S60™ Sucker Rod

Reliable performance in rod life and PCP lift wells

Applications

- Reciprocating rod lift systems
- PCP lift systems
- Light- to medium-duty applications in noncorrosive or inhibited wells[1]

Features and Benefits

- AISI 1029 carbon-manganese alloy steel
- API Grade C
- Normalized-and-tempered steel improves mechanical properties for overall toughness and reduced brittleness
- Shot-peened process creates compressive stress that strengthens surface-tension properties for enhanced fatigue life

Tool Description

Weatherford S60 sucker rods are part of the Weatherford series of quenched and tempered sucker rods and are recommended for light- to medium-duty pumping services in noncorrosive or inhibited wells. Manufactured to API specifications from AISI 1029 modified carbon steel that is quenched and tempered for added durability and strength. S60 sucker rods feature fully rolled, cold-formed threads designed to provide a precise and smooth, reinforced-thread structure. S60 rods are liberally coated with atmospheric inhibitors and carefully palletized in bundles for safe transport and handling.

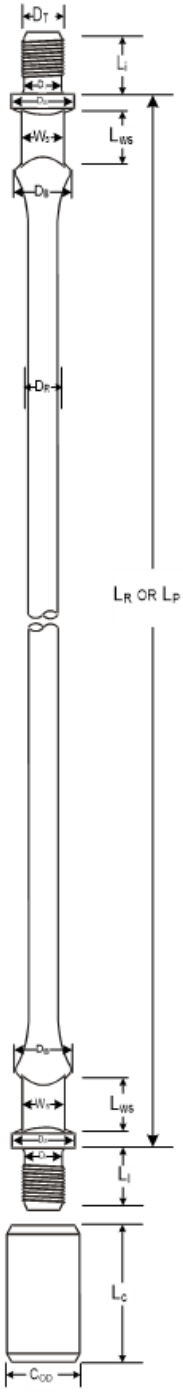
Weatherford S60 sucker rods provide reliable performance in light- to medium-duty pumping services in noncorrosive or inhibited wells.

Weatherford®

S60™ Sucker Rod

Specifications

	Description	in. (mm)			
ID	Nominal size	0.750 (19.05)	0.875 (22.23)	1.000 (25.40)	1.125 (28.58)
D_R	Rod body diameter				
D_S	Pin shoulder OD	1.500 (38.10)	1.625 (41.28)	2.000 (50.80)	2.250 (57.15)
D_T	Nominal thread diameter	1.063 (26.99)	1.187 (30.16)	1.375 (34.93)	1.562 (39.69)
L_I	Pin length	1.43 (36.51)	1.62 (41.28)	1.87 (47.63)	2.125 (53.98)
W_S	Wrench square width	1.00 (25.40)		1.313 (33.34)	1.500 (38.10)
L_{WS}	Wrench square length	1.25 (31.75)			1.63 (41.28)
D_B	Bead diameter	1.40 (35.72)	1.50 (38.1)	1.90 (48.42)	2.187 (55.63)
D_I	Stress relief diameter	0.915 (23.24)	1.04 (26.42)	1.22 (31.17)	1.414 (35.92)
L_R	Sucker rod length	25 and 30 ft (7.62 and 9.144 m)			
L_P	Pony rod length	2, 4, 6, 8, 10 ft (.6, 1.2 ,1.8, 2.4, 3 m)			
L_C	Coupling OD, SH	4.00 ft (101.6 m)			
C_{OD}	Coupling OD, SH	1.50 (38.10)	1.625 (41.30)	2.00 (80.80)	2.25 (53.0)
C_{OD}	Coupling OD, FH	1.625 (41.30)	1.812 (46.00)	2.187 (55.60)	2.375 (60.30)
~ 25-ft rod weight w/o coupling		38.5 lbs (17.5 kg)	52.0 lbs (23.6 kg)	69.9 lbs (31.7 kg)	88.7 lbs (40.2 kg)
~ 25-ft rod weight w/FH coupling		40.0 lbs (18.1 kg)	53.8 lbs (24.4 kg)	72.5 lbs (32.9 kg)	91.8 lbs (41.6 kg)
~ 25-ft rod weight w/SH coupling		39.8 lbs (18.1 kg)	53.5 lbs (24.3 kg)	71.9 lbs (32.6 kg)	91.17 lbs (41.35 kg)



Chemical Composition

Material	C %	Mn %	P %	S %	Si %	Ni %	Cr %	Mo %	Cu/Va %
1029M	0.22 to 0.29	1.00 to 1.32	0.035 Max	0.040 Max	0.15 to 0.30	0.15 Max	0.20 Max	0.05 Max	0.35 Max/ 0.010 to 0.03

Mechanical Properties[2]

API Grade	Yield Strength ksi (MPa)	Tensile Strength ksi (MPa)	Elongation % (8 in.) 8 in.	Reduction %	Heat Treatment
C Carbon	90 (620)	100 to 115 (689 to 792)	13 Min	55 Min	Quenched and Tempered

Maximum Allowed Stress Calculation

$(T/2.8 + 0.375\ S_{MIN}) * SF$

[1] Provided satisfactory corrosion-inhibiting practices are followed.
[2] Weatherford recommends applying a service factor to the specified-torque limit based on operating conditions. Please refer to Weatherford engineering bulletin TB-135 for further guidance on torque limits.