

TOTAL CONTROL SYSTEMS

"The Standard of Measurement"

MODEL 682

PISTON POSITIVE DISPLACEMENT FLOW METER



TCS Model 682-15SP10AT

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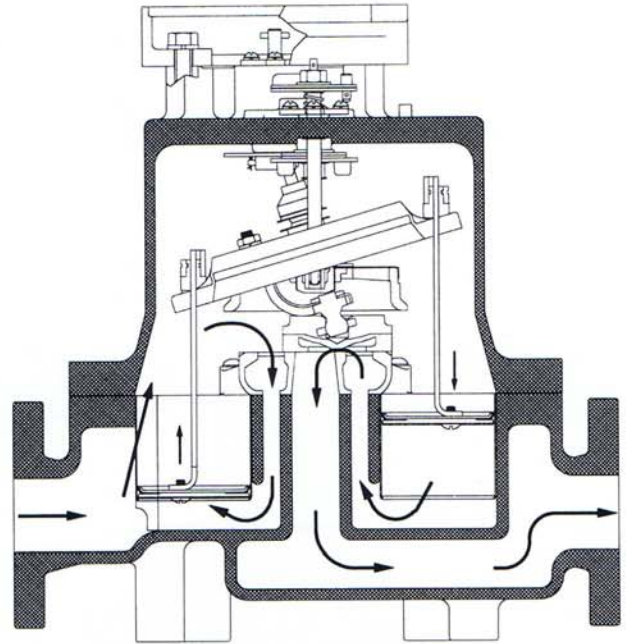
MODEL 682 SERIES FLOW METER

"The Standard of Measurement"

The TCS model 682 series positive displacement reciprocating piston flow meter is designed to accurately measure liquids within the Petroleum, Chemical, Food Processing, Agricultural and other industries requiring precise liquid flow measurement.

DESIGN FEATURES

The TCS model 682 series flow meter is a true positive displacement meter that has a unique inline design consisting of three reciprocating pistons operating within their respective measuring chambers, where each piston works in a manner similar to an automobile engine. The pistons are fitted to a wobble plate, which has a shaft extending from its upper surface and a valve pivot attached beneath it. The valve pivot drives a sliding valve from piston to piston as a known amount of product flows through each cylindrical bore, controlling the sequence of events in a smooth mechanical motion. This smooth mechanical motion is then transferred through the calibrator to the register.



ACCURACY AND FLOW RATE

The TCS model 682 series flow meter combines outstanding accuracy (0.1% of flow rate) with an exceptionally wide turndown ratio (200:1). This superior performance is supported by the National Type Evaluation Program (NTEP) Certificate of Conformance meeting the National Institute of Standards and Technology (NIST) Handbook 44 requirements. The TCS model 682 series flow meter is virtually unaffected by changing viscosities. The inline meter design allows the TCS model 682 series flow meter to have a wide operating range (0.2 to 40 GPM) and fluid compatibility that has been proven over many years of service.

FEATURES

- Excellent accuracy - 0.1% repeatability of flow rate
- Wide turndown ratio 200:1. A perfect choice for slow flow measurement and batching applications
- High tolerance to changing viscosity
- Wide range of flow - 0.2 GPM to 40 GPM
- Wide operating temperature
- Wide fluid compatibility range
- Industrial-grade construction
- Proven design and reputation

METER TYPES

SP - Standard Petroleum

Petroleum base products: Gasoline, Fuel Oil, Diesel, Bio-Diesel, Kerosene, Aviation Gasoline, Motor Oils

AF - All Ferrous

Ethanol, Petroleum base products, Industrial Chemicals, Agricultural products.

SS - Stainless Steel

Covers the same products as the SP and AF models but includes special handling liquids; such as Acids.

