Rosemount™ Vortex Configuration Data Sheet

All sections are required on this form.
* = Default Value

❍ Select only one of the items provided
❑ One or more of the listed items can be selected

Customer information

Customer: _____ Contact Name: _____

P.O./Reference No: _____ Fax No./Email: _____

Phone No.:_____ P.O. Line Item: _____

Quote No. _____ Model No.:_____

Customer Signoff: _____

Tagging

Hardware Tag.:_____ (21 characters max)

Software Tag: _____(8 characters max for HART® 5, 32 max for FOUNDATION™ Fieldbus and HART 7)

Fluid selection

Steam:	❍ Superheated	❍ Saturated - Pressure Based	❍ Saturated - Temperature Based
Liquid:	❍ Water	❍ Methanol	❍ Ethanol
	❍ Ammonia	❍ Oxygen	❍ Other[1] _____
Gas:	❍ Air	❍ Nitrogen	❍ Hydrogen
	❍ Oxygen	❍ Carbon Dioxide	❍ Other[1] _____
Natural Gas:	❍ Typical	❍ Other: Please complete Rosemount Natural Gas Worksheet 00806-0300-4803	
Custom[2]:	❍ Gas	❍ Liquid	

Name_____

Density or Specific Gravity _____

Viscosity _____

Vapor Pressure (liquids) _____

Base Compressibility[3]_____

Operating Compressibility[3] _____

1. See complete list of database fluids at end of this form.
2. Provide data at normal conditions.
3. Required for gases when specific gravity is provided. Not required if density is provided.

Process information					
	Units	Minimum	Normal	Maximum	Design
Flow Rate:					
Pressure:					
Temperature:					

Base conditions (Required only if Standard Volumetric Flow Rate Units are used)

○ Standard★	○ Normal	○ Standard - Natural Gas	○ User Defined
P = 14.696 psia/101.3625 kPaa	P = 14.696 psia/101.3625 kPaa	P = 14.73 psia/101.3727 kPaa	P = _____
T = 60 °F/ 15.56 °C	T = 32 °F/0 °C	T = 60 °F/15.56 °C	T = _____m °F m °C

Variable mapping (HART only)

Primary Variable: ○ Volumetric Flow★ ○ Mass Flow ○ Velocity Flow ○ Process Temperature(1) ○ Corrected Volumetric Flow

Secondary (SV), Tertiary (TV) and Quaternary (QV) Variables: Select up to 3 variables from the list. Mark the SV with a 2, TV with a 3, and QV with a 4.

___ Volumetric Flow	___ Electronics Temperature
___ Corrected Volumetric Flow	___ Calculated Process Density(1)
___ Mass Flow	___ Shedding Frequency
___ Velocity Flow	___ Pulse Output Frequency
___ Process Temperature(1)	___ Signal Strength
___ Totalizer	

Process variable Configuration (HART only)

	LRV++	URV++	UOM
Mass Flow:			
Volumetric Flow:			
Corrected Volumetric Flow			
Flow Velocity:			
Process Temperature(1):			(1)

++ = Note that the LRV for the Process Variable that is mapped to the PV will determine the 4 mA set point of the transmitter. The URV for the Process Variable that is mapped to the PV will determine the 20 mA setpoint of the transmitter.

FOUNDATION Fieldbus configuration(2)

	Lower Limit	Upper Limit	UOM
Flow XD_Scale:			

1. MTA Option Only.
2. FOUNDATION Fieldbus is only available on 8800D.

Flow velocity/mating pipe I.D.

Velocity Based on: ○ Mating Pipe ID★ ○ Meter Body ID

Process Line Size: _____ OR Mating Pipe I.D. _____ ○ Inches★ ○ Millimeters

Mating Pipe Schedule: ○ 10 ○ 40★ ○ 80 ○ 160 ○ Other

Damping

Flow: _____ sec (Default value is 2 seconds) Damping must be between 0.2 and 255 seconds

Temperature: _____ sec (Default value is 2 seconds)[2] Damping must be between 0.4 and 32 seconds

Transmitter settings

Hardware Selectables: Alarm Direction[1]: ○ High★ ○ Low

Transmitter Security: ○ Off★ ○ On

Descriptor (HART Only): _____ (16 characters maximum)

