


WARNING

DO NOT EXCEED WORKING LOAD LIMIT.

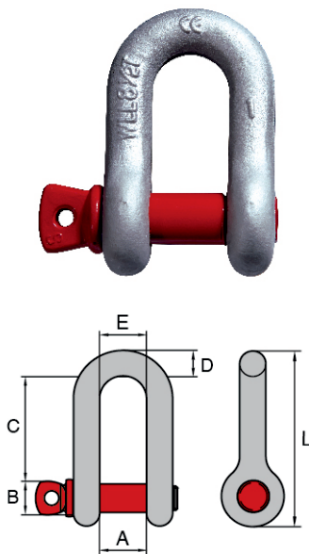
USE ONLY G80 & G100 COMPATIBLE COMPONENTS FOR OVERHEAD LIFTING.



US Type Chain Dee Shackle

Fedra Standard RR-C-271D

SCREW PIN CHAIN DEE SHACKLE SL - 210

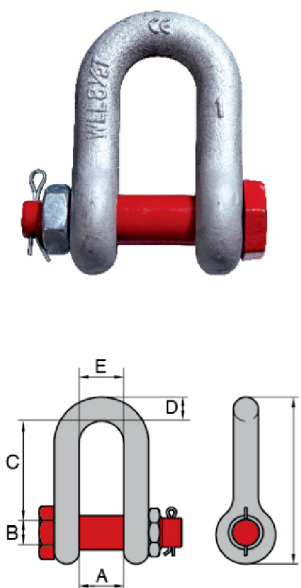


- Working Load Limit Permanently shown on every shackle.
- Forged - Quenched and Tempered
- Capacities 1 ton to 150 tons.
- Shackle can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification. Charges for proof testing and certification available when requested at time of order.
- Shackles are galvanized



Model	WLL	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	L [mm]	Weight [kg/pc]
3/16"	1/3T	9.65	6.35	-	4.85	19.35	-	0.022
1/4"	1/2T	11.9	7.85	22.5	6.35	26.4	40.4	0.05
5/16"	3/4T	13.5	9.65	26.2	7.85	29.5	48.5	0.08
3/8"	1T	16.8	11.2	31.8	9.65	35.8	58.5	0.13
7/16"	1-1/4T	19.1	12.7	36.6	11.2	41.4	67.5	0.2
1/2"	2T	20.6	16	41.4	12.7	46	77	0.27
5/8"	3.25T	26.9	19.1	51	16	58.5	95.5	0.57
3/4"	4.75T	31.8	22.4	60.5	19.1	70	115	1.2
7/8"	6.5T	36.6	25.4	71.5	22.4	81	135	1.43
1"	8.5T	42.9	28.7	81	25.4	93.5	151	1.91
1-1/8"	9.5T	46	31.8	91	29.5	103	172	3.06
1-1/4"	12T	51.5	35.1	100	32.8	115	191	4.11
1-3/8"	13.5T	57	38.1	111	35.1	127	210	5.28
1-1/2"	17T	60.5	41.4	122	38.1	137	230	7.23
1-3/4"	25T	73	51	146	44.5	162	279	12.1
2"	35T	82.5	57	172	51	184	312	19.2
2-1/2"	55T	105	70	203	66.5	238	377	32.5

NUT BOLT TYPE CHAIN DEE SHACKLE SL - 2150



Model	WLL	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	L [mm]	Weight [kg/pc]
3/16"	1/3T	9.65	6.35	-	4.85	-	-	-
1/4"	1/2T	11.9	7.85	19.05	6.35	84.6	40.4	0.06
5/16"	3/4T	13.5	9.65	25.4	7.85	29.5	48.5	0.1
3/8"	1T	16.8	11.2	30.99	9.65	35.8	58.5	0.15
7/16"	1-1/4T	19.1	12.7	36.09	11.2	41.1	67.5	0.22
1/2"	2T	20.6	16	41.04	12.7	46	77	0.34
5/8"	3.25T	26.9	19.1	50.8	16	58.5	95.5	0.67
3/4"	4.75T	31.8	22.4	60.45	19.1	70	115	1.14
7/8"	6.5T	36.6	25.4	71.37	22.4	81	135	1.74
1"	8.5T	42.9	28.7	81.03	25.4	93.5	151	2.52
1-1/8"	9.5T	46	31.8	90.93	28.7	103	172	3.45
1-1/4"	12T	51.5	35.1	100.08	31.8	115	191	4.9
1-3/8"	13.5T	57	38.1	111.25	35.1	127	210	6.24
1-1/2"	17T	60.5	41.4	122.17	38.1	137	230	8.39
1-3/4"	25T	73	51	146.05	44.5	162	279	14.2
2"	35T	82.5	57	171.45	51	184	312	21.2
2-1/2"	55T	105	70	203.2	66.5	238	377	38.6
3"	85T	127	82.5	215.9	76	279	429	56
3-1/2"	120T	133	95.5	-	92	-	-	-
4"	150T	140	108	-	104	-	-	-


