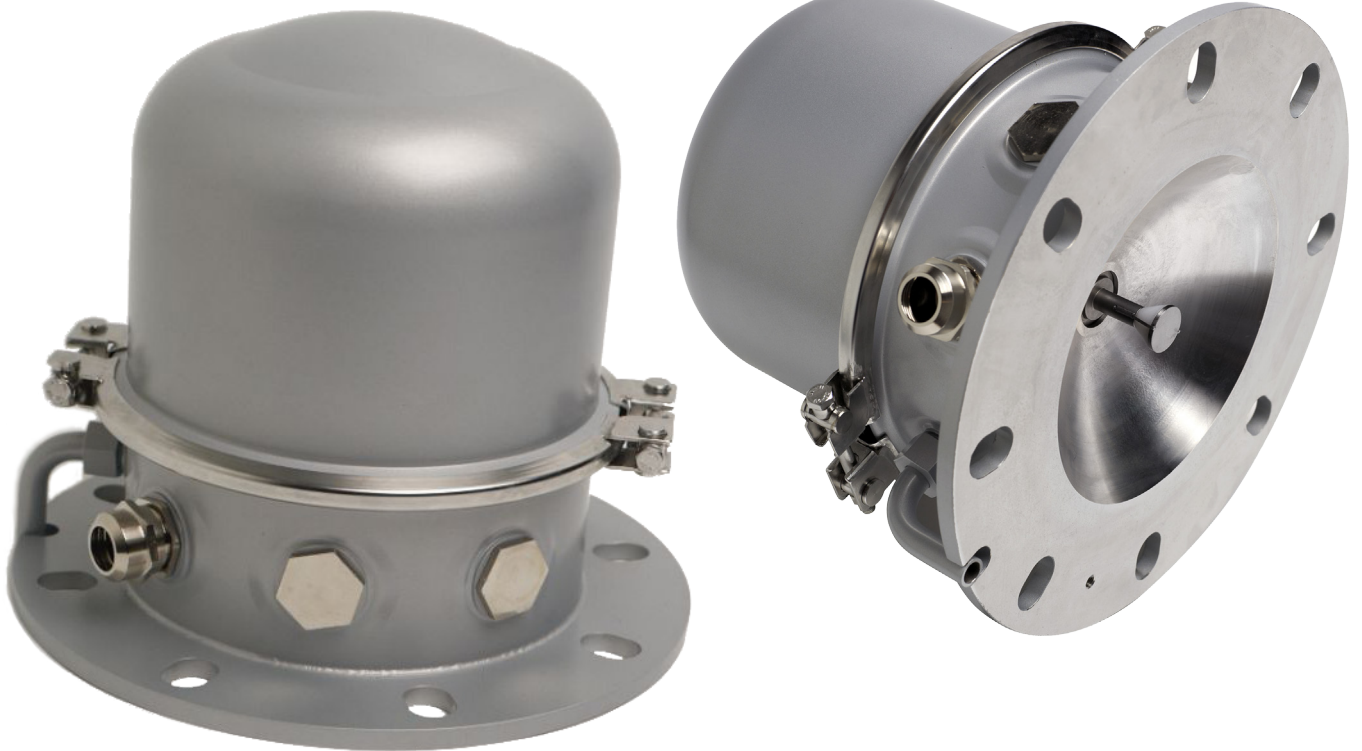


# Rosemount TGU58 Parabolic Antenna Gauge



## Description

The gauge uses intrinsic safe FMCW radar technology. It is designed with the intelligence that processes tank signals locally. The advantage is better and faster tracking of echoes in tank, to pick up the reflected signal for level calculation.

By using 26 GHz the size of the parabolic antenna has been reduced to fit an 8" tank opening.

With a low socket height, the antenna is positioned close to tank atmosphere. The seamless, in-flange integrated antenna handles temperature gradient to minimize condensation and cargo build-up effects.

A narrow beam width of  $\pm 2.0^\circ$ , has been achieved by improved signal handling.

