



## TURBINES INCORPORATED PRODUCTS OVERVIEW

# HIGH ACCURACY TURBINE FLOW METERS



- » Vertical or horizontal installation
- » Low Pressure Drop
- » NIST Traceable Calibration
- » CRN Certified

## Sizes

1/2 to 12"

## Temperature Range

-450°F to +450°F  
(+850°F with special coil)

## Standard Endfittings

AN Flare, NPT, Flanged,  
Sanitary (consult factory for  
other options)

## Flowrates

1 to 12,000gpm

## Accuracy

Linearity:  $\pm 0.5\%$   
 $\pm 0.25$  available on request  
Repeatability:  $\pm 0.1\%$

## Standard Material

316 Stainless steel 17-4PH, 440C  
Stainless steel or Duplex

# HIGH ACCURACY WAFER



- » Vertical or horizontal installation
- » Low Pressure Drop
- » NIST Traceable Calibration
- » CRN Certified

## Sizes

1 to 4"

## Temperature Range

-450°F to +450°F  
(+850°F with special coil)

## Standard Endfittings

Fits between two existing flanges,  
Installation kits available

## Flowrates

4 to 1,250gpm

## Accuracy

Linearity:  $\pm 0.5\%$   
 $\pm 0.25$  available on request  
Repeatability:  $\pm 0.1\%$

## Standard Material

316 Stainless steel 17-4PH, 440C  
Stainless steel or Duplex

# CRYOGENIC FLOW METERS



- » Vertical or horizontal installation
- » Low Pressure Drop
- » NIST Traceable Calibration
- » CRN Certified
- » NTEP Certified, NMi Netherlands Certified
- » OIML R117, R81, MID

## Sizes

1/2 to 12"

## Temperature Range

-450°F to +450°F

## Standard Endfittings

AN Flare, NPT, Flanged, Wafer, Sanitary (consult factory for other options)

## Flowrates

1 to 12,000gpm

## Accuracy

Linearity:  $\pm 0.5\%$   
 $\pm 0.25$  available on request  
Repeatability:  $\pm 0.1\%$

## Standard Material

316 Stainless steel, Nickel 200, 17-4PH, 440C Stainless steel



# INTEGRATED ELECTRONICS FLOW METERS



- » Vertical or horizontal installation
- » NIST Traceable Calibration
- » Low Profile compact design

## Sizes

7/8 to 1"  
Consult factory for other sizes

## Temperature Range

-22°F to 150°F

## Standard Endfittings

FNPT

## Flowrates

7/8" = 3 to 30gpm  
1" = 5 to 50gpm

## Accuracy

Linearity:  $\pm 1.0\%$   
Repeatability:  $\pm 0.1\%$

## Standard Materials

316 Stainless steel, 416 Stainless steel,  
CD4MCu, Tungsten Carbide



# LOW FLOW SERIES FLOW METERS



## Orifice Sizes

0.020 to 0.175"

## Flowrates

.007 to 3gpm

## Temperature Range

-450°F to 450°F  
(+525°F with special coil)

## Repeatability

± 0.25%

## Standard Endfittings

NPT, AN Flare

## Standard Material

316 Stainless steel, 17-4PH,  
440C Stainless steel

# GAS FLOW METERS



## Sizes

1 to 12"

## Temperature Range

-450°F to 450°F

## Standard Endfittings

Grooved, NPT, Flanged, Wafer  
(Consult factory for other options)

## Flowrates

0.5 to 12,000 ACFM

## Accuracy

Linearity: ± 1.0%  
Repeatability: ± 0.1%

## Standard Materials

316 Stainless steel, 17-4PH,  
440C Stainless steel

- » Vertical or horizontal installation
- » NIST Traceable Calibration
- » Encapsulated Version Available for High Pressure, Low Temperature
- » Liquid and Gas Measurement

# SANITARY SERIES FLOW METERS



- » CIP/SIP
- » 3A Certified
- » Vertical or horizontal installation
- » NIST Traceable Calibration
- » CRN Certified

