



Vortex Gas Separator



Produce in wells with up to 80% free gas intake

The SPECTRUM Vortex Gas Separator is used in place of a standard pump intake for applications where free gas volume at the pump exceeds 20%. This allows wells with high gas fraction to be lifted with Electrical Submersible Pumps (ESP).

Installed below the main pump, the separator utilizes an inducer and propeller to create a natural vortex in the multiphase flow. The heavier fluid is pushed to the side of the unit and the lighter gas rich stream is channeled up through the center before being ejected to the annulus. The SPECTRUM Vortex Gas Separator allows production at up to 80% free gas at the intake.

Abrasion resistant design to protect run life

ESP run life is enhanced through the use of three Abrasion Resistant (AR) bearing designs, providing better stabilization and allowing production in harsher environments where sand and abrasive material that creates significant radial wear and erosional risks with standard equipment.

Increase recovery in gas breakout

The SPECTRUM Vortex Gas Separator enables operators to produce wells with low pump intake pressures where gas breakout previously made ESPs a poor choice. A larger drawdown and the additional inflow from the reservoir maximizes recovery and boosting production.

The SPECTRUM Vortex Gas Separator can be run as a tandem unit and with a SPECTRUM Gas Processing Unit or SPECTRUM ADVANCE Advanced Gas Processing Unit.

APPLICATIONS

- Abrasive, high GLR wells
- Vented packer applications
- Gas well dewatering
- Gas lift to ESP conversions
- Mature, low pressure wells

BENEFITS

- Extended ESP run life
- Less ESP cycling
- Achieve high drawdown & additional production
- Stable operation at low PIP
- Reduced cycling of ESP
- AR bearing design extends ESP run life due to added radial stability in shafts
- AR design allows for greater gas slug handling

FEATURES

- Tungsten carbide bearing design provides greater stability
- Tandem separator 85% efficient
- Can be installed with SPECTRUM Gas Processing Unit or SPECTRUM ADVANCE Advanced Gas Processing Unit for higher GLR wells

SERIES
400
513



Alkhorayef™

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MOTOR SPECIFICATIONS

Series	400	513
OD, in (mm)	4.00 (101.6)	5.38 (136.65)
Length, ft (m)	2.5 (0.77)	3.4 (1.04)
Weight, lb (kg)	60 (27.2)	127 (57.4)
Power consumption @60Hz	2	7
Housing material	Ferritic steel/Monel flame spray coating	Ferritic steel/Monel flame spray coating
Shaft material	Inconel	Inconel
Shaft diameter, in (mm)	0.875	1.1875
Shaft rating, hp @ 60Hz	400	1000
Shaft bearing type	3B	3B
Flowrate at intake conditions BPD (m³/d) @ 60Hz	500 - 4,000 (79 - 636)	1,000 - 7,000 (132 - 928)