4" Iron Model T-40

Bulletin SS01029 Issue/Rev. 0.5 (8/17)

Smith Meter® PD Rotary Vane Meter

The **Smith Meter® Model T-40 Meter** is a 4", single-case, angled rotary vane type positive displacement meter. Applications include: blending, batching, dispensing, inventory control, and custody transfer of oils, solvents, chemicals, paints, fats and fertilizers.

Features

- **Superior Accuracy -** The Smith Meter Rotary Vane meter principle minimizes pressure drop across the measuring chamber, which reduces flow through meter clearances to maximize accuracy.
- **Low Pressure Drop -** Streamlined flow path provides low pressure drop.
- **Positive and Accurate Registration -** High torque drive calibrator with adjustment in 0.05% increments ensures accurate registration.
- **Long Service Life -** Low friction ball bearings, fixed cam-type timing and rugged construction give sustained accuracy and long service life.

Operating Specifications

Maximum Flow Rate

	USGM	L/min
Continuous Rating - Standard Trim	400	1,500
Intermittent Rating[1] - Standard Trim	500	1,900

Minimum Flow Rate – Typical Performance

Linearity[2]	Units	Viscosity (centipoise - mPa•s)					
		0.5	1	5	20	100	400
±0.15	USGM	80	50	20	5.0	1.0	0.25
	L/min	303	190	75	19.0	4.0	1.00
±0.25	USGM	50	35	15	4.0	0.8	0.20
	L/min	190	132	57	15.0	3.0	0.80
±0.50	USGM	40	25	10	2.5	0.5	0.13
	L/min	150	95	38	10.0	2.0	0.50

Repeatability
±0.02%

Viscosity
Standard: 400 mPa•s[3] (2,000 SSU) maximum.

Optional: 2 Pa•s (10,000 SSU) maximum - specify "High Viscosity Meter Clearances."

Over 2 Pa•s: Specify "High Viscosity Meter Clearances" and derate maximum flow rate in direct proportion to viscosity over 2 Pa•s (e.g., at 4 Pa•s, derate maximum flow rate to 50% of normal continuous rating - 200 USGM).

1 Intermittent rating applies to service on clean, refined products where continuous operation is not required (e.g., truck loading, rail loading, and other batching applications.)

2 Based on a maximum flow rate of 400 USGM (1,500 L/min) unless otherwise stated.

3 1,000 mPa•s = 1,000 cP = 1 Pa•s.

Maximum Working Pressure
Standard: 75 psig (517 kPa) up to 200°F (93°C) for cast iron or aluminum housing.

Meter Gearing
Five U.S. gallons or one dekalitre per revolution of meter calibrator output shaft.

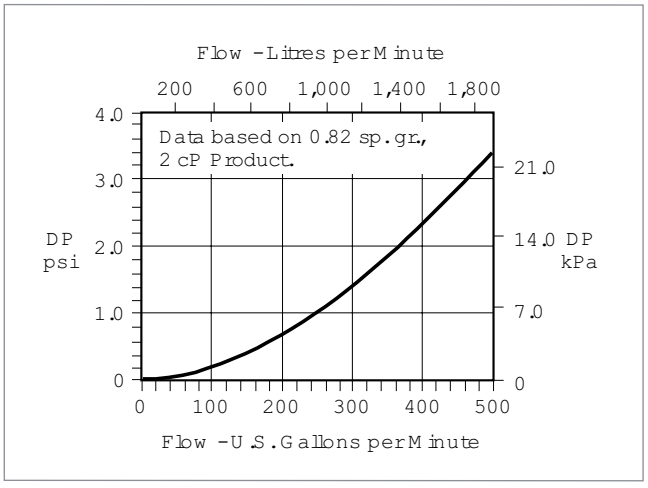
Temperature
Standard: -20°F to 150°F (-29°C to 65°C).

Optional: -20°F to 200°F (-29°C to 93°C) - specify "High Temperature Meter Clearances"

Aluminum Housing Option: -50°F to 200°F (-45°C to 93°C).

Other Temperatures: Consult factory.

Pressure Drop (ΔP)



Materials of Construction			
	Housing	**Internals**	**Seals**
Meter: T-40	Cast Iron	Iron, Steel, Stainless Steel, Aluminum	Cover O-Ring - Buna-N, Opt'l. - Viton Packing Gland - Buna, Opt'l. - Viton or PTFE[4]

Ordering Information	
Application	Batching, Loading, Blending, Inventory, Process Control, etc.
Operating Conditions	Liquid — Name and sp. gr., Flow Range[5], Temp. Range[5], Viscosity Range[5], Maximum Working Pressure
Seals	Meter: Buna[6], Viton or PTFE[4]. Valve: Buna[6], Viton.
Units of Registration	Gallons, Liters, Pounds and Kilograms
Inlet/Outlet Position	Position 1-A is standard and will be supplied unless another position (e.g., 2-C) is specified.
Options and Accessories	As required.

Accessories

Strainer
Y-type 4" NPT, cast iron.

Automatic Temperature Compensation
Model ATC[7] - Factory-set for a given product.
Model ATG[7] - Field-adjustable for different products.

Counters
200 Series - Accumulative, nine-digit, non-reset type.
600 Series - Five large-digit reset, eight small-digit non-reset.

Printer
Seven-digit accumulative.
Optional six-digit zero start.

Pulse Transmitters
Type E - SPDT Mercury Wetted Switch.
LNC Pulse Transmitter (adapts to 600 Series Counters).
Low-Resolution - 1 or 10 pulses[8].
High-Resolution (HR) - 50 or 100 pulses[8].
PST - Dual-channel, high-resolution, security pulse generator.
UPT - Universal Pulse Transmitter - High resolution dual pulse quadrature output in a weather-tight explosion proof enclosure (up to 1,000 pulses/rev.).

