

# MUELLER<sup>®</sup> GAS

## NO-BLO<sup>®</sup> Valve Changers

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### **⚠ WARNING:**

1. Read and follow instructions carefully. Proper training and periodic review regarding the use of this equipment is essential to prevent possible serious injury and/or property damage. The instructions contained herein were developed for using this equipment on fittings of Mueller manufacturer only, and may not be applicable for any other use.
2. Do not exceed the pressure ratings of any components or equipment. Exceeding the rated pressure may result in serious injury and/or property damage.
3. Safety goggles and other appropriate protective gear should be used. Failure to do so could result in serious injury.
4. Pressure test, check for and repair leaks in all fittings and components each time one is installed or any joint or connection is broken. Failure to find and repair a leak from any source in the fittings, by-pass lines or equipment could result in an explosion and subsequent serious injury and/or property damage.
5. MUELLER<sup>®</sup> Drilling Machines and Equipment have been carefully designed and engineered to work together as a unit. The use of equipment manufactured by someone other than Mueller Co. may cause excessive wear or a malfunction of the MUELLER machines.



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All warranties, expressed or implied, for Mueller Drilling Machines are rendered null and void if the machines are used with shell cutters or equipment manufactured by someone other than Mueller Co.

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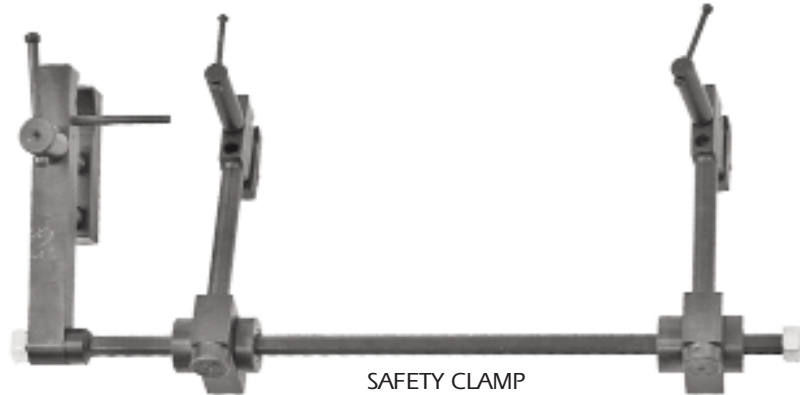


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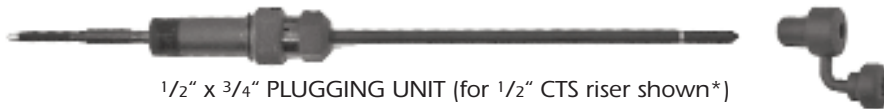
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# NO-BLO® VALVE CHANGERS

Equipment and Parts

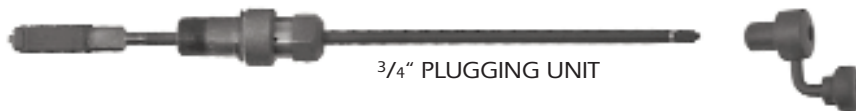


SAFETY CLAMP



1/2" x 3/4" PLUGGING UNIT (for 1/2" CTS riser shown\*)

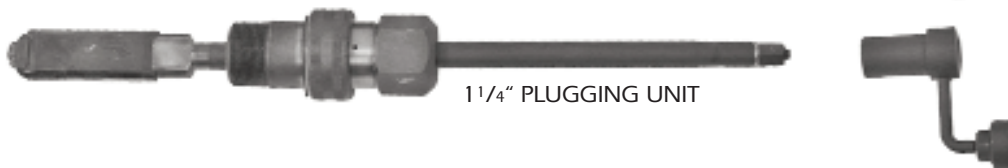
\*1/2" x 1" for 1/2" CTS riser and 1/2" x 3/4" for 1/2" schedule 40 steel pipe have similar appearance



3/4" PLUGGING UNIT



1" PLUGGING UNIT



1 1/4" PLUGGING UNIT

## UNITS FOR 3/4", 1" OR 1 1/4" VALVES.

H-17010 Valve Changer for schedule 40 steel pipe, with Safety Clamp and 3/4", 1" and 1 1/4" Plugging Units.

