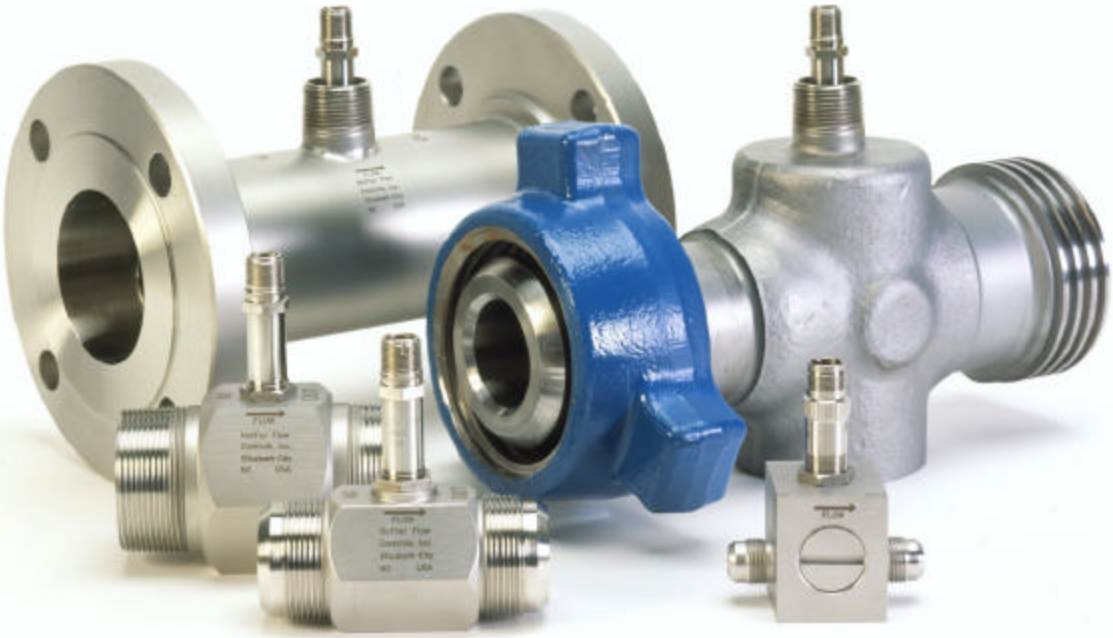
The Hoffer Collection

"Technology. Teamwork."

A powerful source of Turbine Flowmeters and Electronics for a wide range of flow applications.



INDUSTRIAL TURBINE FLOWMETERS

HO SERIES PRECISION TURBINE FLOWMETERS

Liquid Service, Inline

Repeatable Flow Range: .0625 to 15,000 GPM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 12"

Gas Service, Inline

Repeatable Flow Range: .15 to 12,000 ACFM
Accuracy:
+/-1% Linearity
+/-.25% Repeatability
Flowmeter Sizes: 1/4" to 12"

MF SERIES TURBINE MINI-FLOWMETERS FOR LOW FLOW RATES

Mini-Flow for Liquid

Repeatable Flow Range: .007 to 3.5 GPM
Accuracy:
+/-1% Linearity
+/-.25% Repeatability
Flowmeter Sizes: 1/2" line size

Mini-Flow for Gas

Repeatable Flow Range: .005 to 1 ACFM
Accuracy:
+/-2% Linearity
+/-.25% Repeatability
Flowmeter Sizes: 1/2" line

HP SERIES INSERTION FLOWMETERS FOR LARGE PIPE DIAMETERS

Insertion for Liquid

Repeatable Flow Range: .25 to 50 FPS
Accuracy:
+/-1% Linearity
+/-.25% Repeatability
Sizes: 4" to 72" pipe diameters

Insertion for Gas

Repeatable Flow Range: 5 to 250 FPS
Accuracy:
+/-2% Linearity
+/-.25% Repeatability
Sizes: 4" to 72" pipe diameters

3A SANITARY SERIES 3A APPROVED TURBINE FLOWMETERS

3A Sanitary Liquid

Repeatable Flow Range: .25 to 800 GPM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 3"

LO-CO SERIES LOW-COST, INDUSTRIAL TURBINE FLOWMETERS

Liquid Service, Inline

Repeatable Flow Range: .45 to 225 GPM
Accuracy:
+/-1% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 2"

STAR SERIES LOW-COST, INDUSTRIAL TURBINE FLOWMETERS

Liquid Service, Inline

Repeatable Flow Range: .25 to 800 GPM
Accuracy:
+/-1% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 3"

TEFLON SERIES TURBINE FLOWMETERS FOR CORROSIVE SERVICE

Liquid Service, Inline

Repeatable Flow Range: .35 to 485 GPM
Accuracy:
+/-1% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 3"

