NAVTEC FRANCE

ROD SYSTEMS

NAVTEC FRANCE - P.A de la Siagne, Allée Charles Nungesser 06210 MANDELIEU – France
T. 33(0)4 93 90 24 60 - F. 33(0)4 93 90 24 61 – EMail : navtec@navtecsudeurope.fr
https://www.facebook.com/navtecsudeurope.fr
SIRET 793 366 733 00012 – APE 3315Z – TVA INTRA FR56793366733 – CAPITAL 255 001 € - RCS CANNES 793 366 733

NAVTEC FRANCE

ROD SYSTEMS

Superior performance, longevity and brilliant aesthetics are the driving force of the original Navtec flagship rigging solution. Nitronic 50 rod rigging is the industry baseline for evolving rigging design.

Nitronic 50 Rod

Originally developed by Navtec, using a cold-drawn process, the high-strength, low-stretch, corrosion-resistant Nitronic 50 rod is the industry standard. It is available in coil form in rod sizes up to -91 and in bar form for -76 and above. Navtec's Nitronic 50 rod can be found throughout the yachting industry. America's Cup racers, Super Yachts, Bluewater cruisers, one-design racers, and production boats. Our highly-polished finish provides the final touch to our well-engineered rigging systems.

Nitronic 50 Coil

PART NUMBER	SIZE	Ø DIAMETER		MINIMUM BREAKING STRENGTH		WEIGHT	
		in	mm	lbs	kg	lbs/ft	kg/m
R505-004	-4	0,172	4,37	4 700	2 132	0,079	0,118
R505-006	-6	0,198	5,03	6 300	2 858	0,105	0,156
R505-008	-8	0,225	5,72	8 200	3 719	0,136	0,202
R505-010	-10	0,250	6,35	10 300	4 672	0,167	0,249
R505-012	-12	0,281	7,14	12 500	5 670	0,211	0,314
R505-015	-15	0,296	7,52	14 250	6 464	0,235	0,350
R505-017	-17	0,330	8,38	17 500	7 938	0,291	0,433
R505-022	-22	0,375	9,53	22 500	10 206	0,376	0,560
R505-030	-30	0,437	11,10	30 000	13 608	0,511	0,760
R505-040	-40	0,500	12,70	38 000	17 237	0,669	0,996
R505-048	-48	0,562	14,27	48 000	21 772	0,845	1,257
R505-060	-60	0,660	16,76	60 000	27 216	1,166	1,735
R505-076	-76	0,705	17,91	76 000	34 473	1,330	1,979
R505-091	-91	0,768	19,51	90 000	40 823	1,579	2,350

Nitronic 50 bar (Gamma)

PART NUMBER	SIZE	Ø DIAMETER		MINIMUM BREAKING STRENGTH		WEIGHT	
		in	mm	lbs	kg	lbs/ft	kg/m
R508-P-076	-76	0,705	17,91	76 000	34 473	1,330	1,979
R508-P-091	-91	0,768	19,51	90 000	40 823	1,579	2,350
R508-P-115	-115	0,875	22,23	115 000	52 163	2,049	3,049
R508-P-150	-150	1,000	25,40	150 000	68 039	2,677	3,984
R508-P-170	-170	1,066	27,08	170 000	77 111	3,042	4,527
R508-P-195	-195	1,125	28,58	190 000	86 183	3,388	5,042
R508-P-220	-220	1,191	30,25	217 000	98 430	3,797	5,651
R508-P-260	-260	1,313	33,35	260 000	117 934	4,614	6,866
R508-P-320	-320	1,500	38,10	320 000	145 150	6,022	8,962
R508-P-400	-400	1,750	44,45	400 000	181 437	8,197	12,198

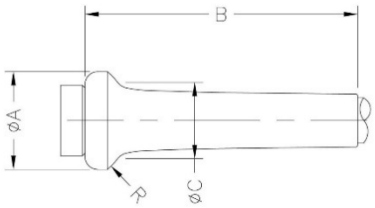
NAVTEC FRANCE

Stemballs

Stemballs were developed by Navtec with the simple aim of increasing the useful life of rod rigging. The stemball builds on the weight-saving approach of a ball terminal for rod, also originally developed by Navtec. Stemball rigging systems provide significant fatigue life with minimal weight and size increase.

F235 Micro Stemball

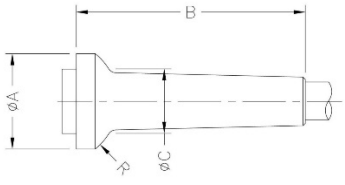
Micro Stemballs are Navtec's most advanced stemball. Through the use of high-strength material and sophisticated computer stress analysis programs developed by Navtec's fatigue testing. Navtec has developed a smaller lighter stemball. Commonly used in the L500- Tip cups, K150 & K550 Tangs.



PART NUMBER	SIZE	Ø A		B		Ø C		R (Radius)		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	lbs	kg
F235-004	-4	0,372	9,45	1,039	26,4	0,264	6,71	0,250	6,35	0,011	0,005
F235-006	-6	0,428	10,87	1,197	30,4	0,302	7,67	0,280	7,11	0,011	0,005
F235-008	-8	0,487	12,37	1,362	34,6	0,344	8,74	0,313	7,95	0,011	0,005
F235-010	-10	0,541	13,74	1,512	38,4	0,381	9,68	0,344	8,74	0,020	0,009
F235-012	-12	0,608	15,44	1,701	43,2	0,430	10,92	0,394	10,01	0,031	0,014
F235-015	-15	0,640	16,26	1,791	45,5	0,451	11,46	0,406	10,31	0,040	0,018
F235-017	-17	0,714	18,14	1,996	50,7	0,505	12,83	0,469	11,91	0,040	0,018
F235-022	-22	0,811	20,60	2,268	57,6	0,573	14,55	0,531	13,49	0,060	0,027
F235-030	-30	0,946	24,03	2,646	67,2	0,669	16,99	0,625	15,88	0,090	0,041
F235-040	-40	1,082	27,48	3,020	76,7	0,763	19,38	0,687	17,45	0,130	0,059
F235-048	-48	1,216	30,89	3,402	86,4	0,858	21,79	0,781	19,84	0,190	0,086
F235-060	-60	1,428	36,27	3,988	101,3	1,008	25,60	0,925	23,50	0,298	0,135
F235-076L	-76	1,525	38,74	4,272	108,5	1,078	27,38	1,000	25,40	0,377	0,171
F235-091L	-91	1,662	42,21	4,650	118,1	1,173	29,79	1,063	27,00	0,478	0,217
F235-115L	-115	1,893	48,08	5,291	134,4	1,339	34,01	1,250	31,75	0,664	0,301
F235-150L	-150	2,164	54,97	6,051	153,7	1,532	38,91	1,438	36,53	1,085	0,492
F235-170L	-170	2,307	58,60	6,449	163,8	1,631	41,43	1,500	38,10	1,321	0,599
F235-195L	-195	2,434	61,82	6,811	173,0	1,718	43,64	1,563	39,70	1,512	0,686
F235-220L	-220	2,577	65,46	7,209	183,1	1,822	46,28	1,688	42,88	1,676	0,760
F235-260L	-260	2,845	72,26	7,961	202,2	2,007	50,98	1,813	46,05	2,482	1,126

F220 Tapered Stemball

The larger head geometry of the F220 makes it suitable for use in spreader root tangs to help distribute load.

