

Shackle

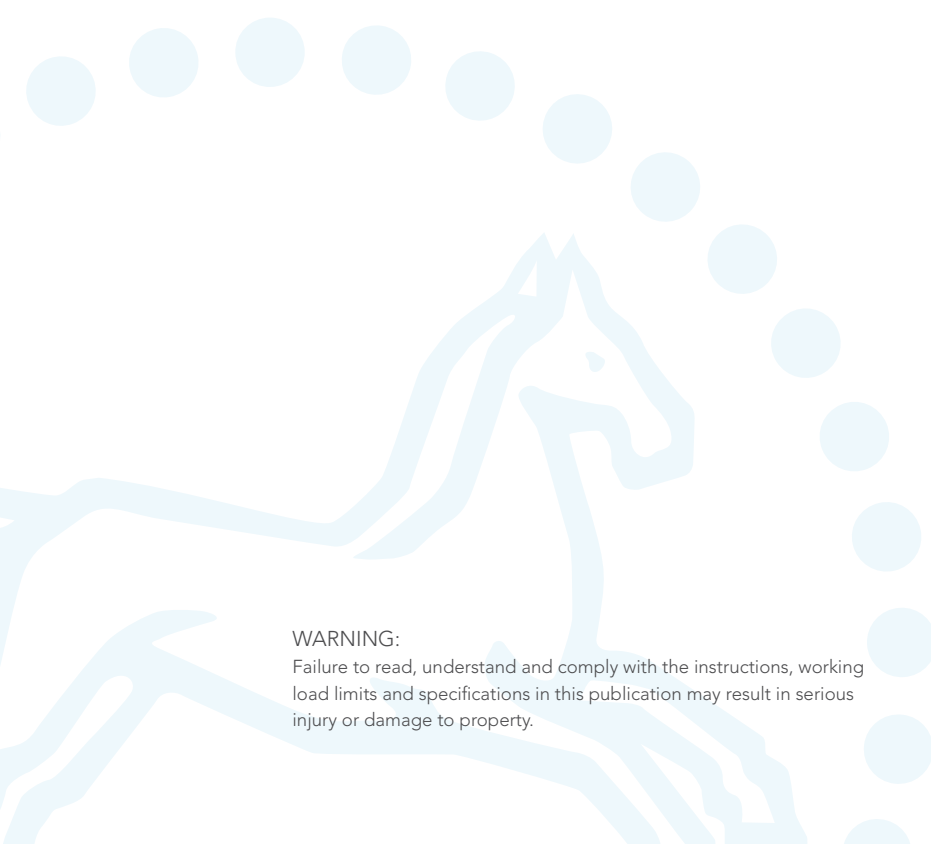
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WARNING:
Failure to read, understand and comply with the instructions, working load limits and specifications in this publication may result in serious injury or damage to property.

Feel Confident in Every Situation

Our lifting systems are valued for their long durability and high quality. Whether the working environment is hot or cold, our systems assure lifting operations with high safety and functionality.

Gunnebo Industries shackles are made from a range of steel qualities, including acid proof stainless steel and high grade alloy steel to comply with the most stringent specifications. Our workshops comprise all facilities and systems for the manufacturing and control of a top quality product. This includes tool design, an advanced tool shop, forging, heat treatment, machining, hot dip galvanizing and quality control.

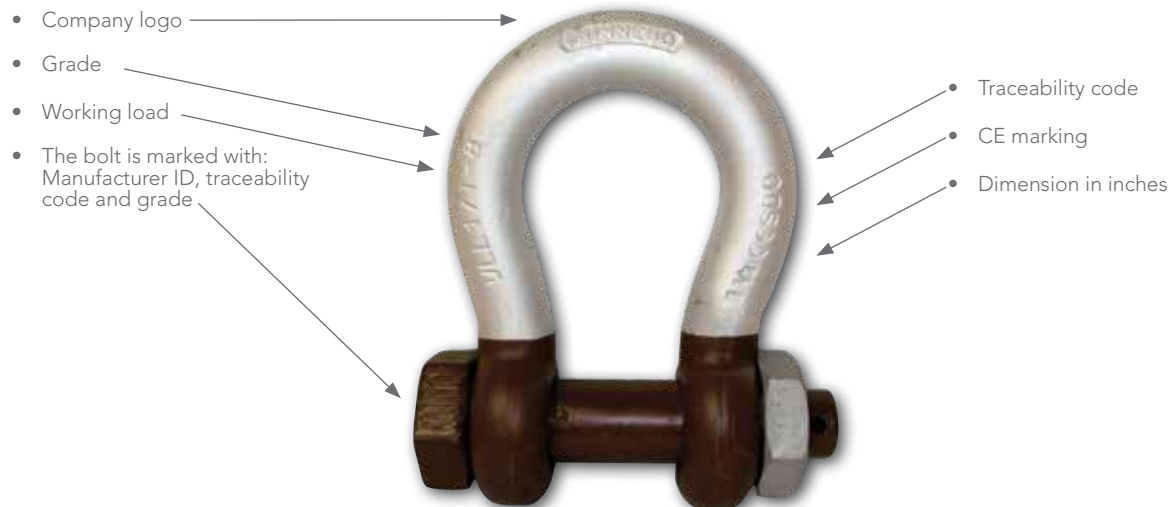
We offer a range of DNV 2.7-1 Type approved lifting shackles for offshore containers, developed for the tough conditions of the offshore industry, where safety must be of the highest priority at all times. The heat treatment of these products ensures the proper ductility and strength to sustain shock loads which may be imposed when the container is lifted from the deck of a vessel.

Furthermore we offer Standard shackles, Super lifting shackles with increased working load limit, ROV shackles, Heavy duty shackles, Wide-Body shackles, Mooring shackles, Stainless Steel shackles etc.

Make sure you have the original

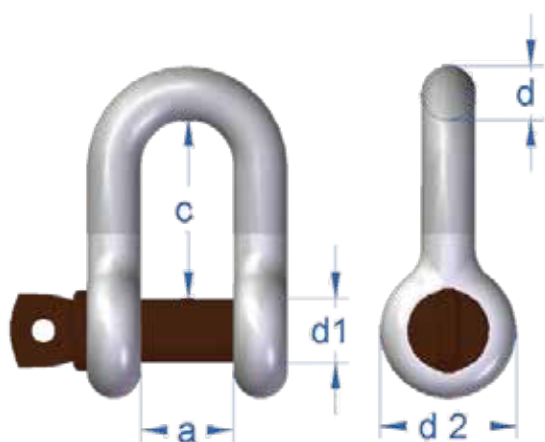
- High quality shackles acc. EN 13889 and U.S. Fed.Spec RR-C. 271 (grade A and grade B)
- Consistent product quality
- Long experience of shackle production using modern manufacturing methods
- Local availability of expertise from Gunnebo Industries subsidiary or distributors

To ensure you have a genuine Gunnebo Industries Shackle, it should be marked as below:

