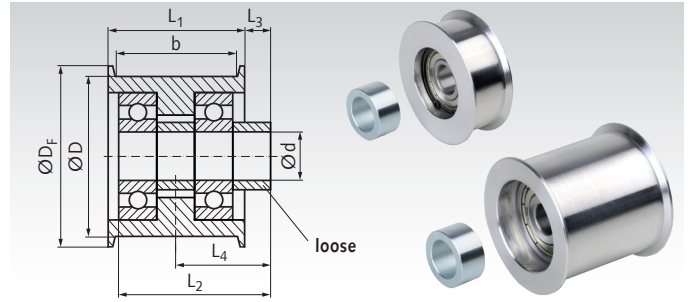


Tensioning Rollers / Idlers TS for Belt Drives

Material: Aluminium, one-piece, with turned flanges.
Distance bushes and ball bearings from steel.

Tensioning Rollers / Idlers are used on the outside of the belt (back of belt). Mounted on a suitable tensioning element, the tensioning roller becomes a ready-to-mount belt tensioner or, on its own, it can be used as an idler. It runs on permanently lubricated 2Z ball bearings. One loose, zinc-plated distance bush is included in the delivery (in the drawing on the right side). Support, screw set and tensioning element have to be ordered separately.

Ordering Details: e.g.: Product No. 140 882 01, Tensioning Roller TS 20-8



| Product No. | Type | D mm | b mm | d mm | D _F mm | L ₁ mm | L ₂ mm | L ₃ mm | L ₄ mm | Ball Bearing | Weight g | Product No. additional Bush | d _B x D _B x L _B mm | Weight g |
|-------------|-----------|------|------|------|-------------------|-------------------|-------------------|-------------------|-------------------|--------------|----------|-----------------------------|---|----------|
| 140 882 01 | TS 20-8 | 20 | 8 | 5 | 25 | 11 | 10 | 2 | 7,5 | 1 x 625-2Z | 12 | 140 805 05 | 5x10x5 | 2,3 |
| 140 882 02 | TS 20-13 | 20 | 13 | 5 | 25 | 16 | 20 | 4,5 | 12,5 | 2 x 625-2Z | 22 | 140 805 05 | 5x10x5 | 2,3 |
| 140 883 01 | TS 30-13 | 30 | 13 | 8 | 35 | 16 | 14 | 2,5 | 10,5 | 1 x 608-2Z | 32 | 140 808 07 | 8x13x7 | 4,5 |
| 140 883 02 | TS 30-19 | 30 | 19 | 8 | 35 | 22 | 28 | 6,5 | 17,5 | 2 x 608-2Z | 58 | 140 808 07 | 8x13x7 | 4,5 |
| 140 883 03 | TS 30-28 | 30 | 28 | 8 | 35 | 32 | 28 | 1,5 | 17,5 | 2 x 608-2Z | 64 | 140 808 07 | 8x13x7 | 4,5 |
| 140 884 01 | TS 40-14 | 40 | 14 | 10 | 45 | 17 | 18 | 5 | 13,5 | 1 x 6200-2Z | 74 | 140 810 09 | 10x17x9 | 10,5 |
| 140 884 02 | TS 40-23 | 40 | 23 | 10 | 45 | 27 | 36 | 9 | 22,5 | 2 x 6200-2Z | 138 | 140 810 09 | 10x17x9 | 10,5 |
| 140 884 03 | TS 40-28 | 40 | 28 | 10 | 45 | 32 | 36 | 6,5 | 22,5 | 2 x 6200-2Z | 146 | 140 810 09 | 10x17x9 | 10,5 |
| 140 884 04 | TS 40-38 | 40 | 38 | 10 | 45 | 42 | 36 | 1,5 | 22,5 | 2 x 6200-2Z | 162 | 140 810 09 | 10x17x9 | 10,5 |
| 140 886 01 | TS 60-19 | 60 | 19 | 12 | 68 | 23 | 24 | 6,5 | 18 | 1 x 6301-2Z | 206 | 140 812 12 | 12x20x12 | 18,9 |
| 140 886 02 | TS 60-31 | 60 | 31 | 12 | 68 | 36 | 48 | 12 | 30 | 2 x 6301-2Z | 366 | 140 812 12 | 12x20x12 | 18,9 |
| 140 886 03 | TS 60-38 | 60 | 38 | 12 | 68 | 43 | 48 | 8,5 | 30 | 2 x 6301-2Z | 402 | 140 812 12 | 12x20x12 | 18,9 |
| 140 886 04 | TS 60-54 | 60 | 54 | 12 | 68 | 60 | 60 | 6 | 36 | 2 x 6301-2Z | 530 | 140 812 12 | 12x20x12 | 18,9 |
| 140 888 01 | TS 80-28 | 80 | 28 | 20 | 90 | 33 | 30 | 6 | 22,5 | 1 x 6304-2Z | 500 | 140 820 15 | 20x30x15 | 46,2 |
| 140 888 02 | TS 80-40 | 80 | 40 | 20 | 90 | 45 | 60 | 15 | 37,5 | 2 x 6304-2Z | 820 | 140 820 15 | 20x30x15 | 46,2 |
| 140 888 03 | TS 80-54 | 80 | 54 | 20 | 90 | 60 | 60 | 7,5 | 37,5 | 2 x 6304-2Z | 940 | 140 820 15 | 20x30x15 | 46,2 |
| 140 889 01 | TS 120-28 | 120 | 28 | 20 | 130 | 34 | 39,5 | 5,5 | 22,5 | 1 x 6304-2Z | 1110 | 140 820 15 | 20x30x15 | 46,2 |
| 140 889 02 | TS 120-36 | 120 | 36 | 20 | 130 | 42 | 50 | 9 | 30,0 | 2 x 6304-2Z | 1490 | 140 820 10 | 20x30x10 | 30,8 |
| 140 889 03 | TS 120-44 | 120 | 44 | 20 | 130 | 50 | 60 | 12,5 | 37,5 | 2 x 6304-2Z | 1740 | 140 820 15 | 20x30x15 | 46,2 |
| 140 889 04 | TS 120-54 | 120 | 54 | 20 | 130 | 62 | 60 | 6,5 | 37,5 | 2 x 6304-2Z | 2060 | 140 820 15 | 20x30x15 | 46,2 |

