SOTERA PRECISION METERS

TS20C, 2”

Stainless Steel, Electronic

- **Only two moving parts**
- **No metal to metal contact in chamber or bearings**
- **Internal pulser = Gland-less meter design**
- **Patented ‘Wave Form’ oval gear design**
- **Low differential pressure for maximum flow**

TS20CW04ABTU for remote electronic register

Depending upon register or controller model, the pulser compartment in flow sensor front cover holds the sensor (pulser), and either:

A. **TBB** = Terminal Block Board
B. **SCL** = Scaler/Calibrator/Linearizer

Specifications

- **Nominal Capacity with standard LV rotors**

To 1500 SSU visc.	: **150 GPM**	*NTEP*	*5:1 turn-down*
To 300 cP viscosity	: **570 lpm**	*OIML*	*10:1 turn-down*
To 300 cP viscosity	: **34 m³/h**	*Industrial*	*to 30:1 turn-down*

- **Pressure Rating** : 400 PSI at 100°F = 28 BAR at 40°C
- **Temperature Rating** *See note under Signal Conditioners*
  - **Design W Assy.** : -40°F to +257°F = -40°C to +125°C
  - **ATEX listing** : -4°F to +140°F = -20°C to +60°C
  - **Design F Assy.** : Same, *subject to register temperature limits!*
- **Viscosity**
  - With **LV** rotors : 100% capacity to 1,500 SSU (300 cP).
  - With **HV** rotors : 100% capacity to 5,000 SSU (1000 cP), reduced capacity to 1,500,000 SSU (350,000 cP).
- **2” Connections** Bolted companion flanges with NPT or BSP port.
  - Optional : Bolted welding flanges, stainless steel
  - Bolted 150# RF ANSI adaptors, stainless steel
- **Materials** **100% Non-Ferrous**
  - Case : CF8M (cast equivalent to 316SS).
  - Gears : PPS with carbon bearings, Teflon™ bearings opt.
  - Posts : HC316SS
  - Seals : Teflon™ standard.
  - Flanges : CF8M (cast equivalent to 316SS).
- **Pulser** : **Hall Effect Quadrature,** 5V reg or 6-12V non-reg; pls consult for 24V DC.
- **K Factor** : Nominal 395 PPG (104.4 ppl) on 1 cP viscosity,
  - Opt. with SCL : EL0300-3-13E = 100 PPG (26.5 ppl)
  - EL0300-3-18E = 10 PPL (37.85 PPG)

Meter Performance

Linearity Over 5:1 turn-down from max. capacity: ±0.175%
Over 10:1 turn-down from max. capacity: ±0.25%
Over 30:1 turn-down from max. capacity: ±0.5%

Repeatability 0.05% or better under constant conditions

Approvals Custody Transfer approvals are liquid specific.
W&M approval in the US, Canada* & EU*.
** Canada & EU: W&M approval of pulser is pending.*

- **Flow Meter** CE mark.
- **Pulser & SCL** ***Intrinsically Safe***, UL & cUL listed, **SCL** also **EEx ia ATEX** when powered through approved barrier.
- **Pulser encl.** Ⓔx II 2G Ex d IIA T4, -20°C <Ta<+60°C, ATEX, IEC Ex & IP65

Registration, Signals & Accessories

- **Electronic registers:**
  Tuthill electronic flow meters will support most common electronic registers & controllers. Available through Tuthill:
  - **ELNC** W&M register for stationary service
  - **EMR³** W&M register for stationary or truck service
  - **PC58** Totalizer/Rate meter (non-W&M)
- **Signal Conditioners:**
  - **EL0300** SCL Scaler, Calibrator and/or Linearizer (*see FPP261*).
  - **EL6630** PIA-300 amplifier for remote register (to 2,500’ = 750 m)
  - **PC58** with optional 4-20 mA signal or multi-point calibration.

NOTE: *If EL0300 is used in place of EL0304, max liquid temperature = 185°F (85°C). For higher liquid temperatures, these components must be mounted remote from the flow meter in a separate enclosure.*

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