## Sizes

1/2 to 3"

## Flowrates

1.25 to 650gpm

## Temperature Range

-100°F to 450°F

## Accuracy

Linearity:  $\pm 0.5\%$

Repeatability:  $\pm 0.1\%$

## Standard Endfittings

Sanitary

## Standard Material

316 Stainless steel

17-4 PH Stainlessss steel, Rulon®,  
Carbon Composite



# QUICK CHANGE METER



- » Field servicable internals without removing meter from the line
- » Vertical or horizontal installation
- » NIST Traceable Calibration
- » Low Maintenance Cost

## Standard Sizes

1 or 2"

## Flowrates

5-225gpm

## Temperature Range

-40°F to 300°F

## Accuracy

Linearity:  $\pm 1.5\%$   
Repeatability:  $\pm 0.15\%$

## Standard Endfittings

NPT, Grooved, Flanged,

## Standard Material

316 Stainless steel, 17-4PH,  
Duplex Stainless steel, 440C Stainless  
steel, Ceramic, Tungsten carbide



# TM SERIES LIQUID FLOW METER

TM Series



- » Vertical or horizontal installation
- » CRN Certified
- » Economical solution with quick delivery
- » NIST Traceable Calibration

**Size**

3/8 to 10"

**Temperature Range**

-100° to 250°F  
(850°F with special coil)

**Standard Connections**

Flanged, Grooved, NPT  
(Consult factory for other options)

**Flowrates**

From 0.3-5,500gpm  
(10-190,000 bpd)

**Accuracy**

Linearity: ± 1.0%  
Repeatability: ± 0.1%

**Standard Materials**

316 Stainless steel,  
CDMCu, 416 Stainless  
steel, Tungsten Carbide

# WM SERIES LIQUID FLOW METER

WM Series



- » Vertical or horizontal installation
- » Economical and Space Efficient
- » CRN Certified
- » NIST Traceable Calibration

**Sizes**

3/8 to 10"

**Temperature Range**

-100° to 250°F  
(850°F with special coil)

**Standard Endfittings**

Fits between two flanges,  
Installation kits available

**Flowrates**

0.3-5,500gpm  
(10-190,000 bpd)

**Accuracy**

Linearity: ± 1%  
Repeatability: ± 0.1%

**Standard Material**

316 Stainless steel, CDMCu, 416  
Stainless steel, Tungsten Carbide

# HIGH PRESSURE FLOW METER



- » Pressure up to 15,000 psi
- » NIST Traceable Calibration
- » Vertical or horizontal installation
- » CRN Certified

**Sizes**

2 or 3"

**Temperature Range**

-100°F to 250°F

**Standard Endfittings**1502 Hammer Union  
end connection**Flowrates**

15-600gpm

**Accuracy**

Linearity: ± 1%

Repeatability: ±0.1%

**Standard Material**A286 Stainless steel, 316 Stainless  
steel, CD4MCu, Tungsten Carbide

## FLOW MONITORS



F Series

- » Intrinsically Safe Available
- » Three micro-switch keys with UV - resistant  
polyester key pad
- » Suitable for direct or remote mount
- » Temperature & Pressure Compensation  
Available

**Power**

6 – 30V DC or 4–20mA

Loop-powered, Lithium Battery  
Pack**Physical Dimensions**

5.1" x 4.7" x 2.9"

**Outputs**

Pulse or 4-20mA output

**Temperature Rating**

-40°F to 158°F

**Display Size**

3.5" x 1.6"

**Communication**Modbus RS485,  
Free configuration software**Signal Input**

0 – 7000 Hz

# FLOW MONITORS



FML250

- » Temperature Compensation Available
- » 2-40 Point Linearization
- » Independent Rate Indicator and Totalizer
- » Built-in test system for diagnostics
- » Backlit Display
- » Intrinsically Safe Version Available
- » Operating Alarms

