

685 Liquid Level Indicator for Atmospheric Vessels

Application

The Model 685I is a liquid head pressure type level indicator. It continuously indicates the liquid level in an atmospheric (vented) tank in feet and inches. Also, the scale on the Model 685I is available calibrated for horizontal cylindrical vessels or in pounds, gallons, barrels, percent, etc.

Features

- **Simple Adjustments:** Zero Adjustment Knob and one Specific Gravity (span) Knob. Unit can be factory calibrated for a nominal cost or field adjusted in less than 15 minutes, without having to change the liquid level in the vessel.
- **Easy to Read:** Scale reads the same as a hand tank gauge, making it unnecessary to convert psig of head pressure into feet and inches of liquid to get the correct reading.
- **Long Life:** All bearings are Teflon®, Delrin or Moly Disulphide baked on Dry Film Lubricated Stainless Steel.



Operation

Liquid head pressure against a flexible elastomer diaphragm is transmitted directly to a leaf spring, which has a fixed pivot point at the upper end and an adjustable fulcrum point in the mid region of the leaf spring. For example, because 8' of heavy liquid exerts more pressure on the diaphragm than 8' of lighter liquid, the spring can be "stiffened" by moving the fulcrum down by the gravity adjustment knob (red), so the indicator will still read 8'. The zero knob (green) moves the entire spring assembly and pointer, having the same effect as shifting the scale.

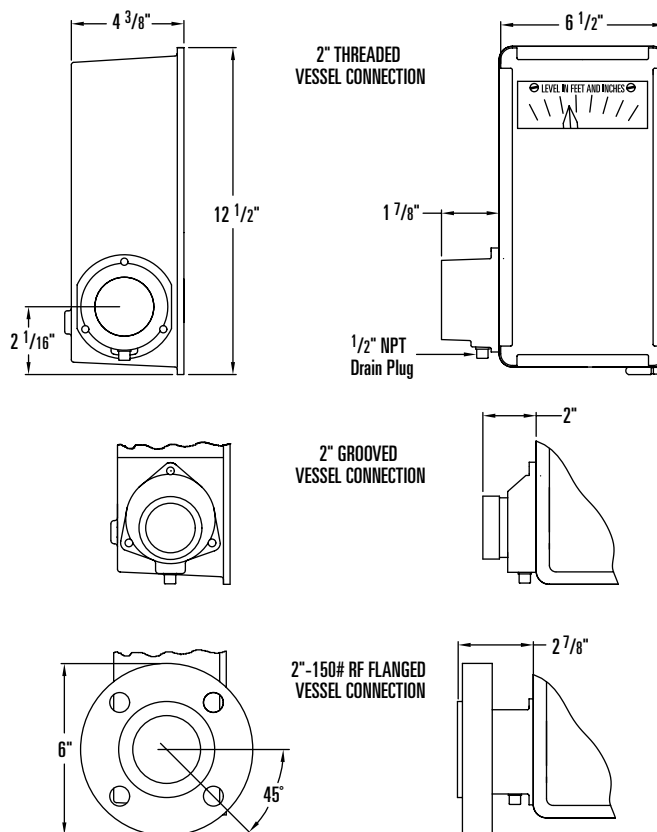
Installation

Since the unit measures liquid head pressure, the point at which it is installed on the vessel is the point that liquid measurement begins. For calibration and maintenance purposes, always install an isolation valve between the model 685I and the vessel. Also, install a drain petcock in the liquid inlet bottom, where a plug is generally located.

Specifications

Indicator Housing	Weatherproof
Proof Pressure	100 psig
Temperature	-20°F to +225°F Standard
Pressure	0 to 4 ounces pressure (Atmospheric)
Range (Vessel Height)	3' thru 60' (see 685 code sheet)

