

# FITOK

## Hydraulic Presetting Tool

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## Introduction

FITOK Hydraulic Presetting Tool provides time-saving and easy installation in tube fittings made of carbon steel, stainless steel, and alloy steel.

### CAUTION

**We recommend reading this operation manual entirely before using FITOK Hydraulic Presetting Tool.**

## Definition

HPT – Hydraulic Presetting Tool

## Ordering information

Ordering Number	Tube OD (dimensions)
HPT-03M	12 mm, 14 mm, 15 mm, 16 mm, 18 mm, 20 mm, 22 mm, 25 mm
HPT-03F	1/2", 5/8", 3/4", 7/8", 1"
HPT-03-U	Choose your needs from HPT-03M and HPT-03F
HPT-03	Include HPT-03M and HPT-03F

Ordering Number	Tube OD (dimensions)
HPT-05M	28 mm, 30 mm, 32 mm, 38 mm, 50 mm
HPT-05F	1-1/4", 1-1/2", 2"
HPT-05-U	Choose your needs from HPT-05M and HPT-05F
HPT-05	Include HPT-05M and HPT-05F

# Components

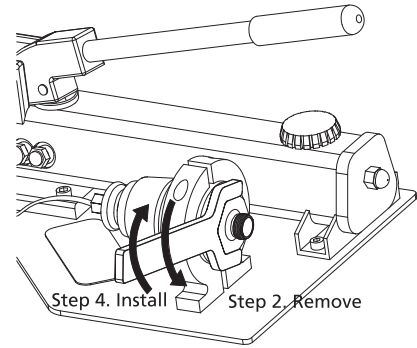
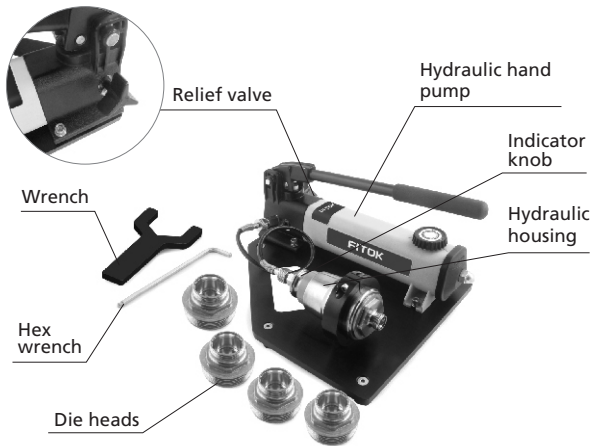


Fig. 2 Body Die Removal / Installation

# Setup

1. Screw the hex head screw counterclockwise and take out from the die head using the hex wrench. See Fig. 1.
2. Screw the previously installed die head counterclockwise from the hydraulic housing using the wrench. See Fig. 2.

3. Select the appropriate sized die head.
4. Install the selected die head into the hydraulic housing clockwise, until the end face of the die head reaches the end face of the hydraulic housing. Further Tighten slightly with a wrench. See Fig. 2.
5. Screw the hex head screw into the die with a the wrench clockwise. See Fig. 1.
6. Minimum wall thickness please refer to Recommended Minimum Wall Thickness of Tubing for Use with the HPT on Page 8.

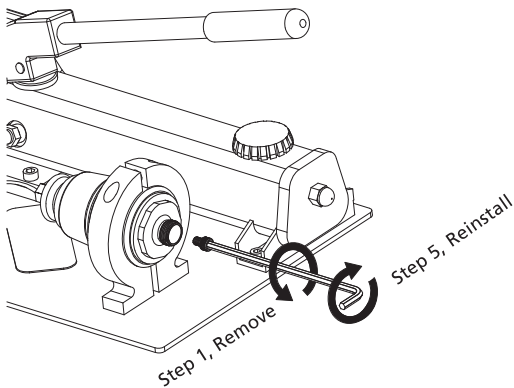


Fig. 1 Hex Head Screw Removal / Reinstallation

### ⚠ CAUTION

Do not tamper with or alter any components of the HPT when using.

## Operation

1. Open the relief valve by turning the handle counterclockwise.
2. Deburr the tube ends. Use of FITOK Tube Deburring Tools is recommended.
3. Insert tubing into the FITOK end fitting to be presetted. Disassemble the nut from the end connection, leaving the nut and ferrules on the tubing. The orientation of the nut, rear ferrule, and front ferrule should be as shown in Fig. 3.

