

Application & Configuration Data Sheet

Always fill out the Application Section for ordering and pre-order support.

Fill out the Application Section AND the Configuration Section if the C1 option is ordered.

For a complete list of C1 parameters see last page.

Bold parameters are very important for evaluation of the application and configuration of the device. They should always be filled out.

APPLICATION SECTION

Always fill out this section.

Customer and Sales Person Information

Customer/ End User: _____ Customer Contact: _____

Field Sales Person: _____ Customer Phone/E-mail: _____

Final Destination: _____
 (city), (state, province), (country)

Industry:

<input type="checkbox"/>	Chemical
<input type="checkbox"/>	Food and Beverage
<input type="checkbox"/>	Life Sciences
<input type="checkbox"/>	Metals and Mining
<input type="checkbox"/>	Oil and Gas

<input type="checkbox"/>	Power
<input type="checkbox"/>	Pulp and Paper
<input type="checkbox"/>	Refining
<input type="checkbox"/>	Water and Waste Water
<input type="checkbox"/>	Other _____

Process Information

Process Name: _____ **Measurement Type:**

<input type="checkbox"/>	Liquid Level
<input type="checkbox"/>	Interface

<input type="checkbox"/>	Solid Level
<input type="checkbox"/>	Level/Interface

Process Media: _____ **Dielectric Constant⁽¹⁾:**

<input type="checkbox"/>	1.4-1.9
<input type="checkbox"/>	1.9-2.5
<input type="checkbox"/>	2.5-4.0

<input type="checkbox"/>	4.0-10.0
<input type="checkbox"/>	>10
<input type="checkbox"/>	Unknown

Process Temperature:

Min: _____ degrees F
 degrees C

Max: _____ degrees F
 degrees C

Process Pressure:

Min: _____ psig
 bar

Max: _____ psig
 bar

(1) If Interface Measurement, enter Dielectric Constant of lower product. Dielectric Constant of upper product is entered on page33.

Rosemount Radar Level Transmitters

Process Information (Continued)

Vapor Present: None Medium
 Light Heavy

Turbulence Type: Calm Surface If turbulent, it is due to Chemical Reaction
 Gently Stirred Bubbling/boiling
 Turbulent Agitation
 Air lance
 Splashing during fill

Foam Present: Not Applicable if foam, it is Light (Airy)
 Occasionally Medium
 Constantly Heavy (Dense)

Foam Thickness: _____ Inches
 Millimeters

Rapid Level Changes⁽¹⁾: No
 >1.6 in./s (40 mm/s)
 > 3.9 in./s (100 mm/s)

Product Build-up: None
 Film
 Heavy

Viscosity Most Similar To: Water Honey
 Machine Oil Syrup/Molasses
 Olive Oil Tar

at Temperature: _____ degrees F
 degrees C

(1) Due to overall level changes, not to turbulent surface.

Process Information (Continued)

For Interface Products Only⁽¹⁾

Upper Product: _____

Maximum Upper Product Thickness: _____ mm m ft in

Upper Product Dielectric Constant: _____

Fully Submerged Probe⁽²⁾ No Yes

(1) Requires the Rosemount 3300.

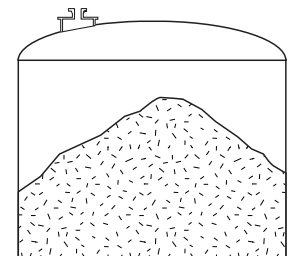
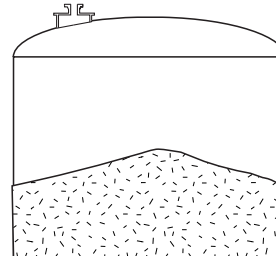
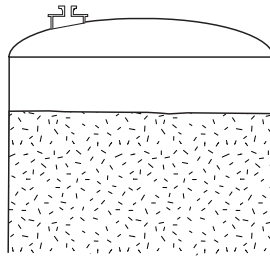
(2) If the probe is fully submerged at all times, the Rosemount 3301 can be used for measuring the interface between the upper and the lower product.