Dimensional Data



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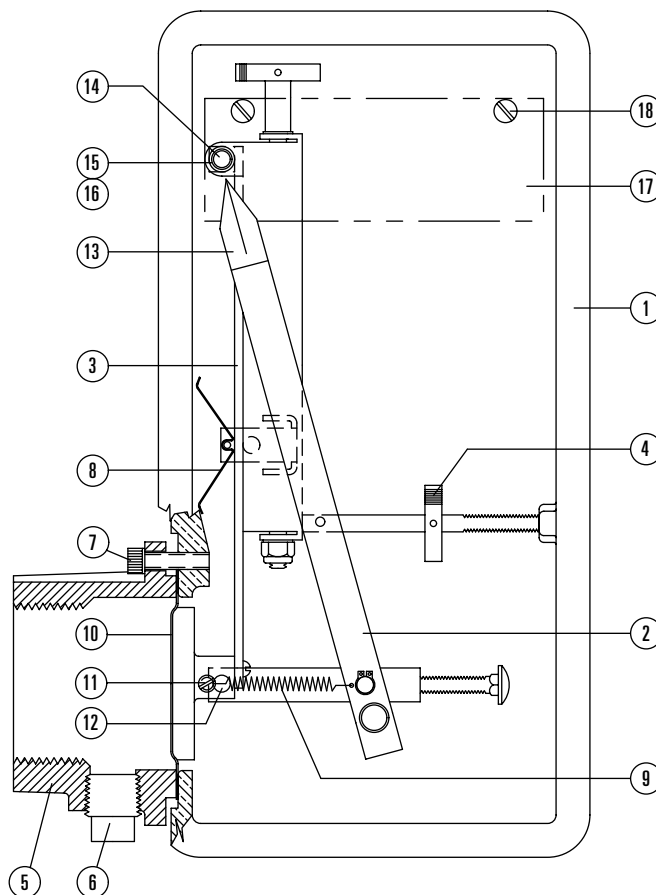
Parts List

Item	Description	Qty.	Part No.
1	HOUSING, ALUMINUM	1	000154-M
2	POINTER ASSEMBLY	1	000071-A
3	MAIN SPRING ASSEMBLY, STD.	1	000053-A
	MAIN SPRING ASSEMBLY, THIN	1	000054-A
	MAIN SPRING ASSEMBLY, DOUBLE	1	000055-A
4	ZERO KNOB, SHAFT & PIN	1	000010-A
5	ADAPTER	1	SEE CHART
6	PIPE PLUG, STEEL PLATED	1	002300-C
	PIPE PLUG, 304SS	1	002304-P
	PIPE PLUG, 316SS	1	002307-P
	PIPE PLUG, PVC	1	002301-P
7	SCREW, STEEL PLATED	3	001508-P
	SCREW, 2" NPT PVC ADAPTER ONLY	3	001542-P
	SCREW, 2"-150RF PVC ONLY	3	001553-P
8	ZERO SPRING, STAINLESS STEEL	1	003102-P
9	WEAR SPRING, STAINLESS STEEL	1	003103-P
10**	DIAPHRAGM, BUNA-N	1	000700-P
	DIAPHRAGM, VITON®	1	000713-P
	DIAPHRAGM, COMPOUND W	1	000720-P
	DIAPHRAGM, TEFLON®	1	000703-P
11	SCREW, 18-8 STAINLESS STEEL	1	001507-P
12	FOLLOWER BEARING, STAINLESS STEEL	1	003909-L
13	POINT DECAL	1	005900-P
14	SPRING BEARING, STAINLESS STEEL	1	000009-A
15	WASHER, TEFLON®	1	001807-P
16	RETAINER O-RING, NEOPRENE	1	003602-P
17***	SCALE, ALUMINUM	1	0030xx-P
18	SCREW, 18-8 STAINLESS STEEL	2	001504-P
19*	TAG, ALUMINUM	1	005906-P
20*	BEZEL FRAME, STAINLESS STEEL	1	000023-P
21*	BEZEL SEAL	1	003400-P
22*	WINDOW, ACRYLIC	1	000204-S
23*	WASHER, PVC ADAPTER ONLY	1	001809-P

*Not shown.

**Recommended spare parts. Other materials available.

***Specify tank height when ordering.



Item #5 Part Number

Vessel Connection	Cad. Plated	Epoxy Coated	Teflon® Coated
2" NPT, D.I.	000307-C	000307-E	000307-T
2" NPT, 316SS	000317-M*	000317-E	000317-T
2"-150RF, STEEL	000335-C	000335-E	000336-T
2"-150RF, 304SS	000338-M*	000338-E	N/A
2"-150RF, 316SS	000341-M*	000341-E	000341-T
3"-150RF, STEEL	000345-C	000345-E	N/A
2" GROOVE, D.I.	000302-C	000303-E	000302-T
2" NPT, PVC	000343-M*	N/A	N/A
2"-150RF, PVC	000342-M*	N/A	N/A

*Plating not required.