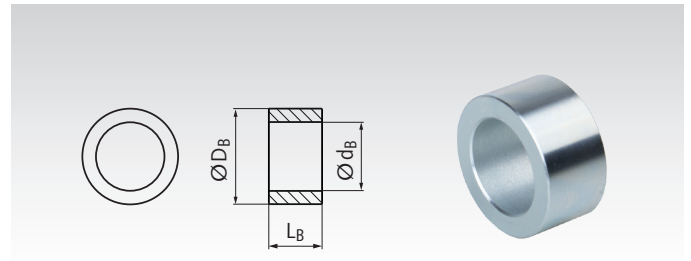
Distance Bushes for Tensioning Rollers / Idlers TS

Material: Steel, zinc-plated.

As spare part or as an additional distance bush for double-sided mounting.

Ordering Details: e.g.: Product No. 140 805 05, Distance Bush 5 x 10 x 5 mm

| Product No. | d _B mm | D _B mm | L _B mm | Weight g |
|-------------|-------------------|-------------------|-------------------|----------|
| 140 805 05 | 5 | 10 | 5 | 2,3 |
| 140 808 07 | 8 | 13 | 7 | 4,5 |
| 140 810 09 | 10 | 17 | 9 | 10,5 |
| 140 812 12 | 12 | 20 | 12 | 18,9 |
| 140 812 24 | 12 | 20 | 24 | 37,9 |
| 140 820 10 | 20 | 30 | 10 | 30,8 |
| 140 820 15 | 20 | 30 | 15 | 46,2 |

