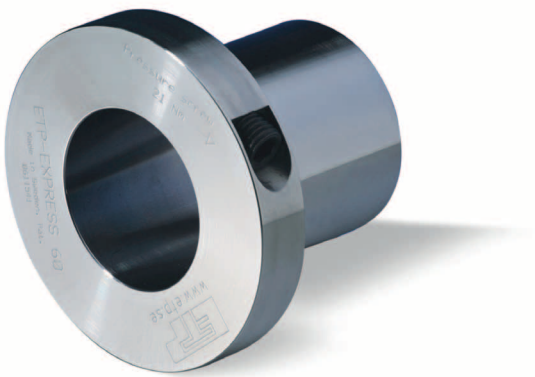


ETP-EXPRESS®

Hydraulic clamping element

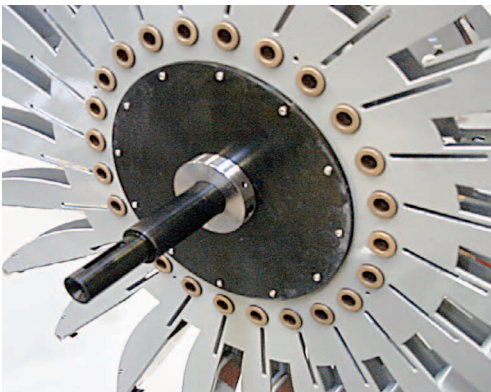
The easiest mounting in the tightest installation space.



The extremely small-scale engineering in the ETP-EXPRESS® provides a compact, low-weight design with a very low moment of inertia. Extremely easy mounting, compact dimensions and precise positioning are key features of the ETP-EXPRESS®.

Highlights

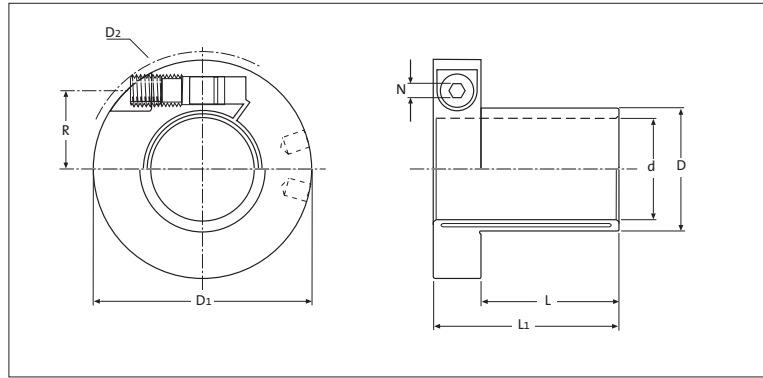
- Extremely fast mounting/removal with just one screw
- Extremely compact mounting dimensions
- Radial tightening of the screw saves space on the shafts
- Precise positioning, no axial movement when fitting
- High degree of concentricity, even after multiple mountings



For fast mounting in the tightest installation spaces

Structure/function

The ETP-EXPRESS® is a hydraulic locking bush, consisting of a double-wall, hardened steel sleeve that is filled with a specially developed pressure medium and a flange section. When the pressure screw is tightened, the sleeve expands evenly towards the shaft and the hub and thereby establishes a fixed, friction-locked connection. After slackening the pressure screw, the ETP-EXPRESS® returns to its original state and is easy to remove. This whole process can be repeated up to 2,000 times.



