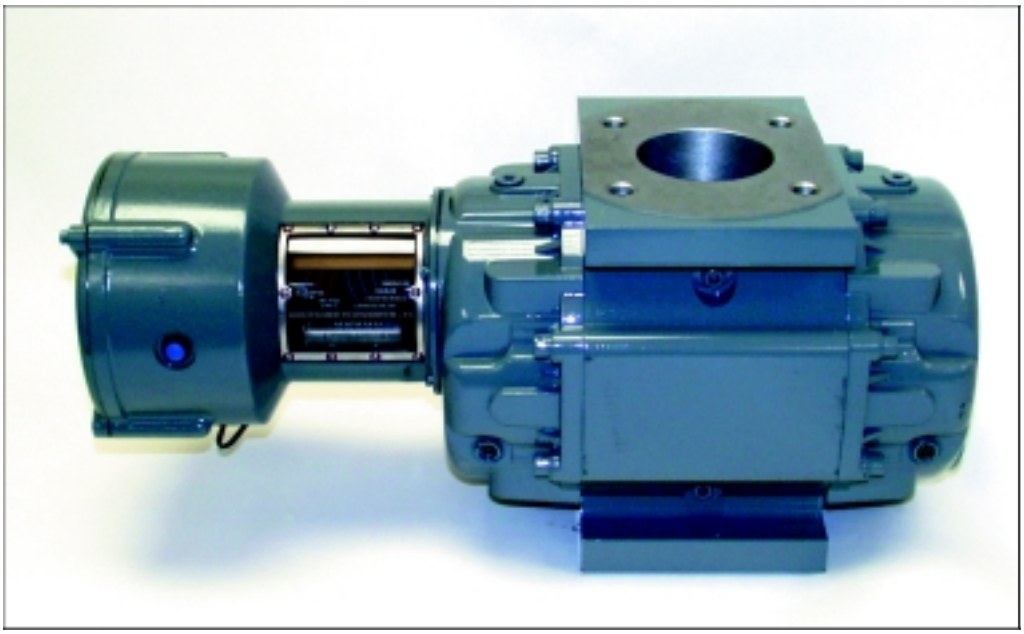
DRESSER
Measurement

ROOTS® IMC/C
Meter with Integral Micro Corrector



7M175 IMC/C ROOTS® meter

The ROOTS® IMC/C is the new line of integral volume correctors from Dresser Measurement. The product is available on Series B meters, sizes 8C through 16M (G16 to G250). The new IMC/C measures live pressure and temperature to calculate corrected volume, includes supercompressibility calculations (SGERG 88/AGA 8 Gross Characterization Method) and data/audit logging functions.

The pressure transducer and temperature RTD are mounted inside the meter enclosure, therefore the possibility of tampering with these sensors is reduced. There is an additional cost savings as external temperature and pressure connections are not required. In addition to the LCD, the accessory unit also has a back up mechanical counter, which offers a lower cost option to instrument drive mounted correctors.

PRODUCT DATA

DRESSER ROOTS Meters & Instruments

Best Value

Designed to be the best value in the industry, the ROOTS® IMC/C is designed for easy installation and eliminates the costs associated with fitting separate pressure and temperature connections. No on-site set-up is required. The log option offers 35 days of hourly logs, 48 days of daily logs, 15 months of monthly logs, average pressure and temperature logging and peak flow logging.

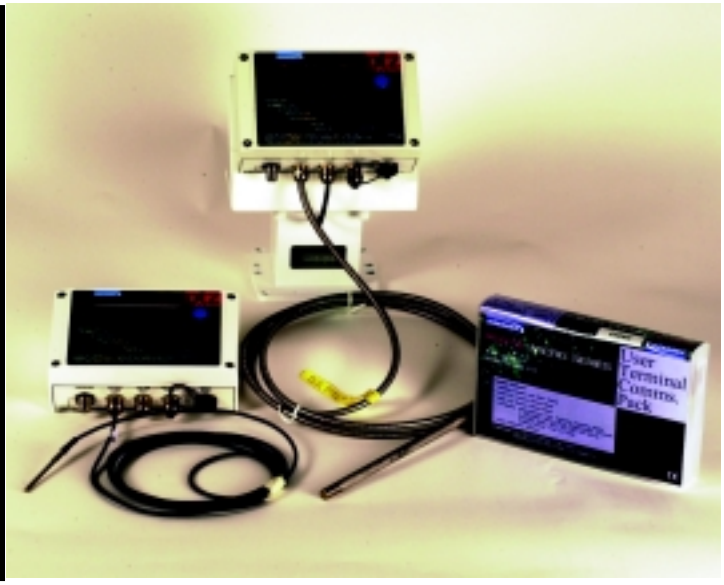
5+ Year Battery Life

New, low power electronics yield unprecedented alkaline battery life - in excess of 5 years. Low battery indication occurs with a minimum of 2 months remaining battery life. This means lower operating and maintenance costs: fewer battery disposal issues; and fewer batteries to purchase.