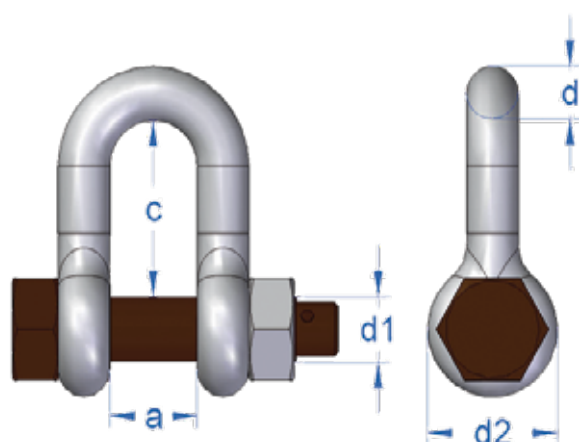


Dee Shackle No 834 and No 835

Standard:	DNV 2.7-1 Type Approved, EN 13889 and U.S Fed. Spec. RR-C-271
Material:	High Tensile Carbon Steel, Quenched and tempered, Grade 6
Finish:	All parts hot dip galvanized, pin brown painted on top of galv.
Safety factor:	6:1
Documentation:	Test certificate and traceable raw material / inspection certificate acc. EN 10204 - 3.1. DNV 2.7-1 and DNV 2.7-3 Type Approval Certification.
Temperature:	-4°F to 392°F



Shackle No 834 with screw pin



Shackle No 835 with safety bolt

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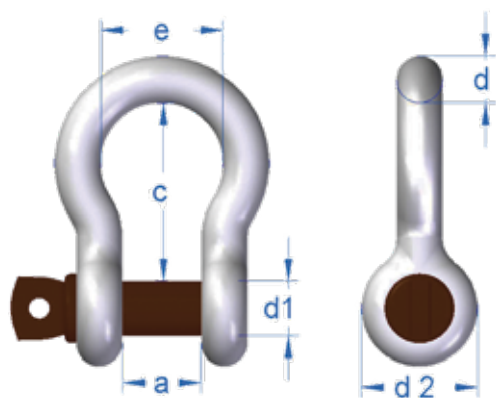
Art. no. Screw pin	Art. no. Safety bolt	WLL metric tonnes 6:1	Dim. d1	d Trade size		Inner width a*	Inner length c*	Eye outer d2	Screw pin lb	Safety bolt lb
				mm	inch					
A083405	-	0.33	0.24	5	3/16"	0.39	0.87	0.51	0.04	-
A083406	-	0.5	0.31	7	1/4"	0.47	0.98	0.47	0.13	-
A083408	-	0.75	0.39	9	5/16"	0.53	1.06	0.63	0.24	-
A083409	-	1.0	0.43	10	3/8"	0.67	1.22	0.79	0.33	-
A083411	-	1.5	0.51	11	7/16"	0.73	1.46	0.87	0.46	-
A083413	A083513	2.0	0.63	13	1/2"	0.83	1.61	1.30	0.55	0.66
A083416	A083516	3.25	0.75	16	5/8"	1.06	2.01	1.57	1.21	1.32
A083419	A083519	4.75	0.87	19	3/4"	1.22	2.36	1.89	2.20	2.43
A083422	A083522	6.5	0.98	22	7/8"	1.46	2.80	2.05	2.87	3.31
A083425	A083525	8.5	1.10	25	1"	1.69	3.19	2.36	4.19	4.85
A083428	A083528	9.5	1.26	28	1 1/8"	1.81	3.54	2.52	6.17	6.83
A083432	A083532	12.0	1.38	32	1 1/4"	2.05	3.94	2.83	7.937	9.26
A083435	A083535	13.5	1.50	35	1 3/8"	2.24	4.37	2.99	10.141	12.35
A083438	A083538	17.0	1.65	38	1 1/2"	2.36	4.80	3.31	14	16.53
A083445	A083545	25.0	1.97	45	1 3/4"	2.91	5.87	4.13	25	28.66
A083452	A083552	35.0	2.24	50	2"	3.27	6.73	4.41	35	39.68
-	A083564	55.0	2.76	65	2 1/2"	4.13	7.99	5.71	-	85.980

* Forging tolerance: +/- 5% on inside width/length.

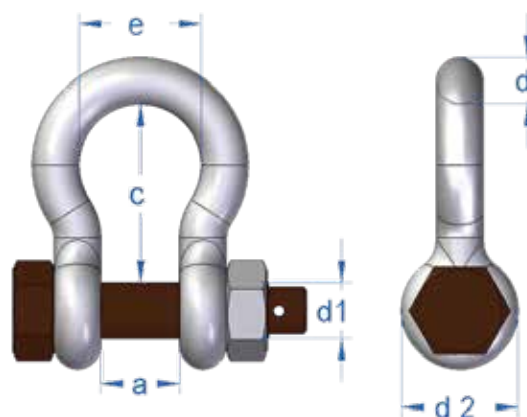
Split pin included

Bow Shackle No 854 and No 855

Standard: DNV 2.7-1 Type Approved, EN 13889 and U.S Fed. Spec. RR-C-271
 Material: High Tensile Carbon Steel, Quenched and tempered, Grade 6
 Finish: All parts hot dip galvanized, brown painted bolts on top of galv.
 Safety factor: 6:1
 Documentation: Test certificate and traceable raw material / inspection certificate acc. EN-10204 - 3.1.
 DNV 2.7-1 and DNV 2.7-3 Type Approval
 Temperature: -4°F to 392°F



Shackle No 854 with screw pin



Shackle No 855 with safety bolt



Art. no. Screw pin	Art. no. Safety bolt	WLL metric tonnes 6:1	Dim. d1	d Trade size		inner width a*	inner length c*	Bow width e	Eye outer d2	Screw pin lb	Safety bolt lb
				mm	inch						
A085405	-	0.33	0.24	5	3/16"	0.39	0.87	0.63	0.51	0.04	-
A085406	A085506	0.5	0.31	6	1/4"	0.47	1.14	0.79	0.63	0.13	0.15
A085408	A085508	0.75	0.39	8	5/16"	0.51	1.26	0.83	0.79	0.24	0.29
A085409	A085509	1.0	0.43	9	3/8"	0.63	1.42	1.02	0.87	0.33	0.37
A085411	A085511	1.5	0.51	11	7/16"	0.71	1.69	1.14	1.02	0.46	0.55
A085413	A085513	2.0	0.63	13	1/2"	0.83	1.85	1.30	1.30	0.82	0.93
A085416	A085516	3.25	0.75	16	5/8"	1.06	2.36	1.65	1.57	1.43	1.54
A085419	A085519	4.75	0.87	19	3/4"	1.22	2.80	1.93	1.89	2.43	2.65
A085422	A085522	6.5	0.98	22	7/8"	1.46	3.31	2.36	2.05	3.31	3.75
A085425	A085525	8.5	1.10	25	1"	1.69	3.74	2.68	2.36	4.87	5.69
A085428	A085528	9.5	1.26	28	1 1/8"	1.81	4.25	2.91	2.52	6.83	7.50
A085432	A085532	12.0	1.38	32	1 1/4"	2.05	4.69	3.27	2.83	9.26	10.58
A085435	A085535	13.5	1.50	35	1 3/8"	2.24	5.20	3.50	2.99	13.23	15.43
A085438	A085538	17.0	1.65	38	1 1/2"	2.36	5.75	3.86	3.31	18	19.84
A085445	A085545	25.0	1.97	45	1 3/4"	2.91	7.01	5.00	4.13	30	33
A085452	A085552	35.0	2.24	50	2"	3.27	7.76	5.43	4.41	42	46
-	A085556	42.5	2.56	57	2 1/4"	3.74	8.74	6.30	5.20	-	63
A085464	A085564	55.0	2.76	65	2 1/2"	4.13	10.24	7.09	5.71	84	86
-	A085576	85.0	3.27	75	3"	5.00	12.99	7.48	6.38	-	137
-	**A085589	120 (5:1)	3.74	95	3 3/4"	5.75	15.75	9.25	8.19	-	243

* Forging tolerance: +/- 5% on inside width/length.

