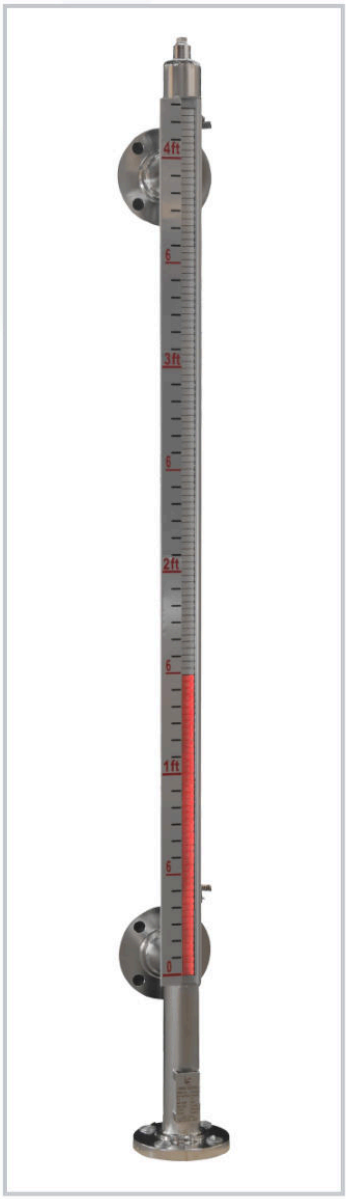
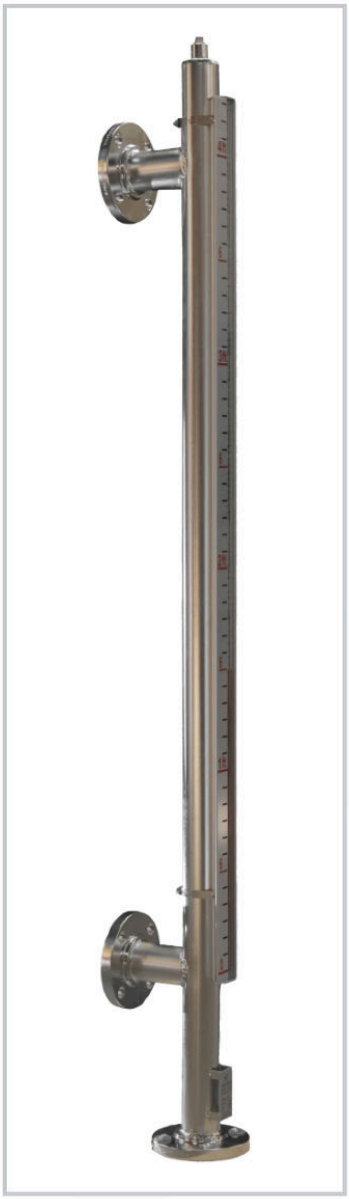
PRODUCT BROCHURE

MAGNAMONT™

Magnetic level gauge





Magnamont™ is a 316 stainless steel magnetic level gauge for storage tanks, process vessels, boilers, drums and utility skids. The welded chamber isolates the indicator from the process and reduces potential leak paths. There is no glass in the pressure boundary and no wetted electronics. High-contrast indicator flags show the level at a distance.

Each gauge is engineered to order for the vessel, the fluid and the piping code specified, and gives continuous visual level indication. Applications also include distillation systems and OEM equipment.

CONTENTS

- Industries served
- MagnaLine™ floats
- ClearView™ indicators
- Principle of operation
- Model code reference

REQUEST A QUOTATION →

lamontcontrols.com/request-a-quote

234 bar	−40 / +450 °C	SG ≥ 0.34	Engineered
3,400 psig	−40 / +842 °F	minimum	to order
PRESSURE	TEMPERATURE	SPECIFIC GRAVITY	CONFIGURATION

01 Magnamont™ magnetic level gauge

A welded 316 stainless steel magnetic level gauge that accepts LevelSync™ transmitters and SurePoint™ switches.

