

RIGGING HARDWARE & EQUIPMENT

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SHACKLE - DEE (CHAIN) TRAWLING, WITH SQUARE HEAD SCREW PIN

Dimensions approximate.

Commercial grade trawling chain shackles are inexpensive shackles used for trawling applications, NOT for bearing critical loads. Not for overhead lifting, Non load rated Shackle.

*Pin Size: Large diameter size available while quantities last.

- Material: Mild Steel
- Finish: Self Coloured Black



Small Pin Diameter:

Shackle Size (in)	Qty. / Bag	Inside Length (in)	Inside Width (in)	Pin Diameter (in)	Tolerance + / - (in)		Wt./ea. (lb)	Price / ea.	Part Number
					Length	Width			
3/8	300	1 1/4	11/16	3/8	1/8	1/16	0.26	1.05	6-3/8"SCTD
1/2	150	1 5/8	13/16	1/2	1/8	1/16	0.49	1.45	6-1/2"SCTD
5/8	70	2	1 1/16	5/8	1/8	1/16	1.10	3.25	6-5/8"SCTD

Large Pin Diameter:

Shackle Size (in)	Qty. / Bag	Inside Length (in)	Inside Width (in)	Pin Diameter (in)	Tolerance + / - (in)		Wt./ea. (lb)	Price / ea.	Part Number
					Length	Width			
3/8	300	1 1/4	11/16	7/16	1/8	1/16	0.26	1.05	6-3/8"SCTDL
1/2	150	1 5/8	13/16	5/8	1/8	1/16	0.49	1.45	6-1/2"SCTDL
5/8	70	2	1 1/16	3/4	1/8	1/16	1.10	3.25	6-5/8"SCTDL

SHACKLE - DEE (CHAIN) TRAWLING, WITH SQUARE HEAD SCREW PIN

High tensile steel D-trawl shackles with square head pin. Not for overhead lifting.

- Material: High Tensile Steel
- Finish: Painted Yellow
- Design Factor: 4:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



WLL (t)	Size (in)	Price / ea.	Part Number
2	1/2	8.54	6-1/2S2131SH
3-1/4	5/8	16.74	6-5/8S2131SH
4-3/4	3/4	25.25	6-3/4S2131SH
6-1/2	7/8	33.30	6-7/8S2131SH
8-1/2	1	50.54	6-1S2131SH
9-1/2	1 1/8	63.87	6-11/8S2131SH
12	1 1/4	93.62	6-11/4S2131SH

SHACKLE - DEE (CHAIN), WITH SCREW PIN

- Material: High Tensile Steel
- Standard: Meets Performance of RR-C-271F
- Finish: Body:Galvanized, Pin: Yellow Painted
- Design Factor: 6:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



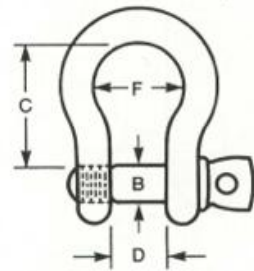
Size (in)	WLL (t)	Wt./ea. (lb)	Dimensions (in)						Price / ea.	Part Number
			Gap	Pin	Stock	In. Length	Palm	Pin Length		
1/4	1/2	0.12	0.47	0.31	0.25	0.88	0.61	1.38	2.50	6-1/4"SP
5/16	3/4	0.17	0.53	0.38	0.31	1.03	0.75	1.66	3.50	6-5/16"SP
3/8	1	0.25	0.66	0.44	0.38	1.25	0.91	2.03	4.60	6-3/8"SP
1/2	2	0.70	0.81	0.63	0.50	1.63	1.19	2.69	6.90	6-1/2"SP
5/8	3-1/4	1.24	1.06	0.75	0.63	2.00	1.56	3.34	13.00	6-5/8"SP
3/4	4-3/4	2.18	1.25	0.88	0.81	2.38	1.88	3.97	23.50	6-3/4"SP
7/8	6-1/2	3.28	1.44	1.00	0.97	2.81	2.13	4.50	34.10	6-7/8"SP
1	8-1/2	4.80	1.69	1.13	1.00	3.19	2.38	5.07	49.25	6-1"SP

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

SHACKLE - COMMERCIAL BOW, ANCHOR, WITH SCREW PIN

- Material: Mild Steel
- Finish: Galvanized

Commercial grade shackles are inexpensive shackles used for non critical applications. NOT for overhead lifting, NOT for bearing critical loads.

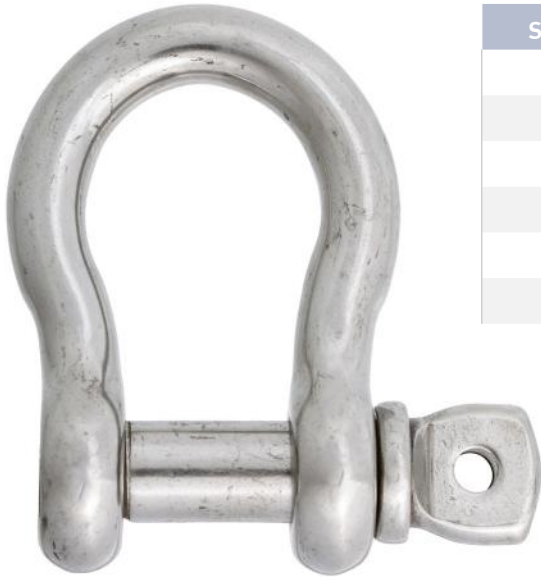


Nominal Size (in)	Weight / ea. (lb)	Body Dia. (in)	Dimensions (in)				Price / ea.	Part Number
			B	C	D	F		
3/16	0.04	0.20	0.21	0.92	0.38	0.61	0.85	6-3/16"GCS
1/4	0.08	0.23	0.28	1.15	0.51	0.70	1.10	6-1/4"GCS
5/16	0.14	0.30	0.36	1.27	0.55	0.82	1.45	6-5/16"GCS
3/8	0.26	0.37	0.44	1.56	0.60	0.97	2.39	6-3/8"GCS
7/16	0.36	0.42	0.46	1.67	0.72	1.00	3.74	6-7/16"GCS
1/2	0.64	0.50	0.60	1.95	0.77	1.32	4.30	6-1/2"GCS
5/8	1.16	0.60	0.75	2.37	1.12	1.70	8.45	6-5/8"GCS
3/4	1.96	0.75	0.82	2.90	1.29	1.93	14.37	6-3/4"GCS
7/8	3.16	0.87	0.98	3.31	1.42	2.20	19.90	6-7/8"GCS
1	4.20	1.00	1.06	3.75	1.58	2.73	25.88	6-1"GCS

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

SHACKLE - BOW, ANCHOR, WITH SCREW PIN

- Material: 316 Stainless Steel, Forged
- Finish: Stainless Steel
- Design Factor: 4:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



Size (in)	WLL (t)	Qty. / Box	Price / ea.	Part Number
1/4	1/2	300	5.75	6-1/4"SSFB
5/16	3/4	250	7.89	6-5/16"SSFB
3/8	1	150	12.58	6-3/8"SSFB
1/2	2	60	20.93	6-1/2"SSFB
5/8	3-1/4	40	49.36	6-5/8"SSFB
3/4	4-3/4	20	87.40	6-3/4"SSFB

SHACKLE - BOW, ANCHOR, WITH SCREW PIN

- Material: 304 Stainless Steel
- Finish: Stainless Steel
- Identification: Size

Size (in)	Qty. / Box	Price / ea.	Part Number
1/4	300	4.50	6-1/4"SSBOW
5/16	300	5.20	6-5/16"SSBOW
3/8	150	7.55	6-3/8"SSBOW
1/2	100	17.28	6-1/2"SSBOW
5/8	50	41.94	6-5/8"SSBOW
3/4	30	62.00	6-3/4"SSBOW



SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION



SHACKLE - BOW, ANCHOR, WITH SCREW YELLOW PIN®

Trademark - Yellow Pin® Shackle - Registration Number: TMA 862,758



Identification / Marking:

Shackle Body:

- Name or trademark of manufacturer "OCEAN"
- Size
- WLL (Working Load Limit)

Shackle Bolt:

- Name of trademark of manufacturer "OC"
- Grade, material type "HS"
- Powder Coated "Yellow Pin®" for instant recognition

Additional Identification:

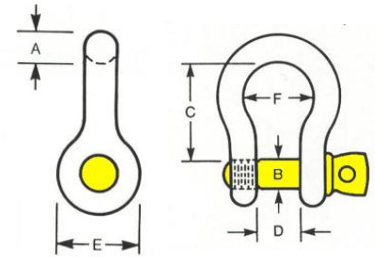
- Shackle Production Code
- Traceable to certificate & material

Manufacturing/Design Information:

- Manufactured to Federal Specification RR-C-271D, Type IVA, Grade A, Class 2.
- Meet and/or exceeds ASME B30.26
- Safety/Design Factor: 6:1
- Material: High Tensile Steel, Forged
- Quenched and Tempered, Grade 6.

Coating / Protection:

- Hot dip galvanized & yellow pin powder coated.



Rated in Metric Ton(s)

Size (in)	WLL (t)	Dimensions (in)						Weight/ea. (lb)	Qty. / Box	Price / ea.	Part Number
		A	B	C	D	E	F				
3/16	1/3	0.19	0.25	0.88	0.38	0.56	0.60	0.06	1000	2.05	6-3/16"SPB
1/4	1/2	0.25	0.31	1.13	0.47	0.61	0.78	0.10	500	2.54	6-1/4"SPB
5/16	3/4	0.31	0.38	1.22	0.53	0.75	0.84	0.19	300	2.96	6-5/16"SPB
3/8	1	0.38	0.44	1.44	0.66	0.91	1.03	0.31	200	3.88	6-3/8"SPB
7/16	1 1/2	0.44	0.50	1.69	0.75	1.06	1.16	0.38	150	5.13	6-7/16"SPB
1/2	2	0.50	0.63	1.88	0.81	1.19	1.31	0.72	80	6.56	6-1/2"SPB
5/8	3 1/4	0.63	0.75	2.38	1.06	1.50	1.69	1.37	40	11.24	6-5/8"SPB
3/4	4 3/4	0.75	0.88	2.81	1.25	1.81	2.00	2.35	25	17.99	6-3/4"SPB
7/8	6 1/2	0.88	1.00	3.31	1.44	2.09	2.28	3.62	15	26.36	6-7/8"SPB
1	8 1/2	1.00	1.13	3.75	1.69	2.38	2.69	5.03	10	37.55	6-1"SPB
1-1/8	9 1/2	1.16	1.25	4.25	1.81	2.69	2.91	7.41	6	56.14	6-1-1/8"SPB
1-1/4	12	1.29	1.38	4.69	2.03	3.00	3.25	9.50	5	75.29	6-1-1/4"SPB
1-3/8	13 1/2	1.42	1.50	5.25	2.25	3.31	3.63	13.53	4	102.07	6-1-3/8"SPB
1-1/2	17	1.54	1.63	5.75	2.38	3.63	3.88	17.20	3	130.56	6-1-1/2"SPB
1-3/4	25	1.84	2.00	7.00	2.88	4.19	5.00	27.78	2	225.60	6-1-3/4"SPB
2	35	2.08	2.25	7.75	3.25	4.81	5.75	45.00	2	361.07	6-2"SPB
2-1/2	55	2.71	2.75	10.50	4.13	5.69	7.25	85.75	1	700.90	6-2-1/2"SPB

Note: Each production code represents the forging batch. All pins and bodies are interchangeable for that batch. Pin and Bodies are not interchangeable between alternate batches.

SHACKLE - BOW, ANCHOR, WITH SAFETY BOLT YELLOW PIN®

Trademark - Yellow Pin® Shackle - Registration Number: TMA 862,758

Identification / Marking:

Shackle Body:

- Name or trademark of manufacturer "OCEAN"
- Size
- WLL (Working Load Limit).

Shackle Bolt:

- Name of trademark of manufacturer "OC"
- Grade, material type "HS"
- Powder Coated "Yellow Pin®" for instant recognition

Additional Identification:

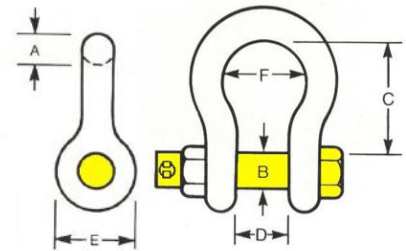
- Shackle Production Code
- Traceable to certificate & material

Manufacturing/Design Information:

- Manufactured to Federal Specification RR-C-271D, Type IVA, Grade A, Class 3.
- Meet and/or exceeds ASME B30.26
- Safety/Design Factor: 6:1
- Material: High Tensile Steel, Forged
- Quenched and Tempered, Grade 6.

Coating / Protection:

- Hot dip galvanized & yellow pin powder coated.



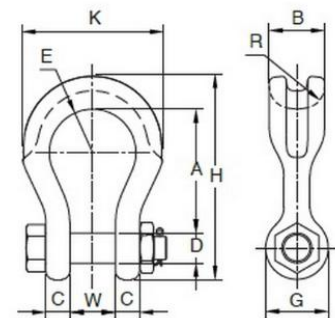
Size (in)	WLL (t)	Dimensions (in)						Pin length (in)	Wt./ ea. (lb)	Qty. / Box	Price / ea.	Part Number
		A	B	C	D	E	F					
1/4	1/2	0.25	0.31	1.13	0.47	0.61	0.78	1.56	0.11	500	2.86	6-1/4"SA
5/16	3/4	0.31	0.38	1.22	0.53	0.75	0.84	1.82	0.22	300	3.47	6-5/16"SA
3/8	1	0.38	0.44	1.44	0.66	0.91	1.03	2.17	0.33	200	4.72	6-3/8"SA
7/16	1-1/2	0.44	0.50	1.69	0.75	1.06	1.16	2.51	0.49	150	5.64	6-7/16"SA
1/2	2	0.50	0.64	1.88	0.81	1.19	1.31	2.80	0.79	80	7.17	6-1/2"SA
5/8	3 1/4	0.63	0.77	2.38	1.06	1.50	1.69	3.56	1.68	40	12.72	6-5/8"SA
3/4	4 3/4	0.75	0.89	2.81	1.25	1.81	2.00	4.15	2.72	25	19.79	6-3/4"SA
7/8	6 1/2	0.88	1.02	3.31	1.44	2.09	2.28	4.82	3.95	15	28.44	6-7/8"SA
1	8 1/2	1.00	1.15	3.75	1.69	2.38	2.69	5.39	5.66	10	41.39	6-1"SA
1-1/8	9 1/2	1.13	1.25	4.25	1.81	2.69	2.91	5.90	8.27	6	56.10	6-1-1/8"SA
1-1/4	12	1.29	1.40	4.69	2.03	3.00	3.25	6.69	11.71	5	75.29	6-1-1/4"SA
1-3/8	13 1/2	1.42	1.53	5.25	2.25	3.31	3.63	7.21	15.83	4	119.00	6-1-3/8"SA
1-1/2	17	1.53	1.66	5.75	2.38	3.63	3.88	7.73	20.80	3	140.55	6-1-1/2"SA
1-3/4	25	1.84	2.04	7.00	2.88	4.19	5.00	9.68	33.91	2	260.05	6-1-3/4"SA
2	35	2.08	2.30	7.75	3.25	4.81	5.75	10.81	52.25	2	405.00	6-2"SA
2-1/2	55	2.71	2.80	10.50	4.13	5.69	7.25	13.58	98.25	1	760.85	6-2-1/2"SA

Note: Each production code represents the forging batch. All pins and bodies are interchangeable for that batch. Pin and Bodies are not interchangeable between alternate batches.

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

SHACKLE - WIDE BODY SLING, WITH SAFETY BOLT

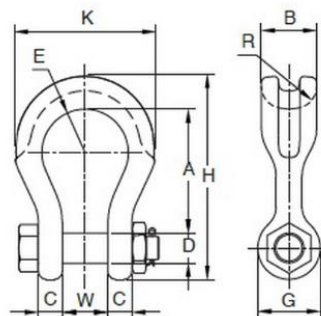
- Material: Forged Alloy Steel with Alloy Pins/Bolts
- Standard: RR-C-271F, EN 13889
- Finish: Body: Powder Coated Blue, Bolt/Pin: Galvanized
- Design Factor: 5.4:1 (Ultimate Load)
- Identification: Trademark, Size/WLL, Batch Code
- 100% Magnaflux crack detection during manufacturing
- 20,000 cycle fatigue rated to 1.5 times working load limit



Size (in)	WLL (t)	Dimensions (in)										Wt./ea. (lb)	Price / ea.	Part Number
		A	B	C	D	E	G	H	K	R	W			
3/4	7	3.58	1.61	0.70	0.87	1.26	1.81	5.90	4.10	1.26	1.30	3.7	116.60	28-809-19
1	12.5	4.64	2.12	0.91	1.14	1.61	2.40	7.64	5.51	1.38	1.73	8.4	279.25	28-809-26
1-1/4	18	5.83	2.52	1.18	1.42	2.00	2.68	9.37	6.77	1.50	2.13	15	405.49	28-809-32
1-1/2	30	6.93	3.15	1.38	1.77	2.50	3.50	11.38	8.50	1.77	2.36	27	1,022.30	28-809-38

SHACKLE - WIDE BODY SLING, WITH SAFETY BOLT GREEN PIN®

- Material: Bow and pin alloy steel, Grade 8, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Painted Silver, Bolt: Painted Green
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -20°C up to +200°C
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

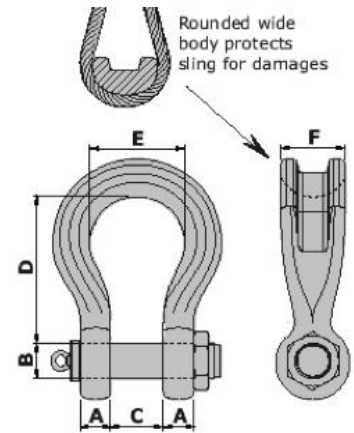


Item	WLL (t)	Dimensions (mm)									Wt./ea. (kg)	Price / ea.	Part Number
		A	B	C	D	E	G	H	K	W			
P-6033	55	240	100	55	57	160	115	389	270	90	30	4,398.37	25-55SS

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

SHACKLE - SLING PROTECTOR, WITH SAFETY BOLT, GN®

- Material: Bow and pin alloy steel, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Painted Grey
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code
- Certification: MPI, US, Witness DNV, Lloyd's, ABS, BV, etc. (on request)
- Temperature Range: -20°C up to +200°C
- Charpy impact testing performed at -40°C



Rated in Metric Ton(s)

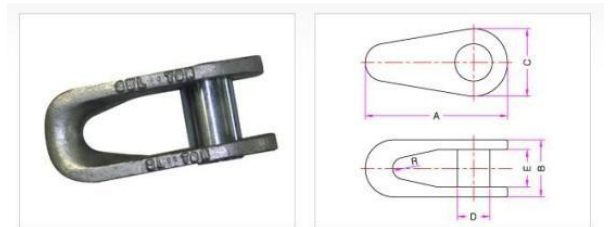
WLL (t)	Dimensions (mm)						Wt./ea. (kg)	Price / ea.	Part Number
	A	B	C	D	E	F			
75	70	70	105	290	185	120	45	5,376.69	116-75WBS
125	80	80	130	365	220	150	120	9,362.80	116-125WBS
150	90	95	140	390	250	170	160	13,719.98	116-150WBS
200	105	105	150	480	275	205	230	16,635.00	116-200WBS
250	110	120	170	550	300	240	320	Pricing on Request	116-250WBS
300	140	134	185	600	350	265	340		116-300WBS
400	160	160	220	600	370	320	620		116-400WBS
500	170	180	250	650	450	340	800		116-500WBS
600	180	200	275	720	490	370	960		116-600WBS
700	200	215	300	750	540	400	1250		116-700WBS
800	220	230	325	780	555	420	1400		116-800WBS
900	238	250	350	850	585	440	2100		116-900WBS
1000	240	270	380	850	615	460	2200		116-1000WBS
1250	260	300	430	930	645	530	2800		116-1250WBS
1500	280	320	460	950	680	560	3300	116-1500WBS	
2000	320	385	500	1050	680	600	4800	116-2000WBS	

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION



SHACKLE - TONSBERG

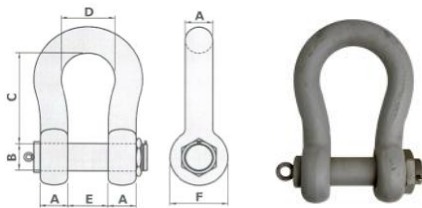
Tonsberg Mooring Link - galvanized steel mooring link of compact design typically utilized as connection between wire rope and fiber forerunner.



