Mixing Application Information

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I. Customer Information

Company Name:_____

Company Address: _____

Company Contact Name: _____

Contact Telephone Number_____ Contact Email: _____

II. End User/Market/Product Manufacturer Information (Indicate "Same as Above" if Applicable)

Company Name:_____

Company Address: _____

Company Contact Name: _____

Contact Telephone Number_____ Contact Email: _____

Product Type, General Description _____

_____

General Tank Service Description _____

_____

III. Vessel Information

Total Vessel Volume: _____ liters/US gallons

Mixing Volume: Maximum: _____ liters/US gallons/depth/freeboard (inches)

Minimum: _____ liters/ US gallons/depth/freeboard (inches)

Other Batch Sizes: ☐ ¾ Design Full Depth ☐ ½ Design Full Depth ☐ ¼ Design Full Depth ☐ Other _____

Tank Bottom Shape (See Page 3 For Tank Details): ☐ Dished ☐ Conical ☐ Other

Tank Construction: ☐ New ☐ Existing ☐ Fixed in Place ☐ Portable ☐ Stainless Steel

Is Tank Bottom Insulated: ☐ Yes ☐ No

Is a Detailed Drawing of the Tank(s) Available ☐ Yes ☐ Bottom Plan View ☐ Complete Tank Profile View

☐ No

IV. Fluid, Tank, and Mixing Properties (continued on next page)

Kinematic Viscosity _____ cP Density _____ kg/m^3 (lb/ft^3)

Flammable Atmosphere ☐ Yes ☐ No Hazard Code Standard _____ (Ex/Class-Div./ATEX)

Tank Process Position: ☐ Upstream ☐ Downstream of Sterile Filtration

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IV. Fluid, Tank, and Mixing Properties (Cont.)

Mixing Purpose (Check all that Apply)

☐ Buffer/Salt Solution ☐ Heat Transfer ☐ Blend Miscible Liquids

☐ Suspend Solids ☐ Chemical Reaction ☐ Emulsify Immiscible Liquid

☐ Powder Mixing ☐ Protein Solution ☐ Delicate Cell Suspension

Other _____

_____

Type of Powder/Solids being Mixed: ☐ Readily Soluble ☐ Mostly Soluble ☐ Difficult to Dissolve

☐ Insoluble ☐ Crystalline ☐ Sticky

☐ Abrasive ☐ Other _____

Vortex in Liquid Batch is: ☐ Needed ☐ Not Needed ☐ Should be avoided during mixing

Powder Particle Size: Nominal Range _____ Minimum _____ Maximum _____

Powder is added to Batches: ☐ All at one Time ☐ In steps

Comments _____

_____

Mixing Characteristics: ☐ Gentle (Calm surface) ☐ General (Gentle surface motion)

☐ Vigorous (Surface rolling w/o splashing) ☐ Violent (Surface rolling and splashing)

Shear Sensitivity of Batch Liquid/Components ☐ Very ☐ Slight ☐ Insensitive

Does product foam if Mixing Agitation Condition Above is Exceeded: ☐ Yes ☐ No

Is Entrained Air in the Product/Batch due to Mixing an Issue? ☐ Yes ☐ No

Mixing Conditions: Time _____ (Min) Maximum Temp. _____ ^{0}F/^{0}C Minimum Temp. _____ ^{0}F/^{0}C

Sterilization Conditions: Time _____ (Min) Maximum Temp. _____ ^{0}F/^{0}C Minimum Temp. _____ ^{0}F/^{0}C

Cleaning Conditions: Time _____ (Min) Maximum Temp. _____ ^{0}F/^{0}C Minimum Temp. _____ ^{0}F/^{0}C

Cleaning Regime (Cleaning Chemicals, Comments, Refer to TCQ as needed.) _____

_____

_____

V. Mixer Configuration Specifications

Do the in-tank Materials of Construction require Material Traceability Certificates? ☐ Yes ☐ No

Include Variable Frequency Drive with Mixer? ☐ Yes ☐ No

Surface Finish of In-Tank Impeller _____ Ra µinch

Electropolished ☐ Yes ☐ No

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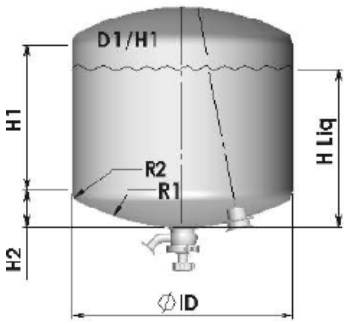
VI. Tank Diagram and Schematics



ϕD _____mm

H_{liq} _____mm

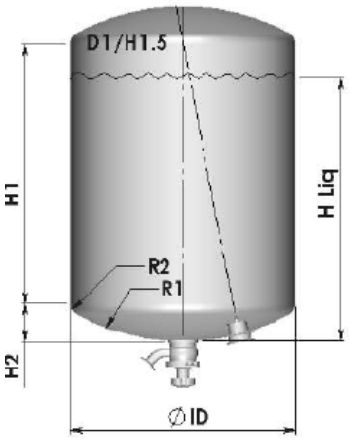
R1_____mm

R2_____mm

H_1_____mm

H_2_____mm

Dished



ϕD _____ mm

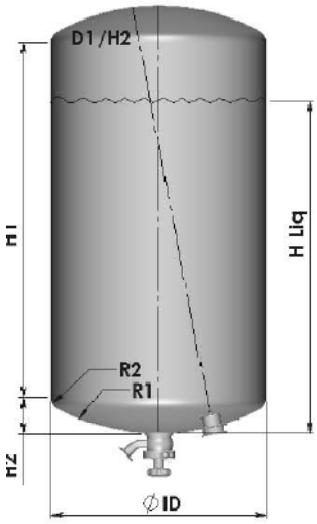
H_{liq} _____ mm

R1 _____ mm

R2 _____ mm

H_1 _____ mm

H_2 _____ mm



ϕD _____ mm

H_{liq} _____ mm

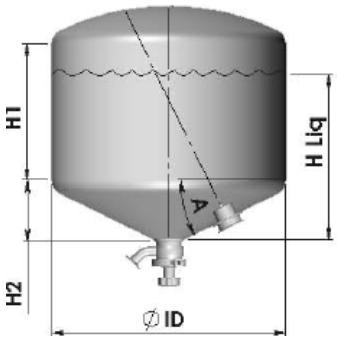
R1 _____ mm

R2 _____ mm

H_1 _____ mm

H_2 _____ mm

Conical



ϕD _____mm

H_{liq} _____mm

α _____degrees

H_1 _____mm

H_2 _____mm

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