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# Intermediate and Large Capacity Diaphragm Type Gas Meters

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M-1021  
Rev. 8



 **Equimeter**  
INCORPORATED

 A BTR Metering Systems Company

Taking the Measure of Tomorrow

## Intermediate and Large Capacity Diaphragm Gas Meters

# Single Joint Large Capacity Meters

## A Better Idea From Equimeter . . .

and that's a result that came about by design . . .

The recognized quality of today's Equimeter meters is the result of 100 years of methodical research and evolutionary development, implemented by an up-to-the-minute production team.

All Equimeter Diaphragm meters, including the lightweight large capacity models, are designed around our unique Single Joint Concept — a single seal joining upper and lower halves of the meter body and incorporating the valve plate area. Coupled with complete interchangeable valve plate assemblies and lightweight aluminum bodies, this design offers several important benefits.

- Ease of repair
- Replaceability of measurement module
- Simple installation
- Lighter weight, for ease of handling and lower shipping costs
- Minimal risk of leakage — because there's only 1 body seal

Only Equimeter offers you all these cost-saving benefits in a complete line of Single Joint meters made of Corrosion-resistant Aluminum Alloy Castings.

Compare the features of Equimeter meters with any others made. See for yourself why Equimeter large capacity meters are one of today's outstanding meter values.



**The full selection available in Equimeter's complete line of single joint large capacity gas meters assures you the right meter for any application.**

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### 10,000 Meter

The rugged 10,000 meter, with "O" ring seal, is the largest among the Equimeter line of single joint aluminum gas meters.

This lightweight, large capacity meter, made of aluminum alloy, has a maximum working pressure of 100 psig, yet weighs only 428 pounds—about one-third the weight of comparable cast iron meters.

Its rigid construction and light weight make it the perfect meter for commercial and industrial operations requiring large volume loads at high pressure.

*10,000 Meter*

### 5000 Meter

The great weight reduction over previous cast iron models, made possible by the use of aluminum alloy for the cover, body, and valve plate, results in substantial savings in shipping costs as well as greater ease in handling.

To prevent leakage between the body and cover, the 5000 meter has an "O" ring seal.

Its compact design and light weight make this meter an ideal replacement for large tin meters still in service, and for downtown basement installations where a large capacity, yet easy-to-handle, meter is required.

*5000 Meter*

### 3000 Meter

The sturdy design, internally and externally, of the Equimeter 3000 meter makes it ideal for commercial and industrial operations where large volume loads at high pressure (up to 100 psig) are necessary.

Single joint construction and "O" ring type gasket insure a positive seal against leakage.

Aluminum alloy construction of the cover, body, and valve plate accounts for its lightweight durability and economy in shipping costs.

Compact, 28 1/4" x 16" wide, and weighing approximately 100 pounds, the 3000 meter eliminates many of the service and installation problems encountered with the heavier cast iron meters.

*3000 Meter*

### 1000 Meter

The 1000 meter, newest member of the single joint line of meters, was engineered for intermediate size loads on commercial and industrial services. It was designed and built specifically for 1000 cfh loads—not an alteration or redesign of an existing meter.

The low speed (1.6 REV/CF) of the 1000 meter ensures proof stability and long service life with minimum maintenance.

This meter, as well as all others described on this page, incorporates such recognized Equimeter features as single joint and low friction valves.

The 1000 meter, as well as all the other members of the single joint family, makes use of modern engineering plastic (UV stabilized clear polycarbonate) for its index box as standard equipment.

*1000 Meter*

### 750 and 1600 Meters

The 750 and 1600 meters, like all Equimeter single joint lightweight meters, are extremely versatile because repair and space problems are reduced to a minimum. Due to advanced design and engineering features, both of these meters have all of the inherent simplicity and accuracy of the reputable Equimeter single joint meters.

