

Smooth Flowmeters

MANUFACTURERS & SERVICE PROVIDERS

**Accurate flow measuring technology for
liquids & Gases - Products and Services**



SMOOTH FLOWMETERS

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WELCOME TO SMOOTH FLOWMETERS

ABOUT US

The industries have now become more advanced and thanks to the highly developed solutions providers!!! One such name is Smooth Flowmeters. As the very name implies, our company deals with flow meters required by many industries to accurately monitor, measure and control the flow. Mr. Sushant Sahu, the founder of Smooth Flowmeters, established the company in 2013 with a dream to serve efficiently as a manufacturer, importer & exporter of Flow meters such as Turbine, Electromagnetic, Hydraulic oil tester and the so on.

The driving force of our company is the pioneering spirit of the founder & promoter and the zeal to achieve complete satisfaction of our customers. Apart from creating our own range, we partnered with a German based company – KRACHT GmbH in 2013. The product ranges KRACHT Gear and Screw type PD Flowmeters. Besides this, In 2014, M/S EPO Signal, Russia also partnered with us to market their products like Ultrasonic based air and gas Flowmeters and EVC. Also, we provide the After Sales Service.

OUR INFRASTRUCTURE

Smooth Flowmeters is a company which deals with a complete flow and pressure measurement solutions to various Industries. Our large factory is located in a prime location of Thane, a city in the Indian state of Maharashtra. The manufacturing of flowmeters is carried out by making use of progressive tools and equipments. The facility is upgraded a several times since establishment to keep it in pace with the latest technology to meet the increasing requirements. The units wherein the operations are conducted are:

R&D unit
Manufacturing unit
Quality testing unit
Warehouse and packaging unit

HISTORY

Previously, the Company started with commissioning and After Sales Services of Instruments. Wherein, the customers started relying on our services, we expanded our domains by entering into manufacturing and marketing field. The founder, an Instrumentation Engineer, utilized his more than 12 years of on-site experience of handling Flowmeters, Gas Meters and Regulating skid to start his own business. He leveraged his knowledge, skills and experience in oil and gas sector to grow his business.

WHY US?

Serving the products useful in several applications:

The offered range finds usage in oil/ gas refinery and several process industries such as food, steel, shipbuilding, defense, power, pharmaceuticals, chemical, water and automobile.

Working on mission:

Working on a mission to Make and Market the products that can improve the automation level in Indian industries. It also includes customer's satisfaction regarding quality, safety, value for money, emulous and environment friendly.

New product launch:

Always engaged in launching new products; Our recent introduction is a Twin Lobe type Positive Displacement Flowmeter for liquids in a unique design.

Markets we are serving:

Customers of Europe, Asia, The Middle East and Africa.

OUR PARTNER

KRACHT GMBH, GERMANY **KRACHT**

Kracht a medium sized, family run business is a globally active company with over 300 employees working at the Werdohl based head office in Germany and another 85 members of staff in China, USA and Hungary.

As a manufacturer of transfer pumps,hydraulic motors,high pressure gear pumps,valves,pumps units,flow meters and electronics,Kracht attach great importance to quality and to satisfy all customers requirement. Whether it is a standard or special solution, Kracht will be there.Kracht is your competent business associates for Hydraulic technology.

Flow measurement that means high dynamic ,precise volume and flow measurements,evaluated according to the application from a simple display to an intelligent microcontroller solution. The basis of all this is Kracht volume counter.This flow measurement product presents the successful result of our long experienced engineers.The sophisticated tooth system geometry in connection with application specific bearings are made for the volume counter being an absolute All Rounder. The volume counter covers a wide medium range to go from hydraulic oil to printing ink,from gear grease to water based laquer.

The highly efficient KRACHT electronics takes the signals given by the volume counter and ensures that processes are exactly monitored,regulated and controlled.For example,in process technology as micro controller for metering and mixing systems,or as flexible measuring and recording electronics for different applications in test bench technology. Kracht know how warrants functional solutions, standardized and optimal for many applications.

