GAS MEASUREMENT EQUIPMENT APPROVED FOR BILLING PURPOSES
PUBLIC SERVICE COMMISSION OF MARYLAND

In Accordance with COMAR 20.55.05.02 and COMAR 20.25.01.04-1A(2)

Diaphragm Meters - Aluminum Case

Current Manufacturer	Prior Manufacturer
American Meter Company Models: 80B AL-175 5B-225 250B AC-250 AL-250 AL-425 500B AL-600 AC-630 AL-800 AL-1000 AL-1400 AL-2300 AL-5000 AR-250 AC-800 Temperature Compensated Models: AL-175 AL-250 AL-425 5B-225 AR-250	American, Singer
ARKLA Model: V250	
Dresser Model D800	
Equimeter Model: RX250 Temperature Compensated Model: RX-250TC	Rockwell
Rockwell International Models: 0 and 00	EMCO (Pittsburgh)
Rockwell International Models: 150 175 R175 R200 RT210 R230 250 R275 310 415 750 1000 1600 3000 5000 10,000	Rockwell
Actaris U.S. Gas Model: Gallus 2000. Indoor installation for submetering only	
Actaris U.S. Gas Models: METRIS-250 "A" Series Models: 400A 675A 800A 1000A	
Itron Models: 1A 175 240 250 305 400 675 1000 175RM; I-250 Temperature Compensated Models: 175 and 250	Actarias US Gas, Sprague
Superior (Defunct) Models: AL175A AL250 AL340	
Universal Lancaster National Model: UL250	
Westinghouse-ABB Model: G-2	
Sensus Model R-275	Rockwell

Diaphragm Meters - Iron Case

Current Manufacturer	Prior Manufacturer
American Meter Company Models: 5B 10B 20B 25B 30B 35B 60B 80B 250B 500B DU-5000	American, Singer
American Meter Company Models: 5B 10B 20B 25B 30B 35B 60B 80B 250B 500B	Metric, Singer
Rockwell International Models: 0 2 2-1/2 3 4 4-1/2(steel) 5(steel)	EMCO (Pittsburgh)
Sprague Meter Division of Textron, Inc. Models: 1A 1D 2 3 4 5 250	

GAS MEASUREMENT EQUIPMENT APPROVED FOR BILLING PURPOSES
PUBLIC SERVICE COMMISSION OF MARYLAND

Diaphragm Meters - Tin Steel Case

Current Manufacturer	Prior Manufacturer
American Meter Company Models: 5-225 5T-225	Accurate, Singer
American Meter Company Models: 5B 5M 5T 10A 10B 10M 11C 20A 20B 25C 30A 30B 30M 40C 60A 60B 60C 60M 100B 150A 200B	American, Singer
American Meter Company Models: 5B 10A 10B	Lambert, Singer
American Meter Company Models: 5B 10B 11C 20B 30B 40C 60B 60C 100B 200B	Maryland, Singer
American Meter Company Model: 5B	Tufts, Singer
Rockwell International Models: 5-200 5B 10A	EMCO (Pittsburgh)
Rockwell International Models: 5-80 5-200 5-300 10-425	Rockwell
Superior (Defunct) Models: 5A 5AA 5B 5T 10A 10B 11C 20A 20B 30A 40C 60A 60C	

Rotary Meters - Aluminum Case

Current Manufacturer	Prior Manufacturer
American Meter Company Models: CVM 3.5M125 CVM 5.3M125 CVM 11M125	American, Singer
American Meter Company Models: RPM 9.0C RPM 1.5M RPM 3.5M RPM 5.5M RPM 7.0M RPM 11.0M RPM 16.0 M These models are approved for use with or without a counter, mechanical temperature compensator, and electronic temperature compensator.	
Dresser Measurement Division, Dresser Industries, Inc. Models: 1.5M125 3M125 5M125 7M125 11M125 16M125 D630	Dresser
Dresser Measurement Division, Dresser Industries, Inc. Series B3 models are approved for use with any combination of Counter Version, Instrument Drive, Temperature Compensated, and Solid State Pulser. Series B3 Models: 8C175 11C175 15C175 2M175 3M175 5M175 7M175 11M175 16M175 23M175 23M232 4 inch 38M175	Roots
Romet Models: RM2000 RM3000 RM5000 RM7000 RM11000	