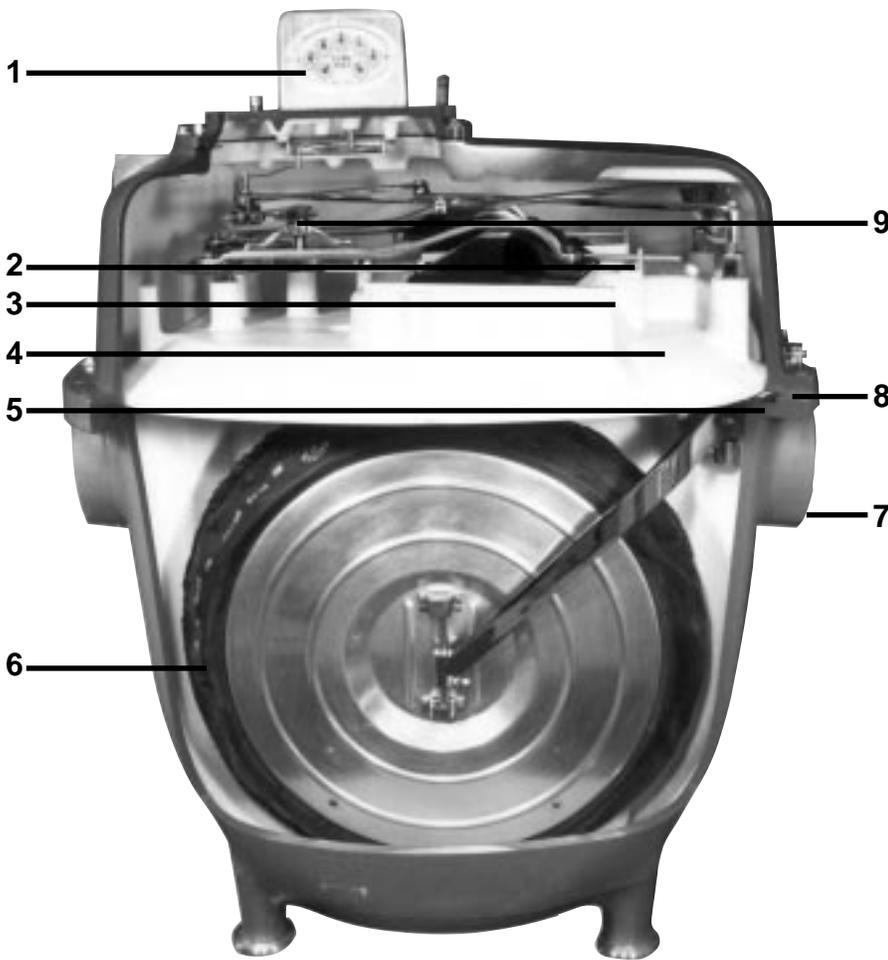
The 1600 is constructed of sturdy aluminum alloy castings. It has an "O" ring seal and is especially suited to small industrial and commercial operations where large capacities at high pressure are needed.

Guide wires are utilized in the 750 and 1600 to provide the smoothest possible diaphragm motion and to assure proof stability and long meter life.

*750 and  
1600 Meters*

Intermediate and Large Capacity  
Diaphragm Gas Meters

**Equimeter Single Joint Meters are Engineered For Accuracy, Dependability, and Economy. How? Check these Features . . .**



**1 UV STABILIZED CLEAR POLYCARBONATE INDEX BOX**

high impact engineering materials reduce tampering and vandalism.

**2 NYLON VALVE GUIDES**

minimize friction.

**3 TEFLON-FACED BAKELITE VALVES**

minimize friction.

**4 INTERCHANGEABLE VALVE PLATE ASSEMBLY**

All Equimeter aluminum case meters are designed with all moving and working parts located on a single aluminum alloy valve plate casting. This gives two important advantages:

1. Proper alignment of the working parts is insured with resultant maintenance of accuracy;
2. The working parts of the meter can easily be removed for inspection, repair, and calibration.



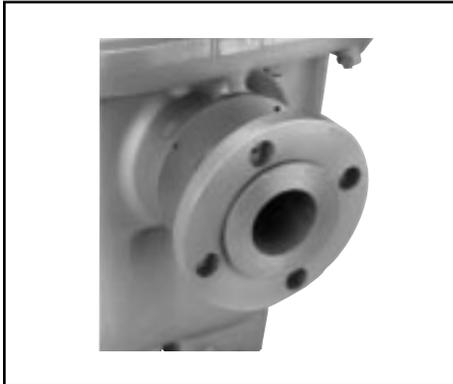
## 5 "O" RING SEAL

One of the most important features of the 1600, 3000, 5000 and 10,000 large capacity meters is the use of the "O" ring type gasket. This Buna-N gasket fits snugly into a groove machined into the top of the Equimeter meter body, thereby insuring a positive seal against leakage between the cover and body.



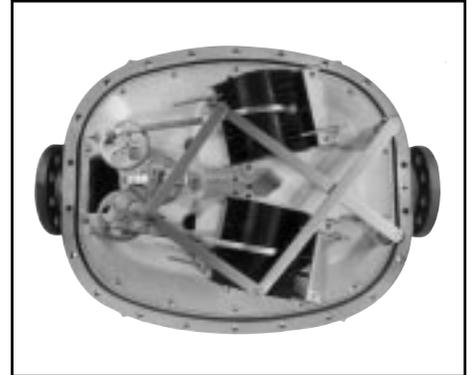
## 7 INSERTED STEEL UNIVERSAL CONNECTIONS

The 3000, 5000 and 10,000 large capacity meters have threaded steel inserts in the inlet and outlet connections as a replaceable part of the body casting. These steel inserts furnish extremely strong, corrosion-resistant connections which afford a minimum of friction and complete freedom from seizure. Heavy duty steel flanges are also available on all Equimeter large capacity meters.



