Assembly of VOSS quick connect system 232

Cutting nylon tubes to length and assembly of nylon tubes on the fir-tree

A. Cutting nylon tubes to length

The VOSS tool

VOSS cutting pliers

A. Cutting nylon tubes to length

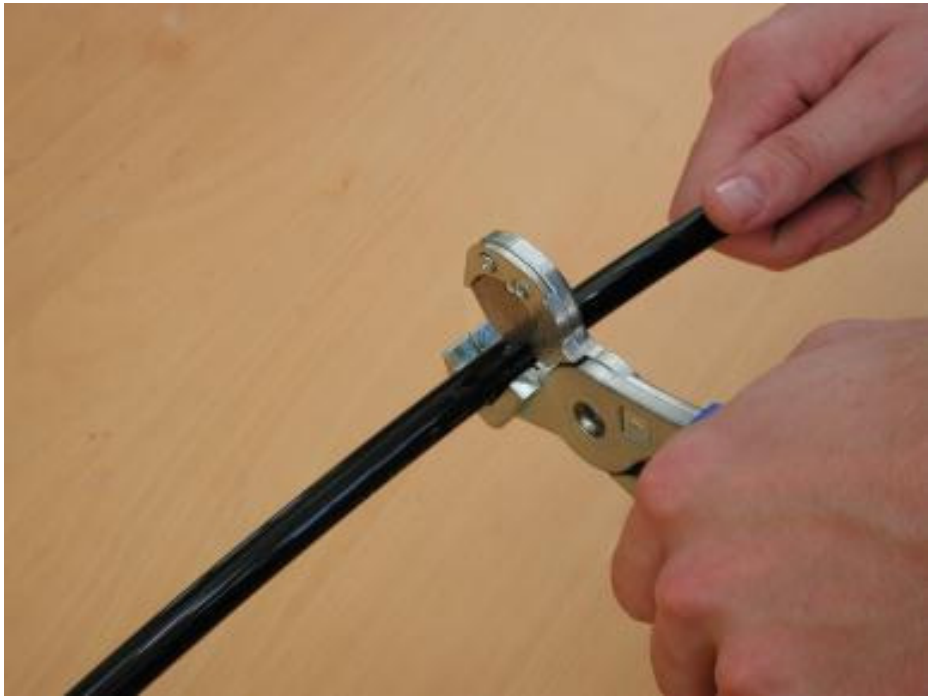
The process (1)

The nylon tube should not be cut using a standard cutting tool as this causes burring.

Burring reduces the sealing ability of the connection.

A. Cutting nylon tubes to length

The process (2)



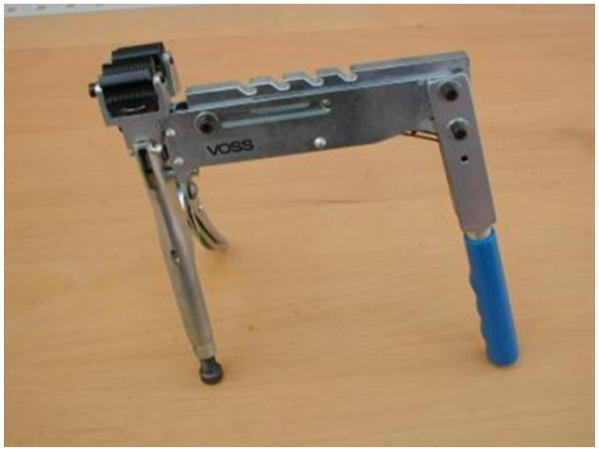
The VOSS cutting pliers guarantee a straight and clean cut. Reworking of the cut surface is not necessary.

The tube must be cut at a right angle (±10°)

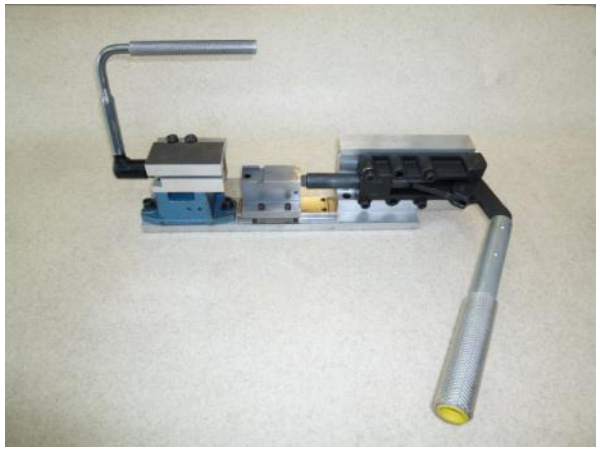
B. Assembly of nylon tubes on the fir-tree

The VOSS tools

Nylon tube pliers



Manual assembly tool



Tabletop assembly tool

Plastic hammer

B. Assembly of nylon tubes on the fir-tree

1. The process with VOSS nylon tube pliers (1)

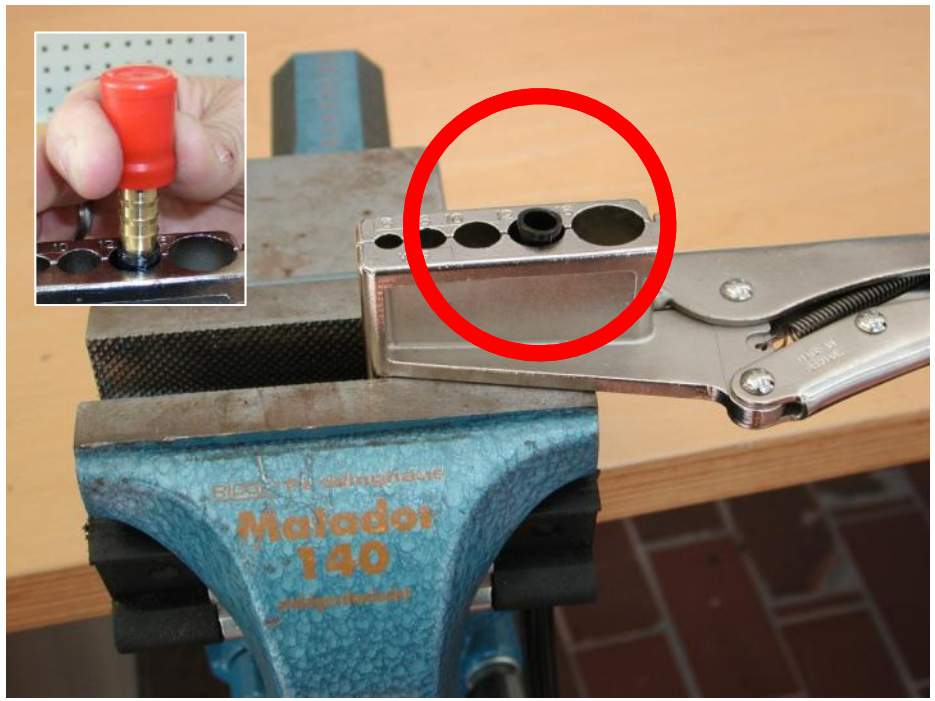
The tube is placed into the opened pliers in accordance with the tube size.

The tube is then clamped in the pliers.

B. Assembly of nylon tubes on the fir-tree

1. The process with VOSS nylon tube pliers (2)

Brass plugs



For the connection with brass plugs, approximately 2 mm of the tube must overlap on the non-serrated side of the jaws.

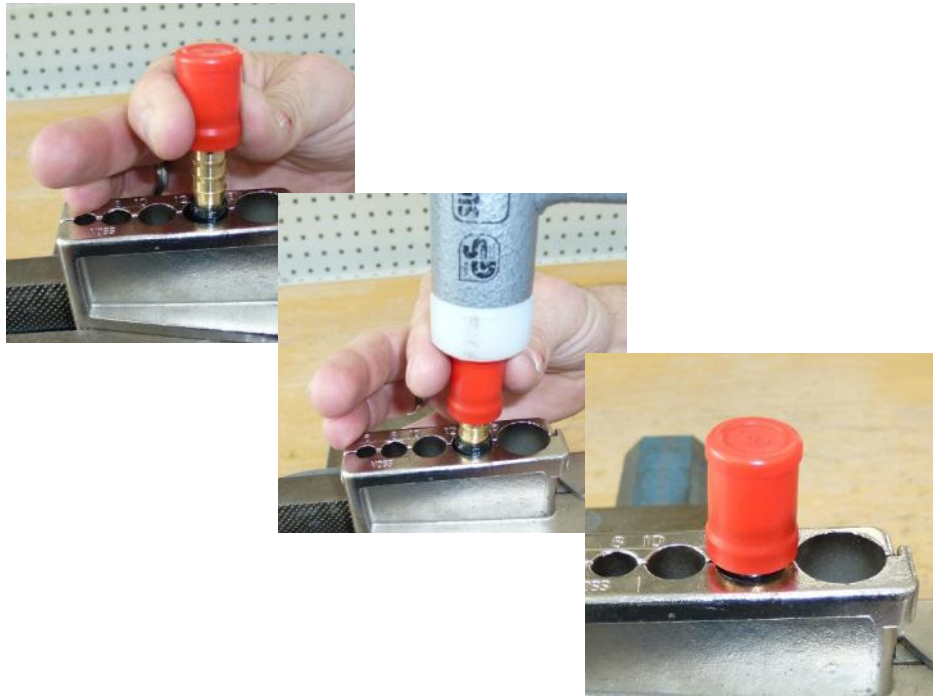
Nylon plugs

For the connection with nylon plugs, approximately 9 mm of the tube must overlap on the non-serrated side of the jaws.

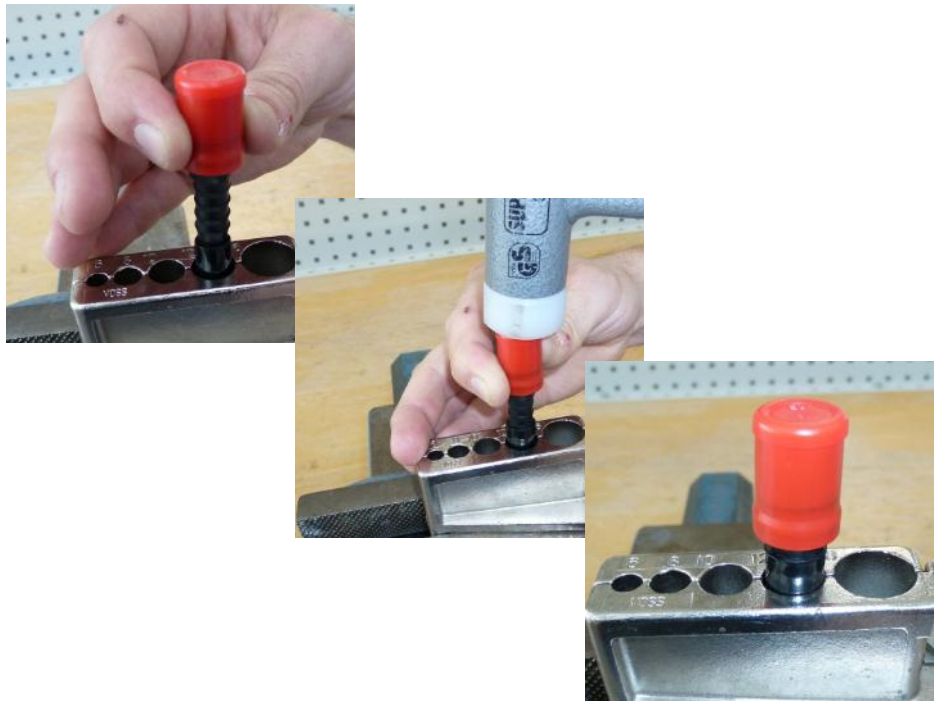
B. Assembly of nylon tubes on the fir-tree

1. The process with VOSS nylon tube pliers (3)

Brass plugs



Nylon plugs



The plug‘s fir-tree is driven into the tube end as far as possible with a plastic hammer.
A plastic protective cap prevents the plug end against any damage.

