Thank You for Attending Today's Webinar:

Basics of Magnetic Level Measurement

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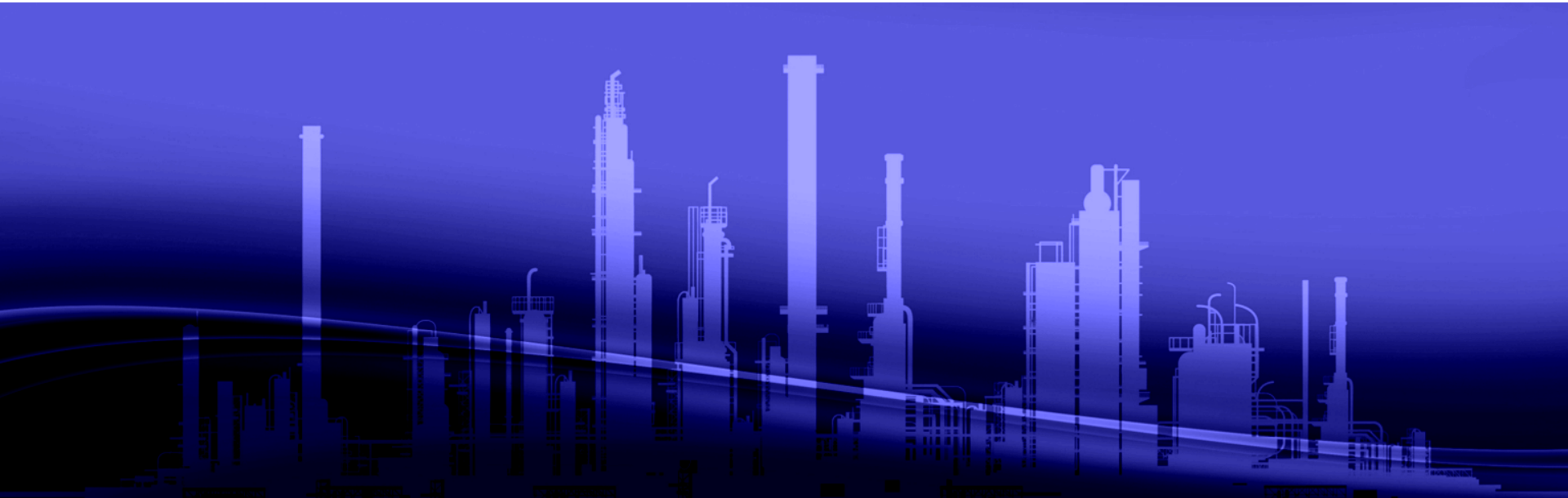
Pressure, Temperature and Level Measurement

WIKA Magnetic Level Indicator

Houston – Texas

Solutions for temperature, level, flow and pressure measurements



WIKA

Magnetic Level Indicator

Pressure, Temperature and Level Measurement

KSR-Kuebler

Phonix

WMI WIKA Magnetic Indicator

WIKA

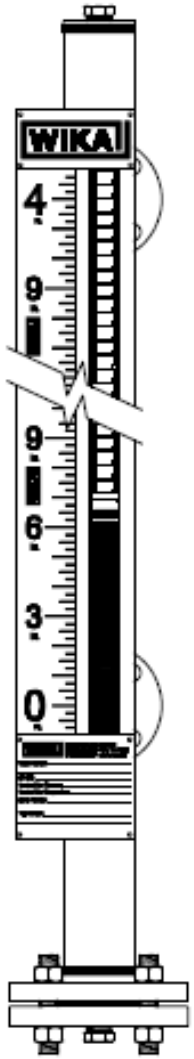
Pressure, Temperature and Level Measurement

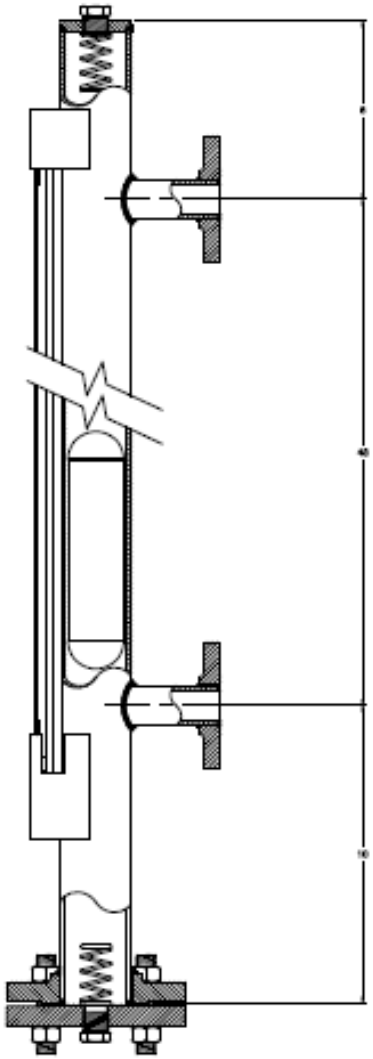
What is a Magnetic Level Indicator?
How does it work?

