



Locking elements

Technical information

Principle of operation

These parts operate on the basis of an interference fit between two conical rings crewed together. The outer ring expands and exerts a pressure on the part being held whilst the inner ring exerts a pressure on a shaft.

Assembly

Carefully clean all the components parts and then apply a light coating of oil to the contact surfaces. Place one part in the hub and insert the shaft, then tighten the screws in a uniform fashion until the prescribed torque is reached. The Torque (T) and Axial Force (F_{ax}) figures in the tables have been calculated for an oiled assembly.

Note:

Do not use Molybdenum Bisulphate based oils or greases as these can significantly reduce the frictional torque.

Dismantling

Unscrew the screws, inserting them in the extraction holes and increasing the pressure in a gradual and uniform manner until the cones are freed. When re-using the pieces, ensure that the screws and threaded holes are oiled.

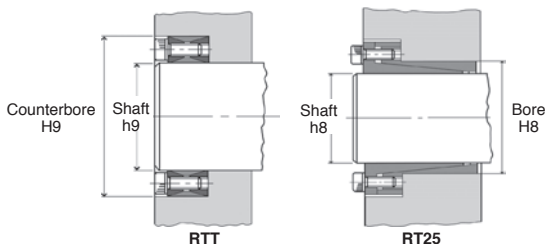
Tolerance

A good machine-finish is sufficient.

Roughness

Maximum admissible roughness: Rt max 16µm

Recommended assembly tolerances



Self-centering hexagonal locking assembly

SUP

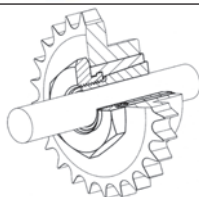
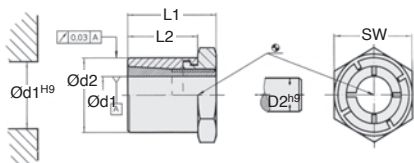
For small diameters

- Backlash free, self centring shaft-gear hub.
- Single part to insert
- Corrosion resistant
- Materials:
 - Internal ring: blackened steel
 - External ring: zinc plated steel
 - Nut: nickel plated steel

Info.

- T_A : tightening torque of nut
- M : transmissible rotational movement
- F_A : transmissible axial load
- P_W : shaft surface pressure
- P_N : hub surface pressure

Reduces
assembly time



DISCOUNTS

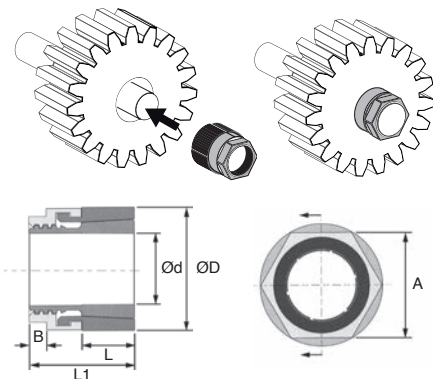
Qty	1+	6+	20+
Disc.	List	-5%	On request

Part number	Ød1	Ød2	L1	L2	SW	T_A max. (Nm)	M max. (Nm)	F_A max. (kN)	P_W max. (N/mm ²)	P_N max. (N/mm ²)	Price each 1 to 5
SUP-005	5	14	19	15	14	9,9	10,1	4,0	264	96	✓ 35,50 €
SUP-006	6	14	19	15	14	9,9	12,1	4,0	220	96	✓ 35,50 €
SUP-008	8	16	22	17	16	16,9	23,4	5,8	179	91	✓ 37,15 €
SUP-010	10	20	24	19	22	34,9	48,6	9,7	221	115	✓ 39,29 €
SUP-012	12	22	24	19	22	43,8	65,3	10,9	206	117	✓ 42,83 €
SUP-014	14	26	28	22	27	65,0	93,0	13,3	178	99	✓ 46,47 €
SUP-015	15	26	28	22	27	65,0	99,0	13,3	166	99	✓ 46,47 €
SUP-016	16	26	28	22	27	65,0	106,0	13,3	156	99	✓ 46,47 €
SUP-018	18	35	36	27	36	161,0	223,0	24,8	224	125	- 50,99 €
SUP-020	20	35	36	27	36	161,0	248,0	24,8	201	125	✓ 50,99 €
SUP-022	22	42	41	30	46	250,0	349,0	31,8	197	110	✓ 55,91 €
SUP-024	24	42	41	30	46	250,0	381,0	31,8	180	110	✓ 55,91 €
SUP-025	25	42	41	30	46	250,0	397,0	31,8	173	110	✓ 55,91 €
SUP-030	30	47	44	33	50	355,0	605,0	40,4	162	110	✓ 65,55 €
SUP-032	32	55	51	38	55	490,0	764,0	47,8	166	102	- 78,36 €
SUP-035	35	55	51	38	55	490,0	836,0	47,8	151	102	✓ 78,36 €

*Depending on availability - Dimensions in mm

- Locking assembly for small shafts**- Very good concentricity****- Material:**

RoHS compliant finish

Info.**- Ma:** Tightening torque**- Mt:** Transmissible torque**- Th:** Transmissible force**- Ph:** Hub surface pressure**- Dn:** Minimum hub diameter**- Tolerance for shaft and bore +/- 0.04mm**
(for all sizes)**DISCOUNTS**

