

# HYDROSTATIC LIQUID LEVEL TANK GAUGING SYSTEMS



**MODEL P-14**  
Scale Length - 14-1/2"



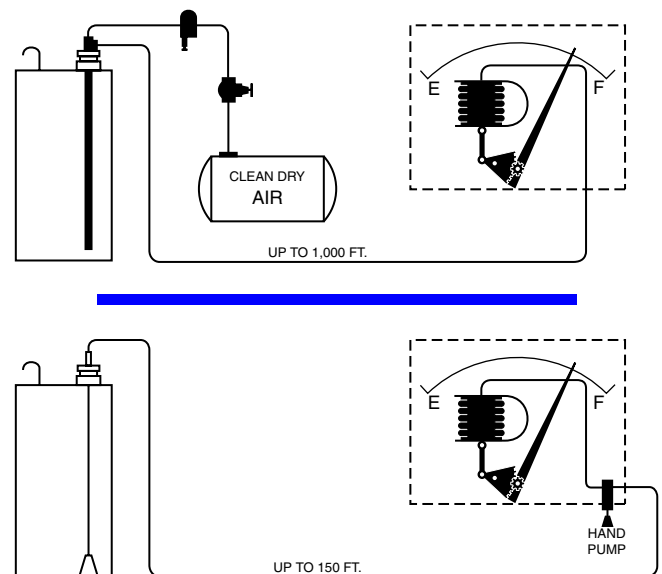
**MODEL P-5**  
Scale Length - 5"

This family of indicators is based on an adaptation of the hydrostatic principle, air pressure is required to obtain liquid level indication. This is provided either by a built-in hand pump or by a source of clean dry air.

Installation is readily accomplished in either empty tanks or partially filled tanks. A 2" tank opening is required through which the air bell assembly (supplied by Pneumercator) is installed. Once the system has been properly installed, maintenance is practically non-existent. All that is required is an occasional check of the zero position which takes less than a minute.

The hydrostatic gauging system described on this page should be used only on tanks vented to the atmosphere.

## PRINCIPLE OF OPERATION



Air is introduced in the line between the indicator and the tank by means of either the built-in hand pump or a source of clean compressed air. When the pressure in this line equals the pressure at the bottom of the bubble pipe (created by the head of liquid in the tank), the bellows in the indicator mechanism expands - or contracts - and thru suitable linkage moves the pointer over the face of the dial. Excess pressure bubbles out of the bottom of the bubble pipe.

# REMOTE READING HYDROSTATIC TYPE

Pneumercator hydrostatic tank gauging systems operate on the principle that the pressure at the bottom of the tank varies with the liquid head. The pressure balance which is equal to the tank liquid height is converted into tank contents and indicated on a calibrated dial. These gauges are designed to measure liquids having a constant specific gravity in vented tanks. The simple bubble pipe arrangement in the tank is ideal for vertical tanks and those having internal obstructions. For corrosive liquids the pipe can be of proper resistant material.

There are two types of systems available. One

system has a hand pump built into the gauge case. A few strokes of the pump supplies the air for purging the tube in the tank to obtain the "pressure balance". The hand pump gauges can operate a distance up to 150 feet from the tank. The other system is with the hand pump omitted and a constant source of clean dry air is used to instantly follow tank level changes and automatically indicate capacity on a calibrated dial. Constant air gauges can be located up to 1000 feet from the tank.

This gauging system is listed by Underwriters Laboratories Inc., N.Y.C., Board of Standards and Appeals.

## HAND PUMP MODELS

**STANDARD SYSTEM:** Includes a dial type indicator complete with gallons dial, built-in hand pump, 30 feet of 1/4 inch tubing, an air chamber, a 2 inch tank entrance bushing and all other necessary fittings to complete the installation. Additional tubing is available.

