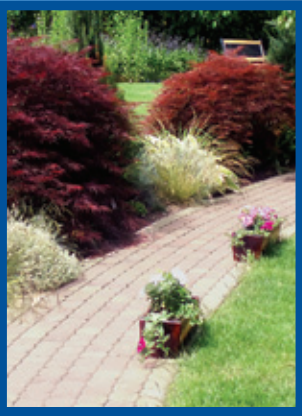
Water Meters

The Most Reliable and Accurate Water Meters with the Industry's Longest Warranty

Agriculture



Landscape & Turf

Greenhouse & Nursery

Wastewater

NETAFIM™

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Gas or Electric Meter

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Netafim MPE Digital Register

If You Can't Measure It, You Can't Manage It. It Makes Cents.

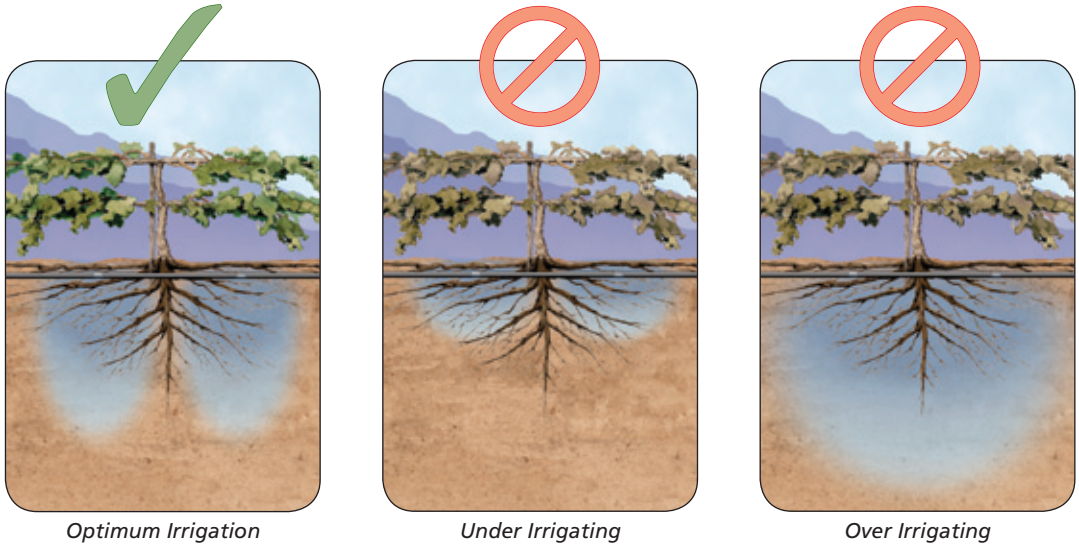
Every irrigation system - drip/micro, flood, sprinkler or center pivot - needs water and fertilizer delivered at the right time and in the right amounts. Metering is the only way to make sure water and fertilizers are delivered accurately.

Water and fertilizer metering requirements are met with high quality Netafim USA meters. They provide the confidence and assurance that the correct amount of water and fertilizer (nutrients) are being delivered to the crop maximizing yields and reducing energy costs.

Measurement is the Key to Good, Effective Water Management

It is a fact that all crops are affected if irrigation is not consistent and accurate. The use of water meters ensures growers are able to measure and effectively manage the watering of their crops. Over and under irrigating affects your bottom line.

- *Over Irrigating and Under Irrigating Result in Reduction of Crop Yield and Quality*
  Plants become stressed by both too much water or too little water which affects crop yields and quality.
- *Over Irrigating Results in Waste of Water, Energy and Fertilizers*
  Energy and fertilizer costs increase with every gallon of wasted water.



Optimum Irrigation *Under Irrigating* *Over Irrigating*

Why Buy a Netafim USA Water Meter?

Reliability With The Industry's Longest Warranty

Netafim stands behind our water meters with an unprecedented warranty - the industry's longest - three (3) years on the metering components (register and metering assembly) and five (5) years on the meter body. If your water meter encounters a problem, you can be confident that it will be replaced, in the field, with a factory calibrated metering component with minimal interruption to your irrigation schedule.

All meters are individually tested, calibrated and inspected to ensure they meet the highest quality standards and the testing documents are included with each meter. The performance and reliability of our meters provide a valuable tool for managing your system.

Brent Hoover of Hoover Pumping Systems in Pompano Beach, FL, a supplier of pre-fabricated and sophisticated pumping systems says:

"We choose Netafim water meters and hydrometers for many of our basic pumping station designs. Netafim's proven reliability and accuracy keeps them on the top of our vendor list. We've had virtually no service calls for the past 9 years."

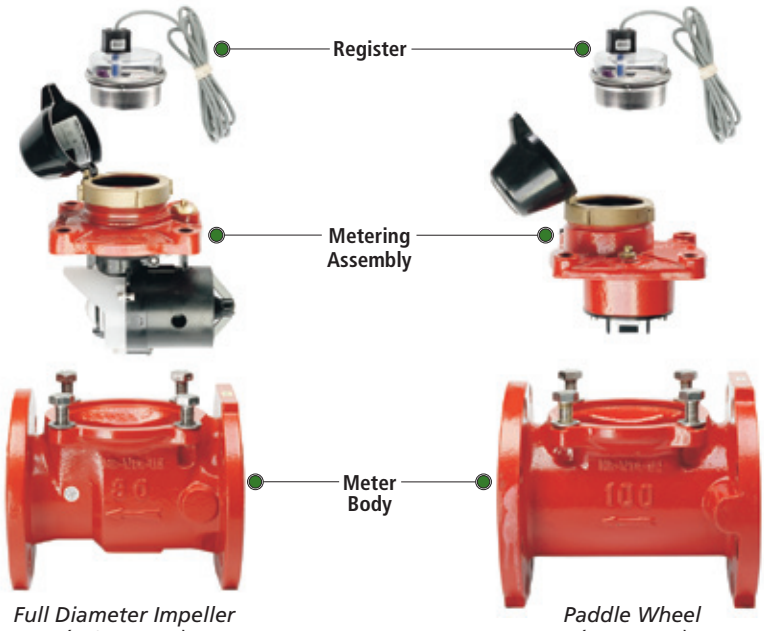
3

Three Year Warranty
Metering Components

5

Five Year Warranty
Water Meter Body

Three Components for Quick Maintenance



Full Diameter Impeller (WST Meter)

Paddle Wheel (IRT Meter)

Netafim USA Water Meter Benefits

- Measuring your irrigation water with a water meter is a more accurate way to deliver water to a crop.
- Monitors system performance and records total water applied.
- Ensures verification of water received versus water pumped or purchased.
- Provides accurate water measurement if required by a private or governmental agency.

Application and Installation Considerations

Determining the appropriate water meter for your application involves several requirements: Water Quality; Flow Range and Straight Pipe Installation Requirement. The following information will help with the selection of the right water meter for your site requirements.

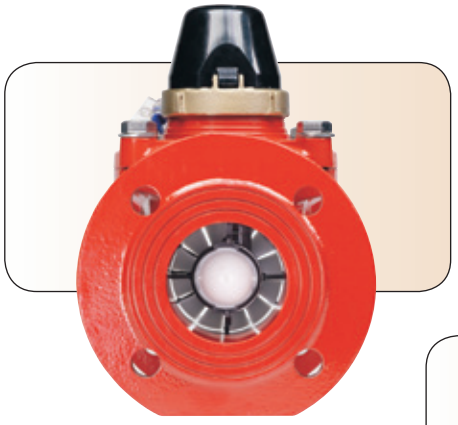
Water Quality

The quality of irrigation water is an important consideration when choosing the right water meter for your system. Netafim has a full line of water meters for accurate measuring in good or poor water conditions.

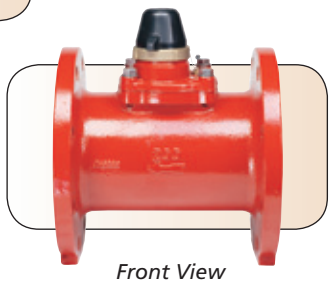
Good Water Conditions

- *Water with minimal organic materials*
- *Well water with minimal sand*

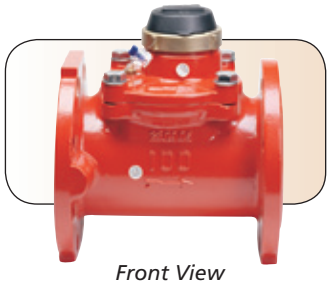
A water meter with a full diameter impeller is recommended for good water conditions. The impeller encompasses the full diameter of the inside water meter passage and provides a higher degree of accuracy from very low flows to maximum flows. Positioning the impeller directly in the flow path assures full flow measurement.



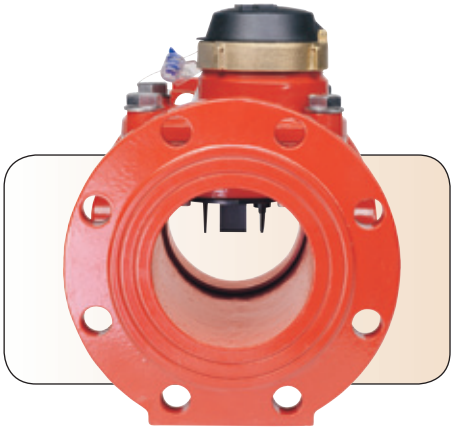
Side View
Full Diameter Impeller



Front View



Front View



Side View
Paddle Wheel

Poor Water Conditions

- *Water with moderate organic materials*
- *Well water with sand*

A water meter with a paddle wheel is recommended for poor water conditions. The water is metered with a paddle wheel located at the top of the water passage. This provides a free water passage eliminating clogging from debris. Paddle wheel water meters can also be used in good water conditions.

