

# AUTOTROL™ TURBINE WATER METER



1TM-NPT shown

## Flow Sensor Specifications

	MODEL 1TM 1 inch (25 mm)	MODEL 2TM 2 inch (51 mm)
Flow rate range	0.25 – 25 gpm (0.06 – 9.5 m <sup>3</sup> /h)	2 – 255 gpm (0.45 – 60 m <sup>3</sup> /h)
Materials of construction:		
Housing		
Turbine (Impeller)	30% Glass-Filled PPO <sup>†</sup>	30% Glass Filled PPO <sup>†</sup>
Bearings	Polypropylene	Polypropylene
Shaft	Polyimide 302 SS	Carbon Graphite No shaft—thrust bearing
Accuracy	± 3% of reading	± 3% of reading
Pressure Drop	1.5 psi @ 30 gpm (10.3 kPa @ 7 m <sup>3</sup> /h)	2.5 psi @ 150 gpm (17.2 kPa @ 34 m <sup>3</sup> /h)
Maximum water temp.	100°F (38°C)	100°F (38°C)
Maximum temp.	122°F (50°C)	122°F (50°C)
Maximum pressure	127 psi (875 kPa)	100 psi (689 kPa)
Available cable lengths	25, 50 ft (7.6, 15.2 m)	25, 50 ft (7.6, 15.2 m)
Maximum cable length – kit form	1,000 ft. (305 m)	1,000 ft. (305 m)

<sup>†</sup> PPO – Polyphenylene Oxide

# ORDERING INFORMATION

1033238	1TM-ESW	1 inch turbine meter with solvent weld PVC adapters
1033236	1TM-NPT	1 inch turbine meter with 1 inch NPT brass adapter
1034080	2TM-ESW	2 inch turbine meter with solvent weld PVC adapters
1034078	2TM-NPT	2 inch turbine meter with 2 inch NPT brass adapter
1033317	400B418-701	1 inch turbine meter only
1033358	480B78G1	2 inch turbine meter only

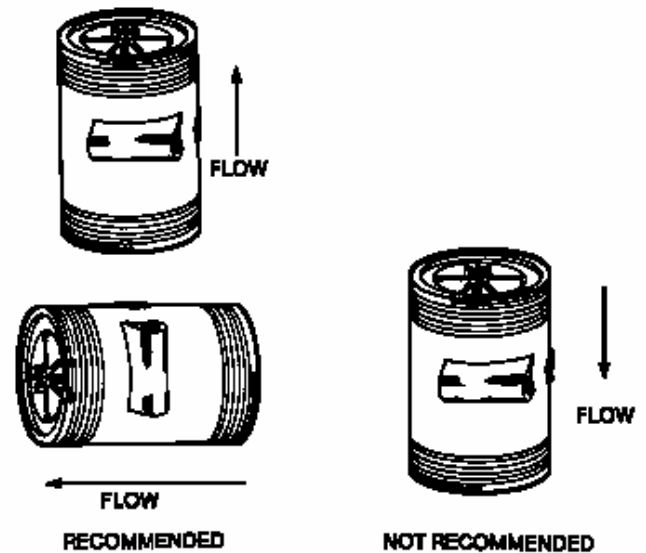
## WATER METER CABLE (ORDER ONE CABLE FOR EACH TURBINE)

1033354	49C25	25 ft cable with Hall Effect sensor
1033355	49C50	50 ft cable with Hall Effect sensor
1230307	49CKT	25 ft cable with Hall Effect sensor and junction box

## INSTALLATION INSTRUCTIONS

Install the turbine assembly in the water line. Note the flow direction arrow on the turbine body. It is highly recommended that there be a length of straight pipe either side of the turbine equal to ten times the pipe diameter.

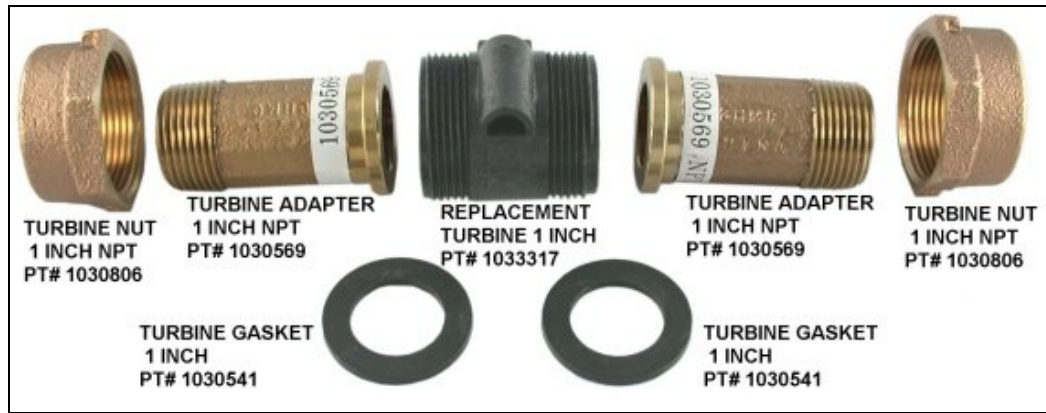
If installation conditions do not permit this length, a minimum of 12 inches (31 cm) of straight pipe before and after the 2 inch (5 cm) turbine, and 6 inches (15 cm) before and after the 1 inch (2.5 cm) turbine may be sufficient.



