



thompson
COUPLINGS Limited

TCAE-S



Product Installation Guide

General Information

Thompson Couplings Limited is proud of its products and employs the latest manufacturing techniques to ensure that a premium product is delivered to its customers. Thompson Couplings Limited believes in a high level of quality control to provide only the best products, advice and service.

The fundamental function of a coupling is to transmit power from drive to driven device in a regular action. The TCAE product range is designed to operate at angles, sending torque through the shaft inside the coupling whilst ensuring operation is smooth and efficient.

Owner Responsibility

It is the responsibility of the purchaser to ensure that the product is kept clean, inspected regularly and maintenance is performed as advised.

Customer Relations

For any enquiries or assistance please contact:

Thompson Couplings Limited

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Safety Precautions

To prevent injury to yourself and /or damage to the equipment:

- *Read carefully all owners' manuals, service manuals, and/or other instructions.*
- *Always follow proper procedures and use proper tools and safety equipment.*
- *Be sure to receive proper training, installation and maintenance work should be performed by qualified personnel.*
- *Never work alone while under a vehicle or while repairing or maintaining equipment.*
- *Always use proper components in applications for which they are approved.*
- *Be sure to assemble components properly.*
- *Never use worn-out or damaged components.*
- *Always store and handle coupling safely.*
- *Use blocks or adequate racking to prevent coupling moving or rolling away and ensure points are not adversely loaded during storage.*



- *Rotating auxiliary coupling is dangerous. You can snag clothes, skin, hair, hands, etc. This can cause serious injury or death.*
- *Do not work on or around the coupling when the engine/motor is running.*
- *Keep hands away from the joint as danger of crushing may occur.*
- *Do not work on or near an exposed coupling when engine/motor is running.*
- *Exposed rotating coupling must be guarded.*



WARNING: THIS SYMBOL WARNS OF POSSIBLE PERSONAL INJURY



WARNING: ROTATING DEVICE

Recommended Installation of TCAE coupling Models S-6 to S-10

1. Unpacking & inspection, Lifting & Installation

- Minimum **2 persons** lift for couplings heavier than 16 kg.



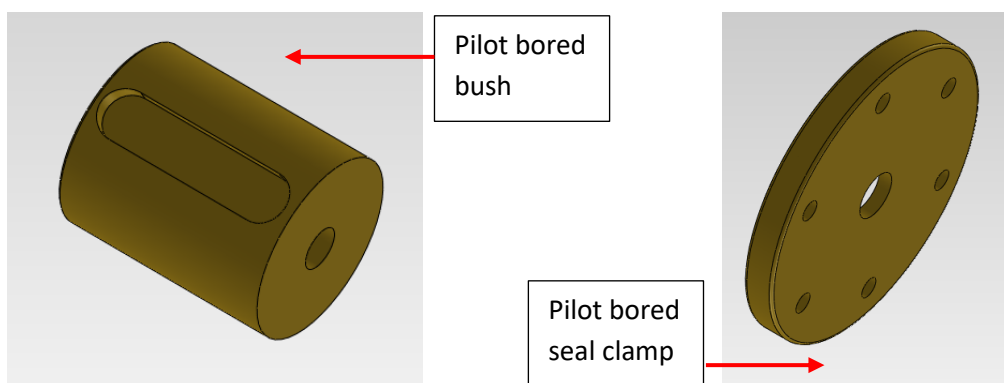
- Ensure no visual external damage has occurred to the shipping box. If it has, please contact shipper and Thompson Couplings Limited for details.
- Ensure all components have been supplied in the packaging.
 - (x1) TCAE-S Coupling
 - (2x) pilot-bored bushes
 - Seal Clamps
 - (x1) Keysteel
 - Fasteners

2. Installation

The TCAE-S series is shipped as a complete fully greased coupling.

