

Assembly of screw connections on TECALAN® hose lines

Type AF and BF

A. Requirements ...

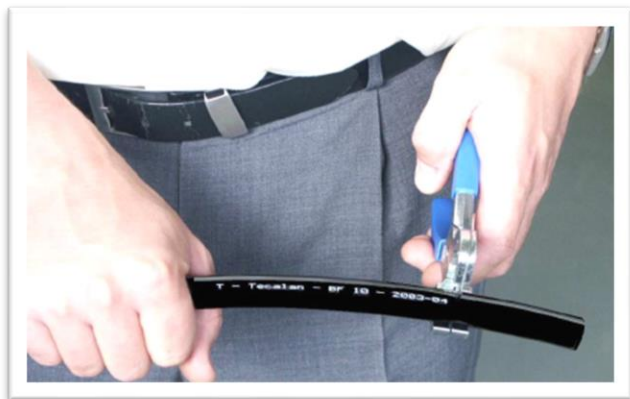
- Only original TECALAN hose connections (mandrels and sleeves) may be used for the binding.
- The self-assembly must be carried out professionally and exactly according to the following assembly instructions (section B), otherwise the tightness and durability of the connections cannot be guaranteed.
- These instructions are valid for new assemblies (processing of yard goods) as well as for repair work (reattachment of damaged hoses or replacement of defective connections) on single and double hoses. Disconnecting the double hoses is described in detail in section D.
- Note for repair work
A prerequisite for the reuse of hoses and connections is:
 - The hose must be undamaged and cut off again in the area of the integration.
 - The hose mandrel and sleeve must not be damaged, especially at the thread.
If this is not observed, the inner hose - when screwing in the mandrel - can be damaged (see section B/6)!
- Before starting assembly, check that all necessary tools and auxiliary materials (see section F) are available.

B. Mounting of the connections ...

1. Cut the hose to length

Use TECALAN scissors or cut the hose at right angles with a sharp knife.

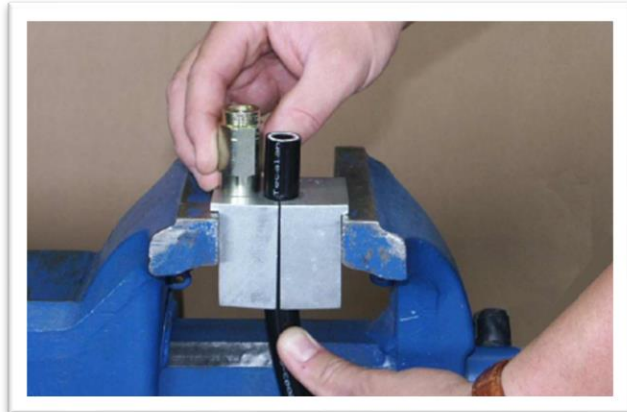
For repairs (reconnection), cut off the hose at least 2 cm behind the connection (see note A/4).



2. Clamp end of hose

Allow the end of the hose to protrude to the notch in the hexagon.

Then press the clamping jaws or the clamping device together.



3. Oil the hose end

Lubricate the surface of the protruding hose section with a viscous oil (e.g. 85W-90) all around.

(A small flat brush is best suited for this).



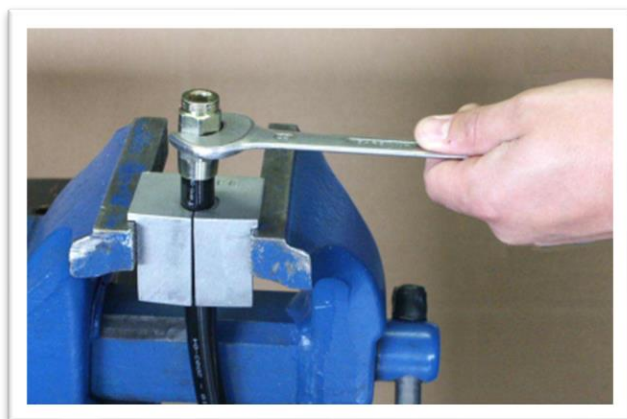
4. Screw on hose sleeve

⚠ **Beware! - Left-hand thread!**

Mount the hose sleeve axially and unscrew it with a ring spanner or open-end wrench against the clockwise direction until the sleeve contacts the clamping jaws.

Perform visual inspection: A gap must remain between the hose end and the fine thread so that the hose material can expand when the mandrel (see B/7) is screwed in.

(Does not apply to AF 4 and BF 4 hoses)



5. Expand the inner hose

Clamp the screwed-on sleeve properly in a bench vice without damage or deformation. (Use protective jaws!)

Soak the tip of the expanding mandrel in oil and screw the mandrel completely into the sleeve with a spanner. Turn quickly without breaking. - Then unscrew the mandrel again.

