

# titan

## Small Bore Flow Meters & Flow Meter Solutions



- End user & OEM solution providers
- An ISO 9001 company
- Designing & manufacturing flowmeters since 1981
- Traceable calibrations

**Titan Enterprises Ltd**

## Quality and Production

All our flowmeters are designed, manufactured and tested in-house. We are an ISO 9001 accredited company able to draw upon a highly experienced and conscientious workforce. Our standard materials of construction are selected for their excellent mechanical and chemical stability. Custom flow meters can be produced in materials acceptable to a customer's application environment requirements. Titan employs a manufacturing system that has full traceability for all critical components. Flow meter manufacture at Titan complies with CE, hazardous material and ROHS regulations. All external companies supplying

components and materials to Titan Enterprises are vetted to our standards to ensure top quality, reliable products and deliveries.

Calibration of our flow meters is undertaken in house on our bespoke calibration rigs. Each meter is calibrated with a very low uncertainty. When manufactured the flow rigs were certified to an overall uncertainty of  $\pm 0.05\%$ . Calibration is over the whole flow range not just a one point calibration check.

## Product Range Overview

### Atrato ultrasonic flow meters

Utilising patented technology that enables it to operate with excellent accuracy over very wide flow ranges, the Atrato inline ultrasonic flow meters are a genuine breakthrough in flowmeter technology. Its rugged, clean bore construction makes the Atrato ideal for a whole range of low flow applications. Titan is designing an ever expanding range of Atrato products, both bespoke and with standard configurations. All these electronic meters are immune from viscosity effects, deliver excellent accuracy and unmatched performance across a wide dynamic range.

### Oval gear meters

Titan designed its own range of oval gear flowmeters to satisfy the need for a simple, reliable gear meter that could be used on both viscous and non-viscous products. Used today by a large number of industrial and process customers worldwide – Titan's Oval Gear (OG) flow meter range has expanded and OEM configurations have included meters for use at high temperature (200°C) or high pressure (950 Bar).

### Turbine flow meters

This very flexible range of meters is available in a wide choice of permutations enabling Titan to deliver a turbine meter optimised to your precise requirements. Nine flow ranges, two detector types, three termination options, four 'O' ring materials, 6 styles of end fittings and four end fitting material options are available and OEM configurations can be accommodated.

### Low cost turbine flow meters

Manufactured from high quality, chemically resistant polymers, these low cost turbine flow meters provide a very affordable solution for a wide range of applications. Drawing upon long experience, Titan now offers the most commonly requested low cost turbine flow meter configurations as standard models. For larger volume requirements, Titan offers a consultancy service whereby meters can be tailored with differing flow ranges, labelling, cable type, length and connectivity to exactly meet your needs.

### OEM solutions

Titan prides itself in its ability to produce a flowmeter for specific applications whether it is to work with laboratory equipment, a medical sensor or as part of an industrial process plant. Each OEM solution is developed to provide an optimised flow meter specific for the customer and if required branded to their requirements.

# atrato™

## BENEFITS

- High reliability
- No moving parts
- Fast response
- Through bore design
- Time of flight technology
- Ease of use



## Low flow ultrasonic flow meter

This unique technology enables Titan's Atrato® to outperform any other low flow ultrasonic meter on the world market today. It is an in-line product with a straight through bore which varies from 1mm (operating from 2ml/min) up to 6mm for the 20 litre per minute model.

The wetted components are all selected to offer high chemical resistance and long term meter stability. Each meter has a 200:1 ratio between the minimum and maximum flow with a linearity of  $\pm 1.0\%$  over the entire range. This family gives full user control and the ability to alter all of the input and output parameters to suit their application. The meters can be stand alone units or operated with a computer connection and will run quite happily on USB power alone albeit with some output limitations.

## FEATURES

- Choice of materials
- $\pm 1.0\%$  of reading
- $\pm 0.1\%$  repeatability
- 4 Flow ranges
- USB interface
- 10/30 Bar rating
- Choice of end fitting
- 200:1 turndown
- Rate & total option
- Flow switch
- 60°C or 110°C Max
- Pulse output
- option 10-24 Vdc
- Non-metallic options
- Remote inputs
- Optional seal materials.
- Analogue outputs
- 0-10V or 4-20mA
- NPN or PNP
- LCD display
- Unit & time enunciators



# OG Range

## BENEFITS

- High reliability
- Long service life
- Bidirectional
- Easily serviced
- Low pressure drop
- Custom options available

## Oval gear flow meters for 1 to 10000cstks

These compact rugged oval gear flowmeters are designed to give high performance with a low cost of ownership. These meters are happy measuring simple water like products as well as lubricating fluids. There are several versions; some can have totally non-metallic wetted components, PEEK™, ceramic and a choice of

elastomer which makes these the ideal choice for the metering of aggressive chemicals.

The standard inlet and outlet are BSP or NPT female threads, flanges are also available. For OEM use, alternative mountings, including manifolds, are available. The standard models are 316 St St, aluminium, Hastelloy C and PEEK™. For hazardous areas either the Namur sensor or the reed switch (simple apparatus) may be used.



