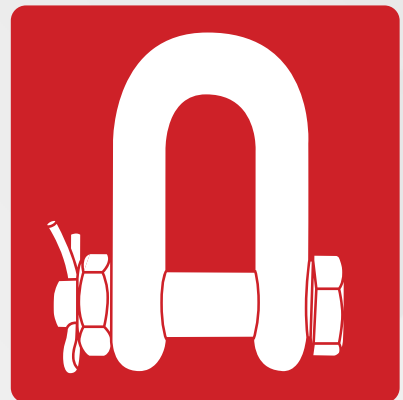


SHACKLES

Forged, heat treated, and tested for unmatched strength and performance.



SHACKLES

DESIGN

The theoretical reserve capability of carbon shackles should be at a minimum 5 to 1, and alloy shackles a minimum of 4 to 1. Known as the Design Factor, it is usually computed by dividing the catalog Ultimate Load by the Working Load Limit.

The Ultimate Load is the average load or force at which the product fails or no longer supports the load.

The Working Load Limit is the maximum mass or force which the product is authorized to support in general service. The Design Factor is generally expressed as a ratio such as 5 to 1, or 5:1.

Also important to the design of shackles is the selection of proper steel to support fatigue, ductility, and impact properties.

Questions to ask your rigging provider

What is the Working Load Limit and Design Factor for shackles?

Is deformation upon overloading a critical consideration in their design?

Do they jeopardize other properties by having high hardness in order to increase Working Load Limit or Design Factor?

Why choose Crosby

Crosby carbon shackles have the highest design factor (6 to 1) in the industry. All of Crosby's Design Factors are documented.

Crosby purchases only special bar forging quality steel with cleanliness and guaranteed hardenability. All material chemistry is independently verified prior to manufacturing.

The design of Crosby shackles assures that strength, ductility, and fatigue properties are met.

CLOSED DIE FORGING

The proper performance of premium shackles depends on good manufacturing techniques that include proper forging and accurate machining. Closed-die forging of shackles assures clear lettering, superior grain flow, and consistent dimensional accuracy.

A closed-die forged bow allows for an increased cross section that, when coupled with quench and tempering, enhances strength and ductility.

Closed-die bow forgings combined with close tolerance pin holes assures good fatigue life. Close pin-to-hole tolerance has been proven to be critical for good fatigue life, particularly with screw pin shackles.

Questions to ask your rigging provider

Are their shackles closed-die forged with close tolerance pin holes?

Do their shackles have good fatigue life?

Do their shackles have a fatigue life that meets the new world standards?

Many forge bows utilize an open die forging process which allows for inconsistent dimensional accuracy and increased pin hole clearance, thus jeopardizing the fatigue life of the shackle in actual use.

Why choose Crosby

Each shackle is closed-die forged. Closed-die forging produces consistent dimensions. A closed-die forged bow allows for an increased cross section that, when coupled with quench and tempering, enhances strength and ductility.

Close tolerance holes and concentric pins with good surface finishes are provided by Crosby and are proven to provide improved fatigue life in actual use.

Crosby shackles are fatigue rated as well as load rated. Close pin to hole tolerance has been proven to be critical for good fatigue life, particularly with screw pin shackles.

FATIGUE PROPERTIES

The mechanical properties of steel when a load is repeatedly applied is known as its fatigue strength. Fatigue testing determines the ability of a material to withstand repeated applications of a load. The load by itself may be too small to produce a failure. There are three factors involved when considering fatigue strength: the number of cycles at which a crack initiates, the number of cycles at which the crack starts to grow, and the number of cycles at which the fitting fails. One accepted method of fatigue rating fittings is to test them to 1-1/2 times the working load limit for 20,000 cycles, without failure. This standard test is accepted as indicating indefinite life when used within the working load limit under normal circumstances.

Questions to ask your rigging provider

Does the material selection process recognize fatigue properties?

Do they have an active program to design and test fatigue properties?

Is there a program in place to fatigue rate all load-bearing products that are used in critical applications?

Why choose Crosby

Crosby has an active program to determine fatigue properties. Included in this program is the use of finite element design methods to predict possible weak areas, which in turn allows us to design in superior fatigue properties.

Crosby specifies material of specific cleanliness and guaranteed hardenability which enhances fatigue. We design and manufacture products with fatigue in mind and ensure all load-bearing products used in critical applications being fatigue rated.

QUENCHED & TEMPERED

Quench and tempering assures the uniformity of performance and maximizes the properties of the steel. This means that each shackle meets its rated strength and has required ductility, toughness, impact, and fatigue properties.

The requirements of your job demand this reliability and consistency. This process develops a tough material that reduces the risk of brittle, catastrophic failure.

The shackle bow will deform if overloading occurs, giving warning before ultimate failure.

Questions to ask your rigging provider

Are their bows and pins quenched and tempered?

If not, are they willing to accept inferior impact toughness, product deformation, and the increased risk of inconsistency?

Why do many manufacturers not recommend non-heat-treated shackles for overhead lifting?

Why do some recommend quench and tempering for alloy but not carbon grades?

Many normalize the shackle bows. As a result, desired properties are not achieved. A few even provide bows in an 'as-forged' condition, resulting in the possibility of brittle failure.

Why choose Crosby

All Crosby shackle bows and pins are quenched and tempered, which enhances their performance under cold temperatures and adverse field conditions. Crosby's carbon shackles are recommended for all critical applications including overhead lifting. Alloy shackles are recommended when specific dimensional requirements dictate a size that requires higher working load limits. Crosby shackles provide the tensile strength, ductility, impact, and fatigue properties that are essential if they are to perform time after time in adverse conditions.

These properties assure that the inspection criteria set forth by ANSI will effectively monitor the ability of the shackles to continue in service.

Watch our video on the Quench & Tempered process at thecrosbygroup.com/QT.



IDENTIFICATION & APPLICATION INFO

The proper application of shackles requires that the correct type and size of shackle be used. The shackle's Working Load Limit, its size, a traceability code, and the manufacturer's name should be clearly marked in the bow.

Traceability of the material chemistry and properties is essential for total confidence in the product. Material chemistry should be independently verified prior to manufacturing.

Questions to ask your rigging provider

Do they have an active traceability system used in manufacturing?

Is the material chemistry independently verified?

What training support is provided?

Why choose Crosby

We forge the Crosby name or "CG," the Working Load Limit, and the Product Identification Code (PIC) into each bow, and the Crosby name or "CG," and the PIC into each pin of its full line of screw pin, round pin, and bolt type anchor and chain shackles. Crosby also provides training on the proper use of shackles.

Watch our training video on shackle identification at thecrosbygroup.com/identification.

CROSBY VALUE ADDED

- **Charpy impact properties:** Crosby shackles are quenched and tempered and have enhanced impact properties for greater toughness at all temperatures. If requested at the time of order, Crosby can provide Charpy impact properties.
- **Fatigue properties:** Fatigue properties are available for 1/3 to 55 metric ton shackles. These Crosby shackles are fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit.
- **Ductility properties:** Typical ductility properties are available for all sizes upon special request.
- **Hardness levels and material tensile strengths:** Typical values are available for all sizes of shackles, and actual values can be furnished if requested at the time of order.
- **Proof Testing:** If requested at the time of order, shackles can be proof tested with certificates.
- **Mag Certification:** If requested at the time of order, shackles can be magnetic particle inspected with certificates.
- **Certification:** Certification to world class standards is available upon special request at the time of order; American Bureau of Shipping, Lloyds Register of Shipping, Det Norske Veritas, American Petroleum Institute, RINA, Nuclear Regulatory Commission, and several other worldwide standards.
- **Applications:** **Round pin shackles** can be used in tie down, towing, suspension or lifting applications where the load is strictly applied in-line. **Screw pin shackles** can be used in any application where a round pin shackle is used. In addition, screw pin shackles can be used for applications involving side-loading circumstances. Reduced working load limits are required for side-loading applications. **Bolt type shackles** can be used in any application where round pin or screw pin shackles are used. In addition, they are recommended for permanent or long-term installations and where the load may slide on the shackle pin causing the pin to rotate.
- **Material analysis:** Crosby can provide certified material (mill) analysis for each production lot, traceable by the Product Identification Code (PIC). Crosby, through its own laboratory, verifies the analysis of each heat of steel. Crosby purchases only **special bar** forging quality steel with specific cleanliness requirements and guaranteed hardenability.
- **Field inspection:** Written instructions for visual, magnaflux, and dye penetrant inspection of shackles are available from Crosby. In addition, acceptance criteria and repair procedures for shackles are available.
- **QUIC-CHECK®:** Shackles incorporate two marking indicators forged into the shackle bow at 45° angles from vertical. These are utilized to quickly check the approximate angle of a two-legged hitch or check the angle of a single leg hitch. If the load is off vertical or side loaded a reduction in the Working Load Limit of the shackle is required.

G-213

Round pin anchor shackles meet the performance requirements of Federal Specification RR-C-271G, Type IVA, Grade A, Class 1, except for those provisions required of the contractor.



G-209

Screw pin anchor shackles meet the performance requirements of Federal Specification RR-C-271G, Type IVA, Grade A, Class 2, except for those provisions required of the contractor.



G-2130

Bolt type anchor shackles meet the performance requirements of Federal Specification RR-C-271G, Type IVA, Grade A, Class 3, except for those provisions required of the contractor.



G-210

Screw pin chain shackles meet the performance requirements of Federal Specification RR-C-271G, Type IVB, Grade A, Class 2, except for those provisions required of the contractor.



G-215

Round pin chain shackles meet the performance requirements of Federal Specification RR-C-271G, Type IVB, Grade A, Class 1, except for those provisions required of the contractor.



G-2150

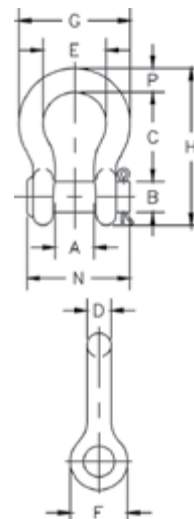
Bolt type chain shackles meet the performance requirements of Federal Specification RR-C-271G, Type IVB, Grade A, Class 3, except for those provisions required of the contractor.



G-213/S-213



- Forged, Quenched & Tempered, with alloy pins.
- Working Load Limit permanently shown on every shackle.
- Hot-dip galvanized (G) or self colored (S).
- Sizes 3/8 inch and below are mechanically galvanized.
- Fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit.
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification. Charges for proof testing and certification available when requested at the time of order.
- Shackles are Quenched & Tempered and can meet DNV impact requirements of 42 Joules (31 ft-lb) at -20° C (-4° F).
- G-213 Round pin anchor shackles meet the performance requirements of Federal Specification RR-C-271H, Type IVA, Grade A, Class 1, except for those provisions required of the contractor.
- DO NOT SIDE LOAD ROUND PIN SHACKLES.
- Look for the Red Pin®... the mark of genuine Crosby quality.



