Bench Vise Brake Line Flaring Tool
User Manual



OMT
Orion Motor Tech

Read Carefully Before Use
Keep for Future Reference

Disclaimer

Read this disclaimer completely and carefully before proceeding with the rest of the manual content.

1. **Product Modifications**

   Any modifications or alterations to Orion Motor Tech (OMT) products void any warranties and may result in damage or injury. OMT shall not be liable for any damages resulting from such modifications or alterations.

2. **Compliance with Laws**

   Customers shall be liable for ensuring that the use of OMT products complies with all applicable laws and regulations in their respective jurisdictions. OMT assumes no responsibility for any violations of laws or regulations resulting from the use of OMT products.

3. **Correct Use**

   Always use OMT products only as directed in the accompanying manuals. Failure to follow instructions may result in injury or damage.

   Always ensure the assembly, installation, operation, maintenance, or repair of OMT products is carried out by a competent person.

   Always make maintenance regularly throughout OMT products' lifecycles; you have the liability to keep the products operating as intended.

   Always wear appropriate protective gear.

4. **Third-Party Products**

   OMT shall not be liable for any damages or losses resulting from the use of third-party products in conjunction with OMT products. Customers shall refer to the third-party's guidelines or/and warranties (if any) for any third-party products used.

5. **Limitation of Liability**

   OMT shall not be liable for any direct, indirect, punitive, incidental, special, or consequential damages to property or life, whatsoever arising out of or connected with the use or misuse of OMT products. In no event shall OMT's liability exceed the value of the products sold.

6. **Warranty**

   Refer to the sales page for warranty information.

This disclaimer states the entire obligation of OMT with respect to OMT products. If any part of this disclaimer is determined to be void, invalid, unenforceable, or illegal, including but not limited to the warranty disclaimers, liability disclaimers, and liability limitations set forth above, the invalid or unenforceable provision will be deemed superseded by a valid and enforceable provision that most closely matches the intent of the original provision and the remainder of the agreement shall remain in full force and effect.

Safety Information

Danger

- The instructions provided herein are **ONLY** for general information. **ALWAYS** perform **ALL** repairs in **FULL** compliance with your machinery's service manual. After **ANY** repair, test your engine and machinery in your workshop and at low speed **BEFORE** returning to normal use. Failure to do so may result in serious property damage and severe personal injury.
- **DO NOT** allow use by children, persons whose mental or physical condition precludes safe use, or persons unfamiliar with this product and its compatible systems.
- **DO NOT** use while under the influence of alcohol, drugs, or **ANY** medication that negatively affects your judgment or reflexes. Keep children and bystanders away during use.
- Keep your work site clean and well-lit. Cluttered and dark work areas invite accidents.
- For best results, keep the kit clean and dry. Remove any fluid, oil, or grease before and after work.
- **ALWAYS** use personal protective equipment (PPE) suitable to your task. **ALWAYS** wear ANSI and OSHA-approved eye, breathing, and hand protection while using this product. Normal use of this product typically produces microscopic particles known to the state of California to cause cancer, birth defects, or other reproductive harm. Nonslip footwear is also highly recommended. Other equipment such as ear, head, and body protection may also be necessary depending on your work, work environment, and other equipment.
- **ALWAYS** know and understand the specific safety warnings and instructions for your machinery **BEFORE** using this kit. Use the correct fluids, pressures, adapters, etc., for your machinery. Make sure the machinery is **FULLY** supported and parked **BEFORE** beginning **ANY** work. Take care to **NEVER** touch **ANY** heated surface with exposed skin.
- Dress properly for automotive servicing. **DO NOT** wear loose clothing or jewelry and keep hair, clothing, gloves, hoses, and tools away from **ANY** moving parts during use.
- **BEFORE** servicing your machinery, turn off its engine and refer to its manufacturer's service and repair manual for instructions on how to safely secure the machinery in place with chocks, jacks, stands, etc.
- In case of an accident or injury, have a first aid kit and a communication device (e.g., a phone) readily available. Know the locations of emergency medical facilities.