** Safety factor 5:1

Split pin included

Arctic Shackle No 856

Bow shackle with safety bolt

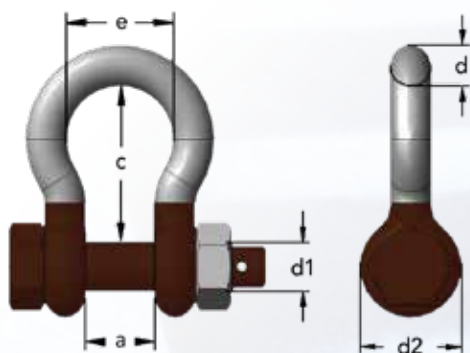
Unique Benefits with The Arctic Shackle

Adverse weather and rough sea conditions in combination with extremely low temperatures, as often encountered in the North Sea for instance, places tough requirements on the products used. Gunnebo Industries has a range of shackles specially designed for these conditions. The Arctic Shackle is type approved to DNV 2.7-1 Offshore containers and meets the impact requirements of 31 ft-lb (42 J) at -40 degrees °F.

The Arctic Shackle is a grade 8 shackle with all parts hot dipped galvanized, including the safety bolt, and has the characteristic brown color marking.



Standard:	DNV 2.7-1, U.S. Fed. Spec. RR.C-271 and EN-13889
Material:	Special Alloy Steel, Quenched and Tempered, Grade 8
Finish:	All parts hot dip galvanized + brown color marking
Safety factor:	As specified in the table below
Documentation:	Test certificate and traceable raw material / inspection certificate acc. to EN-10204 - 3.1 DNV 2.7-1 and DNV 2.7-3 Type Approval Certification.
Temperature:	- 40°F to 392°F



Art. no.	WLL metric tonnes	Dim. d1	d Trade size		a	c	d 2	e	Weight lb	Safety factor
			mm	inch						
A085613	2.0	0.63	13	1/2"	0.83	1.85	1.30	1.30	0.93	8.00
A085616	3.25	0.75	16	5/8"	1.06	2.36	1.57	1.65	1.54	8.00
A085619	4.75	0.87	19	3/4"	1.22	2.80	1.89	1.93	2.65	8.00
A085622	6.5	0.98	22	7/8"	1.46	3.31	2.05	2.36	3.75	7.85
A085625	8.5	1.10	25	1"	1.69	3.74	2.36	2.68	5.51	7.25
A085628	9.5	1.26	28	1 1/8"	1.81	4.25	2.52	2.91	7.50	6.94
A085632	12.0	1.38	32	1 1/4"	2.05	4.69	2.83	3.27	10.58	6.40
A085635	13.5	1.50	35	1 3/8"	2.24	5.20	2.99	3.50	15.43	6.10
A085638	17.0	1.65	38	1 1/2"	2.36	5.75	3.31	3.86	19.84	6.00
A085645	25.0	1.97	45	1 3/4"	2.91	7.01	4.13	5.00	33.07	6.00
A085652	35.0	2.24	50	2"	3.27	7.76	4.57	5.43	46.30	6.00
A085664	55.0	2.76	65	2 1/2"	4.13	10.24	5.71	7.09	85.98	6.00
A085676	85.0	3.27	75	3"	5.00	12.99	6.38	7.48	136.69	6.00

Split pin included

Super Shackle No 858

Bow shackle with safety bolt

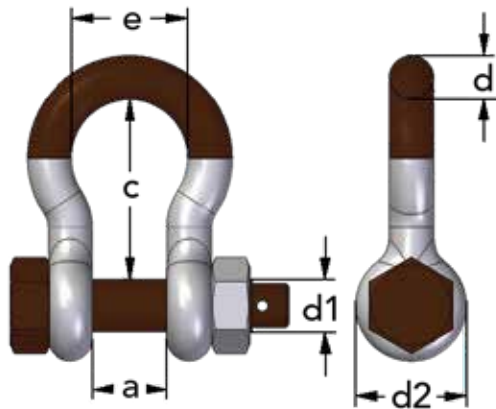
Unique Benefits with The Super Shackle

In certain situations, a demand for extra Working Load Limit occurs, in others the lifting environment has limited space for the lifting application. Gunnebo Industries has therefore added the Super Shackle to the range, enabling the same Working Load Limit on a 7/8" in Super shackle as for a 1-1/8" in Standard shackle.

The Super shackle meets the US Federal Specification RR.C-271. It is a grade 8 shackle and has all parts hot dipped galvanized, including the safety bolt.



Standard:	U.S. Fed. Spec. RR.C-271 Type IVA Class 3, Grade B
Material:	High Tensile Steel. Quenched and Tempered, Grade 8
Finish:	All parts hot dip galvanized + brown color marking
Safety factor:	5:1
Documentation:	Test certificate and traceable 3.1 certificate
Temperature:	-4 °F to 392 °F



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Art.no	WLL metric tonnes	Dim. d1	d Trade size		a	c	d2	e	Weight lb
			mm	inch					
A085813	3.3	0.63	13	1/2"	0.83	2.01	1.30	1.30	0.88
A085816	5.0	0.75	16	5/8"	1.06	2.36	1.57	1.65	1.54
A085819	7.0	0.87	19	3/4"	1.22	2.80	1.89	1.93	2.65
A085822	9.5	0.98	22	7/8"	1.46	3.31	2.05	2.36	3.75
A085825	12.5	1.10	25	1"	1.69	3.74	2.36	2.68	5.51
A085828	15.0	1.26	28	1 1/8"	1.81	4.25	2.52	2.91	7.50
A085832	18.0	1.38	32	1 1/4"	2.05	4.69	2.83	3.27	10.58
A085835	21.0	1.50	35	1 3/8"	2.24	5.20	2.99	3.50	15.43
A085838	30.0	1.65	38	1 1/2"	2.36	5.75	3.31	3.86	19.40
A085845	40.0	1.97	45	1 3/4"	2.91	7.01	4.13	5.00	33.07
A085857	55.0	2.24	57	2"	3.27	7.76	4.61	5.43	48.50
A085870	85.0	2.76	70	2 1/2"	4.13	10.24	5.63	7.09	83.78
A085883	120.0	3.27	83	3"	5.00	12.95	6.38	7.48	154.32
A085895	150.0	3.74	95	3 1/2"	5.79	15.75	8.19	9.37	246.92

Split pin included

Aquaculture

Because safety is everything

Gunnebo Industries has an in-depth knowledge of the demands aquaculture puts on the products supplied. With over 100 years of experience gained manufacturing shackles and chain for maritime use, which allows us to provide our clients with the highest level of satisfaction, even in the most extreme environments.

Whilst other producers have been focusing on low cost to the detriment of performance, we have focused on quality and improved properties to give best value for money. Products such as our hot dip galvanized chain and shackles are designed to satisfy the specific demands from the global fishing industry.

Gunnebo Industries products are the best choice when safety and quality comes first. We have always and will continue to provide the Aquaculture industry with the preferred products available in the market. All of our aquaculture products are independently approved according to Norwegian standard NS 9415. NS 9415 with this being the first national standard for aquaculture mooring systems.

Our continuous focus on quality has been proven by our achievements with the key industry standards:

- Approved acc. to ISO 9001
- Approved acc. to ISO 14001
- Product certification acc. to NS 9415



Mooring Shackle No 852

Unique Benefits with Mooring Shackle

The Mooring Shackle has a sunken bolt that locks into the shackle to prevent rotation (unintentional loosening of the nut). The sunken bolt also reduces the risk of the shackle interacting with the net. Fatigue resistance is increased by the addition of 25% extra material in the bow (increased life span and safety).