H-17013 Valve Changer for schedule 80 steel pipe, with Safety Clamp and 3/4", 1" and 1 1/4" Plugging Units.

H-17016 Plugging Unit for 1/2" CTS PE risers, in 1/2" x 3/4", 1/2" x 1" sizes (Safety Clamp purchased separately) – second number in size refers to the size of valve.

H-17017 Plugging Unit for 1/2" schedule 40 steel pipe, in 1/2" x 3/4" sizes (Safety Clamp purchased separately) – second number in size refers to the size of valve.

## MAXIMUM WORKING PRESSURE: 60 psig

The NO-BLO Valve Changers on this page consist of a Safety Clamp and three Plugging Units, except the H-17016 and H-17017, which are Plugging Units alone that must be used with a Safety Clamp, provided separately.

Plugging Unit Size	Valve Size	Min. Port Width	Min. Port Height
1/2" x 3/4"	3/4"	13/32"	23/32"
1/2" x 1"	1"	13/32"	23/32"
3/4"	3/4"	13/32"	23/32"
1"	1"	17/32"	31/32"
1 1/4"	1 1/4"	11/16"	1 9/32"

# NO-BLO® VALVE CHANGERS

Equipment and Tools



SAFETY CLAMP



1 1/2" PLUGGING UNIT



2" PLUGGING UNIT

## UNITS FOR 1 1/2" OR 2" VALVES.

H-17012 Valve Changer for schedule 40 steel pipe, with Safety Clamp and 1 1/2" and 2" Plugging Units.

H-17014 Valve Changer for schedule 40 steel pipe, with Safety Clamp and 1 1/2" and 2" Plugging Units.

MAXIMUM WORKING PRESSURE: 60 psig

The NO-BLO Valve Changers on this page consist of a Safety Clamp and two Plugging Units.

Plugging Unit Size	Valve Size	Min. Port Width	Min. Port Height
1 1/2"	1 1/2"	25/32"	1 19/32"
2"	2"	1 5/32"	2"

## WHEN ORDERING EXTRA SAFETY CLAMPS OR PLUGGING UNITS USE THE PART NUMBERS IN THE TABLE BELOW

Plugging Unit		Safety Clamp	Plugging Unit Sizes						
Catalog Number	Model No.		1/2" x 3/4"	1/2" x 1"	3/4"	1"	1 1/4"	1 1/2"	2"
H-17010	2	682597	—	—	83962	83963	83964	—	—
H-17012	1	83792	—	—	—	—	—	83805	83928*
H-17013	2	682597	—	—	83962	580530	580531	—	—
H-17014	1	83792	—	—	—	—	—	580630	580750
H-17016	1	682597	681218	681298	—	—	—	—	—
H-17017	1	682597	1701010	—	—	—	—	—	—

\*2" Plugging Unit for H-17012 is Model No. 2.

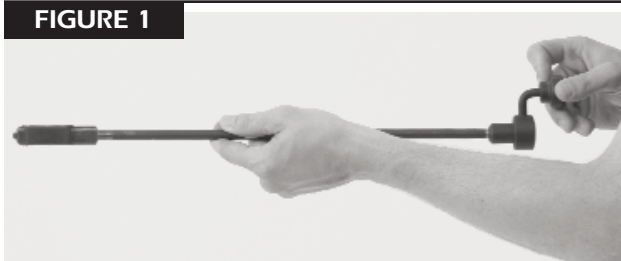
# NO-BLO® VALVE CHANGERS

## Instructions for Plugging Unit Assembly

### A – PREPARING PLUGGING UNIT FOR USE

1. Select proper plugging unit according to size of valve to be removed.
2. Close valve to be removed.
3. Purge gas from piping in an accepted manner, preferably from highest point in piping system.
4. Remove enough pipe and fittings from valve outlet to permit easy accessibility.
5. Examine Valve Changer Unit for proper function. Inspect Rubber Plug to be sure it is in good condition. Free up Rubber Plug by partially compressing and relaxing it several times. This is done by holding Shaft Tube in one hand and turning Shaft Crank alternately **clockwise & counter-clockwise**. FIGURE 1

