Sucker Rod Grade Comparison Table

	Grade C					Grade K			
Manufacturer	Champion X Norris	Champion X Upco	Lufkin/US Rod	Tenaris	Weatherford	Champion X Norris	Champion X Upco	Schlumberger	Tenaris
Grade	30	C	C	C	C	40	K	K	K
Steel Series UNS	G15410M	G15410M	G15360M	G15300M	G15360M	G46230M	G46230M	G46210M	G46210M
Yield Strength ksi	60 min	60 min	60 min	60 min	60 min	60 min	60 min	60 min	60 min
Tensile Strength ksi	90 - 115	90 - 115	90 - 115	90 - 115	90 - 115	90 - 115	90 - 115	90 - 115	90 - 115
Heat Treatment	N & T	N & T	N & T	N	N	N & T	N & T	N & T	N & T

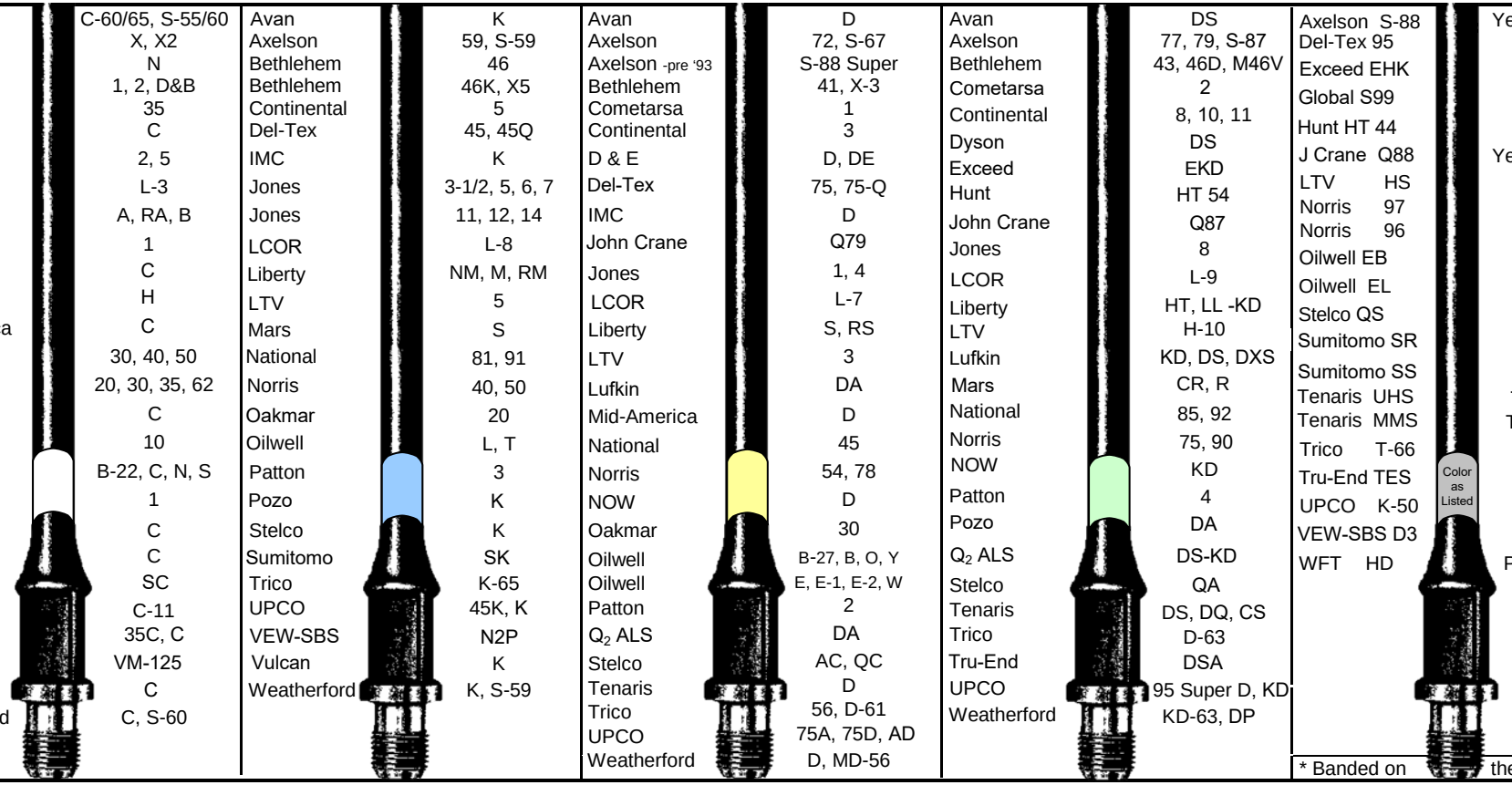
	Grade DC - *D Carbon*			Grade DA - *D Alloy*							
Manufacturer	Champion X Norris	Champion X Upco	Tenaris	Champion X Norris	Champion X Upco	Exceed	Lufkin/US Rod	Q_2 ALS	Schlumberger	Tenaris	Weatherford
Grade	54	CD	D Carbon	78	AD	D	DA	DA	DA	D Alloy	D
Steel Series UNS	G15410M	G15410M	G15300M	G41420M	G41420M	G41420M	G41400M	G41300M	G41420M	G41420M	G41420M
Yield Strength ksi	85 min	85 min	85 min	100 min	100 min	100 min	100 min	115 min	85 min	95 min	100 min
Tensile Strength ksi	115 - 140	115 - 140	115 - 140	120 - 140	120 - 140	115 - 140	120 -140	120-140	115 - 140	120-140	115 - 140
Heat Treatment	N & T	N & T	N & FC	N & T	N & T	N & T	N & T	Q & T	N & T	N & T	N & T