G-213 / S-213 Round Pin Anchor Shackles

Nominal Size (in)	Working Load Limit (t)	Stock No.		Weight Each (lb)	Dimensions (in)										Tolerance (+ / - in)	
		G-213	S-213		A	B	C	D	E	F	G	H	N	P	C	A
1/4	0.5	1018017	1018026	.13	.47	.31	1.13	.25	.78	.61	1.28	1.84	1.34	.25	.06	.06
5/16	0.75	1018035	1018044	.18	.53	.38	1.22	.31	.84	.75	1.47	2.09	1.59	.31	.06	.06
3/8	1	1018053	1018062	.29	.66	.44	1.44	.38	1.03	.91	1.78	2.49	1.86	.38	.13	.06
7/16	1.5	1018071	1018080	.38	.75	.50	1.69	.44	1.16	1.06	2.03	2.91	2.13	.44	.13	.06
1/2	2	1018099	1018106	.71	.81	.63	1.88	.50	1.31	1.19	2.31	3.28	2.38	.50	.13	.06
5/8	3.25	1018115	1018124	1.50	1.06	.75	2.38	.63	1.69	1.50	2.94	4.19	2.91	.69	.13	.06
3/4	4.75	1018133	1018142	2.32	1.25	.88	2.81	.75	2.00	1.81	3.50	4.97	3.44	.81	.25	.06
7/8	6.5	1018151	1018160	3.49	1.44	1.00	3.31	.88	2.28	2.09	4.03	5.83	3.81	.97	.25	.06
1	8.5	1018179	1018188	5.00	1.69	1.13	3.75	1.00	2.69	2.38	4.69	6.56	4.53	1.06	.25	.06
1-1/8	9.5	1018197	1018204	6.97	1.81	1.25	4.25	1.13	2.91	2.69	5.16	7.47	5.13	1.25	.25	.06
1-1/4	12	1018213	1018222	9.75	2.03	1.38	4.69	1.29	3.25	3.00	5.75	8.25	5.50	1.38	.25	.06
1-3/8	13.5	1018231	1018240	13.25	2.25	1.50	5.25	1.42	3.63	3.31	6.38	9.16	6.13	1.50	.25	.13
1-1/2	17	1018259	1018268	17.25	2.38	1.63	5.75	1.54	3.88	3.63	6.88	10.00	6.50	1.62	.25	.13
1-3/4	25	1018277	1018286	29.46	2.88	2.00	7.00	1.84	5.00	4.19	8.86	12.34	7.75	2.25	.25	.13
2	35	1018295	1018302	45.75	3.25	2.25	7.75	2.08	5.75	4.81	9.97	13.68	8.75	2.40	.25	.13

6:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit.

Load Rated

Fatigue Rated

QUIC-CHECK®

QT &

MAX TOUGH®

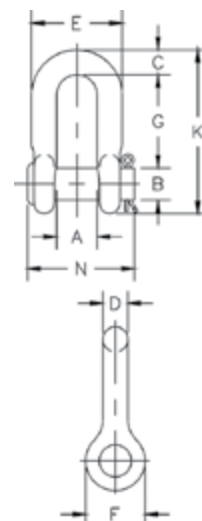
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APPLICATION AND WARNING INFORMATION
SECTION 17

G-215/S-215



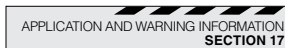
- Forged, Quenched & Tempered, with alloy pins.
- Working Load Limit permanently shown on every shackle.
- Hot-dip galvanized (G) or self colored (S).
- Sizes 3/8 inch and below are mechanically galvanized.
- Fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit.
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification. Charges for proof testing and certification available when requested at the time of order.
- Shackles are Quenched and Tempered and can meet DNV impact requirements of 42 Joules (31 ft-lb) at -20° C (-4° F).
- G-215 Round pin chain shackles meet the performance requirements of Federal Specification RR-C-271H, Type IVB, Grade A, Class 1, except for those provisions required of the contractor.
- DO NOT SIDE LOAD ROUND PIN SHACKLES.
- Look for the Red Pin®... the mark of genuine Crosby quality.



G-215 / S-215 Round Pin Chain Shackles

Nominal Size (in)	Working Load Limit (t)	Stock No.		Weight Each (lb)	Dimensions (in)										Tolerance (+ / - in)	
		G-215	S-215		A	B	C	D	E	F	G	K	N	G	A	
1/4	0.5	1018810	1018829	.10	.47	.31	.25	.25	.97	.62	.91	1.59	1.34	.06	.06	
5/16	0.75	1018838	1018847	.18	.53	.38	.31	.31	1.15	.75	1.07	1.91	1.63	.06	.06	
3/8	1	1018856	1018865	.25	.66	.44	.38	.38	1.42	.92	1.28	2.31	1.86	.13	.06	
7/16	1.5	1018874	1018883	.40	.75	.50	.44	.44	1.63	1.06	1.48	2.67	2.13	.13	.06	
1/2	2	1018892	1018909	.50	.81	.63	.50	.50	1.81	1.18	1.66	3.03	2.38	.13	.06	
5/8	3.25	1018918	1018927	1.21	1.06	.75	.63	.63	2.32	1.50	2.04	3.76	2.91	.13	.06	
3/4	4.75	1018936	1018945	2.00	1.25	.88	.81	.75	2.75	1.81	2.40	4.53	3.44	.25	.06	
7/8	6.5	1018954	1018963	3.28	1.44	1.00	.97	.88	3.20	2.10	2.86	5.33	3.81	.25	.06	
1	8.5	1018972	1018981	4.75	1.69	1.13	1.00	1.00	3.69	2.38	3.24	5.94	4.53	.25	.06	
1-1/8	9.5	1018990	1019007	6.30	1.81	1.25	1.25	1.13	4.07	2.68	3.61	6.78	5.13	.25	.06	
1-1/4	12	1019016	1019025	9.00	2.03	1.38	1.38	1.25	4.53	3.00	3.97	7.50	5.50	.25	.13	
1-3/8	13.5	1019034	1019043	12.00	2.25	1.50	1.50	1.38	5.01	3.31	4.43	8.28	6.13	.25	.13	
1-1/2	17	1019052	1019061	16.15	2.38	1.63	1.62	1.50	5.38	3.62	4.87	9.05	6.50	.25	.13	
1-3/4	25	1019070	1019089	29.96	2.88	2.00	2.12	1.75	6.38	4.19	5.82	10.97	7.75	.25	.13	
2	35	1019098	1019105	43.25	3.25	2.25	2.36	2.10	7.25	5.00	6.82	12.74	8.75	.25	.13	

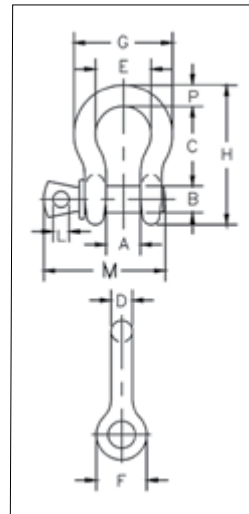
6:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit.



G-209/S-209



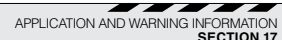
- Meets performance requirements of Grade 6 shackles.
- Forged, Quenched & Tempered, with alloy pins.
- Working Load Limit and Grade 6 permanently shown on every shackle.
- Hot-dip galvanized (G) or self colored (S).
- Sizes 3/8 inch and below are mechanically galvanized.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certifications. Proof testing and certification available when requested at the time of order, charges will apply.
- Approved for use at -40° F (-40° C) to 400° F (204° C).
- All 209 and 210 shackles can meet charpy requirements of 31 ft-lb (42 Joules) avg. at -4° F (-20° C) upon special request.
- Meets or exceeds all requirements of ASME B30.26.
- Type Approval certification in accordance with ABS 2016 Steel Vessel Rules and ABS Guide for Certification of Lifting Appliances available. Certificates available when requested at time of order and may include additional charges.
- G-209 Screw pin anchor shackles meet the performance requirements of Federal Specification RR-C-271H, Type IVA, Grade A, Class 2, except for those provisions required of the contractor.
- Look for the Red Pin®... the mark of genuine Crosby quality.



G-209 / S-209 Screw Pin Anchor Shackles

Nominal Size (in)	Working Load Limit (t)	Stock No.		Weight Each (lb)	Dimensions (in)													Tolerance (+ / - in)	
		G-209	S-209		A	B	C	D	E	F	G	H	L	M	P	C	A		
3/16	0.33	1018357	—	.06	.38	.25	.88	.19	.60	.56	.98	1.47	.16	1.14	.19	.06	.06		
1/4	0.5	1018375	1018384	.10	.47	.31	1.13	.25	.78	.62	1.28	1.84	.19	1.43	.25	.06	.06		
5/16	0.75	1018393	1018400	.18	.53	.38	1.21	.31	.84	.75	1.46	2.09	.22	1.71	.31	.06	.06		
3/8	1	1018419	1018428	.31	.66	.44	1.45	.38	1.03	.92	1.79	2.50	.25	2.06	.38	.13	.06		
7/16	1.5	1018437	1018446	.38	.75	.50	1.69	.44	1.16	1.06	2.04	2.91	.31	2.37	.44	.13	.06		
1/2	2	1018455	1018464	.72	.81	.62	1.88	.50	1.31	1.18	2.31	3.28	.38	2.69	.50	.13	.06		
5/8	3.25	1018473	1018482	1.37	1.06	.75	2.38	.62	1.69	1.50	2.93	4.19	.44	3.34	.69	.13	.06		
3/4	4.75	1018491	1018507	2.35	1.25	.88	2.81	.75	2.00	1.81	3.50	4.97	.50	3.97	.81	.25	.06		
7/8	6.5	1018516	1018525	3.62	1.44	1.00	3.31	.88	2.28	2.10	4.04	5.83	.50	4.50	.97	.25	.06		
1	8.5	1018534	1018543	5.03	1.69	1.12	3.76	1.00	2.69	2.38	4.69	6.56	.56	5.13	1.06	.25	.06		
1-1/8	9.5	1018552	1018561	7.41	1.81	1.25	4.27	1.16	2.91	2.68	5.15	7.47	.63	5.97	1.25	.25	.06		
1-1/4	12	1018570	1018589	9.50	2.03	1.38	4.69	1.29	3.26	3.00	5.76	8.26	.69	6.50	1.38	.25	.06		
1-3/8	13.5	1018598	1018605	13.53	2.25	1.53	5.22	1.42	3.62	3.31	6.38	9.16	.75	6.93	1.50	.25	.13		
1-1/2	17	1018614	1018623	17.20	2.38	1.63	5.76	1.53	3.88	3.62	6.94	10.00	.81	7.43	1.62	.25	.13		
1-3/4	25	1018632	1018641	27.78	2.88	2.00	7.00	1.84	5.00	4.19	8.80	12.34	1.00	9.19	2.25	.25	.13		
2	35	1018650	1018669	45.00	3.25	2.25	7.75	2.08	5.75	4.81	10.15	13.68	1.13	10.36	2.40	.25	.13		
2-1/2	55	1018678	1018687	85.75	4.12	2.75	10.51	2.72	7.25	5.81	12.75	17.92	1.38	13.17	3.13	.25	.25		

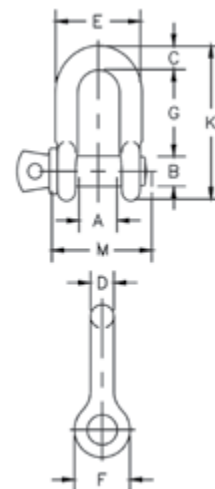
6:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see Warnings & Applications.



