OCTAVE ULTRASONIC WATER METERS

Highly Accurate With
No Moving Parts

APPLICATIONS

- Commercial applications
- Communicate with irrigation controllers and measures water usage for effective water management

SPECIFICATIONS

- Sizes: 2", 3", 4", 6", 8", 10" and 12"
- Body: epoxy-coated cast iron with flange inlet and outlet
- Flow range: < 1 GPM to 1,600 GPM
- Maximum working pressure: 230 psi
- Fluid temperature range: 32˚ to 122˚ F (0.1˚ to 50˚ C)
- Connections metal body: flanges ANSI ISO for AWWA connection standard
- Connections plastic: male pipe thread with ASTM couplers
- Environmental protection: IP-68, ambient operation temperature for display: -13˚ to 131˚ F (-25˚ - 55˚ C)
- Display units: multi-line, programmable 9 digit LCD display
- Output (optional): programmable single/dual open collector pulse output or externally powered 4-20 mA loop

FEATURES & BENEFITS

ACCURATE FLOW DATA WITHIN ± 1.5%

Double-beam ultrasonic sensors provide highly accurate flow data and reliable operation.

NO IMPELLER OR MOVING PARTS IN THE FLOW PATH

Ensures unrestricted low pressure loss flows.

LONG TERM PERFORMANCE

Lithium batteries provide a 10 year life expectancy.

SEALED AND TAMPER PROOF IP68 REGISTER

Programmed to log and display both forward and reverse flow. Physically reversing the meter will not decrease the forward flow totalizer.

INSTANT INFORMATION READINGS

Flow and volume information, leak detection, flow direction, output mode, battery level, alarms and errors are viewable from a multi-readout screen.

UNIQUE SERIAL NUMBER AND ACCURACY CERTIFICATE

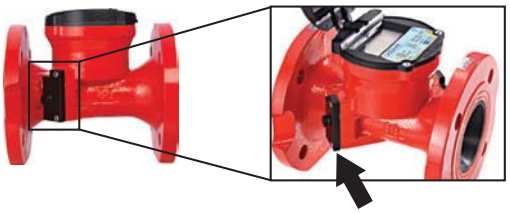
Each meter has its own unalterable barcoded serial number and includes a certificate verifying flow accuracy.

REDUCED MAINTENANCE

Requires less maintenance for wear-prone parts commonly found in other meters.

HOW OCTAVE WORKS

The Octave's measurement method is based on ultrasonic, transit-time, dual-beam sensors that determines the length of time it takes an ultrasonic wave to travel the distance between the two sensors located in the meter's body. The sensors function as both sender and receiver, each one alternating these functions so that the ultrasonic wave travels both with and against the direction of the flow. Because the ultrasonic wave travels slower against the flow than with the flow, the time difference of the two waves allows the meter to determine the flow rate.

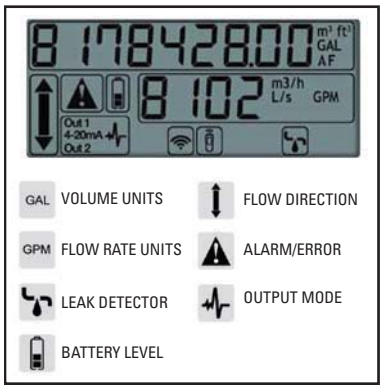


ULTRASONIC TRANSDUCERS
Double beam ultrasonic sensors

Unrestricted Flow Path

OCTAVE PROGRAMMING AND DIGITAL DISPLAY

Multi-line digital LCD readout display provides immediate reporting and visual indicators for critical conditions. The 9 digit display is easy to read at a glance. Each Octave Meter will be pre-programmed before shipment for an instantaneous flow rate in Gallons per Minute (GPM) and Volume Totalizer Units (Gallons).



NOTE: Programming software is not available to the end user. Once the meter is programmed by the Netafim prior to shipment, it can only be reset by Netafim.

