



Precision Pressure Gauges



HEISE®

Serial No. CM-111727

100 psig / Subdivisions 0.2

Tube Material: A-403 Stainless Steel
Temperature: Compensated
Made in USA

HEISE®

Serial No. CMM 16116

100 psig / Subdivisions 0.1
Tube Material: A403-403 Stainless Steel
Made in USA

ISO 9001
REGISTERED FIRM

DRESSER INSTRUMENT

a Halliburton company

BULLETIN HE-1

A Tradition of Excellence Founded on a History of Performance

History "In The Making"

In every Heise precision pressure gauge we make, you'll see the result of our 50 year history of intense research, development and experience. You'll see the ingenuity and dedication of our engineers and the pride and skill of our craftsmen. But, most of all, you'll see a pressure gauge which consistently yields an accuracy of $\pm 0.1\%$ of span and is considered to be the finest mechanical pressure gauge in the world.

A Hi-Tech Solution

In today's "micro-chip" world, the term "Hi-Tech" is frequently used interchangeably with "electronic." Yet, without electronics, the Heise precision pressure gauge yields consis-

tent, reliable accuracy through the use of state-of-the-art precision machining and the world's most refined ("Hi-Tech") Bourdon tube technology. This eliminates the need for a power source and precludes the associated problems such as susceptibility to electronic line noise, power outage or potential fire hazard. In addition, this mechanical instrument is simple to operate, easy to troubleshoot, and can be readily flushed or purged to remove foreign matter or trapped gas. All this and much more, without the use of electronics and without the need for power. That's why the Heise precision pressure gauge is still the #1 choice for many nuclear, aerospace, power and military applications.

Wide Selection

To meet the specific needs of all our customers, we manufacture the Heise precision pressure gauge in four dial face sizes, a wide variety of pressure ranges from 12 to 100,000 psi and a broad selection of inlet fittings. We also offer several important optional features which allow for effective use of this instrument in a variety of applications and environments. And since each gauge is handmade to order, we'll provide you with the exact combination of features to best satisfy your needs.

Quality, Quality, Quality...

Our charter. Heise precision pressure gauges have continually set the quality standard by which all other pressure

gauges are measured. Behind every Heise® product is a modern manufacturing facility certified to ISO9001 with NIST traceable standards maintained in accordance with MIL-STD-45662 and ANSI/NCSS Z-540.

But far beyond any specifications are the unwritten standards of excellence which have been set by our craftsmen. They have become the single most important ingredient in our success. It is this pride, skill and dedication that has become our history, and you can see it in every Heise precision pressure gauge that we make.

Dial

Black dial graduations are clearly defined and are highly legible assuring maximum readability. A mirror band, which eliminates parallax reading errors, is standard on all Heise dials.

Pointer

The knife edge at the reading end of the pointer provides a plane which is perpendicular to the mirror band on the dial face, eliminating parallax as a source of reading error.

Solid Front Case

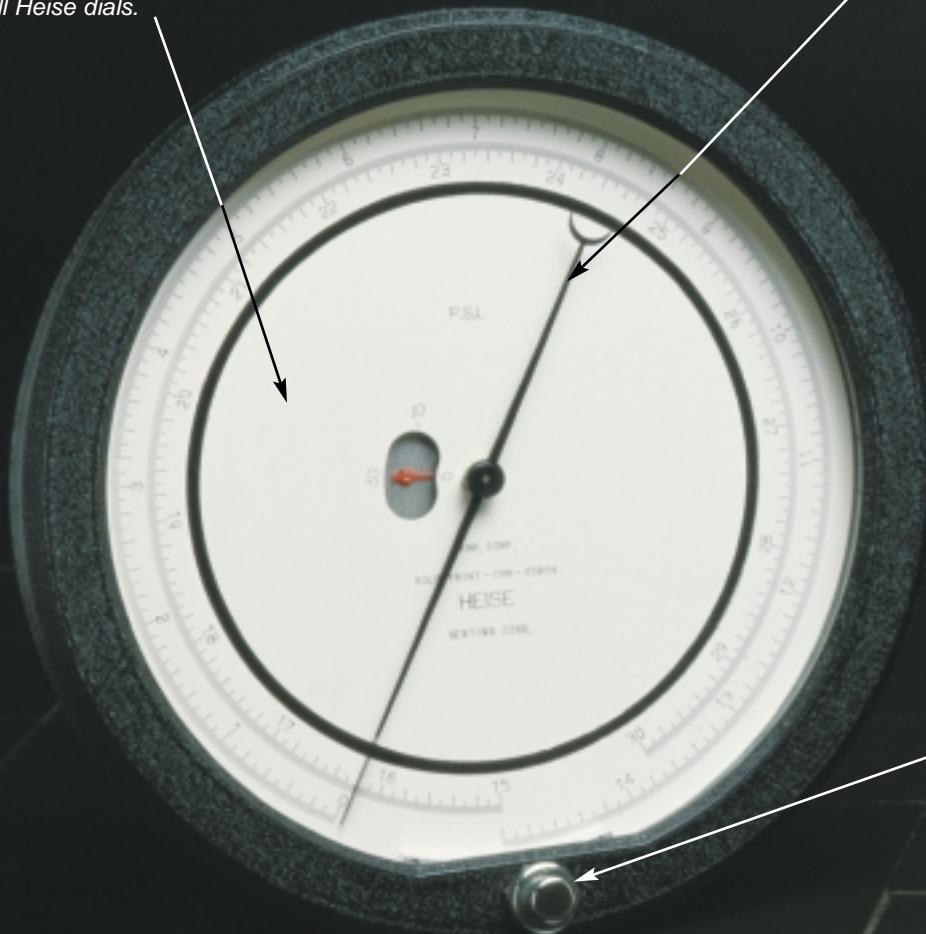
A cast aluminum solid front case protects the operator in the event of tube leakage through excessive overloading. An abnormal rise in pressure within the gauge case causes a stainless steel disc covering the entire back of the gauge case to flex outward, releasing the pressure away from the operator.

External Dial Zero Adjustment

One coaxial zero adjustment knob rotates the dial, not the pointer, through approximately 300° of arc. This makes it possible to set the dial at zero, to atmospheric pressure or other bench marks. A second knob locks the bezel and prevents accidental dial rotation.

Pressure Connection

Available in back or bottom connection, with a wide variety of inlet fittings to choose from.



Movement

The movement is supported with a massive single piece rigid casting. This maintains alignment of the movement under all conditions. No significant calibration error, resulting from distortion or shifting of supporting parts, can occur in the Heise gauge.

