

**6-INCH
MERCURY
PRESSURE
GAUGE**

Suitable for use as a permanently installed or portable pressure instrument for measuring air or gas pressures.

Sturdily made with gauge body of cast semi-steel finished in durable, baked, blue crackle. Contains a heavy-walled Pyrex glass tube centrally located for added protection against breakage.

It is easily read because of the large clear-cut, black, depressed characters and graduations on aluminum scale. Supplied with Mercury in instrument ready for immediate use. Ask for Bulletin P-10.



U Type Manometers—
Ranges 6" to 100"

Well Type Manometers
—Ranges 6" to 100"

Mercury Pressure
Gauges—Ranges
23 oz. to 48 oz.

Draft Gauges—Ranges
 $\frac{1}{2}$ " to 4"

Tank Gauges

Indicating Flow
Meters (Vertical
Type)

Indicating Flow
Meters (Inclined
Tube Type)

Multiple Orifice
Flow Meter Unit

Orifice Plates and
Orifice Flanges

Gauge Pulsation
Absorbers

Sight Feed Bubblers

For complete reference, description, and prices of Meriam instruments, write for general catalogue.



10920 Madison Avenue
Cleveland, Ohio 44102

Form 16
Litho in U. S. A.



MANOMETER

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INSTRUCTIONS

FOR INSTALLATION AND READING MERIAM "U" TYPE MANOMETERS

The manometer should always be mounted or supported in a vertical position with the name plate at the top.

The manometer may be self-supported by the connecting piping, or when using rubber tubing, fastened by use of two countersunk holes provided in the manometer body and located underneath the scale.

Sufficient gauge fluid should be placed in the U-tube to bring both liquid levels to the zero point on the scale. The slotted scale may be adjusted for accurate zero location.

When measuring pressure or vacuum, connect to one side of the U-tube with the other side of U-tube opened to atmosphere. Measuring differential pressure, or difference in pressure, connect one pressure to one side of the U-tube and the other pressure to the other side of the U-tube. In every case the measure of the pressure is the height of liquid in the U-tube. As shown in Fig. "b," the reading is 2+2 or 4 inches. This reading can be changed to standard units of pressure as illustrated by the examples and the conversion tables shown below.

When a differential pressure on air or gas not requiring a sealing fluid is measured, the equivalent pressure will be computed as illustrated in the example below. Should a sealing fluid such as water be used on top of the mercury, unequal sealing liquid heights will result as soon as the mercury deflects from zero. To correct for the liquid on top of the mercury, multiply the inches of mercury differential by the difference in specific gravity between the gauge liquid and the sealing fluid.

The differential pressure (h) is usually expressed in inches of water pressure when using mercury as the gauge fluid, or:

$$h(\text{inches of water}) = h(\text{inches of mercury}) \times (13.56 - \text{Sp. Gr. of sealing fluid})$$

When a liquid seal is used on top of the mercury, it is important that all air or gas bubbles be vented from the manometer and connecting piping.

The use of a liquid seal on top of red oil is not recommended. Mercury should be used as the gauge fluid where a sealing fluid is necessary.

EXAMPLE FOR READING PRESSURE OR VACUUM

When Using Water

1" Water = .577 oz.
 $4 \times .577 = 2.308$ oz.
 per sq. inch

When Using Mercury

1" Mercury = .4895 lbs.
 $4 \times .4895 = 1.958$ lbs.
 per sq. inch

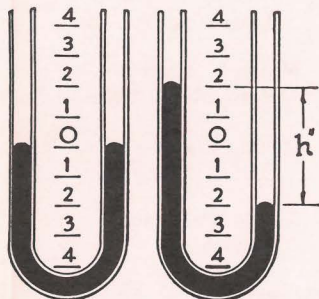


Fig. "a"

Fig. "b"

Fig. "a" no gauge liquid deflection.

Fig. "b" 2" up and 2" down liquid deflection.

EXAMPLE FOR READING DIFFERENTIAL PRESSURE

Using Red Oil

1" Red Oil = .827" of water
 $4 \times .827 = 3.308$ " of water
 pressure

Using Mercury with Water Seal

Specific Gravity Mercury = 13.56
 Specific Gravity Water = 1.000
 $hw = hm \times (13.56 - 1.000)$
 $= 4 \times 12.56 = 50.24$ " of
 water pressure

Total liquid deflection =
 $2" + 2" = 4" = h$.

IMPORTANT

When ordering replacement glass tubing or manometer parts, always give full name plate information.

CAUTION: DO NOT USE BRASS FITTINGS WITH MERCURY.

