



GF Piping Systems

# Signet 2580 FlowtraMag™ Meter

The performance you've been  
waiting for is here



# Full-bore magnetic flowmeter

## High accuracy and lighter weight

The Signet 2580 FlowtraMag Meter is a full-bore plastic in-line style magnetic flow meter. The PVC body with titanium electrodes has no moving parts, and is two to three times lighter in weight compared to traditional metal magmeters on the market.

It is designed for high accuracy flow measurement in short pipe runs. Users can configure and calibrate the 2580 using the GF Configuration Tool Bluetooth® App.



### +Features & Benefits

- No moving parts
- Lighter in weight compared to traditional metal magmeters
- Reduced straight run requirements, ideal for final effluent lines, wellheads and skids
- Factory calibrated with certificate ( $\pm 1\%$  of reading accuracy)
- Partially filled pipe detection status indicator
- Reverse flow direction configurable with 0252 Configuration Tool or GF Config Tool Bluetooth® App
- One device with three different outputs: field selectable Frequency or Digital ( $S^3L$ ), and analog 4 to 20 mA
- On-the-fly configuration with GF Config Tool Bluetooth® App

### + Applications

- Chemical Processing/Production
- Cooling Tower
- Filtration Systems
- Water and Wastewater Treatment
- Municipal and Industrial Water Distribution
- Pool and Aquatics
- Process Control, Water Process Flow
- Reverse Osmosis
- Scrubber Systems
- Metal Recovery and Landfill Leachate
- Mining

### Approvals



U.S. and International Patents Pending

## + Wireless Connection

Configure and calibrate your required parameters for your system using the GF Configuration Tool Bluetooth® App.

## + Easy Access to Process Data

Direct connection via Smart Phone.



## + Commissioning via App

- Configure  
Change settings including units, 4 to 20 mA span and flow direction using drop down selections
- Clone settings  
Save files to your Smart Devices or share via text or email and then upload settings to the sensors

## + Calibration

- Diagnostics ease  
Connect to sensor via GF Config Bluetooth® App using Smart Devices and monitor flow rates and temperatures and log data to CSV file
- Maintenance  
Titanium electrodes and plastic body result in maximum chemical compatibility
- Calibrate  
Perform Rate or Volume Calibrations directly via GF Config Bluetooth® App using Smart Devices



For more information:  
[www.gfsignet.com](http://www.gfsignet.com)

## + Compatibility

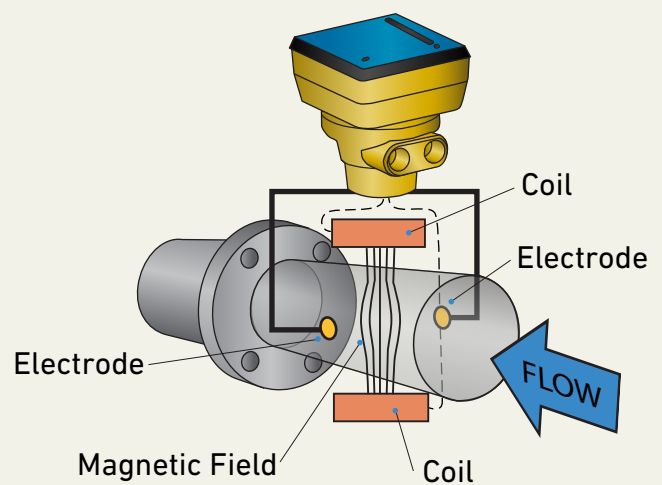
Compatible with all  
Signet instruments



## + Theory of Operation

Magnetic flowmeters operate under the principles of Faraday's Law/Lorentz Force of electromagnetic induction to determine the flow of liquid in a pipe.

Flow of a conductive liquid through the magnetic field will cause a voltage signal to be sensed by electrodes located on the flow tube walls. When the fluid moves faster, more voltage is generated. The voltage generated is proportional to the movement of the flowing liquid, the electronic transmitter processes the voltage signal to determine liquid flow.



## + Communication

Includes output types to support multiple platforms

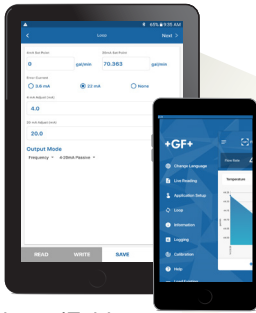


Signet Instrument

Digital (S<sup>3</sup>L) or Frequency



PC Running Signet 0252 Configuration Tool

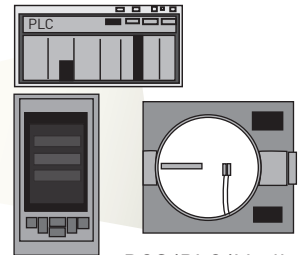


Smart Phone/Tablet

GF Configuration Tool Bluetooth® App

Digital (S<sup>3</sup>L)

