

GRIP TIGHT® BUSHING

NEW! DODGE® GRIP TIGHT BUSHING

We proudly introduce a revolutionary new keyless bushing system that is ideal for lower-torque, rotating shaft systems. The GRIP TIGHT bushing is optimally suited for applications in which concentricity, balance, and vibration control are important, decreasing maintenance costs and increasing productivity and uptime. The 360-degree contact provides a secure fit onto the shaft, eliminates shaft damage, and makes the use of keys obsolete.



Features/Specifications

- Ease of installation and removal - equipment using the GRIP TIGHT bushing needs little modification, like tapering the bore and drilling/tapping
- No need to machine your shaft for key seats or tight tolerances
- Concentric contact on shaft for better grip > Less vibration
- Usable with commercial shafting > Reduction in material cost
- No set screws contacting the shaft - no fretting corrosion
- Superior balanced system
- Same bushing concept used in bearings, fan hubs, and sheaves

Possible Application:

- Fan and Air-Handling Systems
- Cooling Wheels
- Low-Torque Mixers
- Pumps
- With Sheaves, Sprockets and Couplings

✓ Aggregate/Cement

✓ Food

Mining

✓ Forest/Paper

Petro/Chem

✓ Unit/Baggage Handling

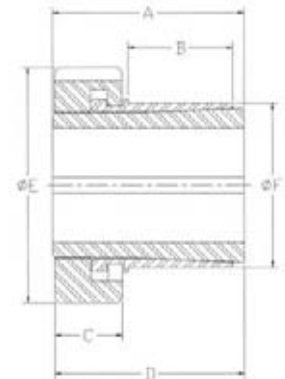
✓ HVAC/Industrial Air Handling

✓ Environmental/Fluid Power

✓ Automotive

✓ Metals

Shaft Size	Series	Part Number	A	B	C	D	E	F	Recommended Housing Bore Tolerance	Locknut Rotation From Zero
1	205	111940	1.46	.80	.52	1.43	1.80	1.256	+0.040" - 0	2/3 Turn
1-3/16	206	111941	1.61	.94	.53	1.58	2.00	1.445	+0.040" - 0	2/3 Turn
1-7/16	207	111942	1.62	.98	.53	1.59	2.30	1.693	+0.040" - 0	2/3 Turn
1-1/2	208	111943	1.84	1.12	.53	1.81	2.50	1.932	+0.040" - 0	2/3 Turn
1-11/16	209	111944	1.85	1.15	.53	1.82	2.67	2.080	+0.047" - 0	2/3 Turn
1-15/16	210	111945	1.86	1.16	.53	1.83	2.94	2.312	+0.047" - 0	1 Turn
2-3/16	211	111946	1.93	1.23	.53	1.90	3.25	2.564	+0.047" - 0	1 Turn
2-7/16	212	111947	2.12	1.33	.60	2.09	3.50	2.782	+0.047" - 0	1 Turn
2-11/16	214	111948	2.39	1.59	.62	2.36	3.81	3.083	+0.047" - 0	1 Turn
2-15/16	215	111949	2.56	1.66	.75	2.53	4.25	3.410	+0.055" - 0	1 Turn
3-7/16	218	111950	2.77	1.83	.75	2.74	4.50	3.962	+0.055" - 0	1 Turn



Instruction Manual For GRIP TIGHT Bushing

WARNING - To ensure that drive is not unexpectedly started, turn off and lock out or tag power source before proceeding. Failure to observe these precautions could result in bodily injury.

Shaft & Mounting Surface Inspection

Shaft should be smooth, straight, & within commercial tolerances (TABLE 1). Remove any burrs from the shaft and bore of the mounting surface with Emory cloth and then clean.

TABLE 1

Table #1 - Shaft Tolerances	
Shaft Size (in)	Commercial Shaft Tolerances (in)
Up to 1-1/2"	+0.000" to -0.002"
1-5/8" to 2-1/2"	+0.000" to -0.003"
2-11/16" to 3-7/16"	+0.000" to -0.004"

Assemble GRIP TIGHT Bushing

(NOTE: This step is only necessary if GT Bushing has been disassembled)

- Place locknut into bushing sleeve groove.
- Insert threaded adapter sleeve through the bushing sleeve, opposite the nut side, until it rests against the locknut.
- Rotate locknut clockwise until adapter sleeve threads have been engaged.