FIGURE 1



6. Lubricate Rubber Plug by applying Mueller Rubber Stopper Lubricant (Part #580657).
7. Lubricate the bleeder "O" rings. This is done by applying Mueller Rubber Stopper Lubricant (Part #580657) to outside machined surface of Stuffing Box and sliding Bleeder Ring up and down while turning it slightly.
8. Lubricate Shaft Tube with Mueller Rubber Stopper Lubricant (Part #580657) and slide Stuffing Box up and down.
9. Measure width of valve port opening to be sure it is equal to or greater than minimum port width for appropriate Rubber Plugging Unit as listed on pages 3 and 4.

**NOTE:** Cutting of pipe will often form a burr inside pipe. While this burr might not interfere with threading and installation of original valve on the pipe, it can cause problems when replacing a valve with a Valve Changer. This burr can prevent the Rubber Plug on Plugging Unit from entering the pipe, also preventing removal of existing valve in a NO-BLO® Method.

Reamers and special machine adapter nipples are used under pressure with F-1™ Machine to ream inside of pipe and remove burrs before using the Valve Changer.

### B – ASSEMBLE PLUGGING UNIT TO METER VALVE. FIGURE 2

1. Fully retract Rubber Plug into Stuffing Box.
2. Thread Stuffing Box fully into outlet of valve to be removed.
3. Close Bleeder Valves by sliding the Bleeder Ring upward while turning it at same time.
4. Open valve fully, carefully lining up valve key with piping.
5. Turn Shaft Tube until small arrow on tapered portion of Shaft Tube is lined up with the valve key. This arrow locates the flat Rubber Plug is in proper alignment to pass through port opening of valve. (It is not necessary to locate arrow when using the H-17016 for PE risers.)

### C – ATTACH SAFETY CLAMP TO PIPE. FIGURE 3

1. Position Safety Clamp on pipe with its short locating pin just touching inlet of valve to be removed.
2. Tighten Pipe Clamp firmly using hand force only. Never use an extension on handle of Pipe Clamp vise.

FIGURE 2



FIGURE 3



# NO-BLO® VALVE CHANGERS

## Instructions for Plugging Unit Assembly

3. Adjust bottom Shaft Tube Clamp so that it is aligned with keyway of valve to be replaced.
4. Move top shaft tube clamp approximately 3" down from top nut on the safety clamp and fasten loosely. This will help to place the rubber plug into the riser.  
**NOTE:** It may be necessary to take a manual measurement for proper placement.
5. Applies to 1 1/2" and 2" Safety Clamps only: Adjust each knurled Shaft Clamp positioning sleeve so that Shaft Tube Clamp is approximately in the center of threaded portion of each sleeve.

