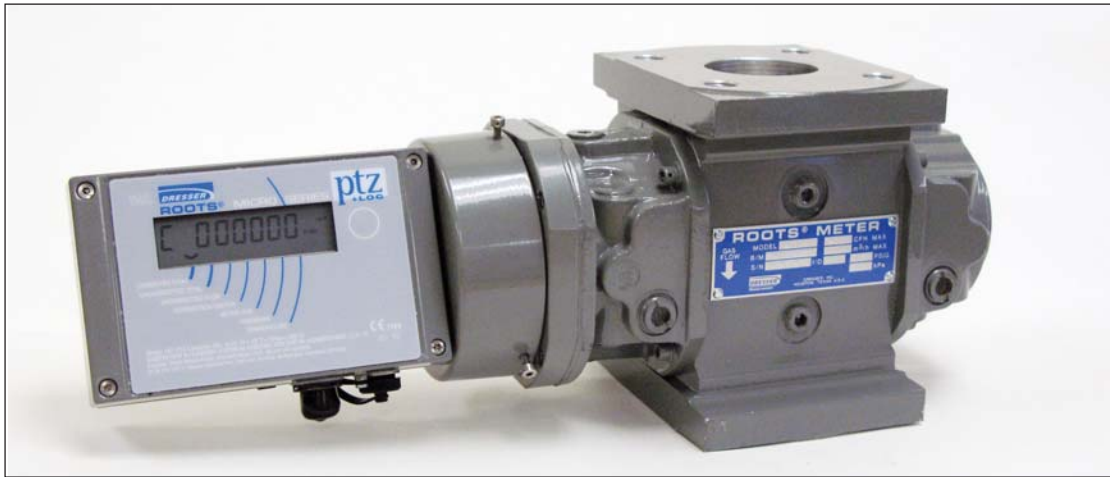


ROOTS® Micro Corrector – Model IMC/W2

The most capable integral gas volume corrector ever developed for rotary meters

Available in PTZ+ log, P+ log, and T+ log versions



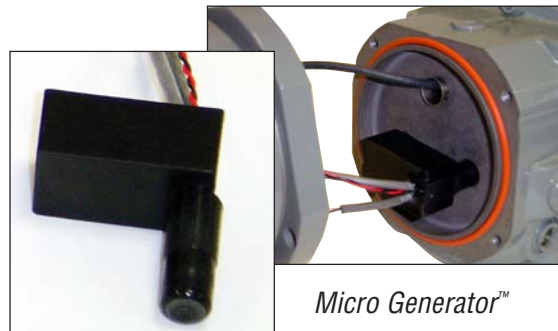
ROOTS® Meter with IMC/W2 , Model, PTZ + Log

This second generation Micro Corrector has the enhancements customers have been asking for. Using the proven IMC/W platform, features were added that make it the easiest corrector to use – features such as improved low flow accuracy, greatly enhanced data logging capability and significantly reduced accuracy test times!

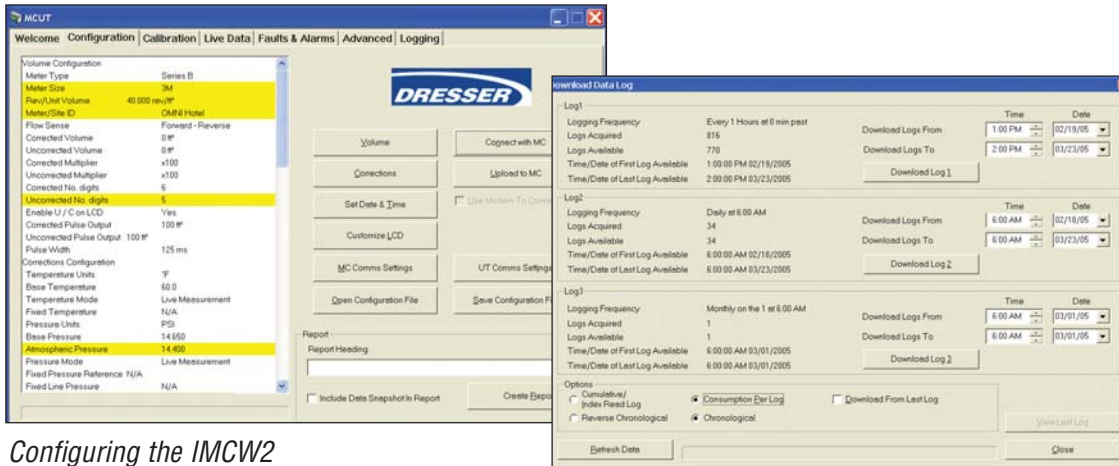
The ROOTS Micro Corrector, model IMC/W2, is the only integral corrector rated for Division 1 hazardous locations.

