

T-Rail

Fixed rails used as the main load bearing in radial and axial forces.

The rails are available in 4 different sizes: 18, 28, 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: Size 18, cold-drawn roller bearing carbon steel C43 F. Sizes 28-63 Cf53. Zinc-plated according to ISO 2081.

Rail raceways are induction hardened and ground

Max. Acceleration (m/s²): 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

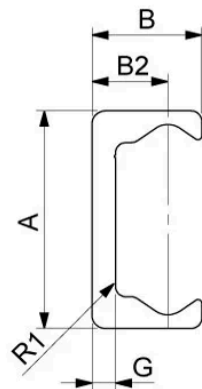


General Data

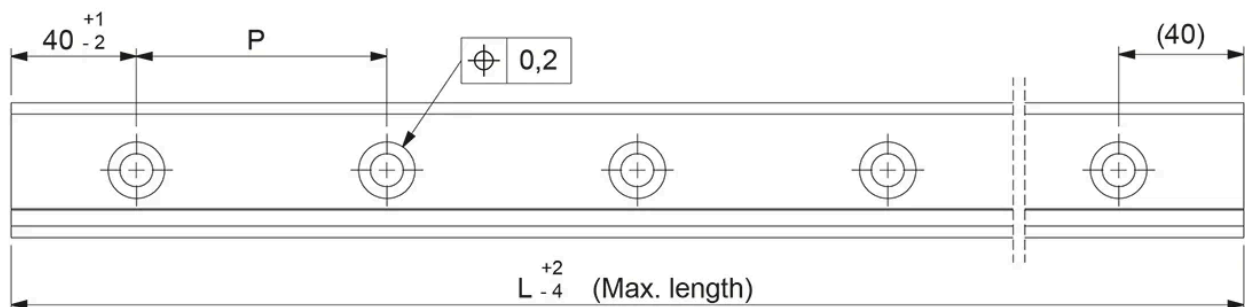
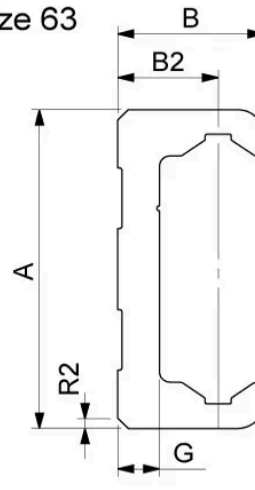
| Designation | Size |
|-------------|------|
| TLC18 | 18 |
| TLV18 | 18 |
| TLC28 | 28 |
| TLV28 | 28 |
| TLC43 | 43 |
| TLV43 | 43 |
| TLC63 | 63 |
| TLV63 | 63 |

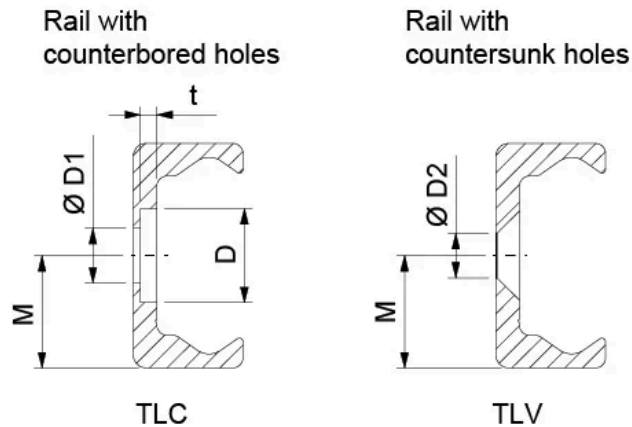
Dimensions

Size 18-43



Size 63





| Designation | M | A | B | B2 | R1 | R2 | L | D | D1 |
|-------------|------|----|-------|-------|-----|-------|------|-----|----|
| TLC18 | 9 | 18 | 8.25 | 5.75 | 1.5 | - | 2000 | 9.5 | M4 |
| TLV18 | 9 | 18 | 8.25 | 5.75 | 1.5 | - | 2000 | 9.5 | M4 |
| TLC28 | 14 | 28 | 12.25 | 8.5 | 1 | - | 3200 | 11 | M5 |
| TLV28 | 14 | 28 | 12.25 | 8.5 | 1 | - | 3200 | 11 | M5 |
| TLC43 | 21.5 | 43 | 21 | 14.5 | 2.5 | - | 4080 | 18 | M8 |
| TLV43 | 21.5 | 43 | 21 | 14.5 | 2.5 | - | 4080 | 18 | M8 |
| TLC63 | 31.5 | 63 | 28 | 19.25 | - | 2x45° | 4080 | 15 | M8 |
| TLV63 | 31.5 | 63 | 28 | 19.25 | - | 2x45° | 4080 | 15 | M8 |

| Designation | D2 | t | G | P | Min. length |
|-------------|-----|-----|-----|----|-------------|
| TLC18 | M4 | 2 | 2.8 | 80 | 160 |
| TLV18 | M4 | 2 | 2.8 | 80 | 160 |
| TLC28 | M5 | 2 | 3 | 80 | 240 |
| TLV28 | M5 | 2 | 3 | 80 | 240 |
| TLC43 | M8 | 3.1 | 4.5 | 80 | 400 |
| TLV43 | M8 | 3.1 | 4.5 | 80 | 400 |
| TLC63 | M10 | 5.2 | 8 | 80 | 560 |
| TLV63 | M10 | 5.2 | 8 | 80 | 560 |

