Process Questionnaire – Agitator

Data on page 1: *Required for rating/ optimizing a new/existing mixing system*
Data on page 2: *Additionally required if you want us to calculate your heat exchange*

Company:	
Name:	
Department:	
Telephone:	
Mobile phone:	
E-mail address:	
Your query/order:	
Thaletec offer/order no.:	

Mixing task

(please check, multiple answers possible, please mark dominant mixing task)

Suspension (solid/liquid)		Suspension (crystallization)	
Homogenization (liquid/liquid)		Gas quantity to be dispersed	[m³/h]
Dispersion (liquid/gaseous)		Residual quantity to be mixed	[liters]
Mixing residuals		Multipurpose	[yes/no]
Heat exchange			

Product properties

(please check, multiple answers possible, please mark dominant mixing task)

foaming		goes lumpy	
abrasive		sticky	
sensitive to shearing		viscous structure	
Newtonian (flow behavior)			

Product data

Viscosity	[mPas]	Solids density	[kg/m³]
Liquid density	[kg/m³]	Particle size	[µm]
Density of mixture (for solids)	[kg/m³]	Solids quantity	[kg]
Service temperature	[°C]	Mass proportion of solids	[%]
Service pressure	[bar abs]	Solids consistency	[soft, hard]
Volume to be mixed »1«	[liters]	Volume to be mixed »2«	[liters]

Reactor data

Reactor type (e.g. AE, BE, CE, ...)	[-]	Design to DIN28136 Part 3	[Yes/no]
Nominal volume	[liters]	Shape of lower head (e.g. dished head)	
Inner vessel diameter	[mm]	Elevation above ground	[mm]
Manhole size	[mm]	Half-pipe coil	[yes/no]
Mounting hole diameter	[mm]	Double jacket	[yes/no]
		PowerBaffle	[yes/no]

Existing/desired Agitator

(we are happy to advise you!)

Agitator speed	[rpm]	Agitator direction of rotation	[cw, ccw]
Single-impeller agitator	[yes/no]	Multi-impeller agitators	[yes/no]
Impeller diameter, lower level	[mm]	Impeller type, lower level	
Impeller diameter, interm. level:	[mm]	Impeller type, interm. level	
Impeller diameter, upper level:	[mm]	Impeller type, upper level	
Number of baffles	[pieces]	Baffle type	
Baffle connection nozzle	[DN]	Baffle length	[mm]

Drawings and/or process description are quite helpful for rating your system. Please send this information together with the completed questionnaire, if available. Thank you very much for your cooperation!

Please fill in the questionnaire and send it to: ***process@thaletec.com***

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Process Questionnaire – Heat transfer

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Product data

Thermal conductivity	[W/mK]
Specific thermal capacity	[kJ/kgK]
Reactor filling level when heating	[liters]
Filling level when cooling	[liters]
Specific evaporation enthalpy	[kJ/kg]

Process requirements

	for heating		for cooling
Thermal quantity to be transferred	[kW]	Thermal quantity to be transferred	[kW]
Initial product temperature	[°C]	Initial product temperature	[°C]
Final product temperature	[°C]	Final product temperature	[°C]
Desired heating time	[min]	Desired cooling time	[min]
Current heating time	[min]	Current cooling time	[min]
Exhaust vapour	[kg/h]	Heat of reaction	[kW]

Double jacket data

Double jacket w/o jacket division	[yes/no]
Use of agitating nozzles	[yes/no]

PowerBaffle data

Nominal size	[DN]
Quantity	[pieces]
Interconnection to jacket/Half-pipe	[parallel/seriell]
Nominal size (Service)	[DN]

Half-pipe coil data

Half-pipe coil subdivided into:	[zones]	Exchanger surface per zone	[m^2]
Number of heating zones	[pieces]	Number of cooling zones	[pieces]
1-section half-pipe coil	[yes/no]	Exchanger surface	[m^2]
2-section half-pipe coil	[yes/no]	Exchanger surface per section	[m^2]
Number of heating sections	[pieces]	Number of cooling sections	[pieces]

Heating using steam *(not for PowerBaffle)*

Steam pressure	[bar abs]	Steam quantity available	[kg/h]
Steam temperature	[°C]		

Heating using other media

Name of heating fluid		Quantity available	[m^3/h]
Viscosity	[mPas]	Thermal conductivity	[W/mK]
Density	[kg/m^3]	Specific thermal capacity	[kJ/kgK]
Inlet temperature	[°C]	Outlet temperature	[°C]
Evaporation enthalpy	[kJ/Kg]		

Cooling using media

Name of cooling fluid		Quantity available	[m^3/h]
Viscosity	[mPas]	Thermal conductivity	[W/mK]
Density	[kg/m^3]	Specific thermal capacity	[kJ/kgK]
Inlet temperature	[°C]	max. outlet temperature	[°C]

Process description:

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