WARNING

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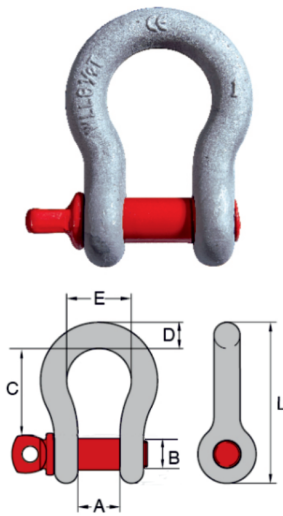
USE ONLY G80 & G100 COMPATIBLE COMPONENTS FOR OVERHEAD LIFTING.



US Type Anchor Bow Shackle Fedra Standard RR-C-271D

ROUND PIN
ANCHOR BOW SHACKLE

SL - 209



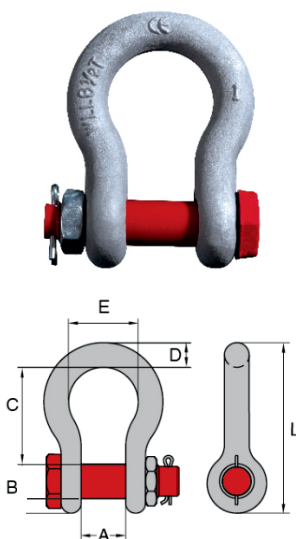
- Working Load Limit Permanently shown on every shackle.
- Forged - Quenched and Tempered
- Capacities 1 ton to 150 tons.
- Shackle can be furnished proof tested with certificates to designated standards, such as ABS, DNV, Lloyds, or other certification. Charges for proof testing and certification available when requested at time of order.
- Shackles are galvanized



Model	WLL	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	L [mm]	Weight [kg/pc]
3/16"	1/3T	9.65	6.35	22.4	4.85	15.2	37.3	0.03
1/4"	1/2T	11.9	7.85	28.7	6.35	19.8	46.7	0.05
5/16"	3/4T	13.5	9.65	31	7.85	21.3	53	0.09
3/8"	1T	16.8	11.2	36.6	9.65	26.2	63	0.14
7/16"	1-1/2T	19.1	12.7	42.9	11.2	29.5	74	0.17
1/2"	2T	20.6	16	74.8	12.7	33.3	83.5	0.33
5/8"	3.25T	26.9	19.1	60.5	16	42.9	106	0.62
3/4"	4.75T	31.8	22.4	71.5	19.1	51	126	1.07
7/8"	6.5T	36.6	25.4	84	22.4	58	148	1.64
1"	8.5T	42.9	28.7	95.5	25.4	68.5	167	2.28
1-1/8"	9.5T	46	31.8	108	29.5	74	190	3.36
1-1/4"	12T	51.5	35.1	119	32.8	82.5	210	4.31
1-3/8"	13.5T	57	38.1	133	36.1	92	233	6.14
1-1/2"	17T	60.5	41.4	146	39.1	98.5	254	7.8
1-3/4"	25T	73	51	178	46.7	127	313	12.6
2"	35T	82.5	57	197	53	146	348	20.4
2-1/2"	55T	105	70	267	69	184	453	38.9