ENGELS INSTRUMENT- ENGINEERING ASSOCIATION “SIGNAL” RUSSIA



EPO “Signal” is associated with the emergence and development of domestic aircraft instrument. In 1918 he built the first factory for the creation of aircraft instruments, “Aviapribor” The main objective of the company was to create a product that can compete with experienced American and European firms.

Flow measurement that means high dynamic ,precise volume and flow measurements,evaluated according to the application from a simple display to an intelligent microcontroller solution. In 1924 began mass production of devices. After 7 years’ Aviapribor “ produced from 80 to 100% of all aircraft instruments produced in the country.

The Great Patriotic War has made adjustments to the location of the enterprise. To ensure the security of important military-industrial enterprises in wartime conditions, it was decided to transfer the plant. October 23, 1941 he was evacuated to the city of Engels, Saratov region.

Group of companies “Signal” a rapidly growing business group specializing in the industrial productions oil instrumentation and gas equipment. Group of companies “Signal” has clear goals and acts in the effective direction (production, sale,development, leasing, Expedition, etc.)

SMOOTH FLOWMETERS

INLINE TURBINE FLOW METER - STM SERIES

Flow Rate – 0.4 to 1100 M3/Hr
 Linearity - $\pm 0.5\%$ and 0.15% of measured value.
 Repeatability - $\pm 0.05\%$ and 0.015%
 Line Size – $\frac{1}{2}$ " to 8"
 Body and Flange – SS 316
 Max Pressure – As Per Flange Rating (NASI , DIN)
 Max Temp – 120°C and 300°C on Request
 Explosion Proof Amplifier Assembly.
 Meter Mounted & Remote Displays (FLP).
 Rugged Design & Reliable Functions User Friendly.
 Pulse Output (2 - Wire, 3 - Wire PNP)
 4 - 20 mA DC Linear Output RS 485 Modbus
 Power Supply – 24VDC and 230 VAC



HYDRAULIC TURBINE FLOW METER - HP SERIES

Flow Rate – 6 to 600 LPM
 Linearity - $\pm 0.5\%$ and 1% of measured value.
 Repeatability - $\pm 0.5\%$
 Line Size – $\frac{1}{2}$ " to 2"
 Body and Flange – SS 316
 Max. Static Pressure 300 bars
 Max Temp – 120°C and 300°C on Request
 Explosion Proof Amplifier Assembly.
 Meter Mounted & Remote Displays (FLP).
 Rugged Design & Reliable Functions User Friendly.
 Pulse Output (2 - Wire, 3 - Wire PNP)
 4 - 20 mA DC Linear Output & RS 485 Modbus
 Power Supply – 24VDC and 230 VAC



SANITARY FLOW METERS - TCF SERIES

Flow Rate – 6 to 1100 LPM
 Linearity - $\pm 0.5\%$ of measured value.
 Repeatability - $\pm 0.05\%$
 Line Size – $\frac{1}{2}$ " to 2"
 Body and Flange – SS 316
 Max Temp – 120°C and 300°C on Request
 Explosion Proof Amplifier Assembly.
 Meter Mounted & Remote Displays (FLP).
 Rugged Design & Reliable Functions User Friendly.
 Pulse Output (2 - Wire, 3 - Wire PNP)
 4 - 20 mA DC Linear Output & RS 485 Modbus
 Power Supply – 24VDC and 230 VAC



TURBINE FLOW METER - W SERIES

Flow Rate - 0.5 to 250 M3/Hr
 Accuracy of $\pm 0.5\%$ of measured value.
 Repeatability - $\pm 0.1\%$
 Line Size $\frac{3}{4}$ " to 4"
 Max Pressure – 250 Bar
 Max Temp - 100°C Body – SS 316
 Display - Meter Mounted & Remote Displays
 Rugged Design & Reliable Functions User Friendly.
 Output - Pulse and 4 - 20 mA DC Linear & RS 485 Modbus
 Power Supply – 24VDC and 3.6 VDC (Battery Powered)