Piping code construction

DESIGN FEATURE

Heavy-duty schedule pipe; ASME B31.1 or B31.3 construction. Industrial grade covers general service. For critical applications, the ASME code is matched to the piping specification.

IN SERVICE

The gauge can be specified to the same code as the process piping, with the same safety factors and mechanical strength standards.

Automation without new nozzles

DESIGN FEATURE

LevelSync™ and SurePoint™ clamp to the outside of the chamber and are magnetically actuated by the internal float.

IN SERVICE

The transmitter gives continuous level measurement with a standard 4–20 mA output; digital communication is optional, depending on configuration. The switches give point-level alarms. The pressure boundary remains sealed. The transmitter and switches have no wetted parts, require no additional vessel nozzle, and are fitted at the factory or in the field.

Visible at a distance

DESIGN FEATURE

High-contrast flags are isolated from the process and do not cloud or stain. The indicator mounts outside the chamber and is magnetically coupled to the float.

IN SERVICE

The indicator gives a continuous visual reference of the level. Operators read it from a distance, without approaching hot or hazardous equipment.

No glass in the pressure boundary

DESIGN FEATURE

A welded, all-metal bypass chamber replaces the glass assembly. Standard process connections are retained; without the long glass-to-gasket seals of a sight glass, the chamber reduces potential leak paths.

IN SERVICE

The process liquid is contained in a pressure-rated pipe column with no glass or gasketed viewing sections. This improves personnel safety in high-temperature service.

LEAD TIME | Engineered to order and made in Canada. Expedited builds available; contact Lamont Controls Engineering for current lead times.

02 Industries served

Magnamont™ is used across the process industries. Each gauge is engineered to order for the vessel, the fluid and the piping code specified.



Nuclear power

Balance-of-plant condensate, feedwater and auxiliary tanks, with material traceability maintained throughout manufacturing.



Power generation and steam utilities

Condensate receivers, boiler feedwater tanks and hotwells, with ASME B31.1 construction options. Auxiliary systems across hydro and thermal plants.



Oil, gas and terminals

Sour water, odorant storage, propane vessels, diesel tanks and refined-fuel tanks. Heat tracing and insulation blankets for cold-climate service.



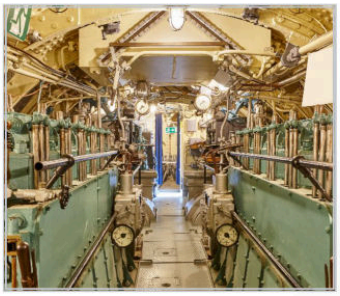
Hydrogen and industrial gases

Liquid level in hydrogen and industrial-gas plants, documented for new-build projects.



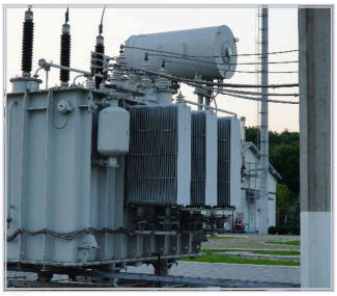
Chemical and petrochemical

Solvents, caustics and hydrocarbons in day tanks, mixing vessels and batch reactors. For aggressive corrosives that call for thermoplastic construction, see Polysight™.



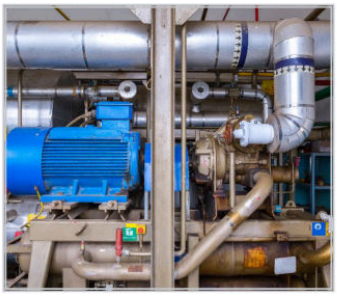
Marine and shipboard

Ballast, potable-water and sewage tanks on ferries; fuel, ballast and water tanks on tugs, workboats and fishing vessels. Glass-free for vibration and sea air.



Transformer and dielectric oil systems

Conservator and oil-tank level for transformer OEMs and service facilities, including full-vacuum-rated chambers for oil processing.



Industrial refrigeration and cold storage

Anhydrous ammonia receivers and surge drums in cold storage, food processing and industrial refrigeration plants, in sealed, glass-free construction.