## 9 POWDERED METAL PARTS

The use of oil impregnated powdered metal bushings and bearings at all potential wear points and the use of powdered metal timing gears for maintaining the relationship between the valves, are instrumental in keeping friction to a minimum and assuring a smooth glide for the Bakelite valves used in all Equimeter single joint meters.



## 6 SYNTHETIC DIAPHRAGMS

Specially treated synthetic material. Field tested for over 25 years.



## 8 SINGLE JOINT CONSTRUCTION

Single joint construction—cover to body for ease of repair—is an exclusive feature found only in lightweight meters and offers the advantage of having only one main gasket joint to seal... competitive meters have as many as six external gasket joints.



- Temperature compensation is available on all diaphragm meters.



- Internal relief valves are available on the 5000 and 10,000 large capacity meters.
- If required, all large capacity meter covers can be supplied with 1" tapping for easy temperature bulb insertion.



A BTR Metering Systems Company

## Intermediate and Large Capacity Diaphragm Gas Meters

### Equimeter Gas Meter Capacity Tables

Some care must be taken in establishing diaphragm meter capacities, and the tables on this and the following page are designed to simplify meter sizing. The first table lists the natural gas capacities of Equimeter diaphragm meters at base pressure conditions and at meter differentials of both 1/2" w.c. and 2" w.c., which is the most common method of presenting such information. The other tables give meter capacities at elevated operating pressures and for several commonly metered gases in addition to natural gas. Diaphragm capacities under pressure must be suppressed from the normal Boyle's law multipliers somewhat to protect the meter diaphragms from damage. These tables do just that and indicate the maximum allowable capacity for each meter under various pressure and gas conditions for safe, reliable operation. Also listed are capacities limiting the meter differential to 2" w.c. because a number of utilities place that restriction on their use to extend ultimate meter life. For meter capacities at other pressures and for gases other than those listed, please contact your local Equimeter representative.

**NOTE:** Recommended meter operating temperature range is -30°F to +150°F. The typical temperature compensation performance is within an accuracy band of ±2% over a flowing gas temperature range of -20°F to +120°F.

### NATURAL GAS CAPACITIES

Meter Model	Capacity Rating @ 1/2" w.c. Differential	Capacity Rating @ 2" w.c. Differential
750	750 CFH	1600 CFH
1600	800	1600
1000	1000	2200
3000	1450	3000
5000	2500	5000
10000	5000	10000

Note: Capacities based on 0.6 sp. gr. gas metered at 4 oz. base pressure.

The table below can be used to estimate capacities at other elevated pressures. Multiply the maximum allowable factor, or the 2" w.c. factor corresponding to the operating pressure, times the 2" w.c. rating at 0.25 psig.

Example: A 3000 meter operating at 100 psig has a maximum allowance capacity of:  
 $(4.50) \times (3000) = 13,500$  SCFH.

The same meter at 50 psig has a 2" w.c. capacity of:  
 $(2.10) \times (3000) = 6,300$  SCFH.

Please see the Equimeter Gas Meter Capacity Tables section for additional details.

### CAPACITIES AT OTHER ELEVATED PRESSURES

Gauge Pressure (psig)	Maximum Allowance Factor	2" w.c. Factor
0	1.00	1.00
5	1.29	1.15
10	1.55	1.30
15	1.78	1.45
20	2.00	1.55
25	2.23	1.65
30	2.40	1.75
40	2.78	1.95
50	3.10	2.10
60	3.50	2.30
70	3.73	2.40
75	3.80	2.50
80	4.00	2.60
90	4.30	2.70
100	4.50	2.80

### NATURAL GAS CAPACITIES SCFH OF 0.6 SP. GR. GAS AT ELEVATED PRESSURES

Gauge Pressure (psig)	Diff.	750	1600	1000	3000	5000	10,000
0.25	2" w.c.	1,600	1,600	2,200	3,000	5,000	10,000
	Max. Allow.	1,600	1,600	2,200	3,000	5,000	10,000
5	2" w.c.	1,840	1,840	2,530	3,450	5,750	11,500
	Max. Allow.	2,070	2,070	2,840	3,880	6,450	12,900
10	2" w.c.	2,080	2,080	2,860	3,900	6,500	13,000
	Max. Allow.	2,480	2,480	3,420	4,660	7,760	15,550
15	2" w.c.	2,320	2,320	3,190	4,350	7,250	14,500
	Max. Allow.	2,070	2,840	3,960	5,400	9,000	18,000
20	2" w.c.	2,480	2,480	3,410	4,650	7,750	15,500
	Max. Allow.	3,230	3,230	4,440	5,820	10,100	20,200
25	2" w.c.		2,640	3,630	4,950	8,250	16,500
	Max. Allow.		3,570	4,900	6,700	11,100	22,300
40	2" w.c.		3,120		5,850	9,750	19,500
	Max. Allow.		4,450		8,700	13,900	27,800
50	2" w.c.		3,360		6,300	10,500	21,000
	Max. Allow.		5,000		9,370	15,600	31,200
70	2" w.c.		3,840		7,200	12,000	24,000
	Max. Allow.		5,980		11,200	18,700	37,400
100	2" w.c.		4,480		8,400	14,000	28,000
	Max. Allow.		7,170		13,400	22,400	44,800