- Chamber is connected to a tank
- Liquid Level Changes in Tank are Duplicated in the Chamber
- The Chamber contains a float
  - *The float Contains a Magnetic System*
- Mounted on the Outside of the Chamber is a Bar-Graph Indicator
- Movement of the Float causes a Reaction with the Indicator

WMI
Three Basic Parts

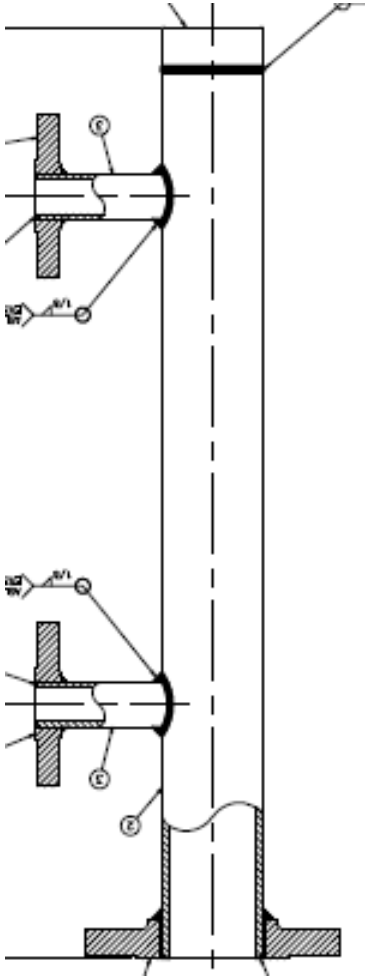
- Chamber
- Float
- Indicator





WMI
The Chamber

- **It's a piece of PIPE and Flanges!**
  - ***Must Be Non-Magnetic Material***
    - **Various Stainless Steels, Hastelloy, Inconel, Alloy 20**
      - **Monel? Duplex SS?**
    - **Plastics Such As PVC, Kynar, Teflon and More**
  - ***Various Sizes, Thicknesses***
    - **Application Dependent**

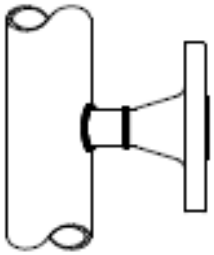


Chamber Construction

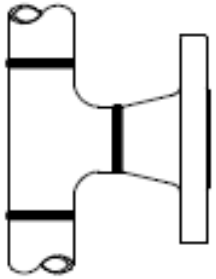
- 1. Pipe Schedule
  - *10, 40, 80, 160, XX*
- 2. Pipe Size
  - *2”, 2.5”, 3”*
- All functions of Application
  - *Temperature*
  - *Pressure*
  - *Specific Gravity*

