



Polished Rod



Material Selections

- The AISI 1045 piston steel based polished rod offers good fatigue resistance in non-corrosive environment.
- AISI 4140/4142 alloy steel offers improved abrasion resistance and maximum fatigue resistance. This is the most popular material choice for polished rod.
- For corrosive applications, it is suitable to use 1045 carbon steel with spray metal finish. The nickel-chromium surface increases corrosion resistance.

AISI 414X Alloy Steel

Max. fatigue resistance
Abrasion resistance
Corrosion tolerance

AISI 1045 Piston Steel

Fatigue resistance
Abrasion tolerance
Corrosion tolerance

AISI 1045 w/ Spray Metal

Fatigue resistance
Max. abrasion resistance
Corrosion resistance

Manufacturing Process

Exceed polished rod are manufactured and inspected to be fully comply with API-11B spec. Pin threads is cold-formed and rolled, creating a much stronger pin compared to old cut thread or burnished process. The rolled threads improve the fatigue performance of the polished rod significantly and reduces common polished rod failures at thread roots dramatically.

Physical Properties

	Unit	4140/4142 Alloy Steel	1045 Piston Steel	Spray-metal Piston Steel
Tensile Strength	ksi	125	90	125
	Mpa	861	689	620

Exceed Polished Rod



Chemical Composition

Chemical %	4140/4142 Alloy Steel	1045 Piston Steel	Spray Metal
Carbon	0.38-0.45 ⁽¹⁾	0.43-0.5	0.5-1
Chromium	0.8-1.1	-	12-18
Iron	-	-	3.0-5.5
Manganese	0.75-1.0	0.6-0.9	-
Molybdenum	0.15-0.25	-	-
Nickel	<0.35	-	-
Phosphorus	<0.35	<0.04	-
Silicon	0.15-0.35	-	3.5-5.5
Sulfur	<0.04	<0.05	-
Aluminum	-	-	<0.05
Boron	-	-	2.5-4.5
Cobalt	-	-	<0.1
Titanium	-	-	<0.05

Note: (1) AISI 4140 is 0.38-0.43% and AISI 4142 is 0.40-0.45%

Dimensions

Unit	Body Dia.	Pin Size	Length Unit	Length Selection
inch	1-1/8	5/8 , 3/4	ft	8, 11, 16, 22, 24 26
mm	28.58	15.88, 19.05	m	2.44, 3.35, 4.88, 6.71, 7.32, 7.93
inch	1-1/4	7/8	ft	11, 16, 22, 24, 26, 30, 36
mm	31.75	22.23	m	3.35, 4.88, 6.71, 7.32, 7.93, 9.14, 10.97
inch	1-1/2	1	ft	16, 22, 24, 26, 30, 36
mm	38.1	25.4	m	4.88, 6.71, 7.32, 7.93, 9.14, 10.97

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The logo features a stylized, multi-colored geometric icon above the word "EXCEED" in a large, bold, serif font. Below "EXCEED" is the phrase "OILFIELD EQUIPMENT" in a smaller, all-caps, sans-serif font.

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