



UJT-500 SERIES FRICTION TORQUE LIMITERS



UJT-500 Series Torque Limiters

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 detente devices, etc.). The UJT will act like a torsional shock absorber and does not limit engine performance because the torque setting is above the engine or electric motor's peak torque.

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

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
B. Overall length (inches)	3.23	3.55	3.89	3.45	3.77	3.97
C. Distance between flange faces (in.)	2.95	3.50	3.84	3.17	3.72	3.92
Input mounting configuration ³	1710	1710	1810	1810	1810	1810
Output mounting configuration ⁴ (Spicer)	1710	1710	1810	1810	1810	1810
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 (lb-ft):						
Gold	191	382	573	252	504	756
Red	131	262	393	174	348	522
Blue	79	158	237	104	208	312
White	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.)	102	115	130	164	182	198

¹ All dimensions are subject to change without notice.

² TORQUE LIMITER size designation:

UJT 28 and 35 single disc output

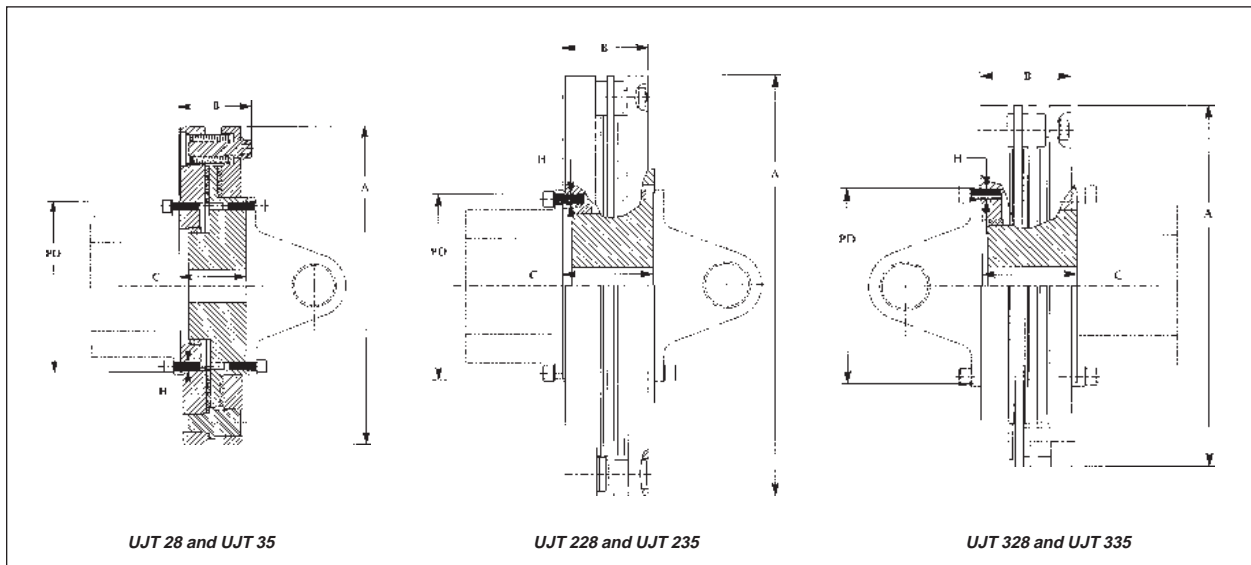
UJT 228 and 235 double disc output

UJT 328 and 335 triple disc output

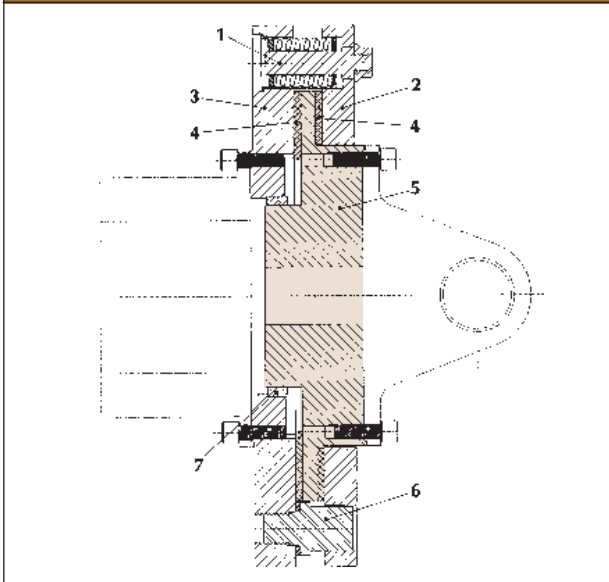
³ Male pilot.

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

⁵ For slow speed applications more spring cup bolts can be added to increase max. torque.



HOW UJT 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 bolt 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 bonded 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 80-90% of the 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.

WARRANTY: PT Tech guarantees all its products will leave the factory in good condition. PT Tech warrants its products against defects in workmanship and material for a period of 365 days (one year) after shipment. Adjustments under this warranty will be made only after completion of inspection of the part or product in PT Tech's factory. PT Tech's liability under the warranty shall extend only to the replacement or correction of any defective part or product determined by PT Tech's inspection as not conforming to this warranty. Under no circumstances shall PT Tech be liable for consequential or incidental damages. This warranty shall not apply to any product which shall have been repaired or altered without PT Tech's knowledge and consent or operated or installed contrary to PT Tech's instruction or subjected to misuse, improper maintenance, or damaged by accident or negligence.

PERFORMANCE ASSURANCE: Rated torque and speeds are provided by PT Tech to assist the buyer in selecting the proper product. In addition, engineering assistance is offered by PT Tech for design and application of custom designed drives. Since the actual performance characteristics of the buyer's equipment cannot be completely analyzed nor duplicated in laboratory tests, performance assurance of all PT Tech products in the buyer's applications is the responsibility of the buyer. Performance assurance is usually accomplished through manufacture of a prototype by PT Tech and a test or qualification program on the part of the buyer.

Rotating equipment is potentially dangerous and should be properly guarded. The user should check all applicable safety codes in his area and provide suitable guards.

IMPORTANT FEATURES

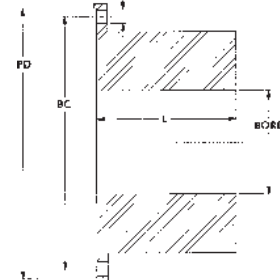
- Accommodates a variety of driveshafts**
 The input and output can be modified to accept DIN or wing bearing style driveshafts.
- No adjustment at installation**
 Torque limiter is preset at the factory. Problems due to improper torque setting adjustment at installation are virtually eliminated.
- No 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 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
BC. Bolt circle (inches)	7.25	7.25
L. Bore length (inches ⁶)	4.0	4.0
H. Bolt hole (inches)	.38	.44
Number 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

¹ All dimensions are subject to change without notice.

⁶ Dimension may vary slightly between manufacturers.



1441 Wolf Creek Trail • P.O. Box 305
 Sharon Center, OH 44274-0305 USA
 TEL (330) 239-4933; FAX (330) 239-2012

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