

# Impeller Flow Products & Accessories

Badger Meter Impeller Product Guide





# Simple, low-cost, and reliable Impeller flow measurement solutions for a variety of applications.

## Badger® Flow Meters

### SDI Series

The SDI Series is a line of full-featured stainless steel or bronze body insertion flowmeters suited for a wide variety of applications. Offering an assortment of wetted materials, several output choices, a battery power option, and a data logger option, these meters are a complete flow metering package. SDI's also have the capability of reading bi-directional flow. SDI's can be directly inserted into pipes ranging from 1.5" to 36" or greater. For easy serviceability they may be installed with a unique hot tap valve that requires no hot tap insertion tool. With local, remote or no display options, the product further expands to suit the needs of the application. High temperature models are available for temperatures up to 300° F.

### 200 Series

200 Series flowmeters are available in bronze, stainless steel and plastic versions. They may be mounted in pipe sizes of 2.5" or greater and have a hot tap option. The output of these sensors may be taken directly into a PLC or similar type device, can be conditioned with one of our flow transmitters, or may be connected directly to one of our flow monitors. The 200 style flowmeter offers a wide variety of wetted materials, and irrigation style (below grade, wet locations) sensors that incorporate a non-magnetic impeller design.

### 228 and 250 Series

These meters are part of the 200 Series which utilize a variety of plastic and metal service tees. Ranging in pipe sizes from 1/2" to 4", these meters offer a simple method of installing a flowmeter into smaller line sizes. The insert sensor concept makes it easy to remove and re-install the sensor without having to take the sensor housing (the tee) out of the piping. Connect these meters to one of our flow monitors, transmitters or Btu transmitters to complete a flow monitoring package.

### 4000 Series

The 4000 Series is a compact in-line style impeller flowmeter. Units are available in pipe sizes ranging from 1/2" to 3/4", and 1" line sizes in either PVC or PVDF materials. Several end connections and wetted material options are available. Pulse and 4-20mA output options are available as well as raw pulse versions to connect to any of our flow monitors or transmitters. The 4000 series has a low flow option which allows it to read flow velocities as low as 0.25 FPS. The unique sensor body design allows for quick and easy servicing without removing the unit from the pipe.

### Wireless Flow Meter

If providing power and output wiring to your flow sensor is difficult, we also offer a wireless sensor option. This battery powered sensor and transmitter pair can be placed in pipe sizes 1.5" or greater. The 24VAC or 24VDC powered receiver can be placed where the output is desired. The output can either be a scaled pulse output representing flow total or a frequency output representing flow rate. This option is available in several configurations including the 200 Series plastic tee sensors as well as the battery powered SDI Series sensors.



## Badger® Series 380 Btu System

The Badger® Series 380 Btu Systems provides a low cost system for metering cold or hot systems. The 380CS/HS can accurately measure flow and temperature differential to compute energy. Utilizing either BACnet or Modbus RS-485 communications protocols, or a scaled pulse output, the Btu Meter can interface with many existing control systems. The rugged design incorporates an impeller flow sensor and two temperature probes. One temperature probe is conveniently mounted directly in the flow sensor tee. The second temperature probe is placed on either the supply or the return line depending on ease of installation for the application. These minimal connections help simplify installation and save time. The main advantage of the Series 380 Btu Meters is the cost savings over other systems offered on the market today. The integration of flow and temperature sensors, along with metering components provide a single solution for metering. With this system it will be possible to meter energy where it hasn't been cost effective before.



## Badger® Flow Transmitters

The 300 series analog 4-20mA and scaled pulse transmitters, along with the setpoint controller are part of a family of low-cost products that compliment our line of flow sensors. These transmitters can be surface mounted, DIN rail mounted, or wall mounted incorporating plastic or metal enclosure. Each of the 300 series devices are programmed with a Windows® based software program for quick and easy setup.

## Badger® Data Acquisition

The Badger Meter Model 3700 is a powerful data acquisition system that allows users to log data easily and efficiently. No special software is required to set up the 3700 as most standard web browsers will communicate with it. Meter connections can be made to one of the eight inputs or via the standard modbus input. The Badger Meter Model 345WT is a wireless mesh transceiver. Connecting one to a Model 3700 and then deploying one or more in remote applications allows for a self-healing mesh network to be created that provides additional connectivity for more sensors.



## Badger® Flow and Btu Monitors

A complete line of flow and Btu monitors are available when a local display or multiple features are required. Monitors are available with single inputs and outputs or multiple inputs and outputs. Batch control versions are a simple way to provide reliable process control. The vast flexibility in accepting various types of inputs and offering several different types of outputs makes our line of flow monitors a simple choice for the applications where more is required than a blind transmitter. These devices may also be configured to be used as pressure, level, and temperature monitors as well. Both panel and wall mounts are available. Bacnet® and Modbus® are also an available option.

## Badger® Btu Transmitters

Our 340 family of Btu transmitters offer a complete energy calculating device in a very small size. By taking the input of any of our flowmeters as well as the input from two thermistor temperature probes, the 340 can provide an output signal representing thermal energy consumed. Various units of measure can be provided for either energy or flow. Temperature can be in Fahrenheit or Centigrade. The standard pulse signal is compatible with most energy management systems. BACnet®, Modbus, LonWorks® and Johnson Controls proprietary protocols are also available. Simple and easy Windows® based configuration software is used to setup the 340. The 340's can be surface mounted, DIN rail mounted or wall mounted incorporating plastic or metal enclosure.



## Industries

Irrigation

HVAC

Water Treatment

Waste Water

Water Conditioning

Process Water

Chemical

Semi-Conductor

Textile

Pulp & Paper

Food & Beverage

## Solutions

Flow Control

Leak Detection

Bulk Transfer

Dispensing

Batching

Blending

## Accessories

Our optional accessories help round out most application needs. Pipe saddles, fittings and hot tap tools can help with the installation of our flowmeters. Power supplies, software, and cables are available for all of our sensors, transmitters and monitors. We also offer temperature sensors for use with our Btu systems. Signal isolators are sometimes needed when one flow sensor is required to interface with more than one device. These accessories further simplify the use of our products in your application.



## Experience

All of our high quality, easy to use products are complimented with the people who know how to properly apply and support them. The people and products team have been providing flow measurement solutions for over 25 years. We also offer custom OEM sensors, transmitters and monitors for low cost or unique design needs. Whether you require one measurement point, a dozen, or hundreds, we can offer a solution to fit the need.



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