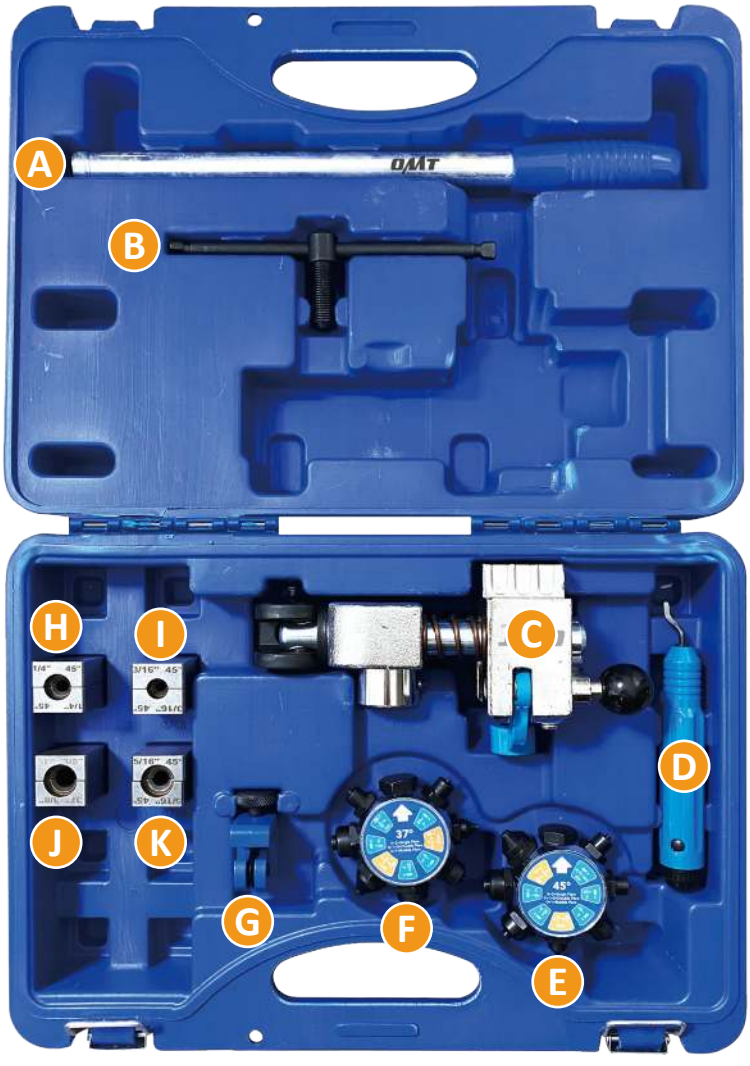
Safety Information

- Maintain this product. Check for misalignment, binding, wear, or other damage **BEFORE** use. If **ANY** damage is detected, repair or replace the problematic components **BEFORE** further use. In a large shop, mark such tools as "**DO NOT USE**" until they have been repaired. **ONLY** replace components with identical parts.
- Machinery repair is inherently dangerous and this manual and the separate machinery service manual **CANNOT** cover **ALL** possible situations. **ALWAYS** exercise discretion and good judgment. Seek training if needed.

Specifications

Dimensions	13.98×10.83×3.74 (in.)	35.5×27.5×9.5 (cm)
Weight	10.4 lb.	4.7 kg

Parts List









No.	Item	Qty.
A	Handle	1
B	T-Handle	1
C	Base Tool	1
D	Deburring Tool	1
E	45° Rotating Die Head	1
F	37° Rotating Die Head	1
G	Cutter	1

No.	Item	Qty.
H	1/4 in. Dies	1 (Pair)
I	3/16 in. Dies	1 (Pair)
J	3/8 in. Dies	1 (Pair)
K	5/16 in. Dies	1 (Pair)
L	Replacement Blades	2
M	Grease	1
N	Gloves	1 (Pair)

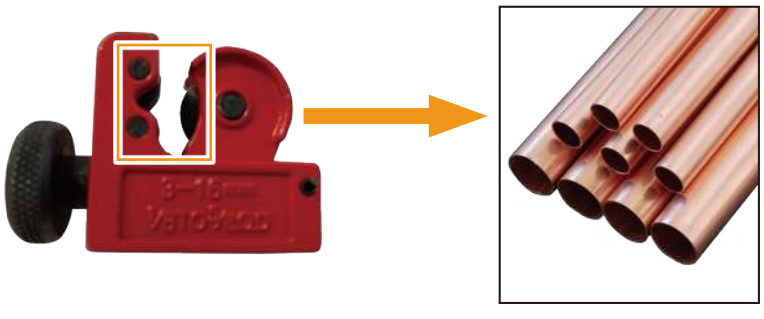
Operation

⚠ Caution

- *The thickness of the copper tube **MUST NOT** exceed 0.8 mm.*
- *Use correct tools and personal protective equipment (PPE) **BEFORE** performing **ANY** operation. Be extremely careful with possible pinch points, moving parts, or parts that may suddenly spring out.*
- *Make sure your surroundings are safe when using the tool. Avoid operating in crowded or unstable areas*
- *Inspect the tool and hydraulic system for **ANY** leaks or damage **BEFORE** use.*
- *Choose the appropriate flare die based on the pipe diameter and type to ensure quality flares.*
- *Maintain clean pipes and dies to prevent debris from affecting the flaring process.*
- *Apply pressure uniformly to avoid rapid or excessive force, which could deform or rupture the pipe.*
- *For added safety, it is recommended to take training **BEFORE** using these tools. Serious injury could happen due to a lack of training.*