Flow Range

Water meter functionality and accuracy is dependent on minimum and maximum flow ranges. Netafim water meters accurately measure water from a minimum of 0.9 GPM up to a maximum of 5,500 GPM. Specific flow ranges for each size and model are listed in the Selection Guideline charts on page 8.

Straight Pipe Installation Requirement

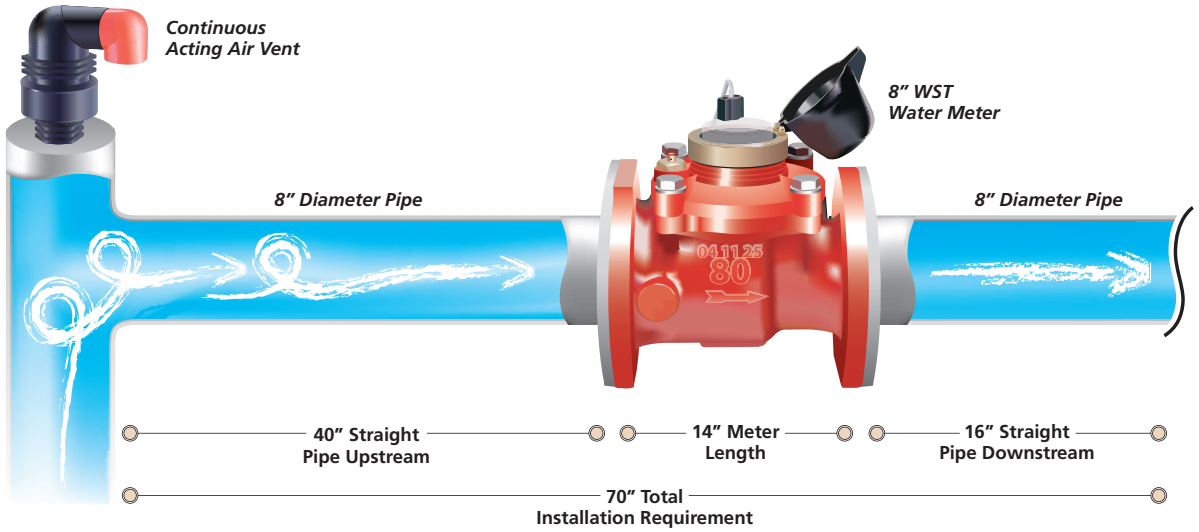
When water flows through a pipe, any transition through a fitting, elbow, or change in pipe size causes turbulence in the water. In order to eliminate water turbulence, some water meters require straight pipe before and after the water meter. Straight pipe installation refers to the length of straight pipe needed before (upstream of the water meter) and after (downstream of the water meter).

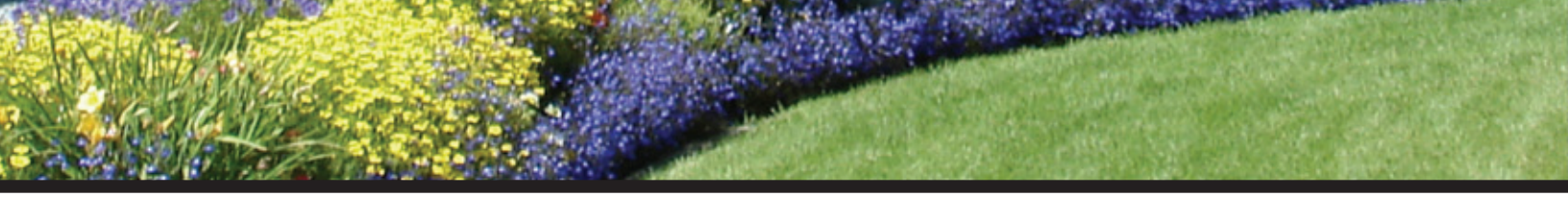
Meters with built-in straightening vanes (WST Water Meters) are used to reduce the minimum straight pipe requirements. WST Water Meters require 5 x diameter before and 2 x diameter after the meter. Meters without straightening vanes (WMR, WT, and IRT Water Meters) require 10 x diameter before and 5 x diameter after the meter. ***(Diameter = Meter Size)***

Continuous Acting Air Vents are used to remove air from the system for accurate metering. Proper air vent selection and placement within the system is critical - refer to the Netafim USA Air Vent Selection Guide for more information.

Configuring Straight Pipe Installation Requirement Example:

Water Meter:	8" WST
Upstream:	5 x 8" diameter meter = 40" (5 x D) 40" of straight pipe required upstream of the water meter
Downstream:	2 x 8" diameter meter = 16" (2 x D) 16" of straight pipe required downstream of the water meter
Meter Length:	14"
Total:	70" total installation requirement





Selection Guidelines

Poor Water Quality

Straight Pipe Installation Requirement - 10 x D and 5 x D

Minimum Flow Rate (± 2% Accuracy)	Maximum Flow Rate (± 2% Accuracy)	Straight Pipe Installation 10 x D & 5 x D (Upstream + Downstream + Meter Length)	Model	Size	Product Information
45 GPM	500 GPM	54″ Total	IRT	3″	Page 20
50 GPM	688 GPM	70″ Total		4″	
65 GPM	1,375 GPM	102″ Total		6″	
130 GPM	2,475 GPM	134″ Total		8″	
300 GPM	4,125 GPM	166″ Total		10″	

Good Water Quality

Straight Pipe Installation Requirement - 10 x D and 5 x D

Minimum Flow Rate (± 2% Accuracy)	Maximum Flow Rate (± 2% Accuracy)	Straight Pipe Installation 10 x D & 5 x D (Upstream + Downstream + Meter Length)	Model	Size	Product Information
8.8 GPM	110 GPM	44″ Total	WMR	2″	Page 14
45 GPM	500 GPM	54″ Total	IRT	3″	Page 20
50 GPM	688 GPM	70″ Total		4″	
65 GPM	1,375 GPM	102″ Total		6″	
130 GPM	2,475 GPM	134″ Total		8″	
300 GPM	4,125 GPM	166″ Total		10″	
44 GPM	4,125 GPM	168″ Total	WT	10″	Page 16
51 GPM	5,500 GPM	200″ Total		12″	

Good Water Quality

Straight Pipe Installation Requirement - 5 x D and 2 x D

Minimum Flow Rate (± 2% Accuracy)	Maximum Flow Rate (± 2% Accuracy)	Straight Pipe Installation 5 x D & 2 x D (Upstream + Downstream + Meter Length)	Model	Size	Product Information
4.0 GPM	660 GPM	30″ Total	WST	3″	Page 16
8.0 GPM	1,266 GPM	38″ Total		4″	
15 GPM	1,431 GPM	54″ Total		6″	
38 GPM	2,475 GPM	70″ Total		8″	

Good Water Quality

Straight Pipe Installation Requirement - 0 x D and 0 x D

Minimum Flow Rate (± 2% Accuracy)	Maximum Flow Rate (± 2% Accuracy)	Straight Pipe Installation 0 x D & 0 x D (Upstream + Downstream + Meter Length)	Model	Size	Product Information
0.9 GPM	14 GPM	11 1/4″ Total	M	3/4″	Page 12
1.2 GPM	20 GPM	14 3/4″ Total		1″	
3.5 GPM	55 GPM	17 1/4″ Total		1 1/2″	
0.3 GPM	2.2 GPM	4 3/8″ Total	Fertilizer	3/4″	Page 23
1.8 GPM	44 GPM	6″ Total		1″	Page 25

Water Meter Registers

Netafim registers are simple to read and operate while providing reliable and accurate readings. Features include:

- Hermetically sealed - guaranteed not to accumulate moisture or fog
- Mounted in a dry compartment - no contact with the water
- Instantaneous readings - easy to read
- Electrical output - driven by a magnetic coupling that activates a reed switch creating a pulsed output for communicating with control and monitoring equipment
- Interchangeable and easily replaced - only need common tools
- Removable - even when the meter is operating

STANDARD REGISTER - Gallon or Acre Feet Totalizer

The standard register includes pulsed output for communicating with control and monitoring equipment. A leak indicator located in the center of the dial registers the lowest flow through the meter. If services are shut off and the dial continues to rotate, there may be a leak in the system network.

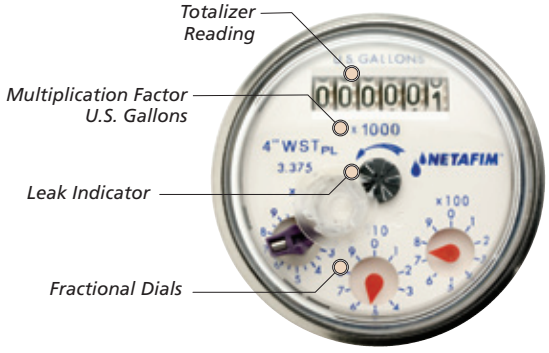
Flows are totalled in U.S. Gallons and each dial face indicates the multiplication factor (located directly under the totalizer reading) or flows are totalled in Acre Feet with the decimal point indicated in blue on the register. Three small fractional dials measure quantities smaller than the totalizer reading.