All capacities listed are standard cubic feet per hour, standard conditions being an atmospheric pressure of 14.4 psia and 60°F with a 4 oz. base pressure. Tables do not take into account supercompressibility. Last capacity figure in each group indicates maximum allowable operating pressure. See specification table on page 10.

### METRICATION Use the following for metric conversions:

std. metres<sup>3</sup>/hr. x 35.31 = std. ft<sup>3</sup>/hr. (SCFH)  
 std. ft<sup>3</sup>/hr. (SCFH) x 0.0283 = std. metres<sup>3</sup>/hr.

kilograms/centimeter<sup>2</sup> (kg/cm<sup>2</sup>) x 14.22 = psi  
 psi x 0.0703 = kilograms/centimeters<sup>2</sup> (kg/cm<sup>2</sup>)

kilopascals (kPa) x 0.145 = psi  
 psi x 6.90 = kilopascals (kPa)

bars x 14.50 = psi  
 psi x 0.069 = bars

millimeters water (mm H<sub>2</sub>O) x 0.0394 = in. w.c.  
 in. w.c. x 25.4 = millimeters water (mm H<sub>2</sub>O)

millimeters mercury (mm Hg) x 0.535 = in. w.c.  
 in. w.c. x 1.868 = millimeters mercury (mm Hg)

**ARGON—  
SPECIFIC GRAVITY 1.38  
PROPYLENE—SPECIFIC GRAVITY 1.45**

Gauge Pressure (psig)	Meter Diff.	750	1600	1000	3000	5000	10,000
0.25	2" w.c.	1,070	1,070	1,470	2,010	3,350	6,700
	Max.	1,390	1,390	1,910	2,610	4,350	8,700
5	2" w.c.	1,220	1,220	1,670	2,280	3,800	7,600
	Max.	1,710	1,710	2,350	3,210	5,350	10,700
10	2" w.c.	1,380	1,380	1,890	2,580	4,300	8,600
	Max.	2,020	2,020	2,770	3,780	6,300	12,600
15	2" w.c.	1,520	1,520	2,090	2,850	4,750	9,500
	Max.	2,260	2,260	3,100	4,230	7,050	14,100
20	2" w.c.	1,630	1,630	2,240	3,060	5,100	10,200
	Max.	2,500	2,500	3,430	4,680	7,800	15,600
25	2" w.c.	1,780	2,440	3,330	5,550	11,100	
	Max.	2,770	3,810	5,190	8,650	17,300	
40	2" w.c.	2,080		3,900	6,500	13,000	
	Max.	3,330		6,240	10,400	20,800	
50	2" w.c.	2,290		4,290	7,150	14,300	
	Max.	3,650		6,840	11,400	22,800	
70	2" w.c.	2,690		5,040	8,400	16,800	
	Max.	4,290		8,040	13,400	26,800	
100	2" w.c.	3,040		5,700	9,500	19,000	
	Max.	5,120		9,600	16,000	32,000	

**PROPANE and  
DRY CARBON DIOXIDE  
SPECIFIC GRAVITY 1.55**

Gauge Pressure (psig)	Meter Diff.	750	1600	1000	3000	5000	10,000
0.25	2" w.c.	990	990	1,360	1,860	3,100	6,200
	Max.	1,340	1,340	1,850	2,520	4,200	8,400
5	2" w.c.	1,120	1,120	1,540	2,100	3,500	7,000
	Max.	1,630	1,630	2,240	3,060	5,100	10,200
10	2" w.c.	1,260	1,260	1,740	2,370	3,950	7,900
	Max.	1,920	1,920	2,640	3,600	6,000	12,000
15	2" w.c.	1,390	1,390	1,910	2,610	4,350	8,700
	Max.	2,180	2,180	2,990	4,080	6,800	13,600
20	2" w.c.	1,550	1,550	2,130	2,910	4,850	9,700
	Max.	2,420	2,420	3,320	4,530	7,550	15,100
25	2" w.c.	1,620	2,220	3,030	5,050	10,100	
	Max.	2,610	3,590	4,890	8,150	16,300	
40	2" w.c.	1,920		3,600	6,000	12,000	
	Max.	3,140		5,880	9,800	19,600	
50	2" w.c.	2,110		3,960	6,600	13,200	
	Max.	3,470		6,510	10,850	21,700	
70	2" w.c.	2,400		4,500	7,500	15,000	
	Max.	4,100		7,680	12,800	25,600	
100	2" w.c.	2,800		5,250	8,750	17,500	
	Max.	4,830		9,060	15,100	30,200	

