

# Liberator™ Vortex Gas Separator

## HELPS REDUCE UNNECESSARY SHUTDOWNS CAUSED BY GAS INTERFERENCE

### OVERVIEW

Summit ESP® – A Halliburton Service offers a high-performance suite of vortex gas separators designed to mitigate the downtime and other impacts of free gas excessive ingestion into electric submersible pumps (ESPs) during oil and gas production.

Summit ESP Liberator™ vortex gas separators are available in the 338, 400, and 513 series. Our highly efficient and advanced line of vortex separators is designed to allow continuous operation of the ESP system in the most extreme gaseous applications, effectively reducing the unnecessary shutdowns caused by gas interference in the pump.

Summit ESP vortex technology is standard in all three series, thereby avoiding the documented design flaws of “rotary separators” that have reliability issues when operating in abrasive applications. To further enhance reliability, our standard offering includes corrosion-resistant metallurgy and abrasion-resistant (AR) bearings. Our AR bearings are constructed with robust tungsten carbide, and provide radial support to extend operational life in severe-service well conditions.

In applications where a single separator is unable to handle the volume of free gas, either tandem separators and/or net positive suction head (NPSH) pumps are available for both the 400 and 500 series. Standard to our NPSH pump line are tungsten carbide bearings at the flange connections, along with optional thrust bearing support throughout the pump assembly.



Liberator™ vortex gas separator



Features	Benefits
Highly efficient vortex separator design	Efficient gas handling increases production and reduces power consumption
Line comprises three series of separators	Reduces or eliminates gas locking to increase system run life
AR radial bearings standard at flange end connections on all series	Allows for continuous ESP operation
AR radial and thrust bearing support available throughout NPSH pumps	Corrosion-resistant metallurgy improves reliability in both corrosive and abrasive applications
Standard corrosion-resistant fasteners	Improves economics

Description	Housing Diameter		Shaft Diameter		Inconel Shaft BHP* Limitations		Inconel Shaft BHP* Limitations	
	In.	mm	In.	mm	HP	kW	HP	kW
338 vortex carbon steel, abrasion resistant, trash screen	3.38	85.85	.6875	17.42	125	93	200	149
400 vortex carbon steel, abrasion resistant, trash screen	400	101.6	.875	22.20	256	191	410	306
513 vortex carbon steel, abrasion resistant, trash screen	5.13	130.3	.875	30.20	637	475	1,019	760

\* Bottomhole pressure

Description	Length		Weight	
	ft	m	lb	kg
338 vortex carbon steel, abrasion resistant, trash screen	2.7	0.8	43	19.5
400 vortex carbon steel, abrasion resistant, trash screen	2.7	0.8	55	24.9
513 vortex carbon steel, abrasion resistant, trash screen	3.9	1.2	154	69.9
338 vortex carbon steel, abrasion resistant, trash screen	4.7	1.4	137	62.1
400 vortex carbon steel, abrasion resistant, trash screen	4.7	1.4	137	62.1
513 vortex carbon steel, abrasion resistant, trash screen	7.0	2.1	304	137.9

For more information, contact your local Halliburton representative or visit us on the web at [www.halliburton.com](http://www.halliburton.com)

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