Electrical Specifications:
Maximum Contact Current: 50 mA
Maximum Contact Voltage: 48 VDC

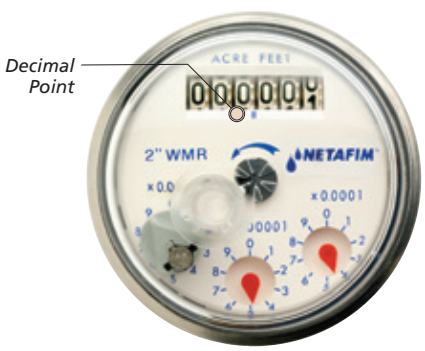
REGISTERS ARE EASY TO INSTALL AND REMOVE

Step 1: *Loosen and unscrew the brass closing ring and cap assembly that secures the register.*

Step 2: *Lift off the brass closing ring and cap assembly. Lift out the register from it's sealed compartment.*



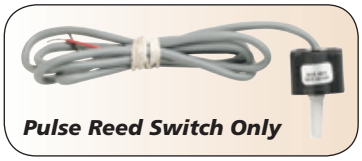
Gallon Totalizer



Acre Feet Totalizer

PULSE OUTPUT - With Pulse Reed Switch

The Pulse Reed Switch is activated by a magnet installed on a fractional dial. The reed switch acts as a "dry contact" and consumes very little power. The Reed Switch sensor is installed in the transparent plastic cover over the register and can be mounted in any of three positions facing the pointer with the magnet.



Pulse Reed Switch Only

PHOTO DIODE REGISTER - Gallon Totalizer

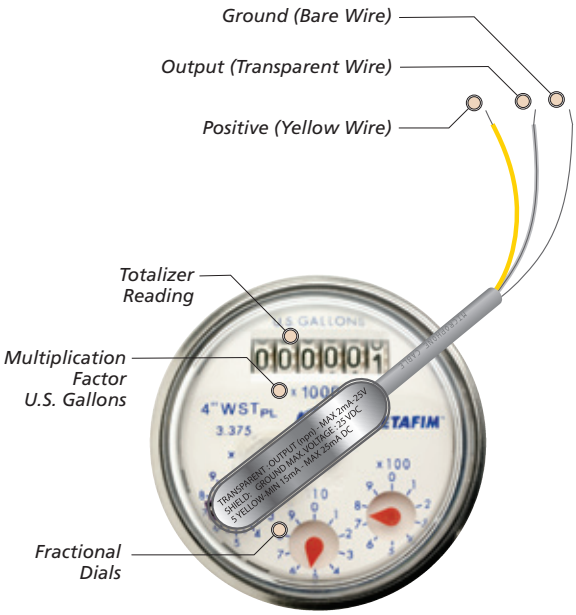
A sensor combines an IR light source and a light sensitive diode in one package. Signals are created when the light beam created by the IR light is interrupted by a rotating element. Includes pulse output (open collector) for communicating with control and monitoring equipment. This register requires a constanrt supply of DC power. Flows are totalled in U.S. Gallons based on the multiplication factors indicated on the dial face.

Electrical Specifications:
Positive (Yellow Wire): 20-30 mA through a resistor
Output (Transparent Wire): Open collector, max. load 2 mA
Ground (Bare Wire)

Note:
Correct polarity of the leads should be checked carefully to prevent damage of the sensor.

Recommended Resistor Values

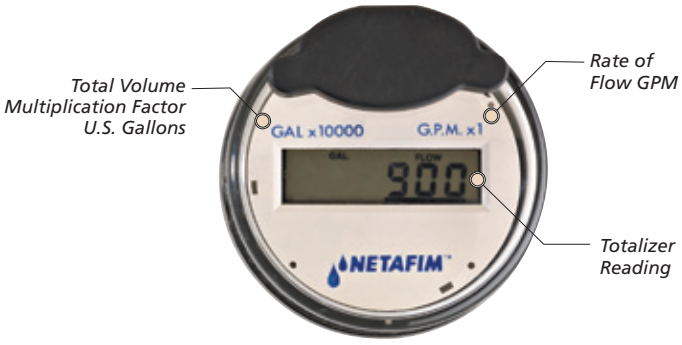
		Resistor Value Ω	Resistor Value W
Voltage	5	180	0.25
	6	220	0.25
	9	330	0.25
	12	470	0.5
	24	1,000	1



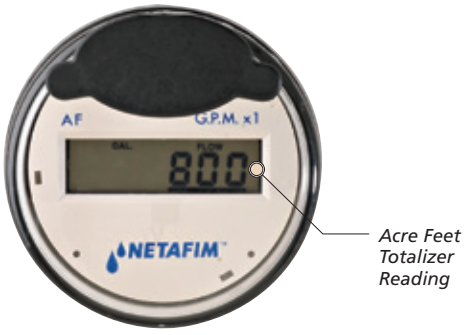
Gallon Totalizer

MULTI-PURPOSE ELECTRONIC (MPE) DIGITAL REGISTER - GPM Rate of Flow with Gallon or Acre Feet Totalizer

Combines electronic register features with dry pulse output capabilities. Operated by an internal lithium battery with a 10 year life and mounted inside a stainless steel glass encapsulated cup. Register data is stored on an internal chip and retrievable if the register is damaged. The register's LCD screen clearly displays the Rate of Flow in Gallons per Minute (GPM) and Total Volume in U.S. Gallons (U.S.G.) or Acre Feet.

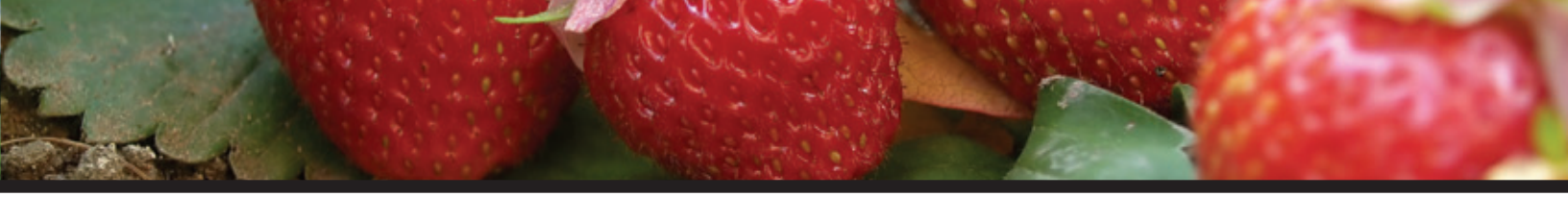


Gallon Totalizer



Acre Feet Totalizer

Electrical Specifications:
Minimum Voltage: 3.6 VDC
Maximum Contact Voltage: 48 VDC
Maximum Contact Current: 200 mA
Maximum Distance Between Meter and Control Board: 65 feet



Reading a Water Meter Register

STANDARD REGISTER

Total Flow is calculated by adding the readings from the Totalizer and the three fractional dials. The three fractional dials measure quantities smaller than the totalizer reading and are continuously turning while calculating the flow.

Totalizer Reading

Rotates sequentially for each 1000 U.S.G. (U.S. Gallons) calculated Number displayed is multiplied by 1000 to reach total U.S.G.

Fractional Dial #1

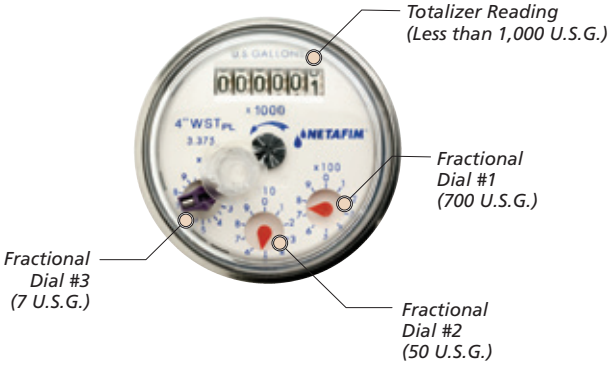
Each number (1-9) on the dial is multiplied by 100 to reach U.S.G. One complete revolution on this dial = 1000 U.S.G.

Fractional Dial #2

Each number (1-9) on the dial is multiplied by 10 to reach U.S.G. One complete revolution on this dial = 100 U.S.G.

Fractional Dial #3

Each number (1-9) on the dial is multiplied by 1 to reach U.S.G. One complete revolution on this dial = 10 U.S.G.



TOTAL FLOW FOR THIS STANDARD REGISTER

Totalizer Reading: 0 x 1000 = 0

Fractional Dial #1: 7 x 100 = 700

Fractional Dial #2: 5 x 10 = 50

Fractional Dial #3: 7 x 1 = 7

Calculation

0 + 700 + 50 + 7 = 757 U.S.G.

757 U.S. Gallons is the Current Total Flow

NOTE: *If the Totalizer Reading is between numbers (a number is partially visible), always default to the lower of the two numbers when calculating flow. If a Fractional Dial is pointing between numbers, always default to the lower of the two numbers.*

MPE DIGITAL REGISTER

LCD screen displays 6 digits and alternates every 10 seconds between Rate of Flow and Total Volume as a whole number and a fractional number in U.S. Gallons or Acre Feet.

