

## TL SERIES TORQUE LIMITER

The Tsubaki Torque Limiter is a protective device that limits the torque transmitted in a drive system by slipping when the torque demand exceeds a preset value as a result of shock loads, overloads, or machine jams. It automatically reengages when the overload is removed. No resetting is required. Tsubaki Torque Limiters prevent machine damage and eliminate costly downtime.

Tsubaki Torque Limiters utilize spring loaded friction surfaces for their operation and slip torque is preset by adjustment of the spring force by using the adjustment nut or bolts.

Tsubaki Torque Limiters can be used with a sprocket, gear, sheave, or flange plate as the center member clamped between two friction facings. The Tsubaki Torque Limiter ratings are realistic and consistent with optimum spring loads and face pressures that permit longer slip time, maintain re-engagement at preset torque, and provide long lasting protection. This is an important advantage over the shear-pin mechanism which serves only as a one-shot remedy.

### TL200 <sup>-1</sup>/<sub>-2</sub> TL250 <sup>-1</sup>/<sub>-2</sub> TL350 <sup>-1</sup>/<sub>-2</sub>

- Single Nut Adjustment
- Lock Washer to prevent the nut from loosening



### TL10 <sup>-16</sup>/<sub>-24</sub> TL14 <sup>-10</sup>/<sub>-15</sub> TL20 <sup>-6</sup>/<sub>-12</sub>

- 5 to 8 Bolt Adjustment
- Each spring backed up by one adjustment bolt
- Each bolt has a hole through its head for wire to prevent loosening



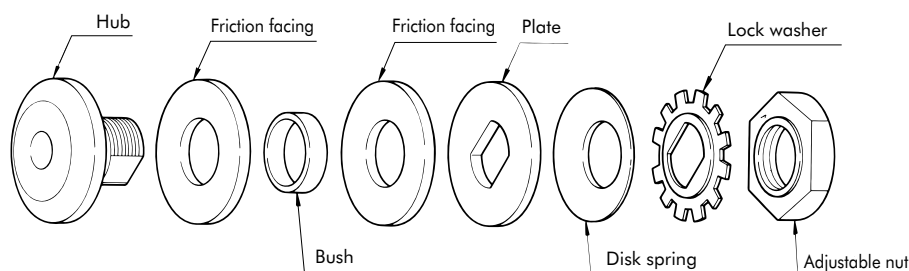
### TL500 <sup>-1</sup>/<sub>-2</sub> TL700 <sup>-1</sup>/<sub>-2</sub>

- Three Bolt Adjustment
- Torque preset by the three bolts (an adjustment nut to fix a pilot plate in place)