**AIR, DRY CARBON MONOXIDE,  
ETHANE, NITROGEN, ETHYLENE—  
SPECIFIC GRAVITY 1.0**

Gauge Pressure (psig)	Meter Diff.	750	1600	1000	3000	5000	10,000
0.25	2" w.c.	1,220	1,220	1,670	2,280	3,800	7,600
	Max.	1,500	1,500	2,060	2,800	4,670	9,350
5	2" w.c.	1,440	1,440	1,980	2,700	4,500	9,000
	Max.	1,840	1,840	2,530	3,450	5,750	11,500
10	2" w.c.	1,620	1,620	2,220	3,030	5,050	10,100
	Max.	2,240	2,240	3,080	4,200	7,000	14,000
15	2" w.c.	1,780	1,780	2,440	3,330	5,550	11,100
	Max.	2,510	2,510	3,450	4,710	7,850	15,700
20	2" w.c.	1,920	1,920	2,640	3,600	6,000	12,000
	Max.	2,800	2,800	3,850	5,250	8,750	17,500
25	2" w.c.	2,080	2,860	3,900	6,500	13,000	
	Max.	3,020	4,160	5,670	9,450	18,900	
40	2" w.c.	2,480		4,650	7,750	15,500	
	Max.	3,840		7,200	12,000	24,000	
50	2" w.c.	2,640		4,950	8,250	16,500	
	Max.	4,190		7,860	13,100	26,200	
70	2" w.c.	3,040		5,700	9,500	19,000	
	Max.	5,120		9,600	16,000	32,000	
100	2" w.c.	3,490		6,540	10,900	21,800	
	Max.	5,920		11,100	18,500	37,000	

**HYDROGEN—SPECIFIC GRAVITY 0.069\* †**

Gauge Pressure (psig)	Meter Diff.	750	1600	1000	3000	5000	10,000
0.25	Max.	1,600	1,600	2,200	3,000	5,000	10,000
5	Max.	2,110	2,110	2,900	3,960	6,600	13,200
10	Max.	2,640	2,640	3,630	4,950	8,250	16,500
15	Max.		3,180	4,380	5,970	9,950	19,900
20	Max.		3,710		6,960	11,600	23,200
25	Max.		4,260		7,980	13,300	26,600
40	Max.		5,860		10,980	18,300	36,600
50	Max.		6,980		13,080	21,800	43,600

**HELIUM—SPECIFIC GRAVITY 0.138\* †**

Gauge Pressure (psig)	Meter Diff.	750	1600	1000	3000	5000	10,000
0.25	Max.	1,600	1,600	2,200	3,000	5,000	10,000
5	Max.	2,110	2,110	2,900	3,960	6,600	13,200
10	Max.	2,640	2,640	3,630	4,950	8,250	16,500
15	Max.		3,180	4,380	5,970	9,950	19,900
20	Max.		3,710		6,960	11,600	23,200
25	Max.		4,260		7,980	13,300	26,600
40	Max.		5,860		10,980	18,300	36,600
50	Max.		6,980		13,080	21,800	43,600

**BUTANE—SPECIFIC GRAVITY 2.08**

Gauge Pressure (psig)	Meter Diff.	750	1600	1000	3000	5000	10,000
0.25	2" w.c.	860	860	1,190	1,620	2,700	5,400
	Max.	1,230	1,230	1,690	2,310	3,850	7,700
5	2" w.c.	990	990	1,360	1,850	3,080	6,160
	Max.	1,500	1,500	2,070	2,820	4,700	9,400
10	2" w.c.	1,130	1,130	1,550	2,110	3,520	7,050
	Max.	1,740	1,740	2,400	3,270	5,450	10,900
15	2" w.c.	1,260	1,260	1,730	2,360	3,940	7,880
	Max.	1,970	1,970	2,710	3,690	6,150	12,300
20	2" w.c.	1,360	1,360	1,870	2,550	4,250	8,500
	Max.	2,160	2,160	2,970	4,050	6,750	13,500
25	2" w.c.	1,470	2,020	2,760	4,600	9,200	
	Max.	2,400	3,300	4,500	7,500	15,000	
40	2" w.c.	1,760		3,300	5,500	11,000	
	Max.	2,800		5,250	8,750	17,500	
50	2" w.c.	1,840		3,450	5,750	11,500	
	Max.	3,100		5,820	9,700	19,400	
70	2" w.c.	2,100		3,930	6,500	13,100	
	Max.	3,600		6,750	11,250	22,500	
100	2" w.c.	2,400		4,500	7,500	15,000	
	Max.	4,160		7,800	13,000	26,000	

\* These gases are quite light compared to natural gas and, therefore, meter differentials at maximum capacities are less than 2" w.c. in most cases.