Size (t)	Dimensions (in)						Breaking Load (t)	Wt./ea. (lb)	Price / ea.	Part Number
	A	B	C	E	D	R				
120	324	142	150	85	75	28	120	17.0	1,694.69	157-120TLINK

SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION

SHACKLE - BOW, WITH SAFETY BOLT, GN®



Type H9 & H10

- Material: ≤ 120 t: Forged High Tensile Steel.
> 120 t: Forged High Alloy Steel Bow and pin alloy steel, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Painted Gray

- Design Factor: ≤ 85 t: 6:1. > 85 t: 5:1.
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -40°C up to +200°C
- Charpy impact testing performed at -40°C
- Rated in Metric Ton(s)

Tolerance ± 5%

WLL (t)	Design Factor	Dimensions (mm)						Wt./ea. (kg)	Price / ea.	Part Number
		A	B	C	D	E	F			
25	6:1	45	50	178	126	74	104	13	Pricing on Request	116-25SA
35	6:1	50	57	197	138	83	119	18		116-35SA
42.5	6:1	57	65	220	160	95	134	26		116-42.5SA
55	6:1	65	70	260	180	105	145	35		116-55SA
85	6:1	75	83	330	190	127	163	53		116-85SA
120	5:1	89	95	381	238	150	200	110	5,134.80	116-120SA
150	5:1	102	108	400	275	170	230	160	8,125.40	116-150SA
200	5:1	120	125	500	290	180	260	235	12,172.50	116-200SA
250	5:1	125	140	540	305	200	260	285	Pricing on Request	116-250SA
300	5:1	135	150	600	305	200	305	340		116-300SA
400	5:1	165	175	650	325	225	350	560		116-400SA
500	5:1	175	185	700	350	250	370	685		116-500SA
600	5:1	195	205	700	375	275	405	880		116-600SA
700	5:1	205	215	700	400	300	435	980		116-700SA
800	5:1	210	220	700	400	300	435	1100		116-800SA
900	5:1	220	230	700	420	320	465	1280		116-900SA
1000	5:1	230	240	700	420	340	480	1460	116-1000SA	

Cold Temperature application – General Information

There has been a lot of discussion in recent months about cold temperature shackles. There is a misconception that if a shackle complies with DNV 2.7-1 it is certified for cold temperature use and conforms to CAPP requirements. Use web site (<http://exchange.dnv.com/publishing/StdCert/Standard2-7-1.pdf>) to obtain a copy of DNV 2.7-1. DNV rules are written for the world not just the cold areas therefore why would a shackle used in the tropics have to have a cold temperature rating. DNV's material requirement is to have a minimum Charpy impact testing at the design working temperature see section 8.4. Make sure the shackle you are using has actually been tested at the working temperature you are using them. Most areas of Canada are going to require a temperature of minus 40°C and achieving a 42 jewel impact result. These parameters and

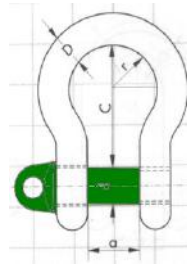
results should be stated on documentation, identification marking should link all documentation to the individual product. Based on EN10204 (3.1 or 3.2) primary and incoming material can be tested for standard compliance (section 4). Both of these standards are a requirement for CAPP. Be informed to make sure your inspection and documentation matches your client's expectations. We have two manufacturers who comply with DNV for Cold temperature results at -40°C, Van Beest (Polar shackle) and GN Rope Fittings. Also has shackles certified to DNV standards however not for cold temperature applications. We are able for an additional charge perform extra 3rd party laboratory testing on our stock lots should additional testing be required, these would be added as an appendix to the manufacturer's certificate of compliance and EN 10204 certificate that can be traced to the lot production.



- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

SHACKLE - BOW, ANCHOR, WITH SCREW GREEN PIN®

- Material: High Tensile Steel, Grade 6, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Galvanized, Pin: Painted Green
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -40°C up to +200°C
- Rated in Metric Ton(s)



Item	WLL (t)	Size (in)	A (mm)	C (mm)	D (mm)	d (mm)	2r (mm)	Wt./ea. (kg)	Price / ea.	Part Number
G-4161	0.33	3/16	9.5	22	5	6	16	0.02	8.62	25-.33SP
G-4161	0.5	1/4	12	29	7	8	20	0.06	8.89	25-.5SP
G-4161	0.75	5/16	13.5	32	9	10	21	0.11	9.98	25-.75SP
G-4161	1	3/8	17	36.5	10	11	26	0.15	11.83	25-1SP
G-4161	1.5	7/16	18.5	43	11	12	29	0.21	15.05	25-1.5SP
G-4161	2	1/2	22	51	13.5	16	32	0.37	25.16	25-2SP
G-4161	3.25	5/8	27	64	16	19	43	0.65	39.31	25-3.25SP
G-4161	4.75	3/4	31	76	19	22	51	1.06	58.97	25-4.75SP
G-4161	6.5	7/8	36	83	22	25	58	1.56	88.60	25-6.5SP
G-4161	8.5	1	43	95	25	28	68	2.32	112.15	25-8.5SP
G-4161	9.5	1 1/8	47	108	28	32	75	3.28	178.35	25-9.5SP
G-4161	12	1 1/4	51	115	32	35	83	4.51	235.62	25-12SP
G-4161	13.5	1 3/8	57	133	35	38	92	5.93	264.86	25-13.5SP
G-4161	17	1 1/2	60	146	38	42	99	7.89	385.23	25-17SP
G-4161	25	1 3/4	74	178	45	50	126	13.40	638.46	25-25SP
G-4161	35	2	83	197	50	57	138	18.85	819.14	25-35SP
G-4161	55	2-1/2	105	266.5	65	70	180	37.86	1,661.48	25-55SP

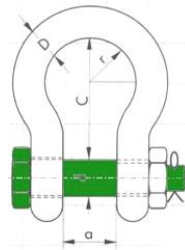
SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION



- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

SHACKLE - BOW, ANCHOR, WITH SAFETY BOLT GREEN PIN®

- Material: High Tensile Steel, Grade 6, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Galvanized, Bolt: Painted Green
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -40°C up to +200°C
- Rated in Metric Ton(s)



Item	WLL (t)	Size (in)	a (mm)	C (mm)	D (mm)	d-pin (mm)	2r (mm)	Wt./ea. (kg)	Price / ea.	Part Number
G-4163	0.75	5/16	13.5	32	9	10	22	0.11	11.65	25-.75SA
G-4163	1	3/8	17	36.5	10	11	26	0.16	13.07	25-1SA
G-4163	1.5	7/16	19	43	11	13	14.5	0.22	15.02	25-1.5SA
G-4163	2	1/2	22	51	13.5	16	32	0.44	26.19	25-2SA
G-4163	3.25	5/8	27	64	16	19	43	0.79	43.23	25-3.25SA
G-4163	4.75	3/4	31	76	19	22	51	1.26	65.21	25-4.75SA
G-4163	6.5	7/8	36	83	22	25	58	1.88	90.91	25-6.5SA
G-4163	8.5	1	43	95	25	28	68	2.78	124.98	25-8.5SA
G-4163	9.5	1 1/8	47	108	28	32	75	3.87	175.80	25-9.5SA
G-4163	12	1 1/4	51	115	32	35	83	5.26	270.18	25-12SA
G-4163	13.5	1 3/8	57	133	35	38	92	6.94	298.15	25-13.5SA
G-4163	17	1 1/2	60	146	38	42	99	8.79	406.18	25-17SA
G-4163	25	1 3/4	74	178	45	50	126	14.99	656.25	25-25SA
G-4163	35	2	83	197	50	57	138	20.65	810.44	25-35SA
G-4163	42.5	2 1/4	95	222	57	65	160	28.3	1,345.16	25-42.5SA
G-4163	55	2 1/2	105	260	65	70	180	41.05	1,688.60	25-55SA
G-4163	85	3	127	330	75	83	190	62.24	2,492.15	25-85SA

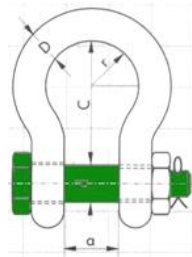
SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION



- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

SHACKLE - SUPER BOW, ANCHOR, WITH SAFETY BOLT GREEN PIN®

- Material: High Strength Alloy Steel, Grade 8, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Galvanized, Bolt: Painted Green
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -20°C up to +200°C
- Rated in Metric Ton(s)



Item	WLL (t)	Trade Size (in)	a (mm)	C (mm)	D (mm)	d (mm)	2r (mm)	Wt./ea. (kg)	Price / ea.	Part Number
G-5263	30	1-1/2	60	146	38	42	99	8.79	885.30	25-30SUPERSA
G-5263	40	1-3/4	74	178	45	50	126	15	1,395.40	25-40SUPERSA
G-5263	55	2	83	197	57	57	138	22	2,004.75	25-55SUPERSA
G-5263	85	2-1/2	105	260	70	70	180	42	3,092.58	25-85SUPERSA
G-5263	120	3	127	329	83	83	190	70	4,767.77	25-120SUPERSA
G-5263	150	3-1/2	147	400	95	95	238	112	9,755.20	25-150SUPERSA

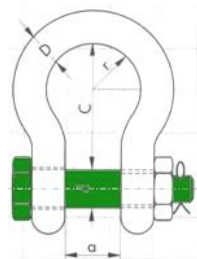
SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION



- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

SHACKLE - WIDE MOUTH BOW, WITH SAFETY BOLT GREEN PIN®

- Material: High Strength Alloy Steel, Grade 8, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Galvanized, Bolt: Painted Green
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -20°C up to +200°C
- Rated in Metric Ton(s)



Item	WLL (t) (towing)	Size (in)	a (mm)	C (mm)	D (mm)	d - pin (mm)	2r (mm)	Wt./ea. (kg)	Price / ea.	Part Number
G-4463	22	1-1/2	106	216	38	42	159	12.5	970.50	25-22WMTS
G-4463	30	1-3/4	127	248	45	50	175	18	1,343.00	25-30WMTS

Van Beest Wide Mouth **Towing** Shackle to be used with correct loading across pin

Item	WLL (t) (lifting)	Size (in)	a (mm)	C (mm)	D (mm)	d - pin (mm)	2r (mm)	Wt./ea. (kg)	Price / ea.	Part Number
G-4263	16	1-1/2	106	216	38	42	159	12.5	970.50	25-16WMS
G-4263	25	1-3/4	127	248	45	50	175	18	1,343.00	25-25WMS
G-4263	30	2	146	273	50	57	207	25	2,009.10	25-30WMS

Van Beest Wide Mouth **Lifting** Shackle to be used with correct loading across pin

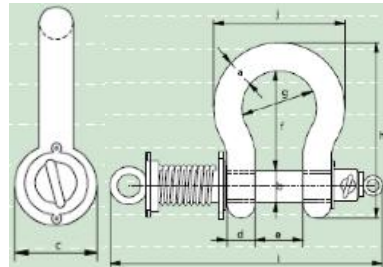
SEE WARNING AND APPLICATION INFORMATION AT END OF SHACKLE SECTION



- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

SHACKLE - ROV SPRING RELEASE BOW, POLAR, WITH GREEN PIN®

- Material: Alloy Steel, Grade 8, Polar, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Painted White, Bolt: Painted Green
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -40°C up to +200°C
- Rated in Metric Ton(s)
- Note: For in-line use only! This shackle is assembled with rope slings and monkey's fist for size starting from WLL 42.5 up to and including 150T a special mounting tool (tensioner) is required to assemble the shackle.



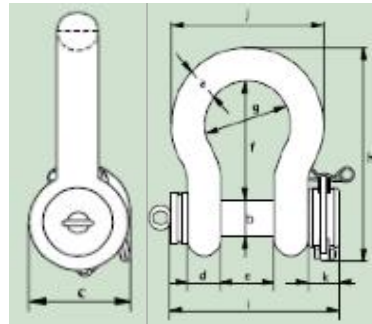
Item	WLL (t)	Dimensions (mm)										Wt./ea. (kg)
		a	b	c	d	e	f	g	h	i	j	
P-5367	12	32	35	72	32	51	115	83	201	262	147	6
P-5367	13.5	35	38	80	35	57	133	92	227	275	162	7
P-5367	17	38	42	88	38	60	146	99	249	330	175	14
P-5367	25	45	50	103	45	74	178	126	300	352	216	16
P-5367	35	50	57	116	50	83	197	138	334	373	238	21
P-5367	42.5	57	65	130	57	95	222	160	377	442	274	32
P-5367	55	65	70	145	65	105	260	180	433	470	310	43
P-5367	85	75	83	162	73	127	329	190	527	579	340	71
P-5367	120	95	95	208	91	147	399	238	646	674	428	131
P-5367	150	105	108	238	102	169	410	275	688	699	485	171



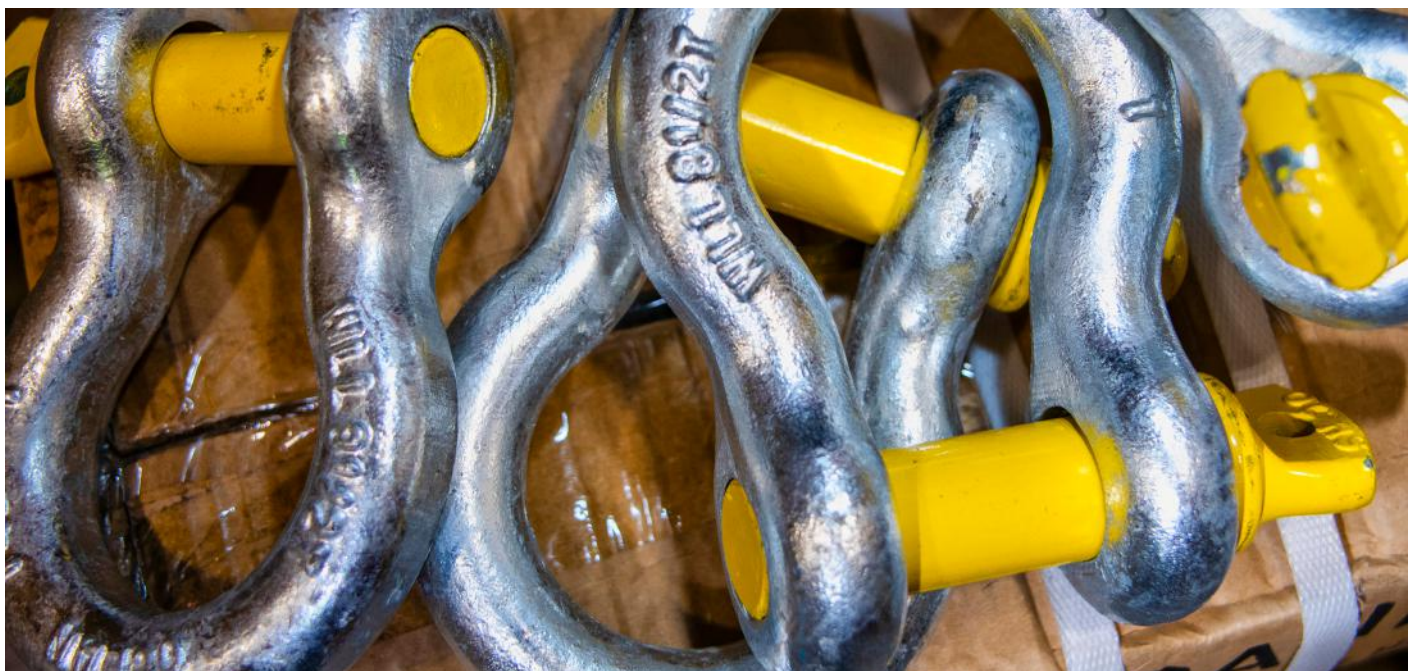
- Made in Holland
- All shackles can be supplied with 3.1-B certificates
- Van Beest is certified by DNV to DNV 2.7-1
- Van Beest mill in Holland is approved to DNV, ABS, Lloyd's & Germanischer Lloyd

SHACKLE - ROV LOCKING CLAMP RELEASE BOW, POLAR, WITH GREEN PIN®

- Material: Alloy Steel, Grade 8, Polar, quenched and tempered
- Standard: RR-C-271F, EN 13889
- Finish: Bow: Painted White, Bolt: Painted Green
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code
- Temperature Range: -60°C up to +200°C
- Rated in Metric Ton(s)
- Note: It is up to the user to attach the locking clamp with wire ropes etc. and attaching loops or monkey's fists. Van Beest supplies the shackle body, the shackle pin and locking clamp with spring pin.



Item	WLL (t)	Dimensions (mm)											Wt./ea. (kg)
		a	b	c	d	e	f	g	h	i	j	k	
P-5365	17	38	42	88	38	60	146	99	250	217	175	48	8.19
P-5365	25	45	50	103	45	74	178	126	300	250	216	48	14.22
P-5365	55	65	70	145	65	105	260	180	433	330	310	48	39.59
P-5365	85	75	83	162	73	127	329	190	527	380	340	48	62



⚠ SHACKLE - WARNINGS AND APPLICATIONS

Side and symmetrical loading data applies to screw pin and bolt nut cotter shackles only!

Side and symmetrical loading not permitted on round pin shackles.

Angles of Side Load

0° - In-Line - 100 % of rated WLL (Working Load Limit)

45° - From In-Line - 70% of rated WLL

90° - From In-Line - 50% of rated WLL

Symmetrical Loading

Shackles symmetrically loaded with two legs at a maximum angle of 120° can be used to full Working Load Limit.

- For permanent or long term installation always use nut and cotter.
- Shackle must be large enough to avoid pinching or bunching of synthetic slings.
- Diameter of shackle must be greater than wire rope diameter if no thimble in eye.
- Use screw pin when used in long term or high vibration applications.

Shackles should be inspected before use to ensure that:

- All markings are legible.
- The body and pin are both identifiable as being of the same size, type and make.
- The threads of the pin and the body are undamaged.
- Never use a safety bolt type shackle without using the cotter pin.
- The body and the pin are not distorted or worn.

- The body and pin are free from nicks, gouges, cracks and corrosion
- Shackles may not be heat treated as this may affect their Working Load Limit.
- Never modify, repair or reshape a shackle by welding, heating or bending as this will affect the Working Load Limit.

Assembly

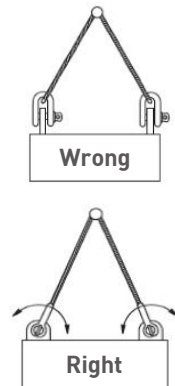
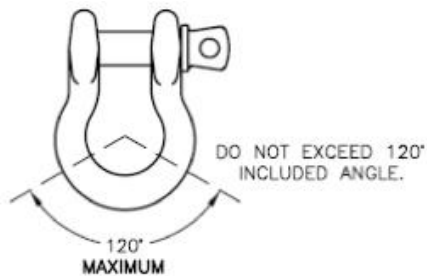
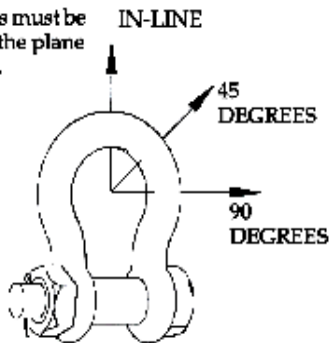
Ensure that the pin is correctly screwed into the shackle eye, i.e. tighten hand tight, and then secure using a wrench or other suitable tool so that the collar of the pin is fully seated on the shackle eye. Ensure that the pin is of the correct length so that it penetrates the full depth of the screwed eye and allows the collar of the pin to seat on the surface of the shackle eye.

Incorrect seating of the pin may be due to a bent pin, too tight fitting thread or misalignment of the pin holes. Do not use the shackle under these circumstances. Never replace a shackle pin except with one of the same size, type and make as it may not be suitable for the loads imposed.

Select the correct type of shackle and its Working Load Limit for the particular application. Should extreme circumstances or shock loading be applicable, this must be taken into account on selecting the correct shackle. Please note that commercial shackles are not to be used for lifting applications.

Make sure that the shackle is supporting the load correctly, i.e. along the axis of the shackle body centerline, avoid introduction of bending loads, unstable loads and do not overload.

Angle loads must be applied in the plane of the bow.



IMPROPER USE OR CARE OF SHACKLES CAN RESULT IN BODILY INJURY OR PROPERTY DAMAGE!

- TO AVOID INJURY OR PROPERTY DAMAGE;
- DO NOT EXCEED THE WLL (WORKING LOAD LIMIT)
- DO NOT SHOCK LOAD
- DO NOT SIDE LOAD - CENTRE LINE OF THE LOAD MUST COINCIDE WITH CENTRE LINE OF SHACKLE
- DO NOT REPLACE PIN OR BOLT WITH OTHER THAN ORIGINAL EQUIPMENT
- INSPECT BEFORE USE FOR WEAR, DEFORMATION, AND PIN ENGAGEMENT
- INSPECT SHACKLES BEFORE EACH USE AS OUTLINES IN ASME B30.26

TURNBUCKLE - JAW & JAW, GALVANIZED

®Trademark - Yellow Attached End Fitting Turnbuckle Design - Registration - ®TMA 796,844

Manufacturing/Design Information:

- Manufactured to: Federal Specification FF-T791B, ASTM F1145, Type 1, Form 1 - Class 7 (G)
- Meet and/or exceeds: ASME B30.26
- Safety/Design Factor: 5:1
- Forged – Quenched and Tempered (Ends), Normalizing (Body)

Coating / Protection:

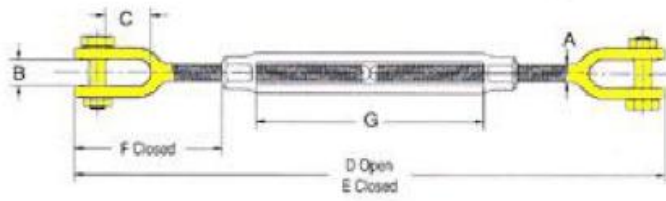
- Hot dip galvanized & yellow powder coated

Identification / Marking:

- Name or trademark of manufacturer "OCEAN / OC"
- Size or rated load
- "Yellow" for instant recognition
- Additional Identification:
Production Code – Traceable to certificate & material



- Ends: Sizes 1/4" through 1/2" c/w nut & bolt
- Sizes 5/8" through 2-3/4" c/w pin & cotter
- Body/Thread: All sizes provided with Lock Nuts

