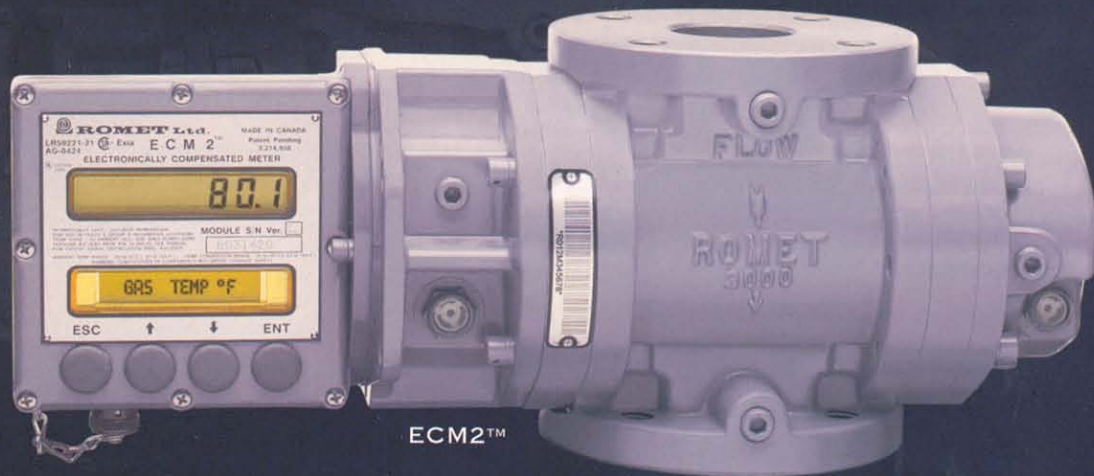# ROMET
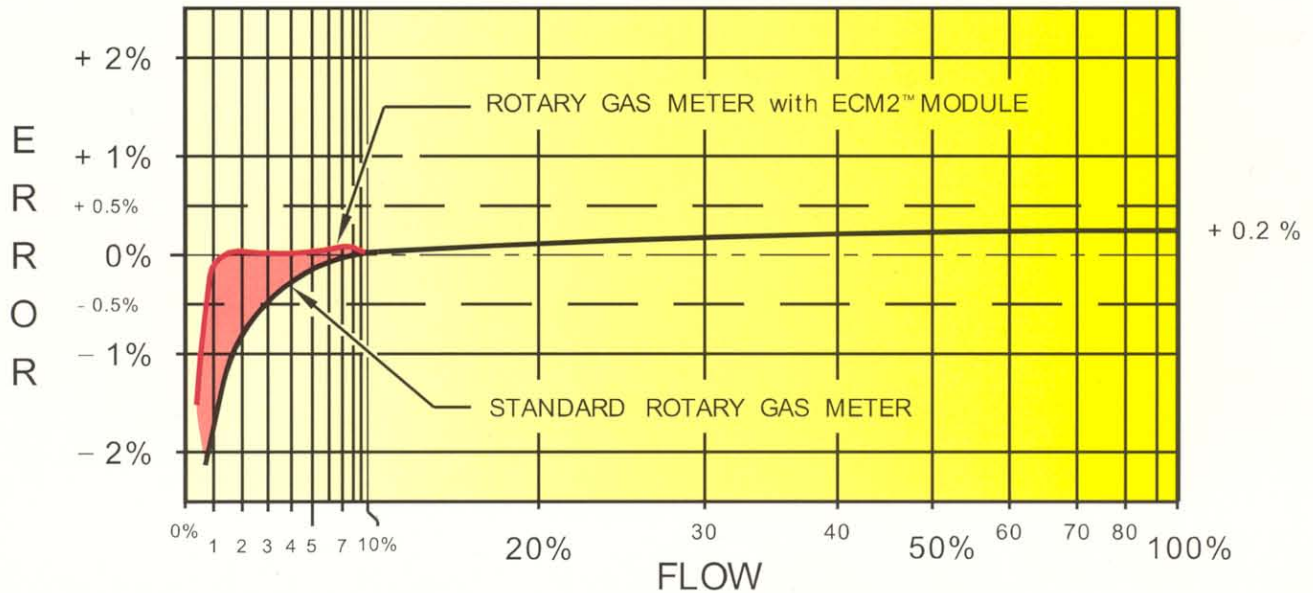
ECM2™-PTZ

OPTIONAL REMOTE KEYPAD

ECM2™

ELECTRONICALLY COMPENSATED METERS

ECM2™-PTZ/ECM2™

DELIVERING A MEASURABLE DIFFERENCE

- **Rangeability exceeds 200:1** with less than 1% error with low flow feature

- **Pilot flow rates** as low as 0.8 cfh ($0.02m^3/h$) can be measured

- **Live T or PTZ conversion** with errors of less than 0.2% (T version) and 0.5% (PTZ version)