NUT BOLT TYPE
ANCHOR BOW SHACKLE

SL - 2130



Model	WLL	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	L [mm]	Weight [kg/pc]
3/16"	1/3T	9.65	6.35	22.4	4.85	15.2	37.3	0.03
1/4"	1/2T	11.9	7.85	28.7	6.35	19.8	46.7	0.05
5/16"	3/4T	13.5	9.65	31	7.85	21.3	53	0.1
3/8"	1T	16.8	11.2	36.6	9.65	26.2	63	0.15
7/16"	1-1/2T	19.1	12.7	42.9	11.2	29.5	74	0.22
1/2"	2T	20.6	16	47.8	12.7	33.3	83.5	0.36
5/8"	3.25T	26.9	19.1	60.5	16	42.9	106	0.76
3/4"	4.75T	31.8	22.4	71.5	19.1	51	126	1.23
7/8"	6.5T	36.6	25.4	84	22.4	58	148	1.79
1"	8.5T	42.9	28.7	95.5	25.4	68.5	167	2.57
1-1/8"	9.5T	46	31.8	108	28.7	74	190	3.75
1-1/4"	12T	51.5	35.1	119	31.8	82.5	210	4.9
1-3/8"	13.5T	57	38.1	133	35.1	92	233	5.31
1-1/2"	17T	60.5	41.4	146	38.1	98.5	254	9.43
1-3/4"	25t	73	51	178	44.5	127	313	15.4
2"	35T	82.5	57	197	51	146	348	23.7
2-1/2"	55T	105	70	267	69	184	453	38.9
3"	85T	127	82.5	330	76	200	546	70
3-1/2"	120T	133	95.5	372	92	229	626	120
4"	150T	140	108	368	104	524	653	153

WARNING

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DEALERS IN LIFTING EQUIPMENTS

Pundol Apartments, Shop No. 5 & 6,160 M.G. Road, Pune - 411001. (India)

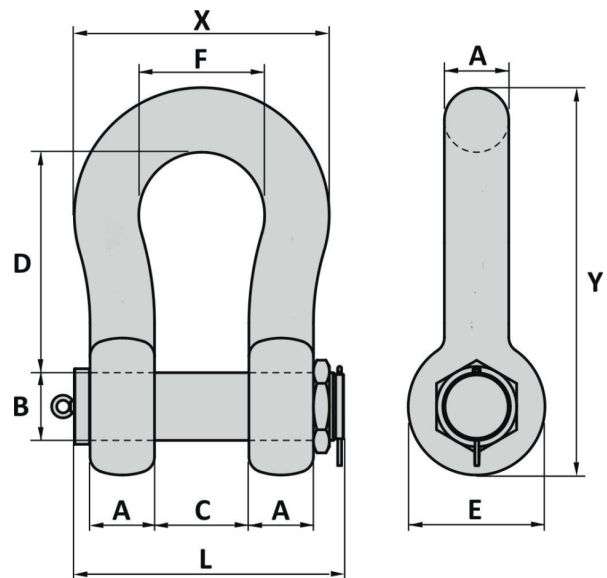
Tel. : +91 -20 -6708 8100 Fax : +91 -20 - 6708 8101

Email : sales@safelifters.com Website : www.safelifters.com

BOW SAFETY PIN SHACKLE

SL-2130H

- Material : Forged alloy steel quenched and tempered
- Safety factor : 5 tmes
- Standards : Generally according to US Federal Spec RR-C-271
- Finish : Painted
- Temperature range : -40°C up to +200°C, Polar Rated



WLL	A	B	C	D	E	F	L	X	Y	Weight
ton	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
120	89	95	150	380	200	238	420	416	617	110
150	102	108	170	400	230	275	475	479	671	160
200	120	125	180	500	260	290	520	530	813	235
250	125	140	205	540	260	305	560	555	865	285
300	130	150	205	600	305	305	570	565	958	340
400	165	175	230	680	350	325	665	655	1108	560
500	180	185	255	700	370	350	720	710	1158	685
600	195	205	285	700	405	375	815	765	1200	880
700	205	217	310	700	435	400	860	810	1231	980
800	210	217	310	700	435	400	870	820	1236	1100
900	220	230	330	700	465	420	910	860	1268	1280
1000	230	240	350	750	480	420	950	880	1290	1460
1250	278	270	370	780	590	450	1105	1010	1490	2320
1500	280	290	370	800	610	450	1105	1010	1530	2450
1750	300	330	430	950	660	540	1230	1140	1745	3280
2000	320	360	460	1050	680	560	1300	1200	1890	3920

