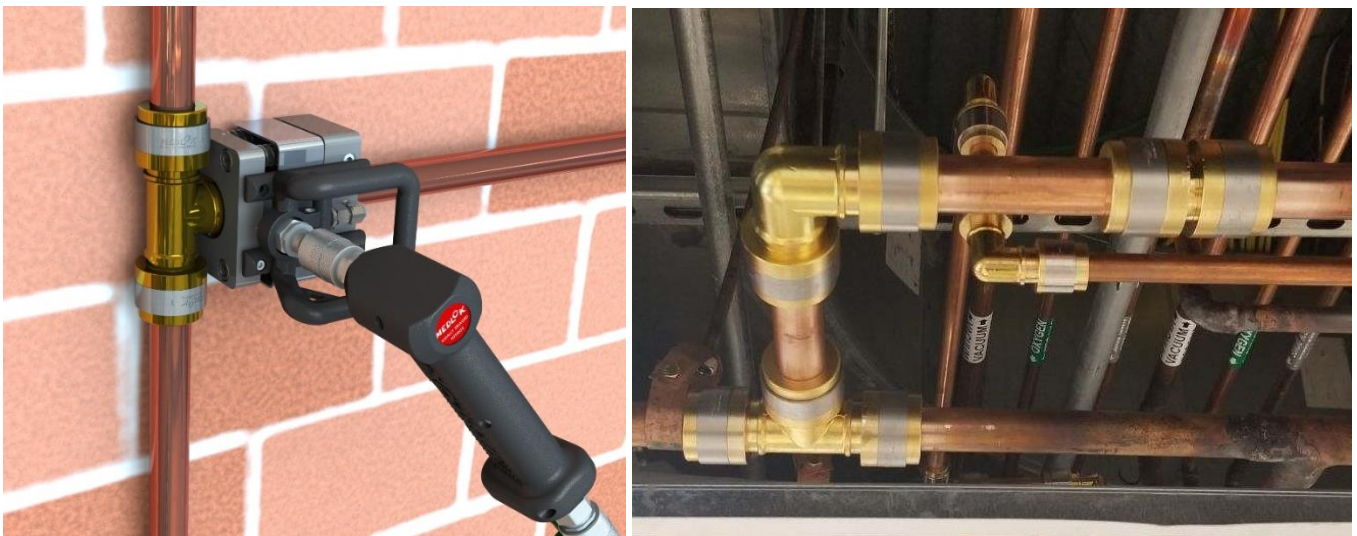


Installation Procedure

MEDLOK[®]

Axially Swaged Medical Fittings from **TYLOK**

Medical Gas Connections Made Easy



MEDLOK
1061 E 260th St.
Euclid, OH 44132

(216) 261-7310 • (800) 321-0466
www.medlok.com

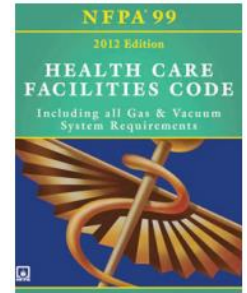
MEDLOK[®] is patented with the U.S. Patent Office and registered with the U.S. Trademark Office.

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1.0 SCOPE AND PURPOSE

The scope of this instruction is to provide the necessary information to become certified in the installation and inspection of MEDLOK fittings.

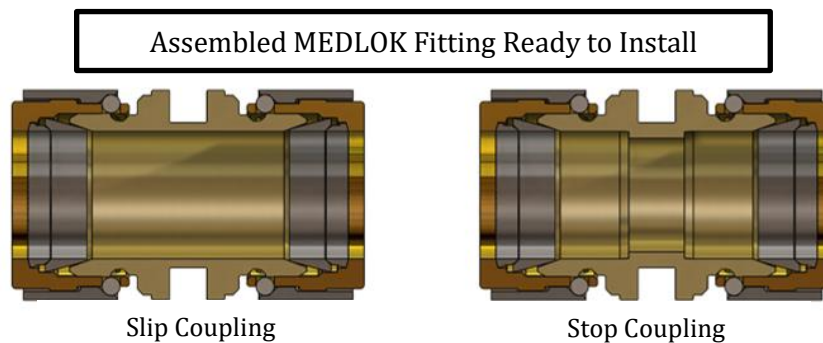
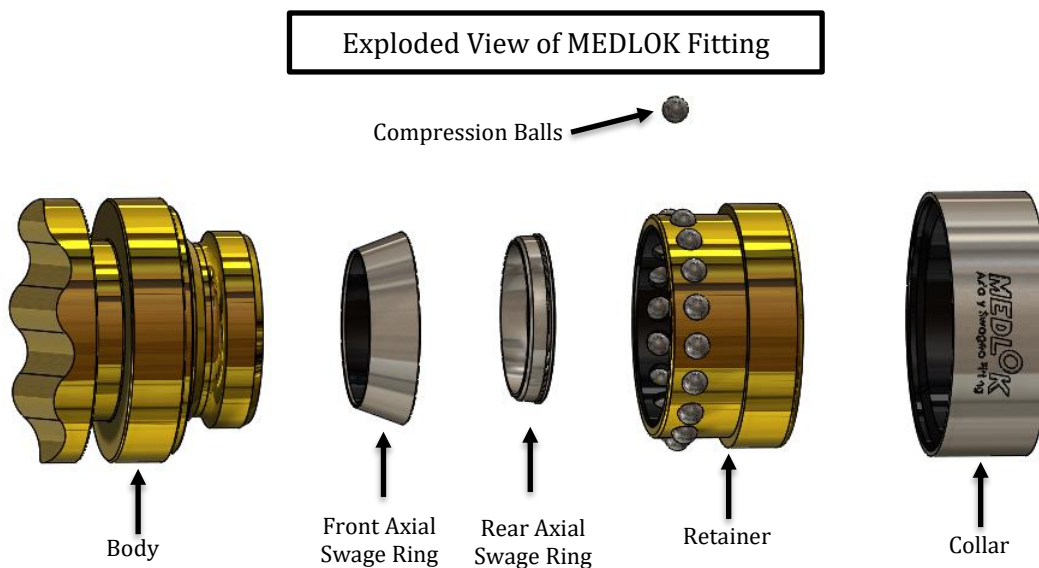
- MEDLOK's axially swaged fittings meet the requirements of NFPA 99 2005 and all subsequent editions, Section 5.1.10.7.
- **Per NFPA 99, MEDLOK installation shall be completed by a certified ASSE 6010 installer that is also certified in the handling, installation, and inspection of MEDLOK fittings.** Note: State Healthcare codes should also be reviewed for compliance.



2.0 MEDLOK FITTING DESIGN: HOW IT WORKS

The patent-awarded MEDLOK fitting design incorporates 6 critical, uniquely designed components. This design includes three proven technologies combined with an engineered, high strength, stainless steel collar to assure a permanent, leak-free connection. These components consist of:

- Front and rear swage ring sealing technology – proven in millions of instrumentation fittings for over 70 years
- Compression balls – widely used retention technology proven in standard quick connect fittings
- An engineered, high-strength collar that retains the MEDLOK fitting in an elastic condition



3.0 MEDLOK FITTING AND VALVE SIZES & CONFIGURATIONS

- MEDLOK fittings and valves are designed to be used with copper tubing Type K & Type L in sizes 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", and 2".
- MEDLOK fittings and valves will work with annealed tubing within inches of a brazed joint.
 - **NOTE: No two brazed joints are the same. Variations in time, temperature, and repair affect tubing hardness. MEDLOK cannot make a statement of compliance in regards to brazed joint location.**
- MEDLOK fittings are offered in many configurations including caps, couplings, elbows, tees, and NPT connectors. Most configurations are offered in stop and slip style bodies.
 - Reducing: couplings, elbows, and tees
 - Slip and stop: couplings and tees
 - Gauge port: caps and couplings
- MEDLOK valves use industry standard valves with MEDLOK tube ends which have 1/8" female NPT gauge ports on the upstream and downstream.

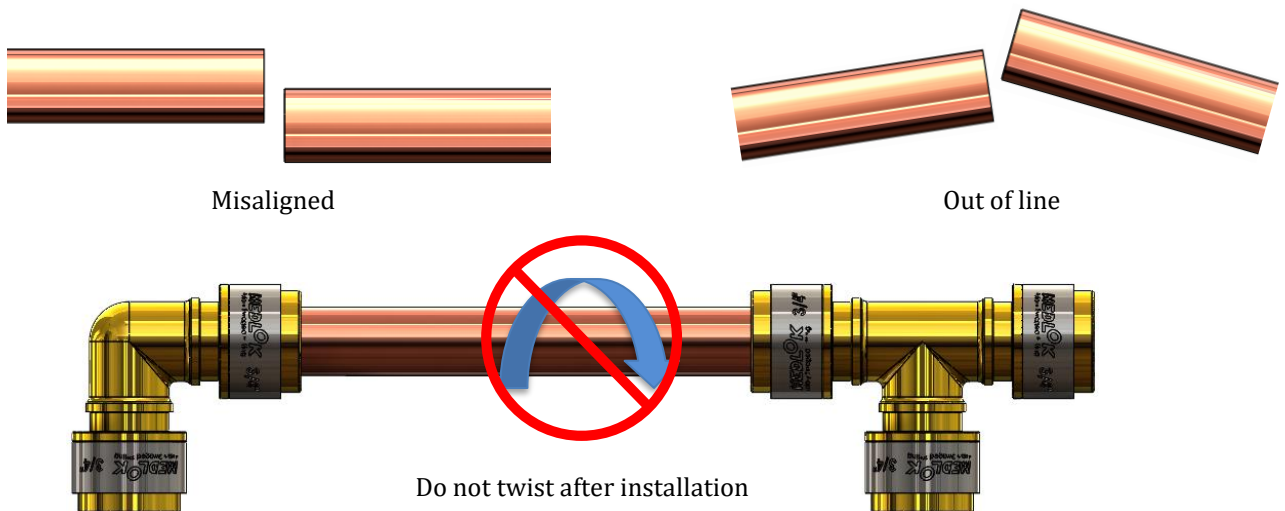
4.0 INSTALLATION CONSIDERATIONS

4.1 Tubing Requirements

- Follow all medical gas tube requirements defined in NFPA 99.

4.2 Tube & Fitting Alignment for MEDLOK Installations

- Tubing must be aligned and supported before installing and swaging MEDLOK fittings.
- Align each fitting and valve in their proper orientation before swaging.
- **A loss of the reliability of the leak tight seal may result if:**
 - **A tube is misaligned and/or unsupported before swaging**
 - **A MEDLOK fitting is twisted after installation**
- Valves and larger fittings will require more support because of their weight.



4.3 Tube Preparations

- Follow all medical gas tube preparations requirements defined in NFPA 99.

4.4 Tube Inspection

Before starting the installation and cutting into the pipeline, always inspect the tubing by following these steps:

Step 1: Carefully inspect tubing for surface defects. Avoid **scratches, stamped markings, dents**, and other imperfections. If they are present, a loss of reliability of the leak tight seal may result.

- Caution: If tubing is painted, care must be taken in removing the paint to avoid flat spots and deep scratches. When removing the paint, go around the tube, not down the length of the tube.



Deep Scratch

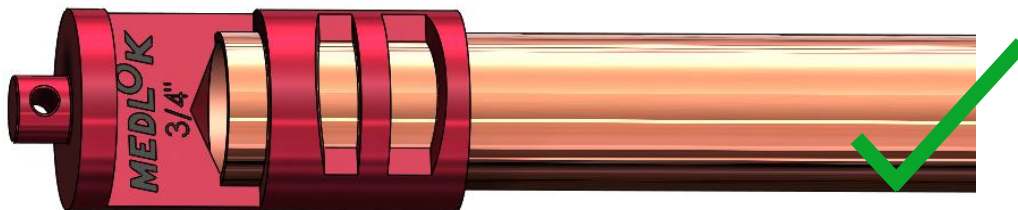


Stamped Marking



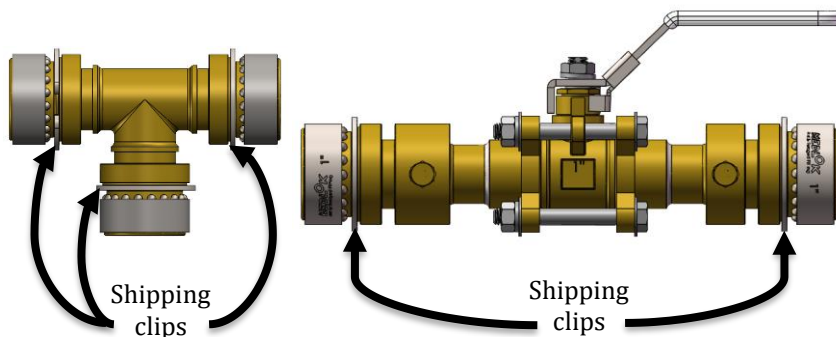
Dent

Step 2: After referencing the attached take-out measurements for the specific fitting, cut the tube and make sure it fits into the depth marking gauge. **Do not force the tube into the gauge.** If the tube does **not** fit into the gauge, it may be out-of-round or have burrs. Clean off burrs and retry. If it still does not fit, it is out-of-round. Use tube reformers or avoid using that section of tubing.



