



PSM INSTRUMENTATION LTD
HCG HYDROSTATIC TANK CONTENTS GAUGE
INSTALLATION OPERATION & MAINTENANCE
INSTRUCTION MANUAL

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General Description

The HCG contents gauge comprises a sensor assembly containing a pressure sensitive diaphragm and an indicator graduated to suit the tank capacity and content. Between these is a flexible seamless copper capillary with a heavy duty flame retardant PVC sheathing. The system is sealed and filled with inert gas at atmospheric pressure which acts as the pressure transfer medium. The system is supplied fully assembled.

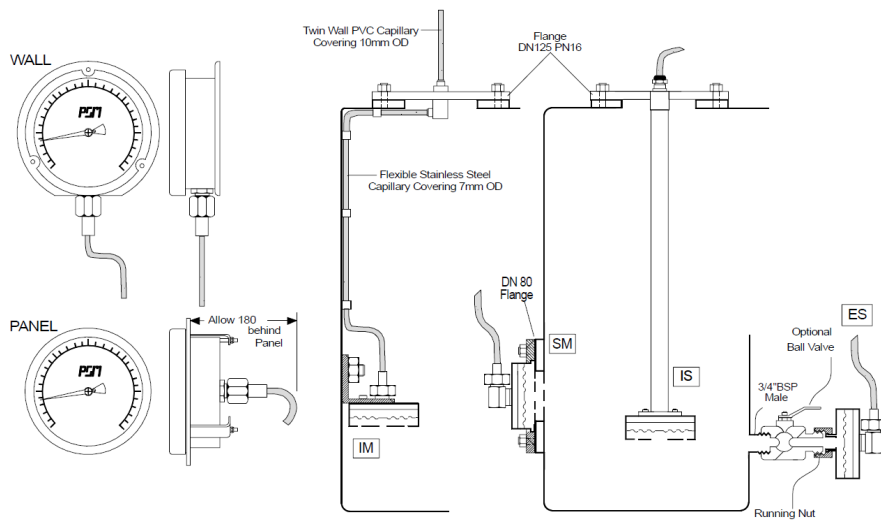
Sensor Installation

There are several basic sensor mountings:

- * Type ES 3/4" BSP female running nut
- * Type IS top entry flange (standard DN 125 with either rigid sensor support pole or suspension wire)
- * Type IM internal bracket mount with bulkhead type capillary exit
- * Type SM external flanged connection (standard DN80)

Flange Dimensions:

Flange	OD	PCD	Holes
DN80 PN16	200 mm	160 mm	8
DN125 PN16	250 mm	210 mm	8



It is recommended that for type ES a suitable tank isolation valve is fitted.

Indicator Installation

The indicator may be either surface or panel mounted dependant upon order requirements. A flange is provided for surface mounting and securing straps for panel mounting. Details are provided on the installation diagram on the previous page.

The indicator is not sensitive to its mounting position relative to the tank but in general it should be sited away from any extremes of temperature, vibration and constantly wet conditions. The indicator can be mounted at any height above or below the datum installation level of the sensor.

Capillary

The HCG device is a factory filled and sealed system. On no account should be capillary be disconnected for installation or shortening of length.

The capillary should be secured using propriety clips taking care not to crush it, and sited away from possible mechanical damage or where flexing might occur. Any excess should be coiled with bend minimum radius of 75mm.

A variety of fittings are offered to enable passage of the capillary through bulkheads or walls. Supplementary drawings are available detailing these.

Commissioning

Since all units are factory calibrated for a particular duty, no adjustment is necessary or possible. In the event that errors are suspected, it should first be established that the instrument has been ordered in accordance with the actual installation conditions, particularly with respect to the tank dimensions, sensor fitting position and liquid specific gravity.

Where a constant low reading is suspected, ie. the pointer drops below zero when the vessel is empty, it is possible to move the pointer position. Access is gained by removing the indicator bezel by rotating it approximately 1/4 turn anti-clockwise. Lift the bezel, glass and seal off.

The pointer is a push fit on the spindle and can be removed by pulling it directly away from the mechanism. **Extreme care should be taken to avoid bending the spindle.** The pointer may then be repositioned and pressed back onto the spindle by hand only. Once the correct position is achieved the bezel, glass and seal may be replaced using a reversal of the removal procedure.