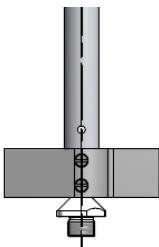
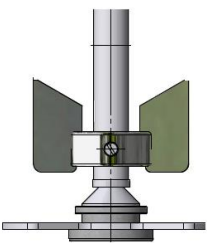
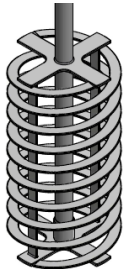
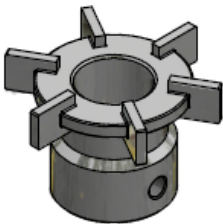
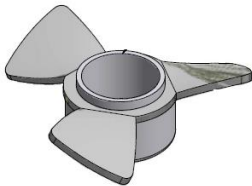


STIRRER OVERVIEW

Stirrer Solutions for High- and Low-Pressure Reactors

Stirrer Overview

Stirrer Type	Construction Material ^[1]	Flow direction ^[2]	Application Type
Paddle stirrer	✓ PTFE	Tangential flow	✓ Low to medium viscous media ✓ Enables homogenization, dissolution, heat transfer and mixing of solids ✓ Hydrothermal synthesis, organic and inorganic synthesis, acid digestions; pharmaceutical applications ✓ Compatible with reactors with 300 ml or greater
a) 			
b) 	✓ Stainless steel 316Ti ✓ Stainless steel 316Ti coated with PTFE ✓ Hastelloy® C-22		
Gas entrainment stirrer	✓ Stainless steel 316Ti ✓ Hastelloy® C-22 ✓ PTFE	Radial flow	✓ Enables maximum gas dispersion into a liquid media ✓ Hydration, oxidation and reduction reactions by using H₂ and/or O₂ gas ✓ Compatible with reactors with 300 ml or greater
			

Stirrer Type	Construction Material ^[1]	Flow direction ^[2]	Application Type
Jet stirrer 	✓ Stainless steel	Tangential flow	✓ High viscous media ✓ Enables mixing gels, paints, pharmaceutical products ✓ Mixing fibers, textiles in liquids without floating and tangled around the stirrer ✓ Compatible with reactors with 700 ml to 3000 ml
Helical Ribbon 	✓ Stainless steel 316Ti ✓ Stainless steel 316Ti coated with PFA	Axial flow	✓ High viscous media ✓ Emulsion polymerizations ✓ Commonly used for pastes, creams and paints ✓ Compatible with reactors with 2000 ml reactor
Turbine Type, Rushton stirrer- 6 blades 	✓ Stainless steel 316Ti ✓ Stainless steel 316Ti coated with PFA	Radial flow	✓ Low to medium viscous media ✓ Two phase mixing (liquid/gas) ✓ Gas-liquid dispersion applications ✓ Liquid-liquid dispersion applications ✓ Compatible with reactors with 1500 ml or 3000 ml
Propeller, 3 blades 	✓ Stainless steel 316Ti	Axial flow	✓ Low to medium viscous media ✓ Enables homogenization and heat transfer ✓ Used for mixtures and suspensions ✓ Compatible with reactors with 1500 ml or greater
Notes:	[1] Construction material is selected according to the reagents and medium used in the application. [2] Tangential flow provides horizontal movement of the fluid around the reactor. It is commonly used when very high viscosity mixing is needed. Axial flow provides top to bottom motion in the reactor. It is suitable for solid suspension and when stirring requires vortex. Axial flow enhances liquid-liquid blending and heat transfer. Radial flow provides up and down fluid movement before moving the liquid back to the center.		
References	https://stirrers.net/blogs/blog/selecting-an-impeller-for-your-overhead-stirrer		

Stirrers for High Pressure Reactors

Stirrer type	Construction Material	Article Number of Stirrer for BR-300 Reactor	Article Number of Stirrer for BR-500 Reactor	Article Number of Stirrer for BR-700 Reactor	Article Number of Stirrer for BR-1000 Reactor
Paddle stirrer	PTFE	5735045	5735046	5735047	5715045
Paddle stirrer	SS	5735030	5735031	5735032	5715030
Paddle stirrer	HC	5735040	5735041	5735042	5715035
Gas entrainment stirrer	PTFE	5735058	5735068	5735078	5715137
Gas entrainment stirrer	SS	5735055	5735065	5735075	5715134
Jet Stirrer	SS	-	-	10028666	10028666

Table 1. Stirrers for BR-300/500/700/1000

SS = Stainless steel 316Ti

HC = Hastelloy® C-22

Stirrer type	Construction Material	Article number of Stirrer for BR-1500 Reactor	Article number of Stirrer for BR-2000 Reactor	Article number of Stirrer for BR-4000 Reactor
Paddle stirrer	PTFE	5715048	5715147	5745910
Paddle stirrer	SS	5715034	5715036	5745920
Paddle stirrer	HC	5715041	5715049	5745925
Gas entrainment stirrer	PTFE	5715138	5715139	5745138
Gas entrainment stirrer	SS	5715135	5715136	5745135
Jet Stirrer	SS	-	10028666	-
Helical Ribbon	SS	-	10004073	-

Table 2. Stirrers for BR-1500/2000/4000

SS = Stainless steel 316Ti

HC = Hastelloy® C-22

Stirrers for Low Pressure Reactors

Stirrer type	Construction Material	Article Number of Stirrer for NR-1500 Reactor	Article Number of Stirrer for NR-3000 Reactor	Article Number of Stirrer for NR-6000 Reactor	Article Number of Stirrer for NR-10000 Reactor
Paddle stirrer	PTFE	5781620	5830031	5860031	-
Paddle stirrer	SS	5815030	5830030	5860030	5816425
Paddle stirrer	HC	5715051* HC /PTFE coated	-		
Gas entrainment stirrer	PTFE	5815033	5830033	5860033	5788024
Gas entrainment stirrer	SS	5815032	5830032	5860032	5788033
Jet Stirrer	SS	-	10028666		
Propeller	SS	5815034	5830034	5787022	5716096
Rushton stirrer	SS /PFA coated	10001462	10001467	-	-
Rushton stirrer	SS	10001485	10001485	-	-

Table 3. Stirrers for NR-1500/3000/6000/10000

SS = Stainless steel 316Ti

HC = Hastelloy® C-22

Please contact us to get the right configuration for your reactor applications.