ELECTROMAGNETIC FLOWMETER - SEMF SERIES

- Flow Rate - 0.03 to 600 M3/Hr
- Accuracy of $\pm 0.5\%$ of measured value.
- Repeatability - $\pm 0.1\%$
- Line Size $\frac{1}{4}$ " to 4"
- Max Pressure – 40 Bar
- Max Temp - 180 °C
- Body – SS 304, SS 316 and CS
- Liner Material - PTFE and PFA
- Electrode - SS 316 L, Titanium, Tantalum, Hastelloy Alloy C
- Display - Meter Mounted & Remote Displays
- Rugged Design & Reliable Functions, User Friendly PROG.
- Output - Pulse and 4 - 20 mA DC Linear & RS 485 Modbus
- Power Supply – 24VDC and 230 VAC



HYDRAULIC OIL TESTER MODEL – PTF 7000

- Flow Rate – 6 to 600 LPM
- Accuracy - $\pm 1\%$ of measured value.
- Line Size – $\frac{3}{4}$ " to 1.5"
- Max Pressure 400 bars
- Max Temp – 100°C
- Power Supply – 3.6 VDC (Lithium Ion Battery)

Smooth flowmeters design and development hydraulic Oil tester for Hydraulic Oil Circuits. This Device designed as a portable Instrument for simultaneous measurement of Flow and Pressure and Temperature on single LCD Screen. Flow and Pressure can Configure as per customer engineering Unit.



SOLVENT / ETHANOL / ALCOHOL LOADING AND MONITORING SYSTEMS

Introduction Loading System is specially designed for accurate measurement of liquid Distilleries Products during loading from tankers and Barrel. Accurate measurement of fluid is the only solution for cross checking the dip rod measurement standard on tankers.

Advantages :

- High accuracy of better than $\pm 0.5\%$. High repeatability and turn down ratios.
- Mass measurement of Alcohol with Temperature compensation by means of RTD.
- Skid mounted systems fully piped and ready for installation can be supplied.
- Easy to operate by means of user friendly buttons.
- Start / Stop push buttons facility to the operator for easy control.
- One batch controller can operate three measuring systems. Reliable,
- Accurate and Rugged Ex Proof Batch Controller.
- Long term accuracy without re-calibration, accuracy unaffected by flow turbulences.
- Teflon coated internals for corrosive services.
- Power supply - 230 VAC



PETROLEUM PRODUCTS UN-LOADING SYSTEMS

Introduction Unloading System is specially designed for accurate measurement of liquid fuels and Petrochemical Products during unloading from tankers. Accurate measurement of fluid is the only solution for cross checking the dip rod measurement standard on tankers.

Advantages :

- Accuracy : Better than 0.25% of reading
- Flow Meter Type : High Precision Turbine Flowmeter
- Flow Rate - 15 to 500 LPM on Gravity Flow.
- Ex-Proof Flow Rate Indicator with Totalizer.
- High repeatability and turn down ratios.
- Skid mounted systems and ready for installation.
- Easy to operate by means of user friendly .
- Reset push buttons facility to the operator ,
- Password protected with Total Flow.
- Long term accuracy without re-calibration,
- Accuracy unaffected by flow turbulences.



SCREW TYPE PD FLOWMETER - SVC SERIES

- Flow Rate – 0.5 to 3750 LPM
- Accuracy of $\pm 0.3\%$ of measured value.
- Linearity - $\pm 0.1\%$
- Line Size $\frac{3}{4}$ " to 4"
- Max Pressure – 400 Bar
- Max Temp - 220 °C
- A unique Twin Screw Type Design.
- High Rangeability of 1:150.
- Wide range of viscosity suitability from 1 to 10,00,000 mm²/s.
- Detection of Bi-Directional Flow.
- High response measurement with changing flows
- Temp. independent output signals
- Display - Meter Mounted & Remote Displays
- Output - Pulse and 4 - 20 mA DC Linear
- Power Supply – 24VDC