INSTALLATION EXAMPLES

RECOMMENDATIONS FOR ACHIEVING TOP PERFORMANCE

1. Two (2) diameters of straight pipe are required when installing a 90º elbow before or after the meter. (Figure 1)
2. Two (2) diameters of straight pipe are required when installing the meter upstream or downstream of a valve, tee connection or or other source of significant turbulence. (See Figures 2 and 3)
   NOTE: The installation of a meter upstream of a pump or large valve is not recommended due to potential cavitation issues.
3. Five (5) diameters of straight pipe downstream of a pump (before the meter) and Two (2) diameters of straight pipe downstream of the meter are required. (See Figure 4)
   NOTE: When the meter is downstream of a pump, Netafim recommends additional straight pipe to ensure accurate measurements.
4. Meter can be installed horizontally or vertically with the water flowing up. It is not recommended for installation where the direction of flow is below the horizontal plane.
5. To eliminate air in the pipeline and maintain accuracy, use of and proper placement of Air Vents is required.
6. Recommended Air Vent placement: 3" and 4" meters place air vent 12" to 18" before the meter; 6" and 8" meters place the air vent 18" to 24" before the meter; 10" and 12" meters place the air vent 30" to 36" before the meter.
7. Installing a Check Valve downstream of the meter creates back pressure to aid in the meter filling with water.

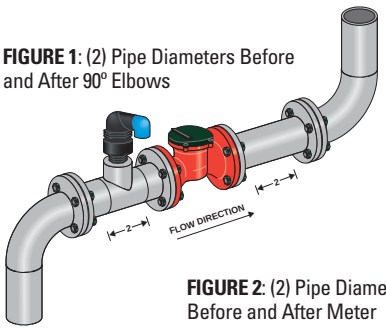


FIGURE 1: (2) Pipe Diameters Before and After 90º Elbows

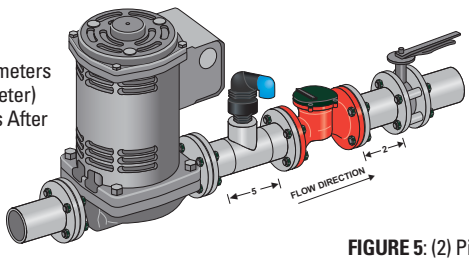


FIGURE 4: (5) Pipe Diameters After Pump (Before Meter) and (2) Pipe Diameters After Meter

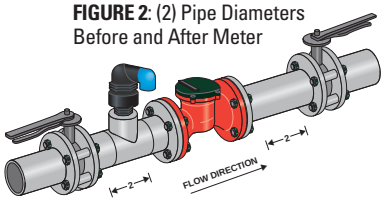


FIGURE 2: (2) Pipe Diameters Before and After Meter

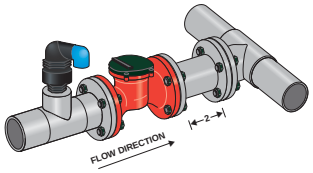


FIGURE 3: (2) Pipe Diameters Before Tee Connection

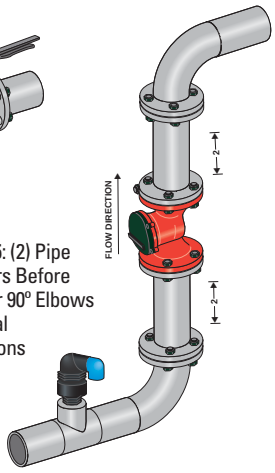


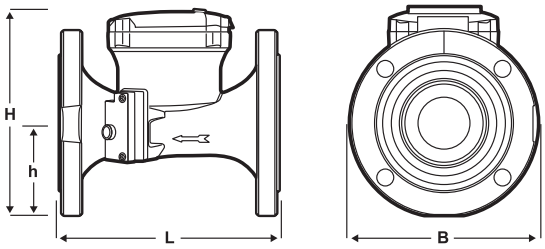
FIGURE 5: (2) Pipe Diameters Before and After 90º Elbows in Vertical Installations

