



## **71710 Hydraulic Flaring and Swaging**



# **Mastercool 71710 Hydraulic Flaring and Swaging Instruction Manual**

[Home](#) » [Mastercool](#) » Mastercool 71710 Hydraulic Flaring and Swaging Instruction Manual 

### **Contents**

- [1 Mastercool 71710 Hydraulic Flaring and Swaging](#)
- [2 Specifications](#)
- [3 Product Usage Instructions](#)
- [4 FAQs](#)
- [5 Using Instruction](#)
- [6 Maintenance Instructions](#)
- [7 Parts Description](#)
- [8 Contact Information](#)
- [9 Documents / Resources](#)
  - [9.1 References](#)



**Mastercool<sup>®</sup>**  
*"World Class Quality"*

**Mastercool 71710 Hydraulic Flaring and Swaging**



## Specifications

- **Product:** Hydraulic Flaring and Swaging Tool
- **Model:** 71710
- **Brand:** Mastercool
- **Website:** [www.mastercool.com](http://www.mastercool.com)

## Product Usage Instructions

### 1. Preparation:

- **Warning!**

Wear Safety Glasses. Ensure the copper tube is cut clean and square using a commercial-grade tube cutter. Deburr the inside and outside of the tube.

### 2. Setting Up:

1. Open the relief valve by turning counterclockwise.
2. Position the correct size die set and tube in the yoke assembly.
3. Tighten the T Handle to lock die blocks and tube in the yoke.

### 3. Flaring and Swaging Process:

1. For swaging, insert the correct size swage adapter into the adapter seat on the end of the piston. For flaring, insert the cone-shaped adapter.
2. Close the relief valve.
3. Pump the handle slowly until resistance is felt and the flange reaches the face of the die blocks or the cone adapter engages the die blocks.

### 4. Completion:

Open the relief valve, and rotate the hydraulic cylinder counter-clockwise to disengage the adapter from the die blocks. Remove the die block and tube from the yoke.

## 5. Maintenance:

Lubricate T handle threads and yoke/hydraulic cylinder threads with EP grease as needed. Clean internal die block threads periodically to ensure a tight grip on the tubing.

## FAQs

- **Q: How do I ensure a proper flare or swage?**

A: Follow the instructions carefully, make sure the tube is positioned correctly, and pump the handle smoothly until completion.

- **Q: How often should I lubricate the tool?**

A: Lubricate the threads as needed, especially if you notice any resistance while operating the tool.

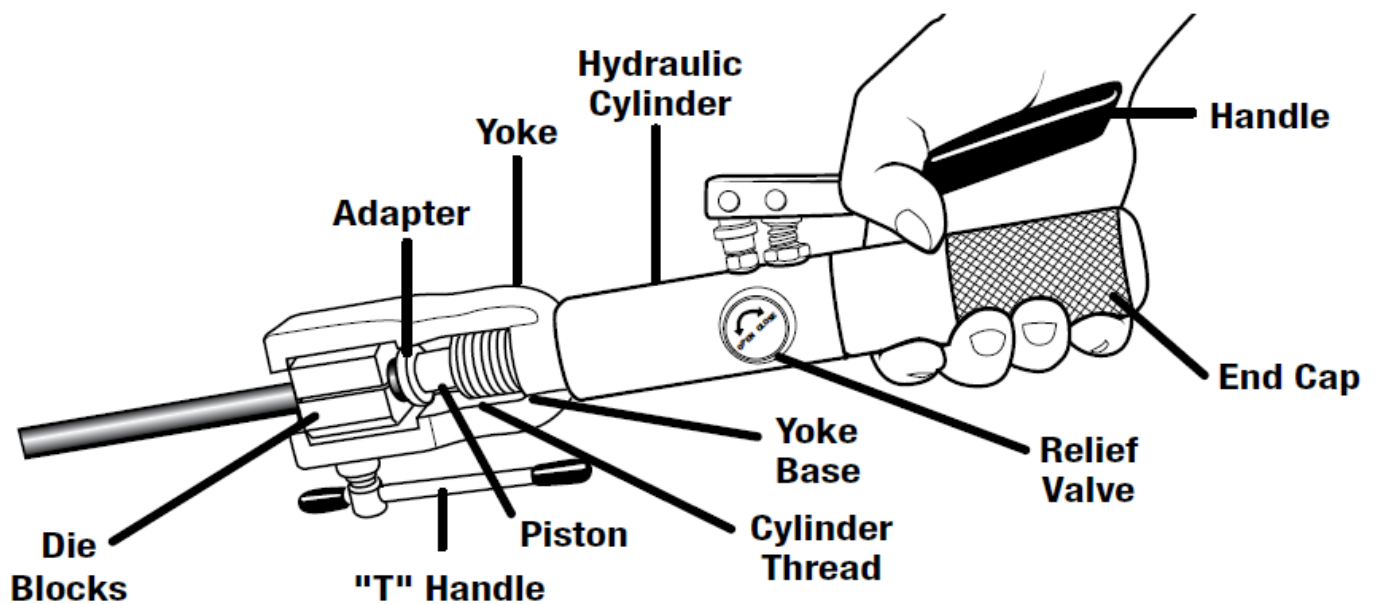
## Using Instruction

### Warning!

Wear Safety Glasses

### Note:

Copper tubes to be flared or swaged should be cut clean and square. Use a tool made to cut copper tubing such as a commercial-grade tube cutter. \*The end must be deburred on the inside and outside of the tube.



