

Check Components



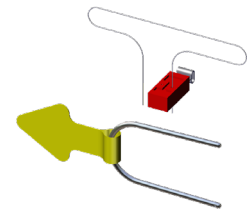
Meter with Indicator
and hinged cover



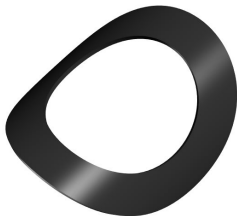
Saddle Assembly
(Packaged Separately)



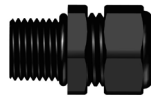
Display Security Seal



Security Clip & Seal
(Security Clip has small hole for seal wire)

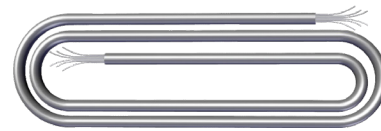


Gasket



Cable Gland

Optional



Output Cable
(Battery configuration)

Recommended Tools

Recommended:

- 3/32" or 2.5mm (small) flat head screw driver
- Crescent Wrench
- 5/32" Hex Key

Optional:

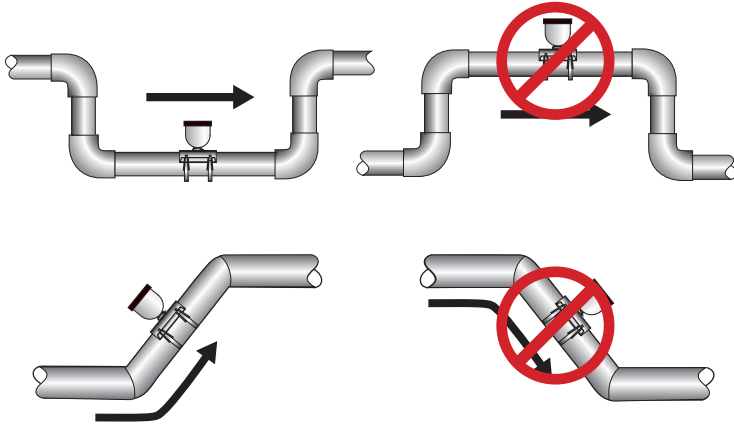
- Channel locks
- 6" Strap Wrench

Warnings *Refer to instruction manual for further details.*

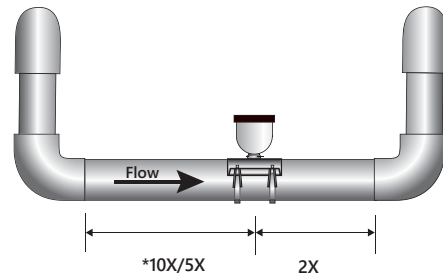
- Confirm that U-clip retainer is installed and never remove the U-clip retainer when pipe is under pressure—may result in serious injury.
- Saddle bolts must be tightened evenly. Do not over tighten.
- Install security seals during installation if regulations require.
- Improper sealing of cables or cable glands will void warranty.
- Ensure proper grounding when required.
- Programming pipe ID, pipe insertion hole size and straight pipe configuration is required for the meter to read. If showing zeros, when there is flow, then the above data has not been entered.

Positioning

Choose a position that will ensure a full pipe.

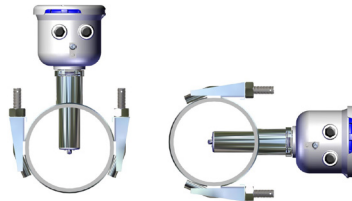


Choose a position that will minimize flow distortion.



*Selected during program setup.

Side (3 o'clock) and top (12 o'clock) installations are acceptable.



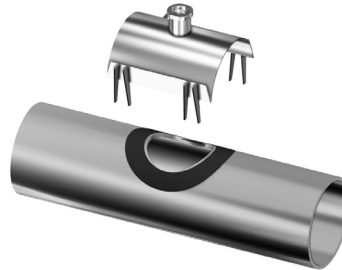
The EX90 performs to specification with straightening vanes present.

BEFORE INSTALLING measure & record inside diameter (ID) of pipe.