PERFORMANCE DATA

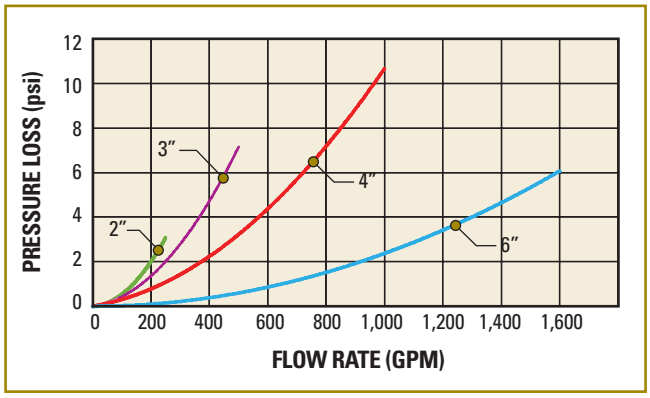
		EXTENDED LOW FLOW WITHIN ± 5% (GPM)	NOMINAL FLOW RANGE WITHIN ± 1.5% (GPM)	SAFE MAX FLOW RATE (GPM)	HEADLOSS MAX FLOW RATE (psi)
SIZE	2″	0.35	1 - 250	250	3.1
	3″	0.50	1 - 400	400	6.9
	4″	0.88	1 - 650	650	10.25
	6″	2.2	3 - 1,500	1,500	6.05
	8″	3.5	4.5 - 3,000	3,000	3.95
	10″	8.8	14 - 5,500	5,500	1.75
	12″	8.8	14 - 5,500	5,500	3.4

DIMENSIONS & WEIGHT

SIZE	LENGTH (L)	WIDTH (B)	HEIGHT (H)	HEIGHT (h)	WEIGHT (LBS)
2″	7.9″	6.5″	7.5″	1.6″	19.8
3″	8.9″	7.9″	8.3″	3.5″	28.7
4″	9.8″	8.7″	8.8″	4.1″	33.1
6″	11.8″	11.2″	11.1″	5.5″	70.5
8″	13.8″	13.4″	13.1″	6.5″	99
10″	17.7″	15.9″	15.9″	8.0″	150
12″	19.7″	19.2″	19.3″	9.6″	216



FLOW RATE VS. PRESSURE LOSS



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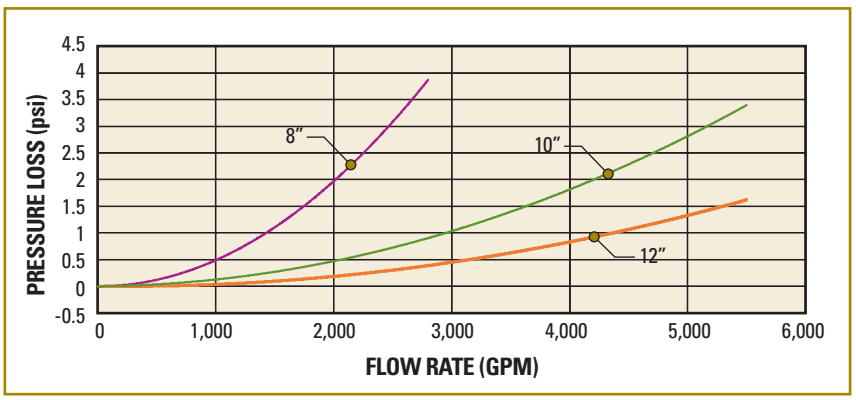

ORDERING INFORMATION

LS360CT SIZE **GAL** OUTPUT

SIZE
2" = 02
3" = 03
4" = 04
6" = 06
8" = 08
10" = 10
12" = 12

OUTPUT	
NO OUTPUT (METER DISPLAY ONLY)	= NO
0.1 GALLONS PER PULSE	= 0.1
1.0 GALLONS PER PULSE	= 1.0
10 GALLONS PER PULSE	= 10
100 GALLONS PER PULSE	= 100
1000 GALLONS PER PULSE	= 1000
ANALOG OUTPUT 420mA	= 420

ORDERING EXAMPLE:

LS360CT04GAL0.1

4" Octave Water Meter, Volume in Gallons, Flow Rate in Gallons Per Minute, Pulse Output 0.1 Gallons Per Pulse

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