

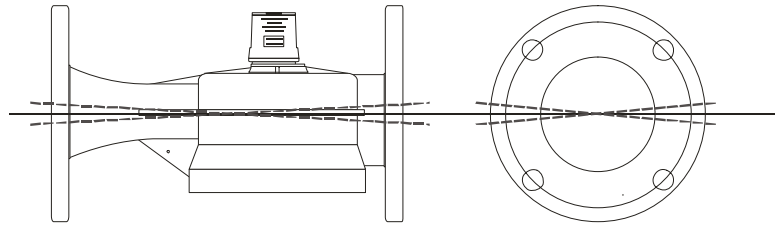
## **Meter Installation Instructions**

### **Installation Preparation**



1. Meter is intended for measuring potable, cold water in one direction only.
2. Meter must be installed in a horizontal pipeline with the register facing upward and readily accessible for reading. To meet accuracy specifications, the meter should not be mounted at more than a 10% angle (either slanted along the pipe or tilted to the side).
3. In most applications, no straight pipe length, upstream or downstream is necessary.
4. Under normal usage conditions the Spectrum is not affected by sand or suspended particles and does not require a strainer. Systems with significant debris in the pipes should consider strainers to avoid damage and accuracy degradation.
5. A variety of standard and custom spool lengths are available from Metron for drop-in installation ease. Spools can accommodate virtually any turbine or compound lengths. Most spools come standard with a test port. Consult your Metron-Farnier sales manager for technical details on spools.

Meter must be within  
+/- 10% of horizontal  
(tilt and slant) to  
achieve specified  
accuracy.



### **Installation Procedures**

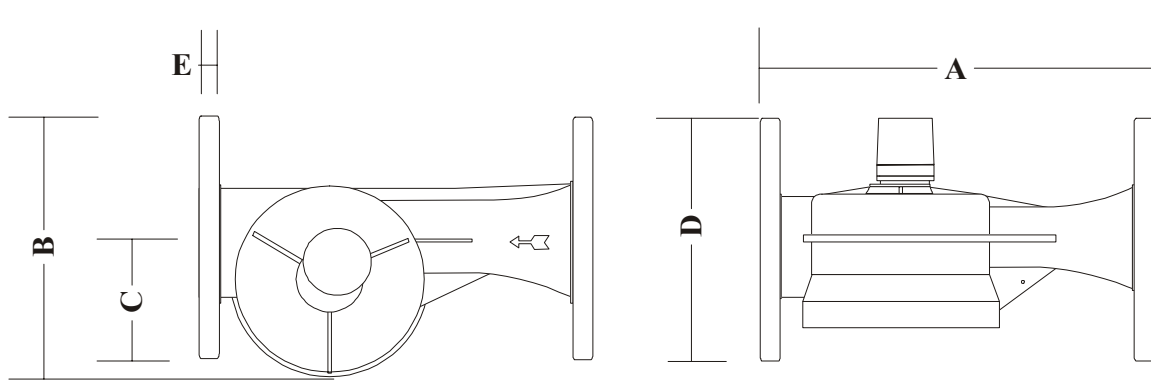
1. Suitable shut-off valves should be installed adjacent to both the inlet and outlet of the meter so service may be shut off without inconvenience to the customer whenever the meter must be removed.
2. Clean and flush the service line thoroughly on the inlet side of the meter before installing the meter.
3. Remove the flange protectors and set the meter with the arrow on the meter body pointed toward the outlet (customer's side).
4. To insure unrestricted flow of water through the meter, use the proper size and type of gaskets. Connections should only be sufficiently tightened to seal; do not over-tighten.
5. When tightening the bolts/nuts, use a staggered pattern similar to tightening lug nuts on a automobile tire to avoid over-stressing the flanges seals.
5. After the meter is installed, shut the outlet shut-off valve. Open the inlet shut-off valve slowly until the meter is full of water and there are no leaks.
6. Open the outlet valve slowly until air is out of the meter and service line. Open a valve downstream of the meter slowly and insure that no foreign debris in the water obstructs the operation of the meter.

**CAUTION:** Introducing water too quickly into the meter will damage the meter's internal components.  
The meter and service line must be free of air before operating the meter at normal flow rates

**NOTE:** Install an electrical grounding strap around the meter for maintenance safety while repairing or removing meter.

**NOTE:** Consult the American Water Works Association (AWWA) Manual M6 for additional details on water meter installations.

