

Sucker Rod String: Sucker & Pony Rod

PDS: SRXTHS

Short Name: R11

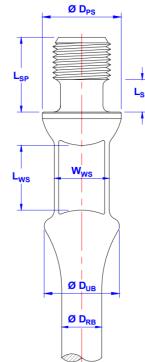
Effective Date: 14/03/2025 Previous Revision: 23/12/2024

X-Torque High Strength Sucker & Pony Rod

Dimensions:

X-Torque is a Tenaris special connection designed to support high torques in progressive cavity pumping (PCP) operations.

Nominal Size		Units	DRB	DPS	wws	LWS	DUB	LSR	LSP
Rod	Pin	Offics	DIAD	DF3	VV VV 3	LVV3	505	LJIV	LJF
1"	7/8"	max. in (mm)	1.009 (25.63)	1.630 (41.40)	1.031 (26.19)	-	1.504 (38.20)	0.425 (10.79)	1.948 (49.49)
		min. in (mm)	0.982 (24.94)	1.615 (41.02)	0.969 (24.61)	1.250 (31.80)	1.378 (35.00)	0.394 (10.00)	1.909 (48.50)
1 1/8"		max. in (mm)	1.126 (28.60)	1.708 (43.38)	1.350 (34.29)	1	1.717 (43.60)	0.425 (10.79)	1.937 (49.21)
11/6	7/8"	min. in (mm)	1.096 (27.84)	1.693 (43.00)	1.256 (31.90)	1.250 (31.80)	1.568 (39.82)	0.394 (10.00)	1.875 (47.63)
1 1/8"	1"	max. in (mm)	1.126 (28.60)	2.005 (50.93)	1.350 (34.29)	-	1.909 (48.49)	0.645 (16.39)	1.937 (49.21)
	1"	min. in (mm)	1.095 (27.81)	1.990 (50.55)	1.256 (31.90)	1.500 (38.10)	1.724 (43.79)	0.614 (15.60)	1.875 (47.63)
1 1/4"	1''	max. in (mm)	1.251 (31.78)	2.005 (50.93)	1.343 (34.11)	-	2.087 (53.01)	0.425 (10.79)	1.937 (49.21)
11/4	1	min. in (mm)	1.220 (30.99)	1.990 (50.55)	1.259 (31.98)	1.500 (38.10)	1.851 (47.02)	0.394 (10.00)	1.875 (47.63)
1 1/4"	/!	max. in (mm)	1.251 (31.78)	2.265 (57.53)	1.531 (38.89)	1	2.191 (55.66)	0.425 (10.79)	2.187 (55.56)
11/4	1 1/8"	min. in (mm)	1.220 (30.99)	2.235 (56.77)	1.457 (37.01)	1.625 (41.28)	1.990 (50.56)	0.394 (10.00)	2.125 (53.98)
1 1/2"	1 1 /0"	max. in (mm)	1.501 (38.13)	2.265 (57.53)	1.531 (38.89)	-	2.191 (55.66)	0.425 (10.79)	2.187 (55.56)
	1 1/8"	min. in (mm)	1.471 (37.36)	2.235 (56.77)	1.457 (37.01)	1.625 (41.28)	1.990 (50.56)	0.394 (10.00)	2.125 (53.98)



Sucker Rods Nominal Lengths: 25, 30 ft (7.62, 9.14 m)

Pony Rods Nominal Lengths:* 2, 4, 6, 8, 10, 12 ft (0.61, 1.22, 1.83, 2.44, 3.05, 3.66 m)

Steel Grades:

Tenaris manufactures high-strength sucker rods from quality steel bars to be used in high-flow wells. Products meet the most stringent requirements for greater mechanical strength, thus ensuring quality performance in deep wells with very high loads.

Chemical Composition:

Typical chemical compositions (wt%) listed in the following table.

Grade	С	Mn	Si	S	P	Cr	Ni	Мо	Others
НА	0.36-0.43	1.00-1.40	0.20-0.40	0.025 max	0.025 max	0.50-1.00	0.30 max	0.25-0.50	V: 0.04-0.08, Nb: 0.05 max
UHS	0.29-0.37	0.70-0.95	0.15-0.35	0.025 max	0.025 max	0.80-1.10	1.65-2.00	0.20-0.30	V: 0.04-0.08

Mechanical Properties:

Mechanical properties are listed in the following table.