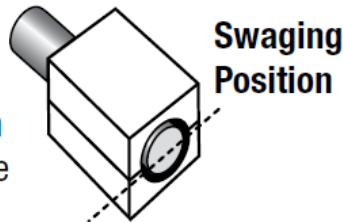
1. Open the relief valve by turning counterclockwise. Hold the yoke and rotate the hydraulic cylinder until the last thread on the cylinder is even with the yoke base. (Ref. Fig. 1)
2. Position the correct size die set and tube in the yoke assembly.  
The tube end should be even with the face of the die blocks for swage and even with a mark on the die blocks for flare. (Ref. Fig. 2)
3. Tighten the "T" Handle (rotate clockwise) to lock die blocks and tube in the yoke. When swaging, insert the correct size swage adapter into the adapter seat on the end of the piston (the slotted end of the adapter fits into the grooved end of the piston). When flaring, insert cone shaped adapter. (Ref. Fig. 3)
4. Close relief valve by rotating clockwise. When swaging, hold the yoke and rotate the hydraulic cylinder clockwise advancing the adapter as close to the die blocks as possible, without inserting it into the tube. When

- flaring, rotate the hydraulic cylinder clockwise advancing the adapter to engage the tube. (Ref. Fig. 4)
5. Slowly pump handle. As the piston advances, make sure the adapter enters the tube smoothly. Continue pumping until resistance from the pump handle is felt and the large flange on the swage adapter reaches the face of the die blocks or the cone adapter has engaged the die blocks. Stop pumping, swage, or flare is complete. (Ref. Fig. 5)
6. Open the relief valve, DO NOT loosen the "T" Handle. Hold the yoke and rotate the hydraulic cylinder counterclockwise until the adapter is fully disengaged from the die blocks. Loosen the "T" Handle (rotate counterclockwise) and remove the die block and tube from the yoke. (Ref. Fig. 6)

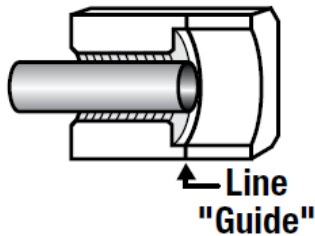
### FIGURE 2

Insert the tube between the die blocks as shown.

**When swaging,**  
position tube even  
with the end of the  
die blocks.

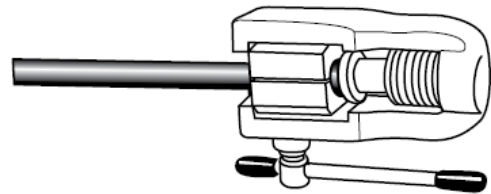


**When flaring,**  
position tube even  
with line "guide"  
on die block bore.



### FIGURE 3

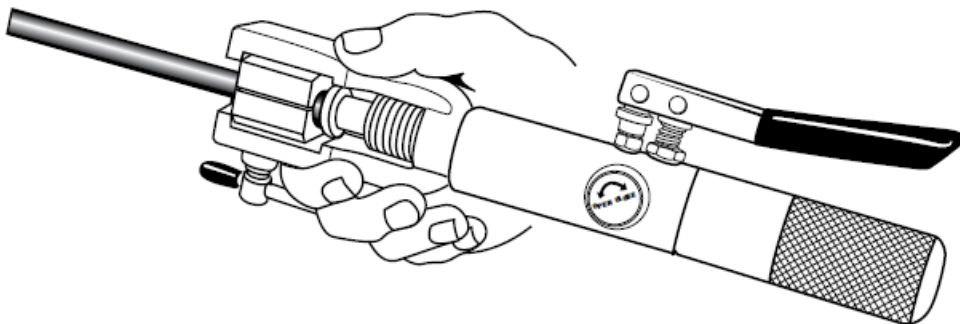
Insert and tighten the dies and tubing into the yoke. *It is important to securely fasten the die blocks.*



Securely fasten die blocks by turning the "T" handle clockwise.

### FIGURE 4

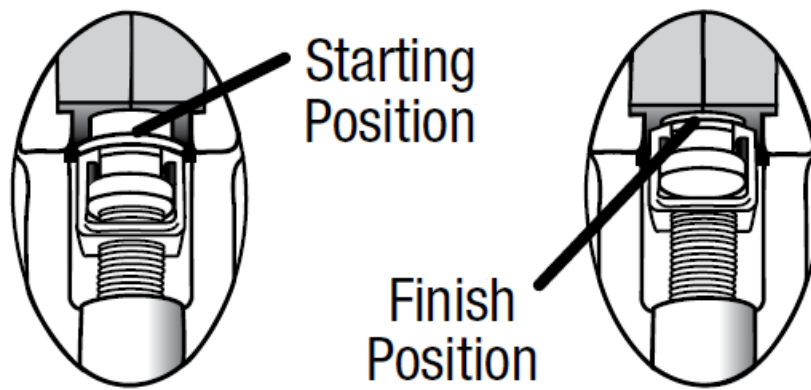
Hold the yoke and rotate the hydraulic cylinder clockwise to advance the swage adapter until the front of the adapter is even with the die blocks. The flare adapter should be engaged in a tube.