ETP-EXPRESS® technical specifications

| ETP-EXPRESS® | Dimensions | | | | | | Transmissible | | | Screw | | | | Moment of inertia | Weight |
|--------------|------------|------|-------|-------|------|-------|---------------|-------------------|-------------------|---------------|------|------|-----------------------|---------------------------------------|--------|
| | | | | | | | torque | axial force | radial force | DIN 915, 12.9 | | | | | |
| | d mm | D mm | D1 mm | D2 mm | L mm | L1 mm | M Nm | F _A kN | F _R kN | Size | R mm | N mm | M _{tight} Nm | J kgm ² · 10 ⁻³ | kg |
| 15 | 15 | 18 | 46 | 48.9 | 25 | 39 | 46 | 5.1 | 0.5 | M10 | 15.1 | 5 | 5 | 0.04 | 0.16 |
| 5/8" | 15.875 | 19 | 47 | 49.8 | 26 | 40 | 53 | 5.5 | 0.5 | M10 | 15.6 | 5 | 5 | 0.05 | 0.17 |
| 19 | 19 | 23 | 50.5 | 53.0 | 28 | 42 | 85 | 7.3 | 1 | M10 | 17.4 | 5 | 5 | 0.06 | 0.20 |
| 3/4" | 19.05 | 23 | 50.5 | 53.0 | 28 | 42 | 85 | 7.3 | 1 | M10 | 17.4 | 5 | 5 | 0.06 | 0.20 |
| 20 | 20 | 24 | 51.5 | 54.1 | 30 | 44 | 110 | 9.1 | 1 | M10 | 18 | 5 | 5 | 0.07 | 0.21 |
| 22 | 22 | 27 | 55.5 | 60.5 | 32 | 46 | 130 | 9.6 | 1.2 | M10 | 19.3 | 5 | 5 | 0.10 | 0.25 |
| 7/8" | 22.225 | 27 | 55.5 | 60.5 | 32 | 46 | 130 | 9.6 | 1.2 | M10 | 19.3 | 5 | 5 | 0.10 | 0.25 |
| 24 | 24 | 29 | 57.5 | 62.3 | 33 | 47 | 190 | 13 | 1.4 | M10 | 20.3 | 5 | 5 | 0.11 | 0.27 |
| 25 | 25 | 30 | 58 | 62.9 | 35 | 49 | 230 | 15 | 1.5 | M10 | 20.8 | 5 | 5 | 0.12 | 0.27 |
| 1" | 25.4 | 31 | 59 | 63.8 | 35 | 49 | 190 | 12 | 1.5 | M10 | 21.2 | 5 | 5 | 0.13 | 0.29 |
| 28 | 28 | 34 | 63 | 69.6 | 38 | 52 | 280 | 16 | 1.8 | M10 | 22.6 | 5 | 5 | 0.17 | 0.34 |
| 1 1/8" | 28.575 | 35 | 63.5 | 70.1 | 39 | 53 | 290 | 16 | 1.8 | M10 | 23 | 5 | 5 | 0.18 | 0.35 |
| 30 | 30 | 36 | 64.5 | 71.0 | 40 | 54 | 380 | 21 | 2 | M10 | 23.6 | 5 | 5 | 0.19 | 0.35 |
| 1 1/4" | 31.75 | 39 | 68.5 | 77.7 | 42 | 56 | 430 | 22 | 2.2 | M10 | 24.8 | 5 | 5 | 0.25 | 0.42 |
| 32 | 32 | 39 | 68.5 | 77.7 | 42 | 56 | 440 | 22 | 2.2 | M10 | 24.8 | 5 | 5 | 0.25 | 0.42 |
| 1 3/8" | 34.925 | 42 | 73 | 85.1 | 45 | 59 | 640 | 30 | 2.5 | M10 | 26.4 | 5 | 5 | 0.32 | 0.48 |
| 35 | 35 | 42 | 73 | 85.1 | 45 | 59 | 640 | 30 | 2.5 | M10 | 26.4 | 5 | 5 | 0.32 | 0.48 |
| 1 7/16" | 36.5125 | 44 | 74.5 | 86.6 | 48 | 62 | 740 | 33 | 2.6 | M10 | 27.3 | 5 | 5 | 0.36 | 0.52 |