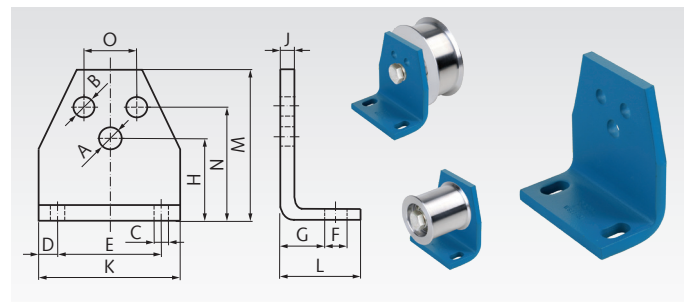


Supports for Idlers or Tensioning Elements

Material: Steel, blue painted.

This support enables an easy mounting of an idler wheel / tensioning roller or a tensioning element to the machine. The hole A is for fastening the tensioner with its central screw. The mounting can be done at the front side or back side of the support. For any other purposes, the both holes B can be used to fix other parts instead of a tensioner.

Ordering Details: e.g.: Product No. 140 800 01, Support Size 0



| Product No. | Size | A mm | B mm | C mm | D mm | E mm | F mm | G mm | H mm | J mm | K mm | L mm | M mm | N mm | O mm | Weight kg |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----------|
| 140 800 01 | 0 | 6,5 | 5,5 | 7 | 7,5 | 30 | 13 | 11,5 | 27 | 4 | 45 | 30 | 46 | 35 | 10 | 0,08 |
| 140 801 01 | 1 | 8,5 | 6,5 | 7 | 7,5 | 40 | 13 | 13,5 | 34 | 5 | 55 | 32 | 58 | 44 | 12 | 0,15 |
| 140 802 01 | 2 | 10,5 | 8,5 | 9,5 | 10 | 50 | 15,5 | 16,5 | 43 | 6 | 70 | 38 | 74 | 55 | 20 | 0,30 |
| 140 803 01 | 3 | 12,5 | 10,5 | 11,5 | 12,5 | 65 | 21,5 | 21 | 57 | 8 | 90 | 52 | 98 | 75 | 25 | 0,66 |
| 140 804 01 | 4 | 16,5 | 12,5 | 14 | 15 | 80 | 24 | 21 | 66 | 8 | 110 | 55 | 116 | 85 | 35 | 0,94 |
| 140 804 02 | 4 | 20,5 | 12,5 | 14 | 15 | 80 | 24 | 21 | 66 | 8 | 110 | 55 | 116 | 85 | 35 | 0,94 |

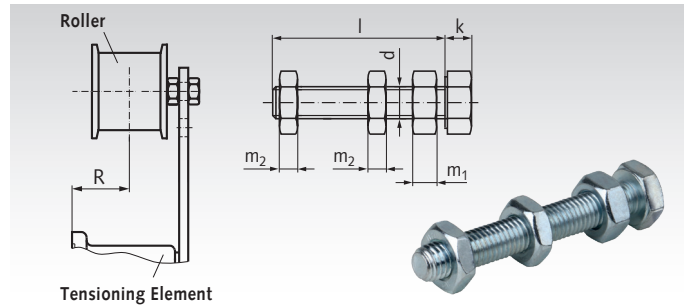
Screw Sets for Tensioning Rollers / Idlers TS

Material: Steel, zinc-plated. Screw strength 8.8, nuts strength class 8.

The set consists of one screw ISO 4017 / DIN 933, one normal nut DIN 934 and two thin nuts DIN 936.

For mounting a tensioning roller TS at a tensioning element, at a support or at a customer's mounting surface. The alignment can be adjusted (dimension R at our tensioning elements). Tensioning roller TS, screw set and tensioning element have to be ordered separately.

