LED At-A-Glance

The "LED At-A-Glance" gauge system is an electronic remote read that accurately and reliably measures the fuel level in your fuel tank. It will transmit and display the level information to a wired LED display located in a convenient location on your premises.

Operation:

- The Display/Receiver displays the liquid level on a row of LED's where each LED represents approximately a 1/8 of the tank's capacity
- The row of LED's is green from 3/8 of a tank to full
- When the level goes to 1/4 tank the highest LED illuminated will be yellow
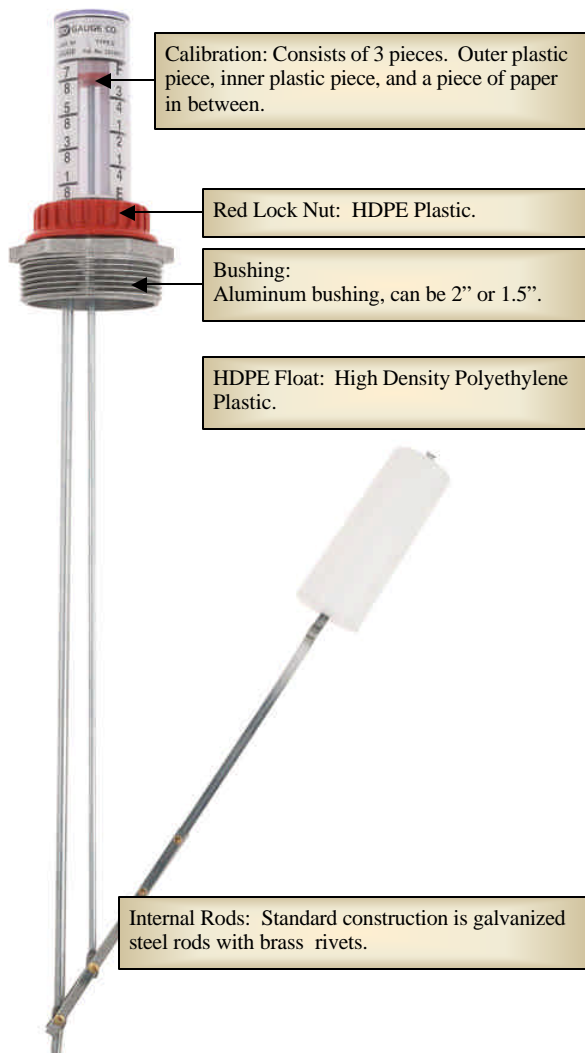- At 1/8 of a tank the highest LED illuminated will be red

Features:

- Quick and East Install
- Suitable for both inside or outside tanks
- Connects using a 3 wire cable
- Yellow LED will illuminate if any fault to the system occurs
- Powered by a 9V battery—change after 1 year of use
- Display can be located anywhere within 100ft of the Transmitter
- Hi and Lo Level adjustable alarms (can also be disabled)

KRUEGER SENTRY GAUGE CO. INC.   Phone: (920) 434-8860 Fax: (920) 434-8897   **website: http://**

Direct Reading Gauge—Type D

Calibration: Consists of 3 pieces. Outer plastic piece, inner plastic piece, and a piece of paper in between.

Red Lock Nut: HDPE Plastic.

Bushing:
Aluminum bushing, can be 2" or 1.5".

HDPE Float: High Density Polyethylene Plastic.

Internal Rods: Standard construction is galvanized steel rods with brass rivets.

Part Number—
D-(size opening)-(tank depth)+(ext)-(list options)
Sample—D-2-48+12

What it is:

Top mounted liquid level gauge that can measure from 6 inches to 144 inches in depth. Bushing size can be 2", 1.5", or .75". Gauges are custom made in house to fit your tank. Can also accommodate for double walls and pipe risers.

Additional Options - Not included:

Audible Alarm Accessory: This add on feature can turn your mechanical gauge into an audible Hi or Lo level alarm.

LED At-A-Glance Accessory: Another add on feature. This can give your mechanical gauge remote reading capability.

Gauge Guard: A cover that protects the exposed plastic components on top of the gauge.

Replacement Parts -

D-Kit - Replaces all of the gauge components from the red lock nut and up. Includes: Red HDPE Plastic Nut, Duro Nitrile Gasket, Plastic Cellulose acetate inner and outer calibration.