Rotary Meters - Cast Iron Case

Current Manufacturer	Prior Manufacturer
Dresser Measurement Division, Dresser Industries, Inc.	Roots - Connersville
Models: 3-1/2x10 4x12 5x10 5x15 6x18 8x12 8x24 10x30 12x18	
Dresser Measurement Corporation	Roots
Model: Meter #4	
Dresser Measurement Division, Dresser Industries, Inc.	Dresser
Models: 1.5M125 3M125 5M125 7M125 11M125 16M125 23M125 38M125 56M125 102M125	
Rockwell International	Rockwell
Roto Seal Models: R-3 R-5 R-8	
Elster	
American RABO Rotary Meter	

Turbine Meters

Current Manufacturer	Prior Manufacturer
American Meter Company	American, Singer
Models: GT 125 4" (4 GT-16M) GT 125 6" (6 GT-30M) GT 125 8" (8 GT-60M)	
Daniel Measurement & Control	
Models: Mini-Gas Turbine Meter (1", 2", 3") Gas Turbine Meter (4", 6", 8", 12")	
Dresser Measurement Division, Dresser Industries, Inc.	Roots - Connersville
Model: 8C125	
Invensys Energy Metering Auto-Adjust Turbo-Meter	
4", 6", 8", and 12"	
Rockwell International	Rockwell
Mark I Models: 6"T-30 8"T-60	
Mark II Models: 4"T-18 6"T-30 8"T-60 12"T-140	

Ultrasonic Gas Meters

Current Manufacturer	Prior Manufacturer
Sensus Metering System Models: Sonix 215, 600, 880, 2000	Invensys Energy Metering
Itron Models: Intelis 250 , Intelis 425	

Fluid Oscillation Meters

Current Manufacturer	Prior Manufacturer
Actaris U.S. Gas	
Models: **FM2-1M, FM2-1.5M, FM2-2M, FM2-3M, FM2-5M, FM2-7M, FM2-11M, FM3-7M, FM3-11M, FM3-16M, FM3-23M, FM3-38M, FM3-56M** Approved versions: **Basic** (uncorrected), **ETC** (temperature compensated), **PTZL** (Pressure, Temperature, and Z compensated) or **Mini Max** (integral Mercury Mini Max corrector)	

Orifice Metering Systems

Orifice metering is approved for billing purposes, provided that the requirements listed below are met and the utility submits an acceptable In-Service Performance Plan to the Commission's Engineering Division.

Acceptable Engineering Standards:

- ✓ American Gas Association Report No. 3: *Orifice Metering of Natural Gas and Other Related Hydrocarbon Fluids*, Part 1: *General Equations and Uncertainty Guidelines*
- ✓ American Gas Association Report No. 3, Part 2: *Specification and Installation Requirements*
- ✓ American Gas Association Report No. 3, Part 3: *Natural Gas Application*

Applicability:

Orifice meters shall be permissible in applications where the uncertainty of the orifice meter is less than 1.0% for all historical and/or expected sustained demand levels of gas flow. The uncertainty of the orifice meter shall be calculated as specified by the American Gas Association Report Number 3 (AGA 3), Part 1. The utility must demonstrate the uncertainty calculation result is less than 1.0% for all expected sustained demand levels of flow. To ensure the uncertainty requirements are met across the expected flow range, a stacked differential pressure transducer arrangement may be used.

