



ROMET™



ECM2®-PTZ/RM5000
BUTTON-LESS VERSION



OPTIONAL
PORTABLE KEYBOARD



ECM2®/RM3000
WITH FRONT FACE MOUNTED
PUSH BUTTONS



MECHANICAL BACKUP
INDEX OPTIONAL
PATENT PENDING

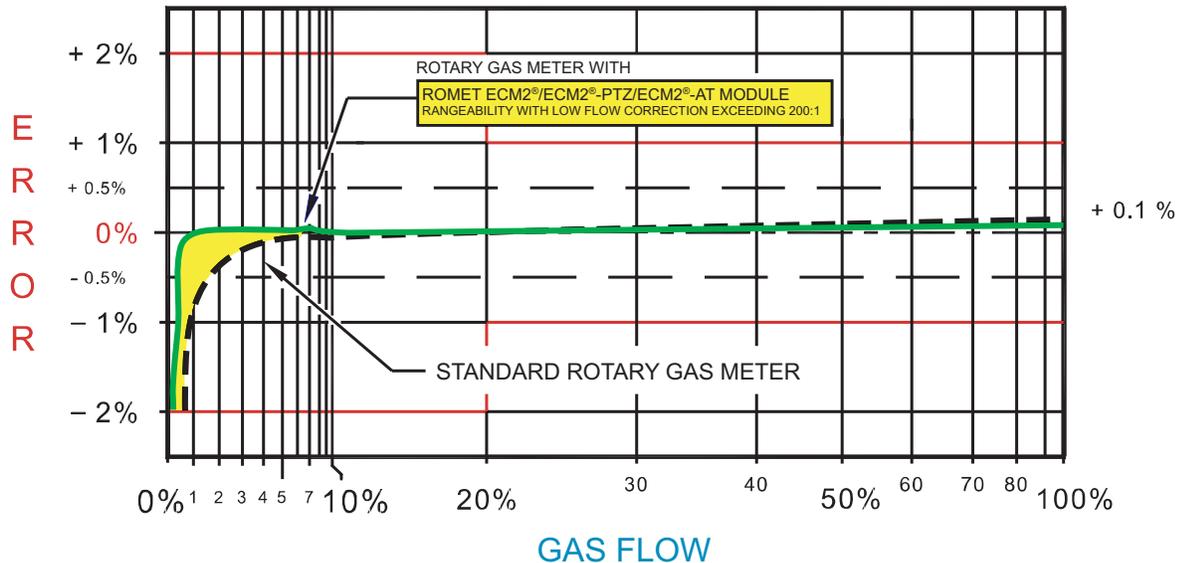
ELECTRONICALLY COMPENSATED METERS

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 (0.02m³/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 NX-19 (PTZ version)

ROTARY GAS METER ACCURACY CURVES



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

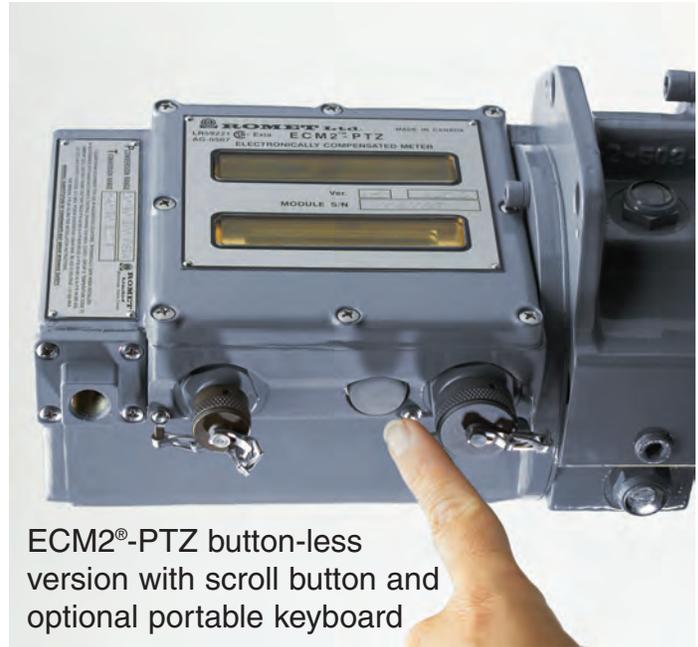
- **Adapts to all Romet meters, plus other selected manufacturers, such as the LMMA series.**
- **Reduces inventories**
- **Upgrade mechanical TC modules**
- **Universal mounting system** allows the module to be positioned vertically for both vertical and horizontal meter installations



ECM2® with front face mounted push buttons

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 with external communication box option, for shop use only)
- **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



- **Optional Portable Keyboard** offers a convenient alternative to front face push buttons
- **Upgrading of the firmware program** can be downloaded quickly and conveniently to flash memory using a PC (PTZ version)



PERFORMANCE DATA – ECM2® - PTZ/ECM2®

Accuracy

- Temperature conversion error typically less than $\pm 0.2\%$
- Combined PTZ conversion error typically less than $\pm 0.5\%$
- Calculation error less than 0.01%

Temperature

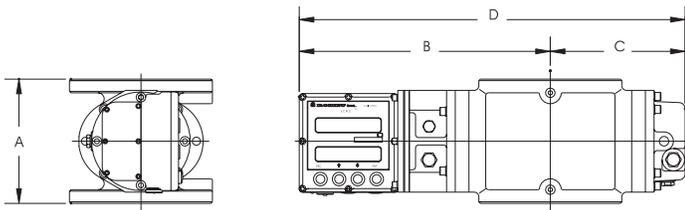
- Measurement error typically less than $\pm 0.5^\circ\text{F}/0.3^\circ\text{C}$
- Ambient operating range: -40°F to 122°F (-40°C to 50°C)
Higher temperature ranges available on request
- Conversion range: -40°F to 122°F (-40°C to 50°C)
- Resolution: $0.2^\circ\text{F}/0.11^\circ\text{C}$

Pressure (PTZ only)

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

Pressure ranges ECM2®-AT

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



Electronics

- Alkaline batteries (typically 3 years life - T version) (typically 4 years life - PTZ version) or lithium battery pack (typically 6 years life - T version) (typically 8 years life - PTZ version)
- 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" (25VDC Maximum, 10 mA Maximum)
- 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: 5.30 lb/2.40 kg (T version)
7.20 lb/3.27 kg (PTZ 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

ROMET METER SIZE	A (inches)	B* (inches)	C (inches)	D* (inches)	ANSI 125/150 F.F. flange dimensions***	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
RM25000 / RM700	16.00	14.38	8.76	23.14	6"	126.0
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)	ANSI 125/150 F.F. flange dimensions***	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
G400-150	406	365	223	588	150	6"	57.0
G650	406	427	284	712	150	6"	72.0

* Add 1.50" (38 mm) to dimensions B and D for ECM2®-PTZ, ECM2®-AT.

** Add 1.90 lb / 0.87 kg to weight for ECM2®-PTZ, ECM2®-AT.

*** Noted that the maximum operating pressure (MAOP) is 175 psig/12 bar/1206 kPa. For higher pressure ratings contact Romet.



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