

# Mid-West Instrument

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**Mid-West Instrument is proud to introduce our new**

## **Model 115/116**

Tank Level gauges for Cryogenic and liquefied gas Applications

These gauges are direct drop in replacements for the most popular level gauges on the market available with all of the common mounting configurations without having to re-tube the gauge to retrofit on your tank. These gauges fit right up to your stationary or mobile tanks just like the competition.

The Model 115/116 comes in a variety of ranges from 0-10" H<sub>2</sub>O to 0-415" H<sub>2</sub>O (0-25 mbar to 0-1 bar). Our 1000 psig working pressure is optimum for CO<sub>2</sub> applications.

Our unique "dry" bellows design uses an internal bi-directional relief valve which protects the gauge from over pressurizing causing the bellows to rupture and fail. Ask yourself "why do I have to have these gauges repaired so often"?

Our low range Model 115 is ideal for liquid Helium and Hydrogen applications offering a 30 lb weight savings over the competition and allowing the trailer to carry more product.

Our standard gauges can be delivered in two weeks with customer approved O<sub>2</sub> cleaning. Special applications and custom dial faces (dual scale, tri-scale or custom logo scale) can be delivered in as little as 4 weeks.

Give us a call at 800-648-5778 or visit us at [www.midwestinstrument.com](http://www.midwestinstrument.com) and find out how we can make your job easier when it comes to liquid level gauges.

# Model 115/116 "Cryogenic"

**Model 115 -  $\Delta P$  Range 0-10" H<sub>2</sub>O (0-25 mbar) to 0-50" H<sub>2</sub>O (0-125 mbar)**

**Model 116 -  $\Delta P$  Range 0-50" H<sub>2</sub>O (0-125 mbar) to 0-415" H<sub>2</sub>O (0-1bar)**

## Functions and Application

Precision Differential Pressure Gauge & Switch for Pressurized Cryogenic/Liquefied Gas Tank Level monitoring. Capable of operating at low differential pressures for up to 1500 PSI of line pressure.

### Common Applications:

- Pressurized Tank Level Monitoring
- Stationary Tanks- Horizontal or Vertical
- Tanker Transport
- Cryogenic/Liquefied Gas Applications

### Product Features:

- Drop in replacement for Barton and Prime Measurements
- Over-Range Protection, High over Low and Low over High
- Micro adjust pointer
- Tamper Proof, All adjustments require removal of bezel for access.
- Snap acting micro switch for alarm (optional)
- In house Oxygen Cleaning (optional)
- Private labeling (optional)
- Black ink on white dial or Whit ink on black dial

### Product Features / Benefits:

- "Engineered Plastic" gauge front and optional stainless steel body bolts provide superior corrosion resistance in "over-the-road trailers, outdoor or salt air environments
- Dry gauge design with no internal liquid fill
- Eliminates costly clean up from liquid fill leaking and fouling the tank and system
- No gauge damage/accuracy loss caused by liquid fill expansion/contraction when exposed to temperature shocks in cryogenic applications
- Up to a 30 lb. (14 kg) weight savings on Helium and Hydrogen
- Allows more products to be transported in mobile trailers
- Easier and less labor to panel mount
- Adaptable to a wide variety of mounting configurations
- Ability to create custom dials for horizontal and vertical tanks
- **Warranty: One Year**

### Specifications:

- Accuracy: +/- 1% of Full Scale
- **Model 115** - DP Range: 0-10" H<sub>2</sub>O to 0-50" H<sub>2</sub>O (25 mbar to 125 mbar)
- Safe Working Pressure: 1500 PSIG
- **Model 116** - DP Range: 0-50" H<sub>2</sub>O to 0-415" H<sub>2</sub>O (25 mbar to 125 mbar)
- Safe Working Pressure: 500 PSIG (Standard) 1000 PSIG (optional)
- **Model 115** - Internals: 316 S.S. Welded Multiple Diaphragm
- **Model 116** - Internals: 316 S.S. Convoluted Bellows
- Body Material: Brass
- Port: Dual Top and Bottom, ¼" FNPT connections with optional snubbers
- Vilton ® Standard, other elastomers available
- 6" Black Dial with White Lettering ( White Dial with Black Lettering)

**Switch Options**

- 1 Switch
- SPDT Outputs
- 4 Amp @ 30 VDC
- 3 Amp @ 240 VAC
- 5 Amp @ 120 VAC
- Adjustable from 3% to 100% F.S.
- Operating Temperature -20deg F to +185 deg F
- Electrical Enclosures Weather-proof NEMA 4

**Static Pressure:**

- 500 PSIG and 1000 PSIG Static Pressure

**Temperature Limits:**

- -40 deg F (-40 deg C) to 200 deg F (93 deg C)

**Standards:**

Model 115/116 Series Gauges either conform to and/or are designed to the requirements of the following standards;

- ASME B1.20.1
- ASME B40.100
- NEMA Std. No. 250
- UL Std. No. 50
- CSA-C22.2 No. 14
- SAE J514