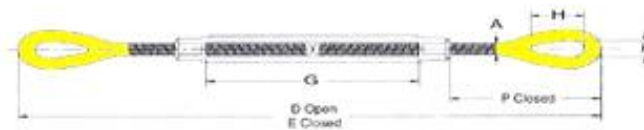


Thread Dia & Take Up (in x in)	WLL (lb)	Wt./ea. (lb)	Dimensions (in)							Pin Dia.	Price / ea.	Part Number
			A	B	C	D Open	E Closed	F Closed	G			
1/4 x 4	500	0.36	0.25	0.41	0.62	11.90	7.90	1.58	4.00	0.24	8.65	6-1/4X4JJ
5/16 x 4 1/2	800	0.52	0.31	0.47	0.87	13.90	9.40	1.98	4.50	0.24	9.79	6-5/16X41/2JJ
3/8 x 6	1200	0.81	0.38	0.50	0.87	17.38	11.38	2.12	6.00	0.31	12.47	6-3/8X6JJ
1/2 x 6	2200	1.50	0.50	0.63	1.06	19.00	13.00	2.75	6.00	0.39	18.40	6-1/2X6JJ
1/2 x 9	2200	1.74	0.50	0.63	1.06	25.00	16.00	2.75	9.00	0.39	21.20	6-1/2X9JJ
1/2 x 12	2200	2.40	0.50	0.63	1.06	31.00	19.00	2.75	12.00	0.39	30.15	6-1/2X12JJ
5/8 x 6	3500	2.72	0.63	0.75	1.31	20.88	14.88	3.50	6.00	0.5	30.55	6-5/8X6JJ
5/8 x 9	3500	3.24	0.63	0.75	1.31	26.88	17.88	3.50	9.00	0.5	35.82	6-5/8X9JJ
5/8 x 12	3500	3.74	0.63	0.75	1.31	32.88	20.88	3.50	12.00	0.5	41.05	6-5/8X12JJ
3/4 x 6	5200	4.11	0.75	0.94	1.50	22.60	16.60	4.18	6.00	0.62	42.22	6-3/4X6JJ
3/4 x 9	5200	5.10	0.75	0.94	1.50	28.60	19.60	4.18	9.00	0.62	44.85	6-3/4X9JJ
3/4 x 12	5200	6.65	0.75	0.94	1.50	34.60	22.60	4.18	12.00	0.62	58.87	6-3/4X12JJ
3/4 x 18	5200	7.00	0.75	0.94	1.50	46.60	28.60	4.18	18.00	0.62	73.47	6-3/4X18JJ
7/8 x 12	7200	8.17	0.88	1.13	1.75	36.32	24.32	4.85	12.00	0.75	89.02	6-7/8X12JJ
7/8 x 18	7200	10.78	0.88	1.13	1.75	48.32	30.32	4.85	18.00	0.75	95.60	6-7/8X18JJ
1 x 6	10 000	10.18	1.00	1.19	2.06	26.06	20.06	5.53	6.00	0.88	84.90	6-1X6JJ
1 x 12	10 000	12.00	1.00	1.19	2.06	38.06	26.06	5.53	12.00	0.88	123.90	6-1X12JJ
1 x 18	10 000	14.00	1.00	1.19	2.06	50.06	32.06	5.53	18.00	0.88	151.80	6-1X18JJ
1 x 24	10 000	17.00	1.00	1.19	2.06	62.06	38.06	5.53	24.00	0.88	178.87	6-1X24JJ
1-1/4 x 12	15 200	20.59	1.25	1.75	2.81	42.54	29.54	7.21	12.00	1.1	226.00	6-1-1/4X12JJ
1-1/4 x 18	15 200	24.25	1.25	1.75	2.81	53.54	35.54	7.21	18.00	1.1	255.20	6-1-1/4X18JJ
1-1/4 x 24	15 200	28.20	1.25	1.75	2.81	68.04	41.54	7.21	24.00	1.1	272.00	6-1-1/4X24JJ
1-1/2 x 12	21 400	32.6	1.50	2.06	2.81	45.68	33.68	8.93	12.00	1.38	339.80	6-1-1/2X12JJ
1 1/2 x 18	21 400	36.75	1.50	2.06	2.81	58.50	37.50	7.88	18.00	1.38	354.77	6-1-1/2X18JJ
1-1/2 x 24	21 400	41.60	1.50	2.06	2.81	70.50	43.50	7.88	24.00	1.38	438.30	6-1-1/2X24JJ
1-3/4 x 18	28 000	53.50	1.75	2.60	3.35	59.16	41.16	9.36	18.00	1.65	578.35	6-1-3/4X18JJ
1-3/4 x 24	28 000	63.36	1.75	2.60	3.35	71.18	47.18	9.36	24.00	1.65	655.82	6-1-3/4X24JJ
2 x 24	37 000	92.25	2.00	2.62	3.69	76.72	52.72	11.86	24.00	2	1,119.39	6-2X24JJ
2-1/2 x 24	60 000	165.00	2.50	3.06	4.44	82.18	58.18	13.56	24.00	2.16	2,765.57	6-21/2X24JJ
2-3/4 x 24	75 000	198.00	2.75	3.68	4.19	85.50	61.50	15.22	24.00	2.75	3,110.00	6-2-3/4X24JJ

TURNBUCKLE - EYE & EYE, GALVANIZED

Conforms to Federal Specification FF-T-791B, ASTM F1145, Type 1, Form 1 – Class 4 (D)

®Trademark - Yellow Attached End Fitting Turnbuckle Design - Registration - ®TMA 796,844

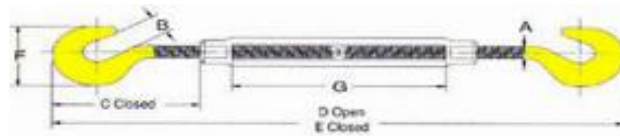


Thread Dia & Take Up (in x in)	WLL (lb)	Wt./ea. (lb)	Dimensions (in)							Price / ea.	Part Number
			A	D Open	E Closed	G	H	K	P Closed		
5/16 x 4 1/2	800	0.47	0.31	14.12	9.62	4.50	0.94	0.44	2.09	8.55	6-5/16X41/2EE
3/8 x 6	1200	0.75	0.38	18.16	12.16	6.00	1.12	0.53	2.52	10.72	6-3/8X6EE
1/2 x 6	2200	1.60	0.50	19.96	13.96	6.00	1.44	0.72	3.23	16.72	6-1/2X6EE
1/2 x 9	2200	1.83	0.50	25.96	16.96	9.00	1.44	0.72	3.23	20.30	6-1/2X9EE
1/2 x 12	2200	2.14	0.50	32.08	19.08	12.00	1.44	0.72	3.23	26.82	6-1/2X12EE
5/8 x 6	3500	2.75	0.63	21.68	15.68	6.00	1.75	0.88	3.90	27.50	6-5/8X6EE
5/8 x 9	3500	3.13	0.63	27.68	18.68	9.00	1.75	0.88	3.90	31.90	6-5/8X9EE
5/8 X 12	3500	3.42	0.63	34.93	21.68	12.00	1.75	0.88	3.90	35.60	6-5/8X12EE
3/4 x 9	5200	4.61	0.75	29.62	20.62	9.00	2.09	1.00	4.69	40.87	6-3/4X9EE
3/4 x 12	5200	5.43	0.75	35.62	23.62	12.00	2.09	1.00	4.69	50.12	6-3/4X12EE
3/4 x 18	5200	7.83	0.75	47.64	29.64	18.00	2.09	1.00	5.09	65.35	6-3/4X18EE
7/8 x 12	7200	8.10	0.88	36.82	24.82	12.00	2.38	1.25	5.10	61.42	6-7/8X12EE
1 x 12	10 000	11.93	1.00	39.97	27.72	12.00	3.00	1.44	6.36	71.65	6-1X12EE

TURNBUCKLE - HOOK & HOOK, GALVANIZED

Conforms to Federal Specification FF-T-791B, ASTM F1145, Type 1, Form 1 – Class 5 (E)

®Trademark - Yellow Attached End Fitting Turnbuckle Design - Registration - ®TMA 796,844

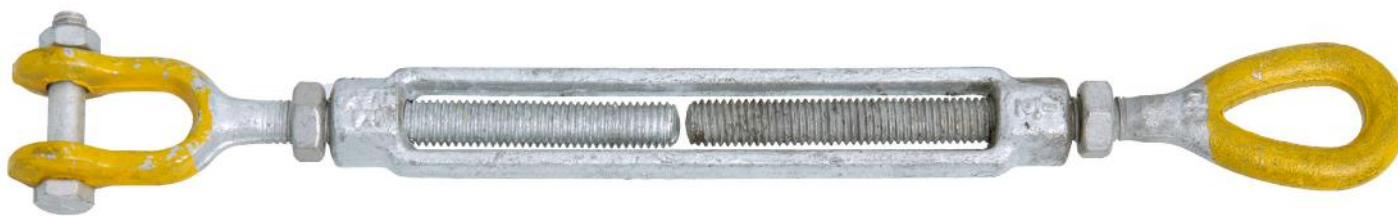


Thread Dia & Take Up (in x in)	WLL (lb)	Wt./ea. (lb)	Dimensions (in)							Price / ea.	Part Number
			A	B	C Closed	D Open	E Closed	F	G		
5/16 x 4 1/2	700	0.47	0.31	0.50	1.94	13.81	9.31	1.50	4.50	8.55	6-5/16X41/2HH
3/8 x 6	1000	0.75	0.38	0.56	2.30	17.72	11.72	1.77	6.00	10.72	6-3/8X6HH
1/2 x 6	1500	1.60	0.50	0.66	2.94	19.38	13.38	2.28	6.00	16.72	6-1/2X6HH
1/2 x 9	1500	1.83	0.50	0.66	2.94	25.38	16.38	2.28	9.00	20.30	6-1/2X9HH
5/8 x 6	2250	2.75	0.63	0.84	3.69	21.25	15.25	2.81	6.00	27.50	6-5/8X6HH
5/8 x 9	2250	3.13	0.63	0.84	3.69	27.25	18.25	2.81	9.00	31.90	6-5/8X9HH
3/4 x 9	3000	4.61	0.75	0.98	4.52	29.28	20.28	3.33	9.00	40.87	6-3/4X9HH
3/4 x 12	3000	5.43	0.75	0.98	4.52	35.28	23.28	3.33	12.00	50.12	6-3/4X12HH
7/8 x 12	4000	8.10	0.88	1.13	5.19	37.00	25.00	3.78	12.00	61.42	6-7/8X12HH
1 x 12	5000	11.93	1.00	1.25	5.84	38.69	26.69	4.25	12.00	71.65	6-1X12HH

TURNBUCKLE - JAW & EYE, GALVANIZED

Conforms to Federal Specification FF-T-791B, ASTM F1145, Type 1, Form 1 – Class 8 (H)

®Trademark - Yellow Attached End Fitting Turnbuckle Design - Registration - ®TMA 796,844



Thread Dia & Take Up (in x in)	WLL (lb)	Wt./ ea. (lb)	Dimensions (in)										Price / ea.	Part Number
			A	B	C	D Open	E Closed	F Closed	G	H	K	P Closed		
3/8 x 6	1200	0.76	0.38	0.50	0.87	17.77	11.77	2.12	6.00	1.12	0.53	2.52	11.82	6-3/8X6JE
1/2 x 6	2200	1.53	0.50	0.63	1.06	19.48	13.48	2.75	6.00	1.44	0.72	3.23	17.67	6-1/2X6JE
1 1/2 x 24	21 400	41.60	1.50	2.06	2.81	70.50	43.50	7.88	24.00	4.09	2.12	8.62	611.98	6-1-1/2X24JE
1 3/4 x 24	28 000	63.36	1.75	2.60	3.35	71.18	47.18	9.36	24.00	4.65	2.38	9.03	993.94	6-1-3/4X24JE

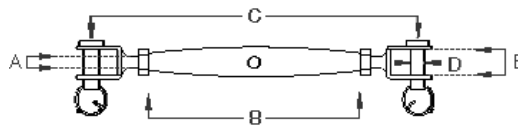
TURNBUCKLE - BOTTLE TYPE (CLOSED) GALVANIZED



Break Load (lb)	Thread Dia. & Take Up (in x in)	Price / ea.	Part Number
4500	3/8 x 6	26.02	6-3/8"BT
6200	1/2 x 9	37.47	6-1/2"BT
9700	5/8 x 9	72.77	6-5/8"BT
13 500	3/4 x 9	115.12	6-3/4"BT
19 200	7/8 x 12	146.39	6-7/8"BT
24 800	1 x 13	199.81	6-1"BT
45 000	1 1/4 x 15	366.33	6-1-1/4"BT

- Material: Steel
- Finish: Galvanized

TURNBUCKLE - JAW & JAW, BOTTLE TYPE (CLOSED) STAINLESS STEEL



A Size (in)	Thread Dia. & Take Up (in)				WLL (lb)	Wt./ea. (lb)	Price / ea.	Part Number
	B	C	D	E				
1/4	3.72	5.64	0.20	0.25	440	0.20	24.87	6-1/4"BTSS
5/16	4.20	6.50	0.31	0.37	840	0.35	44.30	6-5/16"BTSS
3/8	4.87	7.75	0.37	0.43	1260	0.55	61.50	6-3/8"BTSS
1/2	5.75	9.50	0.50	0.50	2000	1.50	88.80	6-1/2"BTSS
5/8	7.50	13.00	0.62	0.68	3500	2.30	170.40	6-5/8"BTSS
3/4	11.00	16.75	0.75	0.88	5000	5.80	290.49	6-3/4"BTSS

- Material: 316 Stainless Steel
- Finish: Stainless Steel

TURNBUCKLE - JAW & JAW, STAINLESS STEEL



WLL (lb)	Thread Dia. & Take Up (in x in)	Price / ea.	Part Number
460	1/4 x 4	21.00	6-1/4X4SSJJ
780	5/16 x 4 1/2	35.60	6-5/16X4.5SSJ
1160	3/8 x 6	53.85	6-3/8X6SSJJ
2150	1/2 x 6	62.50	6-1/2X6SSJJ
3500	5/8 x 6	137.80	6-5/8X6SSJJ
5140	3/4 x 6	206.00	6-3/4X6SSJJ

- Material: 304 Stainless Steel
- Finish: Stainless Steel
- Design Factor: 4:1

TURNBUCKLE - EYE & EYE, LASHING



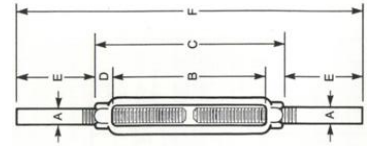
WLL (lb)	Thread Dia. & Take Up (in x in)	Price / ea.	Part Number
3620	3/4 x 18	36.10	6-3/4X18BLEE

- Material: Steel
- Finish: Self-Coloured, Black
- Design Factor: 6:1

TURNBUCKLE - STUB END

Conforms to Federal Specification FFT-T-791B, Type 1, Form 1 Class 3

- Standard: FF-T-791B
- Finish: Self-Coloured
- Design Factor: 5:1



Thread Dia. & Take Up (in x in)	WLL (lb)	Wt./ea. (lb)	Dimensions (in)						Price / ea.	Part Number
			A	B	C	D	E	F		
1/2 x 6	2200	1.25	0.50	6.00	7.50	0.75	4.25	16.00	13.35	6-1/2X6SET
5/8 x 6	3500	2.11	0.63	6.00	7.88	0.94	4.06	16.00	25.60	6-5/8X6SET
3/4 x 6	5200	3.27	0.75	6.00	8.25	1.13	4.38	17.00	29.50	6-3/4X6SET
7/8 x 6	7200	4.78	0.88	6.00	8.63	1.31	4.69	18.00	46.50	6-7/8X6SET
1 x 6	10 000	6.36	1.00	6.00	9.00	1.50	5.00	19.00	59.70	6-1X6SET
1 1/4 x 6	15 200	10.18	1.25	6.00	9.13	1.56	5.44	20.00	91.50	6-1-1/4X6SET
1 1/2 x 12	21 400	20.44	1.50	12.00	15.75	1.88	5.38	26.50	137.15	6-1-1/2X12SET

TURNBUCKLE - STUB END, BODY ONLY

Conforms to Federal Specification FFT-T-791B, Type 1, Form 1 Class 3

WLL (lb)	Size (in x in)	Price / ea.	Part Number
1200	3/8 x 6	8.69	6-3/8X6TBSC
2200	1/2 x 6	9.80	6-1/2X6TBSC
3500	5/8 x 6	13.00	6-5/8X6TBSC
5200	3/4 x 6	19.19	6-3/4X6TBSC
7200	7/8 x 6	44.60	6-7/8X6TBSC
10 000	1 x 6	49.50	6-1X6TBSC
15 200	1 1/4 x 6	59.25	6-11/4X6TBSC
21 400	1 1/2 x 6	137.15	6-11/2X6TBSC



- Standard: FF-T-791B
- Finish: Self-Coloured
- Design Factor: 5:1

TURNBUCKLE - HEAVY DUTY, GN®

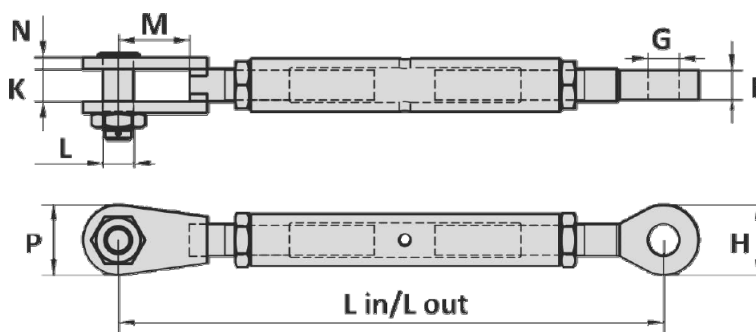


- Material: High tensile steel
- Finish: Painted
- Design Factor: 5:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)
- Rated in Metric Ton(s)
- Non-standard sizes or custom product available on request

WLL (ton)	Jaw-Jaw		Eye-Eye		Jaw-Eye		Thread	Price	Part Number
	Dimensions (mm)		Dimensions (mm)		Dimensions (mm)				
	L in	L out	L in	L out	L in	L out			
13.5	935	1260	840	1165	890	1215	Tr 55x8	Pricing on Request	116-TB13.5
17	1010	1360	920	1270	965	1315	Tr 65x8		116-TB17
25	1085	1415	975	1305	1030	1360	Tr 70x8		116-TB25
30	1160	1530	1020	1390	1090	1460	Tr 75x8		116-TB30
35	1250	1650	1100	1500	1175	1575	Tr 80x8		116-TB35
45	1300	1780	1170	1650	1235	1715	Tr 90x8		116-TB45
55	1380	1890	1270	1780	1325	1835	Tr 100x8		116-TB55
70	1480	2025	1390	1940	1435	1985	Tr 110x8		116-TB70
85	1565	2200	1515	2150	1540	2175	Tr 120x8		116-TB85
100	1630	2360	1600	2330	1615	2345	Tr 130x8		116-TB100
120	1745	2340	1735	2330	1740	2335	Tr 140x8		116-TB120
160	1870	2470	1860	2460	1865	2465	Tr 160x8		116-TB160
200	2020	2640	2000	2620	2010	2630	Tr 180x8		116-TB200
250	2170	2840	2210	2880	2190	2860	Tr 200x8		116-TB250

Tolerance: Forged parts ± 5%, machined parts ± 1 mm

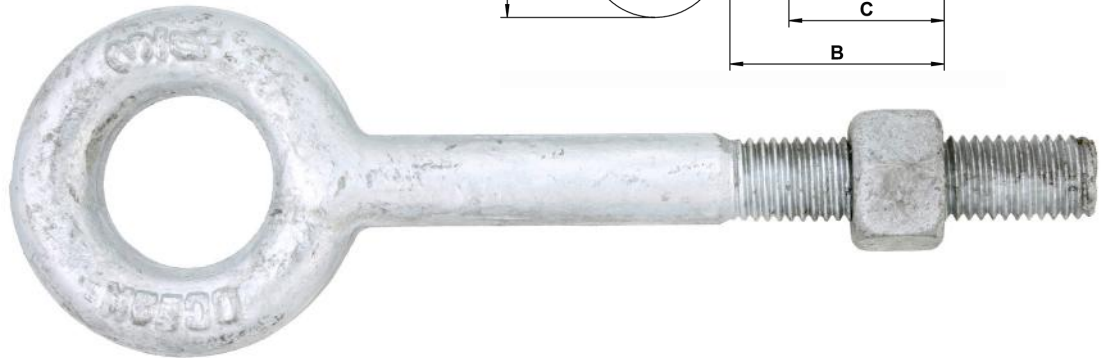
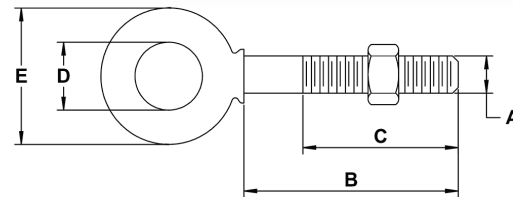
TURNBUCKLE - HEAVY DUTY, GN® (CONTINUED)



WLL (ton)	Dimensions (mm)								Wt. J-J (kg)	Wt. E-E (kg)	Wt. J-E (kg)
	K	N	M	L	P	F	H	G			
13.5	55	20	122	51	120	50	120	53	45	36	41
17	65	28	130	63	140	55	140	65	72	55	62
25	76	30	145	70	140	70	140	72	83	60	73
30	80	35	160	72	150	70	150	74	100	68	85
35	90	40	175	80	170	80	170	82	140	96	117
45	100	45	175	90	190	90	190	93	177	117	146
55	110	50	175	100	210	100	210	103	232	156	194
70	110	55	175	108	230	100	230	111	293	200	245
85	130	75	175	127	270	125	270	130	441	270	363
100	140	90	175	140	290	125	290	143	607	364	485
120	155	90	190	152	340	140	340	155	740	490	615
160	170	100	210	178	380	160	380	181	967	614	791
200	190	110	250	190	400	170	400	193	1380	720	1050
250	210	120	280	250	520	190	520	253	1825	832	1345

EYE BOLT - REGULAR WITH NUT

- Material: Forged carbon steel quenched & tempered
- Standard: EN 4278, ASME B30.26
- Finish: Hot dip galvanized
- Design Factor: 5:1
- Identification: Size/Ocean



Dia. & Length (in)	WLL (lb)	Weight / 100 pcs. (lb)	Dimensions (in)					Price / ea.	Part Number
			A	C	B	D	E		
3/8 x 2 1/2	1550	23.30	0.38	1.50	2.50	0.75	1.50	4.72	6-3/8X21/2EBG
3/8 x 4 1/2	1550	29.50	0.38	2.50	4.50	0.75	1.50	4.95	6-3/8X41/2EBG
3/8 x 6	1550	35.20	0.38	2.50	6.00	0.75	1.50	5.35	6-3/8X6EBG
1/2 x 3 1/4	2600	50.30	0.50	1.50	3.25	1.00	2.00	7.20	6-1/2X31/4EBG
1/2 x 6	2600	66.10	0.50	3.00	6.00	1.00	2.00	7.95	6-1/2X6EBG
1/2 x 8	2600	82.00	0.50	3.00	8.00	1.00	2.00	9.52	6-1/2X8EBG
1/2 x 10	2600	88.00	0.50	3.00	10.00	1.00	2.00	10.75	6-1/2X10EBG
5/8 x 4	5200	103.10	0.62	2.00	4.00	1.25	2.50	10.45	6-5/8X4EBG
5/8 x 6	5200	118.20	0.62	3.00	6.00	1.25	2.50	12.33	6-5/8X6EBG
5/8 x 8	5200	135.10	0.62	3.00	8.00	1.25	2.50	13.48	6-5/8X8EBG
5/8 x 10	5200	153.60	0.62	3.00	10.00	1.25	2.50	16.25	6-5/8X10EBG
5/8 x 12	5200	167.10	0.62	4.00	12.00	1.25	2.50	17.95	6-5/8X12EBG
3/4 x 4 1/2	7200	168.60	0.75	2.00	4.25	1.50	3.00	17.88	6-3/4X41/2EBG
3/4 x 6	7200	184.50	0.75	3.00	6.00	1.50	3.00	19.10	6-3/4X6EBG
3/4 x 8	7200	207.90	0.75	3.00	8.00	1.50	3.00	19.93	6-3/4X8EBG
3/4 x 10	7200	235.00	0.75	3.00	10.00	1.50	3.00	24.22	6-3/4X10EBG
3/4 x 12	7200	257.50	0.75	4.00	12.00	1.50	3.00	25.44	6-3/4X12EBG
1 x 12	13 300	540.00	1.00	4.00	12.00	2.00	4.00	52.48	6-1X12EBG

SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

EYE BOLT - SCREW

Size (in)	Thread Length (in)	Eye I.D (in)	Price / ea.	Part Number
1/4 x 2	1.50	0.47	3.39	6-1/4X2SC
5/16 x 2 1/4	1.70	0.60	4.06	6-5/16X21/4SC
3/8 x 2 1/2	1.90	0.72	4.96	6-3/8X21/2SC
1/2 x 3 1/4	2.45	0.98	7.98	6-1/2X31/4SC
5/8 x 4	3.00	1.17	10.60	6-5/8X4SC



- Non Load Rated
- For use in wood
- Material: Forged
- Standard: EN 4278, ASME B30.26
- Finish: Hot dip galvanized
- Identification: Size

EYE BOLT - SHOULDER WITH NUT, UNC

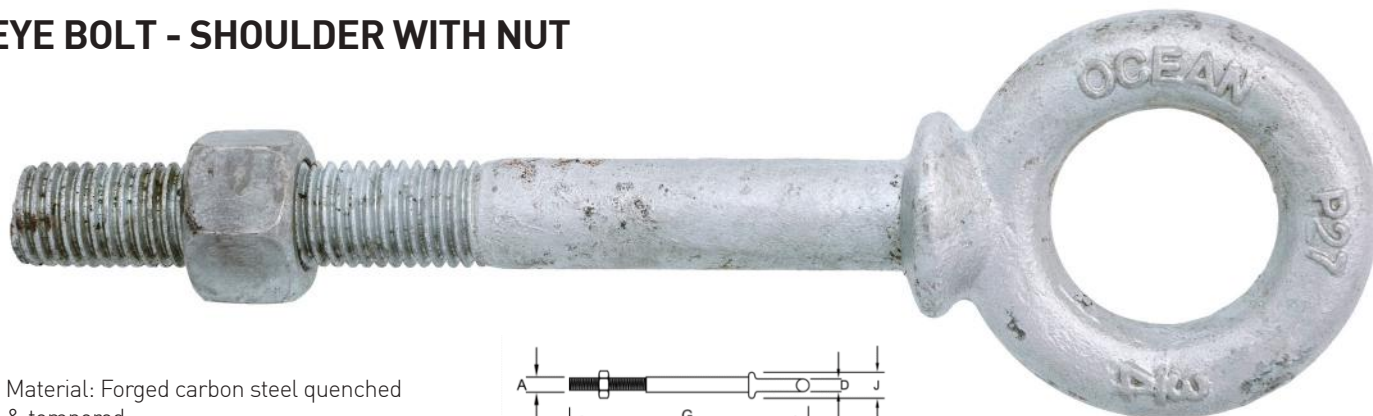
Size (in)	Shank Length (in)	Thread Length (in)	Price / ea.	Part Number
1 1/2	3 1/2	2	136.74	6-11/2x31/2GS



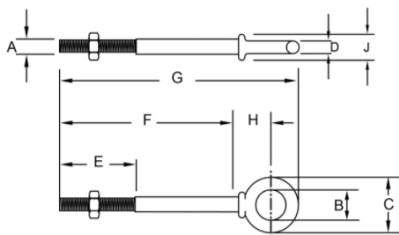
- Material: Forged carbon steel quenched & tempered
- Standard: EN 4278
- Finish: Hot dip galvanized
- Identification: Size

SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

EYE BOLT - SHOULDER WITH NUT



- Material: Forged carbon steel quenched & tempered
- Standard: EN 4278
- Finish: Hot dip galvanized
- Design Factor: 5:1
- Identification: Size/Ocean



Size (in)	WLL (lb)	Weight / 100 pcs. (lb)	Dimensions (in)									Price / ea.	Part Number
			A	B	C	D	E	F	G	H	J		
1/4 x 2	650	6.6	0.25	0.50	0.88	0.19	1.50	2.00	2.94	0.50	0.47	2.78	6-1/4X2GS
1/4 x 4	650	9.1	0.25	0.50	0.88	0.19	2.50	4.00	4.94	0.50	0.47	3.68	6-1/4X4GS
5/16 x 2 1/4	1200	12.5	0.31	0.62	1.12	0.25	1.50	2.25	3.50	0.69	0.56	3.68	6-5/16X21/4GS
5/16 x 4 1/4	1200	18.8	0.31	0.62	1.12	0.25	2.50	4.25	5.50	0.69	0.56	4.52	6-5/16X41/4GS
3/8 x 2 1/2	1550	21.4	0.38	0.75	1.38	0.31	1.50	2.50	3.97	0.78	0.66	4.51	6-3/8X21/2GS
3/8 x 4 1/2	1550	25.3	0.38	0.75	1.38	0.31	2.50	4.50	5.97	0.78	0.66	5.21	6-3/8X41/2GS
1/2 x 3 1/4	2600	42.6	0.50	1.00	1.75	0.38	1.50	3.25	5.12	1.00	0.91	6.80	6-1/2X31/4GS
1/2 x 6	2600	56.8	0.50	1.00	1.75	0.38	3.00	6.00	7.88	1.00	0.91	7.79	6-1/2X6GS
5/8 x 4	5200	68.6	0.62	1.25	2.25	0.50	2.00	4.00	6.44	1.31	1.12	9.50	6-5/8X4GS
5/8 x 6	5200	102.4	0.62	1.25	2.25	0.50	3.00	6.00	8.44	1.31	1.12	10.95	6-5/8X6GS
3/4 x 4 1/2	7200	144.5	0.75	1.50	2.75	0.62	2.00	4.50	7.44	1.56	1.38	14.90	6-3/4X41/2GS
3/4 x 6	7200	167.5	0.75	1.50	2.75	0.62	3.00	6.00	8.94	1.56	1.38	15.29	6-3/4X6GS
7/8 x 5	10 600	225.0	0.88	1.75	3.25	0.75	2.50	5.00	8.46	1.84	1.56	25.10	6-7/8X5GS
1 x 6	13 300	366.3	1.00	2.00	3.75	0.88	3.00	6.00	9.97	2.09	1.81	36.20	6-1X6GS
1 x 9	13 300	422.5	1.00	2.00	3.75	0.88	4.00	9.00	12.97	2.09	1.81	46.85	6-1X9GS
1 1/4 x 8	21 000	650	1.25	2.50	4.50	1.00	4.00	8.00	12.72	2.47	2.28	69.36	6-11/4X8GS
1 1/4 x 12	21 000	795	1.25	2.50	4.50	1.00	4.00	12.00	16.72	2.47	2.28	88.50	6-11/4X12GS
1 1/2 x 15	24 000	1425	1.50	3.00	5.50	1.25	6.00	15.00	20.75	3.00	2.75	185.60	6-11/2X15GS

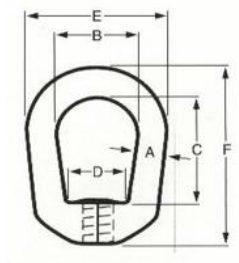
SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

EYE BOLT - SHOULDER WITH NUT



WLL (lb)	Size (in)	Price / ea.	Part Number
500	1/4 x 2	14.19	6-1/4x2EBSS
500	1/4 x 4	17.91	6-1/4x4EBSS
798	5/16 x 2 1/4	22.15	6-516X214EBSS
798	5/16 x 4 1/4	26.61	6-516x414EBSS
1196	3/8 x 2 1/2	27.35	6-3/8X212EBSS
1196	3/8 x 4 1/4	34.75	6-3/8X414EBSS
2195	1/2 x 3 1/4	36.31	6-1/2X314EBSS
2195	1/2 x 6	40.15	6-1/2X6EBSS
3493	5/8 x 4	55.54	6-5/8X4EBSS
3493	5/8 x 6	64.97	6-5/8X6EBSS
5189	3/4 x 4 1/2	86.02	6-3/4X412EBSS
5189	3/4 x 6	103.35	6-3/4X6EBSS
7185	7/8 x 5	184.55	6-7/8X5EBSS
8675	1 x 6	349.48	6-1X6EBSS
8675	1 x 9	392.47	6-1X9EBSS

- Material: Forged 304 Stainless Steel
- Standard: EN 4278
- Finish: Stainless Steel
- Design Factor: 5:1
- Identification: Size



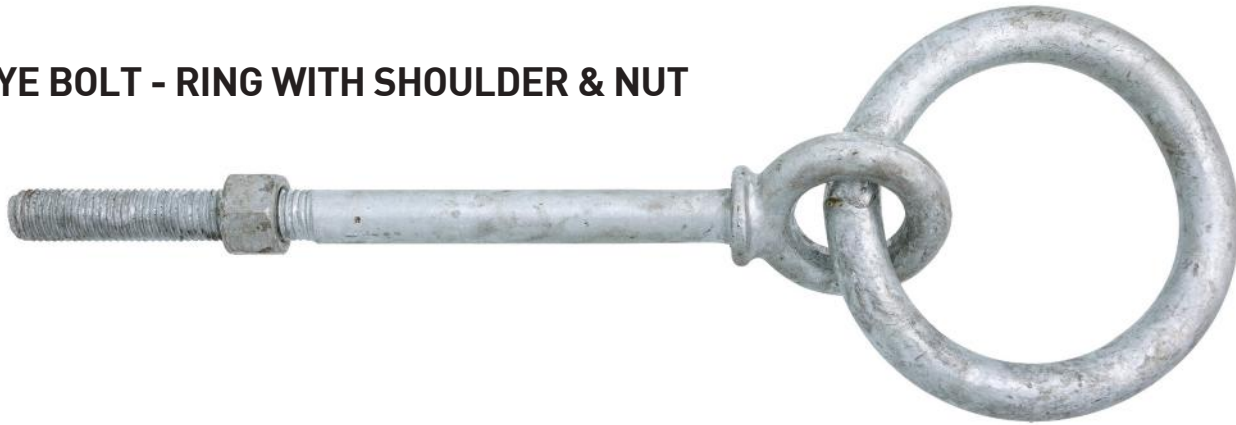
EYE NUT

Tap Size (in)	WLL (lb)	Dimensions (in)						Price / ea.	Part Number
		A	B	C	D	E	F		
1/2	2150	0.500	1.25	1.50	1.04	1.98	2.50	16.53	6-1/2SSEN

- Material/Finish: 304 Stainless Steel
- Standard: DIN 582
- Design Factor: 5:1
- Identification: Size/WLL

SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

EYE BOLT - RING WITH SHOULDER & NUT



- Material/Finish: 304 Stainless Steel & Hot Dip Galvanized

Size (in)	Ring Stock (in)	ID of Ring (in)	Max. Load (lb)	Stainless Steel (304 grade)		Galvanized	
				Price / ea.	Part Number	Price / ea.	Part Number
3/8 x 4 1/2	3/8	2	600	31.35	6-3/8X412BRSS	12.47	6-3/8X41/2BGR
3/8 x 6	3/8	2	600	34.87	6-3/8X6BRSS	15.35	6-3/8X6BGR
1/2 x 6	1/2	2 1/2	1100	55.69	6-1/2X6BRSS	26.75	6-1/2X6BGR
1/2 x 8	1/2	2 1/2	1100	60.53	6-1/2X8BRSS	37.65	6-1/2X8BGR
3/4 x 10	3/4	3 3/4	2600	226.20	6-3/4X10BRSS	94.69	6-3/4X10BGR

EYE BOLT - SHOULDER MACHINE, IMPERIAL

- Material: Forged Steel
- Standard: EN 4278, ASME B30.26
- Finish: Self-Coloured
- Design Factor: 5:1
- Identification: Size/Ocean



WLL (lb)	Shank (in)		Eye (in)		Weight / 100 pcs. (lb)	Price / ea.	Part Number
	Dia.	Length	I.D.	O.D.			
650	1/4	1	0.75	1.13	4.9	2.70	6-1/4X1EB
1200	5/16	1-1/8	0.88	1.38	8.5	3.00	6-5/16X11/8EB
1550	3/8	1-1/4	1.00	1.62	14.0	3.75	6-3/8X11/4EB
2600	1/2	1-1/2	1.19	1.95	29.5	5.80	6-1/2X11/2EB
5200	5/8	1-3/4	1.38	2.38	58.0	8.60	6-5/8X13/4EB
7200	3/4	2	1.50	2.76	88.5	11.85	6-3/4X2EB
10 600	7/8	2-1/4	1.75	3.25	129.0	14.55	6-7/8X21/4EB
13 300	1	2-1/2	2.00	3.76	198.5	21.70	6-1X21/2EB
21 000	1-1/4	3	2.50	4.50	396.0	48.53	6-11/4X3EB
24 000	1-1/2	3-1/2	3.00	5.50	654.0	85.26	6-11/2X31/2EB

SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

EYE BOLT - SHOULDER MACHINE, METRIC

- Material: Forged Steel
- Standard: EN 4278, ASME B30.26
- Finish: Self-Coloured
- Design Factor: 5:1
- Identification: Size/Ocean



WLL (kg)	Thread Size & Pitch	Shank (mm)		Eye I.D. (mm)	Weight / ea. (kg)	Price / ea.	Part Number
		Dia.	Length				
200	M6x1.0	6	25.5	18.43	0.03	8.47	6-6MEB
400	M8x1.25	8	31.75	15.51	0.05	9.60	6-8MEB
640	M10x1.5	10	31.75	24.76	0.07	11.67	6-10MEB
1000	M12x1.75	12	38	23.94	0.11	14.30	6-12MEB
1800	M16x2.0	16	44.5	29.5	0.25	22.13	6-16MEB
2500	M20x2.5	20	51	36.51	0.42	33.09	6-20MEB
4808	M22x2.5	22	57	43.69	0.58	49.68	6-22MEB
4000	M24x3.0	24	63.5	49.36	1.05	57.15	6-24MEB
9525	M32x3.0	32	76	61.58	1.80	142.58	6-32MEB

EYE PAD

Reference local welding specifications for proper welding procedures.

- Material: Steel
- Finish: Self colored
- Identification: Type

Size	I.D. Eye (in)	O.D. Eye (in)	Dia. of Shoulder (in)	Overall Height (in)	Wt./ 100 pcs (lb)	Price / ea.	Part Number
2	3/4	1 1/2	1 1/16	1 5/8	17.25	5.56	6-#2PESC
4	1	2 1/8	1 7/16	2 11/32	50.00	9.20	6-#4PESC
5	1 1/4	2 5/8	1 3/4	2 3/4	82.50	11.24	6-#5PESC

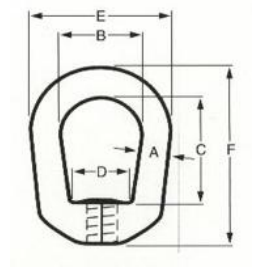


SEE WARNING AND APPLICATION INFORMATION FOR EYE BOLTS.

EYE NUT

Note: Order by tap size, marking on eye nut is body stock diameter

- Material: Forged
- Standard: EN 4278, ASME B30.26
- Finish: Galvanized
- Design Factor: 5:1
- Identification: Size ("A" Dia.)
- Thread oversized for galvanized threads



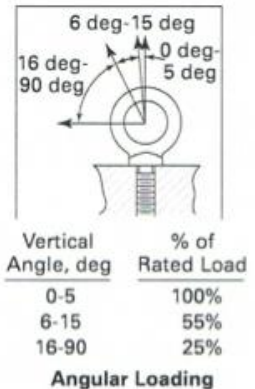
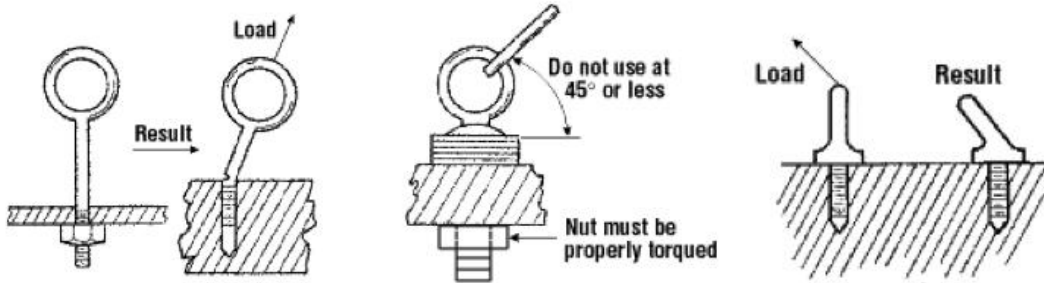
Std Tap Size (in)	Dimensions (in)						Wt. / ea. (lb)	WLL (lb)	Price / ea.	Part Number
	A	B	C	D	E	F				
1/4	1/4	3/4	1 1/16	21/32	1 1/4	1 11/16	0.09	520	2.90	6-1/4EN
5/16	1/4	3/4	1 1/16	21/32	1 1/4	1 11/16	0.09	850	2.90	6-5/16EN
3/8	5/16	1	1 1/4	3/4	1 5/8	2 1/16	0.18	1250	3.15	6-3/8EN
1/2	3/8	1 1/4	1 1/2	1	2	2 1/2	0.28	2250	5.20	6-1/2EN
5/8	1/2	1 1/2	2	1 3/16	2 1/2	3 3/16	0.58	3600	7.65	6-5/8EN
3/4	5/8	1 3/4	2 3/8	1 3/8	3	3 7/8	1.00	5200	13.29	6-3/4EN
7/8	3/4	2	2 5/8	1 5/8	3 1/2	4 5/16	1.70	7200	18.10	6-7/8EN
1	7/8	2 1/4	3 1/16	1 7/8	4	5	2.75	10 000	28.90	6-1EN
1 1/4	1	2 1/2	3 1/2	1 15/16	4 1/2	5 3/4	3.85	15 500	46.85	6-1-1/4EN



EYE BOLTS FORGED - WARNINGS AND APPLICATION INSTRUCTIONS

How should you select the right bolt?

- Eye Bolts are marked with their thread size NOT with their rated capacities. Make sure you select the correct eyebolt based on its type and capacity for the lift you are conducting.
- Use plain or regular eye bolts (non-shoulder) or ring bolts for vertical loading only.
- Angle loading on non-shoulder bolts will bend or break them.
- Use shoulder eye bolts for vertical or angle loading.

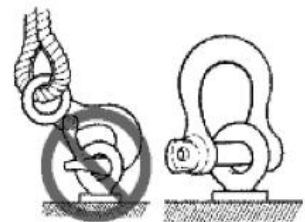


How should you use eye bolts safely?

- Orient the eye bolt in line with the slings. If the load is applied sideways, the eye bolt may bend.
- Pack washers between the shoulder and the load surface to ensure that the eye bolt firmly contacts the surface. Ensure that the nut is properly torqued.
- Engage at least 90% of threads in receiving a hole when using shims or washers.
- Attach only one sling leg to each eye bolt.
- Inspect and clean the eye bolt threads and the hole.
- Screw the eye bolt on all the way down and properly seat.
- Ensure the tapped hole for a screw eye bolt (body bolts) has a minimum depth of one-and-a-half times the bolt diameter.
- Install the shoulder at right angles to the axis of the hole. The shoulder should be in full contact with the surface of the object being lifted.
- Use a spreader bar with regular (non-shoulder) eye bolts to keep the lift angle at 90° to the horizontal.
- Use eye bolts at a horizontal angle greater than 45°. Sling strength at 45° is 71% of vertical sling capacity. Eye bolt strength at 45° horizontal angle drops down to 25% of vertical lifting capacity.
- Use a swivel hoist ring for angled lifts. The swivel hoist ring will adjust to any sling angle by rotating around the bolt and the hoisting eye pivots 180°.

What should you avoid when using eye bolts?

- Do not run a sling through a pair of eye bolts: this will reduce the effective angle of lift and will put more strain on the rigging.
- Do not force the slings through eye bolts. This force may alter the load and the angle of loading.
- Do not use eye bolts that have been ground, machined or stamped.
- Do not use bars, grips or wrenches to tighten eye bolts.
- Do not paint an eye bolt. The paint could cover up flaws.
- Do not force hooks or other fittings into the eye; they must fit freely.
- Do not shock load eye bolts.
- Do not use a single eye bolt to lift a load that is free to rotate.
- Do not use eye bolts that have worn threads or other flaws.
- Do not insert the point of a hook in an eye bolt. Use a shackle.



- Loads may slip or fall if proper eye bolt assembly and lifting procedures are not followed
 - A falling load can seriously injure or kill
 - Read and understand all instructions and follow warnings and safety instructions



Certified to DNV 2.7-1, type approval no. S-7732

For offshore container lifting and cold weather use with Charpy V-notch impact Value's of > 42 Joule At -40°C. All DNV links are specially heat treated after proof testing to minimize the risk of hydrogen embrittlement and stress corrosion cracking. Every link is batch coded for certificate recognition.