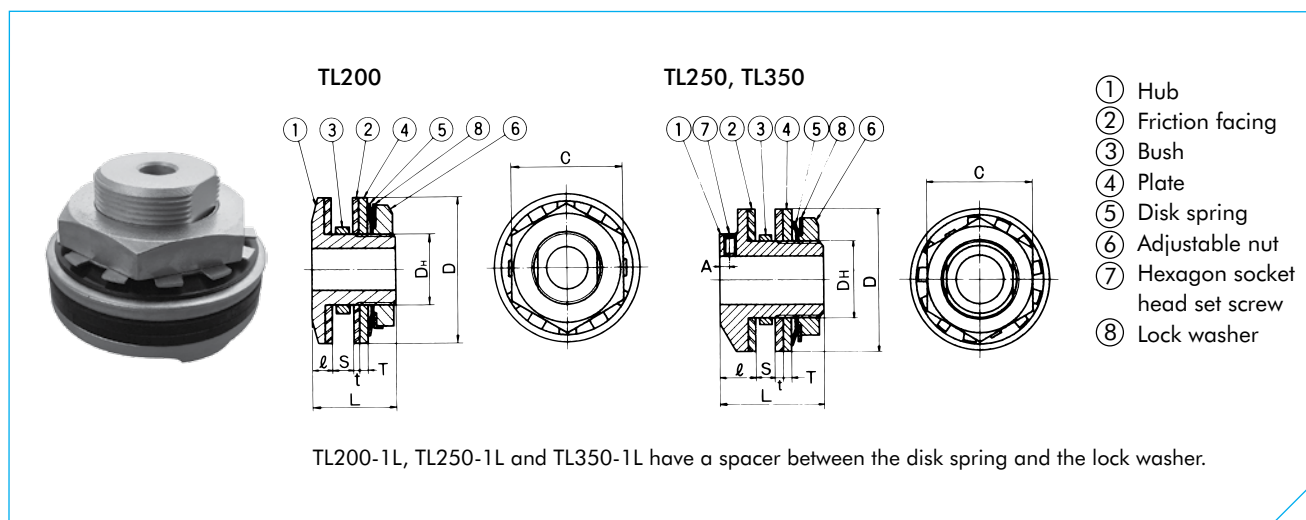


### TL200 <sup>-1</sup>/<sub>-2</sub> C thru TL20 <sup>-6</sup>/<sub>-12</sub> C

The Torque Limiter Coupling combines overload slip protection with the ability to couple driving and driven shafts. It is an assembly consisting of a Tsubaki Torque Limiter and a Roller Chain Coupling. This construction provides a dependable and easy-to-assemble flexible coupling.



## TL SERIES TORQUE LIMITER

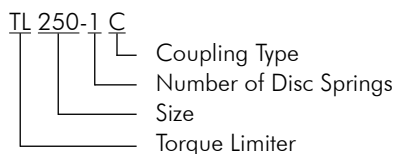


TL

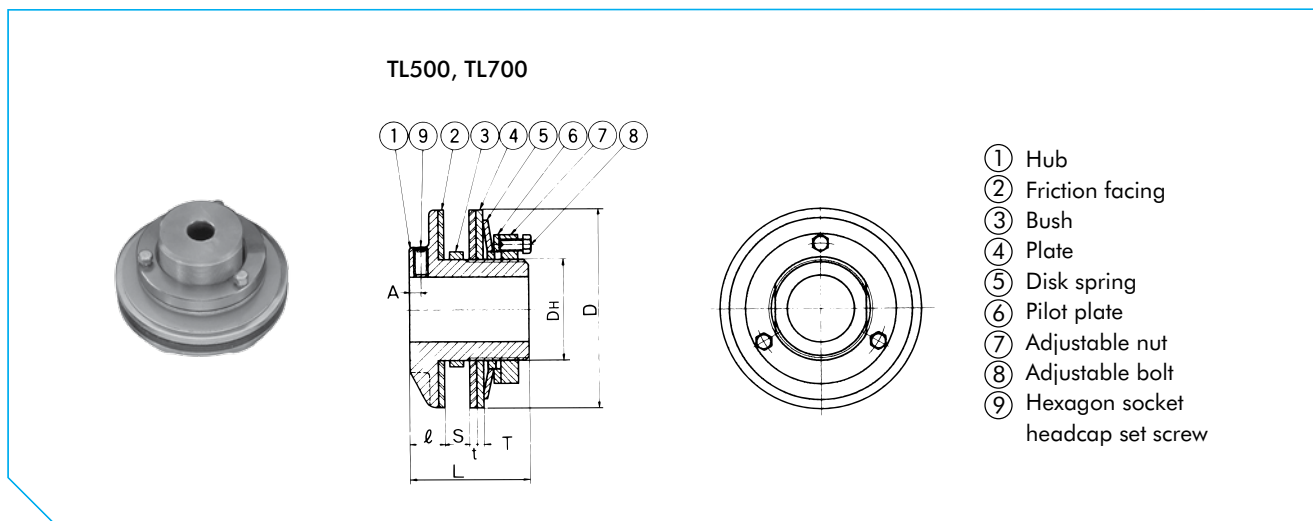
Dimensions in mm

Model	Torque Range Nm	Plain Bore	Max. Bore	Bush Length	O.D. of Bush	Bore for Centre Member	D	D <sub>H</sub>	L	ℓ	T	t	S (max.)	A	C	Adjust. Nut Size x Pitch	Set Screw	Approx. Mass
																		kg/pc
TL200-1	2.9 ~ 9.8	7	14	3.8	30	30	50	24	29	6.5	2.6	2.5	7	-	38	M24 x P1.0	-	0.2
TL200-2	6.9 ~ 20			6.0	-0.024 -0.049	0												0
TL250-1	6.9 ~ 27	10	22	4.5	41	41	65	35	48	16	4.5	3.2	9	4	50	M35 x P1.5	M5	0.6
TL250-2	14 ~ 54			6.5	-0.010 -0.045	0												0
TL350-1	20 ~ 74	17	25	4.5	49	49	89	42	62	19	4.5	3.2	16	6	63	M42 x P1.5	M6	1.2
TL350-2	34 ~ 149			6.5 9.5	-0.025 -0.065	0												0

