

LASER[®]

Flaring Tool Kit



Introduction

The Laser Flaring Tool Kit is a comprehensive yet simple to use kit suitable for cutting and flaring copper, brass and thin-walled aluminium tubing. You can use it to cut tube from 3mm (1/8 in) diameter up to 30mm (1-1/8 in) diameter and to produce high quality 45° single or double, male or female flares on pipes from 5mm (3/16 in) to 16mm (5/8 in) diameter.

We cannot consider a warranty claim for tool failure if you have used the kit in any way other than that described in these instructions, or if you have used it for any other purpose than that for which it is intended. Nor can we be held responsible in any way for personal injury caused while using the kit.

IMPORTANT: Always wear eye and hand protection when using the Laser Flaring Tool Kit.

NOT SUITABLE FOR STEEL PIPES

What the kit contains

Check your Flaring Tool Kit carefully to make sure you have all the components. If any are missing, please contact The Tool Connection on 01926 818186. You should have all the following components. Flaring dies are available direct from Laser. Contact service on the above number.

Item	Description	Qty
1	Adjustable tube cutter with spare cutting wheel and built-in reamer	1
2	Tubing vice with 7 clamping positions	1
3	Flaring press	1
4	3/16" flaring die (Part No: 3029)	1
5	1/4" flaring die (Part No: 3030)	1
6	5/16" flaring die (Part No: 3031)	1
7	3/8" flaring die (Part No: 3032)	1
8	7/16" flaring die (Part No: 3033)	1
9	1/2" flaring die (Part No: 3034)	1
10	5/8" flaring die (Part No: 3035)	1

The flaring die sizes are embossed on the dies and on the tubing vice. Please make sure that you use the appropriate die and vice clamping position for the tube you wish to flare.

Warning Notice - READ NOW

Read these instructions through carefully before you use the Flaring Tool Kit.

If you do not use the kit correctly, as described in these instructions, you may damage either the flaring die or the tubing vice or both.

How to use the Laser Flaring Tool Kit

To prepare the tubing.

- **IMPORTANT:** Make sure the tubing is cut squarely by using the adjustable tube cutter supplied in the kit. This is vital or it will not be possible to form a correct flare on the end of the tube.
- First, adjust the tube cutter by turning the large knob until the tube is gripped between the cutting wheel and the two guide wheels.
- Turn the cutter around the tube, tightening it as the cutting wheel cuts through the tube. Continue until the tube is cut through completely.
- Next, open the reaming blade on the back of the tube cutter and use it to clean any burrs from the end of the tube.

- Finally, chamfer the outside cut edge of the tube with a file or grinding wheel.
- You will find a spare cutting wheel located in the adjusting knob, under the plastic disc.

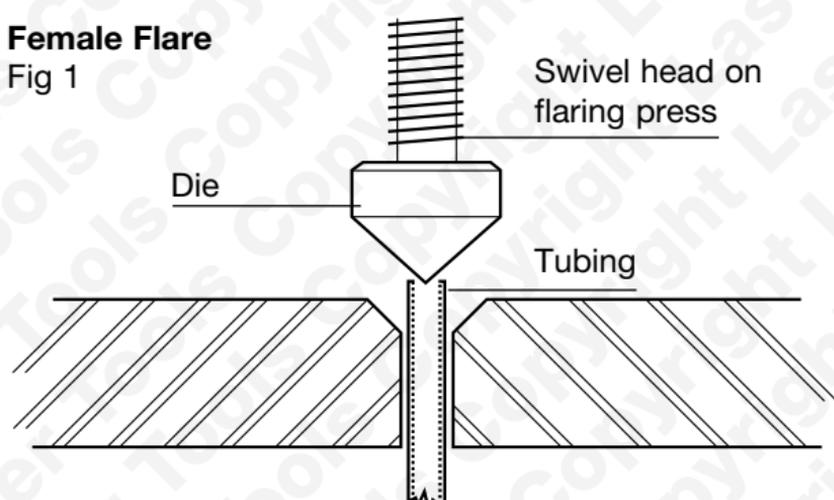
Single Female flare.

