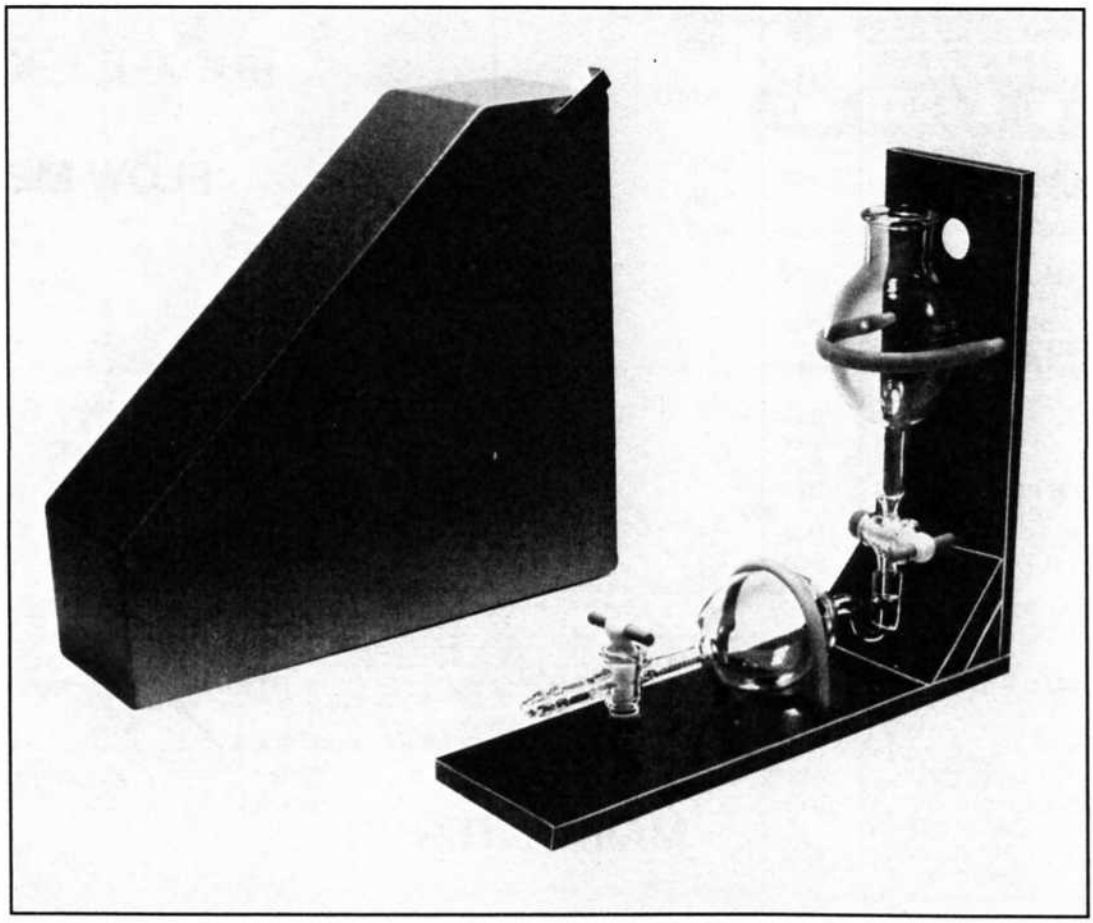
Zahm CO_2 Gas Purity Tester (Series 10,000)

The Zahm CO_2 Gas Purity Tester is an improved absorption bottle designed to eliminate confusing cocks, hose connections, awkward manipulation and the usual caustic spillage. It makes gas testing simple, fool-proof, clean, and highly accurate.

Description:

The Purity Tester consists of a caustic reservoir and calibrated absorption burette mounted to a PVC polished frame. The reservoir and burette are held to the frame with two neoprene covered mounting bands that are adjustable from the rear side of the frame. The absorption burettes are available in five different calibrations, with the standard burette graduated in tenths of one percent, the total being one percent of the volume of the burette. The caustic reservoir **(10100)** has a line indicating the level to which caustic solution should be added, which volume is slightly in excess of the capacity of the absorption burette. The line drawings on pages 48 and 49 should be used for identification of the Purity Tester parts. The parts description found on page 48 and 49 of this manual and should be used when ordering replacement parts.



Operating Instructions

CAUTION: CAUSTIC SOLUTION IS USED IN THE OPERATION OF THIS INSTRUMENT. THIS SOLUTION MAY CAUSE SEVERE BURNS TO THE OPERATOR IF NOT HANDLED WITH CARE. WEAR GOGGLES AND PROTECTIVE CLOTHING WHILE OPERATING THIS INSTRUMENT.