ILLUSTRATION A



Installation

Note: When mounting 2 GRIP TIGHT Bushings with the same component, special attention must be given to the installation process as the mounting procedure of the second bushing assembly differs from the first.

First GRIP TIGHT Bushing

- Secure the shaft and slide the FIRST GT Bushing over the shaft and into the bore of the component to be secured. If the unit will not slip onto the shaft, hold the adapter and rotate the locknut counter clockwise to expand the adapter sleeve.
- (Using Gloves) rotate locknut clockwise by hand as tight as possible. When this step is completed, neither the component or adapter sleeve should be able to slide axially on the shaft. It may be necessary to tap on the OD of the locknut during the tightening process, if the adapter is spinning with the locknut.
- Scribe a line on the locknut above the adapter sleeve slot. Lock the assembly by rotating the locknut with a spanner wrench or drift pin & hammer, clockwise by the amount shown in (TABLE 2).

TABLE 2

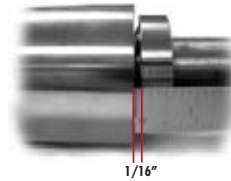
Table #2 - Locknut Tightening Rotation	
Shaft Size (in)	Locknut Rotation
Up to 1-11/16"	2/3 Turn
1-15/16" to 3-7/16"	1 Turn

- Tighten setscrew found on the O.D. of the locknut, with a 3/32" hex key to 25 in.-lbs., or until hex key bends.

Second GRIP TIGHT Bushing

- Slide the SECOND GT Fan Bushing Assembly over the shaft and into the bore of the component being secured leaving a 1/16" gap between the bushing face and component shoulder (See ILLUSTRATION B)
- (Maintaining the 1/16" gap) Using gloves rotate locknut clockwise by hand until it is tight such that the adapter sleeve grips & does not spin on the shaft. Tapping the O.D. of the nut may be required during this step.
- Continue mounting by referring to steps 3a. through 4a.

ILLUSTRATION B



Dismounting

- Secure shaft from rotation.
- Completely loosen set screw which is found on the O.D. of the locknut.
- While tapping on the O.D. of the locknut with a hammer, rotate locknut counter clockwise until assembly freely slides from the shaft.

TABLE 3

Table #3 - Housing Bore Tolerance	
Bushing OD (in)	Housing Bore Tolerance (in)
1.256 - 1.932	+0.0040/-0.0000
2.080 - 3.083	+0.0047/-0.0000
3.410 - 3.962	+0.0055/-0.0000

GRIP TIGHT Bushing Torque Capacities

Series: 205		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
3/4 7/8 15/16 1	2.5	750	1440
		880	1680
		945	1800
		1000	1920
Series: 206		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
1 1 1/8 1 3/16 1 1/4	3.0	1220	2320
		1375	2610
		1450	2750
		1528	2900
Series: 207		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
1 3/16 1 1/4 1 3/8 1 7/16	3.8	1595	3000
		1680	3150
		1850	3470
		1930	3620
Series: 208		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
1 7/16 1 1/2 1 5/8	4.8	2330	4330
		2430	4520
		2630	4890
Series: 209		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
1 1/2 1 5/8 1 11/16 1 3/4	5.3	2530	4680
		2740	5070
		2850	5250
		2950	5460
Series: 210		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
1 11/16 1 3/4 1 15/16 2	5.8	2850	5280
		2950	5480
		3270	6050
		3375	6250
Series: 211		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
1 15/16 2 2 3/16 2 1/4	5.5	4890	9220
		5200	9800
		5350	10100
		5500	10375
Series: 212		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
2 3/16 2 1/4 2 7/16	5.5	5780	10910
		5950	11225
		6450	12150
Series: 214		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
2 7/16 2 1/2 2 11/16	6.0	7150	13660
		7330	14000
		7900	15050
Series: 215		Cast Iron Hub	Steel Hub
Shaft Size	Min Hub OD (in)	CL 30 Iron	50KPSI UTS
		Max Torque (in-lb)	
2 11/16 2 15/16 3	6.8	8400	16000
		9180	17500
		9380	17850



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