Qty	1+	6+	20+
Disc.	List	-5%	On request

Part number	Ød	ØD	L	L1	A	B	Ma (Nm)	Mt (Nm)	Th (kN)	Ph (N/mm²)	Dn	Stock*	Price each 1 to 5
TTQ5-16-MINI	5	16,0	9,5	19,1	13,0	3,2	14,1	12	3,2	36	17,8	-	41,32 €
TTQ6-16-MINI	6	16,0	9,5	19,1	13,0	3,2	14,1	16	3,4	36	17,8	✓	41,32 €
TTQ7-19-MINI	7	19,0	11,1	22,2	15,9	3,2	17,0	20	3,5	26	20,7	-	41,32 €
TTQ8-19-MINI	8	19,0	11,1	22,2	15,9	3,2	17,0	23	4,0	26	20,7	✓	43,14 €
TTQ9-19-MINI	9	19,0	11,1	22,2	15,9	3,2	17,0	26	4,1	26	20,7	✓	43,14 €
TTQ10-22-MINI	10	22,5	12,7	25,7	19,0	4,8	19,8	30	4,2	19	23,6	✓	47,62 €
TTQ11-22-MINI	11	22,5	12,7	25,7	19,0	4,8	19,8	34	4,2	19	23,6	✓	47,62 €
TTQ12-22-MINI	12	22,5	12,7	25,7	19,0	4,8	19,8	39	4,3	19	23,6	✓	47,62 €
TTQ15-25-MINI	15	25,5	15,9	28,6	22,0	4,8	22,6	45	4,4	12	26,4	✓	49,42 €
TTQ16-25-MINI	16	25,5	15,9	28,6	22,0	4,8	22,6	50	4,5	12	26,4	✓	49,42 €
TTQ17-32-MINI	17	32,0	19,1	34,9	27,0	6,4	80,0	170	8,9	55	38,0	-	49,42 €

*Depending on availability - Dimensions in mm

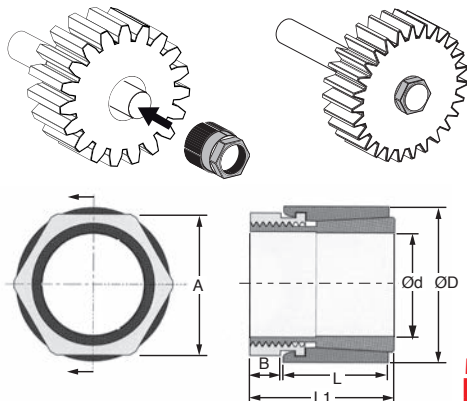
Self centering hexagonal locking assembly

TTQ Suitable for **medium** torque applications

- Compact locking assembly
- Very good concentricity

Info.

- Ma: Tightening torque
- Mt: Transmissible torque
- Th: Transmissible force
- Ph: Hub surface pressure
- Dn: Minimum hub diameter
- Tolerance for shaft and bore +/- 0.08mm (for all sizes)



DISCOUNTS

Qty	1+	6+	20+
Disc.	List	-5%	On request

Part number	Ød	ØD	L	L1	A	B	Ma (Nm)	Mt (Nm)	Th (kN)	Ph (N/mm²)	Dn	Stock*	Price each 1 to 5
TTQ17-32-OE	17	32	22	30	30	6	110	208	25	92	43,5	✓	33,16 €
TTQ18-32-OE	18	32	22	30	30	6	110	221	25	92	43,5	✓	38,46 €
TTQ19-32-OE	19	32	22	30	30	4	110	233	25	92	43,5	✓	38,46 €
TTQ20-35-OE	20	35	24	33	32	7	150	298	30	94	47,9	✓	45,97 €
TTQ22-35-OE	22	35	24	33	32	7	150	328	30	94	47,9	✓	45,97 €
TTQ24-38-OE	24	38	25	35	36	8	185	398	33	93	51,7	✓	45,97 €
TTQ25-38-OE	25	38	25	35	36	8	185	415	33	93	51,7	✓	45,97 €
TTQ28-45-OE	28	45	29	41	46	11	240	505	36	73	57,3	-	59,54 €
TTQ30-45-OE	30	45	29	41	46	11	240	541	36	73	57,3	✓	59,54 €
TTQ32-50-OE	32	50	30	44	50	12	265	590	37	65	61,9	-	59,54 €
TTQ35-50-OE	35	50	30	44	50	12	265	645	37	65	61,9	✓	59,54 €

*Depending on availability - Dimensions in mm



Self centering hexagonal locking assembly

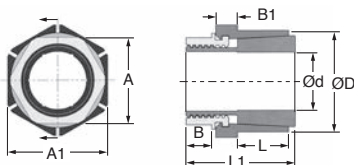
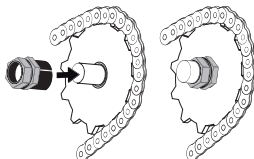
Suitable for **very high** torque applications

TTQ

- **Compact locking assembly**
- Very good concentricity
- Material:
RoHS compliant finish

Info.

- Ma: Tightening torque
- Mt: Transmissible torque
- Th: Transmissible force
- Ph: Hub surface pressure
- Dn: Minimum hub diameter
- Tolerance for shaft and bore $\pm 0.08\text{mm}$ (for all sizes).



DISCOUNTS

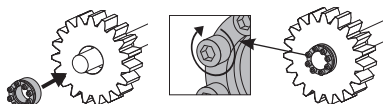
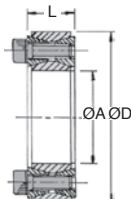
Qty	1+	6+	20+
Disc.	List	-5%	On request

