

# 6700 Liquid Level Indicator

Float and tape gaugeboard indicator for level measurement in bulk storage tanks

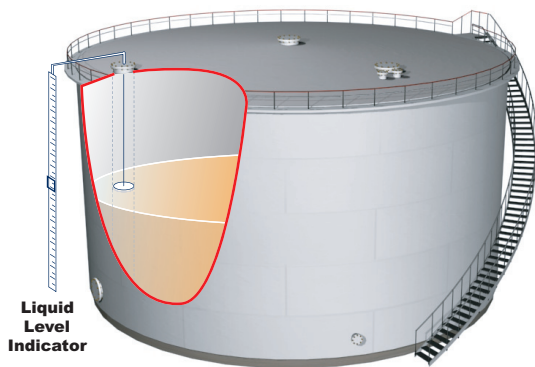
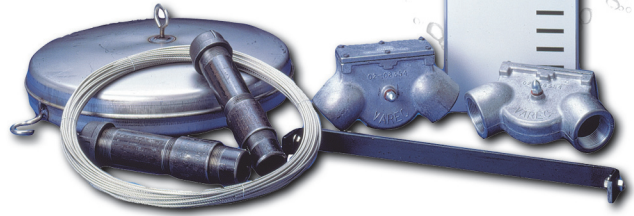
Varec®

## Highlights

- Accurate to 1" (25 mm)
- Durable aluminum gaugeboard with vinyl facing
- Level indication in feet/inches or meters/decimeters
- Full travel or half travel designs
- Standard and severe service configurations
- Vertical cone roof and bolted tank models

## Application

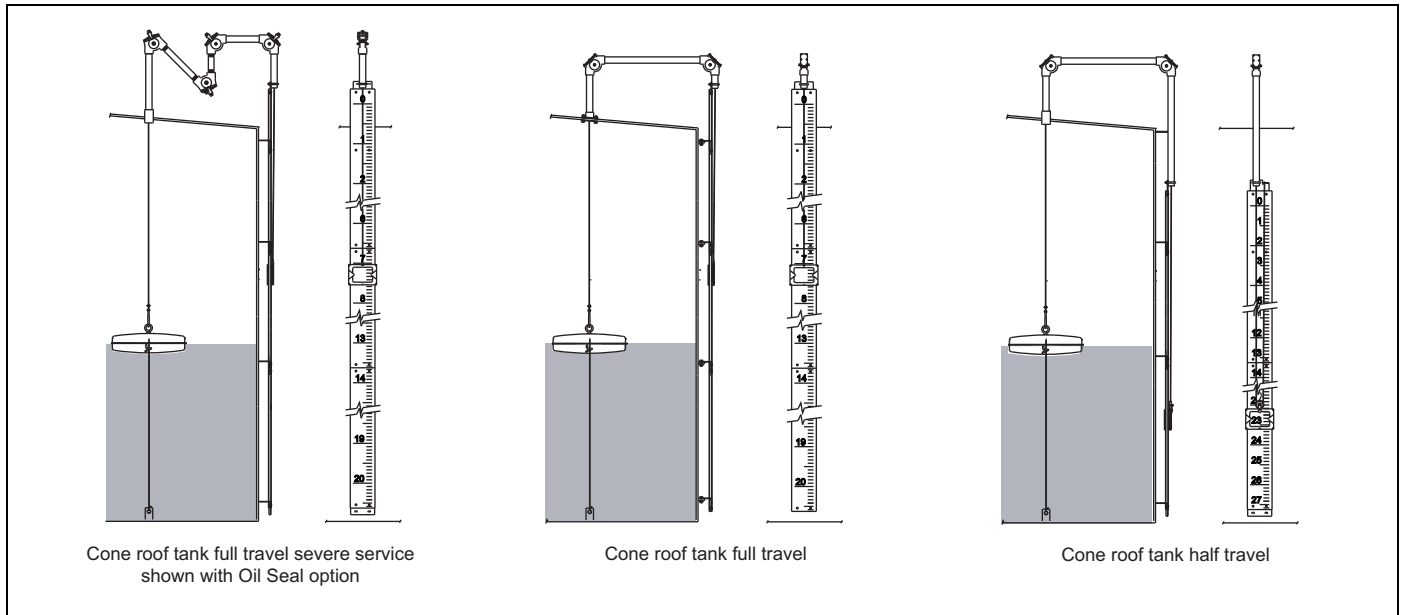
The 6700 Liquid Level Indicator (LLI) is an economical, easy to install measurement device utilizing a target and gauge board to indicate tank level. The indicator displays liquid level (product innage) to an accuracy of 1" (25 mm). Designed for use on a variety of atmospheric and low-pressure storage vessels, the 6700 may be installed on both in-service and out-of-service tanks.



