Fenner Drives®

Trantorque® GTR

Keyless Bushings

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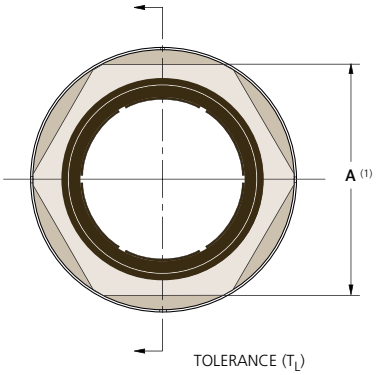
Fenner Drives, a worldwide leader in mechanical power transmission and motion control solutions, is pleased to present Trantorque GTR, the newest addition to our line of Keyless Bushings. The Trantorque GTR product line is designed specifically with Fenner Drives' customers in mind who are seeking an alternative to Trantorque GT while maintaining the existing ID/OD relationship. Trantorque GTR has exceptional concentricity, the ability to transmit bending loads, and limited axial movement during installation.

Trantorque GTR Metric

Part Number	d (mm)	D (mm)	L (mm)	L_1 (mm)	A [1] (mm)	B (mm)	M_a	M_t	Th	P_h	D_N [2]	Shipping Weight (kg)
								Maximum Transmitted				
							Install Torque (Nm)	Torque (Nm)	Thrust (kN)	Hub Pressure (N/mm^2)	Minimum Hub Diameter (mm)	
TTQR2015	15	38.0	19.7	38.1	32	8.0	113	168	22.4	79	49.3	0.2
TTQR2016	16	38.0	19.7	38.1	32	8.0	113	179	22.4	79	49.3	0.2
TTQR2017	17	38.0	19.7	38.1	32	8.0	113	190	22.4	79	49.3	0.2
TTQR2018	18	38.0	19.7	38.1	32	8.0	113	201	22.4	79	49.3	0.2
TTQR2019	19	38.0	19.7	38.1	32	8.0	113	213	22.4	79	49.3	0.2
TTQR2020	20	45.0	20.2	42.6	38	11.1	141	233	23.3	68	56.2	0.3
TTQR2022	22	45.0	20.2	42.6	38	11.1	141	257	23.3	68	56.2	0.3
TTQR2024	24	45.0	20.2	42.6	38	11.1	141	280	23.3	68	56.2	0.3
TTQR2025	25	45.0	20.2	42.6	38	11.1	141	292	23.3	68	56.2	0.3
TTQR2028	28	51.0	20.4	49.1	46	12.7	164	325	23.2	59	61.9	0.4
TTQR2030	30	51.0	20.4	49.1	46	12.7	164	348	23.2	59	61.9	0.4
TTQR2032	32	51.0	20.4	49.1	46	12.7	164	372	23.2	59	61.9	0.4
TTQR2034	34	60.5	28.9	57.6	50	14.3	249	520	30.6	46	70.4	0.8
TTQR2035	35	60.5	28.9	57.6	50	14.3	249	535	30.6	46	70.4	0.8
TTQR2036	36	60.5	28.9	57.6	50	14.3	249	551	30.6	46	70.4	0.7
TTQR2038	38	60.5	28.9	57.6	50	14.3	249	581	30.6	46	70.4	0.7
TTQR2040	40	67.0	31.5	64.9	60	14.3	294	650	32.5	41	76.5	0.8
TTQR2042	42	67.0	31.5	64.9	60	14.3	294	682	32.5	41	76.5	0.8
TTQR2045	45	73.0	37.6	74.2	65	15.9	339	761	33.8	33	81.1	1.2
TTQR2048	48	73.0	37.6	74.2	65	15.9	339	812	33.8	33	81.1	1.1
TTQR2050	50	73.0	37.6	74.2	65	15.9	339	845	33.8	33	81.1	1.0

