

## K-Rail

The compensation rails are used for the load carrier of radial and axial forces. Tolerance compensation in two planes in combination with the U-rail. A combination of compensating rail and floating rail (K+U system) manages both parallel deviations and angular errors. The unique raceway contour of the K-rail allows the slider a certain rotation around its longitudinal axis, with the same linear precision as with a T-rail. The K-rail must be mounted in such way that the radial load of the slider is always supported by at least 2 rollers on the slider, which lie on the V-shaped raceway of the rail.



The rails are available in 2 different sizes: 43, 63 mm.

Longer single rails up to max. 4080 mm on request. For longer rail systems, see section "Joined rails" in Technical Information.

Dimensions in mm.

D1 Fixing holes for Torx® screws with low head (custom design) included in scope of supply.

D2 Fixing holes for countersunk head screws according to DIN 7991.

**Material:** Cf53. Zinc-plated according to ISO 2081. Rail raceways are induction hardened and ground.

**Max. Acceleration (m/s<sup>2</sup>):** 20 (depending on application)

**Max. Operating Speed (m/s):** 9 (depending on application)

**Max. Radial Load Capacity (N):** 15,000 (per slider)

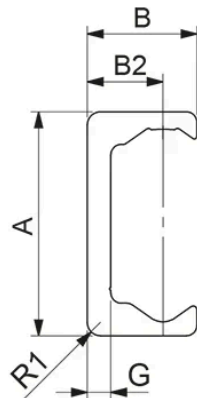
**Temperature range (°C):** -20 to +120

## General Data

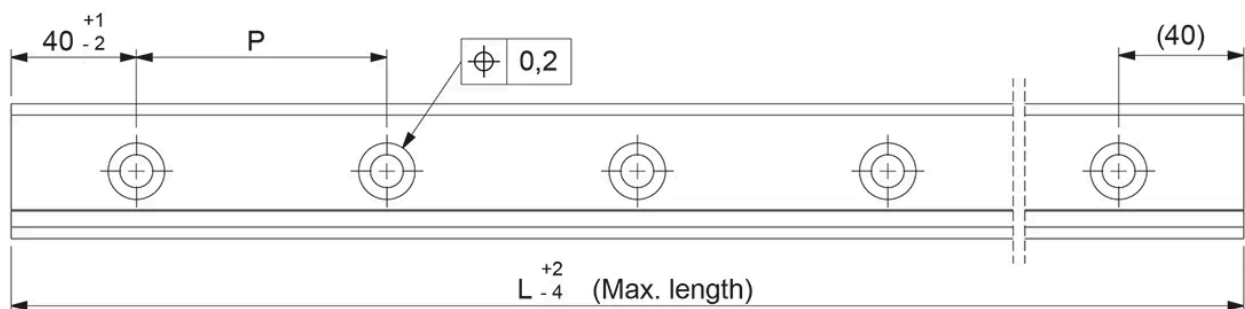
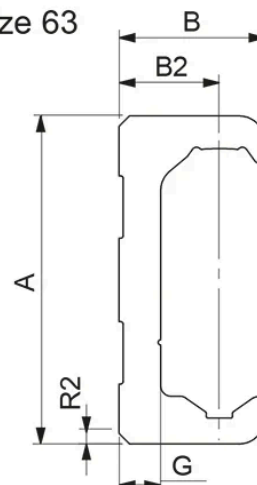
| Designation | Size |
|-------------|------|
| KLC43       | 43   |
| KLV43       | 43   |
| KLC63       | 63   |
| KLV63       | 63   |

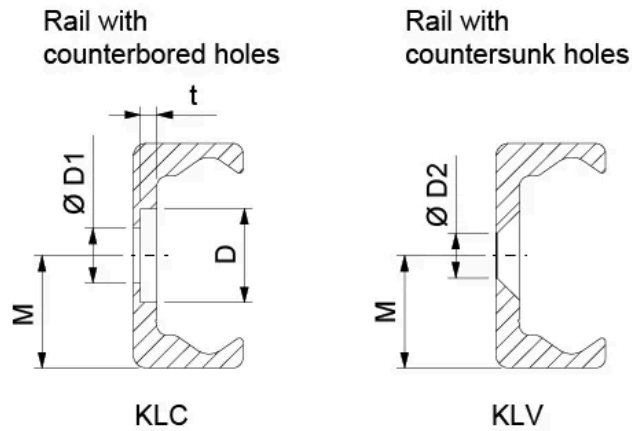
## Dimensions

Size 43



Size 63





| Designation | M    | A  | B  | B2    | R1  | R2    | L    | D  | D1 |
|-------------|------|----|----|-------|-----|-------|------|----|----|
| KLC43       | 21.5 | 43 | 21 | 14.5  | 2.5 | -     | 4080 | 18 | M8 |
| KLV43       | 21.5 | 43 | 21 | 14.5  | 2.5 | -     | 4080 | 18 | M8 |
| KLC63       | 31.5 | 63 | 28 | 19.25 | -   | 2x45° | 3600 | 15 | M8 |
| KLV63       | 31.5 | 63 | 28 | 19.25 | -   | 2x45° | 4080 | 15 | M8 |