4.5 MEDLOK Fittings Preparations

- Larger MEDLOK fittings & valves may be delivered with shipping clips attached. **These clips must be removed before swaging.**

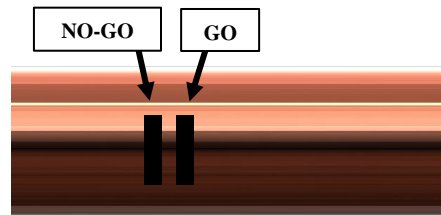


5.0 INSTALLING A CAP OR FITTING ON AN EXISTING TUBE END

- **NOTE: Prior to any installation, make sure that there is proper clearance for the tool head.**
- The depth marking gauge is used to assure the tube will be installed correctly after swaging.
- When installing Medlok fittings with male or female NPT threads, you must hold the fitting wrench flats and avoid turning the Medlok fitting if it is already installed.

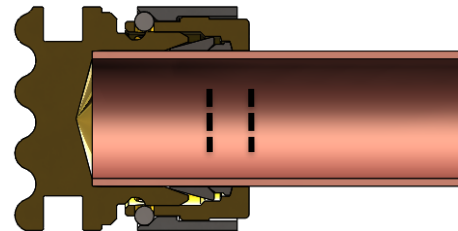
Step 1: Slide the gauge **all the way** onto the tube and fill in the GO and NO-GO marks.

1. NO-GO mark: **closer** to the tube end, meant to be hidden after swaging
2. GO mark: **further away** from the tube end, meant to be visible after swaging



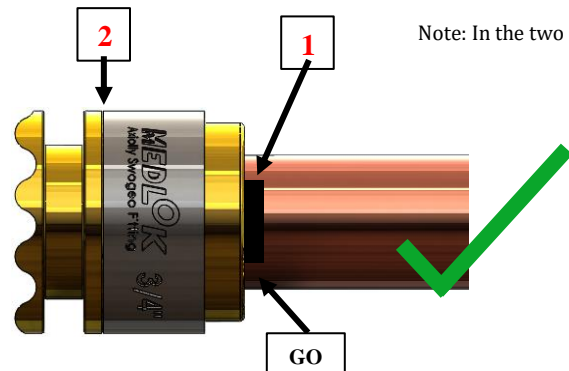
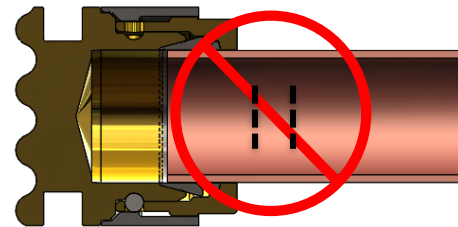
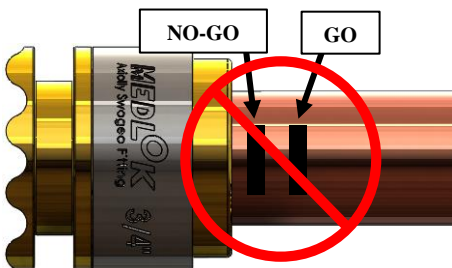
After Step 1: Tube should have the GO and NO-GO lines filled in

Step 2: Insert the tube all the way into the end of the fitting body. Only the GO mark should be visible. **DO NOT SWAGE IF YOU SEE THE NO-GO MARK.**

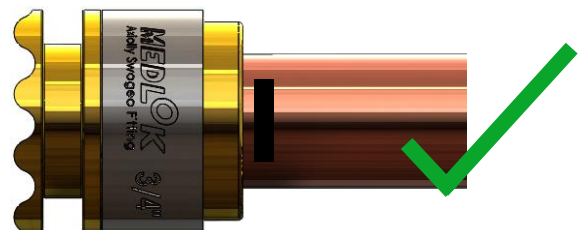


Final Steps: Swage the fitting. If two lines are visible after swaging it needs to be cut out because the tubing is in front of the swage ring, and this will cause leakage.

1. Check that **only the GO mark is visible**
2. Check that the collars are touching the body **all the way around**



Note: In the two examples below, the NO-GO marks are hidden



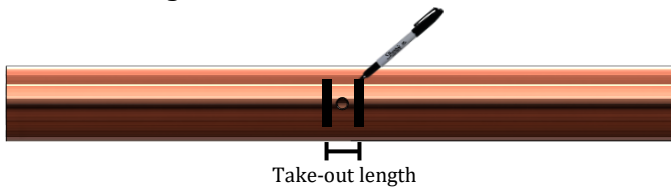
Note: The space between the two lines provides an acceptable tolerance after swaging

6.0 TYING IN A FITTING OR REPAIRING A BREACH IN AN EXISTING LINE

- **NOTE:** Prior to any installation, make sure that there is proper clearance for the tool head.
- A slip coupling can be used to tie in a fitting or repair a breach in the tube through the following steps:



Step 1: Reference the take-out lengths in the MEDLOK Catalog or at back of the document for the measurement and fill in the take-out length on the tube.

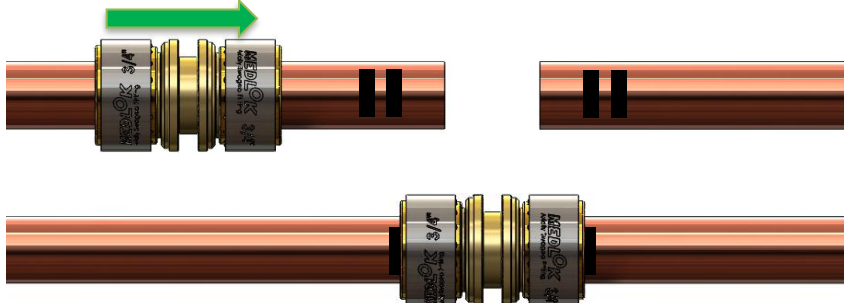


NOTE: Be sure to center the breach when marking the take-out

Step 2: Cut the tube on the take-out length marks. On each tube end, use the depth marking gauge and fill in the GO and NO-GO marks.

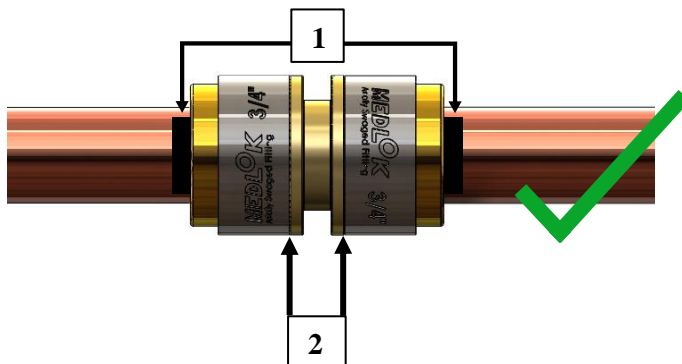


Step 3: Slide the slip fitting over the take-out area and center between the GO marks. Make sure that only the GO mark is visible on each side.



Final Steps: Swage the fitting

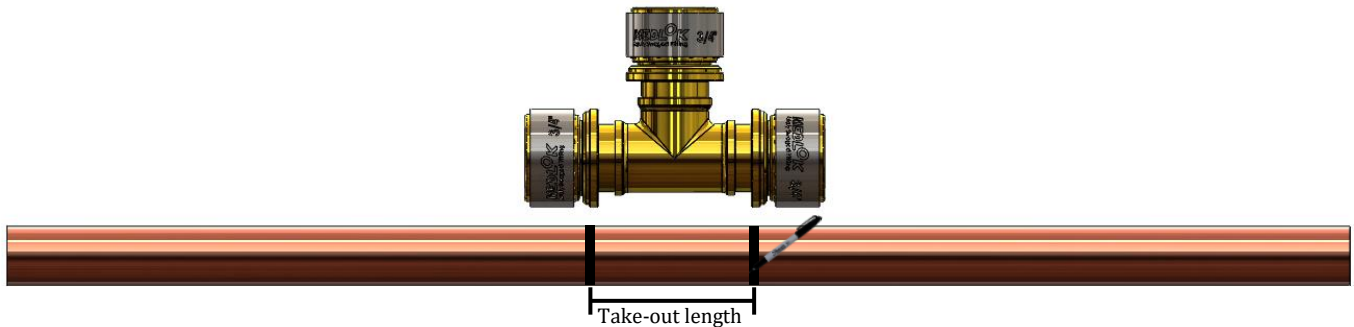
1. Check that only the GO mark is visible for each fitting end
2. Check that the collars are touching the body all the way around



7.0 TYING-IN A SLIP/STOP TEE OR A GAUGE PORT FITTING

NOTE: Prior to any installation, make sure that there is proper clearance for the tool head.

Step 1: Mark the take-out length on the tube (see Section 6.0 Step 1).



Step 2: Cut the tube on the take-out length marks. On each tube end, use the depth marking gauge and fill in the GO and NO-GO marks.

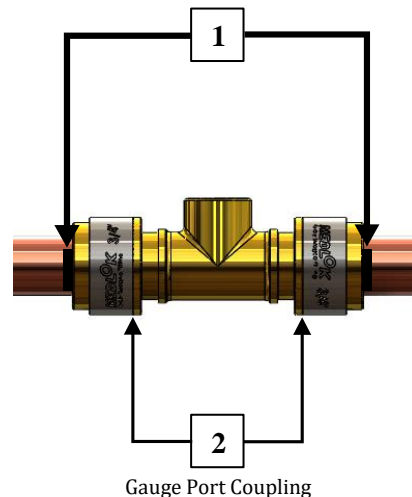
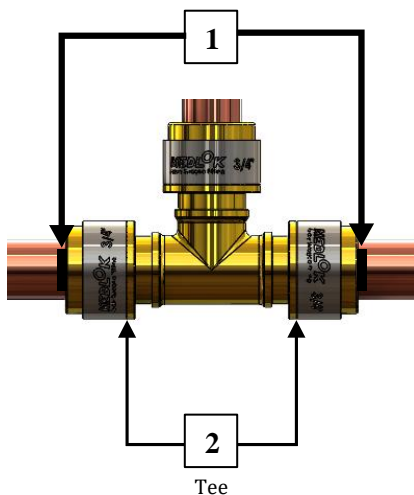


Step 3: Slide the fitting over the take-out area and center between the GO marks. Make sure that only the GO mark is visible on each side.



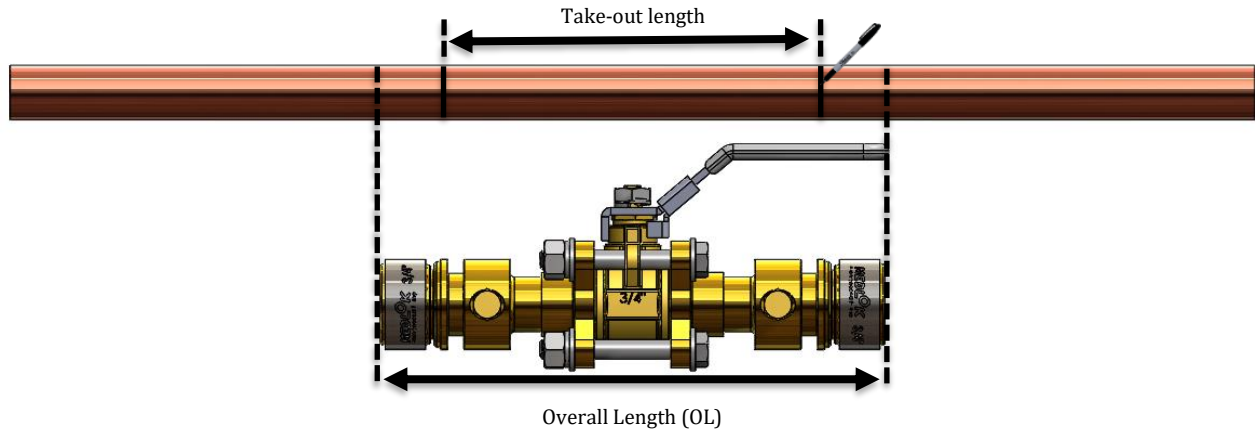
Final Steps: Swage the fitting

1. Check that only the GO mark is visible for each fitting end
2. Check that the collars are touching the body all the way around

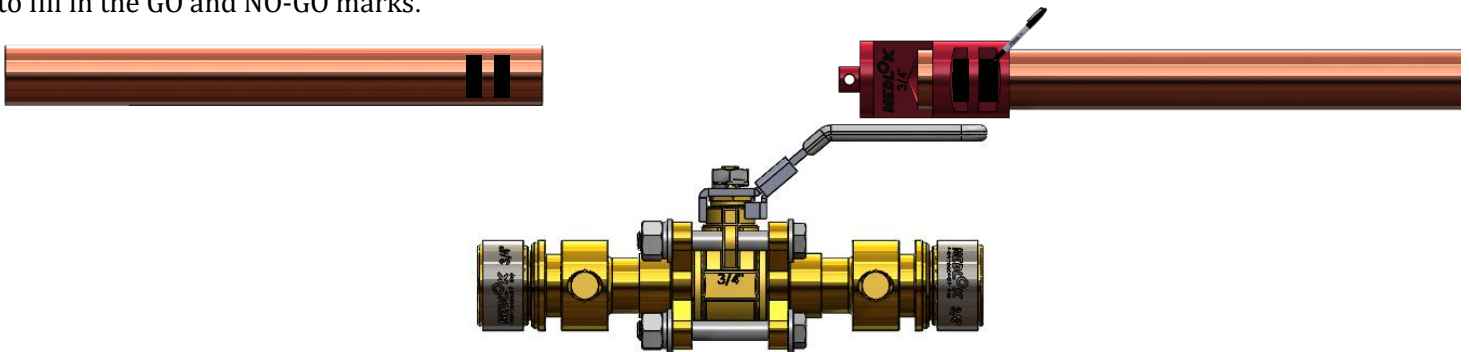


8.0 TYING-IN A MEDLOK VALVE

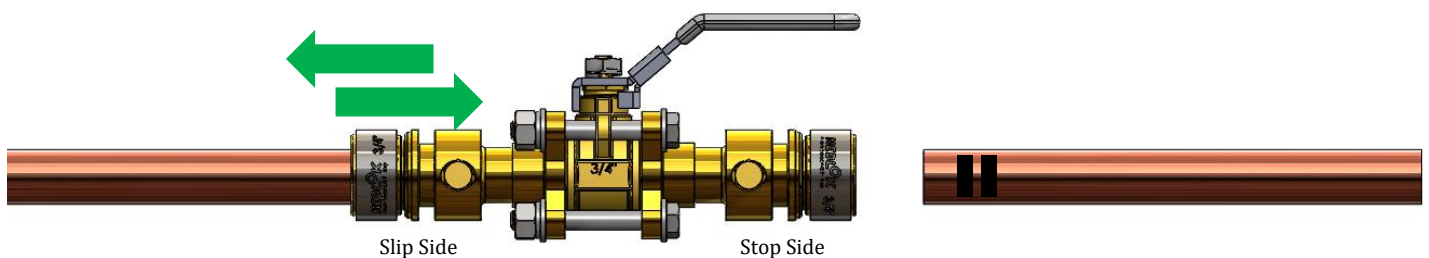
Step 1: Using the take-out lengths found at the end of this document, mark the take-out length indicated based on the size of the fitting.



