



Great Lakes Industry, Inc.

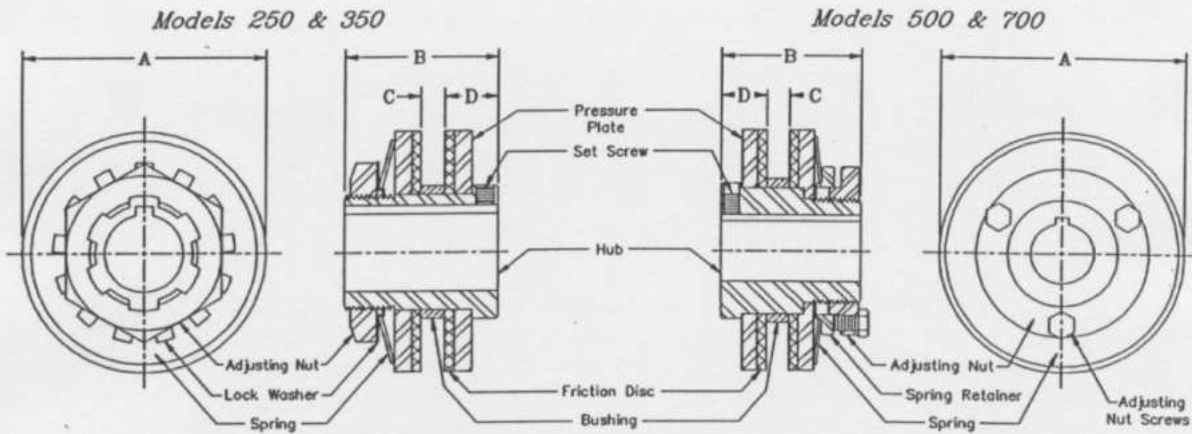
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Torque Limiters
(since 1959!)

GLI's Torque Limiters protect machinery from damage due to unexpected overload conditions. The driven center member slips on nonasbestos friction discs during extraordinary loads on the driveline. The GLI Torque Limiter automatically resets when the overload condition is relieved.

The most commonly used center member is a special A-plate roller chain sprocket. Other suitable drive members include sheaves, synchronous drive pulleys, or special flanges. The center member is machined flat and parallel and fits over a sintered iron bushing which protects the Torque Limiter hub during slippage.

- ★ **Protect Machinery**
- ★ **Reset Automatically**
- ★ **Easy to Adjust**
- ★ **Simple & Economical**
- ★ **Available Off-the-Shelf**



Model	Torque Ratings (lb-ft)				Stock Bore Sizes (inches)		Dimensions (inches)					Wgt (lbs)
	One Spring		Two Springs		Plain Bore	Finished Bore With Keyway	A	B	C		D	
	Min.	Max.	Min.	Max.					Min	Max		
250	25	60	30	95	1/2	1/2, 5/8, 3/4, 7/8, 1	2 1/2	1 3/4	1/8	11/32	5/8	1
350	60	120	60	190	3/4	3/4, 7/8, 1, 1 1/8, 1 3/16, 1 1/4	3 1/2	2 3/16	1/8	1/2	3/4	2
500	90	250	120	400	1	1, 1 1/8, 1 3/16, 1 1/4, 1 3/8, 1 7/16, 1 1/2, 1 5/8	5	2 7/8	1/4	5/8	7/8	7
700	200	620	290	900	1 3/8	1 3/8, 1 7/16, 1 1/2, 1 5/8, 1 3/4, 1 15/16, 2, 2 1/8, 2 3/16, 2 7/16, 2 1/2	7	3 7/8	7/16	3/4	1	17

Torque Ratings

The torque ratings are estimates that may be used as a basis for selection and comparison to other products. Actual torque capacity may vary significantly depending upon many factors.

The center drive member must be flat and parallel with a proper bore size as described on the reverse page. The Torque Limiter should be installed and "run-in" per GLI instructions provided with each shipment.

Field conditions such as oil, humidity, water, and temperature as well as the frequency and duration of slippage all affect torque capacity.

Bore Sizes

GLI offers Torque Limiter hubs with a wide range of finished bore sizes that are provided with USA standard keyways and one set screw. Hubs with a minimum plain bore are available for each model. Special metric bores and keyways per ISO standards are available upon request.

Restrictions on Use

Torque Limiters were not designed to function as clutches and must not be used to engage or disengage drive systems. They should never be used as personal protection devices. They are best suited for low speed mechanical drives where slippage is infrequent and of short duration.

Selection & Ordering

Select the Torque Limiter model that fits your needs based upon torque requirements, shaft/bore size, and size constraints such as diameter, overall length, sprocket specifications, etc.

All Torque Limiters are provided with one spring. For added torque capacity, order an additional spring. Sprockets & bushings are also ordered separately; stock sizes are shown on the reverse page.

Refer to the most recent GLI price list for part numbers and quantity pricing for all Torque Limiter assemblies, extra springs, bushings, sprockets, and replacement parts.

