

## Application and 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"/> Power
	<input type="checkbox"/> Food and Beverage	<input type="checkbox"/> Pulp and Paper
	<input type="checkbox"/> Life Sciences	<input type="checkbox"/> Refining
	<input type="checkbox"/> Metals and Mining	<input type="checkbox"/> Water and Waste Water
	<input type="checkbox"/> Oil and Gas	<input type="checkbox"/> Other _____

#### Process Information

Process Name: \_\_\_\_\_ Measurement Type:  Liquid Level  Solid Level  
 Interface  Level/Interface

Process Media: \_\_\_\_\_ Dielectric Constant<sup>(1)</sup>:  1.4-1.9  4.0-10.0  
 1.9-2.5  >10  
 2.5-4.0  Unknown

Process Temperature:

Minimum: \_\_\_\_\_  degrees F  
 degrees C

Maximum: \_\_\_\_\_  degrees F  
 degrees C

Process Pressure:

Minimum: \_\_\_\_\_  psig  
 bar

Maximum: \_\_\_\_\_  psig  
 bar

**Process Information (Continued)**

Is Vapor Present:  None  Light  Medium  Heavy

Turbulence Type:  Calm Surface  Gently Stirred  Turbulent Conditions

Turbulence due to:

- Chemical Reaction
- Bubbling/boiling
- Agitation
- Air lance
- Splashing during fill

Foam Present:  Not Applicable  Occasionally  Constantly

Foam Type:  Not Applicable  Light (Airy)  Medium  Heavy (Dense)

Foam Thickness: \_\_\_\_\_  Inches  Millimeters

Rapid Level Changes<sup>(2)</sup>  No  >1.6-in./s (40 mm/s)  > 3.9-in./s (100 mm/s)

Product Build-up Potential:  None  Film  Heavy

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

at Temperature: \_\_\_\_\_  degrees F  degrees C

(1) If Interface Measurement, enter DC of lower product. DC of upper product entered on Page 2.

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

# Rosemount 5600 Series

**Process Information (Continued)**

**For Interface Products Only<sup>(1)</sup>**

Upper Product: \_\_\_\_\_

Maximum Upper Product Thickness: \_\_\_\_\_  mm  m  ft  in

Upper Product Dielectric Constant: \_\_\_\_\_

Fully Submerged Probe<sup>(2)</sup>  No  Yes

*(1) Not available with the Rosemount 5400 and 5600.*

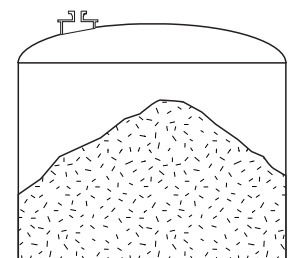
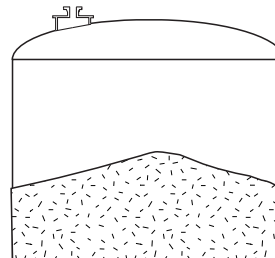
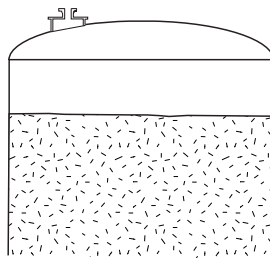
*(2) If the probe is fully submerged at all times, the Rosemount 3301 can be used for measuring the interface between the upper and the lower product.*

**For Solid Products Only<sup>(1)</sup>**

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/ft<sup>3</sup>  
 kg/l

*(1) Available with the Rosemount 3300 and 5600 only.*

**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

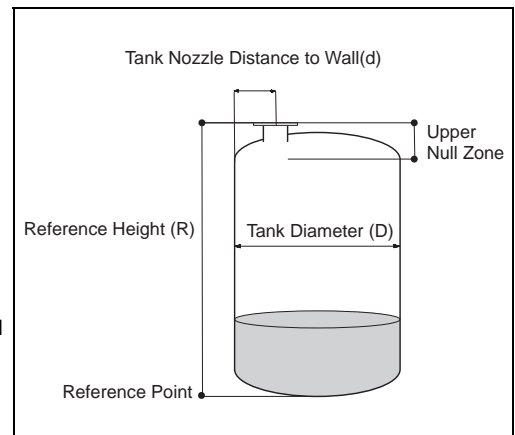
**Agitator<sup>(1)</sup>:**  No  Yes

**Baffles<sup>(1)</sup>:**  No  Yes

**Heating Coils<sup>(1)</sup>:**  No  Around inside of tank wall  
 Across Tank bottom

**Other Internal Obstacles<sup>(1)</sup>:**  No  Yes

**Upper Null Zone<sup>(2)</sup>:** \_\_\_\_\_  mm  cm  m  ft  in



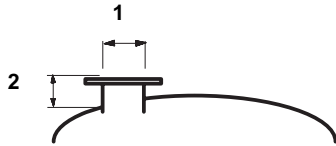
(1) If the answer to this question is 'Yes', please provide a drawing.

