

SHACKLES



SEDRA MARINE

FRANCE

Tél. : + 33 (0) 5 62 28 32 52 - Fax : + 33 (0) 5 62 28 40 68
e-mail : info@sedra-marine.fr - Site : <http://www.sedramarine-ard.com>



SHACKLES

SCREW PIN



G-209 S-209

Forged shackles

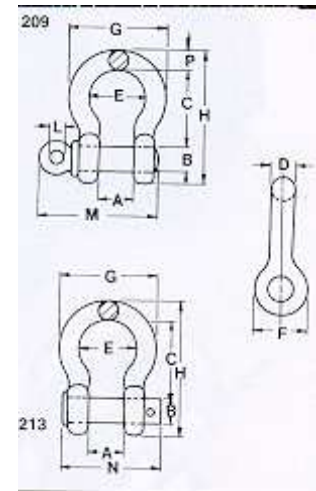
- Working Load Limit permanently shown on every shackle
- Forged - quenched and tempered, with alloy pins
- Capacities 1/3 thru 55 tons
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds or other certification. Charges for proof testing and certification available when requested at the time of order
- Hot dip galvanized or self colored
- Fatigue rated

ROUND PIN



G-213 S-213

Nominal Size (in.)	Working Load Limit * (tons)	Stock No.				Weight Each (lbs.)	
		G-209 Galv.	S-209 S.C.	G-213 Galv.	S-213 S.C.	G-209 S-209	G-213 S-213
3/16	1/3 **	1018357	-	-	-	.05	-
1/4	1/2	1018375	1018384	1018017	1018026	.12	.13
5/16	3/4	1018393	1018400	1018035	1018044	.19	.17
3/8	1	1018419	1018428	1018053	1018062	.31	.25
7/16	1 1/2	1018437	1018446	1018071	1018080	.38	.38
1/2	2	1018455	1018464	1018099	1018106	.63	.70
5/8	3 1/4	1018473	1018482	1018115	1018124	1.38	1.50
3/4	4 3/4	1018491	1018507	1018133	1018142	2.25	2.32
7/8	6 1/2	1018516	1018525	1018151	1018160	3.38	3.40
1	8 1/2	1018534	1018543	1018179	1018188	5.32	5.00
1 1/8	9 1/2	1018552	1018561	1018197	1018204	6.81	6.97
1 1/4	12	1018570	1018589	1018213	1018222	9.50	9.75
1 3/8	13 1/2	1018598	1018605	1018231	1018240	13.25	13.25
1 1/2	17	1018614	1018623	1018259	1018268	17.20	17.25
1 3/4	25	1018632	1018641	1018277	1018286	30.38	29.46
2	35	1018650	1018669	1018295	1018302	45.00	45.75
2 1/2	55**	1018678	1018687	-	-	85.75	-



* Maximum Proof Load is 2.2 times the Working Load Limit. Minimum ultimate strength is 6 times the Working Load Limit.

** Furnished in screw pin only.

Nominal Size (in.)	Working Load Limit * (tons)	Dimensions (in.)												Tolerance	
		A	B	C	D	E	F	G	H	L	M	N	P	C	A
3/16	1/3 **	.38	.25	.88	.19	.60	.56	.98	1.47	.16	1.12	-	.19	.06	.06
1/4	1/2	.47	.31	1.13	.25	.78	.61	1.28	1.84	.19	1.38	1.34	.25	.06	.06
5/16	3/4	.53	.38	1.22	.31	.84	.75	1.47	2.09	.22	1.66	1.59	.31	.06	.06
3/8	1	.66	.44	1.44	.38	1.03	.91	1.78	2.49	.25	2.03	1.86	.38	.13	.06
7/16	1 1/2	.75	.50	1.69	.44	1.16	1.06	2.03	2.91	.31	2.38	2.13	.44	.13	.06
1/2	2	.81	.63	1.88	.50	1.31	1.19	2.31	3.28	.38	2.69	2.38	.50	.13	.06
5/8	3 1/4	1.06	.75	2.38	.63	1.69	1.50	2.94	4.19	.44	3.34	2.91	.69	.13	.06
3/4	4 3/4	1.25	.88	2.81	.75	2.00	1.81	3.50	4.97	.50	3.97	3.44	.81	.25	.06
7/8	6 1/2	1.44	1.00	3.31	.88	2.28	2.09	4.03	5.83	.50	4.50	3.81	.97	.25	.06
1	8 1/2	1.69	1.13	3.75	1.00	2.69	2.38	4.69	6.56	.56	5.07	4.53	1.06	.25	.06
1 1/8	9 1/2	1.81	1.25	4.25	1.16	2.91	2.69	5.16	7.47	.63	5.59	5.13	1.25	.25	.06
1 1/4	12	2.03	1.38	4.69	1.29	3.25	3.00	5.75	8.25	.69	6.16	5.50	1.38	.25	.06
1 3/8	13 1/2	2.25	1.50	5.25	1.42	3.63	3.31	6.38	9.16	.75	6.84	6.13	1.50	.25	.13
1 1/2	17	2.38	1.63	5.75	1.54	3.88	3.63	6.88	10.00	.81	7.35	6.50	1.62	.25	.13
1 3/4	25	2.88	2.00	7.00	1.84	5.00	4.19	8.86	12.34	1.00	9.08	7.75	2.25	.25	.13
2	35	3.25	2.25	7.75	2.08	5.75	4.81	9.97	13.68	1.22	10.34	8.75	2.40	.25	.13
2 1/2	55 **	4.13	2.75	10.50	2.71	7.25	5.69	12.87	17.84	1.38	13.00	-	3.13	.25	.25