Pinion Shaft

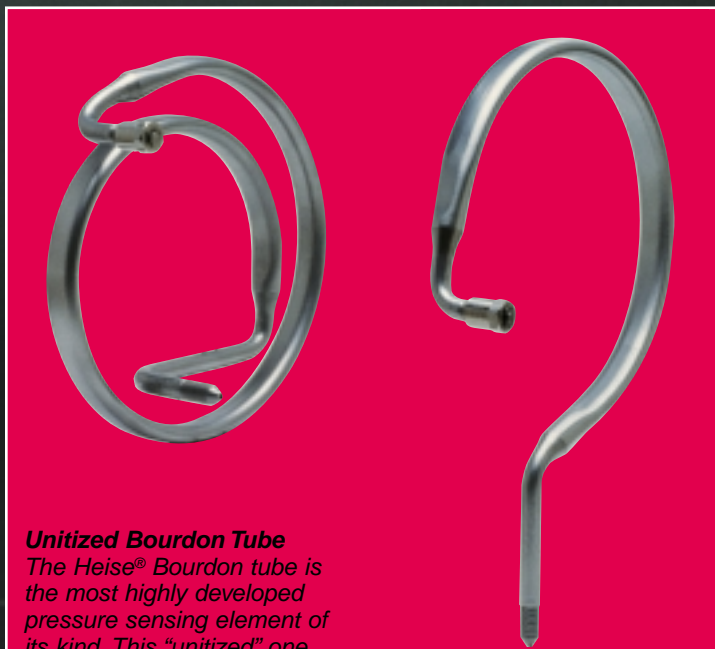
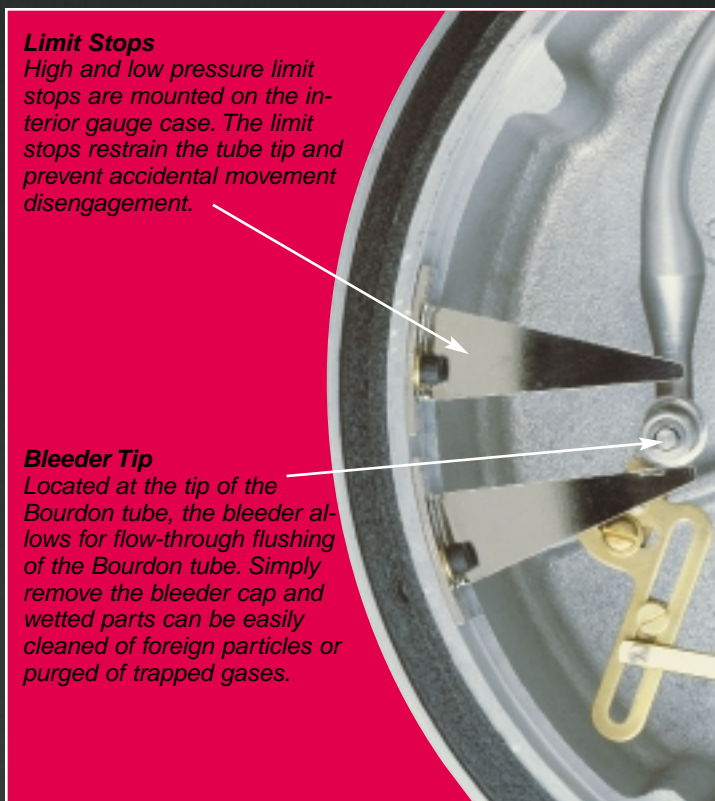
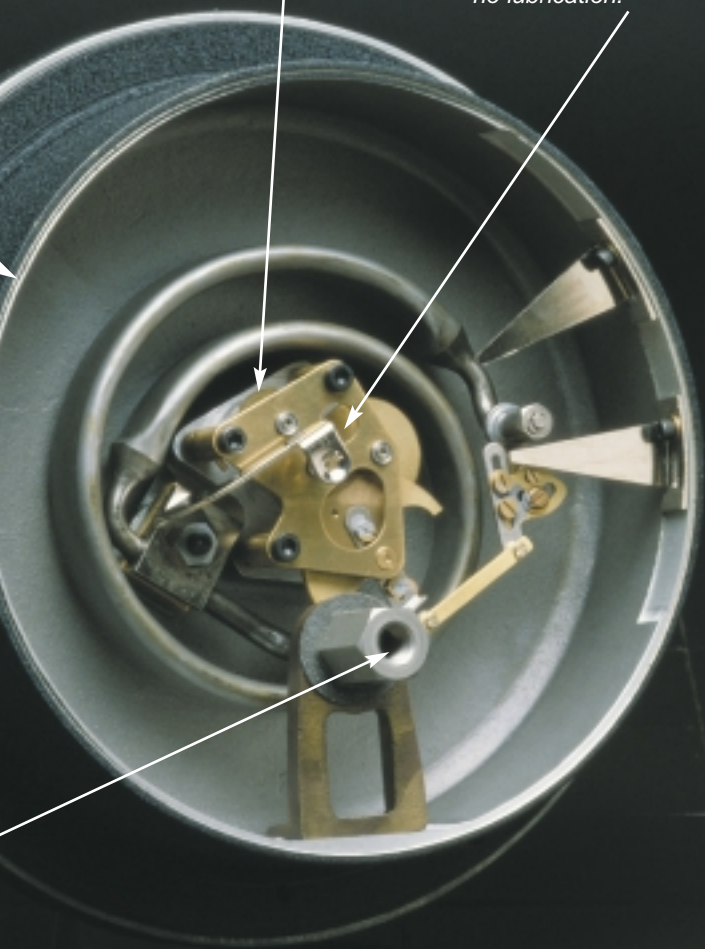
Miniature stainless steel ball bearings surrounding the pinion shaft minimize friction and wear, and improve sensitivity. Smoothness of action at this critical point in the movement delivers instant and accurate response to minute pressure changes. This unique design requires no lubrication.

Limit Stops

High and low pressure limit stops are mounted on the interior gauge case. The limit stops restrain the tube tip and prevent accidental movement disengagement.

Bleeder Tip

Located at the tip of the Bourdon tube, the bleeder allows for flow-through flushing of the Bourdon tube. Simply remove the bleeder cap and wetted parts can be easily cleaned of foreign particles or purged of trapped gases.



Unitized Bourdon Tube

The Heise® Bourdon tube is the most highly developed pressure sensing element of its kind. This "unitized" one piece Bourdon tube is a product of more than 40 years of intensive, continuous refinement. This unique design eliminates soldered, welded or threaded joints providing controlled stress distribution in a wide range of tubes of varying cross-sectional configurations. The tubes are formed from a single piece of seamless stock. The tube design eliminates internal traps in which foreign matter may accumulate, therefore allowing for easy and complete cleaning by flushing or purging. High

accuracy in measurement is enhanced by efficient bleeding of entrapped gasses from the Bourdon tube.