For Solid Products Only⁽¹⁾

Dust: None Constantly Occasionally

Particle Size Most Similar To: Wood chips Fine dust (flour, cement) Grains (rice, corn)
 Small stone/gravel Small rocks/chunks (limestone)

Fill Cycle Surface Profile: Relatively Flat Moderate incline Steep Incline



Material Density: _____ lbs/ft³
 kg/l

(1) Requires the Rosemount 3300 or 5600.

Rosemount Radar Level Transmitters

Tank Geometry (Required for C1 option)

Tank Shape: Unknown Vertical cylinder
 Spherical Horizontal Cylinder
 Cubical Other (describe: _____)

Tank Material of Construction: Metal Glass lined
 Non-metal Other: _____

Tank Bottom: Unknown
 Flat
 Dome/Dish/Bullet
 Cone
 Other (Inclined or obstructed due to heating coils, pipes, etc.).

Reference Height (R): _____ mm m ft in

Tank Diameter(D): _____ mm m ft in

Tank Nozzle Distance to Wall (d): _____ mm m ft in

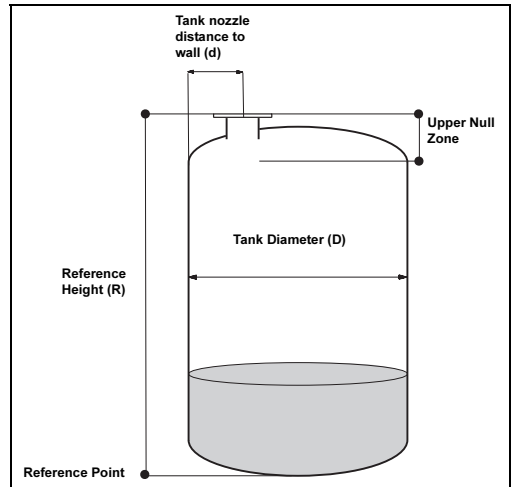
Agitator⁽¹⁾: No Yes

Baffles⁽¹⁾: No Yes

Heating Coils⁽¹⁾: No Yes, around the inside of the tank wall
 Yes, across the tank bottom

Other Internal Obstacles⁽¹⁾: No Yes

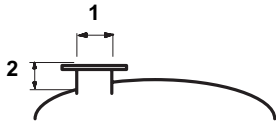
Upper Null Zone⁽²⁾: _____ mm cm m ft in



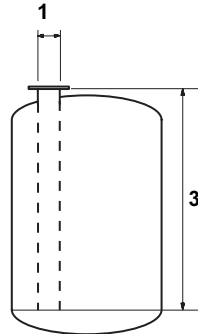
(1) If the answer to this question is 'Yes', please provide a drawing.
 (2) The transmitter will not consider echoes in this area. Normally set to suppress nozzle echoes. Preset for 5400 and 5600 based on antenna selection.

Fitting Dimensions

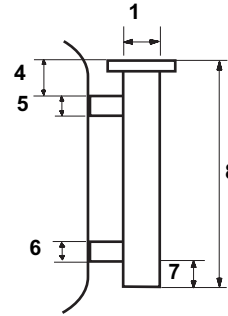
Nozzle



Stilling Well



Bypass Pipe



1. Flange / Thread

- 1-in. NPT / G
- 1.5-in. NPT / G
- 2-in. / DN 50
- 3-in. / DN 80
- 4-in. / DN 100

- 6-in. / DN 150
- 8-in. / DN 200
- Fisher 249B (for Rosemount 3300, bypass pipe)
- Fisher 249C (for Rosemount 3300, bypass pipe)
- Masoneilan (for Rosemount 3300, bypass pipe)

Pressure Class

- 150 lb.
- 300 lb.
- 600 lb.