Grade	Yield Strength (0.2% offset)	Ultimate Tensile Stress	Elongation (8")	Reduction of area	Hardness
НА	min 115 kpsi (min 793 MPa)	140 to 155 kpsi (965 to 1069 MPa)	8% min	30% min	32 HRC
UHS	min 115 kpsi (min 793 MPa)	140 to 155 kpsi (965 to 1069 MPa)	10% min	40% min	34 HRC

Performance Data:

Maximum operative torque:

The maximum operative torque values were determined in full-scale tests.

Tenaris recommends the end user to determine the von mises effective stress of each application and not to exceed the rod body yielding stress. Tenaris recommends the use of a 0.75 Service Factor depending on the operative conditions (dynamic loading and environment).

Nomin	al Size	Maxium Ope	rative Torque	
Rod	Pin	НА	UHS	
1"	7/8''	1284 Lb.ft (1740 N.m)	1284 Lb.ft (1740 N.m)	
1 1/8"	7/8''	1284 Lb.ft (1740 N.m)	1284 Lb.ft (1740 N.m)	
1 1/8"	1''	1958 Lb.ft (2654 N.m)	1958 Lb.ft (2654 N.m)	
1 1/4"	1''	2675 Lb.ft (3626 N.m)	2675 Lb.ft (3626 N.m)	
11/4" 11/8"		2675 Lb.ft (3626 N.m)	2675 Lb.ft (3626 N.m)	
1 1/2"	1 1/8''	3210 Lb.ft (4352 N.m)	3210 Lb.ft (4352 N.m)	

Maximum Pulling Force:

	Rod Outer Diameter					
Grade	1"	1 1/8"	1 1/8"	1 1/4"	1 1/2"	
НА	78.3 klb	99.1 klb	99.1 klb	126.8 klb	182.7 klb	
	(35.6 t)	(45.1 t)	(45.1 t)	(57.7 t)	(83 t)	
UHS	78.3 klb	99.1 klb	99.1 klb	126.8 klb	182.7 klb	
	(35.6 t)	(45.1 t)	(45.1 t)	(57.7 t)	(83 t)	

To prevent tensile failures, the weight indicator pull on a "like new" condition rod string should not exceed 90% of the yield strength of the smallest diameter sucker rod, based on its known size and grade. Maximum pulling force values herein informed were calculated based on the 90% of the specified minimum yield strength at the smallest section of a given rod.

Color Code:

Rod's ends are painted according to the following table:

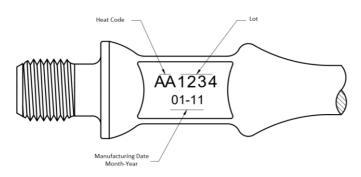
Grade	Color Code
НА	Green
UHS	Purple

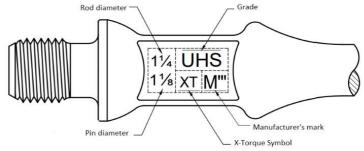
*Displayed colors are for guidance only.

Non Destructive Testing:

All raw material is carefully inspected using electromagnetic and/or ultrasonic methods to ensure the soundness of the final product.

Marking:





Grade	New Marking	Old Marking
HA	НА	MMS
UHS	UHS	UHS

Labeling:*



Metalmecánica S.A.

Ruta 55 Km. 754,1 Villa Mercedes (San Luis) Made in Argentina

BOX N°		QTY:
PRODUCT: SAP CODE: SPECIFICATION:	SUCKER RODS	DATE:
ROD DIAM:	NET WEIGHT: (kg)	
END DIAM:		
GRADE:		
LENGTH: (ft)		
SALES ORDER:		PACKAGING TYPE:
DESTINATION:		THREAD PROTECTIO

Ordering Information: When placing an order places attach

When placing an order please attach the following information:

PDS: SRXTHS

Product Family: Sucker Rod (or Pony Rod)

Body Diameter: 1"
Pin Diameter: 7/8"
Grade: UHS
Length: 25 ft

*Image for reference only.

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