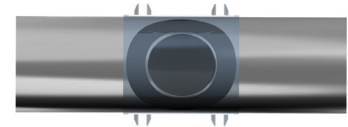
1. Clean the mounting surface, removing any roughness which would prevent the gasket from sealing. Place gasket centered over pipe opening.



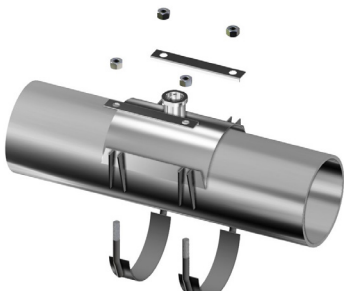
2. Place saddle top over gasket.



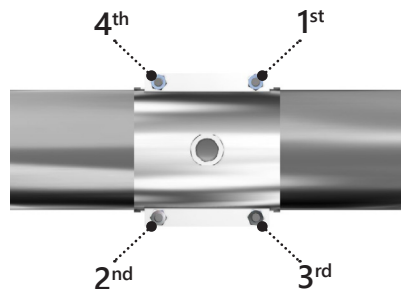
3. Make sure saddle top covers entire gasket.



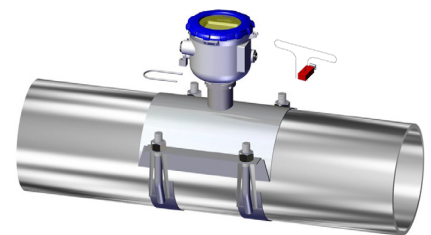
4. Place the saddle clamps under the pipe and align with the clamp guides on the saddle top.



5. Place saddle plates over saddle clamp threads. Attach nuts and tighten as shown below. Torque to 75 ft-lb in cross pattern.



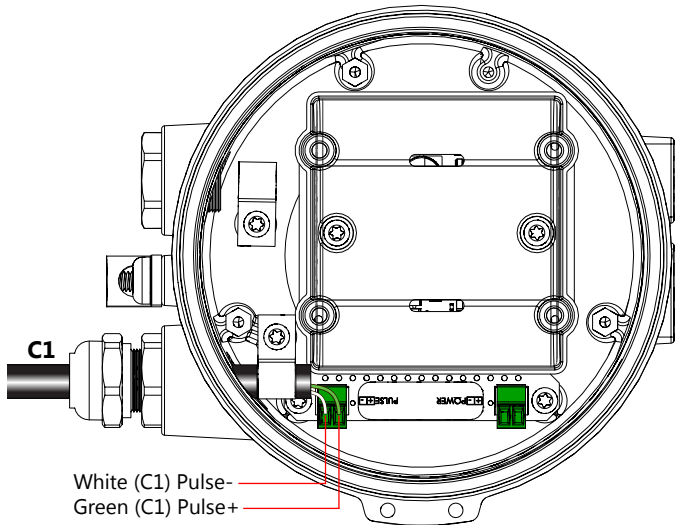
6. Insert the AG90 sensor into the saddle fitting and secure with mounting clip or attach security clip and seals if required.



Wiring

With Pulse Output

With No External Output



NOTE:
If not using external output, no wiring is required.

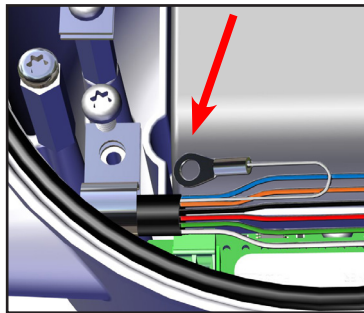
Unscrew the display lid and remove it. Unsnap the display assembly and remove it from the meter exposing the internal wiring connector. Install the wires through the cable port. Refer to the complete manual for further details. (C1 = output cable)



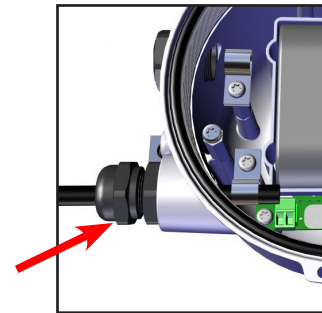
WARNING: Improper sealing of glands or cables will invalidate any warranty.



