

Joining Instructions for Solosele® KB Hydro Seals [19mm (3/4 inch) section & above]

Kit contents



● Solosele® KB Hydro seal (with 'Z' type join on split seals) — if you have purchased endless seals please refer to the 'Fitting Instructions' sections A-G

● Steel support band (*band*)

● Silicone rubber jig incorporating seal profile (*jig*)

X2

● Thin PTFE strip (*PTFE*)

● Clamps

X2

● Sachets containing adhesive resin and hardener

● Impregnated cleaning cloths

X4

● Temperature indicating strip

● Brush (to apply adhesive)

● Abrasive stick

i Check kit contents **Then carefully read these instructions in their entirety before starting.**

Verify that the adhesive is still within its expiry date and, if not, discard the sachet and apply to your seal supplier for a replacement. (The adhesive has ample shelf life when the kit is supplied.)

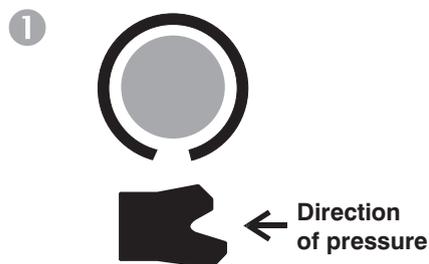
Other equipment required/recommended.

- Hot air gun — required (eg, as used for paint stripping).
- Suitable grease/lubricant.
- Electronic temperature probe (recommended).
- Modified seal retaining plate segment (recommended). See section E of Fitting Instructions

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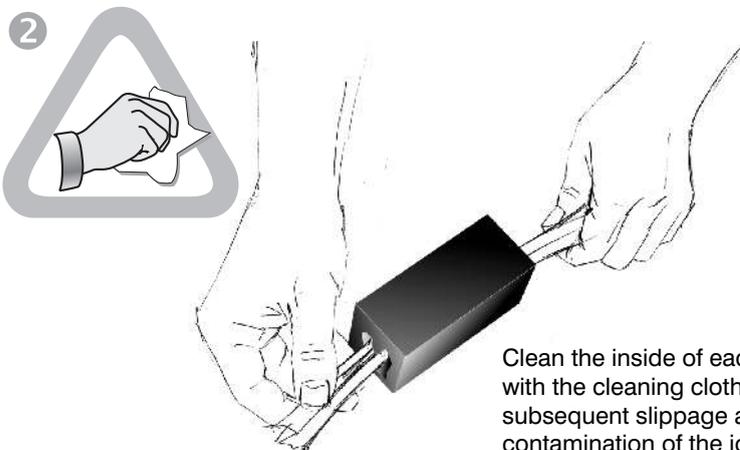
i Before preparing the ends of the seal and applying adhesive, assemble the contents of the kit in accordance with the instructions below to become familiar with the procedure.

The success of this joining method is dependent upon the bond itself. Therefore it is of paramount importance to ensure that the seal surfaces are absolutely clean prior to applying the adhesive and that no contamination occurs during the joining operation.