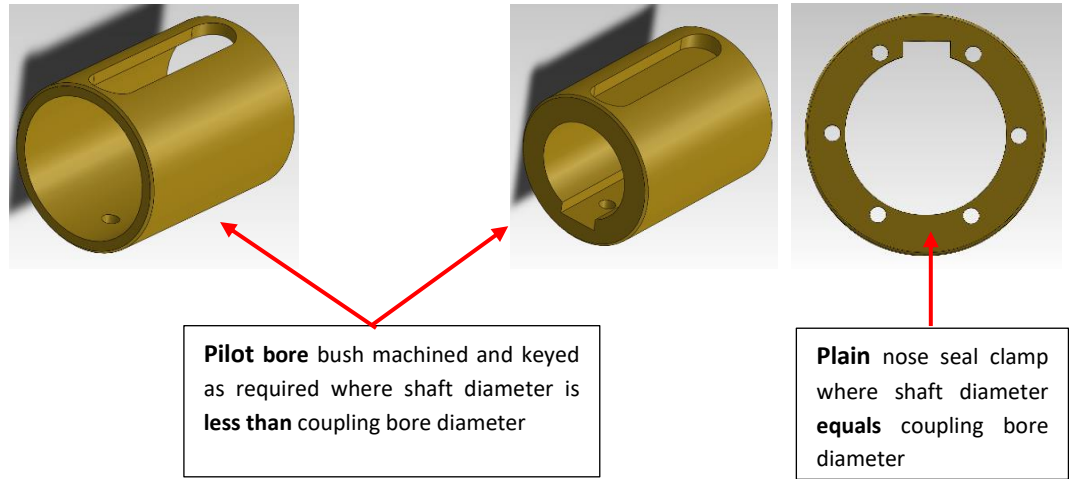
The 2x pilot bored bushes, seal clamps and keystone are packaged separately in this shipment.

1. Check for any damage to the outer box. Report issues to Thompson Couplings Ltd accordingly.
2. Remove the Pilot Bored bushes and seal clamps from the packaging.

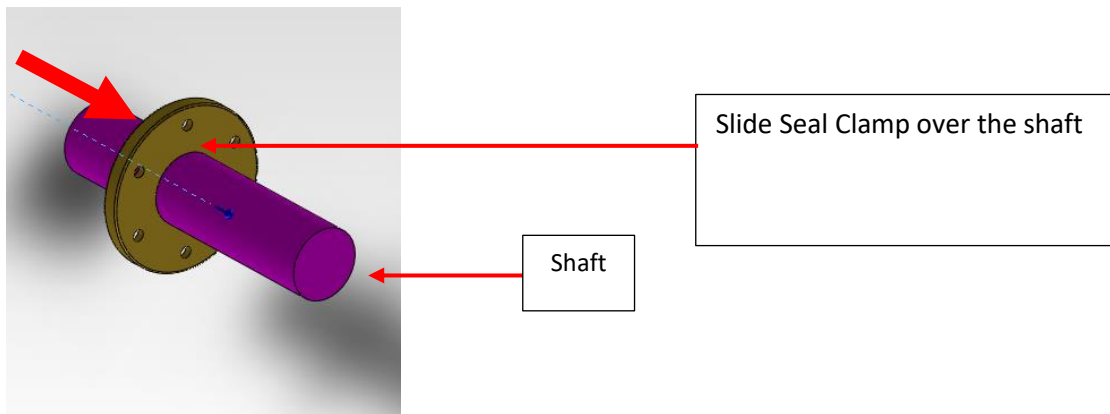


3. Measure the mating shaft diameter and machine the pilot bored bushes and the seal clamps with appropriate surface finish and tolerance. **The recommended tolerance of the pilot bored bush is an interference fit with the shaft such as P7/h6.**
4. Broach internal keyway as required to fit key.
 - a. Note: when the shaft diameter is **close** to the external diameter of the pilot bush it is necessary to just use the same key as supplied. When necessary, keys can be machined to fit using key stock sizes. Below is an example where the standard 80mm pilot bored bush is used
 - b. When the shaft diameter **equals** the actual bore diameter of the coupling, the pilot bored bush is not required. Instead, just use the nose seal clamp as shown below -far right diagram

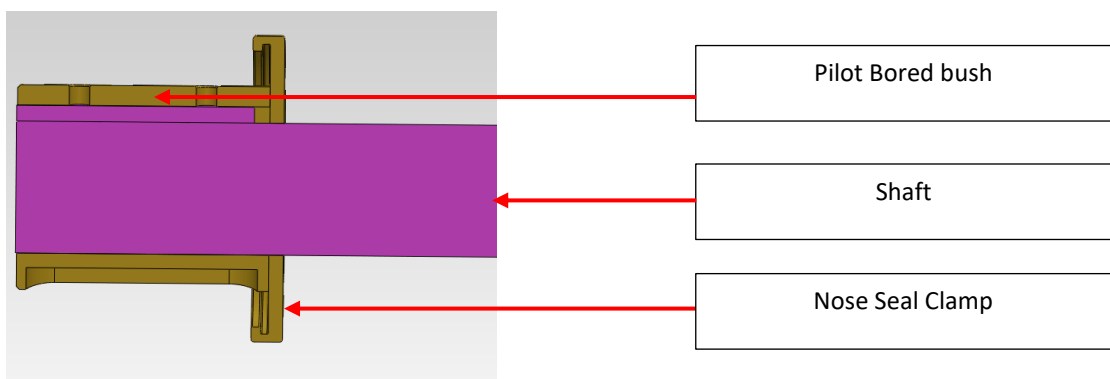
TCAE-S Model	Maximum Shaft Diameter (Plain Bore)
S-6	65 mm
S-7	65 mm
S-8	85 mm
S-9	100 mm
S-10	125 mm



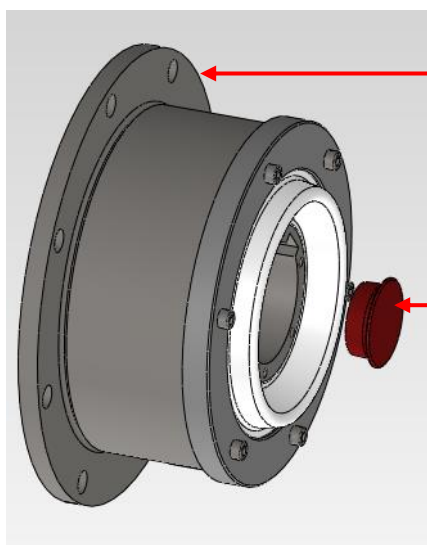
4. After machining the Seal clamp, slide it over the machine shaft:



5. Fit the newly machined pilot bore bush onto the shaft



6. Return to the coupling and remove the outer hex bolts and separate the 2 coupling halves including the rear location spigot. Also remove the plastic cover plug from the shaft bore. **Ensure no contaminants enter the couplings while doing this.**

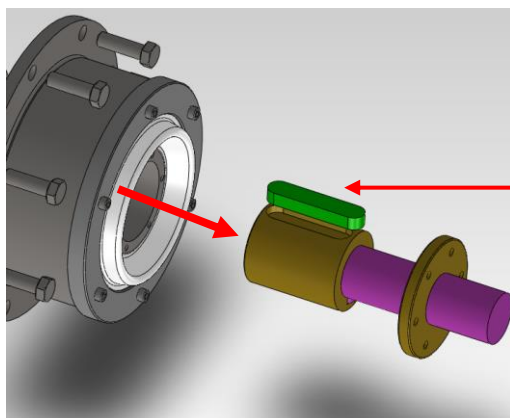


Remove hex bolts, washers and nuts and separate the 2 x coupling halves

Remove plastic dust cap

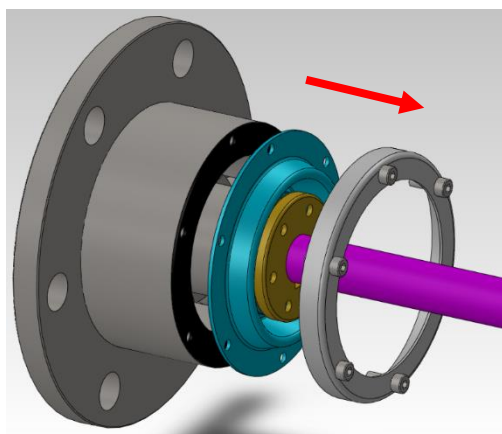
!!! KEEP IT CLEAN !!!

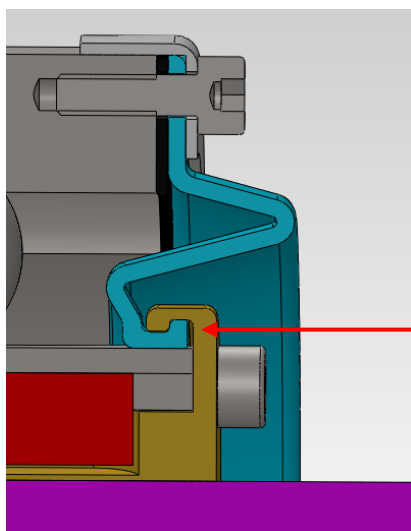
7. Fit the main coupling key into the bush and slide the coupling on, lining up the key with the keyway.