### Model Identification



## TL SERIES TORQUE LIMITER

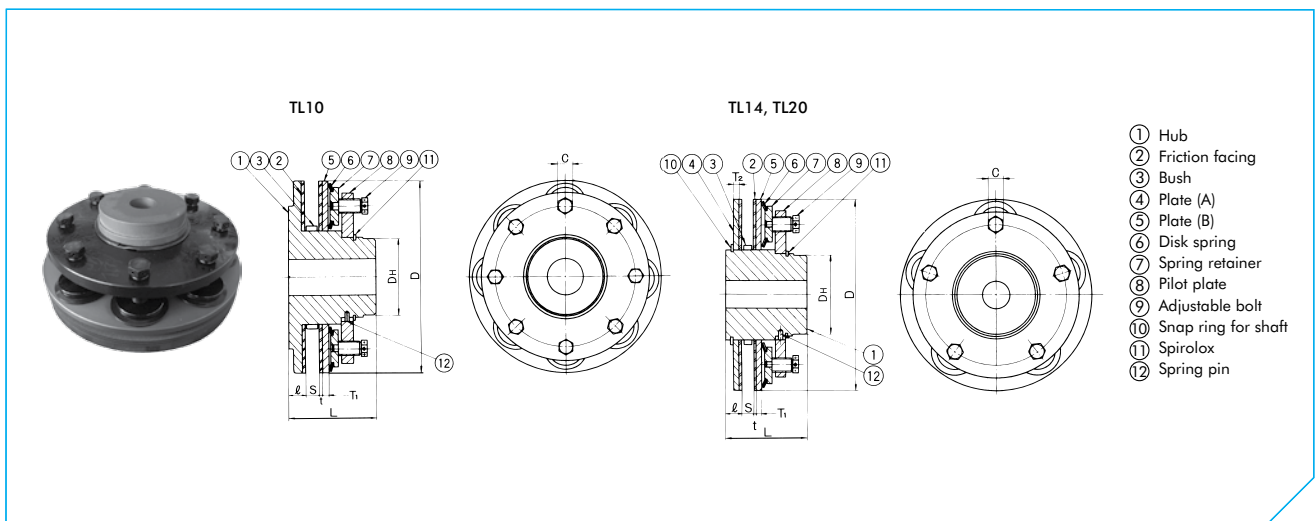


TL

Dimensions in mm

Model	Torque Range Nm	Plain Bore	Max. Bore	Bush Length	O.D. of Bush	Bore for Centre Member	D	D <sub>H</sub>	L	ℓ	T	t	S (max.)	A	C	Adjust. Nut Size x Pitch	Adjust. Bolt Holes x Size x Pitch	Set Screw	Approx. Mass kg/pc
TL500-1	47 ~ 210	20	42	6.5	74 -0.05 -0.10	74 +0.05 0	127	65	76	22	6	3.2	16	7	-	M65 x P1.5	3 x M8 x P1.0	M8	3.5
TL500-2	88 ~ 420			9.5															
TL700-1	116 ~ 569			9.5	105 -0.075 -0.125	105 +0.05 0	178	95	98	24	8	3.2	29	8	-	M95 x P1.5	3 x M10 x P1.25	M10	8.4
TL700-2	223 ~ 1080	30	64	12.5															