G-210 / S-210



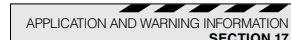
- Forged, Quenched & Tempered, with alloy pins.
- Working Load Limit and Grade 6 permanently shown on every shackle.
- Hot-dip galvanized (G) or self colored (S).
- Sizes 3/8 inch and below are mechanically galvanized.
- Fatigue rated at 1-1/2 times the Working Load Limit at 20,000 cycles.
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certifications. Proof testing and certification available when requested at the time of order, charges will apply.
- Approved for use at -40° F (-40° C) to 400° F (204° C).
- All 209 and 210 shackles can meet charpy requirements of 31 ft-lb (42 Joules) avg. at -4° F (-20° C) upon special request.
- Meets or exceeds all requirements of ASME B30.26.
- Type Approval certification in accordance with ABS 2016 Steel Vessel Rules and ABS Guide for Certification of Lifting Appliances available. Certificates available when requested at time of order and may include additional charges.
- G-210 Screw pin anchor shackles meet the performance requirements of Federal Specification RR-C-271H, Type IVB, Grade A, Class 2, except for those provisions required of the contractor.
- Look for the Red Pin®... the mark of genuine Crosby quality.



G-210 / S-210 Screw Pin Chain Shackles

Nominal Size (in)	Working Load Limit (t)	Stock No.		Weight Each (lb)	Dimensions (in)										Tolerance (+ / - in)	
		G-210	S-210		A	B	C	D	E	F	G	K	L	M	G	A
1/4	0.5	1019150	1019169	.11	.47	.31	.25	.25	.97	.62	.97	1.59	.19	1.43	.06	.06
5/16	0.75	1019178	1019187	.17	.53	.38	.31	.31	1.15	.75	1.07	1.91	.22	1.71	.06	.06
3/8	1	1019196	1019203	.28	.66	.44	.38	.38	1.42	.92	1.28	2.31	.25	2.02	.13	.06
7/16	1.5	1019212	1019221	.43	.75	.50	.44	.44	1.63	1.06	1.48	2.67	.31	2.37	.13	.06
1/2	2	1019230	1019249	.59	.81	.63	.50	.50	1.81	1.18	1.66	3.03	.38	2.69	.13	.06
5/8	3.25	1019258	1019267	1.25	1.06	.75	.63	.63	2.32	1.50	2.04	3.76	.44	3.34	.13	.06
3/4	4.75	1019276	1019285	2.63	1.25	.88	.81	.75	2.75	1.81	2.40	4.53	.50	3.97	.25	.06
7/8	6.5	1019294	1019301	3.16	1.44	1.00	.97	.88	3.20	2.10	2.86	5.33	.50	4.50	.25	.06
1	8.5	1019310	1019329	4.75	1.69	1.13	1.00	1.00	3.69	2.38	3.24	5.94	.56	5.13	.25	.06
1-1/8	9.5	1019338	1019347	6.75	1.81	1.25	1.25	1.13	4.07	2.69	3.61	6.78	.63	5.71	.25	.06
1-1/4	12	1019356	1019365	9.06	2.03	1.38	1.38	1.25	4.53	3.00	3.97	7.50	.69	6.25	.25	.13
1-3/8	13.5	1019374	1019383	11.63	2.25	1.50	1.50	1.38	5.01	3.31	4.43	8.28	.75	6.53	.25	.13
1-1/2	17	1019392	1019409	15.95	2.38	1.63	1.62	1.50	5.38	3.62	4.87	9.05	.81	7.33	.25	.13
1-3/4	25	1019418	1019427	26.75	2.88	2.00	2.12	1.75	6.38	4.19	5.78	10.97	1.00	9.06	.25	.13
2	35	1019436	1019445	42.31	3.25	2.25	2.36	2.10	7.25	5.00	6.77	12.74	1.13	10.35	.25	.13
2-1/2	55	1019454	1019463	71.75	4.12	2.75	2.63	2.63	9.38	5.68	8.07	14.85	1.38	13.00	.25	.25

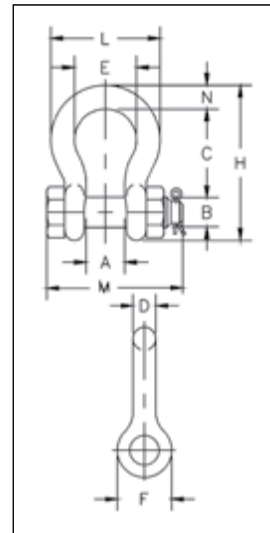
6:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see Warnings & Applications.



G-2130 / S-2130



- Working Load Limit and Grade 6 permanently shown on every shackle.
- Forged, Quenched & Tempered, with alloy bolts.
- Hot-dip galvanized (G) or self colored (S). 85, 120, and 150-metric ton shackles are all hot-dip galvanized bows and the bolts are Dimetcoated® and painted red.
- Sizes 3/8 and below are mechanically galvanized.
- Fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit (1/3t - 55t).
- Approved for use at -40° F (-40° C) to 400° F (204° C).
- Meets or exceeds all requirements of ASME B30.26.
- Shackles 85 metric tons and larger are individually proof tested to 2.0 times the working load limit.
- Type Approval certification in accordance with ABS 2016 Steel Vessel Rules ABS Guide for Certification of Lifting Appliances available. Certificates available when requested at time of order and may include additional charges.
- 3.1 Certification as standard available for charpy and statistical proof test from 3.25t up to 25 tons to DNV 2.7-1 and EN13889.
- Crosby 3.25t through 25t G-2130OC anchor shackles are type approved to DNV Certification Notes 2.7-1-Offshore Containers. These Crosby shackles are statistical proof and impact tested to 31 ft-lb (42 Joules) min. avg. at -4° F (-20° C). The tests are conducted by Crosby and 3.1 test certification is available upon request.
- All other 2130 shackles can meet charpy requirements of 31 ft-lb (42 Joules) avg at -4° F (-20° C) when requested at time of order.
- Meets the performance requirements of Federal Specification RR-C-271H, Type IVA, Grade A, Class 3, except for those provisions required of the contractor.
- Look for the Red Pin®... the mark of genuine Crosby quality.

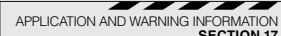


G-2130 / S-2130 Bolt Type Anchor Shackles

Nominal Size (in)	Working Load Limit (t)	Stock No.			Weight Each (lb)	Dimensions (in)										Tolerance (+ / - in)	
		G-2130	S-2130	G-2130OC		A	B	C	D	E	F	H	L	M	N	C	A
3/16	0.33 ‡	1019464	-	-	.06	.38	.25	.88	.19	.60	.56	1.47	.98	1.29	.19	.06	.06
1/4	0.5	1019466	-	-	.11	.47	.31	1.13	.25	.78	.61	1.84	1.28	1.56	.25	.06	.06
5/16	0.75	1019468	-	-	.22	.53	.38	1.22	.31	.84	.75	2.09	1.47	1.82	.31	.06	.06
3/8	1	1019470	-	-	.33	.66	.44	1.44	.38	1.03	.91	2.49	1.78	2.17	.38	.13	.06
7/16	1.5	1019471	-	-	.49	.75	.50	1.69	.44	1.16	1.06	2.91	2.03	2.51	.44	.13	.06
1/2	2	1019472	1019481	-	.79	.81	.64	1.88	.50	1.31	1.19	3.28	2.31	2.80	.50	.13	.06
5/8	3.25	1019490	1019506	1262013	1.68	1.06	.77	2.38	.63	1.69	1.50	4.19	2.94	3.56	.69	.13	.06
3/4	4.75	1019515	1019524	1262022	2.72	1.25	.89	2.81	.75	2.00	1.81	4.97	3.50	4.15	.81	.25	.06
7/8	6.5	1019533	1019542	1262031	3.95	1.44	1.02	3.31	.88	2.28	2.09	5.83	4.03	4.82	.97	.25	.06
1	8.5	1019551	1019560	1262040	5.66	1.69	1.15	3.75	1.00	2.69	2.38	6.56	4.69	5.39	1.06	.25	.06
1-1/8	9.5	1019579	1019588	1262059	8.27	1.81	1.25	4.25	1.13	2.91	2.69	7.47	5.16	5.90	1.25	.25	.06
1-1/4	12	1019597	1019604	1262068	11.71	2.03	1.40	4.69	1.29	3.25	3.00	8.25	5.75	6.69	1.38	.25	.06
1-3/8	13.5	1019613	1019622	1262077	15.83	2.25	1.53	5.25	1.42	3.63	3.31	9.16	6.38	7.21	1.50	.25	.13
1-1/2	17	1019631	1019640	1262086	19.00	2.38	1.66	5.75	1.53	3.88	3.63	10.00	6.88	7.73	1.62	.25	.13
1-3/4	25	1019659	1019668	1262095	33.91	2.88	2.04	7.00	1.84	5.00	4.19	12.34	8.80	9.68	2.25	.25	.13
2	35	1019677	1019686	-	52.25	3.25	2.30	7.75	2.08	5.75	4.81	13.68	10.15	10.81	2.40	.25	.13
2-1/2	55	1019695	1019702	-	98.25	4.13	2.80	10.50	2.71	7.25	5.69	17.90	12.75	13.58	3.13	.25	.25
3	† 85	1019711	-	-	154	5.00	3.30	13.00	3.12	7.88	6.50	21.50	14.62	15.13	3.62	.25	.25
3-1/2	† 120 ‡	1019739	-	-	265	5.25	3.76	14.63	3.62	9.00	8.00	24.88	17.02	17.00	4.38	.25	.25
4	† 150 ‡	1019757	-	-	338	5.50	4.26	14.50	4.00	10.00	9.00	25.68	18.00	17.75	4.56	.25	.25

6:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see Warnings & Applications..

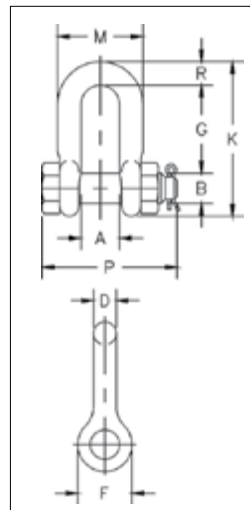
† Individually Proof Tested with certification. ‡ Furnished with eye bolts for handling.



G-2150 / S-2150



- Working Load Limit and Grade 6 permanently shown on every shackle.
- Forged, Quenched & Tempered, with alloy pins.
- Hot-dip galvanized (G) or self-colored (S). 85 ton shackles have hot-dip galvanized bows and the bolts are Dimetcoated® and painted red.
- Sizes 3/8 inch and below are mechanically galvanized.
- Fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit. (1/2t - 55t).
- Approved for use at -40° F (-40° C) to 400° F (204° C).
- Meets or exceeds all requirements of ASME B30.26.
- Sizes 1/2 - 25t meet the performance requirements of EN13889:2003.
- Shackles 55 metric tons and smaller can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification when requested at time of order.
- Type Approval certification in accordance with ABS 2016 Steel Vessel Rules and 2016 ABS Guide for Certification of Lifting Appliance. Certificates available when requested at time of order and may include additional charges.
- Meets the performance requirements of Federal Specification RR-C-271H, Type IVB, Grade A, Class 3, except for those provisions required of the contractor.
- All 2150 shackles can meet charpy requirements of 31 ft-lb (42 Joules) avg at -4° F (-20° C) upon special request.
- Look for the Red Pin®... the mark of genuine Crosby quality.



