



10920 MADISON AVENUE • CLEVELAND, OHIO 44102
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**MODEL 310ECX10
 310EFX10**

ABSOLUTE PRESSURE GAUGE WELL TYPE MANOMETER

DESCRIPTION

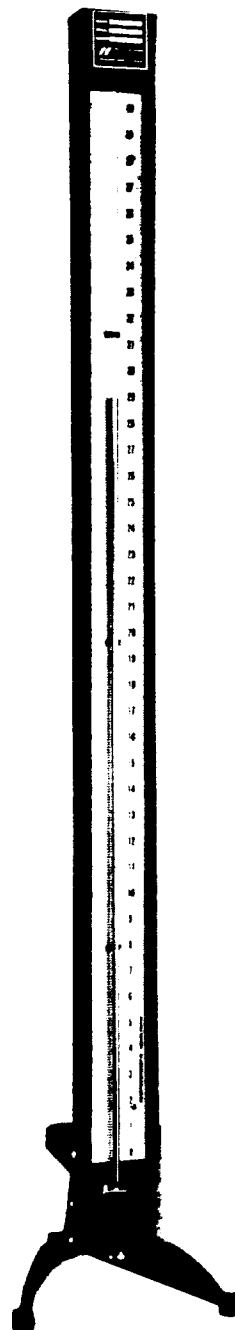
Pressures are normally stated in terms of gauge pressure (PSIG) or absolute pressure (PSIA). Measurement of gauge pressure and vacuum are referenced to the barometric pressure at time of measurements are taken. A gauge pressure, or positive pressure, is greater than or above existing barometric pressure. A vacuum or negative pressure is less than or below barometric pressure.

Absolute pressure measurement is referenced to zero absolute, that is, absence of any pressure. Whereas gauge pressure is related to existing barometric pressure variations, absolute pressure is not, and the absolute system of measurement will therefore give better accuracy in measuring and setting pressures below normal barometric pressure. Absolute pressure gauges are now available for pressure measurement in terms of absolute units beyond normal barometric pressure.

Many processes are operated at pressures below or near atmosphere pressure, where measurement and expression in absolute pressure units is desirable. For measurement of absolute pressures from .1 inch or 1 millimeter to 100 inches or 2540 millimeters, the Meriam Models 310ECX10 and 310EFX10 find wide application.

The Meriam Models 310ECX10 and 310EFX10 absolute pressure gauge is a sealed tube well type manometer, which indicates pressures or vacuum directly in absolute values. These precision, mercury filled gauges continuously self compensate the applied pressure measurements for any barometric pressure changes which occur. No adjustment or correction for prevailing barometer is required.

As mentioned, absolute pressures are generally expressed in inches or millimeters of mercury. Standard Meriam scales are available in either unit. Where readings in units less than .1 inches or 1 millimeter are required, use the 310EFX10 (vernier model).



Meriam Model 310ECX10 TM

CONSTRUCTION

The Model 310 ECX10 is sturdily constructed for continuous, reliable and accurate service in the instrument laboratory or in industrial process systems. Special design features permit shipping the instrument completely filled with mercury, ready for immediate use without complicated preliminary preparation.

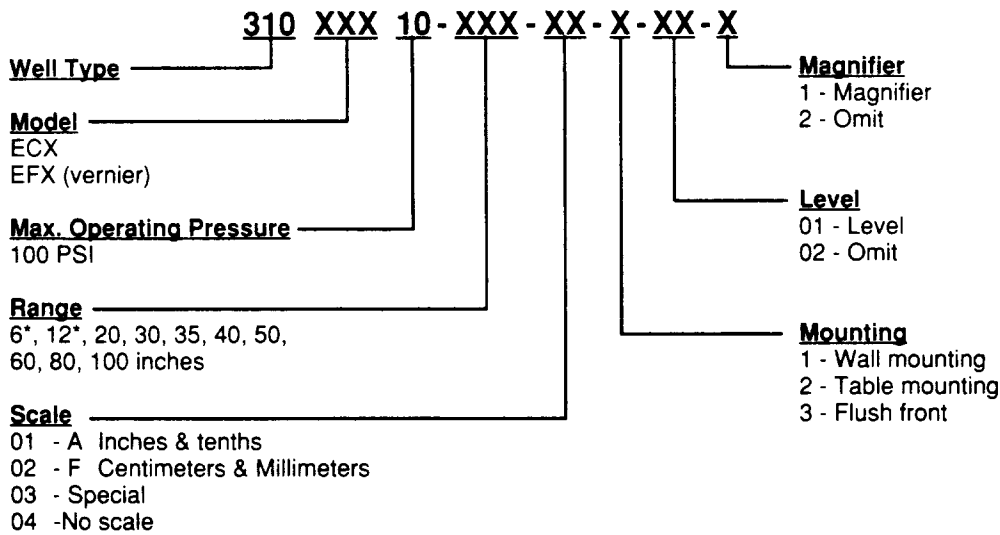
The sturdy instrument body is constructed with an aluminum channel. Large diameter, annealed, precision bore glass tube is fusion sealed at the top. Tube supports eliminate distortion and Viton packing assures leak proof sealing at the stainless steel lower end block where the tube is yoke packed. A submerged restriction between the well and glass indicating tube protects the tube from mercury hammer during rapid release of applied pressure and also prevents air from entering the indicating tube. The stainless steel well has a special replaceable shipping seal which permits moving and transporting the instrument without loss of evacuation.