Step 2: Cut the tube on the take-out marks and remove the section. On each tube end, use the depth marking gauge to fill in the GO and NO-GO marks.



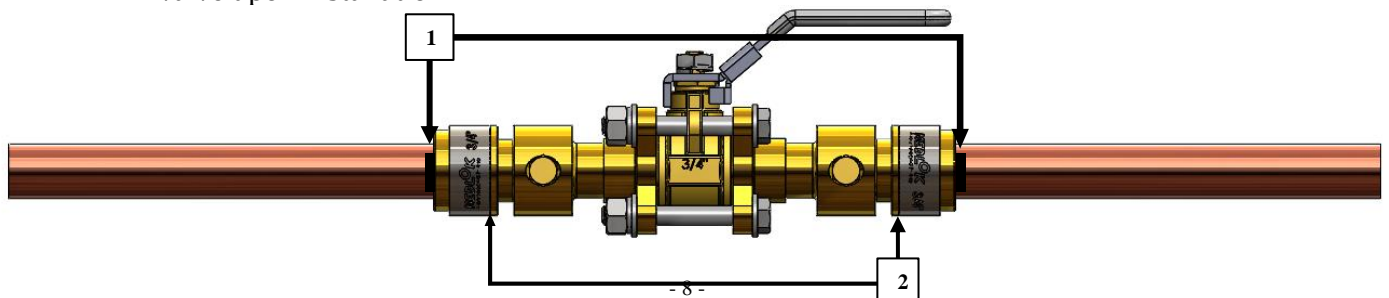
Step 3: Slide the SLIP side of the valve onto one end of the tube. Then realign the tubing and slide the valve back onto the STOP side until it stops.



NOTE: The slip side is always the side opposite of the handle in the open position

Final Steps: Assure the valve is within the black installation marks, and swage at each end.

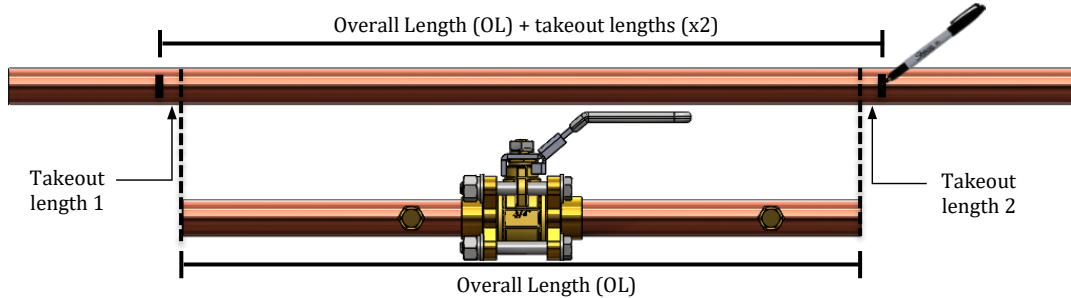
1. Check that each fitting is centered between the GO marks and that the NO-GO marks are hidden
2. Check that the collars are touching the body all the way around
3. Due to the weight of the valves, hangers shall be used at a minimum of 3 feet before and after the valve upon installation.



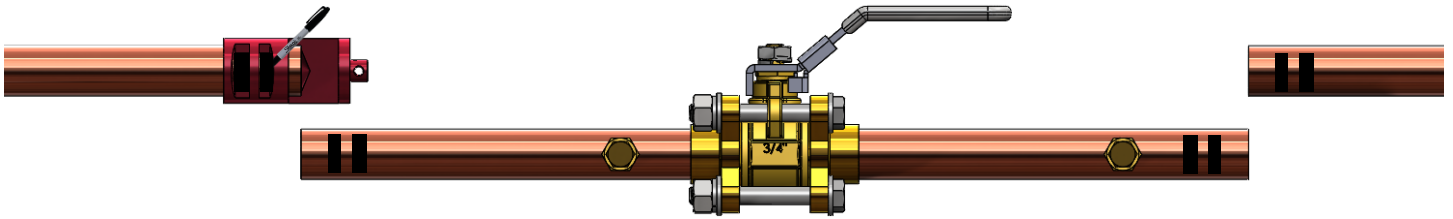
9.0 TYING-IN A VALVE WITH TUBE STUBS USING MEDLOK COUPLINGS

NOTE: Prior to any installation, make sure that there is proper clearance for the tool head.

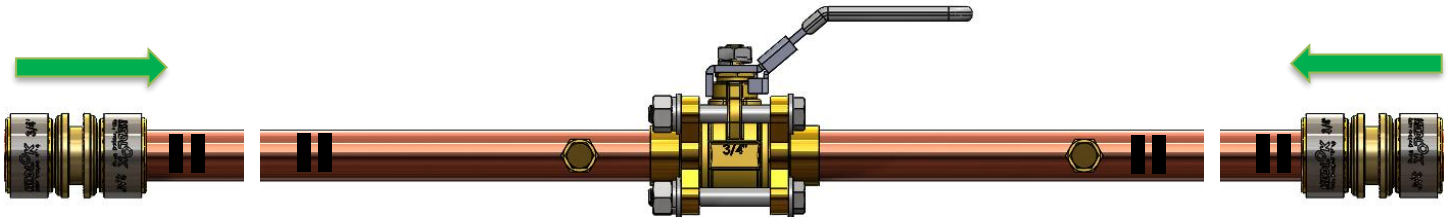
Step 1: Mark the section of the tube with the overall length (OL) of the valve with tube stubs and the takeout lengths of the two fittings. Refer to Section 4.4 to be sure if the tube can be used.



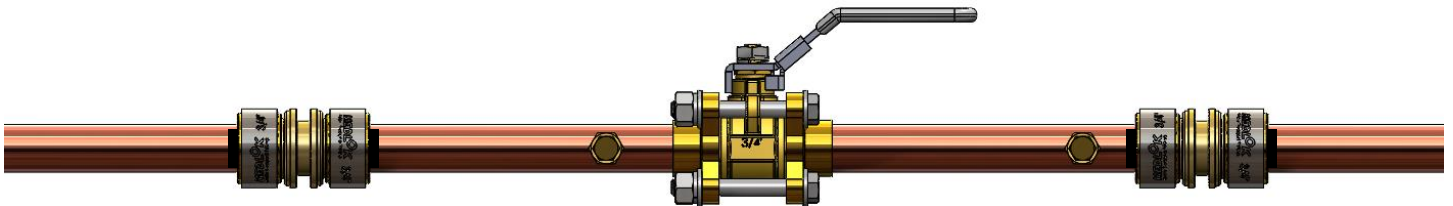
Step 2: Cut tubing at the OL marks. On each tube end, use the depth marking gauge to fill in the GO & NO-GO marks.



Step 3: Slide the MEDLOK slip couplings onto the fixed tube ends and lift valve with tube stubs into position.

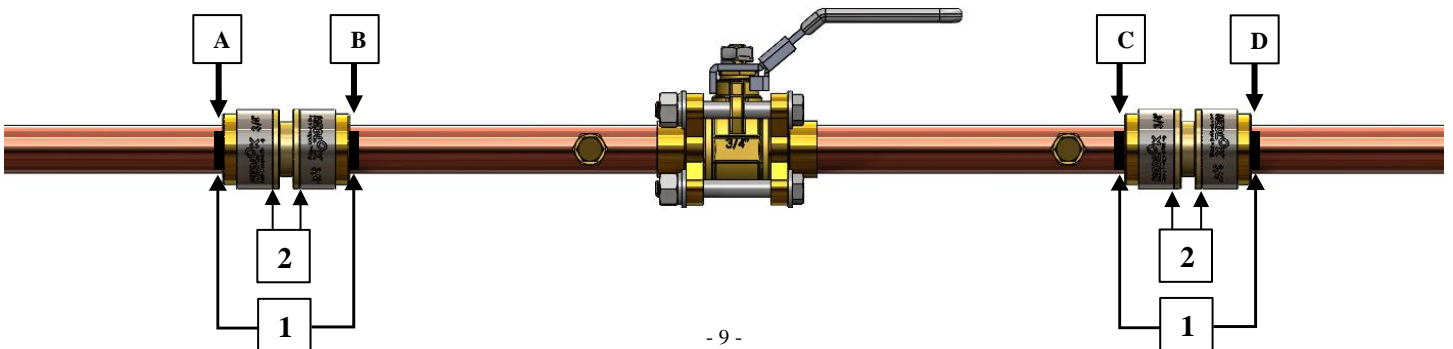


Step 4: Slide the couplings towards the valve. Center each fitting between the GO marks.



Final Steps: Swage the coupling ends on the fixed tube (A & D). Next, confirm fittings are correctly within the GO marks. Lastly, swage at the valve tube stubs (B & C).

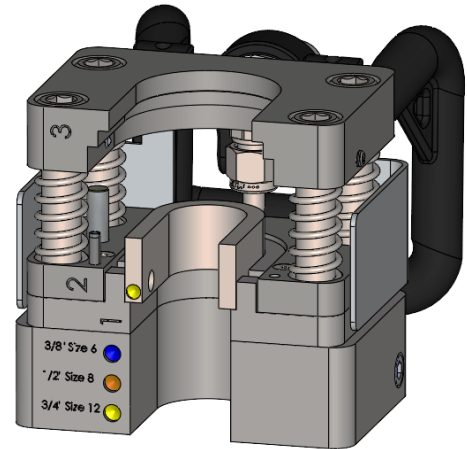
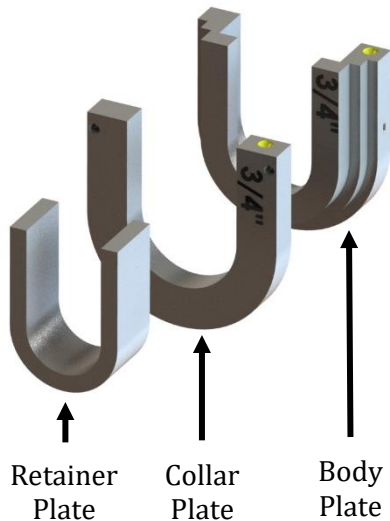
1. Check that each fitting is centered between the GO marks and that the NO-GO marks are hidden
2. Check that the collars are touching the body all the way around



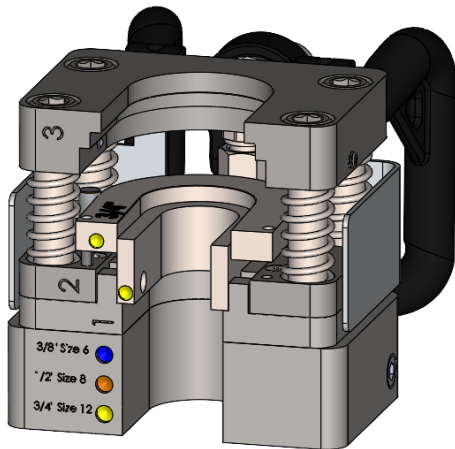
10.0 MEDLOK INSTALLATION TOOLING INSTRUCTIONS

10.1 Inserting Fitting Size Die Sets Into the Tool Head (1" and Under MHSU 6-16)

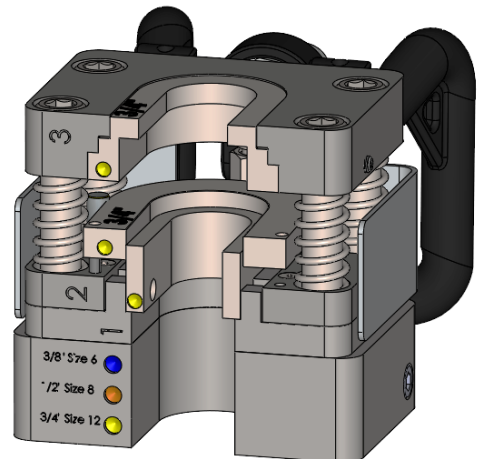
- Before inserting the tooling plates, make sure the power between the pump and the tool head is turned off
- Place die sets of 3/8", 1/2", or 3/4" into the tool head (1" fitting does not need die sets)
- Make sure the colored dots are on the same side as the dots on the tool head when inserting the die sets
- DO NOT USE the wrong sized plates for a fitting, the fitting will not install properly



Step 1: Place retainer adapter first into lower section of the tool head.