The very heart of the Heise precision pressure gauge, the Bourdon tubes are heat treated in high vacuum maintaining internal cleanliness and optimizing mechanical properties. The multi-coil design maintains a tube deflection rate at a level which eliminates hysteresis and creep as significant factors in gauge operation for all ranges up to 100,000 psi.

Specifications



SPECIFICATIONS/FEATURES/OPTIONS		Model “CC”		
ACCURACY Traceable to NIST Mil-Std-45662A (Calibration Systems) ASME B40.1 (Recommended Practices), Grade 4A		±0.1% of span Includes Calibration Certificate		
REPEATABILITY		±0.02% of span		
HYSTERESIS		<0.1% of span ⁽¹⁾		
SENSITIVITY		0.01% of span		
PRESSURE RANGES		0/12 psi through 0/30,000 psi		
OTHER ENGINEERING UNITS/SPECIAL SCALE		OPTIONAL – See page 7 or consult factory		
“UNITIZED” BOURDON TUBE MATERIALS/PRESSURE RANGES				
Beryllium Copper	STANDARD	0/12 psi through 0/40 psi		
	OPTIONAL	0/50 psi through 0/10,000 psi		
403 Stainless Steel	STANDARD	0/50 psi through 0/30,000 psi		
	OPTIONAL	0/12 psi through 0/40 psi		
316 Stainless Steel	STANDARD	—		
	OPTIONAL	0/12 psi through 0/5,000 psi		
STANDARD PRESSURE INLET TYPE AND LOCATION				
¼ NPT Female – Back Connect		0/12 psi through 0/10,000 psi		
Autoclave F250-C (Aminco 45-11310) – Back Connect		Over 10,000 through 30,000 psi		
OPTIONAL PRESSURE INLET TYPE AND LOCATION				
⅛ NPT – Male or Female – Back or Bottom		Specify Type and Location		
¼ NPT – Male or Female – Back or Bottom				
AND10050-4 – Female Only – Back or Bottom				
Autoclave F250-C – Female Only – Back or Bottom				
Aminco 45-11310 – Female Only – Back or Bottom				
MS33649-4 – Female Only – Back or Bottom				
MS33656-4 – Male Only – Back or Bottom				
MS-16142 – Female Only – Back or Bottom				
Mil-G-18997D – Male Only – Back or Bottom				
WHITE DIAL, KNIFE-EDGE POINTER, MIRROR RING				
Available Dial Sizes – (inches)		8½”	Standard 12”	16”
Scale Length – (inches)		21½”	27¼”	37½”
Pointer Travel (degrees)			300°	
DOUBLE SCALE (psi in. Hg, etc.)		OPTIONAL		
OPTIONAL PRESSURES TYPES (Gauge Pressure – Standard)		Absolute, Vacuum, Compound ⁽⁵⁾		
BIMETALLIC TEMPERATURE COMPENSATOR – Eliminates temperature errors from –25°F to +125°F ⁽³⁾		OPTIONAL		
SLOTTED LINK (sudden pressure release protection) ⁽⁴⁾		OPTIONAL		
PEAK LOAD INDICATOR		OPTIONAL		
WALL MOUNTING BRACKETS (installed)		OPTIONAL		

(1) Hysteresis may exceed .1% of span and is not guaranteed for gauges with 316 SS Bourdon tubes.

(2) Ranges above 30,000 psi have less travel.

(3) Recommended for precision applications where ambient temperature varies more than ±10°F.

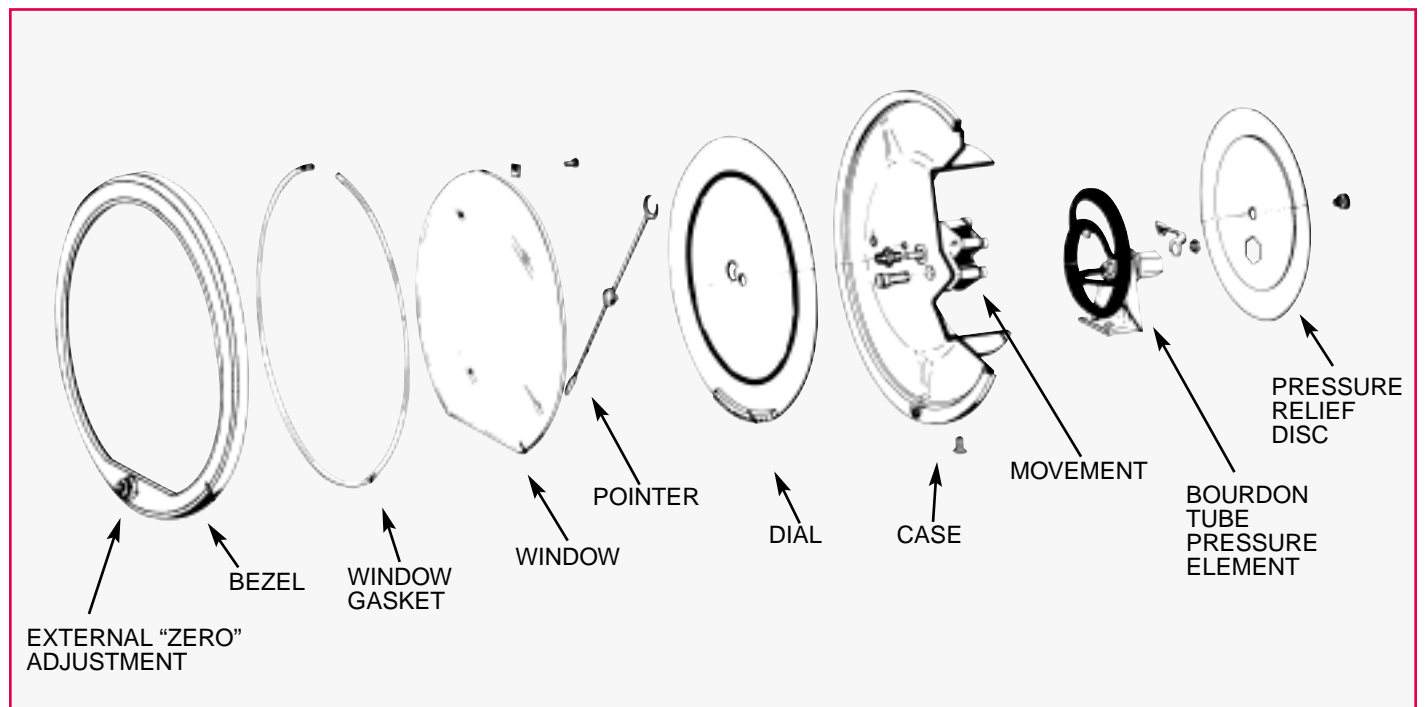
(4) Not available on vacuum ranges.

