KDP™ Sucker Rod

Increase uptime in challenging rod-lift and PCP-lift wells

Applications

- Medium to heavy-load applications[1]
- Reciprocating rod-lift systems
- PCP systems

Features and Benefits

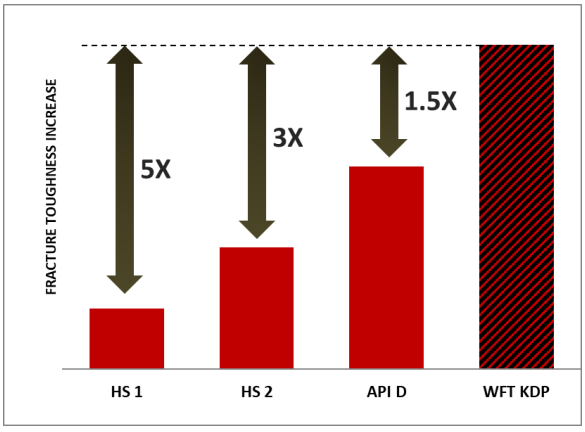
- Optimized tensile strength provides reliable durability in wells requiring aggressive pump-applications
- Enhanced load tolerance for reaching deep, severe, and demanding wells
- Improved yield strength resists fracture propagation
- Enhanced shot-peened surface extends fatigue life

Tool Description

Engineered as an impact-resistant sucker rod with improved mechanical properties, KDP sucker rods manage challenging wells that require aggressive pumping.

KDP sucker rods are manufactured under strict quality-control standards at our Greenville, Texas production facility, which is ISO 9001/API Q1 certified and considered the most advanced sucker-rod manufacturing center in the world.

KDP sucker rods move through a proven shot-peen process that increases fatigue life. Each rod features fully rolled, cold-formed threads and reinforced structure that delivers a smooth, precision fit unattained by conventional rods with machine-cut threads.



KDP sucker rods have the highest impact values when compared with other sucker rods in the industry.

Weatherford KDP sucker rods provide superior strength and long-lasting durability in heavy-load wells.

Weatherford®

1. Provided satisfactory corrosion inhibiting practices are followed

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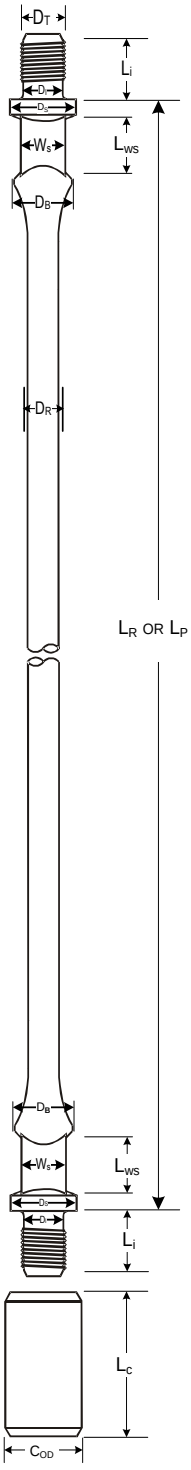

Specifications

ID Description

	Nominal size	.75 in. (19.05 mm)	.875 in. (22.23 mm)	1 in. (25.4 mm)
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	1.4375 in. (36.51 mm)	1.625 in. (41.28 mm)	1.875 in. (47.63 mm)
W_S	Wrench-square width	1 in. (25.4 mm)	1 in. (25.4 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 lengths	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)		
C_{OD}	Coupling outside diameter, SH	1.5 in. (38.1 mm)	1.625 in. (41.3 mm)	2 in. (50.8 mm)
C_{OD}	Coupling outside diameter, FH	1.625 in. (41.3 mm)	1.812 in. (46 mm)	2.187 in. (55.6 mm)

Chemical Properties

AISI	C	Mn	Si	Max P	Max S	Ni	Cr	Mo
4333 mV	.3 to .035%	.7 to .9%	.25 to .35%	.025%	.025%	1.4 to 1.6%	.85 to 1.1%	.15 to .25%

Mechanical Properties

KDP	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

$S_A = (T/2.8 + .375\ S_{MIN}) * SF$

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