Step 2: Place the collar plate in next, over the retainer plate.



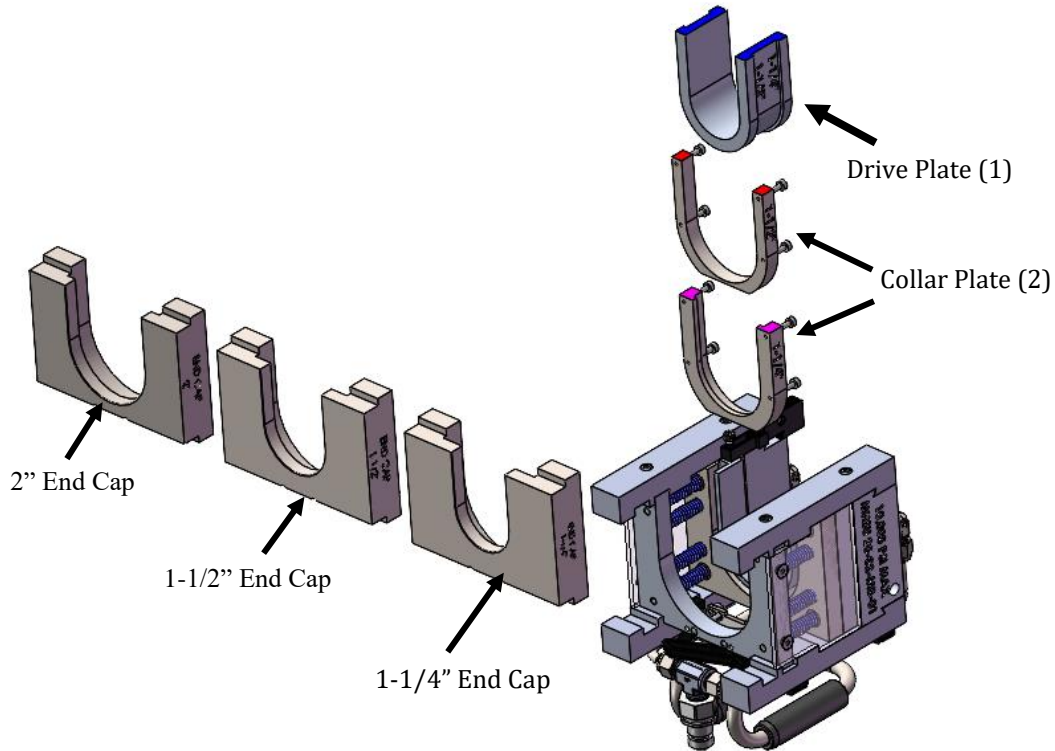
Step 3: Lastly, push the body plate into the upper section of the tool head.
*Notice all colored dots are on the same side

Final Check Before Swaging

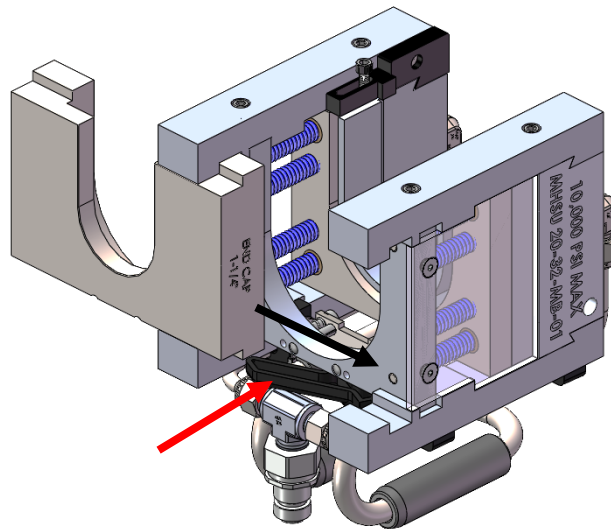
- Check that all the plates are pushed all the way in and seated
- All colored dots should be aligned on the same side of tool
- All plate sizes match the size of the fitting being installed

10.2 Inserting Fitting Size Die Sets Into the Tool Head (Over 1" MHSU 20-32-MB)

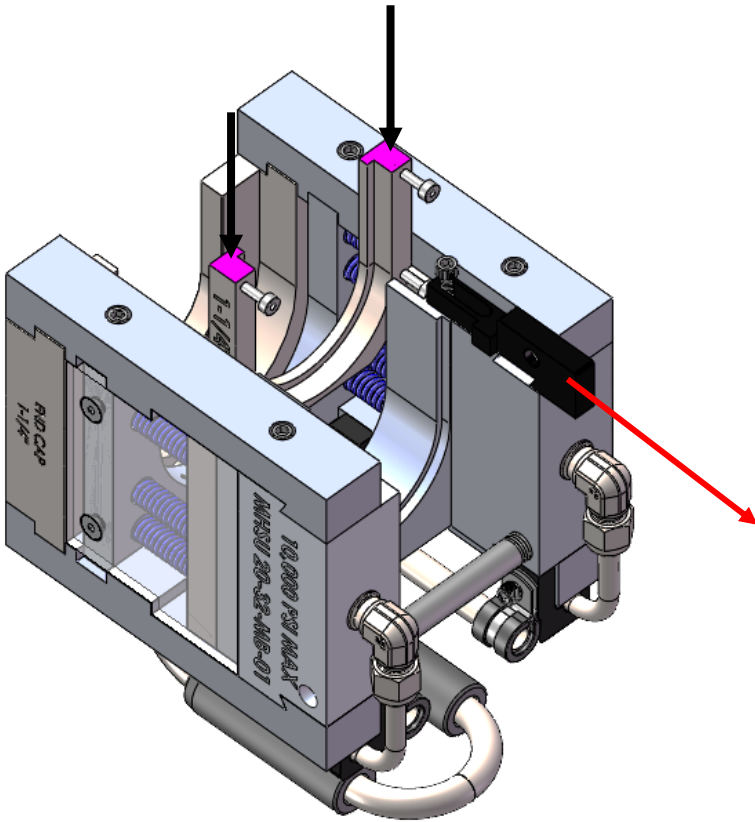
- Before inserting the tooling plates, make sure the power between the pump and the tool head is turned off
- For a 1-1/4" and 1-1/2" MEDLOK fitting, the proper End Cap, 1-1/4" or 1-1/2" Collar Plate and Drive Plate is required
- For a 2" MEDLOK fitting, only the 2" End Cap is required
 - Colors shown in the images are for emphasis only
- DO NOT USE the wrong sized plates for a fitting, the fitting will not install properly.



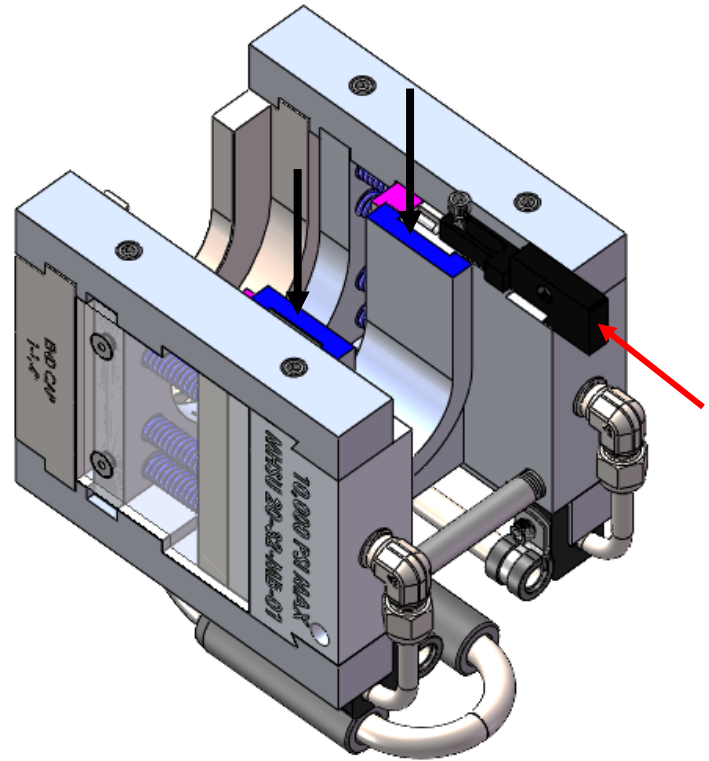
There are 3 components that determine the size of the fitting being installed: the End Cap, the Collar Plate and the Drive Plate.



Step 1: Push Latch Lever to retract locking pins and slide End Cap into position



Step 2: Slide Plate Retainer back and insert the screw head on the Collar Plate into slot



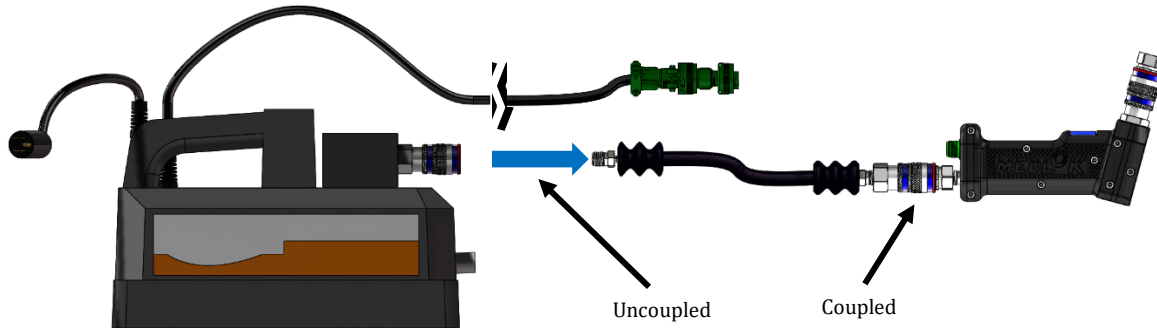
Step 3: Install Drive Plate into place and slide Adapter Plate Retainer back into the lock position

Final Check Before Swaging

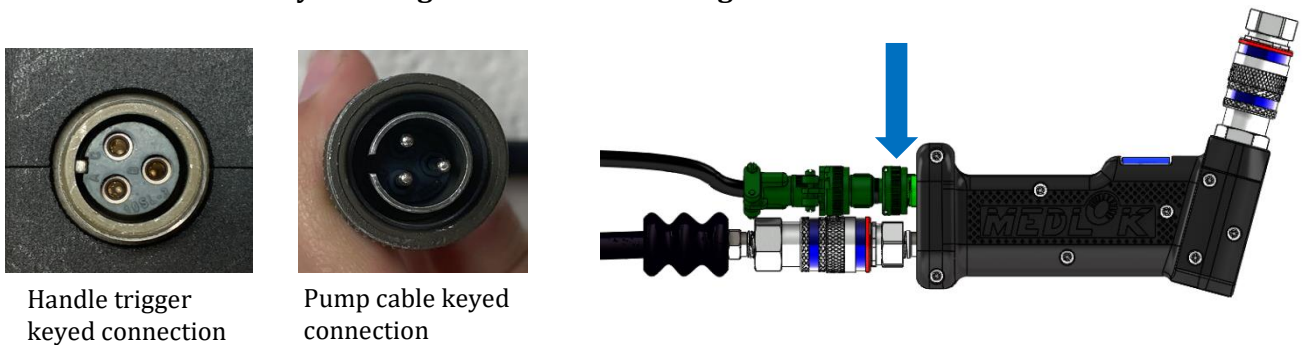
- Check that all the plates are pushed all the way in and seated
- All plate sizes match the size of the fitting being installed

10.3 Connecting MEDLOK Tooling

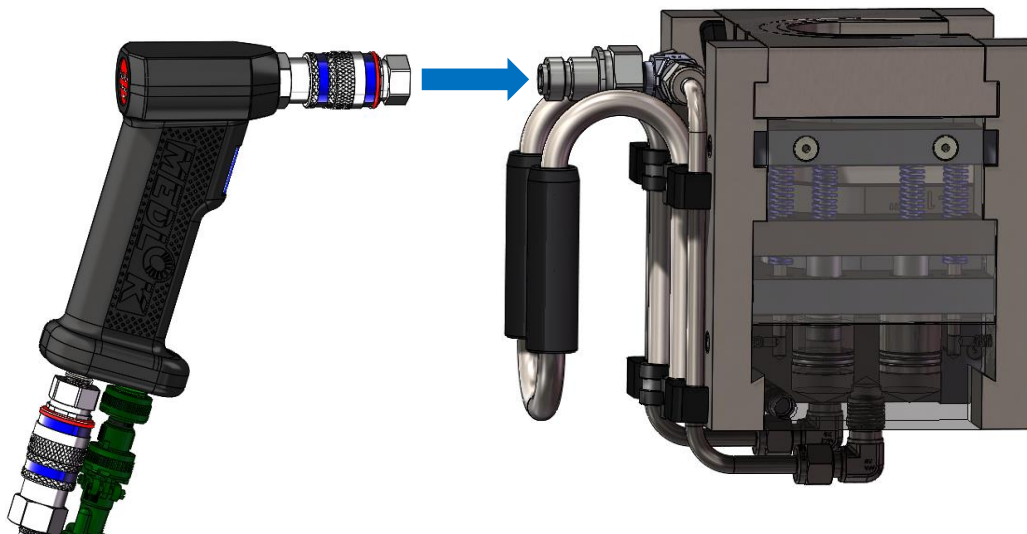
- CAUTION: Make sure that the pump is NOT connected to power before connecting the tooling
- Connect the MEDLOK trigger handle and the hydraulic pump together with the hydraulic hose quick connect fittings
 - Make sure the quick connect fittings are locked in place



- Connect the 110VAC electric cable between the pump and the handle trigger with the Amphenol Connector
 - **Make sure the keys are aligned before connecting**



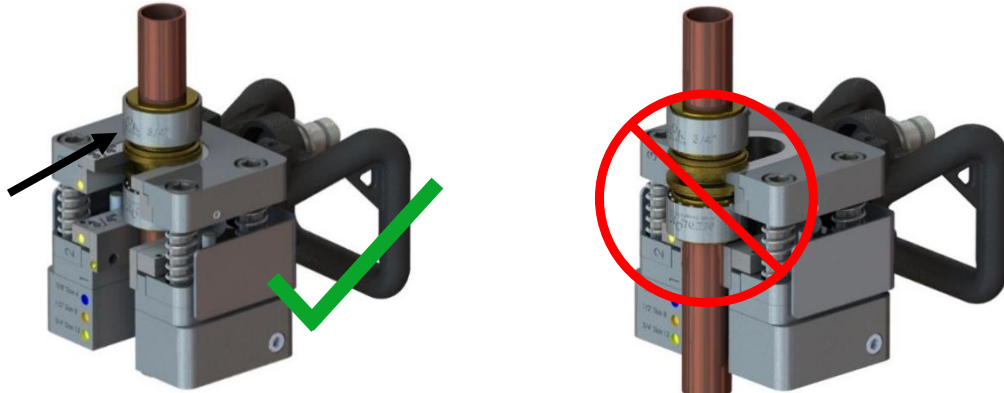
- Connect the tool head to the trigger using the quick connect fitting



- Apply power to the tool and cycle the tool to make sure all components work properly
- CAUTION: keep fingers out of tool head to prevent injury

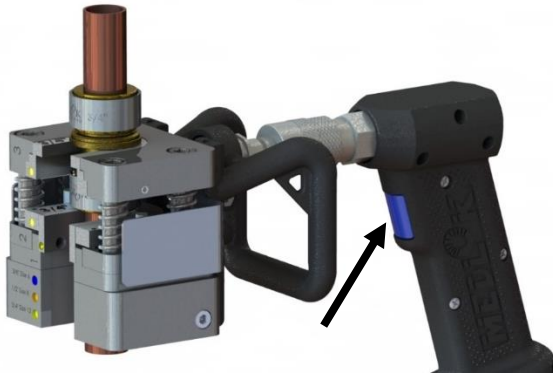
10.4 Swaging MEDLOK Fittings using MEDLOK Tooling

Step 1: Push the MEDLOK fitting onto the body plate until it is all the way in and seated



NOTE: Both 1" and 2" tool heads follow the same instructions

Step 2: Actuate pump through the blue trigger button. Hold button until a "snap" or "click" is heard to confirm that installation is complete (takes about 2 seconds)



NOTE: If the fitting is NOT completely inside the tool head, DO NOT SWAGE. The fitting could install crooked and cause leakage

10.5 Final Inspection After Installation

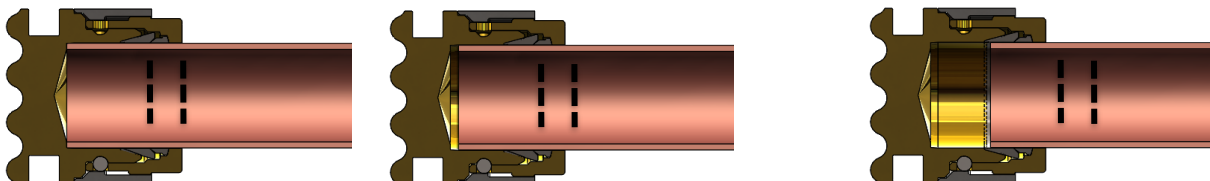
The fitting is properly installed when:

1. Only one mark is visible
2. Collar is touching body all the way around

If two marks are visible, the fitting needs to be cut out. The tube was likely not inserted to the proper depth and may not be past the swage rings

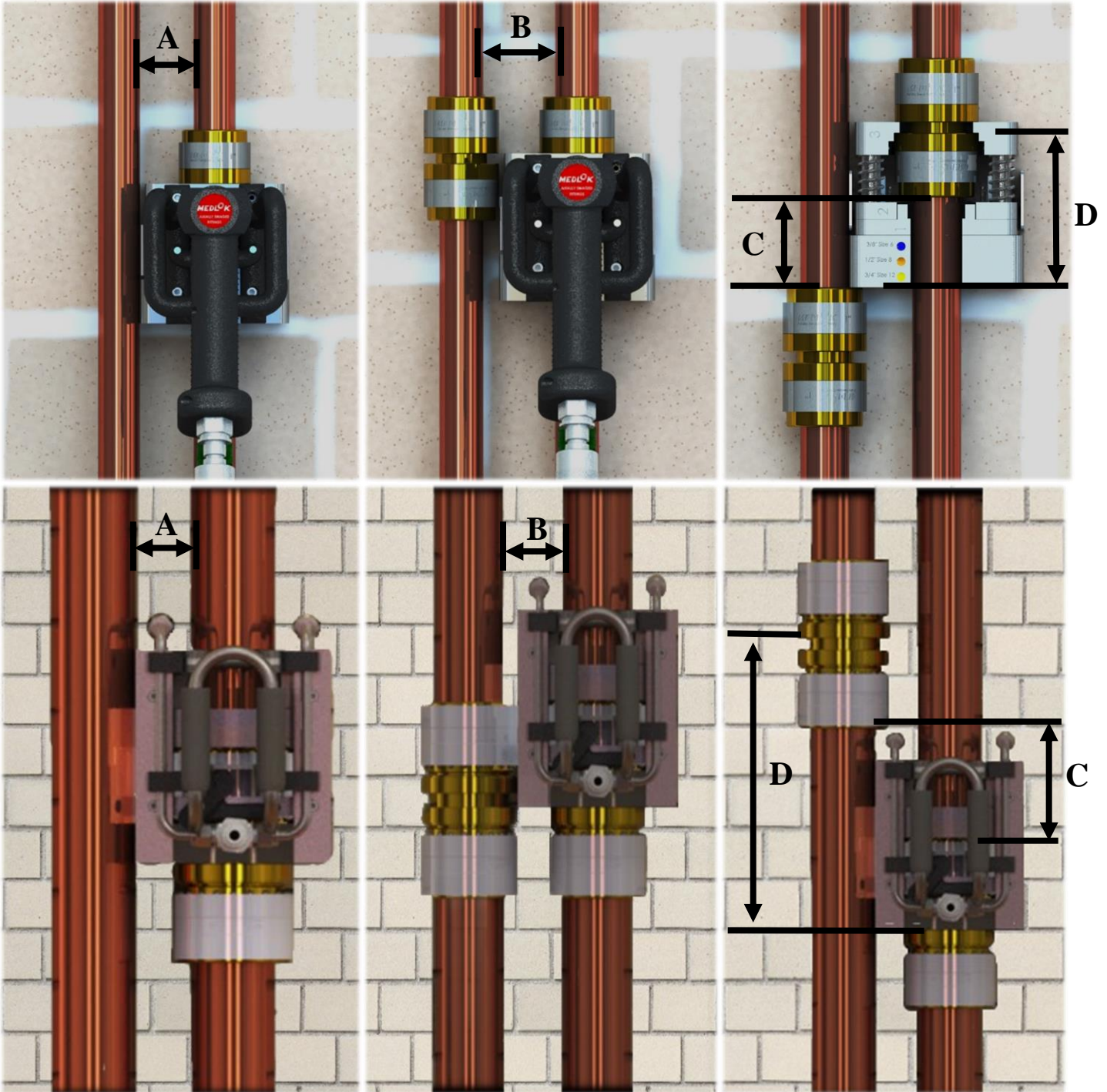


Note: The space between the two lines provides an acceptable tolerance for swaging



11.0 MEDLOK TOOLING AND INSTALLATION DIMENSIONS

- Staggering couplings and tees allow for closer installation



Installation Dimensions

Fitting Size	Tube OD	A Minimum spacing between tube OD and tube OD	B Minimum spacing between tube OD and tube OD (when fittings adjacent to each other)	C Minimum spacing between bottom of fitting to top of fitting (when fittings staggered)	D Minimum spacing between middle of fitting to top of fitting (when fittings staggered)
Size 6 (3/8")	.5" (1/2")	1-3/4"	2-1/16"	2-1/2"	3-1/2"
Size 8 (1/2")	.625" (5/8")	1-11/16"	2"	2-1/2"	3-1/2"
Size 12 (3/4")	.875" (7/8")	1-9/16"	2"	2-1/2"	3-1/2"
Size 16 (1")	1.125"(1-1/8")	1-7/16"	2"	2-1/2"	5-1/4"
Size 20 (1-1/4")	1.375"(1-3/8")	1-3/4"	2-1/4"	3-1/2"	6-1/2"
Size 24 (1-1/2")	1.625"(1-5/8")	1-5/8"	2-1/16"	3-1/2"	6-1/2"
Size 32 (2")	2.125"(2-1/8")	1-3/8"	2"	3-1/2"	6-1/2"

Clearance Formulas

$$A = \frac{1}{2}(\text{Tool Head Width} - \text{Tube OD})$$

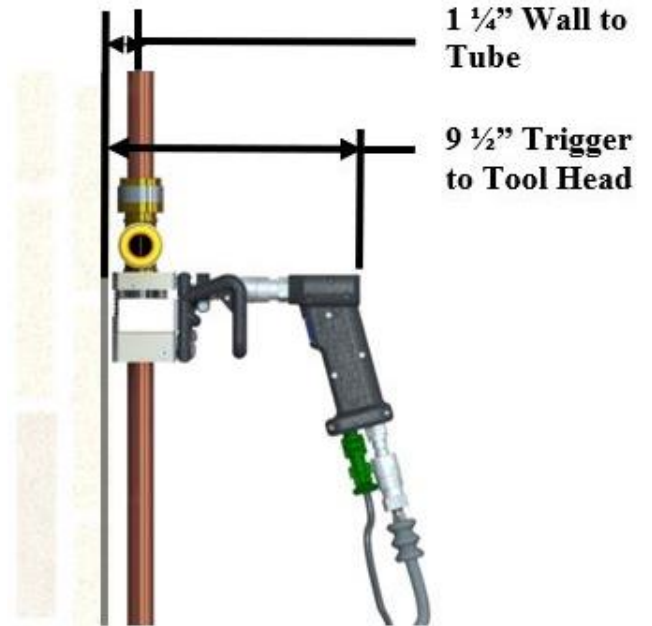
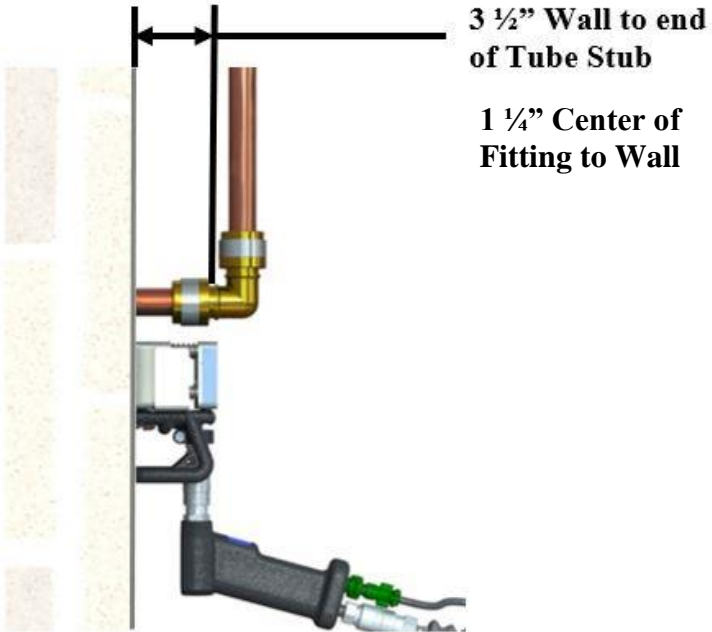
$$B = \frac{1}{2}(\text{Tool Head Width} + \text{Fitting OD}) - \text{Tube OD}$$