*Instrument Case:* Surface  
*Tank Pressure:* Vented tanks  
*Gauge Models:* P-5 (5 inch scale),  
P-14 (14-1/2 inch scale),

**SUGGESTED SPECIFICATION:** Provide and install for each tank a remote reading UL listed tank gauging system which shall be of the dial hydrostatic type, utilizing an integral built-in hand pump for manual operation. The instrument shall be factory calibrated for the tank contents and indicated on [(5") (14-1/2")] dial scale marked for ( ) gallons without the use of gauge glass or fluids. The tank gauging system shall be model ( ) manufactured by The Pneumercator Co., Inc., Hauppauge, N.Y. 11788.

## GAUGE SELECTION

Model gauge recommended depends on tank capacity. A P-5 model on a 10,000 gallon tank has readable spaced marks representing 200 gallons each but the P-14 has approximately 100 gallons for each mark making it more suitable for measurement as you can interpolate between marks and read to approximately twenty gallons.

## CONTINUOUS READING MODELS

**STANDARD SYSTEM:** Includes indicating instrument and a 2" tank entrance assembly with choke and fittings for 1/4" tubing to air supply and indicator.

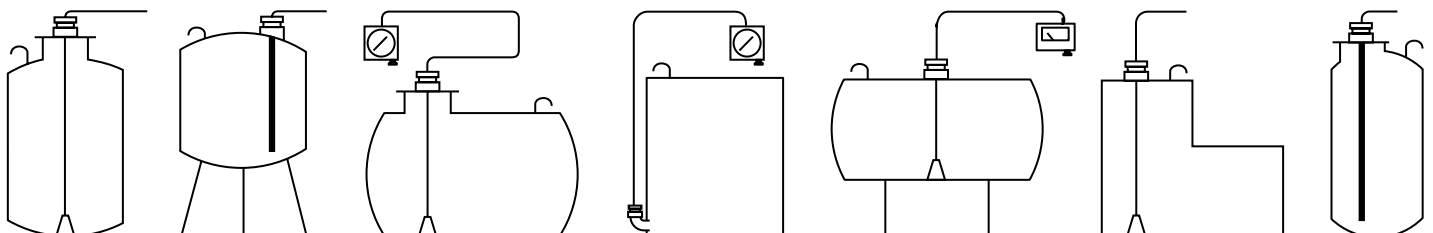
*Indicator Case:* Surface  
*Tank Distance:* Up to 1000 feet  
*Gauge Models:* P-5A (5 inch scale),  
P-14A (14-1/2 inch scale),

**SUGGESTED SPECIFICATION:** Provide and install for each tank a remote continuous reading dial type hydrostatic tank gauge. The gauging system shall utilize an external source of compressed air and include an optional pressure regulator with air filter, a combination jewel choke and tank entrance fitting. The gauging system shall provide continuous indication of tanks' contents on a [(5") (14-1/2")] dial scale calibrated for ( ) gallons. The tank gauging system shall be model ( ) manufactured by The Pneumercator Co., Inc., Hauppauge, N.Y. 11788.

Experience has established the following gauge selection

Model P-5 For tanks up to 3000 gallons  
Model P-14 For tanks 3000 and higher

**INSTALLATION:** Either the hand pump or constant air type gauges can be installed quickly and simply in empty or full tanks. No special skills are required.