WMI
Side (Branch) Connections

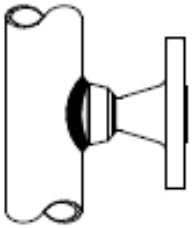
- 1. Saddled



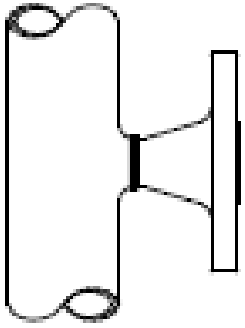
- 2. Welded T



- 3. O-Lets



- 4. Extrusion

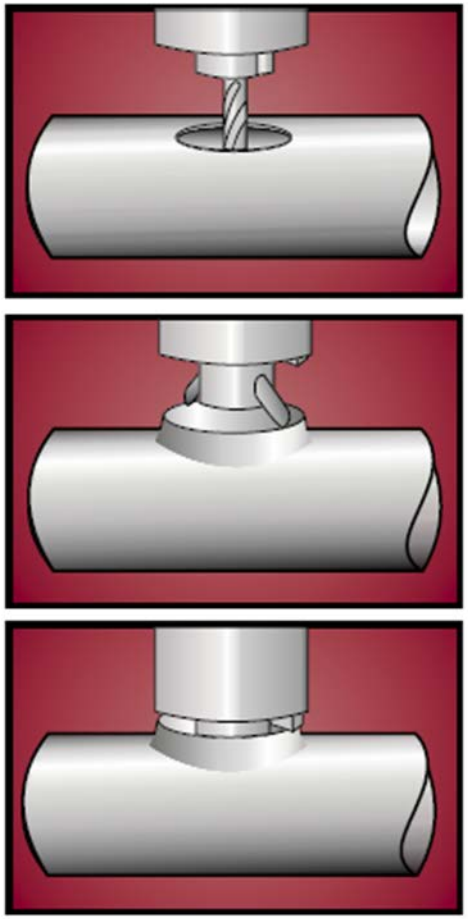


WIKA‘s Capabilities

WIKA

Pressure, Temperature and Level Measurement

Extruded Outlet



- Safe and easy welding process
- Better quality
- No weldseams and cavities
- 6 T-Drills worldwide

WMI - Floats

- Contains a Magnet Assembly
- Often Times are Stainless Steel or Titanium
  - Hastelloy
  - Monel
- Can be Coated, i.e., Teflon, Halar
- Can Be Plastic

WMI - Floats

Basic Titanium Floats for simple applications

Lower SG Floats, Titanium and Hastelloy

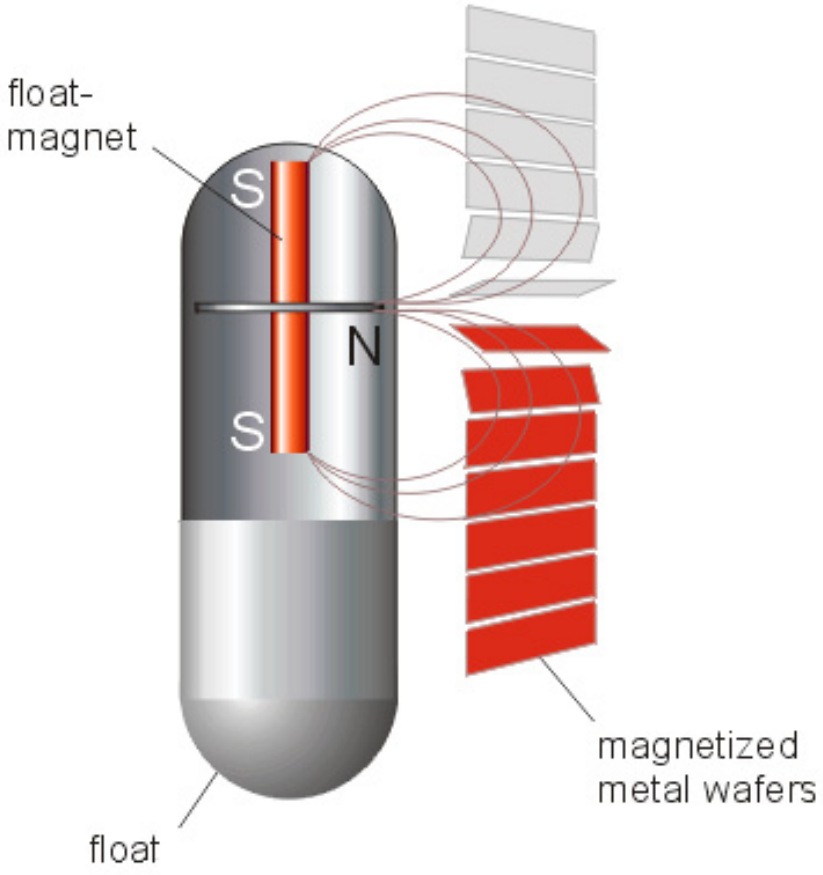
WMI - Floats

- „Foam Float“ - Solid Material
- Very High Pressures – 5000 PSI
- Lower temperatures < 150 F
- Higher Specific Gravities
- Non-Corossive Liquids

- Titanium Spherical Chain Float
- High pressures
- High Temperatures
- Wide Range of Specific Gravities