G-2150 / S-2150 Bolt Type Chain Shackles

Nominal Size (in)	Working Load Limit (t)*	Stock No.		Weight Each (lb)	Dimensions (in)										Tolerance (+ / - in)	
		G-2150	S-2150		A	B	D	F	G	K	M	P	R	G	A	
1/4	0.5	1019768	-	.13	.47	.31	.25	.62	.91	1.59	.97	1.56	.25	.06	.06	
5/16	0.75	1019770	-	.23	.53	.38	.31	.75	1.07	1.91	1.15	1.82	.31	.06	.06	
3/8	1	1019772	-	.33	.66	.44	.38	.92	1.28	2.31	1.42	2.17	.38	.13	.06	
7/16	1.5	1019774	-	.49	.75	.50	.44	1.06	1.48	2.67	1.63	2.51	.44	.13	.06	
1/2	2	1019775	1019784	.75	.81	.64	.50	1.18	1.66	3.03	1.81	2.80	.50	.13	.06	
5/8	3.25	1019793	1019800	1.47	1.06	.77	.63	1.50	2.04	3.76	2.32	3.56	.63	.13	.06	
3/4	4.75	1019819	1019828	2.52	1.25	.89	.75	1.81	2.40	4.53	2.75	4.15	.81	.25	.06	
7/8	6.5	1019837	1019846	3.85	1.44	1.02	.88	2.10	2.86	5.33	3.20	4.82	.97	.25	.06	
1	8.5	1019855	1019864	5.55	1.69	1.15	1.00	2.38	3.24	5.94	3.69	5.39	1.00	.25	.06	
1-1/8	9.5	1019873	1019882	7.60	1.81	1.25	1.13	2.68	3.61	6.78	4.07	5.90	1.25	.25	.06	
1-1/4	12	1019891	1019908	10.81	2.03	1.40	1.25	3.00	3.97	7.50	4.53	6.69	1.38	.25	.06	
1-3/8	13.5	1019917	1019926	13.75	2.25	1.53	1.38	3.31	4.43	8.28	5.01	7.21	1.50	.25	.13	
1-1/2	17	1019935	1019944	17.01	2.38	1.66	1.50	3.62	4.87	9.05	5.38	7.73	1.62	.25	.13	
1-3/4	25	1019953	1019962	31.40	2.88	2.04	1.75	4.19	5.82	10.97	6.38	9.33	2.12	.25	.13	
2	35	1019971	1019980	46.75	3.25	2.30	2.10	5.00	6.82	12.74	7.25	10.41	2.36	.25	.13	
2-1/2	55	1019999	1020004	85.00	4.12	2.80	2.63	5.68	8.07	14.85	9.38	13.58	2.63	.25	.25	
3	† 85	1020013	-	124.25	5.00	3.25	3.00	6.50	8.56	16.87	11.00	15.13	3.50	.25	.25	

6:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see Warnings & Applications.

† Individually Proof Tested with certification.

Load Rated

Fatigue Rated

TA
TYPE APPROVED

QUIC-CHECK®

Q&T
QUENCHED & TEMPERED

MAXTOUGH®

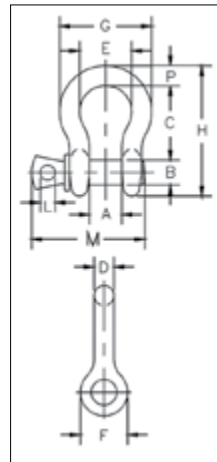
CE

APPLICATION AND WARNING INFORMATION
SECTION 17

G-209A
Grade 8



- Forged alloy steel, Quenched & Tempered, with alloy pins.
- Meets performance requirements of Grade 8 shackles.
- Working Load Limit permanently shown on every shackle.
- Hot-dip galvanized.
- Size 3/8 inch is mechanically galvanized.
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification. Charges for proof testing and certification available when requested at the time of order.
- Approved for use at -40° C (-40° F) to 204° C (400° F).
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these shackles meet other critical performance requirements including impact properties and material traceability, not addressed by ASME B30.26.
- G-209A Screw pin anchor shackles meet the performance requirements of Federal Specification RR-C-271H, Type IVA, Grade B, Class 2, except for those provisions required of the contractor.



G-209A Alloy Screw Anchor Pin Shackles

Load Rated

QUICK-CHECK®

QT

CE

APPLICATION AND WARNING INFORMATION
SECTION 17

Nominal Size (in)	Working Load Limit (t)	Stock No.	Weight Each (lb)	Dimensions (in)												Tolerance (+ / - in)	
				A	B	C	D	E	F	G	H	L	M	P	C	A	
3/8	2	1017450	.31	.66	.44	1.44	.38	1.03	.91	1.78	2.49	.25	2.03	.38	.13	.06	
7/16	2.67	1017472	.38	.75	.50	1.69	.44	1.16	1.06	2.03	2.91	.31	2.38	.44	.13	.06	
1/2	3.33	1017494	.63	.81	.63	1.88	.50	1.31	1.19	2.31	3.28	.38	2.69	.50	.13	.06	
5/8	5	1017516	1.38	1.06	.75	2.38	.63	1.69	1.50	2.94	4.19	.44	3.34	.69	.13	.06	
3/4	7	1017538	2.35	1.25	.88	2.81	.75	2.00	1.81	3.50	4.97	.50	3.97	.81	.25	.06	
7/8	9.5	1017560	3.61	1.44	1.00	3.31	.88	2.28	2.09	4.03	5.83	.50	4.50	.97	.25	.06	
1	12.5	1017582	5.32	1.69	1.13	3.75	1.00	2.69	2.38	4.69	6.56	.56	5.07	1.06	.25	.06	
1-1/8	15	1017604	7.25	1.81	1.25	4.25	1.16	2.91	2.69	5.16	7.47	.63	5.59	1.25	.25	.06	
1-1/4	18	1017626	9.88	2.03	1.38	4.69	1.29	3.25	3.00	5.75	8.25	.69	6.16	1.38	.25	.06	
1-3/8	21	1017648	13.25	2.25	1.50	5.25	1.42	3.63	3.31	6.38	9.16	.75	6.84	1.50	.25	.13	

4.5:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit (metric tons) and 2.2 times the Working Load Limit (short tons). For Working Load Limit reduction due to side loading applications, see Warnings & Applications.

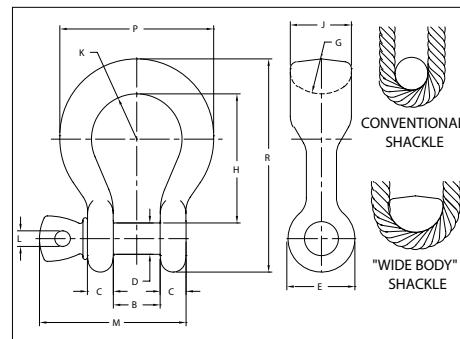
G-2169



S-2169



- Quenched & Tempered for maximum strength.
- Forged alloy steel.
- Available in galvanized (G) and self colored (S) finish.
- Can be individually proof tested and magnetic particle inspected upon request. Crosby certification available at time of order.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these shackles meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.
- Look for the Red Pin®... the mark of genuine Crosby quality.



G-2169 / S-2169 Alloy Screw Pin Wide Body Shackles

Load Rated

QT

APPLICATION AND WARNING INFORMATION
SECTION 17

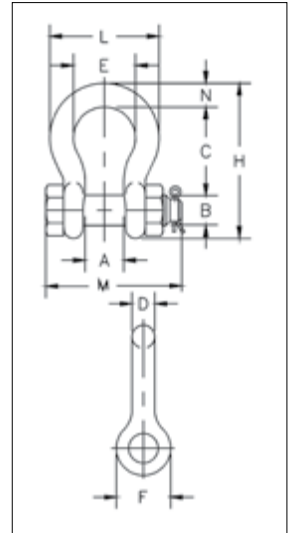
Working Load Limit (t)	G-2169 Stock No.	S-2169 Stock No.	Weight Each (lb)	Dimensions (in)											
				B +/- .25	C	D +/- .02	E	G	H	J	K	L	M	P	R
7	1021655	1021664	3.5	1.25	.69	.88	1.82	1.25	3.56	1.60	1.25	.50	3.97	4.10	5.87
12.5	1021673	1021682	8.8	1.69	.92	1.13	2.38	1.37	4.63	2.13	1.63	.56	5.13	5.51	7.63
18	1021691	1021699	13	2.03	1.16	1.38	2.69	1.50	5.81	2.50	2.00	.69	6.25	6.76	9.38

5:1 Design Factor. Proof Load is 2 times the Working Load Limit.

G-2130A Grade 8



- Forged alloy steel, Quenched & Tempered, with bow and bolt.
- Meets or exceeds all requirements of Grade 8 shackles.
- Working Load Limit permanently shown on every shackle.
- Hot-dip galvanized.
- Meets or exceeds all requirements of ASME B30.26, including identification, ductility, design factor, proof load, and temperature requirements. Importantly, G-2130A meet other critical performance requirements, including impact properties, and material traceability not addressed by ASME B30.26.
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification when requested at time of order.
- Type Approval and certification in accordance with DNV 2.7-1 offshore containers.
- Shackles are Quenched & Tempered and meet DNV impact requirements of 42 Joules (31 ft-lb) at -40° C (-40° F).
- G-2130A Bolt Type Anchor shackles with thin head bolt – nut with cotter pin. Meets the performance requirements of Federal Specification RR-C-271H, Type IVA, Grade B, Class 3, except for those provisions required of the contractor.



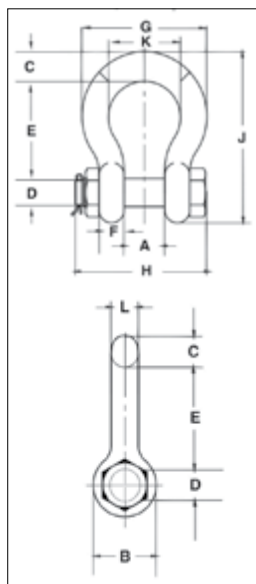
G-2130A Alloy Bolt Type Anchor Shackles Grade 8

Nominal Size (in)	Working Load Limit (t)*	Stock No.	Weight Each (lb)	Dimensions (in)										Tolerance (+ / - in)	
				A	B	C	D	E	F	H	L	M	N	C	A
1/2	2	1219472	.79	.81	.63	1.88	0.50	1.31	1.19	3.29	2.30	2.80	0.50	0.13	0.06
5/8	3.25	1219491	1.37	1.06	.75	2.38	0.63	1.69	1.50	4.18	2.94	3.56	0.69	0.25	0.06
3/4	4.75	1219516	2.71	1.25	.88	2.82	0.75	2.01	1.81	4.96	3.51	4.15	0.81	0.25	0.06
7/8	6.5	1219534	3.95	1.44	1.00	3.31	0.88	2.29	2.09	5.83	4.02	4.82	0.97	0.25	0.06
1	8.5	1219552	5.03	1.69	1.10	3.76	1.00	2.70	2.38	6.58	4.69	5.39	1.06	0.25	0.06
1-1/8	9.5	1219578	8.27	1.81	1.25	4.26	1.13	2.92	2.70	7.49	5.16	5.90	1.25	0.25	0.06
1-1/4	12	1219598	11.7	2.03	1.38	4.69	1.25	3.25	2.99	8.27	5.75	6.69	1.38	0.25	0.06
1-3/8	13.5	1219614	15.8	2.25	1.50	5.24	1.38	3.62	3.31	9.18	6.38	7.21	1.50	0.25	0.13
1-1/2	17	1219632	19.0	2.38	1.63	5.75	1.50	3.88	3.62	10.0	6.90	7.73	1.62	0.25	0.13

8:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see Warnings & Applications..