FLOW and GAL

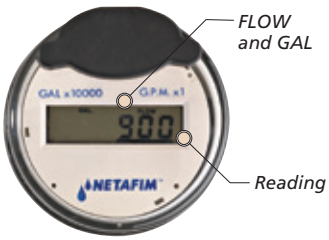
When both are visible on the display, reading for Rate of Flow in GPM

GAL (Gallon Totalizer)

When visible on the display, whole number reading for a portion of the total volume in U.S.G.

Fr

When visible on the display and the numbers are underlined in red, fractional number reading for a portion of the Total Volume in U.S.G. or Acre Feet



RATE OF FLOW FOR THIS MPE DIGITAL REGISTER

Totalizer Reading: 900

900 GPM is the Current Rate of Flow

RATE OF VOLUME FOR THIS MPE DIGITAL REGISTER

GAL Reading: 9

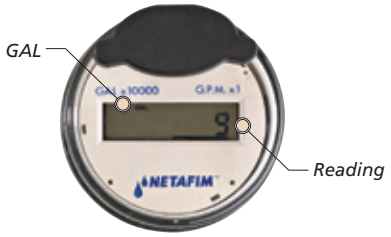
Fr Reading: 835

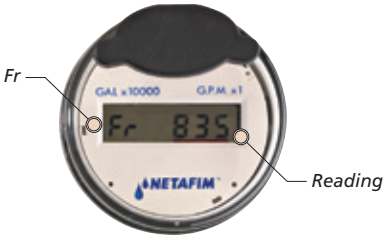
Calculation

GAL + Decimal Point + Fr = 9.835

9.835 x 10,000 = 98,350

98,350 U.S. Gallons is the Current Total Volume





‘M’ Water Meters

Industry’s Smallest Water Meters

Netafim USA’s M water meters are the industry’s smallest multi-jet water meters. These meters offer the best cost and performance, long life flow measurement instruments. The multi-jet principle assures an equally distributed load on the impeller minimizing wear and maintaining accuracy. Wide clearances in the measuring chamber and negligible area of contact between static and moving parts are the main reasons for the high reliability of this design even in hard water.

Features

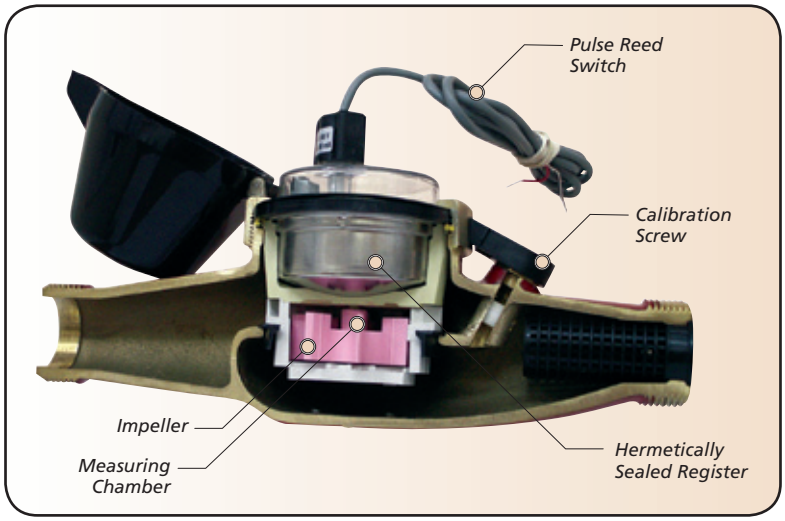
- Only one moving part - the impeller - in contact with the water for minimum wear and utmost reliability.
- Magnetically driven sealed registers are stainless steel/glass encapsulated and guaranteed against fogging due to moisture.
- No additional upstream and downstream straight length of pipe required for installation.
- Very accurate over a wide range of flows.

Available Sizes

- ¾”, 1” and 1 ½”

Specifications

Maximum Working Pressure	140 psi
Maximum Liquid Temperature	122˚ F
Body Material	Corrosion Proof Copper Alloy
Connections	MPT



Installation Requirements

- Dial face must be horizontal.
- There are no straight pipe installation requirements.
- Prior to installation of the meter, the pipeline should be thoroughly flushed.
- Meter must be installed so that the pipe will be full of water at all times during metering.
- Recommendation: Continuous Acting Air Vents of proper size and type be installed to eliminate air.

‘M’ Meters

Straight Pipe Installation Requirement
0 x D and 0 x D

Size	Upstream Distance	Downstream Distance	Meter Length	Total Requirement
¾”	0”	0”	11 ¼”	11 ¼”
1”	0”	0”	14 ¾”	14 ¾”
1 ½”	0”	0”	17 ¼”	17 ¼”

‘M’ Water Meters

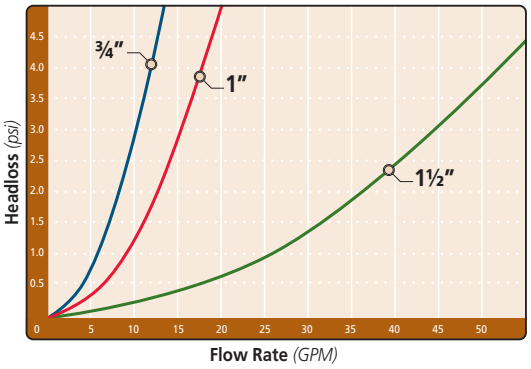
Registers

Register Type →		Standard		MPE Digital
Register Totalizer		Gallon	Gallon	Gallon
Meter Size		3/4”	3/4”	3/4”, 1” & 1 1/2”
Volume Unit		Gallon x 10	Gallon x 100	Gallon x 10
Flow Rate Units		–	–	GPM x 1.00
Pulse Output *(gallons/pulse)*		0.1	1.0	1.0
Pointer Resolution	Pointer 1	x 0.01 Gallon	x 0.10 Gallon	–
	Pointer 2	x 0.1 Gallon	x 1.0 Gallon	–
	Pointer 3	x 1.0 Gallon	x 10 Gallon	–

Performance Data

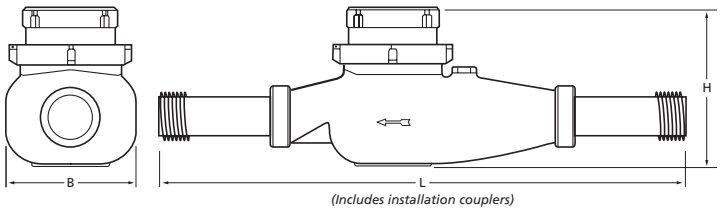
		Lowest Flow *within ± 5% Accuracy*	Lowest Flow *within ± 2% Accuracy*	Nominal Flow *within ± 2% Accuracy*	Maximum Flow *within ± 2% Accuracy*
Size	¾”	0.2 GPM	0.9 GPM	11 GPM	14 GPM
	1”	0.3 GPM	1.2 GPM	15.4 GPM	20 GPM
	1 ½”	0.9 GPM	3.5 GPM	44 GPM	55 GPM

Headloss Chart



Dimensions and Weight

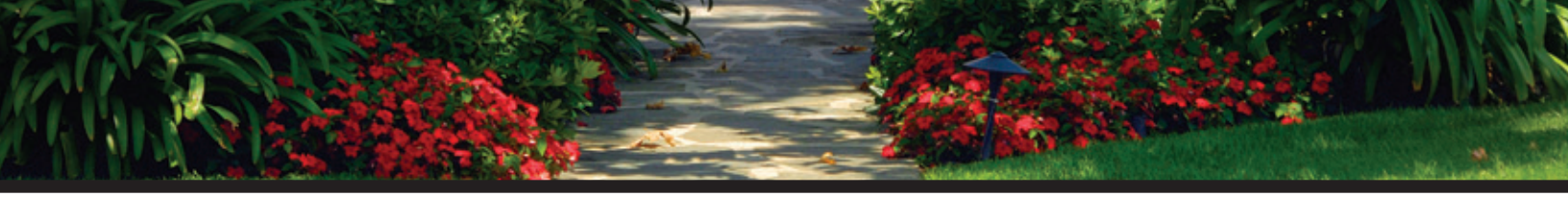
Size	H Height	L Length	B Width	Weight
¾”	4 ¼”	11 ¼”	3 ¾”	4.4 lbs.
1”	4 ¼”	14 ¾”	4 ¼”	6.1 lbs.
1 ½”	6 ¾”	17 ¼”	15”	15 lbs.



(Includes installation couplers)

Ordering Information

Size	Connection	Register Type	Gallons per Pulse	Item Number	Model Number
¾”	Union/Thrd	Standard/ Gallon	0.1	70261-002445	36M201T.1
¾”			1.0	70261-002450	36M201T
1”			1.0	70261-002720	36M251T
1 ½”			1.0	70261-003230	36M401.5T
¾”	Union/Thrd	MPE Digital/ Gallon	1.0	-	36M201T-MPE
1”			1.0	-	36M251T-MPE
1 ½”			1.0	-	36M401.5T-MPE



'WMR' Water Meter

Industry's Smallest Water Meter

Netafim USA's WMR water meter is one of the industry's smallest water meters. The ample space around the core of the in-line helical axial turbine allows foreign matter to pass through the meter without clogging. This wide clearance produces full pipe flow measurements and is very accurate over a wide range of flows.

Features

- Magnetically driven sealed registers are stainless steel/glass encapsulated and guaranteed against fogging due to moisture.
- Minimum head loss.
- Very accurate over a wide range of flows.