- **Live supercompressibility calculation** employing NX19 (PTZ version)

ROTARY GAS METER with ECM2™ MODULE

STANDARD ROTARY GAS METER

ERROR axis: + 2%, + 1%, + 0.5%, 0%, - 0.5%, - 1%, - 2%

+ 0.2 %

FLOW axis: 0%, 1, 2, 3, 4, 5, 7, 10%, 20%, 30, 40, 50%, 60, 70, 80, 100%

PROTECTING THE INTEGRITY OF YOUR GAS REGISTRATION

- **All key data is protected in the event of a power loss**
  - Last hourly unconverted and converted indexes along with the date and time
  - Set up configuration of all parameters
  - Calibration data
  - Access password
  - Peak flow rate, including date and time of occurrence
  - Alarms, including activation date and time

- **Unauthorized access is prevented** by a combination of a password, sealable program switch and seal screws on the enclosure

- **Battery monitoring program** provides an advanced low battery alarm

- **System status is monitored** and an alarm activated in the event of a malfunction

UNIVERSAL SOLUTION TO YOUR GAS MEASUREMENT REQUIREMENTS

- **Adapts to all Romet meters**, plus other selected manufacturers, such as the LMMA series.

- **Reduces inventories**

- **Upgrade mechanical TC modules**

- **Universal mounting system** allows the module to be positioned vertically for both vertical and horizontal meter installations
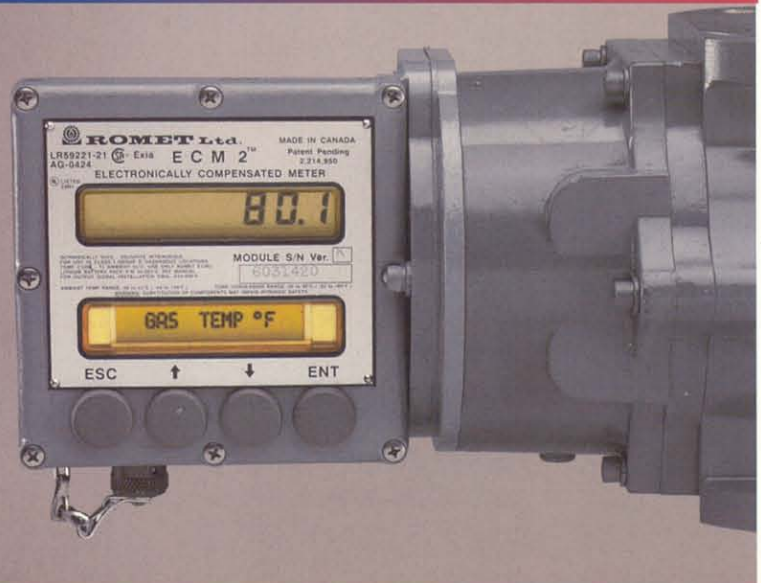
USER FRIENDLY

- **Easy calibration** with one test point for temperature (T & PTZ versions) and three test points for pressure (PTZ version)

- **Large, easy to read dual display** eliminates the need for confusing parameter codes by displaying numeric value along with the associated description

- **Live flow rate** is displayed at the touch of a button, eliminating manual "clocking" of the meter

- **Quick access to key parameters, live flow rate and any activated alarms** has been made easy by using a single scroll button

- **Peak flow rate monitoring** provides a check that the meter is correctly sized

- **Upload key parameter values quickly** to a PC using the ECM2™ software (PTZ version)

- **Reliable interface to AMR** provided by three programmable solid state pulse outputs (converted, unconverted and alarm)

- **Proving test times reduced by 90%** when verifying meter body accuracy

- **TC conversion accuracy performed in as little as 30 seconds** with the TC Test Mode

- **Large selection of parameters** stored in a non-volatile EEPROM memory
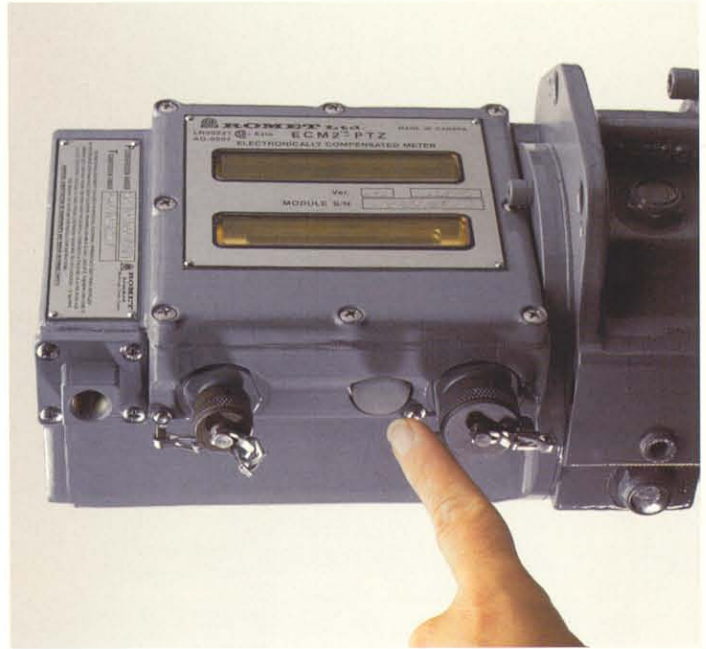
- **Remote keypad** offers a convenient alternative to front face pushbuttons

