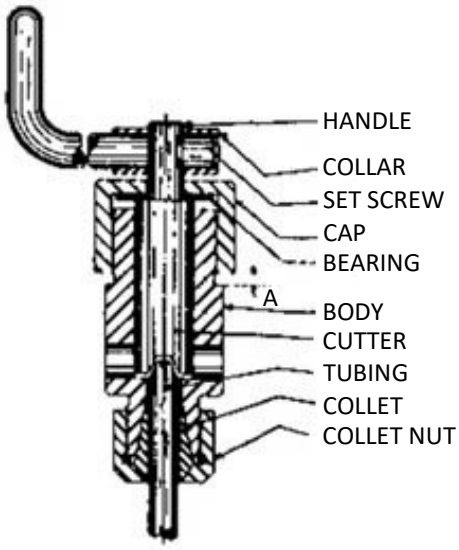
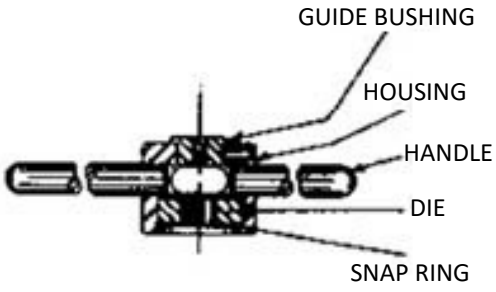
Coning and Threading Tool Instruction Sheet

Coning Tools

Catalog Number	Tubing Size	Spare Cutter	Spare Collet
2-HF2	(1/8" O.D. x .020" I.D.) (1/8" O.D. x .040" I.D.)	2-HF2L	2-HF2P
2-HF4	(1/4" O.D. x .083" I.D.) (1/4" O.D. x 1/16" I.D.)	2-HF4L	2-HF4P
2-HF6	3/8" O.D. x 1/8" I.D. (60,000 psi)	2-HF6L	2-HF6P
2-XF6	3/8" O.D. x 1/16" I.D. (150,000 psi)	2-XF6L	2-XF6P
2-HF9	9/16" O.D. x 3/16" I.D. (60,000 psi)	2-HF9L	2-HF9P
2-LF4	1/4" O.D. x .109" I.D. (20,000 psi)	2-LF4L	2-LF4P
2-LF6	3/8" O.D. x .203" I.D. (20,000 psi)	2-LF6L	2-LF6P
2-LF9	9/16" O.D. x .312" I.D. (20,000 psi)	2-LF9L	2-LF9P



Threading Tools



Catalog Number	Tubing Size	Spare Cutter	Spare Collet
2-MHF2	(1/8" O.D. x .020" I.D.) (1/8" O.D. x .040" I.D.)	1/8" - 40LH	2-MHF2P
2-MHF4	(1/4" O.D. x .083" I.D.) (1/4" O.D. x 1/16" I.D.)	1/4" - 28LH	2-MHF4P
2-MHF6	3/8" O.D. x 1/8" I.D. (60,000 psi)	3/8" - 24LH	2-MHF6P
2-MXF6	3/8" O.D. x 1/16" I.D. (150,000 psi)	3/8" - 24LH	2-MXF6P
2-MHF9	9/16" O.D. x 3/16" I.D. (60,000 psi)	9/16" - 18LH	2-MHF9P
2-MLF4	1/4" O.D. x .109" I.D. (20,000 psi)	1/4" - 28LH	2-MLF4P
2-MLF6	3/8" O.D. x .203" I.D. (20,000 psi)	3/8" - 24LH	2-MLF6P
2-MLF9	9/16" O.D. x .312" I.D. (20,000 psi)	9/16" - 18LH	2-MLF9P

Although separate catalog numbers are listed for clarification, the following threading tool assemblies are virtually identical: (2-MHF4/2-MLF4), (2MHF6/2-MXF6/2-M6F6), (2-MHF9/2-MLF9).