Part number	Ød	ØD	L	L1	A	A1	B	B1	Ma (Nm)	Mt (Nm)	Th (kN)	Ph (N/mm²)	Dn	Price each 1 to 5
TTQ15-38-GT	15	38,0	19,1	38,1	31,8	38,1	8,0	8,9	136	180	13,4	76	48,7	58,36 €
TTQ16-38-GT	16	38,0	19,1	38,1	31,8	38,1	8,0	8,9	136	198	15,0	76	48,7	58,36 €
TTQ17-38-GT	17	38,0	19,1	38,1	31,8	38,1	8,0	8,9	136	220	17,0	76	48,7	58,36 €
TTQ18-38-GT	18	38,0	19,1	38,1	31,8	38,1	8,0	8,9	136	265	18,1	76	48,7	58,36 €
TTQ19-38-GT	19	38,0	19,1	38,1	31,8	38,1	8,0	8,9	136	282	19,9	76	48,7	58,36 €
TTQ20-45-GT	20	45,0	22,2	47,6	38,0	44,5	11,1	9,5	170	290	21,0	65	54,8	69,33 €
TTQ22-45-GT	22	45,0	22,2	47,6	38,0	44,5	11,1	9,5	170	315	24,1	65	54,8	69,33 €
TTQ24-45-GT	24	45,0	22,2	47,6	38,0	44,5	11,1	9,5	170	380	27,2	65	54,8	69,33 €
TTQ25-45-GT	25	45,0	22,2	47,6	38,0	44,5	11,1	9,5	170	390	28,7	65	54,8	69,33 €
TTQ28-51-GT	28	51,0	25,4	57,2	46,0	50,8	12,7	14,3	225	495	32,6	54	60,5	69,33 €
TTQ30-51-GT	30	51,0	25,4	57,2	46,0	50,8	12,7	14,3	225	580	35,4	54	60,5	90,31 €
TTQ32-51-GT	32	51,0	25,4	57,2	46,0	50,8	12,7	14,3	225	680	38,2	54	60,5	90,31 €
TTQ34-60-GT	34	60,5	38,1	69,9	50,0	60,3	14,3	12,7	260	710	41,0	45	69,8	110,39 €
TTQ35-60-GT	35	60,5	38,1	69,9	50,0	60,3	14,3	12,7	260	725	42,4	45	69,8	110,39 €
TTQ36-60-GT	36	60,5	38,1	69,9	50,0	60,3	14,3	12,7	260	750	43,8	45	69,8	110,39 €
TTQ38-60-GT	38	60,5	38,1	69,9	50,0	60,3	14,3	12,7	260	790	46,6	45	69,8	110,39 €
TTQ40-67-GT	40	67,0	42,9	79,4	60,0	66,7	14,3	17,4	316	900	49,7	38	75,4	137,78 €
TTQ42-67-GT	42	67,0	42,9	79,4	60,0	66,7	14,3	17,4	316	1000	53,3	38	75,4	137,78 €
TTQ45-73-GT	45	73,0	50,8	90,5	65,0	73,0	15,9	19,1	554	1170	57,5	29	80,2	171,54 €
TTQ48-73-GT	48	73,0	50,8	90,5	65,0	73,0	15,9	19,1	554	1355	62,9	29	80,2	171,54 €
TTQ50-73-GT	50	73,0	50,8	90,5	65,0	73,0	15,9	19,1	554	1510	65,7	29	80,2	171,54 €
TTQ55-80-GT	55	80,0	54,0	95,3	69,9	79,4	15,9	20,7	600	1650	67,8	24	85,8	376,85 €
TTQ60-86-GT	60	86,0	57,2	98,4	75,0	85,7	17,5	19,1	635	1740	68,7	19	91,3	419,74 €
TTQ65-92-GT	65	92,0	60,3	103,2	82,0	92,1	17,5	20,7	680	1930	69,5	17	97,2	473,57 €
TTQ70-92-GT	70	92,0	60,3	103,2	82,0	92,1	17,5	20,7	680	1920	70,4	17	97,2	473,57 €
TTQ75-100-GT	75	100,0	63,5	108,0	90,0	98,4	19,1	20,7	750	2000	71,5	16	97,2	528,32 €

Dimensions in mm

RTT Medium/high torque, not self-centering

- Inserts between the shaft and the bore
- High transmissible torque
- Contact pressure spread evenly
- Easy to assembly and dismantle
- Reduced width
- Backlash free
- **No constraints due to keyway**
- Increases the resistant part of the shaft
- Suitable for alternating rotational movements
- Up to 4 units can be used together
- Materials:
Body: steel
Screws: steel DIN 912 12.9



Options

- Other diameters available (up to 220mm bore)
- Stainless steel version

Info

- **P_N: hub surface pressure
- **P_W: shaft surface pressure

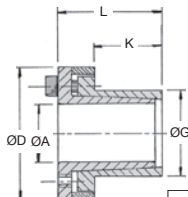
DISCOUNTS

Qty	1+	6+	20+	40+	60+	100+
Disc.	List	-10%	-15%	-20%	-25%	On request

Part number	ØA	ØD	L	H	Screw M	Tightening torque TA(Nm)	Transmissible torque T (Nm)	**P _W (N)	mm ² mm ²	(N/mm ²) mm ²	Price each 1 to 5
RTT-20-47	20	47	20	28	8xM6x18	14	270	210	90	✓	15,25 €
RTT-22-47	22	47	20	28	8xM6x18	14	300	195	90	✓	15,25 €
RTT-24-50	24	50	20	28	9xM6x18	14	360	195	95	✓	15,64 €
RTT-25-50	25	50	20	28	9xM6x18	14	380	190	85	✓	15,64 €
RTT-28-55	28	55	20	28	10xM6x18	14	500	187	96	-	17,46 €
RTT-30-55	30	55	20	28	10xM6x18	14	530	176	96	✓	17,46 €
RTT-32-60	32	60	20	28	12xM6x18	14	630	192	105	✓	19,17 €
RTT-35-60	35	60	20	28	12xM6x18	14	700	180	105	✓	19,17 €
RTT-38-65	38	65	20	28	14xM6x18	14	860	183	107	-	21,11 €
RTT-40-65	40	65	20	28	14xM6x18	14	910	180	110	✓	21,11 €
RTT-42-75	42	75	24	34	12xM8x22	35	1500	226	125	-	26,41 €
RTT-45-75	45	75	24	34	12xM8x22	35	1610	210	125	-	26,41 €
RTT-48-80	48	80	24	34	12xM8x22	35	1700	196	115	-	28,00 €
RTT-50-80	50	80	24	34	12xM8x22	35	1770	190	115	✓	28,00 €
RTT-55-85	55	85	24	34	14xM8x22	35	2270	200	130	-	30,74 €
RTT-60-90	60	90	24	34	14xM8x22	35	2470	180	120	✓	32,51 €
RTT-65-95	65	95	24	34	16xM8x22	35	3040	190	130	✓	35,39 €
RTT-70-110	70	110	28	40	14xM10x25	70	4600	210	130	-	46,85 €
RTT-75-115	75	115	28	40	14xM10x25	70	4900	195	125	-	50,99 €
RTT-80-120	80	120	28	40	14xM10x25	70	5200	180	120	-	53,61 €
RTT-85-125	85	125	28	40	16xM10x25	70	6300	195	130	-	57,04 €
RTT-90-130	90	130	28	40	16xM10x25	70	6600	180	125	-	57,26 €
RTT-95-135	95	135	28	40	18xM10x25	70	7900	195	135	-	62,99 €
RTT-100-145	100	145	33	47	14xM12x30	125	9600	195	135	-	75,16 €