**Water Meter Physical Specifications**



Meter Type Pipe Size	Length * A	Width B	Center Line C	Height D	Flange E	No. Bolts	Net Weight
Spectrum 175 -3"	11 3/4" (298mm)	8 1/8" (206mm)	3 3/4" (95mm)	7 1/2" (190mm)	5/8" (15mm)	4	27lb (12.3kg)
Spectrum 260 -3"	13 3/4" (349mm)	10 1/8" (257mm)	3 3/4" (95mm)	7 1/2" (190mm)	5/8" (15mm)	4	38lb (17.3kg)
Spectrum 260 -4"	13 3/4" (349mm)	10 7/8" (276mm)	4 1/2" (114mm)	9" (229mm)	3/4" (19mm)	8	48lb (21.8kg)
Spectrum 440 -4"	17 3/4" (450mm)	11 1/2" (292mm)	4 1/2" (114mm)	9" (229mm)	3/4" (19mm)	8	72lb (32.7kg)
Spectrum 440 -6"	17 3/4" (450mm)	12 1/2" (317mm)	5 1/2" (139mm)	11" (279mm)	7/8" (22mm)	8	92lb (41.8kg)

**Meter Flanges**

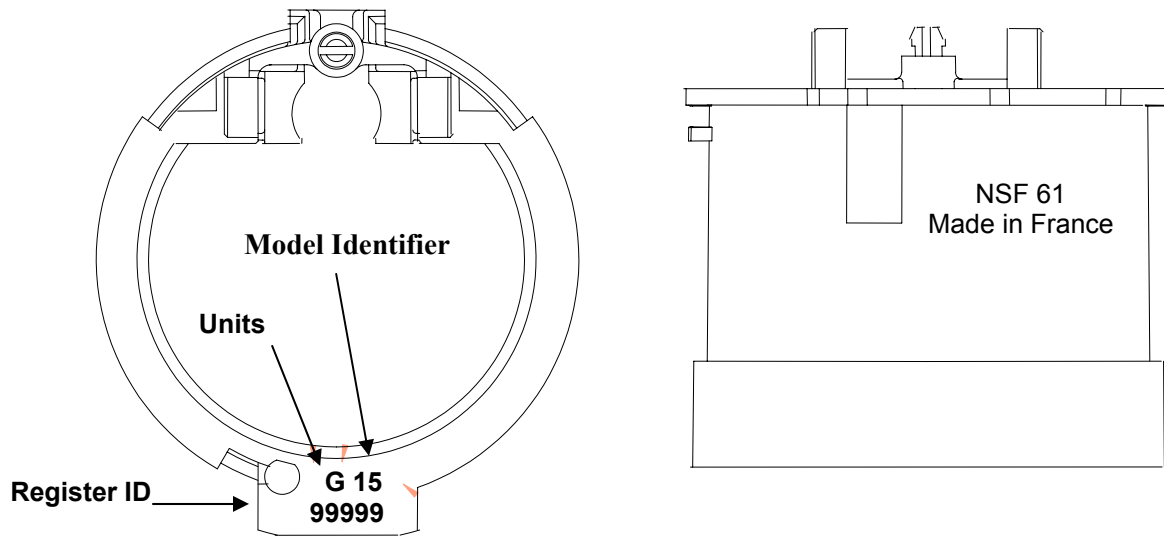
All flanges are C875 silicon brass which matches the meter body alloy. All flanges are sealed with a NSF-61 approved threadlocker and pressure tested at 200 psi. All flanges meet AWWA standards per standard C712-02 and ANSI B16-24.

**Spool Pieces & Strainers**

All spool pieces for 3" and larger Spectrum meters are stainless steel (carbon core in flanges) and have a 2" test port and plug. Check with your sales manager for standard, custom and adjustable spools.

Brass plate strainers are available in 3", 4", 6" and 8" sizes.

**Register Labeling & Identification**



<u>Model</u>	<u>Identifier</u>
Spectrum 175	15
Spectrum 260	17
Spectrum 440	19

NOTE: Older registers may have different labeling scheme. Check with Metron Customer Service for reference documentation

**Touchpad and AMR Interface**

All Commercial Spectrum Water Meters come standard with a Hawkeye OER register. The optically-encoded register can be programmed to match virtually any data format. Check with Metron-Farnier Customer Service for additional information.

Electronic Output  
Model Identifier + Register ID  
  
*Example: 15 + 99999*  
*1599999*

Wiring  
Touchpad Wiring:  
**Red** / Black  
(no polarity)  
  
AMR Wiring:  
**Red** – Clock/Power  
**Green** – Data  
**Black** – Ground