4 to 20 mA

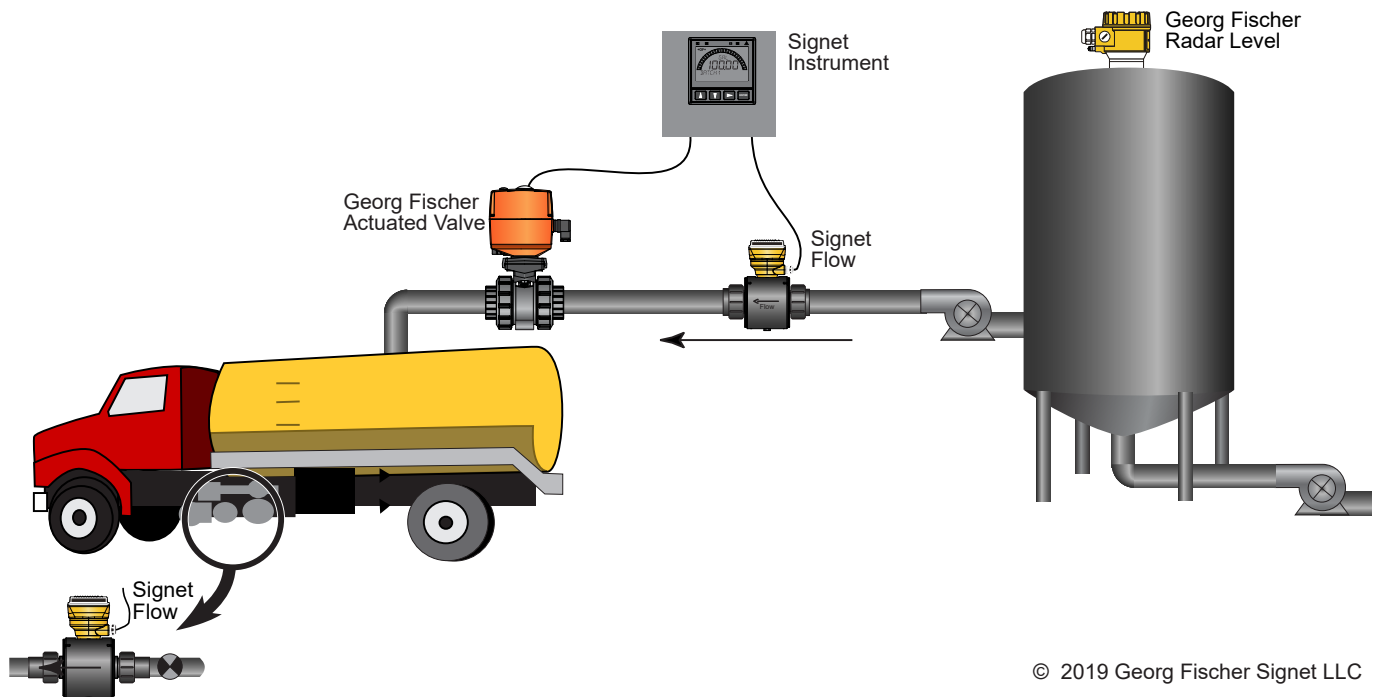


DCS/PLC/Modbus



# Applications

## Bulk Chemical Batching



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The Signet 2580 FlowtraMag™ magnetic flow meter when being used with the Signet 9900-1BC batch controller combines for a highly accurate yet economical solution for bulk chemical delivery to chemical trucks. The 2580 FlowtraMag's ability to measure accurately with minimal straight runs of pipe, means the user can fit these flow sensors in more confined areas. Add in a Georg Fischer Actuated valve and you have a complete batch control system.

Manufacturing companies use several different chemicals in the processes for their production. The chemicals can be aggressive and are normally stored in tanks at their facility.

When those tanks become depleted, they need to be filled by tanker trucks that deliver replenishment chemicals. Those trucks come from chemical distribution / manufacturing centers where the material is kept in much greater volumes.

In this Georg Fischer Automation scenario, chemical materials are stored in a large storage tank.

A tanker truck pulls into the depot where an operator attaches a hose to the truck's tank. A 9900-1BC Signet Batch Controller is set with a predetermined batch. It is being fed a flow signal from the Signet 2580 FlowtraMag.