B. Assembly of nylon tubes on the fir-tree

1. The process with VOSS nylon tube pliers (4)

Brass plugs

Nylon plugs

Tubes fitted correctly on the fir-tree of the plugs

B. Assembly of nylon tubes on the fir-tree

1. The process with VOSS nylon tube pliers (5)

Brass plugs

Nylon plugs

Tubes not fitted completely on the fir-tree

B. Assembly of nylon tubes on the fir-tree

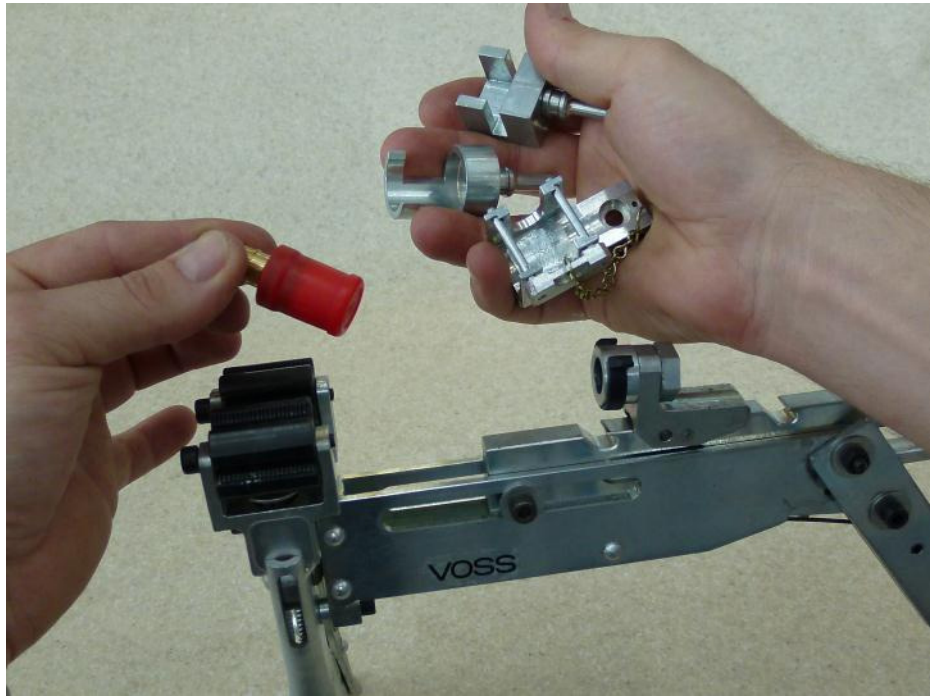
1. The process with VOSS nylon tube pliers (6)

Nylon plugs

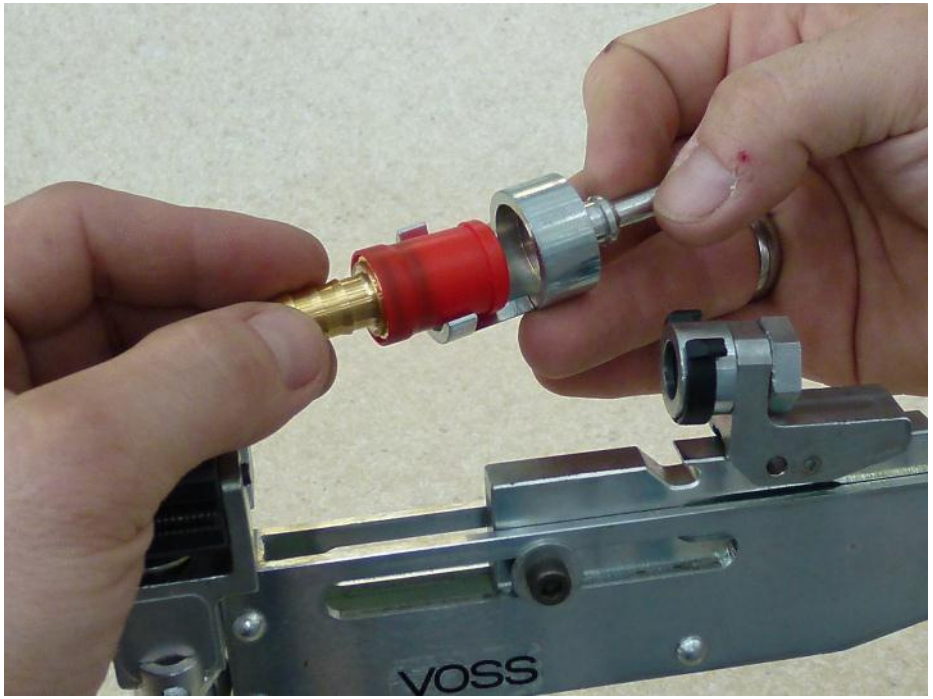
Tube driven with too much force on the fir-tree of the nylon plug

B. Assembly of nylon tubes on the fir-tree

2. The process with the manual assembly tool (1)



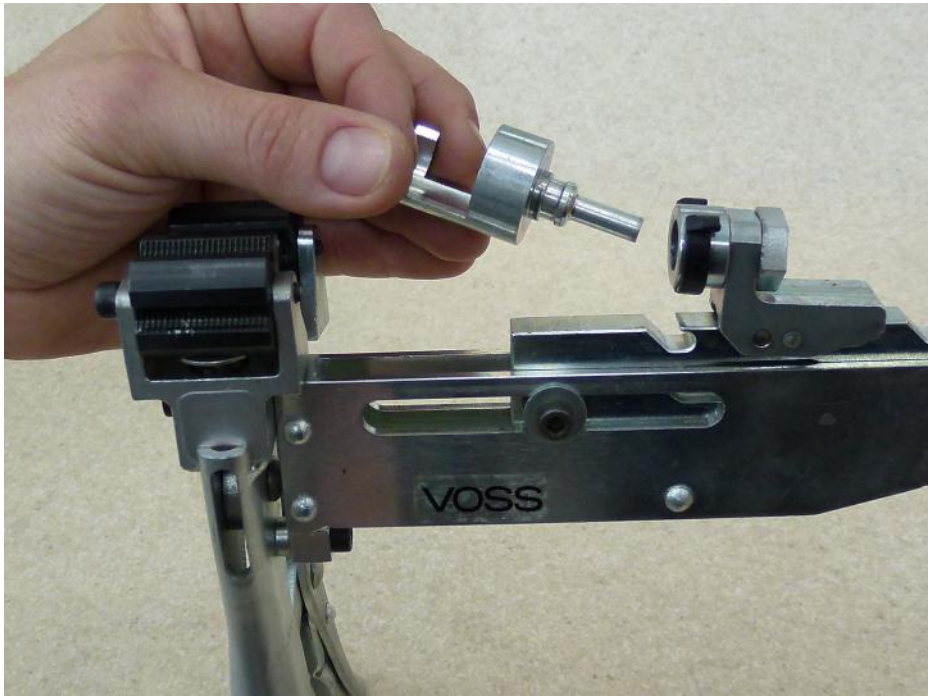
Tool inserts for the manual assembly tool are available on request.

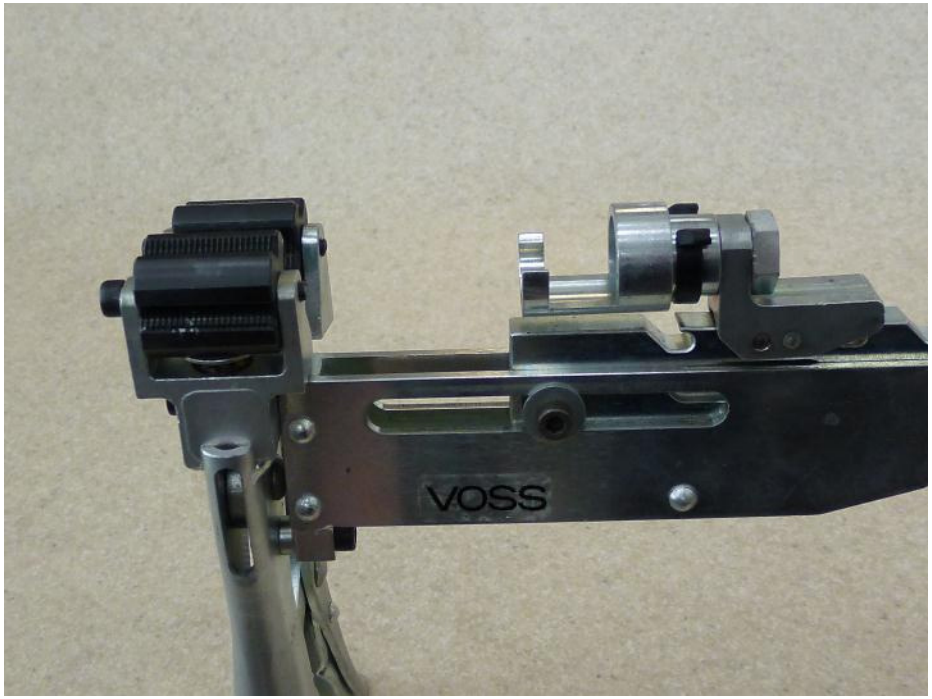


Plugs are always placed in the fixture with protective caps. A tool insert which matches the plug…