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Torque Limiter Sprockets, Bushings, & Center Members

GLI offers a wide selection of roller chain sprockets that are available off-the-shelf for immediate shipment. A-Plate sprockets are offered with various number of teeth in many ANSI pitch sizes for all Torque Limiter models.

GLI Torque Limiter sprockets are machined from mild steel per ANSI standards. The faces are surface ground or machined flat within .005", parallel within .010" and smooth with a finish of 63-125 microinches.

Model 250		
Sprocket Size	Outside Diameter	Wgt (lbs)
35A25	3.2"	.21
35A26	3.3"	.22
41A19	3.3"	.27
40A19	3.3"	.31
40A20	3.5"	.42
40A21	3.6"	.45
40A22	3.8"	.48
40A23	3.9"	.50
40A24	4.1"	.60
40A25	4.3"	.66
40A28	4.7"	1.00
40A30	5.1"	1.20
50A16	3.5"	.44
50A17	3.7"	.53
50A18	3.9"	.63
50A19	4.1"	.73
50A21	4.5"	.94
50A22	4.7"	1.05
50A23	4.9"	1.17

Model 350		
Sprocket Size	Outside Diameter	Wgt (lbs)
35A33	4.2"	.36
35A35	4.4"	.60
35A40	5.0"	.80
41A26	4.4"	.52
40A26	4.4"	.75
40A28	4.7"	.80
40A30	5.1"	1.10
40A32	5.4"	1.25
50A21	4.5"	.79
50A22	4.7"	1.00
50A23	4.9"	1.08
50A24	5.1"	1.10
50A25	5.3"	1.32
50A26	5.5"	1.44
60A18	4.7"	1.21
60A19	4.9"	1.45
60A20	5.2"	1.67
60A21	5.4"	1.88
60A23	5.9"	2.35

Model 500		
Sprocket Size	Outside Diameter	Wgt (lbs)
41A35	5.9"	.83
40A35	5.9"	1.06
40A40	6.7"	2.25
40A48	7.9"	2.42
50A29	6.1"	1.50
50A30	6.3"	1.90
50A32	6.7"	2.06
50A36	7.5"	2.70
50A40	8.3"	3.30
60A25	6.4"	2.36
60A26	6.6"	2.63
60A28	7.1"	3.19
60A30	7.6"	3.72
80A19	6.6"	3.06
80A20	6.9"	3.34
80A21	7.2"	3.82
80A23	7.9"	5.70
80A24	8.2"	6.10
80A33	11.1"	11.20

Model 700		
Sprocket Size	Outside Diameter	Wgt (lbs)
60A33	8.3"	4.1
60A35	8.8"	4.7
60A36	9.0"	4.9
80A26	8.8"	5.6
80A27	9.2"	6.0
80A28	9.5"	8.0
80A30	10.1"	8.3
80A33	11.1"	10.2
80A36	12.0"	12.8
100A21	9.0"	6.9
100A22	9.4"	7.8
100A24	10.2"	9.9

Specials
 Nonstock sprockets quoted and machined to fit your specific needs.

Bushing Sizes

GLI can provide sintered iron bushings for many ANSI sprocket pitches for all Torque Limiter models. Bushings are ordered separately and are easy to specify. (e.g. "Model 350 Bushing for a #41 Pitch Sprocket")

The length of available bushings is provided below. The bushing lengths are the same for all torque limiter models. This data is helpful when selecting bushings for special center members.

Bushing Lengths	
Bushing # 35	.125"
Bushing # 41	.170"
Bushing # 40/50	.230"
Bushing # 60	.400"
Bushing # 60/80	.400"
Bushing # 80/100	.500"

Center Member Bores

Most applications utilize a sprocket or other driven center member that slips over a bushing on the torque limiter hub. It is also possible to mount the center member directly over the torque limiter hub without using a bushing.

Refer to the table below for bore sizes and tolerances of center members as recommended to maintain proper clearance.

Model	Bore Sizes		Minimum No. of Sprocket Teeth By ANSI Pitch						
	w/ Bushing	No Bushing	#35	#41	#40	#50	#60	#80	#100
	250	1.630" 1.633"	1.374" 1.377"	25	19	19	16	-	-
350	2.005" 2.008"	1.681" 1.684"	33	26	26	21	18	-	-
500	3.005" 3.008"	2.631" 2.634"	-	35	35	29	25	19	-
700	4.196" 4.199"	3.821" 3.824"	-	-	-	-	33	26	21

Minimum Sprocket Sizes

Sprockets used as center members must be large enough in diameter to avoid any contact between the roller chain and the outside diameter of the Torque Limiter pressure plates.

The table below shows the minimum number of teeth that can be specified by ANSI sprocket pitch for each Torque Limiter model size. For example, the smallest #50 pitch sprocket for a Model 350 would have only 21 teeth.

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Sprockets ★ Couplings ★ Spur Gears ★ Idlers