Preparation of Caustic Solution:

To prepare a 10% solution of either Potassium or Sodium Hydroxide slowly add 250 grams of hydroxide to 500 cc's of distilled water and store in a sealed jar. While a 10% solution will work, a stronger solution of 20% will work more rapidly. The hydroxide solution may also be purchased from any laboratory or chemical supply company.

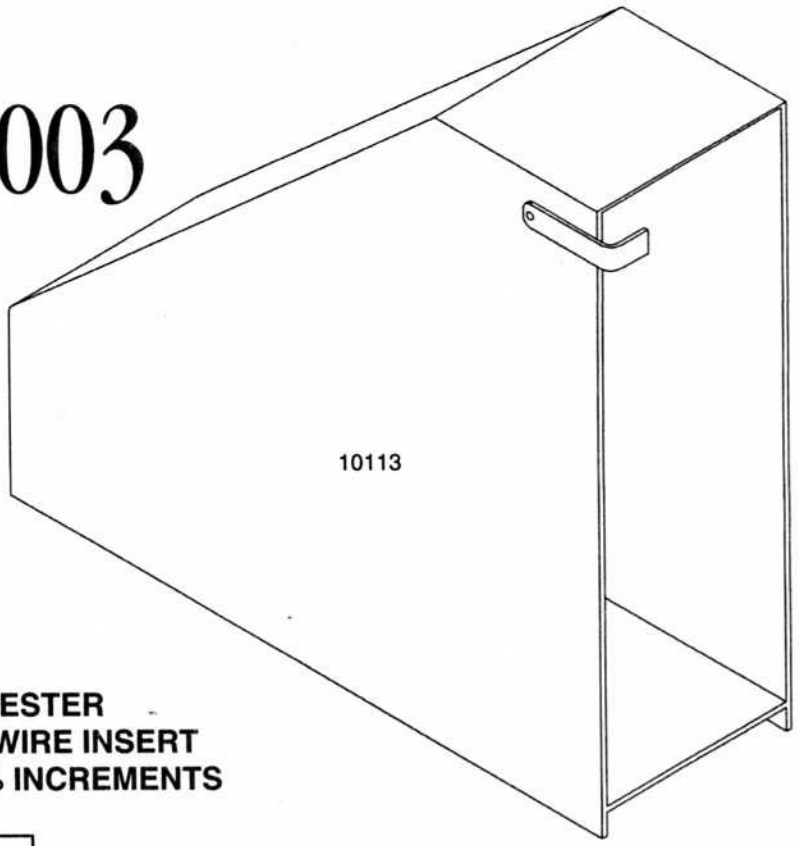
To Operate:

1. Attach a hose from the CO_2 gas supply that is to be tested to the nipple of the absorption burette. Use care when attaching the hose so as not to break the calibrated stem of the absorption burette. If using the 1/100th calibrated burette **(10102),** place your finger on top of the stem and push gently downward onto the support block to prevent the stem from breaking when attaching the hose. Make sure that the gas supply is regulated to below 10 psi before releasing gas into the Purity Tester.
2. Open both cocks **(5005)** and allow the gas to sweep through the absorption burette and caustic reservoir to completely displace air in the glassware. If preferred, the bulb may be first filled with water and the water displaced with the gas to be tested.
3. After the sample has been taken, close the cock on the absorption burette first and then close the cock on the caustic reservoir.
4. Pour the caustic solution into the reservoir to the line indicated on the bulb (approximately 105cc).
5. Open the cock on the caustic reservoir and allow the solution to flow down into the absorption burette. Absorption of the CO_2 gas now takes place until only air in the sample remains, the small bubble of which may be moved around by tilting the Purity Tester slightly, thereby insuring complete absorption of the gas.
6. Close the cock on the caustic reservoir and turn the instrument 90 degrees so that it rests on its other frame side. In this position, the unabsorbed gas enters the calibrated neck where the volume is directly indicated. The percentage purity of CO_2 gas is 99% plus 1/10 of 1% for each division as indicated by the level above the bottom graduation (using the standard absorption burette #10101). There are four other types of absorption burettes available which are listed below.
7. After the test is completed, empty the caustic solution from the Purity Tester. Place the Purity Tester over a container and open both cocks to allow the caustic to drain out. Rinse out all traces of caustic with warm water and dry the glassware before returning the tester to its case.