B. Assembly of nylon tubes on the fir-tree

2. The process with the manual assembly tool (2)

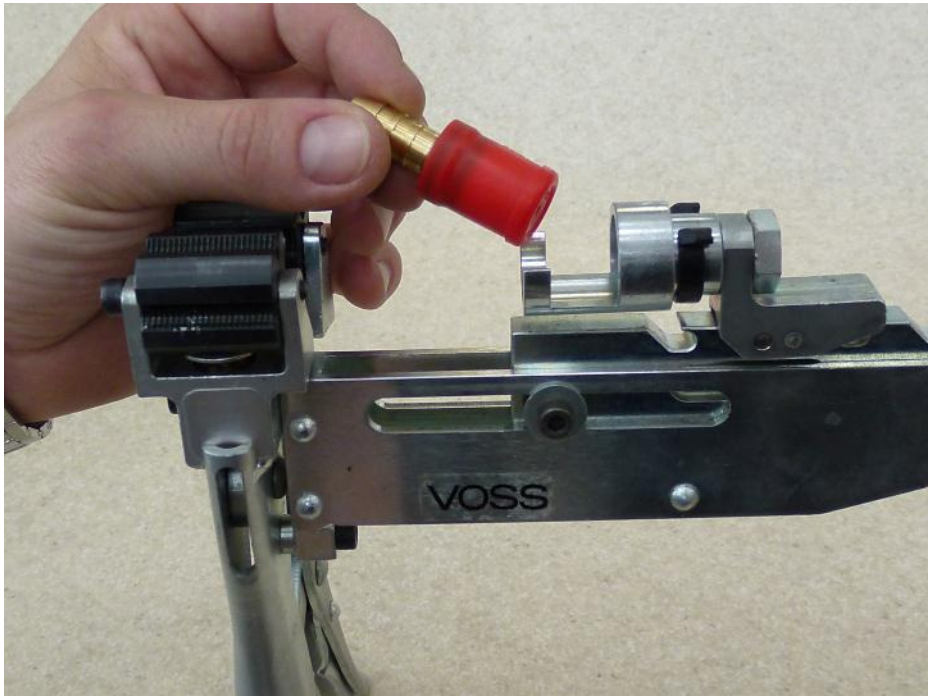




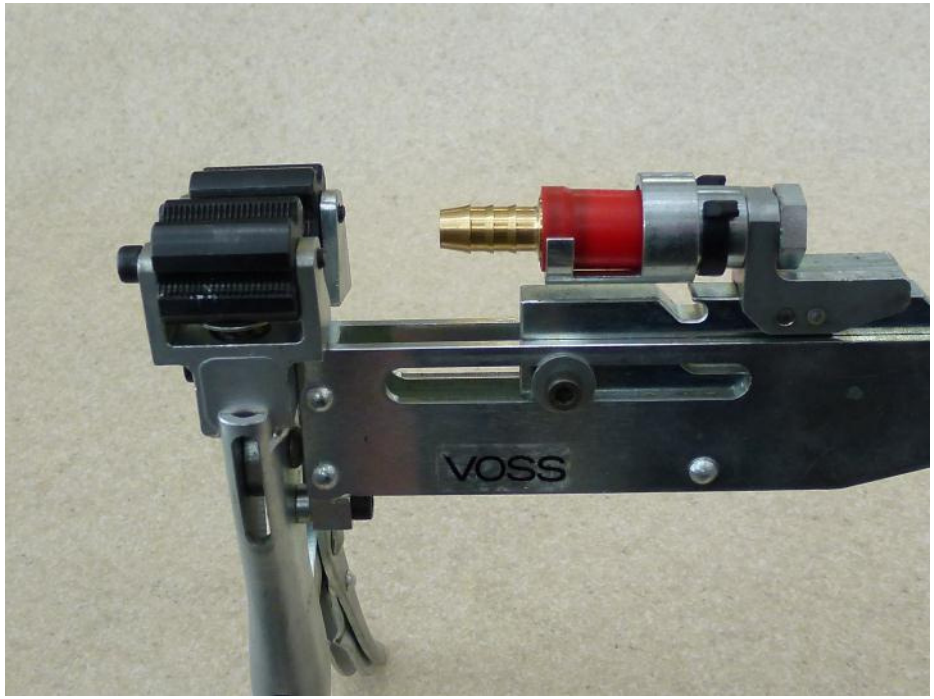
… is placed into the fixture.

B. Assembly of nylon tubes on the fir-tree

2. The process with the manual assembly tool (3)



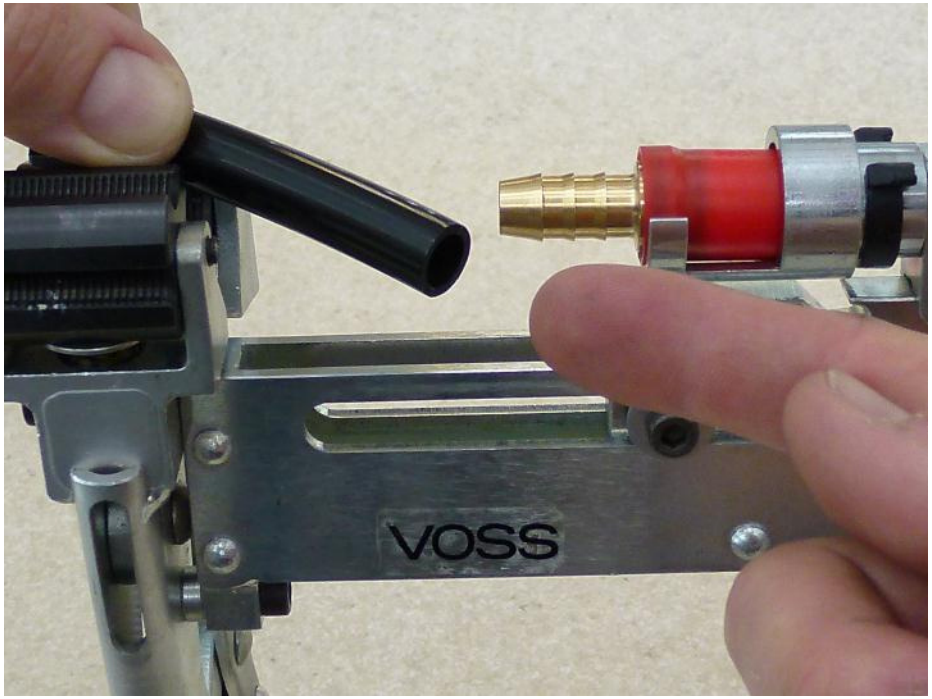
The plug is then secured in the fixture…



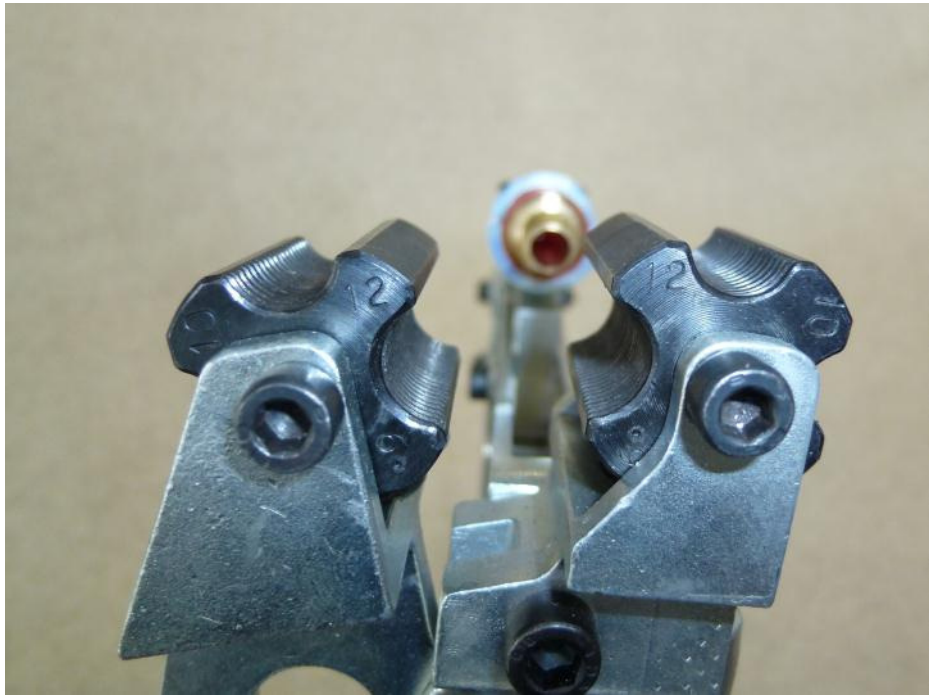
…with the fir-tree facing forward.

B. Assembly of nylon tubes on the fir-tree

2. The process with the manual assembly tool (4)



The end of the tube must be free of burrs.

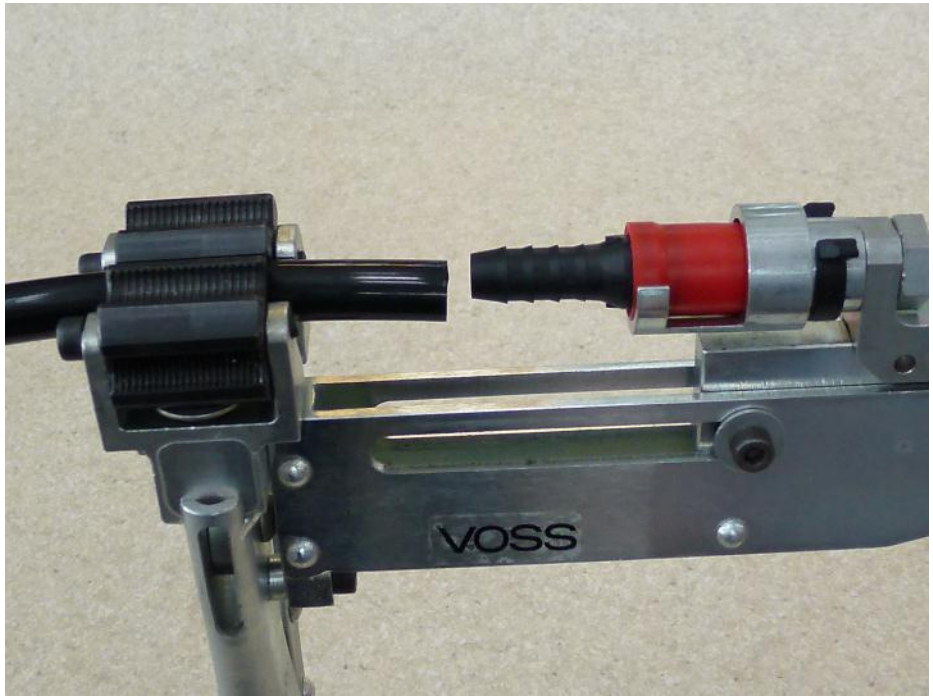


The clamping jaws of the tool are set in accordance with the outer diameter of the tube.