LINK - MASTER LINK, DNV 2.7-1+

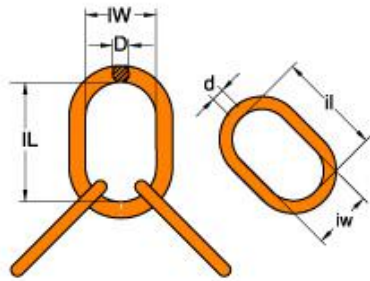
- Material: Triple Alloy Steel
- Standard: EN 1677-4, ASME B30.26, DNV 2.7-1
- Finish: Painted Orange
- Design Factor: 5:1(Wire Sling)
- Identification: Trademark, Size/WLL, Batch Code
- Rated in Metric Ton(s)



Type	Dimensions (mm)			WLL 5:1 (t)	Wt. / ea. (kg)	Price / ea.	Part Number
	Dia.	Inside Leghth	Inside Width				
OML160DNV	16.0	150	75	4.10	0.68	52.07	2-MA16MLS
OML220DNV	22.0	270	140	7.0	2.28	113.37	2-MA22MLS
OML250DNV	25.5	270	140	9.3	3.11	125.55	2-MA25MLS
OML280DNV	28.0	270	140	14.5	3.78	134.75	2-MA28MLS
OML320DNV	32.0	270	140	19.0	5.02	183.90	2-MA32MLS
OML360DNV	36.0	270	140	26.0	6.46	229.05	2-MA36MLS
OML400DNV	40.0	280	155	30.5	8.46	360.90	2-MA40MLS
OML450DNV	45.0	320	175	40.0	12.18	465.92	2-MA45MLS
OML500DNVS	50.0	350	195	51.0	16.54	673.45	2-MA50MLS
OML650DNV	65.0	410	220	75.0	33.02	1,521.60	2-MA65ML
OML750DNV	75.0	450	250	100.0	48.98	3,581.79	2-MA75ML
OML900DNV	90	510	300	150.0	86.0	11,456.00	2-MA90ML

LINK - MASTER LINK ASSEMBLY, DNV 2.7-1+

- Material: Triple pAlloy Steel
- Standard: EN 1677-4, ASME B30.26, DNV 2.7-1
- Finish: Painted Orange
- Design Factor: 5:1 (Wire Sling)
- Identification: Trademark, Size/WLL, Batch Code
- Rated in Metric Ton(s)



Type	Dimensions (mm)						WLL 5:1 (t)	Wt./ea. (kg)	Price / ea.	Part Number
	D	IL	IW	d	il	iw				
OSA160DNV	16	150	75	14.5	125	60	4.1	1.3	123.80	2-MA16QA
OSA220SDNV	22.0	162	90	22	162	90	11.0	4.41	256.90	2-MA22QASS
OSA250DNVS	25.5	270	140	22	162	90	9.30	6.05	273.15	2-MA25QAS
OSA260DNVS	28.0	270	140	22	162	90	14.5	5.89	299.20	2-MA26QAS
OSA320DNV	32.0	270	140	28	200	110	19.0	10.92	442.40	2-MA32QAS
OSA360DNV	36.0	270	140	28	200	110	26.0	12.35	621.30	2-MA36QAS
OSA400DNV	40.0	280	155	32	270	140	30.5	18.5	702.96	2-MA40QAS
OSA450DNV	45.0	320	175	36	270	140	40.0	25.09	1,207.50	2-MA45QAS
OSA500DNVS	50.0	350	195	45	320	175	51.0	40.89	1,951.70	2-MA50QAS
OSA650DNV	65.0	410	220	50	350	195	75.0	66.1	4,025.00	2-MA65QA
OSA750DNV	75.0	450	250	65	410	220	100.0	115.02	7,765.00	2-MA75QA
OSA900DNV	90.0	510	300	70	400	200	150.0	164.1	20,733.00	2-MA90QA

LINK - PEAR, WELDLESS SLING

- Standard: RR-C-271F
- Finish: Galvanized
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code



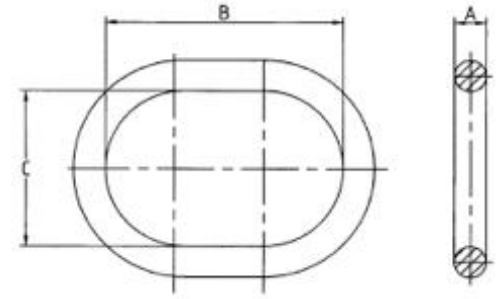
Size (in)	WLL (lb)	Weight (lb)	Inside Length (in)	I. Width Sm. End (in)	I. Width Lg. End (in)	Price / ea.	Part Number
3/8	1800	0.13	2-1/4	3/4	1-1/2	5.30	6-3/8"PLG
1/2	2900	0.55	3	1	2	7.85	6-1/2"PLG
5/8	4200	1.10	3-3/4	1-1/4	2-1/2	11.39	6-5/8"PLG
3/4	6000	1.95	4-1/2	1-1/2	3	22.15	6-3/4"PLG
7/8	8300	2.78	5-1/4	1-3/4	3-1/2	31.40	6-7/8"PLG
1	10 800	4.30	6	2	4	48.05	6-1"PLG
1 1/4	16 750	8.50	7-3/4	2-1/2	5	89.70	6-1-1/4"PLG

LINK - MASTER LINK, LARGE

Made in Holland

- Material: High Alloy Steel
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code
- Rated in Metric Ton(s)

*More sizes available from 105 to 1500 tonne WLL



MBL (t)	WLL (t)	Dia. (mm)	In. Length (mm)	In. Width (mm)	Wt./ea. (kg)	Price / ea.	Part Number
525	105	80	450	250	56	Pricing on Request	116-ML105T
1250	250	115	600	400	163		116-ML250T
2000	500	175	800	400	603		116-ML500T
4000	1000	240	900	400	1226		116-ML1000T
6000	1500	270	1000	400	1712		116-ML1500T

RING - ROUND, WELDLESS

- Standard: RR-C-271F
- Finish: Painted Yellow
- Design Factor: 6:1
- Identification: Trademark, Size/WLL, Batch Code

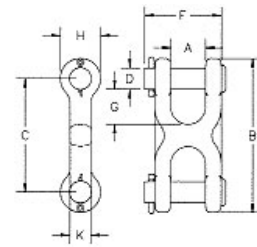


Size (in)	WLL (lb)	Weight (lb)	Dimension (in)			Price / ea.	Part Number
			Dia.	I.D.	O.D.		
7/8 x 4	7200	2.72	7/8	4.00	5.75	41.59	6-7/8X4RR
7/8 x 5 1/2	5600	3.47	7/8	5.50	7.25	63.60	6-7/8X5-1/2RR
1 x 4	10 800	3.69	1	4.00	6.00	61.69	6-1X4RR
1 1/8 x 6	10 400	6.60	1 1/8	6.00	8.25	68.52	6-1-1/8X6RR
1 1/4 x 5	17 000	8.36	1 1/4	5.00	7.50	117.69	6-1-1/4X6RR
1 1/4 x 10	17 000	12.65	1 1/4	10.00	12.50	133.42	6-1-1/4X10RR

LINK - TWIN CLEVIS

Not for overhead lifting - Not for grade 80 or grade 100 material

- Material: Body: Heat Treated Carbon Steel, Pins: Alloy Steel
- Standard: EN 12195-3
- Finish: Zinc & Painted
- Design Factor: 4:1
- Identification: Size/WLL



Size Chain (in)	WLL (lb)	Dimensions (in)								Price / ea.	Part Number
		A	B	C	D	F	G	H	K		
1/4 - 5/16	4700	0.47	2.50	1.16	0.38	1.31	0.43	0.94	0.50	5.99	6-1/4-5/16TCL
3/8	6600	0.53	2.81	1.81	0.44	1.80	0.50	1.00	0.56	6.90	6-3/8TCL
7/16 - 1/2	11 250	0.65	3.62	2.31	0.56	2.24	0.63	1.31	0.81	13.45	6-7/16-1/2TCL

LINK - QUICK

- Finish: Zinc & Stainless Steel



Size (in)	Wt. / ea. (lb)	Inside Length (mm)	Inside Width (mm)	Opening (mm)	WLL (lb)	Zinc Plated		Stainless Steel - 304SS		
						Price / ea.	Part Number	WLL (lb)	Price / ea.	Part Number
1/8	0.006	30	10	4	200	0.45	6-1/8"QL	330	1.68	6-1/8"SSQL
3/16	0.031	38	13	6	520	0.62	6-3/16"QL	600	2.10	6-3/16"SSQL
1/4	0.066	45	15	9	750	0.79	6-1/4"QL	950	2.78	6-1/4"SSQL
5/16	0.132	58	18	10	1525	1.52	6-5/16"QL	1350	5.25	6-5/16"SSQL
3/8	0.220	70	20	11	1800	2.59	6-3/8"QL	1700	7.29	6-3/8"SSQL
7/16	0.242	81	23	15	2550	3.52	6-7/16"QL	-	-	-
1/2	0.781	85	23	16	3300	3.98	6-1/2"QL	2975	14.87	6-1/2"SSQL

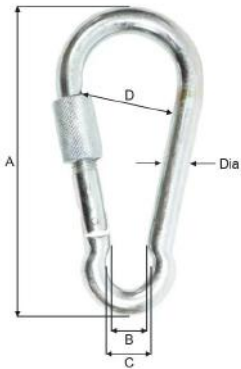
HOOK - "S"



- Finish: Zinc

Size	Length (mm)	Opening (mm)	Inside (mm)	Price / ea.	Part Number
4	35	6.0	11	0.61	6-4MMEGH
5	46	6.5	13	0.64	6-5MMEGH
6	54	7.0	15.5	0.94	6-6MMEGH
7	65	10.5	18.5	1.17	6-7MMEGH
8	75	12.5	22.5	1.57	6-8MMEGH
10	90	15.0	28	2.79	6-10MMEGH

HOOK - CARABINER, FISHING, SCREW LOCK



- Finish: Stainless Steel
- Material: 316 Stainless Steel

Size dia. (mm)	Size dia. (inch)	WLL (lb)	Weight / 100 pcs (lb)	Dimensions (mm)				Price / ea.	Part Number
				A	B	C	D		
6	1/4"	265	6.39	60	7	9	8	8.54	6-6X60SHSSSL
8	5/16"	500	15.87	80	9	13	8	10.25	6-8x80SHSSSL
11	7/16"	990	42.01	120	13	19	15	20.38	6-11X120SHSSSL

HOOK - SNAP

- Finish: Zinc & Stainless Steel
- Design Factor: 2.5:1

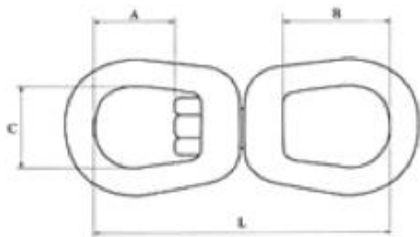


Size (mm)	O.L.		Wire Dia.		Wt. / ea. (lb)	Zinc plated			Stainless Steel - 304SS		
	(mm)	(in)	(mm)	(in)		WLL (lb)	Price / ea.	Part #	WLL (lb)	Price / ea.	Part #
5 x 50	50	2.00	5	3/16	0.022	200	0.60	6-5X50SH	220	2.05	6-5X50SHSS
6 x 60	60	2.36	6	1/4	0.062	240	0.68	6-6X60SH	260	2.37	6-6X60SHSS
7 x 70	70	2.75	7	9/32	0.099	360	1.15	6-7X70SH	396	3.38	6-7X70SHSS
8 x 80	80	3.16	8	5/16	0.154	460	1.22	6-8X80SH	500	3.97	6-8X80SHSS
10 x 100	100	4.00	10	3/8	0.317	700	1.85	6-10X100SH	770	7.05	6-10X100SHSS
12 x 140	140	5.50	12	1/2	0.595	760	3.90	6-12X140SH	1150	15.60	6-12X140SHSS
14 x 180	180	7.00	14	9/16	0.750	1120	9.65	6-14X180SH	-	-	-

SWIVEL - EYE & EYE

- Material: Forged Steel, quenched and tempered
- Standard: RR-C-271F, Type VII, Class 2
- Finish: Hot Dip Galvanized
- Design Factor: 5:1
- Identification: Trademark, Size/WLL

These swivels are positioning devices and are not intended to rotate under load.

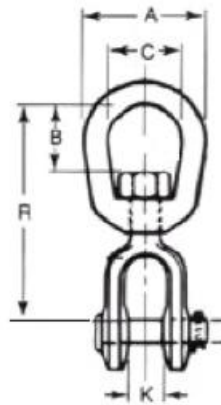


Rope (in)	WLL (lb)	Wt./ea. (lb)	Dimensions (in)				Price / ea.	Part Number
			A	B	C	L		
3/8	2250	0.71	0.94	1.50	1.25	4.31	7.77	6-3/8SWLEE
1/2	3600	1.32	1.31	2.00	1.50	5.44	12.53	6-1/2SWLEE
5/8	5200	2.49	1.56	2.38	1.75	6.56	19.28	6-5/8SWLEE
3/4	7200	4.02	1.75	2.43	2.00	7.19	31.08	6-3/4SWLEE
1	12 500	8.95	2.31	3.25	2.50	9.63	101.05	6-1SWLEE
1 1/4	18 000	16.37	2.89	3.89	3.13	11.44	259.00	6-1-1/4SWLEE
1 1/2	45 200	45.79	4.40	6.11	3.95	17.51	699.00	6-1-1/2SWLEE

SWIVEL - JAW & EYE

- Material: Forged Steel, quenched and tempered
- Standard: RR-C-271F, Type VII, Class 2
- Finish: Hot Dip Galvanized
- Design Factor: 5:1
- Identification: Trademark, Size/WLL

These swivels are positioning devices and are not intended to rotate under load.



Rope (in)	WLL (lb)	Wt./ea. (lb)	Dimensions (in)					Length	Price / ea.	Part Number
			A	B	C	K	R			
3/8	2250	0.66	2.00	0.94	1.25	0.63	3.63	4.75	9.00	6-3/8SWLJE
1/2	3600	1.34	2.50	1.31	1.50	0.75	4.50	6.06	17.30	6-1/2SWLJE
5/8	5200	2.48	3.00	1.56	1.75	0.94	5.31	7.31	21.15	6-5/8SWLJE
3/4	7200	3.88	3.50	1.75	2.00	1.13	6.06	8.31	35.55	6-3/4SWLJE
1	12 500	9.84	4.50	2.31	2.40	1.75	8.56	11.69	108.60	6-1SWLJE
1 1/4	18 000	15.75	5.69	2.89	3.13	2.06	9.44	13.13	339.17	6-1-1/4SWLJE
1 1/2	45 200	54.75	7.00	3.88	4.00	2.88	14.25	20.84	837.95	6-1-1/2SWLJE

SWIVEL - EYE & EYE

- Material: 304 Stainless Steel
- Finish: Stainless Steel
- Design Factor: Non-Load Rated

Size (in)	Price / ea.	Part Number
1/4	5.15	6-1/4SWEES
5/16	11.30	6-5/16SWEES
3/8	21.19	6-3/8SWEES
1/2	48.35	6-1/2SWEES
5/8	94.31	6-5/8SWEES
3/4	128.25	6-3/4SWEES



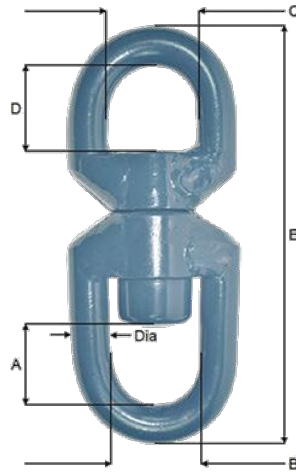
SWIVEL - SHORT BOW

Type	Price / ea.	Part Number
1-1/4" short bow swivels	368.25	6-1-1/4"SBSWL



SWIVEL - EYE & EYE

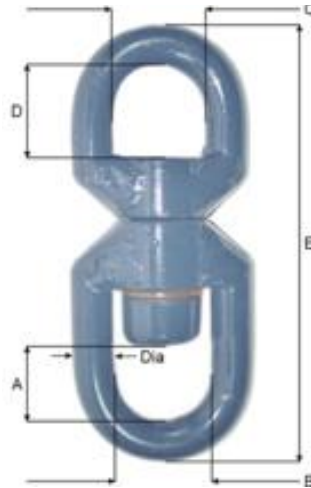
- Material: Steel
- Standard: RR-C-271F
- Finish: Painted Blue
- Design Factor: 5:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



Size (mm)	WLL (t)	Wt./ea. (kg)	Dimensions (mm)					Price / ea.	Part Number
			A	B	C	D	E		
32	12.5	7.2	60	57	55	50	305	139.85	6-32SWLEE

SWIVEL - EYE & EYE, WITH HARDENED WEARING RING

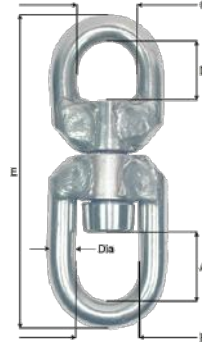
- Material: Steel
- Standard: RR-C-271F
- Finish: Painted Blue
- Design Factor: 5:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



Size (mm)	WLL (t)	Wt./ea. (kg)	Dimensions (mm)					Price / ea.	Part Number
			A	B	C	D	E		
32	12.5	7.6	60	57	55	50	305	169.20	6-32SWLEEHR

SWIVEL - EYE & EYE

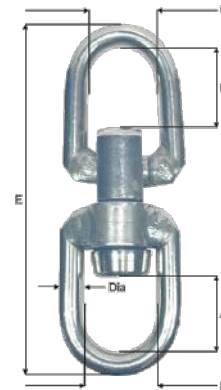
- Material: 304 Stainless Steel
- Standard: RR-C-271F
- Finish: Stainless Steel
- Design Factor: 5:1
- Identification: Size/WLL
- Rated in Metric Ton(s)



Size (mm)	WLL (t)	Wt./ea. (kg)	Dimensions (mm)					Price / ea.	Part Number
			A	B	C	D	E		
32	12.0	8.15	60	50	50	98	350	583.79	6-32SWEES

SWIVEL - FLEX, EYE & EYE

- Material: 304 Stainless Steel
- Standard: RR-C-271F
- Finish: Stainless Steel
- Design Factor: 5:1
- Identification: Size/WLL
- Rated in Metric Ton(s)

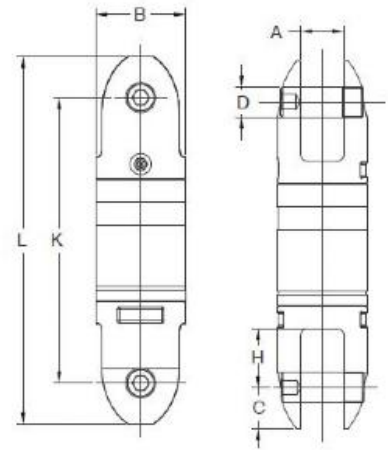


Size (mm)	WLL (t)	Wt./ea. (kg)	Dimensions (mm)					Price / ea.	Part Number
			A	B	C	D	E		
32	12.0	9.2	70	55	54	93	360	682.82	6-32SWLF
45	28.0	24.0	75	70	84	106	515	1,749.00	6-45SWLF

SWIVEL - BULLET STYLE, ANGULAR CONTACT BEARING

- Minimum Ultimate Load is 5 times the Working Load Limit
- Proof Load is 2 times the Working Load Limit
- Rated in Metric Ton(s)

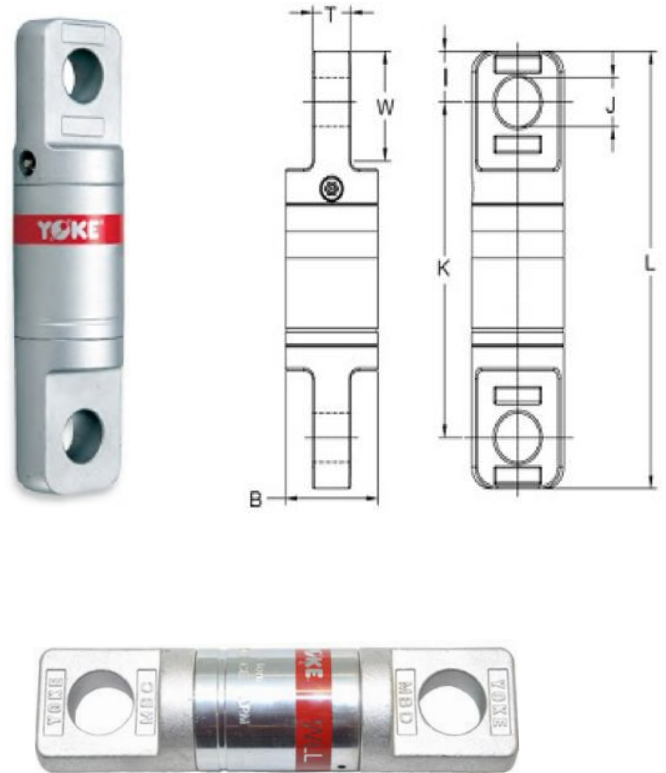
- All Swivels are manufactured using the highest grade of material available
- Tested to 2 times the Working Load Limit with certification
- Zinc plated for corrosion resistance and longer life
- Grease fittings for superior performance
- Designed for low starting torque and high rotation speed
- 20,000 cycle fatigue rated to 1.5 times WLL
- 100% Magnaflux crack detection
- All parts with batch number for quality certified and traceability
- Rated in Meric Ton(s)



Wire Size (in)	WLL (t)	Dimensions (in)							Wt./ea. (lb)	Price / ea.	Part Number
		B	K	L	C	A	D	H			
1/2	3	2.00	6.3	8.00	0.90	0.90	0.60	1.20	4.4	1,320.96	28-301-03
7/8	10	4.00	12.50	16.00	1.80	1.70	1.50	2.10	41.1	3,972.35	28-301-10
1	15	4.30	12.50	16.00	1.80	2.00	1.50	2.20	45.5	4,534.97	28-301-15
1.25	25	5.20	14.70	19.50	2.40	2.50	2.00	2.70	80.0	8,916.65	28-301-25

SWIVEL - EYE & EYE, ANGULAR CONTACT BEARING

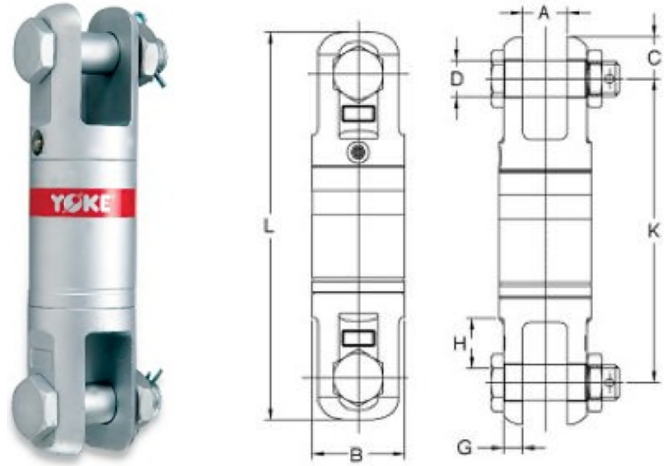
- Minimum Ultimate Load is 5 times the Working Load Limit
 - Proof Load is 2 times the Working Load Limit
 - Rated in Metric Ton(s)
-
- All Swivels are manufactured using the highest grade of material available
 - Tested to 2 times the Working Load Limit with certification
 - Zinc plated for corrosion resistance and longer life
 - Grease fittings for superior performance
 - Designed for low starting torque and high rotation speed
 - 20,000 cycle fatigue rated to 1.5 times WLL
 - 100% Magnaflux crack detection
 - All parts with batch number for quality certified and traceability
 - Rated in Metric Ton(s)