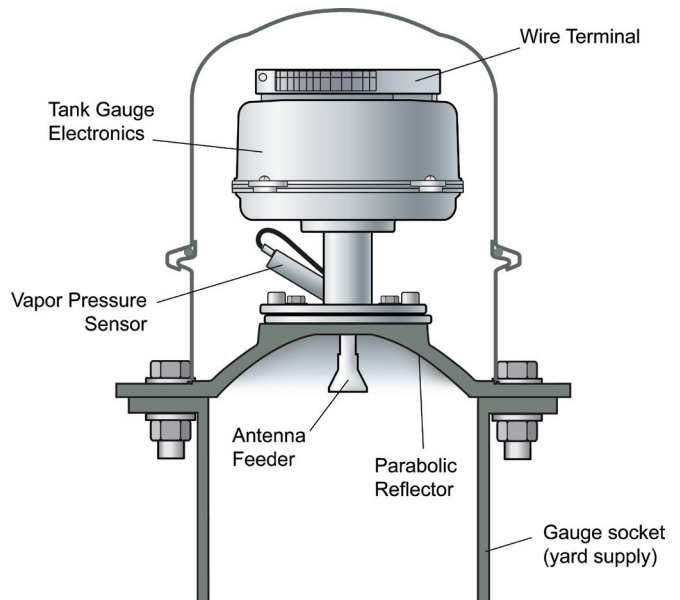
An other advantage is that the radar beam can be adjusted at time of commissioning to avoid unwanted reflections that disturb the measurement, simplifying installation process and securing robust measurement. This makes it easy to find a good location for the gauge on deck.

The antenna feeder is well protected in the stainless steel parabolic antenna reflector, for a sustainable installation.

The vapor pressure sensor is mounted inside the radar gauge and connected to the breather to provide relative tank pressure.

## Benifits

- 26 GHz FMCW radar with narrow radar beam for an accurate and reliable level measurement
- Seamless, in-flange integrated antenna—withstands harsh conditions in tank
- Easy to install and fit on deck thanks to the compact and light-weight gauge
- Robust, withstands harsh conditions on deck
- Integrated vapor pressure sensor
- Cost-effective solution with sensor bus for temperature sensors, cleaning machines and local display
- Independent 2-in-1 and 3-in-1 radar channels for level redundancy or High Level & Overfill alarm in a single deck penetration




## Applications

Rosemount TankRadar TGU58 can be installed on deep tanks and is suitable to all type of vessels including VLCC and ULCC. The gauge is equally suitable for cargo and slop tanks.

Additional measurement channels can be added for optional redundant level measurement or High Level & Overfill Alarm.

## Technical Specification

TGU58	
<b>Gauge</b>	
Measuring range	0 to 35 m
FMCW centre frequency	26 GHz
Instrument accuracy	±2 mm
Ambient temperature	-40 to +70° C
Cable to control room	Up to 3 cables with two or three twisted pairs with common shield. Max length 400 m
Number of cable inlets	Up to 3 inlets (Ø 6 - 21 mm cable)
Half power beam width	±2.0° (lobe angle from antenna axis) <sup>1</sup>
Flange	JIS 5K-200, DN200. (Pipe diameter 8" or 200 mm)
Deck socket height (Yard supply)	150 mm (standard)
Material facing tank atmosphere	Stainless steel 316L, PTFE, Fluor silicon (standard) or Kalrez 6375 (optional)
Material facing deck	Stainless steel 316L
Weight (deck socket excluded)	16.5 kg (35 lbs.)
Sealing	IP 66/67
Explosion protection	Intrinsically safe: ATEX:  II 1G Ex ia IIC Ga T4 IECEX: Ex ia IIC Ga T4

1) For details see Installation Manual.

Optional	
<b>Channels</b>	
No. of independent channels	Up to 3 for Level, Redundant level, High Level and/or Overfill Alarm
<b>Vapor Pressure</b>	
Operating range	-100 to 300 mBar alt. -100 to 900 mBar
Instrument accuracy	±3 mBar
Material facing tank atmosphere	Alloy C276
Housing material	Stainless steel

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