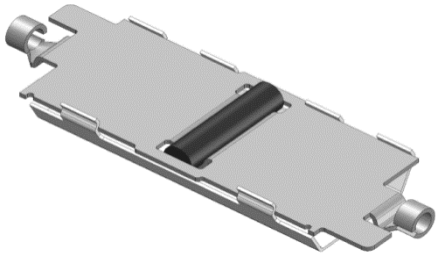
WMI - Floats

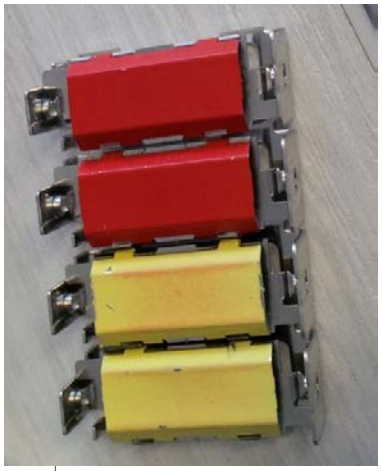
- North Out (Horizontal)



These Magnet Systems provide Pin-point accuracy.

New Improved Indicator





- Imbedded Magnets on each flag guarantee highly accurate single flag rotation
- Color variety to chose from
- Only indicator with Stainless Steel Flags on Stainless Steel Pivots
- Aluminum Guide rail standard. SS optional
- Hermetically sealed as option
- Acrylic up to 300 ° F; Borosilicate glass 300° F +
- Ready for Demanding Offshore Applications

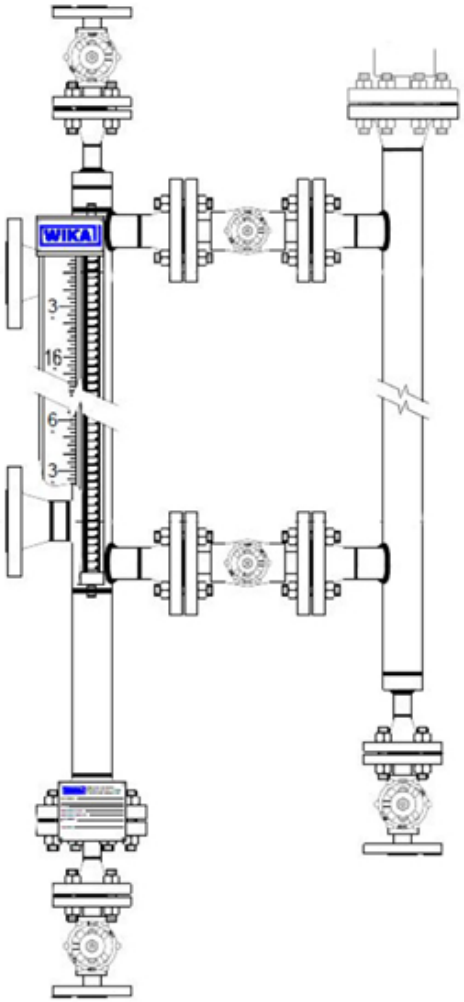
Magnetic Level Indicator
Additions to the Product/accessories

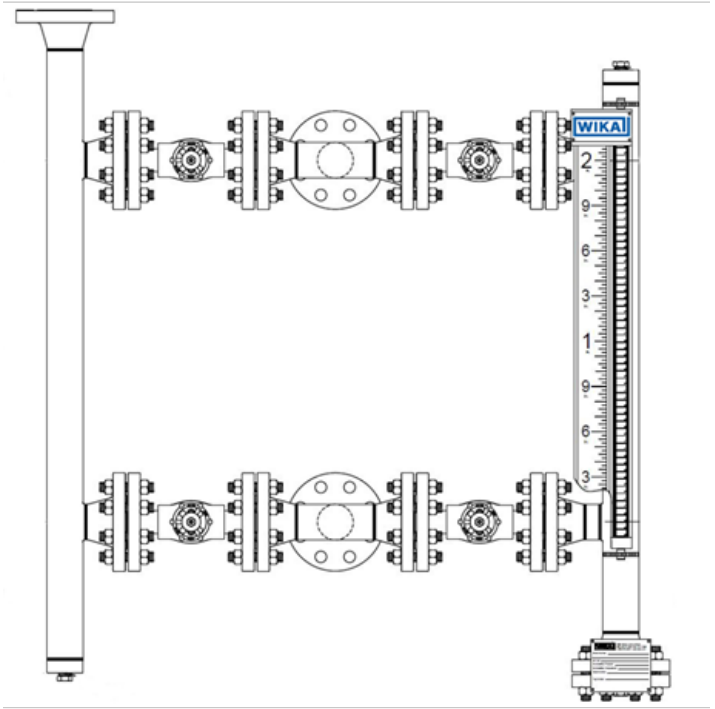
- Level Chambers
- Valves
- Transmitters
  - *Reed Chain*
  - *Magnetostrictive*
- Switches
  - *Low amperage*
  - *Higher Amperage Dry Contact*
  - *Pneumatic*
- Insulation
  - *High temp and Cryogenic*
- Heat Tracing/Steam Tracing
- Gussets

