1. Sucker Rod

Sucker Rod Nominal Value	Φ16(5/8")	Φ19(3/4")	Φ22(7/8")	Φ25(1")	Φ29(11/8")
Rod Body Diameter	15.88+0.18-0.36 (0.625+0.007-0.014)	19.05+0.20-0.41 (0.750+0.008-0.016)	22.23+0.20-0.41 (0.875+0.008-0.016)	25.40+0.23-0.46 (1.000+0.009-0.018)	28.58+0.25-0.51 (1.125+0.010-0.020)
Outer Diameter Of External Thread Shoulder	31.8+0.13-0.25 (1.250+0.005-0.010)	38.1+0.13-0.25 (1.500+0.005-0.010)	41.3+0.13-0.25 (1.625+0.005-0.010)	50.8+0.13-0.25 (2.000+0.005-0.010)	57.2+0.13-0.25 (2.250+0.005-0.010)
Wrench Width ±0.8(±0.031)	22.2(0.875)	25.4(1.000)	25.4(1.000)	33.3(1.313)	38.1(1.500)
Wrench Length	31.8(1.250)	31.8(1.250)	31.8(1.250)	38.1(1.500)	41.3(1.625)
API Rod Length ±50(±2.0)	508(20) 1118(44) 1727(68) 2337(92) 2946(116) 7518(296) 9042(356)	508(20) 1118(44) 1727(68) 2337(92) 2946(116) 7518(296) 9042(356)	508(20) 1118(44) 1727(68) 2337(92) 2946(116) 7518(296) 9042(356)	508(20) 1118(44) 1727(68) 2337(92) 2946(116) 7518(296) 9042(356)	508(20) 1118(44) 1727(68) 2337(92) 2946(116) 7518(296) 9042(356)
Domestic Rod Length±50	900,1400,1900, 2400,2900,3400, 7900,9900	900,1400,1900, 2400,2900,3400, 7900,9900	900,1400,1900, 2400,2900,3400, 7900,9900	900,1400,1900, 2400,2900,3400, 7900,9900	900,1400,1900, 2400,2900,3400, 7900,9900
Upset Flange Diameter	31.1+0.13-3.17 (1.219+0.005-0.125)	35.7+0.13-3.17 (1.406+0.005-0.125)	38.1+0.13-3.17 (1.500+0.005-0.125)	48.4+0.13-3.17 (1.906+0.005-0.125)	55.6+0.13-3.17 (2.188+0.005-0.125)
AR±3.2(±0.125)	47.6(1.875)	57.1(2.250)	66.7(2.625)	76.2(3.000)	85.7(3.375)

CR+1.59-0.40 (+0.063-0.016)	3.2(0.125)	3.2(0.125)	4.8(0.188)	4.8(0.188)	4.8(0.188)

2. Mechanical Properties Of Steel Sucker Rod

Grade	Minimum Yield Strength (0.2% Residual Deformation)		Minimum Tensile Strength		Maximum Tensile Strength		Elongation 200mm%	Reduction Of Area Z%	Surface Hardness HRC	Core Hardness HB	Fatigue Life
K	60000	414	90000	621	115000	793	≥13	≥50			
C	60000	414	90000	621	115000	793	≥13	≥50			
D	85000	586	115000	793	140000	965	≥13	≥50			
KD	85000	590	115000	795	140000	965	≥13	≥50			
HL	115000	795	140000	965	173339	1195	≥13	≥45			
HY	/	/	140000	965	173339	1195	/	/	≥42	≥224	
EHL	/	/	188500	1300	217500	1500	/	/	≥50	≥320	≥2.5X106

Note: when the yield strength cannot be measured, it should be considered to be processed into standard sample installation drawing

a) It is generally made of high quality carbon steel, which can reach the mechanical properties of the table.

b) Molybdenum steel (but not limited to this type of steel) is generally used, and the mechanical properties of this table can be achieved through effective heat treatment.

3. Chemical Composition Of Common Sucker Rod

AISI	C	Si	Mn	P	S	Cr	Ni	Mo	V	Cu	Al
1541	0.36-0.45	0.15-0.35	1.35-1.65	≤0.04	≤0.04	≤0.3	≤0.35	≤0.06	0.04-0.09	≤0.35	≤0.035
4120	0.17-0.24	0.17-0.37	0.4-0.7	≤0.025	≤0.025	0.8-1.1	≤0.3	0.15-0.25	/	≤0.2	/
4130	0.26-0.33	0.17-0.37	0.4-0.7	≤0.025	≤0.025	0.8-1.1	≤0.3	0.15-0.25	/	≤0.2	/
4138	0.37-0.45	0.17-0.37	0.9-1.2	≤0.025	≤0.025	0.9-1.2	≤0.3	0.2-0.3	/	≤0.2	/
4138M	0.37-0.45	0.17-0.37	0.9-1.2	≤0.025	≤0.025	0.9-1.2	≤0.3	0.2-0.3	0.04-0.09	≤0.2	/
4140	0.38-0.45	0.17-0.37	0.5-0.8	≤0.025	≤0.025	0.9-1.2	≤0.3	0.15-0.25	0.04-0.09	≤0.2	/
4142	0.38-0.45	0.17-0.37	0.5-0.8	≤0.025	≤0.025	0.9-1.2	≤0.3	0.15-0.25	0.04-0.09	≤0.2	/
3130	0.22-0.29	0.15-0.35	0.71-1.0	≤0.025	≤0.025	0.42-0.65	0.72-1.0	0.01-0.06	/	≤0.2	/
4320	0.18-0.42	0.15-0.35	0.8-1.0	≤0.025	≤0.025	0.7-0.9	1.15-1.5	0.2-0.3	0.04-0.09	≤0.35	≤0.035
4330	0.3-0.35	0.15-0.35	0.8-1.1	≤0.025	≤0.025	0.8-1.1	1.65-2.0	0.2-0.3	0.05-0.10	≤0.2	/
4621	0.18-0.23	0.17-0.37	0.7-0.9	≤0.025	≤0.025	≤0.35	1.65-2.0	0.2-0.3	/	≤0.2	/
4720	0.19-0.23	0.15-0.35	0.85-1.05	≤0.025	≤0.025	0.8-1.05	0.9-1.2	0.22-0.30	0.02-0.05	0.40-0.60	/

4. Sucker Rod Weight List

Size	$^{5}/_{8}$"	$^{3}/_{4}$"	$^{7}/_{8}$"	1"	1 $^{1}/_{8}$"	1 $^{1}/_{4}$"	1 $^{1}/_{2}$"
kg/m	1.68	2.4	3.2	4.2	5.3	6.4	9.5