



Wire rigging systems, used in continuous rigging, are selected by boat builders and sailors throughout the world for strength and durability . For any wire rigging problem, Navtec supplies a solution.

Wire Rigging



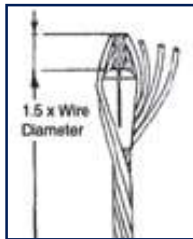
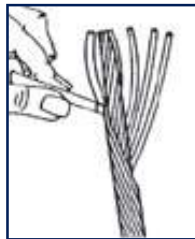
NORSEMAN SWAGELESS TERMINALS



Norseman terminals provide a fast, secure, corrosion-resistant end fitting on all types of wire rigging and are an ideal replacement part. They can be installed quickly and easily at sea, making them ideal for emergency repairs. Norseman terminals also can be re-used, but please note: A new cone must be installed.

SWAGELESS FITTING METHOD

No special tools required. Slip the body of the terminal over the diameter of the cable. Unlay outer wires and fit the cone over the center core. Relay the outer wires into the head of the fitting. Draw the body up to the head and screw together.



Wire Rigging

Swageless Cones

PART NUMBER		SIZE		COLOR		
METRIC	IMPERIAL	mm	in	1X19	7 Strand	Dyform
NCC-M025	NCC-03	2.5	3/32	BLUE	YELLOW	-
NCC-M03	NCC-04	3	1/8	NONE	YELLOW	-
NCC-M04	NCC-05	4	5/32	NONE	RED	-
	NCC-06		3/16	GREEN	RED	-
NCC-M05		5		NONE	RED	WHITE
-	NCC-07		7/32	BLUE	YELLOW	-
NCC-M06	-	6		NONE	RED	WHITE
-	NCC-08		1/4	GREEN	YELLOW	WHITE
NCC-M07	NCC-09	7	9/32	NONE	RED	WHITE
NCC-M08	NCC-10	8	5/16	NONE	NONE	WHITE
NCC-M09	-	9		BLUE	YELLOW	-
-	NCC-12		3/8	GREEN	YELLOW	WHITE
NCC-M10	-	10		NONE	NONE	WHITE
NCC-M11	NCC-14	11	7/16	BLUE	YELLOW	WHITE
NCC-M12	-	12		NONE	NONE	WHITE
-	NCC-16		1/2	GREEN	RED	WHITE
NCC-M14	NCC-18	14	9/16	NONE	NONE	WHITE
NCC-M16	NCC-20	16	5/8	NONE	NONE	WHITE
NCC-M19	NCC-24	19	3/4	NONE	NONE	WHITE
NCC-M22	NCC-28	22	7/8	NONE	NONE	-
NCC-M26	NCC-32	26	1	NONE	NONE	-
NCC-M28		28	1 1/8	NONE	-	-
NCC-M30		30	1 3/16	NONE	-	-
NCC-M32		32	1 1/4	NONE	-	-

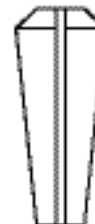
PART NUMBER	WIRE CONSTRUCTION
NCC-	1x19
NCS-	7 Strand
NCD-	Dyform



1X19



7 STRAND*

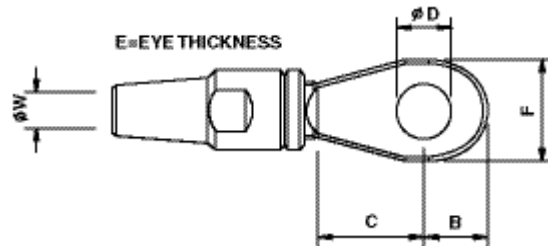


DYFORM

*Note: This style 7mm and above.

N010 Swageless Eye

Made from high-quality 316 Stainless Steel for 1X19, 7 Strand or Dyform wire.



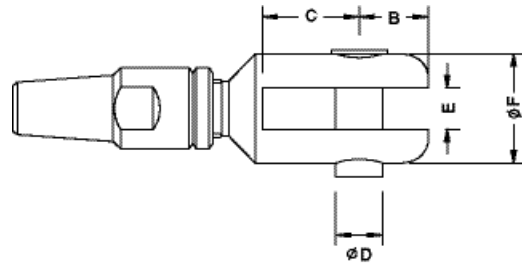
Swageless Eyes

Metric		Imperial		Wire Dia		B		C		ØD		E		F	
1 x 19	1 x 19	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
N010-M02506	N010-0306	2.5	3/32	7	0.276	11	0.433	4.7	0.185	5.5	0.217	13	0.512		
N010-M02508	N010-0308	2.5	3/32	7	0.276	11	0.433	6.5	0.256	5.5	0.217	13	0.512		
N010-M0308	N010-0408	3	1/8	7	0.276	11	0.433	6.5	0.256	5.5	0.217	13	0.512		
N010-M0410	N010-0610	4	5/32	8.2	0.323	11	0.433	8.1	0.319	6.7	0.264	16	0.630		
-	N010-0610	-	3/16	10	0.394	16	0.630	8.1	0.319	8	0.315	16	0.630		
-	N010-0612	-	3/16	10	0.394	18	0.708	9.7	0.382	8	0.315	19	0.748		
N010-M0610	-	6	-	10	0.394	16	0.630	8.1	0.319	8	0.315	16	0.630		
N010-M0612	-	6	-	10	0.394	16	0.708	9.7	0.382	8	0.315	16	0.630		
-	N010-0712	-	7/32	11	0.433	17	0.669	9.7	0.382	9	0.354	22	0.864		
-	N010-0714	-	7/32	12.5	0.492	19.5	0.768	11.3	0.445	9.5	0.374	23	0.906		
-	N010-0716	-	7/32	15	0.591	22	0.866	13	0.512	9.5	0.374	26	1.024		
N010-M0612	-	6	-	11	0.433	17	0.669	9.7	0.382	9	0.354	22	0.864		
N010-M0614	-	6	-	12.5	0.492	19	0.748	11.3	0.445	9.5	0.374	23	0.906		
N010-M0616	-	6	-	13.5	0.531	23.5	0.925	13	0.512	9.5	0.374	26	1.024		
-	N010-0812	-	1/4	11	0.433	17	0.669	9.7	0.382	9	0.354	22	0.864		
-	N010-0814	-	1/4	12.5	0.492	19.5	0.768	11.3	0.445	9.5	0.374	23	0.906		
-	N010-0816	-	1/4	15	0.591	19.5	0.768	13	0.512	9.5	0.374	26	1.024		
N010-M0716	N010-0916	7	9/32	13.5	0.531	23.5	0.925	13	0.512	11	0.433	27	1.063		
N010-M0816	N010-1016	8	5/16	15	0.591	24	0.945	13	0.512	12.5	0.492	27	1.063		
N010-M0820	N010-1020	8	5/16	18	0.708	28	1.102	16	0.630	12.5	0.492	33	1.299		
-	N010-1220	-	3/8	18	0.708	28	1.102	16	0.630	13.5	0.531	34	1.340		
N010-M1020	-	10	-	18	0.708	28	1.102	16	0.630	13.5	0.531	34	1.340		
N010-M1124	N010-1424	11	7/16	21	0.827	30	1.181	19.2	0.756	18	0.709	40	1.575		
N010-M1128	N010-1428	11	7/16	25	0.984	30	1.181	22.5	0.886	18	0.709	47.5	1.870		
N010-M1224	-	12	-	21	0.827	30	1.181	19.2	0.756	18	0.709	40	1.575		
N010-M1228	-	12	-	25	0.984	41	1.614	22.5	0.886	18	0.709	47.5	1.870		
-	N010-1624	-	1/2	21	0.827	30	1.181	19.2	0.756	18	0.709	40	1.575		
-	N010-1628	-	1/2	25	0.984	30	1.181	22.5	0.886	18	0.709	47.5	1.870		
N010-M1428	N010-1828	14	9/16	25	0.984	41	1.614	22.5	0.886	21	0.827	47.5	1.870		
N010-M1632	N010-2032	16	5/8	27.5	1.083	44	1.732	26.7	1.012	24	0.945	64	2.126		
N010-M1836	N010-2436	18	3/4	30	1.181	50	1.969	29	1.142	26.7	1.012	64	2.520		
N010-M1840	N010-2440	18	3/4	30	1.181	50	1.969	32	1.260	26.7	1.012	64	2.520		
N010-M2240	N010-2840	22	7/8	38	1.496	55	2.165	32	1.260	28.6	1.126	70.5	2.770		
N010-M2642	N010-3242	26	1	42	1.654	61	2.402	33.3	1.311	31.3	1.232	75	2.950		
N010-M2844	N010-3244	28	1	42	1.654	61	2.402	35.5	1.398	31.3	1.232	75	2.950		
N010-M2844	N010-3644	28	1 1/8	42	1.654	61	2.402	35.5	1.398	31.3	1.232	75	2.950		
N010-M2848	N010-3648	28	1 1/8	45	1.772	75	2.953	33.1	1.500	34.85	1.372	90	3.543		

PART NUMBER	WIRE CONSTRUCTION
N010	1x19
N011	7 Strand
N012	Dyform

N020 Swageless Fork

Made from high-quality 316 Stainless Steel for 1X19, 7 Strand or Dyform wire.



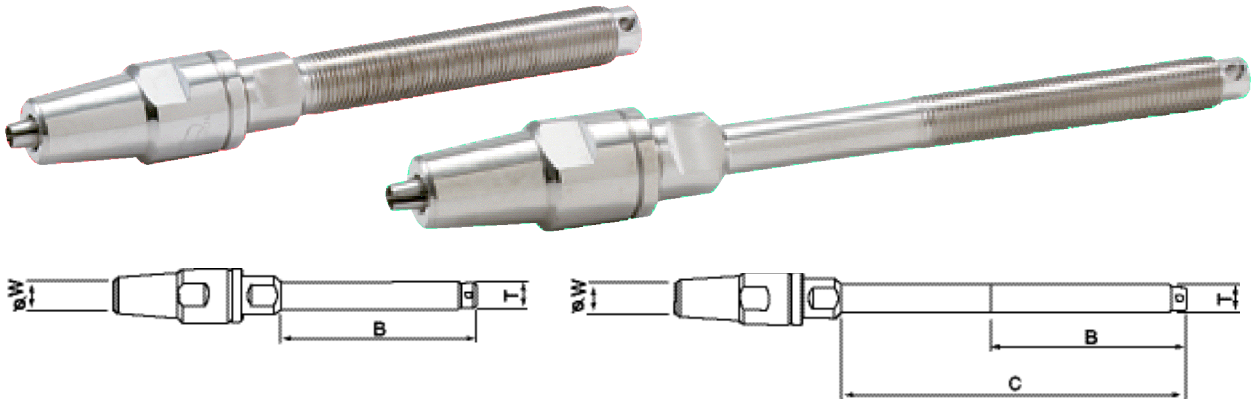
Swageless Forks

Metric 1 x 19	Imperial 1 x 19	Wire Dia		B		C		D		E		F	
		mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
N020-M02508	N020-0308	2.5	3/32	8.00	0.31	13.00	0.51	6.30	0.25	6.30	0.25	14.00	0.55
N020-M0308	N020-0408	3	1/8	8.00	0.31	13.00	0.51	6.30	0.25	6.30	0.25	14.00	0.55
N020-M0410	N020-0510	4	5/32	10.00	0.39	16.00	0.63	7.90	0.31	7.90	0.31	19.00	0.75
	N020-0610	-	3/16	10.00	0.39	16.00	0.63	7.90	0.31	7.90	0.31	19.00	0.75
	N020-0612	-	3/16	12.00	0.47	19.00	0.75	9.50	0.37	9.50	0.37	22.00	0.87
N020-M0510		5	-	10.00	0.39	16.00	0.63	7.90	0.31	7.90	0.31	19.00	0.75
N020-M0512		5	-	12.00	0.47	19.00	0.75	9.50	0.37	9.50	0.37	22.00	0.87
	N020-0712	-	7/32	12.00	0.47	19.00	0.75	9.50	0.37	9.50	0.37	22.00	0.87
	N020-0714	-	7/32	14.00	0.55	22.00	0.87	11.10	0.44	11.10	0.44	28.50	1.12
N020-M0612		6	-	12.00	0.47	19.00	0.75	9.50	0.37	9.50	0.37	22.00	0.87
N020-M0614		6	-	14.00	0.55	22.00	0.87	11.10	0.44	11.10	0.44	28.50	1.12
N020-M0616		6	-	16.00	0.63	25.50	1.00	12.70	0.50	12.70	0.50	31.50	1.24
	N020-0812	-	1/4	12.00	0.47	19.00	0.75	9.50	0.37	9.50	0.37	22.00	0.87
	N020-0814	-	1/4	14.00	0.55	22.00	0.87	11.10	0.44	11.10	0.44	28.50	1.12
	N020-0816	-	1/4	16.00	0.63	25.50	1.00	12.70	0.50	12.70	0.50	31.50	1.24
N020-M0716	N020-0916	7	9/32	16.00	0.63	25.50	1.00	12.70	0.50	12.70	0.50	31.50	1.24
N020-M0816	N020-1016	8	5/16	16.00	0.63	25.50	1.00	12.70	0.50	12.70	0.50	31.50	1.24
N020-M0820	N020-1020	8	5/16	20.00	0.79	32.00	1.26	15.80	0.62	15.80	0.62	38.00	1.50
	N020-1220	-	3/8	20.00	0.79	32.00	1.26	15.80	0.62	15.80	0.62	38.00	1.50
N020-M1020		10	-	20.00	0.79	32.00	1.26	15.80	0.62	15.80	0.62	38.00	1.50
N020-M1124	N020-1424	11	7/16	24.00	0.94	38.00	1.50	19.00	0.75	19.00	0.75	47.50	1.87
N020-M1224		12	-	24.00	0.94	38.00	1.50	19.00	0.75	19.00	0.75	47.50	1.87
N020-M1228		12	-	28.00	1.10	44.50	1.75	22.00	0.87	22.00	0.87	54.00	2.13
	N020-1624	-	1/2	24.00	0.94	38.00	1.50	19.00	0.75	19.00	0.75	47.50	1.87
	N020-1628	-	1/2	28.00	1.10	44.50	1.75	22.00	0.87	22.00	0.87	54.00	2.13
N020-M1428	N020-1828	14	9/16	28.00	1.10	44.50	1.75	22.00	0.87	22.00	0.87	54.00	2.13
N020-M1632	N020-2032	16	5/8	32.00	1.26	51.00	2.01	25.40	1.00	25.40	1.00	63.50	2.50
N020-M1936	N020-2436	19	3/4	36.00	1.42	57.00	2.24	28.60	1.12	28.60	1.12	70.00	2.76
N020-M2240	N020-2840	22	7/8	40.00	1.57	63.50	2.50	31.70	1.25	31.70	1.25	76.00	2.99
N020-M2644	N020-3244	26	1	44.00	1.73	70.00	2.76	35.00	1.38	35.00	1.38	82.50	3.25

PART NUMBER	WIRE CONSTRUCTION
N020	1x19
N021	7 Strand
N022	Dyform

N030 Swageless Stud & Swageless Long Stud

Made from high-quality 316 Stainless Steel for 1X19, 7 Strand or Dyform wire. UNF threads.



Swageless Studs

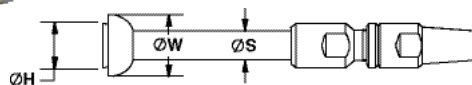
Metric 1 x 19	Imperial 1 x 19	WIRE Ø		THREAD Ø UNF	B		C (Long Stud)	
		mm	in		mm	in	mm	in
N030-M02508	N030-0308	2.5	3/32	1/4	57	2.24	-	-
N030-M0308	N030-0408	3	1/8	1/4	57	2.24	-	-
N030-M0410	N030-0510	4	5/32	5/16	48	1.89	-	-
-	N030-0610	-	3/16	5/16	48	1.89	100	3.94
-	N030-0612	-	3/16	3/8	65	2.56	115	4.53
N030-M0510	-	5	-	5/16	48	1.89	100	3.94
N030-M0512	-	5	-	3/8	65	2.56	115	4.53
-	N030-0712	-	7/32	3/8	65	2.56	120	4.72
-	N030-0714	-	7/32	7/16	75	2.95	135	5.31
-	N030-0716	-	7/32	1/2	83	3.27	145	5.71
N030-M0612	-	6	-	3/8	65	2.56	120	4.72
N030-M0614	-	6	-	7/16	75	2.95	135	5.31
N030-M0616	-	6	-	1/2	83	3.27	145	5.71
-	N030-0812	-	1/4	3/8	65	2.56	130	5.12
-	N030-0814	-	1/4	7/16	75	2.95	135	5.31
-	N030-0816	-	1/4	1/2	83	3.27	145	5.71
N030-M0716	N030-0916	7	9/32	1/2	83	3.27	145	5.71
N030-M0816	N030-1016	8	5/16	1/2	83	3.27	155	6.10
N030-M0820	N030-1020	8	5/16	5/8	98	3.86	170	6.69
-	N030-1220	-	3/8	5/8	98	3.86	180	7.09
N030-M1020	-	10	-	5/8	98	3.86	180	7.09
N030-M1124	N030-1424	11	7/16	3/4	115	4.53	285	11.22
N030-M1128	N030-1428	11	7/16	7/8	138	5.43	308	12.13
N030-M1224	-	12	-	3/4	115	4.53	285	11.22
N030-M1228	-	12	-	7/8	138	5.43	308	12.13
-	N030-1624	-	1/2	3/4	115	4.53	285	11.22
-	N030-1628	-	1/2	7/8	138	5.43	308	12.13
N030-M1428	N030-1828	14	9/16	7/8	138	5.43	-	-
N030-M1632	N030-2032	16	5/8	1	155	6.10	-	-
N030-M1936	N030-2436	19	3/4	1 1/8	180	7.09	-	-
N030-M2240	N030-2840	22	7/8	1 1/4	200	7.87	-	-
N030-M2644	N030-3244	26	1	1 3/8	219	8.62	-	-
N030-M2848	N030-3648	28	1 1/8	1 1/2	230	9.06	-	-

PART NUMBER	LONG VERSION	WIRE CONSTRUCTION
N030	N030L	1x19
N031	N031L	7 Strand
N032	N032L	Dyform

For LEFT HAND thread, add "LH" to the Part Number, i.e. N030-0816LH

N060 Swageless Stemball

Made from high-quality 316 Stainless Steel for 1X19, 7 Strand or Dyform wire.



Swageless Stemballs

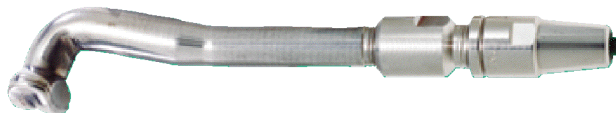
Metric		Imperial		WIRE Ø		Ø S		Ø H		Cup No.		Ø W	
1 x 19	1 x 19	mm	in	mm	in	mm	in	mm	in	Metric	Imperial	mm	in
N060-M03	N060-04	3	1/8	7.5	0.30	16.7	0.66	N640-M04	N640-04	26.5	1.04		
N060-M04	N060-05	4	5/32	7.5	0.30	16.7	0.66	N640-M04	N640-04	26.5	1.04		
-	N060-06	-	3/16	9.1	0.36	18.8	0.74	N640-M05	N640-06	26.5	1.04		
N060-M05	-	5	-	9.1	0.36	18.8	0.74	N640-M05	N640-06	26.5	1.04		
-	N060-07	-	7/32	12.5	0.49	20	0.80	N640-M07	N640-08	26.5	1.04		
N060-M06	-	6	-	12.5	0.49	20	0.80	N640-M07	N640-08	26.5	1.04		
-	N060-08	-	1/4	12.5	0.49	20	0.80	N640-M07	N640-08	26.5	1.04		
N060-M07	N060-09	7	9/32	14.3	0.56	22	0.87	N640-M07	N640-08	26.5	1.04		
N060-M08	N060-10	8	5/16	16.1	0.63	28	1.10	N640-M12	N640-10	34	1.34		
-	N060-12	-	3/8	17.8	0.70	28	1.10	N640-M12	N640-10	34	1.34		
N060-M10	-	10	-	17.8	0.70	28	1.10	N640-M12	N640-10	34	1.34		

PART NUMBER	WIRE CONSTRUCTION
N060	1x19
N061	7 Strand
N062	Dyform

1. The threaded Stemball needs to be locked tight to the thread adapter prior to or after installation on mast.
2. The washer can be removed if not needed.

N070 Swageless T

Made from high-quality 316 Stainless Steel for 1x19, 7 Strand or Dyform wire.



Swageless T

WIRE Ø		METRIC			IMPERIAL			HEAD HEIGHT		HEAD WIDTH		GRIP DEPTH	
mm	in	SWAGELESS PART NO.	BACKING PLATE	RETAINING PLUG	SWAGELESS PART NO.	BACKING PLATE	RETAINING PLUG	mm	in	mm	in	mm	in
2.5	3/32	N070-M025	N740-M03	N742-M03	N070-03	N740-03	N742-03	6.3	0.25	15.5	0.61	6.0	0.24
3	1/8	N070-M03	N740-M03	N742-M03	N070-04	N740-03	N742-03	6.3	0.25	16.6	0.65	6.0	0.24
4	5/32	N070-M04	N740-M04	N742-M04	N070-05	N740-05	N742-05	9.0	0.35	17.5	0.69	6.4	0.25
-	3/16	-	-	-	N070-06	N740-06	N742-06	11.1	0.44	20.0	0.79	8.0	0.31
5	-	N070-M05	N740-M05	N742-M05	-	-	-	11.1	0.44	20.0	0.79	8.0	0.31
-	7/32	-	-	-	N070-07	N740-07	N742-07	14.3	0.56	28.0	1.10	8.3	0.32
6	-	N070-M06	N740-M07	N742-M07	-	-	-	14.3	0.56	28.0	1.10	8.3	0.32
-	1/4	-	-	-	N070-08	N740-07	N742-07	14.3	0.56	28.0	1.10	8.3	0.32
7	9/32	N070-M07	N740-M07	N742-M07	N070-09	N740-07	N742-07	14.3	0.56	28.0	1.10	8.3	0.32
8	5/16	N070-M08	N740-M10	N742-M10	N070-10	N740-10	N742-10	17.8	0.70	32.0	1.26	12.0	0.47
-	3/8	-	-	-	N070-12	N740-10	N742-10	17.8	0.70	32.0	1.26	12.0	0.47
10	-	N070-M10	N740-M10	N742-M10	-	-	-	17.8	0.70	32.0	1.26	12.0	0.47

For backing plate info, see page 14. Grip depth is measured from the bearing surfaces to the bend.

N080 Swageless Shroud Terminal

Made from high-quality 316 Stainless Steel for 1x19, 7 Strand or Dyform wire.



Swageless Shroud Terminals

WIRE Ø		METRIC			IMPERIAL			HEAD HEIGHT		HEAD WIDTH	
mm	in	SWAGELESS PART NO.	BACKING PLATE	RETAINING PLUG	SWAGELESS PART NO.	BACKING PLATE	RETAINING PLUG	mm	in	mm	in
-	7/32	-	-	-	N080-07	N840-07	N842-07	10.8	0.425	23.2	0.913
6	-	N080-M06	N840-M06	N842-M06	-	-	-	12.5	0.492	22.5	0.886
-	1/4	-	-	-	N080-08	N840-07	N842-07	12.5	0.492	22.9	0.902
7	9/32	N080-M07	N840-M07	N842-M08	N080-09	N840-09	N842-09	14.3	0.563	28.7	1.130
8	5/16	N080-M08	N840-M08	N842-M08	N080-10	N840-10	N842-09	16.0	0.630	29.0	1.142
9	-	N080-M09	N840-M10	N842-M10	-	-	-	17.8	0.701	30.0	1.181
-	3/8	-	-	-	N080-12	N840-12	N842-12	17.8	0.701	32.5	1.280
10	-	N080-M10	N840-M10	N842-M10	-	-	-	17.8	0.701	32.5	1.280
11	7/16	-	-	-	N080-14	N840-14	N842-14	19.8	0.780	39.0	1.535
12	-	N080-M12	N840-M12	N842-M12	-	-	-	21.4	0.843	39.0	1.535
-	1/2	-	-	-	N080-16	N840-14	N842-14	21.4	0.843	39.0	1.535

For backing plate info, see page 15.

WIRE SWAGE TERMINALS



Our swage terminals are crafted from premium 316 Stainless Steel for maximum corrosion resistance and are used to terminate 1x19 Stainless Steel wire, flexible wire rope, and Dyform wire. Navtec swage terminals are available in many sizes to answer practically any problem.

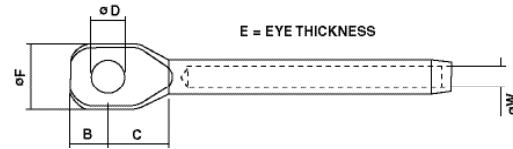
Reference Table For Swage Dimensions

Detailed below is a table of BEFORE and AFTER swage dimensions. This is an essential reference point to ensure that the correct dies have been used and that the swage has been completed successfully.

WIRE DIA		DIA. BEFORE SWAGING		DIA. AFTER SWAGING		SWAGE HOLE DIA		DRILL DEPTH	
In	mm	In	mm	In	mm	In	mm	In	mm
3/32	2.50	0.218-0.219	5.54-5.41	0.190-0.185	4.83-4.70	0.114-0.109	2.90-2.77	1.261	32.03
	3.00	0.250-0.245	6.35-6.22	0.219-0.214	5.56-5.44	0.137-0.132	3.48-3.35	1.511	38.38
1/8		0.250-0.245	6.35-6.22	0.219-0.214	5.56-5.44	0.146-0.141	3.71-3.58	1.511	38.38
5/32	4.00	0.297-0.292	7.54-7.42	0.250-0.245	6.35-6.22	0.177-0.172	4.50-4.37	1.761	44.73
3/16		0.359-0.354	9.12-8.99	0.313-0.308	7.96-7.82	0.208-0.203	5.28-5.16	2.011	51.08
	5.00	0.359-0.354	9.12-8.99	0.313-0.308	7.96-7.82	0.215-0.210	5.46-5.33	2.011	51.08
7/32		0.427-0.422	10.95-10.72	0.375-0.368	9.53-9.35	0.239-0.234	6.07-5.94	2.261	57.43
	6.00	0.494-0.489	12.55-12.42	0.439-0.431	11.13-10.95	0.257-0.252	6.53-6.40	2.511	63.78
1/4		0.494-0.489	12.55-12.42	0.439-0.431	11.13-10.95	0.270-0.265	6.86-6.73	2.511	63.78
9/32	7.00	0.563-0.558	14.30-14.17	0.500-0.492	12.79-12.50	0.302-0.297	7.67-7.54	2.761	70.13
5/16	8.00	0.635-0.630	16.13-16.00	0.563-0.554	14.30-14.07	0.333-0.328	8.46-8.33	3.011	76.48
	9.00	0.703-0.698	17.86-17.73	0.625-0.618	15.88-15.70	0.377-0.370	9.58-9.40	3.511	89.18
3/8		0.703-0.698	17.86-17.73	0.625-0.618	15.88-15.70	0.398-0.390	10.11-9.91	3.511	89.18
	10.00	0.703-0.698	17.86-17.73	0.625-0.618	15.88-15.70	0.418-0.413	10.62-10.49	3.511	89.18
7/16	11.00	0.781-0.776	19.84-19.71	0.688-0.680	17.48-17.27	0.476-0.468	12.09-11.89	4.011	101.89
	12.00	0.844-0.839	21.44-21.31	0.750-0.741	19.05-18.82	0.508-0.500	12.90-12.70	4.698	119.33
1/2		0.844-0.839	21.44-21.31	0.750-0.741	19.05-18.82	0.540-0.531	13.72-13.49	4.698	119.33
9/16	14.00	0.984-0.979	24.99-24.87	0.875-0.866	22.23-22.00	0.603-0.594	15.32-15.09	5.011	127.28
5/8	16.00	1.109-1.104	28.17-28.04	1.000-0.990	25.40-25.15	0.666-0.656	16.92-16.66	5.511	139.99
3/4	19.00	1.359-1.354	34.52-34.39	1.250-1.238	31.75-31.45	0.793-0.781	20.14-19.84	6.511	165.38
7/8	22.00	1.593-1.583	40.46-40.21	1.437-1.425	36.50-36.20	0.933-0.921	23.70-23.39	7.166	182.02
1	26.00	1.812-1.802	46.02-45.77	1.625-1.613	41.28-40.97	1.058-1.046	26.87-26.57	8.229	209.02

N546 Swage Eye

316 Stainless Steel traditional wire end terminal.

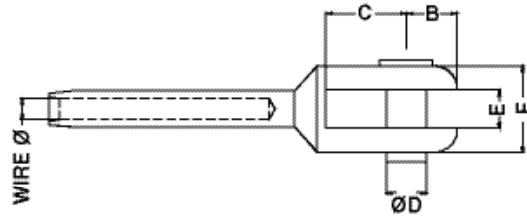
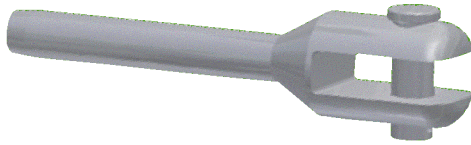


Swage Eyes

Part Number		Wire Dia		B		C		D Dia		E		F Dia	
Metric	Imperial	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In
N546-M02508	N546-0308	2.5	3/32	6.5	0.256	11.5	0.453	6.5	0.256	5.5	0.217	13	0.512
N546-M0308	-	3	-	7	0.276	11	0.433	6.5	0.256	5.5	0.217	13	0.512
-	N546-0408	-	1/8	7	0.276	11	0.433	6.5	0.256	5.5	0.217	13	0.512
N546-M0410	N546-0510	4	5/32	8.2	0.323	13	0.512	8.1	0.319	6.7	0.264	16	0.630
-	N546-0612	-	3/16	10	0.394	18	0.709	9.7	0.382	8	0.315	19	0.748
N546-M0512	-	5	-	10	0.394	18	0.709	9.7	0.382	8	0.315	19	0.748
-	N546-0714	-	7/32	12.5	0.492	19.5	0.768	11.3	0.445	9.5	0.374	23	0.906
N546-M0614	-	6	-	12.5	0.492	19.5	0.768	11.3	0.445	9.5	0.374	23	0.906
-	N546-0812	-	1/4	12.5	0.492	19.5	0.768	9.7	0.382	9.5	0.374	23	0.906
-	N546-0814	-	1/4	12.5	0.492	19.5	0.768	11.3	0.445	9.5	0.374	23	0.906
-	N546-0816	-	1/4	15	0.591	22.5	0.886	13	0.512	9.5	0.374	26	1.024
N546-M0716	N546-0916	7	9/32	14.5	0.571	22.5	0.886	13	0.512	10.9	0.425	27	1.063
N546-M0816	N546-1016	8	5/16	16	0.630	23	0.906	13	0.512	12.5	0.492	27	1.063
N546-M0820	N546-1020	8	5/16	18	0.709	25	0.984	16.2	0.638	12.5	0.492	33	1.299
-	N546-1216	-	3/8	18	0.709	28	1.102	13	0.512	13.5	0.531	33	1.299
-	N546-1220	-	3/8	18	0.709	28	1.102	16.25	0.640	13.5	0.531	33	1.299
N546-M1020	-	10	-	18	0.709	28	1.102	16.25	0.640	13.5	0.531	33	1.299
N546-M1124	N546-1424	11	7/16	21	0.827	39	1.535	19.25	0.758	18	0.709	40	1.575
N546-M1224	-	12	-	21	0.827	39	1.535	19.25	0.758	18	0.709	40	1.575
N546-M1228	-	12	-	25	0.984	41	1.614	22.5	0.886	18	0.709	47.5	1.870
-	N546-1624	-	1/2	21	0.827	39	1.535	19.25	0.758	18	0.709	40	1.575
-	N546-1628	-	1/2	25	0.984	41	1.614	22.5	0.886	18	0.709	47.5	1.870
N546-M1428	N546-1828	14	9/16	25	0.984	41	1.614	22.5	0.886	21	0.827	47.5	1.870
N546-M1632	N546-2032	16	5/8	27.5	1.083	44.5	1.752	25.75	1.014	24	0.945	54	2.126
N546-M1936	N546-2436	19	3/4	30	1.181	50	1.969	30	1.181	25.7	1.012	57	2.244
N546-M2240	N546-2840	22	7/8	38	1.496	55	2.165	32	1.260	33	1.299	63	2.480
N546-M2640	N546-3240	26	1	42	1.654	61.5	2.421	32	1.260	31.3	1.232	69	2.717
N546-M2644	N546-3244	26	1	42	1.654	64	2.520	35	1.378	31.3	1.232	69	2.717
N546-M2848	N546-3648	28	1 1/8	45	1.772	75	2.953	38.25	1.506	34	1.339	90	3.543

N547 Swage Fork

316 Stainless Steel traditional fork end terminal.

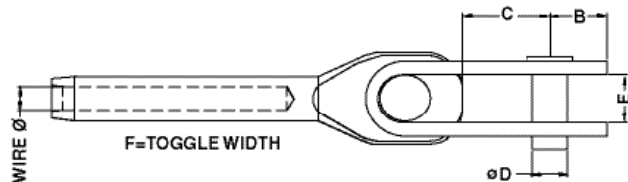


Swage Forks

Part Number		Wire Diameter (W)		B		C		ØD		E		F	
Metric	Imperial	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
N547-M02508	N547-0308	2.5	3/32	8.0	0.315	13.0	0.512	6.3	0.248	6.3	0.248	14.0	0.551
N547-M0308	-	3	-	8.0	0.315	13.0	0.512	6.3	0.248	6.3	0.248	14.0	0.551
-	N547-0408	-	1/8	8.0	0.315	13.0	0.512	6.3	0.248	6.3	0.248	14.0	0.551
N547-M0410	N547-0510	4	5/32	10.0	0.394	16.0	0.630	7.9	0.311	7.9	0.311	19.0	0.748
-	N547-0612	-	3/16	12.0	0.472	19.0	0.748	9.5	0.374	9.5	0.374	22.0	0.866
N547-M0512	-	5	-	12.0	0.472	19.0	0.748	9.5	0.374	9.5	0.374	22.0	0.866
-	N547-0714	-	7/32	14.0	0.551	22.0	0.866	11.1	0.437	11.1	0.437	28.5	1.122
N547-M0612	-	6	-	12.0	0.472	19.0	0.748	9.5	0.374	9.5	0.374	22.0	0.866
-	N547-0814	-	1/4	14.0	0.551	22.0	0.866	11.1	0.437	11.1	0.437	28.5	1.122
N547-M0716	N547-0916	7	9/32	16.0	0.630	25.5	1.004	12.7	0.500	12.7	0.500	31.5	1.240
N547-M0816	N547-1016	8	5/16	16.0	0.630	25.5	1.004	12.7	0.500	12.7	0.500	31.5	1.240
N547-M0820	N547-1020	8	5/16	20.0	0.787	32.0	1.260	15.8	0.622	15.8	0.622	37.8	1.488
-	N547-1220	-	3/8	20.0	0.787	32.0	1.260	15.8	0.622	15.8	0.622	37.8	1.488
N547-M1020	-	10	-	20.0	0.787	32.0	1.260	15.8	0.622	15.8	0.622	37.8	1.488
N547-M1124	N547-1424	11	7/16	24.0	0.945	38.0	1.496	19.0	0.748	19.0	0.748	47.3	1.862
N547-M1224	-	12	-	24.0	0.945	38.0	1.496	19.0	0.748	19.0	0.748	47.3	1.862
-	N547-1624	-	1/2	24.0	0.945	38.0	1.496	19.0	0.748	19.0	0.748	47.3	1.862
N547-M1428	N547-1828	14	9/16	28.0	1.102	44.5	1.752	22.2	0.874	22.2	0.874	54.0	2.126
N547-M1632	N547-2032	16	5/8	32.0	1.260	51.0	2.008	25.4	1.000	25.4	1.000	63.3	2.492
N547-M1936	N547-2436	19	3/4	36.0	1.417	57.0	2.244	28.5	1.122	28.5	1.122	69.6	2.740
N547-M2240	N547-2840	22	7/8	40.0	1.575	63.5	2.500	31.7	1.248	31.7	1.248	76.0	2.992
N547-M2644	N547-3244	26	1 1/8	44.0	1.732	70.0	2.756	35.0	1.378	35.0	1.378	82.5	3.248

N551 Swage Toggle Fork

316 Stainless Steel traditional toggle end terminal.



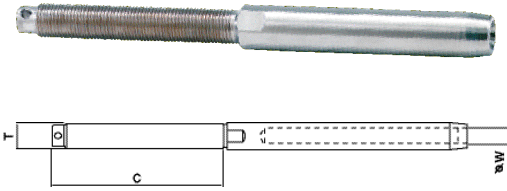
Swage Toggle Forks

PART NO.		WIRE Ø		B		C		ØD		E		F	
Metric	Imperial	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
-	N551-0308	-	3/32	8.0	0.315	16	0.630	6.3	0.248	7.0	0.276	16.0	0.630
N551-M0308	-	3	-	8.0	0.315	16	0.630	5.3	0.209	7.0	0.276	16.0	0.630
-	N551-0408	-	1/8	8.0	0.315	16	0.630	6.3	0.248	7.0	0.276	16.0	0.630
N551-M0410	N551-0510	4	5/32	10.0	0.394	18	0.709	7.9	0.311	8.0	0.354	20.0	0.787
-	N551-0612	-	3/16	12.0	0.472	20	0.787	9.5	0.374	11.0	0.433	20.0	0.787
N551-M0512	-	5	-	12.0	0.472	20	0.787	9.5	0.374	11.0	0.433	20.0	0.787
-	N551-0714	-	7/32	12.7	0.500	26	1.024	11.1	0.437	14.0	0.551	25.0	0.984
N551-M0614	-	6	-	16.0	0.630	26	1.024	11.1	0.437	14.0	0.551	25.0	0.984
-	N551-0816	-	1/4	20.0	0.787	38	1.496	12.7	0.500	18.0	0.709	30.0	1.181
N551-M0716	N551-0916	7	9/32	20.0	0.787	38	1.496	12.7	0.500	18.0	0.709	30.0	1.181
N551-M0816	N551-1016	8	5/16	20.0	0.787	38	1.496	12.7	0.500	18.0	0.709	30.0	1.181
N551-M0820	N551-1020	8	5/16	20.0	0.787	44	1.732	15.8	0.622	19.0	0.748	40.0	1.575
-	N551-1220	-	3/8	20.0	0.787	44	1.732	15.8	0.622	19.0	0.748	40.0	1.575
N551-M1020	-	10	-	20.0	0.787	44	1.732	15.8	0.622	19.0	0.748	40.0	1.575
N551-M1124	N551-1424	11	7/16	28.0	1.102	52	2.047	19.0	0.748	23.0	0.906	50.0	1.969
N551-M1224	-	12	-	28.0	1.102	52	2.047	19.0	0.748	23.0	0.906	50.0	1.969
-	N551-1624	-	1/2	28.0	1.102	52	2.047	19.0	0.748	23.0	0.906	50.0	1.969
N551-M1428	N551-1828	14	9/16	28.0	1.102	60	2.362	22.2	0.874	25.0	0.984	50.8	2.000
N551-M1632	N551-2032	16	5/8	32.0	1.260	63	2.480	25.4	1.000	28.0	1.102	63.5	2.500
N551-M1936	N551-2436	19	3/4	36.0	1.417	66	2.598	28.0	1.102	31.5	1.240	63.5	2.500
N551-M2240	N551-2840	22	7/8	40.0	1.575	79	3.110	31.8	1.252	34.5	1.358	76.2	3.000
N551-M2644	N551-3244	26	1	43.5	1.713	100	3.937	35.0	1.378	38.0	1.496	76.2	3.000

Note: Toggle Assembly uses N546 Swage Eye.

N555 Swage Stud

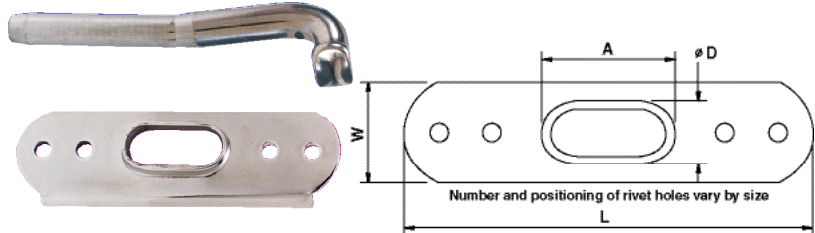
Made from high-quality 316 Stainless Steel with UNF Threads.



Swage Studs						
Part Number		Wire Diameter (W)		Thread (T)	C	
Metric	Imperial	mm	in	UNF	mm	in
N555-M0308	-	3	-	1/4	57	2.24
-	N555-0408	-	1/8	1/4	57	2.24
N555-M0410	N555-0510	4	5/32	5/16	51	2.01
-	N555-0610	-	3/16	5/16	51	2.01
-	N555-0612	-	3/16	3/8	65	2.56
N555-M0510	-	5	-	5/16	51	2.01
N555-M0512	-	5	-	3/8	65	2.56
-	N555-0712	-	7/32	3/8	65	2.56
-	N555-0714	-	7/32	7/16	72	2.84
N555-M0612	-	6	-	3/8	65	2.56
N555-M0614	-	6	-	7/16	72	2.83
N555-M0616	-	6	-	1/2	80	3.15
-	N555-0812	-	1/4	3/8	65	2.56
-	N555-0814	-	1/4	7/16	72	2.84
-	N555-0816	-	1/4	1/2	80	3.15
N555-M0714	N555-0914	7	9/32	7/16	72	2.83
N555-M0716	N555-0916	7	9/32	1/2	80	3.15
N555-M0816	N555-1016	8	5/16	1/2	80	3.15
N555-M0820	N555-1020	8	5/16	5/8	95	3.74
-	N555-1220	-	3/8	5/8	95	3.74
N555-M1020	-	10	-	5/8	95	3.74
N555-M1124	N555-1424	11	7/16	3/4	110	4.33
N555-M1224	-	12	-	3/4	110	4.33
-	N555-1624	-	1/2	3/4	110	4.33
-	N555-1628	-	1/2	7/8	138	5.43
N555-M1428	N555-1828	14	9/16	7/8	138	5.43
N555-M1632	N555-2032	16	5/8	1	155	6.10
N555-M1936	N555-2436	19	3/4	1 1/8	176	6.93
N555-M2240	N555-2840	22	7/8	1 1/4	206	8.11
N555-M2644	N555-3244	26	1	1 3/8	219	8.62
N555-M2848	N555-3648	28	1 1/8	1 1/2	235	9.25

N741 Swage T

The traditional T Terminal, crafted from 316 Stainless Steel.



Swage T													
WIRE Ø		METRIC			IMPERIAL			HEAD HEIGHT		HEAD WIDTH		GRIP DEPTH	
mm	in	SWAGE PART NO.	BACKING PLATE	RETAINING PLUG	SWAGE PART NO.	BACKING PLATE	RETAINING PLUG	mm	in	mm	in	mm	in
2	-	N741-M02	N740-M03	N742-M03	-	-	-	6.3	0.25	14.5	0.57	7.0	0.28
2.5	3/32	N741-M025	N740-M03	N742-M03	N741-03	N740-03	N742-03	6.3	0.25	15.5	0.61	6.0	0.24
3	-	N741-M03	N740-M03	N742-M03	-	-	-	6.3	0.25	16.6	0.65	6.0	0.24
-	1/8	-	-	-	N741-04	N740-03	N742-03	6.3	0.25	16.6	0.65	6.0	0.24
4	5/32	N741-M04	N740-M04	N742-M04	N741-05	N740-05	N742-05	9.0	0.35	17.5	0.69	6.4	0.25
-	3/16	-	-	-	N741-06	N740-06	N742-06	9.0	0.35	17.5	0.69	6.4	0.25
5	-	N741-M05	N740-M05	N742-M05	-	-	-	11.1	0.44	20.0	0.79	8.0	0.31
-	7/32	-	-	-	N741-07	N740-07	N742-07	14.3	0.56	28.0	1.10	8.3	0.32
6	-	N741-M06	N740-M07	N742-M07	-	-	-	14.3	0.56	28.0	1.10	8.3	0.32
-	1/4	-	-	-	N741-08	N740-07	N742-07	14.3	0.56	28.0	1.10	8.3	0.32
7	9/32	N741-M07	N740-M07	N742-M07	N741-09	N740-07	N742-07	14.3	0.56	28.0	1.10	8.3	0.32
8	5/16	N741-M08	N740-M10	N742-M10	N741-10	N740-10	N742-10	17.8	0.70	32.0	1.26	12.0	0.47
-	3/8	-	-	-	N741-12	N740-10	N742-10	17.8	0.70	32.0	1.26	12.0	0.47
10	-	N741-M10	N740-M10	N742-M10	-	-	-	17.8	0.70	32.0	1.26	12.0	0.47

Grip depth is distance from bearing point to inside corner of 90-degree bend.

T-Terminal Backing Plates										
WIRE Ø		METRIC PART NO.	IMPERIAL PART NO.	A	ØD	W	L	Construction	RIVET INFO	
mm	in									
2, 2.5, 3	3/32, 1/8	N740-M03	N740-03	60"	40"	59"	1.98"	Stamped	2 X 3/16"	
4	5/32	N740-M04	N740-05	1.16"	56"	1.00"	3.47"	Stamped	4 X 3/16"	
5	3/16	N740-M06	N740-06	1.10"	66"	1.00"	2.60"	Stamped	2 X 1/4"	
6, 7	7/32, 1/4, 9/32	N740-M07	N740-07	1.55"	88"	1.55"	4.85"	Stamped	4 X 1/4"	
8, 10	5/16, 3/8	N740-M10	N740-10	1.98"	1.00"	1.55"	5.95"	Cast	5 X 1/4"	

N743 T Rings

T Rings enable fiber rope to connect to spars through a T Terminal backing plate. Ideal for replacing old wire runners and checkstays with lighter weight alternatives.

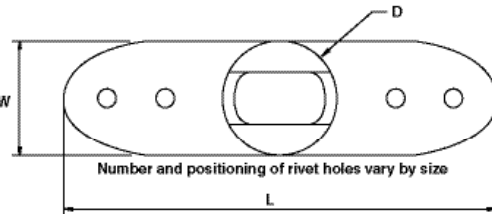
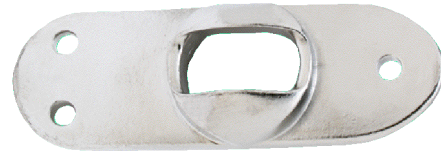


T-Rings					
METRIC			IMPERIAL		
RING PART NO.	BACKING PLATE	RETAINING PLUG	RING PART NO.	BACKING PLATE	RETAINING PLUG
N743-M03	N740-M03	N742-M03	N743-03	N740-03	N742-03
N743-M04	N740-M04	N742-M04	N743-05	N740-05	N742-05
N743-M05	N740-M05	N742-M05	N743-06	N740-06	N742-06
N743-M06	N740-M07	N742-M07	N743-07	N740-07	N742-07

Backing plate determines T-ring size.
For T-head details and backing plate, see charts on page 14.

N841 Swage Shroud Terminal

The optimum design for a quick-release terminal, the 841 combines conventional Terminal advantages with strength and durability under heavy loads.



Swage Shroud Terminals											
WIRE Ø		METRIC			IMPERIAL			HEAD HEIGHT		HEAD WIDTH	
mm	in	SWAGE PART NO.	BACKING PLATE	RETAINING PLUG	SWAGE PART NO.	BACKING PLATE	RETAINING PLUG	mm	in	mm	in
-	7/32	-	-	-	N841-07	N840-07	N842-07	10.8	0.425	23.2	0.913
6	-	N841-M06	N840-M06	N842-M06	-	-	-	12.5	0.492	22.5	0.886
-	1/4	-	-	-	N841-08	N840-07	N842-07	12.5	0.492	22.9	0.902
7	9/32	N841-M07	N840-M07	N842-M08	N841-09	N840-09	N842-09	14.3	0.563	28.7	1.130
8	5/16	N841-M08	N840-M08	N842-M08	N841-10	N840-10	N842-09	16.0	0.630	29.0	1.142
9	-	N841-M09	N840-M10	N842-M10	-	-	-	17.8	0.701	30.0	1.181
-	3/8	-	-	-	N841-12	N840-12	N842-12	17.8	0.701	32.5	1.280
10	-	N841-M10	N840-M10	N842-M10	-	-	-	17.8	0.701	32.5	1.280
11	7/16	N841-M11	N840-M12	N842-M12	N841-14	N840-14	N842-14	19.8	0.780	39.0	1.535
12	-	N841-M12	N840-M12	N842-M12	-	-	-	21.4	0.843	39.0	1.535
-	1/2	-	-	-	N841-16	N840-14	N842-14	21.4	0.843	39.0	1.535

Shroud Terminal Backing Plates								
WIRE Ø		METRIC PART NO.	IMPERIAL PART NO.	Ø D	W	L	Construction	RIVET INFO
mm	in							
6	7/32, 1/4	N840-M06	N840-07	1.25"	1.18"	3.75"	Stamped	3 X 1/4"
7	9/32	N840-M07	N840-09	1.5"	1.50"	4.75"	Stamped	3 X 1/4"
8	5/16	N840-M08	N840-10	1.6"	1.55"	4.75"	Cast	3 X 1/4"
10	3/8	N840-M10	N840-12	1.8"	1.75"	5.90"	Cast	4 X 1/4"
12	7/16, 1/2	N840-M12	N840-14	2.0"	2.00"	7.85"	Cast	5 X 1/4"

N639 Stemball Eye

Made from high-quality 316 Stainless Steel. Used as a toggle in some headstay and backstay applications.



PART NUMBER	CUP Ø		PIN Ø	
	mm	in	mm	in
N639-3212	26.5	1.04	9.5	3/8
N639-3214	26.5	1.04	11	7/16
N639-3216	26.5	1.04	12.7	1/2
N639-4416	34	1.34	12.7	1/2
N639-4420	34	1.34	16	5/8

N641 Swage Stemball

For mast attachment. Can be used with Navtec K200 Tangs. See chart on page 35 for more details.



WIRE Ø		METRIC		IMPERIAL		SHAFT Ø		HEAD Ø	
mm	in	PART NO.	CUP NO.	PART NO.	CUP NO.	mm	in	mm	in
3	-	N641-M03	N640-M04	-	-	6.3	0.25	14.3	0.56
-	1/8	-	-	N641-04	N640-04	6.3	0.25	14.3	0.56
4	5/32	N641-M04	N640-M04	N641-05	N640-04	7.5	0.30	16.3	0.64
-	3/16	-	-	N641-06	N640-06	9.0	0.35	18.8	0.74
5	-	N641-M05	N640-M05	-	-	9.0	0.35	18.8	0.74
-	7/32	-	-	N641-07	N640-07	10.8	0.43	19.0	0.75
6	-	N641-M06	N640-M07	-	-	12.5	0.49	20.3	0.80
-	1/4	-	-	N641-08	N640-08	12.5	0.49	20.3	0.80
7	9/32	N641-M07	N640-M07	N641-09	N640-08	14.2	0.56	21.2	0.83
8	5/16	N641-M08	N640-M12	N641-10	N640-10	16.1	0.63	27.3	1.07
-	3/8	-	-	N641-12	N640-10	17.8	0.70	27.8	1.09
10	-	N641-M10	N640-M12	-	-	17.8	0.70	28.0	1.10

N640 Stemball Cup

Made from 316 Stainless Steel. Used with N641 Stemballs to increase head diameter.



PART NUMBER		OUTER Ø		HOLE Ø	
METRIC	IMPERIAL	mm	in	mm	in
N640-M03	-	21	0.83	11.00	0.44
N640-M04	N640-04	26	1.00	9.00	0.35
N640-M05	N640-06	26	1.00	11.00	0.43
N640-M06	N640-07	26	1.00	13.25	0.52
N640-M07	N640-08	26	1.00	16.30	0.64
N640-M12	N640-10	34	1.34	20.00	0.79

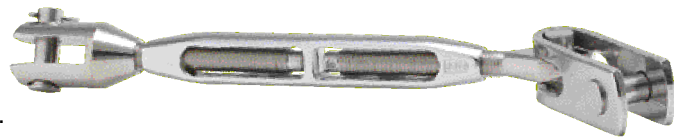
TURNBUCKLES FOR WIRE



Available in multiple designs, Navtec turnbuckles are compatible with most any wire-to-turnbuckle interface. We use 316 Stainless Steel for maximum strength and durability under any marine conditions.

N671 Fork-Toggle

Open-body design. Chrome bronze body with 316 Stainless Steel fork and toggle. UNF threads.



Open-Body Fork - Toggle Turnbuckle

PART NO	THREAD	PIN Ø		FORK GAP		FORK DEPTH		LENGTH OPEN		LENGTH CLOSED		BREAKING STRENGTH	
	U.N.F.	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
N671-080808	1/4	6.27	0.247	6.4	0.252	13.0	0.512	192	7.56	137	5.39	1500	3300
N671-101010	5/16	7.86	0.309	7.9	0.311	16.0	0.630	228	8.98	165	6.50	2270	5010
N671-121212	3/8	9.44	0.372	9.5	0.374	19.0	0.748	297	11.69	205	8.07	3730	8220
N671-141414	7/16	11.00	0.433	11.1	0.437	22.0	0.866	339	13.35	233	9.17	4990	11000
N671-161616	1/2	12.60	0.496	12.7	0.500	25.5	1.004	381	15.00	269	10.59	6670	14700
N671-202020	5/8	15.77	0.621	15.8	0.622	32.0	1.260	467	18.39	336	13.23	10700	23600
N671-242424	3/4	18.94	0.746	19.0	0.748	38.0	1.496	498	19.61	356	14.02	16600	36600
N671-282828	7/8	22.11	0.870	22.0	0.866	44.5	1.752	641	25.24	461	18.15	20600	45500
N671-323232	1	25.29	0.996	25.4	1.000	51.0	2.008	770	30.31	545	21.46	26900	59300
N671-363636	1 1/8	28.45	1.120	28.5	1.122	57.0	2.244	862	33.94	635	25.00	33600	74100
N671-404040	1 1/4	31.63	1.245	31.7	1.248	63.5	2.500	980	38.58	712	28.03	38100	84000
N671-444444	1 3/8	34.80	1.370	35.0	1.378	70.0	2.756	1096	43.15	794	31.26	45400	100000

For toggle dimensions, see N673 chart on page 18.

N672 Toggle-Toggle

Open-body design. Chrome bronze body with 316 Stainless Steel toggles. UNF threads.



Open-Body Toggle - Toggle Turnbuckle

PART NO	THREAD	PIN Ø		LENGTH OPEN		LENGTH CLOSED		BREAKING STRENGTH	
	U.N.F.	mm	in	mm	in	mm	in	kg	lbs
N672-080808	1/4	6.27	0.247	270	10.61	190	7.46	1500	3300
N672-101010	5/16	7.86	0.309	249	9.80	181	7.13	2270	5010
N672-121212	3/8	9.44	0.372	320	12.60	228	8.98	3730	8220
N672-141414	7/16	11.00	0.433	368	14.49	262	10.32	4990	11000
N672-161616	1/2	12.60	0.496	438	17.24	326	12.83	6670	14700
N672-202020	5/8	15.77	0.621	520	20.47	389	15.31	10700	23600
N672-242424	3/4	18.94	0.746	613	24.12	471	18.53	16600	36600
N672-282828	7/8	22.11	0.870	718	28.25	538	21.17	20600	45500
N672-323232	1	25.29	0.996	827	32.54	602	23.69	26900	59300
N672-363636	1 1/8	28.45	1.120	916	36.07	689	27.14	33600	74100
N672-404040	1 1/4	31.63	1.245	1038	40.87	770	30.31	38100	84000
N672-444444	1 3/8	34.80	1.370	1178	46.38	876	34.49	45400	100000

For toggle dimensions, see N673 chart on page 18.

N673 Swage-Toggle

Open-body swage and toggle. Chrome bronze body. 316 Stainless Steel swage studs and toggles. UNF threads.



Open-Body Swage - Toggle Turnbuckle

PART NO	PART NO	WIRE Ø		THREAD	PIN Ø		TOGGLE GAP		TOGGLE DEPTH		LENGTH OPEN*		LENGTH CLOSED*		BREAKING STRENGTH	
		mm	in	U.N.F.	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lbs
N673-M03808	-	3	-	1/4	6.27	0.247	7.0	0.276	16.0	0.630	215	8.46	158	6.26	1500	3310
-	N673-05908	-	1/4	1/4	6.27	0.247	7.0	0.276	16.0	0.630	215	7.17	152	4.56	1500	3310
N673-M041010	N673-051010	4	5/32	5/16	7.86	0.309	9.0	0.354	18.0	0.709	218	8.58	154	6.06	2270	5010
-	N673-061212	-	3/8	3/8	9.44	0.372	11.0	0.433	20.0	0.787	265	11.22	192	7.56	3730	8220
N673-M051010	-	5	-	5/16	7.86	0.309	9.0	0.354	18.0	0.709	265	11.22	192	7.56	2270	5010
N673-M051212	-	5	-	3/8	9.44	0.372	11.0	0.433	20.0	0.787	265	11.22	192	7.56	3730	8220
-	N673-071212	-	7/32	3/8	9.44	0.372	11.0	0.433	20.0	0.787	265	11.22	192	7.56	3730	8220
-	N673-071414	-	7/32	7/16	11.00	0.433	14.0	0.551	26.0	1.024	324	12.76	222	8.74	4940	10900
N673-M081212	-	8	-	3/8	9.44	0.372	11.0	0.433	20.0	0.787	324	12.76	222	8.74	3730	8220
N673-M081414	-	8	-	7/16	11.00	0.433	14.0	0.551	26.0	1.024	324	12.76	222	8.74	4940	10900
-	N673-081414	-	1/4	7/16	11.00	0.433	14.0	0.551	26.0	1.024	324	12.76	222	8.74	4940	11000
-	N673-081616	-	1/4	1/2	12.80	0.496	18.0	0.709	38.0	1.496	355	13.98	253	9.96	6670	14700
N673-M071414	N673-091414	7	9/32	7/16	11.00	0.433	14.0	0.551	26.0	1.024	347	13.68	245	9.65	4990	11000
N673-M071616	N673-091616	7	9/32	1/2	12.80	0.496	18.0	0.709	38.0	1.496	355	13.98	253	9.96	6670	14700
N673-M081616	N673-101616	8	5/16	1/2	12.80	0.496	18.0	0.709	38.0	1.496	382	15.04	271	10.57	6670	14700
N673-M082020	N673-102020	8	5/16	5/8	15.77	0.621	19.0	0.748	44.0	1.732	457	17.90	325	12.80	10700	23600
-	N673-122020	-	3/8	5/8	15.77	0.621	19.0	0.748	44.0	1.732	457	17.90	325	12.80	10700	23600
N673-M102020	-	10	-	5/8	15.77	0.621	19.0	0.748	44.0	1.732	457	17.90	325	12.80	10700	23600
-	N673-142424	-	7/16	3/4	18.94	0.746	23.0	0.906	52.0	2.047	530	20.87	354	15.12	16600	36600
N673-M122424	-	12	-	3/4	18.94	0.746	23.0	0.906	52.0	2.047	530	20.87	354	15.12	16600	36600
-	N673-162424	-	1/2	3/4	18.94	0.746	23.0	0.906	52.0	2.047	530	20.87	354	15.12	16600	36600
N673-M142828	N673-182828	14	9/16	7/8	22.11	0.870	25.0	0.984	60.0	2.362	650	25.50	460	18.11	20600	45500
N673-M163232	N673-203232	16	5/8	1	25.29	0.996	29.0	1.102	68.0	2.490	753	29.65	525	20.67	26900	59300
N673-M183636	N673-243636	18	3/4	1 1/8	28.45	1.120	31.5	1.240	66.0	2.568	842	33.15	618	24.13	33600	74100
N673-M224040	N673-284040	22	7/8	1 1/4	31.83	1.245	34.5	1.358	79.0	3.110	957	37.68	656	27.13	36100	84000
N673-M284444	N673-324444	28	1	1 3/8	34.80	1.370	39.0	1.498	100.0	3.937	1000	42.13	708	30.16	45400	100000

*Length is measured from pin to bottom of swage hole (end of wire)

N674 Blank-Toggle

Open-body blank and toggle with chrome bronze body. 316 Stainless Steel toggles. UNF threads.



Open-Body Blank - Toggle Turnbuckle

PART NO	THREAD	PIN Ø		STROKE		BREAKING STRENGTH	
	U.N.F.	mm	in	mm	in	kg	lbs
N674-000808	1/4	6.27	0.247	80	3.15	1500	3300
N674-001010	5/16	7.86	0.309	68	2.68	2270	5010
N674-001212	3/8	9.44	0.372	92	3.62	3730	8220
N674-001414	7/16	11.00	0.433	106	4.17	4990	11000
N674-001616	1/2	12.80	0.496	112	4.41	6670	14700
N674-002020	5/8	15.77	0.621	131	5.16	10700	23600
N674-002424	3/4	18.94	0.746	142	5.59	16600	36600
N674-002828	7/8	22.11	0.870	180	7.09	20600	45500
N674-003232	1	25.29	0.996	225	8.86	26900	59300
N674-003636	1 1/8	28.45	1.120	227	8.94	33600	74100
N674-004040	1 1/4	31.83	1.245	268	10.55	38100	84000
N674-004444	1 3/8	34.80	1.370	302	11.89	45400	100000

For toggle dimensions see N673 chart above.
See extra options on page 20 for parts to fit upper end.

N676 Blank-Fork

Open-body design. Chrome bronze body, 316 Stainless Steel fork end. UNF thread sizes.



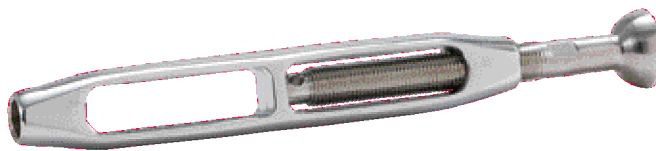
Open-Body Blank - Fork Turnbuckle

PART NO	THREAD	PIN Ø		STROKE		BREAKING STRENGTH	
	U.N.F.	mm	in	mm	in	kg	lbs
N676-000808	1/4	6.27	0.247	80	3.15	1500	3300
N676-001010	5/16	7.86	0.309	68	2.68	2270	5010
N676-001212	3/8	9.44	0.372	92	3.62	3730	8220
N676-001414	7/16	11.00	0.433	106	4.17	4990	11000
N676-001616	1/2	12.60	0.496	112	4.41	6670	14700
N676-002020	5/8	15.77	0.621	131	5.16	10700	23600
N676-002424	3/4	18.94	0.746	142	5.59	16600	36600
N676-002828	7/8	22.11	0.870	180	7.09	20600	45500
N676-003232	1	25.29	0.996	225	8.86	26900	59300
N676-003636	1 1/8	28.45	1.120	227	8.94	33600	74100
N676-004040	1 1/4	31.63	1.245	268	10.55	38100	84000
N676-004444	1 3/8	34.80	1.370	302	11.89	45400	100000

For fork dimensions see N671 chart on page 17.
See extra options on page 20 to fit upper end.

N677 Blank-Stemball

Open-body design. Chrome bronze body, Stainless Steel ends. Various thread sizes. UNF threads.



Open-Body Blank - Stemball Turnbuckle

PART NO	THREAD	HEAD Ø		STROKE		BREAKING STRENGTH	
	U.N.F.	mm	in	mm	in	kg	lbs
N677-000808	1/4	14.64	0.576	80	3.15	1500	3300
N677-001010	5/16	18.00	0.709	68	2.68	2270	5010
N677-001212	3/8	17.60	0.693	92	3.62	3730	8220
N677-001414	7/16	22.00	0.866	106	4.17	4990	11000
N677-001616	1/2	26.00	1.024	112	4.41	6670	14700
N677-002020	5/8	40.68	1.602	131	5.16	10700	23600
N677-002424	3/4	40.68	1.602	142	5.59	16600	36600
N677-002828	7/8	43.63	1.718	180	7.09	20600	45500

See extra options on page 20 for parts to fit upper ends.

N534 Blank-Toggle

Closed-body design. Full Stainless Steel body with 316 Stainless Steel toggle end. UNF threads.



Blank - Toggle Closed-Body Turnbuckle

PART NO	THREAD	PIN Ø		STROKE		BREAKING STRENGTH	
	U.N.F.	mm	in	mm	in	kg	lbs
N534-000808	1/4	6.27	0.247	52	2.05	1020	2240
N534-001010	5/16	7.86	0.309	57	2.24	2030	4470
N534-001212	3/8	9.44	0.372	78	3.07	3090	6800
N534-001616	1/2	12.60	0.496	100	3.94	6680	14700
N534-002020	5/8	15.77	0.621	121	4.76	10200	22400

For toggle dimensions see N673 chart on page 18.
See extra options below for parts to fit upper ends.

N535 Fork-Toggle

Closed-body design. Full 316 Stainless Steel rigging screw with fork and toggle. UNF threads.



Fork - Toggle Closed-Body Turnbuckle

PART NO	THREAD	PIN Ø		LENGTH OPEN		LENGTH CLOSED		BREAKING STRENGTH	
	U.N.F.	mm	in	mm	in	mm	in	kg	lbs
N535-080808	1/4	6.27	0.247	193	7.60	141	5.55	1020	2240
N535-101010	5/16	7.86	0.309	219	8.62	162	6.38	2030	4470
N535-121212	3/8	9.44	0.372	280	11.02	202	7.95	3090	6800
N535-161616	1/2	12.60	0.496	365	14.37	265	10.43	6680	14700
N535-202020	5/8	15.77	0.621	473	18.62	352	13.86	10200	22400

For toggle dimensions, see N673 chart on page 18, fork dimensions see N671 chart on page 17.

Extra Options

SWAGE STUD



Product prefix #:N555
See page 14 for details

SWAGELESS STUD



Product prefix #:N030
See page 10 for details

ROD STUD

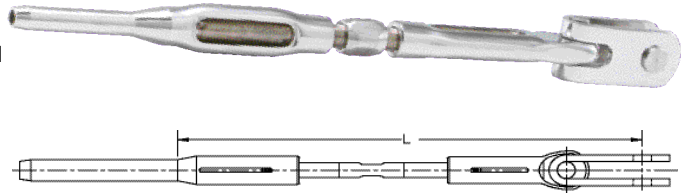


Product prefix #:N090
See page 42 for details

Note: Forks, Eyes and Toggles also available.

C500 Turnbuckles

Swage end machined from 316 Stainless Steel, drilled through for full insertion of wire before swaging. Can be fitted with extra-long screw. Center screw design allows for maximum rig tensioning.



Swage - Toggle Turnbuckle

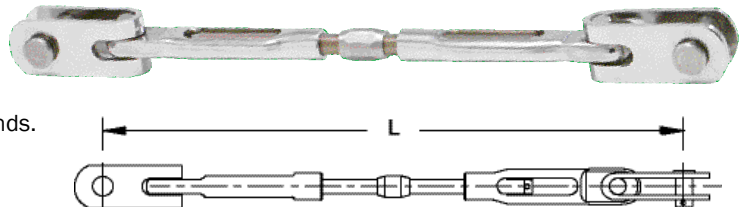
PART NUMBER	WIRE Ø	PIN Ø		LENGTH OPEN*		LENGTH CLOSED*		BREAKING STRENGTH		WEIGHT	
		mm	in	mm	in	mm	in	kg	lbs	kg	lbs
C500-061010	3/16	7.9	5/16	314	12.38	235	9.25	2,490	5,500	0.231	0.51
C500-061012	3/16	9.5	3/8	314	12.38	235	9.25	2,490	5,500	0.231	0.51
C500-071212	7/32	9.5	3/8	343	13.50	254	10.00	3,760	8,300	0.349	0.77
C500-071214	7/32	11.1	7/16	343	13.50	254	10.00	3,760	8,300	0.349	0.77
C500-081212	1/4	9.5	3/8	343	13.50	254	10.00	3,760	8,300	0.372	0.82
C500-081214	1/4	11.1	7/16	343	13.50	254	10.00	3,760	8,300	0.372	0.82
C500-081414	1/4	11.1	7/16	372	14.63	279	11.00	5,080	11,200	0.558	1.23
C500-081416	1/4	12.7	1/2	372	14.63	279	11.00	5,080	11,200	0.576	1.27
C500-091414	9/32	11.1	7/16	372	14.63	279	11.00	5,080	11,200	0.590	1.30
C500-091416	9/32	12.7	1/2	372	14.63	279	11.00	5,080	11,200	0.635	1.40
C500-101616	5/16	12.7	1/2	435	17.13	330	13.00	6,890	15,200	0.816	1.80
C500-101620	5/16	15.9	5/8	435	17.13	330	13.00	6,890	15,200	0.816	1.80
C500-122020	3/8	15.9	5/8	521	20.50	394	15.50	10,900	24,000	1.500	3.40
C500-142424	7/16	19.1	3/4	610	24.00	470	18.50	14,200	31,300	2.600	5.73
C500-162828	1/2	22.2	7/8	673	26.50	521	20.50	19,500	43,000	4.000	8.73
C500-182828	9/16	22.2	7/8	673	26.50	521	20.50	19,500	43,000	4.000	8.90
C500-203232	5/8	25.4	1	724	28.50	559	22.00	25,400	56,000	5.700	12.50
C500-244040	3/4	31.8	1 1/4	797	31.38	619	24.38	40,800	90,000	11.200	24.60

For toggle dimensions, refer to H200 High Fatigue Jaw chart, page 33. Compare using pin diameter.