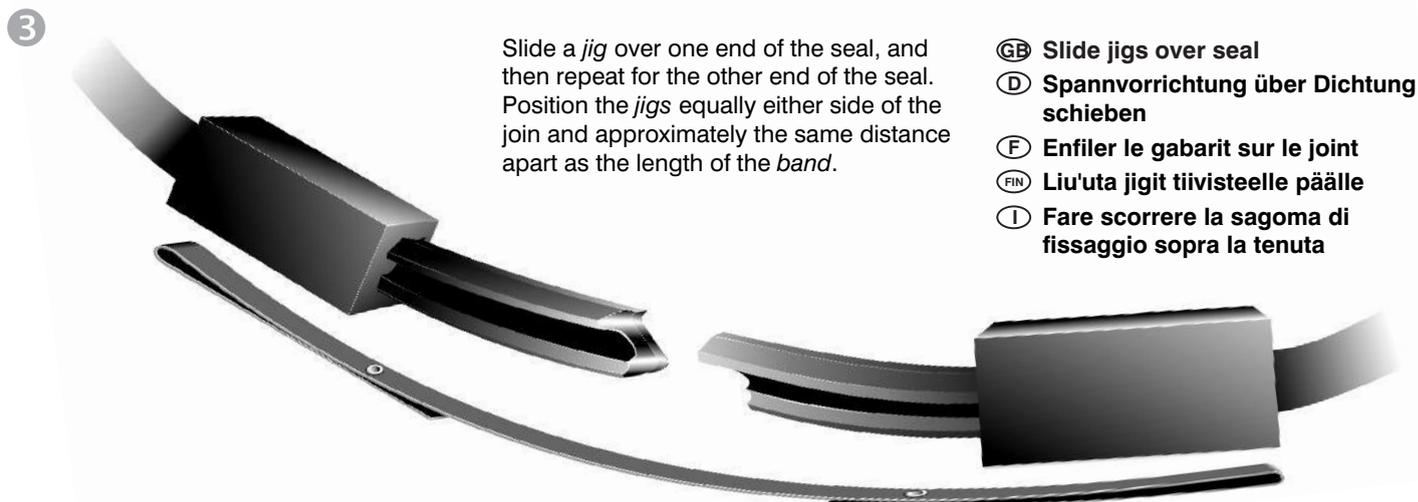
Place the seal over the shaft with the join at the lowest point and the rubber 'grooved' side facing the required sealing direction.

- GB** Place seal around shaft
- D** Dichtung um die Welle legen
- F** Poser le joint autour de l'axe
- FIN** Aseta tiiviste akselin ympärille
- I** Posizionare la tenuta attorno all'albero



Clean the inside of each *jigs'* seal groove with the cleaning cloth, to ensure no subsequent slippage and to avoid contamination of the join area.

- GB** Clean jig groove
- D** Rille der Spannvorrichtung reinigen
- F** Nettoyer la gorge du gabarit de montage
- FIN** Puhdisti jigin ura
- I** Pulire la scanalatura della sagoma di fissaggio



Slide a *jig* over one end of the seal, and then repeat for the other end of the seal. Position the *jigs* equally either side of the join and approximately the same distance apart as the length of the *band*.

- GB** Slide jigs over seal
- D** Spannvorrichtung über Dichtung schieben
- F** Enfiler le gabarit sur le joint
- FIN** Liu'uta jigit tiivisteelle päälle
- I** Fare scorrere la sagoma di fissaggio sopra la tenuta

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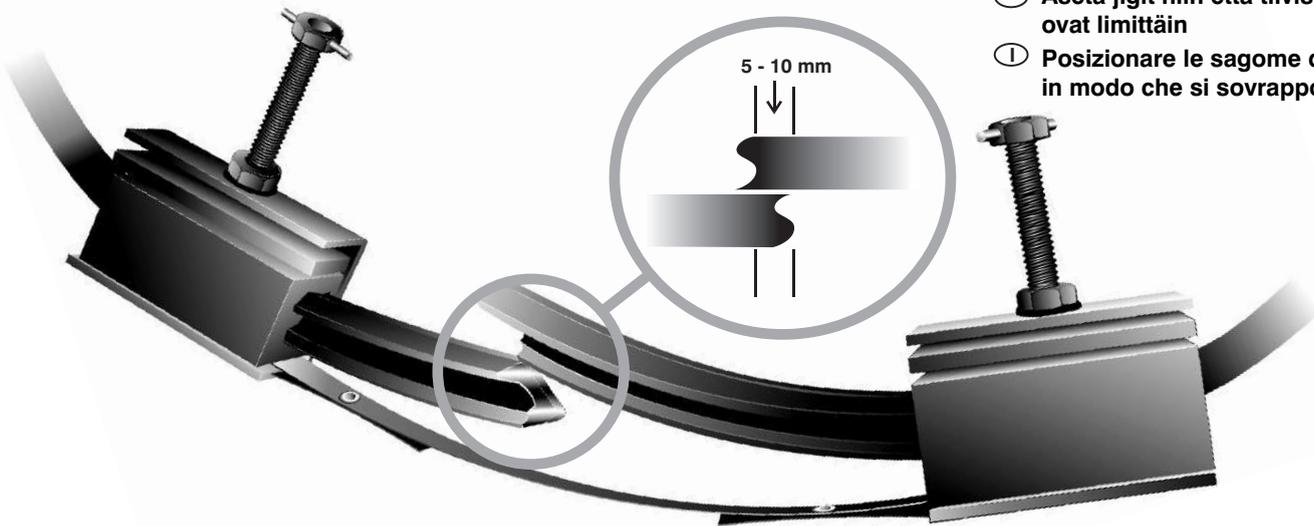


Hook one end of the *band* on to a clamp. Position clamp over a *jig* and tighten slightly to hold. Assemble second clamp with the other end of the *band*. Position the clamp over the second *jig* and slightly tighten to hold.

- Ⓒ **Hook band onto clamps**
- Ⓓ **Band über Klemmbacke schieben**
- Ⓕ **Accrocher la bande métallique sur les serre-joints**
- Ⓔ **Kiinnitä vanne puristimiin**
- Ⓘ **Agganciare la fascia sui morsetti**

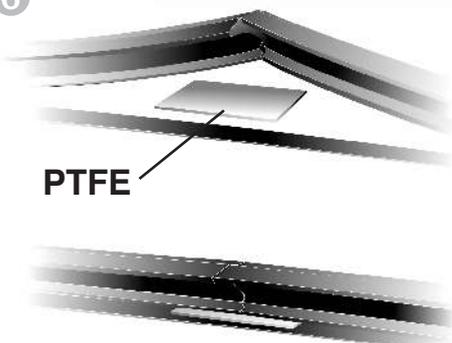
5

Re-position the *jigs* and clamps to allow for a 5mm to 10mm (3/16 - 3/8 inch) overlap of the ends of the seal, with the band on the outer diameter face of the seal.



- Ⓒ **Position jigs to give overlap**
- Ⓓ **Spannvorrichtungen so platzieren, dass Teile übereinander liegen**
- Ⓕ **Placer les gabarits pour avoir un chevauchement des extrémités**
- Ⓔ **Aseta jigit niin että tiivisteiden päät ovat limittäin**
- Ⓘ **Posizionare le sagome di fissaggio in modo che si sovrappongano**

6



Place the *PTFE* between the join on the seal and the *band*.

Place ends of seal together to form a join - check for alignment and adjust the distance between the clamps if necessary. Firmly tighten both clamps.

- Ⓒ **Insert PTFE, check join, tighten clamp**
- Ⓓ **PTFE hinzufügen, Verbindungsstelle überprüfen, Klemmbacke anziehen**
- Ⓕ **Intercaler le PTFE, vérifier le raccord et serrer le serre-joint**
- Ⓔ **Asenna PTFE, tarkista liitos, kiristä puristimet**
- Ⓘ **Inserire PTFE, controllare il punto di giunzione e stringere morsetto**

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Open up the joint and with the coarse side of the abrasive stick, lightly abrade the cut faces of the seal to roughen them, in order to produce a good key for the adhesive. Care must be taken to avoid over-abrading the faces as this could result in rounding the edges or tearing the seal lip.

- ⒸⒹ Roughen the cut ends
- Ⓓ Abgeschnittene Enden aufrauen
- Ⓕ Limer les extrémités
- Ⓔ Karhenna päät
- Ⓘ Abradere le estremita del taglio