Example Tank Gauging System

Changes in the liquid level of the tank raise or lower the float, which moves the indicator cable. Cable movement drives the indicator up and down the gaugeboard on the side of the tank. The liquid level in feet and inches or meters and decimeters is shown by the indicator position on the gaugeboard. The user may then convert the liquid level to units of volume. This may be accomplished manually or by using inventory management software, such as FuelsManager®.

## Installation Guidelines



Example 6700 LLI installations

The following information should be used as a guide only; please refer to the operation and maintenance manual for complete installation instructions. You are able to leave the tank in-service while you install the 6700 LLI.

Varec offers a variety of models and installation kits to suit most applications for the 6700 Liquid Level Indicator (LLI). Included with each 6700 LLI are all components necessary for installation, except for the following items:

- 1-1/2" (38 mm) conduit pipe (all options)
- 1-1/2" tank entry coupling/nipple (all options)
- bottom anchor (severe service option only)

The aluminum gaugeboard is provided in 7 ft (2.1 m) sections and includes the necessary number of splice brackets to connect the sections supplied per the measuring range ordered. The aluminum board is 0.8" (2 mm) thick with a vinyl facing of English or Metric units of measure.

### Severe Service Option

For corrosive chemical storage, Varec offers a Severe Service option. All wetted parts are fabricated from fiber reinforced plastic (vinyl ester) or PTFE coated stainless steel.

### Stainless Steel Option

For corrosive or clean liquids, such as potable water, a Stainless Steel option is offered with all wetted parts, top anchors and elbows fabricated from 316 stainless steel.

### Asphalt Service Option

Stainless steel sheaves replace the standard delrin sheaves to allow for the higher temperatures associated with asphalt applications.

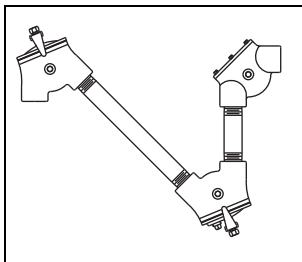
Material Specifications				
Description	Standard	Stainless Steel	Severe Service	Asphalt
Indicator board	0.08" (2 mm) aluminum			
Sheave elbows	Aluminum with Delrin sheaves	316 SS	Cast iron with 316 SS sheaves	Aluminum with 316 SS sheaves
Indicator target	304 SS/HMWPE			
Float	316 SS		Fiber reinforced vinyl ester	316 SS
Float cable			PTFE coated 316 SS	
Guide cable				
Top anchors	Steel	316 SS	Steel	Steel
Bottom anchors			(Customer supplied)	
Cable fastener	316 SS		Fiber reinforced vinyl ester	316 SS
Cable crimp	Nickel plated copper			

**Note!** An oil seal is recommended if the process temperature can exceed 200 °F (93 °C).

## Accessories

### Oil Seals

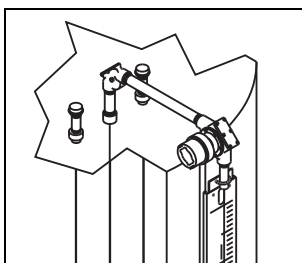
Oil seals are used when the tank cannot be free vented to atmosphere.



Part #	Description
10-01994-AAA	135° aluminum elbows, 8.5" (216 mm) W.C. working pressure
10-01994-BAA	135° cast iron elbows, 8.5" (216 mm) W.C. working pressure
10-02861-AAA	180° aluminum elbows, 27" (689 mm) W.C. working pressure

### Drive Elbow Modification Kit

This kit allows additional transmitters or limit switches to be driven by the 6700 LLI. The kit (English #13-08821, Metric #13-08971) includes the drive elbow, which replaces the standard elbow, and sufficient tape/cable for a 48 ft (14.4 m) tank. Not for use with half-travel version of 6700 LLI.