High Pressure Equipment Company

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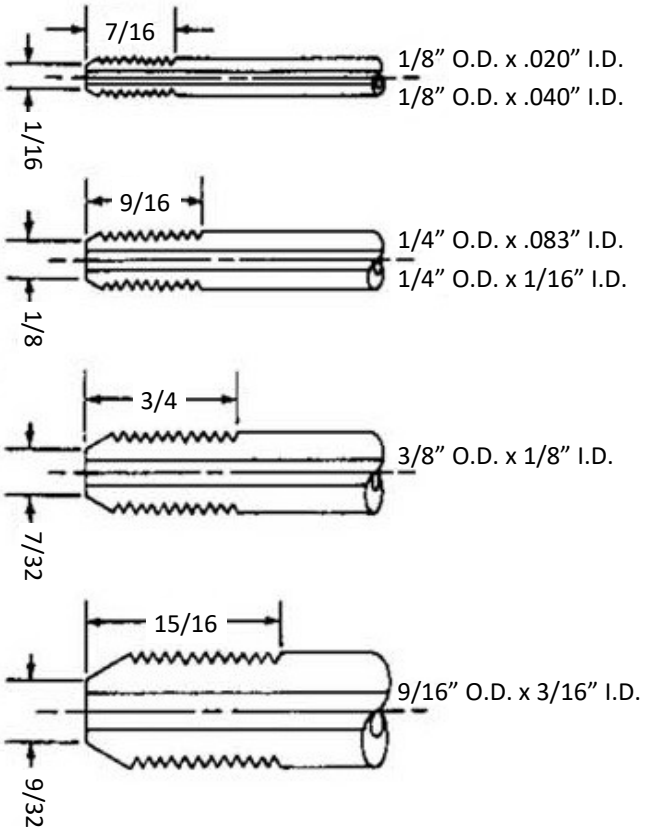
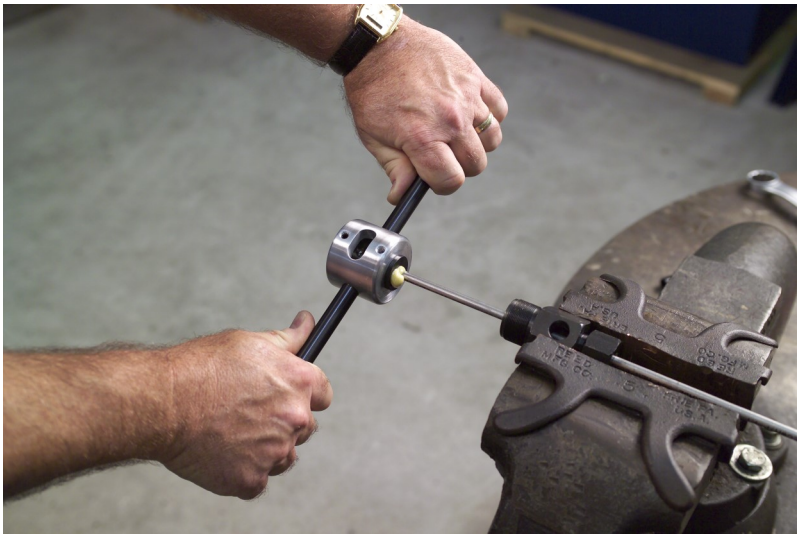
Coning Tools

High Pressure

(30,000 & 60,000 psi)

