



# LEVEL MEASURING WITH MAGNETIC GAUGE



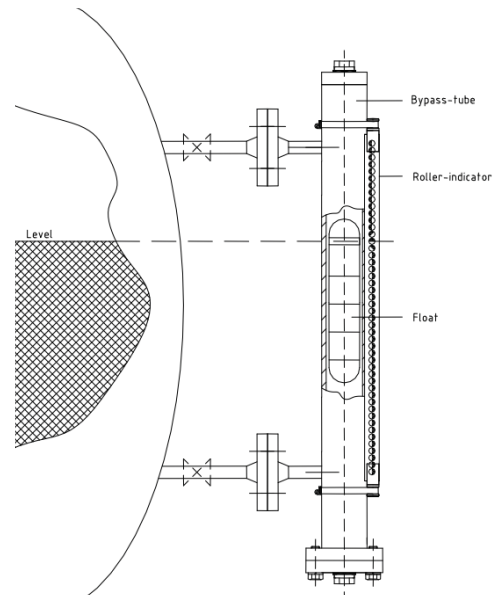


## Introductions

The ARAMAK magnetic liquid level gauge used to determine the volume of liquid contained within a tank. Because the magnetic level high pressure applications and hazardous locations are protected from the danger of a chemical spill due to glass failure.

The magnetic level gauge made in 2 Type :

- 1- Economical
- 2- Heavy duty



## Applications

### Typical industries:

- Oil and gas production
- Petrochemical
- Chemical
- Power generation
- Water and wastewater treatment
- Food and beverage
- Pharmaceutical
- Pulp and paper
- Biotech
- Semiconductor

### Typical applications:

- Oil
- Water
- High and low pressure separators
- Oil and water interface
- Acids - hydrofluoric, hydrochloric, nitric, sulfuric, etc.
- Refined petrochemical - gasoline, propane, butane, ethylene, etc.
- Solvents - acetone, toluene, xy-

lene, naphtha

- Gas condensate
- Heat transfer fluids - diathermy, thermion and glycol
- Black, green and red liquor
- Refrigerants
- Alcohols
- Caustics
- Chlorine
- Steam condensate - boiler feedwater heater boiler drum level control
- Bitumen
- Vacuum tower bottoms
- Ammonia
- Liquid Sulphur
- Most liquid to liquid interfaces



## Mounting Type

### Side Mounted Magnetic Level Gauge

- Highly visible level indication with no process fluid in contact with the glass
- All construction in house by code certified welders
- Float designed and weighted for maximum accuracy
- Transmitter and switch options which can be installed, adjusted and maintained with no process interruption
- Safe for corrosive, flammable, toxic, high-temperature and high-pressure applications
- Rugged design- low or no maintenance

### Corrosive/Lightweight Magnetic Level Gauge

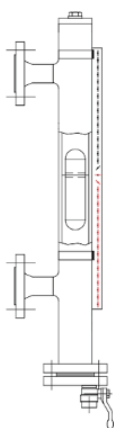
- PVC, CPVC, Polypropylene or PVDF construction (for lightweight MLGs)
- Titanium, Monel and Hastelloy (for corrosive applications)

### Heat Traced and High Temperature Insulation Magnetic Level Gauge

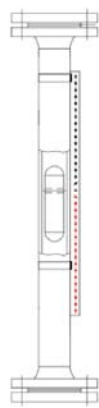
- Electrical or steam heat tracing
- Removable insulation

### Top Mount Magnetic Level Gauge

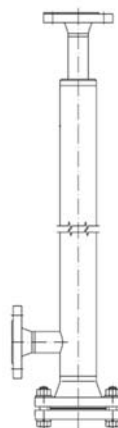
- Magnets above float connected with rod
- Slug catcher level
- Optional stilling wells
- Total or interface level measurement
- Underground tanks and sumps
- Fluids with magnetic particles
- Can be used with transmitters and switches