G-2140 / S-2140

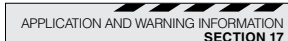


- Quenched & Tempered.
- Alloy bows, alloy bolts.
- Forged alloy steel 2 through 250 metric tons. Cast alloy steel 400 metric tons.
- Meets performance requirements of Grade 8 shackles.
- Working Load Limit is permanently shown on every shackle.
- 30, 40, 55, and 85 metric ton shackle bows are available galvanized (G) or self colored (S) with bolts that are galvanized and painted red.
- Size 3/8 inch is mechanically galvanized.
- 120, 150, 175 metric ton shackle bows are hot-dip galvanized; bolts are Dimetcoated and painted red.
- 200, 250, 300, 400 metric ton shackle bows are Dimetcoated; bolts are Dimetcoated and painted red.
- Approved for use at -40° C (-40° F) to 204° C (400° F).
- Shackles are Quenched & Tempered and can meet DNV impact requirements of 42 Joules (31 ft-lb) at -20° C (-4° F).
- Crosby COLD TUFF® shackles that meet the additional requirements of DNV rules for certification of lifting applications - loose gear are available.
- Shackles 200 metric tons and larger are provided as follows:
 - Serialized bolt and bow
 - Material certification (chemical)
 - Magnetic particle inspected.
 - Certification must be requested at time of order.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. 2140 shackles meet other critical performance requirements including impact properties and material traceability, not addressed by ASME B30.26.
- Type Approval certification in accordance with ABS 2016 Steel Vessel Rules and 2016 ABS Guide for Certification of Lifting Appliances. Certificates are available when requested at time of order and may include additional charges.
- G-2140 meets the performance requirements of Federal Specification RR-C-271H, Type IVA, Grade B, Class 3, except for those provisions required of the contractor. For additional information, see Warnings & Applications.
- Look for the Red Pin®... the mark of genuine Crosby quality.

G-2140 / S-2140 Alloy Bolt Tie Anchor Shackles

Nominal Shackle Size (in)	Working Load Limit (t)	Stock No.			Weight Each (lb)	Dimensions (in)														Tolerance (+ / - in)		
		G-2140	S-2140	G-2140 OC		A	B	C	D	E	F	G	H	J	K	L	M	N	A	D	E	
3/8	2	1021015	-	-	0.33	0.66	0.91	0.38	0.44	1.44	0.38	1.78	2.17	2.49	1.03	0.38	-	-	0.06	0.01	0.13	
7/16	2.67	1021020	-	-	0.49	0.75	1.06	0.44	0.50	1.69	0.41	2.03	2.51	2.91	1.16	0.44	-	-	0.06	0.01	0.13	
1/2	3.33	1021029	-	-	0.79	0.81	1.19	0.50	0.64	1.88	0.46	2.31	2.80	3.28	1.31	0.50	-	-	0.06	0.02	0.13	
5/8	5	1021038	-	-	1.68	1.06	1.50	0.69	0.77	2.38	0.58	2.94	3.56	4.19	1.69	0.63	-	-	0.06	0.02	0.13	
3/4	7	1021047	-	-	2.72	1.25	1.81	0.81	0.89	2.81	0.69	3.50	4.15	4.97	2.00	0.75	-	-	0.06	0.02	0.25	
7/8	9.5	1021056	-	-	3.95	1.44	2.09	0.97	1.02	3.31	0.81	4.03	4.82	5.83	2.28	0.88	-	-	0.06	0.02	0.25	
1	12.5	1021065	-	-	5.66	1.69	2.38	1.06	1.15	3.75	0.92	4.69	5.39	6.56	2.69	1.00	-	-	0.06	0.02	0.25	
1-1/8	15	1021074	-	-	8.27	1.81	2.69	1.25	1.25	4.25	1.04	5.16	5.90	7.47	2.91	1.13	-	-	0.06	0.02	0.25	
1-1/4	18	1021083	-	-	11.7	2.03	3.00	1.38	1.40	4.69	1.16	5.75	6.69	8.25	3.25	1.29	-	-	0.06	0.03	0.25	
1-3/8	21	1021092	-	-	15.8	2.25	3.31	1.50	1.53	5.25	1.28	6.38	7.21	9.16	3.63	1.42	-	-	0.13	0.03	0.25	
1-1/2	30	1021110	1021129	1262407	18.8	2.38	3.62	1.62	1.63	5.75	1.39	6.88	7.73	10.00	3.88	1.53	-	-	0.13	0.03	0.25	
1-3/4	40	1021138	1021147	1262416	33.8	2.88	4.19	2.25	2.00	7.00	1.75	8.81	9.33	12.34	5.00	1.84	-	-	0.13	0.03	0.25	
2	55	1021156	1021165	1262425	49.9	3.25	4.81	2.40	2.25	7.75	2.00	10.16	10.41	13.68	5.75	2.08	-	-	0.13	0.03	0.25	
2-1/2	85	1021174	1021183	1262434	103	4.12	5.81	3.12	2.75	10.50	2.62	12.75	13.58	17.90	7.25	2.71	-	-	0.25	0.03	0.25	
3	120	1021192	-	1262443	162	5.00	6.50	3.63	3.25	13.00	3.00	14.62	15.13	21.50	7.88	3.12	-	-	0.25	0.04	0.25	
3-1/2	† 150	1021218	-	1262452	268	5.25	8.00	4.38	3.75	14.63	3.75	17.02	20.33	24.88	9.00	3.62	4.00	1.80	0.25	0.01	0.25	
4	† 175	1021236	-	1262461	318	5.50	9.00	4.56	4.25	14.50	4.00	18.00	21.20	25.68	10.00	4.00	4.00	1.80	0.25	0.01	0.25	
4-3/4	† 200	1021234	-	-	461	7.25	10.50	5.00	4.75	15.19	4.58	20.84	24.04	27.81	11.00	4.75	4.00	1.80	0.25	0.01	0.25	
5	† 250	1021243	-	-	608	8.50	12.00	5.62	5.00	18.50	4.85	23.62	24.87	32.61	13.00	5.00	4.00	1.80	0.25	0.01	0.25	
6	† 300	1021252	-	-	797	8.38	13.00	6.06	6.00	18.72	4.89	24.76	26.22	34.28	13.00	5.88	4.00	1.80	0.25	0.01	0.25	
7*	† 400	1021478	-	-	1289	8.25	14.00	7.25	7.00	22.50	6.50	26.00	29.66	40.25	13.00	6.00	4.00	1.80	0.25	0.01	0.25	

4.5:1 Design Factor for sizes 2 through 21 metric tons, 5.4:1 Design Factor for sizes 30 through 175 metric tons, 4:1 Design Factor for 200 through 400 metric tons. Maximum Proof Load is 2 times the Working Load Limit. *Cast alloy steel. †Furnished with round head bolts with a handle. For Working Load Limit reduction due to side loading applications, see Warnings & Applications.



G-2140E



- Quenched & Tempered.
- Alloy bows, alloy bolts.
- Meets performance requirements of Grade 8 shackles.
- Working Load Limit is permanently shown on every shackle.
- 200, 250, and 300 metric ton shackle bows are Dimetcoated®; Pins are Dimetcoated and painted red.
- Approved for use at -40° F (-40° C) to 400° F (204° C).
- Shackles are Quenched & Tempered and can meet DNV impact requirements of 31 ft-lb (42 Joules) at -4° F (-20° C).
- All sizes are individually proof tested to 2.0 times the Working Load Limit.
- Shackles are provided as follows:
 - Serialized bolt and bow
 - Material certification (chemical)
 - Magnetic particle inspected
 - Certification must be requested at time of order
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these shackles meet other critical performance requirements including impact properties and material traceability, not addressed by ASME B30.26.
- Type Approval certification in accordance with ABS 2016 Steel Vessel Rules and 2016 ABS Guide for Certification of Lifting Appliances. Certificates available when requested at time of order and may include additional charges.
- G-2140E meets the performance requirements of Federal Specification RR-C-271H, Type IVA, Grade B, Class 3, except for those provisions required of the contractor.
- Look for the Red Pin®... the mark of genuine Crosby quality.

G-2140E Alloy Easy-Loc Shackles

Nominal Shackle Size (in)	Working Load Limit (t)	Stock No.	Weight Each (lb)	Dimensions (in)														Tolerance (+ / - in)	
				A	B	C	D +/- .02	E	F	G	H	J	K	L	M	N	A	E	
4-3/4	200	1021475	458	7.25	10.50	5.00	4.75	15.19	4.58	20.84	23.01	27.81	11.00	4.75	4.00	1.80	0.25	0.25	
5	250	1021484	597	8.50	12.00	5.63	5.00	18.50	4.48	23.63	23.84	32.63	13.00	5.00	4.00	1.80	0.25	0.25	
6	300	1021493	791	8.38	13.00	6.06	6.00	18.72	4.89	24.76	25.01	34.28	13.00	5.88	4.00	1.80	0.25	0.25	

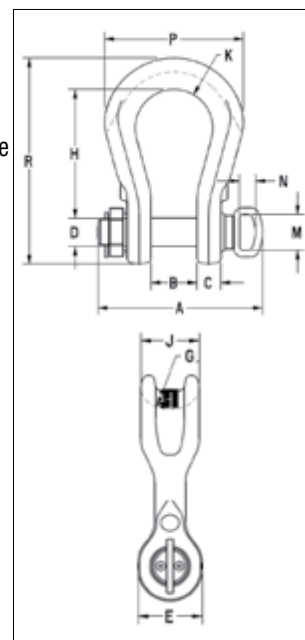
4:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see Warnings & Applications.



G-2160 / S-2160



- Increase in shackle bow radius provides minimum 58% gain in sling bearing surface and eliminates need for a thimble.
- Increases usable sling strength a minimum of 15% and greatly improves life of wire rope slings.
- Can be used to connect synthetic web slings, synthetic round slings or wire rope slings.
- All sizes Quenched & Tempered for maximum strength.
- Forged alloy steel from 7 through 300 metric tons.
- Cast alloy steel from 400 through 1550 metric tons.
- Proof tested as follows:
 - 7 through 75 metric tons and 200 through 300 metric tons: 2 x WLL
 - 125 metric tons: 1.6 x WLL
 - 400 metric tons and higher: 1.33 x WLL
- All ratings are in metric tons, embossed on side of bow.
- G-2160, (7 through 55t), are hot-dip galvanized and pins are painted red.
- G-2160 (75t and larger), bows are furnished Dimetcoated; Pins are Dimetcoated, then painted red.
- S-2160 bows and pins are painted red.
- Approved for use at -40° C (-40° F) to 204° C (400° F).
- Bow and bolt are certified to meet Charpy impact testing of 42 Joules (31 ft-lb) min. avg. at -20° C (-4° F).
- All 2160 shackles are individually proof tested and magnetic particle inspected. Crosby certification available at time of order.
- Shackles requiring ABS, Lloyds and other certifications are available upon special request and must be specified at time of order.
- Type approved and certification to DNV Rules for Certification of Lifting Appliances, and are produced in accordance with DNV MSA requirements. Databook is provided that includes required documents.
 - Serialization / Identification
 - Material Testing (physical / chemical / Charpy)
 - Proof Testing
- Look for the Red Pin®... the mark of genuine Crosby quality.