Intuitive, Windows® Based Software

After loading the user terminal software under Windows® 95/98, you get everything you need to directly communicate with and configure the IMC/C using your laptop or desktop PC. The software is easy to use and requires minimal training. Pull down menus make configuration easy. The software includes built-in intelligence, so when you choose an incorrect parameter, the selection will be shaded in red, signaling you to stop and edit the chosen value.

- Pay for only the features that you need
- New low power electronics means lower operating cost and less maintenance



The ROOTS® Micro Corrector is available in several different mounting styles.

Wide range of Communication Capabiliites

The ROOTS® IMC/C utilizes the MODBUS RTU protocol, which easily adapts to the majority of data collection systems on the market today. It has local and remote RS-232 communication capability and works with commercially available external modems that utilize the Hayes command set. Additionally, the unit has dual communication call out capability allowing appropriate personnel notification in the event of a fault condition. Pulse outputs are available which allow you to easily adapt to your communications network or to provide a separate connection for your customer.

Total System Integrity

Both the data and the program are stored in non-volatile E^2 PROM memory. The robust all-weather enclosure is rated IP66 (NEMA 4X). Additionally, the unit has been thoroughly tested for EMI-RFI immunity and has CE marking. The IMC/C is certified as intrinsically safe. The audit trail allows you to view the last 128 parameter changes, and in the event a fault condition occurs, the display defaults to an error message. Password or Weights & Measures sealed link prevents unauthorized use.

Approvals

- ATEX
- EECS
- NMI
- EN12405

Chatterbox Isolation Relay

- 2 or 4 Channel options safely isolating meter or corrector pulses from the hazardous areas to building management systems
- Battery powered using standard type low cost cells
- One input can be connected to up to four isolated output circuits, e.g., a possible configuration is two inputs with each input connected to two outputs offering a large flexibility for pulse outputs
- IP66 enclosure offers flexibility for installation on site
- Battery saving facility reducing the pulse length if the meter contact remains closed

Micro Modem

- Line powered, no batteries required therefore no running & no maintenance costs
- Plug & Play design, no set up required, reduced installation and start-up costs
- The Micro Modem supports the Micro Corrector & IMC/C and is therefore suitable for remote meter reading.
- IP66 metal housing offering flexibility during installation

ROOTS® IMC/C

Meter with Integral Micro Corrector

Measurement Resolution:

Pressure: 1 mbar (0.01 PSI)
Temperature: 0.1 C (0.1˚F)

Accuracy over Full Temperature Range of -40˚C to +60˚C (-40˚F to 140˚F):
Pressure: < 0.3% of reading for 20% to 100% pressure range, 0.25% of reading typical
Temperature: < 0.5˚C (0.9˚F)
Combined Corrected Volume Accuracy: < 0.5% typical

Battery Characteristics:

Factory supplied alkaline battery pack with life exceeding 5 years. Low battery indication occurs with at least 2 months remaining battery life. Inexpensive, intrinsically safe battery pack is easily changed on site. It is environmentally friendly-no special handling or disposal.

Physical:

Mounting Styles: Will fit B series meters (8C-16M).
Operating Temperature: -40˚C to +60˚C (-40˚F to +140˚F)
Ambient Humidity: Up to 95% sustained outdoor exposure
Storage Temperature: -50˚C to +80˚C (-60˚F to +180˚F)
Approvals for Intrinsic Safety: Certified for EEx ia IIC T4 Tamb = -40˚C to +60˚C, (zone 0)
EECS Cert. No. Ex 98E2082 ATEX BAS98ATEX 1083 (Class 1, Div. 1, Group A, B, C and D hazardous locations)
Enclosure: IP66 (NEMA 4X)
EMC: EN50081-1 and EN 50082-2. Meets FCC class B requirements. EMI/RFI immunity at 10V/m, 0.1 to 1000 MHz
CE Mark

Temperature Input:

4-wire Class A, 100 ohm platinum resistance thermometer, internal to the meter

Volume Input:

Reed switch pickup from the mechanical counter

Pulse Outputs (Telemetry Outputs):

5-15 VDC applied loop voltage
10 mA maximum current loop
Pulse width configurable to 50 msec,125 msec, 187 msec and 312msec
Channels electrically isolated to 2500 VDC
Switch off resistance > 2 Mohms
Switch on resistance< 10 ohms

3 pulse outputs available:
Uncorrected Volume
Corrected Volume
Fault Indication

Long Term Stability:

Pressure: 0.1% of full scale per year, non-cumulative
Temperature: 0.2˚C (0.3˚F) per year, non-cumulative

Power Requirements:

Operating Voltage: To 6.6 VDC
Operating Current: Typical 100 µA
Battery lifetime: Minimum 5 years for a typical configuration assuming live P and T measurements and Z calculation every 30 seconds, one 15 minute user terminal connection per week.

DRESSER Measurement

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