Experience a **safe**, **accurate**, and **reliable** process in **challenging applications**.

The world's **most trusted** Guided Wave Radar level transmitter, the **Rosemount™ 5300**.

**Common Challenges**

Level is critical for safe operations, and good measurement helps to optimize plant performance. Application challenges include:

- Phase changes
- Extreme high pressures and temperatures
- Magnetite coating
- Vibrations
- Density changes

**Benefits of the Rosemount 5300 Guided Wave Radar**

- Independent of density changes
- Handles high pressure and temperature
- No moving parts
- Easy to install and configure
- Direct level measurement
- No calibration and zeroing
- Compensates for vapor space changes

**Advanced Technology: Dynamic Vapor Compensation**

- Helps optimize plant performance, improves safety and reduces field trips
- Uses non-mechanical techniques
- Decreases the risk of production interruptions and increases throughput with an optimized thermal cycle
- Compensates for attenuation in vapor space during saturated steam conditions, providing accurate and reliable measurement in extreme conditions
Dynamic Vapor Compensation Functionality

Operating Principle

Dynamic Vapor Compensation works by using a target at a fixed distance. Knowing where the reflector pulse should be without any vapor, the distance between the target and the apparent reflector point is calculated.

Safe at Extreme High Pressure and Temperatures

Robust process seal design with multiple layers of protection, each resisting the maximum temperature and pressure, increases reliability and prevents leakage, which is vital for safety.

Rosemount 5300 Specification

| Output | Loop-powered 4-20mA HART™, Modbus™, FOUNDATION™ Fieldbus |
| Temp/Pressure rating | -320 to 752 °F (-196 to 400 °C) / Full vacuum to 5000 psig (345 bar) |
| Configuration | Customized PC setup and support software, AMS Suite / Field Communicator (e.g. Emerson 375/475) |
| Process connections | Threaded, flanged, Tri-Clamp® |
| Probe materials | Stainless steel or PTFE covered, Duplex 2205, Alloy C-276, Alloy 400 |
| Diagnostics | Enhanced diagnostic capabilities |
| Challenging applications with single lead probe | Level and interface, coating products, disturbing electromagnetic interference, turbulent hydrocarbons, saturated steam, solids |
| Approvals | ATEX, IECEx, CSA, FM, NEPSI, Steam boiler (EN 12952/12953), EAC Overfill protection (DIBt/TÜV WHG) |
| Safety Instrumented Systems | IEC 61508 certified to SIL 2 |

Phase Changes

With Dynamic Vapor Compensation your readings are correct all the time, even during start-up and shut-down, providing constant reliable measurement up to pressures of 5000 psi (345 bar) and temperatures of 752 °F (400 °C).

Applications

Good fit for safety applications requiring SIL/SIL2 rating according to IEC. These include high pressure saturated steam applications in power and industrial steam systems such as boiler drums, steam separators, deaerators and high pressure feed water heaters, etc.