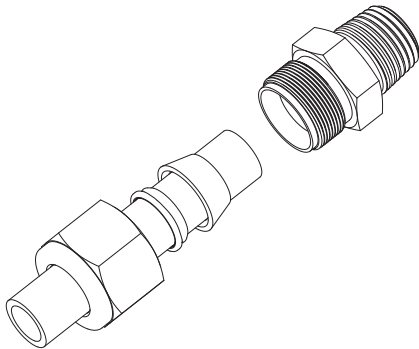


Fig. 3 Nut and Ferrule Orientation

4. Insert the tubing into the die head until it rests firmly against the piston shoulder. Tighten the nut until finger-tight and all die threads are covered by the nut.
5. Push the indicator knob forward until it snaps into place. The knob shoulder should be flush with the hydraulic housing. See Fig. 4.

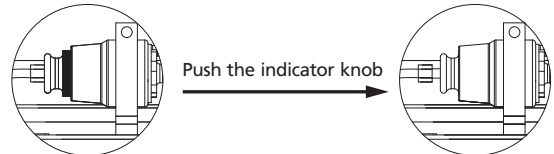
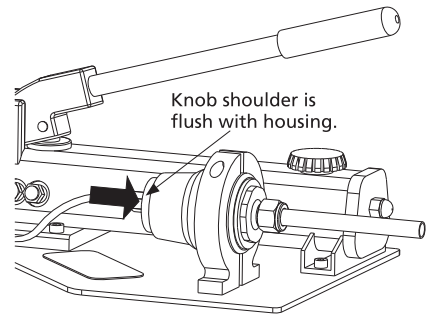


Fig. 4 Indicator Knob in Presetting Position

6. Close the relief valve to the finger-tight position by rotating valve handle clockwise.
7. While holding the tubing against the piston shoulder, increase the hydraulic pressure by using the hand pump until the indicator knob is released.

### ⚠ CAUTION

**Stop pumping immediately after the indicator knob releases.**

8. Mark the tubing at the back of the nut.

Note: This mark will be used later to ensure the nut has been sufficiently hand tightened when assembled to the fitting body.

9. Open the relief valve by turning the handle 1/2 to 1 circle counterclockwise.
10. Unthread the FITOK nut and remove the presetted assembly from the housing.

11. Install the presetted assembly into the fitting body.  
Turn the nut onto the fitting body until it is finger-tight.  
See Fig. 5.

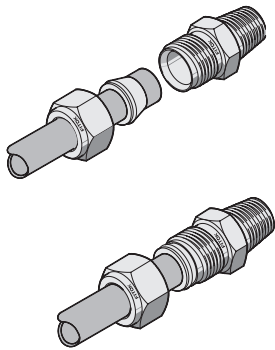


Fig. 5 Installing Presetted Assembly into Fitting Body

Note: The line marked on the tubing in step 8 should now be visible. If not visible, tighten the nut with a wrench until the line is visible.

12. Mark the nut at 6 o'clock position. Hold the fitting body stable and tighten the nut 1/2 turn with a wrench. See Fig.6.

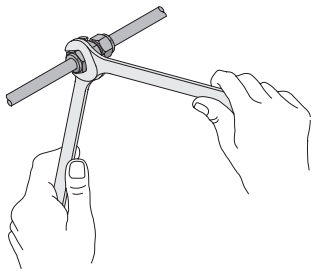


Fig. 6 Tighten Nut with Wrench

**⚠ CAUTION**

**Do not use the FITOK GIG gap inspection gauge to the reinstalled fitting!**

## Troubleshooting

1. If tubing is difficult to remove from the HPT after presetting, rock the tubing back and forth. Refer to the Recommended Minimum Wall Thickness table-presetting tubing below the recommended minimum wall may result in tube sticking.

**⚠ CAUTION**

**Do not rotate the tubing.**

2. If the indicator knob does not release or oil is leaking, return the unit to your independent FITOK sales and service representative.
3. If the die head piston is binding, contact your independent FITOK sales and service representative.
4. If the nut does not cover all of the die head threads, verify that the relief valve is open and the piston is not binding in the body die.
5. If the pump fails to build pressure, check the oil level in the pump by removing the dipstick and checking for a proper amount of oil. Too much or too little oil will prevent the pump from operating properly.

**Recommended Minimum Wall Thickness of Tubing for use with the HPT.**

**⚠ CAUTION**

Use of tubing below the recommended minimum wall thickness may result in the tube sticking in the die head.

Fractional Tubing		
Tubing Size in.	Tubing Wall, in.	
	Steel	Stainless Steel
1/2	0.049	0.065
5/8	0.065	
3/4		
7/8		
1		0.083
1 1/4	0.083	0.095
1 1/2		
2	0.095	0.109

Metric Tubing		
Tubing Size mm	Tubing Wall, mm	
	Steel	Stainless Steel
12	1.5	1.5
14		
15		
16		
18	2.0	1.8
20		
22		
25	2.2	2.0
28		
30		
32		
38		
50		
		2.5

To help you build a reliable system, we supply more essential tools to you



Hand Tube Bender



Tube Cutter



Tube Deburring Tool

Please read FITOK catalogue of the Tubing Tools for more details.