

## MEASURE LEVEL WITH PRESSURE

### Features of Level Sensors from Viatran

- Submersible
- Corrosion resistant construction
- Ranges from 5" WC to 1200 feet of water/500 PSI
- Intrinsically Safe design available
- All stainless steel construction

### Typical Applications

- Water and sewage treatment plants
- Reservoirs/dams
- Wells (any media)
- Marine/shipboard
- Chemical waste ponds
- Food processing level

### Hydrostatic Head Pressure to Accurately Measure Level

There are a number of ways to measure level - from dipsticks to the naked eye, ultrasonic to bubbler systems. At Viatran, we use a reliable method that is accurate to 0.1%.

More and more Process Engineers are utilizing submersible pressure transmitters to send a 4 to 20 mA accurate output. This output lets them know the volume in gallons or liters or how many inches or centimeters of water are in the tank.



### A Whole Family of Options

Pictured above is the Viatran family of level measurement solutions. Some are submersible while others can be mounted on the edge of the tank.

The Level Transmitter pictured at the end is a submersible unit.

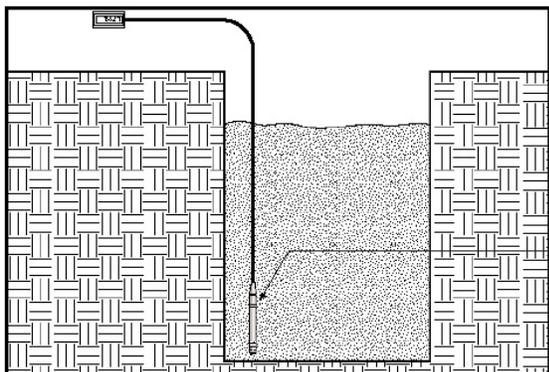
It's just one member of the Submersible Family of solutions. All of the Viatran Models are engineered to survive hostile media. A unique Viatran cable seal ensures watertight integrity up to 500 PSI.

Viatran  
3829 Forest Parkway  
Suite 500  
Wheatfield, NY 14120

Hotline: 1-800-688-0030  
Int'l: 1-716-629-3800  
Fax: 1-716-693-9162  
Email: [solutions@viatran.com](mailto:solutions@viatran.com)  
Web: [www.viatran.com](http://www.viatran.com)



## How They Work



## Measuring Head Pressure

The pressure at the bottom of a liquid filled container is related to the amount of the liquid. Drop a transmitter into the liquid and it measures head pressure. This pressure is translated into a resulting liquid level.

The following equation takes into account specific gravity to measure liquid level:

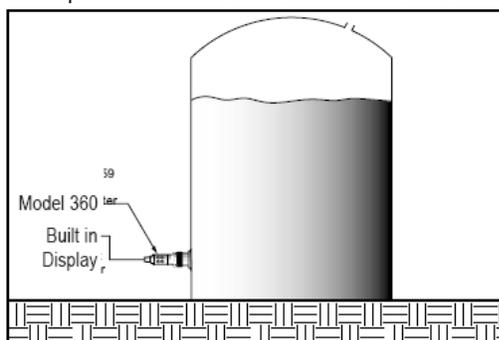
- $H = P/SG$  or  $P = SG * H$
- H - Height of the liquid being measured (inches, feet, centimeters, meters, etc.)
- P - Hydrostatic head pressure at the bottom of the tank (typically in inches of water column, feet of water column, psi, bar, Pascal's, etc.)
- SG - Media's specific gravity (a dimensionless number calculated from density of media being measured  $\div$  Density of water at 4°C. For example, the density of Kerosene equals 0.82 g/cm<sup>3</sup>. Therefore, the SG of Kerosene is 0.82 g/cm<sup>3</sup>  $\div$  1.00 g/cm<sup>3</sup> = 0.82).

## Accurate and Reliable

If you need accuracy and reliability, then a submersible level transmitter is a good way to go. It's easy to install, since it's simply dropped into the media.

## Flush Mount

While a submersible transmitter can instantly tell you the level of your tank or container, a flush mount sensor will accomplish the same task. The sensor can fit on the side of the tank (as illustrated below).



So take your pick. Submersible or flush mount. Call Viatran to discuss your application. Regardless of the media or the tank, in the last 40 years, we've measured the level. We can help. Challenge us with your application.

Viatran  
3829 Forest Parkway  
Suite 500  
Wheatfield, NY 14120

Hotline: 1-800-688-0030  
Int'l: 1-716-629-3800  
Fax: 1-716-693-9162  
Email: [solutions@viatran.com](mailto:solutions@viatran.com)  
Web: [www.viatran.com](http://www.viatran.com)