*Depending on availability - Dimensions in mm

- Inserts between the shaft and the bore
- High transmissible torque
- Contact pressure spread evenly
- Easy to assembly and dismantle
- Reduced width
- Backlash free
- No constraints due to keyway
- Increases the resistant part of the shaft
- Suitable for alternating rotational movements

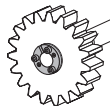
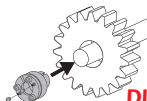


Options

- Other diameters available (up to 100mm bore)

Info

- * PN: hub surface pressure
- * Pw: shaft surface pressure



DISCOUNTS

Qty	1+	6+	10+	20+	40+	60+
Disc.	List	-20%	-30%	-40%	-50%	On request

Part number	ØA	ØG	ØD	L	Screw M	K	Tightening torque TA(Nm)	Transmissible torque T (Nm)	*Pw (N/mm²)	*PN (N/mm²)	Stock*	Price each 1 to 5
RT25-6-14	6	14	25	22,5	3xM3x10	10,0	2,2	12	190	80	✓	24,90 €
RT25-8-15	8	15	27	25,5	3xM4x12	12,0	5,0	29	205	110	✓	21,87 €
RT25-9-16	9	16	28	27,5	3xM4x12	14,0	5,0	31	150	85	✓	22,10 €
RT25-10-16	10	16	28	27,5	3xM4x12	14,0	5,0	35	140	85	✓	22,10 €
RT25-11-18	11	18	32	27,5	4xM4x12	14,0	5,0	52	170	105	✓	22,36 €
RT25-12-18	12	18	32	27,5	4xM4x12	14,0	5,0	58	150	100	✓	22,36 €
RT25-14-23	14	23	39	27,5	4xM4x12	14,0	5,0	69	140	80	✓	20,15 €
RT25-16-24	16	24	45	36,5	4xM6x12	16,0	17,0	180	148	98	✓	23,51 €
RT25-18-26	18	26	47	39,5	4xM6x18	19,0	17,0	200	180	125	✓	23,65 €
RT25-19-27	19	27	49	39,5	4xM6x18	19,0	17,0	210	170	120	✓	23,65 €
RT25-20-28	20	28	50	39,5	4xM6x18	19,0	17,0	220	160	115	✓	24,52 €
RT25-22-32	22	32	54	46,5	4xM6x18	26,0	17,0	250	115	80	✓	26,75 €
RT25-24-34	24	34	56	46,5	6xM6x18	26,0	17,0	395	146	102	-	26,79 €
RT25-25-34	25	34	56	46,5	6xM6x18	26,0	17,0	410	140	102	✓	27,38 €
RT25-28-39	28	39	61	46,5	6xM6x18	25,5	17,0	465	135	98	✓	30,37 €
RT25-30-41	30	41	62	46,5	6xM6x18	25,5	17,0	510	127	90	✓	31,08 €
RT25-32-43	32	43	65	46,5	8xM6x18	25,5	17,0	705	146	108	✓	33,84 €
RT25-35-47	35	47	69	52,5	8xM6x18	31,5	17,0	790	105	80	-	34,50 €
RT25-38-50	38	50	72	52,5	8xM6x18	31,5	17,0	860	100	76	✓	39,42 €
RT25-40-53	40	53	75	52,5	8xM6x18	31,5	17,0	900	96	72	✓	41,20 €
RT25-42-55	42	55	78	52,5	8xM6x18	31,5	17,0	940	90	70	-	42,75 €
RT25-45-59	45	59	86	71,0	8xM8x22	45,0	41,0	1840	110	85	-	65,25 €
RT25-48-62	48	62	87	71,0	8xM8x22	45,0	41,0	2000	105	80	-	66,97 €
RT25-50-65	50	65	92	71,0	8xM8x22	45,0	41,0	2100	100	75	✓	72,49 €
RT25-55-71	55	71	98	81,0	9xM8x22	55,0	41,0	2580	85	65	-	87,26 €

* Depending on availability - Dimensions in mm

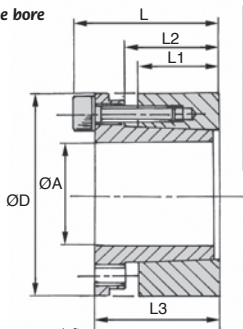
Self-centering locking assembly Ste ★★★

RT70

Medium/high torque

- Inserts between the shaft and the bore

- High transmissible torque
- Contact pressure spread evenly
- Easy to assembly and dismantle
- Backlash free
- No constraints due to keyway
- **Increases the resistant part of the shaft**
- Suitable for alternating rotational movements
- Materials:
Body: steel
Screws: steel DIN 912 12.9

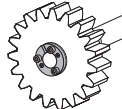


Options

- Other diameters available (up to 180mm bore)

Info.

