

EX™ Stainless-Steel Sucker Rods

Increase uptime in corrosive rod-lift and PCP-lifted wells

Applications

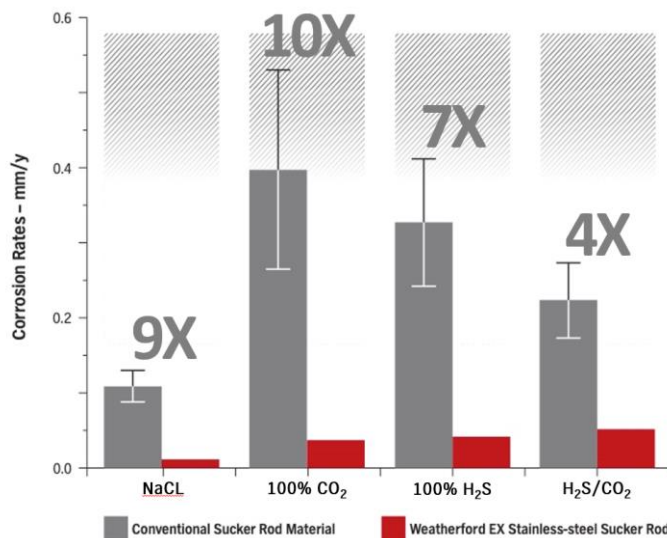
- Mild to aggressively corrosive wells
- Reciprocating rod-lift systems
- PCP systems

Features and Benefits

- Patent-pending, true stainless-steel composition for strength and long-lasting durability in extreme corrosive environments
- High-chrome chemistry improves resistance to corrosion and minimizes pitting on rod-string surfaces
- Optimized tensile strength provides reliable durability for reaching severe and demanding applications
- Enhanced shot-peened surface extends fatigue life
- Additional pin-threads maximize connection integrity

Tool Description

Corrosion is the leading cause of rod-lift failures. Harsh well fluid conditions lead to material loss and detrimental pitting that result in fatigue fractures and downtime. With its patent-pending composition and optimum mechanical properties, Weatherford EX stainless-steel sucker rods are designed specifically for high performance in harsh well environments. Its true, stainless-steel chemistry and high-impact values dramatically reduce corrosive pitting and crack propagation for extended run times and enhanced production.



Weatherford EX stainless-steel sucker rods provide superior strength and long-lasting durability in corrosive environments.



Lab results show EX stainless-steel sucker rod excelled against conventional materials in aggressively corrosive environments.

EX™ Stainless-Steel Sucker Rod

Specifications

ID	Description			
D _R	Rod-body diameter	.75 in. (19.05 mm)	.875 in. (22.23 mm)	1 in. (25.4 mm)
D _S	Pin-shoulder outside diameter	1.5 in. (38.1 mm)	1.625 in. (41.28 mm)	2 in. (50.8 mm)
D _T	Nominal-thread diameter	1.063 in. (26.99 mm)	1.187 in. (30.16 mm)	1.375 in. (34.93 mm)
L _I	Pin length	1.638 in. (41.6 mm)	1.785 in. (45.33 mm)	1.875 in. (47.63 mm)
W _S	Wrench-square width	1 in. (25.4 mm)	1 in. (25.40 mm)	1.313 in. (33.34 mm)
L _{WS}	Wrench-square length	1.25 in. (31.75 mm)	1.25 in. (31.75 mm)	1.25 in. (31.75 mm)
D _B	Bead diameter	1.4 in. (35.72 mm)	1.5 in. (38.1 mm)	1.9 in. (48.42 mm)
D _I	Stress-relief diameter	.915 in. (23.24 mm)	1.04 in. (26.42 mm)	1.22 in. (31.17 mm)
L _R	Sucker-rod length	25 ft (7.62 m)		
L _P	Pony-rod length	2 ft (.6 m), 4 ft (1.2 m), 6 ft (1.8 m), 8 ft (2.4 m), 10 ft (3 m)		
L _C	Coupling length	4 in. (101.6 mm)	4 in. (101.6 mm)	4 in. (101.6 mm)
C _{OD}	Coupling outside diameter, SH	1.5 in. (38.1 mm)	1.625 in. (41.3 mm)	2 in. (80.8 mm)
C _{OD}	Coupling outside diameter, FH	1.625 in. (41.3 mm)	1.812 in. (46 mm)	2.187 in. (55.6 mm)

Mechanical Properties

EX	Yield strength	Tensile strength	Elongation	Reduction in area	Charpy V-notch
Min	100,000 psi (100 ksi)	125,000 psi (125 ksi)	14%	50%	40 ft-lbs (54 J)
Max	—	140,000 psi (140 ksi)	—	—	—

Approximate Weight

API Size	Without coupling	With full-hole coupling	With slim-hole coupling
.75 in. (19.05 mm)	38.5 lbs (17.5 kg)	40 lbs (18.1 kg)	39.8 lbs (18.1 kg)
.875 in. (22.2 mm)	52 lbs (23.6 kg)	53.8 lbs (24.4 kg)	53.5 lbs (24.3 kg)
1 in. (25.4 mm)	69.9 lbs (31.7 kg)	72.5 lbs (32.9 kg)	71.9 lbs (32.6 kg)

Maximum Allowed Stress Calculation

$$S_A = (T/4 + 0.5825 S_{MIN}) * SF$$

