TANK GAUGE · FOR ATMOSPHERIC STORAGE TANKS

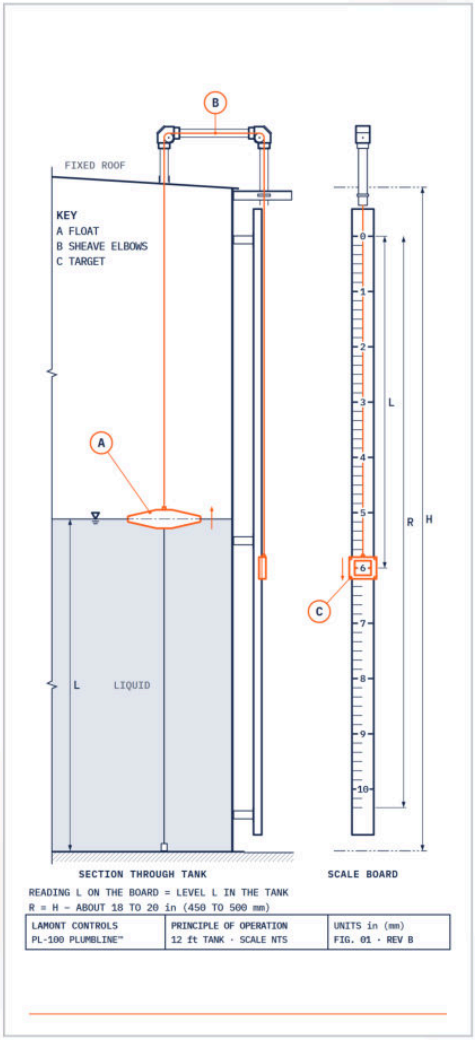
PLUMBLINE™

Float-and-board tank level gauge



Plumbline™ is a float-and-board level gauge, also known as a target level indicator, supplied by Lamont Controls for fixed-roof, vented atmospheric storage tanks. A stainless steel float in the tank is linked by a measuring wire to a target that travels on a scale board on the outside of the tank wall, where the level is read directly. The gauge requires no power and has no glass. Every penetration is on the tank roof; none is below the liquid level. Each gauge is supplied to suit the tank height, the specific gravity of the fluid and the scale units on the order.

MEASURING RANGE	TEMPERATURE	SERVICE
to 49 ft	**to 302** °F	**Atmospheric**
15 m · per order	150 °C · fluid	fixed-roof, vented



01 KEY HIGHLIGHTS

- Float-and-board (target) gauge for fixed-roof, vented atmospheric storage tanks
- Direct local reading on a scale board on the tank wall, from outside the tank
- No power, no electronics and no glass
- Every penetration on the tank roof; none below the liquid level
- Measuring range per order, up to 49 ft (15 m)
- Fluid temperatures to 302 °F (150 °C); suitable for outdoor installation
- Float, measuring wire, guide wires and bottom anchor in 304 stainless steel
- Scale in feet and inches or metric; vapour seal option (VS)

02 KEY BENEFITS

- Local reading for operators: read on the tank wall, from outside the tank, with no power and no electronics
- No gauge nozzles on the shell: no gauge connection below the liquid level
- Tall tanks: one scale board covers the measuring range
- Outdoor sites: ambient −4 to +176 °F (−20 to +80 °C)
- Set for the fluid: the float and counterweight are set for the specific gravity stated on the order

Supplied by Lamont Controls. For fixed-roof, vented atmospheric tanks only. Pressure and temperature ratings depend on materials, connections and configuration, and are confirmed at quotation.