DG-Kit-ALN - Replaces all of the gauge components from the red lock nut and up with upgraded parts. Includes: Aluminum Lock Nut, Duro Nitrile Gasket, Plastic Cellulose acetate outer calibration, Glass inner calibration.

Instructions for Operation:

This gauge is a simple volume reading tool. The top of the red indicator is an indication of your approximate fuel level in your tank. Once installed, you simply view the calibration to monitor your tank level. Indicator is calibrated in eighths of a tank on one side, and quarters of a tank on the other.

Krueger Sentry Gauge
1873 Siesta Lane
Green Bay, WI 54313

www.ksentry.com

KRUEGER SENTRY GAUGE ®

Contact us for more info:
Ph: 920-434-8860
Fax: 920-434-8897

Email: info@ksentry.com

KRUEGER SENTRY GAUGE ®

The Therma Gauge—Type H

Calibration: Consists of 3 pieces. Outer plastic piece, inner plastic piece, and a piece of paper in between. Optional glass inner piece is available.

Red Lock Nut: HDPE Plastic. Also available in aluminum or PVC.

Bushing: Aluminum bushing, can be 2", 1.5". Special package allows for a Stainless Steel Bushing also.

HDPE Float: Also available in Stainless Steel or Nitrophyll.

Internal Rods: Standard construction is galvanized steel rods with brass rivets. Optional stainless steel rods are available. Stainless steel rod construction eliminates the rivets.

Part Number—
H-(size opening)-(tank depth)+(ext)-(list options)
Sample—H-2-48+12

What it is:

Top mounted liquid level gauge that can measure from 6 inches to 144 inches in depth. Bushing size can be 2" or 1.5". Gauges are custom made in house to fit your tank. Can also accommodate for double walls and pipe risers. The Type H Gauge has a 2 piece bushing construction that allows you to aim your swing arm away from walls, corners, and other obstructions.

Additional Options:

Audible Alarm Accessory: This add on feature can turn your mechanical gauge into an audible Hi or Lo level alarm.

LED At-A-Glance Accessory: Another add on feature. This can give your mechanical gauge remote reading capability.

Gauge Guard: A cover that protects the exposed plastic components on top of the gauge.

Material Choices and Limitations:

Standard choices are listed on picture to the left.

Stainless Steel Floats: Maximum tank depth is reduced to 120 inches.

Material Packages / Gauge Packages:

All SS Model—It comes standard with Glass Calibration, Aluminum Locking Nut, Stainless Steel Bushing, Stainless Steel Rods, and Stainless Steel Floats.

All Plastic Model—Type PH—This model comes standard with Glass Calibration, PVC Gauge Guard, PVC Bushing, PEEK Plastic Rods, HDPE Plastic Float.

KRUEGER SENTRY GAUGE®

Barrel Gauge —Type B

Calibration: Consists of 3 pieces. Outer plastic piece, inner plastic piece, and a piece of paper in between. Optional glass inner piece is available.

Red Lock Nut: HDPE Plastic. Also available in aluminum or PVC.

Bushing: Aluminum bushing, can be 2", 1.5" or .75". Special package allows for a PVC Bushing also.

HDPE Float: Also available in Stainless Steel or Nitrophyll. Stainless Steel is not available on .75" opening.

Internal Rods: Standard construction is galvanized steel rods with brass rivets. Optional stainless steel rods, peek rods, or kynar rods are available.

Part Number—
B-(Gallon Size)-(Size Opening)-(list options)
Sample—B-55-2-SSR

What it is:

Top mounted liquid level gauge that can measure the level of Drums & Barrels. Comes in 55 Gallon, 30 Gallon, and 15 Gallon Models. Can accommodate .75", 1.5", or 2" openings.

Additional Options:

Audible Alarm Accessory: This add on feature can turn your mechanical gauge into an audible Hi or Lo level alarm.

LED At-A-Glance Accessory: Another add on feature. This can give your mechanical gauge remote reading capability.

Gauge Guard: A cover that protects the exposed plastic components on top of the gauge.

Material Choices and Limitations:

Standard choices are listed on picture to the left.