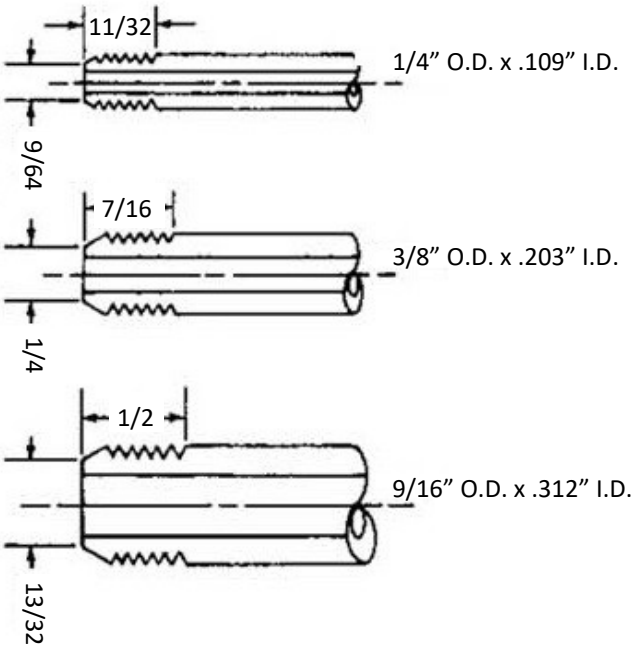


Threading Tools



Medium Pressure

(20,000 psi)



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Coning Tubing Ends

The coning tool is designed for preparing a "cone" having an included angle of approximately 57 to 59 degrees on the ends of the tubing. Operation is as follows:

Tubing Size	"Back Off Turns"
1/8" O.D.	3 turns
¼" O.D.	4-1/2 turns
3/8" O.D.	4-1/2 turns
9/16" O.D.	8 turns

1. Secure coning tool body in suitable vise. You may wish to angle the tool in the vise in order to facilitate access to the collet nut and knurled cap.

2. Cut the tubing to desired length and deburr both ends.

3. Rotate the knurled cap clockwise into tool as far as it will go.

4. "Back off" knurled cap by rotating counterclockwise the number in the chart to the right.

Note: You may want to place a mark on the knurled cap.

Tubing Size	"Back Off Turns"
1/8" O.D.	2-1/2 turns
¼" O.D.	3-1/2 turns
3/8" O.D.	4 turns
9/16" O.D.	7-1/2 turns

5. Insert tubing thru collet nut and collet until tubing stops up against inside cutter.

6. Tighten collet nut to secure tubing into position.

7. Turn knurled cap counterclockwise to remove cap and cutter from tool.

8. Apply a liberal amount of "Sulflo" (Sulphur based cutting compound) to the end of the cutter.

9. Screw cap and cutter back into the body until the cutter contacts the end of the tubing.

10. Rotate handle of cutting tool clockwise fairly rapidly with one hand, while slowly rotating the knurled cap clockwise with your other hand to continually feed the tubing into the cutter. Do not overly force the cutter against the tubing as it will bind. (You will quickly develop the proper feel.) You will need to rotate the knurled cap a complete number of turns as per the chart to the left in order to complete the cone on the end of the tubing.

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11. After coning the tubing end, loosen the collet nut and remove tubing from the tool. Remove the knurled cap and cutter from the tool and clean off Sulflo compound and steel chips in preparation for the next tube.

Coning Notes:

- Steps 3 & 4 above are primarily to help properly position the tubing in the tool. With experience, you will be able to judge the proper position and eliminate these steps.
- The 1/4" O.D. and 3/8" O.D. tubing sizes are relatively easy to cone. 1/8" O.D. tubing is "delicate" and care should be taken not to force the cutter. 9/16" O.D. tubing requires the most firmness in cutting.
- As with other tools. It is not uncommon for a collet to "stick" even after the collet nut has been released, simply tap the collet nut firmly with a wrench to release the collet.

Threading the Tubing

The Threading tool is designed to put a left hand thread onto the end of the tubing. Operation is as follows:

1. The coning tool (with the knurled cap and cutter removed) is ideal for holding the tubing during the threading operation. Position the coning tool for a comfortable approach and secure in vice.

2. After securing the tubing, apply a liberal amount of Sulflo to the end of the tubing.

3. Place the threading tool (guide bushing side first) onto the tubing.

4. Place the palm of your hand firmly against the center of the threading tool and rotate your wrist counterclockwise. This will "start" the die onto the tube. Once started, continue rotating the tool using handles. Proper thread lengths are shown in the drawings.

5. Remove the threading tool and clean off Sulflo and tubing chips. Check threads by screwing collar onto tubing.

NOTE:

The tubing collar should easily screw onto the tubing. If it feels too tight or loose, adjust the die as follows. Remove the die from holder by loosening the outer set screw. The small adjustment screw located on the side of the die can be turned to precisely set the die.