- * PN: hub surface pressure
- * PW: shaft surface pressure



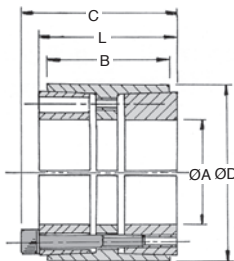
DISCOUNTS

Qty	1+	6+	20+	40+	60+	100+
Disc.	List	-10%	-15%	-20%	-25%	On request

Part number	ØA	ØD	L1	L2	L3	L	Transmissible torque (Nm)	Pw (N/mm²)	PN (N/mm²)	Screws No.	Type	Tightening torque (Nm)	Stock*	Price each 1 to 5
RT70-19-47	19	47	26	31	39	45	350	228	98	4	M6x25	17	✓	13.43 €
RT70-20-47	20	47	26	31	39	45	390	231	100	4	M6x25	17	✓	13.43 €
RT70-22-47	22	47	26	31	39	45	440	220	95	4	M6x25	17	✓	13.43 €
RT70-24-50	24	50	26	31	39	45	519	215	102	6	M6x25	17	-	14.02 €
RT70-25-50	25	50	26	31	39	45	590	230	105	6	M6x25	17	✓	14.02 €
RT70-28-55	28	55	26	31	39	45	700	220	110	6	M6x25	17	✓	15.92 €
RT70-30-55	30	55	26	31	39	45	760	200	120	6	M6x25	17	✓	15.92 €
RT70-32-60	32	60	26	31	39	45	930	230	114	8	M6x25	17	✓	17.27 €
RT70-35-60	35	60	26	31	39	45	1030	200	119	8	M6x25	17	✓	17.27 €
RT70-38-65	38	65	26	31	39	45	1240	210	124	8	M6x25	17	✓	19.62 €
RT70-40-65	40	65	26	31	39	45	1350	200	125	8	M6x25	17	✓	19.62 €
RT70-42-75	42	75	30	36	47	55	2170	236	140	6	M8x30	41	-	26.27 €
RT70-45-75	45	75	30	36	47	55	2350	236	140	6	M8x30	41	✓	26.27 €
RT70-48-80	48	80	30	36	47	55	2510	218	135	6	M8x30	41	✓	29.36 €
RT70-50-80	50	80	30	36	47	55	2580	218	135	6	M8x30	41	✓	29.36 €
RT70-55-85	55	85	30	36	47	55	3200	223	145	8	M8x30	41	✓	33.52 €
RT70-60-90	60	90	30	36	47	55	3380	198	157	8	M8x30	41	✓	35.97 €
RT70-65-95	65	95	30	36	47	55	4160	213	140	8	M8x30	41	-	38.70 €
RT70-70-110	70	110	40	46	57	67	6840	225	143	8	M10x35	83	✓	59.06 €

*Depending on availability - Dimensions in mm

- Inserts between the shaft and the bore
- High transmissible torque
- Contact pressure spread evenly
- Easy to assembly and dismantle
- Reduced width
- Backlash free
- No constraints due to keyway
- **Increases the resistant part of the shaft**
- Suitable for alternating rotational movements
- Up to 3 units can be used together
- Material:
Steel

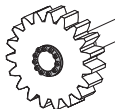
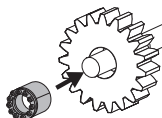


Options

- Other diameters available (up to 300mm bore)

Info.

- *PN: hub surface pressure
- *PW: shaft surface pressure



DISCOUNTS

Qty	1+	6+	20+	40+	60+	100+
Disc.	List	-10%	-15%	-20%	-25%	On request

Part number	ØA	ØD	B	L	C	Screw M	Tightening torque TA (Nm)	Transmissible torque + axial load T (Nm)	*Pw (N/mm²)	*PN (N/mm²)	Price each 1 to 5
RTL450-25-55	25	55	32	40	46	6xM6x35	17	295	295	134	✓ 26,97 €
RTL450-30-55	30	55	32	40	46	6xM6x35	17	246	246	134	✓ 27,72 €
RTL450-35-60	35	60	44	54	60	7xM6x45	17	174	174	101	✓ 33,72 €
RTL450-38-75	38	75	44	54	62	7xM8x50	41	296	296	150	- 42,08 €
RTL450-40-75	40	75	44	54	62	7xM8x50	41	281	281	150	✓ 42,08 €
RTL450-42-75	42	75	44	54	62	7xM8x50	41	268	268	150	- 45,51 €
RTL450-45-75	45	75	44	54	62	7xM8x50	41	250	250	150	- 45,51 €
RTL450-48-80	48	80	44	54	62	8xM8x50	41	207	207	124	✓ 52,48 €
RTL450-50-80	50	80	56	64	72	8xM8x50	41	200	200	98	✓ 52,48 €
RTL450-55-85	55	85	56	64	72	9xM8x50	41	205	205	104	✓ 59,44 €
RTL450-60-90	60	90	56	64	72	10xM8x50	41	202	202	106	✓ 63,93 €
RTL450-65-95	65	95	56	64	72	10xM8x50	41	187	187	100	✓ 70,17 €
RTL450-70-110	70	110	70	78	88	10xM10x60	83	223	223	114	✓ 95,72 €
RTL450-75-115	75	115	70	78	88	10xM10x60	83	223	223	114	✓ 103,71 €
RTL450-80-120	80	120	70	78	88	11xM10x60	83	215	215	115	✓ 110,42 €
RTL450-85-125	85	125	70	78	88	12xM10x60	83	215	215	115	- 118,38 €
RTL450-90-130	90	130	70	78	88	12xM10x60	83	208	208	115	- 122,02 €
RTL450-95-135	95	135	70	78	88	12xM10x60	83	208	208	115	- 138,00 €
RTL450-100-145	100	145	90	100	112	11xM12x80	145	200	200	107	- 185,35 €

*Depending on availability - Dimensions in mm

Mechanical locking assembly

ETP-MINI



ETP-MINI®

- **Mechanical locking assembly**
- Small size
- Quick and easy mounting
- Good concentricity (0.02mm)
- Stainless steel version available for food and pharmaceutical industries
- Materials:
 - Steel or stainless steel (1.4565)
- Working temp: -30/+85°C

Applications

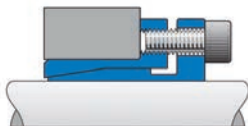
- Machine tools, presses, injection machines requiring frequent adjustment

Info

- When the screws are tightened with a torque T_t :
 - T = transmissible torque (axial force = 0)
 - FA = Transmissible axial force (torque = 0)
 - FR = Transmissible radial force
- Max authorised bending torque is 5% of transmissible torque T
- T_t = Recommended tightening torque for screws.
Increasing the torque will not increase the pressure
- * $\varnothing D2$ is measured before assembly