Features include:

- **Rotating Index** makes meter reading easier, especially in non-typical installations
- **Uncorrected Instantaneous Flow Rate Displayed on LCD** aids meter differential testing in the field.
- **The SmartProve™ Interface** not only reduces meter and corrector test times by as much as 90%, but allows the meter and corrector to be tested as a complete measurement system. This feature is unique to Dresser!
- **User Selectable Trim Table** improves rotary meter accuracy at flow rates less than 10% of meter Qmax, adding revenue to the utility's bottom line.
- **Micro Generator™** adds years to main battery life, extending the interval between battery changes.
- **Simple User Terminal Software** allows for easy configuration, calibration and data log downloads.



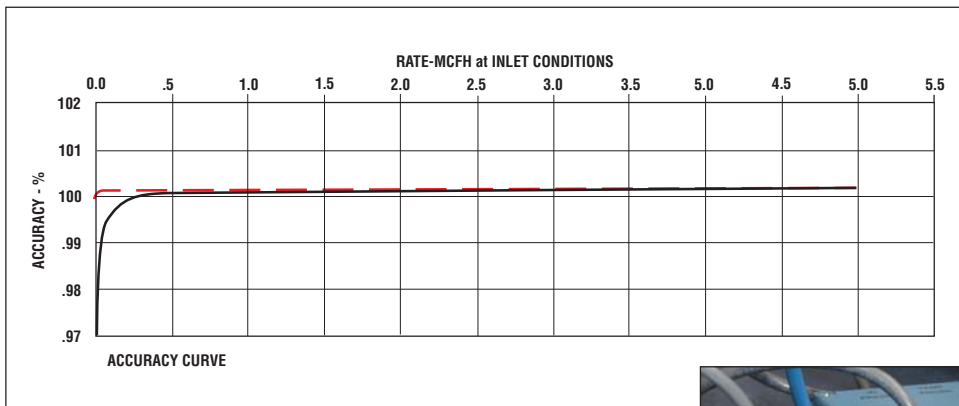
Micro Generator™



Configuring the IMCW2

Downloading Data Logs

- **1 to 3 Data Logs** provide for years of historical information and are configurable in increments from 1 minute to 1 month. Data logs include the option to log live battery voltage.
 - **Audit Log** maintains a record of configuration and calibration changes.
 - **Alarms** notify the user of over-range conditions for pressure, temperature, and flow rate .
 - **Alarm & Fault** activity is displayed in the Data Log and Audit Log reports.
 - **E²PROM** provides non-volatile storage of recorded data and corrector configuration regardless of battery condition.
 - **Uncorrected Volume Under Fault** register in E²PROM replicates a backup mechanical index.
 - **MS Excel[®] Formatted Reports** allow easy manipulation and sharing of information.
- These features provide compelling value that can add thousands of dollars annually to the bottom line!**



Trim Table



ROOTS[®] SmartProve[™] Interface

Specifications

PERFORMANCE

Resolution:**Volume:** 0.01 ft³ (0.01 m³)**Pressure:** 0.01 psi (1 mbar)**Temperature:** 0.1 °F (0.1 °C)**Supercompressibility (Fpv²):** 0.0001**Correction Factor:** 0.00001**Accuracy -40 °F to 140 °F
(-40 °C to 60 °C):****Pressure:** ±0.25% reading**Temperature:** ±0.9 °F (0.5 °C)**IMC/W2-PTZ:** ±0.5% corrected volume**IMC/W2-P:** ±0.35% corrected volume**IMC/W2-T:** ±0.25% corrected volume**Long Term Stability:****Pressure:** 0.1% FS/yr non-cumulative**Temperature:** 0.3 °F (0.2 °C)/yr non-cumulative**METER TRIM TABLE:**