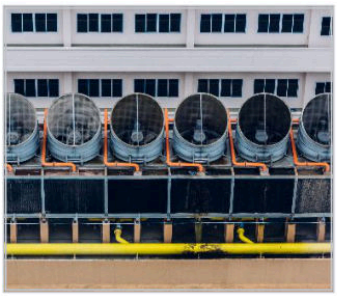
Pulp and paper

Condensate systems, liquor tanks and mill utilities. Glass-free level indication for continuous steam service and mill environments.



Water and wastewater

Filtration skids, surge tanks and chemical-feed systems in pressure service.



HVAC and facility utilities

Cooling-tower remote sumps, chiller plants, boiler rooms and generator day tanks, often with SurePoint™ switches for makeup control and low-level cutoff.



OEM and equipment builders

Compressor packages, pump skids and industrial boilers. One approved drawing covers repeat production runs of custom-length gauges.

Also serving: airports and de-icing · food and beverage · mining and metals · research institutions.

03 Automation and integration

Continuous monitoring and point-level control

LevelSync™ magnetostrictive transmitters and SurePoint™ switches add a continuous level signal and alarm functions to a Magnamont™ gauge. They are externally mounted and magnetically coupled to the gauge's MagnaLine™ float. They have no wetted parts, require no additional vessel nozzle, and are fitted at the factory or in the field. Hazardous-area certifications are held by Lamont's component manufacturing partner and apply to the supplied product. Final certification, temperature class and marking depend on configuration and are confirmed at quotation.

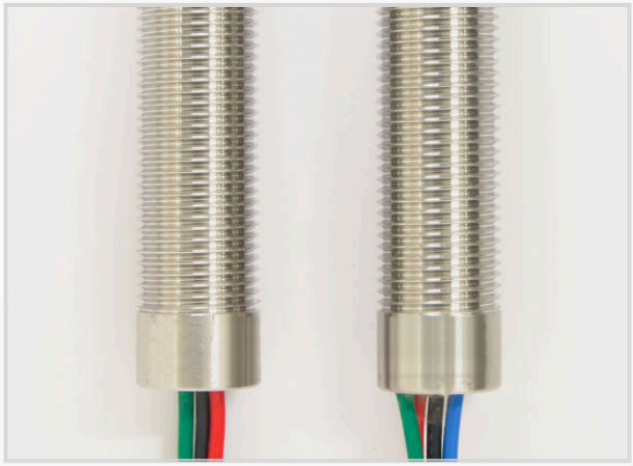


LevelSync™

Magnetostrictive level transmitter

Continuous level measurement from the gauge float by magnetostrictive time-of-flight sensing through the chamber wall. No moving parts and no routine recalibration. The transmitter mounts outside the chamber and gives a standard 4–20 mA output; digital communication is optional, depending on configuration. It has no wetted parts, is isolated from corrosive process media and can be installed or serviced independently of the gauge chamber.

View LevelSync™ details →
lamontcontrols.com/levelsync



SurePoint™

Magnetic point-level switch

Leverless switch for discrete high or low level alarms and basic control functions. No moving levers and no actuation power. The switch clamps to the outside of the chamber and is actuated by the float's magnet as the float passes the set point. The set point is adjustable along the chamber, at commissioning or when the system changes later.

View SurePoint™ details →
lamontcontrols.com/surepoint

04 MagnaLine™ floats



The sealed MagnaLine™ float follows the liquid level inside the chamber. Each float carries a high-strength, 360-degree magnetic flux assembly designed to maximize the coupling force with the external indicator. The coupling holds in standard operation, and the risk of decoupling during process fluctuations is minimized. Every float is precision-weighted to the specific gravity (SG) and operating pressure of the process fluid.

OPTIONAL · FLOATSENSE™

Float-integrity monitoring

FloatSense™ gives a clear visual signal at the indicator if the float loses buoyancy and sinks, so a failed float is not read as a low level.

Titanium

MAGNALINE™ STANDARD

Titanium, precision-weighted for the fluid's specific gravity and operating pressure.

316 stainless steel

MAGNALINE™ OPTIONAL

316/316L stainless steel for heavier fluids and general industrial service.