The accuracy of an absolute pressure gauge depends on the condition of evacuation in the void space in the sealed tube. For the ultimate in accuracy, the instrument is evacuated and filled with Meriam Instrument Mercury under controlled conditions assuring complete removal of all entrained air prior to filling with mercury. If the perfect seal of an absolute pressure gauge is lost, the gauge must again be completely evacuated and a new filling of mercury added.

The wide, easily read scale is directly behind the glass indicating tube and is secured to the instrument body at the reference zero. Sharp black graduations on a non-glare satin finish background extend on both sides of the mercury filled indicating tube. Large numbers on major graduations provide at-a-glance readability.

Protection from dirt and dust is provided by the close fitted transparent window. The instrument finish is a durable, textured, black urethane.

CONFIGURATOR

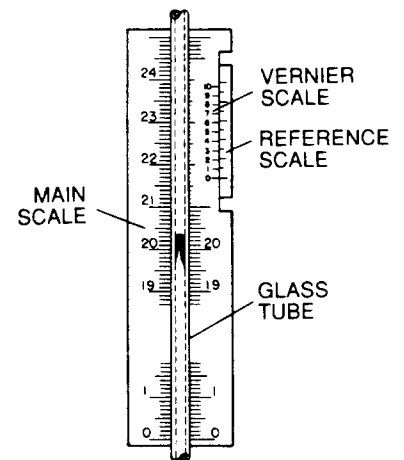


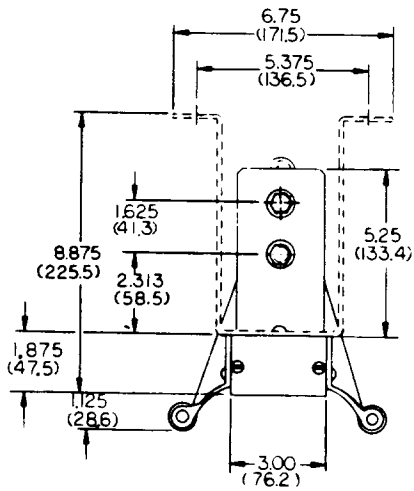
*Not Available in EFX Model

Range	6	12	20	30	35	40	50	60	80	100
Weight	9	12	14	15	15½	16	18	20	24	28

VERNIERS

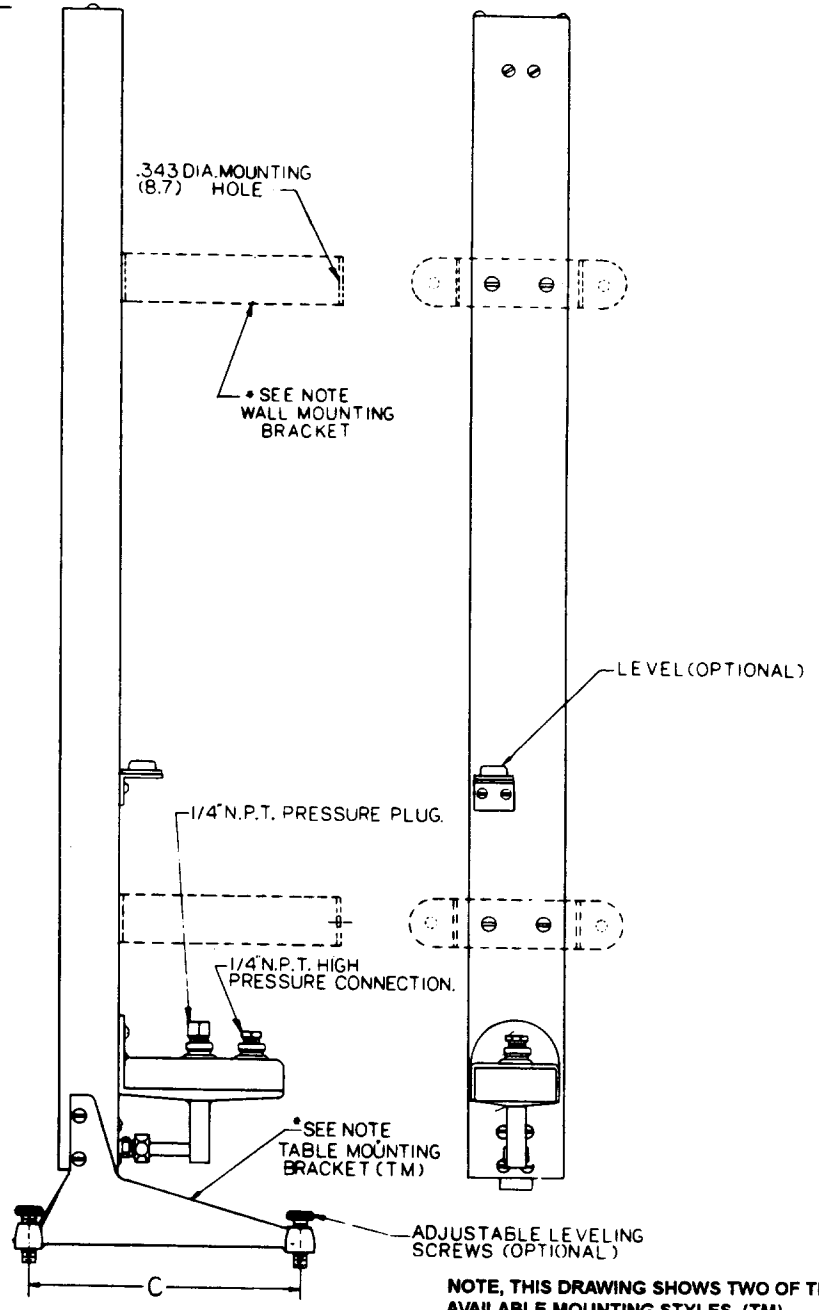
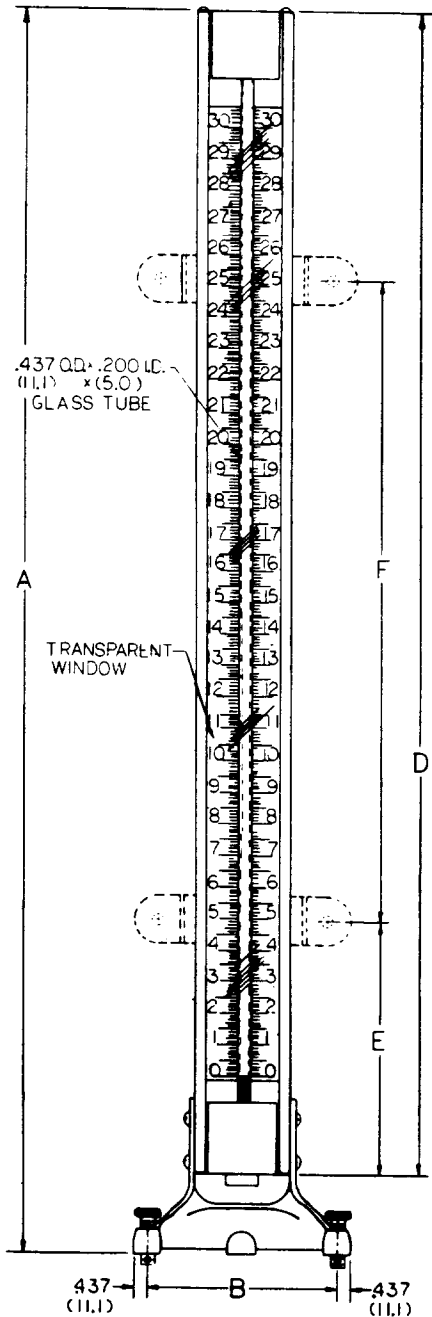
With the full scale vernier, readings can be obtained to 1/10 of the main scale subdivision. A reading is observed by aligning the fluid meniscus with the nearest lower scale division. The distance required to accomplish this is measured on the vernier scale. This is added to the main scale for the overall reading.