| 38 | 38 | 46 | 84.5 | 89.5 | 52 | 72 | 890 | 38 | 2.8 | M16 | 31 | 8 | 21 | 0.76 | 0.84 |
| 1 1/2" | 38.1 | 46 | 84.5 | 89.5 | 52 | 72 | 890 | 38 | 2.8 | M16 | 31 | 8 | 21 | 0.76 | 0.84 |
| 40 | 40 | 48 | 86.5 | 91.2 | 55 | 75 | 1100 | 45 | 3 | M16 | 32 | 8 | 21 | 0.84 | 0.88 |
| 42 | 42 | 51 | 89 | 93.5 | 56 | 76 | 1100 | 43 | 3.2 | M16 | 33.2 | 8 | 21 | 0.97 | 0.96 |
| 1 3/4" | 44.45 | 54 | 93 | 100.3 | 58 | 78 | 1400 | 51 | 3.5 | M16 | 34.8 | 8 | 21 | 1.20 | 1.10 |
| 45 | 45 | 54 | 93 | 100.3 | 58 | 78 | 1400 | 51 | 3.5 | M16 | 34.8 | 8 | 21 | 1.17 | 1.05 |
| 48 | 48 | 59 | 97 | 103.8 | 59 | 79 | 1700 | 57 | 4 | M16 | 36.8 | 8 | 21 | 1.46 | 1.21 |
| 1 15/16" | 49.2125 | 60 | 98.5 | 105.1 | 60 | 80 | 1900 | 63 | 4.3 | M16 | 37.5 | 8 | 21 | 1.57 | 1.27 |
| 50 | 50 | 60 | 98.5 | 105.1 | 60 | 80 | 1900 | 63 | 4.5 | M16 | 37.5 | 8 | 21 | 1.52 | 1.20 |
| 2" | 50.8 | 61 | 101.5 | 111.8 | 60 | 80 | 1900 | 62 | 4.5 | M16 | 38 | 8 | 21 | 1.72 | 1.28 |
| 55 | 55 | 67 | 106 | 115.9 | 65 | 85 | 2400 | 71 | 5 | M16 | 40.5 | 8 | 21 | 2.18 | 1.50 |
| 60 | 60 | 73 | 115.5 | 132.7 | 70 | 90 | 3300 | 90 | 5.3 | M16 | 43.3 | 8 | 21 | 3.17 | 1.85 |
| 65 | 65 | 79 | 120.5 | 137 | 75 | 95 | 4400 | 112 | 5.6 | M16 | 46.1 | 8 | 21 | 4.1 | 2.13 |
| 2 1/2" | 63.5 | 77 | 119 | 134.6 | 73 | 93 | 4000 | 105 | 5.4 | M16 | 45.1 | 8 | 21 | 3.74 | 2.04 |
| 70 | 70 | 85 | 135.5 | 153.9 | 85 | 109 | 5600 | 130 | 6.4 | M20 | 50.8 | 10 | 39 | 7.12 | 3.04 |
| 3" | 76.2 | 92 | 141.5 | 157.8 | 91 | 115 | 7500 | 160 | 7 | M20 | 54.1 | 10 | 39 | 9.01 | 3.48 |
| 80 | 80 | 97 | 145.5 | 162.6 | 95 | 119 | 8700 | 180 | 7.5 | M20 | 56.3 | 10 | 39 | 10.35 | 3.75 |
| 90 | 90 | 109 | 155.5 | 171.7 | 105 | 129 | 12000 | 220 | 8.6 | 2 x M20 | 61.8 | 10 | 39 | 15.20 | 4.80 |
| 100 | 100 | 121 | 166 | 181.0 | 115 | 139 | 17000 | 280 | 9.7 | 2 x M20 | 67.3 | 10 | 39 | 21.90 | 5.90 |

Tolerances

h7 shaft for d = 15 mm
 k6 - h7 shaft for d = 19, 22, 24, 28, 32, 38, 42, 48, 55 mm
 h8 shaft for all other diameters h8.
 H7 hub.

Types of torque

Transmissible torque M for static load.
 For alternating or pulsating loads, the transmissible torque is reduced by the following factors:
 Alternating: 0.5 x M.
 Pulsating: 0.6 x M.