(5) Absolute gauges require manual barometric compensation.



Model "CM"					Model "CMM"				
±0.1% of span Includes Calibration Certificate					±0.1% of span Includes Calibration Certificate				
±0.02% of span					±0.02% of span				
<0.1% of span ⁽¹⁾					<0.1% of span ⁽¹⁾				
0.01% of span					0.01% of span				
0/15 psi through 0/100,000 psi					0/30 psi through 0/10,000 psi				
OPTIONAL – See page 7 or consult factory					OPTIONAL – See page 7 or consult factory				
0/15 psi through 0/40 psi 0/50 psi through 0/10,000 psi 0/50 psi through 0/100,000 psi 0/15 psi through 0/40 psi Not Available Not Available					0/30 psi through 0/40 psi 0/50 psi through 0/5000 psi 0/50 psi through 0/10,000 psi 0/30 psi through 0/40 psi Not Available Not Available				
0/15 psi through 0/10,000 psi Over 10,000 through 100,000 psi					0/30 psi through 0/10,000 psi Not Applicable				
Specify Type and Location					Specify Type and Location				
<div> <div>Standard</div> <div> <div>6"</div> <div>18"</div> </div> <div> <div>8½"</div> <div>25"</div> </div> <div> <div>12"</div> <div>31½"</div> </div> <div> <div>16"</div> <div>43¼"</div> </div> </div> <div> <div>350°⁽²⁾</div> </div>					<div> <div>Standard</div> <div> <div>6"</div> <div>32"</div> </div> <div> <div>8½"</div> <div>45"</div> </div> <div> <div>12"</div> <div>60"</div> </div> <div> <div>16"</div> <div>80"</div> </div> </div> <div> <div>660°</div> </div>				
OPTIONAL					NOT AVAILABLE				
Absolute, Vacuum, Compound ⁽⁵⁾					Absolute, Compound ⁽⁵⁾				
OPTIONAL					OPTIONAL				
OPTIONAL					OPTIONAL				
OPTIONAL					NOT AVAILABLE				
OPTIONAL					OPTIONAL				

Product Selection Information



Warning: A pressure gauge should be selected considering media, ambient operating conditions, and maximum operating pressure. Improper application can be detrimental to the gauge, cause failure and possibly personal injury or property damage. Personnel responsible for selection and installation should read ASME B40.1.

The information contained in this catalog is offered as a guide to assist in making the proper selection of a pressure gauge.

Additional information is available from Dresser Instrument Division.

Pressure Ranges – Select a gauge range such that the maximum applied pressure will never exceed the full scale value. Failure to do so may result in gauge failure and personal injury or property damage.

Operating Conditions – The operating conditions to which a gauge will be subjected must be considered. Extremes in ambient temperature can affect the accuracy of a gauge. Heise offers a thermal compensator to hold the gauge in calibration through ambient temperature changes from -25°F to $+125^{\circ}\text{F}$. Precau-

tion must be taken at all times to protect the gauge from high pressure surges or shocks. If a gauge application requires sudden release of pressure, a "slotted link" can be supplied to protect the mechanism.

Case – All Heise gauges are solid front gauges for protection of the operator when working with high pressure systems. In the event of a tube leakage resulting from excessive overloading, the operator is protected by a solid wall of cast aluminum. The entire back of the gauge consists of a disc of light gauge stainless steel, spring loaded against a seat machined in the periphery of the case. An abnormal rise of pressure within the gauge case causes this disc to flex outward, releasing the pressure through the rear – away from the dial and window.

Bourdon Tube Pressure Elements – Proper selection of the Bourdon system material is dependent on the process media to which the system will be subjected. Bourdon tubes are available in AISI 403 stainless steel, beryllium copper and AISI 316 stainless steel.

Movement – A single massive casting supports all moving parts of the gauge in

one unit to maintain critical alignment under all conditions. Calibration error resulting from distortion or shifting of supporting parts does not occur in the Heise gauge. All movement parts are ultrasonically cleaned. Friction at the pinion shaft is minimized by precision miniature stainless steel ball bearings. Smooth action at this critical point in the movement results in immediate, accurate response to minute pressure changes without rap. Movement parts never need to be lubricated.

Dial – Each dial is designed to assure maximum legibility and provide precise readings in convenient graduations.

Pointer – Reading end of the pointer is formed to provide a plane perpendicular to the dial surface. This acts as a "knife edge" to eliminate parallax. On some gauges, pointers are counterbalanced as part of the calibration adjustment.

Certification – Each Heise gauge is critically tested before shipment and a certified copy of the test results, traceable to the National Institute of Standards and Technology, is supplied with each gauge.

Range Selection Chart

PSI				
STANDARD BOURDON TUBE MATERIAL**	STANDARD RANGE PSI	CC	CM	CMM
BERYLLIUM COPPER	0-12/2-15			
	0-15			
	0-20			
	0-25			
	0-30			
	0-40			
	0-50			
AISI 403 STAIN. STEEL	0-60			
	0-75			
	0-100			
	0-150			
	0-200			
	0-250			
	0-300			
	0-400			
	0-500			
	0-600			
	0-750			
	0-1000			
	0-1500			
	0-2000			
	0-3000			
	0-4000			
	0-5000			
	0-6000			
	0-7500			
	0-10,000			
	0-15,000			
	0-20,000			
	0-25,000			
	0-30,000			
	0-40,000			
	0-50,000			
	0-60,000*			
	0-75,000*			
	0-100,000*			

*Available in 8½, 12, 16 Model "CM" only.

**For optional Bourdon tube materials see pages 4 and 5.
Shaded areas indicate gauge models available.

Inches Mercury				
STANDARD BOURDON TUBE MATERIAL**	STANDARD RANGE INCHES MERCURY	CC	CM	CMM
BERYLLIUM COPPER	0-30			
	0-40			
	0-50			
	0-60			
	0-75			
	0-100			
	0-125			
AISI 403 STAIN. STEEL	0-150			
	0-200			
	0-250			
	0-300			
	0-400			
	0-500			
	0-600			
	0-750			
	0-1000			
	0-1500			
	0-2000			
	0-3000			
Vacuum				
BERYLLIUM COPPER	-30 to 0			
Compound				
STANDARD BOURDON TUBE MATERIAL**	STANDARD RANGE INCHES MERCURY	CC	CM	CMM
BERYLLIUM COPPER	VAC-PRESSURE			
	15" Hg - 15" Hg			
	30" Hg - 30" Hg			
AISI 403 STAIN. STEEL	30" Hg - 60" Hg			
	30" Hg - 150" Hg			
	30" Hg - 150" Hg			
BERYLLIUM COPPER	30" Hg - 15 psi			
	30" Hg - 30 psi			
AISI 403 STAIN. STEEL	30" Hg - 60 psi			
	30" Hg - 100 psi			
	30" Hg - 150 psi			
	30" Hg - 300 psi			
Inches Water				
STANDARD BOURDON TUBE MATERIAL**	STANDARD RANGE INCHES MERCURY	CC	CM	CMM
BERYLLIUM COPPER	0-350			
	0-400			
	0-450			
	0-500			
	0-600			
	0-750			
	0-800			
	0-1000			
	0-1500			