RANGE	A	B	C	D	E	F
6"	15.25 (387.4)	5.125 (130.2)	7.75 (196.9)	12.75 (323.9)	6.25 (158.8)	3.75 (95.3)
12"	21.25 (539.8)	5.125 (130.2)	7.75 (196.9)	18.75 (476.3)	8.00 (203.2)	5.50 (139.7)
20"	29.25 (743.0)	5.125 (130.2)	7.75 (196.9)	26.75 (679.5)	8.00 (203.2)	10.50 (266.7)
30"	39.25 (997.0)	5.125 (130.2)	7.75 (196.9)	36.75 (933.5)	8.00 (203.2)	20.50 (520.7)
35"	44.25 (1124.0)	8.00 (203.2)	12.00 (304.8)	41.75 (1060.5)	8.00 (203.2)	25.50 (647.7)
40"	49.25 (1251.0)	8.00 (203.2)	12.00 (304.8)	46.75 (1187.5)	8.00 (203.2)	30.50 (774.7)
50"	59.25 (1505.0)	8.00 (203.2)	12.00 (304.8)	56.75 (1441.5)	8.00 (203.2)	40.50 (1028.7)
60"	69.25 (1759.0)	8.00 (203.2)	12.00 (304.8)	66.75 (1695.5)	8.00 (203.2)	50.50 (1282.7)
80"	89.25 (2267.0)	8.00 (203.2)	12.00 (304.8)	86.75 (2203.5)	8.00 (203.2)	70.50 (1790.7)
100"	109.25 (2775.0)	8.00 (203.2)	12.00 (304.8)	106.75 (2711.5)	8.00 (203.2)	90.50 (2298.7)

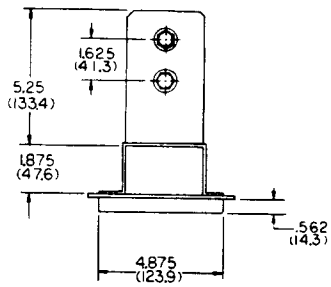
NOTE: ALL NUMBERS IN PARENTHESIS ARE MILLIMETERS