Preparation

1. Rotate the screw of the cutter (G) clockwise to cut the pipe to the desired length.



⚠ Warning

- ***DO NOT** use a hacksaw or cut-off wheel to cut the pipe.*
- ***DO NOT** put your finger or **ANY** part of your body into the blade of the cutter.*

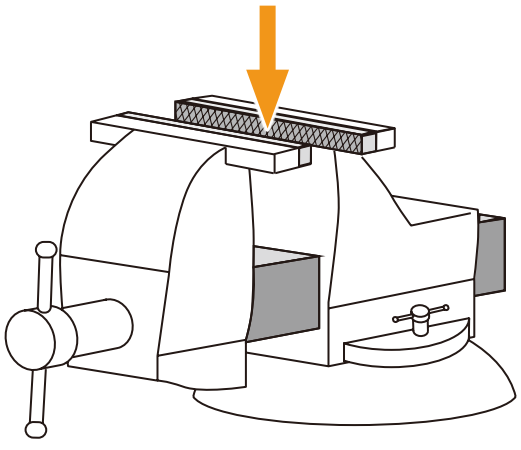
Operation

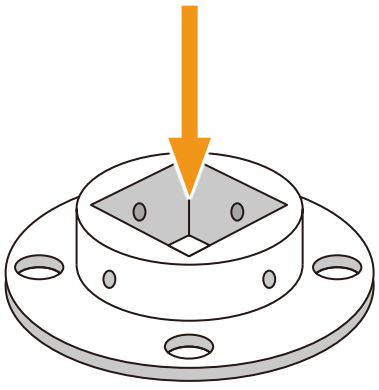
2. Remove any burrs from the cut edges using the deburring tool (C).



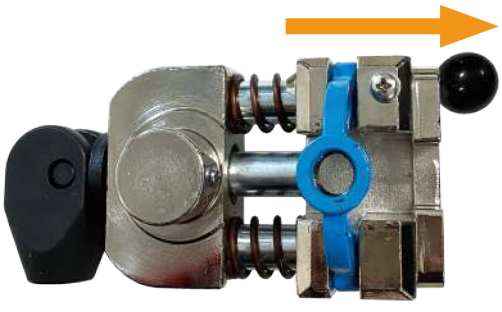
> ***Note:***
> *Be sure to clear metal chips from inside the pipe.*

3. Lightly lubricate the end of the cut and prepared pipe with the provided grease (M).
4. Clamp the base tool (C) into a secure bench-mounted vice or a mounting flange.





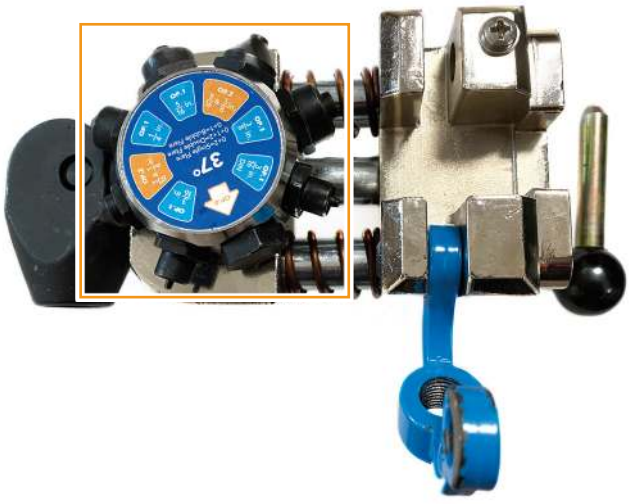
5. Pull the clamp pin (with black knob) out releasing the clamp and rotate the clamp upward.