# ORDERING SPECIFICATIONS

MODEL: P-5 , P-5A , P-14 , P-14A

CONTENTS: CORROSIVE , NONCORROSIVE

TUBING LENGTH TO INDICATOR \_\_\_\_\_

DIAL CALIBRATION: GALLONS , LITERS , FEET AND INCHES , OTHER \_\_\_\_\_

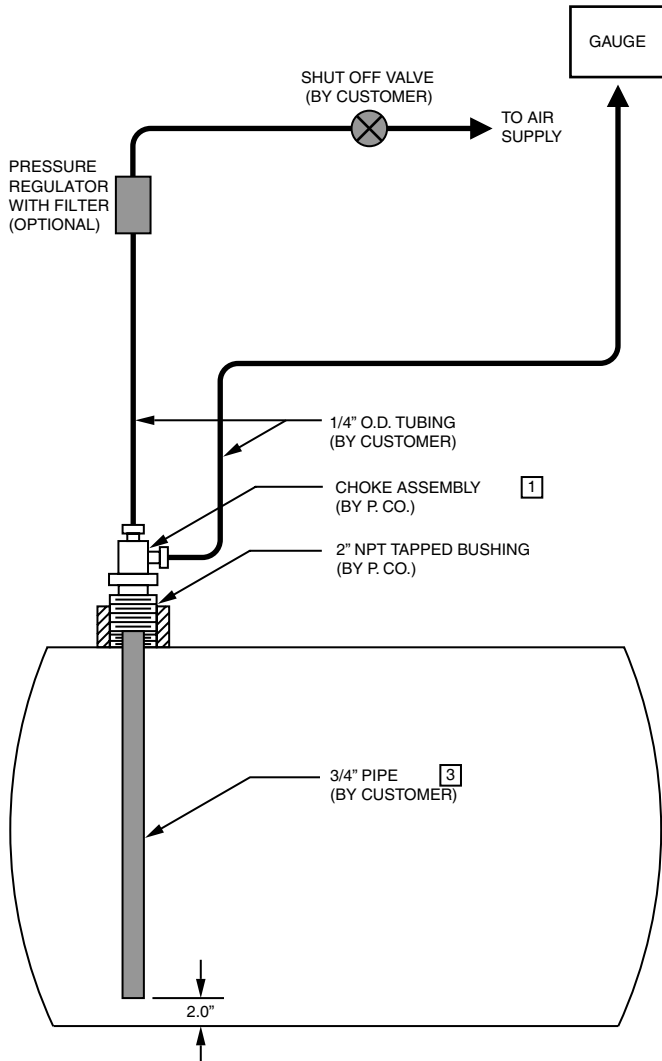
OPTIONAL PRESSURE REGULATOR WITH FILTER

## REQUIRED TANK INFORMATION

TANK TYPE (STEEL OR FIBERGLASS)		HORIZONTAL OR VERTICAL TANK	
TANK MANUFACTURER		OVERALL LENGTH OUTSIDE	
TANK MODEL (MANUFACTURERS NO.)		INSIDE DIAMETER	
CAPACITY (ACTUAL)		TYPE OF ENDS	
TANK CONTENTS		SPECIFIC GRAVITY	