B. Assembly of nylon tubes on the fir-tree

2. The process with the manual assembly tool (5)

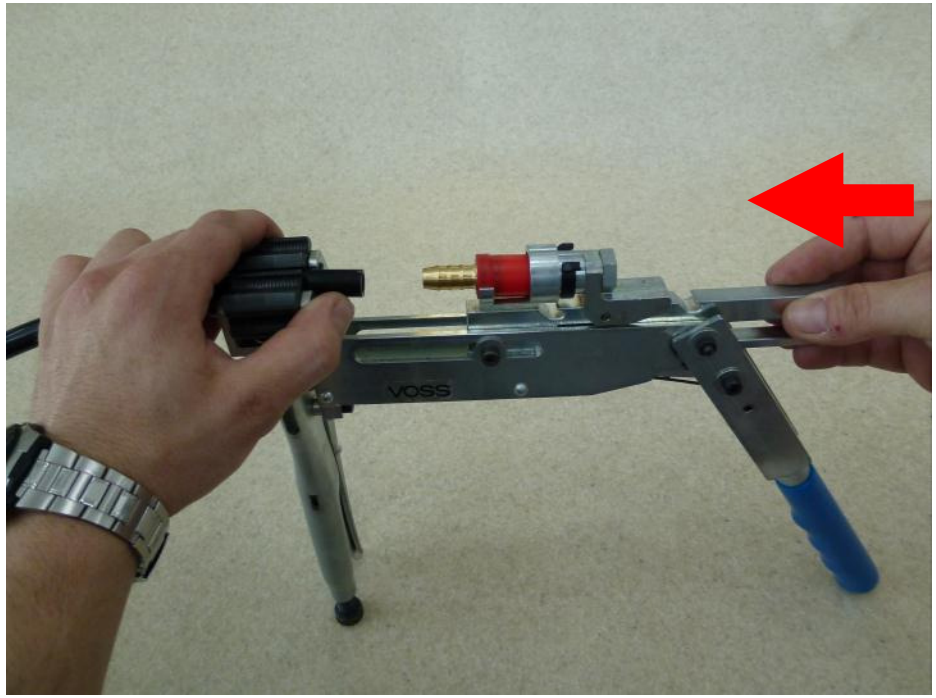
Then the tube must be inserted in the clamping jaws.



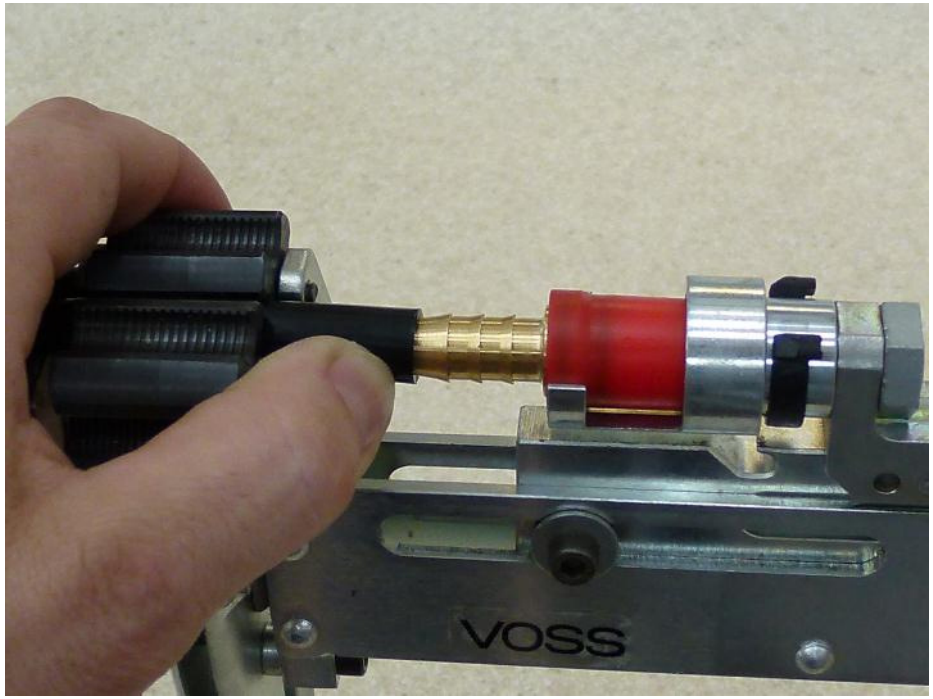
The overlap of the tube must be at least 2 mm longer than the fir-tree. The length of the fir-tree is different for brass and nylon plugs.

B. Assembly of nylon tubes on the fir-tree

2. The process with the manual assembly tool (6)



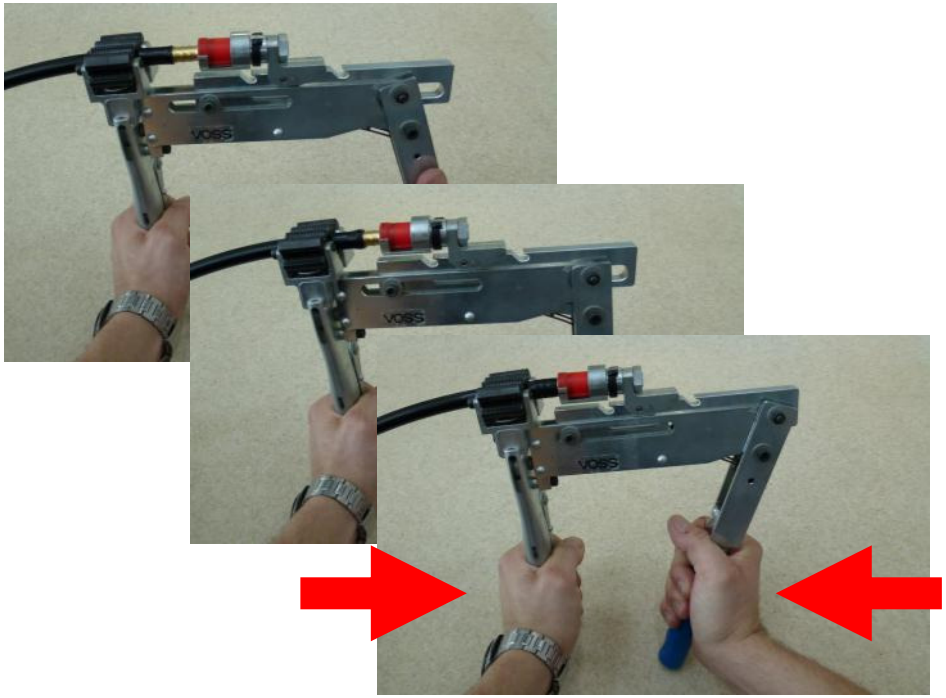
Then the tube must be fixed in the claws and the rail with the tool insert has to be moved to the tube.



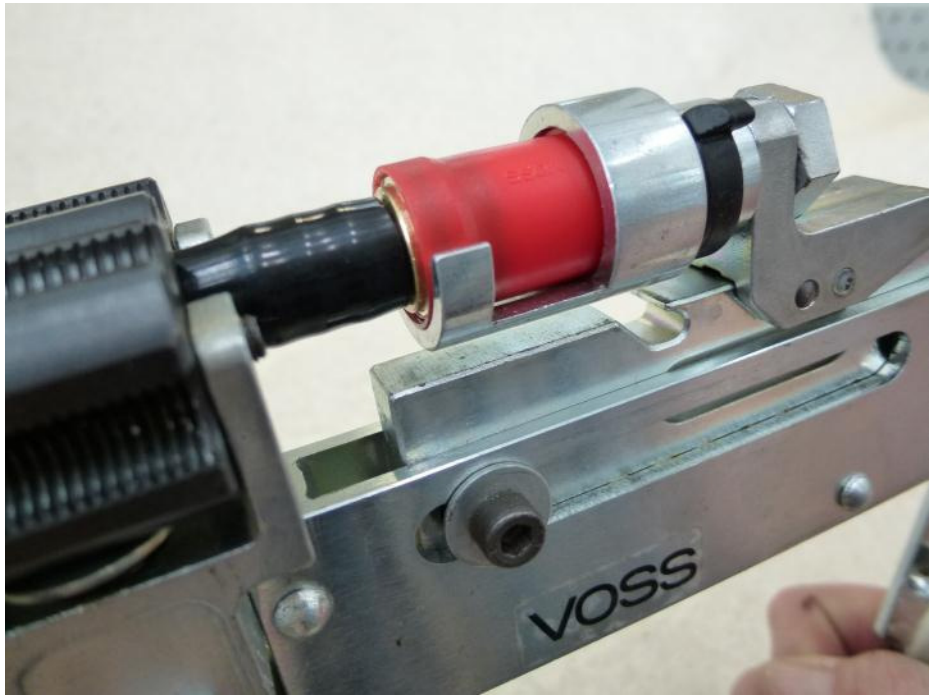
Then the fir-tree is pre-centered in the tube end…

B. Assembly of nylon tubes on the fir-tree

2. The process with the manual assembly tool (7)



…and the fitting process can start.

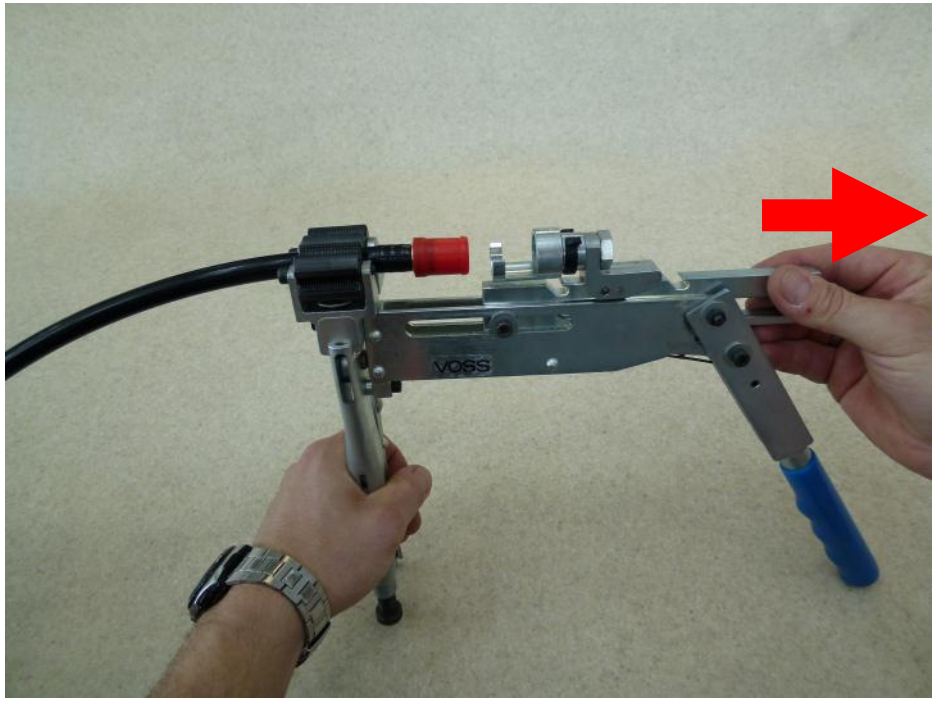


Assembly is complete when the fir-tree is fully inserted into the nylon tube.

B. Assembly of nylon tubes on the fir-tree

2. The process with the manual assembly tool (8)

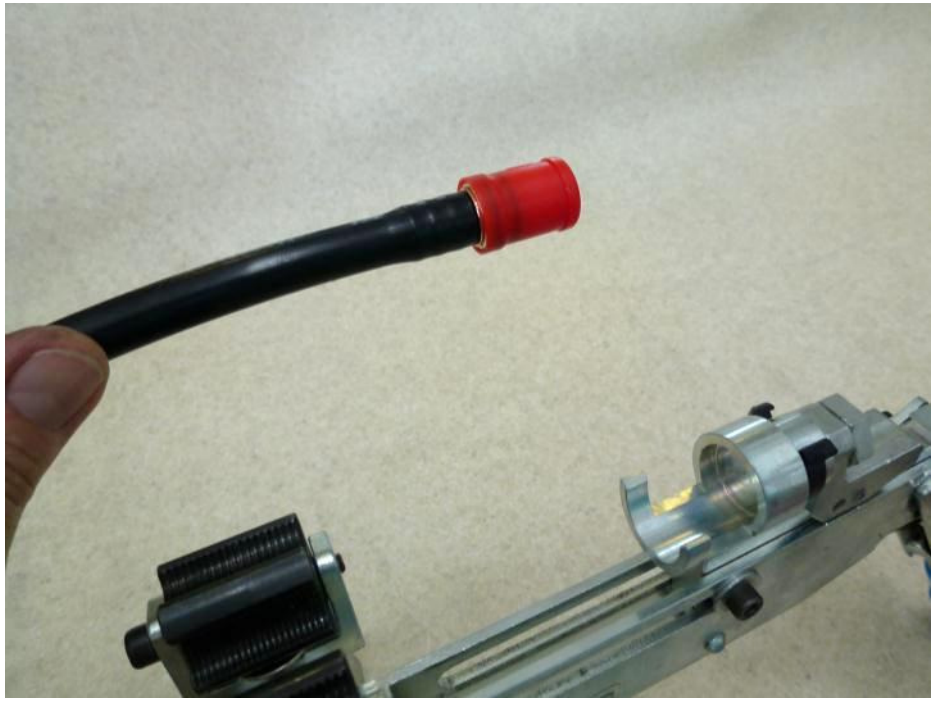
Then the grip of the assembly tool can be released.



The rail with the tool insert can be drawn backward...

B. Assembly of nylon tubes on the fir-tree

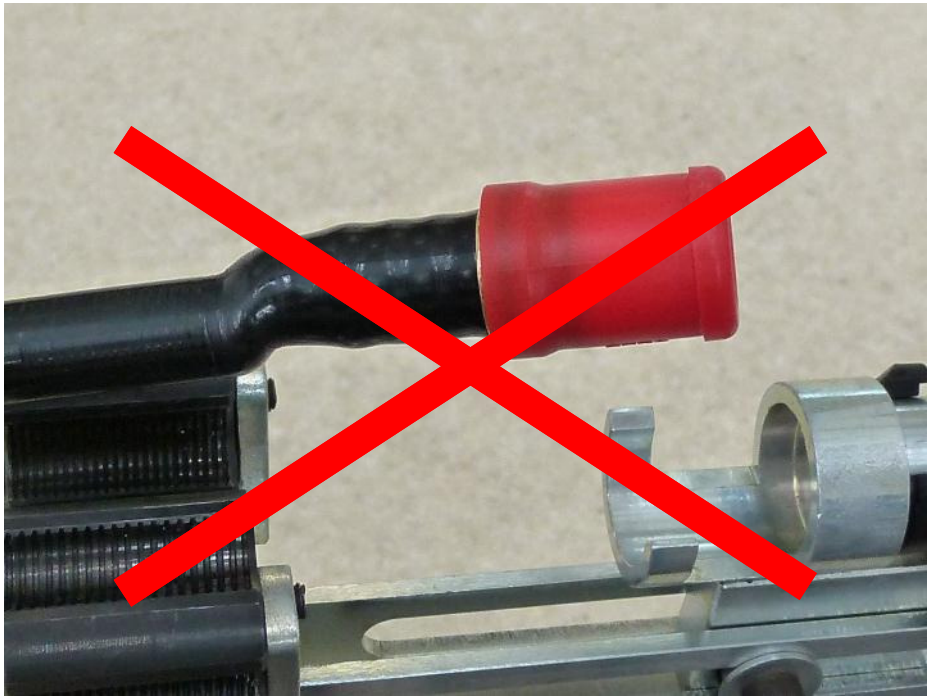
2. The process with the manual assembly tool (9)



The tube can then be removed.

B. Assembly of nylon tubes on the fir-tree

2. The process with the manual assembly tool (10)

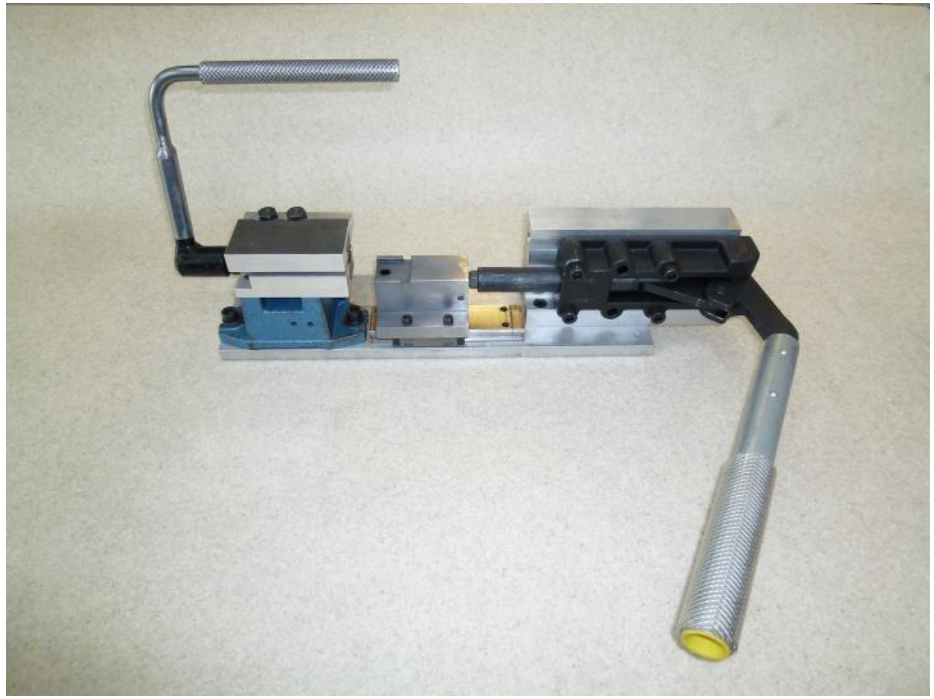


Assembled with excessive force
and exceeded overlap of the tube!

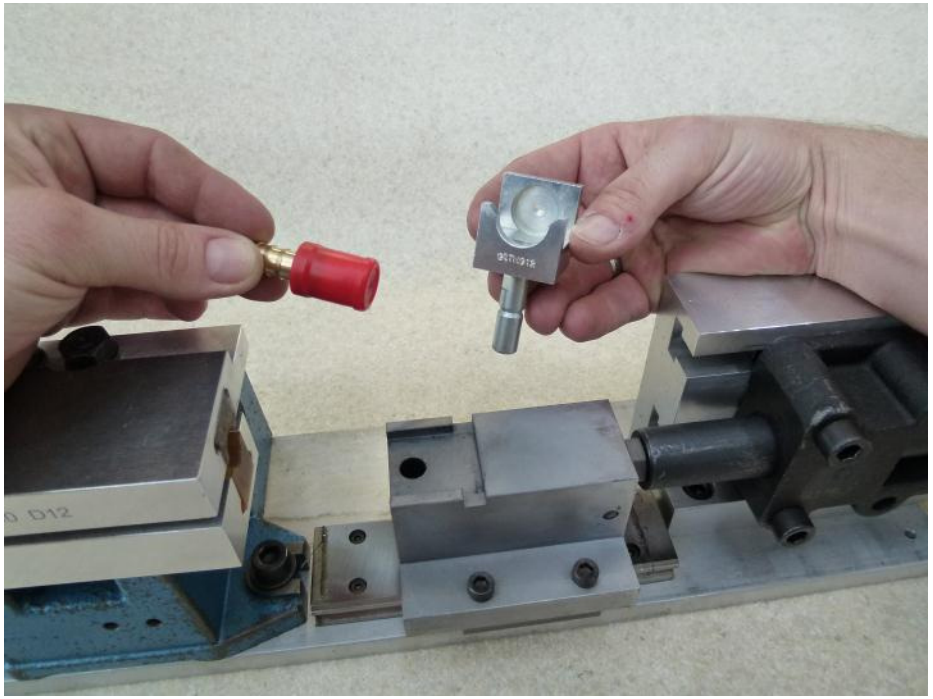
Assembled with too low overlap of the tube!

B. Assembly of nylon tubes on the fir-tree

3. The process with the tabletop assembly tool (1)



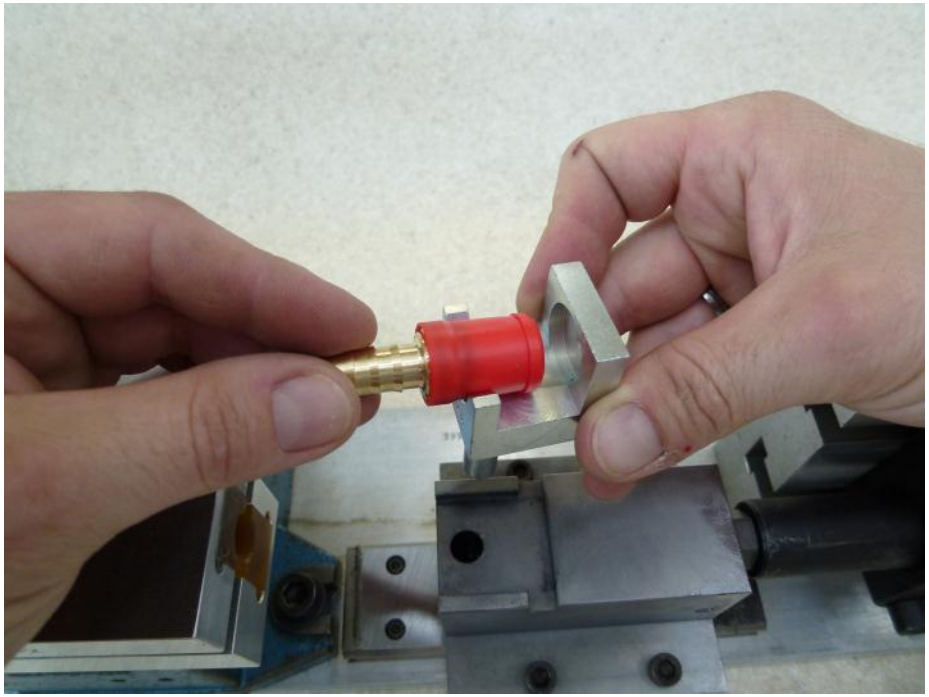
The third method of assembling the tube onto the fir-tree is to use the VOSS tabletop assembly tool.