WMI + Guided Wave Radar

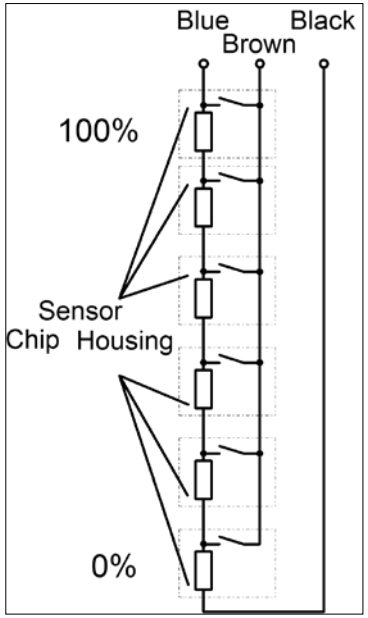
Pressure, Temperature and Level Measurement

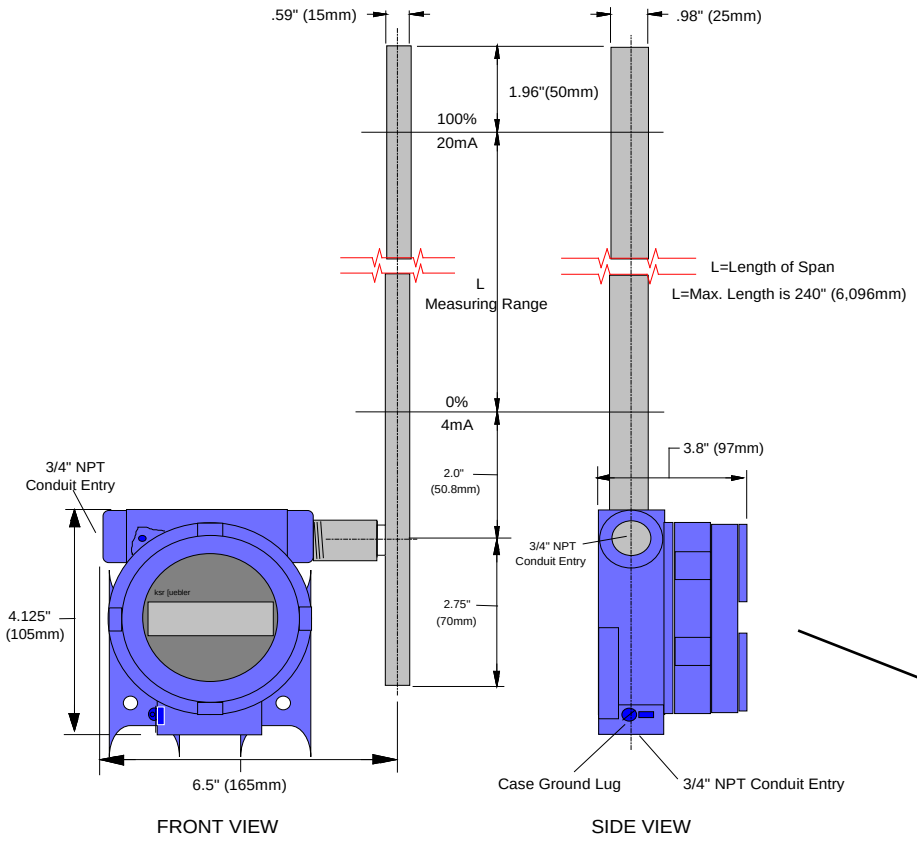
Multiple designs available





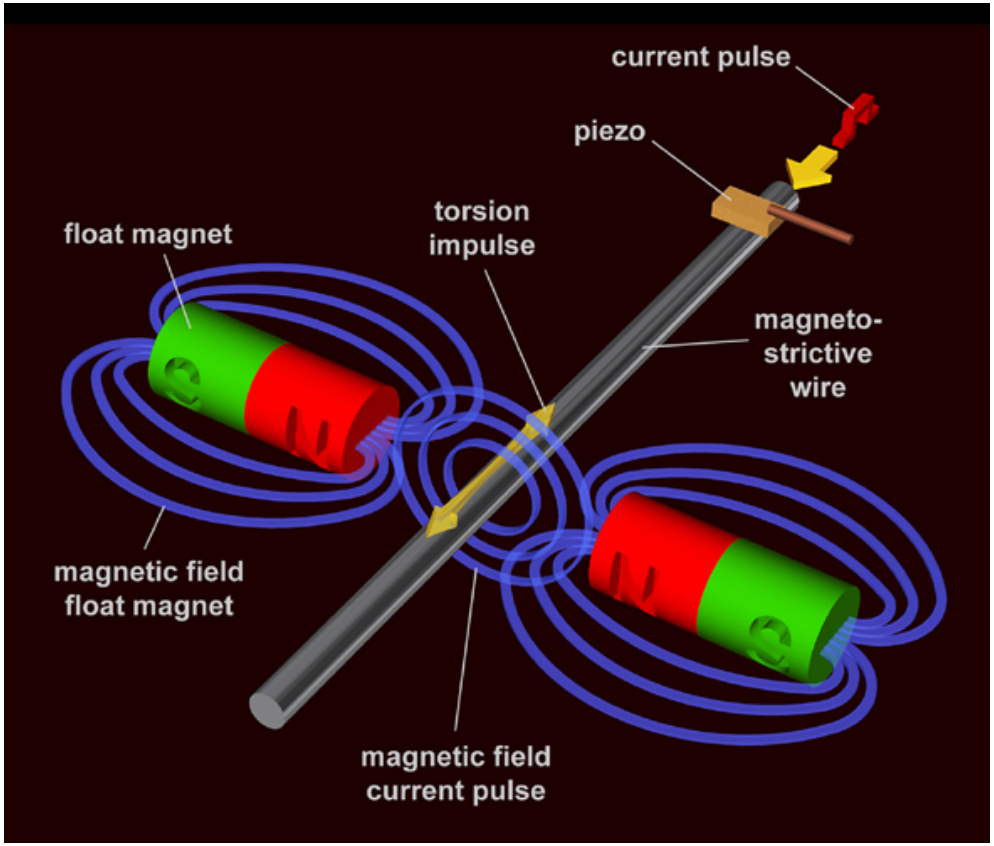