When you rotate the cylinder, the adapter will travel toward the die.

### FIGURE 5

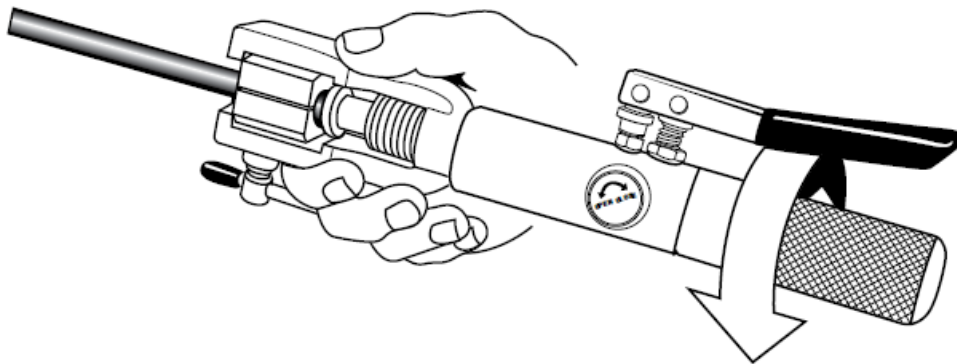
With the relief valve closed securely, begin pumping the handle. Continue pumping until the edge of the adapter meets the die.



Securely fasten die blocks by turning the “T” handle clockwise.

#### FIGURE 6

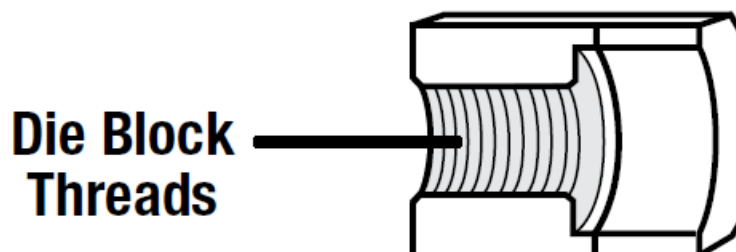
Hold the yoke and rotate the hydraulic cylinder counterclockwise to remove the adapter from the die blocks.



DO NOT loosen the “T” handle until the adapter is outside of the die blocks. Some resistance while turning is normal.

#### Maintenance Instructions

- Lubricate “T” handle threads and yoke/hydraulic cylinder threads with EP grease as needed.
- Clean internal die block threads with a brush periodically to remove any debris ensuring a tight grip on tubing when flaring or swaging.



#### OIL CHECK

Please note that an oil check should only be done if there are traces of oil found suggesting some type of leak.

Check hydraulic oil level. Hydraulic oil can be checked by unscrewing the back part of the hydraulic cylinder. Rotate the endcap (round textured section under the pump handle) counterclockwise until separated from the main body. Hold the tool vertically with a rubber reservoir at the top. Remove a small plug from the end of the

reservoir. With the piston in full retract position, hydraulic oil should fill the reservoir. Add hydraulic oil as needed. Use hydraulic oil with a viscosity of about 46. Replace plug and endcap.


## Parts Description

		SWAGING ADAPTERS		SWAGING DIE SETS	
Part#	Description	Part#	Description		
71710-A	Flaring & Swaging Pump	71700-04	1/4" Swaging Adapter	71700-104	1/4" Die Set
71710-B	Yoke Assembly	71700-05	5/16" Swaging Adapter	71700-105	5/16" Die Set
71700-01	45° Flaring Cone	71700-06	3/8" Swaging Adapter	71700-106	3/8" Die Set
71700-PB	Plastic Molded Box	71700-08	1/2" Swaging Adapter	71700-108	1/2" Die Set
		71700-10	5/8" Swaging Adapter	71700-110	5/8" Die Set
		71700-12	3/4" Swaging Adapter	71700-112	3/4" Die Set
		71700-14	7/8" Swaging Adapter	71700-114	7/8" Die Set

## Contact Information

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## Documents / Resources

	<p><a href="#">Mastercool 71710 Hydraulic Flaring and Swaging</a> [pdf] Instruction Manual 71710, 71710 Hydraulic Flaring and Swaging, 71710, Hydraulic Flaring and Swaging, Flaring and Swaging, Swaging</p>
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## References

-  [California State Portal | CA.gov](http://CA.gov)
-  [P65Warnings.ca.gov](http://P65Warnings.ca.gov)
- [User Manual](#)

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