Meter flow correction: 0.3% to 10% Qmax

E²PROM DATA LOG MEMORY:**Time-stamped Entries:** up to 32,389 (depending on the number of Parameters logged)**Parameters Logged:** Corr Vol; Uncorr Vol; Fault Vol;
Corr Factor; Supercomp; Avg and Peak Corr FLOW Rate;
4 Pressures – Min, Max, Avg and Ending; 4 Temps – Mix,
Max, Avg and Ending; Batt Voltage**BATTERY:****Sealed Pack:** 5-years nominal life**Micro Generator™:** 7-years nominal**Low Battery Reserve:** 3-months approx.**INPUTS:****Volume:** High speed Wiegand sensor in meter magnet cup**Pressure:** Proprietary semiconductor strain gauge**Temperature:** ITS-90 Platinum 100Ω RTD $\alpha=0.00385$ **LCD DISPLAY:**

21 user selectable parameters

3 FULLY PROGRAMMABLE**PULSE OUTPUTS:****Corrected, Uncorrected, and Alarm/Fault:****Loop Voltage:** 5-15 Vdc**Loop Current:** 10 mA maximum**Pulse Width:** 125, 187, or 312 mS**On/Off Resistance:** <10_/> 10MΩ**Isolation:** 2,500 Vdc**ENVIRONMENT:****Operating Temperature:**

-40 °F to 140 °F (-40 °C to 60 °C)

Storage Temperature: -58 °F to 176 °F (-50 °C to 80 °C)**Humidity:** Up to 95% sustained outdoor exposure**ENCLOSURE:**

NEMA 4X (IP66)

DIMENSIONS:

See Dimensional Spec: DS: IMC/W2

INTRINSIC SAFETY**(includes Sealed Battery Pack):****Class-I, Division-1, Group D:**

CSA Approval No. 1224451

Zone 0: EEX ia IIC T4 Tamb = -40 °C to 60 °C**Class-I, Division-1, Group A, B, C, D:** BAS98ATEX 1083**ELECTROMAGNETIC/RADIO FREQUENCY IMMUNITY:****FCC Class B:** Meets EMI/RFI immunity at 10 V/m, 0.1 to 1,000 MHz EN50081-1 and EN5088-2**Other:**

ISO-9001, CE Mark

*ROOTS® Micro Corrector also available
in ID and wallmount versions.*



Ordering:

The IMC/W2 can be ordered as either:

- An integral part of a new meter.
- As a kit to convert existing ROOTS Series-A (LMMA), Series-B (TQM), or Romet meters.

For P and PTZ versions:

The IMC/W2 is available in the following pressure transducer ranges:

Transducer Range	Gauge	Absolute
30 psi (2bar)	X	X
180 psi (12 bar)	X	X
350 psi (24 bar)	X	X
1000 psi (70 bar)		X

- The 350 psi (24 bar), 435 psi (30 bar), and 1000 psi (70 bar) transducers would typically be used for High Pressure Meter applications
- The IMC/W2 can be ordered with either an external or internal pressure connection.
- Kits for Series-A meters, 23M - 56M high capacity meters, and high pressure meters require external pressure connections.
- Optional piping kits are available for convenient connection of external pressure connections.

For PTZ and T versions:

- All 23M - 56M high capacity meters, and high pressure meters require an external temperature probe and thermowell. The probes are available with 5 ft or 10 ft armored cables and in 2 in or 8-1/2 in insertion lengths.
- Thermowells are available in sizes 1/4-NPT x 2, 1-NPT x 2, 1-NPT x 4, and 1-NPT x 6; all dimensions are in inches.

A variety of pulse output connectors are available:

- Metal 6-pin Mil-Spec twist lock connectors.
- Plastic cable-gland connectors.
- Conduit fittings and other special connectors are available upon request.

The IMC/W2 will be shipped with a factory standard configuration unless the customer specifies otherwise.

A Sealed Battery Pack is included and will provide a nominal 5-years of reliable corrector operation. Adding the optional Micro Generator may extend battery life to 7-years or more.

New users will want to order the User Terminal Software and one or more communication cables to allow local configuration, calibration, and data retrieval. The cables are available in 6, 25, and 50 ft. lengths. Special cables are available for proving the meter and corrector with the ROOTS® Model-5 Transfer Prover. See TS: SmartProve for further details.

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