

# TURNBUCKLES - ROD & WIRE RIGGING

## NAVTEC SERIES 500

Designed for strength and reliability, the 500 series is available for both rod and wire rigging. The 500 Series is made from 316 stainless steel and has the following features:-

C560

C550

C550  
(-60 & larger)

C500

C500  
Large Wire

### C550 TURNBUCKLES FOR ROD

- Center screw design allows for easy adjustment under high load.
- The bronze center screw is nickel plated, which not only looks good but also provides lubricity to prevent galling.
- Available for -4 to -400. For turnbuckles -76 and larger, Navtec uses highly polished stainless steel bodies with bronze thread inserts to resist galling and high strength stainless screws to decrease the overall size and weight.
- The C560 prefix represents the marine eye version.
- Long Screw option available.

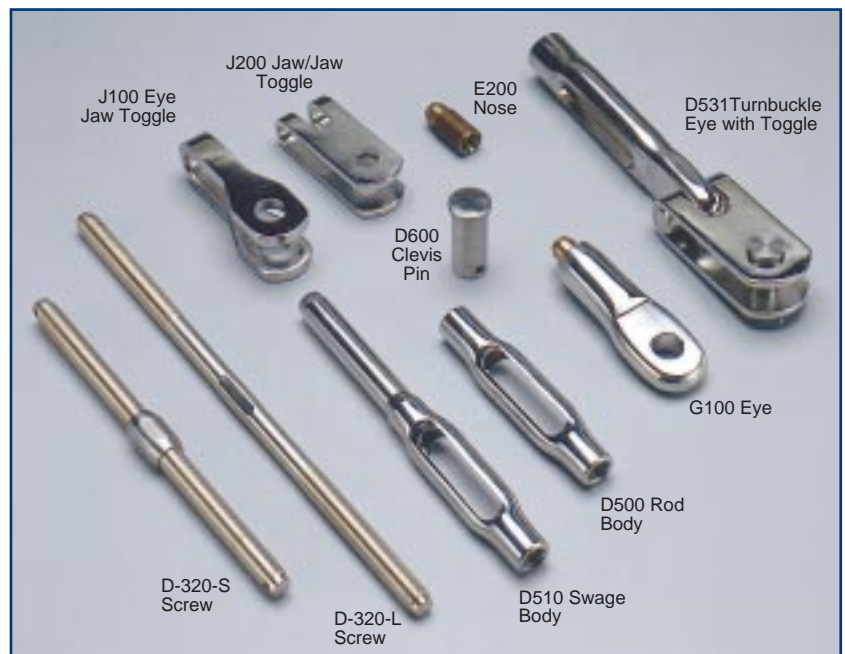
### C500 TURNBUCKLES FOR WIRE

- The swage end, made from 316 stainless, is drilled through to allow the rigger to fully insert the wire before swaging and to allow water to drain from the fitting.
- The Series 500 Turnbuckles can be fitted with an extra long screw in the event the swage end has to be replaced or if the rigging is otherwise too short.
- C500 prefix designates the toggle end version, and the C510 represents the marine eye version.

ALSO SEE NORSEMAN ROD  
TURNBUCKLES ON PAGE 10

## RIGGING SPARES & ACCESSORIES

Navtec offers a full range of spare rigging parts. They include Standard Screws (D-320-S), Long Screws (D-320-L), Series 500 Rod Bodies, Series 500 Swage Ends, Jaw/Jaw Toggles, Eye/Jaw Toggles, Series 500 Eye Ends with Toggle and Clevis Pins.