Tolerance: Inside length ± 7.5%, all other forged parts ± 5%, machined parts ± 1 mm


WARNING

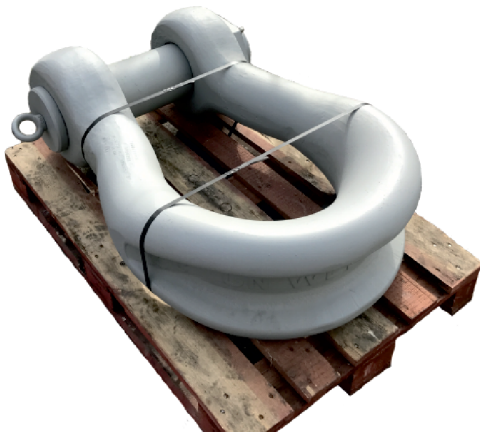
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SL-2160 WIDE BODY SHACKLE

Material : Alloy steel quenched and tempered
Safety factor : ≤ 2000 ton 5 times
 $> 2000 \leq 3000$ ton 4,5 times
 > 3000 ton 4 times
Finish : Painted
Temperature range : ≤ 40 ton -20°C up to $+200^{\circ}\text{C}$
 > 40 ton -40°C up to $+200^{\circ}\text{C}$; Polar Rated

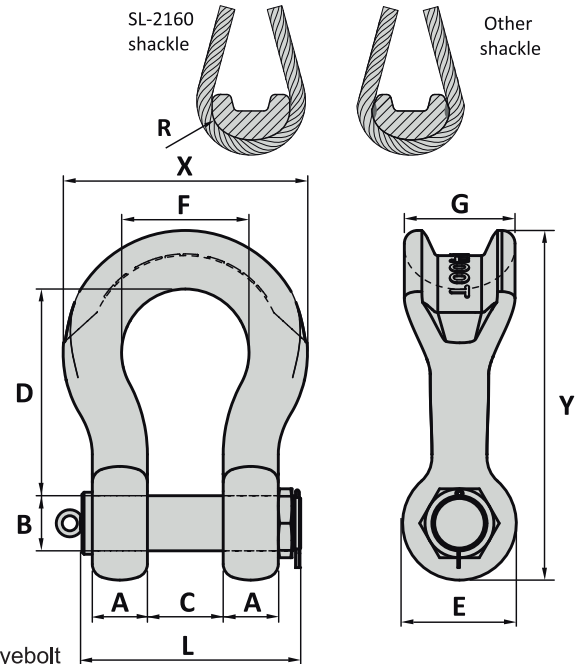


Rounded wide body protects sling for damages

Sharp corners create stress points on slings

SL-2160 shackle

Other shackle


* Shackles from WLL 30 ton $\leq$ 125 ton are not supplied with an eyebolt

	WLL ton	A mm	B mm	C mm	D mm	E mm	F mm	G mm	L mm	R mm	X mm	Y mm	Weight kg
	30	35	44	65	180	90	128	80	202	45	204	292	14
	40	45	51	84	200	109	140	97	252	53	232	331	21
	55	65	56	95	250	130	160	110	300	55	288	400	33
	75	75	70	110	300	150	185	120	345	60	334	485	53
	125	85	80	140	370	165	220	150	395	80	390	583	84
	150	90	95	150	400	200	250	170	420	90	429	638	115
	200	105	105	160	480	225	275	205	470	110	484	755	183
	250	120	120	180	550	240	300	230	520	125	540	850	255
	300	140	134	195	600	280	350	265	580	140	628	947	368
	400	160	160	230	620	330	370	320	655	170	689	1035	571
	500	170	180	265	680	350	440	340	710	180	779	1125	719
	600	180	200	290	720	405	490	370	795	190	847	1213	960
	700	210	215	320	780	465	540	400	880	210	957	1330	1350
	800	220	230	345	800	465	555	420	925	220	990	1358	1400
	900	235	250	370	850	480	585	440	1010	235	1060	1450	2100
	1000	235	270	400	850	530	615	460	1050	240	1091	1490	2200
	1250	275	300	455	960	570	645	560	1210	285	1205	1695	3000
	1550	275	320	485	980	610	680	580	1240	290	1240	1745	3300
	1750	310	360	500	1120	660	700	600	1325	300	1346	1960	4700
	2000	320	385	520	1140	680	720	620	1365	310	1368	2012	4800
	2500	330	400	520	1140	740	730	635	1380	320	1383	2065	5400
	3000	340	420	530	1140	760	740	650	1410	330	1413	2080	5800
	3500	350	440	540	1140	790	750	670	1480	340	1480	2130	6800
	4000	360	460	550	1140	810	760	690	1510	350	1510	2140	7200

