



FAQs

GENERAL OVERVIEW

- Q** What is a downhole gas separator?
- A** A downhole gas separator is installed below the pump to reduce free gas interference by separating gas from the fluid stream before entering the pump intake. It improves pump fillage, reduces gas locking, and extends equipment run life.
- Q** How does TOPS differ from conventional designs?
- A** Unlike standard slotted side-entry designs, TOPS uses a reverse-flow path with a large annular-velocity, deceleration zone that enhances slugging gas breakout efficiency management. This typically results in 10 to 30% higher pump efficiency and increased MTBFs.

PERFORMANCE AND EFFICIENCY

- Q** What efficiency gains can be expected?
- A** Field data consistently show between 10 to 30% pump fillage improvement and less rod buckling after installation, even in high-GOR wells.
- Q** Does it work in deviated or horizontal wells?
- A** Yes. The internal flow geometry and solids weir are optimized for multiphase flow regimes in deviated and horizontal sections, maintaining effective phase separation even at 85-degree inclinations.
- Q** How does it handle solids and sand?
- A** A solids weir and reverse-flow chamber provide a controlled drop-out zone, minimizing solids entry into the pump and protecting barrel/plunger interfaces without using vortex-type strategies which historically can lead to foaming conditions.

DESIGN AND COMPATIBILITY

- Q** What sizes are available?
- A** Standard OD options include 3.5 in., 4.5 in., 5.563 in., and 7 in. and are compatible with casing sizes from 4.5 in. to 9.625 inches.
- Q** What materials and coatings are used?
- A** High-grade SCH40, painted or optional internally and externally coated with ENC, depending on corrosion and scaling conditions.
- Q** Can it be installed with any pump?
- A** Yes. The design is compatible with most API EUE rod pump assemblies and can be adapted for specialty configurations (insert or tubing-anchor pumps).

ECONOMICS AND RELIABILITY

- Q** What is the ROI versus lower-cost alternatives?
- A** While priced higher than “good enough” competitors, the performance gains lead to fewer interventions, higher production rates, and better overall system efficiency, often paying for itself within days.
- Q** How long is the typical run life?
- A** 1.5X to 2X the run life of conventional separators, based on data from installations in the Permian, Montney, and Powder River basins.

FIELD EXPERIENCE AND SUPPORT

- Q** Are there field results or case studies?
- A** Yes. Documented installations show measurable improvement in pump efficiency and reduced rod load buckling and pump wear across multiple basins. Contact us to discuss these proven results today.