G-2160 / S-2160 Wide Body Shackles

Working Load Limit (t)*	Stock No.		Weight Each (lb)	Dimensions (in)														Effective Body Diameter
	G-2160	S-2160		A	B	C	D	E	G	H	J	K	M	N	P	R		
7	1021256	1021548	4.0	4.14	1.25	.69	.88	1.82	1.25	3.56	1.60	1.25	-	-	4.10	5.87	2.1	
12.5	1021265	1021557	8.8	5.38	1.69	.92	1.13	2.38	1.37	4.63	2.13	1.63	-	-	5.51	7.63	2.4	
18	1021274	1021566	14.9	6.69	2.03	1.16	1.38	2.69	1.50	5.81	2.50	2.00	-	-	6.76	9.38	2.8	
30	1021283	1021575	26.5	7.69	2.37	1.38	1.63	3.50	2.50	6.94	3.13	2.50	-	-	8.50	11.38	4.1	
40	1021285	1021584	46.0	9.28	2.88	1.69	2.00	4.00	1.75	8.06	3.75	3.00	-	-	10.62	13.62	3.6	
55	1021287	1021593	68.0	10.36	3.25	2.00	2.25	4.63	2.00	9.36	4.50	3.50	-	-	12.26	15.63	4.3	
75	1022101	-	112	15.04	4.13	2.39	2.75	5.34	3.75	11.53	5.00	3.64	4.00	1.80	12.64	18.66	6.3	
125	1022110	-	193	18.32	5.12	3.10	3.15	6.50	3.75	14.37	5.91	4.33	4.00	1.80	15.47	23.00	6.8	
200	1022118	-	420	19.35	5.91	3.39	4.12	8.41	5.25	18.91	8.56	5.42	4.00	1.80	20.27	30.44	9.5	
300	1022127	-	805	22.61	7.38	4.30	5.25	10.50	6.13	23.63	10.38	6.31	4.00	1.80	23.93	37.66	11.4	
400	1021334	-	1143	30.27	8.66	5.16	6.30	12.56	7.99	22.64	12.60	7.28	4.00	1.80	27.17	38.78	14.3	
500	1021343	-	1439	33.35	9.84	5.73	7.09	13.39	8.09	24.81	13.39	8.86	4.00	1.80	31.10	42.72	14.8	
600	1021352	-	2132	36.02	10.83	6.23	7.87	15.50	13.00	27.56	14.57	9.74	5.75	2.25	34.05	47.24	20.3	
700	1021361	-	2579	38.91	11.81	6.59	8.46	17.03	8.87	28.94	15.75	10.63	5.75	2.25	37.01	50.18	16.6	
800	1021254	-	3025	41.66	12.80	7.30	9.06	17.69	9.76	29.53	16.54	10.92	5.75	2.25	38.39	52.09	18.0	
900	1021389	-	3678	43.73	13.78	7.78	9.84	18.81	13.00	29.82	18.81	11.52	5.75	2.25	40.35	54.59	22.4	
1000	1021370	-	4079	45.98	14.96	8.33	10.63	20.00	10.26	29.92	18.11	12.11	5.75	2.25	42.32	55.31	19.3	
1250	1021272	-	5320	49.86	16.99	9.16	11.81	22.56	13.92	36.61	20.87	12.70	-	-	46.26	65.35	24.4	
1550	1021281	-	8302	54.89	18.31	11.10	12.60	24.25	12.52	42.32	22.82	13.29	-	-	51.81	74.63	23.9	

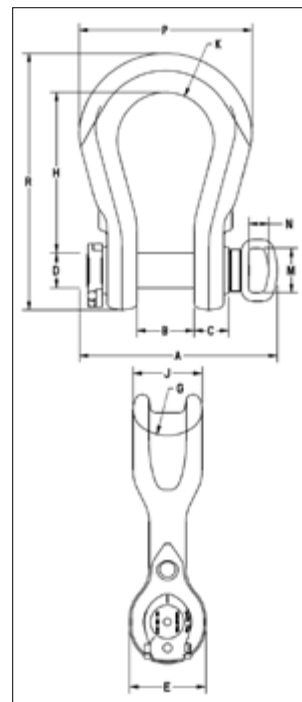
5:1 Design Factor on 75 through 300 metric tons. Maximum Proof Load is 2 times the Working Load Limit on 75 through 300 metric tons (except for 125 metric tons which is proof tested to 1.6 times the Working Load Limit). 4.5:1 Design Factor on 400 through 1550 metric tons. Maximum Proof Load is 1.33 times the Working Load Limit on 400 through 1550 metric tons.



G-2160E



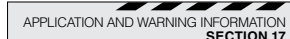
- Increase in shackle bow radius provides minimum 58% gain in sling bearing surface and eliminates need for a thimble.
- Increases usable sling strength a minimum of 15% and greatly improves life of wire rope slings.
- Can be used to connect synthetic web slings, synthetic round slings or wire rope slings.
- All sizes Quenched & Tempered for maximum strength.
- Forged alloy steel from 75 through 300 metric tons.
- Proof tested as follows:
 - 75 metric tons and 200-300 metric tons: 2 x WLL.
 - 125 metric tons: 1.6 x WLL.
- All ratings are in metric tons, embossed on side of bow.
- G-2160E, (75t and larger), bows are furnished Dimetcoated, and pins are Dimetcoated, then painted red.
- Approved for use at -40° C (-40° F) to 204 degrees C (400° F).
- Bow and bolt are certified to meet Charpy impact testing of 42 Joules (31 ft-lb) min. avg. at -20° C (-4 degrees F).
- All 2160E shackles are individually proof tested and magnetic particle inspected. Crosby certification available at time of order.
- Shackles requiring ABS, Lloyds and other certifications are available upon special request and must be specified at time of order.
- Shackles have DNV Type Approval to Rules for Certification of Lifting Appliances, and are produced in accordance with DNV MSA requirements. Databook is provided that includes required documents.
 - Serialization / Identification
 - Material Testing (physical / chemical / Charpy)
 - Proof Testing
- Look for the Red Pin®... the mark of genuine Crosby quality.



G-2160E Easy-Loc Wide Body Shackles

Working Load Limit (t)	Stock No.	Weight Each (lb)	Dimensions (in)													Effective Body Diameter
			A	B	C	D	E	G	H	J	K	M	N	P	R	
75	1021500	110	15.04	4.13	2.39	2.75	5.34	3.75	11.54	5.00	3.64	4.00	1.80	12.64	18.66	6.3
125	1021509	190	17.70	5.12	3.10	3.15	6.50	3.75	14.37	5.91	4.33	4.00	1.80	15.47	23.00	6.8
200	1021518	408	19.35	5.91	3.39	4.12	8.41	5.25	18.91	8.56	5.42	4.00	1.80	20.27	30.44	9.5
300	1021527	787	22.61	7.38	4.30	5.25	10.50	6.13	23.63	10.38	6.31	4.00	1.80	23.93	37.51	11.4

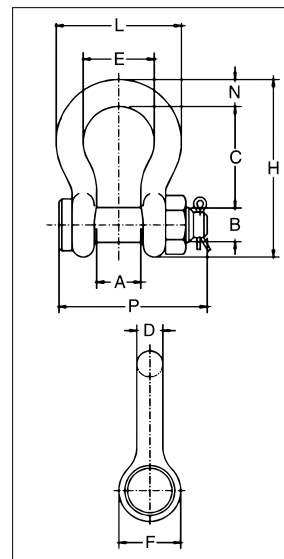
5:1 Design Factor on 75 through 300 metric tons. Maximum Proof Load is 2 times the Working Load Limit on 75 through 300 metric tons (except for 125 metric tons which is proof tested to 1.6 times the Working Load Limit).



G-2130CT / G-2140CT



- Forged, Quenched & Tempered, with alloy bolt.
 - G-2130CT - carbon steel
 - G-2140CT - alloy steel
- Working Load Limit permanently shown on every shackle.
- Individually serialized with certification.
- Fatigue Rated (G-2130CT only).
- All sizes are individually proof tested to 2.0 times the Working Load Limit.
- Finish is inorganic zinc primer.
- Bow and bolt are certified to meet Charpy impact testing of 42 Joules (31 ft-lb) min. avg. at -20° C (-4° F).
- Individually magnetic particle inspected with certification.
- Type Approval and certification in accordance with DNV 2.7-1 Offshore Containers, and Rules for Certification of Lifting Appliances, DNV-OS-E101 and are produced in accordance with DNV MSA requirements, including required documents.
- DNV certified minimum design temperature -4° F. May be used at -50° F (-45° C) in non DNV applications.
- Meets the performance requirements of Federal Specification RR-C-271H Type IVA:
 - G-2130CT - Grade A, Class 3, except for those provisions required of the contractor.
 - G-2140CT - Grade B, Class 3, except for those provisions required of the contractor.



G-2130CT COLD TUFF® Bolt Type Anchor Shackles

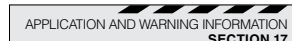
Nominal Shackle Size (in)	Working Load Limit (t)	Stock No.	Weight Each (lb)	Dimensions (in)										Tolerance (+ / - in)	
				A	B	C	D	E	F	H	L	N	P	A	C
3/4	4.75	1260568	2.72	1.25	.88	2.81	.75	2.00	1.81	4.97	3.50	.81	4.25	.06	.25
7/8	6.5	1260577	3.87	1.44	1.00	3.31	.88	2.28	2.09	5.83	4.03	.97	4.71	.06	.25
1	8.5	1260586	5.66	1.69	1.13	3.75	1.03	2.69	2.38	6.56	4.69	1.06	5.38	.06	.25
1-1/8	9.5	1260595	8.26	1.81	1.25	4.25	1.13	2.91	2.69	7.47	5.16	1.25	5.90	.06	.25
1-1/4	12	1260604	11.71	2.03	1.38	4.69	1.29	3.25	3.00	8.25	5.75	1.38	6.63	.06	.25
1-3/8	13.5	1260613	15.1	2.25	1.50	5.25	1.38	3.63	3.31	9.16	6.38	1.50	7.21	.13	.25
1-1/2	17	1260622	20.8	2.38	1.63	5.75	1.54	3.88	3.63	10.00	6.88	1.62	7.66	.13	.25
1-3/4	25	1260633	33.9	2.88	2.00	7.00	1.84	5.00	4.19	12.34	8.86	2.25	9.19	.13	.25

5.4:1 Design Factor. Maximum Proof Load is 2 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see Warnings & Applications.

G-2140CT COLD TUFF® Alloy Bolt Type Anchor Shackles

Nominal Shackle Size (in)	Working Load Limit (t)	Stock No.	Weight Each (lb)	Dimensions (in)										Tolerance (+ / - in)	
				A	B	C	D	E	F	H	L	N	P	A	C
1-1/2	30	1260801	20.8	2.38	1.63	5.75	1.54	3.88	3.62	10.00	6.88	1.62	7.73	.13	.25
1-3/4	40	1260812	33.9	2.88	2.00	7.00	1.84	5.00	4.19	12.34	8.81	2.25	9.33	.13	.25
2	55	1260823	52.0	3.25	2.25	7.75	2.08	5.75	4.81	13.68	10.16	2.40	10.41	.13	.25
2-1/2	85	1260834	96.0	4.12	2.75	10.50	2.72	7.25	5.69	17.84	12.87	3.12	13.58	.25	.25
3	120	1260843	178.0	5.00	3.25	13.00	3.11	7.88	6.50	21.50	14.36	3.63	15.13	.25	.25
3-1/2	† 150	1260852	265.0	5.25	3.75	14.63	3.62	9.00	8.00	24.62	16.50	4.12	17.62	.25	.25
4	† 175	1260861	338.0	5.50	4.25	14.5	4.10	10.00	9.00	25.69	18.42	4.56	20.37	.25	.25
4-3/4	† 200	1260870	450.0	7.25	4.75	15.63	4.50	11.00	10.50	29.25	21.00	6.00	21.21	.25	.25
5	† 250	1260889	600.0	8.50	5.00	20.00	4.50	13.00	12.00	35.00	24.50	6.50	22.68	.25	.25

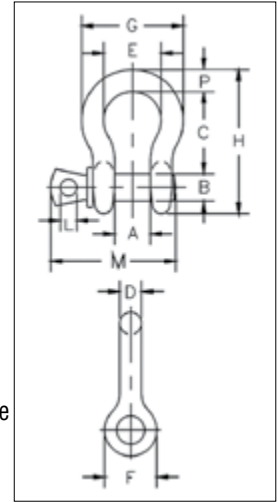
5.4:1 Design Factor on 30t through 175 metric tons. 4:1 Design Factor on 200 metric tons and larger. Maximum Proof Load is 2 times the Working Load Limit for all sizes.



