MAG-GAGE®
THE SUPERIOR MAGNETIC LEVEL GAUGE

- Patented Wide-Flag®
  Solid Design Magnet
  -350° / 1100° F rating
- Standard 2 to 4 week delivery
  Expedited delivery available
- Constructed to meet ANSI/ASME codes B31.1/B31.3 Min. Sch 40
- No Pressurized Floats
- All Welds are GTAW/TIG
  No MIG or T-Drilling
- Replaces Sightglasses

ISO 9001 Certified 1410004

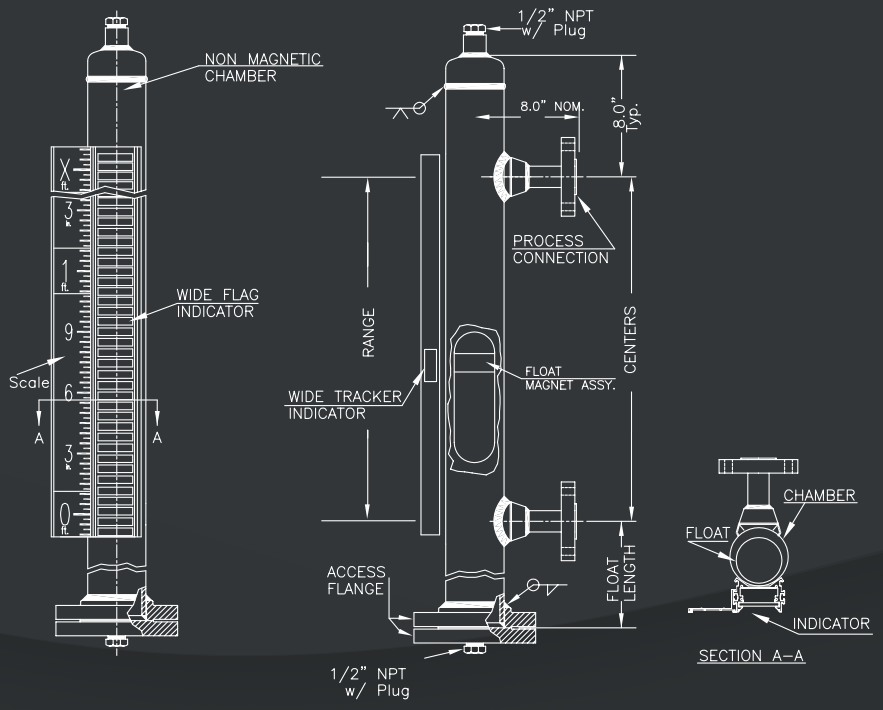
PROCESS LEVEL TECHNOLOGY, LTD.

The Process Level Technology Mag-Gage® is a proven method to measure liquid levels. The Mag-Gage® is one of the safest and most economical ways to measure and control your level requirements. It can be installed on almost any shape, size or type of vessel in the industry. In applications of extreme pressure, temperature, vibration and highly corrosive or hazardous material the Mag-Gage® will perform where others fail.

Principles of Operation

The Chamber is constructed of non-magnetic materials, and process connections to 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 interlocks 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
- 1.40" Wide X 1.5 Long
- Bright Yellow (other colors available)
- Dual Magnetic Coupling

Wide Flag®

- Easy to read 1.40" Wide-Flag (Visible from 200+ ft.)
- Patented solid one piece ceramic magnetic flag
- 180 degree rotation
- Temperatures from -350°F to 1100°F
- High contrast Yellow (liquid) and Black (vapor)
- Other color combinations available

Available Enclosures:
Anodized Aluminum or 316 Stainless Steel

Scales

- Scale can be customized to any increments (ft./in., gallons, percent, metric, etc.)
- 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

Scales Available In:

- Feet/Inch Standard
- Metric
- % Scale
- 10ths 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

Electrical Area Classification: Class I, Division I, Groups B, C, D

MGS-100: NON-BLEED PNEUMATIC SWITCH

Type	Non-Bleed Pneumatic
Supply Pressure	VAC-200 PSIG
Deadband	½ inch
MAWT	0°F to 200°F
Enclosure	0°F to 200°F
Connection	¼" FNPT

FM US C APPROVED

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 Mag-Gage® level gages 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 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 Mag-Gage® float and indicator combination is unmatched.