CONVERSION TABLE

If Water is Used as Gauge Fluid

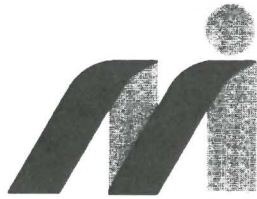
1" Water = .577 oz. or .0361 lbs. per sq. inch
 1" Water = .0737" mercury
 1' Water = .8844" mercury
 1" Water = 1.21" of Red Oil (Sp. Gr. .827)
 1 Oz. Pressure = 1.732" water
 1 Lb. Pressure = 27.7" water

If Red Oil is Used as Gauge Fluid

(Mineral Seal Oil Sp. Gr. .827)
 1" Red Oil = .477 oz. or .0298 lbs. per sq. inch
 1" Red Oil = .827" water
 1" Red Oil = .0609" mercury
 1 Oz. Pressure = 2.096" red oil
 1 Lb. Pressure = 33.557" red oil

If Mercury is Used as Gauge Fluid

(Specific Gravity 13.56)
 1" Mercury = 7.824 oz. or .4895 lbs. per sq. inch
 1" Mercury (dry) = 13.56" water
 1" Mercury (dry) = 1.13' water
 1" Mercury (under water) = 12.56" water
 1 Oz. Pressure = .127" mercury
 1 Lb. Pressure = 2.04" mercury



Meriam Instrument

a Scott Fetzer company

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FILE NO. 100AA25:215-10

MODEL 10AA25

Clean-out U-Type Manometer

DESCRIPTION

The Meriam 10AA25 manometer is a versatile, economical instrument for the measurement of pressures, vacuums or differential pressures.

The U-tube type manometer is a primary basic standard of pressure measurement. Pressure measurements are accomplished by balancing a vertical head of indicating fluid with the pressure to be measured. As there are no cams, gears or levers to operate in the manometer, the readings obtained are always accurate.

CONSTRUCTION

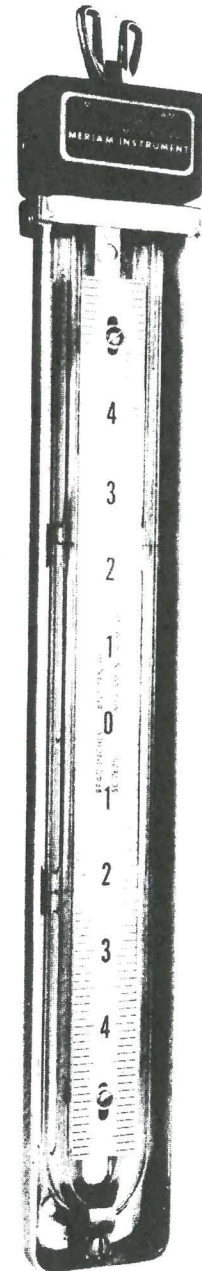
The manometer has a rigid cast aluminum body frame protecting the glass U-tube on three sides. Mounting holes are provided in the frame for mounting to a wall, column or other suitable structure.

The clean-out head at the top of the instrument seals the indicating tube legs and also provides for the external pressure connections to the manometer. The manometer head fastens to the body by a single nut and is quickly and easily removed when necessary. This exclusive Meriam clean-out head feature permits cleaning and filling of the U-tube without disconnecting the piping to the manometer head. A 1/4" female pipe connection is provided out the left and right sides of the clean-out head as standard. Pressure connections at rear or top of head can be furnished when specified. Manometer clean-out heads of cast iron, stainless steel or PVC are available for special corrosive applications.

The manometer scale is located between the tube legs and overlaps the tube legs to a degree that eases reading at the meniscus position.

The scale is readily adjustable for zero indicating fluid level.

The simple engineered method of supporting and sealing the U-tube in this manometer permits easy tube replacement in the field.



MERIAM
Model 10AA25WM

SPECIFICATIONS:

Model: 10AA25
 Type: U-tube
 Range: 6, 10, 15, 20, 30, 50 inches
 Pressure Rating: 250 PSIG
 Mounting: wall
 Indicating Tube & Packing: Glass, Neoprene
 Body Construction: Aluminum

Wetted parts material: Cast Iron,
 316 S.S., PVC
 Scale Finish: Satin aluminum, black
 graduations
 Finish: Aluminum body, black crackle
 enamel head

Accessories:

Return Well Model: 934H50
 Bubbler Model: 931R or 931S
 Line Trap Model: 932R or 932S