## TL SERIES TORQUE LIMITER



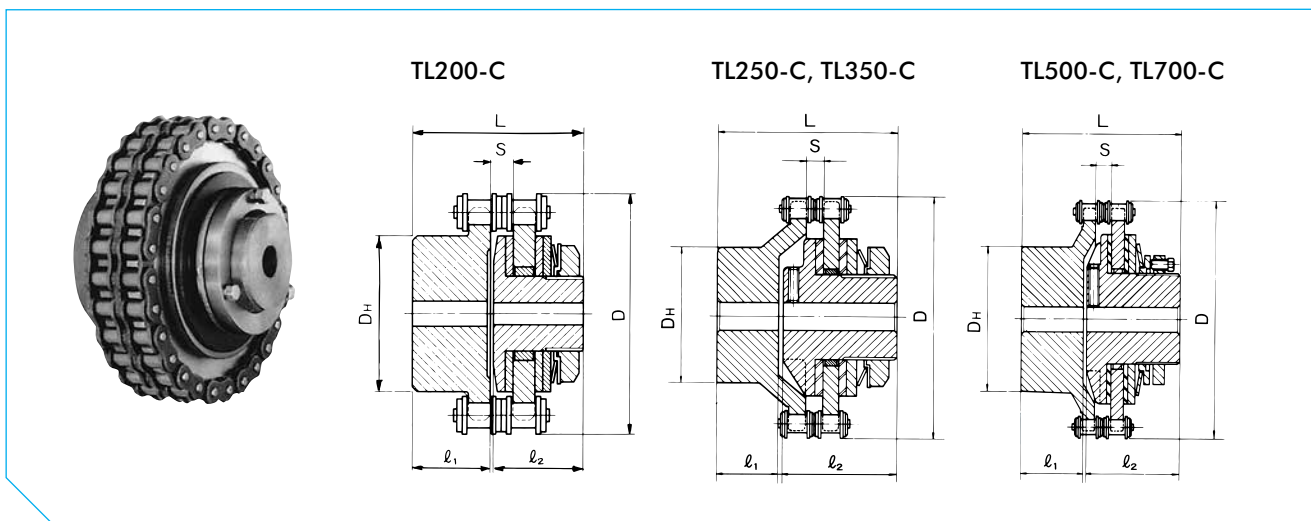
TL

### Dimensions in mm

Model	Torque Range Nm	Plain Bore	Max. Bore	Bush Length	O.D. of Bush	Bore for Centre Member	D	D <sub>H</sub>	L	ℓ	T <sub>1</sub>	T <sub>2</sub>	t	S (max.)	C	Adjust. Bolt Holes x Size x Pitch	Approx. Mass kg/pc
TL10-16*	392 ~ 1247	30	72	12,5	135 <sup>-0.085</sup>	135 <sup>+0.07</sup> <sub>0</sub>	254	100	115	23	15	-	4.0	24	19	8 x M18 x P1.5	21
TL10-24*	588 ~ 1860			15,5	135 <sup>-0.125</sup>	135 <sup>+0.07</sup> <sub>0</sub>	254	100	115	23	15	-	4.0	24	19	8 x M18 x P1.5	21
TL14-10*	882 ~ 2666	40	100	15,5	183 <sup>-0.07</sup>	183 <sup>+0.07</sup> <sub>0</sub>	356	145	150	31	13	13	4.0	29	27	5 x M26 x P1.5	52
TL14-15*	1960 ~ 3920			19,5	183 <sup>-0.12</sup>	183 <sup>+0.07</sup> <sub>0</sub>	356	145	150	31	13	13	4.0	29	27	5 x M26 x P1.5	52
TL20-6*	2450 ~ 4900	50	130	15,5	226 <sup>-0.07</sup>	226 <sup>+0.07</sup> <sub>0</sub>	508	185	175	36	15	18	4.0	31	36	6 x M32 x P1.5	117
TL20-12*	4606 ~ 9310			19,5	226 <sup>-0.12</sup>	226 <sup>+0.07</sup> <sub>0</sub>	508	185	175	36	15	18	4.0	31	36	6 x M32 x P1.5	117