### D – INSERT AND EXPAND RUBBER PLUG.

#### FIGURE 4

1. Place Shaft Crank on hexagon shaft nut on top of Plugging Unit.
2. Push Shaft Tube downward through the stuffing box until its tapered portion (with arrow) is just through the top Shaft Tube Clamp. This will move Rubber Plug downward through valve and into inlet pipe, below valve.
3. Hold Plugging Unit in this position and tighten top Shaft Tube Clamp vise firmly using hand force only. Never use an extension on handle of clamp vise. This vise should seat on smaller diameter portion of Shaft tube, with front edge of vise just above the tapered portion of Shaft Tube. **FIGURE 5**
4. Remove Shaft Crank. Count and note number of exposed threads on shaft end. This number will be used later when the plug is relaxed. Replace Shaft Crank.
5. Expand Rubber Plug by turning Shaft Crank **clockwise** until end of threaded shaft is flush with end of Shaft Crank Sleeve.  
**NOTE:** The H-17016 for PE risers will not require more than a few turns to create a stop-off, do not over expand.
6. Open Bleeder Valve by sliding Bleeder Ring downward while turning it slightly. Tightness of the shut-off will also be indicated at this point by absence of continued gas flow.
7. If flow continues from Bleeder Valve a shut-off has not been effected.
  - a. Close Bleeder Valve by sliding Bleeder Ring upward while turning it slightly.
  - b. Rotate Shaft Crank slowly one additional full turn **clockwise**.

- c. Again test for tightness using Bleeder Valve.
- d. If shut-off has not been effected, continue rotating Shaft Crank one turn at a time, testing with Bleeder Valve after each turn.

**IMPORTANT:** The limit of travel is when Shaft Nut comes into contact with a shoulder on the shaft. This will occur when end of the shaft is approximately 3/8" to 1/2" beyond end of the Shaft Crank Sleeve. **FIGURE 6**

**FIGURE 4**



**FIGURE 5**



**FIGURE 6**



# NO-BLO® VALVE CHANGERS

Instructions for Removing Old Valve And Installing New Valve

## E – REMOVE OLD VALVE

**CAUTION: Do not attempt to remove the old valve without the Safety Clamp being in place.**

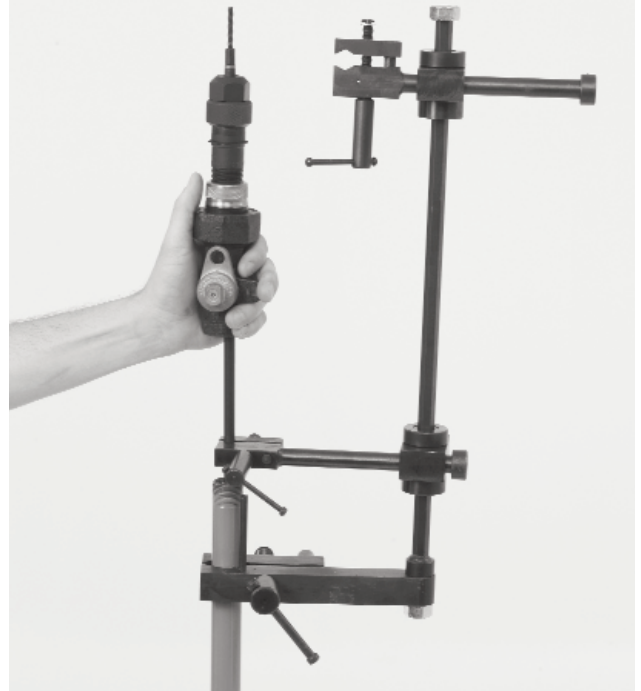
1. When a shut-off has been effected, unthread old valve from pipe.
2. Slide both the Stuffing Box with valve still attached upward along Shaft Tube. **FIGURE 7**
3. Swing bottom Shaft Tube Clamp into position onto Shaft Tube of Plugging Unit, and secure so bottom edge of its vise is next to the riser.
4. Tighten Clamp vise firmly using hand force only. Never use an extension on handle of Clamp vise.
5. Remove Shaft Crank. **FIGURE 8**
6. Open Clamp vise on top Shaft Tube Clamp and swing it out of position.
7. Slide Stuffing Box with valve as a unit off Shaft Tube, turning the assembly slightly as it is moved along the Shaft Tube. **FIGURE 9**. Be careful not to drag Stuffing Box O-rings over exposed threads.
8. Remove old valve from Stuffing Box.
9. If necessary, cut off and rethread the pipe end before installing new Mueller® Meter Valve. See instructions Ea. If not necessary to rethread pipe, skip instructions Ea.