OIL & GAS TURBINE FLOWMETERS

WING NUT SERIES HIGH PRESSURE WING NUT 15,000 PSI

Liquid Service, Inline

Repeatable Flow Range: 4 to 1050 GPM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1" to 3"

Gas Service, Inline

Repeatable Flow Range: 2.5 to 600 ACFM
Accuracy:
+/-1% Linearity
+/-.25% Repeatability
Flowmeter Sizes: 1" to 3"

API SERIES CUSTODY TRANSFER TURBINE FLOWMETERS

Liquid Service

Repeatable Flow Range: 1.5 to 15,000 GPM
Accuracy:
+/-.25% Linearity
+/-.02% Repeatability
Flowmeter Sizes: 3/4" to 12"

Premium Liquid Service

Repeatable Flow Range: 1.5 to 15,000 GPM
Accuracy:
+/-.15% Linearity
+/-.02% Repeatability
Flowmeter Sizes: 3/4" to 12"

GROOVED SERIES OIL PATCH/INDUSTRIAL TURBINE FLOWMETERS

Liquid Service, Inline

Repeatable Flow Range: 4 to 12,000 GPM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 12"

WAFER SERIES OIL & GAS SPECIAL OPTION END-FITTING

Liquid Service, Inline

Repeatable Flow Range: .0625 to 15,000 GPM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 12"

Gas Service, Inline

Repeatable Flow Range: .15 to 12,000 ACFM
Accuracy:
+/-1% Linearity
+/-.25% Repeatability
Flowmeter Sizes: 1/4" to 12"

PREMIER GAS SERIES HIGH ACCURACY GAS FLOWMETERS

Gas Service, Inline

Repeatable Flow Range: .15 to 12,000 ACFM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 12"

OPTIONS COMMONLY RECOMMENDED:

Viscosity Calibrations and Curves

The standard calibration provided with all Hoffer Turbine Flowmeters consists of a 10 point, one centistoke calibration over the linear flow range of the meter. For more viscous applications, a Universal Viscosity Curve (UVC) may be necessary to document the flowmeter's performance for viscous service in order to achieve maximum accuracy.

Installation Kits

Installation piping kits are available for the Hoffer 3A Series and flowmeters with MS flared end fittings. The kits consist of two lengths of stainless steel tubing cut to a length appropriate for the up and downstream straight pipe runs. The kits are suitable for welding into existing pipe lines and can be provided with npt or flanged connections. Optional flow straighteners and special kits to accommodate flanged and npt meters are available.

SPECIALTY TURBINE FLOWMETERS

HHP SERIES HIGH PRESSURE TURBINE FLOWMETERS

Liquid Service, Inline

Repeatable Flow Range: .0625 to 275 GPM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 2"

Gas Service, Inline

Consult Factory for Gas Applications/Sizing.
Flowmeter Sizes: 1/4" to 2"

AUTOCLAVE SERIES TURBINE FLOWMETERS

Liquid Service, Inline

Repeatable Flow Range: .0625 to 75 GPM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 1"

Gas Service, Inline

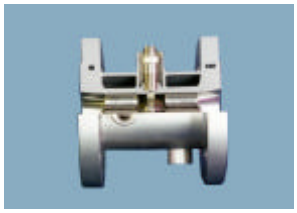
Repeatable Flow Range: .15 to 43 ACFM
Accuracy:
+/-1% Linearity
+/-.25% Repeatability
Flowmeter Sizes: 1/4" to 1"

SADDLE SERIES LOW COST INSERTION FLOWMETERS

Liquid Service, Inline

Repeatable Flow Range: 20 to 1650 GPM
Accuracy:
+/-2% Linearity
+/-.25% Repeatability
Flowmeter Sizes: 2" to 4"

STEAM JACKETED SERIES



Liquid Service, Inline

Repeatable Flow Range: .0625 to 800 GPM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 3"

HOSE SERIES BARBED AND BEADED HOSE FLOWMETERS

Liquid Service, Inline

Repeatable Flow Range: .0625 to 800 GPM
Accuracy:
+/-.5% Linearity
+/-.1% Repeatability
Flowmeter Sizes: 1/4" to 3"

Rate Indicator/Totalizer

HIT-2A

The Hit-2A features 5 digits of rate and 8 digits of total, the HIT-2A is a DC, AC, loop or battery powered indicator capable of accepting magnetic pickup, DC pulse or switch closure inputs. The unit can be ordered with an optional loop powered 4-20mA output.

- 20 point linearization option.
- Isolated scaled pulse output.
- Alarm output for rate or total.
- RS 232 Port for Configuration and Monitoring.
- Diagnostics for Pulse, Alarm and Analog output.
- Windows configuration software.