You can use the Laser Flaring Tool Kit to make a single female flare in the end of the tube. In this case, the flaring dies are not used.

1. First, loosen the two wing nuts on the tubing vice and place the tubing through the correct size hole in the tubing vice, making sure that the cut end of the tube protrudes slightly above the top of the countersink on the vice.
2. Now tighten the two wing nuts securely so that the tubing will not slip during flaring. Tighten the wing nut closest to the tubing first, then the second wing nut.
3. Next, place the flaring press over the tubing vice. You will need to turn the T-bar of the press anti-clockwise until the yoke will slip over the tubing vice.
4. Locate the flaring cone of the press in the end of the tube – see Fig 1, holding it in place with your thumb and forefinger, and tighten the press by turning the T-bar of the press clockwise.

Female Flare

Fig 1



5. NOTE: Put a drop of oil on the flaring cone before inserting it into the tube. This will help the flare to be formed more easily and successfully.

6. Continue to tighten the flaring press until the end of the tube is flared correctly Fig 2.

Fig 2



7. Finally, loosen the flaring press, remove it from the tubing vice then loosen the two wing nuts on the vice and remove the tube.

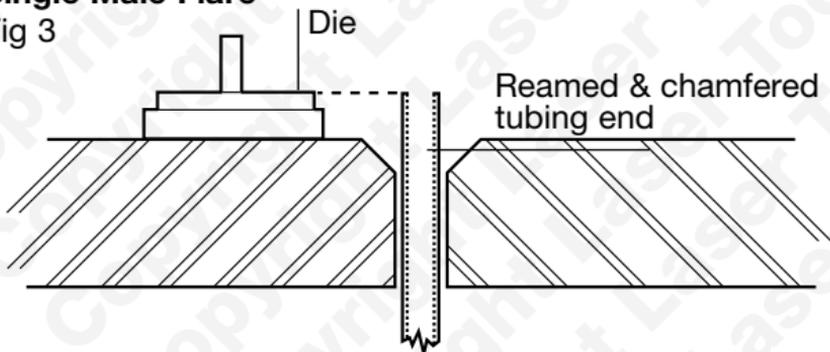
Single Male flare.

The Laser Flaring Tool Kit can be used to make a single 45° male flare by using the flaring dies.

1. First, loosen the two wing nuts on the tubing vice and place the tubing through the correct size hole in the vice. Make sure the cut end of tube extends through the hole up to the shoulder of the appropriate flaring die when placed on top of the vice - Fig 3.