- **Upgrading of the firmware program** can be downloaded quickly and conveniently to flash memory using a PC (PTZ version)

Precision Gas Measurement Equipment   www.imacsystems.com • e-mail: sales@imacsystems.com

PERFORMANCE DATA – ECM2™ - PTZ/ECM2™

Accuracy
- Temperature conversion error typically less than ± 0.2%
- Combined PTZ conversion error typically less than ± 0.5%
- Calculation error less than 0.01%

Temperature
- Measurement error typically less than ± 0.5°F/0.3°C
- Ambient operating range: -40°F to 122°F (-40°C to 50°C) Higher temperature ranges available on request
- Conversion range: -40°F to122°F (-40°C to 50°C)
- Resolution: 0.2°F/0.11°C

Pressure (PTZ only)
- Absolute pressure measurement
- Displayed in both absolute and gauge units
- Digitally compensated
- 1/4" NPT female thread connection

Pressure ranges

• Imperial (psia):	• Metric (kPa):
10 to 25	90 to 150
10 to 50	90 to 250
20 to 100	100 to 500
50 to 190	250 to 1300

(bara ranges on request)

Electronics
- Alkaline batteries (typically 3 years life) or lithium battery pack (typically 6 years life)
- Backup battery for data retention of RAM memory during a main battery replacement (PTZ only)
- Super-capacitor to power the clock during a main battery exchange
- Circuitry: 3.3V surface mount technology
- Intrinsically safe rating: Class 1: Div. 1; Group D CSA LR 59221; UL 29R1.
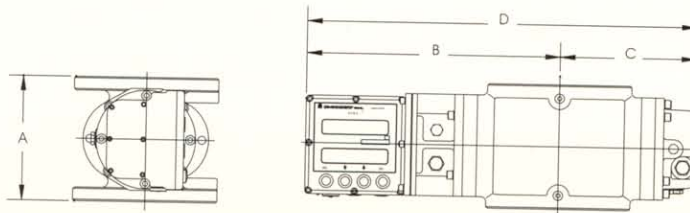
Input
- High frequency solid state sensor

Pulse output
- Unconverted, converted and alarm
- Opto-isolated, form "A" (3-30 VDC, 50 ma max.)
- Pulse width of 50 ms with selectable "off" time
- Multipliers - Imperial: x10cf, x100cf, x1000cf, x10000cf
  Metric: x0.1m³, x1m³, x10m³, x100m³

Physical characteristics
- Module weight: 5.3 lb./2.4 kg (T version)
  7.7 lb./3.5 kg (PTZ version)

ROMET METER SIZE	A (inches)	B* (inches)	C (inches)	D* (inches)	FLANGE ANSI 150	WEIGHT** (lbs.)
RM1000 / RM30	6.75	9.89	3.28	13.17	2"	16.5
RM1500 / RM40	6.75	10.26	3.65	13.91	2"	19.2
RM2000 / RM55	6.75	10.89	4.95	15.84	2"	23.6
RM3000 / RM85	6.75	11.71	5.78	17.49	2"	24.2
RM5000 / RM140	6.75	13.44	7.50	20.94	3"	29.8
RM7000 / RM200	9.50	13.10	7.08	20.18	3"	47.1
RM11000 / RM300	9.50	15.47	9.45	24.92	4"	57.7
RM16000 / RM450	9.50	16.04	10.01	26.05	4"	65.6
RM23000 / RM650	9.50	18.04	12.01	30.05	4"	73.0
RM38000 / RM1100	16.00	16.82	11.20	28.02	6"	158.0

ROMET METER SIZE	A (mm)	B* (mm)	C (mm)	D* (mm)	DIN FLANGE (mm)	FLANGE ANSI 150	WEIGHT** (kg)
G16	171	251	83	334	40	2"	7.5
G25	171	261	93	353	40	2"	8.7
G40	171	281	131	412	40 or 50	2"	11.0
G65	171	307	156	463	50	2"	12.0
G100	171	356	206	562	80	3"	14.7
G160	241	359	206	565	80 or 100	3"	23.8
G250	241	407	254	661	100	4"	29.8
G400	241	458	305	763	100	4"	33.1
G650	406	427	284	712	150	6"	72.0

* Add 1.50" (38 mm) to dimensions B and D for ECM2-PTZ
** Add 2.4 lbs / 1.1 kg to weight for ECM2-PTZ

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