Data sheet DS/MW05-EN Rev. C

MW05 MagWave
Magnetic Level Gauge

Dual chamber level system
K-TEK Products

Multiple Chamber Styles
- 24 Preconfigured Styles Plus Custom Styles
- Left Hand or Right Hand Mounted Secondary Chambers
- Capped or Flanged Secondary Chamber Connections
- 2, 3, or Multiple Process Connections

Secondary Chamber Sizes to Suit the Application
- 1-1/2 inch Schedule 10 Standard
- 2, 2-1/2, 3 and 4 inch Sizes
- Schedule 10, 40 or 80 Welded or Seamless

Variety of Chamber Materials
- 304SS, 316SS, Hastelloy C-276, Alloy 20, Other Non-magnetic Metals
- Teflon “S” Coated Chambers for Slip Resistance.

Chamber Configurations to Fit Process Connections
- Custom Manufactured for Every Installation
- Side - Side
- Top - Side
- Side - Bottom
- Top - Bottom

Unlimited Range of Connection Sizes and Ratings
- 1/2 inch Threaded Half Couplings to 2-1/2 inch 1500# Flanges and Beyond
- ANSI, DIN and Other Flanges
- Matched to Customer Specified Connections
- Carbon Steel Flanges on Stainless Steel Chambers

Highly Visible Indicators
- Fluorescent and High Temperature Shuttle Indicators
- Yellow & Black Magnetic Bargraphs
- Red & White Magnetic Bargraphs

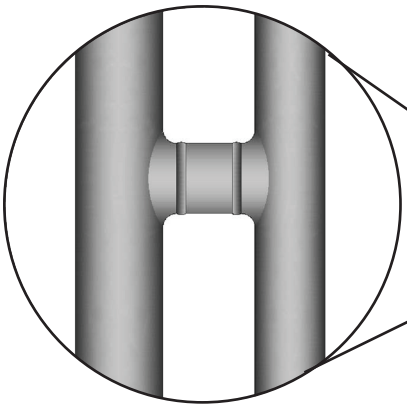
Made to Order Rulers
- Foot and Inch
- Running Inches
- Negative to Positive Numbering
- Meter / centimeter
- Custom Made for Percent or Volume

Custom Built Lengths
- Connection Centers to 40 feet (12.2 meters)
- No “Off the Shelf” systems
- Full Measurement Range

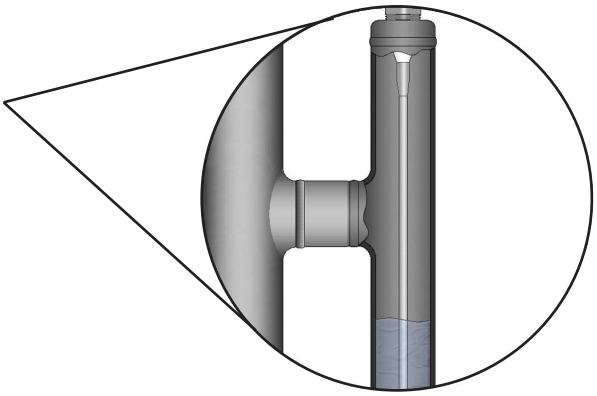
Accessories
- Magnetically Actuated Switches
- Magnetostrictive Transmitters
- High Temperature Insulation Blankets
- Cryogenic Insulation
- Vent, Drain, and Isolation Valves
- Electric and Steam Tracing