Wire Size (in)	WLL (t)	Dimensions (in)							Wt./ea. (lb)	Price / ea.	Part Number
		B	K	L	I	T	J	W			
1/2	3	2.00	6.20	8.43	1.10	0.80	1.10	2.00	4.6	1,242.77	28-306-03
3/4	8.5	3.00	9.80	12.80	1.50	1.30	1.50	3.20	16.1	1,965.62	28-306-085
7/8	10	4.00	12.20	16.30	2.10	1.70	2.00	3.50	37.4	4,184.86	28-306-10

SWIVEL - JAW & JAW, ANGULAR CONTACT BEARING

- Minimum Ultimate Load is 5 times the Working Load Limit
- Proof Load is 2 times the Working Load Limit
- Rated in Metric Ton(s)
- All Swivels are manufactured using the highest grade of material available
- Tested to 2 times the Working Load Limit with certification
- Zinc plated for corrosion resistance and longer life
- Grease fittings for superior performance
- Designed for low starting torque and high rotation speed
- 20,000 cycle fatigue rated to 1.5 times WLL
- 100% Magnaflux crack detection
- All parts with batch number for quality certified and traceability
- Rated in Meric Ton(s)



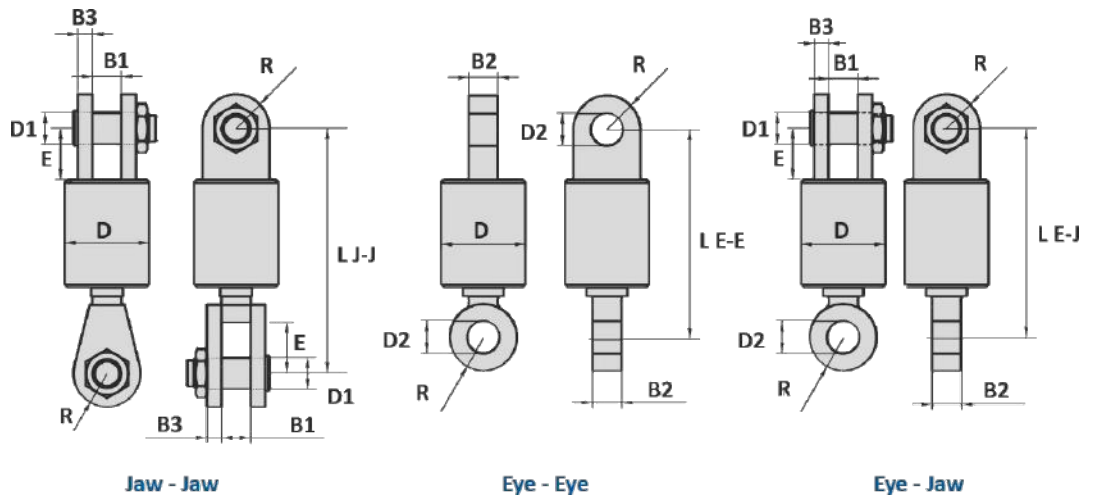
Wire Size (in)	WLL (t)	Dimensions (in)								Wt./ea. (lb)	Price / ea.	Part Number
		B	K	L	C	A	D	G	H			
1/2	3	2.00	6.20	8.20	1.00	0.90	0.80	0.40	1.30	5.1	1,212.70	28-303-03
7/8	10	4.00	12.40	16.20	1.90	1.70	1.50	1.00	2.10	43.0	4,316.72	28-303-10
1 1/4	25	5.20	14.70	20.00	2.60	2.40	2.00	1.20	2.80	87.0	8,872.03	28-303-25

SWIVEL - CLOSED BODY SWIVEL, GN®



Made in Holland

- Material: High Tensile Steel
- Finish: Painted
- Design Factor: 5:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)
3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)



WLL (ton)	Dimensions (mm)											Wt. J-J (kg)	Wt. E-E (kg)	Wt. E-J (kg)	Price	Part Number
	B1	B2	B3	D1	D2	D	E	L J-J	L E-E	L E-J	R					
17	65	55	28	63	65	170	130	480	410	480	70	59	44	55	Pricing on Request	116-17CBS
25	76	70	30	70	72	190	145	565	450	535	70	84	64	77		116-25CBS
35	90	80	40	80	82	250	175	690	540	645	85	168	133	156		116-35CBS
55	110	100	50	100	103	270	175	800	690	785	105	274	213	254		116-55CBS
70	110	100	55	108	111	290	170	810	700	810	115	323	252	275		116-70CBS
85	130	120	75	127	130	350	175	870	830	855	135	529	404	448		116-85CBS
120	155	140	90	152	155	430	190	890	920	925	170	851	663	734		116-120CBS
150	170	160	100	178	181	470	210	1003	960	1038	190	1170	892	990		116-150CBS
200	190	170	110	190	193	530	250	1150	1060	1180	220	1726	1224	1424		116-200CBS
250	210	190	120	250	253	600	280	1240	1170	1300	260	2587	1737	2090		116-250CBS
300	250	190	175	290	293	750	300	1350	1280	1440	300	4320	2769	3438	116-300CBS	

BLOCK - TRY NET

- **Roller Bearing and Grease Nipple**
- Finish: Galvanized
- Design Factor: 4:1
- Identification: Trademark, Size/WLL
- Rated in Metric Ton(s)

WLL (t)	Size (in)	Wt. (lb)	Price / ea.	Part Number
5	6	24	391.00	6-6"TNB
10	8	56	638.12	6-8"TNB



BLOCK - YARDING



- **Roller Bearing and Grease Nipple**
- Material: Steel
- Finish: Painted, Red
- Design Factor: 4:1
- Identification: Size/WLL
- Rated in Metric Ton(s)

Wire size (in)	WLL (t)	Size (in)	Qty. / box	Wt. (lb)	Price / ea.	Part Number
1/4 - 5/16	1.5	3	10	3	49.35	6-3"YB
3/8	3	4	10	6	77.25	6-4"YB
1/2	4.5	5	5	9	125.60	6-5"YB
9/16	6	6	2	14	192.15	6-6"YB
5/8	8	8	2	32	337.44	6-8"YB

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

BLOCK - CHAIN

- Roller Bearing and Grease Nipple
- Roller for 3/8" chain
- Material: Steel
- Standard: EN 13157
- Finish: Painted
- Design Factor: 4:1
- Identification: Trademark, Size/WLL
- Rated in Metric Ton(s)

WLL (t)	Wt. (lb)	Price / ea.	Part Number
5	9	127.76	6-CBE14



BLOCK - GIN



- Ball bearing, with hook and latch
- For Manila Rope
- Material: Steel
- Standard: BS 1692
- Finish: Painted
- Design Factor: 3:1
- Identification: Trademark, Size/WLL

Sheave Size (in)	WLL (lb)	Rope Dia. (in)	Rim Width (in)	Wt. (lb)	Price / ea.	Part Number
12	1000	1	1 3/8	12.7	149.00	6-12"GB

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

BLOCK - SHEAVE BRONZE BRUSHED

- Material: Steel
- Standard: EN 13157
- Finish: Painted
- Design Factor: 4:1



Sheave Dia. (in)	Bore dia. (mm)	Wire Dia. (in)	Qty. / box	Price / ea.	Part Number
5	24	1/2	13	40.36	6-5"SBB
6	32.5	5/8	5	60.84	6-6"SBB
8	35	7/8	5	112.25	6-8"SBB



BLOCK - SINGLE OR DOUBLE SHEAVE, WOODEN, WITH HOOK

For use with fibre rope

- Standard: EN 13157
- Finish: Galvanized
- Design Factor: 4:1
- Identification: Trademark, Size/WLL

Shell Size (in)	Rope Dia. (in)	Sheave Size (in)			Wt. (lb)	SINGLE BLOCKS			DOUBLE BLOCKS		
		O.D.	Rim	Pin		WLL (lb)	Price / ea.	Part Number	WLL (lb)	Price / ea.	Part Number
3	3/8	1 3/4	1/2	3/8	1	500	35.00	6-3"SWBH	800	56.82	6-3"DWBH
4	1/2	2 1/4	5/8	3/8	2	1000	46.85	6-4"SWBH	1400	82.50	6-4"DWBH
5	5/8	3	3/4	3/8	2.5	1200	66.40	6-5"SWBH	1800	113.55	6-5"DWBH
6	3/4	3 1/2	1	1/2	4	1800	92.67	6-6"SWBH	2500	176.95	6-6"DWBH
8	1	4 3/4	1 1/8	5/8	9.5	2800	169.02	6-8"SWBH	3800	291.37	6-8"DWBH

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

BLOCK - SNATCH, SINGLE SHEAVE, WOODEN, WITH HOOK

For use with fibre rope, opens for easy access

- Standard: EN 13157
- Finish: Galvanized
- Design Factor: 4:1
- Identification: Trademark, Size/WLL

Rope Dia. (in)	WLL (lb)	Sheave Size (in)	Wt. (lb)	Price / ea.	Part Number
7/8	2400	6	8	179.00	6-7/8X6SB
1 1/8	4800	8	12	229.50	6-11/8X8SB



BLOCK - PULLEY



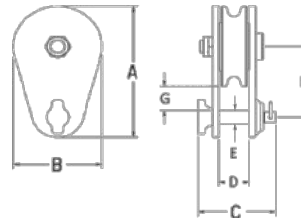
- For use with fibre rope
- Material: Stainless Steel
- Finish: Stainless Steel
- Design Factor: 4:1
- Identification: Trademark, Size/WLL

Rope Dia. (in)	Break Load (lb)	Diameter (in)	Price / ea.	Part Number
3/8	1900	1 1/4	19.30	6-PBSS3/8
5/8	3200	2	36.30	6-PBSS5/8

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

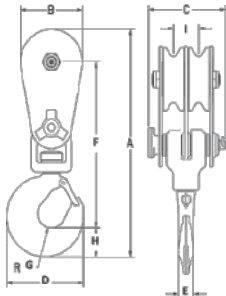
BLOCK - SNATCH, SINGLE SHEAVE, LIGHT DUTY, TAIL BOARD

- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings.
- Finish: Light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



Wire Dia. (in)	Sheave Dia. (in)	WLL (t)	Dimensions (in)							N.W. (lb)	Price / ea.	Part Number
			A	B	C	D	E	F	G			
5/16 - 3/8	3	2	4.87	3.00	2.64	1.04	0.50	2.62	0.87	3	61.72	6-3"406SB
3/8 - 1/2	4 1/2	4	7.75	4.25	3.13	1.56	0.75	4.25	1.63	8	135.00	6-4-1/2"406SB
5/8 - 3/4	6	8	9.87	6.00	4.19	1.80	1.00	5.12	1.62	15	258.24	6-6"406SB
3/4 - 7/8	6	12	9.87	6.00	4.19	1.80	1.00	5.12	1.62	24	297.00	6-6"406SBL
1 - 1-1/8	8	15	13.56	8.12	6.00	2.55	1.25	6.75	2.37	35	495.00	6-8"406SB

BLOCK - SNATCH, DOUBLE SHEAVE, LIGHT DUTY, WITH HOOK

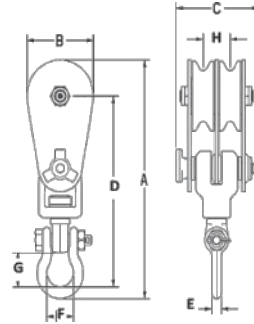


- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

Wire Dia. (in)	Sheave Dia. (in)	WLL (t)	Dimensions (in)									N.W. (lb)	Price / ea.	Part Number
			A	B	C	D	E	F	G	H	I			
3/8 - 1/2	4 1/2	4	14.77	4.24	5.25	5.24	1.00	10.78	0.94	1.87	1.72	20	367.90	6-4-1/2"408SB
5/8 - 3/4	6	12	21.12	6.00	6.13	7.86	1.56	15.50	1.44	2.62	2.62	49	577.20	6-6"408SB
5/8 - 3/4	8	12	23.18	8.12	6.13	7.86	1.56	16.50	1.44	2.62	2.03	59	699.90	6-8"408SB

BLOCK - SNATCH, DOUBLE SHEAVE, LIGHT DUTY, WITH SHACKLE

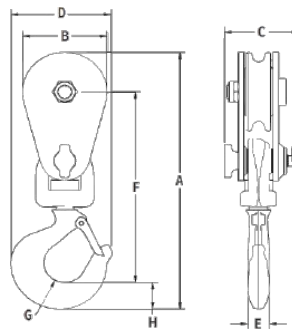
- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



Wire Dia. (in)	Sheave Dia. (in)	WLL (t)	Dimensions (in)								N.W. (lb)	Price / ea.	Part Number
			A	B	C	D	E	F	G	H			
3/8 - 1/2	4 1/2	4	14.03	4.24	5.25	11.22	0.62	1.70	2.01	1.72	20	374.78	6-4-1/2"409SB
5/8 - 3/4	6	12	21.12	6.00	6.13	16.36	1.50	3.12	3.12	2.03	49	610.28	6-6"409SB
5/8 - 3/4	8	12	23.17	8.12	6.13	17.36	1.50	3.12	3.12	2.03	59	710.40	6-8"409SB



BLOCK - SNATCH, SINGLE SHEAVE, ALLOY, WITH HOOK

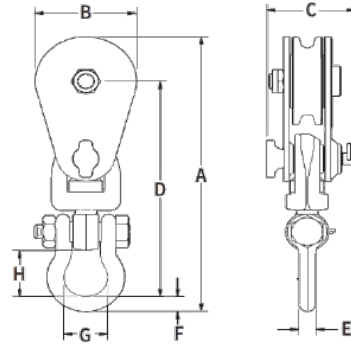


- Material: Manufactured from the highest quality alloy steel, forged swivel tees, yokes and end fittings
- Finish: Yellow for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

Wire Dia.		Sheave Dia. (in)	WLL (t)	Dimensions (in)								N.W. (lb)	Price / ea.	Part Number
(mm)	(in)			A	B	C	D	E	F	G	H			
19-22	3/4 - 7/8	10	12	24.02	10.12	4.19	7.88	1.56	16.34	1.44	2.62	61	1,024.35	6-10"416SB

BLOCK - SNATCH, SINGLE SHEAVE, ALLOY, WITH SHACKLE

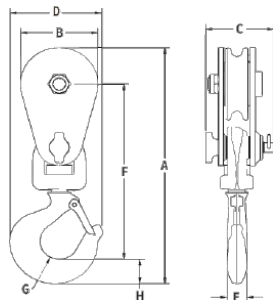
- Material: Manufactured from the highest quality alloy steel, forged swivel tees, yokes and end fittings
- Finish: Yellow for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



Wire Dia.		Sheave Dia. (in)	WLL (t)	Dimensions (in)								N.W. (lb)	Price / ea.	Part Number
(mm)	(in)			A	B	C	D	E	F	G	H			
19-22	3/4 - 7/8	10	12	23.06	10.12	4.19	16.75	1.25	1.25	3.00	3.47	57	1,071.06	6-10"417SB



BLOCK - SNATCH, SINGLE SHEAVE, LIGHT DUTY, WITH HOOK

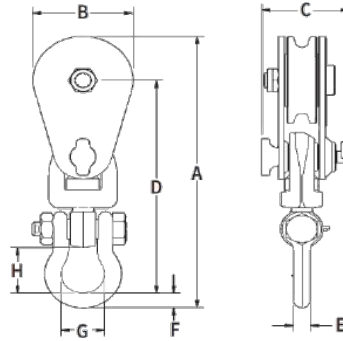


- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings.
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

Wire Dia. (in)	Sheave Dia. (in)	WLL (t)	Dimensions (in)								N.W. (lb)	Price / ea.	Part Number
			A	B	C	D	E	F	G	H			
5/16 - 3/8	3	2	9.30	3.00	2.64	3.65	0.60	6.05	1.09	0.96	5	73.46	6-3"418SB
3/8 - 1/2	4 1/2	4	14.50	4.24	3.13	4.88	1.30	9.00	1.60	1.55	12	139.10	6-4-1/2"418SB
5/8 - 3/4	6	8	18.50	6.00	4.19	6.40	1.52	10.60	2.15	2.00	27	269.52	6-6"418SB
5/8 - 3/4	8	8	20.25	8.12	4.19	6.40	1.52	11.00	2.15	2.00	37	317.50	6-8"418SB

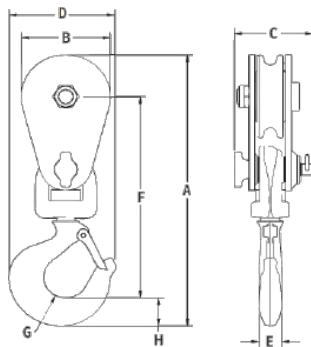
BLOCK - SNATCH, SINGLE SHEAVE, LIGHT DUTY, WITH SHACKLE

- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



Wire Dia. (in)	Sheave Dia. (in)	WLL (t)	Dimensions (in)								N.W. (lb)	Price / ea.	Part Number
			A	B	C	D	E	F	G	H			
5/16 - 3/8	3	2	9.27	3.00	2.64	7.27	0.50	0.50	1.32	1.56	5	75.82	6-3"419SB
3/8 - 1/2	4 1/2	4	13.38	4.24	3.13	10.57	0.62	0.69	1.70	2.00	12	139.05	6-4-1/2"419SB
5/8 - 3/4	6	8	18.93	6.00	4.19	14.68	1.25	1.25	3.00	3.47	27	281.60	6-6"419SB
5/8 - 3/4	8	8	20.99	8.12	4.19	15.68	1.25	1.25	3.00	3.47	34	334.00	6-8"419SB

BLOCK - SNATCH, SINGLE SHEAVE, WITH HOOK

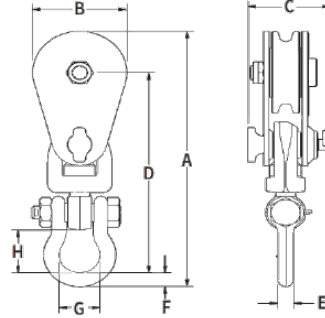


- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

Wire Dia.		Sheave Dia. (in)	WLL (t)	Dimensions (in)								N.W. (lb)	Price / ea.	Part Number
(mm)	(in)			A	B	C	D	E	F	G	H			
19-22	3/4 - 7/8	8	15	23.50	8.12	5.09	8.34	1.76	16.51	1.50	2.93	51	629.10	6-8"420SBS
26-28	1 - 1 1/8	8	15	23.50	8.12	5.90	8.34	1.76	16.51	1.50	2.93	58	629.10	6-8"420SB

BLOCK - SNATCH, SINGLE SHEAVE, WITH SHACKLE

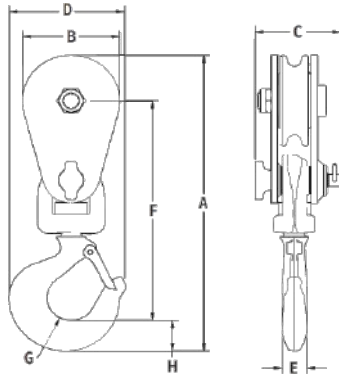
- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



Wire Dia.		Sheave Dia. (in)	WLL (t)	Dimensions (in)								N.W. (lb)	Price / ea.	Part Number
(mm)	(in)			A	B	C	D	E	F	G	H			
19-22	3/4 - 7/8	8	15	23.50	8.12	5.09	17.19	1.50	1.75	3.12	3.12	63	662.96	6-8"421SB
26-28	1 - 1 1/8	8	15	23.50	8.12	5.25	17.19	1.50	1.75	3.12	3.12	59	662.56	6-8"421SBL



BLOCK - SNATCH, SINGLE SHEAVE, LARGE, SUPER DUTY, WITH HOOK

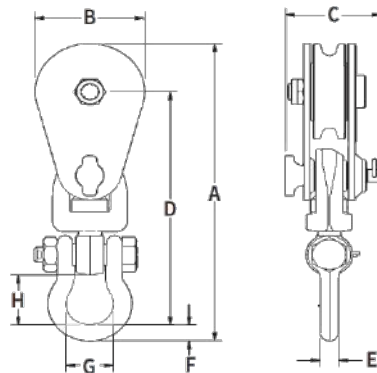


- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)

Wire Dia.		Sheave Dia. (in)	WLL (t)	Dimensions (in)								N.W. (lb)	Price / ea.	Part Number
(mm)	(in)			A	B	C	D	E	F	G	H			
25-29	1 - 1-1/8	8	20	25.84	8.12	6.00	9.39	2.00	18.43	1.50	3.38	102	1,819.50	6-8"430SB

BLOCK - SNATCH, SINGLE SHEAVE, LARGE, SUPER DUTY, WITH SHACKLE

- Material: Manufactured from the highest quality tensile steel, forged swivel tees, yokes and end fittings.
- Finish: Yellow end fittings, light blue body for quick recognition
- Identification: Manufacturer, Rated Load, Rope Size(s)
- Furnished with Bronze Bushings and Grease Nipples
- Blocks open for easy wire installation.
- Design Factor: 4:1
- Standard: EN 13157
- Rated in Metric Load(s)



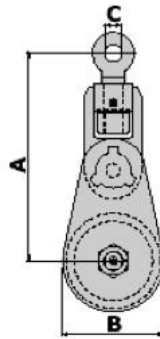
Wire Dia.		Sheave Dia. (in)	WLL (t)	Dimensions (in)								N.W. (lb)	Price / ea.	Part Number
(mm)	(in)			A	B	C	D	E	F	G	H			
25-29	1 - 1 1/8	8	20	26.57	8.12	6.00	19.76	2.00	2.75	3.72	4.00	110	1,906.00	6-8"431SB
25-28	1 - 1 1/8	18	25	41.36	18.25	7.13	29.12	2.00	3.12	3.50	4.81	322	5,207.00	6-18"431SB
25-28	1 - 1 1/8	20	30	52.40	20.25	8.31	38.34	2.50	3.94	5.62	7.06	418	9,982.99	6-20"431SB

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.

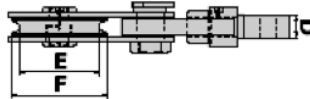
BLOCK - SNATCH, SINGLE SHEAVE, HEAVY DUTY, WITH EYE, GN®

Made in Holland

- Sheave with Bronze Bearing
- Shackles, available from stock, must be ordered separately
- Material: Constructed of HD mild steel
- Standard: EN 13157
- Design Factor: 4:1
- Finish: Painted
- Rated in Metric Ton(s)



***Tolerance:**
Forged parts +- 5%
Machined parts +- 1mm



Wire Dia.		WLL Eye Pull	A	B	C	D	E	F	Wt. (kg)	Price / ea.	Part Number
(in)	(mm)	(t)	(mm)								
1	22-25	17	490	160	44	57	110	150	49	Pricing on Request	116-6"SB
1 1/8	25-28	25	602	220	53	70	150	200	80	Pricing on Request	116-8"SB
1 1/4	28-32	25	632	270	53	70	190	250	93	7,710.00	116-10"SB
1 1/4	28-32	25	662	320	53	70	240	300	109	Pricing on Request	116-12"SB
1 1/4	28-32	25	692	370	53	70	290	350	116	Pricing on Request	116-14"SB
1 1/2	32-38	35	835	470	60	80	380	450	211	16,365.00	116-18"SB
1 1/2	32-38	35	865	520	60	80	430	500	238	Pricing on Request	116-20"SB
1 1/2	32-38	35	925	625	60	80	535	605	284	Pricing on Request	116-24"SB
1 5/8	38-42	55	1040	625	73	100	520	605	460	28,015.00	116-24"55TSB
1 7/8	44-48	85	1212	780	85	120	630	750	890	Pricing on Request	116-30"SB
2	50-55	120	1327	880	100	140	740	860	1200	Pricing on Request	116-34"SB
2 1/2	60-70	150	1427	930	113	160	760	910	1530	Pricing on Request	116-36"SB
3	75-85	200	1630	1080	135	170	870	1060	2285	Pricing on Request	116-42"SB
3 1/2	88-93	250	1785	1190	145	190	970	1170	3015	Pricing on Request	116-46"SB

A potential hazard exists when lifting or dragging heavy loads with tackle block assemblies. Failure to design and use tackle block systems properly may cause a load to slip or fall, the result could be serious injury or death. A tackle block system should be rigged by a qualified person as defined by ANSI/ASME B30.



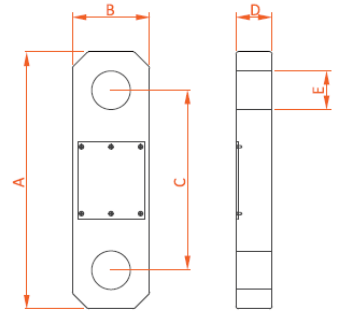
- Since 1992, Wirop Industrial Co., Ltd. has been providing the load testing equipment worldwide. Wirop is a specialist in test beds across many different rigging and lifting gears. All these products have been part of many different fields including oil and gas, marine, and construction.
- Ever since its establishment in 1979 with continuous integration, Wirop is now extending its product line and commercializing its

load monitoring products to the market. We implement the new generation of load monitoring systems. Networking the load with our modern-day computerized products. We are proud to be able to offer this load monitor system to global market. All the load monitoring products are designed, developed and manufactured by our motivated and mixed discipline engineering team.

LOAD CELL - WIRELESS KIT

Load Cell Kit includes:

- Load Cell (wireless)
- Handheld Reader (wireless)
- Carrying Case (< 75 t only, >= 75 t are in wooden crates)
- Instruction Manual(s)
- Certification (Calibration & Warranty)



Capacity (t)	Accuracy (%)	Weight (kg)	Dimensions (mm)					Price	Part Number (kits)
			A	B	C	D	E		
5	0.3	2.9	275	104	196	48	27	8,789.45	176-5TLC
12	0.3	4.7	303	115	204	48	38	10,359.29	176-12TLC
25	0.3	8.3	365	132	234	63	53	12,192.00	176-25TLC
35	0.3	11.4	410	132	248	69	60	13,323.00	176-35TLC
50	0.3	14.7	465	166	273	79	72	16,054.00	176-50TLC
75	0.3	23.4	550	223	296	79	85	18,746.00	176-75TLC
100	0.3	42.0	615	213	335	122	99	27,008.00	176-100TLC
150	0.3	55.7	690	242	370	124	112	34,644.90	176-150TLC
200	0.3	87.0	710	300	350	155	132	Pricing on Request	176-200TLC
300	0.3	147.7	860	312	430	189	153	Pricing on Request	176-300TLC

- The wireless load link transmits the load value to a computer or handset device via radio channel. Aerospace grade aluminum alloy tension link provides high corrosion resistance capability and high level of robust design for rugged environment.
- The wireless communication distance ranges from 500 m to 600 m or even longer using IEEE 802.15.4 networking definition in license free band.

- Wirop engineering team has the leading power saving technology in the load monitoring industry. Talented engineering team has developed in medical grade noise filter technology coupled with ultra-low voltage operating system without losing high accuracy. The continuous reading battery life reaches 925 hours at data rate of 1 Hz.

	Wireless Load Link	Cable Load Link
Material:	Aerospace grade aluminium	
Battery:	AA battery x 4	
Operating hours:	280-950	
Safety factor:	5 times	
Data rate:	1-10 Hz	
System Range:	500 ~ 600 m	
Frequency:	2.4 GHz	
Operating temp:	-10°C ~ 60°C	
Storage temp:	-10°C ~ 70°C	
Sensitivity:	1.5 mV / V or above	
Input resistance:	430 ± 30 Ω	
Zero balance:	± 2%	
Max Excitation:	12 V	
Temp effect on zero:	0.03% / 10°C	
Temp effect on output:	0.05% / 10°C	
Safety overload:	150%	





Software Packages:

Wirop provides different software platforms for users to capture the load data. Currently, we provide Wi-Load, CertiPro, and Centre of Gravity. All the software packages work on Windows PC platform Win7, Win8, and Win10.

LOAD CELL - SOFTWARE PACKAGES

Software Package	Price	Part Number (kits)
Wi-Load Data Logging	2,872.00	176-DLSW
Certificate Generator	2,872.00	176-CGSW
Centre of Gravity	2,872.00	176-COGSW



The Wi-Load Data Logging software package:

is a user friendly, vibrant, and versatile wireless load cell monitoring package. Wi-load allows the user to instantly read load values from multiple load cells. It is capable of monitoring up to 96 load cells via live data. The logging data are saved in excel format, or CSV data file which can be opened for analysis.

The Certificate Generator software package:

USB reader coupled with Certificate Generator software package read and record the load of a single loadcell against time. It plots the graph showing load vs. time. The interface is similar to Wirop Testbed operating software. It helps the user to generate the test certificate instantly.

Centre of Gravity software package:

Wirop provides compression loadcells. Capacity ranges from 2.5 t to 100 t. The Compression loadcell coupled with the Centre of Gravity software package. The center of gravity can be easily found.

Readers:

Wirop developed two type of reading device, Mobile handset and the USB reader. The Mobile Handset reads the load data and records the peak, average, and displays the current load. The Mobile handset simultaneously monitors four wirop load cells. The USB reader sends the load data to the Windows based computers. The USB reader works with any software packages developed by Wirop IT team and provides different functionality for the customers.

Wireless Handset and Cable Handset:

USB reader coupled with Certificate Generator software package read and record the load of a single loadcell against time. It plots the graph showing load vs. time. The interface is similar to Wirop Testbed operating software. It helps the user to generate the test certificate instantly.

- Reading up to four Wirop wireless load cells at once.
- Showing the load in different units. kg, t, lb, kN.
- Recording the peak load of each load cell.
- Pre-set Zero.
- Peak Recoding
- Summing multiple load value.
- Wireless range up to 500-600 m in free space.
- Battery: Four AA batteries.
- Operating Temperature: -10°C ~ 50°C



USB Reader:

USB reader connects the loadcells with the computer.



WATER BAGS, CRANE CERTIFICATION FLUID WEIGHT



Streamline your crane testing operations with the Canflex water filled Crane Certification Fluid Weight Water Bags. Made from 100% "High Tenacity" PVC coated polyester fabric material which comes ready with: safety bolt type shackles, master link, fluid transfer fittings, hoses, ball valves, and load cells required for operation. These bags can also be used as an emergency fluid storage container.

Some of the Crane Certification Fluid Weight Water Bags features are:

- Multiple clusters of up to 300t from a single hook (3 x CT/CPS-100) can be used for larger test loads.
- Foldable for easy storage and transportation.
- Used worldwide for ship-deck cranes, offshore rigs and general-purpose cranes.
- Sizes 1 to 10 Tonnes water bags shipped with carry/storage bag. Sizes 12.5 to 100 Tonnes water bags includes Clip-Lok wood shipping/storage box.
- Used worldwide for ship-deck cranes, offshore rigs, and general-purpose cranes.
- Water Bag 3D Model FEA (Finite Element Analysis) Force & Stress
- All Canflex water bags with "Generic" ABS Weight & Volume Certifications.
- All Canflex Crane Test Water Bags maintain a minimum 7:1 Safety Factor of the operational water test bag's Working Load.
- Test multiple crane sizes with one fluid weight.
- All products are Manufactured in accordance with ISO 9001:2015 Quality
- Management Standard. Canflex (USA) Inc holds certificate No FM 517957
- Capacities range from 1 to 100 Tonnes (1,000 to 100,000 Kg).



LIFEBOAT TEST WATER BAGS

- Lifeboat test water bags are used for evenly distributed load tests. These test water bags come with fill/offload fittings and an automatic relief valve which is activated once the lifeboat bags achieve the desired weight. Capacities 100; 250; 375, 400 and 500 Kg.

Option Optional Accessories

- 1" Ball valve w/ female camlock
- 20 ft x 1" suction hose with camlocks
- Port Drain Manifold w/ camlocks(4 or 6 ports)
- 50 ft x 2" discharge fire hose
- Water meter (Gallons or m3)
- Air driven double Diaphragm pump
- 6 ft x 2" suction hose with camlocks
- Clip-Lok shipping wood box
- Complete Fill/Offload LBB kit

Accessories / Parts Included

- **1" NPT flange connection
- 3/4" Threaded Plug with lanyard Drain/Vent
- Relief Valve
- ** 2" Also available



CANFLEX INC. Crane Certification Fluid Weight Water Bags continued.

Model		Weight	Volume	Empty Height (Length)	Filled Height (L)	Max Dia. (ø)	Dry Weight without Accessories	Fittings	Shipping Volume with Accs.	Shipping Weight with Accs.
		kg	Liters / m ³	m	m	m	kg	3" NPT	M3	kg
		lb	USG	ft	ft	ft	lb	4"NPT	ft ³	lb
***	CT/CPS-35LH	35,000	35,000 / 35	8.07	7.11	3.91	417	1	°2.0	°521
		77,161	9,246	26.50	23.33	12.83	920	1	°71	°1150
***	CT/CPS-40LH	40,000	40,000 / 40	8.71	7.72	4.07	440	1	°2.6	°567
		88,184	10,566	28.58	25.33	13.36	970	1	°92	°1250
****	CT/CPS-50LH	50,000	50,000 / 50	8.99	7.77	4.56	544	1	°3.1	°796
		110,231	13,208	29.50	25.50	14.96	1200	1	°112	°1755
****	CT/CPS-100LH	100,000	100,000 / 100	11.27	10.00	5.65	952	1	°4.5	°1450
		220,462	26,420	37.00	32.90	18.56	2100	2	°160	°3200

NOTES

- Dry Weight does not include hoses and PVC ball valves
- "LH" Designates LOW HEADROOM (short) Water Bag
- 250 Kg and 500 Kg Fluid Weight Water Bags also available
- These bags are tetrahedron shape

1. Shipping with carry/storage bag made of 18 oz/yd²PVC material;
2. Shipping with Clip-Lok style Woodbox: 48" x45" x 29"H;
3. Shipping with Clip-Lok style Wood box: 48" x45"x 53"H;
4. Shipping with Clip-Lok style Wood box: 62" x 45" x 62"H;
5. Shipping with Clip-Lok style Wood box: 88" x 76" x 62"H;
6. Gangway Load Test Bags with flat bottom;

WATER BAGS, LIFEBOAT

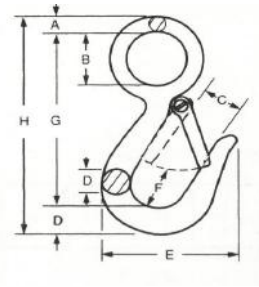
MATERIAL SPECIFICATIONS:
 "High Tenacity PVC coated Polyester Fabric "
 - with RF (HF) Welded seams

- (*) Material Weight 48 oz/yd² (1622 g/m²). Tensile Strength 924 lbs/in (8090 N/5cm); 4x2 Panama weave

Model		Weight	Volume	Diameter	Length	Dry Weight
		kg	Liters / m ³	m	m	m
		lb	USG	ft	ft	ft
*	LBB-100	100	100 / 0.10	0.32	1.5	7
		221	26.4	12.5	59	15
*	LBB-250 LBB/FT-250'	250	250 / 0.25	0.51	1.6	9
		551	66.1	20.0	63	20
*	LBB-375 LBB/FB-375'	375	375 / 0.375	0.51	2.26	10
		826	99.2	20.0	89	22
*	LBB-400 LBB/FB-400'	400	400 / 0.40	0.51	2.40	11
		881	105.8	20.0	94.5	25
*	LBB-500 LBB/FB-500'	500	500 / 0.50	0.51	2.9	13
		1,102	132.0	20.0	114	28

HOOK - SNAP, WITH LATCH

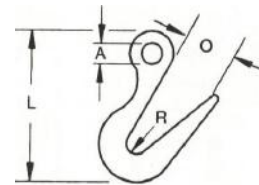
- Material: Mild Steel
- Finish: Galvanized
- Design Factor: 4:1
- Identification: Trademark, Size/WLL



Size (in)	WLL (lb)	Wt. (lb)	Dimensions (in)						Price / ea.	Part Number
			A	B	C	D	E	F		
7/16	750	0.23	0.25	0.75	0.75	0.44	2.25	0.75	5.60	6-7/16GSH
9/16	1000	0.48	0.34	1.12	0.81	0.56	2.69	0.88	9.10	6-9/16GSH

HOOK - SORTING, WITH HANDLE

- Material: Steel
- Finish: Powder Coated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code
- Rated in Metric Ton(s)



WLL Tip (t)	WLL Bottom (t)	Wt. (lb)	Dimensions (in)				Price / ea.	Part Number
			A	R	L	O		
2	7 1/2	6.25	1.38	.625	9.69	2.81	127.85	6-2TSH

HOOK - LANYARD, WITH DOUBLE LOCK

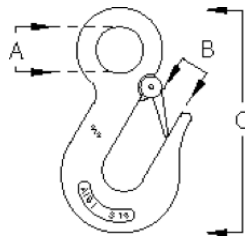
- Material: Mild Steel
- Finish: Zinc

Break Load (lb)	Price / ea.	Part Number
5000	10.62	6-DLLH



HOOK - EYE, SLIP, WITH LATCH

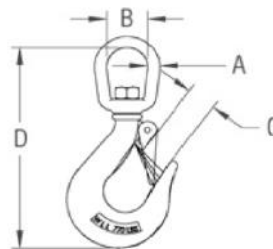
- Material: AISI Stainless Steel 316
- Finish: Stainless Steel
- Design Factor: 4:1
- Identification: Size/WLL



Chain Size (in)	WLL (lb)	Wt. / ea. (lb)	Dimensions (in)			Price / ea.	Part Number
			A	B	C		
3/8	2000	0.92	0.72	0.79	4.75	66.09	6-3/8SSESH
1/2	3000	1.90	0.93	1.06	6.00	124.54	6-1/2SSESH

HOOK - SWIVEL EYE, WITH LATCH

- Material: AISI Stainless Steel 316
- Finish: Stainless Steel
- Design Factor: 4:1
- Identification: Size/WLL



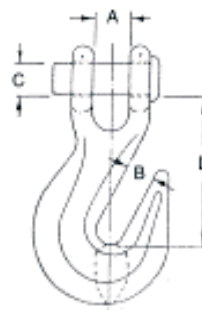
Size (in)	WLL (lb)	Dimensions (in)				Weight / ea. (lb)	Price / ea.	Part Number
		A	B	C	D			
1/4	770	0.25	0.83	0.75	4.55	0.40	29.25	6-1/4"SSSWH
5/16	1430	0.35	1.07	0.76	5.17	0.70	46.10	6-5/16"SSSWH

HOOK - CLEVIS, GRAB, GRADE 70

For use with Grade 70 or lower chains

Not for use with grade 80 chain and chain slings used in overhead lifting

- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Gold Chromated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, G70



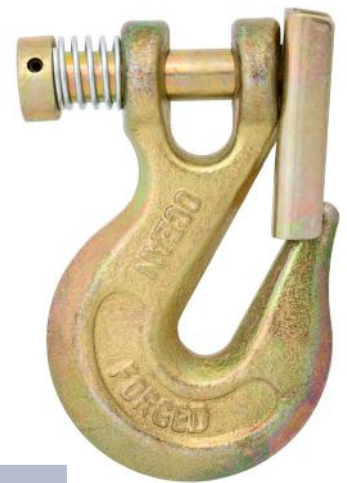
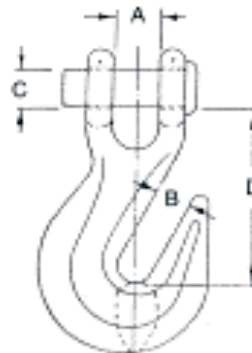
Chain Size (in)	WLL (lb)	Dimensions (in)				Wt. / ea. (lb)	Qty. / box	Price / ea.	Part Number
		A	B	C	D				
1/4	3150	0.36	0.40	0.38	1.97	0.40	100	4.32	6-1/4"CGH
5/16	4700	0.40	0.44	0.44	2.26	0.79	50	7.05	6-5/16"CGH
3/8	6600	0.48	0.50	0.47	2.63	1.00	50	9.07	6-3/8"CGH
7/16	8750	0.66	0.56	0.56	2.75	1.31	40	16.10	6-7/16"CGH
1/2	11 300	0.77	0.69	0.62	3.19	2.10	25	19.75	6-1/2"CGH

HOOK - CLEVIS, GRAB, WITH LATCH, GRADE 70

For use with Grade 70 or lower chains

Not for use with grade 80 chain and chain slings used in overhead lifting.

- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Gold Chromated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, G70



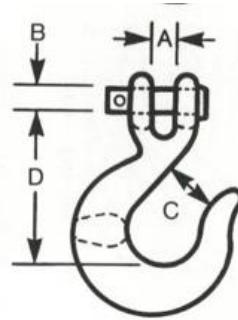
Chain Size (in)	WLL (lb)	Dimensions (in)				Wt. / ea. (lb)	Qty. / box	Price / ea.	Part Number
		A	B	C	D				
1/4	3150	0.36	0.40	0.38	1.97	0.40	100	8.88	6-1/4"CGHL
5/16	4700	0.40	0.44	0.44	2.26	0.79	50	10.50	6-5/16"CGHL
3/8	6600	0.48	0.50	0.47	2.63	1.00	50	12.95	6-3/8"CGHL
1/2	11 300	0.75	0.66	0.63	3.19	2.10	25	23.56	6-1/2"CGHL

HOOK - CLEVIS, SLIP, GRADE 70

For use with Grade 70 or lower chains

Not for use with grade 80 chain and chain slings used in overhead lifting

- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Gold Chromated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, G70



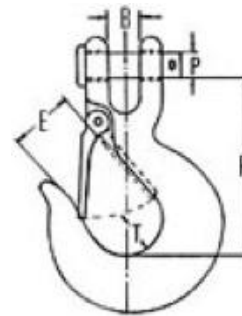
Chain Size (in)	WLL (lb)	Dimensions (in)				Wt. / ea. (lb)	Qty. / Box	Price / ea.	Part Number
		A	B	C	D				
1/4	3150	0.44	0.37	0.91	2.60	0.50	100	5.55	6-1/4"CSH
5/16	4700	0.50	0.43	1.10	2.85	0.75	50	7.59	6-5/16"CSH
3/8	6600	0.59	0.47	1.30	3.25	1.20	50	11.84	6-3/8"CSH
1/2	11 300	0.70	0.63	1.47	3.90	2.80	20	25.89	6-1/2"CSH
5/8	13 500	0.91	0.75	2.00	4.90	4.75	10	41.32	6-5/8"CSH

HOOK - CLEVIS, SLIP, WITH LATCH, GRADE 70

For use with Grade 70 or lower chains

Not for use with grade 80 chain and chain slings used in over head lifting

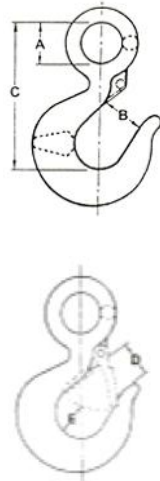
- Material: Forged Alloy Steel, Quenched & Tempered
- Standard: EN 12195-3
- Finish: Gold Chromated
- Design Factor: 4:1
- Identification: Trademark, Size/WLL, Batch Code, G70



Chain Size (in)	WLL (lb)	Dimensions (in)				Wt. / ea. (lb)	Qty. / box	Price / ea.	Part Number
		B	E	P	R				
1/4	3150	0.44	0.73	0.38	2.44	0.50	100	6.04	6-1/4"CSHL
5/16	4700	0.58	1.03	0.42	2.83	0.75	50	7.99	6-5/16"CSHL
3/8	6600	0.59	1.29	0.47	3.33	1.20	50	12.99	6-3/8"CSHL
1/2	11 300	0.75	1.38	0.63	4.00	2.80	20	27.80	6-1/2"CSHL
5/8	13 500	0.93	2.00	0.75	4.94	4.75	10	52.95	6-5/8"CSHL

HOOK - EYE, HOIST, WITH LATCH

- Material: Forged Alloy & Carbon Steel, Quenched & Tempered
- Standard: EN 1677-5,-2
- Finish: Powder Coated (Yellow)
- Design Factor: 5:1
- Identification: Trademark, Size/Load, BatchCode, (Alloy)
- Rated in Metric Ton(s)



WLL (t)		Qty. / box	Dimensions (in)					Wt. / ea. (lb)	Carbon		Alloy	
Carbon	Alloy		A	B	C	D	E		Price / ea.	Part Number	Price / ea.	Part Number
3/4	1	80	0.75	0.94	3.22	0.88	0.81	0.5	6.15	6-3/4TCEH	5.40	6-1TAEH
1	1 1/2	50	0.91	1.03	3.66	0.97	0.81	0.8	6.45	6-1TCEH	6.98	6-1-1/2TAEH
1-1/2	2	40	1.12	1.06	4.09	1.00	0.84	1.1	11.59	6-1-1/2TCEH	10.80	6-2TAEH
2	3	40	1.25	1.22	4.69	1.12	1.19	1.7	14.20	6-2TCEH	14.70	6-3TAEH
3	4 1/2	30	1.56	1.50	5.78	1.34	1.38	3.6	29.25	6-3TCEH	29.95	6-4-1/2TAEH
5	7	10	2.00	1.88	7.38	1.69	1.78	6.7	58.96	6-5TCEH	59.65	6-7TAEH
7 1/2	11	5	2.44	2.25	9.06	2.06	2.12	13.0	106.90	6-7-1/2TCEH	109.35	6-11TAEH
10	15	5	2.84	2.50	10.06	2.27	2.56	18.5	180.79	6-10TCEH	199.50	6-15TAEH
15	22	2	3.50	3.30	12.53	3.02	2.88	33.8	395.00	6-15TCEH	450.00	6-22TAEH
	30	1	3.50	4.00	14.06	3.25	3.44	60.0			1,239.00	6-30TAEH

NOTE: Proof Load is 2.5 times the working load limit for 3/4TC~22TA, 22TA~30TA is 2 times – Hooks Average straightening load (ultimate load) is five times the WLL for 0.75TC~22TA, 30TA is 4.5 times WLL. (1 tonne = 2204 lb)

SEE WARNING AND APPLICATION INFORMATION FOR HOOKS

HOOK - SWIVEL EYE, HOIST, WITH LATCH

- Material: Forged Alloy & Carbon Steel, Quenched & Tempered
- Standard: EN 1677-5,-2
- Finish: Powder Coated (Yellow)
- Design Factor: 5:1
- Identification: Trademark, Size/Load, Batch Code, (Alloy)
- Rated in Metric Ton(s)



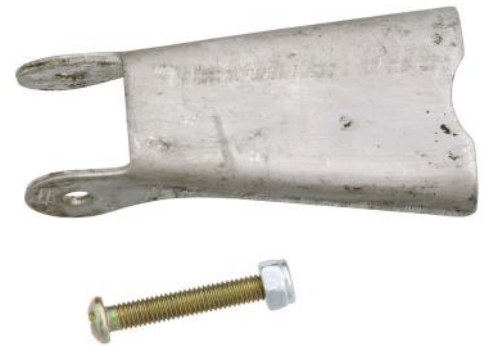
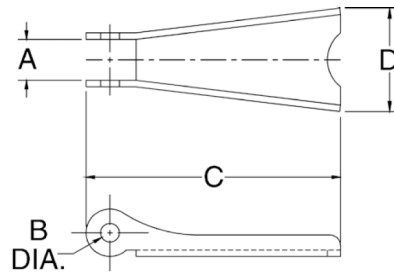
WLL (t)		ID Ball Width (in)	Throat Opening no Latch (in)	Throat Opening with Latch (in)	Weight / ea. (lb)	Qty. / box	Carbon		Alloy	
Carbon	Alloy						Price / ea.	Part Number	Price / ea.	Part Number
3/4	1	1 1/4	15/16	7/8	0.78	50	10.36	6-3/4TSWLH	10.20	6-1TASWH
1	1 1/2	1 1/2	1 1/32	31/32	1.32	50	12.67	6-1TSWLH	16.10	6-1-1/2TASWH
1 1/2	2	1 3/4	1 1/16	1	2.02	30	20.85	6-1-1/2TSWLH	26.15	6-2TASWH
2	3	1 3/4	1 7/32	1 1/8	2.57	20	22.86	6-2TSWLH	28.49	6-3TASWH
3	4 1/2	2	1 1/2	1 11/32	4.89	10	43.15	6-3TSWLH	46.25	6-4-1/2TASWH
5	7	2 1/2	1 7/8	1 11/16	10.29	5	95.28	6-5TSWLH	117.50	6-7TASWH
	11	2 3/4	2 1/4	2 1/16	18.62	5			185.00	6-11TASWH
	15	3 1/8	2 1/2	2 1/4	25.43	2			289.00	6-15TASWH
	22	4 1/16	3 3/8	3 1/8	47.25	1			656.00	6-22TASWH
	30	4 1/16	4	3 1/4	70.50	1			1,035.00	6-30TASWH

NOTE: Proof Load is 2 times the working load limit for 3/4TC~15TC and 30TA, 1TA~22TA is 2.5 times – Hooks Average straightening load (ultimate load) is five times the WLL for 0.75TC~15TC, 1TA~22TA is 4.5 times WLL and 30TA is 4 times WLL. (1 tonne = 2204 lb)

SEE WARNING AND APPLICATION INFORMATION FOR HOOKS

HOOK - LATCH KIT

- Stainless Steel Latch kits for Hoist Hooks
- Rated in Metric Ton(s)



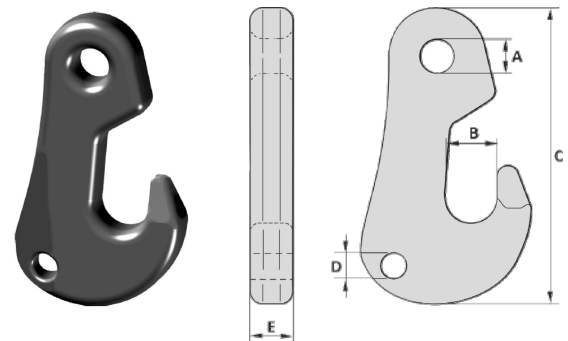
Hook Size (t)		Dimensions (in)				Wt./ea.(lb)	Price / ea.	Part Number
Carbon	Alloy	A	B	C	D			
3/4	1	0.38	0.16	1.44	0.59	0.02	2.74	6-3/4TLK
1	1 1/2	0.38	0.16	1.60	0.59	0.02	3.48	6-1TLK
1 1/2	2	0.47	0.19	1.84	0.82	0.03	3.69	6-1-1/2TLK
2	3	0.47	0.19	2.00	0.92	0.03	3.65	6-2TLK
3	4-1/2	0.56	0.17	2.41	1.00	0.06	5.65	6-3TLK
5	7	0.58	0.20	2.97	1.21	0.11	6.95	6-5TLK
7 1/2 - 10	11 - 15	0.59	0.27	3.66	1.50	0.17	15.52	6-7-1/2-10TLK
15	22	0.83	0.39	4.94	1.90	0.39	23.91	6-15C-22ATLK
20	30	0.94	0.52	5.88	2.56	0.63	59.78	6-20C-30ATLK

HOOK - ANCHOR LINE HOOK, GN®



- Material: Cast steel
- Finish: Galvanized
- Design Factor: 4:1
- Temperature Range: -20°C up to +200°C
- Certification: Certificate of Conformity (on request)
- Rated in Metric Ton(s)

WLL (ton)	MBL (ton)	Dimensions (mm)					Weight (kg)	Price
		A	B	C	D	E		
15	60	38	58	343	32	45	11	Pricing on Request
20	80	40	74	343	32	60	14	
25	100	52	86	440	38	65	26	
50	200	80	112	618	45	90	67	
80	320	90	130	709	62	110	116	



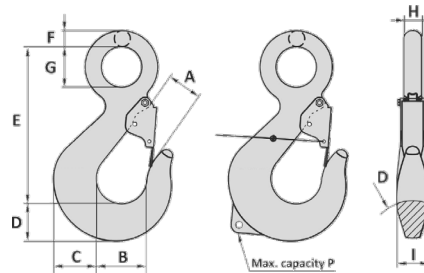
Tolerance: ± 5%

HOOK - EYE, ROV, WITH LATCH, GN®



Made in Holland

- Material: Alloy steel
- Finish: Painted
- Design Factor: 4:1
- Temperature Range: -40°C up to +200°C
- Certification: Certificate of Conformity (on request)
- 3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)
- Spare latches available on request.



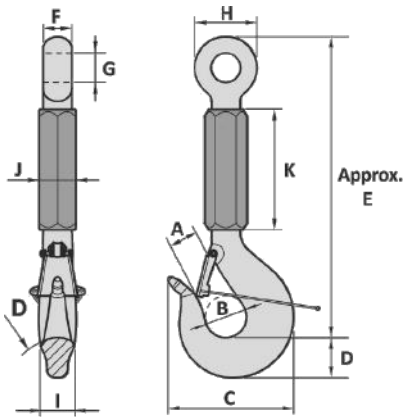
WLL (ton)	MBL (ton)	Dimensions (mm)									P (ton)	Wt. (kg)	Price	Part Number
		A	B	C	D	E	F	G	H	I				
8	32	54	68	53	48	203	25	50	25	38		3.7		-
12.5	50	71	86	68	51	253	32	64	32	48		7.6		-
16	64	81	96	76	68	284	36	72	36	53		10		-
20	80	91	107	86	76	319	40	81	40	61		13		116-SH20T
28	112	71	112	96	83	354	38	95	38	63		17		116-SH28
31	125	81	125	106	92	389	43	100	43	70		23		116-SH31T
40	160	93	140	116	103	457	48	130	48	80		34		116-SH40T
50	200	106	158	135	116	495	54	130	54	89		49		116-SH50T
63	250	119	176	151	130	565	60	150	60	99		63	Pricing on Request	116-SH63T
80	320	131	198	168	145	690	67	170	67	110		99		116-SH80T
100	400	151	225	195	172	725	79	175	79	125	4.75	160		116-SH100T
150	600	173	250	225	199	765	86	130	86	160	6.5	260		116-SH150T
200	800	200	275	260	237	850	102	150	102	180	8.5	417		116-SH200T
250	1000	233	310	290	269	928	120	170	120	200	9.5	576		116-SH250T
300	1200	264	350	330	310	1052	140	190	140	220	12	820		116-SH300T
400	1600	303	400	380	344	1195	170	210	170	240	17	1125		116-SH400
500	2000	370	450	410	390	1360	200	215	200	320	17	1840		-

Tolerance: Forged parts ± 5%, machined parts ± 1 mm

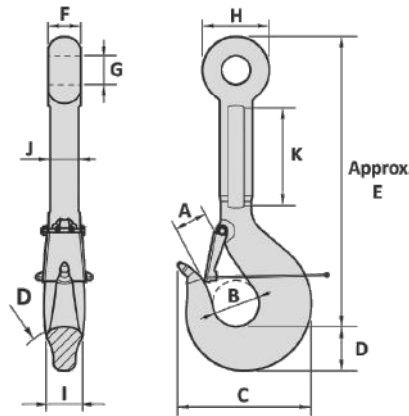
HOOK - ROV SHANK HOOK, GN®



- Material: Alloy steel
- Finish: Painted
- Design Factor: 4:1
- Temperature Range: -40°C up to +200°C
- Certification: Certificate of Conformity (on request)
- 3.1 material certificate EN 10204 (on request)
- Rated in Metric Ton(s)
- Spare latches available on request.



Type for hook WLL 5.4 ton ≤ WLL 80 ton



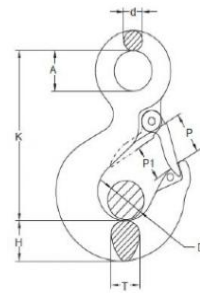
Type for hook WLL 100 ton ≤ WLL 400 ton



WLL (ton)	Dimensions (mm)											Max. Tip Capacity ton	Wt. (kg)	Price
	A	B	C	D	E	F	G	H	I	J	K			
6.5	40	55	182	50	400	30	28	60	45	50	225		8	Pricing on Request
8.5	54	68	208	55	450	30	31	75	50	56	228		11	
12	63	80	254	70	480	41	40	78	55	61	227		16	
17	71	90	297	85	514	48	44	88	60	67	226		22	
25	92	110	344	100	574	56	52	105	70	78	233		34	
35	108	130	395	120	628	58	60	124	85	96	230		56	
42.5	69	100	316	95	780	70	70	150	75	85	330		47	
55	81	112	343	106	808	80	78	162	85	100	350		62	
63	91	125	376	118	950	85	86	180	95	110	360		92	
85	104	140	418	132	893	100	86	200	106	120	290		111	
100	140	175	472	150	831	110	100	228	120	120	240	4.75	178	
125	145	180	509	170	890	124	110	260	140	140	240	4.75	249	
160	157	190	614	190	953	138	135	300	160	150	250	6.5	362	
200	176	224	688	230	998	148	135	350	175	150	250	8.5	496	
250	194	250	780	256	1063	175	145	370	200	160	250	8.5	671	
300	210	280	755	255	1153	190	155	360	220	170	300	9.5	790	
400	234	315	855	305	1253	210	185	420	240	190	300	9.5	1064	

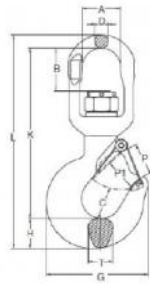
HOOK - EYE, HOIST, GRADE 100, YOKE® BRAND

- Material: Alloy Steel, Grade 100
- Standard: EN 1677-5 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)



WLL (t)	Latch Kits		Dimensions (in)								Wt./ea. (lb)	Price / ea.	Part Number
	Price/ea.	Part Number	A	D	d	H	K	P	P1	T			
1.5	18.91	28-1.5TLK	0.91	0.75	0.43	0.83	3.74	1.02	.075	0.67	0.9	30.87	28-1.5TEHH
2	22.63	28-2TLK	1.14	0.79	0.51	1.02	4.17	1.10	0.79	0.83	1.5	40.23	28-2TEHH
3	22.63	28-3TLK	1.26	0.98	0.59	1.14	4.80	1.22	0.98	0.95	2.0	56.21	28-3TEHH
5	31.46	28-5TLK	1.57	1.22	0.71	1.46	5.87	1.45	1.22	1.22	4.4	106.57	28-5TEHH
7	50.29	28-7TLK	2.00	1.54	0.95	1.85	7.56	1.81	1.54	1.46	8.8	196.21	28-7TEHH
11	54.88	28-11TLK	2.44	2.24	1.10	2.28	9.13	2.40	2.24	1.89	15.4	365.82	28-11TEHH

HOOK - SWIVEL, HOIST, GRADE 100, YOKE® BRAND



- Material: Alloy Steel, Grade 100
- Standard: EN 1677-5 / ASTM A952/952M
- Finish: Powder Coated, Blue
- Design Factor: 5:1
- Identification: Trademark, Size/WLL, Batch Code, Grade
- Rated in Metric Ton(s)

WLL (t)	Latch Kits		Dimensions (in)											Wt./ea. (lb)	Price / ea.	Part Number
	Price/ea.	Part #	A	B	C	D	G	H	K	L	P	P1	T			
1.5	18.91	28-1.5TLK	1.26	0.91	0.97	0.45	3.15	0.84	4.96	6.23	0.95	0.75	0.71	1.5	89.95	28-1.5TSWLHH
3	22.63	28-3TLK	1.62	1.38	1.16	0.63	4.02	1.13	7.73	8.36	1.22	0.98	0.95	3.3	150.13	28-3TSWLHH
5	31.46	28-5TLK	1.83	1.73	1.53	0.83	5.14	1.41	8.32	10.58	1.42	1.22	1.22	7.0	228.22	28-5TSWLHH
22	96.63	28-22TLK	4.83	4.55	2.81	1.64	10.91	3.00	18.42	23.58	3.39	3.19	2.69	73.5	2,620.83	28-22TSWLHH
30	124.25	28-30TLK	4.83	4.24	3.44	1.64	13.90	3.60	19.67	25.63	3.50	3.27	3.00	101	4,186.43	28-30TSWLHH



What makes the Sea Catch so revolutionary?

The Sea Catch Toggle Release is the simplest and most innovative design in quick release history. It is a device designed exclusively for safe release of a line or object under load.

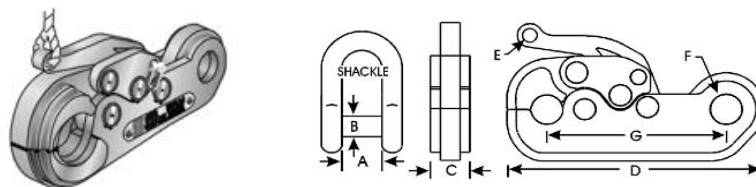
Its multi-purpose design offers a combination of features never seen before in a quick release: multi directional releasing capabilities, on-load and off-load releasing, a hitch pin safety lock to prevent inadvertent release, lanyard-style release for maximum user safety, parts made from aerospace-grade stainless plate, easy connection to common shackles, no springs, and a user friendly size.

The design anticipates reality: heavy sea conditions, corrosive marine environments, quick release kickback, inadvertent release, and the occasional shock and lock ups of unanticipated overload. The key to its success is the combination of a proven toggle linkage principal,

low friction, computer generated parts, and a lot of thinking about its many uses and applications.

Quick releases have to be specific. Movie special effects, tug-tow operations, rescue launch deployment, anchors – each release poses a very different challenge. Sea Catch meets these challenges with models ranging from 1 to 600 ton capacities. Since 1994, Sea Catches have played significant roles in safe releasing operations in 14 major industries around the world. Some units have exceeded 5,000 cycles and are still in service. All feedback has been positive, nothing but praise from engineers and users worldwide.

Releasing an object under load need not be a daunting task any longer. Release yourself of unnecessary hazards.



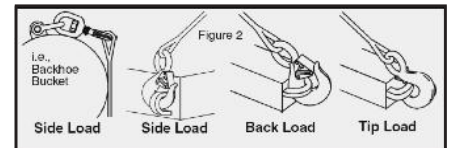
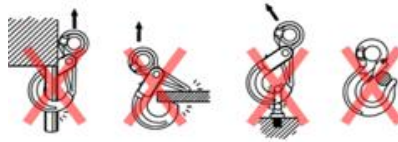
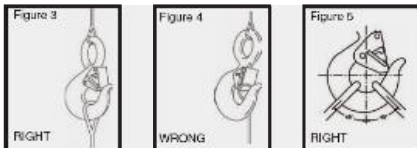
Model No.	Shackle Size (in)	Dimensions (in)							WLL (lb)	Break Load (lb)	Weight / ea. (lb)
		A	B	C	D	E	F	G			
TR3	1/4	0.47	0.31	0.41	2.85	0.18	0.37	1.96	1302	6510	0.31
TR5	7/16	0.75	0.50	0.69	4.50	0.25	0.55	3.13	3323	16 618	1.3
TR7	5/8	1.06	0.75	1.00	6.62	0.38	0.81	4.56	7042	35 210	4
TR8	3/4	1.25	0.87	1.19	7.68	0.43	0.93	5.53	9574	47 870	6.3
TR10	1	1.69	1.13	1.63	9.75	0.56	1.21	6.87	15 840	79 200	12.5
TR11	1 3/8	2.25	1.50	2.12	13.15	0.75	1.63	9.15	28 000	140 000	32
TR12	1 1/2	2.38	1.62	2.25	14.25	0.81	1.78	9.92	32 860	164300	40
TR15	1 3/4	2.88	2	2.75	17.56	1	2.16	12.21	50 200	251 000	69
TR16	2	3.25	2.25	3.13	19.73	1.12	2.46	13.75	63 380	316 900	108
TR17	2 1/2	4.15	2.75	3.88	24.13	1.37	3.01	16.81	94 740	473 700	197
TR18	3	5	3.25	4.75	30.79	1.75	3.85	21.43	154 240	771 200	360

HOOKS EYE HOIST - WARNINGS AND APPLICATION INSTRUCTIONS

Operating Practices:

Personnel using hooks shall be aware of the following:

1. Never use a hook with a throat opening that has been increased, or with a tip that has been bent out of plane from the hook body. A latch will not work properly on a hook that has been worn or bent.
2. Any hook that has a crack, nick, or gouge must be removed from service.
3. Never repair, alter, re-work, or re-shape a hook by welding, heating, burning or bending.
4. Do not swivel hooks under load.
5. It shall be determined that the load to be applied does not exceed the lesser of the load rating of the hook or the load rating of the equipment of which the hook is a part.
6. Shack loading shall be avoided.
7. Load shall be centered in the base (bowl/saddle) of the hook to prevent point loading of the hook.
8. When multileg slings are placed in the base (bowl/saddle) of the hook, the maximum included angle between sling legs shall be 90 deg or as determined by the hook manufacturer. The maximum sling leg angle with respect to the hook centerline for any rigging arrangement shall be 45 deg.
9. A collector ring, such as a link or shackle, should be used when more than two legs are placed in a hook for angles greater than 45 deg with respect to the hook centerline.
10. Hooks shall not be used in such a manner as to place a side load, back load, or tip load on the hook.
11. When using a device to close the throat opening of the hook, care shall be taken that the load is not carried by the closing device.
12. Hands, fingers, and body shall be kept from between hook and load.
13. The use of the hook with latches does not preclude the inadvertent detachment of a slack sling or a load from the hook. Hook latches aid in the retention of loose slings under slack rigging conditions only and are not intended to be antifouling devices during load handling or rigging. Visual verification of proper hook engagement is required in all cases.
14. Self-Locking hooks shall be locked during use.
15. When a latch is equipped with a lock open device to facilitate rigging, the latch shall be closed during operation.
16. When a hook is equipped with a latch, the load shall not restrict the closure of the latch.
17. The need for a latch or mousing on any hook is a function of the application of the hook and shall be determined by a qualified person.



NEVER side load, back load or tip load!

- Loads may disengage from hook if proper procedures are not followed
- A falling load can cause serious injury or death
- Not for personnel lifting

- The hook must always support the load, the load must never be supported by the latch
- Never exceed the hooks working load limit (WLL)
- Perform periodic visual inspection by trained personnel in compliance with the schedule in ANSI B30.10