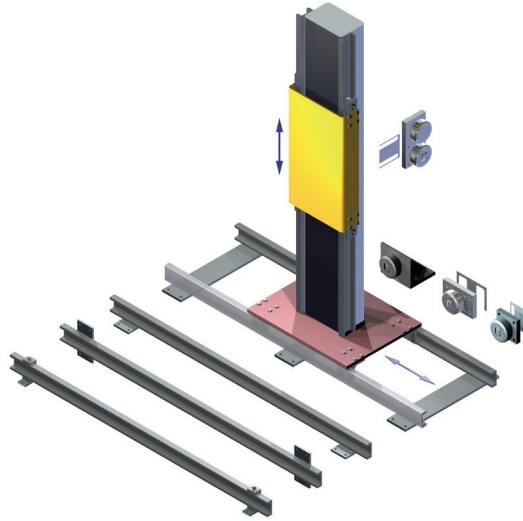


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## Product overview



U-Rail is robust system where precision is secondary. The profiles can be welded on existing constructions and the rollers can be delivered with or without assembly plates. The U-Rail system is designed to compensate for deviations in parallelism.

U-rail is available in three different sizes in steel or stainless steel AISI 304, which makes it suitable for applications in very demanding environments. The profile material is easy to weld and offers high wear resistance and fine grained structure.

For smaller loads or high speed, it is possible to get polyamide rollers for a quieter and smoother operation.

## Technical data

### Tolerances

The bearings are manufactured according to DIN 620, class PN (PO), values load capacity are according to ISO 76 and 281/1.

### Materials

Outer rings: Case-hardened steel 20CrMnTi, surface hardened at 60-62 HRC.  
 Inner rings: Bearing steel UNI 100Cr6, hardened at 60-62 HRC.  
 Welding bolts: S355 J2G3, easy weldable, bolt diam. range of tolerance 0/-0.05 mm.  
 Profiles: Material 18 MnNb6

Material	Minimum yield strength	Minimum hardness	Permissible Hertzian surface pressure decarburisation free	Minimum surface hardness decarburisation free inductive tempered	Minimum toughness KV at 0°C
	MPa	HB	MPa	Hv	J
25 MnV5mod	550	210	1090	520	27
18 MnNb6	430	160	860	370	40

Material	A <sub>c3</sub> temperature	C	Mn	V	CEV
	°C	%	%	%	%
25 MnV5mod	825	0.28	1.60	0.10	≤0.66
18 MnNb6	870	0.12	1.50	0.05	≤0.49

**Sealing**

ZRS-seal Bearing with labyrinth / elastomer-seal, lubricated for lifetime.

**Screws**

TORX / Screw locking DIN 267-28 Polyamid coating.

**Service Temperature**

Generally from - 40 °C to +120 °C, for short time usable to +150 °C, high temperature bearings to +250 °C.

**Important Information**

The standard rollers have a convex contact surface.

Bearings with diameter < 100 mm have to be dismantled before welding.

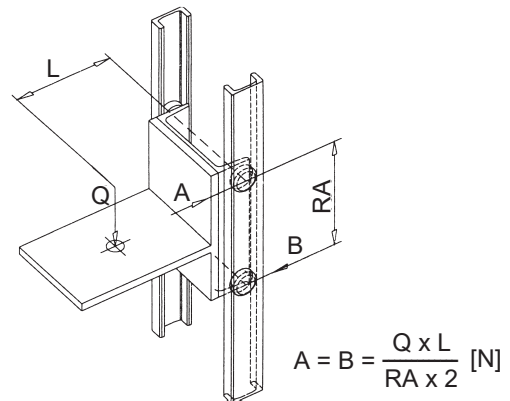
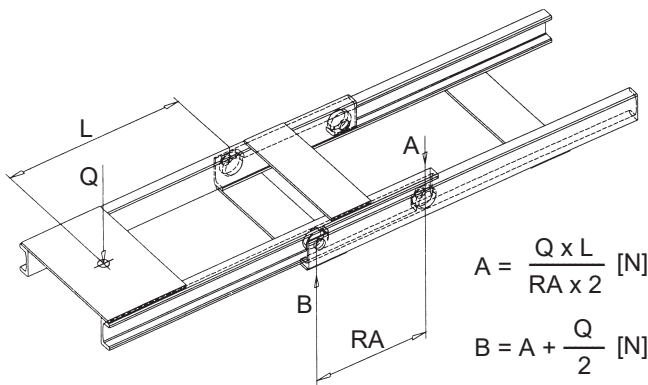
To avoid damage of the bearings we strongly recommend always to order the rollers with mounting plates.

**Lubrication**

For steel rollers the guideway profiles have to be greased carefully on the contact surface before use.

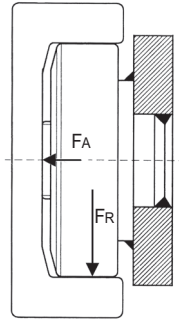
Standard bearings are lubricated with lithium-grease, grade 3.

**Technical dimensioning**



- Q = Load with dead weight [N]
- L = Load distance [mm]
- RA = Roller distance [mm]
- A, B = Load capacity roller/profile [N]

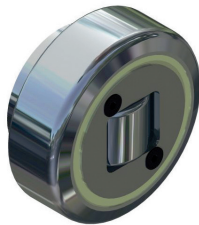
## Selection of type



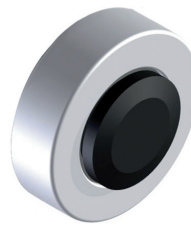
Rail



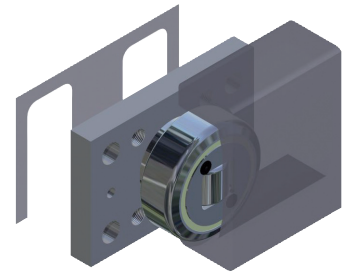
Steel Roller



Polyamide Roller



Mounting Plate

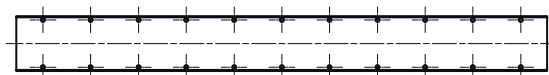
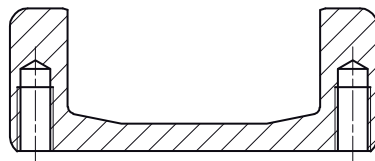


For Rollers in Vulkollan® material please contact Rollco.Profile Machining  
The profiles are manufactured according to your specifications. Please define the favoured pitch.

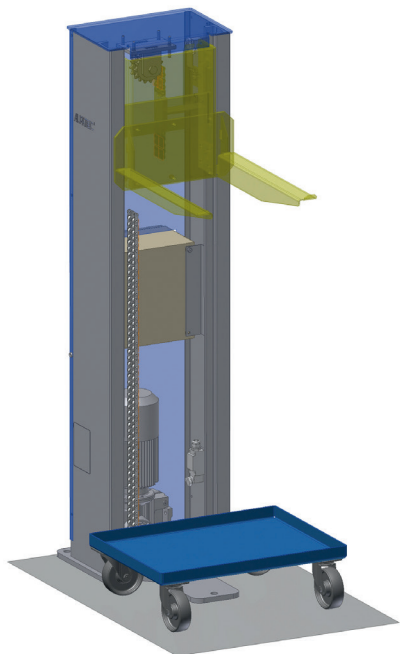
## Profile machining

The profiles are manufactured according to your specifications. Please define the favoured pitch.

Example of machining:



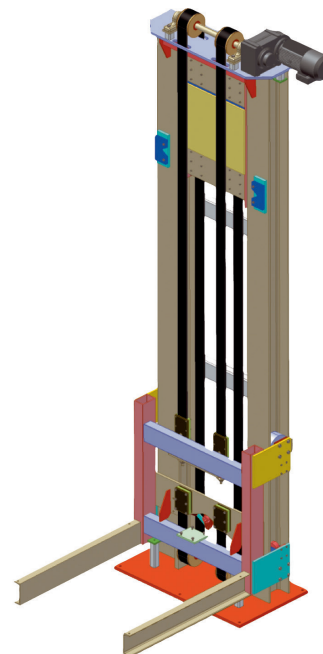
# Application examples



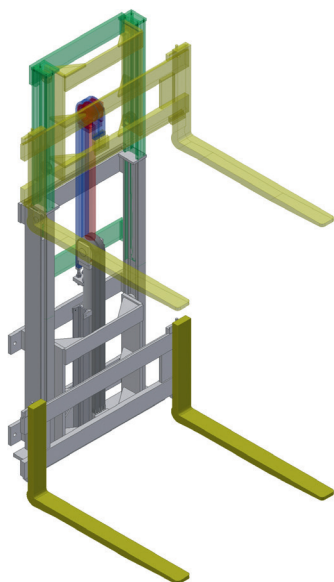
Box lifter. Electrical/pneumactical.  
Up to 350 kg lifting capacity.



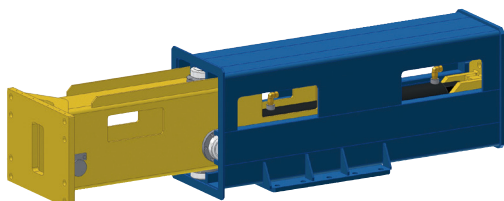
Telescope unit, vertical.



Lift systems. Belt transmission.  
Up to 5000 kg lifting capacity.



Lift system, hydraulic.



Telescope unit, horizontal.



Lift system, hydraulic.

# Rail and Rollers

UP070.700 - 2 - TR070.200 - BQ1000 - 2 - KS070.3650

Rail	UP070.700	2	TR070.200	BQ1000	2	KS070.3650
Number of rollers						
Roller						
Fixing element (optional)						
Number of clamp consoles (optional)						
Clamp console (optional)						

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SOLUTION AT THE RIGHT TIME.**

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