## SERIES 500 TURNBUCKLE

ROD SIZE	PART NUMBER	THREAD DIAM.		PIN DIAM.		LENGTH OPEN (1)		LENGTH CLOSED (1)		WEIGHT	
		(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(lbs)	(kg)
<b>STANDARD TURNBUCKLES</b>											
-4	C550-041012	5/16	7.9	3/8	9.5	12.35	314	8.53	217	0.47	0.21
-6	C550-061214	3/8	9.5	7/16	11.1	13.82	351	9.66	245	0.70	0.32
-8	C550-081416	7/16	11.1	1/2	12.7	15.13	384	10.43	265	1.25	0.57
-10	C550-101616	1/2	12.7	1/2	12.7	17.33	440	12.25	311	1.66	0.75
-12	C550-121620	1/2	12.7	5/8	15.9	18.62	473	13.00	344	1.72	0.78
-17	C550-172020	5/8	15.9	5/8	15.9	20.15	512	14.09	358	3.19	1.45
-22	C550-222424	3/4	19.1	3/4	19.1	23.85	606	17.37	441	5.51	2.50
-30	C550-302828	7/8	22.2	7/8	22.2	26.98	685	19.77	502	8.50	3.85
-40	C550-403232	1	25.4	1	25.4	29.26	743	21.65	550	11.50	5.22
-48	C550-483636	1 1/8	28.6	1 1/8	28.6	30.47	774	22.85	580	14.69	6.66
-60	C550-604040	1 1/4	31.8	1 1/4	31.8	32.80	883	24.98	634	22.90	10.39
-76	C550-763640A	1 1/8	28.6	1 1/4	31.8	34.12	867	25.13	638	24.33	11.03
-91	C550-914044A	1 3/8	34.9	1 1/4	31.8	40.10	1019	27.72	704	34.25	15.53
-115	C550-A24450	1 3/8	34.9	1 9/16	39.7	44.32	1126	30.74	781	44.90	20.36
-150	C550-A55256A	1 1/2	38.1	1 3/4	44.5	47.87	1216	31.29	795	73.00	33.11
-170	C550-A75260A	1 5/8	41.3	1 7/8	47.6	52.14	1324	37.14	943	82.00	37.19
-195	C550-A96068A	1 7/8	47.6	2 1/8	54.0	54.98	1396	37.20	945	106.00	48.07
-220	C550-B26072	1 7/8	47.6	2 1/4	57.2	65.23	1657	47.43	1205	139.00	63.05
-260	C550-B67678	2 3/8	60.3	2 7/16	61.9	57.80	1468	41.70	1059	178.00	80.73
-320	C550-C28084	2 1/2	63.5	2 5/8	66.7	58.00	1473	41.50	1054	220.00	99.80
-400	C550-D08480	2 5/8	66.7	2 1/2	63.5	58.72	1491	41.22	1047	265.00	120.18

1. Length based on pin center line to rod head.

## COMMON REPLACEMENT PARTS

### D510 SWAGE BODIES

PART NUMBER	WIRE DIAMETER (in)	THREAD DIAMETER (in)
D510-0510	5/32	5/16
D510-0610	3/16	5/16
D510-0612	3/16	3/8
D510-0710	7/32	5/16
D510-0712	7/32	3/8
D510-0714	7/32	7/16
D510-0812	1/4	3/8
D510-0814	1/4	7/16
D510-0816	1/4	1/2
D510-0914	9/32	7/16
D510-0916	9/32	1/2
D510-1016	5/16	1/2
D510-1020	5/16	5/8
D510-1220	3/8	5/8
D510-1424	7/16	3/4
D510-1628	1/2	7/8
D510-1828	9/16	7/8
D510-2032	5/8	1
D510-2440	3/4	1 1/4
D510-2844	7/8	1 3/8

### D531 LH TURNBUCKLE EYE WITH TOGGLE

PART NUMBER	THREAD DIAMETER (in)	PIN DIAMETER (in)
D531-0808	1/4	1/4
D531-0810	1/4	5/16
D531-1010	5/16	5/16
D531-1012	5/16	3/8
D531-1212	3/8	3/8
D531-1214	3/8	7/16
D531-1414	7/16	7/16
D531-1416	7/16	1/2
D531-1616	1/2	1/2
D531-1620	1/2	6/8
D531-2020	5/8	5/8
D531-2424	3/4	3/4
D531-2828	7/8	7/8
D531-3232	1	1
D531-3632	1 1/8	1
D531-3636	1 1/8	1 1/8
D531-4040	1 1/4	1 1/4

## RIG-RAP

Navtec's Rig-Rap rigging tape stretches to twice its length and sticks only to itself. It conforms easily to any turnbuckle or spreader tip fitting. Rig-Rap does not deteriorate in sunlight or salt water and will protect expensive sails from sharp edges.

Roll is 36' x 1". Part number: V100-01 (1 Roll), V100-02 (1 Case of 24 rolls).



# TURNBUCKLES FOR WIRE

## TOGGLE - FORK 671

Fork and Toggle (open body) - chrome bronze body with 316 stainless steel fork and toggle. UNF threads.