Remove plug & o-ring. Insert cable gland/strain relief. Feed cable through cable gland.

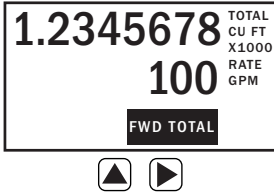


Clamp cable with strain relief clips. Attach drain wire lug to bracket post.



CRITICAL!
Torque cable gland sealing nut to 22 in-lbs.

Menu System



The **HOME Screen** displays flow volume, direction of the flow total and flow RATE along with status conditions such as Empty Pipe. Two buttons below the LCD display are used to access menu screens for viewing and changing meter setup parameters.

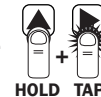
These two buttons are light sensors which can detect when a finger is covering them and activate upon release. Only three button touch actions are needed to control navigation through the menus, settings changes and back to the home screen.

HORIZONTAL SCROLLING:
 Tap right-hand button to scroll horizontally through menu tabs or move horizontally within a tab dialog when applicable.

SELECT: Tap left-hand button to change a highlighted item within a tab dialog.

ENTER/EXIT: Hold left button while tapping right button once to enter or exit a tab dialog or to navigate between the HOME and other menu screens.

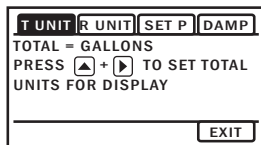
All menu screens consist of two rows of tabs surrounding a dialog box that lets you view and change setup parameters. To enter the Menu System perform the hold and tap sequence.



Changing Settings

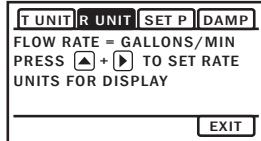
T UNIT

View or change TOTAL volume units



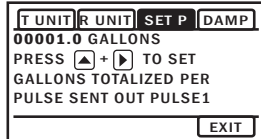
R UNIT

View or change flow RATE units



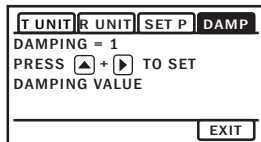
Set P

View or change pulse output scaling



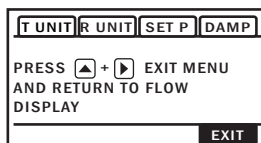
DAMP

View or change # of sample periods for rolling average*



EXIT

Return to HOME SCREEN or enter SUBMENU



INFO: Meter model, serial number, firmware version

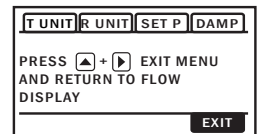
SAMP: Sample rate (Default is set to 5 seconds. Battery life with a 5-second sampling rate is four years.* Increase sampling interval to extend battery life. (See instruction manual for more details.)

*May vary depending on environmental factors.

Enter Pipe Settings (Required)

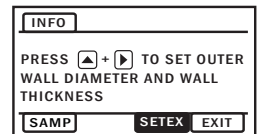
1. EXIT

The EXIT tab in the MAIN MENU has a second function. If you tap five times, you will be redirected to a SUBMENU screen from which you can access additional options.



2. SETEX

View or change meter configuration settings.

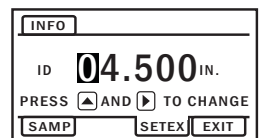


3. SETEX (Menu Functionality)

The highlighted value can be changed using the arrows. The value on the left is the menu name. Cycle through these by pressing . Press to highlight and change the value of the menus.

4. ID (Required)

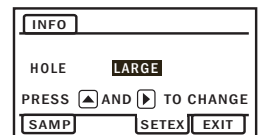
View or change inner diameter of the pipe. Measurement in inches.



5. HOLE (Required)

View or change installation pipe hole size. Tap then to toggle between small and large sizes.

Note: See instruction manual page 14 for hole size description.



6. PIPE (Required)

View or change pipe configuration based on installation.

Tap then to toggle between 10/2, 5/2 or STRAIGHT (conditions with 10 diameters or more)