Engineered and custom floats

CONSULT FACTORY

High-pressure ball-segment floats, syntactic foam for extreme-pressure service, exotic alloys and specialty float designs engineered to the application.

For corrosive service requiring thermoplastic construction, see Polysight™.

05 ClearView™ indicators

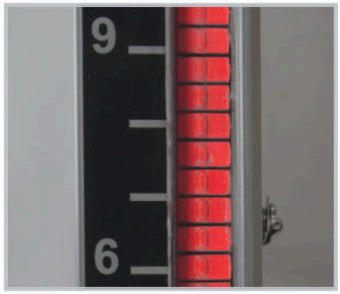
High-visibility local indication



The ClearView™ indicator gives continuous local level indication with no mechanical linkage and no process penetration. It is driven by the magnetic field of the float inside the chamber. The indicator mounts outside the chamber and has no contact with the process. Indicator styles, housing materials, sealing options and temperature ratings are selected for the operating environment.

Custom scales and readout units

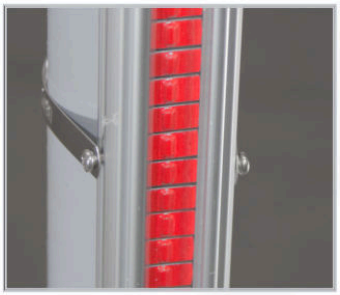
Indicators can be supplied with custom scale markings to suit the application. Standard linear scales are in inches, feet or metric units; dual scales and volumetric readouts (gallons, litres) are derived from the vessel geometry. Custom scales are generated from supplied drawings, strapping tables or dimensional data, so that the indicated level corresponds accurately to the actual vessel volume.



High-contrast aluminum scale

CLEARVIEW™ · ISFS-300 (STANDARD)

Stainless steel flags in an aluminum housing with a black etched aluminum scale. High-contrast graduation, resistant to UV and abrasion. Rated to 300 °C.



No-scale flag indicator

CLEARVIEW™ · ISF-300

Stainless steel flags in an aluminum housing without a scale, for flag-only level indication. Rated to 300 °C.



High-temperature aluminum flags

CLEARVIEW™ · IAF-450

High-temperature aluminum flags with scale for elevated-temperature service. Rated to 450 °C.



Hermetically sealed

CLEARVIEW™ · HS-300

Hermetically sealed, argon-filled indicator in a stainless housing with scale, for humid, washdown or harsh atmospheres. Rated to 300 °C.

ENGINEERED TO ORDER

Quality, testing and documentation

Each gauge is engineered to order. Chamber length is set by the vessel; the float is weighted for the fluid's specific gravity, temperature and pressure. The design is confirmed on the approval drawing before fabrication starts.

The approval drawing is issued after the purchase order. Material traceability is maintained throughout manufacturing; MTRs and hydrostatic test reports are available. Where the application calls for them, interface service, custom scales graduated to the tank volume and special connections are engineered into the same design.

DOCUMENTATION

- **Approval drawings** with every order
- **MTRs and test reports** available
- **Custom scale graduation** by volume or height
- **Floats engineered** to the specific gravity
- **One point** of engineering contact



SS · Side–side



TB · Top–bottom



TS · Top–side



BS · Bottom–side



TM · Top mount

RENDER · STANDARD CHAMBER CONFIGURATIONS



Engineered to order. Made in Canada. Approval drawing issued after the purchase order; MTRs and hydrostatic test reports available.

06 Principle of operation

1 Float

- A sealed MagnaLine™ float carries a permanent magnetic assembly. The float is weighted for the fluid's specific gravity and floats at the liquid surface.
- As the level rises or falls, the float moves with it inside the chamber.

2 Magnetic coupling

- The float's magnetic field couples through the chamber wall to the ClearView™ indicator mounted outside the chamber.
- The indicator follows the float and shows the level without contact with the process.

3 Visual indication

- The indicator is a column of rotating flags in contrasting colours. Each flag turns as the float passes: one colour shows liquid below, the other vapour above.
- The reading is continuous. The indicator, and any transmitter or switches, mount outside the chamber; only the chamber and float are wetted.

