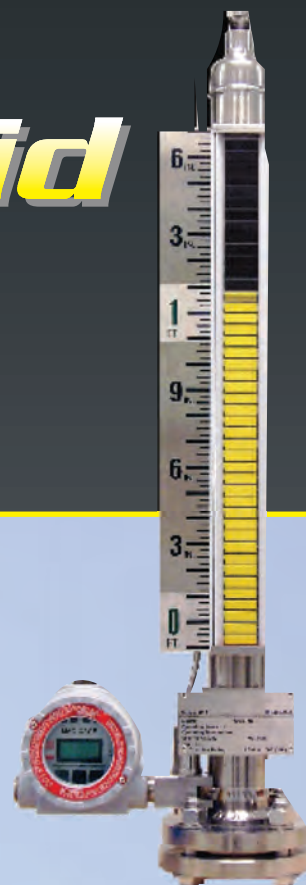




# ARCHON

[www.ARCHONind.com](http://www.ARCHONind.com)

## *Magnetic Liquid Level Gauges*



**800-554-1394**



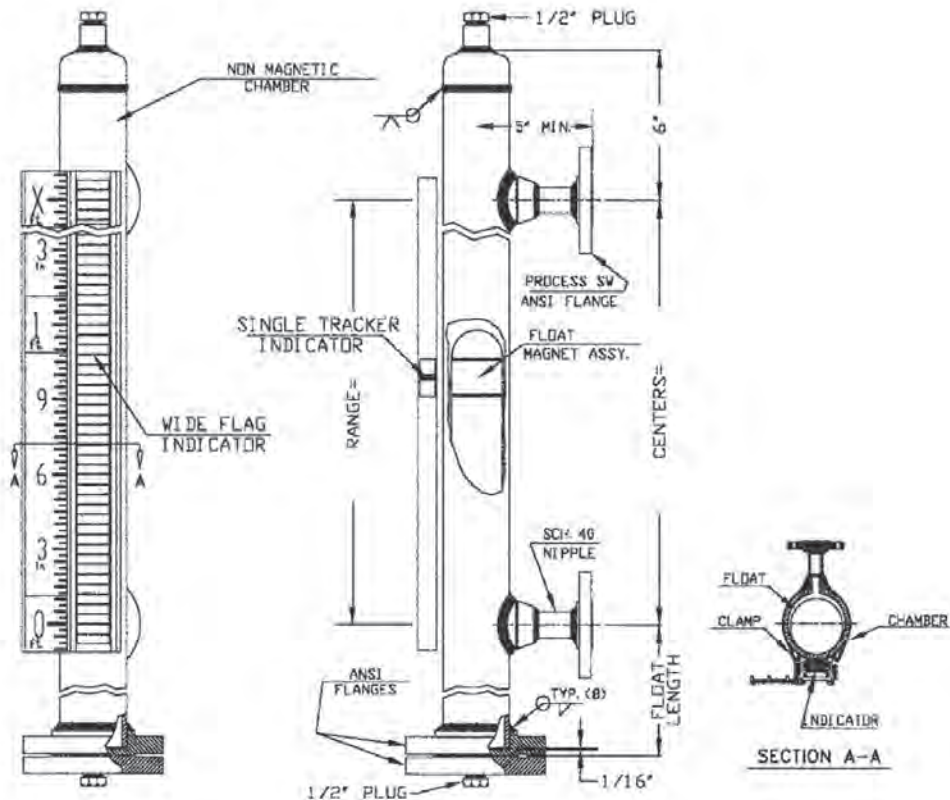
## MAGNETIC LEVEL GAUGES

ARCHON'S magnetic gauges are proven method to measure liquid levels. Our gauges are the safest and most economical way to measure and control your level requirements. They can be installed on almost any shape, size or type of vessel in the industry. In applications of extreme pressure, temperature, vibration or highly corrosive or hazardous material, our magnetic gauges will perform where others fail.

### Principles of Operation:

The chamber is constructed of non-magnetic materials. Process connections mate with those of the tank, vessel or other equipment where the level is to be measured.

The float is engineered and located inside the chamber. It is sized and weighed to the specific gravity of the process fluid to be measured. The float contains a 360° magnetic assembly which generates a strong uniform magnetic circuit. The magnetic flux lines generated by the float interlock with the indicator. The hermetically sealed Indicator, the Wide Flag™ or Wide Tracker™ style, contains its own magnetic assemblies which interlock with the float through the chamber, providing a strong and reliable design. As the float moves with the changes in the liquid level, the magnetic attraction between the indicator and float will ensure that the indicator will track the position of the float exactly, and the liquid level is measured precisely.