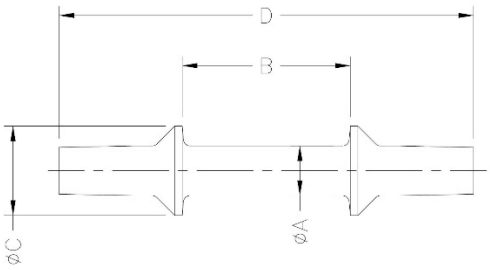


PART NUMBER	SIZE	Ø A		B		Ø C		R (Radius)		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	lbs	kg
F220-004	-4	0,476	12,09	1,043	26,5	0,304	7,72	0,312	7,92	0,020	0,009
F220-006	-6	0,550	13,97	1,189	30,2	0,338	8,59	0,344	8,74	0,020	0,009
F220-008	-8	0,683	17,35	1,350	34,3	0,430	10,92	0,438	11,13	0,040	0,018
F220-010	-10	0,683	17,35	1,500	38,1	0,434	11,02	0,438	11,13	0,060	0,027
F220-012	-12	0,772	19,61	1,685	42,8	0,496	12,60	0,500	12,70	0,060	0,027
F220-015	-15	0,911	23,14	1,776	45,1	0,600	15,24	0,594	15,09	0,090	0,041
F220-017	-17	0,911	23,14	1,980	50,3	0,600	15,24	0,594	15,09	0,090	0,041
F220-022	-22	1,030	26,16	2,252	57,2	0,042	1,07	0,656	16,66	0,130	0,059
F220-030	-30	1,188	30,18	2,622	66,6	0,760	19,30	0,750	19,05	0,201	0,091
F220-040	-40	1,375	34,93	3,031	77,0	0,878	22,30	0,875	22,23	0,311	0,141
F220-048	-48	1,530	38,86	3,413	86,7	1,010	25,65	1,000	25,40	0,441	0,200
F220-060	-60	1,659	42,14	4,000	101,6	1,031	26,19	1,060	26,92	0,529	0,240
F220-076L	-76	1,965	49,92	4,228	107,4	1,122	28,50	1,190	30,23	0,745	0,338
F220-091L	-91	2,100	53,34	4,606	117,0	1,311	33,30	1,344	34,14	1,063	0,482
F220-115L	-115	2,198	55,83	5,252	133,4	1,357	34,47	1,400	35,56	1,261	0,572
F220-150L	-150	2,500	63,50	6,000	152,4	1,550	39,37	1,600	40,64	1,852	0,840
F220-170L	-170	2,750	69,85	6,398	162,5	1,686	42,82	1,750	44,45	2,425	1,100
F220-195L	-195	2,826	71,78	6,752	171,5	1,743	44,27	1,800	45,72	2,690	1,220

Spreader Bends

Navtec Spreader Bends cover and protect the rod rigging that passes over the spreader tip. They have ideally suited to masts where shroud-spreader angle change between 1 and 15 degrees. Spreader bends available in both alloy and stainless steel.

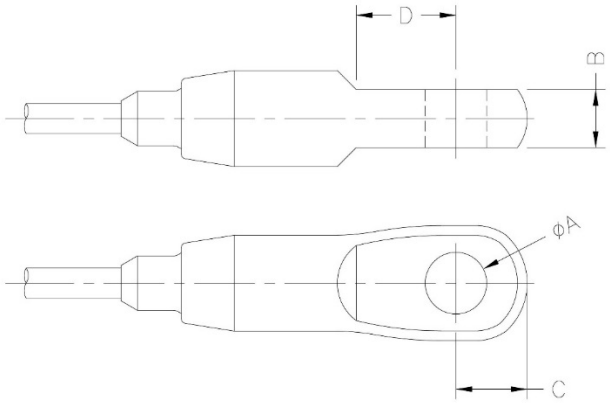
L250 Stainless Steel Spreader Bend



PART NUMBER	SIZE	Ø A		B		Ø C		D		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	lbs	kg
L250-004	-4	0,300	7,62	0,752	19,1	0,500	12,70	2,681	68,10	0,040	0,018
L250-006	-6	0,365	9,27	0,882	22,4	0,625	15,88	3,220	81,80	0,075	0,034
L250-008	-8	0,425	10,80	1,000	25,4	0,688	17,48	3,598	91,40	0,108	0,049
L250-010	-10	0,425	10,80	1,000	25,4	0,688	17,48	3,598	91,40	0,099	0,045
L250-012	-12	0,485	12,32	1,252	31,8	0,750	19,05	4,201	106,70	0,141	0,064
L250-015	-15	0,485	12,32	1,252	31,8	0,750	19,05	4,201	106,70	0,134	0,061
L250-017	-17	0,550	13,97	1,500	38,1	0,750	19,05	4,902	124,50	0,185	0,084
L250-022	-22	0,600	15,24	1,752	44,5	1,000	25,40	4,850	123,20	0,254	0,115
L250-030	-30	0,600	15,24	2,000	50,8	1,000	25,40	5,228	132,80	0,220	0,100
L250-040	-40	0,660	16,76	2,252	57,2	1,188	30,18	5,520	140,20	0,311	0,141
L250-048	-48	0,720	18,29	2,500	63,5	1,188	30,18	5,929	150,60	0,328	0,149
L250-060	-60	0,845	21,46	2,500	63,5	1,375	34,93	6,870	174,50	0,520	0,236
L250-076	-76	0,903	22,94	2,500	63,5	1,470	37,34	7,181	182,40	0,580	0,263

G100 Marine Eyes

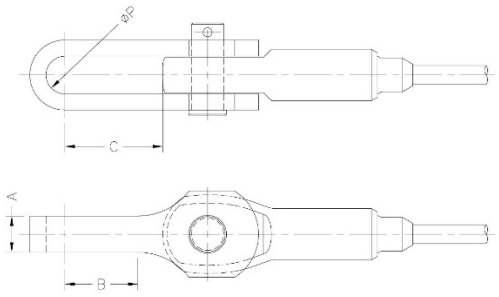
Navtec Marine Eyes have long been the industry standard and are used as upper and lower rod backstay terminals.



PART NUMBER	SIZE	Ø A		B		C		D		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	lbs	kg
G100-004	-4	0,390	9,91	0,350	8,9	0,465	11,8	0,646	16,4	0,112	0,051
G100-006	-6	0,453	11,51	0,409	10,4	0,587	14,9	0,689	17,5	0,207	0,094
G100-008	-8	0,515	13,08	0,469	11,9	0,657	16,7	0,925	23,5	0,324	0,147
G100-010	-10	0,515	13,08	0,469	11,9	0,657	16,7	0,925	23,5	0,659	0,299
G100-012	-12	0,640	16,26	0,598	15,2	0,850	21,6	1,039	26,4	0,670	0,304
G100-015	-15	0,640	16,26	0,598	15,2	0,850	21,6	1,039	26,4	0,683	0,310
G100-017	-17	0,640	16,26	0,598	15,2	0,850	21,6	1,039	26,4	0,681	0,309
G100-022	-22	0,765	19,43	0,720	18,3	0,886	22,5	1,240	31,5	1,100	0,499
G100-030	-30	0,890	22,61	0,819	20,8	1,039	26,4	1,291	32,8	1,404	0,637
G100-040	-40	1,015	25,78	0,902	22,9	1,098	27,9	1,311	33,3	1,742	0,790
G100-048	-48	1,140	28,96	0,988	25,1	1,181	30,0	1,421	36,1	2,033	0,922
G100-060	-60	1,265	32,13	1,110	28,2	1,402	35,6	1,752	44,5	3,719	1,687
G100-076L	-76	1,265	32,13	1,228	31,2	1,591	40,4	2,000	50,8	6,038	2,739
G100-091L	-91	1,390	35,31	1,350	34,3	1,689	42,9	2,209	56,1	7,352	3,335
G100-115L	-115	1,580	40,13	1,500	38,1	1,949	49,5	2,421	61,5	11,455	5,196
G100-150L	-150	1,765	44,83	1,760	44,7	2,339	59,4	2,780	70,6	17,015	7,718
G100-170L	-170	1,890	48,01	1,882	47,8	2,370	60,2	3,000	76,2	19,511	8,850
G100-195L	-195	2,140	54,36	2,142	54,4	2,669	67,8	3,098	78,7	22,928	10,400
G100-220L	-220	2,265	57,53	2,260	57,4	2,799	71,1	3,252	82,6	32,187	14,600
G100-260L	-260	2,453	62,31	2,449	62,2	3,039	77,2	3,559	90,4	TBC	TBC

G200 High Fatigue Marine Eyes

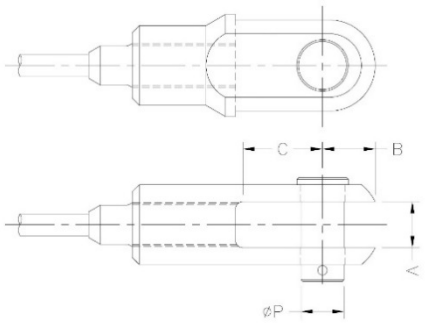
Forestays require fittings that can toggle under high load and shifting lead angles. Navtec High Fatigue Eyes minimize bending stresses in the rod and are ideal for application.