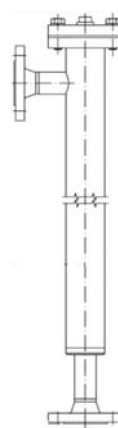
Side-Side



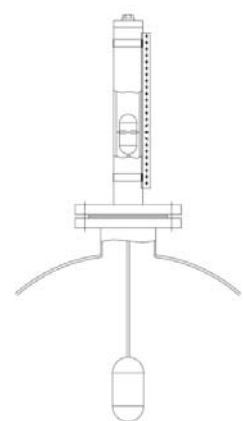
Top-Bottom



Top-Side



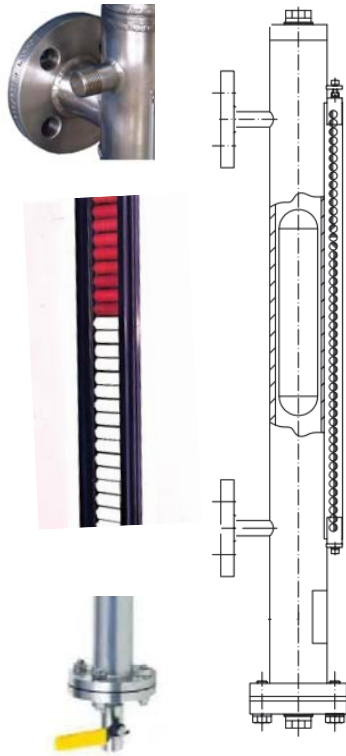
Bottom-Side



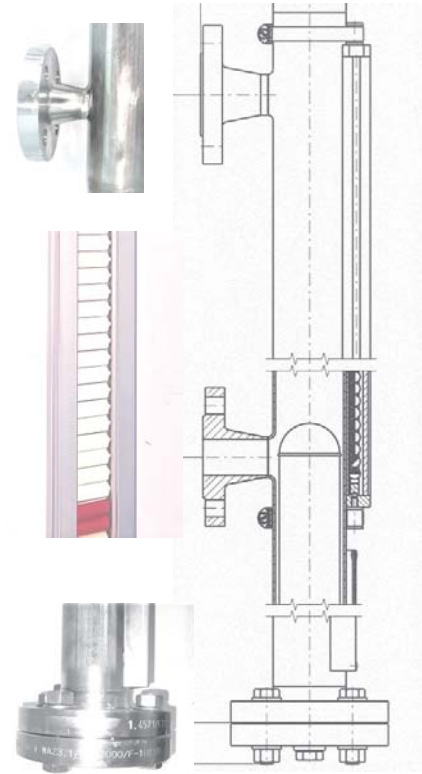
Top Mount



## Typical Application



**Economic**



**Standards**

The magnetic level gauge made in 2 main type :

- 1- Economical
- 2- Heavy duty

### Standards

- Measuring length: max. 6 m
- Operating temperature:  $T = -196 \dots +450 \text{ }^\circ\text{C}$
- Operating pressure:  $P = \text{vacuum to } 200 \text{ bar}$
- Limit density:  $\rho \geq 340 \text{ kg/m}^3$
- Material: stainless steel 304, 316, Inconel
- Wide variety of different process connections and materials
- Explosion-protected versions
- Accuracy transducer:  $\pm 1 \text{ mm}$
- Option: transmitter 4 - 20 mA, contacts

### Economic

- Measuring length: max. 6 m
- Operating temperature:  $T = -10 \dots +180 \text{ }^\circ\text{C}$
- Operating pressure:  $P = \text{vacuum to } 30 \text{ bar(a)}$
- Material: stainless steel 304 or 316
- Limit density:  $\rho \geq 340 \text{ kg/m}^3$
- Accuracy transducer:  $\pm 1 \text{ mm}$
- Option: transmitter 4 - 20 mA, contacts



## Accessories

### Steam or electrical heat trace

Used to uniformly heat or cool process fluid

### Magnetic traps

Fits in line with process connection  
Also available in integral configuration  
Air purge for roller

### Vibration Isolator Connections

Absorbs large amounts of vibration  
Eliminates signal distortion  
Recommended for use on compressor and pump skids

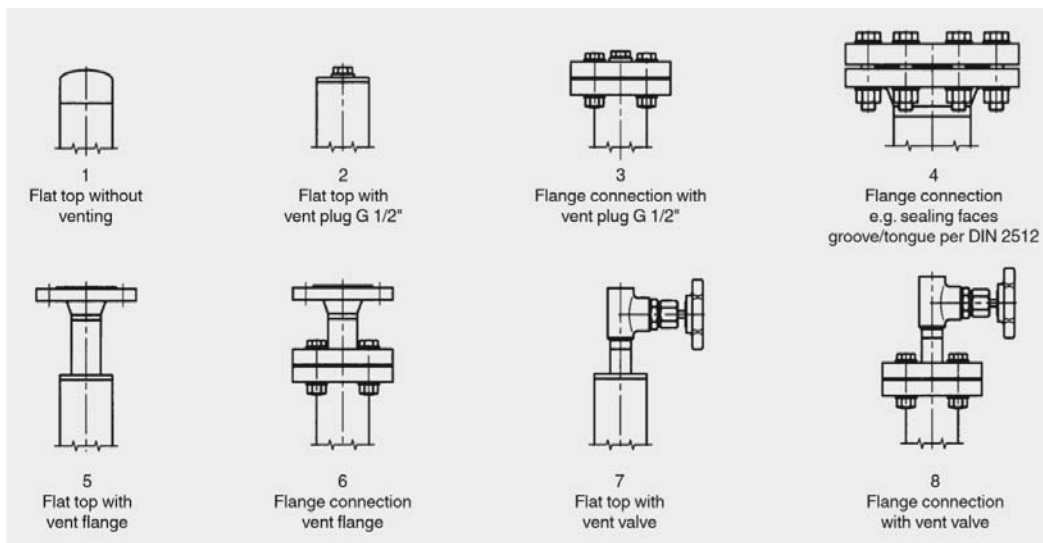
### Oversized chambers

Used to uniformly heat or cool process fluid allows vapors to pass floats when a fluid is close to vapor pressure and can be used in fluids with small suspended particles. Also used in conjunction with Teflon S coating for non-stick.

### High temperature insulation

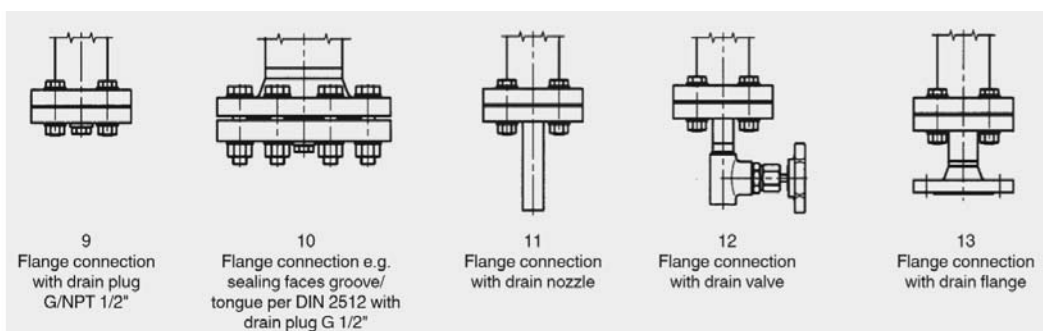
For extreme temperature environments, the ARAMAK magnetic level gauge is factory furnished/fabricated to offer high temperature insulation.

## Bypass Chamber end Top



Other ends on request

## Bypass Chamber end Bottom



Other ends on request



## Ordering Information

MLG	XX	XX	XXXX	XX	XXX	XX	XX	XXX	XXX	XX	XX	XX	XXX	XXX	XXX
<b>Design</b>															
Economic Type	ET														
Standards Type	ST														
<b>Mounting</b>															
Side-Side	SS														
Side-Bottom	SB														
Top-Bottom	TB														
Top Mount	TM														
Special	ST														
<b>Center to Center Distance (mm)</b>															
..... (mm, inside Diameter)		XXXX													
<b>Process Connection:</b>															
½"			I1												
¾"			I2												
1"			I3												
1 ½"			I4												
2"			I5												
Option			I6												
<b>Operating Fluid Density (kg/m3)</b>															
..... (Kg/m3)			XXX												
<b>Connection Rating</b>															
ANSI Class 150						A1									
ANSI Class 300						A2									
ANSI Class 600						A3									
ANSI Class 900						A4									
ANSI Class 1500						A5									
ANSI Class 2500						A6									
PN 10						P1									
PN 16						P2									
PN 25						P3									
PN 40						P4									
PN 63						P5									
PN 100						P6									
PN 160						P7									
NPT-Female						T1									
NPT-Male						T2									
G-Male						T3									
G-Female						T4									
Option						T5									
<b>Chamber and Wetted Part Material</b>															
316 / 316L stainless						I1									
310 stainless steel						I2									
321 stainless steel						I3									



## Ordering Information

22 % Cr duplex	I4							
Alloy 400	I5							
Alloy 625	I6							
Alloy 800	I7							
Alloy C276	I8							
PTFE	P1							
PVC	P2							
PTFE	P3							
Polyethylene	P4							
Polypropylene	P5							
Other	P6							
<b>Float Material</b>								
Titanium	I0							
316 / 316L stainless	I1							
304 / 304 L stainless	I2							
PTFE	P1							
PVC	P2							
PTFE	P3							
Polyethylene	P4							
Polypropylene	P5							
Other	P6							
<b>Chamber End Top (Fig.)</b>								
Flat Without End	FV0							
Flat with 1/2" vent Plug	FP1							
Flat with 3/4" vent Plug	FP2							
Flat with 1" vent Plug	FP3							
Flanged with 1/2" vent Plug	FV1							
Flanged with 3/4" vent Plug	FV2							
Flanged with 1" vent Plug	FV3							
High pressure Flanged	HV1							
Flat top with vent Flanged	FF1							
Flanged top with vent Flanged	FF1							
Flat Top with 1/2" vent valve	PP1							
Flat Top with 3/4" vent valve	PP2							
Flat Top with 1" vent valve	PP3							
Flange Top with 1/2" vent valve	PF1							
Flange Top with 3/4" vent valve	PF2							
Flange Top with 1" vent valve	PF3							
Other	PP0							
<b>Chamber End Bottom (Fig.)</b>								
Flanged with 1/2" Drain Plug	FV0							
Flanged with 3/4" Drain Plug	FP1							
Flanged with 1" Drain Plug	FP2							
High pressure Flanged	FP3							
Flanged Bottom with Drain Flanged	FV1							



## Ordering Information

Flange Bottom with 1/2" vent valve	FV3				
Other	PP0				
<b>Transmitter</b>					
Not Applicable	I0				
4-20 mA , 24 VDC, Loop powered	I1				
4-20 mA HART , 24 VDC, Loop powered	I2				
4-20 mA HART, Exia, 24 VDC, Loop powered	I3				
4-20 mA Exd , 24 VDC, Loop powered	I4				
4-20 mA HART, Exd , 24 VDC, Loop powered	I5				
Other	I6				
<b>Switch</b>					
Not Applicable	S1				
1 SPST, Reed switch, 1A @ 24VDC	S2				
1 SPDT, Reed switch, 1A @ 24VDC	S3				
2 SPST, Reed switch, 1A @ 24VDC	S4				
2 SPDT, Reed switch, 1A @ 24VDC	S5				
1 SPDT, SNAP Action, 4A @ 24VDC	S6				
2 SPDT, SNAP Action, 4A @ 24VDC	S7				
1 SPST, Reed switch, 1A @ 24VDC, Ex	E1				
1 SPDT, Reed switch, 1A @ 24VDC, Ex	E2				
2 SPST, Reed switch, 1A @ 24VDC, Ex	E3				
2 SPDT, Reed switch, 1A @ 24VDC, Ex	E4				
Other	O1				
<b>Isolating Valve</b>					
Not Applicable	0				
Gate Valve Stainless Steel	BC				
Ball Valve Stainless Steel	BS				
Other	O1				
<b>Certification</b>					
Material certificates	C0				
Material NACE MR0175	C1				
Material NACE MR0103	C2				
Internal Pressure Test	C3				
100% dimensional check	C4				
Hardness survey	C5				
Impact testing @ -196 °C (-320.8 °F)	C6				
Others	C7				
<b>Added requirements</b>					
Manufactured to customer drawing	DW				
Heated or Cooling Jacket	HJ				
Electrical Heat Trace	ET				
External Chamber	EC				
Vibration Isolator	VI				
Others	OT				





## Contact us

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