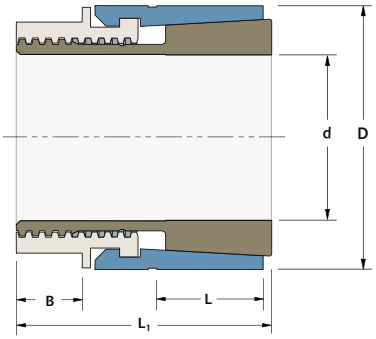
[1] Designates wrench size
[2] Required hub OD for 1045 h.r. steel hub assuming 45 ksi (310 N/mm^2) Yield Point and Stress Reduction Factor C=1 (see Keyless Bushings catalog or website for details)

Please contact our Applications Engineering group at 1-800-243-3374 or ae@fennerdrives.com for more information specific to your application.



TOLERANCE (T_L)

T_L for shaft and bore is ± .08mm (± .003") for all sizes



Trantorque GTR Inch

Part Number	d (inch)	D (inch)	L (inch)	L_1 (inch)	A (1) (inch)	B (inch)	M_a Install Torque (ft lb)	M_t Maximum Transmitted Torque (ft lb)	Th Maximum Transmitted Thrust (lbs)	P_h Hub Pressure (psi)	D_N (2) Minimum Hub Diameter (inch)	Shipping Weight (lb)
TTQR1010	5/8	1 1/2	0.78	1.50	1 1/4	5/16	83	131	5028	11459	1.946	0.5
TTQR1011	11/16	1 1/2	0.78	1.50	1 1/4	5/16	83	144	5028	11459	1.946	0.5
TTQR1012	3/4	1 1/2	0.78	1.50	1 1/4	5/16	83	157	5028	11459	1.946	0.4
TTQR1013	13/16	1 3/4	0.80	1.68	1 1/2	7/16	104	178	5245	9990	2.193	0.8
TTQR1014	7/8	1 3/4	0.80	1.68	1 1/2	7/16	104	191	5245	9990	2.193	0.7
TTQR1015	15/16	1 3/4	0.80	1.68	1 1/2	7/16	104	205	5245	9990	2.193	0.7
TTQR1100	1	1 3/4	0.80	1.68	1 1/2	7/16	104	219	5245	9990	2.193	0.6
TTQR1101	1 1/16	2	0.80	1.93	1 3/4	1/2	121	231	5219	8631	2.429	1.0
TTQR1102	1 1/8	2	0.80	1.93	1 3/4	1/2	121	245	5219	8631	2.429	1.0
TTQR1103	1 3/16	2	0.80	1.93	1 3/4	1/2	121	258	5219	8631	2.429	0.9
TTQR1104	1 1/4	2	0.80	1.93	1 3/4	1/2	121	272	5219	8631	2.429	0.8
TTQR1105	1 5/16	2 3/8	1.14	2.27	2	9/16	183	376	6874	6756	2.763	1.7
TTQR1106	1 3/8	2 3/8	1.14	2.27	2	9/16	183	394	6874	6756	2.763	1.6
TTQR1107	1 7/16	2 3/8	1.14	2.27	2	9/16	183	412	6874	6756	2.763	1.5
TTQR1108	1 1/2	2 3/8	1.14	2.27	2	9/16	183	430	6874	6756	2.763	1.5
TTQR1109	1 9/16	2 5/8	1.24	2.56	2 1/4	9/16	217	475	7297	5952	2.999	2.1
TTQR1110	1 5/8	2 5/8	1.24	2.56	2 1/4	9/16	217	494	7297	5952	2.999	2.0
TTQR1111	1 11/16	2 5/8	1.24	2.56	2 1/4	9/16	217	513	7297	5952	2.999	1.9
TTQR1112	1 3/4	2 5/8	1.24	2.56	2 1/4	9/16	217	532	7297	5952	2.999	1.7
TTQR1113	1 13/16	2 7/8	1.48	2.92	2 1/2	5/8	250	574	7597	4738	3.195	2.7
TTQR1114	1 7/8	2 7/8	1.48	2.92	2 1/2	5/8	250	594	7597	4738	3.195	2.6
TTQR1115	1 15/16	2 7/8	1.48	2.92	2 1/2	5/8	250	613	7597	4738	3.195	2.4
TTQR1200	2	2 7/8	1.48	2.92	2 1/2	5/8	250	633	7597	4738	3.195	2.3