PART NUMBER	SIZE	P (PIN Ø)		A		B		C		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	lbs	kg
G200-004	-4	0,375	9,53	0,366	9,3	0,831	21,1	1,335	33,9	0,229	0,104
G200-006	-6	0,437	11,10	0,425	10,8	0,902	22,9	1,413	35,9	0,421	0,191
G200-008	-8	0,500	12,70	0,480	12,2	1,169	29,7	1,543	39,2	0,675	0,306
G200-010	-10	0,500	12,70	0,480	12,2	1,169	29,7	1,543	39,2	0,666	0,302
G200-012	-12	0,625	15,88	0,610	15,5	1,209	30,7	1,650	41,9	1,393	0,632
G200-015	-15	0,625	15,88	0,610	15,5	1,209	30,7	1,650	41,9	1,367	0,620
G200-017	-17	0,625	15,88	0,610	15,5	1,209	30,7	1,650	41,9	1,360	0,617
G200-022	-22	0,750	19,05	0,728	18,5	1,469	37,3	2,016	51,2	2,202	0,999
G200-030	-30	0,875	22,23	0,839	21,3	1,681	42,7	2,260	57,4	3,003	1,362
G200-040	-40	1,000	25,40	0,961	24,4	2,079	52,8	2,602	66,1	4,425	2,007
G200-048	-48	1,125	28,58	1,091	27,7	2,260	57,4	2,913	74,0	5,646	2,561
G200-060	-60	1,250	31,75	1,209	30,7	2,650	67,3	3,087	78,4	8,329	3,778
G200-076L	-76	1,250	31,75	1,252	31,8	2,500	63,5	2,976	75,6	11,707	5,310
G200-091L	-91	1,375	34,93	1,339	34,0	3,402	86,4	3,902	99,1	14,764	6,697
G200-115L	-115	1,562	39,67	1,524	38,7	3,118	79,2	3,760	95,5	18,056	8,190
G200-150L	-150	1,750	44,45	1,709	43,4	4,870	123,7	5,181	131,6	32,408	14,700
G200-170L	-170	1,875	47,63	2,130	54,1	4,161	105,7	4,835	122,8	40,565	18,400
G200-195L	-195	2,125	53,98	2,252	57,2	4,500	114,3	5,441	138,2	52,250	23,700
G200-220L	-220	2,250	57,15	2,500	63,5	4,461	113,3	5,665	143,9	59,525	27,000
G200-260L	-260	2,500	63,50	2,902	73,7	5,500	139,7	6,724	170,8	70,327	31,900

H120/E200 Rod Jaws

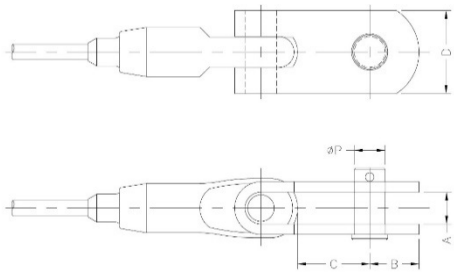
Commonly used as upper and lower terminals on rod backstays. H120/E200 Rod Jaws are also used on low-fatigue assemblies like bobstays.



PART NUMBER JAW	PART NUMBER NOSE	SIZE	P (PIN Ø)		A		B		C		WEIGHT	
			in	mm	in	mm	in	mm	in	mm	lbs	kg
H120-141414	E200-006-14	-6	0,433	11,00	0,441	11,2	0,634	16,1	1,051	26,7	0,428	0,194
H120-161616	E200-008-16	-8	0,496	12,60	0,516	13,1	0,693	17,6	1,201	30,5	0,564	0,256
H120-161616	E200-010-16	-10	0,496	12,60	0,516	13,1	0,693	17,6	1,201	30,5	0,558	0,253
H120-202020	E200-012-20	-12	0,618	15,70	0,634	16,1	0,831	21,1	1,319	33,5	1,054	0,478
H120-202020	E200-015-20	-15	0,618	15,70	0,634	16,1	0,831	21,1	1,319	33,5	1,078	0,489
H120-202020	E200-017-20	-17	0,618	15,70	0,634	16,1	0,831	21,1	1,319	33,5	1,038	0,471
H120-242424	E200-022-24	-22	0,744	18,90	0,768	19,5	0,906	23,0	1,370	34,8	1,235	0,560
H120-282828	E200-030-28	-30	0,870	22,10	0,890	22,6	1,193	30,3	1,500	38,1	1,746	0,792
H120-323232	E200-040-32	-40	0,996	25,30	1,008	25,6	1,429	36,3	1,717	43,6	3,426	1,554
H120-323636	E200-048-32	-48	1,118	28,40	1,146	29,1	1,449	36,8	2,059	52,3	5,503	2,496
H120-404040	E200-060-40	-60	1,244	31,60	1,260	32,0	1,752	44,5	2,250	57,2	7,546	3,423

H200 High Fatigue jaws

Forestays require fittings that can toggle under high load and shifting lead angles. Navtec High Fatigue Jaws minimize bending stresses in the rod and are ideal for this application.

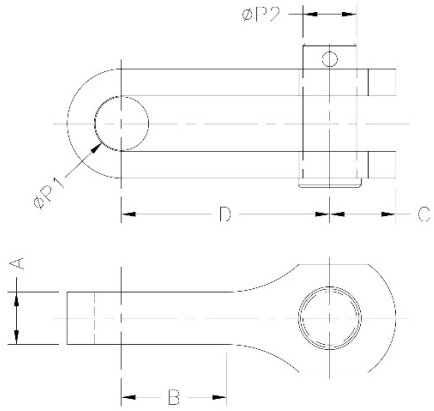


PART NUMBER	SIZE	P (PIN Ø)		A		B		C		D		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
H200-004	-4	0,374	9,50	0,386	9,8	0,626	15,9	1,161	29,5	1,000	25,4	0,243	0,110
H200-006	-6	0,433	11,00	0,449	11,4	0,638	16,2	1,484	37,7	1,000	25,4	0,500	0,227
H200-008	-8	0,496	12,60	0,520	13,2	0,780	19,8	1,394	35,4	1,126	28,6	0,800	0,363
H200-010	-10	0,496	12,60	0,520	13,2	0,780	19,8	1,390	35,3	1,126	28,6	0,772	0,350
H200-012	-12	0,618	15,70	0,646	16,4	0,925	23,5	1,429	36,3	1,598	40,6	1,413	0,641
H200-015	-15	0,618	15,70	0,646	16,4	0,925	23,5	1,429	36,3	1,598	40,6	1,396	0,633
H200-017	-17	0,618	15,70	0,646	16,4	0,925	23,5	1,429	36,3	1,598	40,6	1,402	0,636
H200-022	-22	0,744	18,90	0,772	19,6	1,189	30,2	1,740	44,2	2,000	50,8	2,624	1,190
H200-030	-30	0,870	22,10	0,894	22,7	1,189	30,2	2,161	54,9	2,000	50,8	3,770	1,710
H200-040	-40	0,996	25,30	1,039	26,4	1,449	36,8	2,531	64,3	2,500	63,5	5,567	2,525
H200-048	-48	1,118	28,40	1,165	29,6	1,449	36,8	2,819	71,6	2,500	63,5	7,430	3,370
H200-060	-60	1,244	31,60	1,291	32,8	1,819	46,2	3,598	91,4	3,000	76,2	11,729	5,320
H200-076L	-76	1,244	31,60	1,291	32,8	1,819	46,2	3,409	86,6	3,000	76,2	14,198	6,440
H200-091L	-91	1,370	34,80	1,421	36,1	1,819	46,2	3,902	99,1	3,000	76,2	20,668	9,375
H200-115L	-115	1,559	39,60	1,630	41,4	2,252	57,2	4,228	107,4	3,752	95,3	26,383	11,967
H200-150L	-150	1,744	44,30	1,815	46,1	2,429	61,7	4,752	120,7	4,000	101,6	37,699	17,100
H200-170L	-170	1,870	47,50	1,929	49,0	3,130	79,5	4,831	122,7	5,000	127,0	38,140	17,300
H200-195L	-195	2,122	53,90	2,189	55,6	3,346	85,0	4,752	120,7	5,500	139,7	54,895	24,900
H200-220L	-220	2,245	57,02	2,382	60,5	3,701	94,0	5,000	127,0	6,000	152,4	64,155	29,100
H200-260L	-260	2,433	61,80	2,500	63,5	3,500	88,9	4,480	113,8	6,000	152,4	93,917	42,600