Flow Computers

Nova-Flow Computer

Volumetric Flow Computer Rate Indicator/Totalizer for Liquids and Gases

The Nova-Flow multi-channel modular flow computer. More than 500,000 configurations are possible depending upon the application requirements.

- Up to four flowmeter inputs.
- Two each temperature and pressure inputs.
- Two alarm/relay outputs.
- Two level password protection.
- Flash Memory
- Modbus Protocol.
- Temperature/Pressure/Density protocol.
- 20– Point linearization.

Nova-Flow Batch Controller

Volumetric Batch Controller Flow Computer for Liquids and Gases

The Nova-Batch modular flow computer for liquid and gas batch control. More than 500,000 configurations are possible depending upon the application requirements.

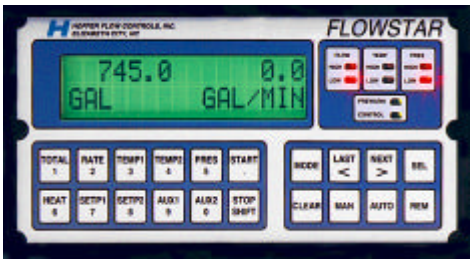
- Two Stage Batch Control.
- One flowmeter input.
- One each temperature and pressure input.
- Two alarm/relay outputs.
- Two level password protection.
- Flash Memory.
- Modbus Protocol.
- Temperature/Pressure/Density protocol.
- 20– Point linearization.

Nova-Flow Energy Calculator

Volumetric Energy Calculator Flow Computer for Liquids and Gases

The Nova-Energy modular flow computer for energy measurement. More than 500,000 configurations are possible depending upon the application requirements.

- Two flowmeter inputs.
- Two each temperature and pressure inputs.
- Two alarm/relay outputs.
- Two level password protection.
- Flash Memory.
- Modbus Protocol.
- Temperature/Pressure/Density protocol.
- 20– Point linearization.



Flowstar 2000

Volumetric Flow Rate Indicator/Totalizer for Liquids and Gases

The Model 2000 is a volumetric flow rate indicator/totalizer that provides local display and transmits flow data for control capability. Flow rate and total may be simultaneously displayed on a two line 16 line character alphanumeric display that indicates unit of measure. English and metric units are available. Up to four flowemter inputs can handled simultaneously. This unit will accept pulse or analog inputs (4-20mA). Flomweter linearization is standard on channel one and improves flowemter linearity to ±.1% of reading when used with an HO Series flowmeter.

Flowstar 2005

Mass Flow Rate Indicator/Totalizer for Liquids

The Model 2005 provides Mass flow measurement via temperature and pressure compensation . Both flow rate and total may be displayed simultaneously or independently. User may change from mass reading s to volumetric readings via the front panel of the unit . Unit is programmable via the front panel. Enclosure options include panel mount, NEMA 4x and explosion-proof. The Model 2005 is a single channel unit.

Flowstar 2007

Volumetric or Mass Batch Totalizer/Rate Indicator for Liquids

The Model 2007 is a batch controller that provides local display of flow rate, accumulated total and batch total. Optional temperature compensation is available for mass fow batching. This unit provides for a single-flowmeter input with two stage preset capability. This feature allows the user to enter a “prewarn” value. This would be used to gradually close the valve prior to reaching the total preset value. Three analog inputs can support/display process variables.

PET-123&7 Digital to Analog Converter Mag Type

The PET Series converter receives frequency input and converts it to a proportional 4-20mA or 0-10V analog output. It has been designed to fit a compact "ELBY" explosion-proof enclosure. The frequency range is field selectable to fit most applications. ZERO and SPAN adjustments make it easy to calibrate to almost any measurement range. This series is designed for use with the Lo-Co Series of low cost flowmeters.

- PET-1 0 to 10 VDC analog output.
- PET-2 4 to 20 mA analog output 2 wire.
- PET-3 4 to 20 mA analog output 3 wire.
- PET-7 4 to 20 mA analog output 2 wire with improved EMI noise immunity.

PET-456 Preamp Signal Conditioner Mag Type

The PET Series mag-preamps are designed to convert low level sinusoidal signals into stable square wave pulses. The signal conditioners are built to fit a compact “ELBY” type explosion-proof enclosure. This series is designed for use with the Lo-Co Series of low cost flowmeters.

- PET-4 TTL/CMOS (0-5 VDC)
- PET-5 0-10 VDC Square Pulse.
- PET-6 Open Collector.

CAT-1

The CAT1 is a microprocessor controlled 2-wire 4-20mA transmitter. The CAT1 converts a low level, frequency signal from a flowmeter sensor into an analog 4-20mA output. The output is proportional to the flow rate.

