



UJT-500 Series

Friction Torque Limiters

- Flange-mounted universal joint driveshafts
- SAE (Spicer) mounting configurations
- Single, double, and triple disc

PT Tech's UJT-500 Series is a maintenance-free continuously engaged friction type torque limiter. The torque setting is pre-set at the factory. The tamper resistant torque setting can only be changed by installing a different complement of spring cup bolts thus preventing equipment damage due to unauthorized adjustment.

The spring cup bolts are pretested and pre-shimmed to maintain a consistent and predictable force on the friction material. They eliminate the need to adjust the torque limiter torque setting at installation and throughout its wearlife. The spring cup bolts are color-coded according to their strength. The torque is easy to verify by counting the quantity and color of spring bolt assemblies.

The standard output is machined to accept a Spicer industrial driveshaft. The UJT-500 Series is available with optional input and output configurations. The UJT-500 Series clutches are continuously engaged. They are not subject to nuisance trip-outs like releasable torque limiters (shear pins, ball detent, pressurized slip devices, etc.). The UJT will act like a torsional shock absorber and does not limit drive engine performance because the torque setting is above the engine or electric motor's peak torque.



How It Works

The UJT series friction type torque limiters require no adjustment at installation or throughout their entire wearlife. They require no lubrication and no resetting after slip has occurred. Wear can be accurately and readily measured without disturbing the unit.

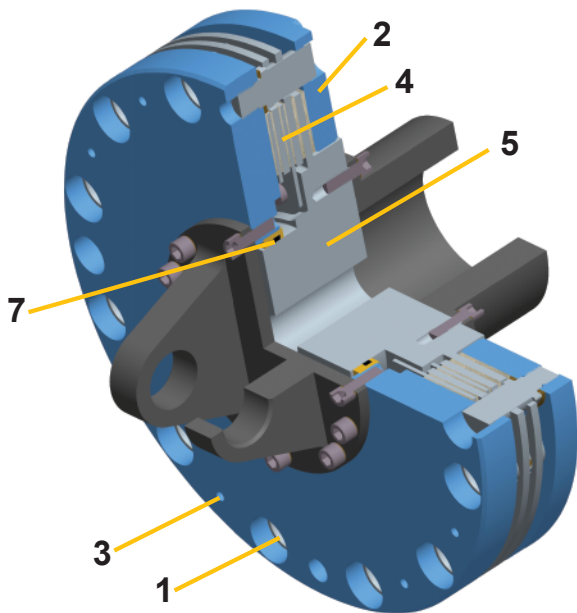
A complement of spring cup bolts assemblies (Item #1) exert a precise clamping force between the pressure plate (Item #2) and input flange (Item #3). This force is transmitted from the input side of the torque limiter to the friction discs (Item #4) that are attached to the output hub (Item #5). The entire output of the torque limiter is shaded.

In the multiple disc UJT torque limiters, the clamping force is transmitted from the input side via the separator plates to the friction plate assemblies that are engaged to the output hub through closely toleranced hardened dowel pins.

A UJT series torque setting is preset at the factory. When the drive system torque exceeds the setting, the torque limiter will slip while continuing to transmit torque equal to the setting. This is possible because the static and dynamic coefficient of the friction material is very similar.

The UJT series torque limiter is designed to operate at motor/engine speed. In most drive systems, the prime mover represents approximately 90-95% of the total system inertia. The UJT series will generally provide excellent inertial shockload protection when located at the prime mover.

For more complete information on inertial shockloads, request PT Tech's "Torque Protection for Electric Motor Driven Equipment" brochure.



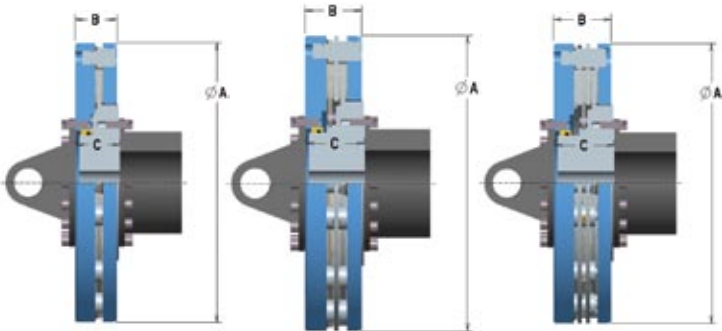
* Couplings are shown for application clarity and not supplied with standard product. Couplings are readily available in the marketplace, also can be ordered from PT Tech upon request.