Compact Close Coupled Chambers

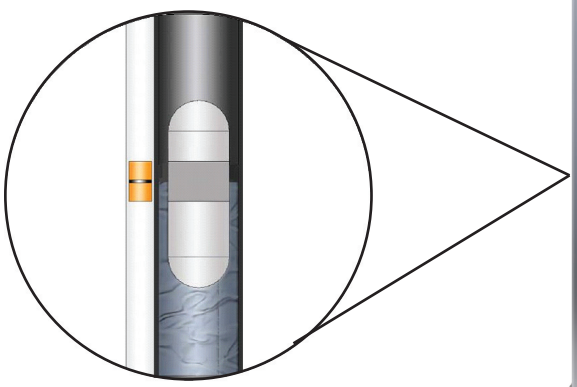
Extruded Outlet Connections



Single Probe Guided Wave Radar Transmitter

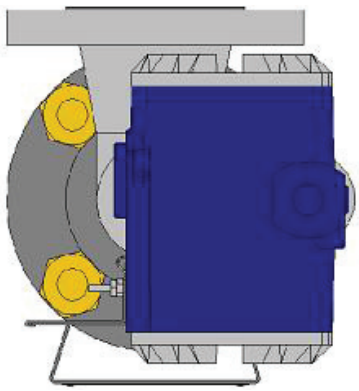


Highly Visible Magnetically Coupled Indicator



Standard 1-1/2 inch Secondary Chamber

Compact Footprint



ASME B31.1, B31.3

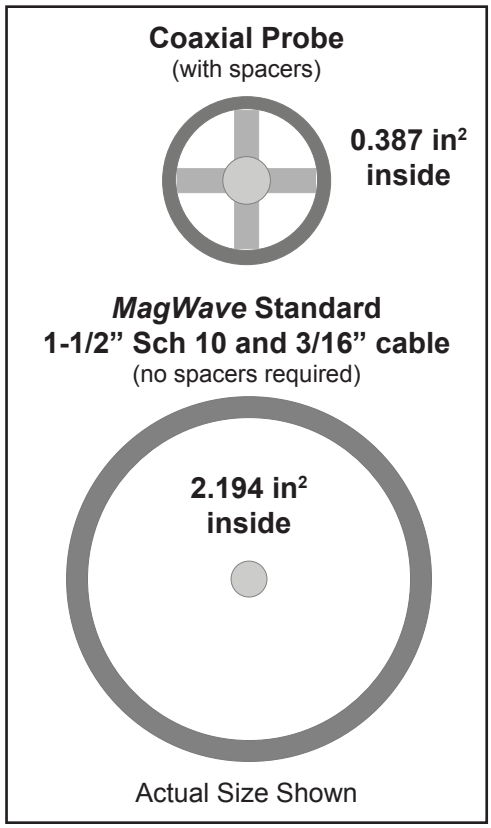
Secondary Chamber Elbow Drain Connection

Model *MW0513*

MagWave

No Need For Coaxial Probes

- A Single Probe in the 1-1/2 inch Secondary Chamber provides the same measurement capabilities as a coaxial probe
- The small internal space of a coaxial style probe is very susceptible to fouling in dirty fluid
- Coaxial probes have small holes that are prone to fouling causing false level readings
- If the single probe does encounter build up, it can be easily removed from the chamber for cleaning

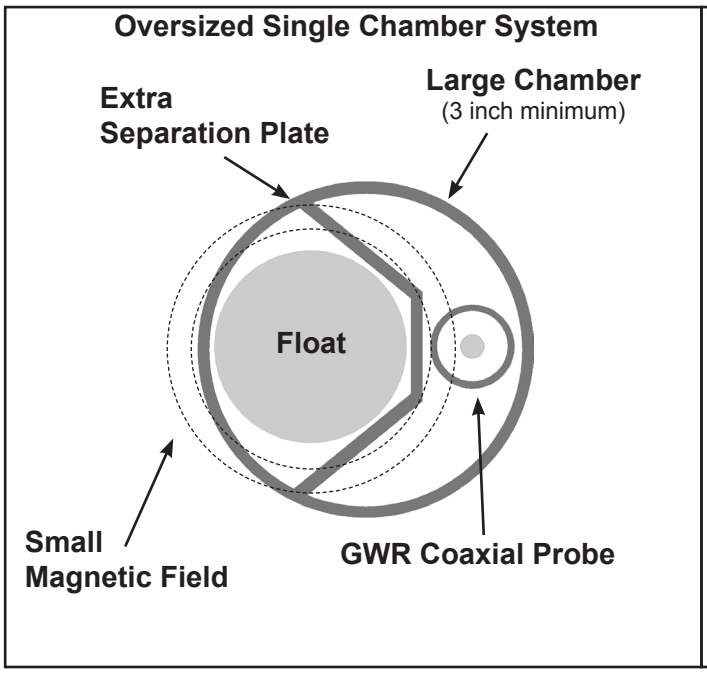


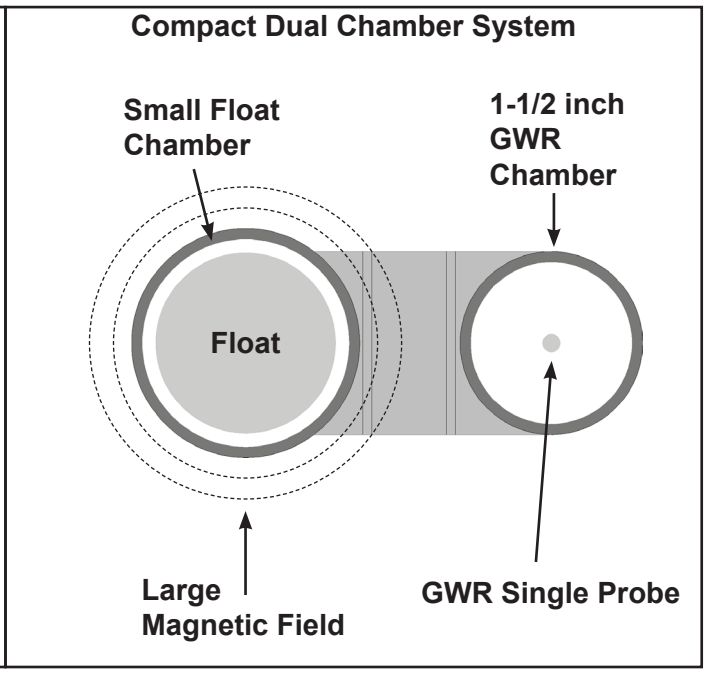
Why Separate Chambers?