\*= Non-stock item

## TL SERIES TORQUE LIMITER



### Coupling

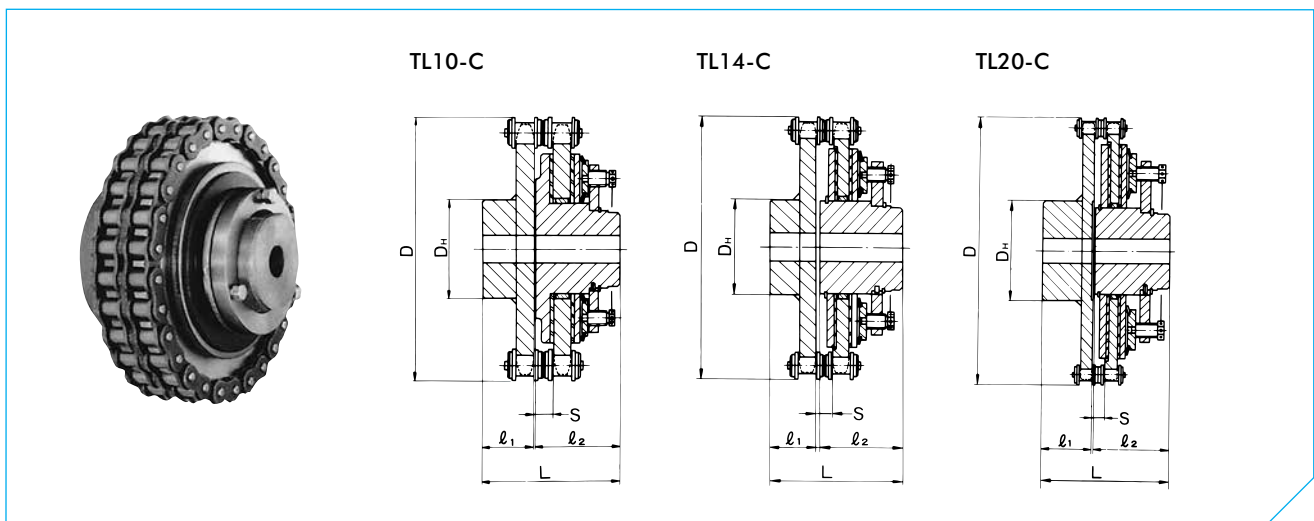
Dimensions in mm

Size	Torque Range Nm	Max. Running Speed r/min	Plain Bore		Max. Bore		Sprocket	D	D <sub>H</sub>	L	l <sub>1</sub>	l <sub>2</sub>	S	Approx. Mass kg/pc
			Coupling Side	TL Side	Coupling Side	TL Side								
TL200-1C	2.9 ~ 9.8	1200	8	7	31	14	RS40-16T	76	50	55	24	29	7.5	1.0
TL200-2C	6.9 ~ 20													
TL250-1C	6.9 ~ 27	1000	13	10	38	22	RS40-22T	102	56	76	25	48	7.4	1.9
TL250-2C	14 ~ 54													
TL350-1C	20 ~ 74	800	13	17	45	25	RS50-24T	137	72	103	37	62	9.7	4.2
TL350-2C	34 ~ 149													
TL500-1C	47 ~ 210	500	18	20	65	42	RS60-28T	188	105	120	40	76	11.6	10.0
TL500-2C	88 ~ 420													
TL700-1C	116 ~ 569	400	23	30	90	64	RS80-28T	251	150	168	66	98	15.3	26.0
TL700-2C	223 ~ 1080													

**Note:**

When the Torque Limiter Coupling is running at max. speed, the chain and sprocket should be lubricated with MoS2 or grease and covered. Please contact Tsubaki when a higher speed is required than those listed above.

## TL SERIES TORQUE LIMITER



### Coupling

Dimensions in mm

Size	Torque Range Nm	Max. Running Speed r/min	Plain Bore		Max. Bore		Sprocket	D	D <sub>H</sub>	L	l <sub>1</sub>	l <sub>2</sub>	S	Approx. Mass kg/pc
			Coupling Side	TL Side	Coupling Side	TL Side								
TL10-16C*	392 ~ 1274	300	33	30	95	72	RS140-22T	355	137	189	71	115	26.2	66
TL10-24C*	588 ~ 1860													
TL14-10C*	882 ~ 2666	200	38	40	118	100	RS160-26T	470	167	235	80	150	30.1	140
TL14-15C*	1960 ~ 3920													
TL20-6C*	2450 ~ 4900	140	43	50	150	130	RS160-36T	631	237	300	120	175	30.1	285
TL20-12C*	4606 ~ 9310													

\*= Non-stock item

**Note:**

When the Torque Limiter Coupling is running at max. speed, the chain and sprocket should be lubricated with MoS2 or grease and covered. Please contact Tsubaki when a higher speed is required than those listed above.