Tolerance: Inside length $\pm 7.5\%$, all other forged parts $\pm 5\%$, machined parts ± 1 mm

Advantage of SL-2160 Wide Body Shackle as compared to Standard Shackles

- 1) Increase in Shackle Bow Radius provides minimum 58% gain in sling bearing surface and eliminates the need for Thimble
- 2) Increases usable sling strength minimum 15 % and greatly improves life of Wire Rope Slings

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Pundol Apartments, Shop No. 5 & 6, 160 M.G. Road, Pune - 411001. (India)

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Fax : +91-20-6708 8101

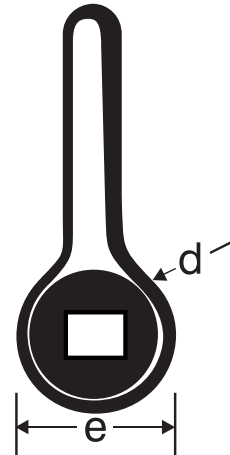
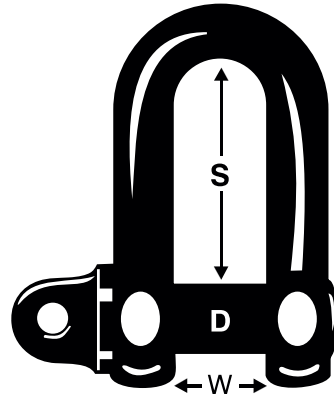
Email : sales@safelifters.com

Website : www.safelifters.com

Dee Shackles

IS 6132 (Part - II)

SL - 211



JAW INSIDE WIDTH	INSIDE LENGTH	BODY MATERIAL DIA	PIN DIA	EYE OUTSIDE DIA	SAFE WORKING LOAD TONNES		
					GRADE 30	GRADE 40	GRADE 63
W	S = 2.5 W	d	D min	D min			
18	40	10	12	24	-	-	1
20	44	12	14	28	-	1	1.25
22	49	14	16	38	1	1.6	2.6
25	55	16	19	38	1.25	1.6	2
28	62	17	20	40	1.6	2	2.5
32	70	19	22	44	2	2.5	3.2
34	79	22	26	52	2.5	3.2	4
40	88	24	28	56	3.2	4	5
45	99	28	32	62	4	5	6.3
50	110	32	35	70	5	6.3	8
56	124	35	40	78	6.3	8	10
63	139	38	44	88	8	10	12.5
70	154	45	50	100	10	12.5	16
80	178	48	55	110	12.5	16	20
90	198	54	62	124	16	20	25
100	220	60	69	138	20	25	32
107	236	66	76	152	25	32	40
117	258	70	82	164	32	40	45
130	286	80	91	182	40	45	63
140	308	85	97	197	50	63	80
155	337	93	110	220	63	80	-

Specifications given are indicative and are subject to change.

Note : The pin diameters actually used may be based on any standard series for sizes of bar material provided that the intervals between adjacent sizes do not exceed the R20 interval (1.12) the next size above the minimum pin diameter, D min as given in the above table should be used. The Nominal diameter D used is then subject to the tolerances specified in 5.2 of IS : 6132 (part1). 1971 The eye outside diameter then becomes twice the nominal Pin diameter D subject to the tolerances in 5.2 of IS :6132 (part 2)-1971. Specification for Shackles : Part 1 General Requirement for grade 30,40, and 63 only. Shackles of Grade 30, 40, 63 confirm to I. S. I specification 6132