**CHROME BRONZE  
BODY**

671 - OPEN BODY TOGGLE - FORK TURNBUCKLE							
PART NO	THREAD DIA U.N.F.	PIN DIA (mm)	METRIC DIMENSIONS		FORK GAP (mm)	FORK DEPTH * (mm)	BREAKING LOAD (kg)
			LENGTH OPEN (mm)	LENGTH CLOSED (mm)			
671-1/4	1/4	6.4	192	137	6.4	13.0	1500
671-5/16	5/16	7.9	228	165	7.9	16.0	2272
671-3/8	3/8	9.5	297	205	9.5	19.0	3727
671-7/16	7/16	11.1	339	233	11.1	22.0	4955
671-1/2	1/2	12.7	381	269	12.7	25.5	6675
671-5/8	5/8	15.8	467	336	15.8	32.0	10682
671-3/4	3/4	19.0	498	356	19.0	38.0	16590
671-7/8	7/8	22.2	641	461	22.0	44.5	20265
671-1	1	25.4	770	545	25.4	51.0	26880
671/11/8	1 1/8	28.5	862	635	28.5	57.0	33600
671-11/4	1 1/4	31.7	980	712	31.7	63.5	38100
671-13/8	1 3/8	35.0	1096	794	35.0	70.0	45360
USA - IMPERIAL DIMENSIONS							
	U.N.F.	(in)	(in)	(in)	(in)	(in)	(lb)
N671-080808	0.250	0.252	7.559	5.394	0.252	0.512	3307
N671-101010	0.313	0.311	8.976	6.496	0.311	0.630	5009
N671-121212	0.375	0.374	11.693	8.071	0.374	0.748	8217
N671-141414	0.438	0.437	13.346	9.173	0.437	1.004	10923
N671-161616	0.500	0.500	15.000	10.591	0.500	1.004	14716
N671-202020	0.625	0.622	18.386	13.228	0.622	1.260	23551
N671-242424	0.750	0.748	19.606	14.016	0.748	1.752	36576
N671-282828	0.875	0.874	25.236	18.150	0.866	1.752	44679
N671-323232	1.000	1.000	30.315	21.457	1.000	2.008	59262
N671-363636	1.125	1.122	33.937	25.000	1.122	2.244	74077
N671-404040	1.250	1.248	38.583	28.031	1.248	2.500	84000
N671-444444	1.375	1.378	43.150	31.260	1.378	2.765	100004

**NOTE \*** Measured pin center to bottom of fork

# TOGGLE - SWAGE 673

Swage and Toggle (open body) - chrome bronze body with 316S31 stainless steel toggle and swage ends. UNF threads.