Toggles

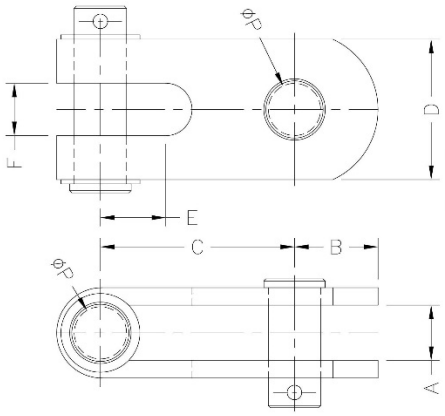
Navtec toggles release fatigue stress and assist in allowing the load forces to align with the shroud angle.

J100 Toggles



PART NUMBER	SIZE	Ø PIN 1		Ø PIN 2		A		B		C		D		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
J100-1412	-6	0,437	11,10	0,374	9,50	0,43	10,8	0,90	22,9	2,00	50,8	2,00	50,8	0,238	0,108
J100-1414	-6	0,437	11,10	0,437	11,10	0,43	10,8	0,90	22,9	2,00	50,8	2,00	50,8	0,229	0,104
J100-1614	-8/-10	0,500	12,70	0,437	11,10	0,48	12,2	1,17	29,7	2,20	55,9	2,20	55,9	0,364	0,165
J100-1616	-8/-10	0,500	12,70	0,500	12,70	0,48	12,2	1,17	29,7	2,20	55,9	2,20	55,9	0,364	0,165
J100-2018	-12/-15/-17	0,625	15,88	0,561	14,25	0,61	15,4	1,21	30,7	2,50	63,5	2,50	63,5	0,714	0,324
J100-2020	-12/-15/-17	0,625	15,88	0,620	15,75	0,61	15,4	1,21	30,7	2,50	63,5	2,50	63,5	0,714	0,324
J100-2420	-22	0,750	19,05	0,620	15,75	0,73	18,5	1,47	37,3	2,90	73,7	2,90	73,7	1,071	0,486
J100-2424	-22	0,750	19,05	0,745	18,92	0,73	18,5	1,47	37,3	2,90	73,7	2,90	73,7	0,937	0,425
J100-2824	-30	0,875	22,23	0,745	18,92	0,84	21,3	1,68	42,7	3,30	83,8	3,30	83,8	1,616	0,733
J100-2828	-30	0,875	22,23	0,870	22,10	0,84	21,3	1,68	42,7	3,30	83,8	3,30	83,8	1,658	0,752
J100-3228	-40	1,000	25,40	0,870	22,10	0,96	24,4	2,08	52,8	3,70	94,0	3,70	94,0	2,469	1,120
J100-3232	-40	1,000	25,40	0,995	25,27	0,96	24,4	2,08	52,8	3,70	94,0	3,70	94,0	2,425	1,100
J100-3632	-48	1,125	28,58	0,995	25,27	1,09	27,7	2,26	57,4	4,09	104,0	4,09	104,0	3,505	1,590
J100-3636	-48	1,125	28,58	1,120	28,45	1,09	27,7	2,26	57,4	4,09	104,0	4,09	104,0	3,373	1,530
J100-4036	-60	1,250	31,75	1,120	28,45	1,21	30,7	2,65	67,3	4,49	114,0	4,49	114,0	4,630	2,100
J100-4040	-60	1,250	31,75	1,245	31,62	1,21	30,7	2,65	67,3	4,49	114,0	4,49	114,0	4,850	2,200
J100-3840	-76	1,250	31,75	1,183	30,05	1,25	31,8	2,50	63,5	4,57	116,0	4,57	116,0	4,663	2,115
J100-4444	-91	1,375	34,93	1,370	34,80	1,34	34,0	3,40	86,4	5,59	142,0	5,59	142,0	7,882	3,575
J100-5050	-115	1,562	39,67	1,557	39,55	1,52	38,7	3,12	79,2	5,71	145,0	5,71	145,0	12,015	5,450
J100-5656	-150	1,750	44,45	1,745	44,32	1,71	43,4	4,87	123,7	7,52	191,0	7,52	191,0	16,905	7,668

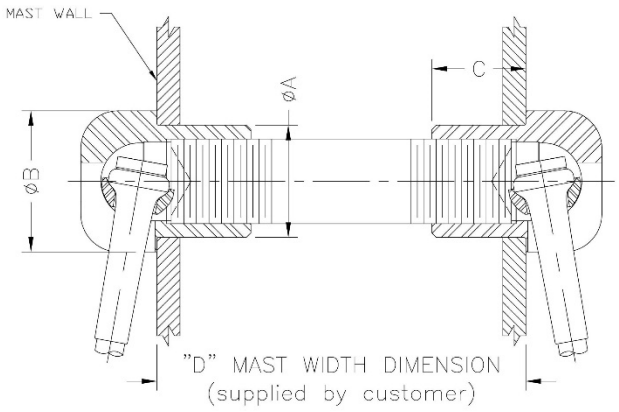
J200 Toggles



PART NUMBER	SIZE	Ø PIN		A		B		C		D		E		F		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
J200-1010	-4	0,311	7,90	0,323	8,2	0,500	12,7	1,406	35,7	0,752	19,1	0,299	7,6	0,315	8,0	0,130	0,059
J200-1212	-6	0,373	9,47	0,386	9,8	0,626	15,9	1,630	41,4	1,000	25,4	0,409	10,4	0,374	9,5	0,218	0,099
J200-1414	-8	0,433	11,00	0,449	11,4	0,642	16,3	1,681	42,7	1,000	25,4	0,390	9,9	0,437	11,1	0,324	0,147
J200-1616	-10	0,495	12,57	0,520	13,2	0,780	19,8	2,051	52,1	1,252	31,8	0,500	12,7	0,500	12,7	0,516	0,234
J200-2020	-12/-15/-17	0,620	15,75	0,646	16,4	0,925	23,5	2,276	57,8	1,598	40,6	0,551	14,0	0,626	15,9	0,820	0,372
J200-2424	-22	0,745	18,92	0,772	19,6	1,189	30,2	2,626	66,7	2,000	50,8	0,909	23,1	0,752	19,1	1,631	0,740
J200-2828	-30	0,870	22,10	0,894	22,7	1,189	30,2	3,201	81,3	2,000	50,8	0,949	24,1	0,874	22,2	2,643	1,199
J200-3232	-40	0,995	25,27	1,039	26,4	1,449	36,8	3,630	92,2	2,500	63,5	1,000	25,4	1,000	25,4	2,732	1,239
J200-3636	-48	1,120	28,45	1,165	29,6	1,449	36,8	4,016	102,0	2,500	63,5	1,130	28,7	1,020	25,9	5,203	2,360
J200-4040	-60/-76	1,245	31,62	1,291	32,8	1,819	46,2	5,000	127,0	3,000	76,2	1,461	37,1	1,252	31,8	7,826	3,550
J200-4444	-91	1,370	34,80	1,421	36,1	1,819	46,2	5,591	142,0	3,000	76,2	1,512	38,4	1,331	33,8	9,259	4,200
J200-5050A	-115	1,558	39,57	1,673	42,5	2,252	57,2	6,181	157,0	3,780	96,0	1,976	50,2	1,520	38,6	15,102	6,850
J200-5656	-150	1,745	44,32	1,815	46,1	2,429	61,7	7,087	180,0	4,000	101,6	2,319	58,9	1,626	41,3	21,669	9,829
J200-6060	-170	1,870	47,50	1,929	49,0	3,130	79,5	7,205	183,0	5,000	127,0	2,555	64,9	1,902	48,3	TBC	TBC
J200-6868A	-195	2,120	53,85	2,165	55,0	3,350	85,1	7,528	191,2	5,512	140,0	2,276	57,8	2,000	50,8	38,140	17,300
J200-7272	-220	2,245	57,02	2,382	60,5	3,701	94,0	8,150	207,0	6,000	152,4	2,811	71,4	2,272	57,7	TBC	TBC