steel or stainless steel

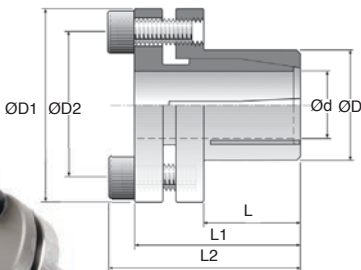


Part number	Transmissible Torque T (Nm)	Axial force FA (kN)	Polar moment of inertia (kgm ² · 10 ⁻³)	Weight (kg)
Steel version				
ETP-MINI-6-14	7	2,5	2,1	0,03
ETP-MINI-1/4-14	8	2,5	2,1	0,03
ETP-MINI-8-15	20	5,0	3,3	0,04
ETP-MINI-9-16	28	6,5	4,4	0,05
ETP-MINI-3/8-16	30	6,5	4,4	0,05
ETP-MINI-10-16	34	6,5	4,3	0,05
ETP-MINI-11-18	36	6,5	6,2	0,06
ETP-MINI-12-18	40	6,5	6,1	0,06
ETP-MINI-1/2-18	42	6,5	6,0	0,06
ETP-MINI-14-22	66	9,5	13,2	0,08
Stainless steel version				
ETP-MINI-6-14/SS	5	1,7	2,1	0,03
ETP-MINI-8-15/SS	17	4,4	3,3	0,04
ETP-MINI-9-16/SS	20	4,4	4,4	0,05
ETP-MINI-10-16/SS	23	4,4	4,3	0,05
ETP-MINI-11-18/SS	25	4,4	6,2	0,06
ETP-MINI-12-18/SS	27	4,4	6,1	0,06
ETP-MINI-14-22/SS	48	6,5	13,2	0,08

Dimensions in mm

Assembly

- All keyways **MUST** be refilled
- **Assembly tolerances:**
Shaft h8 (h7 for size 15 only)
Hub H7
- Please ensure that threads are lubricated each time parts are assembled
We recommend use of Omega 58



For smaller parts

DISCOUNTS

Qty	1+	9+
Disc.	List	On request

Part number	Ød	ØD	ØD2	ØD2*	L	L1	L2	N°	R	Screws DIN912	Price each 1 to 8
										Tt (Nm)	
Steel version											
ETP-MINI-6-14	6,00	14	25	18	10	19,0	22,0	2	M3	2,0	45,31 €
ETP-MINI-1/4-14	6,35	14	25	18	10	19,0	22,0	2	M3	2,0	45,31 €
ETP-MINI-8-15	8,00	15	27	20	12	21,5	25,5	2	M4	4,0	46,86 €
ETP-MINI-9-16	9,00	16	28	21	14	24,0	28,0	2	M4	4,0	49,26 €
ETP-MINI-3/8-16	9,525	16	28	21	14	24,0	28,0	2	M4	4,0	50,09 €
ETP-MINI-10-16	10,00	16	28	21	14	24,0	28,0	2	M4	4,0	50,09 €
ETP-MINI-11-18	11,00	18	30	23	14	25,5	29,5	2	M4	4,0	52,47 €
ETP-MINI-12-18	12,00	18	30	23	14	25,5	29,5	2	M4	4,0	55,28 €
ETP-MINI-1/2-18	12,70	18	30	23	14	25,5	29,5	2	M4	4,0	55,28 €
ETP-MINI-14-22	14,00	22	35	27	15	27,5	31,5	3	M4	4,0	58,48 €
Stainless steel version											
ETP-MINI-6-14/SS	6,00	14	25	18	10	19,0	22,0	3	M3	1,2	89,22 €
ETP-MINI-8-15/SS	8,00	15	27	20	12	21,5	25,5	3	M4	2,7	75,70 €
ETP-MINI-9-16/SS	9,00	16	28	21	14	24,0	28,0	3	M4	2,7	77,78 €
ETP-MINI-10-16/SS	10,00	16	28	21	14	24,0	28,0	3	M4	2,7	78,09 €
ETP-MINI-11-18/SS	11,00	18	30	23	14	25,5	29,5	3	M4	2,7	78,91 €
ETP-MINI-12-18/SS	12,00	18	30	23	14	25,5	29,5	3	M4	2,7	79,32 €
ETP-MINI-14-22/SS	14,00	22	35	27	15	27,5	31,5	4	M4	2,7	107,01 €

Dimensions in mm

Hydraulic locking assembly



ETP-CL



ETP-CLASSIC®

- **Hydraulic locking assembly**
- Small size
- Quick and easy mounting
- Fine adjustment is possible during assembly
- Low tightening torque and reduced number of screws eases assembly
- Good concentricity even after frequent use (0.03 -0.06mm)
- Supplied with Allen screws but hexagonal head screws can also be used
- Material:
Steel
- Working temp: -30/+85°C



Info

- When the screws are tightened with a torque T_t :
 T = transmissible torque (axial force = 0)
 FA = Transmissible axial force (torque = 0)
 FR = Transmissible radial force
- Max authorised bending torque is 5% of transmissible torque T
- * $\varnothing D2$ is measured before assembly.



Part number	Torque T (Nm)	Transmissible Axial force FA (kN)	Radial force FR (kN)	Polar moment of inertia of inertia (kgm ² ·10 ⁻³)	Weight (kg)
ETP-CL15-23	55	7,30	2,5	0,019	0,10
ETP-CL19-28	100	10,60	5,8	0,045	0,17
ETP-CL20-28	125	12,50	6,6	0,043	0,16
ETP-CL22-32	135	12,30	8,2	0,063	0,20
ETP-CL24-34	200	16,70	9,8	0,066	0,20
ETP-CL25-34	250	20,00	10,6	0,067	0,20
ETP-CL28-39	300	21,40	13,1	0,112	0,27
ETP-CL30-41	420	28,00	14,7	0,133	0,30
ETP-CL32-43	420	26,30	16,3	0,180	0,35
ETP-CL35-47	650	37,10	18,8	0,230	0,41
ETP-CL38-50	750	39,50	21,2	0,277	0,44
ETP-CL40-53	940	47,00	22,8	0,408	0,57
ETP-CL42-55	940	44,80	24,4	0,414	0,56
ETP-CL45-59	1290	57,30	26,9	0,636	0,73
ETP-CL48-62	1570	65,40	29,3	0,761	0,80
ETP-CL50-65	1900	76,00	30,9	0,943	0,91
ETP-CL55-71	2500	90,90	35	1,301	1,09
ETP-CL60-77	3400	113,00	39,1	1,959	1,40
ETP-CL65-84	3500	108,00	43,1	2,780	1,72
ETP-CL70-90	5200	149,00	47,2	4,035	2,09
ETP-CL75-95	6300	168,00	51,3	5,500	2,51
ETP-CL80-100	8800	220,00	55	8,100	2,68
ETP-CL85-106	8800	207,00	58	9,500	3,09
ETP-CL90-112	11000	244,00	60	12,200	3,52
ETP-CL95-120	12800	269,00	61,5	17,100	4,46
ETP-CL100-125	15500	310,00	62	19,950	4,87