S-209T



- Flat black baked on powder coat finish.
- Forged, Quenched & Tempered, with alloy pins.
- Working Load Limit and Grade 6 permanently shown on every shackle.
- Fatigue rated to 20,000 cycles at 1-1/2 times the Working Load Limit.
- Industry leading 6 to 1 Design Factor.
- Screw pin anchor shackles meet the performance requirement of Federal Specification RR-C-271H, Type IVA, Grade A, Class 2, except for those provisions required of the contractor.
- Meets the performance requirements of EN 13889.
- Meets or exceeds all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements. Importantly, these shackles meet other critical performance requirements including fatigue life, impact properties and material traceability, not addressed by ASME B30.26.



S-209T Theatrical Shackles

Nominal Size (in)	Working Load Limit (t)	Stock No.	Weight Each (lb)	Dimensions (in)												Tolerance (+ / - in)	
				A	B	C	D	E	F	G	H	L	M	P	C	A	
3/8	1	1018706	.31	.66	.44	1.44	.38	1.03	.91	1.78	2.49	.25	2.02	.38	.13	.06	
7/16	1.5	1018724	.38	.75	.50	1.69	.40	1.16	1.06	2.03	2.91	.31	2.37	.44	.13	.06	
1/2	2	1018742	.72	.81	.63	1.88	.50	1.31	1.19	2.31	3.28	.38	2.69	.50	.13	.06	
5/8	3.25	1018760	1.37	1.06	.75	2.38	.63	1.69	1.50	2.94	4.19	.44	3.34	.69	.13	.06	
3/4	4.75	1018778	2.35	1.25	.88	2.81	.75	2.00	1.81	3.50	4.97	.50	3.97	.81	.25	.06	

Maximum Proof Load is 2.0 times the Working Load Limit.

Load Rated

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APPLICATION AND WARNING INFORMATION SECTION 17



Ep. 46 Shackles designed for theatrical applications

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Ep. 36 Lifting & Mooring Fatigue: What is it and how to avoid it?

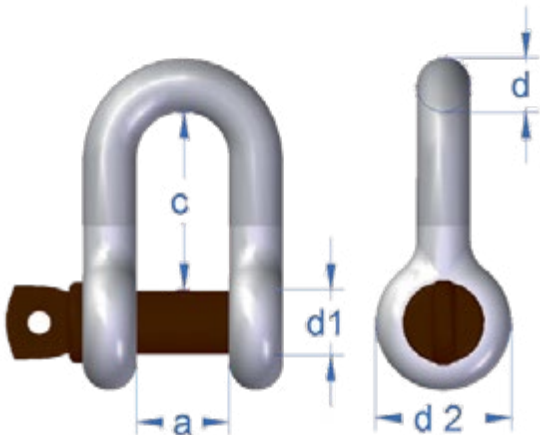


Ep. 5 Hooks: Why the tips must point outward on multiple bridle

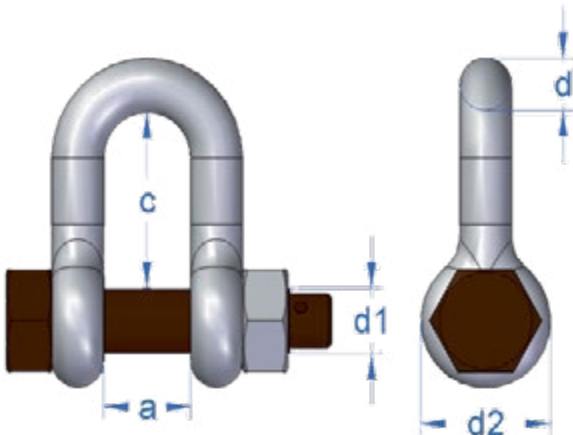
Ask the Expert
VIDEO PODCAST

Dee Shackle No 834 and No 835

- Standard:** DNV 2.7-1 Type Approved, EN 13889 and US Federal Spec. RR-C-271
- Material:** High tensile carbon steel, Quenched & Tempered, Grade 6
- Finish:** All parts hot-dip galvanized, pin brown painted on top of galvanized.
- Design Factor:** 6:1
- Documentation:** Test certificate and traceable raw material / inspection certificate acc. EN 10204 - 3.1.
DNVGL-ST-E271-2.7-1 and E273-2.7-3 Type Approval Certification.
- Temperature:** - 40°C to 200°C



Shackle No 834 with screw pin



Shackle No 835 with safety bolt



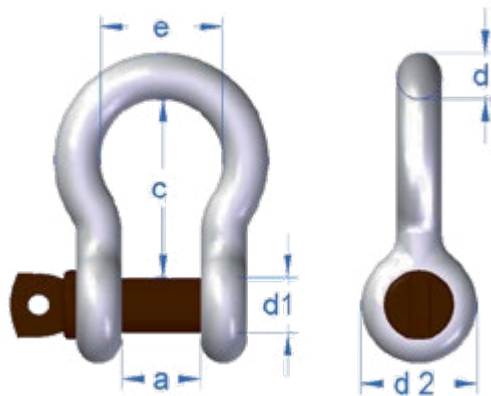
834 Screw Pin Stock No.	835 Safety Bolt Stock No.	WLL (t) 6:1	Pin d1 (in)	Nominal Size d		Inner Width a* (in)	Inner Length c* (in)	Eye Outer d2 (in)	834 Screw Pin Weight (lb)	835 Safety Bolt Weight (lb)
				(mm)	(in)					
A083416	A083516	3.25	0.75	16	5/8"	1.06	2.01	1.57	1.21	1.32
A083419	A083519	4.75	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	10.1	12.4
A083438	A083538	17.0	1.65	38	1 1/2"	2.36	4.80	3.31	14.3	16.5
A083445	A083545	25.0	1.97	45	1 3/4"	2.91	5.87	4.13	25.3	28.7

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

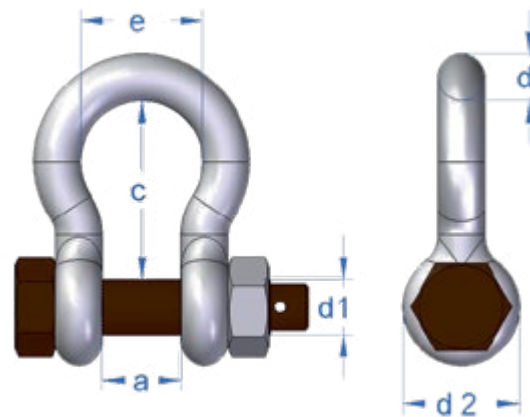
Split pin included

Bow Shackle No 854 and No 855

- Standard:** DNV 2.7-1 Type Approved, EN 13889 and US Federal Spec. RR-C-271
- Material:** High tensile carbon steel, Quenched & Tempered, Grade 6
- Finish:** All parts hot-dip galvanized, brown painted bolts on top of galvanized.
- Design Factor:** 6:1
- Documentation:** Test certificate and traceable raw material / inspection certificate acc. EN 10204 - 3.1.
DNVGL-ST-E271-2.7-1 and E273-2.7-3 Type Approval Certification.
- Temperature:** - 40°C to 200°C



Shackle No 854 with screw pin



Shackle No 855 with safety bolt



854 Screw Pin Stock No.	855 Safety Bolt Stock No.	WLL (t) 6:1	Pin d1 (in)	Nominal Size d		Inner Width a* (in)	Inner Length c* (in)	Bow Width e (in)	Eye Outer d2 (in)	854 Screw Pin Weight (lb)	855 Safety Bolt Weight (lb)
				(mm)	(in)						
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	10.6
A085435	A085535	13.5	1.50	35	1 3/8"	2.24	5.20	3.50	2.99	13.2	15.4
A085438	A085538	17.0	1.65	38	1 1/2"	2.36	5.75	3.86	3.31	17.6	19.8
A085445	A085545	25.0	1.97	45	1 3/4"	2.91	7.01	5.00	4.13	29.7	33.0
A085452	A085552	35.0	2.24	50	2"	3.27	7.76	5.43	4.41	41.8	46.2
A085464	A085564	55.0	2.76	65	2 1/2"	4.13	10.2	7.09	5.71	83.7	85.9

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

Split pin included

Arctic Shackle No 856

Bow shackle with safety bolt

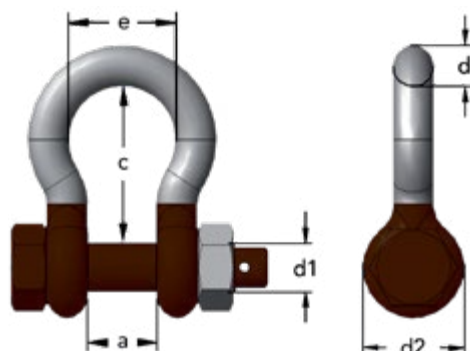


Unique benefits with the Arctic Shackle

Adverse weather and rough sea conditions in combination with extremely low temperatures, as often encountered for instance in the North Sea, places tough requirements on the products used. 856 Arctic shackles are specially designed for these conditions. The Arctic Shackle is type approved to DNV 2.7-1 Offshore containers and meets the impact requirements of 42 J at – 40 degrees °C.

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

Standard:	DNV 2.7-1, US Federal Spec. RR.C-271 and EN-13889
Material:	Special alloy steel, Quenched & Tempered, Grade 8
Finish:	All parts hot-dip galvanized + brown color marking
Design Factor:	As specified in the table below
Documentation:	Test certificate and traceable raw material / inspection certificate acc. EN 10204 - 3.1. DNVGL-ST-E271-2.7-1 and E273-2.7-3 Type Approval Certification.
Temperature:	- 40°C to 200°C



Stock No.	WLL (t)	Design Factor	Pin d1 (in)	Nominal Size d		Inner Width a (in)	Inner Length c (in)	Eye Outer e (in)	Bow Width d2 (in)	Weight (lb)
				(mm)	(in)					
A085613	2.0	8.00	0.62	13	1/2"	0.82	1.85	1.29	1.29	0.92
A085616	3.25	8.00	0.74	16	5/8"	1.06	2.36	1.65	1.57	1.54
A085619	4.75	8.00	0.86	19	3/4"	1.22	2.79	1.92	1.88	2.64
A085622	6.5	7.85	0.98	22	7/8"	1.45	3.30	2.36	2.04	3.74
A085625	8.5	7.25	1.10	25	1"	1.69	3.74	2.67	2.36	5.51
A085628	9.5	6.94	1.25	28	1 1/8"	1.81	4.25	2.91	2.51	7.49
A085632	12.0	6.40	1.37	32	1 1/4"	2.04	4.68	3.26	2.83	10.5
A085635	13.5	6.10	1.49	35	1 3/8"	2.24	5.19	3.50	2.99	15.4
A085638	17.0	6.00	1.65	38	1 1/2"	2.36	5.74	3.85	3.30	19.8
A085645	25.0	6.00	1.96	45	1 3/4"	2.91	7.00	5.00	4.13	33.0
A085652	35.0	6.00	2.24	50	2"	3.26	7.75	5.43	4.56	46.2
A085664	55.0	6.00	2.75	65	2 1/2"	4.13	10.2	7.08	5.70	85.9

Split pin included

Super Shackle No 858

Bow shackle with safety bolt

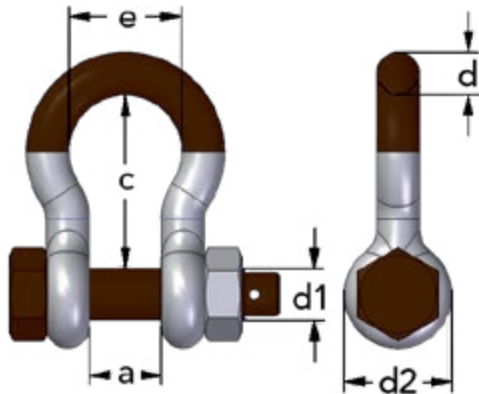


Unique Benefits with The Super Shackle

In certain situations a demand for extra Working Load Limit occurs in others the lifting environment has limited space for the lifting application. The 858 Super Shackle enables a higher working load limit for the same nominal size.