Available Size

- 2″

Specifications

Maximum Working Pressure	230 psi
Maximum Liquid Temperature	131˚ F
Body Material	Cast Iron with Polyester Coating
Connections	MPT

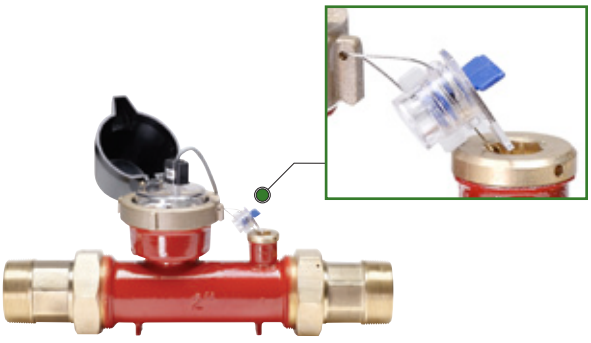
Installation Requirements

- Straight pipe installation requirement of 10 x diameter pipe upstream (before the meter) and 5 x diameter pipe downstream (after the meter).
- The meter may be installed in any position. For non-horizontal positions, the flow should be upwards.
- Prior to installation of the meter, the pipeline should be thoroughly flushed.
- Meter must be installed so that the pipe will be full of water at all times during metering.
- Recommendation: Continuous Acting Air Vents of proper size and type be installed to eliminate air.

'WMR' Meter

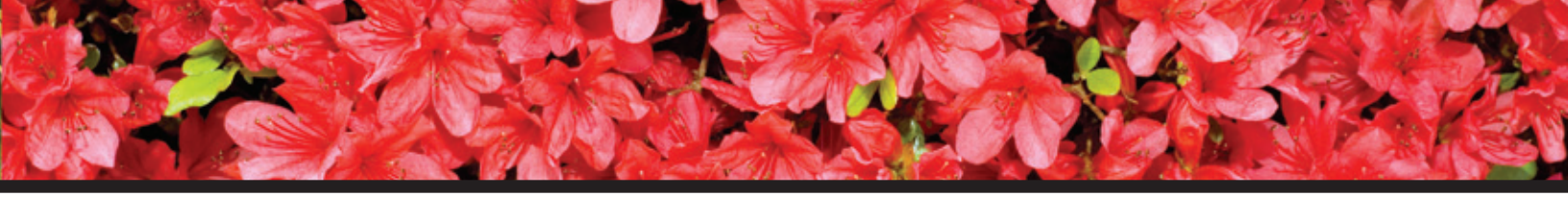
Straight Pipe Installation Requirement
10 x D and 5 x D

Size	Upstream Distance	Downstream Distance	Meter Length	Total Requirement
2″	20″	10″	14″	44″



Tamper Proof Seal

Ensures unauthorized removal and/or tampering of the water meter register.



'WMR' Water Meter

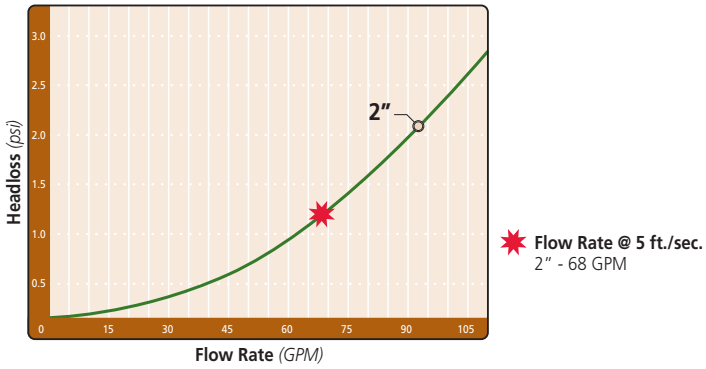
Registers

Register Type →		Standard			Photo Diode	MPE Digital	
Register Totalizer		Gallon	Gallon	Acre Feet	Gallon	Gallon	Acre Feet
Meter Size		2″	2″	2″	2″	2″	2″
Volume Unit		Gallon x 100	Gallon x 1,000	Acre Feet x 1.000	Gallon x 1,000	Gallon x 100	Acre Feet x 1.000
Flow Rate Units		–	–	–	0.055	GPM x 1.00	GPM x 1.00
Pulse Output *(gallons/pulse)*		1.0	10	3.26	–	10	3.26
Pointer Resolution	Pointer 1	x .10 Gallon	x 1.0 Gallon	x 0.000001	x 1.0 Gallon	–	–
	Pointer 2	x 1.0 Gallon	x 10 Gallon	x 0.00001	x 10 Gallon	–	–
	Pointer 3	x 10 Gallon	x 100 Gallon	x 0.0001	x 100 Gallon	–	–

Performance Data

		Lowest Flow *within ± 5% Accuracy*	Lowest Flow *within ± 2% Accuracy*	Nominal Flow *within ± 2% Accuracy*	Maximum Flow *within ± 2% Accuracy*
Size	2″	2.0 GPM	8.8 GPM	88 GPM	110 GPM

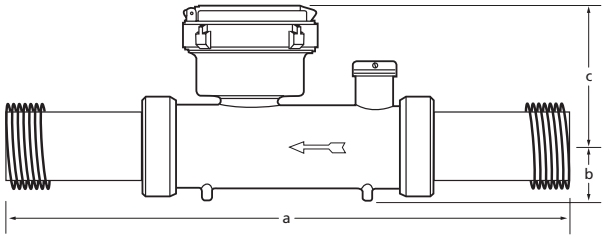
Headloss Chart



Flow Rate @ 5 ft./sec.
2″ - 68 GPM

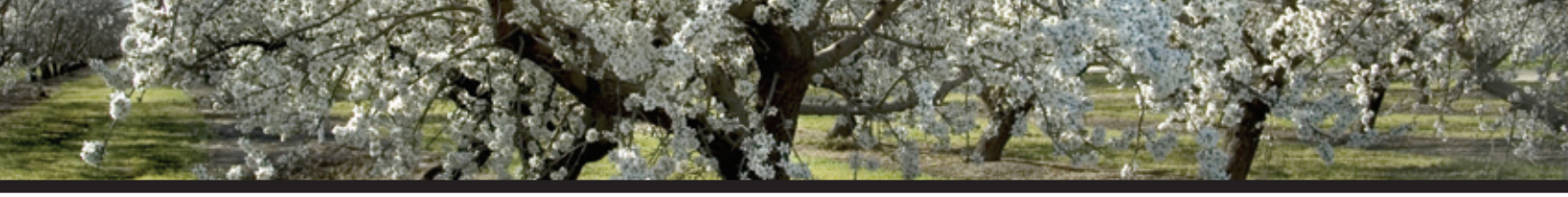
Dimensions and Weight

Size	a Length	b Height	c Height	Weight
2″	14″	1 1/2″	3 1/4″	11 lbs.



Ordering Information

Size	Connection	Register Type	Gallons per Pulse	Item Number	Model Number
2″	Union/Thrd	Standard/Gallon	1.0	70261-005050	36WMR2T1
		Standard/Gallon	10	70261-005060	36WMR2T10
		Standard/Acre Feet	3.26	70261-004900	36WMR2T10-AF
		Photo Diode	0.055	70261-005010	36WMR2T-.055
		MPE Digital/Gallon	10	70261-004990	36WMR2T10-MPE
		MPE Digital/Acre Feet	3.26	-	36WMR2T10-MPE-AF



‘WST’ and ‘WT’ Water Meters

More Accurate Over a Wide Range of Flows

Netafim USA’s WST and WT water meters use a double magnetic transmission to drive the register. This unique design enables the meter to handle high loads of sand since only the impeller is in contact with the water. Transmission gears are located in a sealed, dry compartment which has no contact with the water. The impeller, located in the center of the flow, allows for very accurate measurements over a wide range of flows. Built-in straightening vanes in the WST meters reduce the length of straight pipe required before and after the meter.

Features

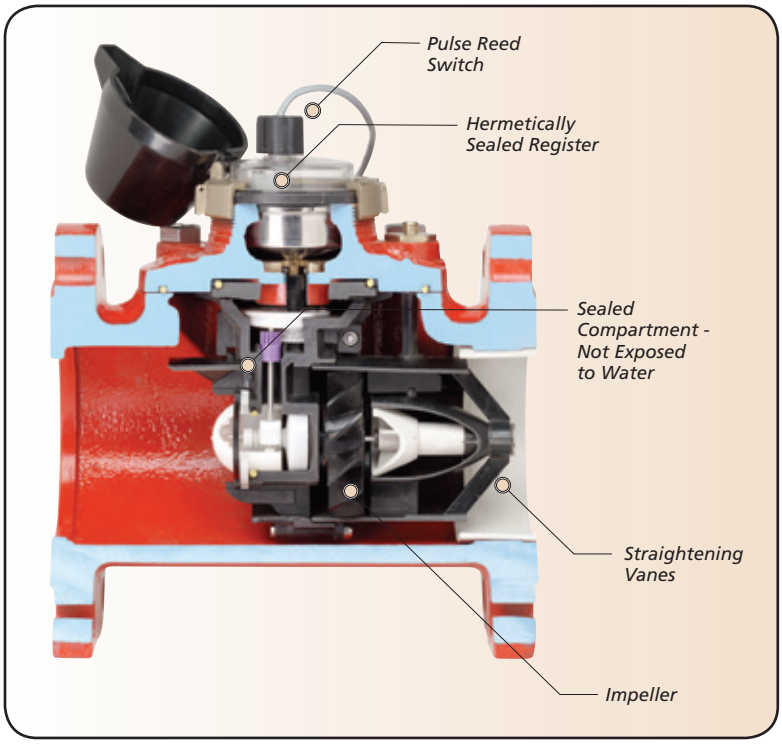
- Repelling magnetics enable accurate measurements across a wide range of flow rates including very low flows.
- Balanced impeller with equal load on the front and rear gears prevents wear of the bearings and maintains high accuracy of the meter even after long years of operation.
- Registers are stainless steel/glass encapsulated and guaranteed against fogging due to moisture.
- Built-in straightening vane reduces installation requirements (WST meters).
- Wide selection of sealed, magnetically coupled registers, standard with three fractional dials and pulse output. Digital registers are also available.