SHACKLES

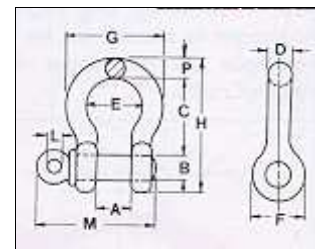
Screw pin anchor shackle



G-209-A

- Working Load Limit permanently shown on every shackle.
- Forged alloy steel - quenched and tempered, with alloy pins
- Capacities : 2 thru 21 tons
- 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 time of order.
- Hot dip galvanized

Nominal Size (in.)	Working Load Limit * (tons)	G-209-A Stock No. Galv.	Weight Each (lbs.)
3/8	2	1017450	.31
7/16	2.6	1017472	.38
1/2	3.3	1017494	.63
5/8	5	1017516	1.38
3/4	7	1017538	2.25
7/8	9.5	1017560	3.38
1	12.5	1017582	5.32
1 1/8	15	1017604	6.81
1 1/4	18	1017626	9.50
1 3/8	21	1017648	13.25



* Maximum proof load is 2.5 times the working load limit. Minimum ultimate load is 5 times the working load limit.

Nominal Size (in.)	Working Load Limit * (tons)	Dimensions (in.)											Tolerance +/-	
		A	B	C	D	E	F	G	H	L	M	P	C	A
3/8	2	.66	.44	1.44	.38	1.03	.91	1.78	2.49	.25	2.03	.38	.13	.06
7/16	2.6	.75	.50	1.69	.44	1.16	1.06	2.03	2.91	.31	2.38	.44	.13	.06
1/2	3.3	.81	.63	1.88	.50	1.31	1.19	2.31	3.28	.38	2.69	.50	.13	.06
5/8	5	1.06	.75	2.38	.63	1.69	1.50	2.94	4.19	.44	3.34	.69	.13	.06
3/4	7	1.25	.88	2.81	.75	2.00	1.81	3.50	4.97	.50	3.97	.81	.25	.06
7/8	9.5	1.44	1.00	3.31	.88	2.28	2.09	4.03	5.83	.50	4.50	.97	.25	.06
1	12.5	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	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	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	2.25	1.50	5.25	1.42	3.63	3.31	6.38	9.16	.75	6.84	1.50	.25	.13

SHACKLES

Forged chain shackles

SCREW PIN



G-210 S-210

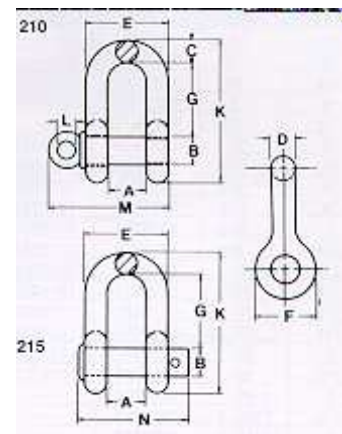
- Working Load Limit permanently shown on every shackle
- Forged - quenched and tempered, with alloy pins
- Capacities 1/3 thru 55 tons
- Shackles can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds or other certification. Charges for proof testing and certification available when requested at the time of order
- Hop dip galvanized or self colored
- Fatigue rated

ROUND PIN



G-215 S-215

Nominal Shackle Size (in.)	Working Load Limit * (tons)	Stock No.				Weight Each (lbs.)	
		G-210 Galv.	S-210 S.C.	G-215 Galv.	S-215 S.C.	G-210 S-210	G-215 S-215
1/4	1/2	1019150	1019169	1018810	1018829	.11	.10
5/16	3/4	1019178	1019187	1018838	1018847	.17	.18
3/8	1	1019196	1019203	1018856	1018865	.24	.25
7/16	1 1/2	1019212	1019221	1018874	1018883	.40	.38
1/2	2	1019230	1019249	1018892	1018909	.59	.50
5/8	3 1/4	1019258	1019267	1018918	1018927	1.21	1.21
3/4	4 3/4	1019276	1019285	1018936	1018945	2.25	2.00
7/8	6 1/2	1019294	1019301	1018954	1018963	3.16	3.28
1	8 1/2	1019310	1019329	1018972	1018981	4.75	4.75
1 1/8	9 1/2	1019338	1019347	1018990	1019007	6.75	6.30
1 1/4	12	1019356	1019365	1019016	1019025	9.06	9.00
1 3/8	13 1/2	1019374	1019383	1019034	1019043	11.63	12.00
1 1/2	17	1019392	1019409	1019052	1019061	15.95	16.15
1 3/4	25	1019418	1019427	1019070	1019089	26.75	29.96
2	35	1019436	1019445	1019098	1019105	42.31	43.25
2 1/2	55 **	1019454	1019463	-	-	71.75	-



* Maximum Proof Load is 2.2 times the Working Load Limit. Minimum ultimate load is 6 times the Working Load Limit.

** Furnished in screw pin only.

Nominal Size (in.)	Working Load Limit * (tons)	Dimensions (in.)											Tolerance +/-	
		A	B	C	D	E	F	G	K	L	M	N	G	A
1/4	1/2	.47	.31	.25	.25	.97	.61	.88	1.59	.19	1.38	1.34	.06	.06
5/16	3/4	.53	.38	.31	.31	1.16	.75	1.03	1.91	.22	1.66	1.59	.06	.06
3/8	1	.66	.44	.38	.38	1.41	.91	1.25	2.30	.25	2.03	1.86	.13	.06
7/16	1 1/2	.75	.50	.44	.44	1.63	1.06	1.44	2.66	.31	2.38	2.13	.13	.06
1/2	2	.81	.63	.50	.50	1.81	1.19	1.63	3.03	.38	2.69	2.38	.13	.06
5/8	3 1/4	1.06	.75	.62	.63	2.31	1.50	2.00	3.75	.44	3.34	2.91	.13	.06
3/4	4 3/4	1.25	.88	.81	.75	2.75	1.81	2.38	4.53	.50	3.97	3.44	.25	.06
7/8	6 1/2	1.44	1.00	.97	.88	3.19	2.09	2.81	5.33	.50	4.50	3.81	.25	.06
1	8 1/2	1.69	1.13	1.00	1.00	3.69	2.38	3.19	5.94	.56	5.07	4.53	.25	.06
1 1/8	9 1/2	1.81	1.25	1.25	1.13	4.06	2.69	3.58	6.78	.63	5.59	5.13	.25	.06
1 1/4	12	2.03	1.38	1.38	1.25	4.53	3.00	3.94	7.50	.69	6.16	5.50	.25	.13
1 3/8	13 1/2	2.25	1.50	1.50	1.38	5.00	3.31	4.38	8.28	.75	6.84	6.13	.25	.13
1 1/2	17	2.38	1.63	1.62	1.50	5.38	3.62	4.81	9.06	.81	7.35	6.50	.25	.13
1 3/4	25	2.88	2.00	2.12	1.75	6.38	4.19	5.75	10.97	1.00	9.08	7.75	.25	.13
2	35	3.25	2.25	2.00	2.00	7.25	4.81	6.75	12.28	1.22	10.34	8.75	.25	.13
2 1/2	55 **	4.13	2.75	2.62	2.62	9.38	5.69	8.00	14.84	1.38	13.00	-	.25	.25

SHACKLES

Bolt-type anchor shackle and bolt-type chain shackle

BOLT TYPE ANCHOR SHACKLE



G-2130 S-2130

Thin hex head bolt - nut
with cotter pin

- Working Load Limit permanently shown on every shackle
- Forged - quenched and tempered, with alloy pins
- Capacities 1/3 thru 150 tons
- Shackles 55 tons and smaller can be furnished proof tested and certificates to designated standards, such as ABS, DNV, Lloyds or other certification
- Shackles 85 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