*Listed clearances are for adjacent parts of the same size

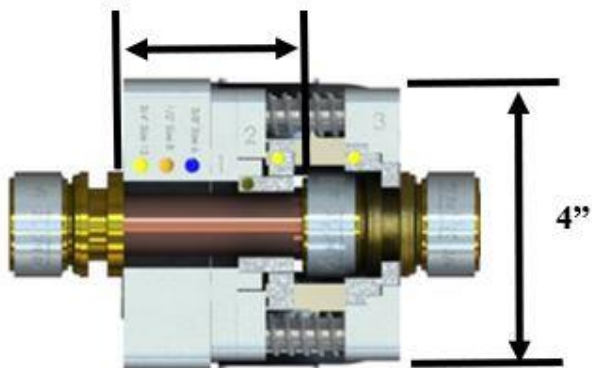
Additional Dimensions

Size 6-16 Tool Head Width	4"
Size 20-32 Tool Head Width	4-7/8"
Size 6 Fitting OD	1-1/16"
Size 8 Fitting OD	1-3/16"
Size 12 Fitting OD	1-1/2"
Size 16 Fitting OD	1-15/16"
Size 20 Fitting OD	2-1/4"
Size 24 Fitting OD	2-1/2"
Size 32 Fitting OD	3"

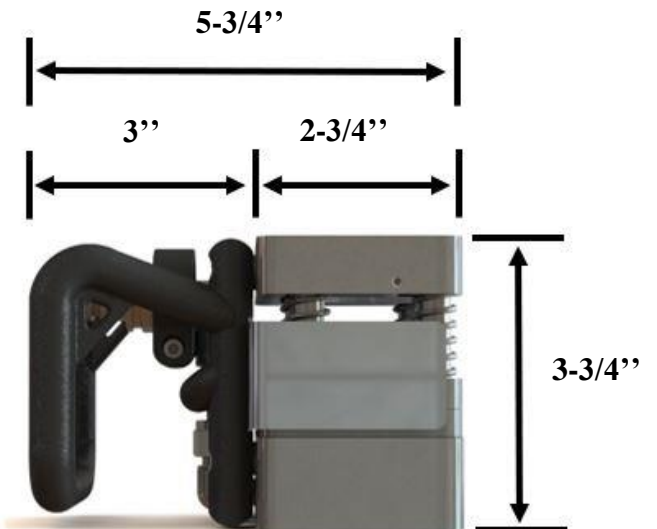
1" and Under Tool Head Clearance Requirements



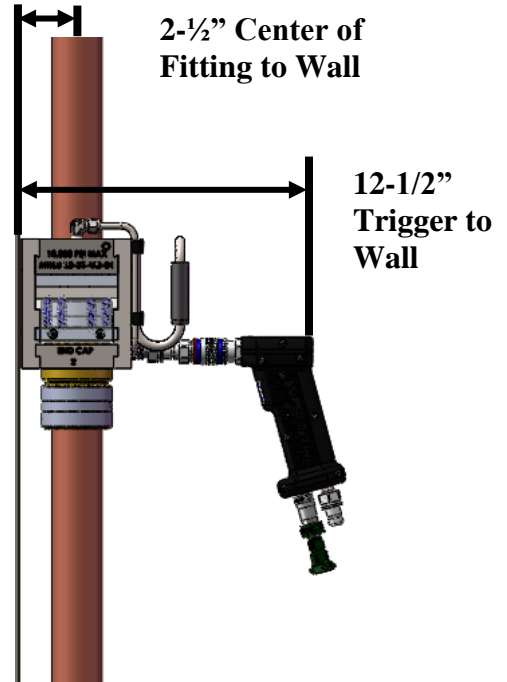
2-1/2" (For 3/4" and 1")



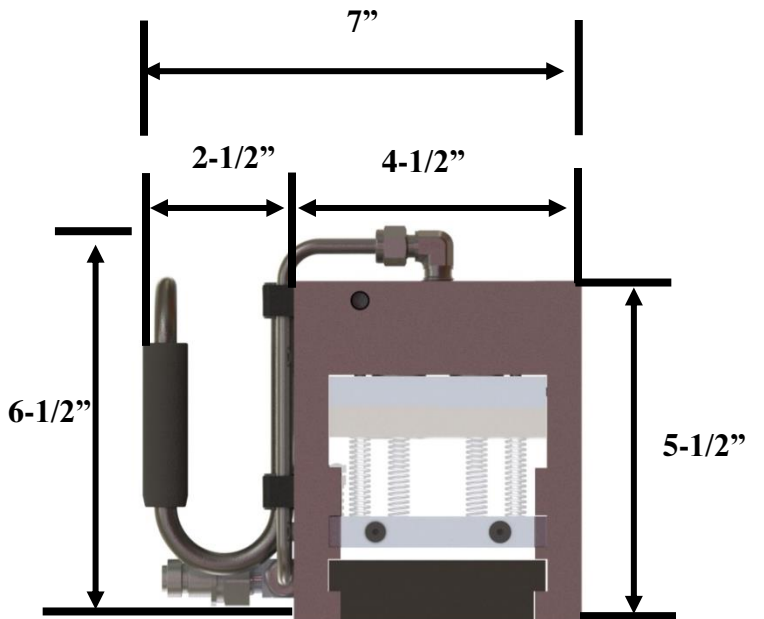
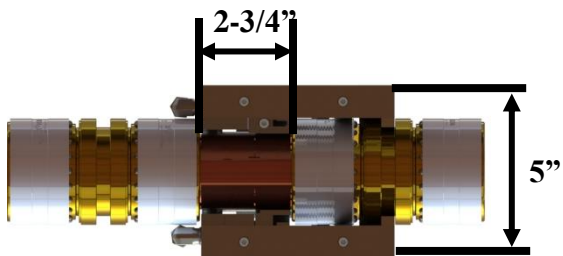
Tool Head Dimensions



Over 1" Tool Head Clearance Requirements



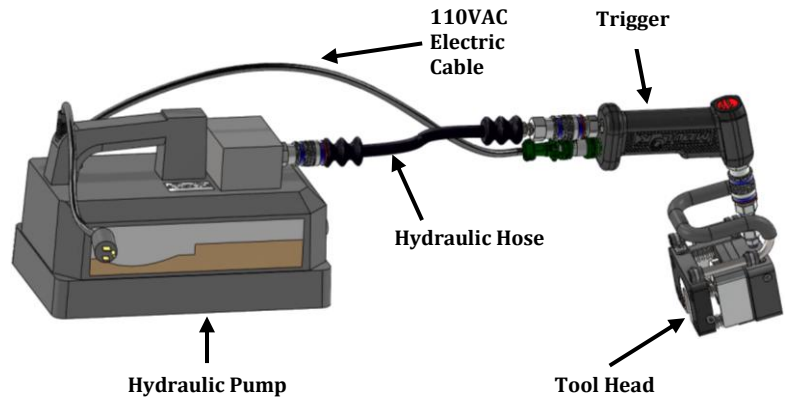
Tool Head Dimensions



12.0 MEDLOK Installation Tool Kit Benefits

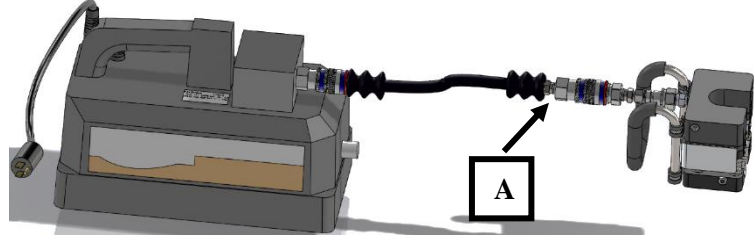
MEDLOK Installation Tool Kit

- Compact, lightweight, agile installation tooling
- One-person installation, pistol grip trigger actuation
- Tool head with 360 degree rotation
- Install fittings in extremely tight areas
- Parallel Swage, ensures tubing is installed straight inline
- Installs in seconds with “click” or “snap” sound

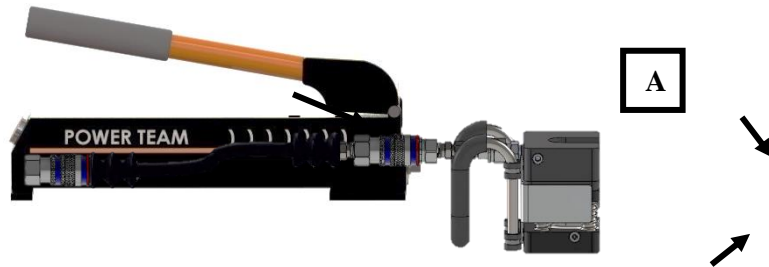


- MEDLOK Installation Tooling can be connected in various configurations to accommodate installations in small spaces, or where there is no power supply.

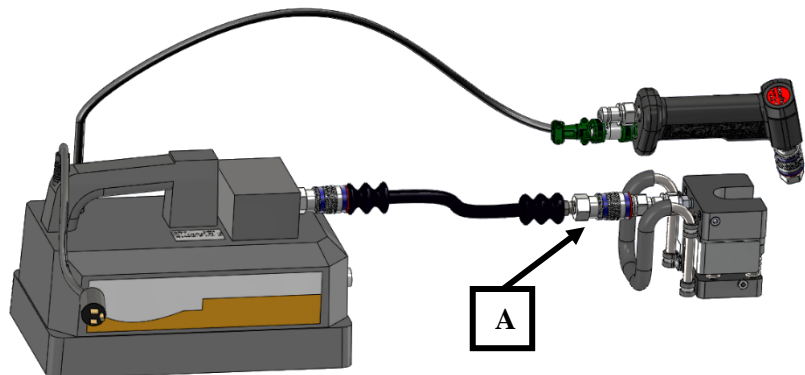
1. Electric pump with direct connection to tool head (without trigger using pump push button)



2. Manual hand pump (no power required) with direct connection to tool head

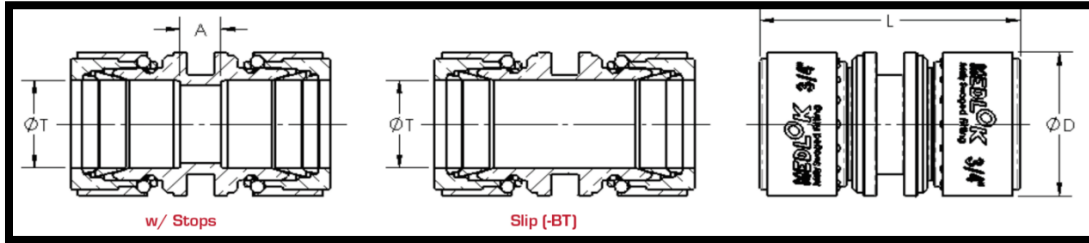


3. Electric pump with direct connection to tool head (with trigger)

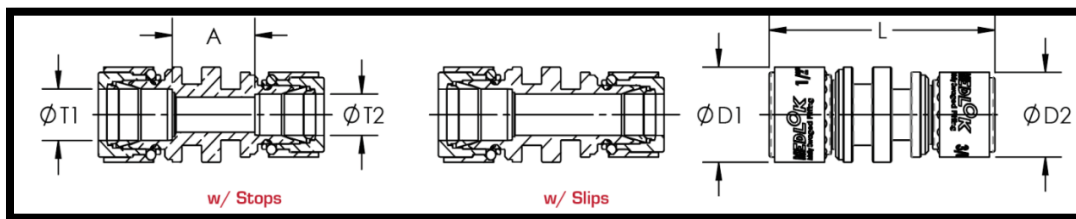


Appendix A: MEDLOK Fitting and Valve Take-out Dimensions

Using the take-out lengths found at the end of this document, mark the take-out length indicated based on the size and type of the fitting

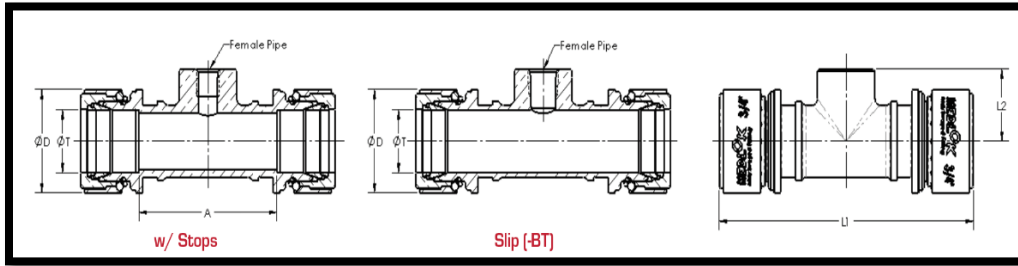


Couplings with Stop of Slip Body Styles		
MEDLOK Part Number	Size (ØT)	Take-out A (in)
B-T06-ASCPL	3/8"	5/8"
B-T08-ASCPL	1/2"	1/2"
B-T12-ASCPL	3/4"	3/8"
B-T16-ASCPL	1"	13/16"
B-T20-ASCPL	1-1/4"	7/8"
B-T24-ASCPL	1-1/2"	11/16"
B-T32-ASCPL	2"	1/8"
B-T06-ASCPL-BT	3/8"	5/8"
B-T08-ASCPL-BT	1/2"	1/2"
B-T12-ASCPL-BT	3/4"	3/8"
B-T16-ASCPL-BT	1"	13/16"
B-T20-ASCPL-BT	1-1/4"	7/8"
B-T24-ASCPL-BT	1-1/2"	11/16"
B-T32-ASCPL-BT	2"	1/8"