FINISHED BLACK TEXTURED URETHANE

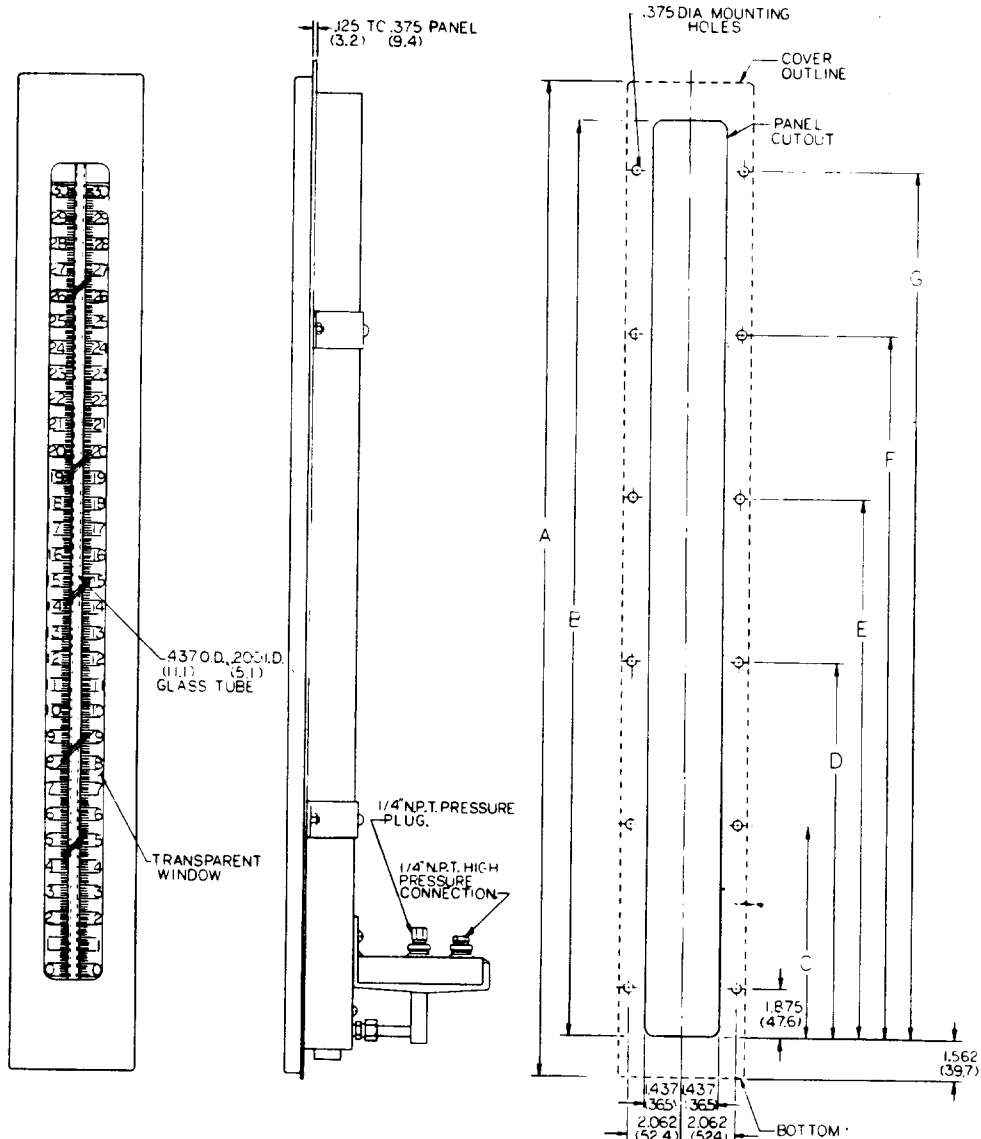
MODEL 310ECX10 WELL TYPE MANOMETER

NOTE, THIS DRAWING SHOWS TWO OF THE AVAILABLE MOUNTING STYLES. (TM) TABLE MOUNT AND (WM) WALL MOUNT. WHEN ORDERING THE CUSTOMER MUST SPECIFY TYPE OF MOUNTING REQUIRED.



MANO RANGE INCHES	A	B	C	D	E	F	G
6	14.375 (365.1)	11.250 (285.8)	5.625 (142.9)	9.375 (238.1)	—	—	—
12	20.375 (517.5)	17.250 (438.2)	7.375 (187.4)	12.875 (327.0)	15.375 (390.5)	—	—
20	28.375 (720.7)	25.250 (641.4)	7.375 (187.4)	17.875 (454.0)	23.375 (593.7)	—	—
30	38.375 (974.7)	35.250 (895.4)	7.375 (187.4)	17.625 (447.7)	27.875 (708.0)	33.375 (847.7)	—
35	43.375 (1101.7)	40.250 (1022.4)	7.375 (187.4)	20.125 (511.2)	32.875 (835.0)	38.375 (974.7)	—
40	48.375 (1228.7)	45.250 (1149.4)	7.375 (187.4)	22.625 (574.7)	37.875 (962.0)	43.375 (1101.7)	—
50	58.375 (1482.7)	55.250 (1403.4)	7.375 (187.4)	19.125 (485.8)	36.125 (917.6)	47.875 (1216.0)	53.375 (1355.7)
60	68.375 (1736.7)	65.250 (1657.4)	7.375 (187.4)	23.125 (587.4)	42.125 (1070.0)	57.875 (1470.3)	63.375 (1609.7)
80	88.375 (2244.7)	85.250 (2165.4)	7.375 (187.4)	29.125 (739.8)	56.125 (1425.6)	77.875 (1978.0)	83.375 (2117.7)
100	108.375 (2752.7)	105.250 (2673.4)	7.375 (187.4)	36.125 (917.6)	69.125 (1755.8)	97.875 (2486.0)	103.375 (2625.7)

NOTE ALL NUMBERS IN PARENTHESIS ARE IN MILLIMETERS.



**MODEL 310ECX10FF WELL TYPE MANOMETER
FLUSH FRONT MOUNTING**



Meriam Instrument
a Scott Fetzer company

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