Absorption Burettes Available:

P/N	GRADUATED IN:	SCALE:
10101	0.10%	99 to 100%
10102	0.01%	99 to 100%
10103	1.00%	70 to 99%
	0.20%	99 to 100%
10104	1.00%	50 to 100%
10105	0.10%	95 to 100%

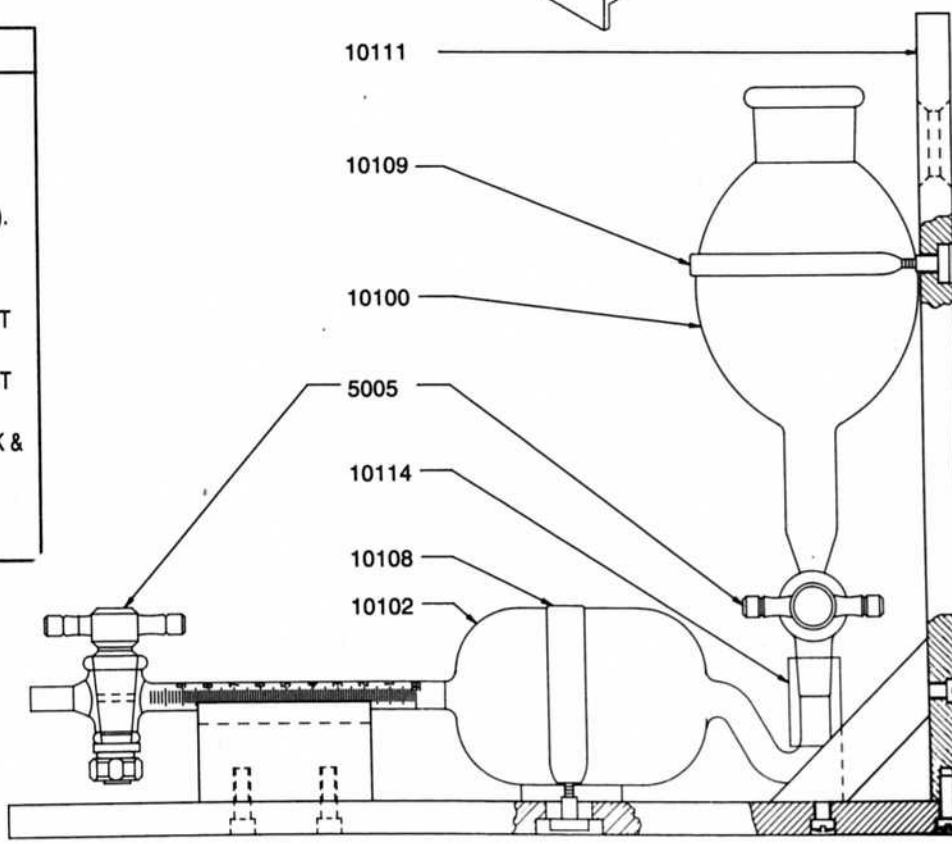
Parts List
Tester #10003



P/N 10003 TESTER
WITH PLATINUM WIRE INSERT
99 TO 100% IN .01% INCREMENTS

P/N	DESCRIPTION
10003	TESTER W/STAND, BANDS, RESERVOIR & BURETTE (99 TO 100% IN 0.01%).
10102	CALIBRATED ABSORPTION BURETTE (99 TO 100% IN 0.01%).
10100	CAUSTIC RESERVOIR
5005	TEFLON* STOPCOCK
10108	RUBBER COVERED BAND W/NUT (FITS #10102 BULB)
10109	RUBBER COVERED BAND W/NUT (FITS #10100 RESERVOIR)
10111	FRAME-2 PC. W/CENTER BLOCK & SUPPORT BLOCK
10113	METAL CASE
10114	PLASTIC CONNECTOR