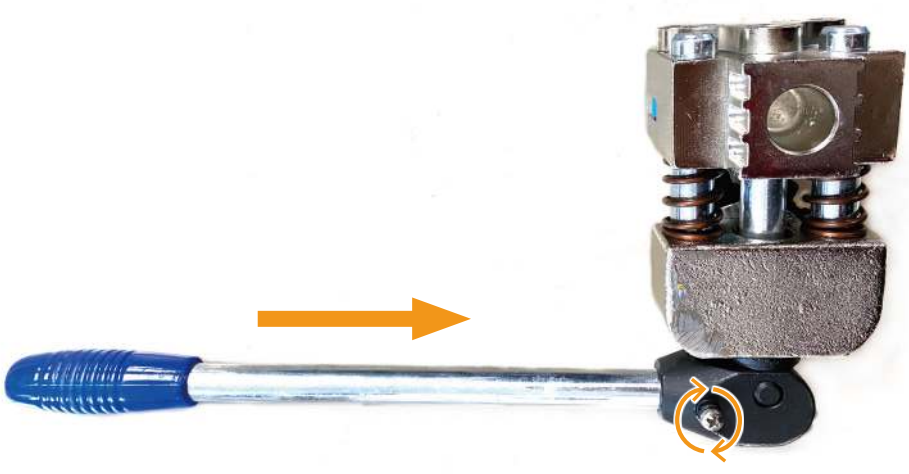


Operation

6. Place the suitable rotating die head (E or F) onto the round stud.



7. Insert the handle (A) into the lever and tighten it by screwing the bolt.



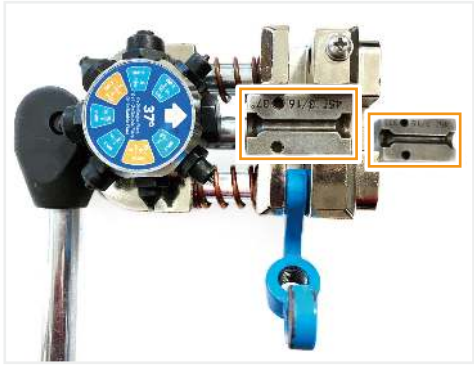
Operation

Forming a Single Flare

1. Choose the dies you need and insert them into the rectangular recess in the tool base.

> ***Note:***
> - *The angles at the ends of the dies are different. Choose the angle you need.*
> - *The angles of the two dies **MUST** be consistent.*
> - *The angles of the dies need to be consistent with the angles of the rotating die head.*





2. Place the tube between the die halves with the tube end flush with the flared end of the dies.



3. Rotate the clamp back into place, push the clamp pin through the holes, and back into the tool until the black knob rests against the body of the tool.



Operation

4. Screw the T-handle (B) into place and turn the T-handle to apply slight tension.
5. Rotate the rotating die head to OP. 0, and move the lever against the tool body to align the end of the tube flush with the dies.
6. Turn the T-handle clockwise to secure the dies.
7. Spin the rotating die head to the appropriate size of OP. 2.
8. Move the lever against the tool body exerting sufficient effort to create flare, continuing until it stops.
9. Loosen the T-handle, pull out the clamp pin, and then remove the dies and the tube.



Single Flare

Forming a Bubble Flare

1. Follow the Steps 1–6 of **Forming a Single Flare**.
2. Spin the rotating die head to the appropriate size of OP. 1.
3. Move the lever against the tool body exerting sufficient effort to create flare, continuing until it stops.
4. Loosen the T-handle, pull out the clamp pin, and then remove the dies and the tube.



Bubble Flare

Operation

Forming a Double Flare

1. Follow the Steps 1–6 of **Forming a Single Flare**.
2. Spin the rotating die head to the appropriate size of OP. 1.
3. Move the lever against the tool body exerting sufficient effort to create flare, continuing until it stops.
4. Spin the rotating die head to the appropriate size of OP. 2.
5. Move the lever against the tool body exerting sufficient effort to create flare, continuing until it stops.
6. Loosen the T-handle, pull out the clamp pin, and then remove the dies and the tube.



Double Flare

Maintenance

- Clean the tools with a soft damp cloth using a mild detergent or solution **AFTER** use. **DO NOT** rinse them or use abrasive cleaners or caustic chemicals.
- For best results, lubricate the tools with high-quality anti-corrosive oil between uses.
- Check the parts of the tool periodically for **ANY** wear or damage. Repair or replace **ANY** problematic parts **BEFORE** further use.
- If the tools will not be used for an extended period, clean, lubricate, and store them in a cool dry place inaccessible to children.
- If the blade of the deburring tool is no longer sharp enough, replace it with the replacement blade provided.

> ⚠ **Warning**
>
> *Be sure to wear protective gloves to avoid scratching your hands with the blade.*

a. Press the button on the deburring tool and pull out the blade.



b. Press the button and **FULLY** insert the blade **UNTIL** the button pops back up.

Contact Us

Thank you for choosing our products! If you have any questions or comments, contact us and we'll resolve your issues ASAP!

support@orionmotortech.com

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