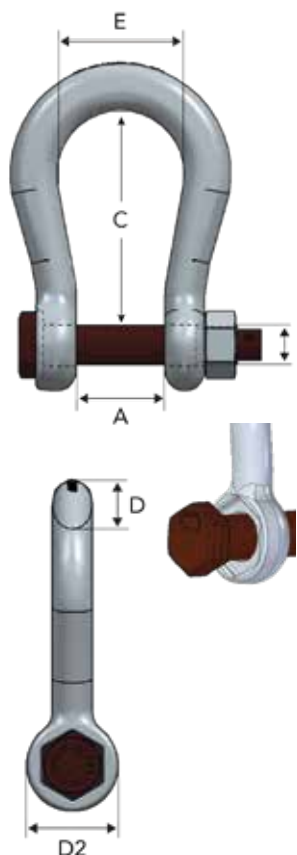
The shackle has a spacious bow for connecting thimbles, rope and mooring/connecting plates.

Standard: Third party approved to relevant Norwegian aquaculture standards

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown color marking

Plastic clip provided as standard safety pin for 3/4T - 1 1/4T,
Stainless steel A4 split pins provided as standard for 15/8T and 13/4T



Art.no	MBL lb	D Trade size		A	C	E	D2	D1
		mm	inch					
*A085219	61 712	19	3/4"	1.73	3.94	2.28	1.89	0.87
*A085222	88 160	22	7/8"	2.05	4.92	2.68	2.05	0.98
*A085228	132 240	28	1 1/8"	2.44	5.91	3.50	2.52	1.10
*A085232	198 360	32	1 1/4"	3.23	6.69	3.86	2.83	1.26
A085242	242 440	42	1 5/8"	4.41	7.87	5.91	3.54	1.77
A085244	330 600	45	1 3/4"	4.96	7.87	4.96	4.13	1.97

* These sizes come with a sunken hexagon bolt head that will greatly reduce the risk of the bolt unscrewing in service as well as making the fitting easier for the user.

Customized securing options

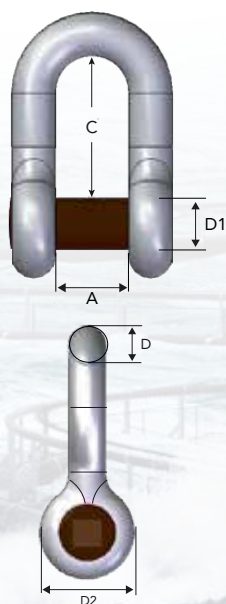
- Clips (3/4T to 7/8T) - Yellow
- Clips (1 1/8T to 1 1/4T) - Green
- Plastic covered seizing wire
- Plastic covered steel wire
- Stainless steel cotter pin

Countersunk Shackle No 830

Standard: Third party approved to relevant Norwegian aquaculture standards

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown color marking



Art.no	Art.no*	WLL metric tonnes	Dim. D		A	C	D1	D2	Square hole	Recommended Key
			mm	inch						
A083013	A083013DP	2.0	13	1/2"	0.83	1.61	0.63	1.30	0.39 x 0.39	3/8"
A083016	A083016DP	3.2	16	5/8"	1.06	2.01	0.75	1.57	0.39 x 0.39	3/8"
A083019	A083019DP	5.0	19	3/4"	1.22	2.36	0.87	1.89	0.39 x 0.39	3/8"
A083022	A083022DP	6.5	22	7/8"	1.46	2.80	0.98	2.05	0.55 x 0.55	1/2"
A083025	A083025DP	8.5	25	1"	1.69	3.19	1.10	2.36	0.55 x 0.55	1/2"

* Countersunk Shackles can also be supplied with a secondary securing for Double Protection (DP), for mooring applications.

Long link Chain LLZ - see chapter 5



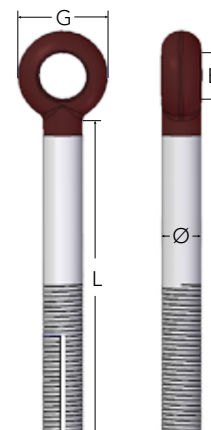
Mooring bolt - Eye Bolt No 8250

Standard: Third party approved to relevant Norwegian aquaculture standards

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown color marking

Art.no	MBL lb	Dim Ø x L	G	E
A825032	88 160	Ø1.26 x 15.75	2.83	1.46
A825038	132 240	Ø1.50 x 19.69	3.31	1.73
A825045	176 320	Ø1.77 x 23.62	4.13	1.85



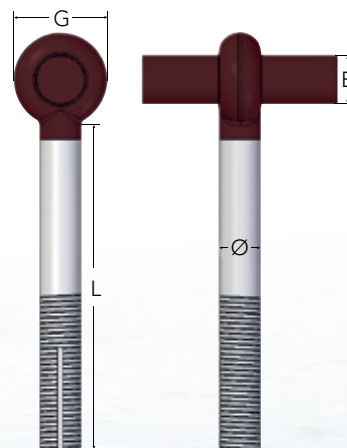
Mooring bolt - T-bolt No 825

Standard: Third party approved to relevant Norwegian aquaculture standards

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized + brown color marking

Art.no	MBL lb	Dim Ø x L	G	E
A825232	88 160	Ø1.26 x 15.75	2.83	1.38
A825238	132 240	Ø1.50 x 19.69	3.31	1.65
A825445	176 320	Ø1.77 x 19.69	4.13	1.77
A825245	176 320	Ø1.77 x 23.62	4.13	1.77
A825450	220 400	Ø1.97 x 19.69	3.94	1.77
A825250	220 400	Ø1.97 x 27.56	4.33	1.97



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Galvanized Master Link

Standard: Third party approved to relevant Norwegian aquaculture standards

Material: High Tensile Steel. Quenched and Tempered, Grade 6

Finish: All parts hot dip galvanized

Art.no	MBL lb	Dim Ø (D)	B	L
A825922	88 160	Ø7/8"	3.74	6.30
A825928	132 240	Ø1 3/8"	4.33	7.48
A825934	176 320	Ø1 3/8"	5.51	9.45
A825940	242 440	Ø1 5/8"	5.91	9.84

