TLK SUPPLEMENT

AXIAL SHIM ADJUSTMENT (TLKA)

Installation, Operation & Maintenance Instructions

Introduction

These instructions are provided to familiarize the user with the axial adjustment option when supplied as part of a TLKS design.

IMPORTANT These instructions must be used in conjunction with the TLKS fitting and maintenance instructions (IOM-TLKS), and applied whenever work is carried out on the coupling.

This document should be retained for future reference whenever work is carried out on the coupling.

NOTE: *Data given on general arrangement drawings takes precedence over these instructions.*

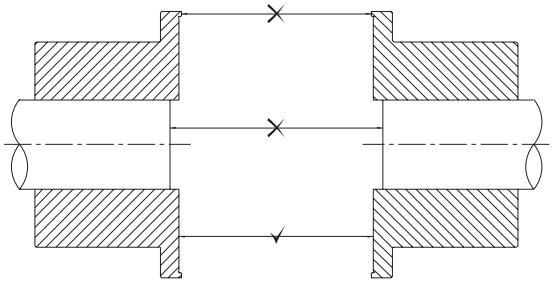
Scope of supply

The TLKA coupling design incorporates an axial length adjustment feature.

Coupling type TLKA sizes 0300 to 2600 inclusive use a shim carrier (see Figure 2, ref. 11). The transmission unit and shim carrier are supplied with 3 mm of factory-fitted shims (ref. 10) and 3 mm of loose shims. This allows axial adjustment of +/- 3 mm.

Coupling type TLKA sizes 3350 to 9049 inclusive use deep-recess hubs (see Figure 3, ref. 13). The length of the transmission unit plus 3 mm of shims is the nominal distance between shaft ends (DBSE) dimension. The transmission unit is supplied with 6 mm of loose shims arranged to provide an adjustment of +/- 3 mm about the DBSE dimension.

FIGURE 1



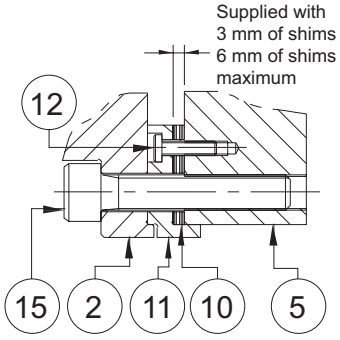
Axial Adjustment Calculations

Please refer to the TLKS fitting and maintenance instructions (IOM-TLKS) for installation of hubs, transmission unit, shaft alignment and DBSE.

1. Fit the hubs (axial shims are normally supplied with taper-bored hubs).
2. Set the specified nominal shaft end separation between the inner faces of the hubs by moving one or both pieces of equipment (faces where the transmission unit locates — see Figure 1).
3. Align the shafts.
4. Accurately measure the distance between the inner faces of the hubs.
5. Accurately measure the free length of the transmission unit. This will include a shim carrier plus a 3 mm thick shim pack on the smaller sizes.
6. Calculate the thickness of shims to be added or removed from the transmission unit.
7. Each shim is 0.38 mm thick. Make any necessary allowance for cold offset in this calculation.

FIGURE 2. Shim Carrier Design

- **2** – Hub
- **5** – Guard ring
- **10** – Axial shims
- **11** – Shim carrier
- **12** – M4 shim carrier bolt
- **15** – Hub bolt (for the shim carrier end only)



Axial adjustment

COUPLING SIZES: 0300, 0500, 0750, 1050, 1500, 2000, 2600

Shim carrier design (see Figure 2)

1. To remove the shim carrier, first remove the 3-off M4 shim carrier bolts (ref. 12) then use jacking bolts to evenly press the shim carrier from the guard ring (ref. 5). The thread size is M6 or M8 depending on coupling size (see Table 1).
2. Add or remove axial shims as calculated. Do not exceed 6 mm of total shims. Align the M4 shim carrier bolts (ref. 12) with the shim carrier and shims and hand tighten into the guard ring. Note that the three holes are offset allowing assembly in only one position. This will maintain the balance integrity of the coupling.
3. Using the hub bolts (ref. 15), tighten evenly to press the shim carrier fully onto the guard ring.
4. Tighten the M4 shim carrier bolts to 4 Nm.
5. Remove the hub bolts (ref. 15).
6. Finally, check the free length of the transmission unit.
7. The transmission unit is now ready for installation.