Available Sizes

- WST - 3″, 4″, 6″ and 8″
- WT - 10″ and 12″

Specifications

Maximum Working Pressure	230 psi
Maximum Liquid Temperature	140˚ F
Body Material	Cast Iron with Polyester Coating
Connections	Flanged



‘WST’ and ‘WT’ Water Meters

Installation Requirements

- Straight pipe installation requirement for WST meters: 5 x diameter pipe upstream (before the meter) and 2 x diameter pipe downstream (after the meter).
- Straight pipe installation requirement for WT meters: 10 x diameter pipe upstream (before the meter) and 5 x diameter pipe downstream (after the meter).
- The meter may be installed in any position. For non-horizontal positions, the flow should be upwards.
- Prior to installation of the meter, the pipeline should be thoroughly flushed.
- Meter must be installed so that the pipe will be full of water at all times during metering.
- Recommendation: Continuous Acting Air Vents of proper size and type be installed to eliminate air.

‘WST’ Meters

Straight Pipe Installation Requirement
5 x D and 2 x D

Size	Upstream Distance	Downstream Distance	Meter Length	Total Requirement
3″	15″	6″	9″	30″
4″	20″	8″	10″	38″
6″	30″	12″	12″	54″
8″	40″	16″	14″	70″

‘WT’ Meters

Straight Pipe Installation Requirement
10 x D and 5 x D

Size	Upstream Distance	Downstream Distance	Meter Length	Total Requirement
10″	100″	50″	18″	168″
12″	120″	60″	20″	200″

Registers

Register Type →		Standard					
Register Totalizer		Gallon	Acre Feet	Gallon	Acre Feet	Gallon	Acre Feet
Meter Size		3″ & 4″	3″ & 4″	6″ & 8″	6″ & 8″	10″ & 12″	10″ & 12″
Volume Unit		Gallon x 1,000	Acre Feet x 1.00	Gallon x 10,000	Acre Feet x 1.00	Gallon x 10,000	Acre Feet x 1.0
Pulse Output *(gallons/pulse)*		10	32.6	100	32.6	100	325.9
Pointer Resolution	Pointer 1	x 1.0 Gallon	x 0.00001	x 10 Gallon	x 0.00001	x 10 Gallon	x 0.0001
	Pointer 2	x 10 Gallon	x 0.0001	x 100 Gallon	x 0.0001	x 100 Gallon	x 0.001
	Pointer 3	x 100 Gallon	x 0.001	x 1,000 Gallon	x 0.001	x 1,000 Gallon	x 0.01

Register Type →		Photo Diode					
Register Totalizer		Gallon	Gallon	Gallon	Gallon	Gallon	Gallon
Meter Size		3″	4″	6″	8″	10″	12″
Volume Unit		Gallon x 1,000	Gallon x 1,000	Gallon x 10,000	Gallon x 10,000	Gallon x 10,000	Gallon x 10,000
Pulse Output *(gallons/pulse)*		0.1172	0.1097	0.2027	0.378	4.5057	6.73
Pointer Resolution	Pointer 1	x 1.0 Gallon	x 1.0 Gallon	x 10 Gallon	x 10 Gallon	x 10 Gallon	x 10 Gallon
	Pointer 2	x 10 Gallon	x 10 Gallon	x 100 Gallon	x 100 Gallon	x 100 Gallon	x 100 Gallon
	Pointer 3	x 100 Gallon	x 100 Gallon	x 1,000 Gallon	x 1,000 Gallon	x 1,000 Gallon	x 1,000 Gallon

‘WST’ and ‘WT’ Water Meters

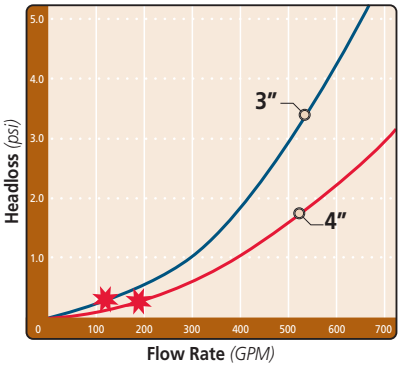
Registers

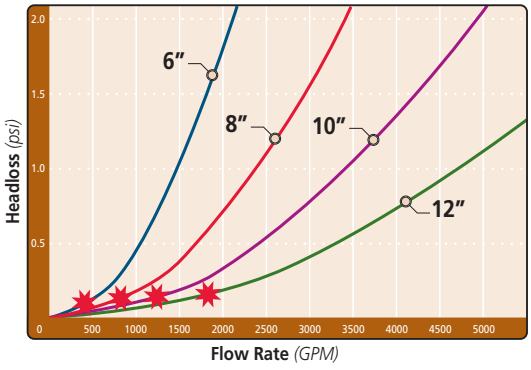
Register Type →	MPE Digital					
Register Totalizer	Gallon	Acre Feet	Gallon	Acre Feet	Gallon	Acre Feet
Meter Size	3” & 4”	3” & 4”	6” & 8”	6” & 8”	10” & 12”	10” & 12”
Volume Unit	Gallon x 100	Acre Feet x 1.000	Gallon x 1,000	Acre Feet x 1.000	Gallon x 10,000	Acre Feet x 1.000
Flow Rate Units	GPM x 1.00	GPM x 1.00	(6”) GPM x 1.00	(6”) GPM x 1.00	GPM x 1	GPM x 1
			(8”) GPM x 1	(8”) GPM x 1		
Pulse Output *(gallons/pulse)*	10	32.6	100	32.6	100	325.9

Performance Data

Size	Lowest Flow *within ± 5% Accuracy*	Lowest Flow *within ± 2% Accuracy*	Nominal Flow *within ± 2% Accuracy*	Maximum Flow *within ± 2% Accuracy*
3”	2 GPM	4 GPM	528 GPM	660 GPM
4”	4 GPM	6 GPM	1,013 GPM	1,266 GPM
6”	11 GPM	15 GPM	1,145 GPM	1,431 GPM
8”	22 GPM	38 GPM	1,980 GPM	2,475 GPM
10”	44 GPM	44 GPM	3,300 GPM	4,125 GPM
12”	51 GPM	51 GPM	4,400 GPM	5,500 GPM

Headloss Charts

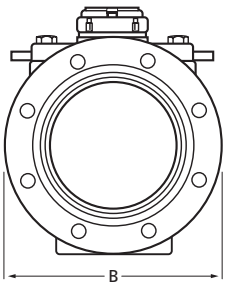


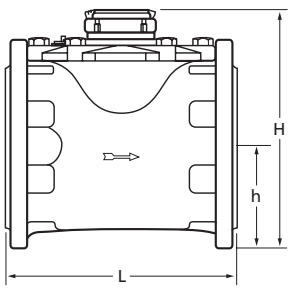


Flow Rate @ 5 ft./sec.
3” - 120 GPM
4” - 195 GPM
6” - 440 GPM
8” - 783 GPM
10” - 1,223 GPM
12” - 1,762 GPM

Dimensions and Weight

Size	L Length	B Width	H Height	h Height	Weight
3”	9”	7 ¾”	9 ¼”	3 ½”	34 lbs.
4”	9 ¾”	7 ¾”	9 ¾”	4 ¼”	42 lbs.
6”	11 ¾”	11 ¼”	12 ¼”	5”	77 lbs.
8”	13 ¾”	13 ¼”	13 ¼”	6 ¼”	103 lbs.
10”	17 ¾”	16”	17 ¼”	10 ¼”	165 lbs.
12”	19 ¾”	18 ¼”	18 ¼”	13”	209 lbs.