K150 Micro Stemball Tangs

Features small mast cut-out and stainless steel tie bar. Includes a pair of Micro Stemballs and Cup washers in each assembly



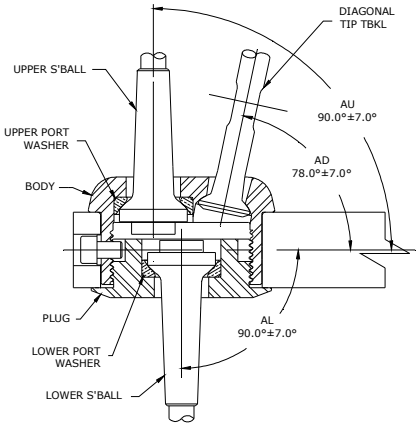
PART NUMBER	SIZE	Ø A		Ø B		C		approx. WEIGHT	
		in	mm	in	mm	in	mm	lbs	kg
K150-004	-4	0,745	18,92	1,000	25,4	0,654	16,60	0,485	0,220
K150-006	-6	0,812	20,62	1,063	27,0	0,752	19,10	0,617	0,280
K150-008	-8	0,932	23,67	1,189	30,2	0,850	21,60	0,904	0,410
K150-010	-10	0,995	25,27	1,252	31,8	1,000	25,40	1,279	0,580
K150-012	-12	1,184	30,07	1,437	36,5	1,087	27,60	1,786	0,810
K150-015	-15	1,305	33,15	1,626	41,3	1,185	30,10	2,337	1,060
K150-017	-17	1,305	33,15	1,626	41,3	1,185	30,10	2,425	1,100
K150-022	-22	1,490	37,85	1,874	47,6	1,252	31,80	3,329	1,510
K150-030	-30	1,870	47,50	2,374	60,3	1,665	42,30	5,930	2,690
K150-040A	-40	2,065	52,45	2,500	63,5	1,902	48,30	8,444	3,830
K150-048B	-48	2,248	57,10	2,866	72,8	1,937	49,20	11,266	5,110
K150-060	-60	2,625	66,68	3,299	83,8	2,276	57,80	16,358	7,420
K150-076L	-76	2,995	76,07	3,752	95,3	3,228	82,00	22,487	10,200
K150-091L	-91	3,245	82,42	4,000	101,6	3,528	89,60	27,558	12,500
K150-115L	-115	3,745	95,12	4,752	120,7	4,047	102,80	44,092	20,000
K150-150L	-150	4,120	104,65	5,000	127,0	4,516	114,70	54,013	24,500
K150-170L	-170	4,495	114,17	5,752	146,1	4,890	124,20	80,028	36,300

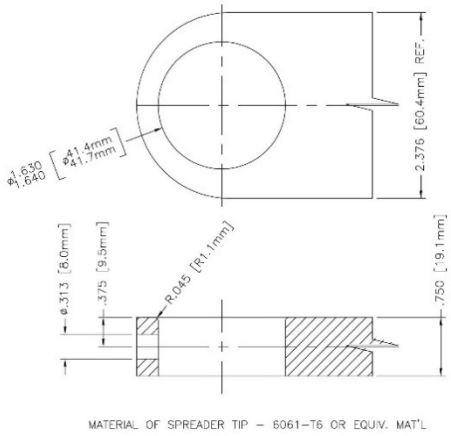
Tips Cups

Navtec spreader tip cups are engineered for weight reduction and enduring strength. The range of product sizes and designs provides a solution for sailboats of any length.

L400-001 Tips Cups

Economical and flexible, the L400 is ideal for smaller boats in the 30-foot LDA range. Two-piece modular design will accept most rod combinations up to -15 rod. Makes discontinuous rigging affordable for 24 to 36-foot boats.





LOWER COMBINAISON		
ROD SIZE	PART NUMBER STEMBALL	PART NUMBER WASHER
-4	F220-004	L401-03-041
-6	F220-006	L401-03-061
-8	F220-008	L401-03-101
-10	F220-010	L401-03-101
-12	F235-012	L401-03-122
-15	F235-012-02	L401-03-122

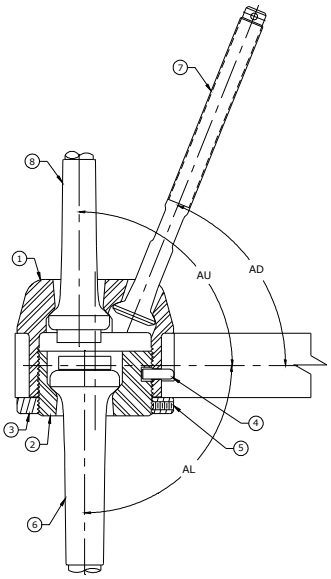
UPPER COMBINAISON		
ROD SIZE	PART NUMBER STEMBALL	PART NUMBER WASHER
-4	F220-004	L401-03-041
-6	F220-006	L401-03-061
-8	F220-008	L401-03-101
-10	F220-010	L401-03-101
-12	F235-012	L401-03-122

DIAGONAL COMBINAISON	
ROD SIZE	PART NUMBER TURNBUCKLE
-4	C651-004-10B
-6	C651-006-10B
-8	C651-008-10B

L500 Tip Cups

The standard in the Navtec line of spreader and tip cups. Incorporates Navtec Micro Stemballs for superior fatigue resistance. Fits completely inside the spreader to reduce sail chafe. Three-piece design ensures ease of installation.

1. TIP CUP BODY
2. TIP CUP PLUG
3. TIP CUP LOCK NUT
4. TIP CUP LOCK PIN
5. NYLON BALL & SET SCREW
6. LOWER MICRO STEMBALL
7. TIP TURNBUCKLE SCREW
8. UPPER MICRO STEMBALL



Other configurations available on request

TIP CUP PART NUMBER	LOWER SHROUD ANGLE AL	UPPER SHROUD ANGLE AU	DIAGONAL SHROUD ANGLE AD
L500-XXYYZZ01	87° +/- 3°	90° +/- 3°	75° +/- 3°
L500-XXYYZZ02	87° +/- 3°	90° +/- 3°	80° +/- 3°
L500-XXYYZZ03	87° +/- 3°	90° +/- 3°	70° +/- 3°
L500-XXYYZZ04	90° +/- 3°	90° +/- 3°	75° +/- 3°
L500-XXYYZZ05	90° +/- 3°	90° +/- 3°	80° +/- 3°
L500-XXYYZZ06	90° +/- 3°	90° +/- 3°	70° +/- 3°
L500-XXYYZZ07	84° +/- 3°	90° +/- 3°	75° +/- 3°
L500-XXYYZZ08	84° +/- 3°	90° +/- 3°	80° +/- 3°
L500-XXYYZZ09	84° +/- 3°	90° +/- 3°	70° +/- 3°

"XX" represents the lower vertical rod dash size (17,22,30,40,48,60,76,etc)
"YY" represents the upper vertical rod dash size (17,22,30,40,48,60,76,etc)
"ZZ" represents the diagonal tip turnbuckle screw size (10,12,14,16,20,24,etc)