**CHROME BRONZE  
BODY**

## 673 - OPEN BODY TOGGLE - SWAGE TURNBUCKLE

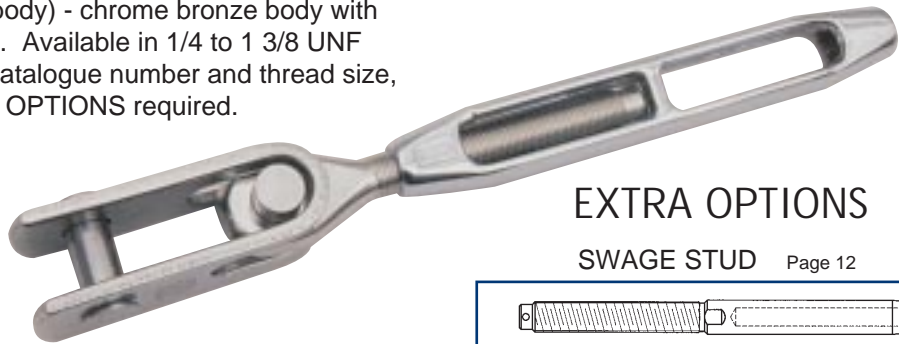
PART NO	WIRE Ø (mm)	THREAD DIA U.N.F.	PIN DIA (mm)	TOGGLE GAP (mm)	TOGGLE DEPTH * (mm)	LENGTH OPEN ** (mm)	LENGTH CLOSED ** (mm)	BREAKING LOAD (kg)
METRIC DIMENSIONS								
673 - 1/4 - 3	3	1/4	6.4	7.00	16	182	126	1500
673 - 5/16 - 4	4	5/16	7.9	9.00	18	218	154	2272
673 - 5/16 - 5	5	5/16	7.93	9.00	18	285	192	2272
673 - 3/8 - 5	5	3/8	9.52	11.00	20	285	192	3727
673 - 3/8 - 6	6	3/8	9.52	11.00	20	324	222	3727
673 - 7/16 - 6	6	7/16	11.11	14.00	26	324	222	4955
673 - 7/16 - 7	7	7/16	11.11	14.00	26	347	245	4955
673 - 1/2 - 7	7	1/2	12.70	18.00	38	355	253	6675
673 - 1/2 - 8	8	1/2	12.70	18.00	35	382	271	6675
673 - 5/8 - 8	8	5/8	15.87	19.00	44	457	325	10682
673 - 5/8 - 10	10	5/8	15.87	19.00	44	457	325	10682
673 - 3/4 - 12	12	3/4	19.05	23.00	52	530	384	16590
673 - 7/8 - 14	14	7/8	22.22	25.00	60	650	460	20265
673 - 1 - 16	16	1	25.40	28.00	63	753	525	26880
673 - 1 1/8 - 19	19	1 1/8	28.57	31.50	66	842	613	33600
673 - 1 1/4 - 22	22	1 1/4	31.75	34.50	79	957	689	38100
673 - 1 3/8 - 26	26	1 3/8	35.00	38.00	100	1070	766	45360
USA - IMPERIAL DIMENSIONS								
	(in)	U.N.F.	(in)	(in)	(in)	(in)	(in)	(lb)
N673-040808	1/8	1/4	0.252	0.276	0.630	7.165	4.961	3307
N673-051010	5/32	5/16	0.311	0.354	0.709	8.583	6.063	5009
N673-061212	3/16	3/8	0.374	0.433	0.787	11.220	7.559	8217
N673-071212	7/32	3/8	0.374	0.433	0.787	11.220	7.559	5009
N673-071414	7/32	7/16	0.437	0.551	1.024	12.756	8.740	8217
N673-081414	1/4	7/16	0.437	0.551	1.024	12.756	8.740	8217
N673-081616	1/4	1/2	0.500	0.709	1.496	13.976	9.961	10923
N673-091616	9/32	1/2	0.500	0.709	1.496	13.976	9.961	8217
N673-101616	5/16	1/2	0.500	0.709	1.378	15.039	10.669	10923
N673-102020	5/16	5/8	0.622	0.748	1.732	17.992	12.795	10923
N673-122020	3/8	5/8	0.622	0.748	1.732	17.992	12.795	14716
N673-142424	7/16	3/4	0.748	0.906	2.047	20.866	15.118	10923
N673-162424	1/2	3/4	0.748	0.906	2.047	20.866	15.118	14716
N673-182828	9/16	7/8	0.875	0.984	2.362	25.591	18.110	14716
N673-203232	5/8	1	1.000	1.102	2.480	29.646	20.669	23551
N673-243636	3/4	1 1/8	1.122	1.240	2.598	33.150	24.134	23551
N673-284040	7/8	1 1/4	1.248	1.358	3.110	37.677	27.126	23551
N673-324444	1	1 3/8	1.378	1.496	3.937	42.126	30.157	23551

**NOTE** \* Measured pin centre to bottom of toggle  
 \*\* Measured from wire cut end (bottom of swage hole) to pin centre

## TOGGLE - BLANK 674

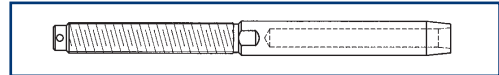
Blank and Toggle (open body) - chrome bronze body with 316 stainless toggle ends. Available in 1/4 to 1 3/8 UNF thread sizes\*. Order by catalogue number and thread size, together with any EXTRA OPTIONS required.

**CHROME BRONZE  
BODY**

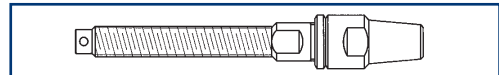


### EXTRA OPTIONS

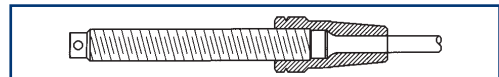
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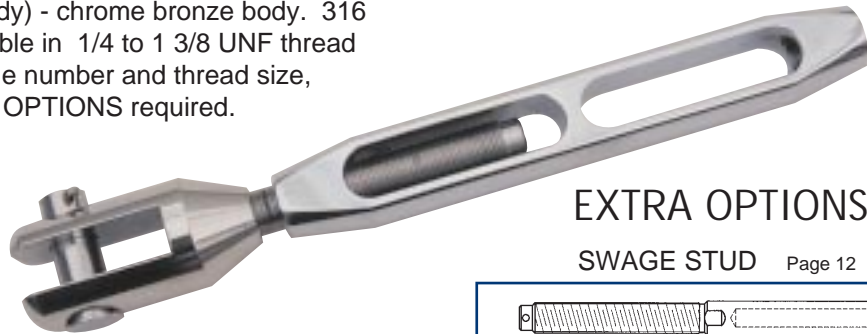
NORSEMAN ROD STUD Page 10



## FORK - BLANK 676

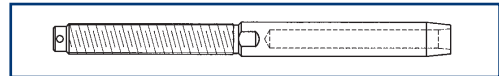
Blank and Fork (open body) - chrome bronze body. 316 stainless fork end. Available in 1/4 to 1 3/8 UNF thread sizes\*. Order by catalogue number and thread size, together with any EXTRA OPTIONS required.

