S4000N high-efficiency REDA ESP pump

Improve lift, efficiency, and reliability in oil wells

Target production rate:
1,000 to 6,000 bbl/d at 60 Hz
[132 to 795 m³/d at 50 Hz]

Casing diameter:
7 in or larger

Benefits
- Reduces power consumption with high-efficiency design
- Improves reliability and extends system run life in abrasive applications

Features
- Application flexibility to accommodate production rates from 1,000 to 6,000 bbl/d at 60 Hz [132 to 795 m³/d at 50 Hz]
- Compression pump with factory shimming
- Optimized hydraulic designs based on computational fluid dynamics (CFD)
- High-strength MONEL® and INCONEL® shafts
- Patented abrasion-resistant bearing configuration for reliability in sandy wells and other demanding applications
- Compliant-mounted radial bearing systems that minimize vibration and wear
- Availability of corrosion-resistant coatings for wells with H₂S, CO₂, or other corrosive elements
- Availability of thermally compensated pumps that enable high-temperature operations

S4000N pump curve for 60 Hz with sg = 1.

S4000N Pump Specifications

<table>
<thead>
<tr>
<th>Best efficiency point (BEP)</th>
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<tbody>
<tr>
<td>Flow rate, bbl/d at 60 Hz [m³/d at 50 Hz]</td>
<td>4,280 [567]</td>
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<tr>
<td>Head per stage, ft at 60 Hz [m at 50 Hz]</td>
<td>59.50 [12.62]</td>
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<tr>
<td>Required power, hp at 60 Hz [hp at 50 Hz]</td>
<td>2.59 [1.50]</td>
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<td>Efficiency, %</td>
<td>72.65</td>
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General
- OD, in [mm]: 5.38 [136]
- Stage geometry: Mixed flow
- Stage metallurgy: Ni-Resist®
- Housing metallurgy: Carbon steel, Redalloy* premium alloy
- Shaft diameter, in [mm]: 1.00 [25]
- Shaft material and rating at 60Hz, hp: High-strength MONEL, 463; INCONEL625, 600; INCONEL 718, 720
- Shaft radial support options: ARZ†
- Pump construction: Enhanced compression design, factory-shimmed

Additional information

Factory-shimmed high-strength shafts increase pump reliability. Factory shimming enables precise shaft setting to match REDA* Maximus* install-ready ESP motors and protectors and reduce installation time by at least 60%.

The patented ARZ abrasion-resistant tungsten carbide bearings and compression-ring construction provide advanced radial stability even in the most challenging conditions, minimizing vibration, ensuring smooth operation, and reducing wear. The compliant-mounted bearings repeatedly show less wear in tests and actual field performance over a wide range of well conditions as compared with alternative bearing materials.

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