Ordering Details: e.g.: Product No. 140 905 035, Screw Set M5 x 35



| For Tens. Roller | Product No. Screw set | for Prod. No. Tens. Roller | with Product No. Tens. Element | Size | d mm | l mm | k mm | m ₁ mm | m ₂ mm | R _{min} mm | R _{max} mm | Weight g |
|------------------|-----------------------------|----------------------------|--------------------------------|------|------|------|------|-------------------|-------------------|---------------------|---------------------|----------|
| TS 20-8 | 140 905 035 ¹⁾ | 140 882 01 | - | - | M5 | 35 | 3,5 | 4 | 4 | - | - | 8,0 |
| TS 20-13 | 140 905 040 ¹⁾²⁾ | 140 882 02 | - | - | M5 | 40 | 3,5 | 4 | 4 | - | - | 8,5 |
| TS 30-13 | 140 908 045 | 140 883 01 | 140 800 00 | 0 | M8 | 45 | 5,3 | 6,5 | 5 | 14,5 | 24,0 | 30 |
| TS 30-19 | 140 908 045 ²⁾ | 140 883 02 | 140 800 00 | 0 | M8 | 45 | 5,3 | 6,5 | 5 | 21,5 ²⁾ | 24,0 ²⁾ | 30 |
| TS 30-28 | 140 908 045 ²⁾ | 140 883 03 | 140 800 00 | 0 | M8 | 45 | 5,3 | 6,5 | 5 | 21,5 ²⁾ | 24,0 ²⁾ | 30 |
| TS 40-14 | 140 910 055 | 140 884 01 | 140 801 00 | 1 | M10 | 55 | 6,4 | 8 | 6 | 19,5 | 31,5 | 62 |
| TS 40-23 | 140 910 070 ²⁾ | 140 884 02 | 140 802 00 | 2 | M10 | 70 | 6,4 | 8 | 6 | 28,5 | 44,5 ²⁾ | 70 |
| TS 40-28 | 140 910 070 | 140 884 03 | 140 802 00 | 2 | M10 | 70 | 6,4 | 8 | 6 | 28,5 | 35,5 | 70 |
| TS 40-38 | 140 910 070 | 140 884 04 | 140 802 00 | 2 | M10 | 70 | 6,4 | 8 | 6 | 28,5 | 35,5 | 70 |
| TS 60-19 | 140 912 070 | 140 886 01 | 140 802 12 | 2 | M12 | 70 | 7,5 | 10 | 7 | 22,0 | 37,0 | 102 |
| TS 60-31 | 140 912 090 ²⁾ | 140 886 02 | 140 803 00 | 3 | M12 | 90 | 7,5 | 10 | 7 | 43,0 | 65,0 ²⁾ | 116 |
| TS 60-38 | 140 912 090 | 140 886 03 | 140 803 00 | 3 | M12 | 90 | 7,5 | 10 | 7 | 43,0 | 53,0 | 116 |
| TS 60-54 | 140 912 090 ²⁾ | 140 886 04 | 140 803 00 | 3 | M12 | 90 | 7,5 | 10 | 7 | 49,0 | 59,0 ²⁾ | 116 |
| TS 80-28 | 140 920 100 | 140 888 01 | 140 804 00 | 4 | M20 | 100 | 12,5 | 16 | 9 | 56,5 | 82,5 | 390 |
| TS 80-40 | 140 920 120 ²⁾ | 140 888 02 | 140 804 00 | 4 | M20 | 120 | 12,5 | 16 | 9 | 51,5 | 82,5 ²⁾ | 430 |
| TS 80-54 | 140 920 120 | 140 888 03 | 140 804 00 | 4 | M20 | 120 | 12,5 | 16 | 9 | 51,5 | 67,5 | 430 |
| TS 120-28 | 140 920 100 | 140 889 01 | 140 804 00 | 4 | M20 | 100 | 12,5 | 16 | 9 | 56,5 | 82,5 | 390 |
| TS 120-36 | 140 920 120 ²⁾ | 140 889 02 | 140 804 00 | 4 | M20 | 120 | 12,5 | 16 | 9 | 49,0 | 85,0 ²⁾ | 430 |
| TS 120-44 | 140 920 120 ²⁾ | 140 889 03 | 140 804 00 | 4 | M20 | 120 | 12,5 | 16 | 9 | 51,5 | 82,5 ²⁾ | 430 |
| TS 120-54 | 140 920 120 | 140 889 04 | 140 804 00 | 4 | M20 | 120 | 12,5 | 16 | 9 | 51,5 | 82,5 | 430 |

¹⁾ Screw M5 with 3 normal nuts DIN 934, for support size 0, product no. 14080001; adjusting range 9 mm.

²⁾ Mounting without the loose distance bush, which is included in the delivery of the tensioning roller set.

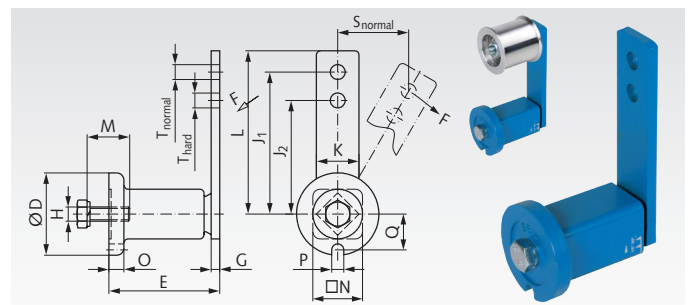
Tensioning Elements

Material: Lever made from St52, housing up to Ø 78 mm made from sintered steel, over Ø 78 mm made from grey cast iron.

Tensioning elements are painted blue and are supplied with a zinc-plated screw and a spring washer.

These tensioning element can be used for tensioning all common kinds of belt and chain drives. The spring elements are based on highly-elastic natural rubber with a good shape memory and are designed for applications in temperatures from -40° to +80°C. Can be used for both tensioning directions.

Ordering Details: e.g.: Product No. 140 800 00, Tensioning Element Size 0



| Product No. | Size | F max. | | s max. | | D mm | E mm | G mm | H mm | J ₁ mm | J ₂ mm | K mm | L mm | M mm | N mm | O mm | P mm | Q mm | T mm | M _A Nm | Weight kg |
|-------------|------|----------|--------|-----------|---------|------|------------------------------------|------|------|-------------------|-------------------|------|-------|------|------|------|------|------|------|-------------------|-----------|
| | | normal N | hard N | normal mm | hard mm | | | | | | | | | | | | | | | | |
| 140 800 00 | 0 | 96 | 128 | 40 | 30 | 35 | 51 ^{+1,0} _{-0,5} | 5 | M6 | 80 | 60 | 20 | 90 | 20 | 22 | 6 | 8 | 16,5 | 8,5 | 10 | 0,18 |
| 140 801 00 | 1 | 135 | 170 | 50 | 40 | 45 | 64 ^{+1,0} _{-0,5} | 5 | M8 | 100 | 80 | 25 | 112,5 | 25 | 30 | 8 | 8,5 | 20,8 | 10,5 | 25 | 0,37 |
| 140 802 00 | 2 | 350 | 440 | 50 | 40 | 58 | 79 ^{+1,5} _{-0,5} | 7 | M10 | 100 | 80 | 30 | 115 | 30 | 35 | 10,5 | 8,5 | 25,3 | 10,5 | 49 | 0,66 |
| 140 802 12 | 2 | 350 | 440 | 50 | 40 | 58 | 79 ^{+1,5} _{-0,5} | 7 | M10 | 100 | 80 | 30 | 115 | 30 | 35 | 10,5 | 8,5 | 25,3 | 12,5 | 49 | 0,65 |
| 140 803 00 | 3 | 810 | 1050 | 65 | 50 | 78 | 108 ⁺² _{-0,5} | 8 | M12 | 130 | 100 | 50 | 155 | 40 | 52 | 15 | 10,5 | 34,3 | 12,5 | 86 | 1,81 |
| 140 804 00 | 4 | 1500 | 1875 | 87,5 | 70 | 95 | 140 ⁺² _{-0,5} | 10 | M16 | 175 | 140 | 60 | 205 | 40 | 66 | 15 | 12,5 | 42 | 20,5 | 210 | 3,55 |

Other tensioning element versions (stainless, zinc-plated etc.) see page 122.