### Manways and Inspection Covers

To facilitate initial installation and subsequent inspection and service, Varec offers several inspection and manway covers. A manhole cover (Model 226) allows for in-service installation through a tank's existing manway. Each of the three port entries is threaded for simple installation of pipework or guidewire anchors. An inspection cover (Model 228) can be installed onto an existing manhole cover, to provide an easily removable inspection plate.

Part #	Description
BM6746	Model 228 Welded Inspection Cover - 19.75" x 10"
BM3443	Model 226 20" Cover - API 650 Drilling
BM3607	Model 226 24" Cover - API 650 Drilling

### Float Grounding Kit

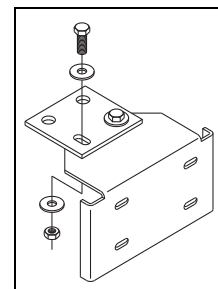
The Float Grounding Kit positively grounds the float to the tape or cable. (Part # 13-10974).

### Teflon Tape Wipe

Generally used with the conduit vent, the Tape Wipe (Model 2546) can also be used alone. The Tape Wipe mounts in the conduit between the top of the tank and the first elbow and removes excess residue from the tape. It minimizes vapor loss from the tank into the conduit and helps prevent vapors and liquids from contaminating the gaugehead (Part #BA13924).

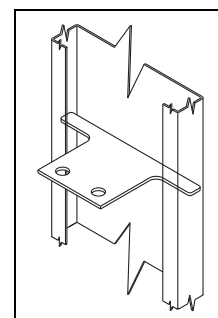
### Extension Bracket Kit

The extension bracket kit (#13-10720-003) bolts to the standard bracket and provides an extension of approximately 2" (50 mm) from the side of the tank. Slotted holes are provided for adjustment. The kit includes a single bracket and the necessary mounting hardware. Order one for each 7 ft. board plus one.



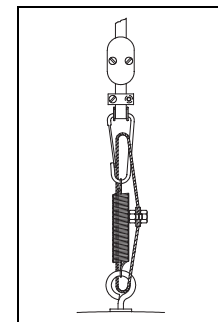
### Reinforcing Bracket

The reinforcing bracket (#02-10721-003) is installed between the standard mounting bracket and provides additional stiffness for the gaugeboard. This option is recommended for areas with high wind conditions.



### Shock Absorber

The Shock Absorber reduces wear and maintenance on a 2500 ATG by minimizing the transfer of wave energy from the float to the perforated tape and gaugehead components. It prevents the float from becoming detached from the tape by wave action and should always be used in tanks with turbulent conditions near inlet or outlet piping and near a mixer (Part #DA6138).



## Order Codes

Application Type	
BL	For application on bolted tank type
SS	For corrosive or clean liquids, (stainless steel kit - wetted parts)
ST	For application on standard tank type
SV	For corrosive chemical storage, (severe service kit - wetted parts)
AP	For asphalt applications
Board Type and Length -	
F06	English-Tank to 6 ft
F13	English-Tank to 13 ft
F20	English-Tank to 20 ft
F27	English-Tank to 27 ft
F34	English-Tank to 34 ft
F41	English-Tank to 41 ft
F48	English-Tank to 48 ft
F55	English-Tank to 55 ft
F62	English-Tank to 62 ft
H13	English-Tank to 13 ft - half travel
H27	English-Tank to 27 ft - half travel
H41	English-Tank to 41 ft - half travel
H55	English-Tank to 55 ft - half travel
H69	English-Tank to 69 ft - half travel
H83	English-Tank to 83 ft - half travel
H97	English-Tank to 97 ft - half travel
M02	Metric-Tank to 2 m
M04	Metric-Tank to 4 m
M06	Metric-Tank to 6 m
M08	Metric-Tank to 8 m
M10	Metric-Tank to 10 m
M12	Metric-Tank to 12 m
M14	Metric-Tank to 14 m
M16	Metric-Tank to 16 m
M19	Metric-Tank to 19 m
M21	Metric-Tank to 21 m
M23	Metric-Tank to 23 m
Y	Special version
<b>N6700-</b>	Complete Designation