CPVC Float

Kynar Float

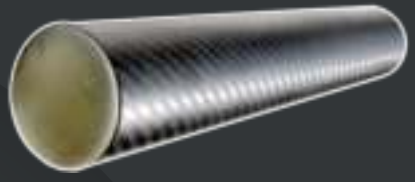
Titanium High Pressure Float

High Pressure Interface Float with Field Adjustable Weight

Coated Float for Corrosive Process

- All floats are engineered to the specific operating conditions of each application.
- Shell is constructed of stainless steel, titanium, hasteloy, 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.
- PLT uses solid engineering to conquer the demands of high pressures and low gravities.

Standard Stainless Steel Float



The Carbon Fiber Float® (Patented)

MAG-GAGE® LIQUID LEVEL ORDERING GUIDE

Standard Specifications

- Non-Magnetic Chamber material
- All Flanges, Fittings and Pipe meet ASME/ANSI Standards
- Fabricated/Welded to B31.1/B31.3 code

Scale

- Feet and Inches, ¼" divisions
- Photo etched and backfilled on stainless steel
- Metric, Percentage, or Volumetric available
- Optional 3½" Acrylic scales

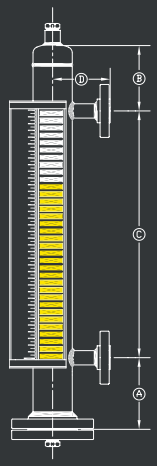
Float Chamber

- 2" to 3" pipe W/RF Flanges - Sch 40
- ½" FNPT vent and drain connections
- All flanges and fittings rated for process conditions
- Connections: ½" through 8" plus
- Pressure ratings vacuum to 5000 PSIG
- Temperature Rating: -350°F to +1100°F
- Specific gravity range: 0.28 and up
- Lengths from 4.0" to 50 feet

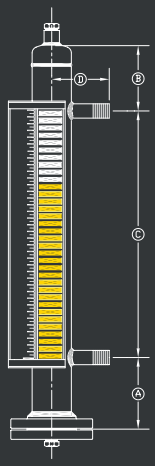
Indicator

- Bright colored
- Can be seen from 200 ft. or more
- 1.4" wide
- Hermetically Sealed

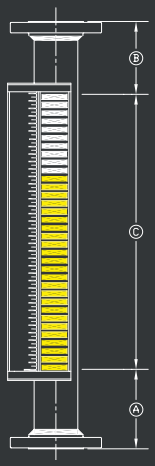
Chamber Styles



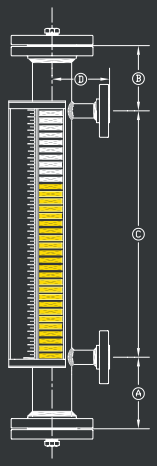
Style A



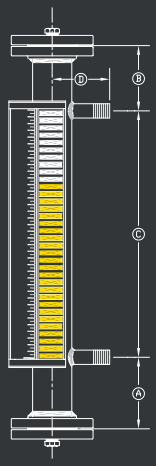
Style B



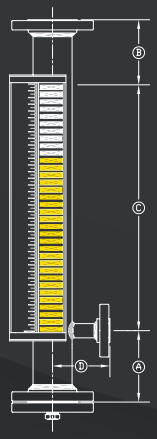
Style C



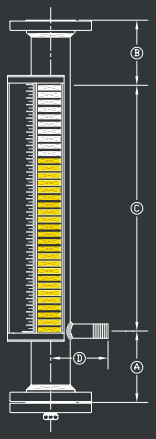
Style D



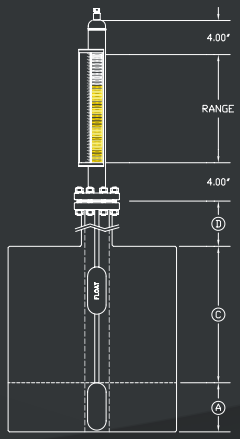
Style E



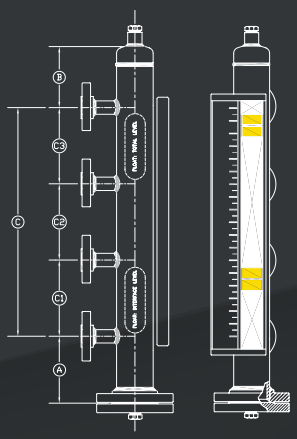
Style F



Style G



Style H



Style X (Other Configurations)