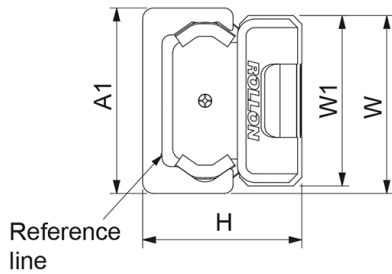
| Designation | D2  | t   | G   | P  | Min. length |
|-------------|-----|-----|-----|----|-------------|
| KLC43       | M8  | 3.1 | 4.5 | 80 | 400         |
| KLV43       | M8  | 3.1 | 4.5 | 80 | 400         |
| KLC63       | M10 | 5.2 | 8   | 80 | 560         |
| KLV63       | M10 | 5.2 | 8   | 80 | 560         |

## Load & Weight

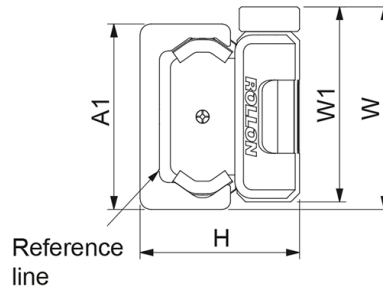
| Designation | Weight Rail (kg/m) |
|-------------|--------------------|
| KLC43       | 2.6                |
| KLV43       | 2.6                |
| KLC63       | 6.0                |
| KLV63       | 6.0                |

## Rail/Slider Combination

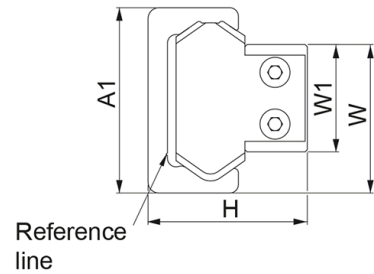
K-rail with NSA slider



K-rail with NSDA slider



K-rail with CSWK-slider



The K-rail enables the slider to twist around its longitudinal axis.

| Designation  | A1               | H (Rail+NSW/NSA) | H (Rail+NSD/NSDA) | H (Rail+CSW/CSWK) | W1 (Rail+NSW/NSA) |
|--------------|------------------|------------------|-------------------|-------------------|-------------------|
| <b>KLC43</b> | 43 (+0.35/-0.10) | 37 (±0.15)       | 37 (±0.15)        | 37 (±0.15)        | 39.5 (0/-0.2)     |
| <b>KLV43</b> | 43 (+0.35/-0.10) | 37 (±0.15)       | 37 (±0.15)        | 37 (±0.15)        | 39.5 (0/-0.2)     |
| <b>KLC63</b> | 63 (+0.35/-0.10) | 50.5 (±0.15)     | n/a               | 49.8 (±0.15)      | 60 (0/-0.2)       |
| <b>KLV63</b> | 63 (+0.35/-0.10) | 50.5 (±0.15)     | n/a               | 49.8 (±0.15)      | 60 (0/-0.2)       |

| Designation  | W1 (Rail+NSD/NSDA) | W1 (Rail+CSW/CSWK) | W (Rail+NSW/NSA)  | W (Rail+NSD/NSDA) | W (Rail+CSW/CSWK)  |
|--------------|--------------------|--------------------|-------------------|-------------------|--------------------|
| <b>KLC43</b> | 39.5 (0/-0.2)      | 24.9 (0/-0.15)     | 41.25 (+0.2/-0.4) | 41.25 (+0.2/-0.4) | 34.3 (+0.10/-0.30) |
| <b>KLV43</b> | 39.5 (0/-0.2)      | 24.9 (0/-0.15)     | 41.25 (+0.2/-0.4) | 41.25 (+0.2/-0.4) | 34.3 (+0.10/-0.30) |
| <b>KLC63</b> | n/a                | 39.5 (+0.15/0)     | 61.5 (+0.2/-0.4)  | n/a               | 51.6 (+0.15/-0.30) |
| <b>KLV63</b> | n/a                | 39.5 (+0.15/0)     | 61.5 (+0.2/-0.4)  | n/a               | 51.6 (+0.15/-0.30) |