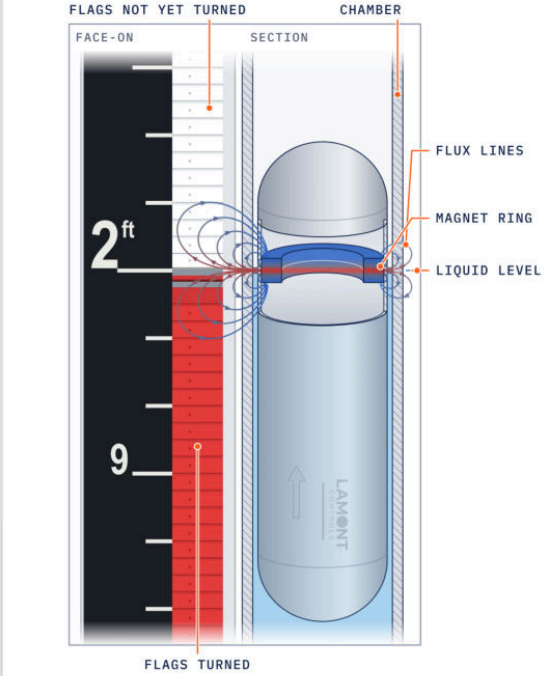


Illustration · section at the float magnet

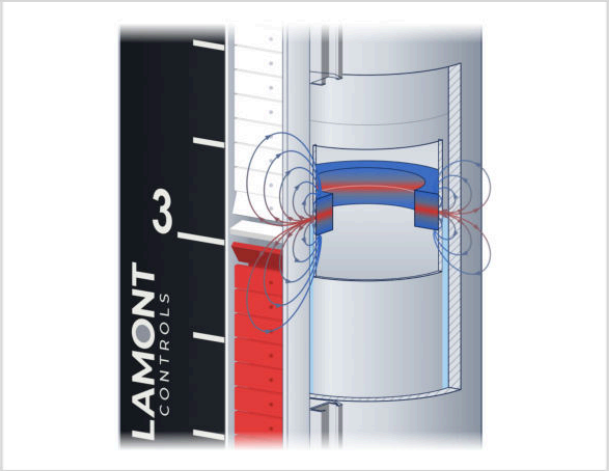


Illustration · flags turning at the liquid level

Sealed, non-invasive design

- **Contained process:** The process fluid stays inside the welded chamber.
- **Wetted parts:** The indicator, and any transmitter or switches, mount outside the chamber; only the chamber and float are wetted.
- **Fewer leak paths:** The sealed chamber reduces potential leak paths, emissions and contamination risk.

07 Why a magnetic level gauge

A magnetic level gauge shows the liquid level in a vessel on a column of flags mounted outside a sealed chamber. The level is readable at a distance, with no glass in the pressure boundary and no wetted electronics.

01

Improved safety

compared with sight glasses

No fragile glass:
A welded chamber replaces the glass, gaskets and cover plates.

Indicator outside the chamber:
Damage to the indicator does not open the process.

Reduced exposure risk:
Personnel exposure to hazardous or corrosive fluids is minimized.

02

Low maintenance

and long service life

Externally mounted components:
The indicator assembly is isolated from the process fluid.

No degrading wetted parts:
No wetted seals, packing or electronics in the indication path.

Simplified inspection:
Less inspection effort and less maintenance over the service life.

03

Mechanical reliability

Magnetically coupled operation:
A float and an external indicator, linked by magnetic coupling.

Non-electronic indication:
No electronics, power supply or calibration required for local indication.

Harsh environments:
Nothing in the indicator is wetted, so there is no glass to etch, stain or coat.



Engineered, manufactured, and tested in the Greater Toronto Area, Ontario, Canada.



Indicator at three levels. Magnamont™ indicators at a low, a middle and a high level: red below the liquid level, white above.