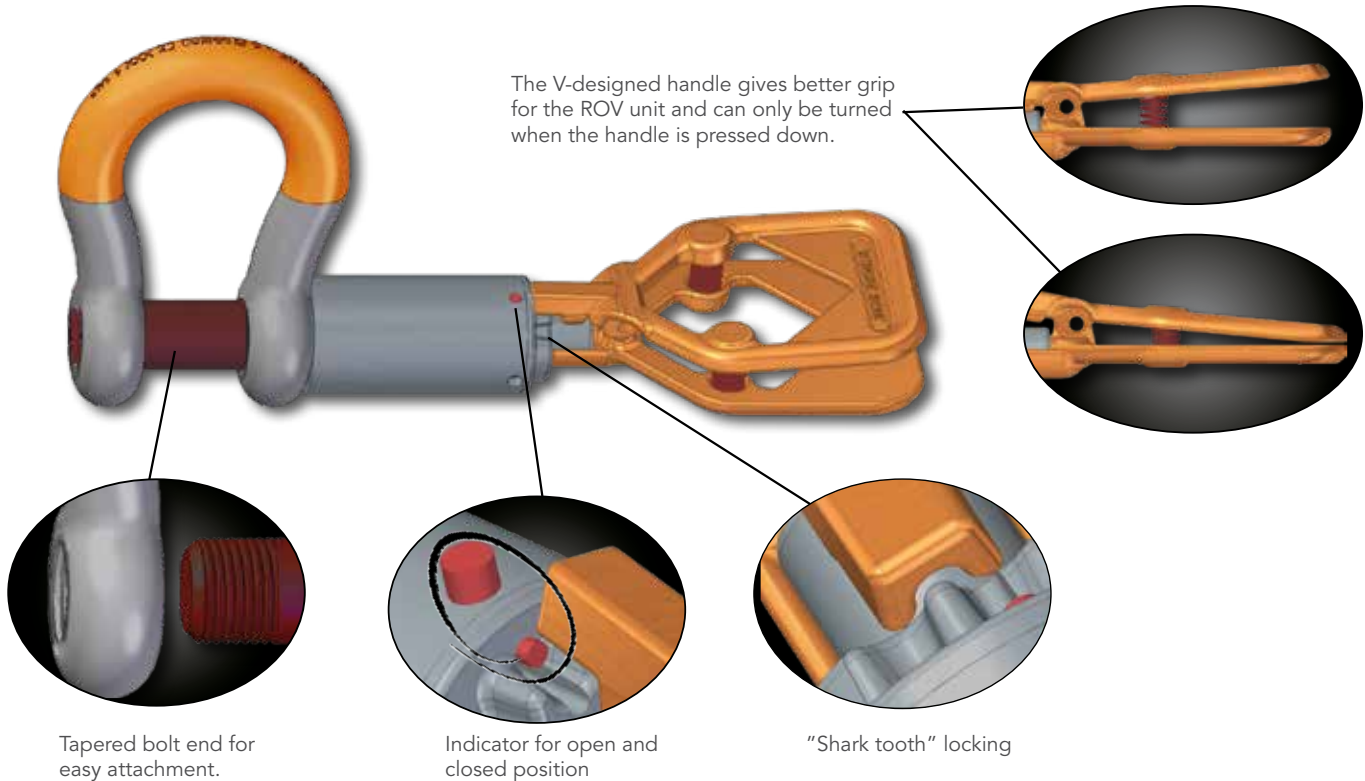


ROV Shackles

The ROV Retrieve Shackle is designed for smooth and easy use in retrieving and releasing subsea lifting and rigging operations. It has no loose parts, in closed or opened position, and there is therefore no need for wires or monkey fists that will risk snagging or getting in the way.

The high visibility handles are close-die forged and has double safety functions - shark tooth locking with indicator that will show if the shackle is in open or locked position as well as the spring loaded handle. The handle is the same size, regardless of size of shackle.

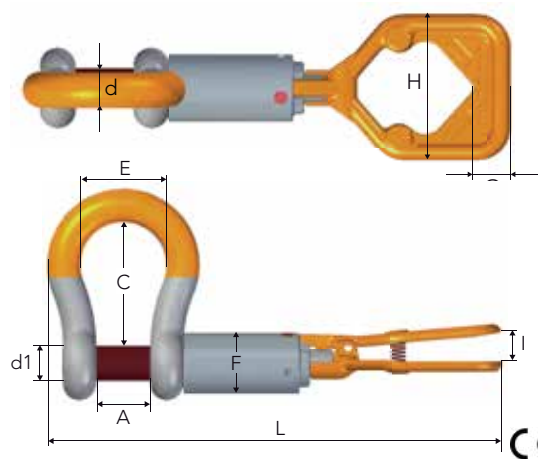
The ROV Retrieve Shackle no. 861 is an easy to operate shackle, saving valuable time and money.



ROV Retrieve Shackle No 861

All shackles have unique marking

Standard:	Dim. according to EN 13889
Material:	High Tensile Steel, Quenched and Tempered
Finish:	All load bearing parts hot dip galvanized
Safety factor:	6:1
Documentation:	Test certificate and traceable 3.1 certificate supplied on request.
Temperature:	-40 °F to 392 °F



Art. no	WLL metric tonnes	d1	d	A	C	E	F	L	I	H	G	Weight lb
A086128	9.5	1.26	1.10	1.81	4.25	2.91	2.36	17.32	1.22	5.20	1.30	14.33
A086132	12.0	1.38	1.26	2.05	4.69	3.27	2.36	18.11	1.22	5.20	1.30	17.64
A086138	17.0	1.65	1.50	2.36	5.75	3.86	2.50	19.72	1.22	5.20	1.30	23.15
A086145	25.0	1.97	1.77	2.91	7.01	5.00	2.76	22.24	1.22	5.20	1.30	36.38
A086152	35.0	2.24	1.97	3.27	7.76	5.43	2.99	23.78	1.22	5.20	1.30	45.19
A086164	55.0	2.76	2.56	4.13	10.24	7.09	3.46	28.03	1.22	5.20	1.30	92.59

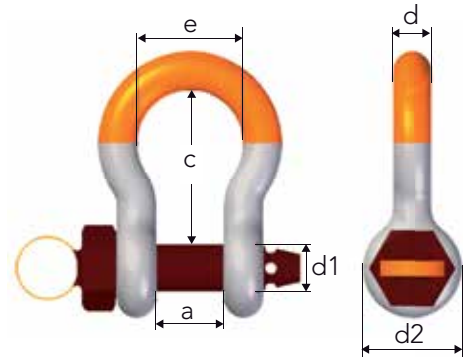
ROV Shackle No 860

Threaded bolt with one locking pin

Standard:	Dim. according to EN 13889
Material:	High Tensile Steel, Quenched and Tempered
Finish:	All load bearing parts hot dip galvanized
Safety factor:	6:1
Documentation:	Test certificate and traceable 3.1 certificate supplied on request.
Temperature:	-40 °F to 392 °F



Art. no.	WLL metric tonnes	d1	d	a	c	d2	e	Weight lb
A086028	9.5	1.26	1.10	1.81	4.25	2.52	2.68	7.50
A086032	12.0	1.38	1.26	2.05	4.69	2.83	3.27	11.02
A086038	17.0	1.65	1.50	2.36	5.75	3.31	3.86	17.20
A086045	25.0	1.97	1.77	2.91	7.01	4.13	5.00	30.64
A086052	35.0	2.24	1.97	3.27	7.76	5.00	5.43	37.48
A086064	55.0	2.76	2.56	4.13	10.24	5.98	7.09	81.57



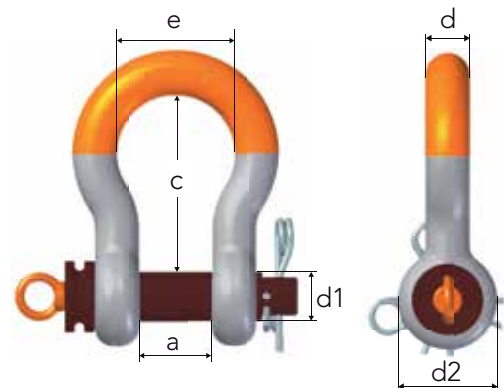
ROV Release Shackle No 863

Equipped with bolt and two locking pins

Standard:	Dim. according to EN 13889
Material:	High Tensile Steel, Quenched and Tempered
Finish:	All load bearing parts hot dip galvanized
Safety factor:	5:1
Documentation:	Test certificate and traceable 3.1 certificate supplied on request.
Temperature:	-40 °F to 392 °F



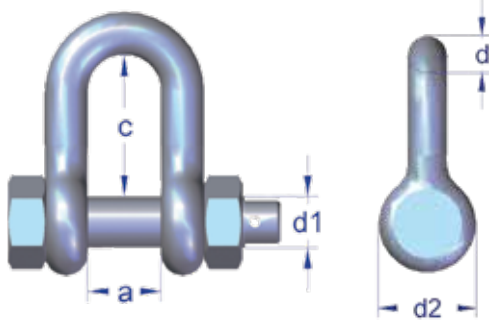
Art. no.	WLL metric tonnes	d1	d	a	c	d2	e	Weight lb
A086322	6.5	0.98	0.87	1.46	3.31	2.05	2.28	3.53
A086328	9.5	1.26	1.10	1.81	4.25	2.52	2.91	7.50
A086332	12.0	1.38	1.26	2.05	4.69	2.83	3.27	11.02
A086338	17.0	1.65	1.50	2.36	5.75	3.31	3.86	17.20
A086345	25.0	1.97	1.77	2.91	7.01	4.13	5.00	30.64
A086352	35.0	2.24	1.97	3.27	7.76	5.00	5.43	37.48
A086364	55.0	2.76	2.56	4.13	10.24	5.98	7.09	81.57



Stainless Steel Shackle No 735

Dee shackle with safety bolt

Material: AISI 316
Finish: Highly Polished
Safety factor: 6:1
Documentation: Test certificate and traceable 3.1 certificate supplied on request.