## Indicators



Wide Tracker™



Wide Flag™  
(Patented)

## Wide Tracker™

- Extra Large Rectangular Indicator
- 1.4" Wide x 1.5" Long
- Bright Yellow (other colors available)
- Dual Magnetic Coupling

## Wide Flag™

- Easy to read 1.4" Wide-Flag  
(Visible from over 200 ft)
- Patented solid one-piece ceramic magnetic flag
- 180 degree rotation
- Temperatures from -350°F to 1100°F
- High contrast Yellow (liquid) & Black (vapor)
- Other color combinations available

Available Enclosures:  
Anodized Aluminum or 316 Stainless Steel

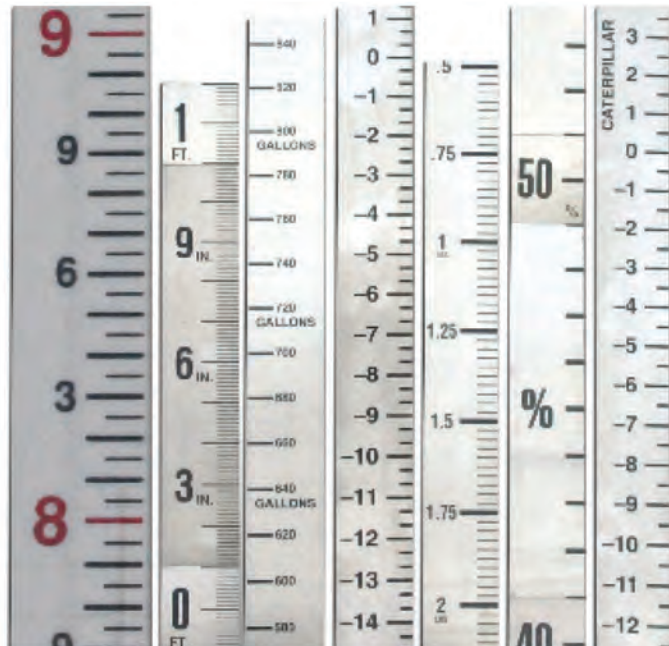
## Scales



- Can be customized to any units
- All scales are photo etched into Stainless Steel - No rusting, fading or stickers falling off
- Large, easy to read markings that allow measurement to be taken from a safe distance

### Scale available in:

- Feet/Inch Standard
- Metric
- % Scale
- Wide Acrylic Scale
- Gallon Scale
- +/- Scale
- Inch only Scale





## Point Level Switches

### MGS-200EX & MGS-200EX/2

Type: Electrical  
 Volts: 150 VAC / VDC  
 Current: 1.0 Amps  
 Power: 25 Watts  
 Contacts: SPDT or DPDT  
 Deadband: ½ inch  
 MAWT: -40°F to +800°F  
 Enclosure: NEMA 4X  
 Connection: ¾" FNPT



### MGS-700EX & MGS-700EX/2

Type: Electrical  
 Volts: 125/250 VAC  
 Current: 10.0 Amps  
 Power: 2500 Watts  
 Contacts: SPDT or DPDT  
 Deadband: ½ inch  
 MAWT: -40°F to +600° F.  
 Enclosure: NEMA 4X  
 Connection: ¾" FNPT



### MGS-500EX & MGS-500EX/2

Type: Electrical  
 Volts: 500 VAC/VDC  
 Current: 3.0 Amps  
 Power: 100 Watts  
 Contacts: SPDT or DPDT  
 Deadband: ½ inch  
 MAWT: -40°F to +600° F  
 Enclosure: NEMA 4X  
 Connection: ¾" FNPT



### MGS-900EX & MGS-900EX/2

Type: Electrical  
 Volts: 125/250 VAC  
 Current: 15.0 Amps  
 Power: 3750 Watts  
 Contacts: SPDT or DPDT  
 Deadband: ½ inch  
 MAWT: -40°F to +600° F.  
 Enclosure: NEMA 4X  
 Connection: ¾" FNPT

Stainless Steel Enclosures Available For All Switches

ELECTRICAL AREA CLASSIFICATION: CLASS I, DIVISION I, GROUPS B, C, D

### MGS-100

Non-Bleed Pneumatic Switch

Type: Non-Bleed Pneumatic  
 Supply Pressure: 30 – 200 PSIG  
 Deadband: ½ inch  
 MAWT: 0°F to 200° F.  
 Enclosure: 316 SS  
 Connection: ¼" FNPT



ATEX

## Floats



CPVC Float



Kynar Float



Titanium High Pressure Float



High Pressure Interface Float with Field Adjustable Weight



Coated Float for Corrosive Process



Standard Stainless Steel Float



The Carbon Fiber Float®  
(Patent Pending)

- All floats are engineered to the specific operating conditions of each application
- Shell is constructed of stainless steel, titanium, Hastelloy, monel, CPVC, PVDF (Kynar®), or any other non-magnetic material
- Magnetic circuit is made of a series of Alnico magnets to provide a light yet effective connection
- We can handle the highest pressures in the industry with NO oversized, pressurized or vented floats. Pressurized floats can be a safety concern and can leak over time.
- ARCHON uses solid engineering to conquer the demands of high pressures and low specific gravities.