- 900 lb.
- 1500 lb.
- PN 16

- PN 40
- PN 64
- Other _____

Dimensions

Nozzle 2. _____ in. ft mm cm m

Stilling Well 3. _____ in. ft mm cm m

Bypass Pipe 4. _____ in. ft mm cm m

- 5. _____
- 6. _____
- 7. _____
- 8. _____

Mounting Nozzle has a valve
 Is an isolation window desired?

- Yes No
- Yes No

Additional Application Information

Preferred Device Type: Contacting Non-Contacting

Additional Comments: _____

Rosemount Radar Level Transmitters

CONFIGURATION SECTION

Fill out this section if the C1 option (basic pre-configuration) is ordered.

Note that the Application Section is required also.

★ Indicates Default Factory Configuration

Customer Information, Model Code, and Tagging Information (Required for C1 option)

Model Number: (Options)

PO Number: _____ SO Number: _____

Hardware Tag: (21 characters max) Software Tag: (8 characters max)

Unit Selection

Variable Units
Use the chosen variable when filling in values in this form

Level: ft in m mm ★
Volume: cubic feet US gals cubic meters ★ oil barrels

Analog Output (4-20 mA analog output) (Not applicable for FOUNDATION fieldbus devices)

Analog Output 1

Primary Variable Assignment:

- Level ★
- Distance
- Upper Product Thickness (3300 only)
- Signal Strength (5400 and 5600 only)
- Interface Level (3300 only)
- Interface Distance (3300 only)
- Volume

Lower Range Value (4mA): _____

Upper Range Value (20mA): _____

Secondary HART® Variable Assignment⁽²⁾:

- Level ★
- Distance
- Interface Level (3300 only)
- Interface Distance (3300 only)
- Upper Product Thickness (3300 only)
- Signal Strength (5400 and 5600 only)
- Volume

Analog Output 2⁽¹⁾

Variable Assignment:

- Level
- Distance
- Signal Strength
- Volume

Lower Range Value (4mA) _____

Upper Range Value (20mA) _____

⁽¹⁾ Requires the Rosemount 5600.
⁽²⁾ If an Analog Out 2 variable is selected, the Secondary HART variable will have the same variable assignment.

LCD Meter Configuration - Only if M1 is ordered⁽¹⁾

Variables: Level Distance Volume⁽²⁾ Interface Level⁽³⁾
 Interface Distance⁽³⁾ % of Range Upper Product Thickness⁽³⁾ Signal Strength⁽⁴⁾

Variable units according to previous table. Carousel Toggling is used to present more than one variable.

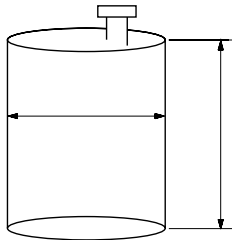
- (1) Pre-configuration of display requires the Rosemount 3300 or 5400.
- (2) For meaningful volume units, the remainder of this CDS needs to be filled out.
- (3) Requires the Rosemount 3300.
- (4) Requires the Rosemount 5400 or 5600.

Volume Calculation (If applicable)

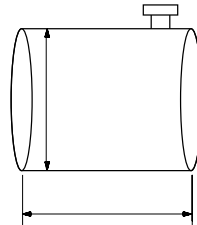
Volume is calculated based on ideal shapes or by a strapping table. If volume calculation based on strapping table is needed, please provide an additional file with volume table to be imported, or fill in the next page.

If your tank is ideal shape, please select from below. Add dimensions for the selected shape.