## Ea – RETHREAD PIPE

1. After old valve is unthreaded from service pipe, examine the riser threads. If it is apparent they have been damaged, thread old meter valve back on pipe WITH STUFFING BOX ATTACHED, then relax Rubber Plug.
2. Loosen Safety Clamp and slide it away from bottom end of valve.
3. Remove short Locating Pin on Safety Clamp and replace it with the long Locating Pin. Slide Safety Clamp upward toward bottom end of valve until Locating Pin touches valve, then tighten Safety Clamp securely.
4. Insert and expand Rubber Plug and remove old valve as was done previously.
5. Measure back 1<sup>3</sup>/<sub>8</sub>" from the end of service pipe.

**CAUTION: This is the maximum amount that can be cut off without damaging Rubber Plug expanded inside the service pipe.**

**FIGURE 7**



**FIGURE 8**



# NO-BLO® VALVE CHANGERS

## Instructions for Removing Old Valve And Installing New Valve

6. Remove long Locating Pin and cut off old threads. A three wheel type narrow pipe cutter must be used to cut off threads.
7. Slide cut off piece of service pipe and old valve upward so bottom Shaft Tube Clamp can be attached. Once attached, top Shaft Tube Clamp can be disengaged allowing old valve and cut off section of pipe to be removed.
8. Place die head over Shaft tube and engage top Shaft Tube Clamp. Disengage bottom Shaft Tube Clamp and proceed to rethread service pipe. After threads are cut, remove die head in the same manner as was done in instruction 7.
9. Install new valve as described in instructions F.

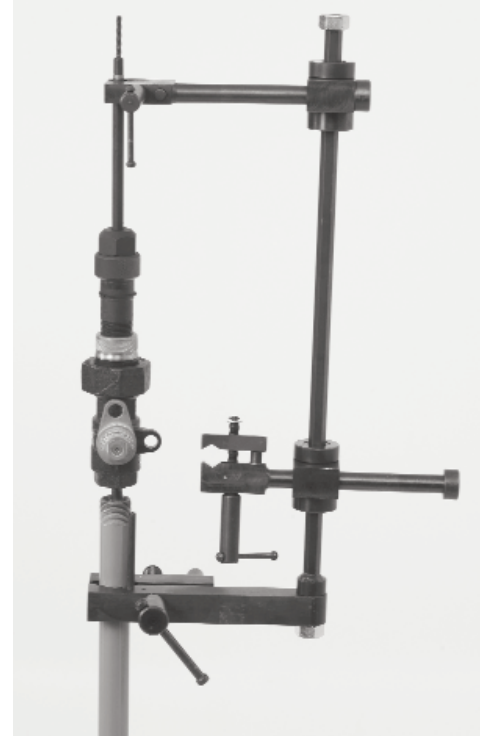
### F – INSTALL A NEW MUELLER VALVE

1. Thread Stuffing Box into outlet end of new MUELLER valve.
2. Open valve fully, carefully lining up valve key with piping.
3. Slide valve with Stuffing Box over end of Shaft Tube, being careful not to drag Stuffing Box O-rings over exposed threads. Turn the assembly slightly as it is moved along the Shaft Tube.
4. Swing top Shaft Tube Clamp back into position and tighten the vise.
5. Open vise of bottom Shaft Tube Clamp and swing it out of position. **FIGURE 10**
6. Brush and clean the threads on end of pipe and apply non-hardening pipe thread sealant.

**FIGURE 9**



**FIGURE 10**





# NO-BLO® VALVE CHANGERS

## Instructions for Removing Old Valve And Installing New Valve

7. Move meter valve with Stuffing Box downward and thread valve onto the end of pipe. If possible to do so and make a pressure tight connection, tighten valve until its key is in line with small arrow on Shaft Tube.