METER CONSTRUCTION

Model 682SP

Outer Housing
Internals
Cups
Seals

Ductile Iron
Ductile Iron, Steel, and Stainless Steel
Glass-filled TFE
Teflon®, Viton and Simriz®

Model 682AF

Outer Housing
Internals
Cups
Seals

Ductile Iron
Ductile Iron and Stainless Steel
Glass-filled TFE
Teflon® and Simriz®

Model 682SS

Outer Housing
Internals
Cups
Seals

316 Stainless Steel
316 Stainless Steel
Glass-filled TFE
Teflon® and Simriz®

METER SPECIFICATIONS

| | |
|---------------------|---|
| Type | Reciprocating 3 Piston Positive Displacement |
| Connections | 1 1/2 inch flange |
| Flow Range | Minimum: 0.2 GPM (0.76 LPM) Maximum: 40 GPM (151 LPM) |
| Working Pressure | 150 PSI (10.5 Bar) |
| Working Temperature | Models 682AF and 682SP: -20°F to 200°F (-28.9°C to 93.3°C) Models 682SS: -20°F to 400°F (-28.9°C to 204.4°C) |
| Turndown Ratio | 200:1 |
| Enclosure Class | Totally mechanical; if equipped with a pulse transmitter, the rating of the pulsing device applies |
| Units of Measure | U.S. Gallons, STANDARD Liters, pounds, etc. available upon request |

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Simriz is a registered trademark of Freudenberg-NOK.

Teflon is a registered trademark of DuPont.

TCS MODEL 682 SERIES FLOW METER OPTIONS

| | |
|-------------------------|---|
| Register | Veeder Root 5 wheel resettable with totalizer (9999.9) |
| Preset | Veeder Root 5-digit (4 whole units, plus 1 tenths 9999.9) |
| Ticket Printer | Veeder Root Zero Start (Standard) |
| Shut-off Valve | Available with Veeder Root Preset Register. Appropriate internals, gaskets, and seals to each model. Note: 2 stage valve closure. |
| Cutoff Switch | Available with 2 stage Veeder Root Preset Register. |
| Temperature Compensator | Not available |
| Transmitter Type | Veeder Root |
| Transmitter Output | 1, 10 or 100 pulses per revolution of output shaft. |
| Air Eliminator | Available with the appropriate internals, gaskets, and seals to each model. |

TCS MODEL 682 SERIES FLOW METER DESCRIPTIONS

| Description | Standard Petroleum (SP) Model Number Approx. Weight | All Ferrous (AF) Model Number Approx. Weight | 316 Stainless Steel (SS) Model Number Approx. Weight |
|---|---|--|--|
| Meter | 682-15-SP-2B 96 lbs. | 682-15-AF-2B 96 lbs. | 682-15-SS-2B 98 lbs. |
| Meter and register | 682-15-SP-2A 110 lbs. | 682-15-AF-2A 110 lbs. | 682-15-SS-2A 112 lbs. |
| Meter, register, and printer | 682-15-SP-3 119 lbs. | 682-15-AF-3 119 lbs. | 682-15-SS-3 121 lbs. |
| Meter, register, and air eliminator | 682-15-SP-4 171 lbs. | 682-15-AF-4 171 lbs. | 682-15-SS-4 179 lbs. |
| Meter, register, printer, and air eliminator | 682-15-SP-6 180 lbs. | 682-15-AF-6 180 lbs. | 682-15-SS-6 188 lbs. |
| Meter, register, preset, and valve RIGHT HAND FLOW | 682-15-SP-8 146 lbs. | 682-15-AF-8 146 lbs. | 682-15-SS-8 150 lbs. |
| Meter, register, printer, preset, and valve RIGHT HAND FLOW | 682-15-SP-9 155 lbs. | 682-15-AF-9 155 lbs. | 682-15-SS-9 159 lbs. |
| Meter, register, preset, valve, and air eliminator RIGHT HAND FLOW | 682-15-SP-10 207 lbs. | 682-15-AF-10 207 lbs. | 682-15-SS-10 217 lbs. |
| Meter, register, printer, preset, valve, and air eliminator RIGHT HAND FLOW | 682-15-SP-11 216 lbs. | 682-15-AF-11 216 lbs. | 682-15-SS-11 226 lbs. |