L500 TIP CUP SPREADER CUT OUT

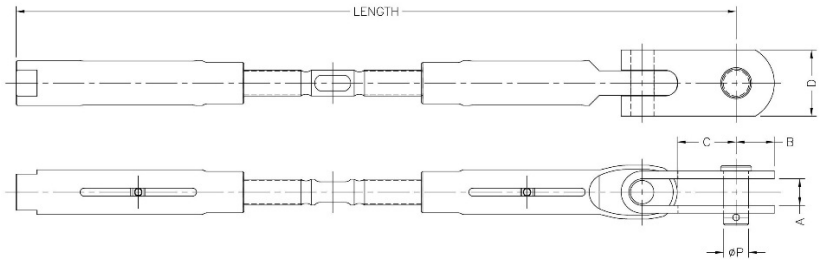
PART NUMBER	SIZE	HOLE Ø		max THICKNESS		min THICKNESS		PIN		DEPTH		LENGTH		min EDGE		RADIUS	
	LOWER V	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
L500-17YYZZ01 - 09	-17	1,815	46,1	0,925	23,5	0,866	22,0	0,138	3,5	0,531	13,5	1,957	49,7	0,201	5,1	0,047	1,2
L500-22YYZZ01 - 09	-22	2,087	53,0	1,051	26,7	0,988	25,1	0,138	3,5	0,594	15,1	2,236	56,8	0,252	6,4	0,047	1,2
L500-30YYZZ01 - 09	-30	2,453	62,3	1,173	29,8	1,114	28,3	0,138	3,5	0,657	16,7	2,654	67,4	0,252	6,4	0,047	1,2
L500-40YYZZ01 - 09	-40	2,642	67,1	1,425	36,2	1,366	34,7	0,138	3,5	0,811	20,6	2,843	72,2	0,252	6,4	0,063	1,6
L500-48YYZZ01 - 09	-48	3,016	76,6	1,551	39,4	1,488	37,8	0,260	6,6	0,917	23,3	3,382	85,9	0,374	9,5	0,118	3,0
L500-60YYZZ01 - 09	-60	3,516	89,3	1,799	45,7	1,740	44,2	0,260	6,6	1,043	26,5	3,819	97,0	0,437	11,1	0,118	3,0
L500-76YYZZ01 - 09	-76	3,764	95,6	1,925	48,9	1,866	47,4	0,260	6,6	1,114	28,3	4,071	103,4	0,437	11,1	0,118	3,0
L500-91YYZZ01 - 09	-91	4,016	102,0	2,051	52,1	1,988	50,5	0,325	8,3	1,193	30,3	4,413	112,1	0,437	11,1	0,118	3,0
L500-A2YYZZ01 - 09	-115	4,516	114,7	2,299	58,4	2,240	56,9	0,327	8,3	1,343	34,1	4,913	124,8	0,437	11,1	0,118	3,0
L500-A5YYZZ01 - 09	-150	5,016	127,4	2,673	67,9	2,614	66,4	0,327	8,3	1,575	40,0	5,386	136,8	0,563	14,3	0,118	3,0

Turnbuckles for Rod Rigging

Turnbuckles are a critical part of Navtec's rod rigging systems. They are designed to complement Navtec rod design and are made from 316 Stainless Steel for strength and corrosion resistance. Like all Navtec rod rigging system components, our terminals are polished to a gleaming finish to complete the Navtec look.

Turnbuckles C550

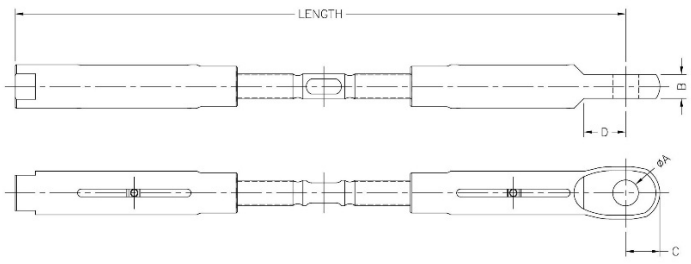
The industry standard. Fully machined body. Center screw design allows for ease of adjustment under load. Nickel plated bronze screw prevents galling.



PART NUMBER	SIZE	P (PIN Ø)		LENGTH OPEN		LENGTH CLOSED		A		B		C		D		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
C550-122020A	-12	0,618	15,70	20,039	509,0	14,803	376,0	0,646	16,4	0,925	23,5	1,429	36,3	1,598	40,6	3,474	1,576
C550-152020A	-15	0,618	15,70	20,039	509,0	14,803	376,0	0,646	16,4	0,925	23,5	1,429	36,3	1,598	40,6	3,474	1,576
C550-172020A	-17	0,618	15,70	20,039	509,0	14,803	376,0	0,646	16,4	0,925	23,5	1,429	36,3	1,598	40,6	3,474	1,576
C550-222424	-22	0,744	18,90	23,740	603,0	18,228	463,0	0,772	19,6	1,189	30,2	1,685	42,8	2,000	50,8	5,512	2,500
C550-302828	-30	0,870	22,10	26,496	673,0	20,039	509,0	0,894	22,7	1,189	30,2	2,138	54,3	2,000	50,8	8,267	3,750
C550-403232	-40	0,996	25,30	27,402	696,0	20,906	531,0	1,039	26,4	1,449	36,8	2,531	64,3	2,500	63,5	11,508	5,220
C550-483636	-48	1,118	28,40	29,961	761,0	23,465	596,0	1,165	29,6	1,449	36,8	2,780	70,6	2,500	63,5	14,914	6,765
C550-604040	-60	1,244	31,60	33,346	847,0	25,354	644,0	1,291	32,8	1,819	46,2	3,598	91,4	3,000	76,2	22,906	10,390
C550-763640L	-76	1,244	31,60	37,402	950,0	33,386	848,0	1,291	32,8	1,819	46,2	3,409	86,6	3,000	76,2	24,621	11,168
C550-914044L	-91	1,370	34,80	38,504	978,0	34,488	876,0	1,421	36,1	1,819	46,2	3,780	96,0	3,000	76,2	29,762	13,500
C550-A24450L	-115	1,559	39,60	43,898	1115,0	35,906	912,0	1,630	41,4	2,252	57,2	4,059	103,1	3,752	95,3	37,699	17,100

C560 Marine Eye Turnbuckle

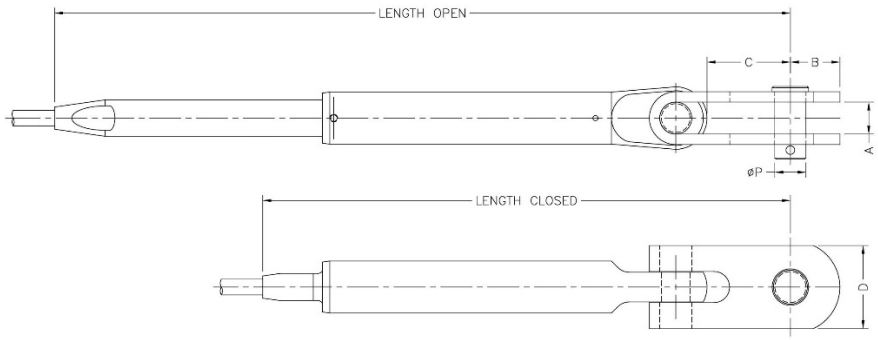
Marine eye version of the C550 turnbuckle. Can be used with a reversed J100 toggle on female chainplates for articulation.



PART NUMBER	SIZE	LENGTH OPEN		LENGTH CLOSED		A (HOLE Ø)		B		C		D		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
C560-122020A	-12	17,756	451,0	12,520	318,0	0,640	16,26	0,598	15,2	0,850	21,6	1,039	26,4	2,718	1,233
C560-152020A	-15	17,756	451,0	12,520	318,0	0,640	16,26	0,598	15,2	0,850	21,6	1,039	26,4	2,718	1,233
C560-172020A	-17	17,756	451,0	12,520	318,0	0,640	16,26	0,598	15,2	0,850	21,6	1,039	26,4	2,718	1,233
C560-222424	-22	21,142	537,0	15,630	397,0	0,765	19,43	0,720	18,3	0,937	23,8	1,240	31,5	3,904	1,771
C560-302828	-30	23,465	596,0	16,969	431,0	0,890	22,61	0,827	21,0	1,063	27,0	1,291	32,8	5,955	2,701
C560-403232	-40	23,780	604,0	17,283	439,0	1,015	25,78	0,902	22,9	1,098	27,9	1,311	33,3	7,707	3,496
C560-483636	-48	25,945	659,0	19,449	494,0	1,140	28,96	0,988	25,1	1,220	31,0	1,366	34,7	9,720	4,409
C560-604040	-60	28,346	720,0	20,354	517,0	1,265	32,13	1,150	29,2	1,382	35,1	1,402	35,6	14,963	6,787
C560-763638L	-76	32,402	823,0	28,386	721,0	1,188	30,18	1,185	30,1	1,500	38,1	1,752	44,5	17,216	7,809
C560-914044L	-91	32,913	836,0	28,898	734,0	1,390	35,31	1,272	32,3	1,925	48,9	2,024	51,4	20,745	9,410
C560-A24450L	-115	37,717	958,0	29,724	755,0	1,580	40,13	1,455	37,0	2,125	54,0	2,368	60,2	30,203	13,700