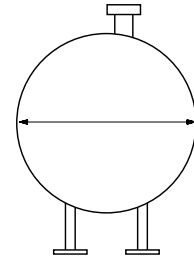
Vertical Cylinder
 Dimensions (*include units*):



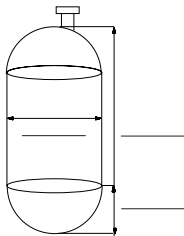
Horizontal Cylinder
 Dimensions (*include units*):



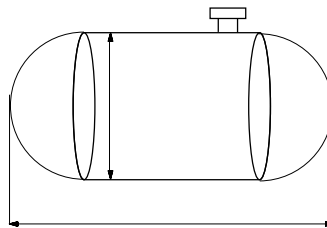
Sphere
 Dimensions (*include units*):



Vertical Cylinder with Bullet Ends⁽¹⁾
 Dimensions (*include units*):



Horizontal Cylinder with Bullet Ends⁽¹⁾
 Dimensions (*include units*):



(1) Requires the Rosemount 3300 or 5400.

Rosemount 3300 Series

Rosemount 5600 Strapping Table		
<input type="checkbox"/> Pre-configuration of strapping table available for Rosemount 5600. Strapping table is available for the Rosemount 3300 and 5400 also, but is not included in C1 basic pre-configuration for these transmitters. The maximum number of strapping table points are 10 for the Rosemount 3300, 20 for the Rosemount 5400, and 100 ⁽¹⁾ for the Rosemount 5600. Data may be submitted to the factory using a data spreadsheet program.		
Strap Point Number	Level	Volume
1	(Bottom of Tank)	
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		

(1) If pre-configuration of more than 20 strapping points is required, please provide a separate file with values.

C1 parameters

3300: Hardware Tag, Software Tag, Dielectric Constant/s, Primary Variable Assignment, Secondary Variable Assignment, Variable Units Level, Variable Units Volume, LRV, URV, RGH, Upper Null Zone, LCD Configuration, Volume Configuration (Ideal Tank Shapes)

5400: Hardware Tag, Software Tag, Dielectric Constant, Turbulence Type, Foam Type, Rapid Level Changes, Variable Unit Level, Variable Unit Volume, Primary Variable Assignment, LRV, URV, Tank Shape, Tank Bottom, RGH, LCD Configuration, Fitting Type, Pipe Diameter, Volume Configuration (Ideal Tank Shapes)

5600: Hardware Tag, Software Tag, Dielectric Constant, Rapid Level Changes, Solid Product, Foam, Turbulence, Tank Shape, Tank Bottom, RGH, Primary Variable Assignment, LRV, URV, Secondary Variable Assignment (if ordered), Secondary LRV, Secondary URV, Volume Configuration (Ideal Tank Shapes or Strapping Table)

Rosemount Level Solutions

Emerson provides a complete range of Rosemount products for level measurement applications.

Pressure – Level or Interface Measurement

Emerson has a complete line of Rosemount pressure transmitters and remote seals for measuring level or interfaces in liquid applications. Optimize performance with direct mount, Tuned Seal systems:

- Rosemount 3051S_L, 3051L, and 1151LT Liquid Level Transmitters
- Rosemount 1199 Remote Diaphragm Seals with direct mount or capillary connections

Guided Wave Radar – Level and Interface Measurement

The reliable Rosemount 3300 Series consists of:

- Rosemount 3301 for level measurements of liquids and solids
- Rosemount 3302 for level and interface measurement of liquids

Both can be equipped with a wide range of probes for different applications.

Non-contacting Radar – Level Measurement

The Rosemount non-contacting radar family consists of:

- Rosemount 5400 Series Transmitters – The two loop-powered models utilize different transmitter frequencies, and both can be equipped with a wide range of antennas for liquid level measurement in most applications and process conditions
- Rosemount 5600 Series Transmitters – These radar level transmitters have ultra-high sensitivity and are the perfect choice for measuring level of liquids and solids, even for the most challenging applications

Vibrating Fork Switches – Point Level Detection

The Rosemount 2100 Series is developed for reliable point level measurement of liquids and consists of:

- Rosemount 2110 Compact Vibrating Fork Liquid Level Switch
- Rosemount 2120 Universal Vibrating Fork Liquid Level Switch

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