“Reed Chain” Transmitter



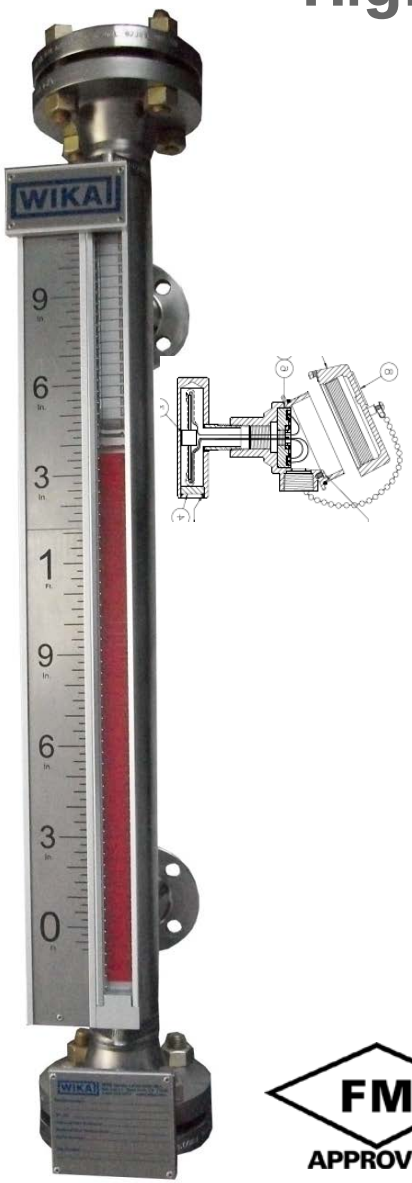


WIKA MODEL WIR (Cl. 1, Div. 1, Gr. B)
24VDC LOOP POWERED SHOWN WITH OPTIONAL INTEGRAL LCD DISPLAY
EXPLOSION PROOF & INTRINSICIALLY SAFE MAGNETIC LEVEL TRANSMITTER