BOLT TYPE CHAIN SHACKLE



G-2150 S-2150

Thin hex head bolt - nut
with cotter pin

Nominal shackle Size (In.)	Working Load Limit (1) (tons)	Stock No.				2130 Weight	2150 Weight
		G-2130 Galv.	S-2130 S.C.	G-2150 Galv.	S-2150 S.C.	Each (lbs.)	Each (lbs.)
3/16	1/3**	1019464	-	-	-	.06	-
1/4	1/2	1019466	-	1019768	-	.17	.13
5/16	3/4	1019468	-	1019770	-	.22	.23
3/8	1	1019470	-	1019772	-	.33	.33
7/16	1 1/2	1019471	-	1019774	-	.49	.49
1/2	2	1019472	1019481	1019775	1019784	.79	.75
5/8	3 1/4	1019490	1019506	1019793	1019800	1.68	1.47
3/4	4 3/4	1019515	1019524	1019819	1019828	2.72	2.52
7/8	6 1/2	1019533	1019542	1019837	1019846	3.95	3.85
1	8 1/2	1019551	1019560	1019855	1019864	6.12	5.55
1 1/8	9 1/2	1019579	1019588	1019873	1019882	8.27	7.60
1 1/4	12	1019597	1019604	1019891	1019908	11.71	10.81
1 3/8	13 1/2	1019613	1019622	1019917	1019926	15.83	13.75
1 1/2	17	1019631	1019640	1019935	1019944	20.80	18.50
1 3/4	25	1019659	1019668	1019953	1019962	33.91	31.40
2	35	1019677	1019686	1019971	1019980	52.25	46.75
2 1/2	55	1019695	1019702	1019999	1020004	98.25	85.00
3	85*	1019711	-	1020013	-	154.00	124.25
3 1/2	*120**	1019739	-	-	-	265.00	-
4	*150**	1019757	-	-	-	338.00	-

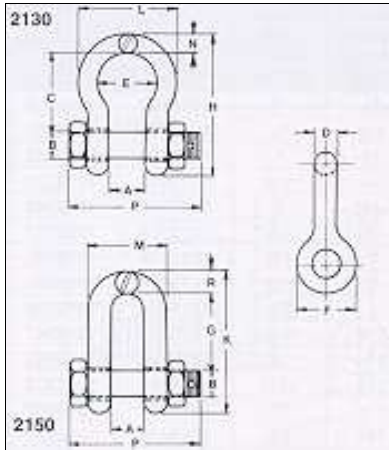
(1) Maximum proof Load is 2.2 times the Working Load Limit. Minimum Ultimate Load is 6 times the Working Load Limit reduction due to the side loading applications.

* Individually proof tested with certification and furnished with Round Head Bolts and welded handle.

** Furnished in anchor style only.

SHACKLES

Bolt-type anchor shackle and bolt-type chain shackle



(1) Maximum proof Load is 2.2 times the Working Load Limit. Minimum Ultimate Load is 6 times the Working Load Limit reduction due to the side loading applications.

* Individually proof tested with certification and furnished with round head bolts and welded handle.

** Furnished in anchor style only.

Nominal Shackle Size (in.)	Working Load Limit (1) (tons)	Dimensions (in.)														Tolerance +/-	
		A	B	C	D	E	F	G	H	K	L	M	N	P	R	C&G	A
3/16	1/3 **	.38	.25	.88	.19	.60	.56	-	1.47	-	.98	-	.19	1.29	-	.06	.06
1/4	1/2	.47	.31	1.13	.25	.78	.61	-	1.84	-	1.28	-	.25	1.56	-	.06	.06
5/16	3/4	.53	.38	1.22	.31	.84	.75	-	2.09	-	1.47	-	.31	1.82	-	.06	.06
3/8	1	.66	.44	1.44	.38	1.03	.91	-	2.49	-	1.78	-	.38	2.17	-	.13	.06
7/16	1 1/2	.75	.50	1.69	.44	1.16	1.06	-	2.91	-	2.03	-	.44	2.51	-	.13	.06
1/2	2	.81	.63	1.88	.50	1.31	1.19	1.63	3.28	3.03	2.31	1.81	.50	2.80	.50	.13	.06
5/8	3 1/4	1.06	.75	2.38	.63	1.69	1.50	2.00	4.19	3.75	2.94	2.31	.69	3.53	.63	.13	.06
3/4	4 3/4	1.25	.88	2.81	.75	2.00	1.81	2.38	4.97	4.53	3.50	2.75	.81	4.07	.81	.25	.06
7/8	6 1/2	1.44	1.00	3.31	.88	2.28	2.09	2.81	5.83	5.33	4.03	3.19	.97	4.71	.97	.25	.06
1	8 1/2	1.69	1.13	3.75	1.00	2.69	2.38	3.19	6.56	5.94	4.69	3.69	1.06	5.31	1.00	.25	.06
1 1/8	9 1/2	1.81	1.25	4.25	1.13	2.91	2.69	3.58	7.47	6.78	5.16	4.06	1.25	5.90	1.25	.25	.06
1 1/4	12	2.03	1.38	4.69	1.25	3.25	3.00	3.94	8.25	7.50	5.75	4.53	1.38	6.51	1.38	.25	.06
1 3/8	13 1/2	2.25	1.50	5.25	1.38	3.63	3.31	4.38	9.16	8.28	6.38	5.00	1.50	7.21	1.50	.25	.13
1 1/2	17	2.38	1.63	5.75	1.50	3.88	3.63	4.81	10.00	9.06	6.88	5.38	1.62	7.73	1.62	.25	.13
1 3/4	25	2.88	2.00	7.00	1.75	5.00	4.19	5.75	12.34	10.97	8.86	6.38	2.25	9.05	2.12	.25	.13
2	35	3.25	2.25	7.75	2.00	5.75	4.81	6.75	13.68	12.28	9.97	7.25	2.40	10.41	2.00	.25	.13
2 1/2	55	4.13	2.75	10.50	2.62	7.25	5.69	8.00	17.84	14.84	12.87	9.38	3.13	13.56	2.62	.25	.25
3	85*	5.00	3.25	13.00	3.00	7.88	6.50	8.50	21.50	16.88	14.36	11.00	3.62	16.50	3.50	.25	.25
3 1/2	*120**	5.25	3.75	14.63	3.62	9.00	8.00	-	24.63	-	16.50	-	4.12	19.00	-	.25	.25
4	*150**	5.50	4.25	14.50	4.10	10.00	9.00	-	25.69	-	18.42	-	4.56	19.75	-	.25	.25