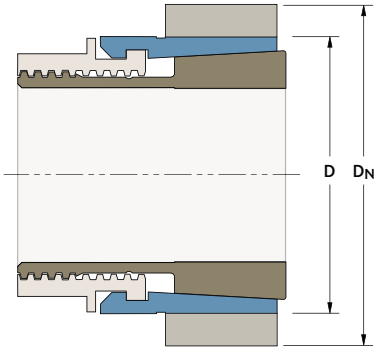
(1) Designates wrench size

(2) Required hub OD for 1045 h.r. steel hub assuming 45 ksi (310 N/mm^2) Yield Point and Stress Reduction Factor C=1 (see Keyless Bushings catalog or website for details)

Please contact our Applications Engineering group at 1-800-243-3374 or ae@fennerdrives.com for more information specific to your application.

Trantorque® GTR Keyless Bushings — Hub Diameter Comparison Chart

Fenner Drives Keyless Bushings transmit torque and other loads by means of mechanical interference generated by pressure exerted on both the shaft and mounted component hub. Therefore, consideration must be given to the amount of hub material (wall thickness) required to prevent permanent expansion (i.e., yielding).



The internal pressure applied to the bore of the mounted component hub by a GTR is slightly greater than that generated by a GT with the same ID/OD relationship. For this reason, the higher hub pressures will require slightly larger minimum hub diameters to prevent permanent expansion of the mounted component.

The chart below shows the minimum hub diameters one can expect to see for a GT and GTR for comparable sized units. Three industry standard hub materials were chosen; AISI 1020, a low carbon steel; AISI 1045, a medium carbon steel and AISI 4140, an alloy steel. The respective yield points used in this example are 32,000 psi, 45,000 psi and 90,000 psi for the inch system, and 220 N/mm², 310 N/mm² and 620 N/mm² for the metric system*.

INCH

D Component Bore (inch)	Minimum Hub Diameter, D_N (inch)					
	32000 psi		45000 psi		90000 psi	
	GTR	GT	GTR	GT	GTR	GT
1 1/2	2.182	2.146	1.946	1.925	1.705	1.696
1 3/4	2.417	2.369	2.193	2.163	1.956	1.943
2	2.637	2.565	2.429	2.383	2.202	2.182
2 3/8	2.943	2.918	2.763	2.747	2.561	2.553
2 5/8	3.169	3.123	2.999	2.968	2.805	2.791
2 7/8	3.337	3.281	3.195	3.157	3.031	3.012

METRIC

D Component Bore (mm)	Minimum Hub Diameter, D_N (mm)					
	220 N/mm²		310 N/mm²		620 N/mm²	
	GTR	GT	GTR	GT	GTR	GT
38.0	55.4	54.5	49.3	48.8	43.2	43.0
45.0	61.9	61.0	56.2	55.7	50.2	50.0
51.0	67.2	65.5	61.9	60.8	56.1	55.7
60.5	74.9	74.4	70.4	70.0	65.2	65.1
67.0	80.8	79.8	76.5	75.8	71.6	71.2
73.0	84.8	83.4	81.1	80.2	77.0	76.5

* Please note the yield points chosen are for demonstrative purposes only. The actual material yield point for your material should be obtained by acquiring a mill specification from your material supplier.

See Fenner Drives Keyless Bushings Catalog or our website for more information on hub sizing. Please contact our Applications Engineering group at 1-800-243-3374 or ae@fennerdrives.com for more information specific to your application.

Fenner Drives®
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