† Because of low density, meter pressure ratings are reduced 50% to eliminate potential leakage.

## Intermediate and Large Capacity Diaphragm Gas Meters

### Meter Mounted Instruments

All Equimeter meters are volumetric devices which totalize volume at line conditions. Meter accessories are available to provide read-outs in desired units at line conditions or corrected for pressure, temperature or both. These accessories fit directly on the index plate without special adapters and are provided with weather-proof cases. Read-out units can be in either cubic feet or cubic meters.

Equimeter Meter Mounted Vertical Direct Reading indexes in aluminum boxes and all electronic correcting instruments can be equipped to provide intrinsically safe pulse outputs for remote reading. Electronic correctors can provide remote reading of either or both uncorrected and corrected volumes. Remote readouts can be obtained in either cubic feet or metric units.

### Indexes

Circular Reading (VCR) and Direct Reading (VDR) indexes are housed in Lexan covers. The VDR index is also available in an aluminum box with a switch output to transmit totalized volume to a remote counter or instrument.

Direct Reading (VDR) Index



Circular Reading (VCR) Index



Aluminum Box Direct Reading (VDR) Index

### Electrocorrector EC-3000

The EC-3000 is a battery or AC/DC powered, meter-mounted instrument which calculates the corrected volume throughput from the meter. Intrinsically safe and easy to calibrate, the EC-3000 uses measured gas pressure and temperature, and the AGA NX-19 compressibility ratio, to provide total system measurement that is accurate, reliable and easy to calibrate. A virtually unlimited quantity of load survey and event log records can be recorded in the unit's extensive memory. Load survey can be logged in intervals of 15, 30 and 60 minutes, or 24 hours. All events and alarms are also logged. The EC-3000 can download data to handheld terminals, laptop computers, modems, or via an **industry first**, memory card. The memory card capability is standard with every unit, providing the user a high-speed, reliable, and easy to use method of collecting data.

For additional information, see Bulletin I-3000.

Electrocorrector EC-3000

### NexCorr

NexCorr is a battery-powered, meter-mounted instrument which automatically corrects the temperature and pressure of flowing gas volume. The corrected volume is registered at base conditions. The pressure correction is an active, on-line function, using the input from an electronic pressure transducer sensing line pressure. Temperature correction is also on-line, using the input from an electronic temperature probe mounted in the pipeline. The compressibility ratio of the gas is calculated based on the composition of the gas as well as the measured values of temperature and pressure, and is used within the corrected volume equations.

For additional information, see Bulletin I-4000.



NexCorr

### The 2400 Modem

The 2400 Modem allows communication through telephone lines with an Equimeter volume corrector installed at remote locations. The 2400 Modem transmits serial signals used by the volume corrector to communicate with a remote terminal or computer system.

For additional information, see Bulletin TD-1166.

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## Industrial Gas Measurement

Industry today is placing a tremendous amount of emphasis on fuel conservation and fuel allocation within its facilities. Plant accountants are making efforts to keep increasingly accurate records of fuel gas consumption as well as consumption of various special process gases within their facilities. Equimeter's complete line of single joint large capacity diaphragm meters provides industry with the metering equipment they need to do the job and to do it accurately. Listed below are some of the gases used by industry that Equimeter meters are capable of handling. See pages 6 and 7 of this bulletin for capacity information and see your local Equimeter representative or distributor for further information regarding in-plant metering and special gas services. Equimeter diaphragm meters offered for these services are of standard construction. These meters will provide accurate measurement and normal meter life. They will not create any hazards when used with the listed gases. The materials of construction in these standard meters are compatible with the listed gases and no material breakdown will occur when contacting these gases.

Some contamination of metered gases may occur due to petroleum base lubricants used in the meters.

Gas
Air
Argon (A <sub>2</sub> )
Butane (C <sub>4</sub> H <sub>10</sub> )
Carbon Dioxide (CO <sub>2</sub> )*
Carbon Monoxide (CO)*
Ethane (C <sub>2</sub> H <sub>6</sub> )
Ethylene (C <sub>2</sub> H <sub>4</sub> )
Helium (He <sub>2</sub> )†
Hydrogen (H <sub>2</sub> )†
Krypton (Kr <sub>2</sub> )
Methane (CH <sub>4</sub> )
Nitrogen (N <sub>2</sub> )
Neon (Ne)
Pentane (C <sub>5</sub> H <sub>12</sub> )
Propane (C <sub>3</sub> H <sub>8</sub> )
Propylene (C <sub>3</sub> H <sub>6</sub> )
Xenon (Xe <sub>2</sub> )

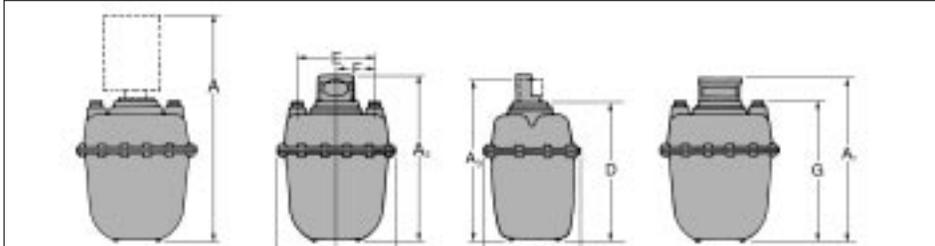
\* Gas must be 100% dry.