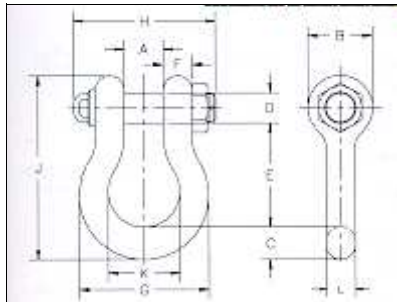
SHACKLES

Bolt type anchor shackle



G-2140 S-2140

All 2140 shackles 110 tons and larger are magnetic particle inspected.



- Working Load Limit is permanently shown on every shackle
- Alloy bows, alloy bolts
- Quenched and tempered
- All sizes are individually proof tested to 2.2 times the Working Load Limit
- Shackles 110 tons and larger are provided as follows
 - . Non destructive Tested
 - . Serialized Pin and Bow
 - . Material Certification (Chemical)
- Certification must be requested at time of order
- Forged alloy steel 30 thru 175 tons. Cast alloy steel 200 thru 600 tons
- Pins are galvanized and painted red

Nominal Shackle Size (in.)	Working Load Limit (1) (tons)	Stock No.		Weight Each (lbs.)
		G-2140 Galv.	S-2140 S.C.	
1 1/2	30	1021110	1021129	20.8
1 3/4	40	1021138	1021147	33.9
2	50	1021156	1021165	52.0
2 1/2	80	1021174	1021183	96.0
3	110 **	1021192	-	178.0
3 1/2	140 **	1021218	-	265.0
4	175 **	1021236	-	338.0
4 3/4 *	200 **	1021414	-	450.0
5 *	250 **	1021432	-	600.0
6 *	300 **	1021450	-	775.0
7 *	400 **	1021478	-	1102.0
7 1/2 *	500 ***	1021496	-	1552.0
8 *	600 ***	1021511	-	1900.0

Nominal shackle Size (in.)	Working Load Limit (1) (tons)	Dimensions (in.)											Tolerance +/-	
		A	B	C	D	E	F	G	H	J	K	L	A	E
1 1/2	30	2.38	3.62	1.62	1.63	5.75	1.39	6.88	7.75	10.00	3.88	1.54	.13	.25
1 3/4	40	2.88	4.19	2.25	2.00	7.00	1.75	8.86	9.06	12.34	5.00	1.84	.13	.25
2	50	3.25	4.81	2.40	2.25	7.75	2.00	9.97	10.41	13.68	5.75	2.08	.13	.25
2 1/2	80	4.12	5.69	3.12	2.75	10.50	2.62	12.87	13.56	17.84	7.25	2.71	.25	.25
3	110 **	5.00	6.50	3.62	3.25	13.00	3.00	14.36	16.50	21.50	7.88	3.11	.25	.25
3 1/2	140 **	5.25	8.00	4.12	3.75	14.63	3.75	16.50	19.00	24.62	9.00	3.62	.25	.25
4	175 **	5.50	9.00	4.56	4.25	14.50	4.00	18.42	19.75	25.69	10.00	4.10	.25	.25
4 3/4 *	200 **	7.25	10.50	6.00	4.75	15.62	3.75	21.00	20.50	29.25	11.00	4.50	.25	.25
5 *	250 **	8.50	12.00	6.50	5.00	20.00	3.88	24.50	21.97	35.00	13.00	4.50	.25	.25
6 *	300 **	8.38	12.00	6.75	6.00	19.50	4.75	25.00	24.35	35.25	13.00	5.00	.25	.25
7 *	400 **	8.25	14.00	7.25	7.00	22.50	6.50	26.00	27.97	40.25	13.00	6.00	.25	.25
7 1/2 *	500 ***	8.31	15.00	7.50	7.50	25.25	6.34	28.00	28.22	44.00	13.00	7.50	.25	.25
8 *	600 ***	9.25	17.00	8.50	8.25	31.88	6.50	31.00	29.97	53.00	14.00	8.50	.25	.25

(1) Maximum Proof Load is 2.2 times the Working Load Limit. Minimum Ultimate Load is 4 times the Working Load Limit on 200 thru 600 tons. From 30 to 175 tons, Minimum Ultimate Load is 6 times the Working Load Limit.

