

Air Conditioning and Refrigeration

>B< MaxiPro Installation Instructions

General:

Conex Bänninger >B<MaxiPro fittings must be installed by an installer who is appropriately trained and qualified to work on air conditioning and refrigeration installations and certified via the >B< MaxiPro training course. All installations must be completed in line with local regulations and by-laws governing the installation, and all applicable health and safety practices must be adhered to.

When using the press tools, care must be taken to ensure hands are kept away from the jaw during the pressing process. Always wear ear and eye protection.

Important:

Select the correct size of tube, fitting and jaw for the job. Ensure the fitting and tube are kept free of any dust or dirt and that the O-ring is undamaged. Check the inner pressing contour of the jaw is free of dirt and debris.

Do not force tube ends together prior to making joints. Joints should only be made on an unstressed pipework assembly.

Remarks:

- A joint is finished after one complete compression cycle of the tool.
- Do not press any >B< MaxiPro fitting more than once.
- Pipework alignment must be completed prior to pressing.
- Do not rotate joints after they have been pressed.

Further Information:

Please refer to the >B< MaxiPro Technical Brochure or visit www.conexbanninger.com for information on:

- Copper tube compatibility.
- Space required for pressing.
- Minimum distance between joints, pressed or brazed.
- Compatible press tools and jaws.

Reference should be made to our Technical Department if clarification is required - technical@ibpgroup.com.

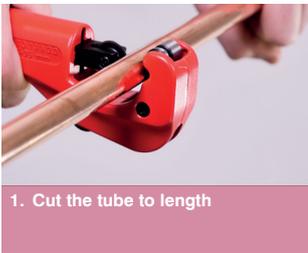
Technical data:

Technical Data	
Parameters	Capability
Applications	Air conditioning, refrigeration, heat pump (refrigerant side)
Connections	Copper to copper
Approved tube: Copper tube conforming to*	EN 12735-1, EN 12735-2 or ASTM-B280
Fitting / tube range inch	1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1 1/8", 1 3/8"
Fitting / tube range metric	6mm, 8mm, 10mm, 12mm, 15mm, 16mm, 18mm, 22mm, 28mm
Fitting material	Refrigerant grade copper (UNS C12200 min 99.9% pure)
O-ring	HNBR
Approved oils	POE, PAO, PVE, AB and MO
Maximum operating and abnormal pressure	48 bar / 4800 kPa / 700 psig
Burst pressure >3 x maximum operating and abnormal pressure EN 378-2	> 144 bar / > 14400 kPa / > 2100 psi
Leak tightness	Helium $\leq 7.5 \times 10^{-7}$ Pa.m ³ /s at +20°C, 10 bar
Vacuum	200 microns
O-ring temperature range	-40°C to 140°C / -40°F to 284°F
UL listing continuous operating temperature	-40°C to 121°C / -40°F to 250°F
Compatible refrigerants	R-1234yf**, R-1234ze**, R-125, R-134a, R-290**, R-32**, R-404A, R-407A, R-407C, R-407F, R-407H, R-410A, R-417A, R-421A, R-422B, R-422D, R-427A, R-438A, R-444A**, R-447A**, R-447B**, R-448A, R-449A, R-450A, R-452A, R-452B**, R-452C, R-454A**, R-454B**, R-454C**, R-457A**, R-459A**, R-507A, R-513A, R-513B, R-600A**, R-718 and HYCOOL 20.

*Please refer to >B< MaxiPro - Tube Compatibility Tables, see section 12.10.

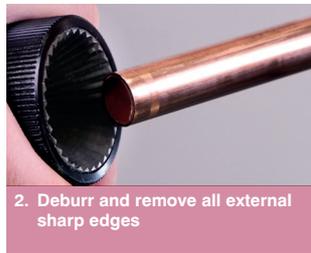
** When using refrigerants classified A2L (lower flammability), A2 (flammable) and A3 (higher flammability) additional/specific standards, local rules and regulations, codes of practice and by-laws may be applicable.

NOTE: >B< MaxiPro fittings are NOT suitable for R-717, R-723, R-764, R-744, R-22 refrigerants.