GEAR TYPE PD FLOWMETER - VC SERIES

- Accuracy of $\pm 0.3\%$ of measured value.
- Linearity - $\pm 0.1\%$
- Line Size $\frac{3}{4}$ " to 2"
- Max Pressure – 480 Bar
- Max Temp - 220 °C
- A unique Twin Gear Type Design.
- High Rangeability of 1:300.
- Wide range of viscosity suitability from 1 to 10,00,000 mm²/s.
- Detection of Bi-Directional Flow.
- High response measurement with changing flows
- Temp. independent output signals
- Display - Meter Mounted & Remote Displays
- Output - Pulse and 4 - 20 mA DC Linear
- Power Supply – 24VDC



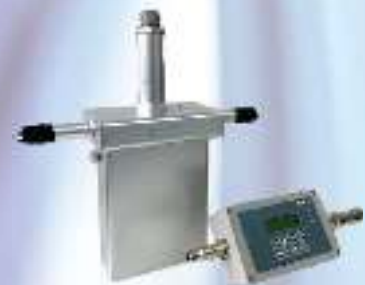
GEAR TYPE PD FLOWMETER - VCA SERIES

- Flow Rate – 0.02 to 200 LPM
- Accuracy of $\pm 2\%$ of measured value.
- Linearity - $\pm 0.1\%$
- Line Size $\frac{3}{4}$ " to 2"
- Max Pressure – 200 Bar
- Max Temp - 80 °C
- A unique Twin Gear Type Design.
- High Rangeability of 1:200.
- Wide range of viscosity suitability from 1 to 10,00,000 mm²/s.
- Detection of Bi-Directional Flow.
- High response measurement with changing flows
- Temp. independent output signals
- Display - Meter Mounted & Remote Displays
- Output - Pulse and 4 - 20 mA DC Linear
- Power Supply – 24VDC



CORIOLIS MASS FLOWMETER - CMM SERISE

- Flow Rate – 3 to 300,000 Kg/Hr
- Accuracy of $\pm 0.3\%$ & 0.5% of measured value.
- Line Size - DN 15 to DN 150.
- Max Pressure – 320 Bar
- Max Temp - 200 °C
- Detection of Bi-Directional Flow.
- Display - Meter Mounted & Remote Displays
- Output - Pulse and 4 - 20 mA DC Linear With RS 232 & RS 485 MODBUS
- Explosion proof - Ex II (2) G [Ex ib] & Ex II (2) G Ex d [ib] IIB T6
- Power Supply – 24VDC



GAS FLOWMETER

ULTRASONIC GAS FLOWMETER

- Nominal size DN 40, DN50 ,DN 80 and DN 100.
- Flow Rate up to – 400 Am³/Hr
- Accuracy of +/-1%.
- Rangeability of 1:200 Extendable.
- Max. Pressure 16 Bar.
- Temp. -40 to 60 Deg C.
- Meter mounted Flow Totalizer and Inbuilt EVC.
- Measurement of Mass with Pressure Temp. Comp.
- Expulsion Protection - 1ExibIICT4X.
- Battery Life – 6 Years , 3.6 VDC Battery D type (2).
- Output - RS 485 Modbus, External power supply - 9 VDC
- 6 years calibration Interval

Applications: Natural gas, LPG, Nitrogen, Dry Co₂, Air, Inert gases, Propane Argon, Carbon Monoxide, Butane, Ethane, Helium, Methane, Pentane,



RPD GAS FLOWMETER G10

- Nominal size - ¾" and 1".
- Flow Rate up to – 16 Am³/Hr
- Accuracy of +/-1.5%.
- Rangeability of 1:160. Extendable.
- Max. Pressure 3 Bar.
- Temp. -40 to 60 Deg C.
- Long term accuracy. 6 years calibration interval.

Applications: Natural Gas, LPG



RPD GAS FLOWMETER

- Nominal size DN 40, DN50 ,DN 80, DN 100 and DN150.
- Flow Rate up to – 650 Am³/Hr
- Accuracy of +/-1%.
- Rangeability of 1:160
- Max. Pressure 16 Bar.
- Temp. -30 to 60 Deg C.