† Because of the low density of these gases, meters for this service may not be used in excess of 50% of their pressure rating.

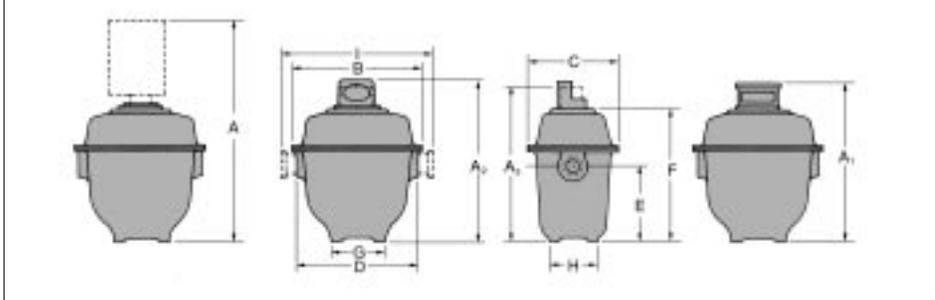
## Intermediate and Large Capacity Diaphragm Gas Meters

### Comparative Dimensions of Equimeter Large Capacity Meters. . .

750/1600/1000



3000/5000/10,000



### Specifications

Meter	Maximum Working Pressure (psig)	Capacity @ 1/2" w.c. diff. of 0.6 Sp. Gr. Gas CFH	Capacity @ 2" w.c. diff. of 0.6 Sp. Gr. Gas CFH	ft <sup>3</sup> /REV of Output Shaft Standard*	m <sup>3</sup> /REV of Output Shaft	REV/cu. ft.	Actual Weight Lbs.	Shipping Weight Lbs.	Standard Connections	Other Available Connections
750	20	750	1600	10	0.1	2.6	51	55	45 Lt.	30, 60 Lt., No. 3 Spg., 1 1/2" FTP, 2" NPT
1600	100	800	1600	10	0.1	2.6	70	75	45 Lt.	30, 60 Lt., No. 3 Spg., 1 1/2" FTP
1000	25	1000	2200	10	0.1	1.6	55	60	45 Lt.	60, 100 Lt., No. 3 Spg., 1 1/2" or 2" FTP No. 5 Spg. on 1000 only
3000 w/o flanges	100	1450	3000	10	0.1	1.3	107	135	3"-8 NPT	2"-11 1/2" NPT
w/ flanges	100	1450	3000	10	0.1	1.3	120	154	3" Flange	2" Flange
5000 w/o flanges	100	2500	5000	10	1 or 0.1	0.5	198	238	4"-8 NPT	3"-8 NPT
w/ flanges	100	2500	5000	10	1 or 0.1	0.5	233	270	4" Flange	3" Flange
10,000 w/o flanges	100	5000	10000	100	1	0.32	323	389	4"-8 NPT	3"-8 NPT
w/ flanges	100	5000	10000	100	1	0.32	360	420	4" Flange	3" Flange

\* Other outputs available upon request on some models.

### 750/1600/1000 Meters

Dimensions (Inches)	Model		
	750	1600	1000
A	32 3/4	32 3/4	35 3/8
A <sub>1</sub>	23 3/8	23 3/8	26
A <sub>2</sub>	24 3/16	24 3/16	26 7/8
A <sub>3</sub>	22 7/8	22 7/8	25 1/2
B	17 1/4	17 1/4	19 11/16
C	14 3/8	14 3/8	16 7/8
D	20 3/16	20 3/16	22 7/8
E	11	11	11 / 13 3/8
F	5 1/2	5 1/2	5 1/2 / 6 9/16
G	20	20	22 5/8

### 3000/5000/10,000 Meters

Dimensions (Inches)	Model		
	3000	5000	10,000
A	36 3/4	43 7/16	49 9/16
A <sub>1</sub>	27 1/2	34 7/8	40 1/4
A <sub>2</sub>	28 1/4	34 15/16	41 1/16
A <sub>3</sub>	26 15/16	33 3/16	39 3/4
B	21 1/2	27 3/16	31 3/4
C	16	19 11/16	26 3/8
D	21 1/2	26	31 3/4
E	13	17 1/4	21 1/4
F	24 1/4	30 15/16	37 1/16
G	9 1/2	10	16 1/4
H	7 1/2	8	13 3/4
I	27 1/2	32	37 3/4

A — Type I Mechanical Instruments and all Electrocorrector Models\*

A<sub>1</sub> — Vertical Direct Reading (VDR) Index in Aluminum Box

A<sub>2</sub> — Vertical Circular Reading (VCR) and Vertical Direct Reading (VDR) Indexes in Lexan Covers

A<sub>3</sub> — Horizontal Circular Reading (HCR) Index

\* Contact your Equimeter representative for dimensions of NexCorr.