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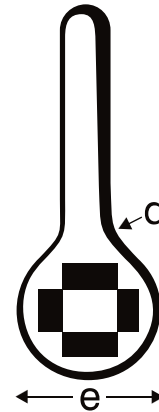
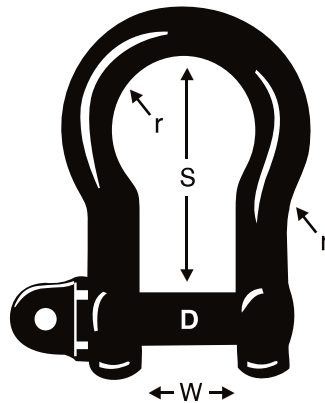
Website : www.safelifters.com

Bow Shackles

IS 6132 (Part - II)



SL - 208



JAW INSIDE WIDTH	INSIDE LENGTH	BOW DIA	BODY MATERIAL DIA	PIN DIA	EYE OUTSIDE DIA	SAFE WORKING LOAD TONNES		
						GRADE 30	GRADE 40	GRADE 63
W	S=2.5 W	2r=1.7 W	d	D min	e min			
18	45	31	10	12	24	-	-	1.0
20	50	34	12	14	28	-	1.0	1.25
22	55	37	14	16	32	1.0	1.25	1.6
25	63	42	16	19	38	1.25	1.6	2.0
28	70	48	18	20	40	1.6	2.0	2.5
32	80	54	20	22	44	2.0	2.5	3.2
36	90	61	22	25	52	2.5	3.2	4.0
40	100	68	25	28	56	3.2	4.0	5.0
45	110	76	28	32	62	4.0	5.0	6.3
50	125	85	32	35	70	5.0	6.3	8.0
56	140	95	36	40	78	6.3	8.0	10
63	155	105	40	44	88	8.0	10	12.5
70	175	120	45	50	100	10.0	12.5	16
80	200	135	50	55	110	12.5	16	20
90	225	155	58	62	124	16	20	25
100	250	170	63	70	138	20	25	32
107	270	180	70	75	154	25	32	40
117	295	200	75	82	164	32	40	45
130	325	220	85	90	182	40	45	63
140	350	240	88	98	196	50	63	80
155	390	265	95	110	220	63	80	-

Specifications given are indicative and are subject to change.

Note : The pin diameters actually used may be based on any standard series for sizes of bar material provided that the intervals between adjacent sizes do not exceed the R20 Interval (1.12) The next size above the minimum pin diameter, D min as given in the above table should be used. The Nominal diameter D used is then subject to the tolerances specified in 5.2 of IS:6132 (Part I). 1971 The eye outside diameter then becomes twice the nominal Pin Diameter D subject to the tolerances in 5.2 of IS:6132 (Part II) - 1971.

Specification for Shackles : Part I General Requirement for grade 30, 40, and 63 only.

Shackles of Grade 30, 40, 63 confirm to I.S.I specification 6132

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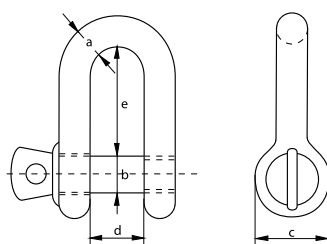


Commercial Shackles

Dee shackles with screw collar pin



- **Material** : mild steel, untreated, Grade 3
- **Finish** : electro-galvanized or selfcoloured
- **Note** : not to be used for lifting applications



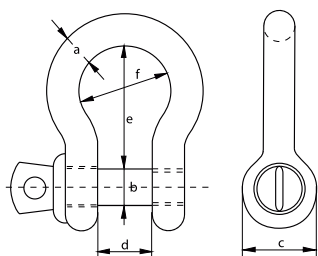
diameter bow	diameter pin	diameter eye	width inside	length inside	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	kg
5	5	10	10	19	1.47
6	6	12	12	25	2.56
8	8	16	16	32	6.06
10	10	20	20	38	11.8
11	11	22	22	44	15.8
12	12	24	24	51	20.5
14	14	28	28	53	32.5
16	16	32	32	64	48.5
20	20	40	40	76	94.7
22	22	44	44	89	126
25	25	50	50	100	185
28	28	56	56	115	260
32	32	64	64	127	388
38	38	76	76	152	650
45	45	90	90	180	1080
50	50	100	100	200	1480
57	57	114	114	220	2192
65	65	130	130	247	3252

Commercial Shackles

Bow shackles with screw collar pin



- **Material** : mild steel, untreated, