

## Working Instructions

### Capacity: 20, 25 & 32mm steel conduit

NOTE: This machine is designed to bend steel conduit and must not be used to bend other materials.

Refer to Figure 1 to identify the parts.

#### Setting up

1. Remove the leg retaining pin and open the stand to its fullest extent. Reinsert the pin to lock the leg in position.

2. The pipe vice is secured under its platform for transit; remove it and bolt it in position.

NOTE: The pipe vice is designed for cutting and threading only; it should not be used for setting.

3. Remove the bending lever retaining pin 2. Fit the grooved roller and pin in the appropriate position on the bending lever (Figure 2).

4. Select the appropriate size of former, withdraw the center pin 3, insert the former and replace the center pin.

5. Raise the bending lever to the upright position and lock it by reinserting the retaining pin in the lower of the two holes.

6. Swing the stop bar 4 to the upright position and insert the stop 5 in the appropriate hole (Figure 2). The machine is now ready.

7. For packing and transport, locate the bending arm between the front legs and secure with the pin. Fold the machine flat, and lock with the retaining pin. The machine may now be carried the carrying handle.

#### Safety notes

Stand the machine on a level surface. If convenient, anchor it to the floor. Sometimes, the type of bend or the amount of force applied will tend to make the machine lift. If this happens, you or an assistant should steady it.

The bender is a precision machine for use in tough environments. Make sure that you use the Hilmor stop and retaining pins, and keep the working parts clean and in good condition.

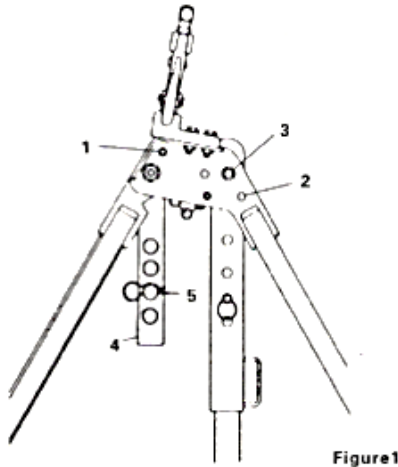


Figure1

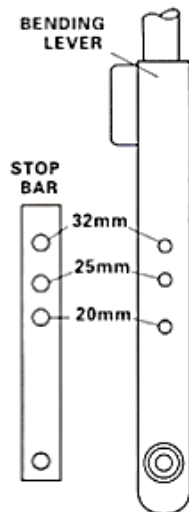


Figure2

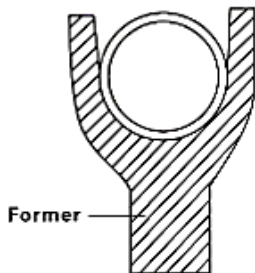


Figure3



Figure4

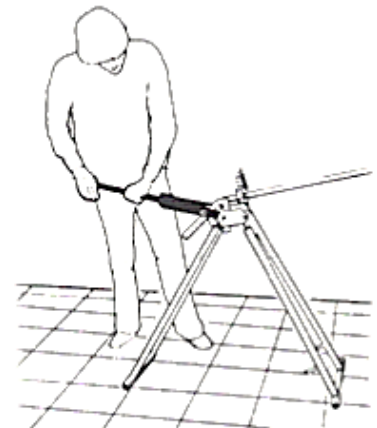


Figure5

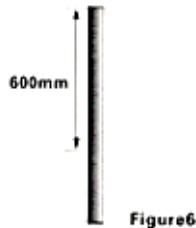


Figure 6

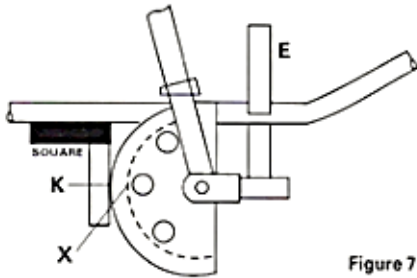


Figure 7

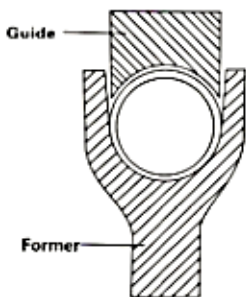


Figure 8

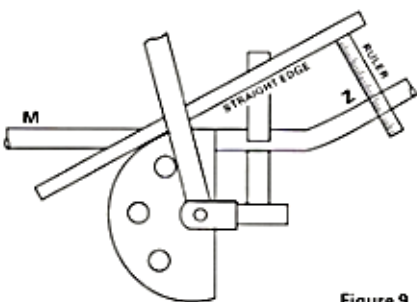


Figure 9



Figure 10

### Bending steel conduit

1. Pass the tube through the gap between the stop and the former, and bed it into the grooves (Figure 3).

2. Check that the free end of the tube will not touch the ground before the bend is complete. The maximum lengths are 1100mm.

If there is insufficient clearance, go to step 4.

3. Withdraw the bending lever retaining pin and pull the bending lever down until the bend is complete (Figure 4).

4. If the free end is too long to enable you to complete the bend, remove the tube. Release the bending lever, swing it and the stop bar downwards.

Load the tube as in step 1 and pull the Bending lever upwards until the bend is complete.

*NOTE: When you use the machine in this way, you should steady it by placing your foot on the front leg cross member (Figure 5)*

### Bending to measurements

The formers are produced to the exact depth and diameter of the tube (Figure 3) to facilitate bending to given measurements.

### Bending to outside measurements

1. If the measurement from the end of the tube to the outside of the bend is to be 600mm, mark off 600mm (Figure 6).

2. Insert the measured part of the tube in the machine so that it rests against the stop, and bed it into the grooves.

3. Place a square (or rule) against the mark on the tube and slide the tube along until the square touches the OUTSIDE edge of the former-K in Figure 7. The tube is now in the correct position for bending.

### IMPORTANT

*Before bending, ensure that the tube is bedded firmly into the groove on the former, if it is not, the bend will not be accurate.*

### Bending to inside measurements

1. If the measurement from the end of the tube to the inside of the bend is to be 600mm mark off 600mm (Figure 6).

2. Now position the square as above but slide the tube until the square touches the bottom of the groove in the former-X in Figure 7.

*NOTE: You can use the method explained above when making a bend at a given distance from another bend, whether- in the same or in a different plane.*

If the required measurement is outside-to--outside of the bends, mark off from the outside of the first bend and square up with the outside of the former. If the measurement is outside-to-inside of bends (the same as center-to-center) square up with the inside of the former.

### Pot floor bends

Fit a plain roller rather than a grooved roller to the bending lever.

When you have positioned your tube according to the instructions above, fit a guide over it with its knife edges in the former groove (Figure 8).

Pull the bending lever, making sure that the roller does not run off the end of the guide; reposition the guide if necessary.

### Offsets

1. Make the first bend to the required angle. As a guide this should be 45° for sets measuring 100mm or more and progressively less as the set decreases.

2 Place the bend in the machine as shown in Figure 9. Suppose you want an offset of 100mm as illustrated in Figure 10. Place a straight edge against the outside edge of the former and parallel to the tube Z, and adjust the tube in the machine until you obtain the required measurement.

*NOTE: The set will increase as you push the tube to the right and decrease as you push it to the left in figure 9.*

3 When the tube is set correctly, ensure that it is bedded firmly into the groove of the former. Now bend in the usual way until the tube M is parallel with Z.