* Cast alloy steel

** Furnished with round head bolts with welded handle

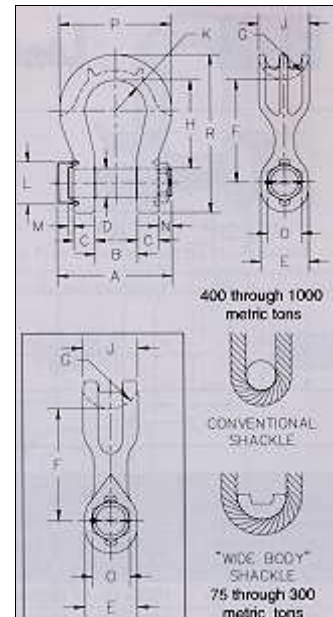
*** Maximum Proof Load is 1000 tons and furnished with round head bolts with welded handle.

ALLOY SHACKLES



G-2160
“Wide Body” sling saver shackles
increase sling life

All shackles are magnetic particle inspected

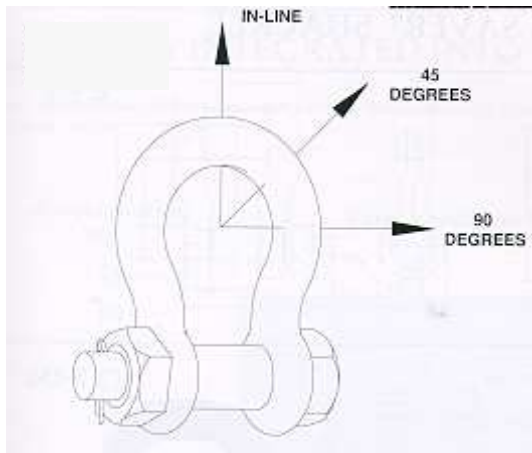


- Greatly improved wearability of wire rope slings
- Increase in shackle bow radius provides minimum 58% gain in sling bearing surface and eliminates need for a thimble
- Increases usable sling strength minimum of 15 %
- Pin is non-rotating, with weld on handles for easier use
- All ratings are in metric tons, embossed on side of bow
- Forged alloy steel from 75 through 300 metric tons
- Cast alloy steel from 400 through 1000 metric tons
- Sizes 400 tons and larger are tested 1.33 times Working Load Limit
- Sizes 300 tons and smaller are proof tested to 2 times the Working Load Limit
- All 2160 shackles are individually proof tested, Crosby certification available at the time of order. Shackles requiring ABS, DNV, Lloyds or other certifications are available upon special request and must be specified at time of order
- Shackles are produced in accordance with certified lifting appliance requirements :
 - . Non-destructive testing
 - . Serialization / Identification
 - . Material testing (physical, chemical, charpy)
 - . Proof testing
- All sizes quenched and tempered for maximum strength
- Bows and pins are furnished Dimetcoated. All pins are Dimetcoated then painted red

Working Load Limit * (metric tons)	G-2160 Stock No.	Weight Each (lbs.)	Dimensions (in.)															
			A	B +/- .25	C	D +/- .02	E	F	G	H	J	K	L	M	N	O	P	R
			75 **	1021290	99	13.62	4.13	2.12	2.76	4.76	12.80	2.52	11.41	4.72	3.66	4.37	1.00	3.00
125 **	1021307	161	15.75	5.12	2.56	3.15	5.71	15.94	3.15	14.37	5.90	4.33	5.12	1.06	2.95	4.64	14.96	22.68
200 **	1021316	500	20.00	5.90	3.35	4.13	7.28	20.96	4.33	18.90	8.07	5.41	6.69	1.26	4.33	5.75	19.49	29.82
300 **	1021325	810	23.27	7.28	4.00	5.25	9.25	26.25	5.51	23.62	10.43	6.31	8.07	1.50	4.42	6.89	23.64	37.39
400 ***	1021334	1050	28.13	8.66	5.16	6.30	11.02	25.79	6.30	22.64	12.60	7.28	9.45	1.50	4.72	7.76	27.16	38.78
500 ***	1021343	1376	31.87	9.84	5.59	7.09	12.52	28.35	6.69	24.80	13.39	8.86	10.43	1.61	4.92	8.74	31.10	42.72
600 ***	1021352	1884	35.94	10.83	6.04	7.87	13.78	31.50	7.28	27.56	14.57	9.74	11.93	1.75	5.39	9.74	34.06	47.24
700 ***	1021361	2496	39.07	11.81	6.59	8.46	14.80	33.17	7.87	28.94	15.75	10.63	12.62	1.89	5.94	10.75	37.01	50.18
800 ***	1021254	3011	38.82	12.80	7.19	9.06	15.75	34.06	8.27	29.53	16.54	10.92	13.90	1.89	6.14	11.26	38.39	52.09
900 ***	1021389	3436	41.34	13.78	7.78	9.84	16.93	34.74	8.66	29.80	17.32	11.52	15.20	2.01	6.08	12.50	40.35	54.04
1000 ***	1021370	3997	46.30	14.96	8.33	10.63	17.72	35.24	9.06	29.92	18.11	12.11	16.00	2.01	5.98	12.99	42.32	55.31