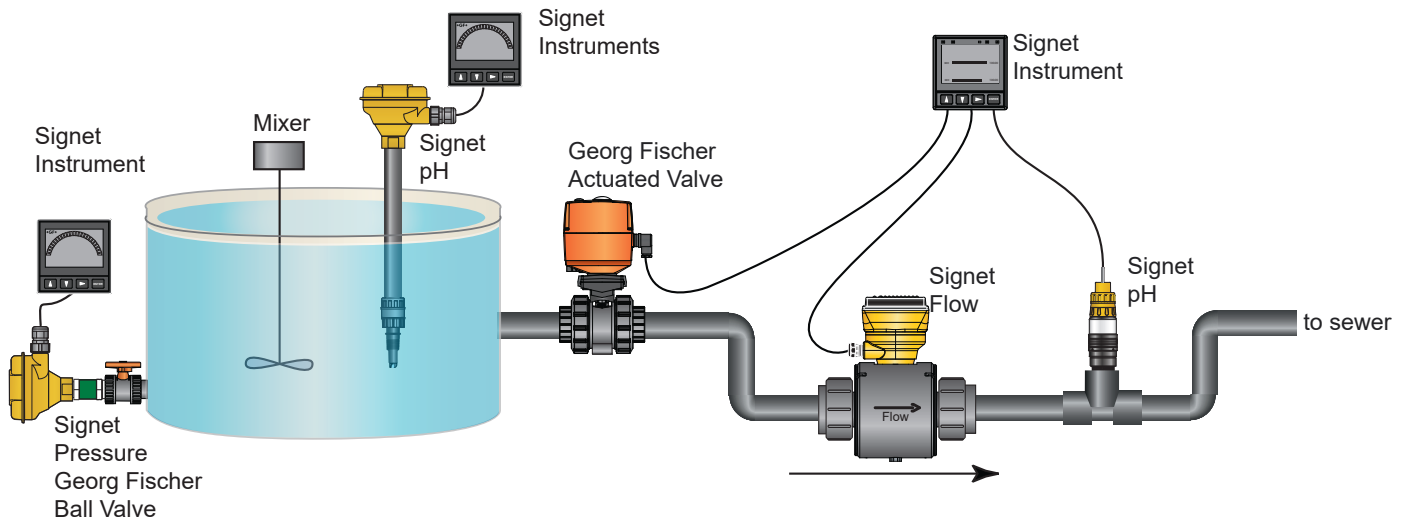
The controller is also tied in to a Georg Fischer automated valve. When the start button is pushed on the 9900-1BC, the valve opens and the chemical pump starts.

The batch is now under way. With the 2580's high accuracy ( $\pm 1\%$  of reading) even when placed within 3 pipe diameters away from an obstruction, the system will provide an accurate batch of the desired chemical to the tanker truck. At the end of batch the 9900-1BC signals the valve to close and the pump to stop. An accurate batch of chemical has now been delivered and the tanker is on its way.

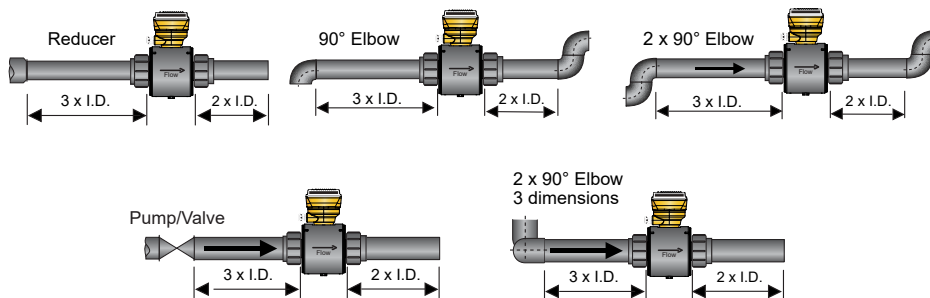
A 2290 Radar Level sensor is placed in the main supply tank to monitor proper level of the chemical in that tank.

Even when delivering chemicals to the end user the tanker truck could be set up with the same batch control system to deliver accurate batches to their customer.

# Industrial Effluent Monitoring



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Georg Fischer Automation is being used to ensure the operations in the final treatment area of this facility are working properly and any effluent is safe and accounted for.

The 2580 FlowtraMag Meter is plumbed into a trap to help maintain a full pipe. The effluent is monitored and with the 2580 FlowtraMag's  $\pm 1\%$  of reading accuracy, the customer can report the gallons dumped for billing purposes to the city.

Typically, without an effluent flow device, the city would look at the incoming water to the facility and assume the same amount is being dumped in to the city sewer. The reality may be that the user in fact consumes the water as part of their production and therefore dispenses considerably less wastewater into the sewer system. The use of the 2580 FlowtraMag proves the reduced effluent, resulting in a savings for the customer that over time more than pays for the measurement device.

1. Effluent flow is measured and a digital signal is sent to a Signet 9950 that provides totalization. For long term reporting a 4 to 20 mA signal from the 9950 or 2580 can be sent to the building automation system for reporting purposes.
2. Batch pH treatment of the effluent in a tank prior to leaving the facility can be adjusted with a submersible 3-2751-3 / 2724-00 pH sensor electronics and pH probe connected to a 9900 can send a signal out to chemical dosing pumps for set point control.
3. A Signet 2450 tied to the external part of the tank (2250 for submersion) connected to a 9900 for level measurement.
4. In-line pH sensor electronics (3-2751-1) hooked up to a 3719 Wet-Tap pH Assembly with 3-2754-WTP pH electrode, monitors final effluent pH for proper compliance. If the pH goes above or below the window settings in the 9950, a relay will activate, closing the Georg Fischer Actuated valve, thus preventing the customer from dumping effluent that potentially would put them in violation with the city.

# Worldwide at home

Our sales companies and representatives ensure local customer support in over 100 countries.

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