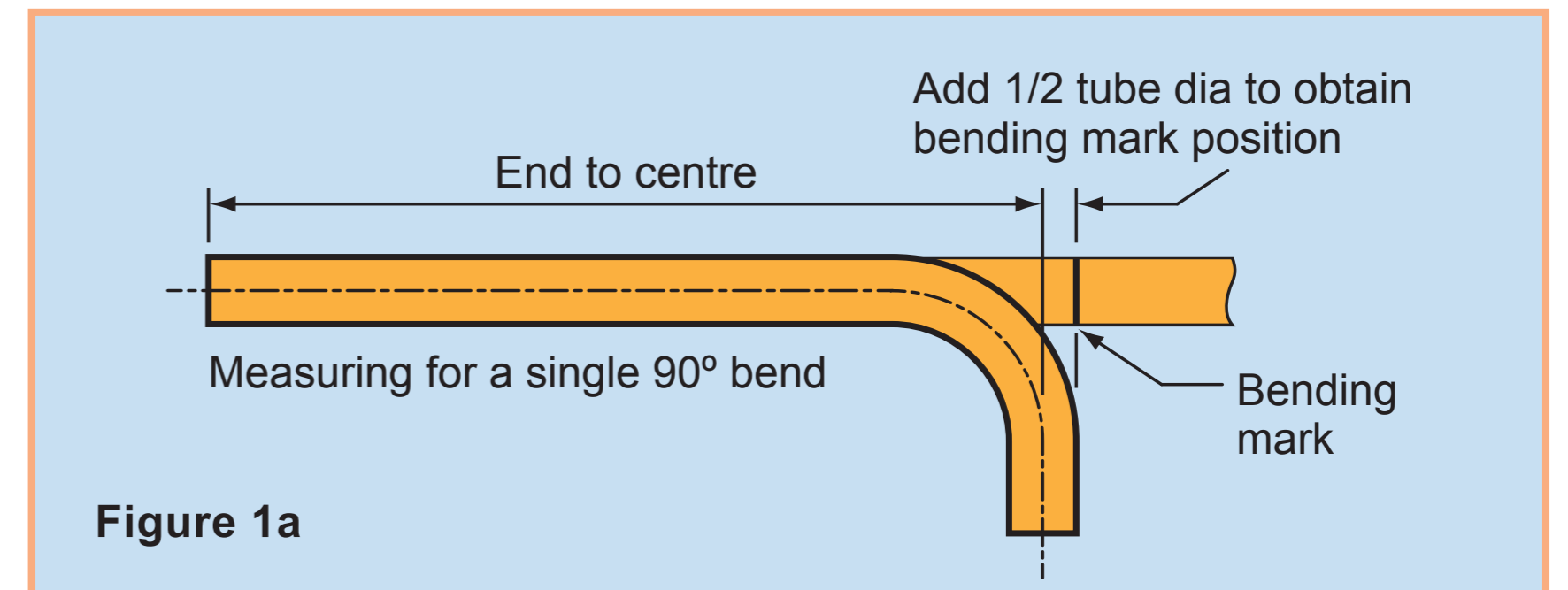


Bending Copper Tube

Half-hard (R250) and annealed (R220) copper tube can be used to form bends. Hard drawn (R290) is not suitable for bending.

For a simple 90° bend

- Establish the bending mark position.
- Measure the end-to-centre length required and add $\frac{1}{2} \times OD$.
- Place a pen mark on the tube, see Figure 1a.



For a second bend

- Determine the centre-to-centre length.
- Measuring off this length from the inside to the back of the required bend, see Figure 1b.
- Mark the tube.

