

# CROSBY FORGED SHACKLES

## Screw Pin Anchor Shackles



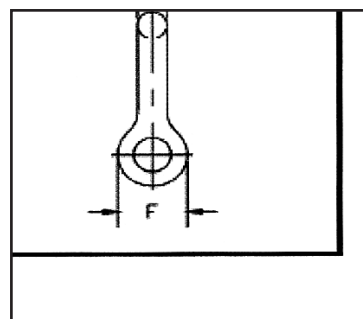
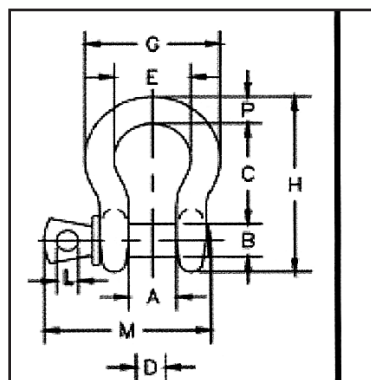
**G-209 S-209**

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

- Shackles are Quenched and Tempered and can meet DNV impact requirements of 42 joules at -20C.
- Working Load Limit permanently shown on every shackle.
- Forged - Quenched and Tempered, with alloy pin.
- Capacities 1/3 thru 55 metric tons.
- Look for the Red Pin™ . . . the mark of genuine Crosby quality.
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification. Charged for proof testing and certification available when requested at the time of order.
- Hot Dip galvanized or Self-Colored.
- Fatigue Rated.

Nominal Size (in.)	Working Load Limit (t)*	Stock No.		Weight Each (lbs.)	Dimensions (in.)										
		G-209	S-209		A	B	C	D	E	F	G	H	L	M	P
3/16	1/3	1018357	—	.06	.38	.25	.88	.19	.60	.56	.98	1.47	.16	1.12	.19
1/4	1/2	1018375	1018384	.10	.47	.31	1.13	.25	.78	.61	1.28	1.84	.19	1.38	.25
5/16	3/4	1018393	1018400	.19	.53	.38	1.22	.31	.84	.75	1.47	2.09	.22	1.66	.31
3/8	1	1018419	1018428	.31	.66	.44	1.44	.38	1.03	.91	1.78	2.49	.25	2.03	.38
7/16	1-1/2	1018437	1018446	.38	.75	.50	1.69	.44	1.16	1.06	2.03	2.91	.31	2.38	.44
1/2	2	1018455	1018464	.72	.81	.63	1.88	.50	1.31	1.19	2.31	3.28	.38	2.69	.50
5/8	3-1/4	1018473	1018482	1.37	1.06	.75	2.38	.63	1.69	1.50	2.94	4.19	.44	3.34	.69
3/4	4-3/4	1018491	1018507	2.35	1.25	.88	2.81	.75	2.00	1.81	3.50	4.97	.50	3.97	.81
7/8	6-1/2	1018516	1018525	3.62	1.44	1.00	3.31	.88	2.28	2.09	4.03	5.83	.50	4.50	.97
1	8-1/2	1018534	1018543	5.03	1.69	1.13	3.75	1.00	2.69	2.38	4.69	6.56	.56	5.07	1.06
1-1/8	9-1/2	1018552	1018561	7.41	1.81	1.25	4.25	1.16	2.91	2.69	5.16	7.47	.63	5.59	1.25
1-1/4	12	1018570	1018589	9.50	2.03	1.38	4.69	1.29	3.25	3.00	5.75	8.25	.69	6.16	1.38
1-3/8	13-1/2	1018598	1018605	13.53	2.25	1.50	5.25	1.42	3.63	3.31	6.38	9.16	.75	6.84	1.50
1-1/2	17	1018614	1018623	17.20	2.38	1.63	5.75	1.54	3.88	3.63	6.88	10.00	.81	7.35	1.62
1-3/4	25	1018632	1018641	27.78	2.88	2.00	7.00	1.84	5.00	4.19	8.86	12.34	1.00	9.08	2.25
2	35	1018650	1018669	45.00	3.25	2.25	7.75	2.08	5.75	4.81	9.97	13.68	1.22	10.34	2.40
2-1/2	55	1018678	1018687	85.75	4.13	2.75	10.50	2.71	7.25	5.69	12.87	17.84	1.38	13.00	3.13

**NOTE:** Maximum Proof Load is 2.0 times the Working Load Limit. Minimum Ultimate Strength is 6 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see page 75.



