Schlumberger

REDA CONTINUUM LF Iow-flow extended-life ESP pump

Improve lift, efficiency, and reliability in all oil wells



Target production rate: 50 to 1.000 bbl/d



Casing diameter: $5\frac{1}{2}$ in or larger

Where it is used

- Wells with casings 51/2 in or larger
- Gassy production environments, including slug flow
- Abrasive production environments
- Reservoirs with uncertain productivity
- Wells with frequent stops and starts
- Wells with steep production decline

How it improves wells

- Delays conversion to low-flow artificial lift methods
- Improves ESP system reliability
- Increases uptime and extends system run life
- Improves cash flow through accelerated production and continuous operation
- Reduces operating cost through superior hydraulic efficiency
- Enhances performance in gassy and abrasive applications
- Lowers total cost of ownership

How it works

The REDA Continuum LF* low-flow extendedlife ESP pump significantly improves lift, efficiency, lifetime, and power consumption in unconventional and conventional oil wells with very low flow rates, transient and slug flow, solids and abrasives, frequent stops and starts, and production uncertainty.

Optimal downthrust management makes Continuum LF pump an ideal choice during late well life. The result is extended lifetime as production declines, which reduces opex and capex for replacement and alternative artificial lift solutions.

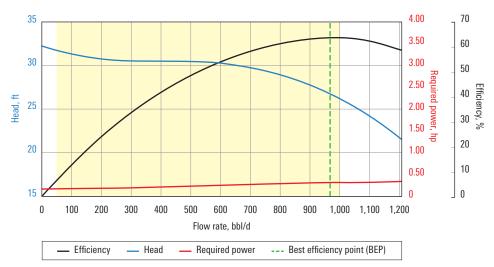
What it replaces

Conventional ESP pumps and early conversion to rod lift.

What else I should know

The latest generation of Continuum* extended-life ESP pumps are fully redesigned, the culmination of four years of sustained

improvement efforts involving analysis of thousands of pumps. In addition to other major improvements, the newest pumps feature an advanced tungsten carbide radial bearing design that prevents sand jams and bearing spinning, which reduces vibrations and significantly improves sand and gas handling.



Continuum LF pump curve for 60 Hz with sq = 1.

Best efficiency point (BEP)	
Flow rate, bbl/d at 60 Hz [m³/d at 50 Hz]	970 [154.28]
Head per stage, ft at 60 Hz [m at 50 Hz]	26.63 [8.12]
Required power, hp [W]	0.31
Efficiency, %	62.01
General	
OD, in [mm]	4.00 [101.6]
Stage geometry	Mixed flow
Recommended operating range, bbl/d at 60 Hz [m³/d at 50 Hz]	50–1,000 [6.68–132.44]
Burst pressure, psi [kPa]	6,000 [41,368]
Stage metallurgy	Ni-Resist®, 5530 alloy
Housing metallurgy	Carbon steel, Redalloy* premium alloy
Shaft diameter, in [mm]	0.68 [17.27]
Shaft material and rating at 60 Hz, hp	240 (INCONEL® 718)
Shaft radial support options	ES-TT,† ARZ-TT,‡ FBH-TT,§ FBH-TT-KS ^{††}
Radial bearing material	Tungsten carbide
Pump construction	Enhanced compression design, factory-shimmed

⁴ AR2 abrasion-resistant zirconia bearing, tungsten carbide bushing, and sleeve.
⁵ Full bearing housing and tungsten carbide bushing.
¹¹ Full bearing housing, tungsten carbide bushing, and keyless sleeve.

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