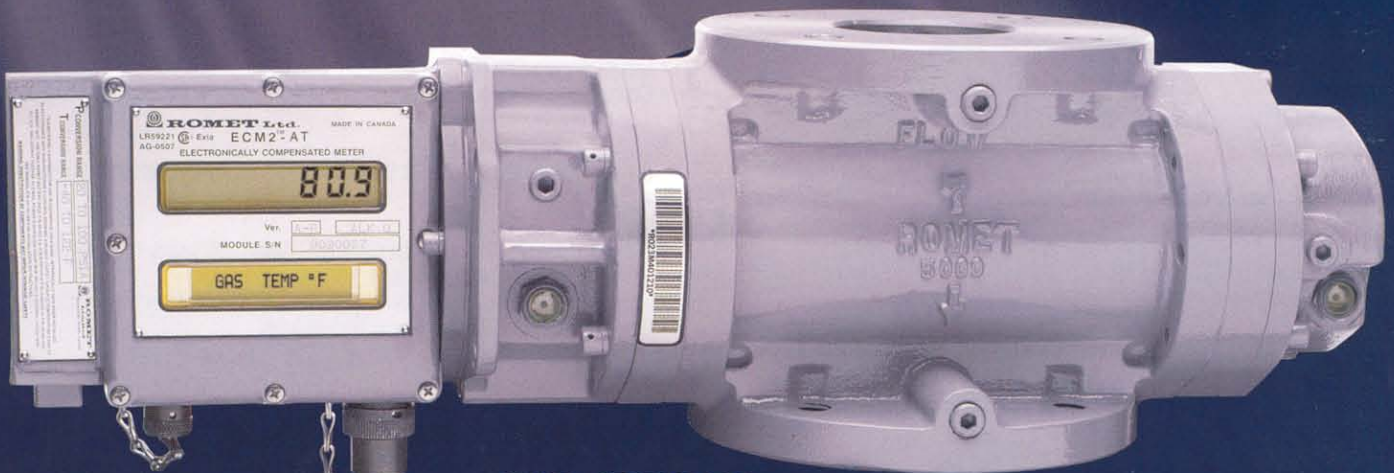




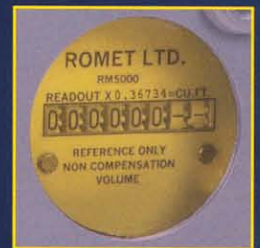
ROMET™



ECM2®-AT/RM5000
BUTTON-LESS VERSION



OPTIONAL PORTABLE
KEYBOARD



MECHANICAL BACKUP INDEX OPTIONAL
PATENT PENDING

ELECTRONICALLY COMPENSATED METERS

ECM2®-AT

FULL AUDIT-TRAIL

SPECIFICATIONS – ECM2® - AT

Correction

- Temperature
- Pressure
- Live supercompressibility NX-19, SGERG-88 or AGA8
- Low flow compensation (Romet meters only) expands meter rangeability to 200:1

Accuracy

- Total conversion error $\pm 0.5\%$ typical

Temperature

- Flowing gas temperature: -40°F to 122°F -40°C to 50°C
- Standard ambient operating temperature: -40°F to 122°F -40°C to 50°C
- Resolution: 0.2°F (0.11°C)
- One point calibration
- Temperature error: $\pm 0.5^{\circ}\text{F}$ 0.3°C typical; $\pm 0.9^{\circ}\text{F}$ 0.5°C maximum

Pressure

- Measurement in absolute (psia or kPa or bara)
- Display in absolute and gauge (psia and psig)
- Transducer digitally compensated
- Supercompressibility calculated using NX-19, SGERG-88 or AGA8
- Three point calibration
- Standard operating ranges

Imperial	Metric	
10 to 25 psia	90 to 150 kPa	0.9 to 1.5 bar
10 to 50 psia	100 to 250 kPa	1.0 to 2.5 bar
20 to 100 psia	100 to 500 kPa	1.0 to 5.0 bar
40 to 200 psia	250 to 1300 kPa	2.5 to 13.0 bar

- $1/4"$ NPT female pipe thread connection
- Pressure measurement error: $\pm 0.3\%$ typical; $\pm 0.5\%$ max.