### **CAUTIONS:**

- **AUTOTROL TURBINE WATER METERS ARE NOT TO BE USED AS A UNION. WATER METERS MUST BE SUPPORTED AT BOTH ENDS.**
- **WATER METERS WILL BE IDEALLY LOCATED IN HORIZONTAL PIPE WITH A LENGTH OF STRAIGHT PIPE EQUAL TO 10 PIPE DIAMETERS ON EITHER SIDE.**
- **WATER METERS MUST HAVE FLOW ORIENTED FROM BOTTOM TO TOP WHEN MOUNTED VERTICALLY.**
- **DO NOT OVER-TIGHTEN THE TURBINE HOUSING ADAPTER NUTS OR YOU MAY DAMAGE THE THREADS**

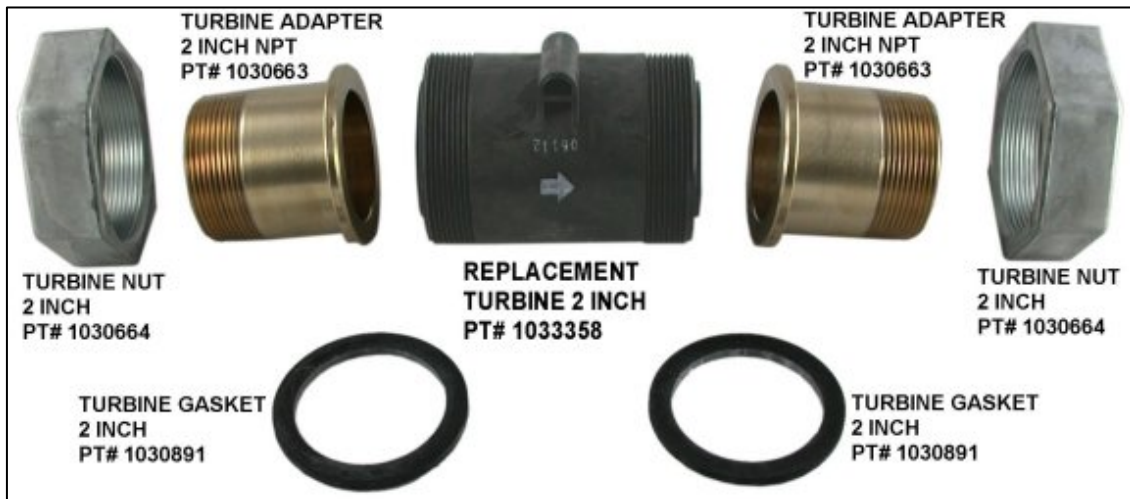
## 1TM-NPT



## 1TM-ESW



## 2TM-NPT



## 2TM-ESW



49C25 OR 49C50



49CKT



# TURBINE METERS AND REPLACEMENT PARTS

**PART NO.      DESCRIPTION**

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## **TURBINES**

1033238      1TM-ESW, 1" Turbine Meter With PVC Fittings  
1033236      1TM-NPT, 1" Turbine Meter With NPT Fittings  
1034080      2TM-ESW, 2" Turbine Meter With PVC Fittings  
1034078      2TM-NPT, 2" Turbine Meter With NPT Fittings

## **SENSOR CABLES (1 Required For Each Turbine)**

1033354      49C25, 25 Ft Cable For Turbine Meter  
1033355      49C50, 50 Ft Cable For Turbine Meter  
1230307      49CKT, Junction Box With Cable For Turbine Meter

## **1 INCH TURBINE METER REPLACEMENT PARTS**

1033317      1 Inch Replacement Turbine Meter, 400B418-701  
1030541      Gasket 1 Inch  
1030806      Turbine Nut 1 Inch for NPT Brass  
1030567      Turbine Nut 1 Inch for ESW PVC  
1030569      Adapter 1 Inch NPT Brass  
1030579      Adapter 1 Inch ESW PVC

## **2 INCH TURBINE METER REPLACEMENT PARTS**

1033358      2 Inch Replacement Turbine Meter, 480B78G1  
1030891      Gasket 2 Inch  
1030664      Turbine Nut 2 Inch for NPT Brass and PVC ESW  
1030663      Adapter 2 Inch NPT Brass  
1030666      Adapter 2 Inch ESW PVC