MG										
1	2	3	4	5	6	7	8	9	10	11

1 Model

MG: Mag-Gage®

2 Material

4S: 304/304L SS
4C: 304 SS/CS
6S: 316/316L SS
6C: 316 SS/CS
2S: 321 SS
4T: Teflon Lined 304 SS
4H: Halar Coated 304 SS
NS: Non-Stick Coating
AL: Aluminum
A2: Alloy 20
MO: Monel
TT: Titanium
HB: Hastelloy B
HC: Hastelloy C
ZR: Zirconium
CP: CPVC
PV: PVC
KY: Kynar (PVDF)
PP: Polypropylene
CM: Other material

3 Style

Specify Options

4 Process Connection

Specify Size

5 Flange Rating

01: 150#
03: 300#
06: 600#
09: 900#
15: 1500#
25: 2500#
50: 5000#

6 Specific Gravity

Specify

7 Pressure

Unit in PSIG

8 Temperature

Unit in Fahrenheit

9 Length

Specify

10 Indicator

WF: Wide Flag
SWF: SS Wide Flag
WT: Wide Tracker
SWT: Single Wide Tracker

11 Options

Chamber

WN: Weld Neck Flanges
LJ: Lap Joint Flanges
RJ: Ring Joint Flanges
BW: All Butt Weld Construction
NM: NACE MR0175/MR0103

Temperature Controls

CI: Low Temp. Cryogenic Insulation
IB: High Temp. Insulation Blanket
EH: Electrical Heat Tracing
FP: Freeze Protection
ST: Steam Tracing
FE: Frost Extension

Valves

GV: Gate Valves
VD: Vent & Drain Valves

Indication and Scale

MS: Metric Scale
PS: Percent Scale
VS: Volumetric Scale
AS: 3 ½ " Acrylic Scale
FE: Non Frost Extension
DI: Dual Indication
IF: Interface Indication
AR: Level Arrow Indicators
IL: Illuma-Mag™
IG: Indicator Guard
HDC: Heavy Duty Mounting Clamps

Testing

HY: Hydrostatic
NDE: 100% Non-destructive Testing (Die Penetration, X-Ray)
PMI: Positive Material Identification

MAG-TRANS® PREMIER LEVEL TRANSMITTER

The Mag-Trans® 2523 Series Level Transmitter is the next generation in Magnetostrictive Level Sensing Technology. It contains a dual compartment enclosure attached to the piezomagnetic wave guide sensor. The output is reliable, repeatable, fast and accurate.

- Standardized Dual Compartment
- Stainless Steel Enclosure Option
- Two Wire: Loop Powered
  - 10-30 Vdc (24 Vdc Nominal)
- Graphic Display:
  - Inch-Metric-Percent
  - Scroll-Tile
- HART – Protocol
- PACTware
- Local Programming
- Repeatable
- Reliable
- Variable Range
- Process Temperatures: -50°F to +800°F
- Class 1, DIV 1, GRP B, C, D

Specifications

Accuracy	+/- 0.015
Repeatability	.001% Full Span
Linearity	.020% Full Span
Refresh Rate	25x per second
Damping	1.0-25.0 Seconds
Electrical Classfication	Class 1, Div 1, Grp B, C, D

Input	10-30 Vdc (24 Vdc Nominal)
Output	4-20mA, HART
Software	HART/PACTware
Display	LCD-Graphic
Process Temperature	800°F
Ambient Temperature	-25°F to 175°F

FieldComm Group Connecting the World of Process Automation · HART Communication Protocol · FM US C Approved · PACTware™ · ISA