Dimensions in mm

Applications

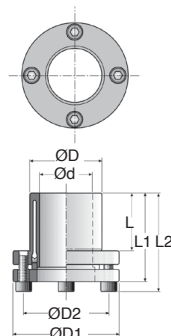
- Machine tools, presses, injection machines requiring frequent adjustment

Assembly

- All keyways **MUST** be refilled.
- **Assembly tolerances:**
 - Shaft h8 - k6 (h7 for size 15 only)
- When using a k6 shaft, transmissible torque (+20%)
- When using a h9 shaft, transmissible torque (-25%)
- Hub H7

Torque

- The transmissible torque T is for a static load.
- If the load is an alternating or pulsating torque, reduce the transmissible torque T by the following factor (factor x T):
 - Alternating : $0.6 \times T$ for sizes 15-30mm.
 - $0.5 \times T$ for sizes 32-100mm.
 - Pulsating : $0.7 \times T$ for sizes 15-30mm.
 - $0.6 \times T$ for sizes 32-100mm.



DISCOUNTS

Qty	1+	9+
Disc.	List	On request

Part number	Ød	ØD	ØD2	ØD2*	L	L1	L2	Nb	R	Screws DIN915		Price each 1 to 8
										Tt (Nm)		
ETP-CL15-23	15	23	38	28.5	17	30	35	3	M5	6		145,50 €
ETP-CL19-28	19	28	45	35,0	21	37	42	3	M5	8		146,64 €
ETP-CL20-28	20	28	45	35,0	22	37	42	3	M5	8		149,85 €
ETP-CL22-32	22	32	49	40,0	22	37	42	4	M5	8		151,08 €
ETP-CL24-34	24	34	49	40,0	25	40	45	4	M5	8		152,65 €
ETP-CL25-34	25	34	49	40,0	27	43	48	4	M5	8		157,10 €
ETP-CL28-39	28	39	55	46,0	29	45	50	4	M5	8		165,09 €
ETP-CL30-41	30	41	57	47,5	32	47	52	4	M5	8		177,85 €
ETP-CL32-43	32	43	60	50,5	34	52	57	4	M5	8		179,51 €
ETP-CL35-47	35	47	63	53,5	37	55	60	6	M5	8		199,53 €
ETP-CL38-50	38	50	65	56,0	41	59	64	6	M5	8		211,56 €
ETP-CL40-53	40	53	70	60,5	43	63	68	6	M5	8		221,60 €
ETP-CL42-55	42	55	70	60,5	45	65	70	6	M5	8		230,03 €
ETP-CL45-59	45	59	77	66,5	49	69	75	6	M6	13		250,02 €
ETP-CL48-62	48	62	80	69,5	52	73	79	6	M6	13		265,29 €
ETP-CL50-65	50	65	83	72,5	53	76	82	6	M6	13		276,48 €
ETP-CL55-71	55	71	88	78,0	58	82	88	8	M6	13		303,76 €
ETP-CL60-77	60	77	95	84,5	64	90	96	8	M6	13		329,78 €
ETP-CL65-84	65	84	102	91,0	68	96	102	8	M6	13		371,06 €
ETP-CL70-90	70	90	113	99,0	72	99	107	6	M8	32		435,99 €
ETP-CL75-95	75	95	118	104,0	85	114	122	6	M8	32		720,05 €
ETP-CL80-100	80	100	123	109,0	90	120	128	6	M8	32		758,10 €
ETP-CL85-106	85	106	129	115,0	95	125	133	6	M8	32		1194,51 €
ETP-CL90-112	90	112	135	121,0	100	133	141	8	M8	32		1007,32 €
ETP-CL95-120	95	120	143	129,0	105	139	147	8	M8	32		1443,30 €
ETP-CL100-125	100	125	148	134,0	110	145	153	8	M8	32		1156,02 €

Dimensions in mm

Hydraulic locking assembly **New**



ETP-EXPRESS®

- **Single screw means extremely quick to mount/unmount**
- Small size
- Radial position of the screw saves space along the shaft
- Accurate positioning, no axial movement during assembly
- Good concentricity
- Materials:
Steel
- Working temp: -30/+85°C

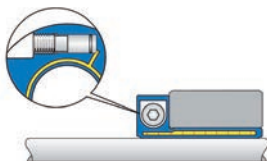


Applications

- Machine tools, presses, injection machines requiring frequent adjustment

Info

- When the screws are tightened with a torque T_t :
 T = transmissible torque (axial force = 0)
 FA = Transmissible axial force (torque = 0)
 FR = Transmissible radial force
 Max authorised bending torque is 5% of transmissible torque T



Part number	Torque T (Nm)	Transmissible Axial force FA (kN)	Radial force FR (kN)	Polar moment of inertia ($\text{kgm}^2 \cdot 10^{-3}$)	Weight (kg)
ETP-EX15-18	46	5,1	0,5	0,04	0,16
ETP-EX19-23	85	7,3	1	0,06	0,2
ETP-EX20-24	110	9,1	1	0,07	0,21
ETP-EX22-27	130	9,6	1,2	0,1	0,25
ETP-EX24-29	190	13	1,4	0,11	0,27
ETP-EX25-30	230	15	1,5	0,12	0,27
ETP-EX28-34	280	16	1,8	0,17	0,34
ETP-EX30-36	380	21	2	0,19	0,35
ETP-EX32-39	440	22	2,2	0,25	0,42
ETP-EX35-42	640	30	2,5	0,32	0,48
ETP-EX38-46	890	38	2,8	0,76	0,84
ETP-EX40-48	1100	45	3	0,84	0,88
ETP-EX42-51	1100	43	3,2	0,97	0,96
ETP-EX45-54	1400	51	3,5	1,17	1,05
ETP-EX48-59	1700	57	4	1,46	1,21
ETP-EX50-60	1900	63	4,5	1,52	1,2
ETP-EX55-67	2400	71	5	2,18	1,5
ETP-EX60-73	3300	90	5,3	3,17	1,85
ETP-EX65-79	4400	112	5,6	4,1	2,13
ETP-EX70-85	5600	130	6,4	7,12	3,04
ETP-EX80-97	8700	180	7,5	10,35	3,75
ETP-EX90-109	12000	220	8,6	15,2	4,8
ETP-EX100-121	17000	280	9,7	21,9	5,9