## Bolt Type Anchor Shackles



**G-2130 S-2130**

Bolt Type Anchor shackles with thin head bolt - nut with cotter pin. Meets the performance requirements of Federal Specifications RR-C-271D type IVA, Grade A Class 3, except for those provisions required of the contractor.

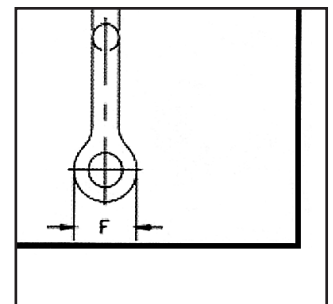
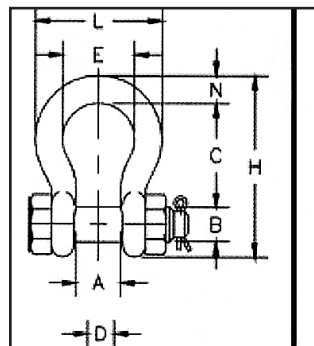
- Working Load Limit permanently shown on every shackle. Capacities 1/3 thru 150 metric tons.
- Forged - Quenched and Tempered, with alloy pins.
- Look for the Red Pin™ . . . the mark of genuine Crosby quality.
- Shackles 55 metric tons and smaller can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification.
- Certification must be requested at time of order.
- Shackles 85 metric tons and larger can be provided as follows.
- Non Destructive Tested
- Serialized Pin and Bow
- Material Certification (Chemical) Certification must be requested at time of order.
- Hot Dip galvanized or Self-Colored.
- Fatigue Rated.

Nominal Size (in.)	Working Load Limit (t)*	Stock No.		Weight Each (lbs.)	Dimensions (in.)										Tolerance +/-	
		G-2130	S-2130		A	B	C	D	E	F	H	L	N	C	A	
3/16	1/3‡	1019464	-	.06	.38	.25	.88	.19	.60	.56	1.47	.98	.19	.06	.06	
1/4	1/2	1019466	-	.11	.47	.31	1.13	.25	.78	.61	1.84	1.28	.25	.06	.06	
5/16	3/4	1019468	-	.22	.53	.38	1.22	.31	.84	.75	2.09	1.47	.31	.06	.06	
3/8	1	1019470	-	.33	.66	.44	1.44	.38	1.03	.91	2.49	1.78	.38	.13	.06	
7/16	1-1/2	1019471	-	.49	.75	.50	1.69	.44	1.16	1.06	2.91	2.03	.44	.13	.06	
1/2	2	1019472	1019481	.79	.81	.64	1.88	.50	1.31	1.19	3.28	2.31	.50	.13	.06	
5/8	3-1/4	1019490	1019506	1.68	1.06	.77	2.38	.63	1.69	1.50	4.19	2.94	.69	.13	.06	
3/4	4-3/4	1019515	1019524	2.72	1.25	.89	2.81	.75	2.00	1.81	4.97	3.50	.81	.25	.06	
7/8	6-1/2	1019533	1019542	3.95	1.44	1.02	3.31	.88	2.28	2.09	5.83	4.03	.97	.25	.06	
1	8-1/2	1019551	1019560	5.66	1.69	1.15	3.75	1.00	2.69	2.38	6.56	4.69	1.06	.25	.06	
1-1/8	9-1/2	1019579	1019588	8.27	1.81	1.25	4.25	1.13	2.91	2.69	7.47	5.16	1.25	.25	.06	
1-1/4	12	1019597	1019604	11.71	2.03	1.40	4.69	1.29	3.25	3.00	8.25	5.75	1.38	.25	.06	
1-3/8	13-1/2	1019613	1019622	15.83	2.25	1.53	5.25	1.42	3.63	3.31	9.16	6.38	1.50	.25	.13	
1-1/2	17	1019631	1019640	20.80	2.38	1.66	5.75	1.53	3.88	3.63	10.00	6.88	1.62	.25	.13	
1-3/4	25	1019659	1019668	33.91	2.88	2.04	7.00	1.84	5.00	4.19	12.34	8.80	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	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	3.13	.25	.25	
3	† 85	1019711	-	154.00	5.00	3.30	13.00	3.12	7.88	6.50	21.50	14.62	3.62	.25	.25	
3-1/2	† 120 ‡	1019739	-	265.00	5.25	3.76	14.63	3.62	9.00	8.00	24.88	17.02	4.38	.25	.25	
4	† 150 ‡	1019757	-	338.00	5.50	4.26	14.50	4.00	10.00	9.00	25.68	18.00	4.56	.25	.25	

**NOTE:** Maximum Proof Load is 2.0 times the Working Load Limit. Minimum Ultimate Strength is 6 times the Working Load Limit. For Working Load Limit reduction due to side loading applications, see page 75.

† Individually Proof Tested with certification.

‡ Furnished in Anchor style only. Furnished with Round Head Bolts with welded handles.



# CROSBY® SHACKLES—APPLICATION INFORMATION



G/S-213

G/S-215

## ROUND PIN SHACKLES

can be used in tie down, towing, suspension or lifting applications where the load is strictly applied in-line.

CODE NO.	SIZE RANGE	
G/S-213	3/16" (1/3 ton) to 2-1/2" (55 Tons)	Round Pin Anchor Shackle
G/S-215	3/16" (1/3 ton) to 2-1/2" (55 Tons)	Round Pin Chain Shackle



SS-209

G-209A

## 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. While in service, do not allow the screw pin to be rotated by a live line, such as a choker application.

CODE NO.	SIZE RANGE	
SS-209	3/16" (1/3 ton) to 2-1/2" (55 Tons)	Stainless Steel Shackle
G-209A	3/16" (1/3 ton) to 2-1/2" (55 Tons)	Alloy Shackles
G/S-209	3/16" (1/3 ton) to 2-1/2" (55 Tons)	Screw Pin Anchor Shackle
G/S-210	3/16" (1/3 ton) to 2-1/2" (55 Tons)	Screw Pin Chain Shackle



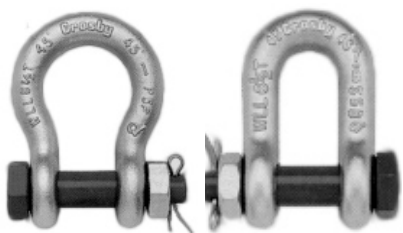
G/S-209

G/S-210

## BOLT-TYPE SHACKLES

can be used in any applications 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.

CODE NO.	SIZE RANGE	
G/S-2130	3/16" (1/3 ton) to 4" (150 Tons)	Safety Anchor Shackle
G/S-2150	3/16" (1/3 ton) to 4" (150 Tons)	Bolt Type Chain Shackle
G/S-2140	3/16" (30 ton) to 2-1/2" (400 Tons)	Alloy Safety Anchor Shackle
G/S-2160	3/16" (75 ton) to 2-1/2" (1000 Tons)	Wide Body Shackle



G/S-2130

G/S-2150



G/S-2140

G/S-2160

**G - Galvanized**  
**S - Painted**

## QUICK-CHECK™ INFORMATION

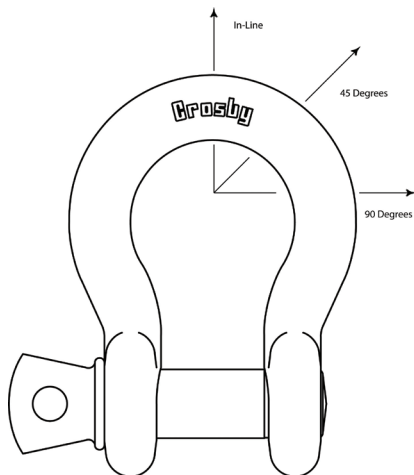
All Crosby Shackles, except for G-2160's incorporate markings forged into the product which address an easy QUIC-CHECK™ feature. Angle indicators are forged into the shackle bow at 45° angles from vertical. These are utilized to quickly check the approximate angle of a two-legged hitch or quickly check the angle of a single leg hitch when the shackle pin is secured and the pull of the load is off vertical or side loaded, thus requiring a reduction in the working load limit of the shackle.



G-2130

# CROSBY® SHACKLES SAFETY INFORMATION

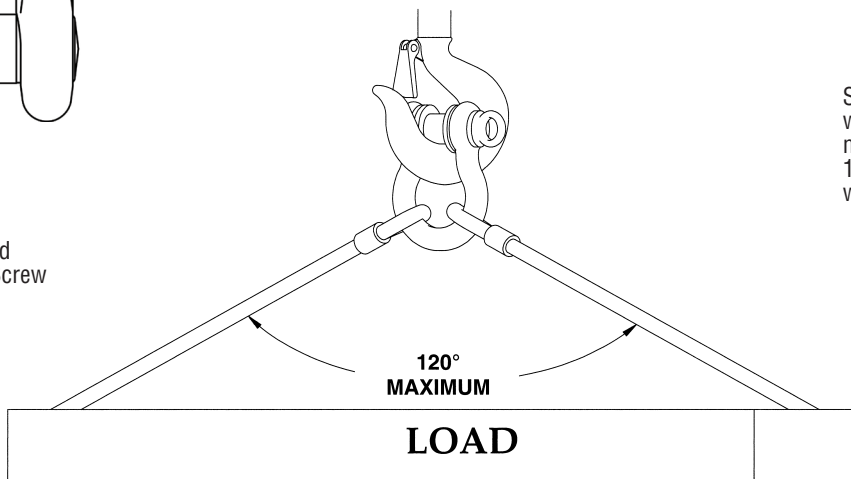
Angle loads must be applied in the plane of the bow.



Side Loading Reduction Chart For Screw Pin and Bolt Type Shackles Only †	
Angle of Side Load from Vertical In-Line of Shackle	Adjusted Working Load Limit
0° In-Line*	100% of Rated working Load Limit
45° from In-Line*	70% of Rated Working Load Limit
90° from In-Line*	50% of Rated Working Load Limit

\*In-Line load is applied perpendicular to pin.  
†DO NOT SIDE LOAD ROUND PIN SHACKLES

Never Exceed 120° included angle. Use bolt Type and Screw Pin Shackles ONLY.



Shackles symmetrically loaded with two leg slings having a maximum included angle of 120° can be utilized to full working Load Limit.

**WIRE ROPE SLINGS AND CONNECTIONS TO FITTINGS**

USE A THIMBLE TO PROTECT SLING AND TO INCREASE D/d

NEVER PLACE EYE OVER A FITTING SMALLER DIAMETER OR WIDTH THAN THE ROPE'S DIAMETER

(POHS16)

**WIRE ROPE SLINGS AND CONNECTIONS TO FITTINGS**

NEVER PLACE A SLING EYE OVER A FITTING WITH A DIAMETER OR WIDTH GREATER THAN ONE HALF THE NATURAL LENGTH OF THE EYE

(POHS16)

**SYNTHETIC SLINGS RATED LOAD** (POHS17)

FOLDING, BUNCHING OR PINCHING OF SYNTHETIC SLINGS, WHICH OCCURS WHEN USED WITH SHACKLES, HOOKS OR OTHER APPLICATIONS WILL REDUCE THE RATED LOAD

BUNCHING

PINCHING

ANSI B30.9-1994

**CHOKER HITCH FORMED**

WITH SHACKLES

WRONG!

PLACE PIN IN EYE OF SLING

CORRECT!

WITH CHOKER HOOK

(POHS16)

**CROSBY SHACKLES POINT LOADING**

POINT LOADING OF CROSBY SHACKLE BOWS IS ACCEPTABLE

POINT LOADING OF CROSBY SHACKLE PINS IS ACCEPTABLE AS LONG AS LOAD IS REASONABLY CENTERED ON THE PIN

ALTHOUGH POINT LOADING IS ACCEPTABLE, A PAD EYE WIDTH OF 80% OR MORE OF SHACKLE SPREAD IS BEST PRACTICE

(TP18 page 23)

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