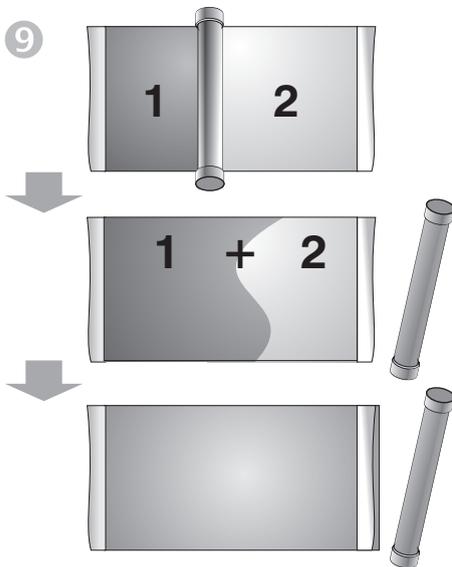
8



Clean the surfaces of the joint with the impregnated cleaning cloth to remove dirt and grease, etc. Ensure no residual fibres from the cloth remain on the joint area.

- ⒸⒹ Clean joint
- Ⓓ Verbindungsstelle reinigen
- Ⓕ Nettoyer les surfaces à encoller
- Ⓔ Puhdista liitos
- Ⓘ Pulire il punto di giunzione

9



9.1 Cut open the silver-coloured outer sachet at one end, taking care not to puncture the inner twin-pack.
9.2 Remove the twin-pack and the centre clip.
9.3 Mix the two components by persistent hand kneading of the pack until they are uniformly blended.
9.4 Then place the pack on a smooth surface and use the centre clip to scrape the two components from the sides and corners of the pack into the middle.
9.5 Now knead the contents together again by hand for three minutes.

If in doubt — mix again, as insufficient mixing will result in soft spots of uncured material in the final product.

- ⒸⒹ Mix adhesive
- Ⓓ Klebstoff mischen
- Ⓕ Mélanger l'adhésif
- Ⓔ Sekoita liima
- Ⓘ Mescolare l'adesivo



= 3 minutes

10



Apply a thin and even layer of adhesive, with the brush supplied, to both surfaces of the ends of the seals to be joined.

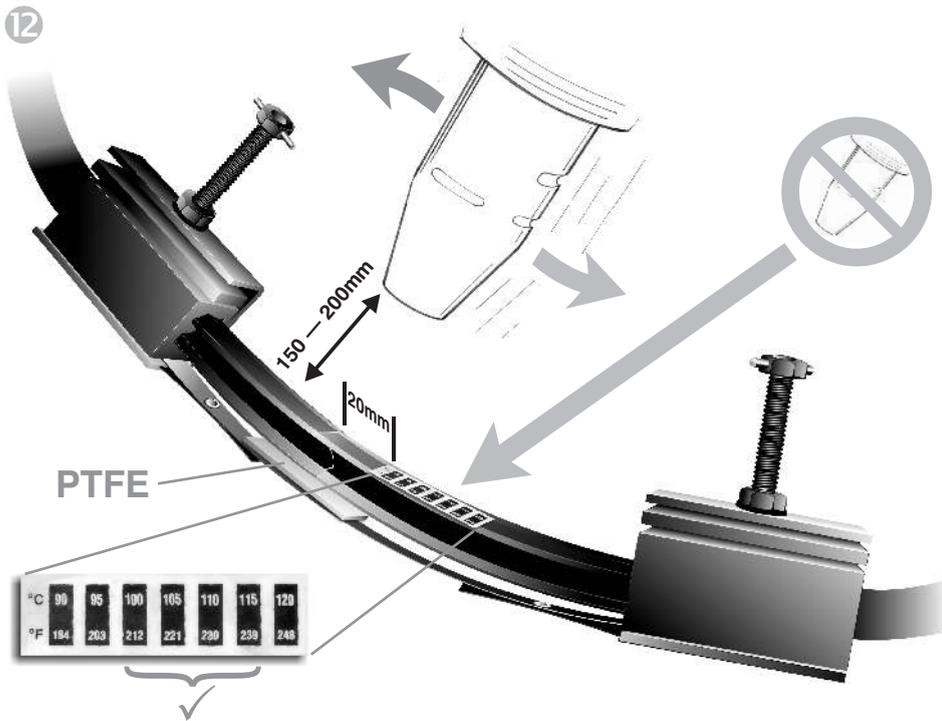
- ⒸⒹ Apply adhesive
- Ⓓ Klebstoff auftragen
- Ⓕ Appliquer l'adhésif
- Ⓔ Levitä liima
- Ⓘ Applicare l'adesivo

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Align the join and wipe clean any excess adhesive from the join area. Ensure that the PTFE strip is in place between the join and the band to stop the adhesive sticking to the band.

