



SSP INSTRUMENTATION HYDRAULIC SWAGING TOOL OPERATING INSTRUCTIONS

1. Fully open Pump Bypass Valve by turning the handle counter-clockwise until it stops.
2. Insert appropriate sized Body Die into the Swaging Head and secure the Body Die with a cap screw. Lightly tighten. Excessive torque is not necessary.
3. Prepare tubing.
 - Cut tubing squarely. Use of a tube saw guide or tube cutter is recommended.
 - Remove any burrs. Use of tube deburring tool is recommended. Deburring is important for proper fitting function as well as for clean, leak-free systems. OD burrs could prevent tubing from being fully inserted through the nut and ferrules or against the shoulder of the Body Die. ID burrs could contaminate the system fluid or damage other parts of the system by lodging in small holes or vents and scratching valve seats and soft seals.
 - Use of tubing below the recommended minimum wall thickness may result in the tubing sticking in the Body Die of the Hydraulic Swaging Tool. Refer to the **Tubing Wall Limits** warning on the Base Plate of the Hydraulic Swaging Tool.
4. Assemble front ferrule, back ferrule and nut onto Body Die observing correct orientation of all three components.
5. Install appropriate size Split Adapters (if required) into Split Collars. Small ID Split Adapters are for size 12 (3/4") tube. Medium ID split adapters are for size 16 (1") tube. Large ID Split Adapters are for sizes 20 and 24 (1.25" and 1.5") tube. Size 32 (2") tube does not require Split Adapters.
6. Install Split Collars with Split Adapters onto Swaging Head, bottom first then top.
7. Slide knurled Lock Ring over Split Collars and lock in place at shoulder of Split Collars.
8. Insert tubing into Swaging Head through Split Collars, nut and ferrules until it firmly bottoms in the Body Die.
9. Close the pump Bypass Valve finger-tight by rotating the valve handle clockwise until it stops.
10. While holding the tube lightly against the Body Die, increase the hydraulic pressure by using the Hand Pump until the recommended pressure is reached. **Stop pumping immediately after the recommended pressure is reached.**

Maximum Swaging Pressures	
12 Series (3/4")	1600 PSIG
16 Series (1")	2300 PSIG
20 Series (1 1/4")	3300 PSIG
24 Series (1 1/2")	4000 PSIG
32 Series (2")	5500 PSIG

11. Verify the nut face has contacted the body die shoulder by looking through the window on the split collar.
12. Fully open Pump Bypass Valve by turning the handle counterclockwise until it stops.
13. Retract the knurled Lock Ring to home position on the Swage Head and lock in place.
14. Remove the Split Collars.
15. Gently slide the preswaged assembly out of the body die.
16. Inspect the end of the tube for indentation markings. The indentations indicate the tubing was properly bottomed in the tool. If there is no visible indentation, the assembly should be reswaged.
17. Install the preswaged assembly into the fitting body. Turn the nut onto the fitting body until it is finger-tight. Hold the fitting body stable with a back-up wrench and tighten the nut 1/2 turn with a wrench.