Input Pulses

- High frequency solid state sensor

Output Pulses

- Form "A" opto-isolated solid state 3 outputs + 1 optional
- Corrected volume 1 output + 1 optional
- Uncorrected volume 1 output
- Alarm 1 output
- Operating voltage: 25 VDC Maximum
- Current: 10 mA Maximum
- Standard pulse width: 50 ms with selectable pulse spacing

Security

- Four digit password on menus that can effect metrology
- Sealable internal program switch
- Sealable screws on the enclosure

Alarms

- Low battery
- Pressure or temperature sensor malfunctions
- Computer malfunction
- Pressure under/over range
- Temperature under/over range
- Flow rate under/over range



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The values quoted are typical of normal production. They do not constitute a specification. Romet Limited reserves the right to change any information in this literature without notice. All of the information and data in this literature has been carefully compiled and thoroughly checked. However, Romet Limited will not assume responsibility for any possible omissions or errors.

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Romet Limited's gas metering technology is protected under U.S. Patent No. 4,910,519 and 6,453,721 and Canadian Patent No. 1,293,568.

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Data Storage

- Last hourly corrected and uncorrected volume indexes
- Calibration data
- Set-up parameters
- Malfunctions and alarms along with date and time
- Peak flow value along with date and time
- Peak flow reset date and time
- Pressure max/min date and time
- Temperature max/min date and time
- Flow rate max/min date and time

Audit Trail

- Event logger 200 events
- Alarm logger 101 alarms
- Selectable 40 days of hourly intervals (maximum 21 items) up to 151 days of hourly intervals (minimum 4 items)
- Data exportable to Excel

User Interface

- Displays: - parameter value: LCD 7 segment, 8 digit
- parameter description: LCD Dot Matrix, 16 characters
- Available as button-less with optional portable keyboard or as front face mounted push buttons
- Button-less version provided with scroll button to read Custom Display parameters and any alarms

RS232 Communication

- ECM2-AT-PRO software to take full advantage of RS232 port (Windows based)
- Direct connection or link through modem
- Compatible with third party protocol (Contact Romet for information)

Upgrading Firmware

- Flash memory programmed through connector in the battery compartment

Electrical

- Powered by alkaline battery pack (4D cells) - 4 years normal or sealed lithium battery pack - 8 years normal
- Backup battery to retain data in RAM during main battery exchange
- Circuitry: 3.3V surface mount technology
- Intrinsically safe, rated for Class 1, Div 1, Group D
- CSA LR59221

Mounting

- For Romet and other manufacturers of TC pressure bodies, (Contact Romet for information)
- Option to mount to Romet standard pressure body using an external temperature sensor
- Pressure connected externally
- Horizontal mounting option available on specified models

Physical Characteristics

- Cast aluminum enclosure with plastic windows (UV stabilized)
- Dimensions: 5.25" x 8.56" x 4.06" (133 mm x 218 mm x 103 mm)
- Module weight: 7.20 lb/3.27 kg (AT version)

Note: Backup index option add to dimension C and D for:

- i) RM1000, RM1500/RM30, RM40 +0.93", 24 mm
- ii) RM2000 to RM5000/RM55 to RM140 +0.56", 14 mm
- iii) RM7000 to RM23000/RM200 to RM650 +0.68", 17 mm
- iv) G16, G25 +24 mm
- v) G40 to G100 +14 mm
- vi) G160 to G400 +17 mm

For meter dimensions, refer to ECM2-PTZ in literature "ELECTRONICALLY COMPENSATED ROTARY METERS, ECM2®-PTZ/ECM2®"

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