**For optional Bourdon tube materials see pages 4 and 5.
Shaded areas indicate gauge models available.

Metric				
STANDARD BOURDON TUBE MATERIAL**	STANDARD RANGE MILLIMETERS MERCURY	CC	CM	CMM
BERYLLIUM COPPER	0-760			
	0-1000			
	0-1250			
	0-1500			
	0-2000			
	0-2500			
	0-3000			
AISI 403 STAIN. STEEL	0-4000			
	0-5000			
	0-6000			
	0-7500			
	0-10,000			
Compound				
STANDARD BOURDON TUBE MATERIAL**	STANDARD RANGE INCHES MERCURY	CC	CM	CMM
BERYLLIUM COPPER	VAC-PRESSURE			
	15" Hg - 15" Hg			
	30" Hg - 30" Hg			
AISI 403 STAIN. STEEL	30" Hg - 60" Hg			
	30" Hg - 150" Hg			
	30" Hg - 150" Hg			
BERYLLIUM COPPER	30" Hg - 15 psi			
	30" Hg - 30 psi			
AISI 403 STAIN. STEEL	30" Hg - 60 psi			
	30" Hg - 100 psi			
	30" Hg - 150 psi			
	30" Hg - 300 psi			
Inches Water				
STANDARD BOURDON TUBE MATERIAL**	STANDARD RANGE INCHES MERCURY	CC	CM	CMM
BERYLLIUM COPPER	0-350			
	0-400			
	0-450			
	0-500			
	0-600			
	0-750			
	0-800			
	0-1000			
	0-1500			

*Available in 8½, 12, 16 Model "CM" only.

**For optional Bourdon tube materials see pages 4 and 5.
Shaded areas indicate gauge models available.

Graduation Tables

Scale for All Units of Measure	6" CM & 8½" CC, CM				12" CC, CM & 6" CMM				16" CC, CM & 8½" CMM				12" & 16" CMM				Scale for All Units of Measure
	Total Number of Divisions	Value per Division	Division Pattern	Numerical Value	Total Number of Divisions	Value per Division	Division Pattern	Numerical Value	Total Number of Divisions	Value per Division	Division Pattern	Numerical Value	Total Number of Divisions	Value per Division	Division Pattern	Numerical Value	
0-1	500	.002	1/5	.05	1000	.001	1/5	.05	1000	.001	1/5	.05	1000	.001	1/5	.05	0-1
0-1.6	800	.002	1/5	.1	800	.002	1/5	.1	800	.002	1/5	.1	1600	.001	1/5	.05	0-1.6
0-2	400	.005	1/2	.1	1000	.002	1/5	.1	1000	.002	1/5	.1	1000	.002	1/5	.1	0-2
0-2.5	500	.005	1/2	.1	1000	.0025	1/4	.1	1250	.002	1/5	.1	1250	.002	1/5	.1	0-2.5
0-3	600	.005	1/2	.2	600	.005	1/2	.2	1500	.002	1/5	.1	1500	.002	1/5	.1	0-3
0-4	400	.01	1/5	.2	800	.005	1/2	.2	800	.005	1/2	.2	1600	.0025	1/4	.1	0-4
0-5	500	.01	1/5	.2	1000	.005	1/2	.2	1000	.005	1/2	.2	1000	.005	1/2	.2	0-5
0-6	500	.01	1/5	.2	600	.01	1/5	.2	1200	.005	1/2	.2	1200	.005	1/2	.2	0-6
0-7.5	750	.01	1/5	.5	750	.01	1/5	.5	1500	.005	1/2	.5	1500	.005	1/2	.5	0-7.5
0-10	500	.02	1/5	.5	1000	.01	1/5	.5	1000	.01	1/5	.5	1000	.01	1/5	.5	0-10
0-15	750	.02	1/5	1	750	.02	1/5	1	1500	.01	1/5	.5	1500	.01	1/5	.5	0-15
0-16	800	.02	1/5	1	800	.02	1/5	1	800	.02	1/5	1	1600	.01	1/5	.5	0-16
0-20	400	.05	1/2	1	1000	.02	1/5	1	1000	.02	1/5	1	1000	.02	1/5	1	0-20
0-25	500	.05	1/2	1	1000	.025	1/4	1	1250	.02	1/5	1	1250	.02	1/5	1	0-25
0-30	500	.05	1/2	2	600	.05	1/2	2	1500	.02	1/5	1	1500	.02	1/5	1	0-30
0-40	400	.1	1/5	2	800	.05	1/2	2	800	.05	1/2	2	1600	.025	1/4	1	0-40
0-50	500	.1	1/5	2	1000	.05	1/2	2	1000	.05	1/2	2	1000	.05	1/2	2	0-50
0-60	600	.1	1/5	2	600	.1	1/5	2	1200	.05	1/2	2	1200	.05	1/2	2	0-60
0-75	750	.1	1/5	5	750	.1	1/5	5	1500	.05	1/2	5	1500	.05	1/2	5	0-75
0-100	500	.2	1/5	5	1000	.1	1/5	5	1000	.1	1/5	5	1000	.1	1/5	5	0-100
0-150	750	.2	1/5	10	750	.2	1/5	10	1500	.1	1/5	5	1500	.1	1/5	5	0-150
0-160	800	.2	1/5	10	800	.2	1/5	10	800	.2	1/5	10	1600	.1	1/5	5	0-160
0-200	400	.5	1/2	10	1000	.2	1/5	10	1000	.2	1/5	10	1000	.2	1/5	10	0-200
0-250	500	.5	1/2	10	1000	.25	1/4	10	1250	.2	1/5	10	1250	.2	1/5	10	0-250
0-300	600	.5	1/2	20	600	.5	1/2	20	1500	.2	1/5	10	1500	.2	1/5	10	0-300
0-400	400	1	1/5	20	800	.5	1/2	20	800	.5	1/2	20	1600	.25	1/4	10	0-400
0-500	500	1	1/5	25	1000	.5	1/2	20	1000	.5	1/2	20	1000	.5	1/2	20	0-500
0-600	600	1	1/5	25	600	1	1/5	25	1200	.5	1/2	20	1200	.5	1/2	20	0-600
0-750	750	1	1/5	50	750	1	1/5	50	1500	.5	1/2	50	1500	.5	1/2	50	0-750
0-760	760	1	1/5	40	760	1	1/5	40	1520	.5	1/2	40	1520	.5	1/2	20	0-760
0-1000	500	2	1/5	50	1000	1	1/5	50	1000	1	1/5	50	1000	1	1/5	50	0-1000
0-1500	750	2	1/5	100	750	2	1/5	100	1500	1	1/5	50	1500	1	1/5	50	0-1500
0-1600	800	2	1/5	100	800	2	1/5	100	800	2	1/5	100	1600	1	1/5	50	0-1600
0-2000	400	5	1/2	100	1000	2	1/5	100	1000	2	1/5	100	1000	2	1/5	100	0-2000
0-2500	500	5	1/2	100	1000	2.5	1/4	100	1250	2	1/5	100	1250	2	1/5	100	0-2500
0-3000	600	5	1/2	200	600	5	1/2	200	1500	2	1/5	100	1500	2	1/5	100	0-3000
0-4000	400	10	1/5	200	800	5	1/2	200	800	5	1/2	200	1600	2.5	1/4	100	0-4000
0-5000	500	10	1/5	250	1000	5	1/2	200	1000	5	1/2	200	1000	5	1/2	200	0-5000
0-6000	600	10	1/5	250	600	10	1/5	250	1200	5	1/2	200	1200	5	1/2	200	0-6000
0-7500	750	10	1/5	500	750	10	1/5	500	1500	5	1/2	500	1500	5	1/2	500	0-7500
0-10000	500	20	1/5	500	1000	10	1/5	500	1000	10	1/5	500	1000	10	1/5	500	0-10000
0-15000	750	20	1/5	1000	750	20	1/5	1000	1500	10	1/5	500	1500	10	1/5	500	0-15000
0-20000	400	50	1/2	1000	1000	20	1/5	1000	1000	20	1/5	1000	1000	20	1/5	1000	0-20000
0-25000	500	50	1/2	1000	1000	25	1/4	1000	1250	20	1/5	1000	1250	20	1/5	1000	0-25000
0-30000	600	50	1/2	2000	600	50	1/2	2000	1500	20	1/5	1000	1500	20	1/5	1000	0-30000
0-40000	400	100	1/5	2000	800	50	1/2	2000	800	50	1/2	2000	1600	25	1/4	1000	0-40000
0-50000	500	100	1/5	2500	1000	50	1/2	2000	1000	50	1/2	2000	1000	50	1/2	2000	0-50000
0-60000	600	100	1/5	2500	600	100	1/5	2500	1200	50	1/2	2000	1200	50	1/2	2000	0-60000
0-75000	750	100	1/5	5000	750	100	1/5	5000	1500	50	1/2	5000	1500	50	1/2	5000	0-75000
0-100000	500	200	1/5	5000	1000	100	1/5	5000	1000	100	1/5	5000	1000	100	1/5	5000	0-100000