	Grade DS - *D Special Alloy*														
Manufacturer	Champion X Norris		Champion X Upco	Exceed	Liberty Lift	Lufkin/US Rod			Q_2ALS	Schlumberger	Tenaris			Weatherford	
Grade	75	90	KD	EKD	LL KD	KD	DS	DXS	DS-KD	DS	KD	D Special	αCS	KD	KDP
Steel Series UNS	G43300M	G43200M	G43200M	G31300M	G31300M	G47200M	G43200M	G43300M	G31300M	G43200M	G43200M	G43300M	Special	G47200M	G4330M
Yield Strength ksi	100 min	95 min	95 min	115 min	115 min	90 min	95 min	100 min	120 min	85 min	85 min	100	110 min	95 min	100 min
Tensile Strength ksi	125-140	120-140	120-140	125 - 140	125 - 140	115-130	115-130	125-140	125-140	115 - 140	115-140	125-140	118-133	115-140	125-140
Heat Treatment	N & T	N & T	N & T	Q & T	Q & T	N & T	N & T	N & T	Q & T	N & T	N & T	N & T	Q & T	N & T	N & T

	Grade HA - *High Strength Alloy*							Grade HY - *Case Hardened*	
Manufacturer	Champion X Norris	Champion X Upco	Liberty Lift	Lufkin/US Rod	Schlumberger	Tenaris	Weatherford	Exceed	Weatherford
Grade	96	HS	LL HS	HA	HA	MMS	XD/T66	EH	EL
Steel Series UNS	G41380M	G41380M	G41380M	G41380M	G41380M	G41380M	G41380M	Special	Special
Yield Strength ksi	115 min	115 min	115 min	115 min	115 min	115 min	115 min	...	...
Tensile Strength ksi	140 - 150	140 - 150	140 - 150	140 - 150	140 - 155	138 - 155	140 - 150	144- -180	...
Heat Treatment	N & T	N & T	N & T	N & T	N & T	N & T	N & T	Q&T & ICH	N&T & ICH

	Grade HS - *High Strength Special Alloy*										
Manufacturer	Champion X Norris		Champion X Upco	Exceed	Lufkin/US Rod	Q_2ALS	Schlumberger	Tenaris		Weatherford	
Grade	97	CS	HX	EHK	HS	HS	HS	UHS	αHS	HD	S88
Steel Series UNS	G43300M	Special	G43300M	G31300M	G43300M	G31300M	G43300M	G43300M	Special	G43330M	G31300M
Yield Strength ksi	115 min	115 min	115 min	130 min	115 min	125 min	115 min	115 min	140 min	115 min	130 min
Tensile Strength ksi	140-150	130-145	140 - 150	140 - 155	140 - 150	140 - 155	140 - 155	140-160	145-160	140-150	140-155
Heat Treatment	N & T	N & T	N & T	Q & T	N & T	Q & T	N & T	N & T	Q & T	N & T	Q & T