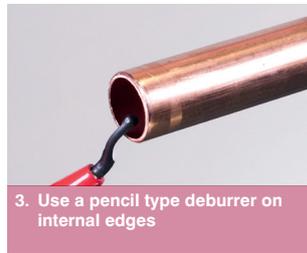
1. Cut the tube to length

- Use a rotary tube cutter.
- Ensure the tube is cut square. Check the tube has retained its shape and is damage free.



2. Deburr and remove all external sharp edges

- Deburr the tube both internally and externally.
- Where possible angle the tube downwards to prevent filings entering the tube.
- Use a pencil type deburrer on internal tube edges.
- Make sure the internal and external surfaces of the tube ends are smooth and free from burrs or sharp edges.



3. Use a pencil type deburrer on internal edges



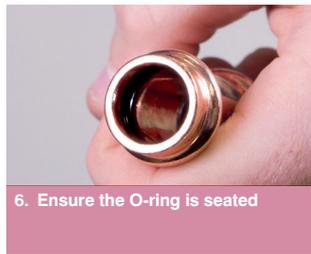
4. Clean the tube end

- Thoroughly clean the tube end using ROTHENBERGER Rovlies or similar cleaning pad in a rotating action.
- Tube ends must be free from scratches, oxidation, dirt and debris.



5. Check for defects

- If deep scratches are visible, cut the tube back to a clean section and prepare the tube end again.



6. Ensure the O-ring is seated

- Check the fitting is the correct size for the tube.
- Check the O-rings are present and correctly seated.
- It is good practice to add a small amount of Conex Bänninger press fitting lubricant to the O-rings to aid tube insertion.



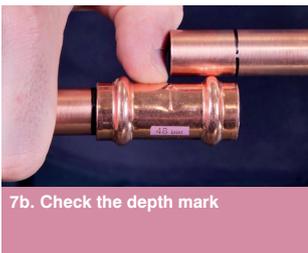
7a. Mark insertion depth on tube using depth gauge

- Insert tube into correct socket in depth gauge.
- Check window to see the tube is fully inserted.
- Mark the insertion depth on the tube.



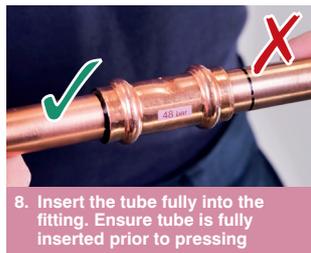
7b. Alternatively insert tube to tube stop and mark

- The tube must be fully inserted into the fitting until it reaches the tube stop.
- To reduce the risk of dislodging the O-ring rotate the tube (if possible) while slipping it into the fitting.
- Mark the insertion depth on the tube.



7b. Check the depth mark

- Remove the tube and align with fitting socket, check that the depth mark is correctly positioned.
- The insertion depth mark is used as a reference prior to pressing the joint.



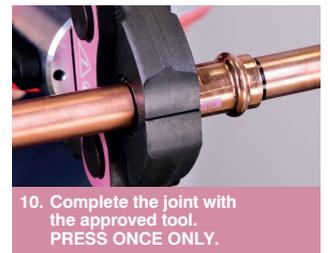
8. Insert the tube fully into the fitting. Ensure tube is fully inserted prior to pressing

- Insert the tube fully into the fitting up to the tube stop.
- To reduce the risk of dislodging the O-ring rotate the tube (if possible) while slipping it into the fitting.
- Prior to pressing ensure the tube has not moved out from the fitting socket.
- Use the insertion depth mark as a guide.



9. Align jaws squarely on the fitting

- Ensure pipework is correctly aligned prior to pressing.
- Ensure the correct size jaw is inserted into the tool.
- The jaws must be placed squarely on the fitting locating the groove on the bead.
- The bead on the fitting should fit centrally in the groove of the jaw.



10. Complete the joint with the approved tool. PRESS ONCE ONLY.

- Depress and hold the button to complete the pressing cycle.
- Pressing is complete when the jaws are fully closed and the piston retracts.
- Complete the press cycle once only – DO NOT REPRESS.
- Release the jaws from the pressing.



11. Mark the completed joint

- Mark the completed joint after pressing.
- This enable joints to be inspected easily before testing and insulating the pipework.



>B< MaxiPro home page

Use the QR code app on your smart phone or tablet to access:
www.conexbanninger.com

Female flare connectors:

For information relating to the installation of a >B< MaxiPro female flare connector please refer to the >B< MaxiPro Technical Brochure or visit:

www.conexbanninger.com

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