‘WST’ and ‘WT’ Water Meters

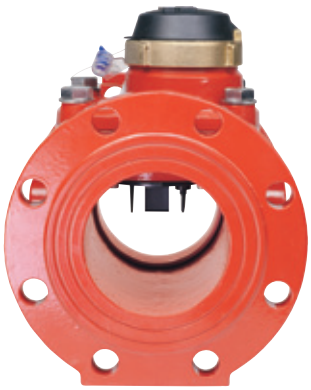
Ordering Information

Size	Connection	Register Type	Gallons per Pulse	Item Number	Model Number
3″	Flanged	Standard/Gallon	10	70261-010220	36WST3F
		Standard/Acre Feet	32.6	70261-010230	36WST3F-AF
		Photo Diode	0.1172	70261-010225	36WST3F-1172
		MPE Digital/Gallon	10	-	36WST3F-MPE
		MPE Digital/Acre Feet	32.6	-	36WST3F-MPE-AF
4″	Flanged	Standard/Gallon	10	70261-010360	36WST4F
		Standard/Acre Feet	32.6	70261-010370	36WST4F-AF
		Photo Diode	0.1097	70261-010380	36WST4F-1097
		MPE Digital/Gallon	10	-	36WST4F-MPE
		MPE Digital/Acre Feet	32.6	-	36WST4F-MPE-AF
6″	Flanged	Standard/Gallon	100	70261-010460	36WST6F
		Standard/Acre Feet	32.6	70261-010450	36WST6F-AF
		Photo Diode	0.2027	70261-010462	36WST6F-2027
		MPE Digital/Gallon	100	70261-010463	36WST6F-MPE100
		MPE Digital/Acre Feet	32.6	-	36WST6F-MPE-AF
8″	Flanged	Standard/Gallon	100	70261-010600	36WST8F
		Standard/Acre Feet	32.6	70261-010605	36WST8F-AF
		Photo Diode	0.378	70261-010601	36WST8F-.378
		MPE Digital/Gallon	100	-	36WST8F-MPE
		MPE Digital/Acre Feet	32.6	-	36WST8F-MPE-AF
10″	Flanged	Standard/Gallon	100	70261-010720	36WT10F
		Standard/Acre Feet	325.9	70261-010670	36WT10F-AF
		Photo Diode	4.5057	-	36WT10F-4.5057
		MPE Digital/Gallon	100	70261-010690	36WT10F-MPE
		MPE Digital/Acre Feet	325.9	-	36WT10F-MPE-AF
12″	Flanged	Standard/Gallon	100	70261-010800	36WT12F
		Standard/Acre Feet	325.9	70261-007270	36WT12F-AF
		Photo Diode	6.73	-	36WT12F-6.73
		MPE Digital/Gallon	100	70261-010790	36WT12F-MPE
		MPE Digital/Acre Feet	325.9	-	36WT12F-MPE-AF

'IRT' Water Meters

Ideal for Moderate to Dirty Water Conditions

Netafim USA's IRT water meters, with a specially designed paddle wheel measuring device, provide a free water passage resulting in low head loss and the ability to accurately measure water with high levels of impurities or debris. Accuracy is achieved over a wide range of flows.



Features

- Negligible head loss.
- Simple maintenance - field replaceable calibrated measuring unit.
- Registers are stainless steel/glass encapsulated and guaranteed against fogging due to moisture.
- Bearings are constantly flushed during operation to eliminate deposits of solids.
- Wide selection of sealed, magnetically coupled registers, standard with three fractional dials and pulse output. Digital registers are also available.
- Electrical output is included with standard registers.

Available Size

- 3", 4", 6", 8" and 10"

Specifications

Maximum Working Pressure	230 psi
Maximum Liquid Temperature	140˚ F
Body Material	Cast Iron with Polyester Coating
Connections	Flanged

Installation Requirements

- Straight pipe installation requirement: 10 x diameter pipe upstream (before the meter) and 5 x diameter pipe downstream (after the meter).
- The meter may be installed in any position. For non-horizontal positions, the flow should be upwards.
- Prior to installation of the meter, the pipeline should be thoroughly flushed.
- Meter must be installed so that the pipe will be full of water at all times during metering.
- Recommendation: Continuous Acting Air Vents of proper size and type be installed to eliminate air.

'IRT' Meters

Straight Pipe Installation Requirement
10 x D and 5 x D

Size	Upstream Distance	Downstream Distance	Meter Length	Total Requirement
3"	30"	15"	9"	54"
4"	40"	20"	10"	70"
6"	60"	30"	12"	102"
8"	80"	40"	14"	134"
10"	100"	50"	16"	166"

'IRT' Water Meters

Registers

Register Type →		Standard					
Register Totalizer		Gallon	Acre Feet	Gallon	Acre Feet	Gallon	Acre Feet
Meter Size		3" & 4"	3" & 4"	6" & 8"	6" & 8"	10"	10"
Volume Unit		Gallon x 1,000	Acre Feet x 1.00	Gallon x 10,000	Acre Feet x 1.00	Gallon x 10,000	Acre Feet x 1.0
Pulse Output *(gallons/pulse)*		10	32.6	100	32.6	100	325.9
Pointer Resolution	Pointer 1	x 1.0 Gallon	x 0.00001	x 10 Gallon	x 0.00001	x 10 Gallon	x 0.0001
	Pointer 2	x 10 Gallon	x 0.0001	x 100 Gallon	x 0.0001	x 100 Gallon	x 0.001
	Pointer 3	x 100 Gallon	x 0.001	x 1,000 Gallon	x 0.001	x 1,000 Gallon	x 0.01

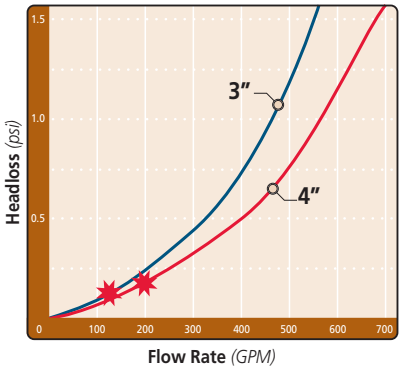
Register Type →		Photo Diode	
Register Totalizer		Gallon	Gallon
Meter Size		3" & 4"	6", 8" & 10"
Volume Unit		Gallon x 1,000	Gallon x 1,000
Pulse Output *(gallons/pulse)*		1.0	10
Pointer Resolution	Pointer 1	x 1.0 Gallon	x 10 Gallon
	Pointer 2	x 10 Gallon	x 100 Gallon
	Pointer 3	x 100 Gallon	x 1,000 Gallon

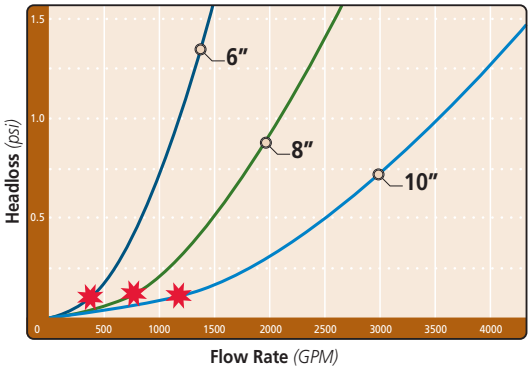
Register Type →		MPE Digital					
Register Totalizer		Gallon	Acre Feet	Gallon	Acre Feet	Gallon	Acre Feet
Meter Size		3" & 4"	3" & 4"	6" & 8"	6" & 8"	10"	10"
Volume Unit		Gallon x 100	Acre Feet x 1.000	Gallon x 1,000	Acre Feet x 1.000	Gallon x 10,000	Acre Feet x 1.000
Flow Rate Units		GPM x 1.00	GPM x 1.00	(6") GPM x 1.00	(6") GPM x 1.00	GPM x 1	GPM x 1
				(8") GPM x 1	(8") GPM x 1		
Pulse Output *(gallons/pulse)*		10	32.6	100	32.6	100	325.9

Performance Data

Size	Lowest Flow *within ± 5% Accuracy*	Lowest Flow *within ± 2% Accuracy*	Nominal Flow *within ± 2% Accuracy*	Maximum Flow *within ± 2% Accuracy*
3"	20 GPM	45 GPM	400 GPM	500 GPM
4"	30 GPM	50 GPM	500 GPM	688 GPM
6"	45 GPM	65 GPM	1,100 GPM	1,375 GPM
8"	80 GPM	130 GPM	1,980 GPM	2,475 GPM
10"	170 GPM	300 GPM	3,300 GPM	4,125 GPM

Headloss Charts



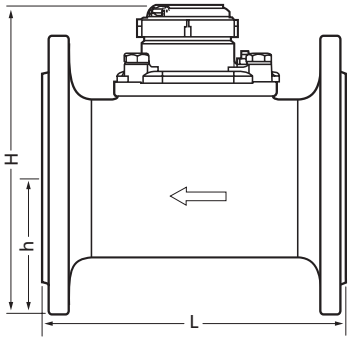


Flow Rate @ 5 ft./sec.
3" - 120 GPM
4" - 195 GPM
6" - 440 GPM
8" - 783 GPM
10" - 1,223 GPM

‘IRT’ Water Meters

Dimensions and Weight

Size	L Length	H Height	h Height	Weight
3″	9″	9 ½″	3 ½″	40 lbs.
4″	9 ¾″	10 ¼″	4 ¼″	50 lbs.
6″	11 ¾″	12 ¼″	5″	73 lbs.
8″	13 ¾″	12 ½″	6 ¼″	95 lbs.
10″	15 ¾″	13 ½″	7 ¾″	125 lbs.



