ETP-TECHNO®

Hydraulic locking bush

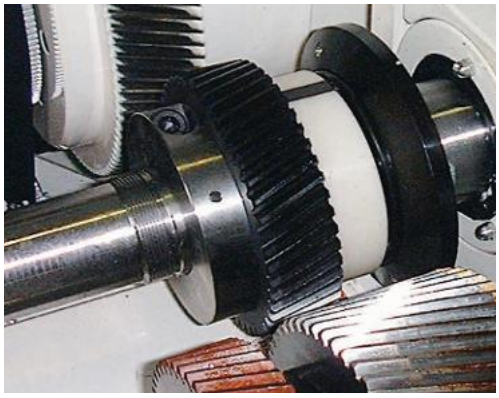
For maximum precision.



ETP-TECHNO® features the highest precision, even with frequent mounting. It is quick and easy to mount with just one screw and boasts an excellent concentricity. ETP-TECHNO® is the ideal product for very high-precision tasks.

Highlights

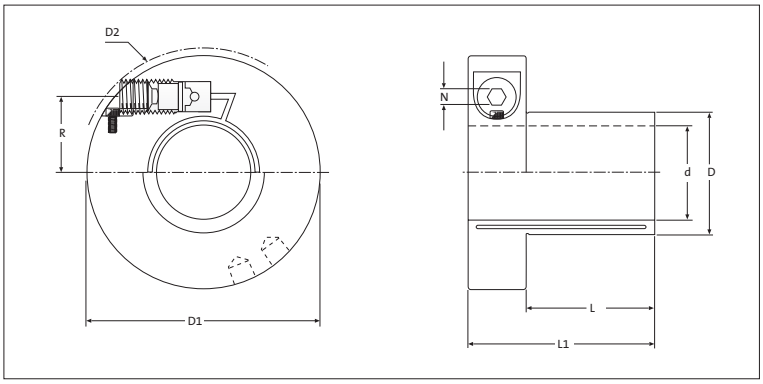
- Extremely fast mounting/dismantling with just one screw
- Can be mounted several thousand times
- Radial tightening of the screw saves space on the shaft
- Precise positioning, no axial movement when fitting
- Extremely high degree of concentricity (≤ 0.006 mm), even after multiple mountings



Lenze SELECTION

For high precision and fast mounting

Structure/function
ETP-TECHNO® 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 double-wall sleeve expands evenly towards the shaft and the hub and thereby establishes a fixed, friction-locked connection. After loosening the pressure screw, the ETP-TECHNO® returns to its original state and is easy to dismantle. This whole process can be repeated up to 5,000 times.



ETP-TECHNO® technical specifications

ETP-TECHNO®	Dimensions						Transmittable torque	axial force	radial force	Screw DIN 915, 12.9				Moment of inertia	Weight
	d [mm]	D [mm]	D_1 [mm]	D_2 [mm]	L [mm]	L_1 [mm]	M [Nm]	F_A [kN]	F_R [kN]	Size	R [mm]	N [mm]	M_{tight} [Nm]	J [kgm² · 10^{-3}]	[kg]
15	15	19	52	53	25	41	50	5	1	M12	16	6	10	0.09	0.25
20	20	25	59	60	30	46	145	12	2	M12	19	6	10	0.15	0.32
25	25	32	70	71	35	55	250	16	3	M14	24	6	16	0.38	0.58
1"	25.4	32	70	71	35	55	250	16	3	M14	24	6	16	0.38	0.58
30	30	38	75	79	40	60	500	26	4	M14	26	6	16	0.54	0.69
1 1/4"	31.75	41	79	81	42	62	510	25	4	M14	27.5	6	16	0.64	0.78
32	32	41	79	81	42	62	510	25	4	M14	27.5	6	16	0.64	0.78
35	35	44	84	87	45	65	740	34	5	M16	29.5	8	24	0.75	0.84
1 1/2"	38.1	50	90	93	50	70	880	36	5	M16	32.5	8	24	1.1	1.08
40	40	52	91	95	55	75	1200	47	6	M16	33	8	24	1.3	1.18
45	45	56	96	101	58	78	1700	62	7	M16	35	8	24	1.5	1.24
50	50	65	110	114	60	85	2250	71	9	M20	40.9	10	40	2.3	1.64
60	60	75	125	132	70	95	4400	119	12	M20	46.8	10	40	5	2.51
70	70	90	140	149	85	110	7000	158	13	M20	53	10	40	8.9	3.65
75	75	95	147	158	90	115	8600	183	14	M20	55.3	10	40	12	4.20
80	80	100	156	168	95	123	10900	218	15	M22	58.7	10	60	15	4.85
90	90	112	166	177	105	133	15500	277	17	2 x M22	63.3	10	60	22	5.44
100	100	125	177	188	115	143	21000	335	19	2 x M22	70	10	60	33	6.18
110	110	138	187	197	125	153	28000	410	21	2 x M22	75.5	10	60	43	7.08
120	120	150	198	208	135	163	29000	393	23	2 x M22	81.1	10	50	54	9.96
130	130	163	208	217	135	163	32000	393	25	2 x M22	86.8	10	46	75	10.86

Tolerances
h8 shaft
H7 hub.

Types of torque
Transmittable torque M for a static load.
For alternating or pulsating loads, the transmittable torque is reduced by the following factors:
Alternating: 0.7 x M.
Pulsating: 0.8 x M..