Magnetostrictive Technology

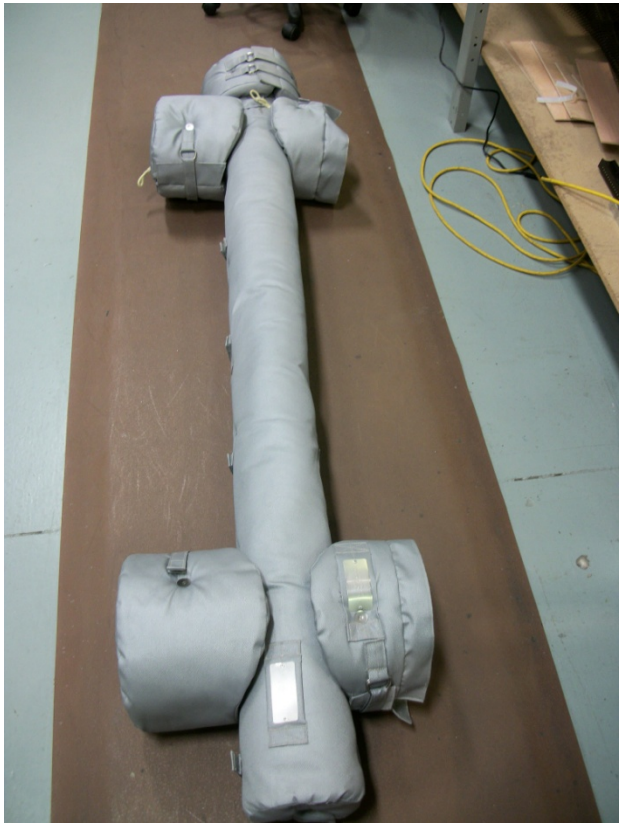


High or Low Level Switch



- **Aluminum Housing Version**
- **FM Class 1 Div 1**
- **1 Amp Rating**
- **Optional Stainless Housing**