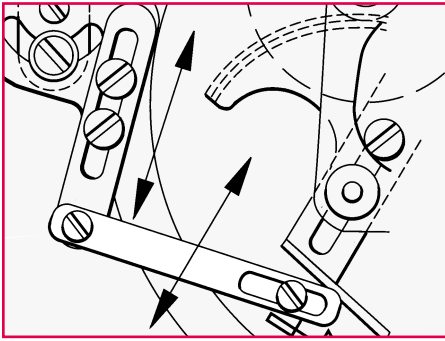
Division Pattern

1/2

1/4

1/5

Optional Features/How To Order



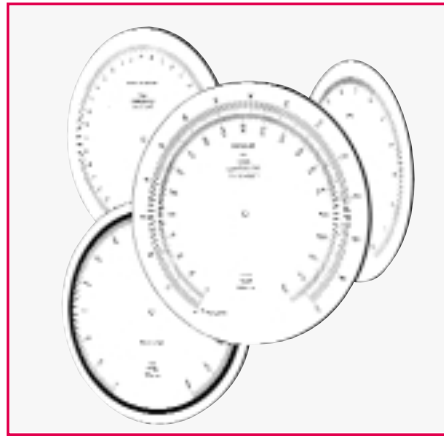
Slotted Link

When test gauges are used for tensile testing, compressive strength testing, or similar applications, a sudden release of pressure is the norm. In these conditions, the slotted link feature will prevent possible resulting damage to the movement on gauge, absolute or compound range gauges.



Carrying Case

This sturdy, impact resistant case with protective insert is available for carrying any 6", 8½", 12" or 16" Heise precision pressure gauge with bottom connection. 6" and 8½" gauge case measures 12" x 13" x 4¾". 12" and 16" gauge case measures 20" x 22" x 6".



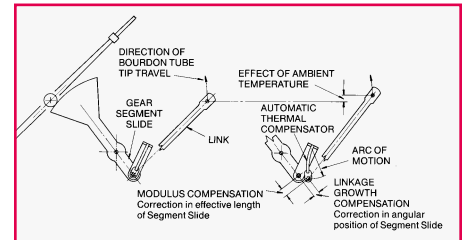
Custom Dial Scales

Special scales and dual scales are available and can be customized to conform to almost any specification. Feet of water (fresh or salt), force on ram and metric units of measure are examples of the many scales that can be specially produced to meet the specific requirements of any application. Dual scales can be provided on any CC or CM gauge to allow the flexibility of reading in two units of measure.



Peak Load Indicator

Often referred to as a "Max Hand" or "Lazy Pointer," the red peak load indicator will continue to read the highest indicated pressure after the work hand pointer has receded. The indicator assembly is mounted through the gauge window and is actuated by movement of the primary pointer. An exterior knob permits convenient resetting for subsequent readings. Available on Models CC and CM.



Automatic Bimetallic Thermal Compensator

The bimetallic thermal compensator automatically corrects for the effects of ambient temperature change on the Bourdon tube. With this unique feature, the gauge will maintain $\pm 0.1\%$ of span accuracy from -25°F to $+125^{\circ}\text{F}$.