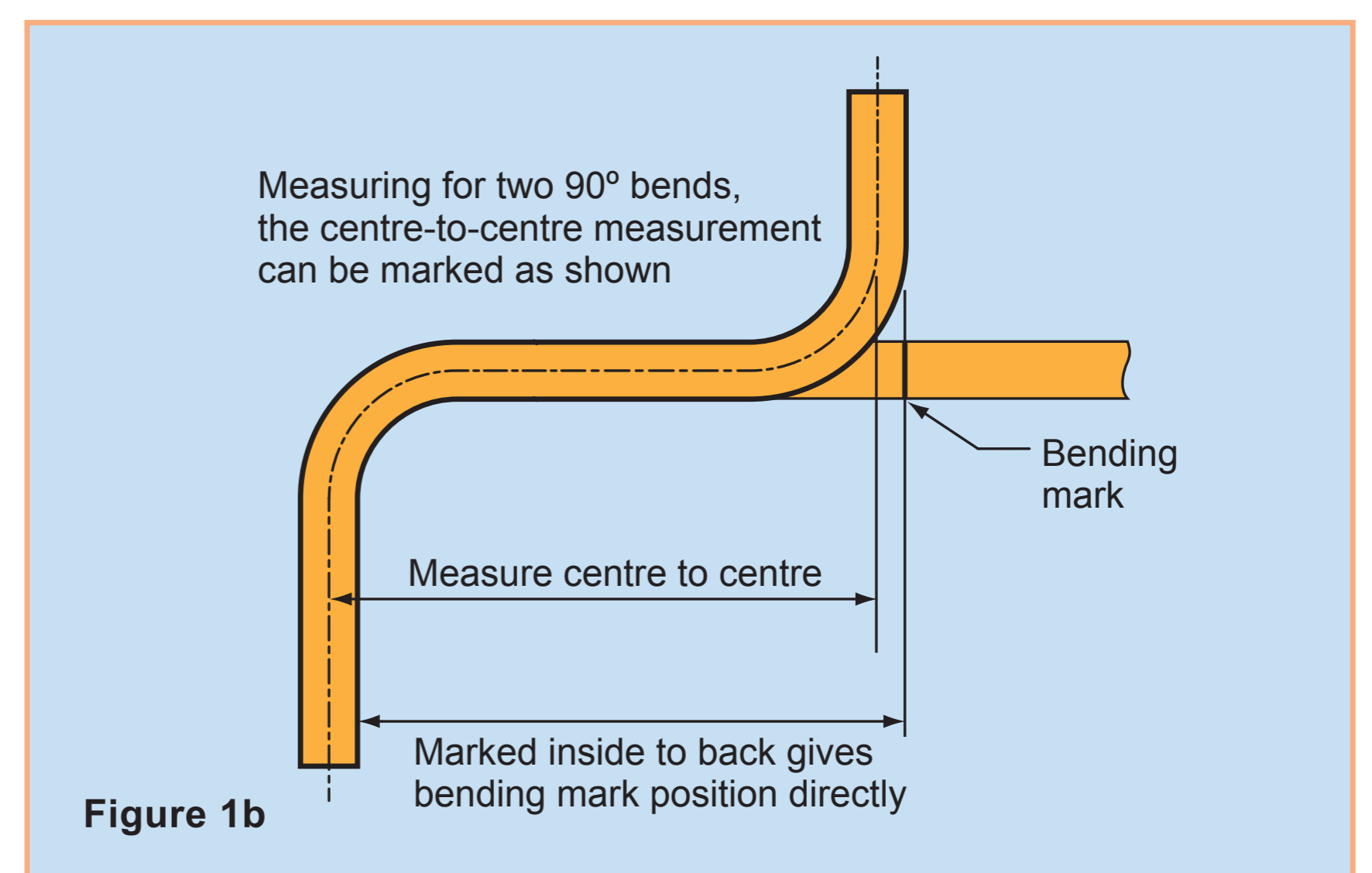
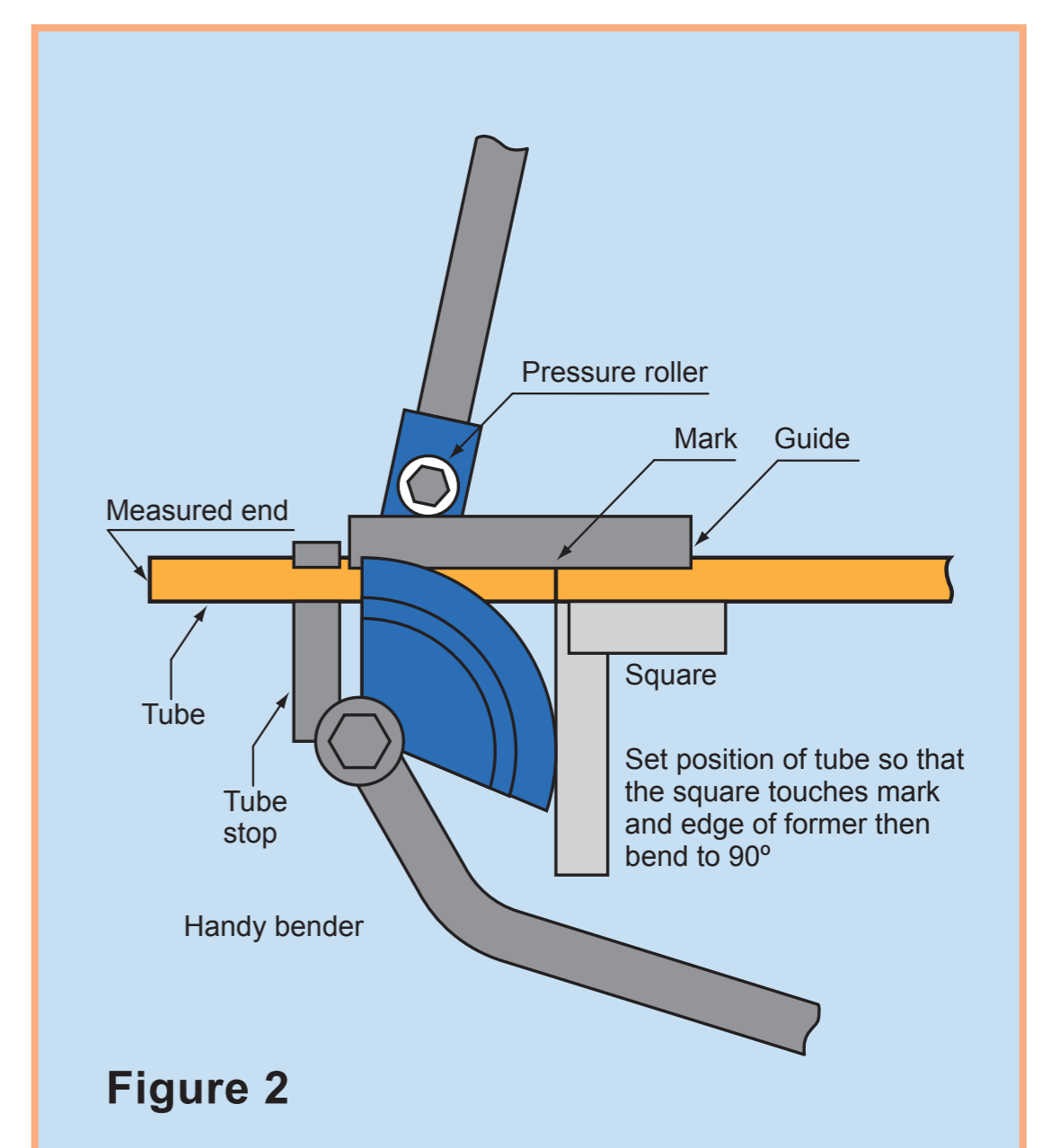
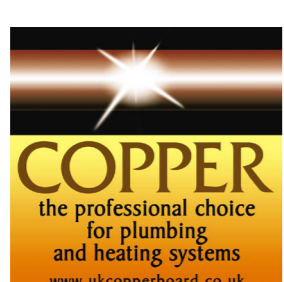


Figure 2 illustrates how to accurately position the bending mark in the machine for 90° bends. When more than one bend is required on a length of tube you must remember to check whether the bends will align correctly in the same plane prior to pulling the second bend.



Images are from an article in the CIPHE magazine Plumbing & Heating Engineering.

For more information see the Installation Tip ***Bending Copper Tubes – By Machine*** by Brian Curry of Learn Plumbing Ltd on the UK Copper Board website.



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Bending Copper Tube

Half-hard (R250) and annealed (R220) copper tube can be used to form bends. Hard drawn (R290) is not suitable for bending.

Offsets

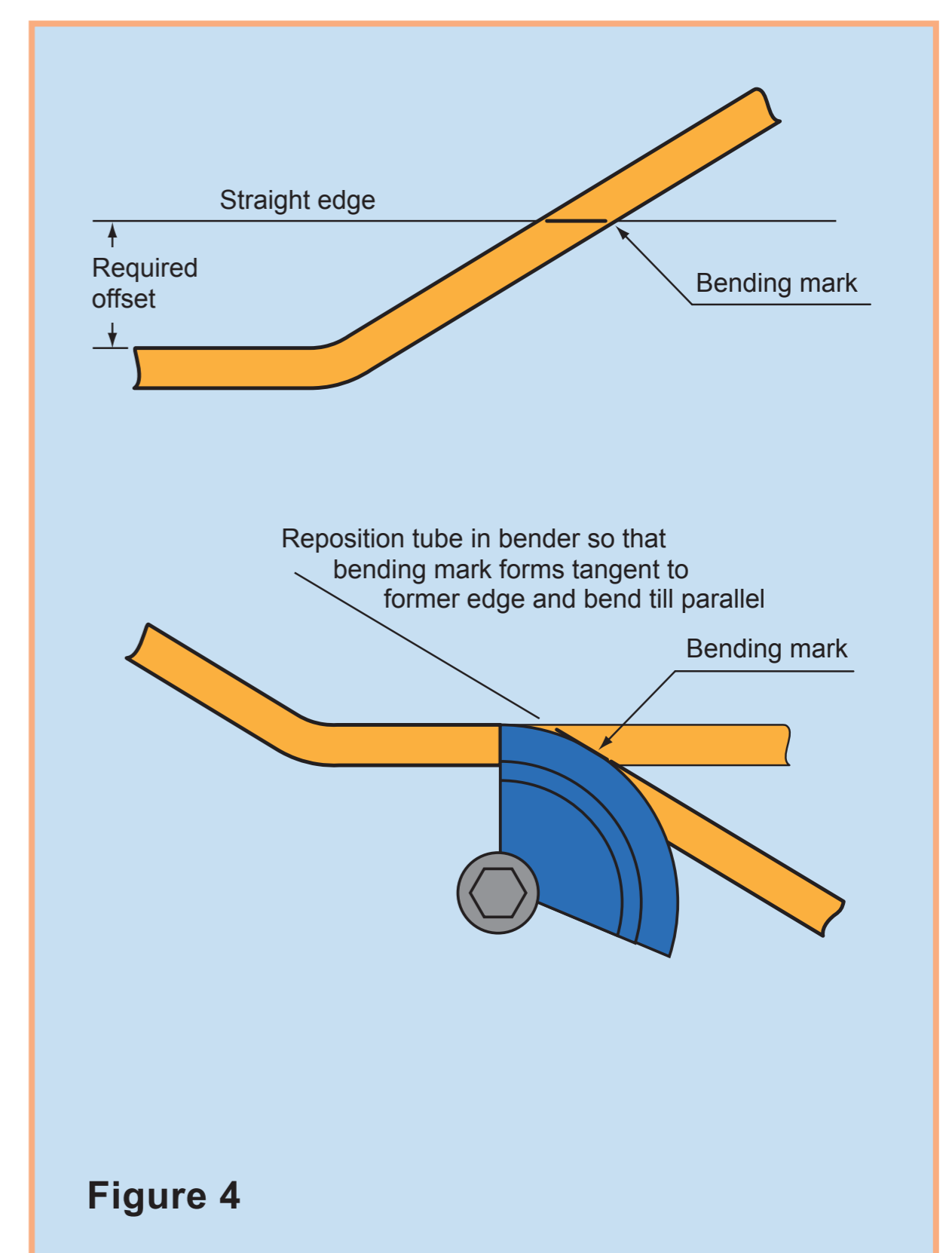
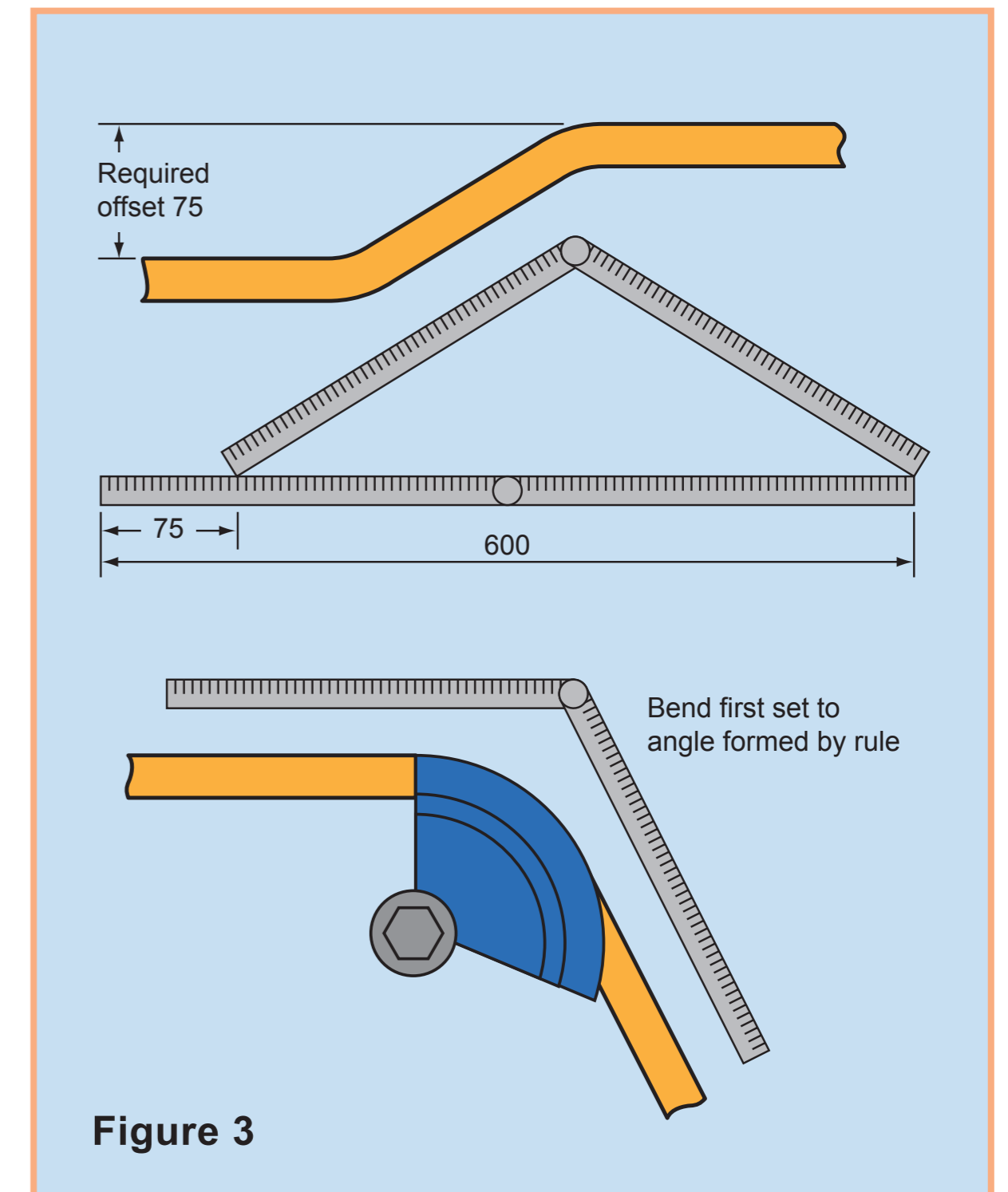
When bending single or double offsets you can use a 600mm folding rule to determine a suitable angle for the bends. Figure 3 shows how to stagger the ends of the rule to obtain the desired angle.

- ⬇ Subtract the offset size required from 600mm.
- ⬇ Close the rule to this length.
- ⬇ Bend to the angle formed, using the rule as a guide.

In our example the offset required is 75mm and $600 - 75 = 525$ mm.

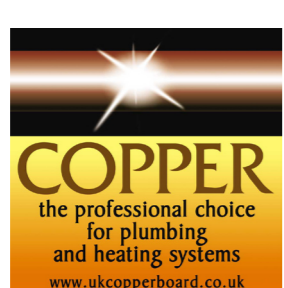
Establishing the bending mark for the second bend of a double offset:

- ⬇ Align the first bend parallel to a 'straight edge' with the inside edge of the tube the required distance from the straight edge.
- ⬇ Ensure that the position of the bending mark is in line with the straight edge.
- ⬇ Reposition the tube in the bender so that the bending mark forms a tangent to the former.
- ⬇ Pull the second bend parallel to the first, see Figure 4.



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