* Length measured from center of pin to end of wire in swage.

C600 Double Toggle

Reliable and flexible. Features toggles at both ends. Most often used with Norseman-type eyes.



Toggle - Toggle Turnbuckle

PART NUMBER	PIN Ø		LENGTH OPEN		LENGTH CLOSED		BREAKING STRENGTH		WEIGHT	
	mm	in	mm	in	mm	in	kg	lbs	kg	lbs
C600-001010	7.9	5/16	332	13.07	252	9.94	2,490	5,500	0.270	0.60
C600-001012	9.5	3/8	332	13.07	270	10.63	2,490	5,500	0.297	0.65
C600-001212	9.5	3/8	386	15.20	297	11.70	3,760	8,300	0.418	0.92
C600-001214	11.1	7/16	386	15.20	297	11.70	3,760	8,300	0.435	0.96
C600-001414	11.1	7/16	422	16.60	329	12.97	5,080	11,200	0.682	1.50
C600-001416	12.7	1/2	422	16.60	329	12.97	5,080	11,200	0.714	1.57
C600-001616	12.7	1/2	451	17.77	346	13.64	6,890	15,200	0.982	2.16
C600-001620	15.9	5/8	470	18.51	365	14.38	6,890	15,200	1.41	3.10
C600-002020	15.9	5/8	525	20.65	398	15.65	10,900	24,000	1.84	4.05
C600-002424	19.1	3/4	662	26.08	523	20.58	14,200	31,300	3.29	7.24
C600-002828	22.2	7/8	732	28.82	580	22.82	19,500	43,000	4.99	10.98
C600-003232	25.4	1	798	31.42	633	24.92	25,400	56,000	6.94	15.27
C600-004040	31.8	1 1/4	898	35.34	720	28.34	40,800	90,000	14.09	31.00

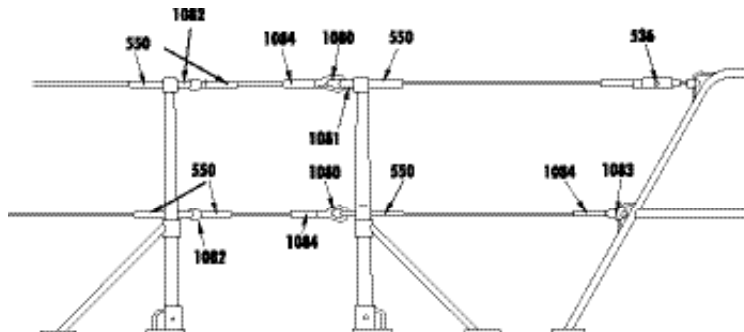
For toggle dimensions, refer to H200 High Fatigue Jaw chart, page 33. Compare using pin diameter.

LIFELINE, GUARDRAIL & SAFETY FITTINGS



Our lifeline fittings are designed to be used with 3mm through 1/4" wire. The range has been proven over many years of use and is selected by boat builders who recognize that lifeline safety is not an area where quality can be compromised.

- NLL-533 - Quickfit Lifeline Turnbuckle
- NLL-536 - Lifeline Turnbuckle
- NLL-550 - Short Swage Stud
- NLL-1080 - Pelican Hook
- NLL-1081 - Threaded Lifeline Eye
- NLL-1082 - Interlinked Eyes
- NLL-1083 - Adjustable Fork End
- NLL-1084 - Long Swage Stud with Locknut



N030 Norseman Swageless Stud

See page 10 for details.



NLL-550 Short Swage Stud

316 Stainless Steel made to be used with lifeline eyes.
Wire 3mm to 1/4". Thread 8mm and 5/16".



NLL-1084

Long Swage Stud with Locknut

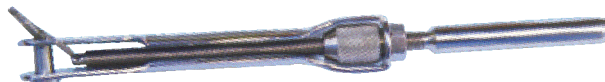
316 Stainless Steel made to be used with Closed-Body Turnbuckle, Pelican Hooks and Adjustable Fork Ends.
Wire 3mm to 1/4". Thread 8mm and 5/16".



NLL-533

Quickfit Lifeline Turnbuckle

316 Stainless Steel made for wire sizes from 3mm to 5mm with 3.1" of stroke, easily adjusted with thumbscrew.



NLL-1081 Single Eye

316 Stainless Steel made with 5/16" (NLL-1081-10) or 8mm (NLL-1081-M08) threads.



NLL-1082 Interlinked Eyes

316 Stainless steel made with 5/16" (NLL-1082-10) or 8mm (NLL-1082-M08) threads.



NLL-536 Lifeline Turnbuckles

See closed body Turnbuckle on page 20 for details.



NLL-1083 Adjustable Fork End

316 Stainless Steel made with 5/16" (NLL-1083-1008) or 8mm (NLL-1083-M0808) threads.



NLL-1080 Pelican Hook

316 Stainless Steel made with 5/16" (NLL-1080-10R) or 8mm (NLL-1080-M08R) threads.



NLL-812 Pelican Hook

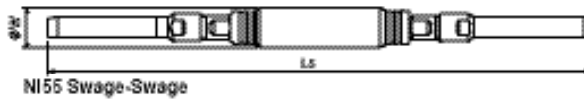
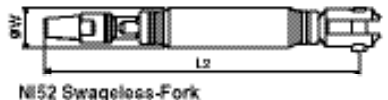
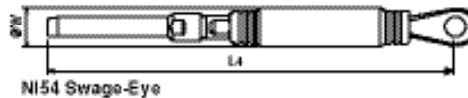
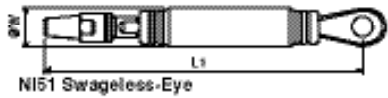
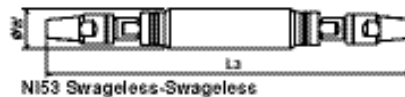
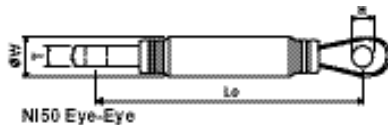
316 Stainless Steel made to be used with thimble and Nico or Talurit press.



WIRE RIGGING INSULATORS

NI Norseman Wire Rigging Insulators

For superior strength and electrical performance in a wire rigging/backstay system. Several end configurations are offered to make an adaptable connection. Withstands high sustained loads in all conditions.



Wire Rigging Insulators

WIRE SIZE		L0		L1		L2		L3		L4		L5		ØW		H		T	
mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in
	3/16	152	5.984	178	7.01	190	7.48	211	8.31	220	8.66	290	11.42	29	1.14	10	0.38	8	0.31
5		152	5.984	178	7.01	190	7.48	211	8.31	220	8.66	290	11.42	29	1.14	10	0.38	8	0.31
	7/32	165	6.496	178	7.01	190	7.48	211	8.31	220	8.66	290	11.42	29	1.14	11	0.44	10	0.37
6		165	6.496	198	7.80	203	7.99	229	9.02	238	9.37	315	12.40	29	1.14	11	0.44	10	0.37
	1/4	165	6.496	198	7.80	203	7.99	229	9.02	238	9.37	315	12.40	29	1.14	11	0.44	10	0.37
7	9/32	185	7.283	216	8.50	222	8.75	241	9.49	271	10.67	360	14.17	35	1.37	13	0.51	11	0.43
8	5/16	191	7.520	229	9.02	254	10.00	262	10.32	283	11.14	376	14.80	35	1.37	16	0.63	13	0.49
	3/8	365	14.370	308	12.13	346	13.63	308	12.13	402	15.83	510	20.08	44	1.73	16	0.63	17	0.65
10		365	14.370	308	12.13	346	13.63	308	12.13	402	15.83	510	20.08	44	1.73	16	0.63	17	0.65
11	7/16	277	10.906	341	13.43	362	14.25	401	15.79	443	17.44	598	23.54	44	1.73	19	0.76	18	0.71
12		277	10.906	341	13.43	362	14.25	401	15.79	465	18.31	640	25.20	44	1.73	19	0.76	18	0.71
	1/2	277	10.906	341	13.43	362	14.25	401	15.79	465	18.31	640	25.20	44	1.73	19	0.76	18	0.71
14	9/16	381	15.000	473	18.62	465	18.31	514	20.24	607	23.90	820	32.28	63	2.50	23	0.89	21	0.83
16	5/8	406	15.984	479	18.86	499	19.65	552	21.73	638	25.12	844	33.23	63	2.50	26	1.01	24	0.94
19	3/4	487	19.173	549	21.61	563	22.17	610	24.02	753	29.65	999	39.33	63	2.50	29	1.14	26	1.01

See website for part numbers.