

PROGRESSING CAVITY PUMPING SYSTEMS

DuraSeal® Series of Rotating Stuffing Boxes

Enhancing the durability of progressing cavity pumping systems with proprietary, high-performance seal technology



Maintenance-free leak protection that's built to last.

At the wellsite, environmental responsibility, fiscal accountability, and production optimization are top concerns. But environmental issues and failed equipment can significantly increase downtime and decrease profitability. This is why the stuffing box is critical to the success of your progressing cavity pumping (PCP) wells.

The Weatherford DuraSeal series of rotating stuffing boxes was created to extend the longevity of your PCP system through exclusive seal technology and design. Compatible with Weatherford PCP drive head models, DuraSeal stuffing boxes are maintenance free and provide several performance-enhancing features.



DuraSeal nonpressurized stuffing box



Get more life from your wells.™

Only DuraSeal stuffing boxes deliver this comprehensive and proven combination of features to give you top performance and lasting reliability.

- **Innovative seal design** improves seal performance and minimizes the risk of seal failure and associated environmental hazards.
- **Redundant sealing**, which enables continued performance in the event of damage to the main seal, contributes to PCP system integrity.
- **Robust bearing system** provides uniform seal contact and controls run-out by limiting lateral shaft movement.
- **Unique, integral connection** provides a strong link between the stuffing box and drive head.

Custom-configured to perform in the most challenging conditions

Available in five distinct configurations, DuraSeal stuffing boxes are compatible with hydraulic and electrical-based systems and deliver reliable, cost-effective performance in a variety of well environments.

DuraSeal 305 Stuffing Box

Designed for trace to medium abrasives, this robust stuffing box is suited for moderate speeds and flowline pressures.

DuraSeal 305P Stuffing Box

Engineered for challenging fluid conditions and built to significantly outperform conventional seal technology in abrasive applications, this stuffing box incorporates a pressurized fluid system. This proven design creates a clean oil barrier to keep abrasives away from the sealing surface, thus eliminating premature seal wear. The DuraSeal 305P stuffing box is well-suited for moderate speeds and flowline pressures.

DuraSeal 405 Stuffing Box

Designed for trace to limited abrasives, this stuffing box is engineered to provide years of trouble-free operation under moderate- to high-speed operation and flowline pressures.

DuraSeal 505 Stuffing Box

This stuffing box is designed to provide long-lasting, dependable performance operating at high speeds and under high flowline pressures in the presence of zero to trace abrasives.

DuraSeal 505P Stuffing Box

This stuffing box incorporates the same design and operating principles as the DuraSeal 305P, but it is engineered for higher-speed and higher flowline pressure applications.

Remanufactured Stuffing Box

To provide customers a high quality, cost-saving option, Weatherford offers remanufactured DuraSeal stuffing boxes in multiple sealing configurations. 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 higher quality and performance to maximize run life.

Leak-Detection Sensors

To provide superior environmental protection by mitigating the risk of external leaks, Weatherford offers a variety of leak-detection systems designed specifically for DuraSeal stuffing boxes.



DuraSeal pressurized stuffing box

Specifications

	DuraSeal Stuffing Box Model				
	305	305P	405	505	505P
Drive head requirements	Hydraulic or electric	Hydraulic	Hydraulic or electric	Hydraulic or electric	Hydraulic
Seal type	Redundant, nonpressurized rotary seals	Pressurized rotary seals	Redundant, nonpressurized rotary seals	Redundant, nonpressurized rotary seals	Pressurized rotary seals
Wellhead attachment	Flanged				
Media	Oil, water, gas, moderate abrasives	Oil, water, gas, abrasives	Oil, water, gas, limited abrasives	Oil, water, gas, trace abrasives	Oil, water, gas, abrasives
Abrasive Tolerance ¹	Very good	Excellent	Fair	Poor	Excellent
Maximum polished-rod speed	300 rpm	300 rpm	400 rpm	500 rpm	500 rpm
Maximum dynamic pressure ²	300 psi (2,068 kPa)	250 psi (1,724 kPa)	300 psi (2,068 kPa)	500 psi (3,447 kPa)	450 psi (3,102 kPa)
Maximum static pressure	3,000 psi (20,684 kPa)				
Recommended media temperature range	32 to 167°F (0 to 75°C)				

¹Recommended abrasive tolerance is based on lab testing and field trials with typical Canadian cold-heavy-oil production with sand (CHOPS). The nature of the abrasives (size, composition, and shape) will impact stuffing-box longevity.

²Refer to the applicable operating specification chart (found in Weatherford DuraSeal technical specification sheets) to verify that the application conditions fall within the seal specifications. Contact your Weatherford representative if the application conditions are outside these ratings.

An industry leader in PCP systems and technical expertise, Weatherford offers a comprehensive selection of value-added PCPs for a variety of lifting applications and well conditions. Committed to ongoing research and development, we continually refine and expand our PCP offerings. For more information about optimizing your PCP performance, contact us at als.pcp@weatherford.com.



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