Single Male Flare

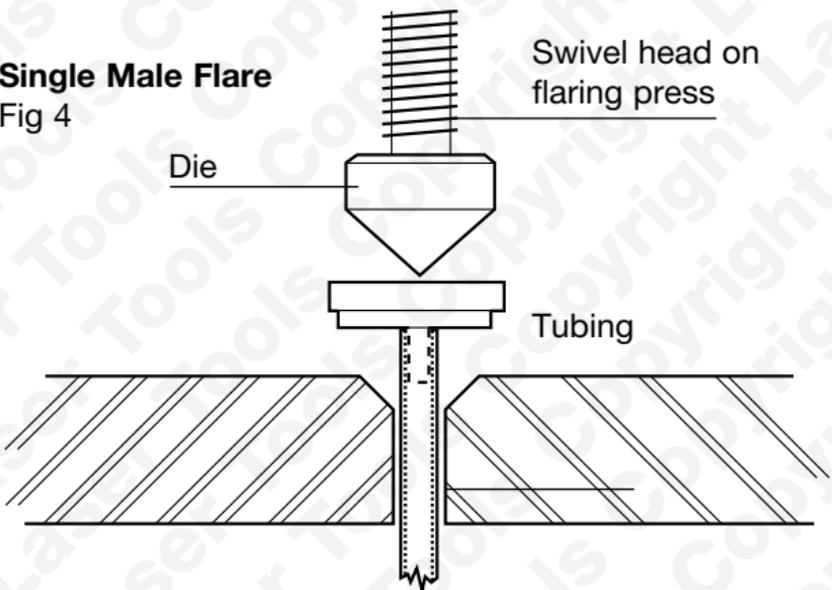
Fig 3



2. Now tighten the two wing nuts securely so that the tubing will not slip during flaring. Tighten the wing nut closest to the tubing first, then the second wing nut.
3. Select the correct flaring die for the tubing and insert the shaft of the die into the cut end of the tube.
4. Put a drop of oil on the shaft of the die before inserting it into the tube. This will help the flare to be formed more easily and successfully.
5. Next, place the flaring press over the tubing vice. You will need to turn the T-bar of the press anti-clockwise until the yoke will slip over the tubing vice.
6. Then locate the flaring cone of the press in the depression in the centre of the flaring die, holding it in place with your thumb and fore finger, and turn the T-bar clockwise until the press is secure.

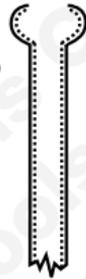
Single Male Flare

Fig 4



7. Turn the T-bar to force the flaring cone down until the flaring die rests flat on the tubing vice – Fig 4. The first part of the double flare has now been formed – Fig 5.

Fig 5



8. Loosen the flaring press by turning the T-bar anti-clockwise until you can remove the flaring die from the tube.

Double Flare (Using both Male and Female methods)

Follow steps 1 – 8 for a Single Male Flare and continue as follows:

9. Now locate the flaring cone of the press in the flared end of the tube and retighten the press. This will force the bell shaped first flare back into the top of the tube to complete the double flare Fig 6

Double Flare

Fig 6

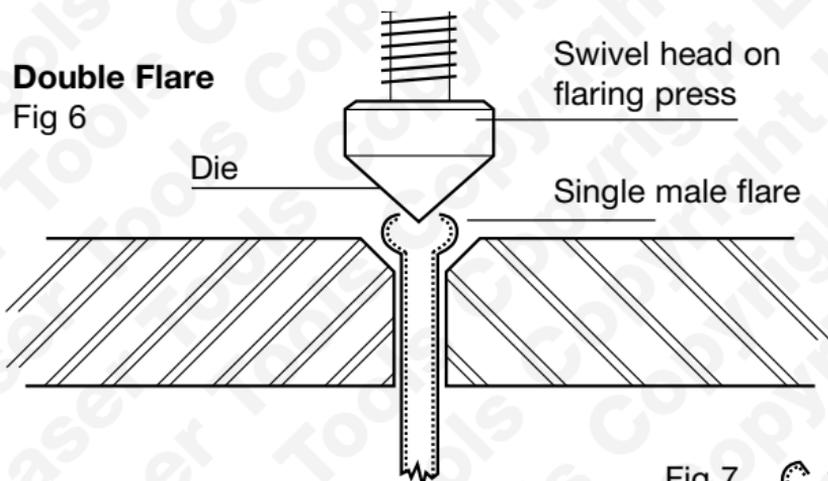
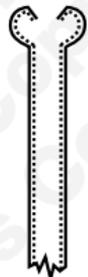


Fig 7



10. Continue to tighten the flaring press until the end of the tube is flared correctly Fig 7.
11. Finally, loosen the flaring press, remove it from the tubing vice then loosen the two wing nuts on the vice and remove the tube.



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Guarantee

If this product fails through faulty materials or workmanship, contact our service department direct on: **+44 (0) 1926 818186**. Normal wear and tear are excluded as are consumable items and abuse.



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Distributed by The Tool Connection Ltd

Kineton Road, Southam, Warwickshire CV47 0DR

T +44 (0) 1926 815000 F +44 (0) 1926 815888

info@toolconnection.co.uk www.toolconnection.co.uk