* Ultimate Load is 5 times the Working Load Limit
 ** Forged Alloy Steel. Proof load is 2 the Working Load Limit
 *** Cast Alloy Steel. Proof load is 1.33 times the Working Load Limit

SHACKLES

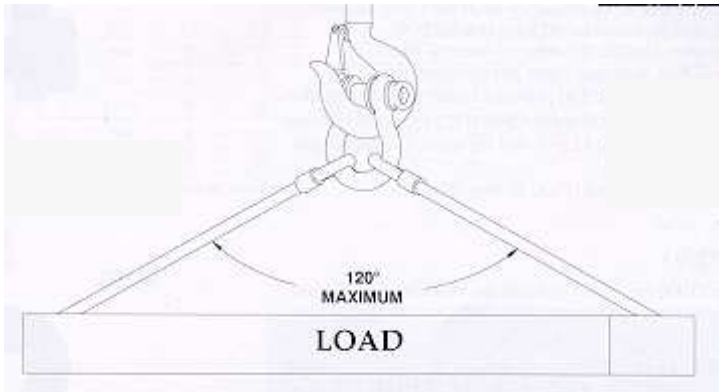


Angle loads must be applied in the plane of the bow

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

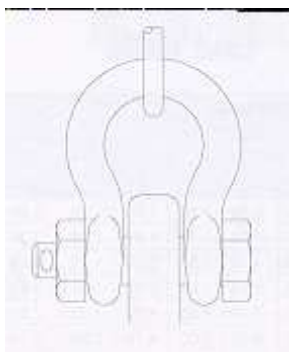


Never exceed 120° included angle

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 Li-

WORKING LOAD LIMIT FOR SHACKLES 85 TONS AND LARGER

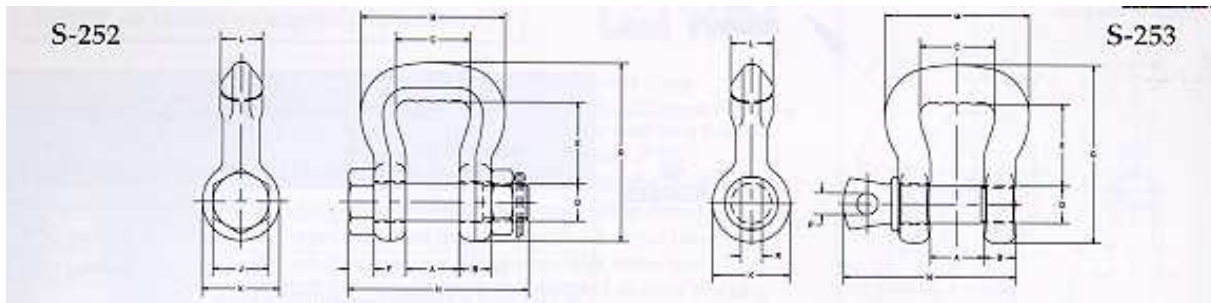


Reduced Working Load Limits when pad eye less than 80 % of the shackle opening

1. Pad eye 60 % of shackle opening
Working load limit = .87 x catalogue Working Load Limit
2. Pad eye 40 % of shackle opening
Working load limit = .80 x catalogue Working Load Limit
3. Point Load
Working load limit = .70 x catalogue Working Load Limit

SHACKLES

“Synthetic sling saver” shackles



The “Synthetic Sling Saver” Shackle, designed for round or flat synthetic slings, has the following features :

- Eliminates “bunching” effect caused by traditional shackles
- Reduces sling tendency to slide.

Increased radius of bow gives wider sling bearing surface resulting in an increased area for load distribution, thus :

- Increases Synthetic Sling efficiency by at least 15% as compared to a standard anchor or chain shackle bow

- Allowing better load distribution on internal fibers

Both a Screw Pin and Bolt, nut and cotter pin configuration

- Bolt (pin) has a large diameter that provides better load distribution

Each shackle has a Product Identification Code (PIC) for material traceability along with a Working Load Limit.

