

## Torque Limiter and TL Coupling FAQ

*We answer your important questions!*

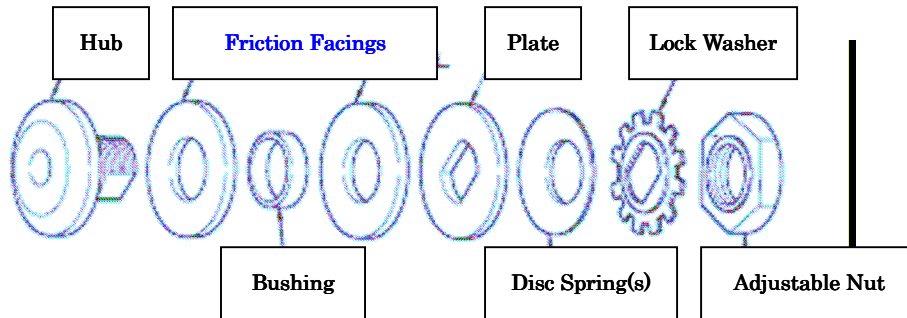
Tsubaki Emerson Co.

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**Q1. Do TEM friction facings contain any asbestos?**

A1.

TEM no longer uses asbestos in its friction facings. Until May 1987, friction facings contained asbestos. From June 1987 to September 1990, both asbestos and non-asbestos friction facings were sold, but as of September 1990, non-asbestos friction facings are standard.



**Q2. What materials are friction facings made of?**

A2.

Mixture of inorganic & organic fibers: 27%, resin: 15%, additive agent: 31%, reinforcer and filler: 27%

**Q3. How is the Torque Limiter TL200 attached to the shaft?**

A3.

Use a shaft snap ring or end plate.

**Q4. I want to use the Torque Limiter Coupling at a higher rotational speed than the maximum prescribed in the catalog.**

A4.

If the sprocket with induction-hardened teeth is chosen, TL200-TL700's size can be used at a maximum 1800r/min. Any size above this can run at approximately 800r/min.

**Q5. Can I use the Torque Limiter in environments where they will be splashed with water or oil?**

A5.

Standard Torque Limiter cannot work in these environments. If the friction facing is splashed with oil or water, the friction coefficient will change and alter the slip torque. These conditions can also cause the facing of these products to rust. If it is necessary to operate in such environments, please contact TEM to discuss possible measures.

**Q6. What is the largest size Torque Limiter & Torque Limiter Coupling TEM can manufacture?**

A6.

Up to 15,000N · m. If a slip torque of more than 15,000N · m is necessary, please consult TEM.

**Q7. What does the “NA” in TL350-2NA mean?**

A7.

*Between 1987-1990, products made with both asbestos and non-asbestos were sold. To differentiate from the old type made with asbestos, NA referred to the non-asbestos type of friction facing. From 1990, all Torque Limiters & Torque Limiter Couplings shipped were non-asbestos, so from that point on no model numbers have included NA.*

**Q8. What is the difference between TL250-1 and TL250-2?**

A8.

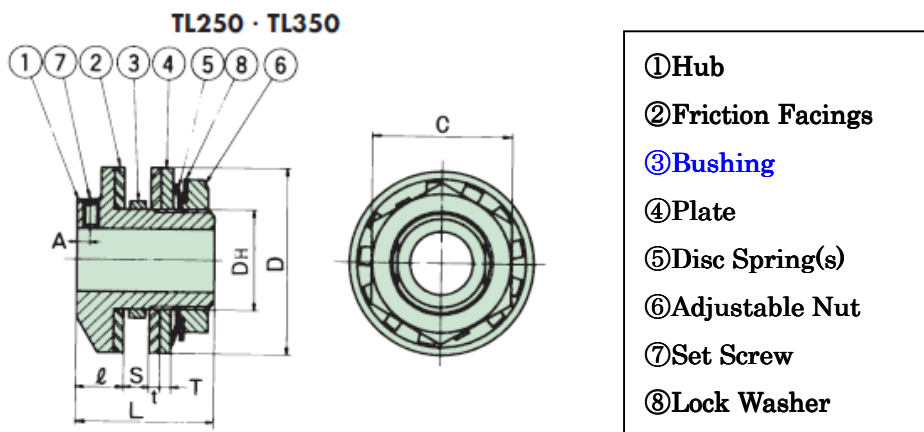
*The last number indicates the number of disk springs.*

*TL250-2 has 2 pieces of the same disk spring TL250-1 uses, superimposed together and facing the same direction. Therefore, the setting torque of TL250-2 is doubled when the nut is tightened at the same amount as TL250-1. All other parts except the number of disk springs are the same.*

**Q9. What is the bushing’s function?**

A9.

*When the Torque Limiter slips, the bushing receives the radial load on the hub.*



**Q10. When attaching the RS50-30T sprocket to TL500-1, which bushing should I select?**

A10.

*For the bush length (thickness), choose the longest thickness bush, which is shorter than the thickness of the center member (sprocket, etc.).*

*In the case of RS50, it's B6.5 (6.5mm).*

**Q11. What are the machining dimensions of the sprocket?**

A11.

*Machine the sprocket bore according to the bushing’s outside diameter. Finish both friction surfaces at 3S to 6S. Refer to the catalog for dimensions and tolerance details.*

**Q12. Does TEM do bore finishing?**

A12.

*Our finished bore and key way products are made with a bore tolerance of H7 and meet new Japan Industrial Standards. Special finish bores may be available on request. Please contact TEM for more information.*

**Q13. When setting torque, how is the O (zero) point decided?**

A13.

*“0” is the point where the adjusting nut or adjusting bolt are hand tightened to a state of no backlash.*

**Q14. What is the best way to set torque?**

A14.

*After the “0” point has been decided, from a position where the adjusting nut or bolt is tightened loosely, gradually tighten it while checking the machine to find the best tightening position.*

**Q15. Can TEM set the torque at the factory?**

A15.

*Torque settings for Torque Limiters & Torque Limiter Couplings can be factory set before delivery. For the finished bores and with center members, this must be done at the factory. Set torque value (kgf · m) by the last number in the model number. For example, TL250-1-04022-18J-1.0 (torque setting of 1.0kgf · m)*

**Q16. What is the torque setting for sprocket-attached finished bore Torque Limiters & Torque Limiter couplings when they are shipped?**

A16.

*If torque setting is not specified, each size adjusting nut or bolt is tightened at 120 degree.*

**Q17. Is it possible to use the RS50-20T sprocket for TL350-1?**

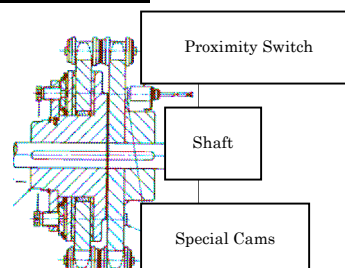
A17.

*The minimum possible number of teeth for the TL350 in the case of RS50 is 21. If there are 20 teeth the outer diameter will be too small, causing the roller chain to interfere with the hub. In TEM’s catalog there is a chart that outlines the minimum number of teeth necessary for each size.*

**Q18. When slippage occurs due to overload, can it be detected electronically?**

A18.

*When the torque limiter slips the decrease in rotating speed can be detected by using a proximity switch and digital tachometer. Please refer to the catalog for some examples.*

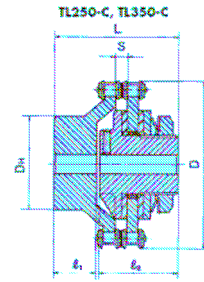


**Q19. For the Torque Limiter Coupling, which side should face the motor side: the Torque Limiter side or the coupling side?**

**A19.**

*There are no particular facings for the running and driven sides. For your reference, maximum bore diameter of the coupling side is larger than that of the torque limiter side.*

<Coupling side> <Torque limiter side>



**Q20. Does TL200-1 come with a bushing?**

**A20.**

*The bushing length is not specified, so it does not come with the TL200-1. If the bushing is necessary, specify the bushing size as you would when ordering TL200-1-B6.0.*

**Q21. Can I order TL250 friction facings and disk spring(s) separately?**

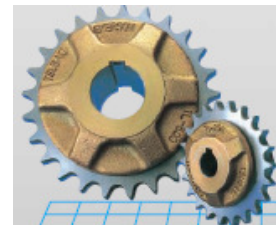
**A21.**

*Yes, you can. The friction facing is TL250A and the disk spring is TL250S.*

**Q22. What is a center member?**

**A22.**

*The center member refers to the sprocket, gear or pulley, etc. that is clamped between two friction facings. A sprocket is the most common center member, and Torque Limiters with sprockets are available.*



**Q23. Do the Torque Limiter & Torque Limiter Couplings conform to RoHS?**

**A23.**

*The majority of Torque Limiters and Torque Limiter Couplings meet RoHS standards; however, some models do not due to inventory adjustment (FIFO: First in, first out.). If it is necessary to meet RoHS standards, please indicate this preference when ordering.*

For further information, please contact our Overseas Sales Department at the numbers provided below.

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