*DuPont, registered Trade Mark

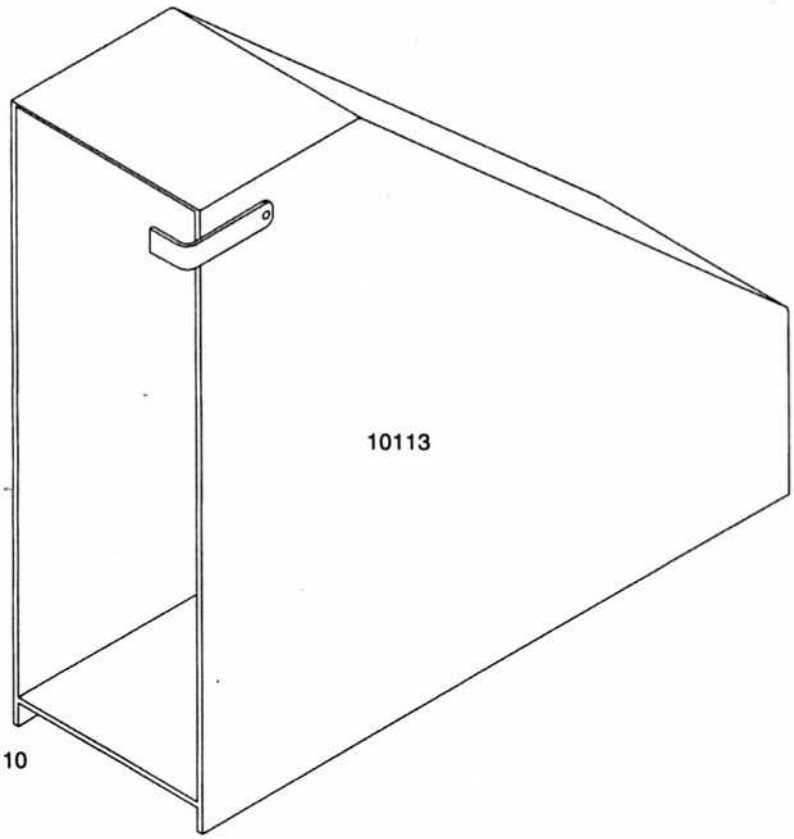


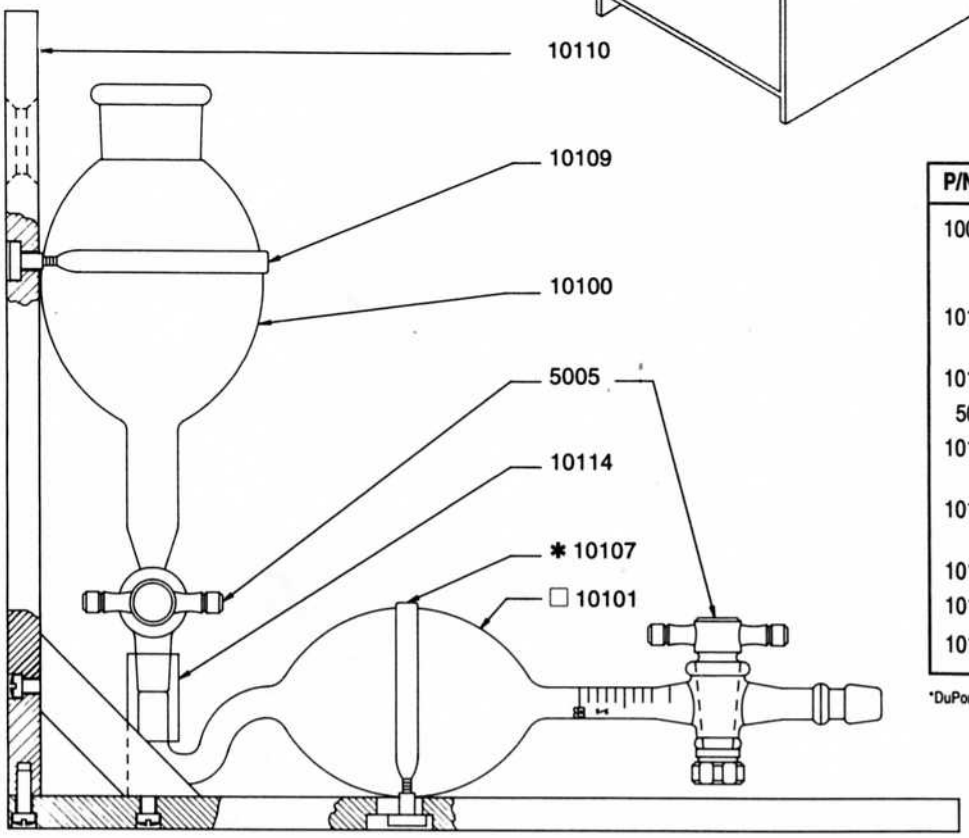
Parts List
Tester #10001

P/N 10001 STANDARD TESTER
99 TO 100% IN .1% INCREMENTS

* 10107 BAND FITS ALL BURETTES EXCEPT #10102 WHICH USES #10108 BAND

☐ CONSULT PRICE LIST FOR OPTIONAL BURETTES





P/N	DESCRIPTION
10001	TESTER W/STAND, BANDS, RESERVOIR & BURETTE (99 TO 100% IN 0.1%).
10101	CALIBRATED ABSORPTION BURETTE (99 TO 100% IN 0.1%).
10100	CAUSTIC RESERVOIR
5005	TEFLON* STOPCOCK
10107	RUBBER COVERED BAND W/NUT (FITS #10101 BULB)
10109	RUBBER COVERED BAND W/NUT (FITS #10100 RESERVOIR)
10110	FRAME — 2PC. W/CENTER BLOCK
10113	METAL CASE
10114	PLASTIC CONNECTOR

*DuPont, registered Trade Mark