To Order a Gauge

Select:

1. Model – "CC," "CM" or "CMM"
2. Dial Size – 6" (Models CM and CMM only), 8½", 12" and 16"
3. Pressure Type – Gauge, Absolute, Vacuum or Compound

4. Pressure Range (see page 7)
5. Pressure Medium – Air, Helium, Oil, Water, etc.
6. Pressure Inlet (Standard is Back ¼ Female NPT)
 - a. Location; b. Type; c. Size
7. Mounting – Panel or Wall
8. Optional Features (see pages 4, 5 and 9)

1 Model	Pointer Travel Degrees	2 Dial Size Inches	Scale Length Inches	3 Gauge Type	6a. Location	6b. & 6c. Male	6b. & 6c. Female	7 Mounting
CC	300	8½ (215.9) 12 (304.8) 16 (406.4)	21½ (546) 27½ (698.5) 37½ (952.5)	Pressure Compound Vacuum or Absolute	Back or Bottom	⅛ Male NPT ¼ Male NPT MS 33656-4 Mil-G-18997D	⅛ Female NPT ¼ Female NPT AND 10050-4 MS 33649-4 MS 16142 ⅝"-18 for ¼" high pressure tubing	Panel or Wall
CM	350†	6 (152.4) 8½ (215.9) 12 (304.8) 16 (406.4)	18 (457.2) 25 (635) 31½ (800.1) 43¾ (1111.3)					
CMM	660	6 (152.4) 8½ (215.9) 12 (304.8) 16 (406.4)	32 (812.8) 45 (1143) 60 (1524) 80 (2032)					

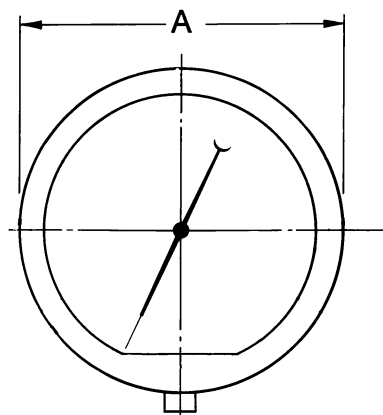
†Model CM above 30,000 psi has less travel.

•Ambient pressure equals pressure surrounding the measuring elements.

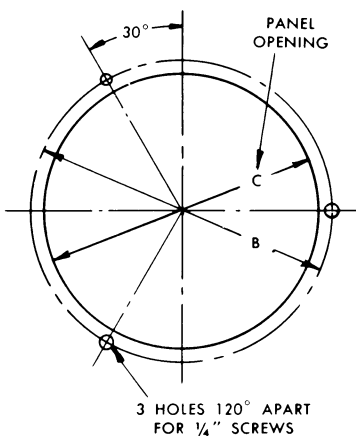
Dimensions in () are millimeters.

Gauge Case Dimensions

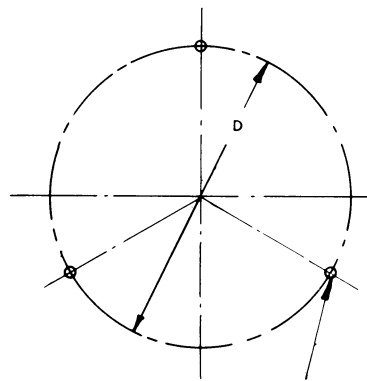
Model "CC"



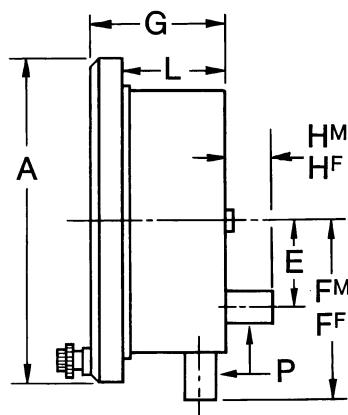
FRONT VIEW



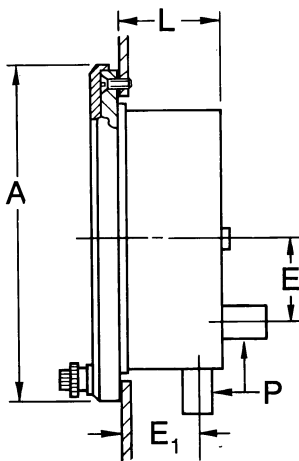
3 HOLES 120° APART
FOR 1/4" SCREWS



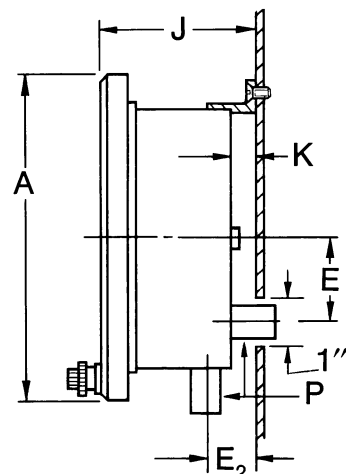
3 HOLES 120° APART
FOR 1/4" SCREWS



SIDE VIEW



PANEL MOUNTING



WALL MOUNTING

Model "CC"

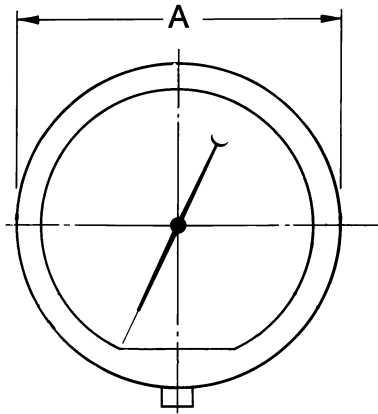
Size	Dim. Units	A	B	C	D	E	E ₁	E ₂	F ^M	F ^F	G	H ^M	H ^F	J	K	L
8 1/2"	in.	10 ⁵ / ₁₆	9 ³ / ₈	8 ¹⁵ / ₁₆	9 1/2	3 1/4	1 ⁵ / ₁₆	1 ⁶³ / ₆₄	5 ⁹ / ₁₆	5 1/4	3 ²⁵ / ₆₄	1 ³ / ₈	1 ¹ / ₁₆	4 ¹ / ₃₂	4 ¹ / ₆₄	2 ²¹ / ₃₂
	mm	261.9	238.1	228.6	241.3	82.6	33.3	50.4	141.3	133.4	86.1	35.0	27.0	102.3	16.3	67.4
12"	in.	13 ²¹ / ₃₂	12 ³ / ₄	12 ³ / ₈	9 1/2	3 1/4	1 ⁵ / ₁₆	1 ⁶³ / ₆₄	5 ⁹ / ₁₆	5 1/4	3 ²⁵ / ₆₄	1 ³ / ₈	1 ¹ / ₁₆	4 ¹ / ₁₆	4 ¹ / ₆₄	2 ²¹ / ₃₂
	mm	346.9	329.9	314.3	241.3	82.6	33.3	50.4	141.3	133.4	86.1	35.0	27.0	103.1	16.3	67.4
16"	in.	17 ²³ / ₃₂	16 ³ / ₄	16 ³ / ₈	9 1/2	3 1/4	1 ⁵ / ₁₆	1 ⁶³ / ₆₄	5 ⁹ / ₁₆	5 1/4	3 ²⁵ / ₆₄	1 ³ / ₈	1 ¹ / ₁₆	4 ¹ / ₁₆	4 ¹ / ₆₄	2 ²¹ / ₃₂
	mm	450.1	425.2	415.9	241.3	82.6	33.3	50.4	141.3	133.4	86.1	35.0	27.0	103.1	16.3	67.4

Inlet Pressure Connection*	P	Pressure connection is illustrated in both back and bottom configurations. See page 4 for available fitting types.			
Approximate Weight	Dial Size	8½"	12"	16"	
	Net Weight	7¾ lbs.	10¾ lbs.	14¼ lbs.	
	Shipping Weight	10 lbs.	15 lbs.	21 lbs.	