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## Equimeter Diaphragm Meter Installation Instructions

The badge end of the meter designates the inlet and is so indicated (on the badge). The maximum working pressure and rated capacity of the meter at 1/2" and 2" water column differential are also marked on the badge. This rated working pressure is not to be exceeded.

It is recommended that large capacity meters be installed with a bypass line to facilitate future repairs without interruption of service.

The inlet pipe of the meter should be blown clean before installing the meter. Pipe turnings, weld spatters, scale, dirt and other foreign materials can cause serious damage to valves, valve seats, and bearings resulting in excessive wear on these parts and loss of meter accuracy. Where condensation is a problem, the line on the upstream side of the meter should have drip traps to prevent the condensation from collecting in the meter. Standard drains are available on all sizes with the exception of the 1000 meter. The threads of the Inlet and Outlet piping should be inspected for dirt and damage. Dirt, damaged threads, or weld spatters and other materials in the threads can be a cause of leakage or damage to meter connection threads.

Caution is necessary when placing the meter into service after installation as any excessive build-up of differential across the diaphragms, valves and channels may cause rupturing of the diaphragm, distortion of the diaphragm pans, bowing or cracking body partitions, and other possible serious damage.

The following procedure should be followed to place a meter into service on an installation with a bypass line:

1. Slowly crack the meter outlet valve.
2. Slowly crack the meter inlet valve until the proving hand has started to move.
3. Very slowly open the outlet valve until completely opened.
4. Very slowly open the inlet valve until completely opened.
5. Slowly close the bypass line valve.

To put the meter into service on an installation without a bypass line, the valve on the outlet of the meter, if there is one, should be opened first. The meter inlet valve should then be very slowly cracked to insure no excessive build-up of differential. After the proving hand of the meter has started to move, continue to very slowly open the valve until completely opened.

Excessively high differentials across the chambers and channels of the meter can also be caused by a sudden reduction in pressure due to blowing drips or removing a meter from service. There is no substitute for extreme caution and care in placing any meter into service or removing any meter from service.

## How to Order

When ordering Equimeter Diaphragm Meters, the following information must be defined. This will insure the greatest possible speed and accuracy in filling orders.

- Meter Model
- Standard (NTC) or temperature compensated (TC)
- Maximum flow rate (cubic feet or M<sup>3</sup> per hour)
- Specific gravity of gas
- Maximum rated working pressure, psig
- Type readout desired (specify cubic feet or metric):
  - HCR—Horizontal Circular Reading Index
  - VCR—Vertical Circular Reading Index
  - VDR—Vertical Direct Reading Index
- Volume Corrector (specify model)
- Size of piping connections
- Type of piping connections (flanged or screwed)
- Diaphragm drains, if desired. (Not available on Model 1000.)

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Representatives in all principal cities.  
Distributors throughout the world.



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DuBois, PA 15801



A BTR Metering Systems Company



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Authorized Distributor:

**LIMITED WARRANTY** Seller warrants the Goods to be free from defects in materials manufactured by Seller and in Seller's workmanship for a period of **[one (1) year]** after tender of delivery (the "Warranty Period"). **THIS LIMITED WARRANTY (a) IS IN LIEU OF, AND SELLER DISCLAIMS AND EXCLUDES, ALL OTHER WARRANTIES, STATUTORY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR OF CONFORMITY TO MODELS OR SAMPLES; (b)** does not apply to any Goods which have been (i) repaired, altered or improperly installed; (ii) subjected to improper use or storage; (iii) used or incorporated with other materials or equipment, after Buyer or anyone using the Goods has, or reasonably should have, knowledge of any defect or nonconformance of the Goods; or (iv) manufactured, fabricated or assembled by anyone other than Seller; **(c)** shall not be effective unless Buyer notifies Seller in writing of any purported defect or nonconformance within **[thirty (30) days]** after Buyer discovers or should have reasonably discovered such purported defect or nonconformance; and **(d)** shall only extend to Buyer and not to any subsequent buyers or users of the Goods. Buyer shall provide Seller access to the Goods as to which Buyer claims a purported defect or nonconformance; upon request by Seller, Buyer shall, at its own risk and expense, promptly return the Goods in question to Seller's Plant.