HOSE BINDING TO DIN 14811 WITH BINDING DEVICE

HOSE BINDING TO DIN 14811 WITH COUPLING DEVICE

Use:
Due to their design and features, the devices may be used exclusively
• for the binding of delivery hoses of sizes Ø 25 mm to Ø 110 mm to the corresponding couplings, using
  binding wire of Ø 1.4 mm.

Any other use beyond the above is deemed improper.
Unauthorized modifications to the devices, incorrect operation or improper use release the manufacturer from liability for any resulting damage.

Devices:
The binding of a new coupling to a hose becomes necessary if
• the binding has become loose.
• a coupling has torn due to water pressure.
• the hose is damaged at the binding or in its immediate vicinity.

Only the devices described below may be used for binding a coupling.
The AWG coupling device accommodates the coupling (sizes 110, 75, 52 or 25) and the hose, and secures the components during the binding process. The hand crank allows to adjust the coupling device perfectly to the intended coupling size. In addition, the coupling device is equipped with a holder for the binding wire. The coupling device can be clamped in any normal workshop vice with a minimum jaw width of 75 mm.

The AWG binding device consists of a cast frame that serves both as a handle and as a holder for a coil of Ø 1.4 mm binding wire. The coil is held by a band brake that can be adjusted with a wing screw. A hand crank is supplied for winding the binding wire. Binding wire can be ordered from AWG under ID-No. 603 616 48.

Preparation
If there is still an old coupling on the hose, it has to be removed first. To do so, it is necessary to release the circlip that secures the clamp fitting of the coupling to the tail piece of the coupling. The easiest way to release the circlip is by means of the circlip remover available from AWG under ID-No. 601 344 44.

Note: In the illustration on the right, the coupling is shown without the clamp fitting for the sake of clarity.
1. Press clamp fitting against tail piece (1).
2. Push hook of circlip remover (2) underneath the clamp fitting.
3. Prise out one end of circlip (3) from the notch of the coupling tail piece.
4. Pull out circlip (3) from below the clamp fitting.
5. Pull off clamp fitting from tail piece (1).
6. Release and remove binding wire (4).
7. Pull off hose from tail piece (1).

If the hose is damaged at the binding or in its immediate vicinity, make sure to remove the damaged piece of hose.
To do so, use a sharp knife to cut off the hose in transverse direction to its length, i.e. exactly in the direction of the weft thread.
Never fit a new coupling on a damaged hose.

Preparations
Preparing the coupling device:
1. Clamp the angled end of the coupling device between the vice jaws.
2. Check firm seat of the coupling device in the vice.
3. Using the hand crank (1), adjust the width of the two gripper jaws (2) so that a new tail piece (3) can be pushed on.
4. Clamp the tail piece (3) by turning the hand crank (1).
5. Check firm seat of the tail piece (3) on the gripper jaws.

When working with used couplings, make sure to clean off any old hose residues before mounting them again.

6. Push circlip and clamp fitting about 20 cm on the hose to be bound. In doing so, compress the hose slightly.
7. Push the hose on the clamped tail piece as far as it will go.

8. Unwind some wire (approx. 20 cm) from the binding device.
9. Clamp the end of the wire in the orifice (4) of the coupling device.
10. Check firm clamping of the wire in the orifice (4).

Binding
The wrapping of the hose with binding wire is done from top to bottom. During binding, make sure that the binding wire is always taut and under tension while being applied. Otherwise, the connection between hose and tail piece might not be tight, and the entire binding process might have to be repeated. If necessary, adjust the band brake at the binding device in order to ensure sufficient tension of the binding wire.

1. Apply the first coil in the right half of the tail piece.
2. After applying the first coil, cross the binding wire over to the left.

3. Apply all the following coils immediately to the left of each previous coil. This means that the first coil is crossed over by each following coil.
4. The minimum number of coils depends on the size of the coupling:
   110 = min. 10; 75 = min. 4; 52 = min. 3; 25 = min. 3
5. Remove binding wire from clamping (1).
6. Twist the free wire end together with the wire from the binding device. Make sure to pull the wire ends tight.

Now apply another block of coils on the side of the hose facing the tail piece. Apply these additional coils at a small distance (approx. 10 to 20 mm) from the previously applied block of coils.

The number of coils in the second block of coils is identical to the number of coils in the first block of coils.
1. Place the following coils over the twisted end of the first block of coils. Again, make sure that the individual coils are applied parallel to each other.

2. After applying the required minimum number of coils, pull off some more wire (approx. 10 cm) from the binding device, and cut off the binding wire with a wire cutter or other suitable tool.
3. Twist the two free wire ends together. Make sure to pull the wire ends tight.

4. Using a hammer, carefully knock down the two twisted portions of binding wire against the tail piece, so that the clamp fitting can be pushed over the two blocks of coils afterwards.

The binding area should now look as shown in the photo on the right.

1. Push the clamp fitting (5) onto the tail piece up to the stop
2. Using a suitable tool (e.g. screwdriver), push the circlip underneath the clamp fitting (5).
   The circlip must audibly snap into a notch in the tail piece.

Check tightness

⚠️ To check the binding area for tightness, pressurise the hose with water. **Test pressure: 16 bar.**

⚠️ **Wear personal protective equipment!** Liquids escaping under high pressure might cause serious injuries!

⚠️ If the binding area is not tight, it is necessary to remove the coupling completely, and to repeat the entire binding process.