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FITOK

Hydraulic Presetting Tools

(Medium & High Pressure)

Instruction Manual



Please read and understand this instruction manual before using FITOK Hydraulic Presetting Tool.

Introduction

This instruction manual specifies FITOK Hydraulic Presetting Tool that is used to preset 20D Series double ferrules onto the tubing.

Definitions

Symbols are used in this document to identify safety concerns. Read the definitions below before installing and operating the Hydraulic Presetting Tool.

-  **CAUTION** - It states the correct operation, maintenance procedure and how to avoid damaging the equipment or other property.
-  **WARNING** - It states a potential danger existed to require correct procedure and convention to avoid personal injury.

Safety Precautions

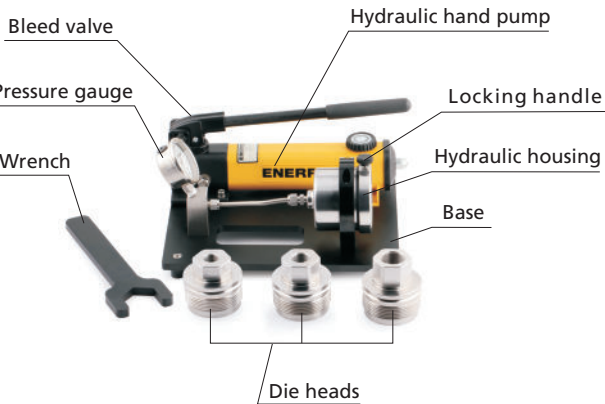
-  **WARNING** - Proper personal protection equipment must be used when operating the Hydraulic Presetting Tool.
-  **CAUTION** - Do not tamper with or alter any components.
-  **CAUTION** - Please contact FITOK Group or authorized distributors if any signs of hydraulic fluid leakage or malfunction occur.
-  **CAUTION** - Keep away from flame or heat source. Do not expose the tool to the temperature of 65 °C or higher, and protect the cylinder from welding sparks.

Model Specification

Hydraulic Presetting Tools	
Model	Description
HPT-DF	With full set of die heads
HPT-N	Without die heads The die heads can be ordered individually

Die Heads	
Model	Tube O.D., in.
HPT-DFF8	1/2
HPT-DFF9	9/16
HPT-DFF12	3/4
HPT-DFF16	1

Components (Unit with Die Heads and Base)



Installation

- 1. Select an appropriate die head.
- 2. Install the selected die head into the hydraulic housing clockwise until the end face of the die head is aligned with that of the hydraulic housing. Then use a wrench to tighten it. See Fig. 1.



Fig. 1 Die Head Installation

- 3. Turn the locking handle clockwise to the finger-tight position to ensure the die head is firmed. See Fig.1.

Caution
When disassembling the die head, loosen the locking handle first, and disassemble the die head.

Operation

- 1. Prepare tube ends by deburring.
Note: Remove any burrs. Use of FITOK Tube Deburring Tool is recommended.
- 2. Put a nut, a rear ferrule and a front ferrule onto the tubing in proper sequence and orientation. See Fig. 2.



Fig. 2. Nut and Ferrules Orientation

- 3. Insert the tubing into the die head until it rests firmly against the piston shoulder. Tighten the nut until finger-tight. See Fig. 3.
- 4. Make sure that the bleed valve is in the closed position. While holding the tubing against the piston shoulder, press the pump handle gently till the gauge shows the corresponding pressure value. Hold for more than 30s. See Fig.3 and Table 1.



Fig.3 Tubing Presetting

Table 1	
Tube O.D., in.	Presetting Pressure, Mpa
1/2	13~15
9/16	20~22
3/4	33~36
1	45~47

- Open the bleed valve. Loosen the nut and remove the tubing from the hydraulic presetting tool.
- Install the preset assembly into the fitting body and turn the nut onto the fitting body until it is finger-tight. While holding the fitting body steady, tighten the nut 1/4 turn with a wrench for tube O.D. 1/2", 9/16", 3/4", and 1/2 turn for tube O.D. 1". See Fig. 4.



Fig. 4 Tighten Nut with Wrench

Reinstallation Instructions

- Insert the tubing into the fitting body or the valve, finger tight the nut.
- While holding the fitting body or the valve steady, for tubing O.D. 1'', tighten the nut to the previous assembly position and further tighten it with a wrench; for other dimension tubing, tighten the nut 1/4 turn with a wrench for the initial reinstallation, and for reinstallations thereafter, tighten the nut to the previous assembly position and further tighten it with a wrench.

Troubleshooting

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

CAUTION

Do not rotate the tubing.

- If the die head piston is binding, contact FITOK Group or authorized distributors.
- 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.
- The pump manufacturer specifies using 10W, AW-46 grade hydraulic oil or equivalent with an antifoaming additive.

Recommended Minimum Wall Thickness of Tubing for Use with the Hydraulic Presetting Tool

WARNING

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

Tube O.D., in.	Tubing Wall Thickness, in.	
	Annealed Stainless Steel tubing	1/8-hard Stainless Steel tubing
1/2	0.134	0.109
9/16	0.188	0.125
3/4	0.188	0.165
1	0.22	0.17