08 Technical specifications

CATEGORY	OPTIONS / SPECIFICATIONS
Chamber configurations	Side–Side · Top–Bottom · Top–Side · Bottom–Side · Top Mount. Custom-engineered dual-chamber arrangements available on request (option X).
Chamber diameters	1.5″, 2″ (schedule and material per design requirements). Special sizes on application review.
Chamber construction	Welded 316 chamber with slip-on process flanges; internal float stop spring (bottom).
Measuring range	Standard lengths to 222 in (5,640 mm) centre-to-centre; longer lengths on request.
Accuracy	Typical ±10 mm (±0.4 in), subject to float design and application conditions.
Specific gravity range	≥ 0.34 minimum, subject to float design and application conditions.
Pressure range	Full vacuum to 3,400 psig (234 bar). Flange classes: ANSI 150 / 300 / 600 / 900 / 1500 · DIN PN10 / 16 / 25 / 40 · JIS J5K–J20K (DIN / JIS: special-order flanges). Pressure and temperature ratings depend on materials, connections and configuration, and are confirmed at quotation.
Temperature range	−40 °C to +450 °C (−40 °F to +842 °F), depending on chamber material and application conditions. Lower temperatures on application review.
Float materials — MagnaLine™	Standard: Titanium Optional: 316 SS Custom: Exotic / coated floats — consult factory Minimum SG: 0.34

08 Technical specifications · continued

CATEGORY	OPTIONS / SPECIFICATIONS	
Chamber materials	SS316 standard. Custom / exotic — consult factory.	
Construction code	IG	Industrial Grade
	B1	ASME B31.1 Power Piping
	B3	ASME B31.3 Process Piping
Process connections	Flanged, threaded (FNPT / MNPT), or welded (Weldolet, Sockolet). ANSI / NPT ½″–4″; DIN DN15–DN65; JIS 15A–50A.	
Indicator options — ClearView™	ISFS-300	Stainless steel flags, aluminum housing with scale — max 300 °C (standard)
	ISF-300	Stainless steel flags, aluminum housing, no scale — max 300 °C (optional)
	IAF-450	High-temperature aluminum flags, with scale — max 450 °C
	HS-300	Hermetically sealed indicator, argon-filled, stainless housing with scale — max 300 °C
	IX	No indicator
Scale options	Feet & Inches (IMP) · Metres / cm (MET) · Percent 0–100 % (PER) · Gallons (GAL) and Litres (LIT), each custom-graduated to tank volume · No Scale (NS) · Custom (CUS).	
Scale material	Etched aluminum scale resistant to UV exposure, abrasion, and chemical attack. Marking compliant with MIL-STD-130N and related identification standards. Optional non-metallic scales available for enhanced chemical resistance.	

08 Technical specifications · continued

CATEGORY	OPTIONS / SPECIFICATIONS	
Vent & drain options	Threaded (MNPT / FNPT) ⅛″, ¼″, ⅜″, ½″, ¾″, 1″; flanged (FL) ½″, ¾″, 1″; or custom machined ports (CS). No vent = NV-00 · No drain = ND-00.	
Surface finishes & treatments	PA — Passivated	Full-immersion per ASTM A380 / A967 (standard, stainless)
	EP — Electropolished	External surfaces per ASTM B912
	PT — Painted	External finish
	PC — Powder Coated	External finish
Options & accessories	MLT	LevelSync™ magnetostrictive level transmitter
	PLS-1 to PLS-8	SurePoint™ clamp-on switches (Qty 1–8)
	FS	FloatSense™ float-integrity monitoring (NF = none, default)
	IB	Insulation blanket
	HT	Heat tracing
	INTSGX.XX	Interface service — second liquid SG (specify, e.g. INTSG0.85)
	X	Custom options
Testing & quality assurance	Material traceability	Maintained throughout manufacturing; MTRs available.
	NDE	Performed in accordance with applicable project-specified codes and standards (e.g., ASME B31.1, ASME B31.3, or other governing codes), where required:
	— Visual (VT)	Of welds and final assembly
	— Dye penetrant (PT)	Of fillet welds, where applicable
	— PMI	For alloy verification, where specified
	Pressure testing	Pressure tested before shipment; hydrostatic test at not less than 1.5 × design pressure where specified. Test reports available.
	Additional	Inspection, testing, and documentation available upon request.

