

## D460N high-efficiency REDA ESP pump

Improve lift, efficiency, and reliability in oil wells

**Target production rate:**  
200 to 650 bbl/d at 60 Hz  
[26.5 to 86 m<sup>3</sup>/d at 50 Hz]

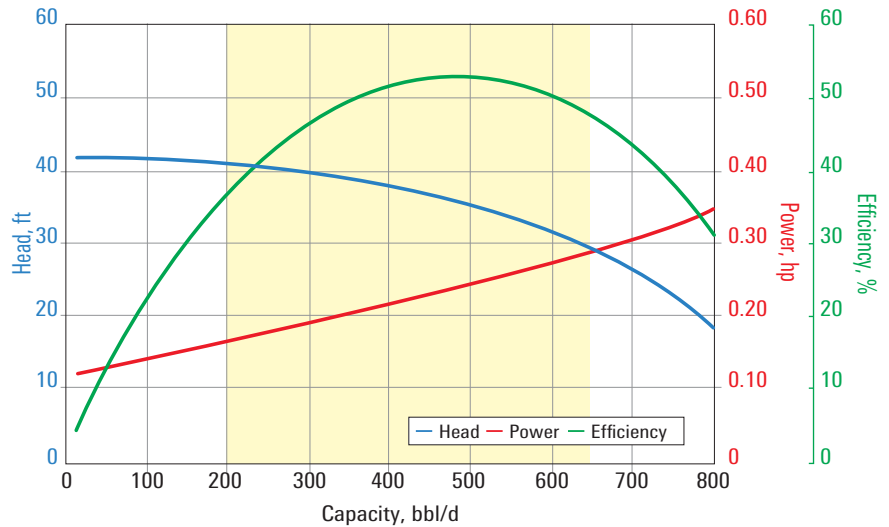
**Casing diameter:**  
5½ in or larger

### 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 200 to 650 bbl/d at 60 Hz [26.5 to 86 m<sup>3</sup>/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 and stainless steel construction for wells with H<sub>2</sub>S, CO<sub>2</sub>, or other corrosive elements
- Availability of thermally compensated pumps that enable high-temperature operations



D460N pump curve for 60 Hz with  $sg = 1$ .

### D460N Pump Specifications

#### Best efficiency point (BEP)

Flow rate, bbl/d at 60 Hz [m <sup>3</sup> /d at 50 Hz]	490 [64.8]
Head per stage, ft at 60 Hz [m at 50 Hz]	35.78 [7.57]
Required power, hp at 60 Hz [hp at 50 Hz]	0.24 [0.14]
Efficiency, %	53.00

#### General

OD, in [mm]	3.87 [98.3] or 4.00 [101.6]
Stage geometry	Radial flow
Stage metallurgy	Ni-Resist®, 5530 alloy
Housing metallurgy	Carbon steel, Redalloy* premium alloy
Shaft diameter, in [mm]	0.62 [15.7]
Shaft material and rating at 60 Hz, hp	INCONEL 718, 180
Shaft radial support options	ES, <sup>†</sup> ARZ <sup>†</sup>
Pump construction	Enhanced compression design, factory-shimmed

<sup>†</sup> Enhanced stability option with tungsten carbide bushing.

<sup>†</sup> ARZ abrasion-resistant zirconia bearing, tungsten carbide bushing, and sleeve.

All specifications are subject to change without notice.

### 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.