Message: _____ (32 characters maximum)

Date: _____ (month/day/yr)

Pulse output (HART only)

Pulse Output based on: ○ Direct Shredding Frequency★ ○ Mass Flow ○ Volumetric Flow ○ Corrected Volumetric Flow

Scaled: 1 Pulse = _____ (e.g., 1 Pulse = 10 gal)

OR _____ _____ Hz e.g., 10 gal/min = 1000 Hz

HART LCD configuration	**Check all items to be displayed**		
❑ Volumetric Flow Rate	❑ Process Temperature[2]	❑ Electronics Temperature	❑ Shedding Frequency
❑ Mass Flow Rate	❑ % Range★	❑ Calculated Process Density[2]	❑ Totalizer
❑ Velocity	❑ Primary Variable★	❑ Analog Output	❑ Pulse Output Frequency
❑ Corrected Volumetric Flow	❑ Signal Strength		

Fieldbus LCD configuration[3]	**Check all items to be displayed**
❑ Process Temperature[2]	❑ Shedding Frequency
❑ Electronics Temperature[2]	❑ Integrator Output (Totalizer)
❑ Calculated Process Density[2]	❑ % Range

Temperature sensor configuration[2]

Temperature Sensor Failure Alarm:

○ Fixed Process Temperature★
In the event of a temperature sensor failure, the vortex meter will output an alert and will use the fixed process temperature as a backup for the density and compensated mass flow calculations.

○ Alarm
In the event of a temperature sensor failure, the vortex meter will go into an alarm mode. Note that if the Primary Variable is Process Temperature (HART Only), Alarm is automatically selected.

1. Not available with Foundation Fieldbus Output.
2. MTA Option Only.
3. FOUNDATION Fieldbus is only available on 8800D.

Temperature compensated liquids (MTA option only with HR5 or HR7 options)

If liquid is not water, please specify between two and five custom temperature and density points. Add units of measure in the parenthesis.

Temperature (unit of measure)	Density (unit of measure)
1. _____ (_____)	1. _____ (_____)
2. _____ (_____)	2. _____ (_____)
3. _____ (_____)	3. _____ (_____)
4. _____ (_____)	4. _____ (_____)
5. _____ (_____)	5. _____ (_____)

SMART Fluid Diagnostics (DS3 option only with HR5 or HR7 options)

Detects when the process fluid flow changes from liquid to gas.

Alert Type: ○ Analog ○ Pulse ○ Analog & Pulse ○ None

Analog Alarm level (mA) _____

Pulse Alarm level (Hz) _____

Expected Gas Density (lb/cu ft) _____

Advanced configuration options

Low Flow Cutoff Response Type: ○ Damped★ ○ Stepped

HART output options

Burst Mode ○ Disabled★ ○ Enabled

The following output options are specifically used for special HART Communication configurations

Note: Required for User Selected Burst Variables

Burst mode of HART digital process variable (Select one option below:)

Burst Variables

○ All Dynamic Variables, Engineering Units — Variable 1 _____ Variable 5 _____

○ All Dynamic Variables, Engineering Units and PV mA Value — Variable 2 _____ Variable 6 _____

○ Primary Variable, % of Range — Variable 3 _____ Variable 7 _____

○ Primary Variable, Engineering Units — Variable 4 _____ Variable 8 _____

○ User Selected Burst Variables[1]

Multidrop Communication (This option fixes the transmitter's analog output at 4 mA.)

Choose Transmitter Address (1-15):_____

Fieldbus node address[2]

Choose Transmitter Address (20-247)[3]:_____

1. Requires completed Burst Variable table.
2. FOUNDATION Fieldbus is only available on 8800D.
3. Unspecified address will be assigned between 248 and 251.

For Rosemount Internal Use Only		
Sales Order:	Line Item #:	ID#:
Cont. Admin.:	Salesperson:	

Fluid database list

❍ 1~1~2~2-TETRAFLUORO-ETHANE	❍ 1~1~2-TRICHLOROETHANE	❍ 1~2~4-TRICHLOROBENZENE	❍ 1~2-BUTADIENE	❍ 1~3~5-TRICHLOROBENZENE
❍ 1~3-BUTADIENE	❍ 1~4-DIOXANE	❍ 1~4-HEXADIENE	❍ 1-BUTENE	❍ 1-DECANAL
❍ 1-DECANOL	❍ 1-DECANOL	❍ 1-DECENE	❍ 1-DODECANOL	❍ 1-DODECENE
❍ 1-HEPTANOL	❍ 1-HEPTENE	❍ 1-HEXADECANOL	❍ 1-HEXENE	❍ 1-NONANAL
❍ 1-NONANOL	❍ 1-OCTANOL	❍ 1-OCTENE	❍ 1-PENTADECANOL	❍ 1-PENTANOL
❍ 1-PENTENE	❍ 1-UNDECANOL	❍ 2~2-DIMETHYLBUTANE	❍ 2-METHYL-1-PENTENE	❍ ACETIC ACID
❍ ACETONE	❍ ACETONITRILE	❍ ACETYLENE	❍ ACRYLONITRILE	❍ AIR
❍ ALCOHOL/ETHANOL	❍ ALLYL ALCOHOL	❍ AMMONIA	❍ ARGON	❍ BEER
❍ BENZALDEHYDE	❍ BENZENE	❍ BENZYL ALCOHOL	❍ BIPHENYL	❍ CANOLA OIL
❍ CARBON DIOXIDE	❍ CARBON MONOXIDE	❍ CARBON TETRACHLORIDE	❍ CHLORINE	❍ CHLOROPRENE
❍ CHLOROTRIFLUORO-ETHYLENE	❍ CORN OIL	❍ CYCLOHEPTANE	❍ CYCLOHEXANE	❍ CYCLOPENTANE
❍ CYCLOPENTENE	❍ CYCLOPROPANE	❍ DIVINYL ETHER	❍ ETHANE	❍ ETHANOL
❍ ETHYLAMINE	❍ ETHYLBENZENE	❍ ETHYLENE	❍ ETHYLENE GLYCOL	❍ ETHYLENE OXIDE
❍ FLUORENE	❍ FURAN	❍ HELIUM-4	❍ HFCS 42%	❍ HFCS 55%
❍ HFCS 90%	❍ HYDRAZINE	❍ HYDROGEN	❍ HYDROGEN CHLORIDE	❍ HYDROGEN CYANIDE
❍ HYDROGEN PEROXIDE	❍ HYDROGEN SULFIDE	❍ ISOBUTANE	❍ ISOBUTENE	❍ ISOBUTYLBENZENE
❍ ISOPENTANE	❍ ISOPRENE	❍ ISOPROPANOL	❍ M-CHLORONITRO-BENZENE	❍ M-DICHLORO-BENZENE
❍ METHANE	❍ METHANOL	❍ METHYL ACRYLATE	❍ METHYL ETHYL KETONE	❍ METHYL VINYL ETHER
❍ MILK	❍ N-BUTANE	❍ N-BUTANOL	❍ N-BUTYRALDEHYDE	❍ N-BUTYRONITRILE
❍ N-DECANE	❍ N-DODECANE	❍ NEON	❍ NEOPENTANE	❍ N-HEPTADECANE
❍ N-HEPTANE	❍ N-HEXANE	❍ NITRIC ACID	❍ NITRIC OXIDE	❍ NITROBENZENE
❍ NITROETHANE	❍ NITROGEN	❍ NITROMETHANE	❍ NITROUS OXIDE	❍ N-NONANE
❍ N-OCTANE	❍ N-PENTANE	❍ ORANGE JUICE CONCENTRATE	❍ OXYGEN	❍ PEANUT OIL
❍ PENTAFLUOROETHANE	❍ PHENOL	❍ PROPADIENE	❍ PROPANE	❍ PROPYLENE
❍ PYRENE	❍ SOY OIL	❍ STYRENE	❍ SULFUR DIOXIDE	❍ TOLUENE
❍ TRICHLOROETHYLENE	❍ VINEGAR	❍ VINYL ACETATE	❍ VINYL CHLORIDE	❍ VINYLCYCLOHEXENE
❍ WATER	❍ WORT			

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