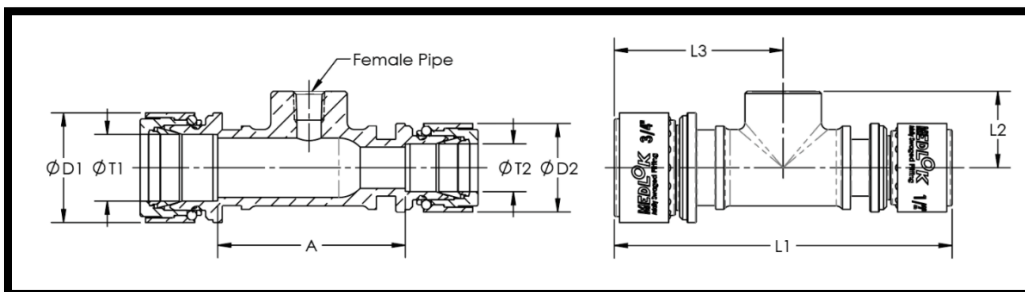


Reducing Couplings with Stop of Slip Body Styles		
MEDLOK Part Number	Size (ØT)	Take-out A (in)
B-T08-ASREDCPL-T06	1/2" to 3/8"	1"
B-T12-ASREDCPL-T06	3/4" to 3/8"	1"
B-T12-ASREDCPL-T08	3/4" to 1/2"	15/16"
B-T16-ASREDCPL-T08	1" to 1/2"	15/16"
B-T16-ASREDCPL-T12	1" to 3/4"	1-1/8"
B-T20-ASREDCPL-T16	1-1/4" to 1"	7/8"
B-T24-ASREDCPL-T16	1-1/2" to 1"	13/16"
B-T24-ASREDCPL-T20	1-1/2" to 1-1/4"	13/16"
B-T32-ASREDCPL-T16	2" to 1"	15/16"
B-T32-ASREDCPL-T20	2" to 1-1/4"	7/8"
B-T32-ASREDCPL-T24	2" to 1-1/2"	3/4"
B-T08-ASREDCPL-T06-BT	1/2" to 3/8"	1"
B-T12-ASREDCPL-T06-BT	3/4" to 3/8"	1"
B-T12-ASREDCPL-T08-BT	3/4" to 1/2"	15/16"
B-T16-ASREDCPL-T08-BT	1" to 1/2"	15/16"

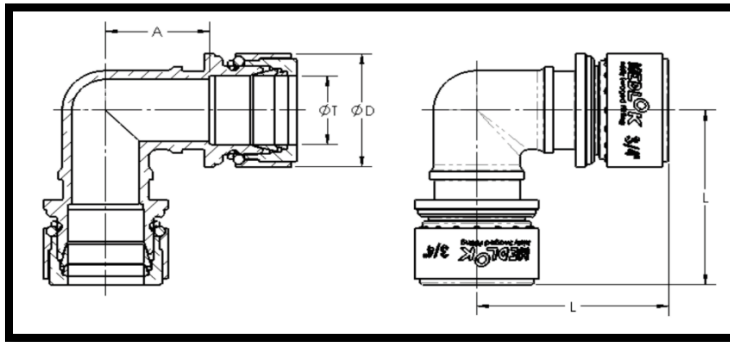
B-T16-ASREDCPL-T12-BT	1" to 3/4"	1-1/8"
B-T20-ASREDCPL-T16-BT	1-1/4" to 1"	7/8"
B-T24-ASREDCPL-T16-BT	1-1/2" to 1"	13/16"
B-T24-ASREDCPL-T20-BT	1-1/2" to 1-1/4"	13/16"
B-T32-ASREDCPL-T16-BT	2" to 1"	15/16"
B-T32-ASREDCPL-T20-BT	2" to 1-1/4"	7/8"
B-T32-ASREDCPL-T24-BT	2" to 1-1/2"	3/8"



Gauge Port Couplings with Stop or Slip Body Styles		
MEDLOK Part Number	Size (ØT)	Take-out A (in)
B-T08-ASCPL-2FPT	1/2"	2-1/4"
B-T08-ASCPL-4FPT	1/2"	2-1/4"
B-T12-ASCPL-2FPT	3/4"	2-7/16"
B-T12-ASCPL-4FPT	3/4"	2-7/16"
B-T16-ASCPL-2FPT	1"	3-5/16"
B-T16-ASCPL-4FPT	1"	3-5/16"
B-T20-ASCPL-4FPT	1-1/4"	2-1/16"
B-T24-ASCPL-4FPT	1-1/2"	1-7/8"
B-T32-ASCPL-4FPT	2"	1-5/16"
B-T08-ASCPL-2FPT-BT	1/2"	2-1/4"
B-T08-ASCPL-4FPT-BT	1/2"	2-1/4"
B-T12-ASCPL-2FPT-BT	3/4"	2-7/16"
B-T12-ASCPL-4FPT-BT	3/4"	2-7/16"
B-T16-ASCPL-2FPT-BT	1"	3-5/16"
B-T16-ASCPL-4FPT-BT	1"	3-5/16"
B-T20-ASCPL-4FPT-BT	1-1/4"	2-1/16"
B-T24-ASCPL-4FPT-BT	1-1/2"	1-7/8"
B-T32-ASCPL-4FPT-BT	2"	1-5/16"

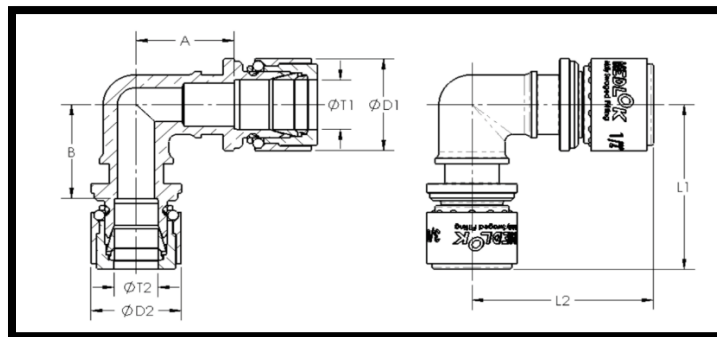


Reducing Gauge Port Couplings with Stop or Slip Body Styles		
MEDLOK Part Number	Size (ØT)	Take-out A (in)
B-T12-ASREDCPL-T08-2FPT	3/4" to 1/2"	2-1/2"
B-T12-ASREDCPL-T08-4FPT	3/4" to 1/2"	2-1/2"
B-T16-ASREDCPL-T12-2FPT	1" to 3/4"	3-7/16"
B-T16-ASREDCPL-T12-4FPT	1" to 3/4"	3-7/16"



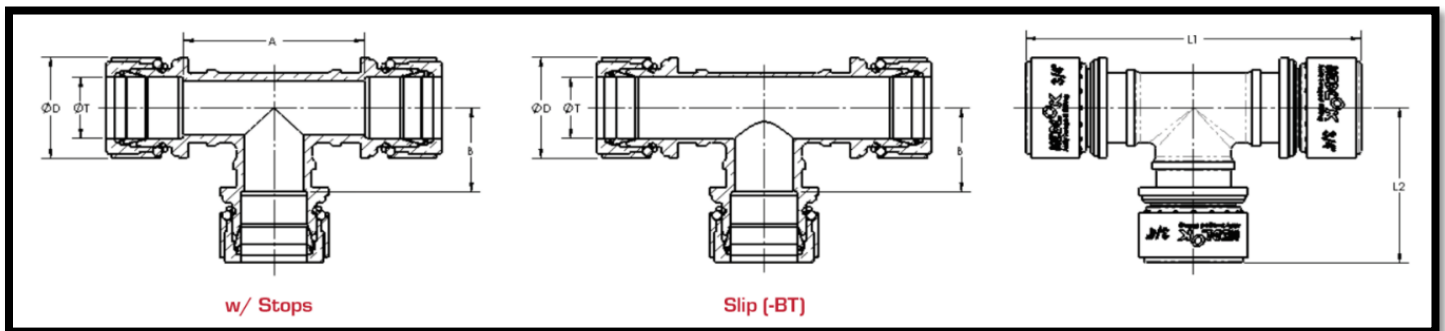
Elbows with Stop Body Style

MEDLOK Part Number	Size (ØT)	Take-out A (in)
B-T08-ASEL90	1/2"	1-1/8"
B-T12-ASEL90	3/4"	1-3/16"
B-T16-ASEL90	1"	1-11/16"
B-T20-ASEL90	1-1/4"	1-15/16"
B-T24-ASEL90	1-1/2"	1-15/16"
B-T32-ASEL90	2"	1-15/16"



Reducing Elbows with Stop Body Style

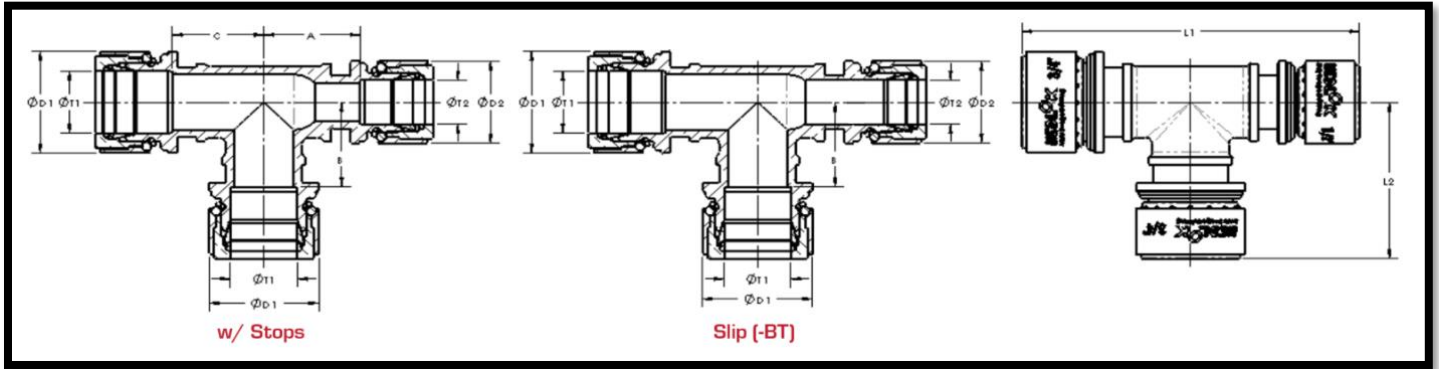
MEDLOK Part Number	Size (ØT)	Take-out A (in)	Take-out B (in)
B-T08-ASREDEL90-T06	1/2" to 3/8"	1-1/8"	1-3/16"
B-T12-ASREDEL90-T08	3/4" to 1/2"	1-3/16"	1-1/4"
B-T16-ASREDEL90-T8	1" to 1/2"	1-11/16"	1-13/16"
B-T16-ASREDEL90-T12	1" to 3/4"	1-11/16"	1-3/4"



Tees with Stop or Slip Body Styles

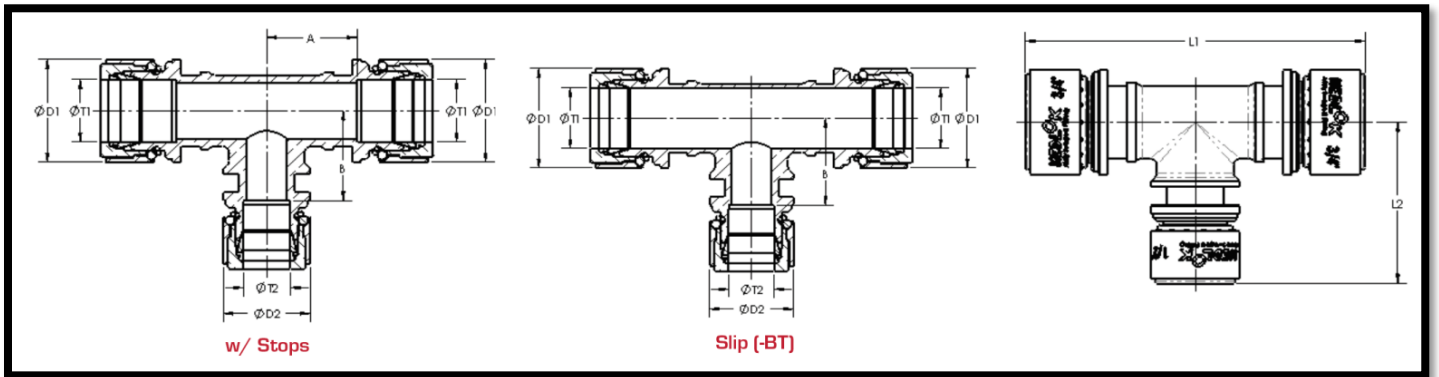
MEDLOK Part Number	Size (ØT)	Take-out A (in)	Take-out B (in)
B-T08-ASTEE	1/2"	2-1/4"	1-1/8"
B-T12-ASTEE	3/4"	2-7/16"	1-1/4"
B-T16-ASTEE	1"	3-5/16"	1-11/16"

