The ROOTS® Micro Corrector, Model IMC/W-T, is a combination of two proven Dresser products; the ROOTS® rotary positive displacement gas meter and the Micro Corrector. The IMC/W-T measures live temperature and allows the user to configure fixed factor pressure. The IMC/W-T also has the capability to sense forward and reverse flow and can be installed on either Series A (LMMA) or Series B ROOTS® meters. Another feature is instantaneous uncorrected flow rate visible on the LCD, which can be used for differential testing.
Logging
The IMC/W-T has storage capacity for 35 days of hourly logs, 48 days of daily logs and 15 months of monthly logs. Each log includes Compensated Total, Non-Compensated Total, Non-Compensated Total in a Fault Condition, Average Temperature and Corrected Peak Flow. The Audit Log saves the last 128-parameter changes made to the corrector during configuration.

Unit Hardware Features
The front panel has “easy to push” button scrolling capability which eliminates the need for magnets. Configurable alarms are included with auto dial out when connected to a modem. Fixed factor pressure can be configured in the unit. The IMC/W-T accessory unit can be rotated 355° - a feature that allows the LCD to be read easily in several different meter mounting positions. Temperature and volume are sensed internally. Additionally, the unit is available with your choice of either one or two pulse output connections with your choice of amphenol or cable gland connectors.

5+ Year Battery Life
New, low power electronics yield unprecedented 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. The IMC/W-T has a backup battery which will allow the unit to continue to accumulate non-compensated counts for a period of up to one year in the case of main battery failure or during main battery replacement. During this period, the IMC/W-T will count and display non-compensated pulses from the meter.

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

Wide Range of Communication Capabilities
The IMC/W-T protocol has local and remote RS-232 communication capability and works with commercially available modems with Bell 212 A compatibility, that utilize the Hayes command set. Additionally, the unit has dual communication call out capability allowing appropriate personnel notification in the event of an alarm/fault condition. Dial out via our intrinsically safe, line powered Micro Modem is available. Pulse outputs for compensated and non-compensated volume and alarm/fault conditions are available. This allows you to easily adapt to your communications network or to provide a separate connection for your customer.

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 offers flexibility during installation
Measurement Resolution:
Temperature: 0.1°C (0.1°F)

Accuracy over Full Temperature Range of -40°F to +140°F (-40°C to +60°C):
Temperature: +/- 0.9°F (0.5°C)

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. A backup battery allows the unit to continue accumulating uncorrected counts for up to one year in the case of main battery failure, or during main battery replacement.

Physical Characteristics:
Operating Temperature:
-40°F to +140°F (-40°C to +60°C)

Ambient Humidity:
Up to 95% sustained outdoor exposure

Storage Temperature:
-60°F to +180°F (-50°C to +80°C)

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 I, Div. I, Group A, B, C and D hazardous locations). CSA (Canadian Standards Association). Approval No. 1224451

Enclosure:
IP66 (NEMA 4X)

EMC:
EN50081-1 and EN 50082-2. Meets FCC class B requirements. EMI/RFI immunity at 10 V/m, 0.1 to 1000 MHz

CE Mark

Volume Input:
Volume sensed from magnetic pickup on meter - Wiegand sensor input to the IMC/W-T

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

3 pulse outlets available:
Uncorrected Volume
Corrected Volume
Fault/Alarm/Intrusion Indication

Long Term Stability:
Temperature: 0.3°F (0.2°C) per year, non-cumulative

Power Requirements:
Operating Voltage: to 6.6 VDC
Operating Current: Typical 100 μA

Battery Lifetime: Minimum 5 years, typical configuration assuming live P and T measurements and Z calculation every 30 seconds, one 15 minute user terminal connection per week.

Ordering Information:


Select Meter Type: MA = Series A (LMMA)
B = Series B (TQM)
Note: The IMC/W for the Series A meter is available only as an Assembly #400

Select Units of Measure:
IMP = Imperial
MTC = Metric

Select Units in which you would configure your fixed factor pressure:
A= Absolute
G= Gauge

Select No. of Amphenol Connectors:
S = Single
D= Dual

Select Type of Pulse Output Connectors:
MSC = Amphenol
CBL = Cable Gland

Select Base Temperature:
F32 = 32°F Base Temperature
F60 = 60°F Base Temperature
C00 = 0°C Base Temperature
C15 = 15°C Base Temperature
C20 = 20°C Base Temperature

Optional Information:
1. Configure Base Pressure?
   If yes - _______
2. Configure Atmospheric Pressure?
   If yes - _______
Select Pressure Units:
PSI _______
Bar _______
kPa _______

Represents Series B 3M 175 ROOTS® meter, model IMC/W-T, with Imperial readout. Fixed factor pressure configured in gauge units, a single output connector and base temperature of 60°F (3M/BI/IMPG15/S/F60)
## ROOTS® Micro Corrector, Model IMC/W-T, T + Log

Integral Temperature Compensator with Data Logging Capability

### Model

<table>
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<tr>
<th>Capacity Unit</th>
<th>C</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>O</th>
<th>P</th>
<th>R</th>
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<td>2-1/4</td>
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</table>

### Dimensions

| Model | Capacity | Unit | C  | L  | M  | N  | O  | P  | R  | S  | T  | W  | X  | Y  | Z  |
|-------|----------|------|----|----|----|----|----|----|----|----|----|----|----|----|
| G160-3” | 8800 cfh | 25-11/16 | 8-3/16 | 17-17/32 | 9-1/2 | 8-7/8 | 9-1/2 | 4-7/16 | 4-11/16 | 4-3/4 | 9 | 6 | 3-15/16 | 4 |
| G160-4” | 8800 cfh | 25-11/16 | 8-3/16 | 17-17/32 | 9-1/2 | 8-7/8 | 9-1/2 | 4-7/16 | 4-11/16 | 4-3/4 | 9 | 6 | 3-15/16 | 4 |
| 11M   | 11,000 cfh | 27-3/4 | 8-9/32 | 19-15/32 | 9-1/2 | 8-7/8 | 9-1/2 | 4-7/16 | 4-11/16 | 4-3/4 | 9 | 7-1/2 | 4-3/2 | 8 |
| 16M   | 16,000 cfh | 32-7/16 | 10-5/8 | 21-13/16 | 9-1/2 | 8-7/8 | 9-1/2 | 4-7/16 | 4-11/16 | 4-3/4 | 9 | 7-1/2 | 4-3/2 | 8 |
| G250  | 16,000 cfh | 32-7/16 | 10-5/8 | 21-13/16 | 9-1/2 | 8-7/8 | 9-1/2 | 4-7/16 | 4-11/16 | 4-3/4 | 9 | 7-1/2 | 4-3/2 | 8 |