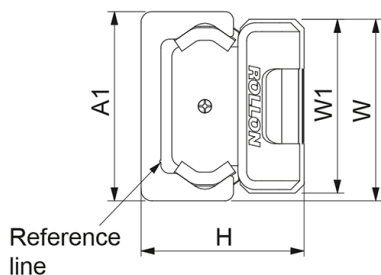
Load & Weight

| Designation | Weight Rail (kg/m) |
|-------------|--------------------|
| TLC18 | 0.55 |
| TLV18 | 0.55 |
| TLC28 | 1.0 |
| TLV28 | 1.0 |
| TLC43 | 2.6 |
| TLV43 | 2.6 |
| TLC63 | 6.0 |

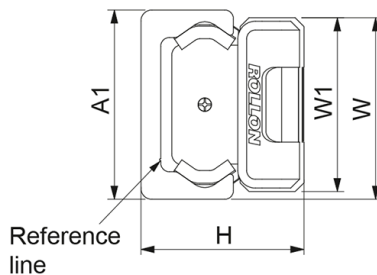
| Designation | Weight Rail (kg/m) |
|-------------|--------------------|
| TLV63 | 6.0 |

Rail/Slider Combination

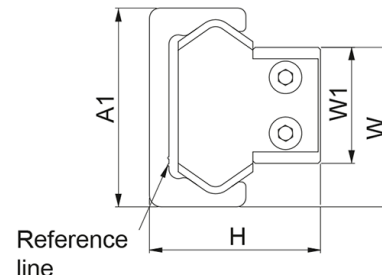
T-rail with NSW slider



T-rail with NSW slider



T-rail with CSW slider



| Designation | A1 | H (Rail+NSW/NSA) | H (Rail+NSD/NSDA) | H (Rail+CSW/CSWK) | W1 (Rail+NSW/NSA) |
|-------------|------------------|------------------|-------------------|-------------------|-------------------|
| TLC18 | 18 (+0.25/-0.10) | 16.5 (±0.15) | n/a | 15 (±0.15) | 16 (0/-0.2) |
| TLV18 | 18 (+0.25/-0.10) | 16.5 (±0.15) | n/a | 15 (±0.15) | 16 (0/-0.2) |
| TLC28 | 28 (+0.25/-0.10) | 23.9 (±0.15) | 23.9 (±0.15) | 23.9 (±0.15) | 24.9 (0/-0.2) |
| TLV28 | 28 (+0.25/-0.10) | 23.9 (±0.15) | 23.9 (±0.15) | 23.9 (±0.15) | 24.9 (0/-0.2) |
| TLC43 | 43 (+0.35/-0.10) | 37 (±0.15) | 37 (±0.15) | 37 (±0.15) | 39.5 (0/-0.2) |
| TLV43 | 43 (+0.35/-0.10) | 37 (±0.15) | 37 (±0.15) | 37 (±0.15) | 39.5 (0/-0.2) |
| TLC63 | 63 (+0.35/-0.10) | 50.5 (±0.15) | n/a | 49.8 (±0.15) | 60 (0/-0.2) |
| TLV63 | 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) |
|-------------|--------------------|--------------------|-------------------|-------------------|--------------------|
| TLC18 | n/a | 9.5 (0/-0.05) | 17 (+0.1/-0.3) | n/a | 14 (+0.05/-0.25) |
| TLV18 | n/a | 9.5 (0/-0.05) | 17 (+0.1/-0.3) | n/a | 14 (+0.05/-0.25) |
| TLC28 | 24.9 (0/-0.2) | 14.9 (0/-0.10) | 26.45 (+0.1/-0.3) | 32 (+0.1/-0.3) | 21.7 (+0.05/-0.35) |
| TLV28 | 24.9 (0/-0.2) | 14.9 (0/-0.10) | 26.45 (+0.1/-0.3) | 32 (+0.1/-0.3) | 21.7 (+0.05/-0.35) |
| TLC43 | 39.5 (0/-0.2) | 24.9 (0/-0.15) | 41.25 (+0.2/-0.4) | 47 (+0.2/-0.4) | 34.3 (+0.10/-0.30) |
| TLV43 | 39.5 (0/-0.2) | 24.9 (0/-0.15) | 41.25 (+0.2/-0.4) | 47 (+0.2/-0.4) | 34.3 (+0.10/-0.30) |
| TLC63 | n/a | 39.5 (+0.15/0) | 61.5 (+0.2/-0.4) | n/a | 51.6 (+0.15/-0.30) |
| TLV63 | n/a | 39.5 (+0.15/0) | 61.5 (+0.2/-0.4) | n/a | 51.6 (+0.15/-0.30) |