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:	US Federal Spec. RR.C-271 Type IVA Class 3, Grade B
Material:	High tensile steel. Quenched & Tempered, Grade 8
Finish:	All parts hot-dip galvanized + brown color marking
Design Factor:	5:1
Documentation:	Test certificate and traceable 3.1 certificate
Temperature:	-40°C to 200°C

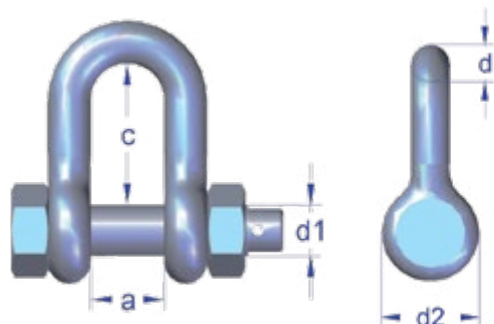


Stock No.	WLL (t) 5:1	Pin d1 (in)	Nominal Size d		Inner Width a (in)	Inner Length c (in)	Bow Width e (in)	Eye Outer d2 (in)	Weight (lb)
			(mm)	(in)					
A085813	3.3	0.62	13	1/2"	0.82	2.00	1.29	1.29	0.88
A085816	5.0	0.74	16	5/8"	1.06	2.36	1.65	1.57	1.54
A085819	7.0	0.86	19	3/4"	1.22	2.79	1.92	1.88	2.64
A085822	9.5	0.98	22	7/8"	1.45	3.30	2.36	2.04	3.74
A085825	12.5	1.10	25	1"	1.69	3.74	2.67	2.36	5.51
A085828	15.0	1.25	28	1 1/8"	1.81	4.25	2.91	2.51	7.49
A085832	18.0	1.37	32	1 1/4"	2.04	4.68	3.26	2.83	10.5
A085835	21.0	1.49	35	1 3/8"	2.24	5.19	3.50	2.99	15.4
A085838	30.0	1.65	38	1 1/2"	2.36	5.74	3.85	3.30	19.4
A085845	40.0	1.96	45	1 3/4"	2.91	7.00	5.00	4.13	33.0

Split pin included

Stainless Steel Shackle No 735 Dee shackle with safety bolt

Material: AISI 316
Finish: Highly polished
Design Factor: 6:1
Documentation: Test certificate and traceable 3.1 certificate supplied upon request.

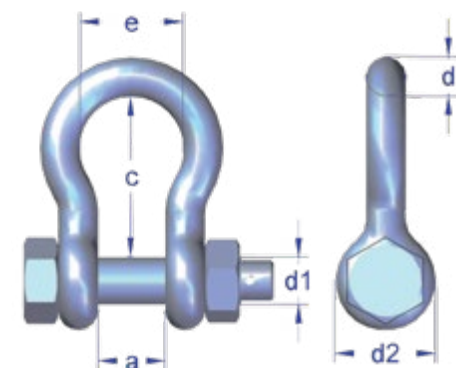


Stock No.	WLL (t) 6:1	Pin d1 (in)	Nominal Size d (in)	Inner Width a (in)	Inner Length c (in)	Eye Outer d2 (in)	Weight (lb)
A073510	0.6	0.39	0.39	0.78	1.57	0.78	0.44
A073512	0.9	0.47	0.47	1.02	1.96	0.94	0.66
A073516	1.5	0.62	0.51	0.94	2.04	1.29	0.88
A073520	2.5	0.74	0.62	1.10	2.55	1.57	1.54
A073522	3.0	0.86	0.74	1.22	2.36	1.88	3.30
A073524	4.5	0.98	0.86	1.45	2.79	2.04	2.86
A073533	7.5	1.25	1.10	1.81	3.54	2.51	6.61
A073536	10.0	1.37	1.25	2.04	3.93	2.83	9.03

Split pin included

Stainless Steel Shackle No 755 Bow shackle with safety bolt

Material: AISI 316
Finish: Highly polished
Design Factor: 6:1
Documentation: Test certificate and traceable 3.1 certificate supplied upon request.

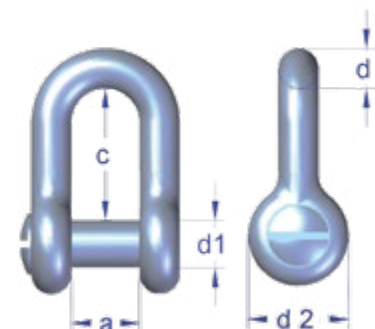


Stock No.	WLL (t) 6:1	Pin d1 (in)	Nominal Size d (in)	Inner Width a (in)	Inner Length c (in)	Bow Width e (in)	Eye Outer d2 (in)	Weight (lb)
A075510	0.6	0.39	0.39	0.78	1.57	1.06	0.78	0.44
A075512	0.9	0.47	0.47	0.98	1.85	1.45	1.02	0.66
A075516	1.5	0.62	0.51	0.98	1.85	1.29	1.33	0.88
A075520	2.5	0.78	0.62	1.10	2.36	1.65	1.57	1.76
A075522	3.0	0.86	0.74	1.22	2.79	2.00	1.88	2.86
A075524	4.5	0.98	0.86	1.45	3.30	2.28	2.04	3.74
A075533	7.5	1.25	1.10	1.81	4.25	2.91	2.51	7.49
A075536	10.0	1.37	1.25	2.04	4.68	3.26	2.83	11.4

Split pin included

Stainless Steel Shackle No 732 Dee shackle with countersunk pin

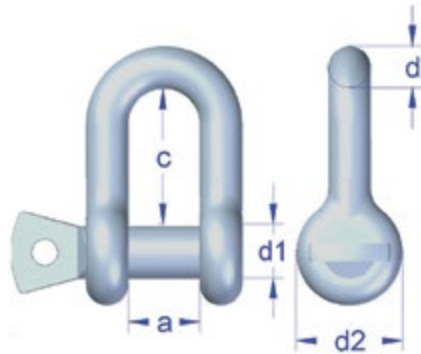
Material: AISI 316
Finish: Highly polished
Design Factor: 6:1
Documentation: Test certificate supplied upon request.



Stock No.	WLL (t) 6:1	Pin d1 (in)	Nominal Size d (in)	Inner Width a (in)	Inner Length c (in)	Eye Outer d2 (in)	Weight (lb)
A073216	2.0	M16	0.51	0.94	2.04	1.33	0.66
A073220	3.0	M20	0.62	1.10	2.55	1.57	1.32
A073222	3.0	M22	0.74	1.22	2.36	1.88	3.08

Stainless Steel Shackle No 730 Dee shackle with screw pin

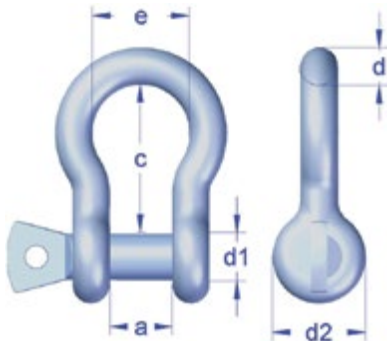
Material: AISI 316
Finish: Highly polished
Design Factor: 6:1
Documentation: Test certificate supplied upon request.



Stock No.	WLL (t) 6:1	Pin d1 (in)	Nominal Size d (in)	Inner Width a (in)	Inner Length c (in)	Eye Outer d2 (in)	Weight (lb)
A073008S	0.4	0.31	0.31	0.62	1.18	0.62	0.13
A073010S	0.6	0.39	0.39	0.78	1.57	0.78	0.22
A073012S	0.9	0.47	0.47	1.02	1.96	0.94	0.44
A073016S	1.5	0.63	0.51	0.94	2.04	1.33	0.66
A073020S	2.5	0.79	0.62	1.10	2.55	1.57	1.32
A073022S	3.0	0.87	0.74	1.18	2.83	1.88	1.98

Stainless Steel Shackle No 750 Bow shackle with screw pin

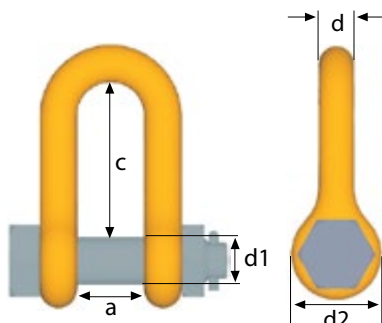
Material: AISI 316
Finish: Highly polished
Design Factor: 6:1
Documentation: Test certificate supplied upon request.



Stock No.	WLL (t) 6:1	Pin d1 (in)	Nominal Size d (in)	Inner Width a (in)	Inner Length c (in)	Bow Width e (in)	Eye Outer d2 (in)	Weight (lb)
A075008S	0.4	0.31	0.31	0.62	1.18	0.90	0.62	0.15
A075010S	0.6	0.39	0.39	0.78	1.57	1.06	0.78	0.24
A075012S	0.9	0.47	0.47	0.98	1.85	1.45	1.02	0.55
A075016S	1.5	0.63	0.51	0.98	1.85	1.33	1.29	0.72
A075020S	2.5	0.79	0.62	1.10	2.36	1.65	1.57	2.11
A075022S	3.0	0.87	0.74	1.22	2.79	2.00	1.88	2.20

Shackle SA Grade 8

Material: Alloy steel
Finish: Painted yellow
Design Factor: 4:1



Stock No.	Code	WLL (t) 4:1	For Chain Size	Pin d1 (in)	Nominal Size d (in)	Inner Width a (in)	Inner Length c (in)	Eye Outer d2 (in)	Weight (lb)
Z100706	SA-7/8-8	2.0	9/32", 5/16"	0.39	0.31	0.59	1.18	0.78	0.22
Z298728	SA-10-8	3.2	3/8"	0.63	0.51	0.94	2.04	1.33	0.88
Z292528	SA-13-8	5.4	1/2"	0.79	0.62	1.10	2.55	1.57	1.54
Z293024	SA-16-8	8.2	5/8"	0.87	0.70	1.18	2.83	1.81	2.20
Z299622	SA-19-8	11.5	3/4"	1.06	0.86	1.41	3.38	2.04	3.74
Z294122	SA-22-8	15.5	7/8"	1.18	0.98	1.57	3.70	2.36	5.51
Z304328	SA-26-8	21.7	1"	1.54	1.25	1.88	4.56	2.99	11.40

Split pin included