Fit main coupling key into machined bush here

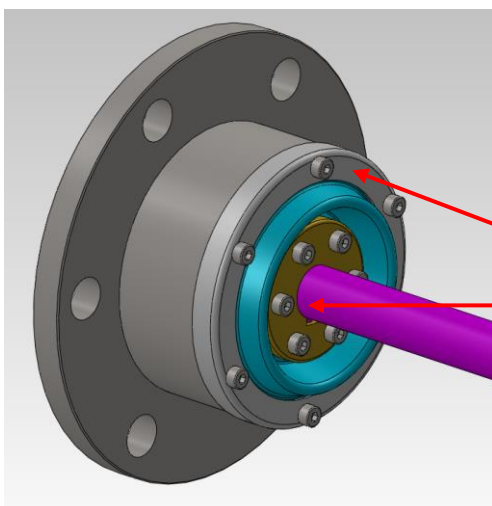
8. Undo the 6x outer seal screws and slide the rubber seal forward to clip the seal inner lip under the nose bush.





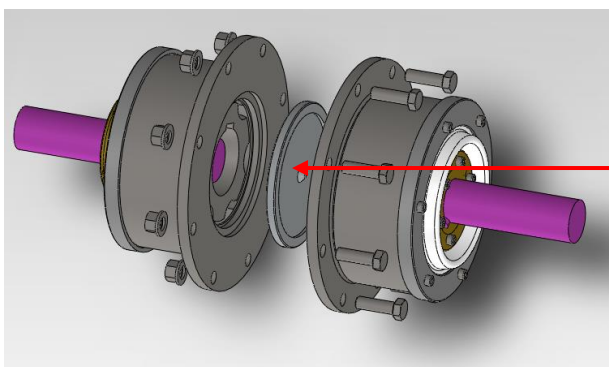
Ensure inner lip of the rubber seal is secured under the nose bush as shown

9. Finally refit the 6x outer seal screws and 6x inner screws to the bush and tighten to the torques shown below



Refit these 6 x screws and tighten

10. Fit the rear locating spigot to the respective grooves in the coupling half ensuring its fitting neatly and squarely.



Fit rear locating spigot into groove and ensure it seats squarely and neatly

11. Slide the 2 coupling halves together again resecure with the hex bolts, washers, and nuts.

12. Torque all screws & bolts to the specified rating for the coupling as listed below:

MODEL TCAE-S -*	Hex Bolt Size	Torque Nm lb.ft)	Inner and Outer Seal Screws	Torque Nm (lb.ft)
S-6	8 x M12 grade 8.8	80 (60)	INNER – 6 x M6 SHCS OUTER – 6 x M6 SHCS	10 (7)
S-7	8 x M14 grade 8.8	120 (90)	INNER – 6 x M6 SHCS OUTER – 6 x M6 SHCS	10 (7)
S-8	8 x M14 grade 8.8	120 (90)	INNER – 8 x M8 SHCS OUTER – 8 x M8 SHCS	20 (14)
S-9	8 x M16 grade 8.8	190 (140)	INNER – 8 x M8 SHCS OUTER – 8 x M8 SHCS	20 (14)
S-10	8 x M18 grade 8.8	270 (200)	INNER – 8 x M10 SHCS OUTER – 8 x M10 SHCS	30 (21)

Start-up Inspection

- Prior to powering up the new coupling setup, ensure all safety precautions have been observed.
- Ensure all the flange mounting fasteners have been installed and are pre-tensioned to the value specified.
- Make sure the angular or parallel misalignment is not exceeded as per the TCAE product specification sheet.
- Prior to motor start up, ensure the shaft rotates by hand without any jerky sound, noise or friction and all tools have been removed.
- Energise the motor drive (if possible, at jog or low speed) and observe the rotation of the coupling components to ensure all faces are running concentric and true.
- Increase the motor speed to observe any noticeable vibrations or alignment issues. Correct if needed.
- Refit safety cover guards and operate in production mode as required.