SPECIFICATION NOTES

Ratings
Pressure and temperature ratings depend on materials, connections and configuration, and are confirmed at quotation.

Indicator compatibility
ClearView™ flag indicators are magnetically coupled and compatible with all chamber materials. No electrical connection to the process.

Float selection
The float's specific gravity must be lower than the fluid's. Consult factory below SG 0.45 or for two-phase or solids-bearing service.

Custom configurations
Non-standard chamber lengths, exotic alloys and special process connections on request. Contact Lamont Controls Engineering.

09 Model code reference

A Magnamont™ gauge is defined by an 18-position model code. Each position selects a chamber, float, indicator or construction option.

Codes such as ISFS-300 and HS-300 are single field values; positions are delimited by field, not by every hyphen.

01	02	03	04	05	06	07	08	09
PRODUCT	CONFIG	MATERIAL	SIZE	FLOAT MATL.	FLOAT SG	PRESSURE	CONSTRUCTION	CONN TYPE

10	11	12	13	14	15	16	17	18
CONN SIZE	INDICATOR	FLOATSENSE	SCALE	C-C LENGTH	VENT	DRAIN	FINISH	OPTIONS

POSITION REFERENCE · 01–12

01 Product Type

MM	Magnamont — standard

02 Chamber Configuration

SS	Side–Side (standard)
TB	Top–Bottom
TS	Top–Side
BS	Bottom–Side
TM	Top Mount

03 Chamber Material

316	SS316 (standard)
CC	Custom / exotic — Hastelloy, Monel K-500, Inconel 625, coated / lined (consult factory)

04 Chamber Size

15	1.5"
02	2" (standard)
SP	Special — custom only

05 Float Material

TI	Titanium (standard)
SS	316 Stainless Steel
CU	Custom / consult factory

CU covers coated, lined and exotic floats — consult factory.

06 Float Specific Gravity

SGX.XX	User-specified (e.g. SG1.00, SG0.85, SG0.34)

Magnamont minimum SG ≥ 0.34.

07 Pressure / Flange Class

ANSI	150 · 300 · 600 · 900 · 1500
DIN	PN10 · PN16 · PN25 · PN40 — special-order flanges
JIS	J5K · J10K · J16K · J20K — special-order flanges
SP	Special (incl. PN63 / PN100)

08 Construction Code

IG	Industrial Grade
B1	ASME B31.1 Power Piping
B3	ASME B31.3 Process Piping

09 Process Connection Type

FL	Flanged
FNPT	Female NPT
MNPT	Male NPT
WO	Weldolet
SO	Sockolet
CS	Custom

10 Process Connection Size

ANSI / NPT	05 (½") · 075 (¾") · 01 (1") · 125 (1¼") · 15 (1½") · 02 (2") · 25 (2½") · 03 (3") · 04 (4")
DIN	DN15 · DN20 · DN25 · DN32 · DN40 · DN50 · DN65
JIS	15A · 20A · 25A · 32A · 40A · 50A
CS	Custom / special

Standard-aware: only sizes valid for the chosen flange standard apply.

11 Indicator Configuration

ISF-300	Stainless steel flags, aluminum housing, no scale — 300 °C
ISFS-300	Stainless steel flags, aluminum housing with scale — 300 °C (standard)
IAF-450	High-temperature aluminum flags, with scale — 450 °C
HS-300	Hermetically sealed indicator, argon-filled, stainless housing with scale — 300 °C
IX	No Indicator

12 FloatSense

NF	No FloatSense (standard)
FS	FloatSense™ float-integrity monitoring

09 Model code reference · continued

POSITION REFERENCE · 13–18

13 Scale

IMP	Feet & Inches (Imperial)
MET	Metres / cm (Metric)
PER	Percent 0–100 %
GAL	Gallons — custom-graduated to tank volume
LIT	Litres — custom-graduated to tank volume
NS	No Scale
CUS	Custom

14 Centre-to-Centre Length

XX.XV	Inches — e.g. 120.0V
XXXXE	Millimetres — e.g. 3048E

Standard lengths to 222 in (5,640 mm) centre-to-centre; longer lengths on request.