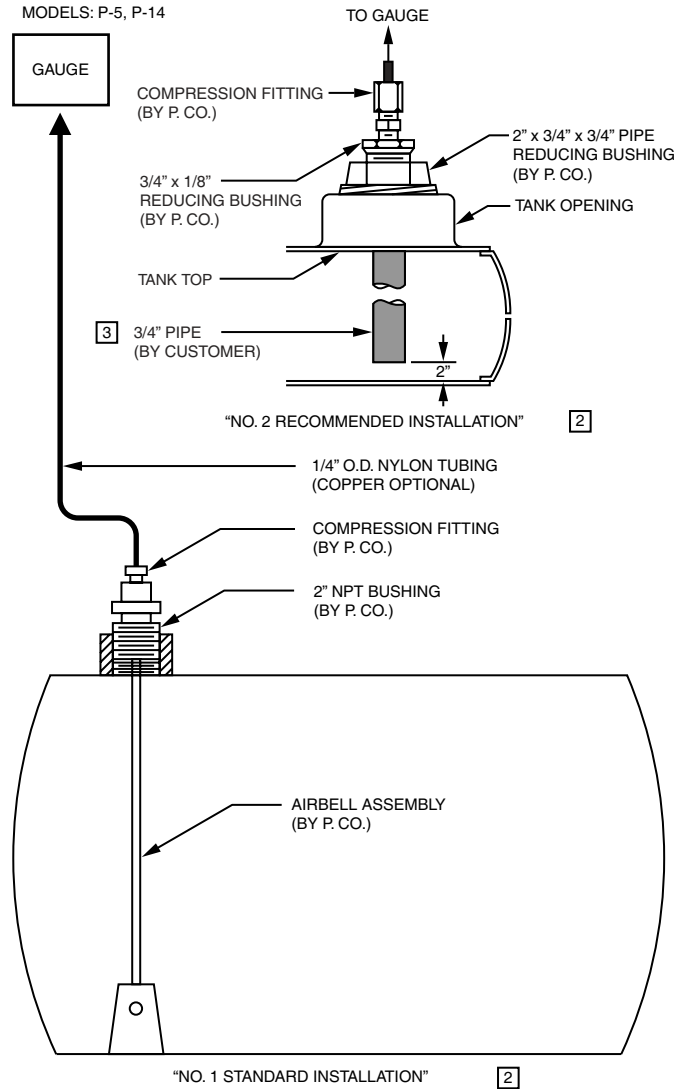
### CONSTANT AIR TYPE

MODELS: P-5A, P-14A



### HAND PUMP TYPE

MODELS: P-5, P-14

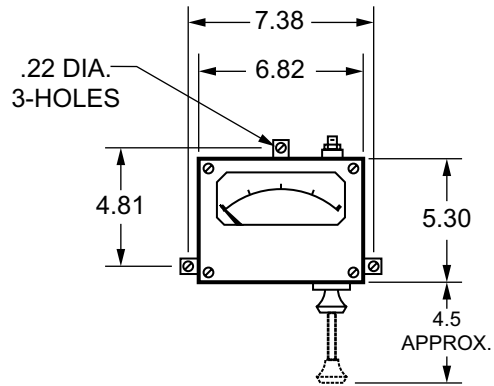
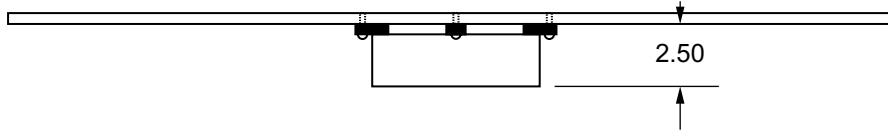


**NOTES:**

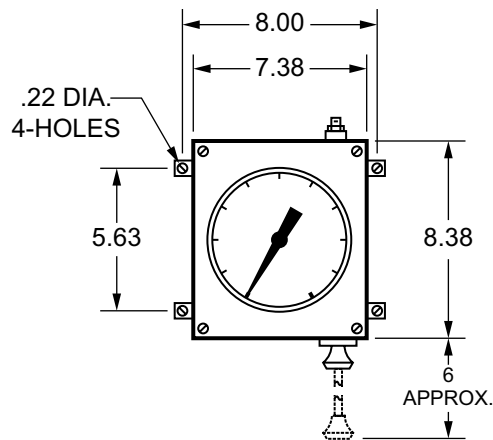
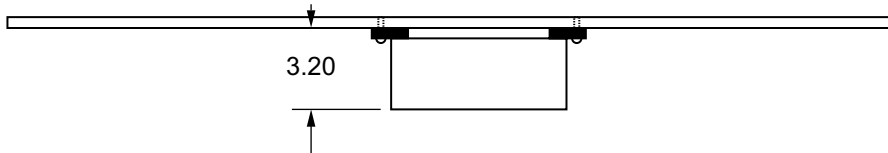
- 1.) ALL SYSTEM COMPONENTS ARE SUPPLIED WITH FITTINGS TO ACCEPT 1/4" O.D. TUBING.
- 1 - 2.) IN ROUTING LINES, AVOID (AS MUCH AS POSSIBLE) BENDS OR DIPS THAT WOULD ACT AS MOISTURE TRAPS, WHERE THEY CANNOT BE AVOIDED, IT IS SUGGESTED THAT CONDENSATE TRAPS BE INSTALLED.

- 2 - 3.) USE NO. 1 INSTALLATION FOR TANKS UP TO 10'-6" IN DIAMETER. USE NO. 2 INSTALLATION FOR TANKS OVER 10'-6" IN DIAMETER AND FOR NO. 6 OIL.
- 3 - 4.) FOR CORROSIVE LIQUIDS, USE STAINLESS STEEL OR P.V.C. PIPING.

# DIMENSIONS



P5



P14



1785 Expressway Drive North, Hauppauge, NY 11788

TEL: (631) 293-8450 • FAX: (631) 293-8533

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