

MUELLER

Aquaient™ Ultrasonic Water Meter

Physical Installation Guide

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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 manufactured by Mueller 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.

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AQUAIENT™ ULTRASONIC METER INSTALLATION GUIDE

REQUIRED TOOLS AND GASKETS

The successful installation of the Mueller Aquaient™ ultrasonic meter requires the proper gaskets and tools to accomplish the task. You will need the following:

1. Aquaient Meter in the proper configuration for your application. See Aquaient meter data sheet for specific choices available.

2. Installation tools: Assorted wrenches, screwdrivers, small spade, and pry bar. This list is not all inclusive and you may require specialized tools based on your installation requirements.

3. Clean rag for wiping hands, meters and tools.

4. Gaskets of the appropriate thickness based on your installation requirements. Normally, $\frac{1}{8}$ " thick rubber gaskets and $\frac{3}{16}$ " or $\frac{1}{4}$ " thick rubber gaskets in the appropriate $\frac{1}{2}$ " or $\frac{3}{4}$ " size will provide sufficient sealing.

INSTALLATION PROCESS

The following steps document the entire installation process from start to finish.

1. Turn off water and relieve pressure from current installed meter prior to attempting any work.

2. Remove the existing meter from setter or piping. The requirements for this operation will vary from site to site. Be sure to practice the applicable safety procedure for each site and your employer.

3. Verify that the setter (if so equipped) or straight piping arrangement for the meter provides minimal clearance for the $7\frac{1}{2}$ " meter and two gaskets before attempting to install the meter. Minimum clearance should be $7\frac{11}{16}$ " between an **aligned** parallel setter or straight pipe coupling faces.

4. The installer should use couplings that are no deeper than $\frac{3}{4}$ " from coupling face to the saddle (normally the furthest point) from the coupling face. Couplings that exceed $\frac{3}{4}$ " in depth may experience interference when tightening the inlet coupling. If interference is experienced, a thicker $\frac{3}{16}$ " or $\frac{1}{4}$ " gasket may be required instead of the standard $\frac{1}{8}$ " thick gasket normally used in most installations on the inlet side of the meter. **(A.)**

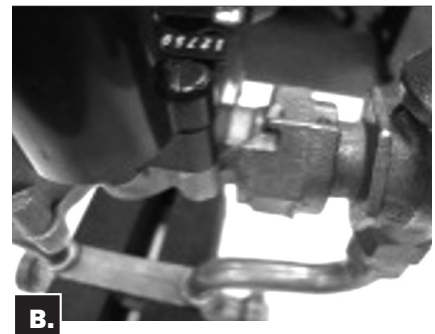
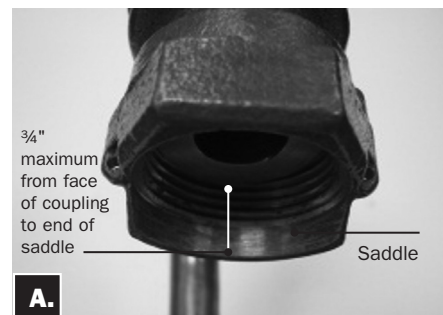
5. Install the inlet coupling first. Snug the coupling no more than hand tight to lightly compress the

inlet gasket and then thread the outlet coupling onto the meter spud threads. If the coupling comes into contact with the meter casting, substitute a $\frac{3}{16}$ " or $\frac{1}{4}$ " thick gasket in place of the standard $\frac{1}{8}$ " thick gasket on the inlet side only. **Never use the meter as a pry bar to realign setters or straight pipe connections.** These should be aligned to parallel prior to installing the meter with the proper tools. **(B.)**

6. It is possible that in extreme instances of very deep couplings with wide saddles, it may become necessary to use a pair of channel locks or pliers to break off the saddle of the coupling on the inlet side of the meter to permit adequate tightening of the coupling.

7. Once both couplings are started on the meter threads, a wrench can be used to tighten the couplings to a maximum of 20 to 25 ft-lbs of torque to prevent any leaks. There should be no need to tighten the couplings beyond this specification to achieve a water tight seal.

8. Once both couplings have been adequately tightened, water service can be restored by slowly turning the curb stop to the open position. Be sure to check for leaks at the couplings as service is being restored. An outside spigot can be turned on to relieve trapped air in the line as a result of its exposure to the atmosphere if one is available.



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9. Follow steps 9 through 14 for installation of meters with the integrated valve. If the meter is not equipped with the integrated valve, proceed to step 15. Once air in the line has been purged and you're satisfied there are no leaks at the meter, the pilot valve operation should be tested verifying it can be turned off and then back on again.

10. Using a field radio or the Sentryx™ software, a command to close the pilot valve should be sent to the Mi.Node transceiver attached to the meter.

11. Depending upon the degree of radio interference present in your area and your distance from the meter, initial communication attempts may need to be repeated in order to establish communication with the pilot valve. Successful operation of the pilot valve can be

checked by turning on an available/ exterior spigot and observing the stoppage of water after the pilot valve is actuated.

12. Be aware that the stoppage will not be instantaneous upon activation of the valve. Residual line pressure, bladders, storage tanks within the home all have an effect on how quickly the flow of water is halted. Normally, 10 to 15 seconds after pilot valve activation, the water should stop flowing. If the house is lower in elevation than the water meter, it may take longer for the water to stop as the line drains toward the house.

13. In the event a large retaining tank or bladder is located in the house causing water to continue to flow from the spigot, it may be necessary to observe the low flow indicator on the register dial

face to verify that flow has been stopped through the meter by the pilot valve. This avoids complete drainage of the storage tank.

14. After successful verification that the water service has stopped due to activation of the pilot valve, full service must be restored prior to leaving the job site. Using the field radio or the Sentryx software, a command to open the pilot valve should be sent to the Mi.Node transceiver attached to the meter.

15. Once again, an open outside spigot is used to verify that service has been restored. It is critical that verification of a fully open, properly operating service take place prior to moving to the next installation site.

16. Clean up work area and proceed to next site.

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