15 Vent — Type

M	MNPT
F	FNPT
FL	Flanged — ½″ and up
CS	Custom machined port
NV	No Vent

15 Vent — Size

18	0.125"
025	0.25"
38	0.375"
05	0.5"
75	0.75"
1	1"
00	No Vent

No vent = NV-00. Flanged vents (FL) are ½" and up; smaller sizes are threaded only.

16 Drain — Type

M	MNPT
F	FNPT
FL	Flanged — ½″ and up
CS	Custom machined port
ND	No Drain

16 Drain — Size

18	0.125"
025	0.25"
38	0.375"
05	0.5"
75	0.75"
1	1"
00	No Drain

No drain = ND-00. Flanged drains (FL) are ½" and up; smaller sizes are threaded only.

17 Finish

PA	Passivated (standard)
EP	Electropolished — external surfaces
PT	Painted — exterior / non-wetted
PC	Powder Coated — exterior / non-wetted

18 Options (stackable)

MLT	LevelSync™ magnetostrictive level transmitter
PLS-1 to PLS-8	SurePoint™ clamp-on switches, Qty 1–8
IB	Insulation Blanket
HT	Heat Tracing
INTSGX.XX	Interface service — second liquid SG (specify)
X	Custom Options

SAMPLE CONFIGURATIONS

B31.1 · Class 150 · passivated

```
MM-SS-316-02-TI-SG1.00-150-B1-FL-02-ISFS-300-NF-IMP-120.0V-F-05-F-05-PA
```

PN40 · B31.3 · DIN flange · metric scale

```
MM-SS-316-02-TI-SG1.00-PN40-B3-FL-DN50-ISFS-300-NF-MET-3048E-F-05-F-05-PA
```

Top–bottom · Class 300 · sealed indicator · no vent / drain · electropolished

```
MM-TB-316-02-TI-SG0.95-300-B3-FL-02-HS-300-NF-IMP-144.0V-NV-00-ND-00-EP
```

NEXT STEP

Specify a Magnamont™ gauge

Send the process conditions to Lamont Controls Engineering, or request a quotation online.

REQUEST A QUOTATION →

lamontcontrols.com/request-a-quote

RELATED PRODUCTS

Lamont Controls product family

Polysight™

CORROSIVE SERVICE

CPVC and PVDF magnetic level gauge for corrosive and chemically aggressive service.

Fortimag™

EXTREME SERVICE

High-pressure magnetic level gauge, to 5,000 psig; Class 2500 flanges built to order.

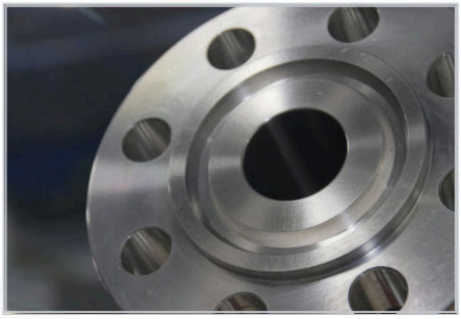
LevelSync™ and SurePoint™

AUTOMATION

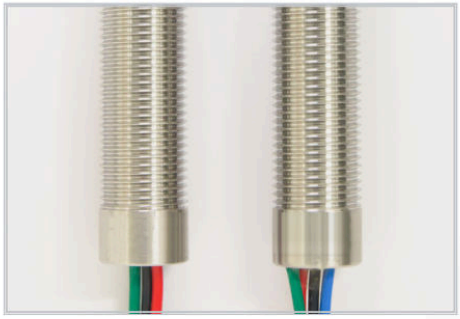
Magnetostrictive level transmitters and magnetic point-level switches for continuous and point-level measurement.



POLYSIGHT™



FORTIMAG™



SUREPOINT™ SWITCHES

LAMONT CONTROLS

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