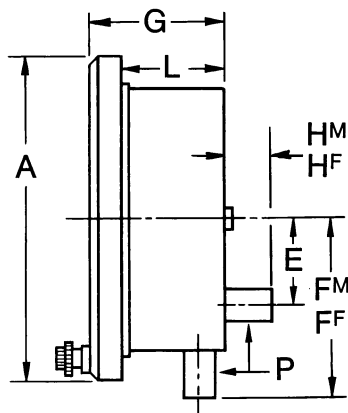
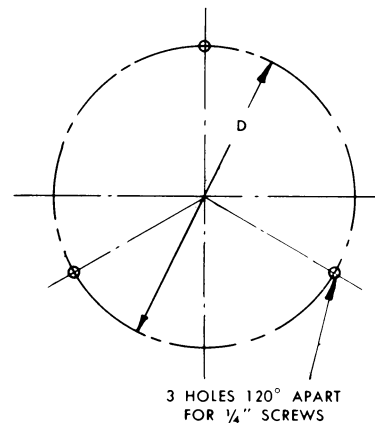
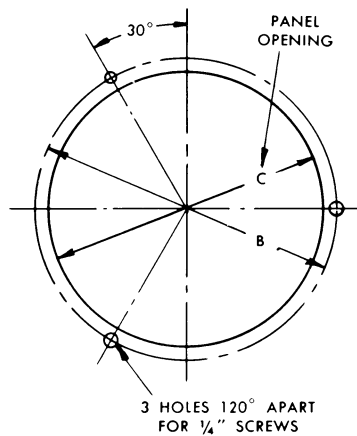
*Standard Inlet Fittings: 1/4 NPT Female Back Connection for ranges up to and including 10,000 psi. AMINCO 45-11310 or AUTOCLAVE F-250-C for ranges over 10,000 psi.

Gauge Case Dimensions

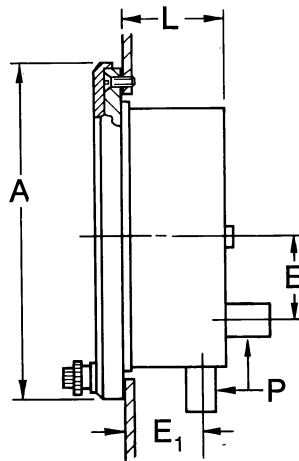
Models "CM" and "CMM"



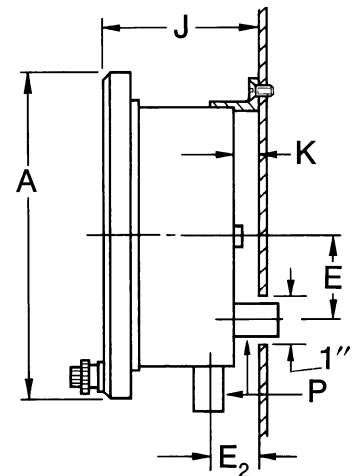
FRONT VIEW



SIDE VIEW



PANEL MOUNTING



WALL MOUNTING

Model "CM" and "CMM"

Size	Dim. Units	A	B	C	D	E	E ₁	E ₂	F ^M	F ^F	G	H ^M	H ^F	J	K	L
6"	in.	7 ⁷ / ₈	7	6 ¹ / ₂	7	2	1 ⁷ / ₈	1 ¹ / ₄	4 ⁹ / ₁₆	4 ¹ / ₄	3 ¹ / ₄	1 ³ / ₈	1 ¹ / ₁₆	3 ²⁷ / ₃₂	5 ⁵ / ₈	2 ¹⁵ / ₃₂
	mm	200	177.8	165.1	177.8	50.8	47.6	31.8	115.8	107.9	82.3	34.9	27	97.6	15.9	62.7
8 ¹ / ₂ "	in.	10 ⁵ / ₁₆	9 ³ / ₈	8 ¹⁵ / ₁₆	9 ¹ / ₂	2	1 ⁷ / ₈	1 ¹ / ₄	5 ⁴³ / ₆₄	5 ²³ / ₆₄	3 ¹ / ₄	1 ³ / ₈	1 ¹ / ₁₆	4 ¹ / ₃₂	5 ⁵ / ₈	2 ²¹ / ₃₂
	mm	261.9	238.1	228.6	241.3	50.8	47.6	31.8	144	136.1	82.3	34.9	27	102.4	15.9	67.4
12"	in.	13 ²¹ / ₃₂	12 ³ / ₄	12 ³ / ₈	9 ¹ / ₂	2	1 ⁷ / ₈	1 ¹ / ₄	5 ⁴³ / ₆₄	5 ²³ / ₆₄	3 ¹ / ₄	1 ³ / ₈	1 ¹ / ₁₆	4 ¹ / ₃₂	5 ⁵ / ₈	2 ²¹ / ₃₂
	mm	346.9	329.9	314.3	241.3	50.8	47.6	31.8	144	136.1	82.3	34.9	27	102.4	15.9	67.4
16"	in.	17 ²³ / ₃₂	16 ³ / ₄	16 ³ / ₈	9 ¹ / ₂	3 ¹ / ₄	1 ⁵ / ₁₆	1 ⁶³ / ₆₄	5 ⁹ / ₁₆	5 ¹ / ₄	3 ²⁵ / ₆₄	1 ³ / ₈	1 ¹ / ₁₆	4 ¹ / ₁₆	4 ¹ / ₆₄	2 ²¹ / ₃₂
	mm	450.1	425.2	415.9	241.3	82.6	33.3	50.4	141.3	133.4	86.1	35.0	27.0	103.1	16.3	67.4

Inlet Pressure Connection*	P	Pressure connection is illustrated in both back and bottom configurations. See page 4 for available fitting types.			
Approximate Weight	Dial Size	6"	8 ¹ / ₂ "	12"	16"
	Net Weight	4 ¹ / ₂ lbs.	7 ³ / ₄ lbs.	10 ³ / ₄ lbs.	14 ¹ / ₄ lbs.
	Shipping Weight	7 lbs.	10 lbs.	15 lbs.	21 lbs.

*Standard Inlet Fittings: 1/4 NPT Female Back Connection for ranges up to and including 10,000 psi. AMINCO 45-11310 or AUTOCLAVE F-250-C for ranges over 10,000 psi.

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