MAG-TRANS® ORDERING GUIDE

MT 2523						
1	2	3	4	5	6	7

1 Model
MT 2523

2 Length
Unit in Inches

3 Mounting Location
BML: Bottom Left
TML: Top Left
BMR: Bottom Right
TMR: Top Right

4 Dual Compartment Housing Materal
ALE: Epoxy Coated Aluminum
SSE: All 316 Stainless Steel

5 Probe Material
6S: 316 Stainless Steel

6 Temperature
Unit in Fahrenheit

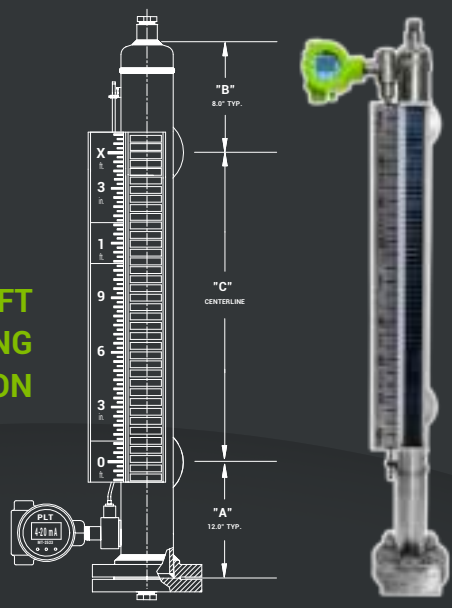
7 Options
HT: High Temp
RD: Remote Display
FM: FM Approved US/Canada
FRD: Field Mounted Loop Powered Indicator
FRDS: All Stainless Steel FRD

FRD: Field Mounted, Loop Powered Indicator - Can be externally mounted anywhere within power loop. Epoxy Coated Aluminum or 316 SS Class1, Div1, Group B, C, D