Steps 6 and 7 must be carried out immediately afterwards.



6. Oil the hose mandrel

Before doing so, check the mandrel for perfect condition! - The tip of the mandrel and the thread may not be damaged in any way, as otherwise a defect in the inner hose could be caused. - This applies in particular to the possible reuse of an unscrewed mandrel.

Oil the arbor tip and thread well.

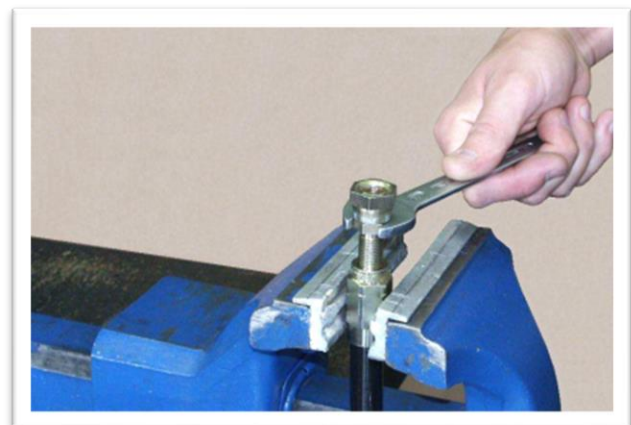


7. Screw in hose mandrel

Insert mandrel tip under slight axial pressure, press in slightly (do not tilt!) until the thread engages in the hose sleeve. - Use a spanner to screw in the mandrel quickly and without interruption.

⚠ Heads up! - Please note:

Tightening of the mandrel must be avoided to prevent unacceptable stretching of the mandrel thread. A gap of up to 0.5 mm between the surfaces is acceptable.



8. Check the passageway

Insert a suitable round material or the shaft of a suitable twist drill (see section F/7) into the connection as far as the mandrel is screwed into the hose (as shown in the picture).

- ⚠ The end face of the test mandrel must be rounded off well so that the inner hose is not damaged!
- ⚠ If there is no passageway, i.e. the inner hose was damaged during connection, the hose must be shortened and reconnected!



C. Pressure test of the hose assemblies ...

If it is possible to carry out a pressure test, it should be performed for safety reasons. The recommended test pressures are given in the following chart.

Tecalan-Hose type	Test pressure in bar	Permissible operating pressure at impact load and 50°C in bar	Tecalan-Hose type	Test pressure in bar	Permissible operating pressure at impact load and 50°C in bar
AF 4	430	287	BF 4	585	390
AF 6,3	380	233	BF 6,3	600	400
AF 8	260	173	BF 8	475	317
AF 10	225	150	BF 10	450	300
AF 13	175	117	BF 13	325	217
			BF 19	285	190

Note:

The assembly of the TECALAN high-pressure hoses type AF and BF, as described in section B of the technical information, must be carried out carefully and professionally.

The original TECALAN hose connections (sleeve and mandrel) guarantee an absolutely tight fit and 100% tightness of the connection. The pressure resistance of the connections is higher than that of the hose material.

D. D. Notes on double hoses ...

1. Integration and repair

For new installations (processing of meter goods) and re-bonding (repair work) on existing double hoses, each connection must be installed individually as described in section "B".

2. Separating

If the two hoses of the double hose have to be separated for the assembly of the connections, which is the case with meter goods in general and with repairs when the hoses have to be shortened, the following separation devices must be used:

for BF 6,3 – hoses → 2. 89 13 72.1

for BF 8 – hoses → 2. 89 13 73.1.



- The cutting device is clamped horizontally in the vice or fixed to the workbench with a vice, for example.
- Cut the double hose smooth and at right angles.
- Lubricate the end of the hose to be separated and pull it quickly through the separating device in the direction of the arrow (marking on the device).
- Always limit the separation length only to that which is absolutely necessary for the assembly of the connections or the installation of the double hose.

3. Special fittings

For connections of special design, e.g. ring pieces, the correct installation position must be ensured when screwing in the mandrel (see section B/7). The mandrel must not be turned back! Stop in good time before the stop.

E. Notes for BE connections...

- Pre-assembly of the cutting and wedge rings including union nuts (or pressure rings) must be carried out - depending on the type - in accordance with the assembly instructions of the coupling manufacturer.
- The necessary pre-assembly connecting pieces and assembly instructions for the compression and wedge couplings can also be obtained from TECALAN.

F. F. Required tools and equipment ...

1. TECALAN scissors, Article no. 2.89 08 63.1
2. Vice with protective jaws
3. TECALAN-SP clamping jaws (or self-made jaws made of hardwood or aluminium)
4. TECALAN expanding mandrel (suitable for hose inner diameter)
5. Viscous oil (as lubricant)
6. Ring spanner or open-end spanner (suitable for mandrel and sleeve)
7. Test mandrel