- Ⓒ Align join and clean
- Ⓓ Verbindungsstelle korrekt ausrichten und reinigen
- Ⓕ Aligner le raccord et le nettoyer
- Ⓖ Linjaa liitos ja puhdistaa
- Allineare il punto di giunzione e pulire
- Ⓘ



- Ⓒ Heat join area
- Ⓓ Verbindungsstelle erhitzen
- Ⓕ Chauffer le raccord
- Ⓖ Kuumenna liitosalue
- Ⓘ Scaldare l'area da giuntare

i Do not allow the hot air flow to dwell on the temperature-indicating strip for more than a few seconds, or it will be destroyed.

If an electronic temperature probe is not available, adhere the temperature indicator strip to the seal [approximately

20mm (3/4 inch) from the joint] aligned with the lowest temperature panel toward the joint.

In order to avoid burning or scorching, the hot air gun should be held 150mm to 200mm (6 - 8 inches) away from the joint and waved over the joint area rather than pointed at one single point.

Using a hot air gun, warm the seal surfaces in the join area to between 100°C and 115°C. This temperature should be maintained as follows:



≤ 19mm (3/4 inch) = 20 minutes
 > 19mm (3/4 inch) = 25 minutes



20 minutes
 25 minutes



40 minutes
 50 minutes

Note the extended heating time in cold conditions. It is essential that at no time should the surface temperature at any point exceed 120°C. A temperature of 115°C at the joint can be achieved by activating the 100°C panel continuously (mainly green, fleetingly brown) and the 105°C - 115°C panel intermittently (mainly blue, fleetingly green).

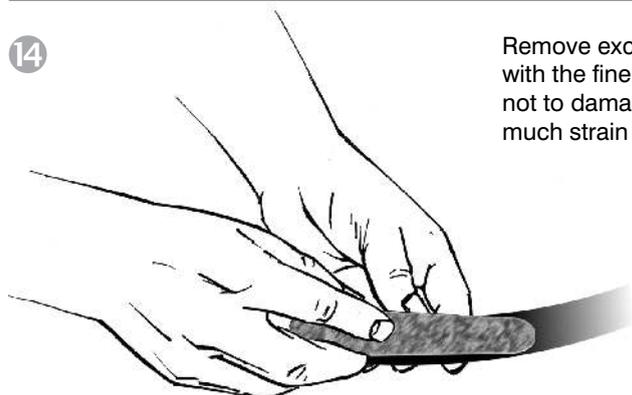
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Allow the seal to cool naturally for at least 30 minutes (ideally leave for 12 hours) depending on seal size and ambient temperature.

Remove the clamps, *jigs*, *band*, *PTFE* and temperature indicator. The *jigs* can be removed by carefully opening up the split in the block and sliding them off the seal.

- Ⓒ Allow to cool, remove clamps, jigs, etc
- Ⓓ Abkühlen lassen, Klemmbacken, Spannvorrichtungen usw. entfernen
- Ⓕ Laisser refroidir, enlever le serre-joint, le gabarit, etc
- Ⓔ Anna jäähtyä, poista puristimet, jigit yms
- Ⓘ Attendere che l'area si raffreddi, rimuovere i morsetti, le sagome di fissaggio, ecc



Remove excess adhesive from the joint, with the fine abrasive stick, being careful not to damage the seal — do not put too much strain on the joint.