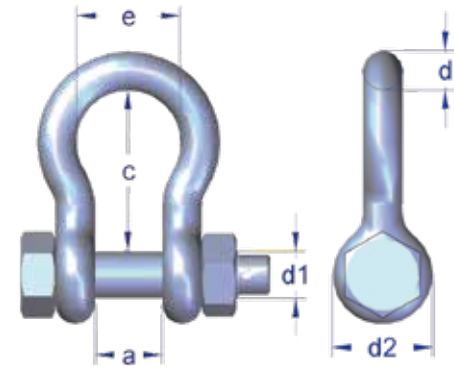
Art, no,	WLL metric tonnes	d1	d	a	c	d2	Weight lb
A073510	0.6	0.39	0.39	0.79	1.50	0.79	0.44
A073512	0.9	0.47	0.47	1.02	1.97	0.94	0.66
A073516	1.5	0.63	0.51	0.94	2.05	1.30	0.88
A073520	2.5	0.75	0.63	1.10	2.56	1.57	1.54
A073522	3.0	0.87	0.75	1.22	2.36	1.89	3.31
A073524	4.5	0.98	0.87	1.46	2.80	2.05	2.87
A073533	7.5	1.26	1.10	1.81	3.54	2.52	6.61
A073536	10.0	1.38	1.26	2.05	3.94	2.83	9.04

Split pin included

Stainless Steel Shackle No 755

Bow shackle with safety bolt

Material: AISI 316
Finish: Highly Polished
Safety factor: 6:1
Documentation: Test certificate and traceable 3.1 certificate supplied on request.



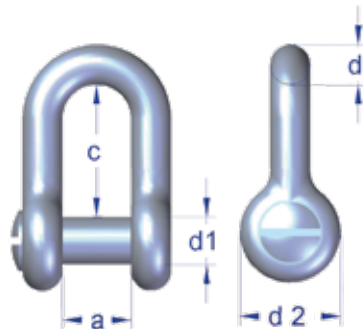
Art. no.	WLL metric tonnes	d1	d	a	c	e	d2	Weight lb
A075510	0.6	0.39	0.39	0.79	1.42	1.06	0.79	0.44
A075512	0.9	0.47	0.47	0.98	1.85	1.46	1.02	0.66
A075516	1.5	0.63	0.51	0.98	1.85	1.30	1.34	0.88
A075520	2.5	0.79	0.63	1.10	2.36	1.65	1.57	1.76
A075522	3.0	0.87	0.75	1.22	2.80	2.01	1.89	2.87
A075524	4.5	0.98	0.87	1.46	3.31	2.28	2.05	3.75
A075533	7.5	1.26	1.10	1.81	4.25	2.91	2.52	7.50
A075536	10.0	1.38	1.26	2.05	4.69	3.27	2.83	11.46

Split pin included

Stainless Steel Shackle No 732

Dee shackle with countersunk pin

Material: AISI 316
Finish: Highly Polished
Safety factor: 6:1
Documentation: Test certificate supplied on request.



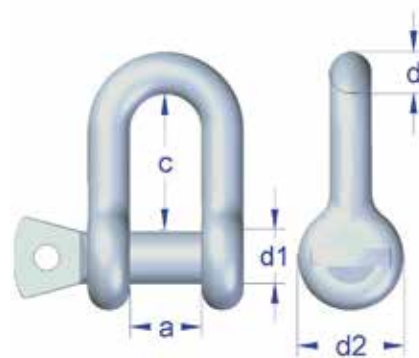
Art. No.	WLL metric tonnes	Dim. d1	d1	d	a	(c)	d2	Weight lb
A073216	2.0	0.63	0.63	0.51	0.94	2.05	1.34	0.66
A073220	3.0	0.79	0.79	0.63	1.10	2.56	1.57	1.32
A073222	3.0	0.87	0.87	0.75	1.22	2.36	1.89	3.09

Stainless Steel Shackle No 730

Dee shackle with screw pin

Material: AISI 316
 Finish: Highly Polished
 Safety factor: 6:1
 Documentation: Test certificate supplied on request.

Art. no.	WLL metric tonnes	Dim. d1	d	a	c	d2	Weight lb
A073008S	0.4	0.31	0.31	0.63	1.18	0.63	0.13
A073010S	0.6	0.39	0.39	0.79	1.50	0.79	0.22
A073012S	0.9	0.47	0.47	1.02	1.97	0.94	0.44
A073016S	1.5	0.63	0.51	0.94	2.05	1.34	0.66
A073020S	2.5	0.79	0.63	1.10	2.56	1.57	1.32
A073022S	3.0	0.87	0.75	1.18	2.83	1.89	1.98

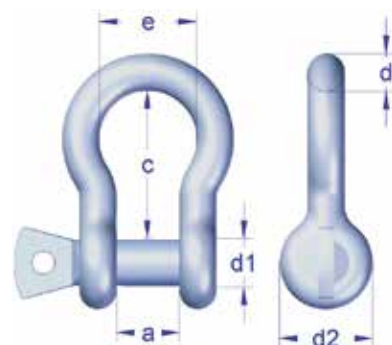


Stainless Steel Shackle No 750

Bow shackle with screw pin

Material: AISI 316
 Finish: Highly Polished
 Safety factor: 6:1
 Documentation: Test certificate supplied on request.

Art. no.	WLL metric tonnes	Dim. d1	d1	d	a	c	e	d2	Weight lb
A075008S	0.4	0.31	0.31	0.31	0.63	1.18	0.91	0.63	0.15
A075010S	0.6	0.39	0.39	0.39	0.79	1.42	1.06	0.79	0.24
A075012S	0.9	0.47	0.47	0.47	0.98	1.85	1.46	1.02	0.55
A075016S	1.5	0.63	0.51	0.51	0.98	1.85	1.34	1.30	0.73
A075020S	2.5	0.79	0.63	0.63	1.10	2.36	1.65	1.57	2.12
A075022S	3.0	0.87	0.75	0.75	1.22	2.80	2.01	1.89	2.20



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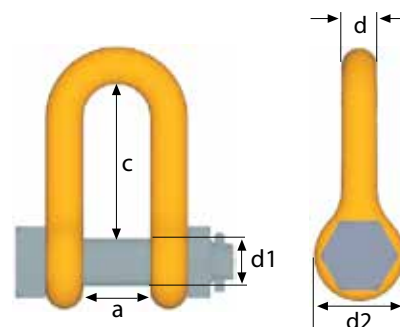
Shackle SA

Grade 8

EN 1677-1

Finish: Painted yellow
 Material: Alloy steel
 Safety factor: 4:1

Art. no.	Code	WLL metric tonnes	For chain dim.	c	a	d	d2	d1	Weight lb
Z100706	SA-7/8-8	2.0	9/32", 5/16"	1.18	0.59	0.31	0.79	0.39	0.22
Z298728	SA-10-8	3.2	3/8"	2.05	0.94	0.51	1.34	0.63	0.88
Z292528	SA-13-8	5.4	1/2"	2.56	1.10	0.63	1.57	0.79	1.54
Z293024	SA-16-8	8.2	5/8"	2.83	1.18	0.71	1.81	0.87	2.20
Z299622	SA-19-8	11.5	3/4"	3.39	1.42	0.87	2.05	1.06	3.75
Z294122	SA-22-8	15.5	7/8"	3.70	1.57	0.98	2.36	1.18	5.51
Z304328	SA-26-8	21.7	1"	4.57	1.89	1.26	2.99	1.54	11.46



Split pin included

Alloy Steel Rigging Screw, No 801, 802, 804

Grade 6

Standard: Working load acc. to U.S. Fed. spec. FF-T-791.b
Supplied with closed body from 5 510 - 37 468 lb, larger dimensions open body.

Material: Quenched and tempered alloy steel

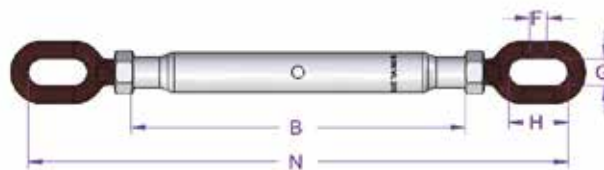
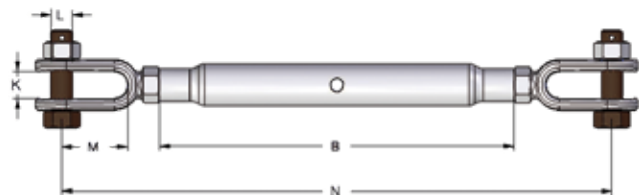
Surface treatment: Hot dip galvanized

Safety factor: 5:1

Certificate: Test certificate and traceable 3.1 certificate supplied on request.

Tolerances: +/- 5%

Temperature: -4 °F to 392 °F



Art. no. Jaw/Jaw	Art. no. Jaw/Eye	Art. no. Eye/Eye	Thread M/UNC	WLL metric tonnes	Take up range	B	N	K	L	M	F	G	H	Weight lb/ea
A801420	A802420	A804420	M 20	2.5	8.27	10.63	17.91	0.79	0.63	1.97	0.51	0.83	1.77	5.07
A801424	A802424	A804424	M 24	5.0	9.84	13.39	22.44	1.10	0.87	2.56	0.75	1.10	2.20	10.14
A801432	A802432	A804432	1.1/4"	7.0	10.63	14.57	26.77	1.50	1.10	3.35	0.87	1.38	2.76	17.64
A801438	A802438	A804438	1.1/2"	10.0	11.81	15.75	31.10	1.77	1.26	3.94	0.98	1.57	3.07	30.86
A801445	A802445	A804445	1.3/4"	13.0	14.17	19.69	34.25	1.97	1.54	4.13	1.18	1.77	3.54	52.91
A801450	A802450	A804450	2"	17.0	17.72	23.62	40.55	2.28	1.77	4.72	1.38	1.77	3.94	83.78
A801464			*2.1/2"	27.2	21.02	30.71	51.65	2.95	2.24	5.59				194.01
A801470			*2.3/4"	34.0	22.68	30.71	55.83	3.54	2.76	5.71				216.05

* Open turnbuckle body without nut and split pin

Rigging Screw No 401, 402, 404 - Hot Dip Galvanized

Design: Jaw-Jaw (jaw-eye and eye-eye on request)

Standard: Acc.to B.S. 4429, closed body - with locking nut

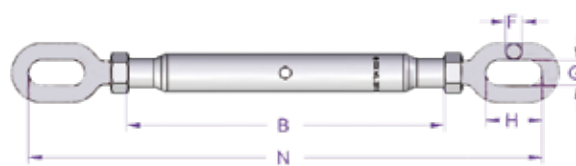
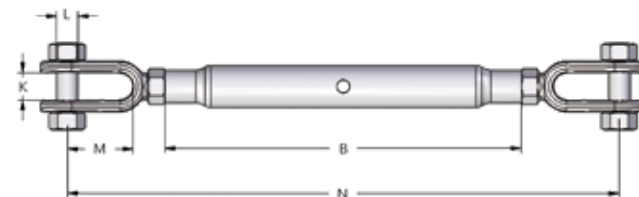
Material: St. 42/St. 52, normalized

Surface treatment: Hot dip galvanized (M6 & M8 zinc plated)

Safety factor: 5:1

Note: The items marked with * below are not for lifting

Tolerances: +/-5%



Art. no. Jaw/ Jaw	Art. no. Jaw/ Eye	Art.no Eye/Eye	Thread M/ UNC	WLL metric tonnes	Take up range	B	N	L	M	K	F	G	H	Weight lb/pcs
	*A402406		M 6	-	3.15	3.94	6.89	0.20	0.71	0.31	0.20	0.39	0.39	0.29
	*A402408		M 8	-	3.35	4.33	8.27	0.24	0.83	0.35	0.24	0.47	0.47	0.55
A401510	*A402410	*A404410	M 10	0.5	3.54	5.71	8.86	0.31	0.79	0.37	0.28	0.51	0.51	0.66
A401512	*A402412	*A404412	M 12	0.7	6.10	7.68	12.40	0.39	1.18	0.51	0.39	0.55	1.10	1.43
A401516	*A402416	*A404416	M 16	1.2	7.28	9.06	14.96	0.47	1.73	0.71	0.47	0.71	1.77	2.76
A401520	A402420	A404520	M 20	1.5	8.27	10.63	17.72	0.63	1.97	0.79	0.51	0.83	1.77	4.85
A401422	A402422	A404422	M 22	2.2	9.06	11.61	19.69	0.79	2.36	0.98	0.63	0.94	1.97	7.28
A401424	A402424	A404424	M 24	3.2	9.84	12.80	21.85	0.87	2.56	1.10	0.75	1.10	2.20	10.14
A401432	A402432	A404432	1.1/4"	4.8	11.42	14.57	26.77	1.10	3.35	1.50	0.87	1.38	2.76	18.74
A401438	A402438	A404438	1.1/2"	6.0	11.81	15.75	29.92	1.26	3.94	1.77	0.98	1.57	3.54	31.97
A401445	A402450	A404445	1.3/4"	8.5	11.42	15.75	29.92	1.50	4.13	1.97	1.18	1.77	3.54	46.08
A401452	A402452	A404452	2"	11.0	11.42	15.75	32.28	1.77	4.72	2.28	1.38	1.77	3.94	52.91

* Will not be delivered with lifting certificate.

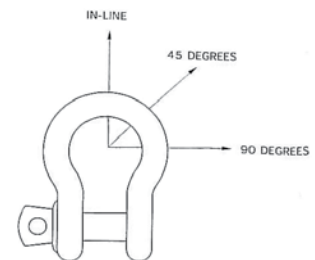
Technical Information

2006/42/EC highlights the responsibility of the manufacturer, distributor and end user of lifting gear. Gunnebo Industries shackles are specified, monitored and documented in compliance with the most stringent requirements for the product concerned. A certified ISO 9001:2008 to 9001:2015 system is an evidence of our quality standard. See website or user instructions for assembly instructions. Meets listed current specifications and standards at time of publication of this catalogue.