NOTE: If valve comes in contact with Locating Pin before making a tight connection with pipe, unthread the valve from piping (without removing it from Valve Changer), remove Locating Pin and then reassemble end valve to pipe.

8. Close Bleeder Valve by sliding Bleeder Ring upward while turning it slightly. FIGURE 11

### G – RELAX RUBBER PLUG AND REMOVE EQUIPMENT

1. Replace Shaft Crank on Shaft Nut and rotate it **counter-clockwise** until the number of threads noted in step D4 are exposed at end of Threaded Shaft.
2. **IMPORTANT:** The pressure inside pipe may tend to force Shaft Tube upward. Hold down on Shaft Tube by placing palm of hand solidly against the face of Shaft Crank. FIGURE 12. Use other hand to open vise of top Shaft Tube Clamp and slowly slide Shaft Tube upward so Rubber Plug passes through the valve and fully into Stuffing

FIGURE 11



Box - if necessary turn Shaft Tube so arrow is in line with valve key which aligns the rubber plug with the port opening through the valve. FIGURE 13

FIGURE 12

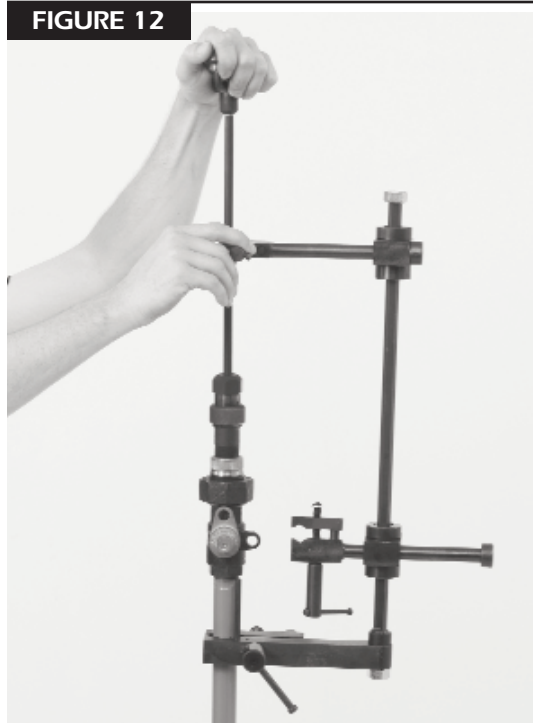


FIGURE 13



# NO-BLO® VALVE CHANGERS

## Instructions for Removing Old Valve And Installing New Valve

3. Close valve.
4. Open Bleeder Valve by sliding Bleeder Ring downward while turning slightly, exhausting gas from Stuffing Box.
5. Remove equipment.
6. Re-connect outlet piping, purge, check for leaks and place in service.

### H – REPLACING THE RUBBER PLUG

**NOTE:** The rubber plug is subjected to great stress and distortion in normal use. When worn or damaged it must be replaced.

1. Fully relax Rubber Plug by turning Shaft Crank **counter-clockwise**.
2. Remove Shaft Crank and hold Plugging Unit in a vertical position with end of shaft on a table or similar solid support.
3. Grasp Rubber Plug and partially compress the plug by pulling downward. This will disengage the locking feature between the End Ferrule and the Locknut. **FIGURE 14**
4. Remove Locknut, End Ferrule, and Rubber Plug. **FIGURE 15**
5. Clean shaft and lubricate with Mueller Rubber Stopper Lubricant (Part #580657).
6. Slide on new Rubber Plug and reinstall End Ferrule.
7. Compress Rubber Plug approximately  $\frac{1}{16}$ " to  $\frac{1}{8}$ " by pulling downward on End Ferrule.
8. Replace Locknut and align its sides with slot in the end of End Ferrule.
9. Relax Rubber Plug, which will act as a spring forcing End Ferrule into contact with Locknut and prevent it from backing off.

**FIGURE 14**



**FIGURE 15**







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