## A Superior Magnetic Circuit

When designing the magnetic circuit between the float and indicator there are many considerations other than just how strong the magnets are in the float. The magnetic level gauges have undergone extensive testing to produce a rigid and high performance design. With a unique construction, the indication performs under the most demanding conditions such as high/low temperatures, vibrations, even in schedule 160 chambers. Our patented solid magnet Wide Flag™ design not only provides highly visible indication, but provides a powerful connection with the float. The reliability and repeatability of the unit, float and indicator combination is unmatched.





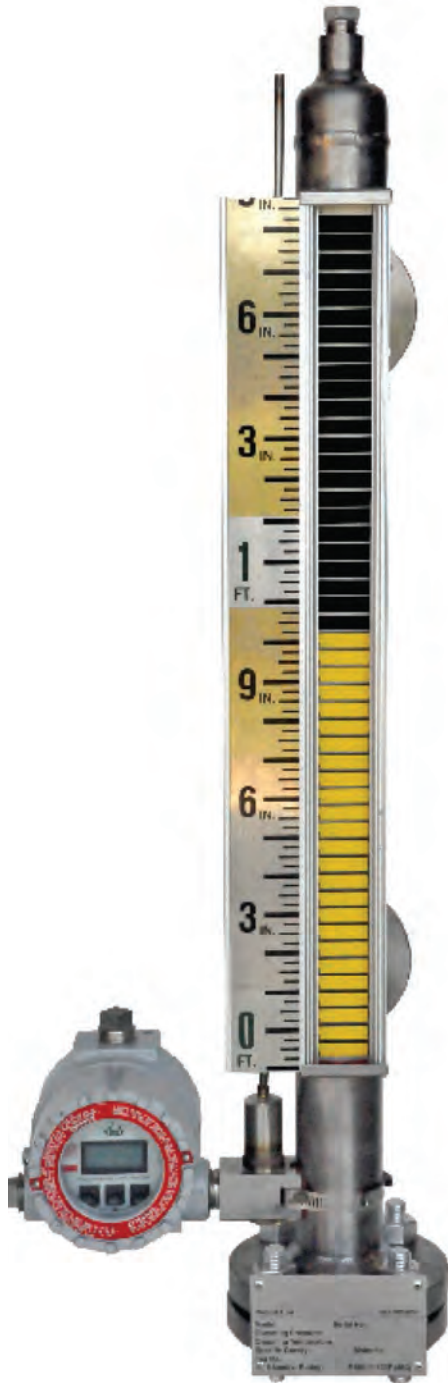
## Transmitters - Non Invasive

### Magnetostrictive Level Transmitter - MGT-6000

ARCHON'S MGT-6000 series level transmitter is the latest development in magnetostrictive level sensing technology that is designed exclusively for magnetic level gauges. The MGT-6000 contains a low profile waveguide that is mounted away from the level gauge chamber. This durable slim design isolates the dual sealed waveguide from excessive vibration and temperature. From enhanced sensor technology, the output signal is fast, stable and extremely accurate.

#### Standard Features

- Two wire, loop powered, 24 VDC nominal
- 4-20 mA, inches/metric and/or percent output signal
- Scrolling LCD digital display in 4-20 mA, in/cm or percent
- Local and remote detection for total or interface level elevations.
- HART protocol field communication
- Local programmability allows for quick and easy setup
- No recalibration necessary, set it and forget it
- Non-wetted, dual sealed low profile waveguide design, 316 SS
- Isolated from excessive thermal & vibration effects
- Top, bottom or remote transmitter head mountings
- Accurate to within 0.01% of total span selected
- Durable design with a strong, noise free signal output
- State of the art sensor and transmitter electronics
- Unique transmitter puck design
- Simple retrofit to most magnetic level gauge chambers
- Explosion proof housing, NEMA Type 4X
- Class I, Division 1, Groups B, C, D
- Class II, Division 1, Groups E, F, G
- Class III



**The ILLUMA-MAG™**  
Patent Pending



Day View

The ILLUMA-MAG™ is a bi-color indicator illuminator and tracker in one design. As the float rises in the magnetic level gauge chamber, the illuminator will change from white to yellow. White being the vapor space and yellow being the measured. The ILLUMA-MAG™ consists of a series of bi-color LED lights, as the magnetic field in the float passes a hall effect sensor, it will change the color of the LED. There are no moving or mechanical parts.