- Loop powered 4-20mA.
- Optional linearization.
- Windows configuration software.

CAT-2

The CAT2 is a versatile DC or AC powered transmitter htat can be interfaced with any Hoffer flow sensor. It provides a pulse output and an analog signal proportional to the flow rate. The CAT2 can be configured with high and low alarms.

- DC or AC powered transmitter.
- Pulse and analog output.
- Optional hi and low alarms.

CAT-3

The CAT3 is a DC or AC powered, microprocessor controlled transmitter. The CAT3 outputs a pulse scaled per unit of flow, and analog signal proportional to flow rate. The CAT3 can be configured with High and low alarms.

- DC or AC powered.
- Pulse and analog output scaled per unit of measure.
- Flowmeter linearization.
- Optional Hi and Low alarms.
- Windows configuration software.

ACE

ACE Advanced Cryogenic Electronics

ACE is a microprocessor-based totalizer designed to withstand the rigors and weather conditions imposed on truck-mounted, over-the-road cryogenic systems. Some features include: user-friendly software, minimal operator involvement, preventive maintenance notification and system malfunction detection. An optional point-of-sales printed delivery ticket is available as well as a number of software options offering flexibility, customization and future expansion. Display options of total, rate and temperature are available for mass or volumetric readout. Designed in compliance with O.I.M.L.—R81 standard, Handbook 44. Approved by NIST, PTB, DANTEST and others.

ACE II

ACE II Advanced Cryogenic Electronics

ACEII incorporates the newest technological advances in electronics and the time proven solutions in cryogenic measurements from the Hoffer ACE system.

Graphical display and “soft keys” allows for easy interaction between operator and the instrument. Multiple, easy to follow messages displayed in full text help the user to navigate through the instrument menu. The menu is built up hierarchically for quick access to a desired function.

Electronic circuits are constructed with rugged, multi-layer boards and SMT (surface mount components). The advanced computation algorithm provides multiple methods for calculating volume, mass and density of the fluid. Extensive built-in diagnostic functions allow for quick troubleshooting and identifying faulty components.
Communication to external computing devices is accomplished through the RS232 serial port, and front panel infrared port. ACE II supports standard MODBUS protocol.

Hoffer Flow Control's history can be traced to the beginning of the original turbine flowmeter development that incorporated pulse transducers to generate accurate and reliable outputs for flow measurement. Hoffer has been designing and manufacturing high-quality turbine flowmeters since 1968.

Today at Hoffer, the craft of combining flowmeters with flow measurement instrumentation has grown to include a wide range of process systems for a variety of fluids and gases including cryogenic applications. Computer-based designs and calibrations assure reliable, accurate operation. System designs from Hoffer allow near-custom applications at moderate costs for a wide range of process operations such as indicating, blending, and controlling.

Sales and Service

The Hoffer Applications Group is ready to assist you with sizing meters to meet your application needs. From simple off-the-shelf flow systems to complex customized instrumentation, Hoffer's technically-versed sales staff is eager to serve you. Hoffer provides extensive support in personnel training and field sales and service.

Providing turbine flowmeters of varying configurations is our specialty and our broad line of state-of-the-art electronics enables us to routinely handle a variety of flow applications.

Hoffer takes pride in its dedication to service and customer satisfaction. The Hoffer name and reputation is synonymous with quality and reliability. Our prices are competitive and typical delivery is in three to four weeks. We offer fast turn-around on repairs and availability of spare parts

Domestic and International manufacturer's representatives are also at your disposal for information and pricing.

Engineering and Production

It takes years of experience to solve complex flow applications. Experienced people can be found at Hoffer. The Hoffer Engineering and Production Group is the driving force behind every flowmeter and flow system offered. Their efforts have resulted in a set of standards unique to Hoffer Turbine Flowmeter Systems.

From engineering and assembly to calibration and testing, the people at Hoffer continue to make immeasurable contributions to give you the measurable difference. Their hands-on involvement assures superior quality and the highest accuracy.

Flow Measuring Systems For:

- ***Water***
- ***Petrochemicals***
- ***Natural Gas***
- ***Gasoline***
- ***Chemicals***
- ***Cryogenics***
- ***Energy Management***
- ***Oil & Gas Processing***
- ***Industrial Gases***
- ***Crude Oil***

HOFFER FLOW CONTROLS, INC.
107 Kitty Hawk Lane, P. O. Box 2145, Elizabeth City, NC 27906-2145
800-628-4584 252-331-1997 FAX 252-331-2886
www.hofferflow.com email: info@hofferflow.com

The quality system covering the design, manufacture and testing of our products is certified to International Standard ISO 9001.

ISO9001
Registered Company