

# Rosemount™ Bulk Solids Level Measurement



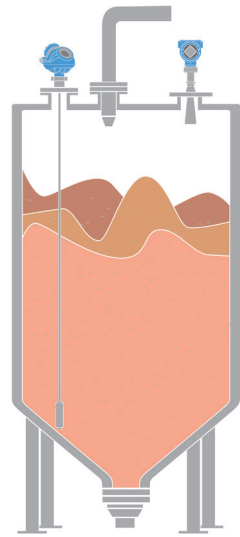
**The full portfolio of solids level measurement products.**





## Solids Level and Volume Measurement

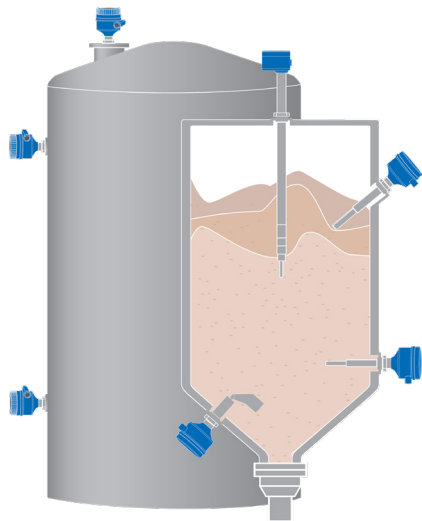
Take the guesswork out of measuring solids with reliable, accurate, and safe level measurement, and manage bulk solids inventory with the Rosemount portfolio of solids transmitters and switches.



### Process and Level Control Applications

- Different sized silos
- Rapid level changes
- Internal obstructions

Process conditions can vary widely: silos may be small or narrow and internal structures can prove challenging. Rapid, repeatable measurement is needed to keep processes under control. Our portfolio of point and continuous level devices suit all types of installation.



### Point Measurement Applications

- Wide variety of silo types
- Risk of overflow/overspill or run-dry
- Flexible automation solutions needed

Protecting your process from risk of overflow or run-dry prevents costly and potentially hazardous clean up and repairs. Make your process safer and more efficient with a choice of easy-to-install solids switch technologies.

## Rosemount 5408 Non-Contacting Radar

- Robust design for tough environments
- Air purging antenna for dusty environments
- Suitable for a wide range of solid media
- Unique diagnostics: Signal Quality Metrics enables preventive maintenance

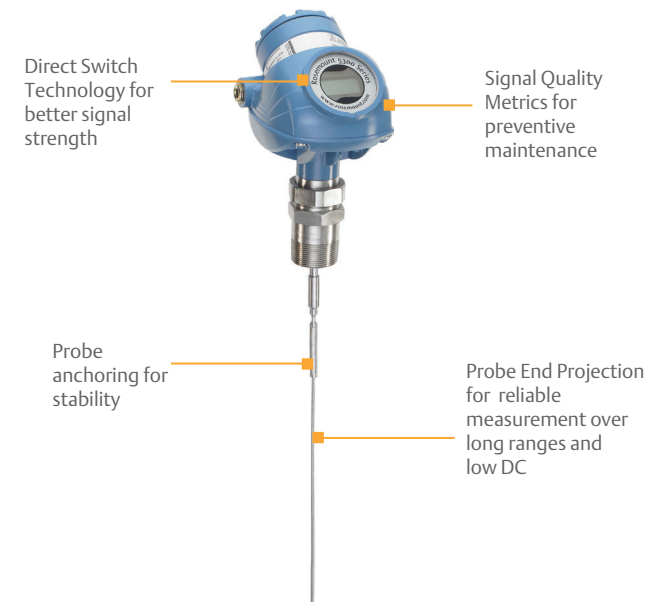


### APPLICATIONS

Small- to medium-sized vessels and internal obstructions.  
Fast changing levels and heavy materials.  
Material with low dielectric constant.

## Rosemount 5303 Guided Wave Radar

- Ideal solution for smaller silos with rapid level changes
- Unaffected by dust or other disturbing process conditions
- Achieve robust measurement despite presence of internal obstacles
- Handles media with low dielectric constants

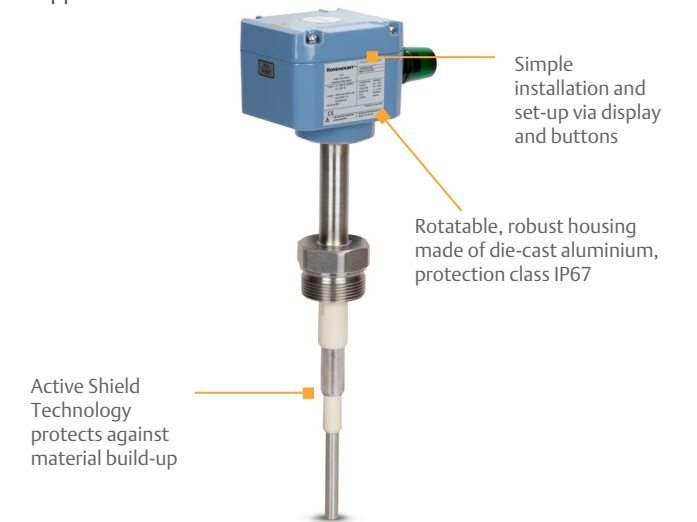


### APPLICATIONS

Small vessels and long distances.  
Fast changing levels and restricted installation areas.  
Material with low dielectric constant.