C890 Toggle Turnbuckle

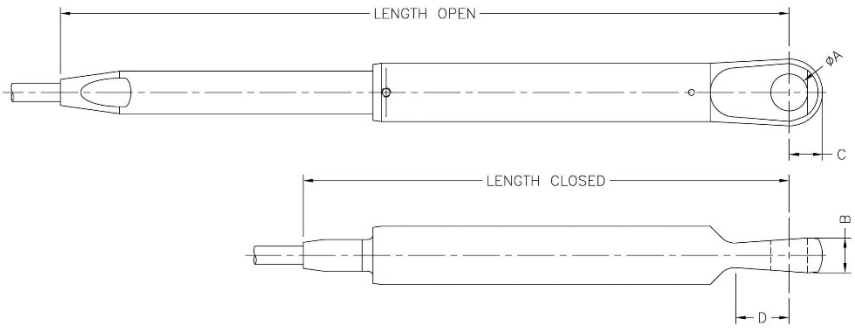
Originally part of Navtec's Grand Prix range, these turnbuckles are becoming more popular in every boat range. High-strength, light weight materials ensure performance without a weight penalty. Closes-body design means no cover is needed to protect today's costly sheets and lines. Calibrated for accurate tuning. Available in marine eye, barrel pin, and toggle versions.



PART NUMBER	SIZE	P (PIN Ø)		LENGTH OPEN		LENGTH CLOSED		A		B		C		D		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
C890-12241603	-12	0,496	12,60	13,898	353,0	9,902	251,5	0,520	13,2	0,780	19,8	1,461	37,1	1,252	31,8	1,32	0,60
C890-15242003	-15	0,618	15,70	14,142	359,2	10,142	257,6	0,646	16,4	0,925	23,5	1,429	36,3	1,598	40,6	1,98	0,90
C890-17242003	-17	0,618	15,70	14,142	359,2	10,142	257,6	0,646	16,4	0,925	23,5	1,429	36,3	1,598	40,6	1,98	0,90
C890-22322403	-22	0,744	18,90	17,677	449,0	12,551	318,8	0,772	19,6	1,189	30,2	1,685	42,8	2,000	50,8	3,97	1,80
C890-30362803	-30	0,870	22,10	20,598	523,2	14,598	370,8	0,894	22,7	1,189	30,2	2,138	54,3	2,000	50,8	6,00	2,72
C890-40403203	-40	0,996	25,30	21,665	550,3	15,661	397,8	1,039	26,4	1,449	36,8	2,531	64,3	2,500	63,5	8,16	3,70
C890-48443603	-48	1,118	28,40	22,815	579,5	16,811	427,0	1,165	29,6	1,449	36,8	2,780	70,6	2,500	63,5	10,58	4,80
C890-60484003	-60	1,244	31,60	28,516	724,3	20,512	521,0	1,291	32,8	1,819	46,2	3,598	91,4	3,000	76,2	15,70	7,12
C890-76564003L	-76	1,244	31,60	31,035	788,3	23,043	585,3	1,291	32,8	1,819	46,2	3,409	86,6	3,000	76,2	18,50	8,39
C890-916444L	-91	1,370	34,80	33,012	838,5	25,020	635,5	1,421	36,1	1,819	46,2	3,780	96,0	3,000	76,2	30,86	14,00
C890-A26850L	-115	1,559	39,60	35,540	902,7	27,540	699,5	1,630	41,4	2,252	57,2	4,059	103,1	3,752	95,3	46,30	21,00

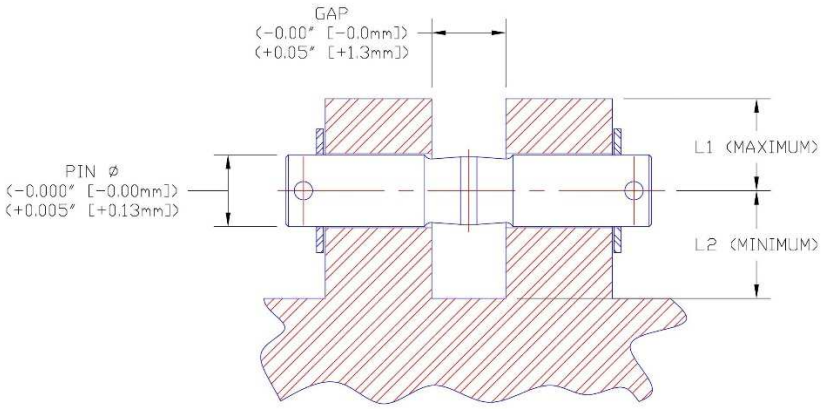
C890 Barrel Pin Turnbuckle

Featuring adjustable barrel pin terminals, this is the ultimate lightweight turnbuckle, and is used on America's Cup yachts, Grand Prix racing yachts, One-Designs, Maxi's, and high-performance cruisers. Crafted from Nitronic 50 stainless steel, and calibrated for accurate tuning.



PART NUMBER	SIZE	LENGTH OPEN		LENGTH CLOSED		A (HOLE Ø)		B		C		D		WEIGHT	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg
C890-BP12003	-12	11,917	302,7	7,921	201,2	0,510	12,95	0,465	11,8	0,591	15,0	0,764	19,4	0,99	0,45
C890-BP15003	-15	11,965	303,9	7,961	202,2	0,635	16,13	0,591	15,0	0,669	17,0	0,941	23,9	1,21	0,55
C890-BP17003	-17	11,965	303,9	7,961	202,2	0,635	16,13	0,591	15,0	0,669	17,0	0,941	23,9	1,19	0,54
C890-BP22003	-22	15,008	381,2	9,929	252,2	0,760	19,30	0,717	18,2	0,689	17,5	1,126	28,6	2,25	1,02
C890-BP30003	-30	17,618	447,5	11,618	295,1	0,885	22,48	0,839	21,3	0,933	23,7	1,315	33,4	3,35	1,52
C890-BP40003	-40	18,205	462,4	12,201	309,9	1,010	25,65	0,961	24,4	1,024	26,0	1,500	38,1	4,17	1,89
C890-BP48003	-48	19,071	484,4	13,071	332,0	1,135	28,83	1,091	27,7	1,091	27,7	1,642	41,7	5,45	2,47
C890-BP60003	-60	23,634	600,3	15,630	397,0	1,260	32,00	1,209	30,7	1,244	31,6	1,819	46,2	7,63	3,46
C890-BP76002L	-76	26,366	669,7	18,374	466,7	1,448	36,78	1,402	35,6	1,713	43,5	1,980	50,3	13,01	5,90
C890-BP91002L	-91	27,563	700,1	19,571	497,1	1,625	41,27	1,600	40,7	1,913	48,6	2,166	55,0	27,01	12,25
C890-BPA2002L	-115	30,224	767,7	22,232	564,7	1,760	44,70	1,717	43,6	2,209	56,1	2,457	62,4	33,95	15,40