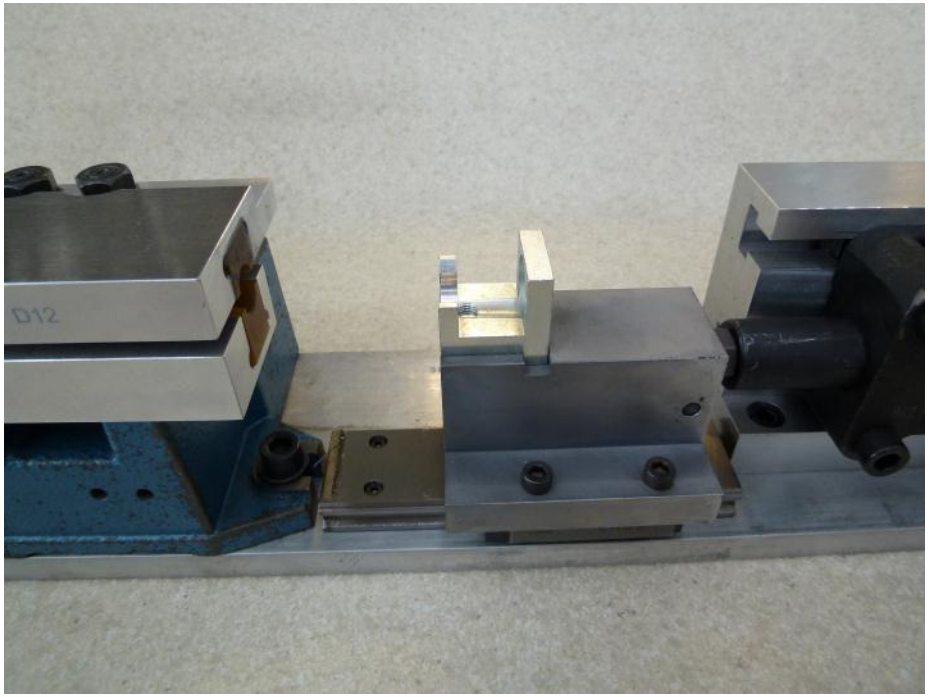


A tool insert which matches the plug…

B. Assembly of nylon tubes on the fir-tree

3. The process with the tabletop assembly tool (2)

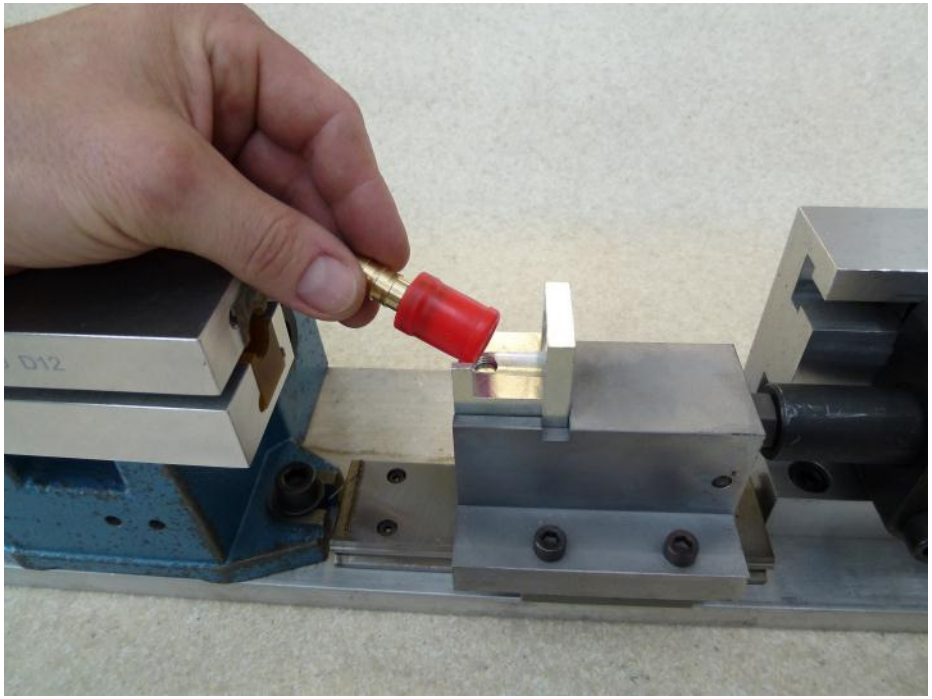




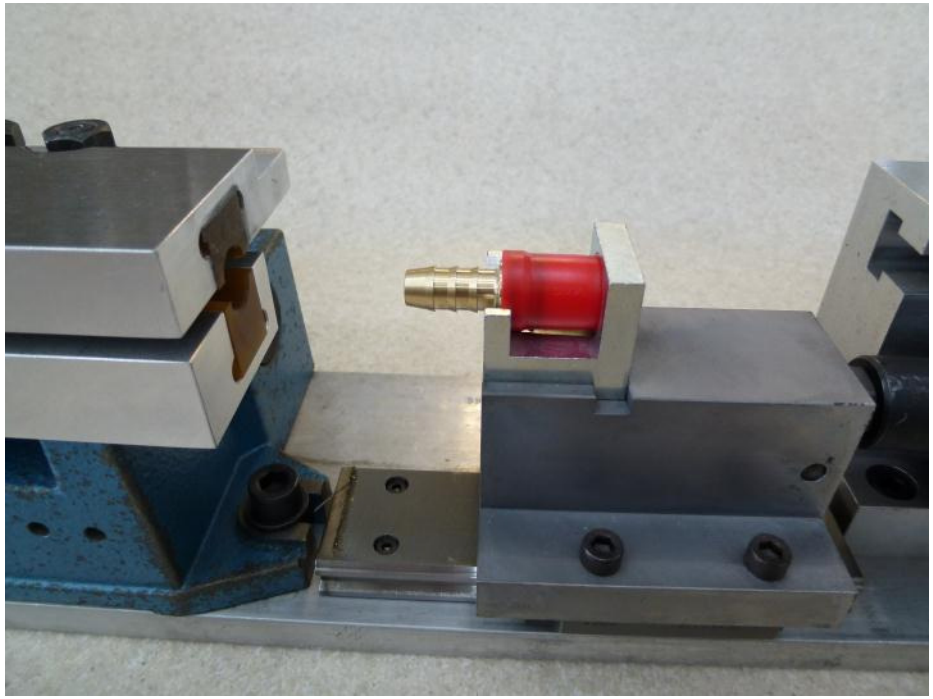
… is placed on the fixture.

B. Assembly of nylon tubes on the fir-tree

3. The process with the tabletop assembly tool (3)



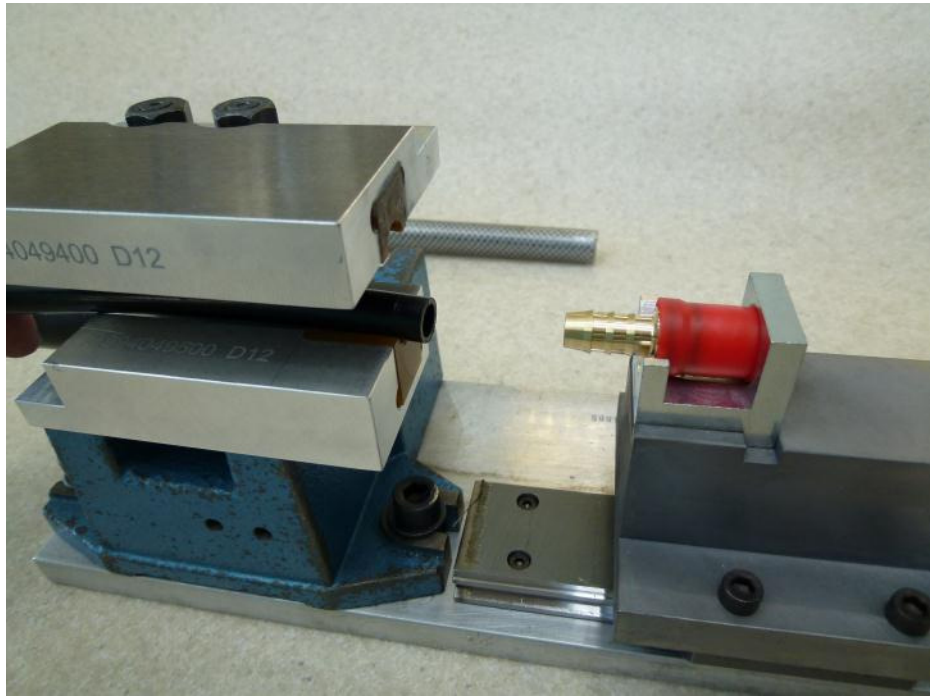
The plug is then secured in the fixture…



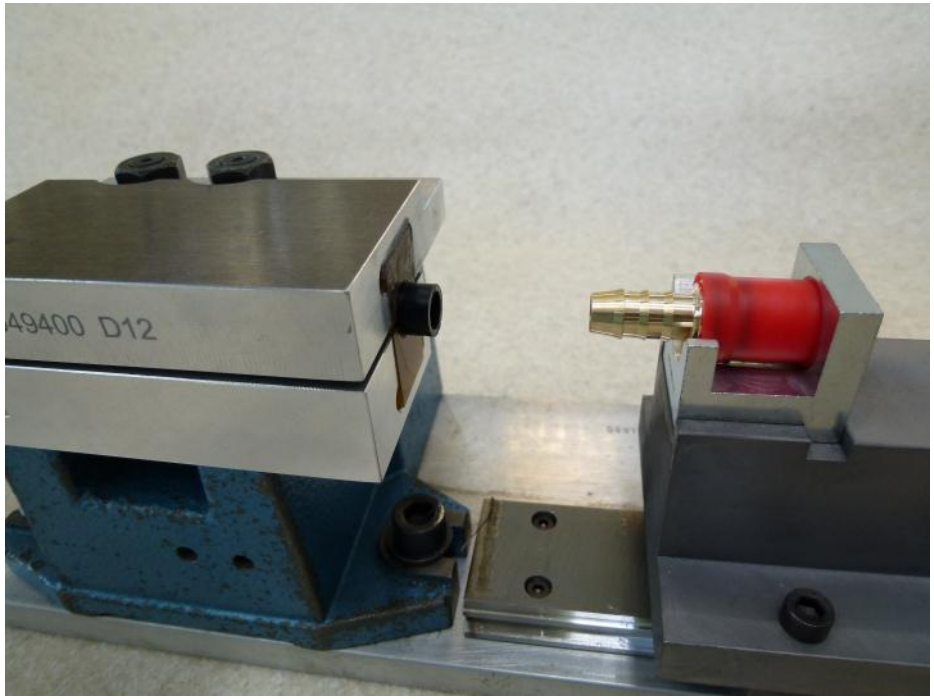
…with the fir-tree facing forward.