Putting a GWR and a float in a single chamber requires larger pipe sizes, larger flange sizes, and a separation plate between the float and the GWR coaxial probe.

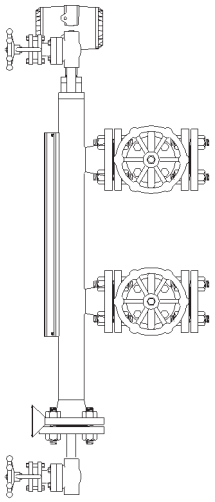
Single Chambers result in:

- Extra parts in the float chamber which can obstruct float travel
- Increased "footprint" of the entire system
- Increased cost of the system
- Increased weight of the system
- Remote mounting of GWR electronics when top connections to the system are required
- Limited access to the float's magnetic field

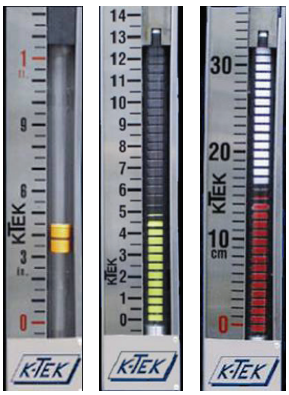


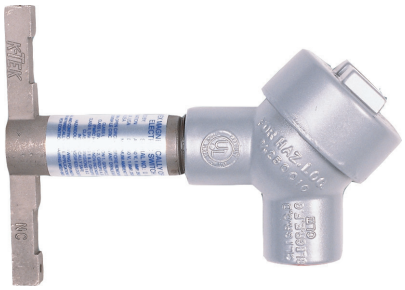


MagWave



MagWave with Valves Installed





MS30/EX SPDT 1 AMP Switch

MS41 DPDT 10 AMP Switch

Guided Wave Radar

Multiple Wetted Part Materials

- Standard 316SS
- Hastelloy C-276
- Hastelloy B3
- Monel
- Titanium

Couplers Suited to the Process

- Standard
  - 1500 psi @ 100 F (103bar @ 38 C)
  - 600 psi @ 400 F (41 bar @ 204 C)
- High Pressure
  - 3000 psi @ 100 F (207bar @ 38 C)
  - 1200 psi @ 400 F (83bar @ 204 C)
- High Pressure/Temperature
  - 5000 psi @ 100 F (344bar @ 38 C)
  - 1500 psi @ 800 F (103bar @ 427 C)
- Saturated Steam
  - 2000 psi @ 635 F (138bar @ 335 C)

Modular Electronics

- LCD Display
- HART Communications
- Honeywell DE
- Level and Interface Measurement

Dual Compartment Housings

- Powder Coated Aluminum Standard
- Stainless Steel
- Solid Covers or Viewing Windows
- Built in RFI Protection

Single Probe Waveguides

- 3/16 inch Cables
- 1/4 inch and 1/2 inch Rigid Rods

Hazardous Area Approvals

- FM Factory Mutual

  XP / I / 1 / ABCD / T6 Ta = 77C
  DIP / II, III / 1 / EFG / T6 Ta = 77C
  IS / I / 1 / CD / T4 Ta = 77C - ELE1014
  NI / I / 2 / ABCD / T4 Ta = 77C
  Type 4X

- CSA Canadian Standards Association

  XP CL I Div 1 GP ABCD
  CL II GP G & Coal Dust (Exia) Associated Equip., Provides I.S. Output to Sensor
  IS CL I Div 1 GP CD T4
  CL I Div 2 GP ABCD
  CL II Div 2 GP G & Coal Dust when installed per ELE1014

- ATEX Flameproof

  II 1/2 GD EExd IIC T6 (80°C) Tamb +66°C;
  02 ATEX 131713

- ATEX Intrinsically Safe

  II 1 GD EEx ia IIB T6 (80°C) Tamb +66°C;
  02 ATEX 131712

Alternate Transmitters

AT100

- Magnetostrictive Transmitter
- LCD Display
- HART Communications
- Honeywell DE
- Foundation Fieldbus
- FM, CSA, ATEX approvals
- Level and Interface Measurement

A38

- Capacitance Transmitter
- Magnet Calibration
- FM and CSA approvals
- Level or Interface Measurement
- Low Cost Transmitter
- Rod and Cable Probes

For Detailed Specifications and Ordering Information Consult the MagWave Configuration Guide COI/MW05-EN.

Contact us

ABB Inc.
18321 Swamp Road
Prairieville, LA 70769 USA
Phone: +1 225 673 6100
Service: +1 225 677 5836
Fax: +1 225 673 2525
Service e-mail: service@us.abb.com

www.abb.com/level

DS/MW05-EN Rev. C 06.2012

Power and productivity
for a better world™