## Rosemount 2555 Capacitance Switches

- Universal sensor for most bulk materials, independent of particle size
- Measurement of low dielectric values (from 1.5)
- Continuous self-diagnostic probe function
- Suitable for high mechanical loads and high temperature/pressure applications

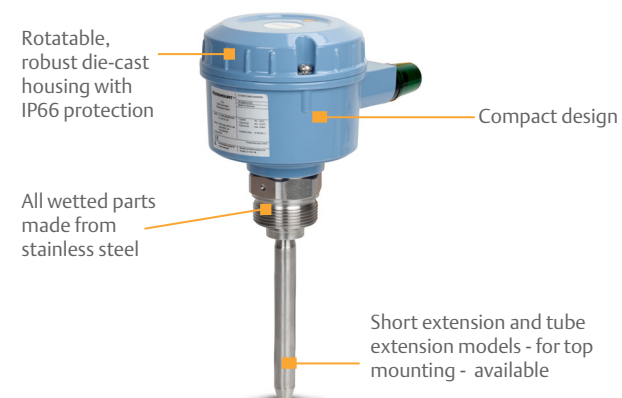


### APPLICATIONS

Bulk solids in all applications, particularly suitable where there is risk of coating or if high vibration is present.  
Ideal for sand, cement, and mining applications.

## Rosemount 2535 Vibrating Rod Switches

- Ideal for use in fine-grained and powdered materials
- Reliable, simple, and maintenance-free measurement principle
- Compact design - ideal for installation in tanks with limited space
- Easy installation - no orientation adjustment

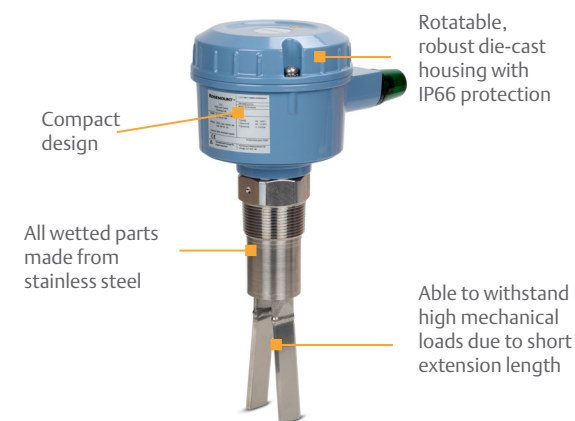


### APPLICATIONS

Storage silos and process vessels/containers with limited space.  
Materials with light product density, fine-grained and powdered products.  
Applications requiring pneumatic filling.

## Rosemount 2511/2521 Vibrating Fork Switches

- Ideal for use in bulk and powdered materials
- Reliable, simple and maintenance-free measurement principle
- Designed for point level detection and interface measurement
- Robust sensor ideal for media demanding high mechanical resistance

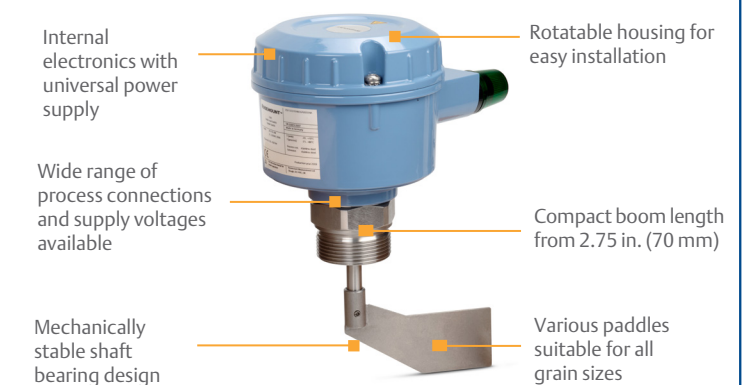


### APPLICATIONS

Storage silos and process vessels/containers with limited space.  
Materials with light product density, fine-grained, and powdered products.  
Applications requiring pneumatic filling.

## Rosemount 2501 Rotating Paddle Switches

- Particularly suitable for small process vessels and bulk solids
- Robust paddle design able to withstand heavy loads and extreme temperatures
- Unaffected by dust, electrostatic charging, and caking
- Long lifetime: mechanical hysteresis prevents frequent activation cycles



### APPLICATIONS

Most bulk solids applications, including high temperature and hazardous/explosive environments.  
Ideal for food and beverage, plastics, and chemical applications.

# Rosemount Bulk Solids Measurement Technologies

## Specification and selection guide: Continuous

		5303	5408
Measurement	Guided wave continuous level measurement	+	-
	Non-contact continuous level measurement	-	+
	Unaffected by dust generation	+	+
	Single point measurement	+	+
	Beam angle	NA	4.5-18° <sup>1</sup>
Output	4-20 mA	+	+
	4-20 mA with HART™	+	+
	FOUNDATION™ Fieldbus	+	+
	RS485/Modbus®	+	-
	WirelessHART™ with Emerson Wireless 775 THUM™ Adapter	+	+
Performance	Maximum measuring range	164 ft/50 m	131 ft/40 m
	Reference accuracy	±0.1 in./3 mm	0.08 in./2 mm
Features	Air-purging	-	+
	Probe End Projection	+	-
Process temperature	-40 to 302°F (-40 to 150°C)	+	+
	-76 to 482°F (-60 to 250°C)	-	+

**KEY:**

+ Available - Not available  
1 Dependent on antenna choice

## Specification and selection guide: Point

		Paddle 2501	Fork 2511	Fork* 2521	Rod 2535	Capacitance 2555
Output	Relay DPDT	+	+	-	+	+
	Relay SPDT	+	-	+	-	-
	3-wire PNP	-	+	-	+	-
Process Temperature	-40 to 302 °F (-40 to 150 °C)	+	+	+	+	+
	-40 to 932 °F (-40 to 500 °C)	+	-	-	-	+
	-40 to 2012 °F (-40 to 1100°C)	+	-	-	-	-

**KEY:**

+ Available - Not available  
\* High sensitivity model

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