B. Assembly of nylon tubes on the fir-tree

3. The process with the tabletop assembly tool (4)



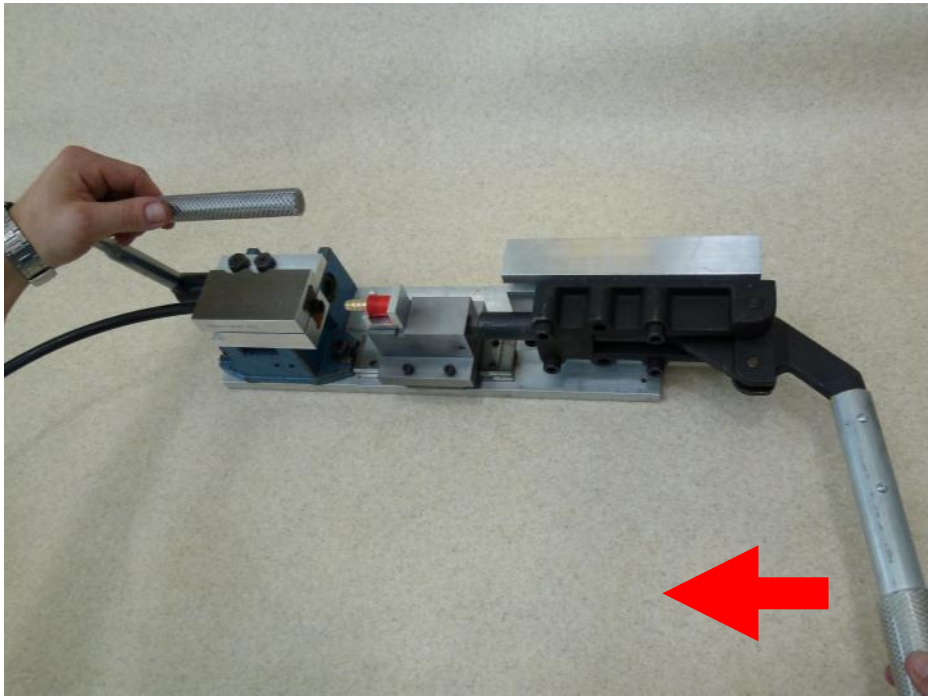
Then the tube is inserted…



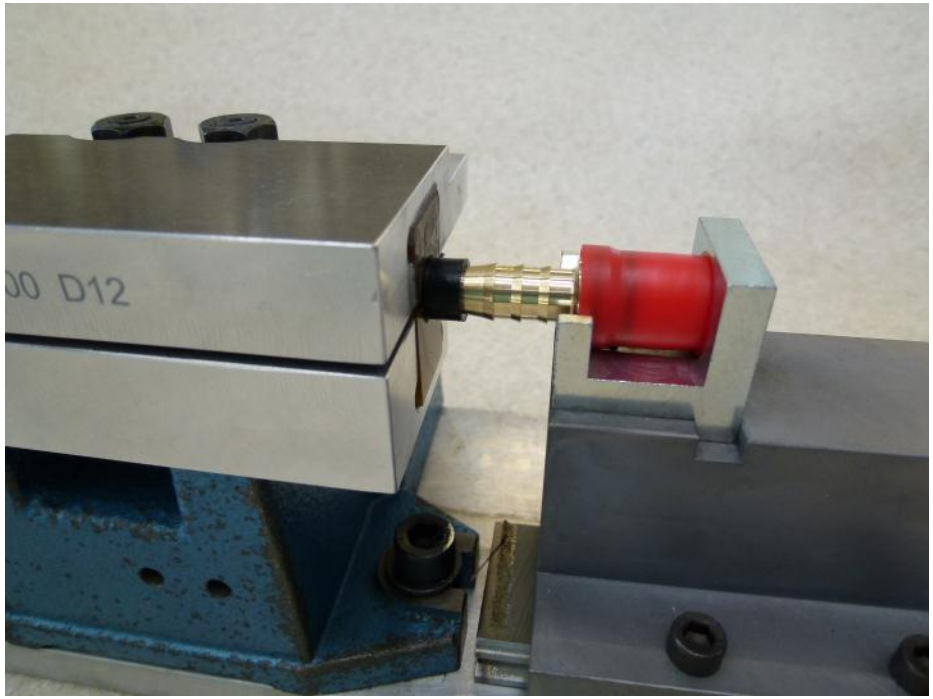
…and clamped in the tool. During the assembly process the clamp must be kept under tension.

B. Assembly of nylon tubes on the fir-tree

3. The process with the tabletop assembly tool (5)



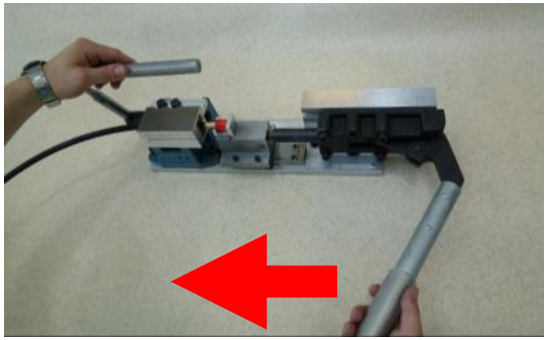
Then the rail with the plug has to be moved in the direction of the tube, using the right lever…

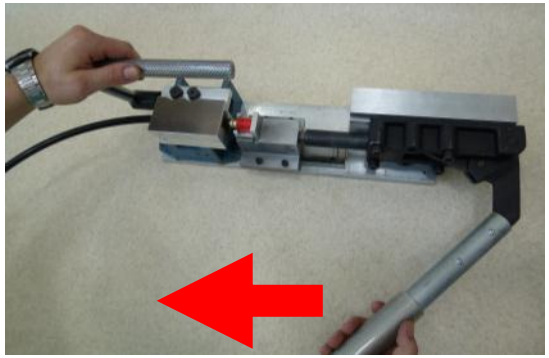


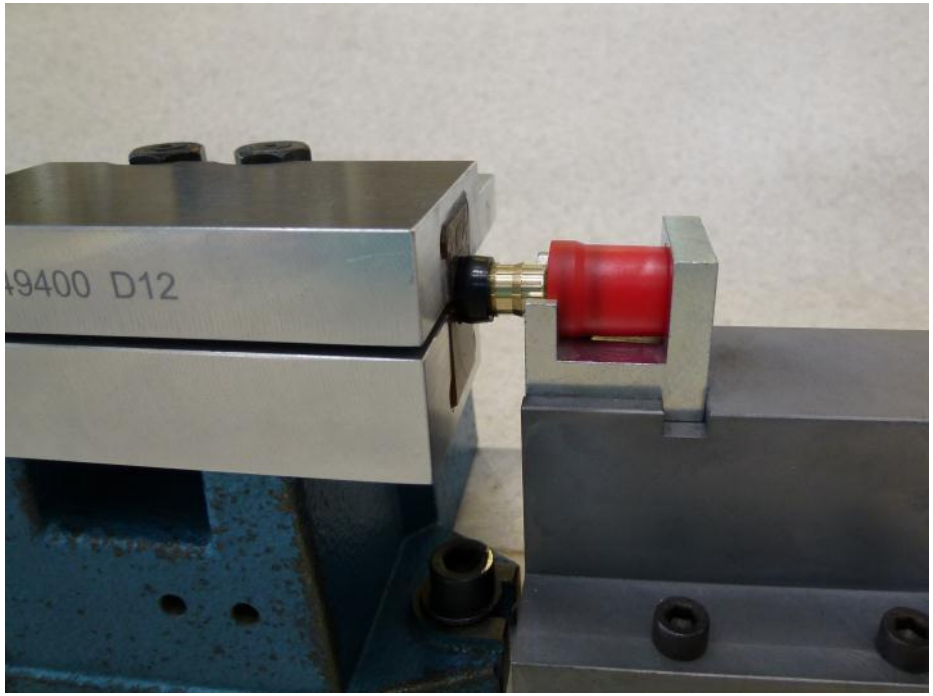
…until the fir-tree is pre-centered in the tube.