Installation and Specifications:

Each orifice meter installation shall meet the geometrical, dimensional, and installation requirements as specified by the AGA 3, Part 2 standard in effect at the time of construction. Note that earlier editions of AGA 3 may have requirements that affect the uncertainty of the orifice meter adversely, resulting in greater uncertainty. Therefore, the AGA 3, Part 2 edition number must be greater than or equal to the AGA 3, Part 1 edition number used to calculate uncertainty.

Calculation of flow through the orifice meter shall be performed as specified by AGA 3 using "real-time data" for differential pressure, static pressure, and flowing temperature. Specific gravity shall be measured and representative of the gas flowing through the orifice meter. Orifice bore diameter and meter tube diameter shall be used in calculating flow as specified by AGA 3.

GAS MEASUREMENT EQUIPMENT APPROVED FOR BILLING PURPOSES
PUBLIC SERVICE COMMISSION OF MARYLAND

Pressure And/Or Temperature Correcting Devices

Current Manufacturer	Prior Manufacturer
American Meter Company BP30 (0-1 lbs 0-5 lbs 0-15 lbs 0-30 lbs) BP60 (0-45 lbs) BP78 (0-60 lbs) BP120 (0-100 lbs) BP300 (0-250 lbs) BPICI: 0-5 Bellows 0-5 Bourdon Tube 0-15 0-45 0-60 0-100 1-150 0-300 BVI: 120 (0-100) 300 (0-250) BVI CI: 0-100 0-150	
American Meter Company Electronic Flow Corrector AE 2000 EFC (RTU 80/1 EFC) 0-200 0-500 AE5000 EFC Electronic Flow Computer AE5000 EC Electronic Corrector AE5000 EPR Electronic Pressure Recorder	Eagle Research Corp.
Dresser Measurement Division, Dresser Industries, Inc. Volume Temperature Compensator Volume Correction Computer Dresser ES3 Electronic TC Index	Roots
Equimeter, Inc. Nex Corr Base Volume Corrector	
Eagle Research Corporation MPplus Volume Corrector/Pressure Recorder MPplus2 Volume Corrector/Pressure Recorder	
Honeywell EC350 PIZ Gas Volume Corrector	
Mercury Instruments Mercury Mini-Max Electronic Volume Corrector Mercor Mini-AT Electronic Volume Corrector Mercor Mini-PT Electronic Volume Corrector Mercor EC Electronic Volume Corrector Mercor Mark III 0-1 0-5 0-15 0-30 0-60 Mercury Electronic Temperature Compensating Index TCI	
Reynolds In-Line Model 831 PT Electronic Volume Corrector 0-100 psia pressure range RECOR 323 LVC Volume Corrector	
Rockwell International Electrocorrector P&T 0-25 0-50 0-100 0-200 0-500 Electrocorrector-P 0-25 0-50 Type I and T Emcorrector 0-10 0-20 0-50 0-100 0-175 0-200 0-250 0-500	
Romet Limited Electronic Gas Pressure Corrector Model IMP-PT 0-250 psig Electronic Gas Pressure Corrector Model AdEM-T Electronic Gas Pressure Corrector Model AdME-PTZ	

GAS MEASUREMENT EQUIPMENT APPROVED FOR BILLING PURPOSES
PUBLIC SERVICE COMMISSION OF MARYLAND

Recording Gauges - Pressure + Volume

Current Manufacturer	Prior Manufacturer
American Meter Company Type PV 0-15 0-30 0-50 0-100 0-200	Metric
Mercury Type PV 0-10 0-50 0-100	
Rockwell International Type PV 0-50 0-100 Type PV + Time 0-50 0-100 0-250	

Recording Gauges - Pressure + Volume + Temperature

Current Manufacturer	Prior Manufacturer
Mercury Type PV + Temp. 0-100 Temp. 0-250 F Type PV + Temp. + Time 0-100 Temp. 0-250 F	

Meter Provers

American Meter Company	Sonic Nozzle Auto Prover (SNAP)
Energy Economics Inc.	Sonic Nozzle Prover (SNP)

John Borkoski
Chief Engineer