

Compression connections



1. Select the correct size of tube for the job. Ensure that it is clean, in good condition and free from damage and imperfections. If the tube is oval or damaged, use a re-rounding tool. Copper tube should be of half-hard (R250) or hard (R290) temper. Annealed soft temper tube (R220) can be used.

2. Cut the tube square using a rotary tube cutter wherever possible. If a hacksaw is used to cut the tube, a fine toothed blade should be used.

3. Remove any burr from the inside and outside of the tube ends using a fine toothed file or a S120 deburring tool from the XPress accessories range.

Connecting copper tube

There are two methods of making a compression joint.

1. Insert the tube firmly into the compression fitting, ensuring that the compression ring

seats centrally and that the tube makes firm contact with the tube stop in the body of the fitting.

2. Remove the compression nut and compression ring, then put the nut and then the ring on the tube. Insert the tube end up to the fitting's tube stop. Slide the ring and the nut down to the fitting body.

3. Tighten the nut using your fingers until tight.

4. Tighten the nut further using high quality open ended or adjustable spanners. Spanner flats are incorporated into the design of the fitting bodies. The second spanner must be used to prevent the fitting rotating as the nut is tightened. For normal joint making, tighten the nut 1 turn (360°) for fittings in sizes from 6mm to 12mm, or 3/4 turn (270°) for fittings in sizes from 15mm to 54mm. A few drops of light oil on the threads will assist, especially on sizes 35mm and above. When jointing stainless steel or R220 copper tube some variation may be needed – the nut may be tightened further if necessary. Take care not to over tighten the compression nut, as this will not result in a stronger joint and could lead to problems in service.

Connecting half-hard thick walled R250 copper tube

This copper tube is significantly thicker than other varieties and special care needs to be taken during installation.

1. Ensure pipework is supported during and after installation, as thick-walled copper tube is less tolerant of stress on the joints. The pipework should be clipped as close as possible to the fittings, particularly where long runs are involved.

2. Use spanners of the correct size and length. More torque is required to tighten fittings with thick walled copper tube, and care should be taken to ensure neighbouring joints are not disturbed.

3. Apply a light oil to the threads and chamfers where possible. This will reduce assembly torque and minimise the risk of damage. This is essential on sizes above 28mm.

4. If a sealant is required, use a suitable PTFE based compound, eg. Loctite 577 or PTFE tape.

Connecting imperial copper tube

Pegler valves with compression connections can be used in maintenance applications to connect copper tube to former imperial sizes, such as BS 3931.

Connecting carbon steel and stainless steel tube

Stainless steel tube to BS EN 10312 (formerly BS 4127), DVGW GW541; and carbon steel tube to DIN 2394/ NEN 1982, can be jointed in sizes up to and including 28mm using Pegler compression fittings. Carbon steel tubes are for use on non potable closed circuit systems only. To achieve sound joints, the following precautions should be taken:

1. Ensure no flats or score marks are visible on the outside surface of the tube. The weld bead should not be visible.

2. A suitable jointing compound should be applied to the sealing faces prior to tightening of the compression nuts. Sealants with PTFE fillers are preferred, with PTFE tape as an alternative.