FRDS: All 316 Stainless Steel

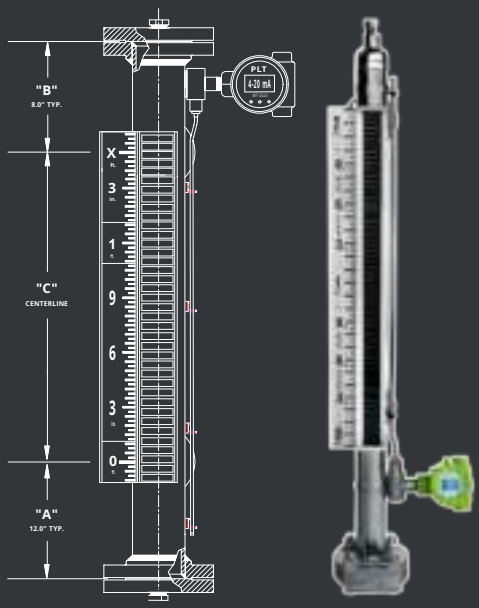
Installation Options

LEFT MOUNTING POSITION



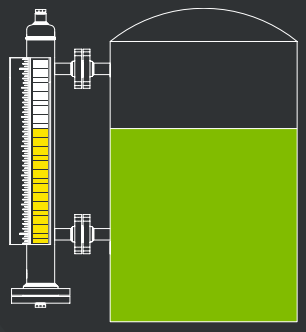
BML *TML*

RIGHT MOUNTING POSITION

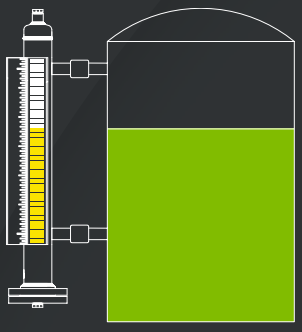


TMR *BMR*

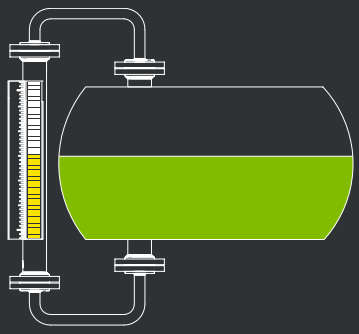
GENERAL INSTALLATIONS



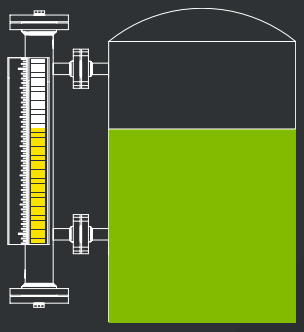
Style A



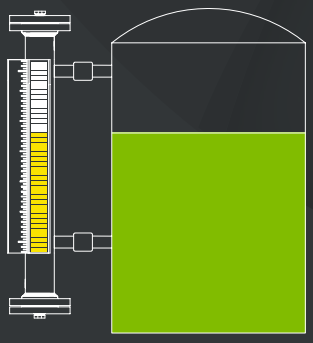
Style B



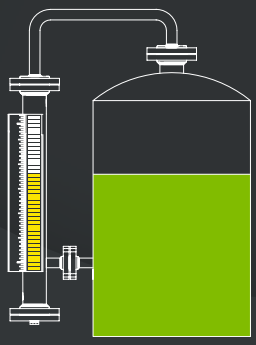
Style C



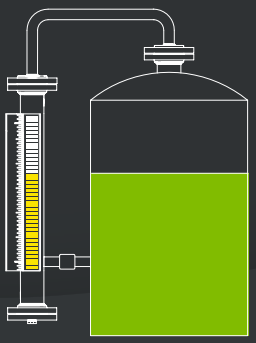
Style D



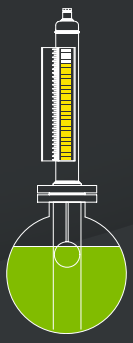
Style E



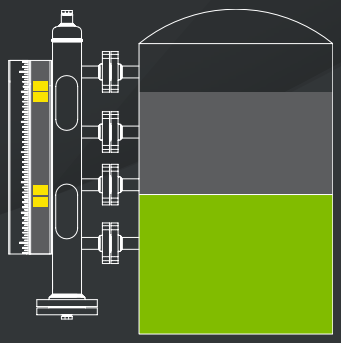
Style F



Style G



Style H



Style X

Applications

- Acetic Acid
- Ammonia
- Asphalt Settler
- Benzene
- Blow case
- Boiler Steam Drum
- Butane
- Caustics
- Cooling Towers
- Deionized Water
- Dow Therm
- Drip Pot
- Feedwater Heaters
- Flare Drums
- Freon
- Glycol
- Hydraulic Oil
- Hydrazine
- Hydrochloric Acid
- Hydrofluoric Acid
- Hydrogen Sulfide
- Interface (i.e. oil/water)
- Jet Fuel
- LPG
- Liquid Carbon Dioxide
- Liquid Ethylene
- Molten Sulfur
- Phosgene
- Propylene
- Propane
- Seal Oil Pots
- Slop Oil
- Sour Oil
- Sump Tank
- Underground Storage
- and more...

Other Products

Bypass

IT2523

Seal Pot

Day Tanks

OPTIONS AND CUSTOMIZATIONS

SANITARY MAG-GAGE®
Tri-colored flags

DUAL CHAMBER
Options: MAG-TRANS®, Guided Wave Radar

PLASTICS
Options: CPVC, KYNAR, Others

HIGH TEMPERATURE INSULATION

CRYOGENIC INSULATION

INTEGRAL SIGHTGLASS

INQUIRIES

Upon product inquiry, a thorough analysis of the customer's application and product specifications is performed. Promptly after the initial inquiry, PLT issues a quotation in complete compliance with the application/specifications previously submitted.

DELIVERABLES

After purchase date, a standard shipping term between 2 to 4 weeks will be issued with all standard orders. Requests for a faster delivery, or immediate (24 hour) delivery can be accommodated. Any delivery requirements are to be given with initial inquiry in order to ensure on time delivery.

Process Level Technology, Ltd.
MAG-GAGE®

888 Clear Creek Ave.
League City, TX 77573
Phone 281 332 6241
Fax 281 332 0232
www.mag-gage.com

MADE IN USA