Flow Rate Indicator
Direction mount mechanical.
Remote electronic.

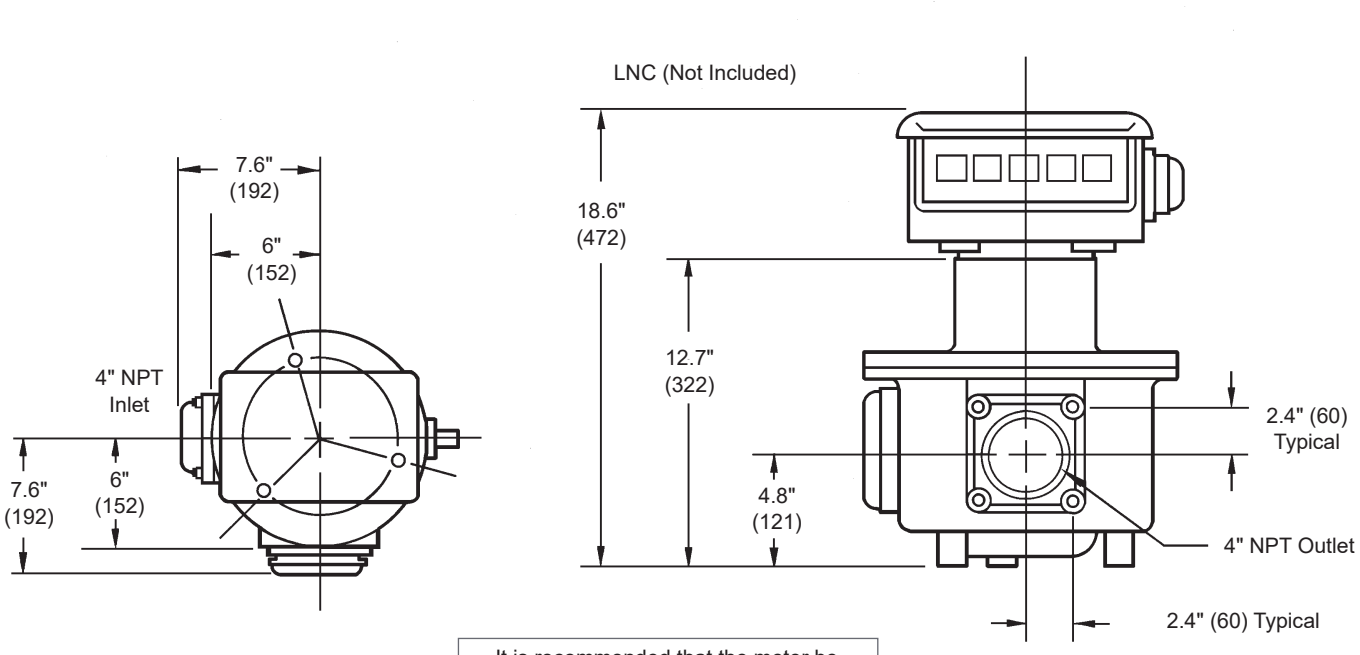
Remote Registration
Electro-mechanical counters.
Electronic totalizers.

4 Polytetrafluoroethylene (PTFE).
5 Specify: minimum/normal/maximum.
6 Standard seals supplied unless optional material specified.
7 Requires temperature well kit.
8 Per revolution of LNC Right-Hand Wheel.

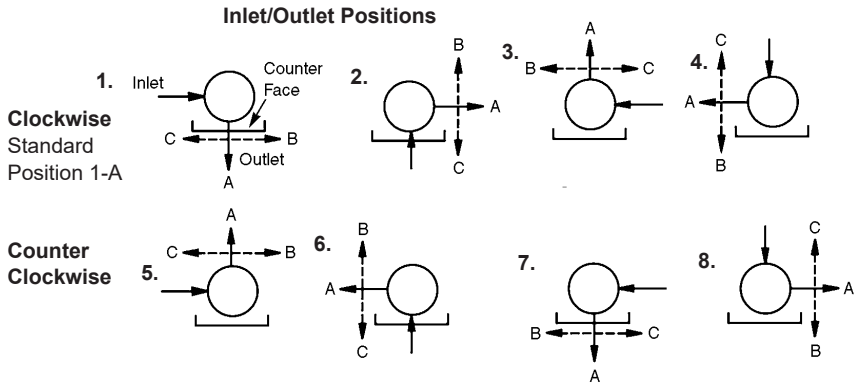
Dimensions

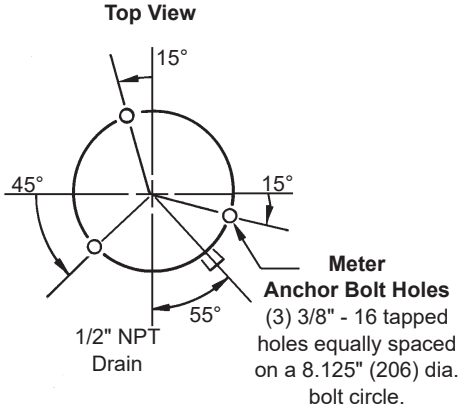
Inches (Millimeters)

Note: Dimensions – inches to the nearest tenth (millimeters to the nearest whole mm), each independently dimensioned from respective engineering drawings.



It is recommended that the meter be protected with a suitable mesh strainer.





Weight: Approximately 110 lb (50 kg).

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