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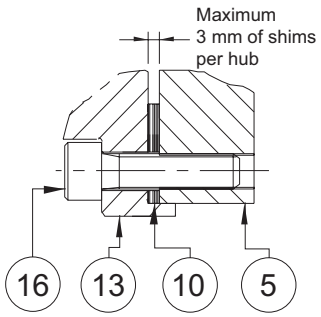
COUPLING SIZES: 3350, 4250, 6010, 8500, 9013, 9017, 9021, 9036, 9049

Deep-recess hub (see Figure 3)

1. Determine the number of shims to be fitted as explained on the previous page.
2. Divide the required number of axial shims equally to be placed into each hub recess. Do not exceed 3 mm per hub.
3. Install 2-off hub bolts (ref. 16) 180˚ apart to act as guides for installing the shims.
4. Install the required number of shims in the hub recess using the hub bolts as guides. Withdraw the bolts so they do not protrude beyond the flange.
5. The transmission unit is now ready for installation.

FIGURE 3. Deep-recess Hub

5 – Guard ring
10 – Axial shims
13 – Deep-recess hub
16 – Hub bolt (for the deep-recess hubs only)



Installation of the Transmission Unit

Transmission unit must be adequately supported during installation to avoid accidental damage should it slip.

Please refer to the TLKS fitting and maintenance instructions (IOM-TLKS) for installation of the transmission unit.

Additional notes on installation:

- The compression bolt heads are painted red for identification.
- Important for shim carrier designs: always use the longer supplied hub bolts at the shim carrier end (Figure 2, ref. 15). The shorter-length hub bolts thread into the guard ring at the end without shims (see Figure 4, ref. 4).
- Refer to Table 1 for the hub bolt-tightening torques.

FIGURE 4. Hub
Installed at opposite end to shim carrier – no shims fitted at this end.

2 – Hub
4 – Hub bolt
5 – Guard ring

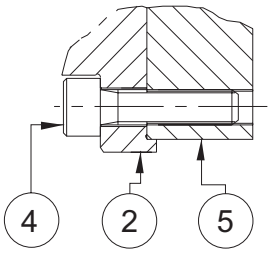


TABLE 1

Coupling Size	Standard Hub Bolt Size	Standard Hub Tightening Torque Nm	Large Hub Bolt Size	Large Hub Tightening Torque Nm	Shim Carrier Jacking Bolt Standard/Large Hub	Jacking Bolt Standard/Large Hub
300	M8	35	M12	120	M6 M6	M6 M6
500	M10	65	M12	120	M6 M6	M6 M6
750	M12	120	M14	180	M6 M8	M6 M8
1050	M12	120	M14	180	M6 M8	M6 M8
1500	M14	180	M16	280	M8 M8	M8 M8
2000	M16	280	–	–	M8 M8	M8 M8
2600	M14	180	–	–	M8 –	M8 –
3350	M14	180	–	–	–	M8
4250	M16	280	–	–	–	M8
6010	M16	280	–	–	–	M8
8500	M16	280	–	–	–	M8
9013	M16	280	–	–	–	M8
9017	M16	280	–	–	–	M16
9021	M16	280	–	–	–	M16
9036	M16	280	–	–	–	M16
9049	M16	280	–	–	–	M16

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North America
United States of America
Tel: 1-847-967-2400
Fax: 1-847-967-3915

Europe
United Kingdom
Tel: 44-1753-224000
Fax: 44-1753-224224

Latin America
Brazil
Tel: 55-11-3371-2500
Fax: 55-11-3371-2599

Middle East & Africa
United Arab Emirates
Tel: 971-481-27800
Fax: 971-488-62830

Asia Pacific
Singapore
Tel: 65-6518-1800
Fax: 65-6518-1803