B. Assembly of nylon tubes on the fir-tree

3. The process with the tabletop assembly tool (6)



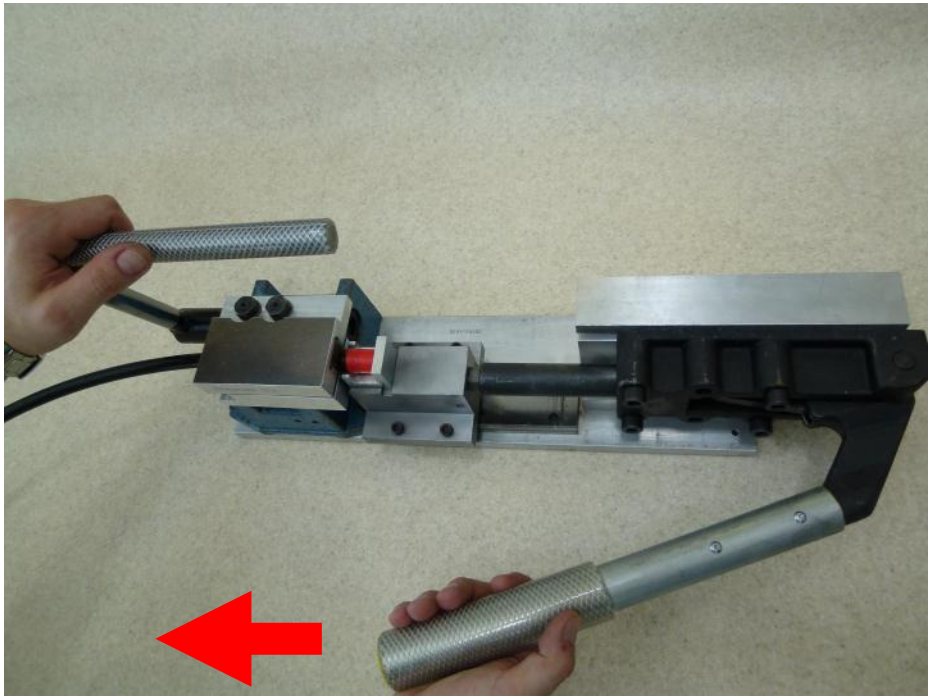


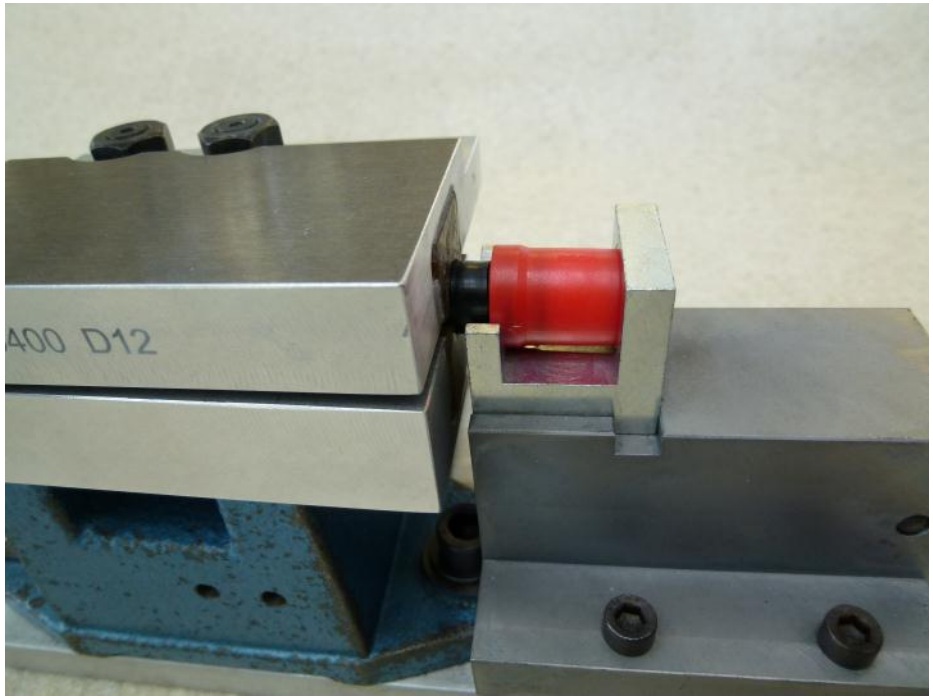


The rail with the plug has to be moved further…

B. Assembly of nylon tubes on the fir-tree

3. The process with the tabletop assembly tool (7)

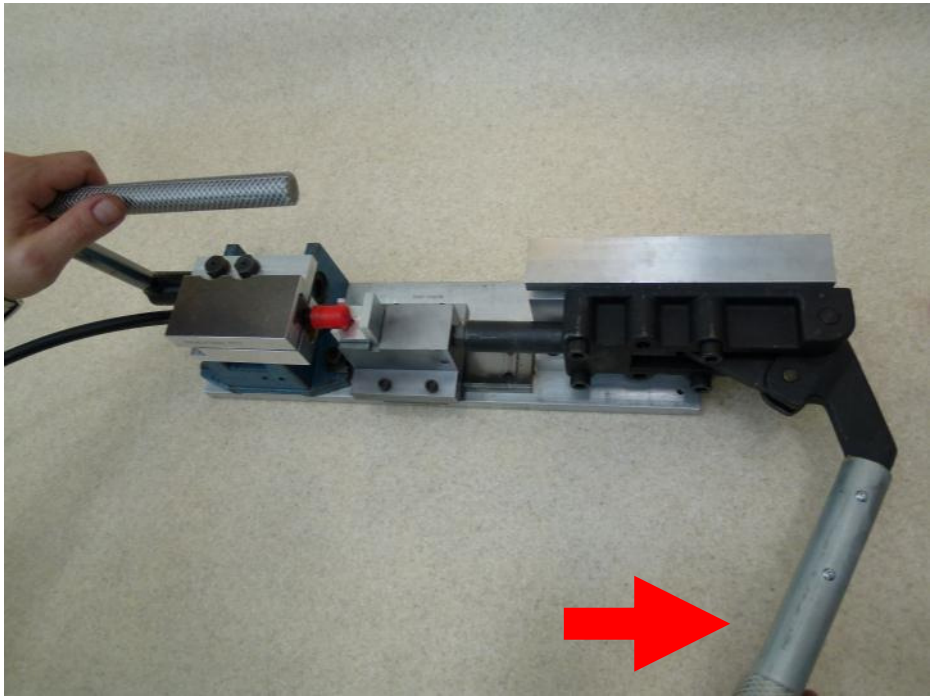


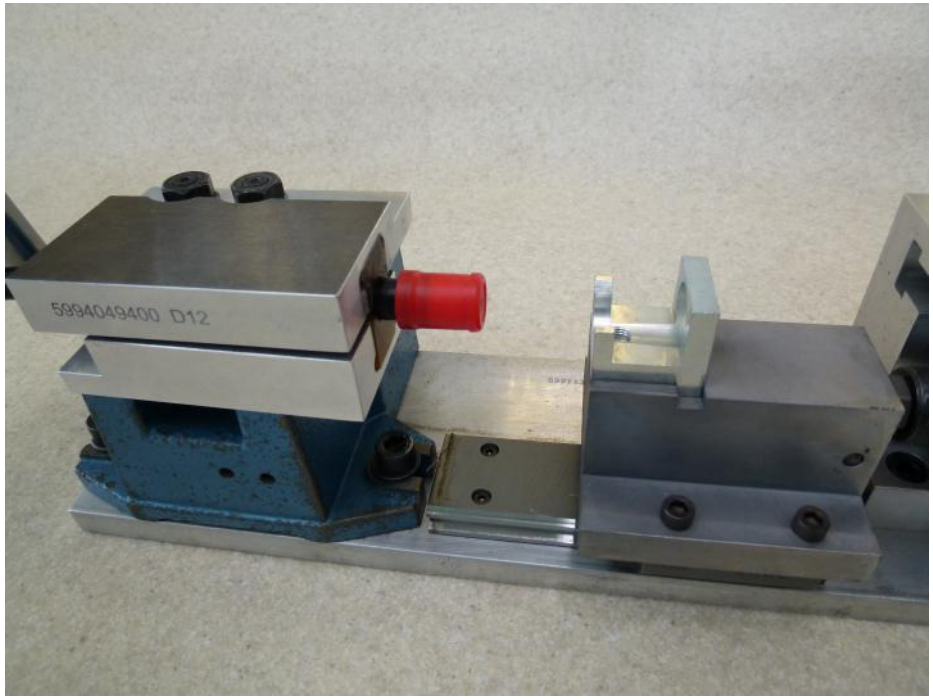


…until the fir-tree is completely inserted into the tube.

B. Assembly of nylon tubes on the fir-tree

3. The process with the tabletop assembly tool (8)

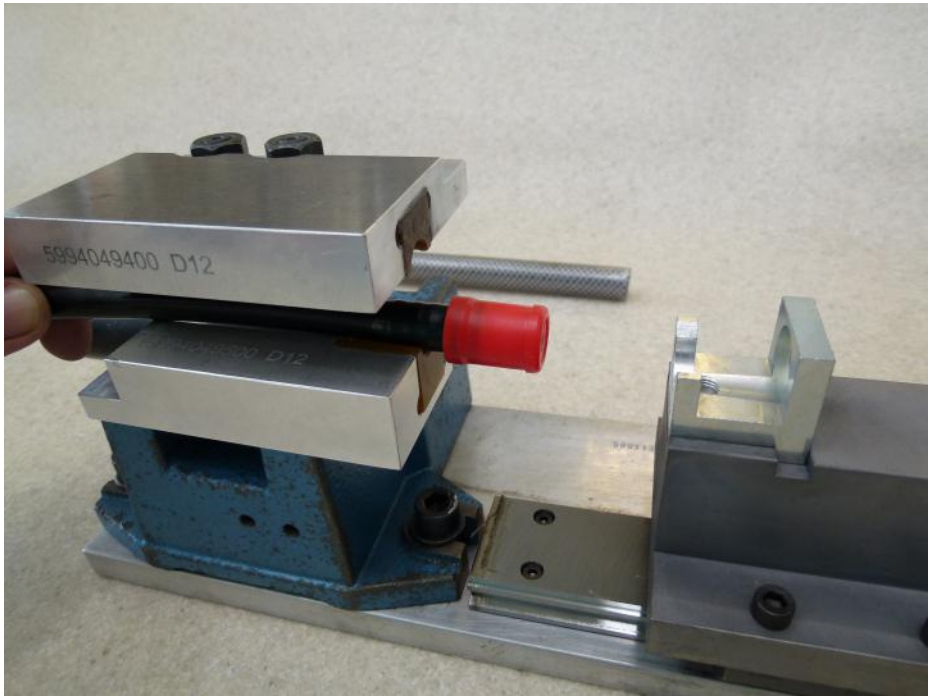




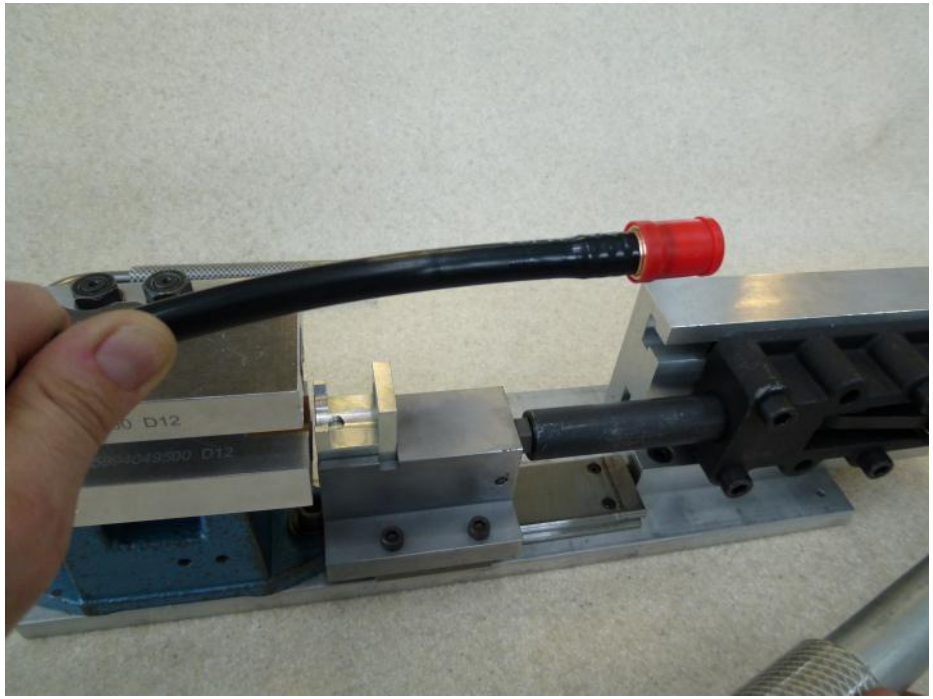
Then the rail can be moved back.

B. Assembly of nylon tubes on the fir-tree

3. The process with the tabletop assembly tool (9)



The tube can be released...



…and taken off.

VOSS

Thank you for your attention!