Specifications:

- Input Voltage 12VDC-50VDC
- Optional: 120VAC
- Power Consumption: 1 A max
- Ambient Temperature: -40 °F to 120°F
- Process Temperature: Up to 780 °F
- Electrical Connection: 3/4" FNPT
- Electrical Class: Class 1 Div 2 Groups B, C & D
- Estimated Life: 250,000 hrs (continuous)
- Colors:
  - Clear Vapor
  - Yellow Liquid
- Optional Color Combinations Available



Night View

Typical Customizations



Sanitary Magnetic Gauge  
(Tri-colored flags)



Drum Level Indicator

Meets ASME Boiler Code (PG60) for water level indicators on boiler drum



High temperature insulation shown with red/white WF Indicator option



Cryogenic insulation with MGT-6000

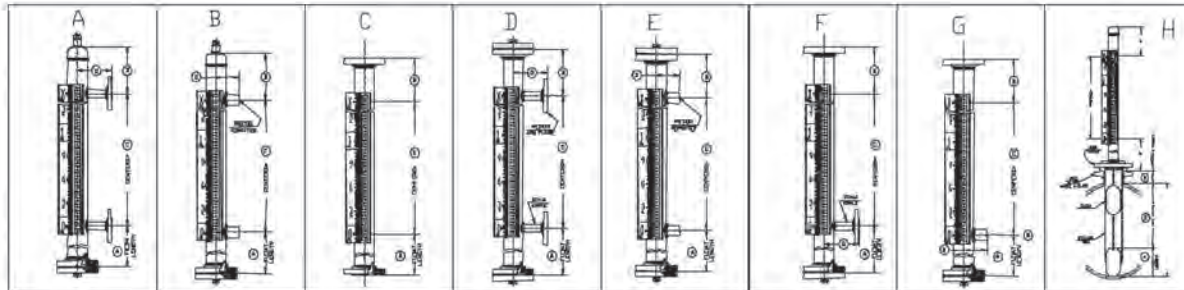




# ARCHON INDUSTRIES, INC.

## Magnetic Gage Application Sheet

Date \_\_\_\_\_



<p><b>Style</b> _____</p> <p><b>Chamber Material</b> _____</p> <p><b>Process Connections:</b>  Material _____  Size _____  Rating _____  Type _____  Center/Center _____  Vent _____  Connection _____  Drain Connection _____</p> <p><b>Process Conditions:</b>  Process _____  Oper. Pressure _____  Max. Pressure _____  Oper. Temperature _____  Max. Temperature _____  Specific Gravity _____  Interface ___yes___no</p>	<p><b>Indicator</b></p> <p><input type="checkbox"/> Wide Flag</p> <p><input type="checkbox"/> Stainless Wide Flag</p> <p><input type="checkbox"/> Wide Tracker™</p> <p><input type="checkbox"/> Stainless Wide Tracker™</p> <p><input type="checkbox"/> ILLuma-Mag™</p> <p><b>Scale</b></p> <p><input type="checkbox"/> Feet / Inches .25" Div.</p> <p><input type="checkbox"/> 0% to 100%</p> <p><input type="checkbox"/> Metric-Meter/Cm</p> <p><input type="checkbox"/> Other _____</p> <p><b>Switches</b></p> <p><input type="checkbox"/> MGS-200EX _____</p> <p><input type="checkbox"/> MGS-200EX/2 _____</p> <p><input type="checkbox"/> MGS-500EX _____</p> <p><input type="checkbox"/> MGS-700EX _____</p> <p><input type="checkbox"/> MGS-700EX/2 _____</p> <p><input type="checkbox"/> MGS-900EX _____</p> <p><input type="checkbox"/> MGS-900EX/2 _____</p> <p><input type="checkbox"/> MGS-100 _____</p> <p><b>Transmitters</b></p> <p><input type="checkbox"/> MGT-6000 _____</p> <p><input type="checkbox"/> Guided Wave _____</p> <p><input type="checkbox"/> Other _____</p>	<p><b>Sketch</b></p>          <p style="text-align: center;"><b>Notes/Options</b></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p>Part Number _____</p>		

Date Required \_\_\_\_\_ Qty. \_\_\_\_\_

Tag# \_\_\_\_\_

Contact/Customer \_\_\_\_\_ Company: \_\_\_\_\_

Phone# \_\_\_\_\_

Fax# \_\_\_\_\_

Rep. \_\_\_\_\_ Sales Eng. \_\_\_\_\_

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