## FEATURES

- Choice of materials
- Up to  $\pm 0.5\%$  of reading
- $\pm 0.1\%$  repeatability
- 7 Flow ranges
- IS options
- 10/700 Bar rating
- Choice of end fitting
- High turndown
- Individual calibration
- Compact assembly
- 80°C to 150°C Max
- Pulse output
- 5-24 Vdc
- Non –metallic options
- Rugged construction
- Optional seal materials.
- Sensor choices
- Low pressure loss
- NPN or Reed switch
- IP67 NEMA 4
- OEM options



# FT2 Range

## BENEFITS

- High reliability
- Long service life
- Cost effective
- Easily serviced
- Low pressure drop
- Can be tailored to suit

## The flexible turbine flow meter

This multi-range radial flow turbine meter uses a low inertia turbine supported on robust sapphire bearings in a chemically resistant housing. 9 flow ranges (0.02 to 160 litres per minute), a choice of "plug in" fittings and individual traceable calibration make this meter one of the most flexible available. For OEM applications the fittings can be tailored to suit the installation and speed production. Custom leads or connectors are also available for quantity orders. Two sensor types are available. Optical for greatest flow range and accuracy and Hall effect for high reliability and opaque fluids.



## FEATURES

- Choice of sensor
- up to  $\pm 1.0\%$  FSD
- $\pm 0.1\%$  repeatability
- 9 Flow ranges
- Traceable calibration
- 15 Bar rating
- Non-metallic option
- OEM possibilities
- Compact assembly
- 125°C Max
- Pulse output
- 5 or 7-24 Vdc
- Rugged construction
- Optional seal materials.
- Threaded or hose
- 700mB max press loss
- Choice of end fitting
- IP67 NEMA 4



# 900 & 1000 Range

## BENEFITS

- High reliability
- Long service life
- Cost effective
- Easily serviced
- Low pressure drop
- Can be tailored to suit

## Turbine Meters

The 900 and 1000 series flowmeters are designed to give high performance and competitive pricing with 7 flow ranges from 0.05 to 30 litres per minute. Its choice of body materials makes this the ideal choice for the metering of aggressive chemicals, including ultra-pure water. The standard inlets are ¼" and ½" BSPF although for OEM use alternatives are available. The bearings are made of sapphire for long life and reliability, the body is either PVDF or 316 stainless steel and as standard the 'O' ring seal is Viton™. Dual pulse outputs are available to give both PNP and NPN pulses for greater interface flexibility.



## FEATURES

- Hall effect sensor
- Up to  $\pm 1.0\%$  FSD
- $\pm 0.1\%$  repeatability
- 7 Flow ranges
- Traceable calibration
- 10 Bar rating
- Non-metallic option
- OEM possibilities
- Compact assembly
- 125°C Max
- Pulse output
- 5 -24 Vdc
- Rugged construction
- Optional seal materials
- ¼" or ½" threads
- 700mB max press loss
- PVDF body option



# 800 Range

## BENEFITS

- High reliability
- Long service life
- Cost effective
- Easily serviced
- Low pressure drop
- Can be tailored to suit

## Low Cost Turbine Flow Meters

### 800 Series a dependable, economic solution

The 800 series flowmeter has been a very popular meter since its inception some 20 years ago and remains a very popular OEM and end user product. It is designed to give high performance and low cost of ownership due to its inherent reliability. It has 6 flow ranges from 0.05 to 15 litres per minute. It has a totally non-metallic construction which makes this the ideal choice for the metering of aggressive chemicals including ultra-pure water. The standard inlet tubes are barbed to accept two hose sizes 8mm and 12mm although for OEM use alternatives are available. The bearings are made of sapphire for long life and reliability, the body is moulded PVDF as standard and the 'O' ring seal is typically Viton™. The magnets within the turbine are moulded in for better chemical compatibility. Two further versions have the dual pulse output or a built-in rate and total meter. For OEM applications alternative cable types and lengths are possible as are custom flow ranges and a battery powered option.

## FEATURES

- Hall effect sensor
- up to  $\pm 1.0\%$  FSD
- $\pm 0.1\%$  repeatability
- 6 Flow ranges
- Traceable calibration
- 10 Bar rating
- Non-metallic
- OEM possibilities
- Compact assembly
- 125°C Max
- Pulse output
- 5 -24 Vdc
- Rugged construction
- Optional seal materials.
- 8 or 12mm hose
- 700mB max press loss
- PP body option
- Rate/total model



## Company Overview

With over 40 years experience in flow meter innovation - Titan Enterprises Ltd are an internationally respected UK manufacturer of high performance solutions such as the Atrato ultrasonic flow meter, Oval Gear flow meters and the low flow Turbine flow meters and instrument range. Our knowledgeable team can offer either an off-the-shelf meter or fully bespoke flow system designed for a particular application whether your requirement is a low cost OEM solution or a specialist flowmeter in exotic materials. Titan Enterprises manufacture standard and bespoke flow meters for smaller pipe sizes (1 to 50mm) with flow rates from 1ml to 500 litres per min. Today Titan supplies innovative flow measurement solutions into a broad range of sectors, including medical, industrial, food and drink, laboratory and pharmaceutical. We are very active in flow meter research and development and in 2013 alone we filed 4 patent applications.

**titan**

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