Ordering Information

Size	Connection	Register Type	Gallons per Pulse	Item Number	Model Number
3″	Flanged	Standard/Gallon	10	70261-009200	36IRT3F
		Standard/Acre Feet	32.6	70261-009100	36IRT3F-AF
		Photo Diode	1.0	-	36IRT3F-1.0
		MPE Digital/Gallon	10	70261-009130	36IRT3F-MPE
		MPE Digital/Acre Feet	32.6	-	36IRT3F-MPE-AF
4″	Flanged	Standard/Gallon	10	70261-009500	36IRT4F
		Standard/Acre Feet	32.6	70261-009340	36IRT4F-AF
		Photo Diode	1.0	-	36IRT4F-1.0
		MPE Digital/Gallon	10	70261-009430	36IRT4F-MPE
		MPE Digital/Acre Feet	32.6	-	36IRT4F-MPE-AF
6″	Flanged	Standard/Gallon	100	70261-009740	36IRT6F
		Standard/Acre Feet	32.6	-	36IRT6F-AF
		Photo Diode	10	-	36IRT6F-10
		MPE Digital/Gallon	100	70261-009710	36IRT6F-MPE
		MPE Digital/Acre Feet	32.6	-	36IRT6F-MPE-AF
8″	Flanged	Standard/Gallon	100	70261-009920	36IRT8F
		Standard/Acre Feet	32.6	70261-009850	36IRT8F-AF
		Photo Diode	10	-	36IRT8F-10
		MPE Digital/Gallon	100	70261-009890	36IRT8F-MPE
		MPE Digital/Acre Feet	32.6	-	36IRT8F-MPE-AF
10″	Flanged	Standard/Gallon	100	70261-010000	36IRT10F
		Standard/Acre Feet	325.9	70261-008730	36IRT10F-AF
		Photo Diode	10	-	36IRT10F-10
		MPE Digital/Gallon	100	70261-008770	36IRT10F-MPE
		MPE Digital/Acre Feet	325.9	-	36IRT10F-MPE-AF

Fertilizer Meter - *Polypropylene Body*

Small and Light-Weight with High Accuracy

Netafim USA's polypropylene fertilizer meter is small, light-weight and delivers a high level of accuracy. It's a fertilizer and chemical solutions meter with electrical output and totalizing register. The impeller is the only moving part in contact with the liquid. It features a compact size, corrosion resistant plastic components and is ideal for fertilizer control in automated irrigation systems.

Features

- Magnetically driven sealed register.
- Only one moving part, the impeller, in contact with the liquid for minimum wear and utmost reliability.
- Dry contact electrical output - 0.1 or 1.0 gallons/pulse.
- Corrosion resistant plastic components.
- Small and light-weight.
- Very accurate.

Available Size

- ¾"

Specifications

Maximum Working Pressure	72.5 psi
Maximum Liquid Temperature	122° F
Body Material	Polypropylene
Connections	Threaded

Installation Requirements

- Install in a horizontal position with dial face up.
- No straight pipe installation requirements.

Fertilizer Meter

Straight Pipe Installation Requirement
0 x D and 0 x D

Size	Upstream Distance	Downstream Distance	Meter Length	Total Requirement
¾"	0"	0"	4 3/8"	4 3/8"

Registers

Register Type →		Standard	
Register Totalizer		Gallon	Gallon
Meter Size		3/4"	3/4"
Volume Unit		Gallon x 10	Gallon x 10
Pulse Output *(gallons/pulse)*		0.1	1.0
Pointer Resolution	Pointer 1	x 0.01 Gallon	x 0.01 Gallon
	Pointer 2	x 0.1 Gallon	x 0.1 Gallon
	Pointer 3	x 1.0 Gallon	x 1.0 Gallon

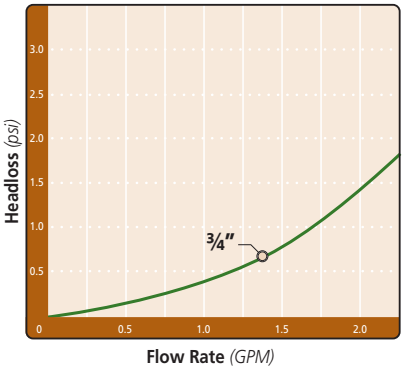
Standard Register
Gallon Totalizer

Fertilizer Meter - *Polypropylene Body*

Performance Data

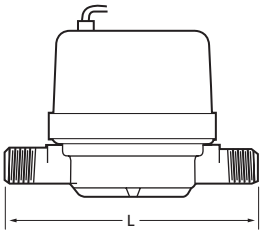
		Lowest Flow *within ± 5% Accuracy*	Lowest Flow *within ± 2% Accuracy*	Nominal Flow *within ± 2% Accuracy*	Maximum Flow *within ± 2% Accuracy*
Size	¾"	0.09 GPM	0.3 GPM	1.7 GPM	2.2 GPM

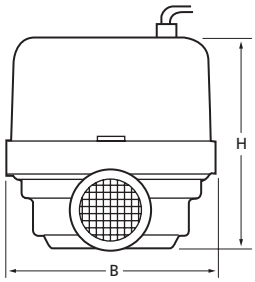
Headloss Chart



Dimensions and Weight

Size	H Height	L Length	B Width	Weight
¾"	3 1/8"	4 3/8"	3"	.6 lbs.





Ordering Information

Size	Connection	Register Type	Gallons per Pulse	Item Number	Model Number
¾"	Threaded	Standard/ Gallon	0.1	70261-011000	36FMPO.75
			1.0	70261-011030	36FMPO.751

Fertilizer Meter - *PVC Body*

Accurate Measuring with Corrosion Resistant Impeller

Netafim USA's PVC fertilizer meter is an angle type multi-jet meter. The multi-jet design assures an equally distributed load on the impeller minimizing wear and maintaining accuracy. The corrosion resistant impeller is the only moving part in contact with the liquid.

Features

- Magnetically driven sealed register.
- Only one moving part - the impeller - in contact with the liquid for minimum wear and utmost reliability.
- Dry contact electrical output - 1.0 gallons/pulse.
- Corrosion resistant impeller.

Available Size

- 1″

Specifications

Maximum Working Pressure	145 psi
Maximum Liquid Temperature	122° F
Body Material	PVC
Connections	Threaded

Installation Requirements

- Install with the dial face in a horizontal position.
- No straight pipe installation requirements.

Fertilizer Meter

Straight Pipe Installation Requirement
0 x D and 0 x D

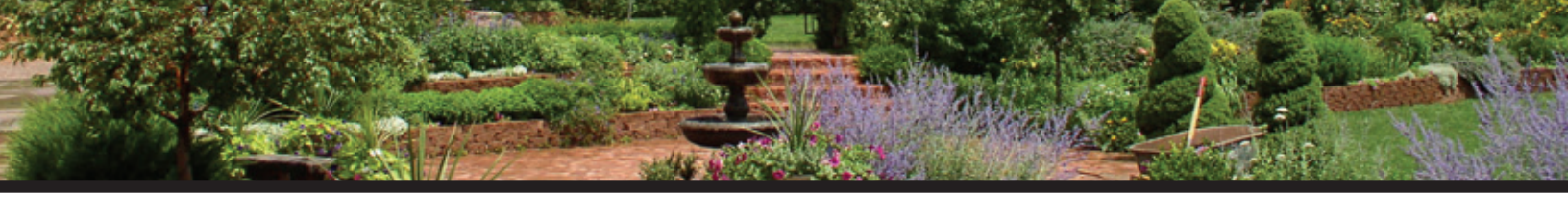
Size	Upstream Distance	Downstream Distance	Meter Length	Total Requirement
1″	0″	0″	6″	6″

Registers

Register Type ⟶		Standard	
Register Totalizer		Gallon	Gallon
Meter Size		1″	1″
Volume Unit		Gallon x 100	Gallon x 100
Pulse Output *(gallons/pulse)*		1.0	10
Pointer Resolution	Pointer 1	x 0.1 Gallon	x 0.1 Gallon
	Pointer 2	x 1.0 Gallon	x 1.0 Gallon
	Pointer 3	x 10 Gallon	x 10 Gallon

Tamper proof seal ensures unauthorized removal and/or tampering of the meter register.

Standard Register
Gallon Totalizer

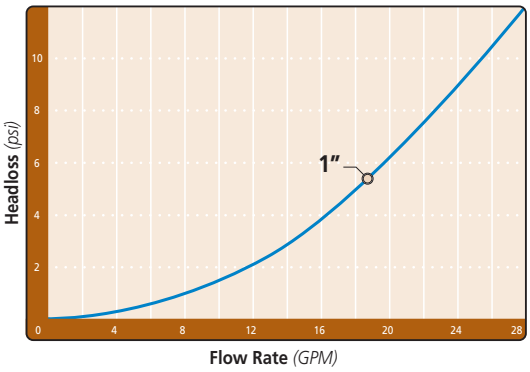


Fertilizer Meter - *PVC Body*

Performance Data

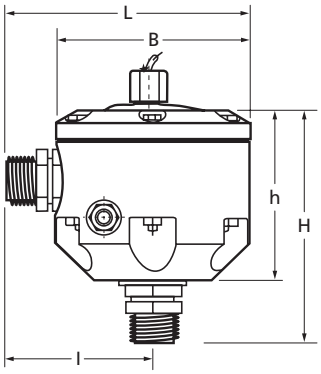
		Lowest Flow *within ± 5% Accuracy*	Lowest Flow *within ± 2% Accuracy*	Nominal Flow *within ± 2% Accuracy*	Maximum Flow *within ± 2% Accuracy*
Size	1″	0.44 GPM	1.8 GPM	22 GPM	44 GPM

Headloss Chart



Dimensions and Weight

Size	H Height	h Height	L Length	l Length	B Width	Weight
1″	6″	4 ½″	6″	3 ½″	4 ¾″	1.9 lbs.



Ordering Information

Size	Connection	Register Type	Gallons per Pulse	Item Number	Model Number
1″	Threaded	Standard/Gallon	1.0	70261-011300	36FMPVE1

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