- Available in sizes from 3 1/4 tons (1”) to 50 tons (6”)
- All alloy construction
- Design factor of 5 to 1
- Fatigue rated to 20,000 cycles at 1 1/2 times the Working Load Limit



Round Sling Size (Number)	Web Sling Nominal Size (in.)	Working Load Limit * (tons)	S-252 Bolt type		S-253 Screw pin	
			S-252 Stock No.	Weight Each (lbs.)	S-253 Stock No.	Weight Each (lbs.)
1 & 2	1	3 1/4	1020485	1.6	1020575	1.4
3 & 4	1.5	6 1/2	1020496	4.1	1020584	3.5
5 & 6	2	8 3/4	1020507	6.9	1020593	6.1
7 & 8	3	12 1/2	1020518	8.9	1020602	8.1
9 & 10	4	20 1/2	1020529	22.3	1020611	18.7
11 & 12	5	35	1020540	50.9	1020620	43.7
13	6	50	1020551	86.9	1020629	74.4

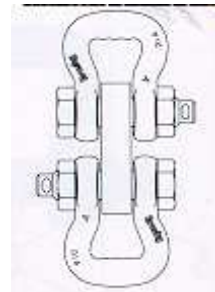
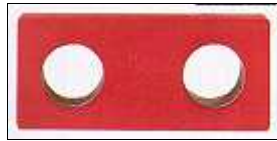
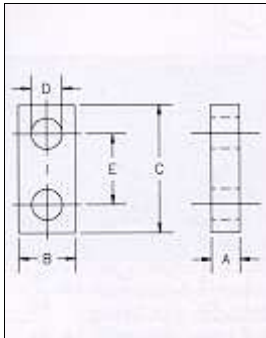
Round Sling Size (Number)	Web Sling Nominal Size (in.)	Working Load Limit * (tons)	Dimensions (in.)														
			A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
1 & 2	1	3 1/4	.88	.62	1.38	.75	1.50	.44	3.38	3.68	1.12	1.50	.75	2.69	3.22	.44	1.00
3 & 4	1.5	6 1/2	1.25	.75	1.75	.88	1.88	.50	4.15	4.25	1.31	1.81	1.00	3.38	4.03	.50	1.19
5 & 6	2	8 3/4	1.38	.88	2.25	1.00	2.81	.56	5.50	4.72	1.50	2.09	1.12	4.19	4.50	.50	1.44
7 & 8	3	12 1/2	1.62	1.12	3.25	1.25	3.06	.75	6.34	5.88	1.88	2.62	1.38	5.62	5.59	.62	1.81
9 & 10	4	20 1/2	2.12	1.38	4.50	1.50	5.75	.88	9.75	7.19	2.25	3.12	1.75	7.50	6.88	.75	2.13
11 & 12	5	35	2.50	1.75	5.50	2.00	6.34	1.12	11.50	9.31	3.00	4.19	2.25	9.19	8.66	1.00	2.88
13	6	50	3.00	2.12	6.50	2.25	7.70	1.25	13.75	10.38	3.38	4.75	2.75	11.00	10.22	1.22	3.19

* Maximum proof load is 2 1/2 times the working load limit. Minimum ultimate strength is 5 times the working load limit.

SHACKLES - ACCESSORIES

Link plate

S-256

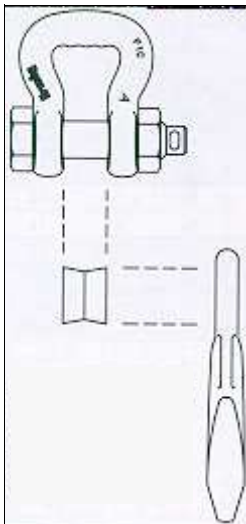


The "Link Plate" is designed to connect two (2) S-252 or S-253 "Sling Saver" shackles together.

Shackle Size (in.)	Stock No.	Dimensions (in.)					Weight Each (lbs.)
		A	B	C	D	E	
1	1020785	.75	1.50	3.38	.81	1.88	1.49
1.5	1020796	1.00	1.75	4.12	.94	2.25	2.11
2	1020807	1.25	2.00	4.75	1.06	2.62	3.45
3	1020818	1.50	2.50	6.00	1.31	2.35	6.51
4	1020829	1.75	3.00	7.00	1.62	3.75	10.60
5	1020840	2.00	4.00	9.25	2.12	5.00	21.25
6	1020851	3.00	5.00	10.50	2.38	5.75	54.19

Spool

S-255



The "Spool" is designed to keep the load centered on the pin, thus keeping the sling positioned correctly in the shackle bow.

Shackle Size (in.)	Stock No.	Dimensions (in.)				Weight Each (lbs.)
		A	B	C	D	
1	1020903	1.25	.81	.75	.19	.33
1.5	1020912	1.50	.94	1.00	.25	.57
2	1020921	1.75	1.05	1.19	.31	.89
3	1020930	2.00	1.31	1.50	.38	1.45
4	1020939	2.50	1.63	1.88	.44	2.79
5	1020948	3.25	2.13	2.25	.50	5.59
6	1020957	3.75	2.38	2.75	.62	9.02

