

VGSA

Vortex gas separator assembly

APPLICATIONS

- Gas-cut oil wells where annular gas production is permitted
- Gas well dewatering
- Gas lift-to-ESP conversion wells

BENEFITS

- Extends ESP run life by eliminating cycling in gassy applications
- Increases production through its ability to lower intake pressure and increase drawdown
- Allows efficient pump operations by eliminating pump performance degradation caused by gas

FEATURES

- Abrasion-resistant construction available for sandy, abrasive applications
- Extra large journal bearings for superior shaft stabilization
- Can be used with the AGH* advanced gas-handling device or MGH* multiphase gas-handling system to increase production

The VGSA* Vortex* gas separator assembly is a dynamic gas separation device that utilizes a natural vortex action created by a specially designed inlet configuration, axial flow inducer, multiple vortex generators, multiple flow-through bearings, and a discharge crossover to provide highly effective gas separation.

The VGSA assembly offers an extended range and greater efficiency over a broader range of flow conditions than previous 400 and 540 series rotary gas separators. Additionally, the VGSA assembly features the patented, compliant-mount abrasion-resistant zirconia radial bearing technology coupled with a dramatically improved overall bearing system to provide far superior reliability over previous designs.

To further extend life expectancy, the rotor assembly has been designed to impart very little energy to solid particles produced through the separator. The improved hydraulics in the VGSA assembly allow for more effective gas separation at higher fluid flow rates than previously possible.



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VGSA Vortex Gas Separator Assembly Specifications

	D20-60	S20-90	S70-150
Outside diameter, in [mm]	4.00 [101.6]	5.38 [136.7]	5.38 [136.7]
Length, ft [m]	6.6 [2.20]	3.2 [0.98]	3.4 [1.04]
Weight, lbm [kg]	145 [65.8]	145 [65.8]	160 [72.6]
Power consumption in 1.0-sg fluid, hp at 60 Hz	3	6	14
Housing material	Redalloy* high-nickel alloy	Redalloy	Redalloy
Shaft material	INCONEL®	INCONEL	INCONEL
Shaft size, in [mm]	0.870 [22.10]	1.187 [30.02]	1.187 [30.02]
Shaft rating, hp at 60 Hz	410	1,019	1,019
Bearing systems†	ES	ES	ES
Total liquid and gas operating range, bbl/d at 60 Hz	2,000–6,000	2,000–9,000	2,000–15,000

† Enhanced-stability bearings are standard.