**CHROME BRONZE  
BODY**

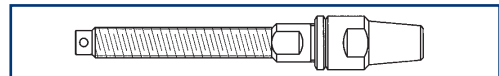


### EXTRA OPTIONS

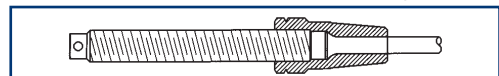
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## STEMBALL - BLANK 677

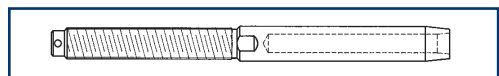
Stemball and Blank (open body) - chrome bronze body and stainless steel ends. Available in 1/4 to 7/8 UNF thread sizes\*. Order by catalogue number and thread size, together with any EXTRA OPTIONS required.

**CHROME BRONZE  
BODY**

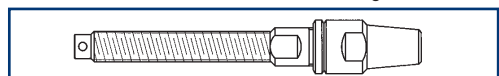


### EXTRA OPTIONS

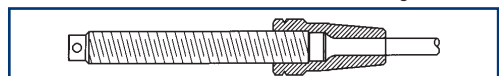
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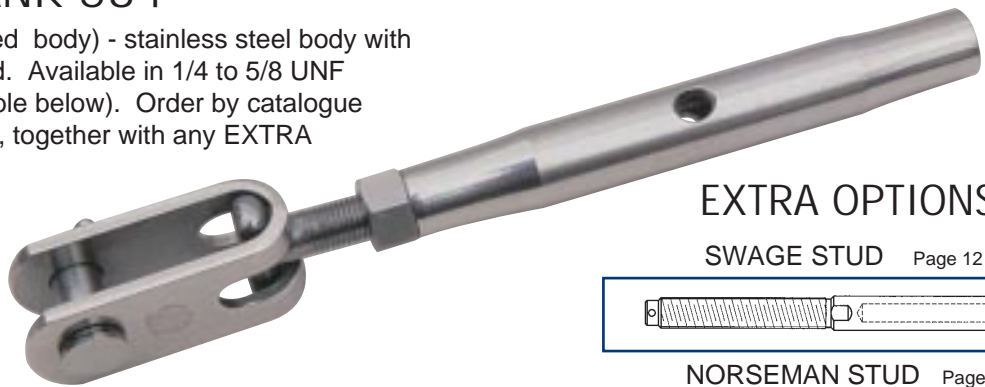


\* For available thread sizes please refer to 671 table on page 16

# TOGGLE - BLANK 534

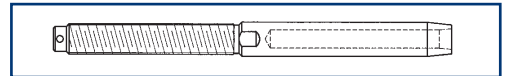
Blank and Toggle (closed body) - stainless steel body with 316 stainless toggle end. Available in 1/4 to 5/8 UNF thread sizes (refer to table below). Order by catalogue number and thread size, together with any EXTRA OPTIONS required.

**STAINLESS STEEL BODY**

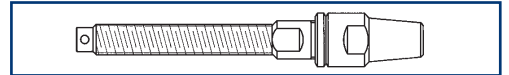


## EXTRA OPTIONS

SWAGE STUD Page 12



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# TOGGLE - FORK 535

Fork and Toggle (closed body) - 316 stainless steel rigging screw.

**STAINLESS STEEL BODY**



## 535 CLOSED BODY FORK - TOGGLE TURNBUCKLE

PART NO	THREAD Ø	PIN Ø	OPEN LENGTH	CLOSED LENGTH	FORK GAP	FORK DEPTH	BREAKING STRENGTH
METRIC DIMENSIONS							
	UNF	(mm)	(mm)	(mm)	(mm)	(mm)	(kg)
535-1/4	1/4	6.3	193	141	6.4	13.0	1016
535-5/16	5/16	7.9	219	162	7.9	16.0	2030
535-3/8	3/8	9.5	280	202	9.5	19.0	3090
535-1/2	1/2	12.7	365	265	12.7	25.5	6675
535-5/8	5/8	15.9	473	352	15.8	32.0	10160
USA - IMPERIAL DIMENSIONS							
	UNF	(in)	(in)	(in)	(in)	(in)	(lb)
N535-080808	1/4	0.248	7.598	5.551	0.248	0.512	2239
N535-101010	5/16	0.311	8.622	6.378	0.315	0.630	4476
N535-121212	3/8	0.374	11.024	7.953	0.386	1.004	4476
N535-161616	1/2	0.500	14.370	10.433	0.500	1.004	6812
N535-202020	5/8	0.626	18.622	13.858	0.622	1.260	14716