White GRADE "C" Light/Medium Load 90K - 115K psi Tensile		Blue GRADE "K" Light/Medium Load 90K - 115K psi Tensile		Yellow GRADE "D" Medium/Heavy Load Min. 115K psi Tensile		Green GRADE "KD" (Comb. Min. 1.15% Ni, Cr, Mo) Medium/Heavy Load Min. 115K psi Tensile		Color as Listed HIGH STRENGTH Heavy/Extra Heavy Load Min. 130K psi Tensile	
Axelson	C-60/65, S-55/60	Avan	K	Avan	D	Avan	DS	Axelson S-88	Yellow - Silver
Bethlehem	X, X2	Axelson	59, S-59	Axelson	72, S-67	Axelson	77, 79, S-87	Del-Tex 95	Purple
Cometarsa	N	Bethlehem	46	Axelson -pre '93	S-88 Super	Bethlehem	43, 46D, M46V	Exceed EHK	Silver
Continental	1, 2, D&B	Bethlehem	46K, X5	Bethlehem	41, X-3	Cometarsa	2	Global S99	Purple
Del-Tex	35	Continental	5	Cometarsa	1	Continental	8, 10, 11	Hunt HT 44	Silver
IMC	C	Del-Tex	45, 45Q	Continental	3	Dyson	DS	J Crane Q88	Yellow - Silver
Jones	2, 5	IMC	K	D & E	D, DE	Exceed	EKD	LTV HS	Brown
LCOR	L-3	Jones	3-1/2, 5, 6, 7	Del-Tex	75, 75-Q	Hunt	HT 54	Norris 97	Silver
Liberty	A, RA, B	Jones	11, 12, 14	IMC	D	John Crane	Q87	Norris 96	Silver *
LTV	1	LCOR	L-8	John Crane	Q79	Jones	8	Oilwell EB	Orange *
Lufkin	C	Liberty	NM, M, RM	Jones	1, 4	LCOR	L-9	Oilwell EL	Orange
Mars	H	LTV	5	LCOR	L-7	Liberty	HT, LL -KD	Stelco QS	Purple
Mid-America	C	Mars	S	Liberty	S, RS	LTV	H-10	Sumitomo SR	Brown
National	30, 40, 50	National	81, 91	LTV	3	Lufkin	KD, DS, DXS	Sumitomo SS	Pink
Norris	20, 30, 35, 62	Norris	40, 50	Lufkin	DA	Mars	CR, R	Tenaris UHS	Turquoise
NOW	C	Oakmar	20	Mid-America	D	National	85, 92	Tenaris MMS	Turquoise *
Oakmar	10	Oilwell	L, T	National	45	Norris	75, 90	Trico T-66	Pink
Oilwell	B-22, C, N, S	Patton	3	Norris	54, 78	NOW	KD	Tru-End TES	Red
Patton	1	Pozo	K	NOW	D	Patton	4	UPCO K-50	Purple
Pozo	C	Stelco	K	Oakmar	30	Pozo	DA	VEW-SBS D3	Gray
Stelco	C	Sumitomo	SK	Oilwell	B-27, B, O, Y	Q_2 ALS	DS-KD	WFT HD	Pink & White
Sumitomo	SC	Trico	K-65	Oilwell	E, E-1, E-2, W	Stelco	QA		
Trico	C-11	UPCO	45K, K	Patton	2	Tenaris	DS, DQ, CS		
UPCO	35C, C	VEW-SBS	N2P	Q_2 ALS	DA	Trico	D-63		
VEW-SBS	VM-125	Vulcan	K	Stelco	AC, QC	Tru-End	DSA		
Vulcan	C	Weatherford	K, S-59	Tenaris	D	UPCO	95 Super D, KD		
Weatherford	C, S-60			Trico	56, D-61	Weatherford	KD-63, DP		
				UPCO	75A, 75D, AD				
				Weatherford	D, MD-56				



* Banded on the Wrench Flat

COUPLING DIMENSIONS

Nominal Rod Size	Diameter +0.005 -0.010	Minimum Tubing O.D.
5/8"	1.500	2 1/16"
5/8" SH	1.250	2 1/16"
3/4"	1.625	2 3/8"
3/4" SH	1.500	2 1/16"
7/8"	1.812	2 7/8"
7/8" SH	1.625	2 3/8"
1"	2.187	3 1/2"
1" SH	2.000	2 7/8"
1 1/8"	2.375	3 1/2"

SH = Slim Hole

CIRCUMFERENTIAL DISPLACEMENT VALUE

Nominal Rod Size	Running New Grade "D" **		Rerunning Grade "C, D, & K"	
	Min.	Max.	Min.	Max.
1/2"	6/32"	8/32"	4/32"	6/32"
5/8"	8/32"	9/32"	6/32"	8/32"
3/4"	9/32"	11/32"	7/32"	17/64"
7/8"	11/32"	12/32"	9/32"	23/64"
1"	14/32"	16/32"	12/32"	14/32"
1 1/8"	18/32"	21/32"	16/32"	19/32"

From API RP 11BR
**For new Grade "C" or "K", make and break connection once, then use values in third column.

SINKER BAR EFFECTIVE WEIGHT

Nominal Bar Size	Effective Weight	
	Lbs.	Kgs.
1 1/4" x 5/8" pin	100	45.4
1 3/8" x 3/4" pin	125	56.7
1 3/8" x 7/8" pin	125	56.7
1 1/2" x 3/4" pin	150	68.0
1 1/2" x 7/8" pin	150	68.0
1 5/8" x 7/8" pin	175	79.4
1 3/4" x 7/8" pin	205	93.0
2" x 1" pin	267.5	121.0

SUCKER ROD SHIPPING WEIGHT

Nominal Rod Size	Shipping Weight	
	Lbs.	Kgs.
5/8"	27	12.2
3/4"	42	19.1
7/8"	54	24.5
1"	72	32.7
1 1/8"	92	41.7

Jan 2023

Class I: 0-.020" Pit Depth Class II: .021"-.040" Pit Depth Class III: .041"-.060" Pit Depth