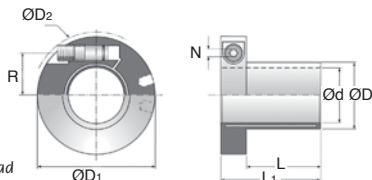
Dimensions in mm

Assembly

- All keyways **MUST** be refilled.
- **Assembly tolerances**
Shaft h7 for d=15mm
Arbre k6-h7 pour
Shaft k6-h7 for d=19,22,24,28,32,38,
42,48 and 55mm
Shaft h8 for all other sizes
Hub H7

Torque

- The transmissible torque T is for a static load
- If the load is an alternating or pulsating torque, reduce the transmissible torque T by the following factor (factor x T)
Alternating : 0,5 x T
Pulsating : 0,6 x T
- Tt = Recommended tightening torque for screws.
- Increasing the torque will not increase the pressure
- *ØD2 is measured before assembly



Quick mounting

DISCOUNTS

Qty	1+	9+
Disc.	List	On request

Part number	Ød	ØD	ØD1	ØD2*	L	L1	Screws DIN915				Price each 1 to 8
							R	N	Tt (Nm)		
ETP-EX15-18	15	18	46	48,9	25	39	M10	15,1	5	5	186,34 €
ETP-EX19-23	19	23	50,5	53	28	42	M10	17,4	5	5	187,08 €
ETP-EX20-24	20	24	51,5	54,1	30	44	M10	18	5	5	191,95 €
ETP-EX22-27	22	27	55,5	60,5	32	46	M10	19,3	5	5	193,09 €
ETP-EX24-29	24	29	57,5	62,3	33	47	M10	20,3	5	5	193,93 €
ETP-EX25-30	25	30	58	62,9	35	49	M10	20,8	5	5	200,34 €
ETP-EX28-34	28	34	63	69,6	38	52	M10	22,6	5	5	210,00 €
ETP-EX30-36	30	36	64,5	71	40	54	M10	23,6	5	5	226,79 €
ETP-EX32-39	32	39	68,5	77,7	42	56	M10	24,8	5	5	228,35 €
ETP-EX35-42	35	42	73	85,1	45	59	M10	26,4	5	5	255,21 €
ETP-EX38-46	38	46	84,5	89,5	52	72	M16	31	8	21	270,05 €
ETP-EX40-48	40	48	86,5	91,2	55	75	M16	32	8	21	282,49 €
ETP-EX42-51	42	51	89	93,5	56	76	M16	33,2	8	21	294,10 €
ETP-EX45-54	45	54	93	100,3	58	78	M16	34,8	8	21	318,90 €
ETP-EX48-59	48	59	97	103,8	59	79	M16	36,8	8	21	339,44 €
ETP-EX50-60	50	60	98,5	105,1	60	80	M16	37,5	8	21	354,15 €
ETP-EX55-67	55	67	106	115,9	65	85	M16	40,5	8	21	388,28 €
ETP-EX60-73	60	73	115,5	132,7	70	90	M16	43,3	8	21	421,14 €
ETP-EX65-79	65	79	120,5	137	75	95	M16	46,1	8	21	474,05 €
ETP-EX70-85	70	85	135,5	153,9	85	109	M20	50,8	10	39	557,74 €
ETP-EX80-97	80	97	145,5	162,6	95	119	M20	56,3	10	39	968,42 €
ETP-EX90-109	90	109	155,5	171,7	105	129	2xM20**	61,8	10	39	1287,44 €
ETP-EX100-121	100	121	166	181	115	139	2xM20**	67,3	10	39	1478,55 €

Dimensions in mm

- **Single screw means extremely quick to mount/unmount**
- Small size
- Radial position of the screw saves space along the shaft
- Accurate positioning, no axial movement during assembly
- Good concentricity
- All parts exposed to the environment are made of stainless steel.
- Flat profile allows easy cleaning.
- Lubricant on fixing screw is approved for use in "food" environments
- Materials:
 - Stainless steel 1.45057
- Working temp: -30/+85°C

stainless steel

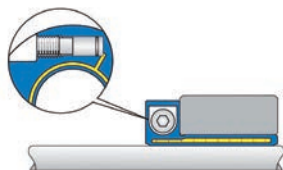


Applications

- Machine tools, presses, injection machines requiring frequent adjustment

Info

- When the screws are tightened with a torque T_t :
 T = transmissible torque (axial force = 0)
 FA = Transmissible axial force (torque = 0)
 FR = Transmissible radial force
 Max authorised bending torque is 5% of transmissible torque T



Part number	Torque T (Nm)	Transmissible		Polar moment of inertia ($\text{kgm}^2 \cdot 10^{-3}$)	Weight (kg)
		Axial force FA (kN)	Radial force FR (kN)		
ETP-EX15-18/SS	46	5,1	0,5	0,04	0,16
ETP-EX20-24/SS	110	9,1	1	0,07	0,21
ETP-EX25-30/SS	230	15	1,5	0,12	0,27
ETP-EX30-36/SS	380	21	2	0,19	0,35
ETP-EX35-42/SS	640	30	2,5	0,32	0,48
ETP-EX40-48/SS	1100	45	3	0,84	0,88
ETP-EX45-54/SS	1400	51	3,5	1,17	1,05
ETP-EX50-60/SS	1900	63	4,5	1,52	1,2
ETP-EX60-73/SS	3300	90	5,3	3,17	1,85
ETP-EX70-85/SS	5600	130	6,4	7,12	3,04
ETP-EX80-97/SS	8700	180	7,5	10,35	3,75

Dimensions in mm

WORM AND WHEEL GEAR REDUCER



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WORM AND WHEEL GEAR REDUCER



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WORM AND WHEEL GEAR REDUCER



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OPTIONAL OUTPUT SHAFT



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DOUBLE REDUCTION WORM GEAR REDUCERS



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