Metrological Approvals

MID

EN-12480

OIML R137



TURBINE FLOWMETER - GT SERIES

- Flow Rate – 0.8 to 800 AM³/Hr
- Linearity - ± 1% of measured value.
- Line Size – 1" to 4"
- Body and Flange – SS 316
- Max Pressure – As Per Flange Rating (ANSI , DIN)
- Max Temp – 120°C
- Meter Mounted & Remote Displays
- Rugged Design & Reliable Functions User Friendly.
- Output - 4 - 20 mA DC Linear and RS 485 Modbus
- Power Supply – 24VDC
- Application – Air and Gas



TRANSMITTERS AND DISPLAYS

PANEL MOUNTED DISPLAY - 7000 FRT

- Compact 1 / 8 DIN size case
- Two pulse and three control inputs
- 2 relays (NO) of 5 A and 250 V
- RS232 / RS485 port for serial communication
- 4 - 20 mA analog output
- Password security for function keys
- NVRAM to retain data on power failure
- Both inputs can have up-to 16 points linearizing K factor
- IP66 Design , CE , UL approved. RoHS compliant
- + 24 V DC unregulated O/P for AC powered unit
- Input Power : AC : 80 to 240 V ; 6.5 VA or DC : + 24 V DC



METER MOUNTED DISPLAY UFT – 7000

- Inputs From: Magnetic Pickup Sensor
- Displays Rate & Total As Required
- 6 Digit Rate Display, 8 Digit Totalizer Display
- Flow Rate & Display updates once per second ,
- Rate can select /SEC, /MIN, /HR
- Totalizer can select : mL, LIT, M3
- RESET – with Front panel Key and Remote Pulse
- RS 485 Modbus Communication
- Battery Life up to - 2 years
- Nonvolatile Flash Memory
- Powered From Accepts Internal Lithium Battery.
- External 24 VDC \pm 10%



METER MOUNTED DISPLAY UFT – 8000

- Accepts Inputs From: Magnetic Pickup Sensor
- Displays Rate & Total Simultaneously
- 6 Digit Rate Display, 8 Digit Totalizer Display
- Flow Rate & Display updates once per second ,
- Rate can select /SEC, /MIN, /HR
- Totalizer can select : mL, LIT, M3
- RESET – with Front panel Key and Remote Pulse
- Both inputs can have up-to 16 points linearizing K factor
- 2 relays (NO/NC) of 5 A
- 4-20mA Analog Output
- RS 485 Modbus Communication
- Nonvolatile Flash Memory
- External 24 VDC \pm 10%



METER MOUNTED DISPLAY UFT – 9000

- Accepts Inputs From: Magnetic Pickup Sensor
- DC Pulses from Flowmeters.
- Displays Rate & Total Simultaneously
- 6 Digit Rate Display, 8 Digit Totalizer Display
- Flow Rate & Display updates once per second ,
- Rate can select /SEC, /MIN, /HR
- Totalizer can select : mL, LIT, M3
- RESET – with Front panel Key and Remote Pulse
- Warning Displays: Low battery warning
- 4-20mA Analog Output
- RS 485 Modbus Communication
- Battery Life up to - 2 years
- Nonvolatile Flash Memory
- Powered From Internal Lithium Battery.
- External 24 VDC \pm 10%



CALIBRATION, SERVICES & SOLUTIONS

At Smooth Flowmeters, we have the most comprehensive Product range for various industries and Applications, ranging from Turbine Flowmeters, High viscous Oil PD Flowmeter, Gas and Air Flowmeter to the solutions related to these.

CUSTOMERS ARE BENEFITED THROUGH

Our services ranges from the consulting and Engineering through to comprehensive After Sales Services. Many customers today have trust on us due to Prompt, On time and Affordable After Sales Service . We believe in 24 hour emergency support and offer the same as and when there is a need at your plant.