B-T20-ASTEES	1-1/4"	3-7/8"	1-15/16"
B-T24-ASTEES	1-1/2"	3-7/8"	1-15/16"
B-T32-ASTEES	2"	3-7/8"	1-15/16"
B-T08-ASTEES-BT	1/2"	2-1/4"	1-1/8"
B-T12-ASTEES-BT	3/4"	2-7/16"	1-1/4"
B-T16-ASTEES-BT	1"	3-5/16"	1-11/16"
B-T20-ASTEES-BT	1-1/4"	3-7/8"	1-15/16"
B-T24-ASTEES-BT	1-1/2"	3-7/8"	1-15/16"
B-T32-ASTEES-BT	2"	3-7/8"	1-15/16"



Reducing Run Tees with Stop or Slip Body Styles

MEDLOK Part Number	Size (ØT)	Take-out A (in)	Take-out C (in)	Take-out B (in)
B-T08-ASREDTEE-T06-T08	1/2" to 3/8" to 1/2"	1-3/16"	1-1/8"	1-1/8"
B-T12-ASREDTEE-T08-T12	3/4" to 1/2" to 3/4"	1-1/4"	1-3/16"	1-3/16"
B-T16-ASREDTEE-T12-T16	1" to 3/4" to 1"	1-3/4"	1-11/16"	1-11/16"
B-T08-ASREDTEE-T06-T08-BT	1/2" to 3/8" to 1/2"	1-3/16"	1-1/8"	1-1/8"
B-T12-ASREDTEE-T08-T12-BT	3/4" to 1/2" to 3/4"	1-1/4"	1-3/16"	1-3/16"
B-T16-ASREDTEE-T12-T16-BT	1" to 3/4" to 1"	1-3/4"	1-11/16"	1-11/16"



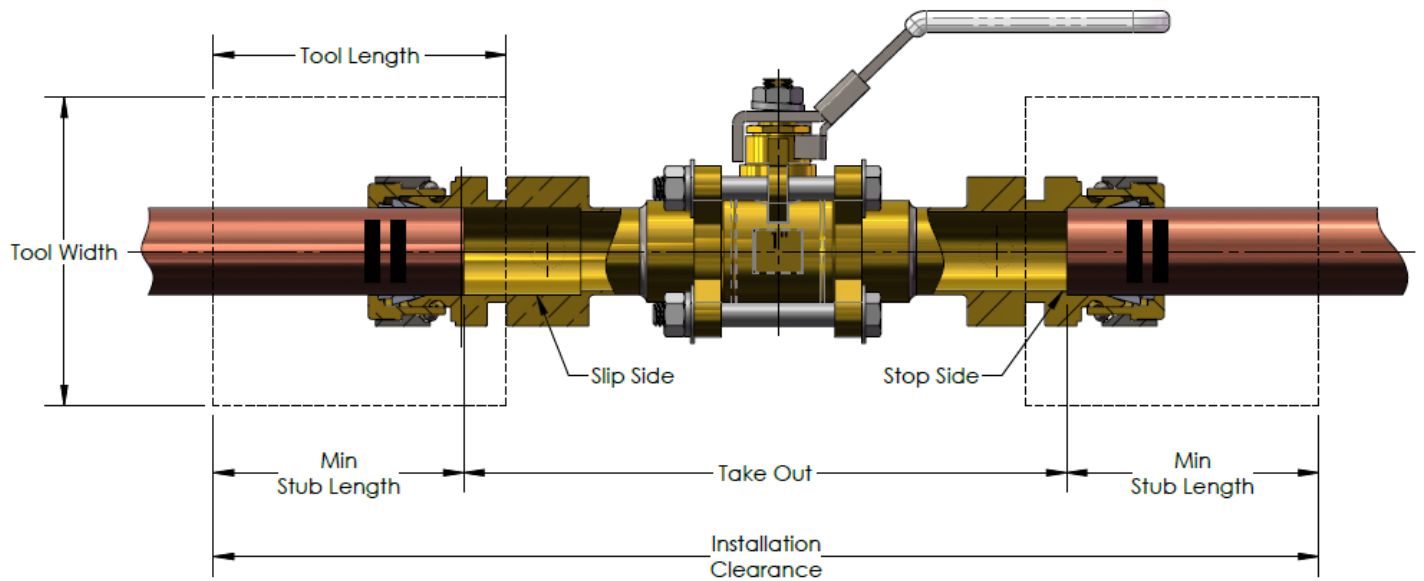
Reducing Branch Tees with Stop or Slip Body Styles

MEDLOK Part Number	Size (ØT)	Take-out A (in)	Take-out B (in)
B-T08-ASREDTEE-T08-T06	1/2" to 1/2" to 3/8"	1-1/8"	1-3/16"
B-T12-ASREDTEE-T12-T08	3/4" to 3/4" to 1/2"	1-3/16"	1-1/4"
B-T16-ASREDTEE-T16-T12	1" to 1" to 3/4"	1-11/16"	1-3/4"
B-T16-ASREDTEE-T16-T08	1" to 1" to 1/2"	1-11/16"	1-3/4"
B-T08-ASREDTEE-T08-T06-BT	1/2" to 1/2" to 3/8"	1-1/8"	1-3/16"
B-T12-ASREDTEE-T12-T08-BT	3/4" to 3/4" to 1/2"	1-3/16"	1-1/4"
B-T16-ASREDTEE-T16-T12-BT	1" to 1" to 3/4"	1-11/16"	1-3/4"
B-T16-ASREDTEE-T16-T08-BT	1" to 1" to 1/2"	1-11/16"	1-3/4"



Medlok Ball Valve Take-Out & Clearance Dimensions

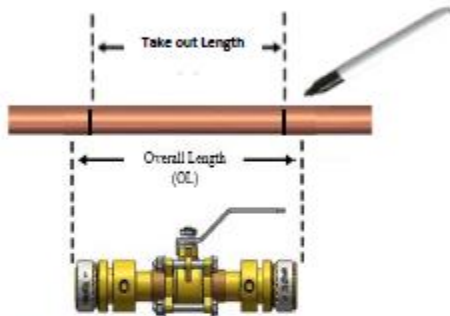
Nominal Size	Take Out	Installation Clearance	Min Stub Length	Tool Length	Tool Width
1/2"	6"	12-3/4"	3-1/2"	3-13/16"	4"
3/4"	6-1/4"	13-1/4"	3-1/2"	3-13/16"	4"
1"	7-7/8"	14-3/8"	3-5/16"	3-13/16"	4"
1-1/4"	9"	20-1/2"	5-3/4"	5-1/2"	4-5/8"
1-1/2"	9-1/2"	21-1/4"	5-7/8"	5-1/2"	4-5/8"
2"	11-1/8"	23-1/4"	6-1/8"	5-1/2"	4-5/8"



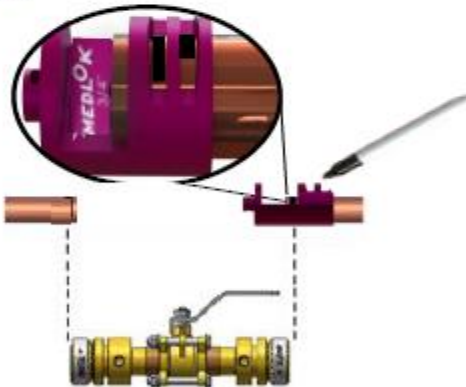
MEDLOK VALVE INSTALLATION INSTRUCTIONS

STEP 1: Inspect the tubing where the valve is going to be installed prior to cutting. Tubing shall be inspected per the MEDLOK Installation Procedure and meet NFPA99 tubing specifications. Assure the tubing is free of deep scratches, stamped markings, dents, and other imperfections. Assure there is enough room for the tool head (see installation clearance and tool head dimensions on page 2).

STEP 2: Based on the tube size, use the takeout lengths (backside) to mark the tubing where the valve is to be installed.



STEP 4: Use the depth gauge to mark the tube in both slots on both sides of the valve cut in area.



STEP 6: Assure the valve is within the black alignment marks on both ends and swage each end using the MEDLOK tool. Inspect per STEP 7.

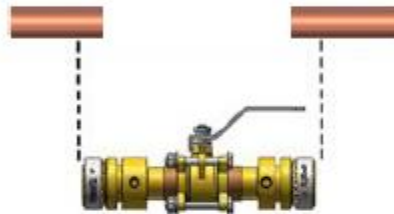


STEP 8: Due to the weight of the valves, hangers shall be used at a minimum of 3 feet before and after the valve upon installation.

pg. 1

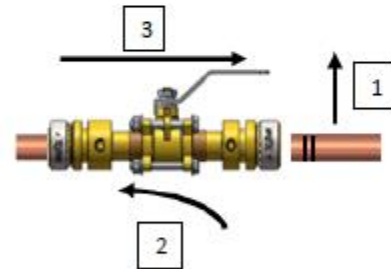
STEP 3: Cut the tube section as marked in step 1.

NOTE: Re-measure the takeout length after the first cut to assure the tubes have not moved apart. If they moved, adjust spacing accordingly.

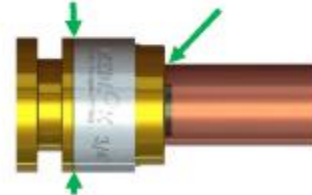


STEP 5:

- ① Spring the tubes apart
- ② slide the slip end of the valve onto the tube
- ③ Realign the tubing and slide the valve back until it stops



STEP 7:



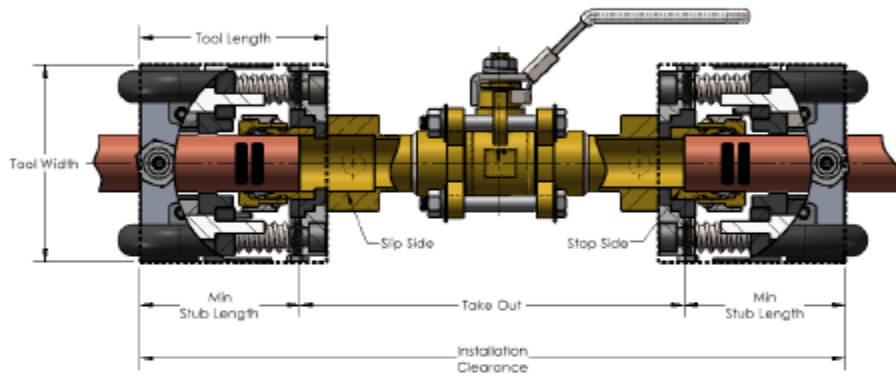
INSPECTION AFTER INSTALLATION

- Only 1st mark should be visible
- Collar touching body all the way around



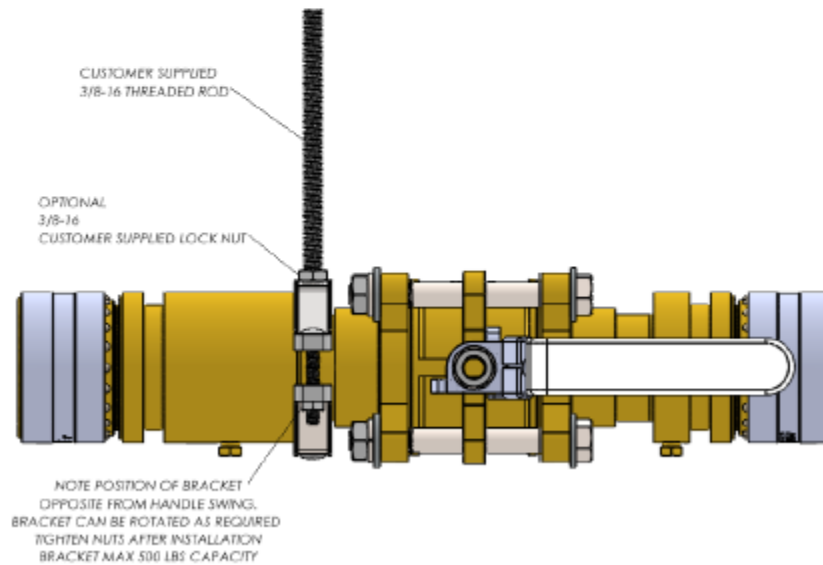
**Medlok Ball Valve
Take-Out & Clearance
Dimensions**

Nominal Size	Take Out	Installation Clearance	Min Stub Length	Tool Length	Tool Width
1/2"	6"	12-3/4"	3-1/2"	3-13/16"	4"
3/4"	6-1/4"	13-1/4"	3-1/2"	3-13/16"	4"
1"	7-7/8"	14-3/8"	3-5/16"	3-13/16"	4"
1-1/4"	9"	20-1/2"	5-3/4"	5-1/2"	4-5/8"
1-1/2"	9-1/2"	21-1/4"	5-7/8"	5-1/2"	4-5/8"
2"	11-1/8"	23-1/4"	6-1/8"	5-1/2"	4-5/8"



MEDLOK VALVE MOUNTING BRACKET INSTRUCTIONS

BRACKET USE IS IN ADDITION TO PIPE SUPPORT DEFINED IN NFPA99 (2021) 5.1.10.11.4
MEDLOK RECOMMENDS MOUNTING BRACKET FOR VALVE SIZES 1-1/4" AND LARGER.



Medlok Installation & Dimensional Information