+1 416 800 0739
info@lamontcontrols.com
www.lamontcontrols.com
800–120 Eglinton Ave E
Toronto, ON M4P 1E2
Canada

Technical specifications

PLUMBLINE FLOAT-AND-BOARD TANK LEVEL GAUGE

CATEGORY	OPTIONS / SPECIFICATIONS	
Measuring principle	Float and board (target type). A 304 SS float, held by two tensioned guide wires, is linked by a measuring wire over two sheave elbows on the roof to a counterweight with a target on a scale board outside the tank. As the level rises, the target descends; the scale is numbered from the top down.	
Output	None: a mechanical gauge for a local reading, with no power and no output signal. Where a level signal is needed, use a level transmitter, or a Lamont magnetic level gauge with a LevelSync™ transmitter.	
Service	Atmospheric: fixed-roof, vented storage tanks; the roof may be cone, dome or flat. Not for floating-roof or pressurized tanks.	
Typical services	Water and wastewater, fire and process water, crude and refined oils, fuels, glycols, vegetable oils and other liquids compatible with 304 SS; other services on application. Where water in the tank can freeze, or the liquid is not compatible with 304 SS, consult Lamont Controls Engineering.	
Temperature	Fluid	To 302 °F (150 °C)
	Ambient	−4 to +176 °F (−20 to +80 °C); suitable for outdoor installation
Measuring range	Per order, up to 49 ft (15 m); about 18 to 20 in (450 to 500 mm) less than the tank height.	
Specific gravity	Float and counterweight set for the specified SG; state the SG on the order.	
Indication	Reading	Target window with arrow pointers on a vertical scale board; scale numbered from the top down
	Graduation	2 in (50 mm)
	Scale	Feet and inches, numbered every foot, or metric, numbered every 0.5 m; black marking on 304 SS plates
Construction and materials	Standard construction, confirmed on the approval drawing.	
	Float	304 SS, sized at the factory for the specified SG
	Measuring wire	304 SS, Ø 0.06 in (1.5 mm)
	Guide wires (2)	304 SS, Ø 0.12 in (3 mm), 17.3 in (440 mm) apart, tensioned from the top anchors to the bottom anchor
	Top anchors (2)	316L SS with 304 SS; 1 in male, about 8.8 in (224 mm) long
	Bottom anchor	304 SS channel, 17.3 × 1.6 in (440 × 40 mm), bolted to the tank floor
	Sheave elbows (2)	304 SS, 4.9 × 4.9 in (124 × 124 mm); 1½ in female, for 1½ in pipe
	Counterweight with target	Carbon steel and cast aluminum, 5.9 × 4.7 in (150 × 120 mm), with arrow pointers
	Scale case	Cast aluminum channel, 4.7 × 1.8 in (120 × 45 mm)
	Scale plates	304 SS, 0.03 in (0.8 mm), 4.6 in (118 mm) wide, in sections of about 3 ft (914 mm)
	Brackets and supports	304 SS brackets and pipe support, cut to suit on site; 304 SS U-bolts and nuts for 1½ in pipe
Supplied by others	Roof penetrations	Three sockets on the roof: two 1 in for the top anchors and one 1½ in for the measuring wire
	Roof pipe	1½ in, galvanized or stainless, coated for corrosive service; at least 21.7 in (550 mm) between the two sheave elbows; straight within ±0.2 in (±5 mm)
	Bottom anchor fixing	To the tank floor: requires an empty tank and tank entry, and may require hot work
	Thread standard	For the sockets, pipe and fittings: confirmed at quotation
Installation and maintenance	Tank empty for installation. Float positioned away from fill inlets, or fit a float guide pipe. Annual check; clean the float in viscous service.	
Options	F · M	Scale units: feet and inches (F) or metric (M)
	VS	Vapour seal: U-seal pot filled with silicone oil, in carbon steel and aluminum or in stainless steel, with a 1½ in union and nipple; for toxic or odorous vapours
	Float guide pipe	Protects the float at fill inlets and in turbulence; supplied by others, or on request
Ordering code	PL-100 · scale F or M · range in or mm · material 4 (304 SS) · thread confirmed at quotation · option VS. Specific gravity, fluid, temperature and tank height are stated on the order datasheet.	
Documentation	Sales drawings are sent on request, after review. The approval drawing is issued after the purchase order.	
Ordering	Request a quotation at lamontcontrols.com/request-a-quote with the tank height and diameter, roof type, fluid, specific gravity, temperature and scale units. One request can cover several tanks, with a tag number for each.	

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