DIMENSIONAL DATA ¹							
TORQUE LIMITER ²		28	228	328	35	235	335
A Outside Diameter	inches	14.37	14.37	14.37	17.48	17.48	17.48
	mm	-	-	-	-	-	-
B Overall Length	inches	3.23	3.55	3.55	3.45	3.77	3.97
	mm	-	-	-	-	-	-
C Distance Between Flange Faces	inches	2.95	3.42	3.70	3.17	3.72	3.92
	mm	-	-	-	-	-	-
Input Mounting Configuration ³		1710	1810	1810	1810	1810	1810
Output Mounting Configuration ⁴ (Spicer)		1710	1810	1810	1810	1810	1810

UJT 28 and UJT 35

UJT 228 and UJT 235

UJT 328 and UJT 335



PERFORMANCE DATA							
Maximum Torque (lb-ft)	2292	4584	6876	3024	6048	9072	
Number of Spring Cup Bolts ⁵	12	12	12	12	12	12	
Torque per Spring Bolt							
GOLD (lb-ft)	191	382	573	252	504	756	
RED (lb-ft)	131	262	393	174	348	522	
BLUE (lb-ft)	79	158	237	104	208	312	
WHITE (lb-ft)	55	110	165	73	146	219	
Maximum Speed (RPM)	3000	2100	2100	2100	2100	1800	
Inertia - Total (lb-ft ²)	17.4	19.4	21.5	41.3	45.1	48.0	
Inertia - Output Only (lb-ft ²)	2.4	2.7	3.2	6.0	6.9	7.7	
Weight (lbs.)	94	104	114	164	182	198	

¹ All dimensions are subject to change without notice.

² TORQUE LIMITER size designation:

UJT 28 and 35 single disc output

UJT 228 and 235 double disc output

UJT 328 and 335 triple disc output

³ Male pilot.

⁴ Female pilot, wing bearing, or DIN configurations are available.

⁵ For specific applications more spring cup bolts can be added to increase maximum torque. Consult PT Tech for specific application analysis.



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Important Features

Accommodates a variety of driveshafts and couplings

The input and output can be modified to accept DIN or wing bearing style driveshafts or couplings.

No adjustment at installation

Torque limiter is preset at the factory. Problems due to improper torque setting adjustment at installation are virtually eliminated.

No adjustment throughout entire wearlife

Unique spring cup bolts provide consistent force on the friction surfaces as they wear. Problems due to improper adjustment by maintenance personnel are eliminated.

Tamper resistant torque setting

Torque can only be varied by disassembling the torque limiter and changing the strength or quantity of spring cup bolts (Item #1)

Torque setting easily checked

Color-coded spring cup bolts allow quick verification of torque setting. Special equipment and testing to check torque setting is eliminated.

No maintenance

No lubrication and no adjustment feature virtually eliminate periodic maintenance.

Graphited bronze bearing

The UJT series is permanently lubricated for long maintenance-free life (Item #7).

Friction wear easily checked

The external wear indicator (Item #6) allows for a quick check of remaining wearlife.

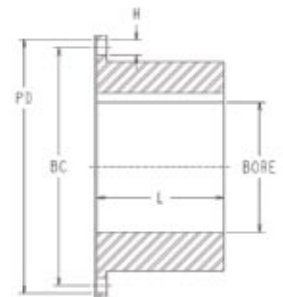
Low output inertia

Provides excellent control of inertial shockloads.

Easy installation

The UJT torque limiter is shipped fully assembled.

COMPANION FLANGE SIZE ¹			
		1710	1810
Max Bore	inches	4.0	4.0
	mm	101.6	101.6
BC Bolt Circle	inches	7.25	7.25
	mm	184.15	184.15
L Bore Length ⁶	inches	4.0	4.0
	mm	101.6	101.6
H Bolt Hole	inches	.38	.44
	mm	9.652	11.176
No. of Bolts		8	12
	Bolt Type	3/8 - 24	7/16 - 20
Bolt Tightening Torque	lb-ft	45	75
PD Pilot Diameters	inches	7.75	7.75
	mm	184.15	184.15



¹ All dimensions are subject to change without notice.

⁶ Dimension may vary slightly between manufacturers.

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* Brochure content subject to change without notice.

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