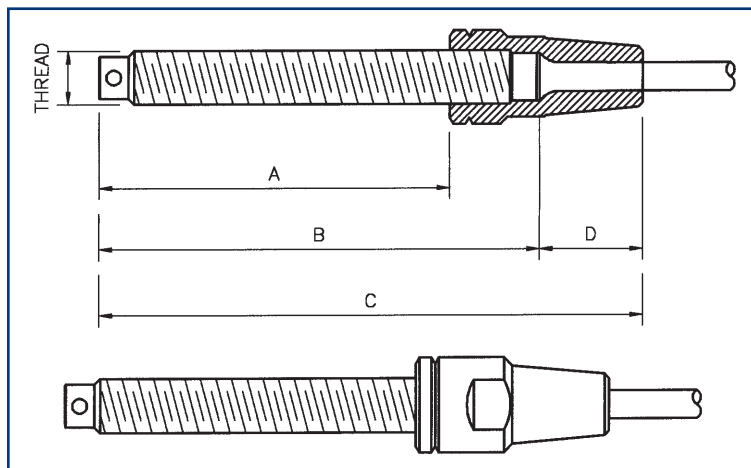
# NORSEMAN ROD STUDS

NEW PRODUCT



These rod studs were developed to have the same distinguished styling as Norseman Swageless Terminals. Designed to be used with our 674 Turnbuckles (see page 18), they provide the most economical way to rig a boat with rod.

Available in sizes from -04 to -22.



## NORSEMAN ROD STUD

### METRIC DIMENSIONS

PART #	ROD Ø	THREAD	A	B	C	D	674 C/L PIN TO ROD SEAT			RIGGING SCREW WEIGHT
							OPEN	CLOSED	STROKE	
N90-004-3/8	-4	(UNF) 3/8	(mm) 66	(mm) 84	(mm) 99	(mm) 17	(mm) 292	(mm) 203	(mm) 89	(kg) 0.27
N90-006-7/16	-6	7/16	74	94	114	20	330	229	102	0.40
N90-008-7/16	-8	7/16	74	94	114	20	330	229	102	0.40
N90-008-1/2	-8	1/2	84	104	130	25	381	279	102	0.71
N90-010-1/2	-10	1/2	84	104	130	25	381	279	102	0.71
N90-012-1/2	-12	1/2	84	104	130	25	381	279	102	0.71
N90-012-5/8	-12	5/8	102	127	155	28	457	330	127	1.27
N90-017-5/8	-17	5/8	102	127	155	28	457	330	127	1.27
N90-022-3/4	-22	3/4	114	145	179	33	521	381	140	2.23

### USA - IMPERIAL DIMENSIONS

PART #	ROD Ø	THREAD	A	B	C	D	N690 C/L PIN TO ROD SEAT			RIGGING SCREW WEIGHT
							OPEN	CLOSED	STROKE	
N090-0412	-4	(in) 3/8 - 24	(in) 2.6	(in) 3.3	(in) 3.9	(in) .65	(in) 11.5	(in) 8	(in) 3.5	(lb) .59
N090-0614	-6	7/16 - 20	2.9	3.7	4.5	.80	13	9	4	.87
N090-0814	-8	7/16 - 20	2.9	3.7	4.5	.80	13	9	4	.87
N090-0816	08	1/2 - 20	3.3	4.1	5.1	1.00	15	11	4	1.57
N090-1016	-10	1/2 - 20	3.3	4.1	5.1	1.00	15	11	4	1.57
N090-1216	-12	1/2 - 20	3.3	4.1	5.1	1.00	15	11	4	1.57
N090-1220	-12	5/8 - 18	4.0	5.0	16.1	1.10	18	13	5	2.80
N090-1720	-17	5/8 - 18	4.0	5.0	6.1	1.10	18	13	5	2.80
N090-2224	-22	3/4 - 16	4.5	5.7	7.0	1.30	20.5	15	5.5	4.90

N090 screwed into an N674 = N690 Turnbuckle  
See price sheet for listing of N690 Turnbuckle