Stainless Steel Floats: Not available for the .75 inch opening size.

Material Packages / Gauge Packages:

All Plastic Model—Type PB—This model comes standard with Glass Calibration, PVC Gauge Guard, PVC Bushing, PEEK Plastic Rods, HDPE Plastic Float.

All Stainless Model - Type B-ALLSS - This model comes standard with Glass Calibration, Aluminum Locking Nut, Stainless Steel Bushing, Stainless Steel Rods, and Stainless Steel Floats.

At-A-Glance® Direct and Remote Mount Alarm Models

At-A-Glance Direct Mount Alarm -All Models

- Compatible with Krueger Sentry Gauges: Type D, Type H, Type B, Type PH, Type PD, Type O, and Type K.
- Powered by a 9 volt Lithium Battery.
- Magnetic Switch triggers a 110 DB Alarm.
- Can be reset even while in alarm mode.
- Test Switch allows you to test the battery before each use.
- All Alarms come with a 9 volt Lithium Battery and Magnetic Indicator.

Part Number	Description
DAlarm	This is the standard model that includes all of the above options.
DAlarm-FL	With this model, the audible alarm is replaced with a small flashing LED light. The flashing light will visually alert when triggered by the magnetic indicator on the gauge and continue until reset. (this version has no audible)
DAlarm-FL-TO	With this model, there is an audible alarm with an added flashing light and time-out feature. The light will alert when triggered by the magnetic indicator on the gauge. The time-out feature will shut down the alarm after 20 seconds to save on battery life, but the light will continue to flash and the alarm will chirp every few seconds.

At-A-Glance Remote Mount Alarm -All Models

- Compatible with Krueger Sentry Gauges: Type D, Type H, Type B, Type PH, Type PD, Type O, and Type K.
- Powered by a 9 volt Lithium Battery.
- Magnetic Switch triggers a 110 DB Alarm.
- Can be reset even while in alarm mode.
- Test Switch allows you to test the battery before each use.
- All Alarms come with a 9 volt Lithium Battery and Magnetic Indicator.
- Remote Alarm comes with 25 feet of remote wire. Can be ordered with up to 100 feet of wire.

Part Number	Description
RAlarm	This is the standard remote model that includes all of the above options.
RAlarm-FL	With this model, the audible alarm is replaced with a small flashing LED light. The flashing light will visually alert when triggered by the magnetic indicator on the gauge and continue until reset. (this version has no audible)
RAlarm-FL-TO	With this model, there is an audible alarm with an added flashing light and time-out feature. The light will alert when triggered by the magnetic indicator on the gauge. The time-out feature will shut down the alarm after 20 seconds to save on battery life, but the light will continue to flash and the alarm will chirp every few seconds.

Flashing Light Version

Standard Remote Version

KRUEGER SENTRY GAUGE

The Leak Gauge—Type K

Calibration: Consists of 3 pieces. Outer plastic piece, inner plastic piece, and a piece of paper in between. Optional glass inner piece is available.

Red Lock Nut: HDPE Plastic. Also available in aluminum or PVC.

Bushing: Aluminum bushing, can be 2", 1.5". Special package allows for a Stainless Steel Bushing also.

Internal Rods: Standard construction is aluminum rods. There are no other options for this gauge due to floatation.

76" and smaller Polypropylene Float
77" and taller Poly Coated Cork Float

Part Number—
K-(size opening)-(total length)-(list options)
Sample—K-2-48-Guard

What it is:

Top mounted liquid leak gauge that can measure from 6 inches to 170 inches in depth. Bushing size can be 2" or 1.5". Gauges are custom made in house to fit your tank. This gauge is designed to monitor either the interstitial space of a double wall containment system, or it can mount into an external monitoring pipe. http://www.ksentry.com/leak.htm

Additional Options:

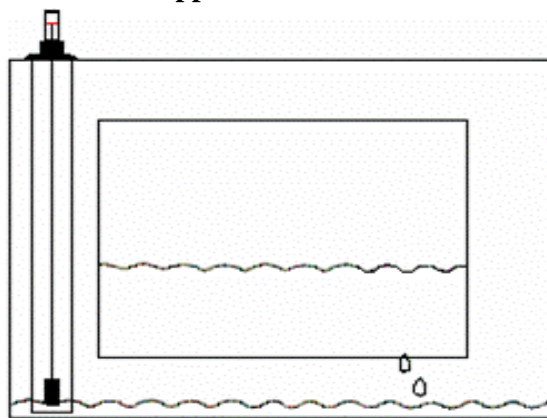Audible Alarm Accessory: This add on feature can turn your mechanical visual gauge into an audible leak detection alarm. *(price book page 8)* http://www.ksentry.com/alarm.htm

Gauge Guard: A cover that protects the exposed plastic components on top of the gauge. - http://www.ksentry.com/replace.htm

Material Choices and Limitations:

Standard choices are listed on picture to the left.

Due to floatation, this gauge does not have many material options. The leak gauge is rarely exposed to the liquid. If it is not compatible and it is exposed, the gauge must be replaced afterward.

Application Photo:
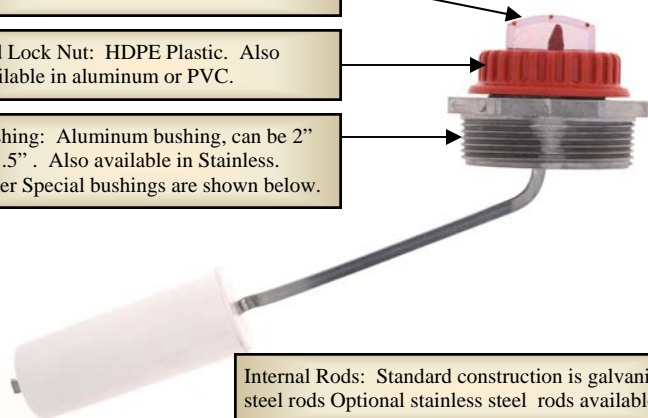
L Gauge—Type L

Calibration: Cellulose Acetate.

Red Lock Nut: HDPE Plastic. Also available in aluminum or PVC.

Bushing: Aluminum bushing, can be 2" or 1.5" . Also available in Stainless. Other Special bushings are shown below.

Internal Rods: Standard construction is galvanized steel rods Optional stainless steel rods available.

HDPE Float: Also available in Stainless Steel or Nitrophyll.

Example Part Numer: L-2-8
L- opening size- tank depth

What it is:

Top mounted liquid level gauge that can measure the level of smaller tanks. Comes in any size from 6 inches to 30 inches.

Recommended Maintenance Procedures:

- Once per month: Inspect the top of the unit once per month to ensure that the calibration is visible, readable, and unbroken. (these top pieces can be easily replaced without having to replace the whole gauge)
- Once every 6 months: Unthread the unit and carefully remove it from the tank. Be sure all rods are connected as one piece from the red indicator all the way down to the float. Also inspect the float for damage or leakage. To ensure proper working order, manually raise the float arm from empty to full to be sure that the red indicator freely moves up and down with the motion of the float rod.

Additional Options:

Several alternative bushings and options are available. Pictured Below.

- Fits through 1.75 inch diameter opening/ hole.
- No tank fitting required.
- Duro Nitrile gasket seals it from the top and bottom.
- Must have access to the tank opening from the inside of the tank.

05 - Threaded Nut
06 - Rubber Gasket
09 - Preened Steel Threaded Tank Flange

- 1 - 5/16" flange for welding or soldering to tank .
- Standard material is CRS (cold roll steel)
- Also available in a 5 bolt hole pattern. (aluminum)

Installation Instructions:

1. Unthread the red locking nut. Separate the aluminum bushing from the rest of the gauge. (do not lose the rubber gasket)
2. Thread the aluminum bushing into the female fitting on the top of your tank.
3. Drop gauge through the center of the aluminum bushing float first. Be sure your gasket is still in between the top of the bushing and the calibration.
4. Be sure your swing arm is pointing to an open spot in the tank, avoiding walls, corners, baffles or other obstructions.
5. Tighten your red locking nut and calibration down to the aluminum bushing. **Hand** tighten the red nut until snug. If a tool is required, use care not to break the red nut.

Krueger Sentry Gauge
1873 Siesta Lane
Green Bay, WI 54313

www.ksentry.com

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Contact us for more info or a local distributor:
Ph: 920-434-8860
Fax: 920-434-8897
Email: info@ksentry.com

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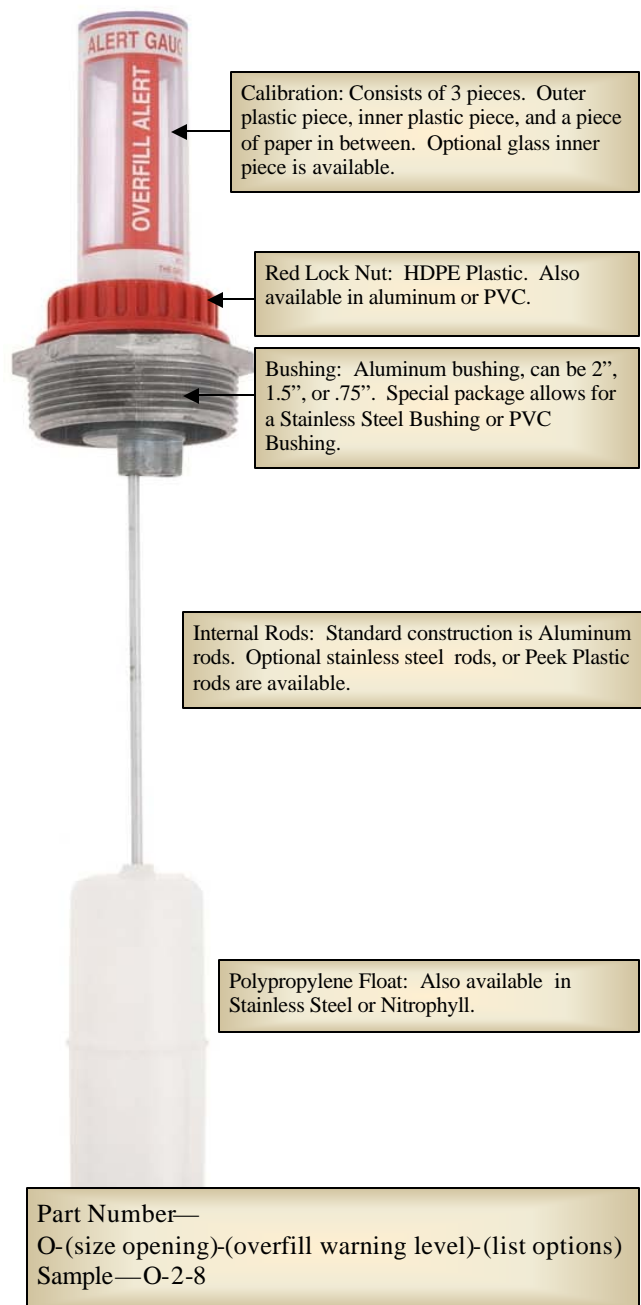
The Overfill Gauge—Type O

Calibration: Consists of 3 pieces. Outer plastic piece, inner plastic piece, and a piece of paper in between. Optional glass inner piece is available.

Red Lock Nut: HDPE Plastic. Also available in aluminum or PVC.

Bushing: Aluminum bushing, can be 2", 1.5", or .75". Special package allows for a Stainless Steel Bushing or PVC Bushing.

Internal Rods: Standard construction is Aluminum rods. Optional stainless steel rods, or Peek Plastic rods are available.

Polypropylene Float: Also available in Stainless Steel or Nitrophyll.

Part Number—
O-(size opening)-(overfill warning level)-(list options)
Sample—O-2-8

What it is:

Top mounted pop up gauge that can measure from 6 inches to 76 inches in Length. Bushing size can be 2", 1.5" or .75". Gauges are custom made in house to fit your application. Most Overfill Alert Gauges are between 6 inches and 12 inches. They are designed to pop up at a specific level (usually 90 percent) and warn you that the tank is almost full. Provides visual overfill warning.

Additional Options:

Audible Alarm Accessory: This add on feature can turn your mechanical gauge into an audible Hi or Lo level alarm. *(price book page 8)* *http://www.ksentry.com/alarm.htm*
LED At-A-Glance Accessory: Another add on feature. This can give your mechanical gauge remote reading capability. *(price book page 1)* *http://www.ksentry.com/led.htm*
Gauge Guard: A cover that protects the exposed plastic components on top of the gauge.

Material Choices and Limitations:

Standard choices are listed on picture to the left.

Some options such as stainless rods, stainless floats, and plastic rods will limit the sizes available.

Material Packages / Gauge Packages:

All SS Model—It comes standard with Glass Calibration, Aluminum Locking Nut, Stainless Steel Bushing, Stainless Steel Rods, and Stainless Steel Floats. *(price book page 4)*

All Plastic Model—Type PO—This model comes standard with Glass Calibration, PVC Gauge Guard, PVC Bushing, PEEK Plastic Rods, HDPE Plastic Float. *(price book page 4)*

Additional Gauge Ordering Instructions and Help

For standard tanks:

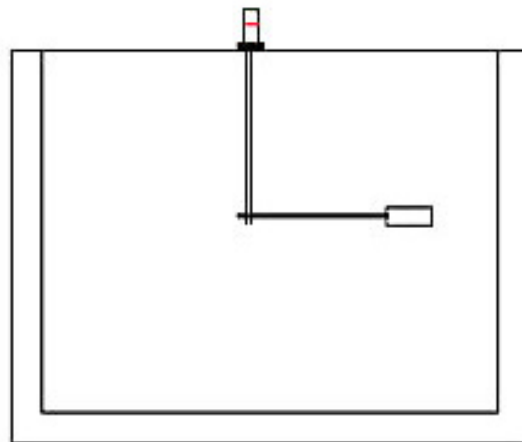No pipe riser, no top double wall.

Definition: There is less than one inch of space between where the gauge float reads full, and where the gauge threads into the tank.

Part Number:
Gauge Type—Size Opening—Depth of Tank—Accessories (optional)

Example: D—2—48—GLC

All Gauge measurements are in inches. Depth of tank should be the inside diameter/height of the tank in inches.

For Vaulted / Pipe Riser Applications

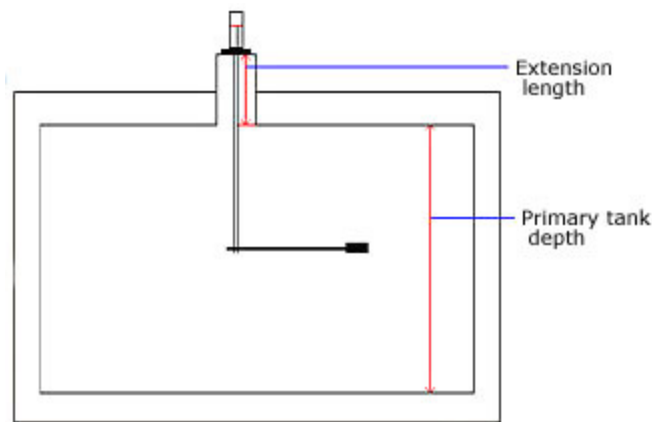Use these instructions when you have a pipe riser or double wall.

Definition: There is significant space between where the gauge float reads full, and where the gauge threads in. This is the extension.

Part Number:
Gauge Type—Size Opening—Depth of Tank—Extension—Accessories

Example: D—2—48 + 12—GLC

All Gauge measurements are in inches. Depth of tank should be the inside diameter/height of the tank in inches.

Accessories: Abbreviations and Definitions

Standard Level Gauge Materials: Galvanized Steel, HDPE Floats, Aluminum Bushing, Plastic Calibration, Plastic Lock Nut.

- Add **SSR** to part number   Stainless Steel Rods
- Add **SSF** to part number   Stainless Steel Floats
- Add **All SS** to part number   Stainless Rods, Stainless Floats, Stainless Bushing, Aluminum Lock Nut, and Glass Calibration
- Add **Peek** to part number   Peek Rods, HDPE Float, Glass Calibration, and PVC Bushing
- Add **Kynar** to part number   Kynar Rods, HDPE Float, Glass Calibration, and PVC Bushing
- Add **GLC** to Part number   Calibration gets a Glass internal piece
- Add **ALG** to Part number   Adds protective guard and aluminum nut to the top of the gauge
- Add **ALN** to part number   Replaces red plastic nut with an aluminum nut
- Add **NTF** to part number   Replaces HDPE float with a nitrophyll float