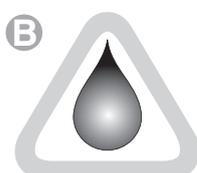
- Ⓒ Remove excess adhesive
- Ⓓ Überschüssigen Klebstoff entfernen
- Ⓕ Oter l'excès de colle
- Ⓔ Poista ylimääräinen liima
- Ⓘ Rimuovere l'adesivo in eccesso

Fitting Instructions for Solosele® KB Hydro Seals



Ensure that the housing is clean, smooth and free from sharp edges.

- Ⓒ Clean housing
- Ⓓ Gehäuse und Welle reinigen
- Ⓕ Nettoyer le logement du joint
- Ⓔ Puhdista pesä
- Ⓘ Pulire l'alloggiamento

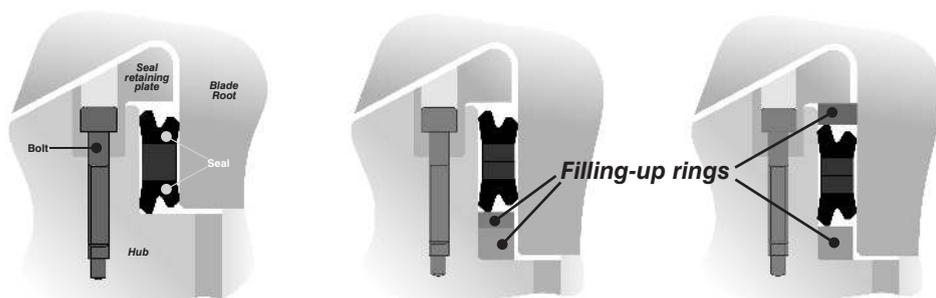


Lightly smear the seal with a suitable grease/lubricant.

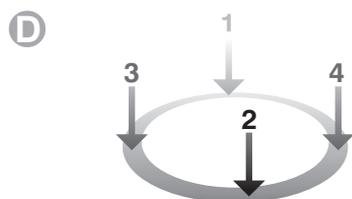
- Ⓒ Lubricate
- Ⓓ Schmierem
- Ⓕ Lubrifier
- Ⓔ Voitele
- Ⓘ Lubrificare

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C If filling-up rings are required decide on their position (see diagram).



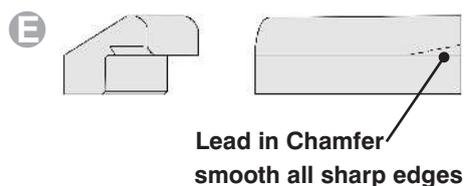
- GB** Filling-up rings?
- D** Füllringe?
- F** Bagues de garnissage?
- FIN** Täyterenkaat?
- I** Anelli di riempimento?



D Fit filling-up rings if required (see diagrams in section C.).

Slide the seal into the housing, pushing in diametrically opposed sections of the seal, rather than working round the seal

- GB** Press seal into housing
- D** Dichtung in Gehäuse drücken
- F** Enfoncer le joint dans son logement
- FIN** Paina tiiviste pesään
- I** Premere la tenuta dentro l'alloggiamento



E Where the housing is inaccessible due to blade coverage, a modified segment of a spare seal-retaining ring should be used as a fitting tool. The modification required is basically a large lead-in chamfer. Apply grease/lubricant to assist as necessary.

- GB** Use fitting tool if required
- D** Ggf. Einsetzwerkzeug verwenden
- F** Utiliser un outil si nécessaire
- FIN** Käytä tarvittaessa asennustyökälua
- I** Se necessario utilizzare lo strumento di fissaggio

F Repeat previous steps for second seal (if applicable) ensuring the seals fit back-to-back and the joints are positioned one third of the circumference apart.

Fit filling up rings if required (see diagram in section C.).

After ensuring the seals are correctly seated (the seal arrangement should be shallower than the housing axial length) fit all segments of the seal-retaining plate.

- GB** Repeat process for second seal
- D** Vorgang für zweite Dichtung wiederholen
- F** Faire de même avec le deuxième joint
- FIN** Toista työvaiheet seuraavalle tiivisteelle
- I** Ripetere la procedura per la seconda tenuta

G Continue to complete assembly

Material Safety Data Sheets are available on request

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