AFTER SALES SERVICE:

- Repairs and spare parts management.
- Instruments maintenance training.
- User friendly products for plant safety.
- Flexibility in faster and safe in production change.
- Less total cost of ownership.
- Fast and sure returns on investments.
- Rapid commissioning and short ramp up times.
- Compatibility, Traceability to latest technologies.
- Spare parts and Inventory management for efficient maintenance.
- Products and solutions for increased productivity and quality.

WATER FLOW CALIBRATION SETUP :

Smooth Flowmeters is having a well-equipped Calibration Laboratory. The systems is designed in standard Gravimetric Method with master weighing Scale, Master Pressure Sensor & Master Temp Sensor as per ISA-RP 31.1 Standard. The calibration is done on the most precise weighing scale having least count of 100 gms on the maximum scale of 2000 Kgs. 10gms on the maximum scale of 100 Kgs.Both Weighing Scales are Calibrated in NABL Accreditation LAB each year. The Weighing Scale accuracy is endorsed by the Weights & Measures Dept. of Govt. of Maharashtra. The setup is designed for calibration of size ranging from 10 mm to 150 mm. We do 100% Calibration of each unit at our precise calibration setup.

- Master weighing Scale - Uncertainty - $\pm 0.067\%$
- Master Pressure Sensor - Uncertainty - $\pm 0.015\%$
- Master Temp Sensor - - Uncertainty - $\pm 0.15\%$

OIL FLOW CALIBRATION SETUP :

Smooth Flowmeters has a well-equipped Oil Calibration Laboratory. The Systems design standard is Comparison Method with Master Flowmeter as per ISA-RP 31.1 Standard. The meter was calibrated in hydraulic oil ISO VZO 32. As a reference, KRACHT Make Screw Type PD Flowmeter Model SVC 40 Flow Rate of 4 to 600 LPM (Accuracy – 0.15% Rd) and SVC 04 Flow Rate 0.4 to 60 LPM(Accuracy – 0.25% Rd) were used. The master meter is Calibrated in NABL Accreditation LAB each Year. We do 100% Calibration of each unit at our precise Oil calibration setup.

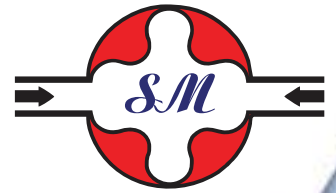
APPLICATIONS

SMOOTH FLOWMETERS

- Water, Injection water, API Solvents, Cooling Water, Treated Water, Waste Water, Drinking water, Irrigation water Hot water, Chilled water, Milk, DM Water, Boiler Feed Water Alcohol, ENA, Beer, Soft drinks
- Gear oil, Engine oil, Coolant, Windshield liquid, Hydraulic oil, Aviation fuel.
- Liquid LPG, Deisel, Boi-Diesel, Ethanol.
- Construction, Mining, Agriculture Machinery, Petroleum Products.
- Defence, R&D, Naval Ships Applications of conductive & nonconductive liquids
- Thermic fluid

KRACHT Flowmeters

- Flow measurement on test benches (mineral oil, brake fluid, scydrol, diesel)
- Indirect cylinder position indication (steel mills, processing machines, die-casting machines)
- Filling of different fluids (gear oil, water/glycol, brake fluid) Leakage detection.
- Mobile hydraulic test stands for Aircraft maintenance.
- Filling of high viscous gear oil
- Consumption measurement of printing ink
- Flow and ratio measurement on RIM - machines
- Fluids: Polyol, Isocyanate, Resin
- Mixture ratio control on Polyurethan machines
- Dosing of Polyol, Isocyanate, Silicone, Amin, Antiflamming agent, tin,
- water and colour in foam block machines
- Flow and consumption measurment of cavity waxes for cars
- Flow measurement of aggressive lubricating oils in steel mills



Smooth Flowmeters

Get in Touch

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DEVELOPMENT DICTATES THAT FROM TIME TO
TIME THE DATA SHOWN ABOVE IS SUBJECT
TO CHANGE WITHOUT NOTICE..PL OBTAIN A OFFER.

We Measure And Control Every Drop & Molecule