Instructions For Safe Use

1. The user is obliged to keep a valid Test Certificate for any shackle being used in a lifting operation.
2. Before use each shackle should be inspected to ensure that:
 - all markings in the body and the pin of the shackle are legible and in compliance with the relevant Test Certificate.
 - the shackle pin is of the correct type.
 - the body and pin are not distorted or unduly worn.
 - The body and pin are free from nicks, cracks, grooves and corrosion.
 - If there is any doubt with regards to the above criteria being met, the shackle should not be used for a lifting operation.
3. It is important to ensure that the pin is safely locked after assembly. For repeated lifting between inspections of the gear, it is recommended to use a safety bolt type shackle with nut and split-pin - the user must ensure that the split-pin is fitted, to prevent the nut from unscrewing during use.
4. Incorrect seating of a pin may be due to a bent pin, damaged threads or misalignment of the holes. Do not use the shackle under these circumstances, but refer the matter to a competent person (i.e. dealer, manufacturer)
5. Shackles should be fitted to the load in a manner that allows the shackle body to take the load in a true line along its centerline to avoid undue bending stresses which will reduce the load capacity of the shackle. When using shackles in conjunction with multi-leg slings, due consideration should be given to the effect of the angle between the sling legs. When a shackle is used to secure the top block of a set of rope blocks the load on this shackle is increased by the value of the hoisting effect.
6. To avoid eccentric loading of the shackle it is recommended to distribute the load as far as possible over the total length of the pin or to use loose spacers.
7. Never modify, repair or reshape a shackle by welding, heating or bending as this will affect the nominal WLL.
8. Never heat treat a shackle as this may affect the WLL.

Side loads should be avoided as the products are not designed for this purpose. If side loads cannot be avoided, the following reduction factors must be taken into account:

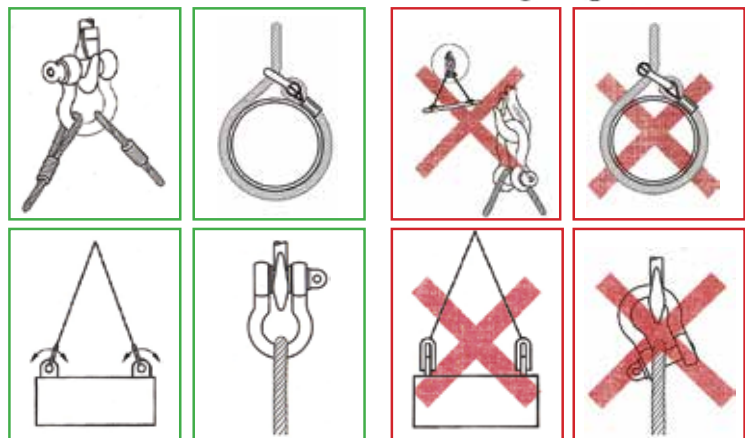


Reduction for side loading

Load angle	New Working Load Limit
0°	100% of original WLL
45°	70% of original WLL
90°	50% of original WLL

Avoid applications where, due to load movement, the shackle pin can rotate

Shackle must be loaded in straight direction



Temperature

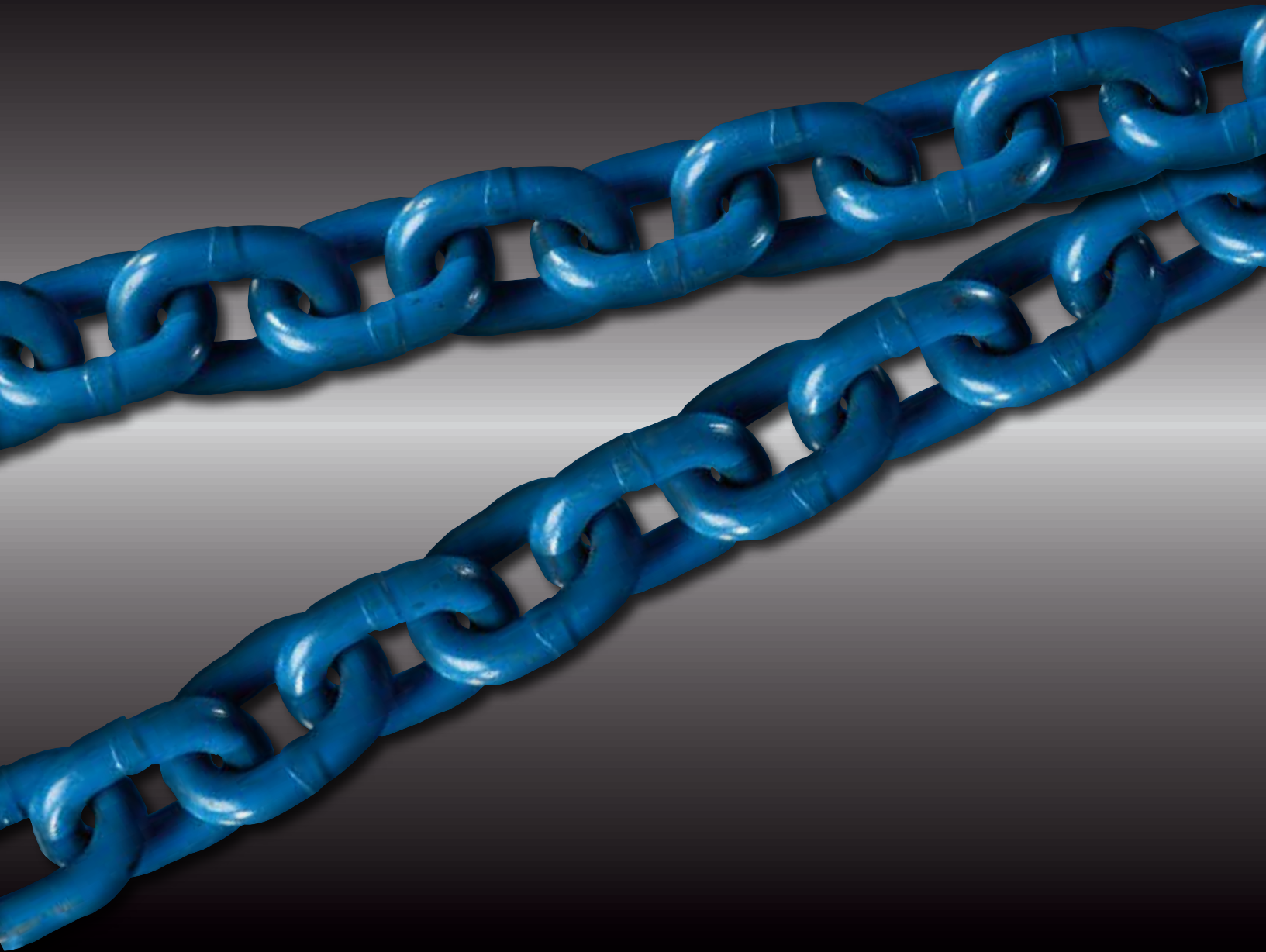
If extreme temperature situations are applicable, the following load reductions must be taken into account.

Reduction for elevated temperatures

Temperature:	New Working Load Limit
-4 - 392 °F	100% of original Working Load Limit
392 - 572 °F	90% of original Working Load Limit
572 - 752 °F	75% of original Working Load Limit
> 752 °F	not allowed

Chain

Grade 10 • Grade 8 • Short Link • Mid-link • Long-link



GUNNEBO
Industries