(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.

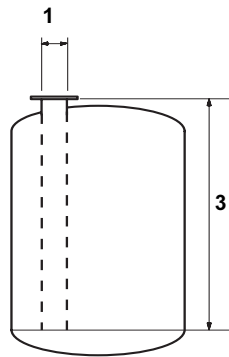
# Rosemount 5600 Series

## Fitting Dimensions

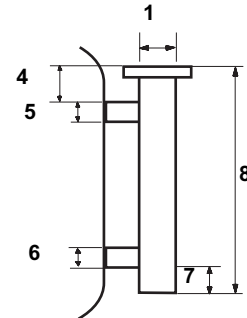
Nozzle



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.

- 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: \_\_\_\_\_

## 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

**Variable Assignment (available in all Radar Transmitters, unless noted)**

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

**Lower Range Value (4mA):**

**Upper Range Value (20mA):**

Other HART Variable Assignments:

SV (Available in all Radar Transmitters, unless noted)<sup>(2)</sup>:

- 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<sup>(1)</sup>

**Variable Assignment:**

- Level       Distance
- Signal Strength       Volume

Lower Range Value (4mA)

Upper Range Value (20mA)

(1) Available with the Rosemount 5600 only.

(2) If an Analog Out 2 variable is selected the SV HART will have the same variable assignment.

**LCD Meter Configuration - Only if M1 is ordered<sup>(1)</sup>**

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

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

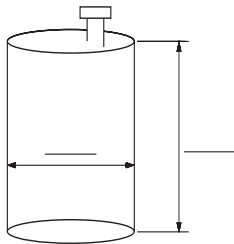
- (1) Pre-configuration of display is not available with Rosemount 5600.
- (2) For meaningful volume units, the remainder of this CDS needs to be filled out.
- (3) Not available with the Rosemount 5400 and 5600.
- (4) Not available with the Rosemount 3300.

**Volume Calculation (If applicable)**

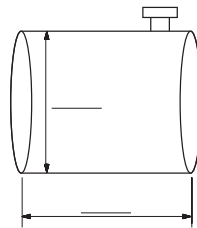
Volume is calculated based on ideal shapes or by a strapping table.  
 If volume calculation based on strapping table is needed, please provide an additional file with volume table to be imported or fill in the next page.  
 The maximum strapping table points are 10 for the 3300, 20 for the 5400, and 100 for the 5600.

If your transmitter is an ideal shape, please select what ideal shape to use. Add the dimensions for the selected shape.

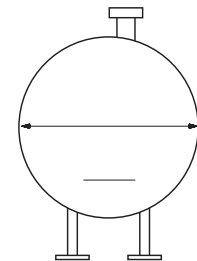
**Vertical Cylinder**  
 Dimensions (*include units*):



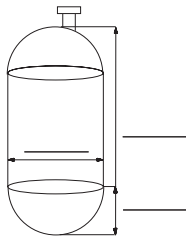
**Horizontal Cylinder**  
 Dimensions (*include units*):



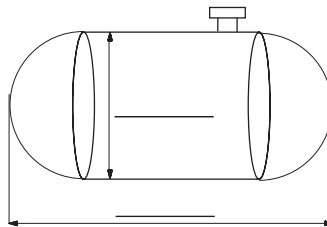
**Sphere**  
 Dimensions (*include units*):



**Vertical Cylinder with Bullet Ends<sup>(1)</sup>**  
 Dimensions (*include units*):



**Horizontal Cylinder with Bullet Ends<sup>(1)</sup>**  
 Dimensions (*include units*):



(1) Available for the Rosemount 3300 and 5400 only.

# Product Data Sheet

00813-0100-4024, Rev EA  
January 2006

# Rosemount 5600 Series

## Rosemount 5600 Strapping Table

Pre-configuration of strapping table available only for Rosemount 5600. Strapping table is available for the Rosemount 3300 and 5400 also, but is not included in C1 basic configuration for these transmitters. (Up to 10 points for the Rosemount 3300, 20 for the Rosemount 5400, and 100 points for the 5600 can be used. 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		

## 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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