Nonpressurized DuraSeal® Rotating Stuffing Box

Extends the longevity of progressing-cavity-pumping (PCP) systems by creating a robust and dependable seal between produced well fluids and the environment

Applications

- Oil, water, and dewatering gas wells
- Abrasive applications
- Wells that require either electric or hydraulic systems

Features and Benefits

- The innovative seal design and robust bearing system reduce the risk of seal failure and associated impact to the environment.
- Redundant sealing enables continued performance in the event of damage to the main seal, which contributes to PCP system durability.
- The maintenance-free design incorporates a unique, integral connection that provides a robust link between the stuffing box and drive head, which minimizes the risk of costly repairs and associated nonproductive time.
- To lower operating costs, all Weatherford stuffing boxes can be remanufactured to OEM specifications at a Weatherford service facility.

Tool Description

Weatherford nonpressurized DuraSeal rotating stuffing boxes enhance the longevity of PCP systems at wellsites that use electric or hydraulic systems. Proprietary redundant seals and a robust bearing assembly provide a superior seal between the rotating shaft assembly and the environment, mitigating the risk of external production fluid leakage and associated environmental impact. For enhanced security against external leakage, a detection system indicates any early-stage seal failure. The indicator system often eliminates the need for expensive controls or external shutdown.

A jaw-style connection and shear ring between the stuffing box and drive head provide a robust connection that prevents costly drive head repairs. Available in 1.25- and 1.50-in. polished rod sizes and various flange wellhead connections, the nonpressurized DuraSeal stuffing box is compatible with Weatherford jaw-style PCP drive heads.

To provide customers a high-quality, cost-saving option, Weatherford offers remanufactured DuraSeal stuffing boxes in multiple sealing configurations. The remanufactured DuraSeal stuffing boxes contain all new internal components and are built to the original manufacturing tolerances. Compared to rebuilt stuffing boxes in which only malfunctioning components are replaced, our remanufactured stuffing boxes provide high-quality parts to maximize run life.

Nonpressurized DuraSeal rotating stuffing box

Options

- DuraSeal stuffing box model DS305, DS405, or DS505
- Remanufactured DuraSeal stuffing boxes
- Integral or conventional booth-mounted stuffing box
- Various leak detection sensors

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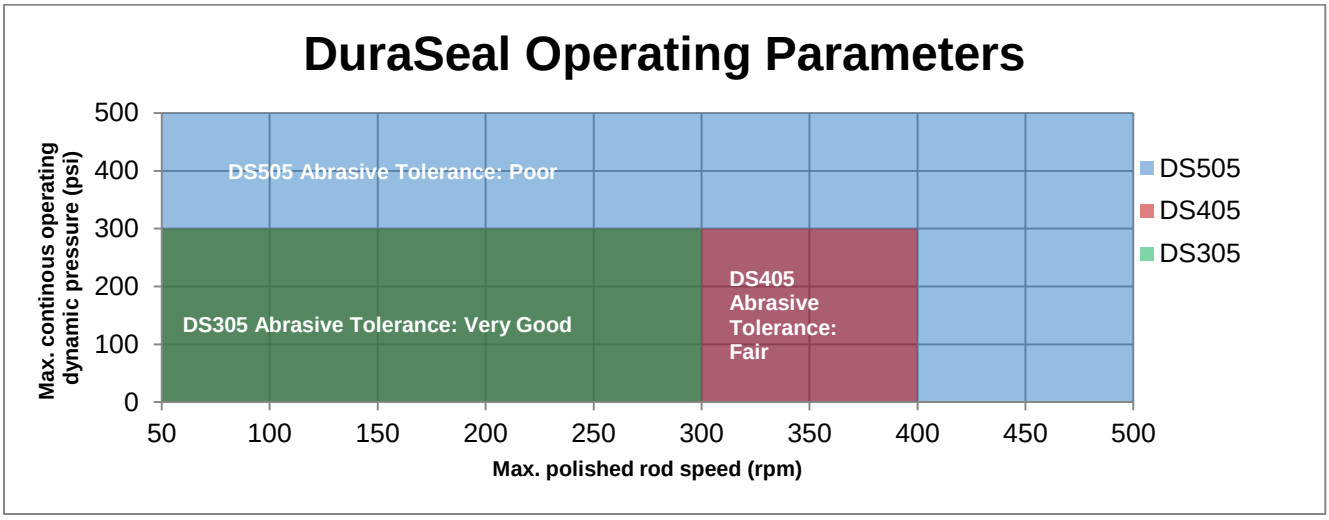
Specifications

Model	305	405	505
Box type	Integral or conventional booth mount		
Seal type	Redundant, nonpressurized rotary seals		
Wellhead attachment	Flanged		
Input shaft	Vertical hollow shaft		
Media	Oil, water, gas, and abrasives	Oil, water, gas, and moderate abrasives	Oil, water, gas, and limited abrasives
Abrasive tolerances[1]	Very good	Fair	Poor
Maximum polished-rod speed	300 rpm	400 rpm	500 rpm
Maximum dynamic pressure[2]	300 psi (2,068 kPa)	300 psi (2,068 kPa)	500 psi (3,447 kPa)
Maximum static pressure	3,000 psi (20,684 kPa)		
Maximum recommended production media temperature	32 to 167°F (0 to 75°C)		
Integral height	8.9 in. (226 mm)		
Integral weight	72 lb (33 kg)		
Conventional booth-mount height	12.9 (327 mm)		
Conventional booth-mount weight	89 lb (40 kg)		
Polished-rod size	1-1/4 or 1-1/2 in. (32 or 38 mm)		
API wellhead connection[3]	3-1/8 in. × 3,000 psi (79 mm × 20,684 kPa)		

[1] Recommended abrasive tolerance is based on lab testing and field trials with typical Canadian cold heavy oil production with sand (CHOPS). Nature of the abrasives (size, composition, and shape) will impact stuffing box longevity.
[2] Refer to the operating specification chart to verify that the application conditions fall within the specification of the seals. Contact your Weatherford representative if the application conditions are outside these ratings.
[3] Optional API wellhead connections are available.

Operating specification chart



Note: Consult your Weatherford representative if the application conditions are outside these operating parameters.

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