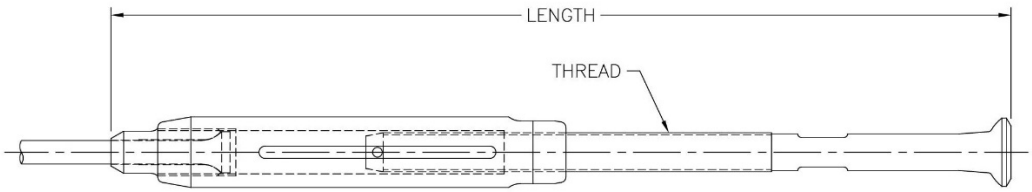
Barrel Pin Chainplate Dimensions



SIZE	P (PIN Ø)		GAP		L1 (maximum)		L2 (minimum)	
	in	mm	in	mm	in	mm	in	mm
-12	0,480	12,19	0,500	12,7	0,70	17,8	0,66	16,8
-15	0,605	15,37	0,625	15,9	0,88	22,4	0,83	21,1
-17	0,605	15,37	0,625	15,9	0,88	22,4	0,83	21,1
-22	0,730	18,54	0,750	19,1	1,06	26,9	1,00	25,4
-30	0,855	21,72	0,875	22,2	1,24	31,5	1,17	29,7
-40	0,980	24,89	1,000	25,4	1,42	36,1	1,34	34,0
-48	1,105	28,07	1,125	28,6	1,60	40,6	1,51	38,4
-60	1,230	31,24	1,250	31,8	1,78	45,2	1,68	42,7
-76	1,418	36,02	1,438	36,5	2,05	52,1	1,94	49,3
-91	1,605	40,77	1,625	41,3	2,32	58,9	2,19	55,6
-115	1,730	43,94	1,750	44,5	2,50	63,5	2,30	58,4

C651 Tip Turnbuckle

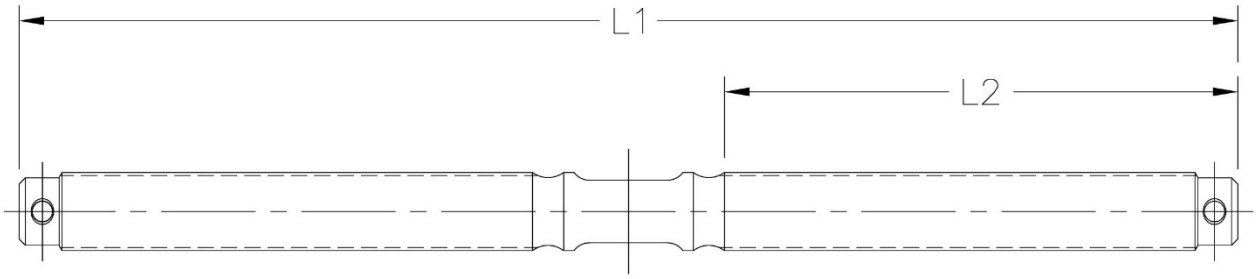
Series 500 tip turnbuckle, Chrome plated bronze body and high-strength Nitronic 50 ball head screw. Stainless steel nose. For sizes -30 and larger, the body is stainless steel and the nose is bronze.



PART NUMBER	SIZE	THREAD	LENGTH OPEN		LENGTH CLOSED		WEIGHT	
		UNF	in	mm	in	mm	lbs	kg
C651-004-08B		1/4-28	7,200	182,9	5,200	132,1	0,179	0,081
C651-004-10B		5/16-24	7,780	197,6	5,580	141,7	0,384	0,174
C651-006-10B		5/16-24	7,780	197,6	5,580	141,7	0,384	0,174
C651-008-10B		5/16-24	7,780	197,6	5,580	141,7	0,379	0,172
C651-008-12B		3/8-24	9,720	246,9	7,220	183,4	0,549	0,249
C651-010-12B		3/8-24	9,720	246,9	7,220	183,4	0,520	0,236
C651-012-14B		7/16-20	11,180	284,0	8,380	212,9	0,838	0,380
C651-015-16B		1/2-20	11,840	300,7	8,840	224,5	1,155	0,524
C651-017-16B		1/2-20	11,840	300,7	8,840	224,5	1,248	0,566
C651-022-20B		5/8-18	16,220	412,0	12,620	320,6	1,874	0,850
C651-030-20S		5/8-18	16,415	416,9	12,815	325,5	2,690	1,220
C651-402428S		7/8-14	17,744	450,7	13,843	351,6	4,718	2,140
C651-482428S		7/8-14	17,610	447,3	13,710	348,2	4,718	2,140
C651-602832S		1-12	18,970	481,8	14,770	375,2	5,952	2,700

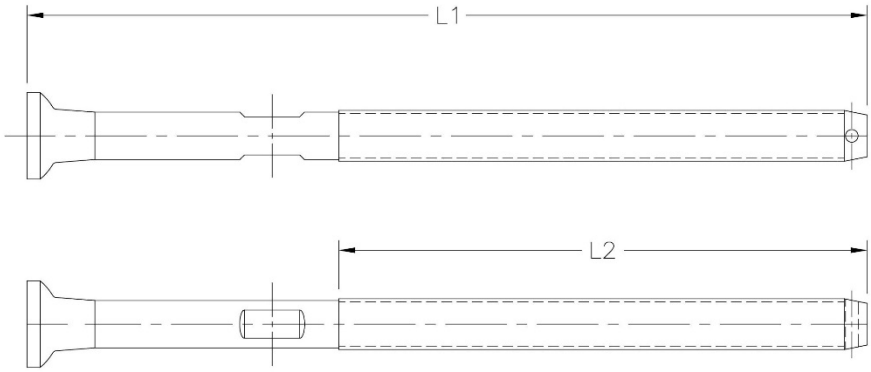
Rigging Accessories

D320 Turnbuckle Screws



PART NUMBER	SIZE	THREAD	L1		L2 (Thread length)		WEIGHT	
		UNF	in	mm	in	mm	lbs	kg
D320-S20	-15/-17	5/8-18	9,79	248,7	4,13	104,8	0,922	0,418
D320-L20	-15/-17	5/8-18	14,12	358,7	4,13	104,8	1,153	0,523
D320-S24	-22	3/4-16	11,75	298,5	4,95	125,7	1,369	0,621
D320-L24	-22	3/4-16	16,50	419,1	4,95	125,7	2,026	0,919
D320-S28	-30	7/8-14	13,00	330,2	5,31	134,8	2,092	0,949
D320-L28	-30	7/8-14	19,00	482,6	5,31	134,8	3,086	1,400
D320-S32	-40	1-12	14,13	358,9	5,87	149,2	2,703	1,226
D320-L32	-40	1-12	22,13	562,1	5,87	149,2	4,934	2,238
D320-S36	-48	1 1/8-12	14,75	374,7	6,12	155,6	3,417	1,550
D320-L36	-48	1 1/8-12	22,75	577,9	6,13	155,6	6,517	2,956
D320-S40	-60	1 1/4-12	15,25	387,4	6,37	161,9	5,165	2,343
D320-L40	-60	1 1/4-12	23,25	590,6	6,37	161,9	8,153	3,698

D340 Tip Turnbuckle Screws



PART NUMBER	SIZE	THREAD	L1		L2 (Thread length)		WEIGHT	
		UNF	in	mm	in	mm	lbs	kg
D340-S08	-4	1/4-28	4,20	106,7	2,72	69,1	0,051	0,023
D340-L08	-4	1/4-28	7,00	177,8	2,72	69,1	0,084	0,038
D340-S10	-4/-6/-8	5/16-24	4,40	111,8	3,00	76,2	0,090	0,041
D340-L10	-4/-6/-8	5/16-24	7,40	188,0	3,00	76,2	0,132	0,060
D340-S12	-10	3/8-24	5,85	148,6	3,74	95,1	0,163	0,074
D340-L12	-10	3/8-24	9,60	243,8	3,74	95,1	0,260	0,118
D340-S14	-12	7/16-20	6,57	167,0	4,37	111,1	0,249	0,113
D340-L14	-12	7/16-20	10,86	275,8	4,37	111,1	0,401	0,182
D340-S16	-15/-17	1/2-20	7,09	180,0	4,37	111,1	0,357	0,162
D340-L16	-15/-17	1/2-20	11,38	289,1	4,37	111,1	0,567	0,257
D340-S20	-22/-30	5/8-18	10,34	262,6	6,50	165,1	0,820	0,372
D340-L20	-22/-30	5/8-18	13,25	336,6	6,50	165,1	1,071	0,486
D340-S2428	-40/-48	7/8-14	10,92	277,4	6,55	166,4	1,667	0,756
D340-L2428	-40/-48	7/8-14	14,92	379,0	6,55	166,4	2,187	0,992
D340-S2832	-60	1-12	11,75	298,5	6,55	166,4	2,335	1,059
D340-L2832	-60	1-12	16,92	429,8	6,55	166,4	3,307	1,500