 Valve & Piping Manifold: 943AC300 - Steel,
 943AS300 - SS.
 Pressure vacuum Variator Model: 971A3
 Table Mounting Stand Model 912A
 Slip On Cover Model: 915C

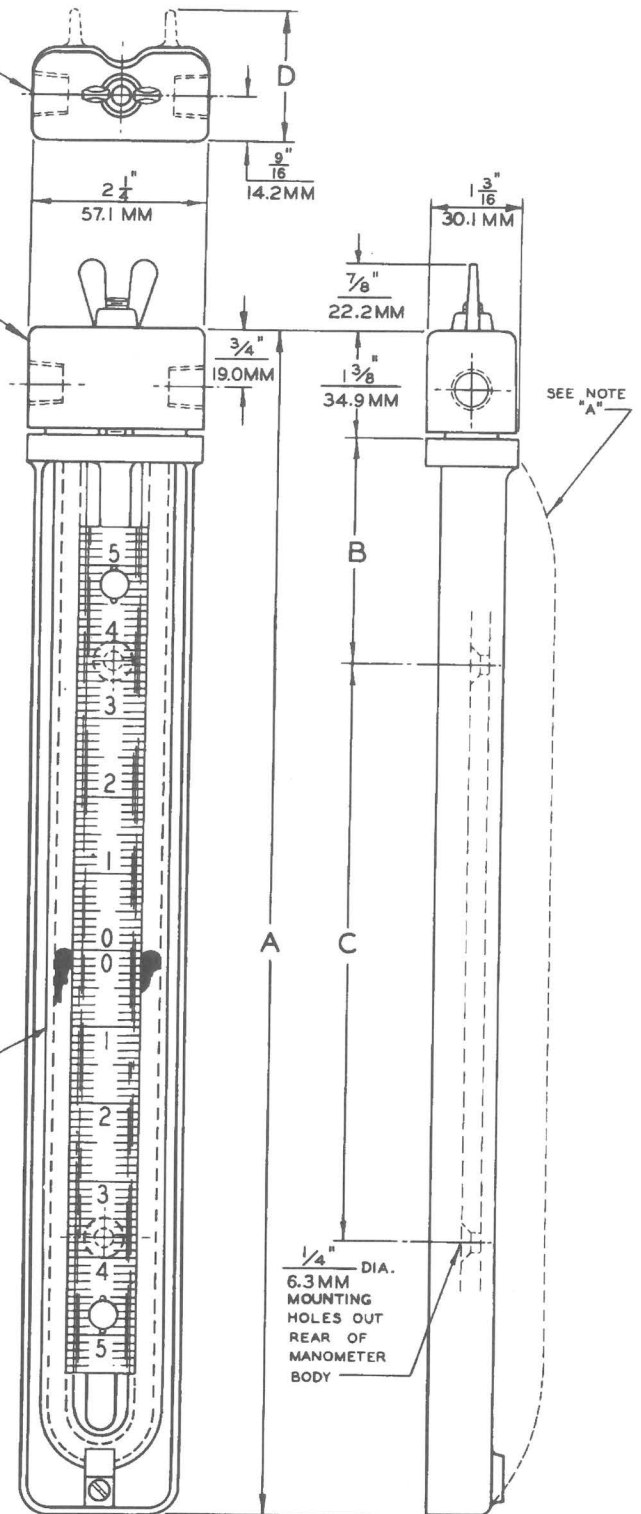
Net weight

Range inches	6	10	15	20	30	50
Weight lbs.	2	3	3	4	5	6

MANO. RANGE INCHES	A INCHES	B INCHES	C INCHES	D INCHES
6	10 3/4"	2 15/16"	2 7/8"	
10	15 3/8"	2 15/16"	7 1/2"	
15	19 1/8"	4 15/16"	7 1/4"	
20	24 3/8"	2 5/8"	17"	1 11/16"
30	35"	3 3/4"	21 3/8"	1 11/16"
50	55 7/16"	3 1/8"	43 3/16"	1 11/16"

MANO. RANGE MM	A MM	B MM	C MM	D MM
152.4	273.0	74.6	73.0	
254.0	390.5	74.6	190.5	
381.0	485.7	125.4	184.1	
508.0	619.1	66.6	431.8	42.8
762.0	889.0	95.2	542.9	42.8
1270.0	1408.1	79.3	1096.9	42.8

7/16" O.D. x .250" I.D. GLASS TUBE



FINISH:
 REMOVABLE HEAD - BAKED BLACK CRACKLE
 MANOMETER BODY - ALUMINUM LACQUER



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