Insulation



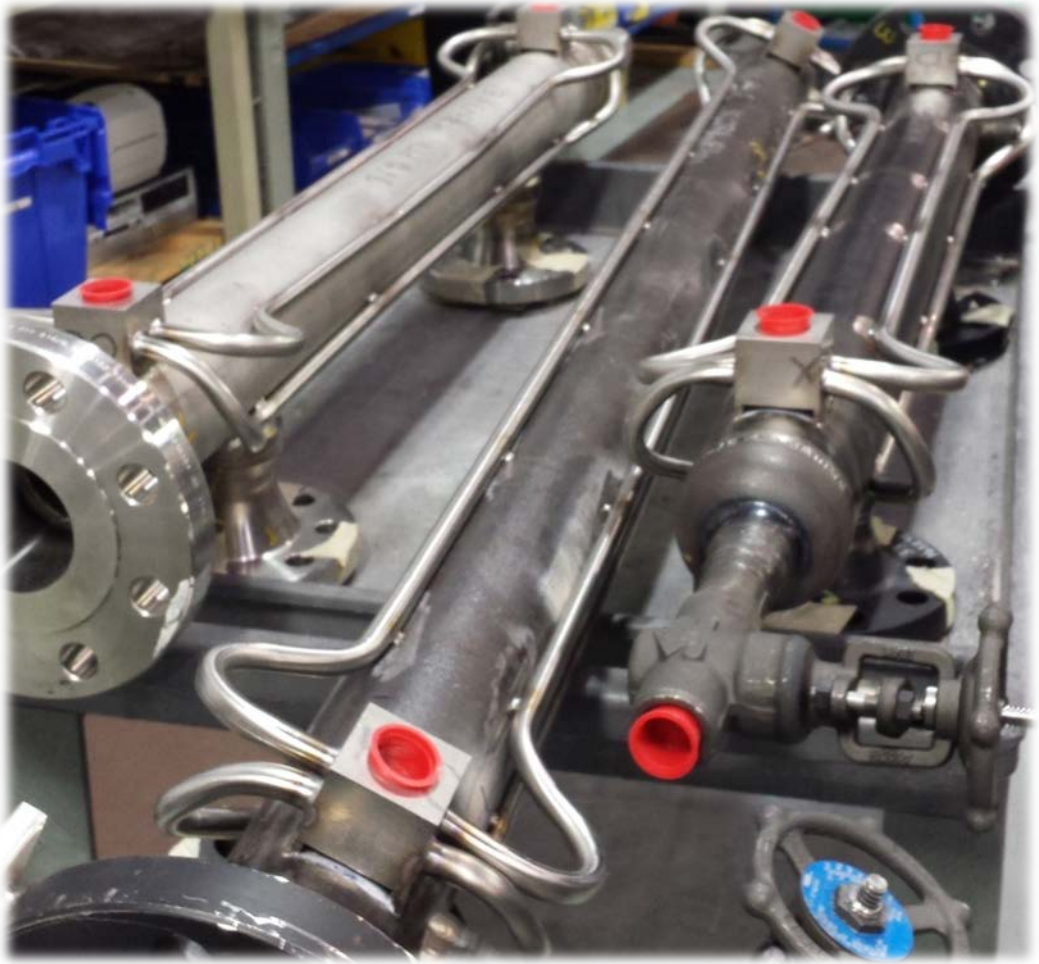
- High Temp

- Freeze Protection

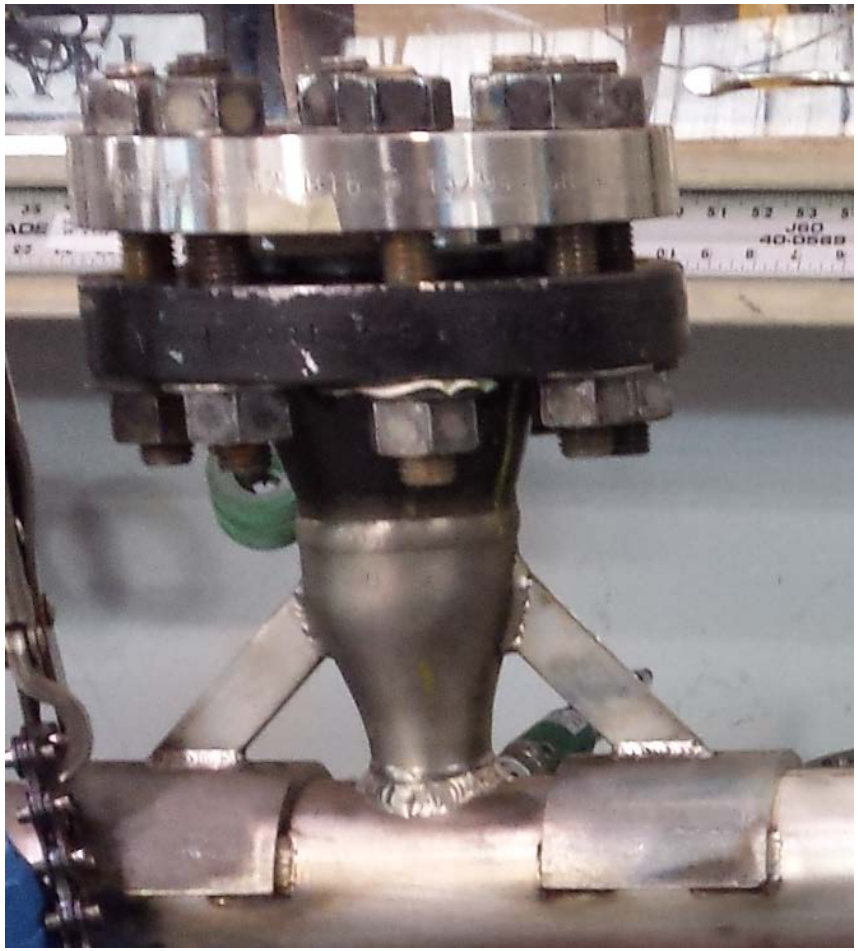
Insulation: Cryo Applications

Insulation: Cryo Applications

Steam Tracing



Gussets



WIKA‘s Capabilities

- **Qualtiy Magnetic Level Indicators**
- Specifications
- Certifications
- Quality/Testing
- Quotations/Order Entry/Projects
- Accessories to Complete the Application

Specifications

- Temperature Ranges from -320 to 1000 F
- Pressures from full Vacuum to 5000 PSI
- Minimum Specific Gravity = 0.35 and lower
- Measuring Ranges from 6” to 20’ Standard
  - Longer lengths available
- Wide Range of Materials
  - 304SS, 316SS, 317SS, 321SS, 347SS, Hastelloy, Alloy 20, Inconel 625, Monel, Titanium, PVC, Kynar, Teflon and More

Certifications

- All Chambers built Per ASME B31.1, B31.3
- Code Calculation Verified/Documented
  - In House Engineering Capabilities
- ASME Pressure Piping Stamp Available
- ASME Code “U” Stamp Available
- NACE Certification Available
- ABS Certification
- CRN’s for all Provinces
- Over 56 Welding Procedures
  - Including Customer Specific/Approved Procedures
- Code Certified Welders
  - 1G and 6G Certified

ChevronPhillips Installed!

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Mass Flow Measurement and Weighing Systems

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TBA

Webinar invitation e-mail coming soon...