

TopTier™ Tag Pin System

Solution for intake restrictions in CHOPS and other applications where sand causes plugging

Applications

- TopTier tag pin system can be used with Weatherford Fat Boy® PCPs, selected PCP models in cold heavy oil production with sand (CHOPS), and any other applications where sand presence causes restriction to the intake.

Features and Benefits

- By eliminating the need for a restrictive tag bar in CHOPS applications, the tag pin system maximizes inflow of fluids at the PCP intake.
- When performing a flushby, the TopTier tag pin system allows the flushing fluid to flow directly out of the bottom of the stator, which achieves a focused, high-pressure flush.
- Without the use of a conventional tag bar, the rotor freely agitates in the casing annulus and keeps sand and debris suspended in the produced well fluids.
- The tag pins are embedded and bonded into the top of the stator elastomer during injection, which provides a protective layer between the rotor and the tag pins to prevent damage to the rotor.
- The space between the two pins allows the rotor to pass easily through and operate between the two pins while, preventing the rotor from passing through the stator.
- PCP models with Top Tier tag pin system are available in various Weatherford elastomers.

Tool Description

Manufactured from high-strength alloy steel to work with Weatherford Fat Boy and other selected PCPs models, the TopTier tag pin system eliminates the need for a conventional tag bar below the PCP stator. Without the conventional tag bar, the rotor freely agitates in the casing annulus, allowing the highly viscous fluids typical of CHOPS applications to flow into the intake of the PCP, while keeping particles and debris suspended in the fluid. The result of the tag pin system is an optimized PCP free of inflow restrictions.

Embedded and bonded in the top of the stator elastomer, the TopTier tag pin system allows the operator to easily land the rotor using the same operation completed with conventional tag bars. The space between the two installed pins is larger than the minor diameter of the rotor and smaller than the rotor top connection OD; therefore, the rotor passes smoothly through and operates between the two pins without going any further than the stator when landing.



Manufactured from high-strength alloy steel, the TopTier tag pin system can support up to 8,000 pounds of rod weight during the rotor landing and can be used to land the rotor multiple times over the lifetime of the PCP stator.



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Specifications

PC Pump Model Name (m ³ /d/100 rpm)	Rotor ¹			Stator	
	Rotor Connection ² (in.)	Min. Tubing size for rotor orbit (in.)	Min. Tubing size for rotor drift (in.)	Protective Ring OD (in.)	Default Top Connection ³ (in.)
5 FB	7/8" FS* pin	2 7/8	2 3/8	3.75	2 7/8 EUE Box
8 FB	1" FS pin	3 1/2	2 7/8	4.25	3 1/2 EUE Box
13 FB	1" FS pin	3 1/2	2 7/8	4.75	3 1/2 EUE Box
17	7/8" FS pin	2 7/8	2 3/8	3.75	2 3/8 EUE Box x 48-in. WE
22	7/8" FS pin	3 1/2	2 3/8	3.90	2 7/8 EUE Box x 48-in. WE
23 FB	1" FS pin	4	2 7/8	5.00	3 1/2 EUE Box x 48-in. WE
32	7/8" FS pin	3 1/2	2 3/8	3.90	2 7/8 EUE Box x 48-in. WE
35 FB	1" XS** pin	4	3 1/2	5.25	3 1/2 EUE Box x 48-in. WE
52 FB	1" XS pin	4	3 1/2	5.25	3 1/2 EUE Box x 48-in. WE
56	1" FS pin	3 1/2	2 7/8	4.50	3 1/2 EUE Box

Notes:

¹Standard rotor configuration for TopTier tag pin system is XXXL Paddle. Other configurations are available upon request.

²For all models in the above table, the TopTier tag pin system requires a specific rotor connection. The system may not work with all existing rotor inventory.

³Other stator connections are available upon request.

*FS: Full Size Connection.

**XS: eXtra Size Connection.

For all other pump dimensions, please use standard lengths and dimensions.

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