## Power

7.5-36V DC or 4-20mA loop-powered,  
Lithium Battery Pack, Polarity protected

## Enclosure

NEMA 4X or IP66,

## Outputs

Pulse or 4-20 mA

## Temperature Rating

Operating: -22°F to 150°F

## Signal Input

0-6000Hz



E Series

- » Explosion Proof
- » Temperature & Pressure Compensation Available
- » Through Glass Programmable
- » Backlit Display
- » Direct or Remote Mounting

## Power

9 – 27V DC or 4-20mA  
Loop-powered, Lithium Battery  
Pack

## Physical Dimensions

5.1" x 4.7" x 2.9"

## Outputs

Pulse or 4-20mA

## Temperature Rating

-40°F to 158°F

## Display Size

3.5" x 1.6"

## Communication

Modbus RS485,  
Free configuration software

## Signal Input

0 – 7000 Hz

# CRYOGENIC DELIVERY SYSTEMS

CDS2000



- » 4 softkeys and embedded resistive touchscreen
- » Multiple tickets with customization options
- » NTEP Certified, IP67
- » Automatic maintenance reminders
- » Real-Time detail diagnostics & alarm screens
- » No heater or battery required

## Control & Communication

Pump Control (1) Form C 5A relay,  
Alarm (1) Form C 5A relay,  
Spare Form C 5A relay,  
RS232 & Bluetooth communications,  
Real-Time data streaming,  
USB front panel port

## Physical Dimensions

10.5" x 8.9" x 2.75"

## Operating Temperature

-40°F to 125°F

## Display

800 X 480 full color graphic

## Signal Input

Frequency Range: 0 - 2500Hz,  
Sensitivity: 15mv RMS @ 10Hz (min)  
Impedance: Approx. 14 Ohms  
Noise immunity: FCO @ 2.5KHz  
Optional dual pickup

## Sensor Inputs

100, 1K, 10K RTD, Silicon Diode  
and 4-20mA

## Power

9 to 26 VDC Polarity insensitive

CDS1000



- » Real-Time calculations & graphics
- » Multiple tickets with customization options
- » Simple menu driven programming
- » 4 softkeys and standard keypad
- » NTEP Certified, IP67, NMi Netherlands Certified
- » OIML R117, R81, MID

## Control & Communication

Pump Control (1) Form C 2A relay  
Alarm (1) Form C 2A relay  
RS232 & Bluetooth

## Physical Dimensions

10.5" x 8.9" x 2.75"

## Signal Input

Frequency range: 0-2500Hz  
Sensitivity: 15mv RMS @ 10Hz (min);  
50mv RMS @ 500Hz (min); 400mv  
RMS @ 2.5KHz (min)  
Optional dual pickup

## Sensor Inputs

100, 1K, 10K RTD

## Operating Temperature

-13°F to 125°F

## Display

Backlit 240x128 graphic  
display

## Power

9-26 VDC with self-resetting fuse.  
Polarity insensitive, NiMH Battery

# INDUSTRIAL SERIES SIGNAL CONDITIONERS



## Analog Signal Conditioners

Input voltage: 7 VDC - 38 VDC  
Outputs: 0-10 V or 0-5 V, 4-20 mA  
Frequency: 0-10 kHz  
Sensitivity: 5mV or 20mV minimum  
Operating Temperature: -40°F to 185°F  
Installation: Meter mount

- » Output Proportional to Flow
- » Short Circuit Protection
- » Exposion Proof Enclosure
- » Sensitivity Field Adjustable
- » Economical

## Digital Signal Conditioners

Input voltage: 5 VDC - 30 VDC  
Output Voltage: 5 V, 10 V, Voltage following  
Frequency: 0-10 KHz  
Sensitivity: 5mV or 20mV minimum  
Operating Temperature: -40°F to 185°F  
Installation: Meter mount





## CONTACT

**Thank you for your interest in Turbines Incorporated.**

**Please visit our website and fill out the contact us form as accurately as possible to be connected to the right department for follow-up. For more immediate questions or custom engineered solutions call us using the phone number listing below.**

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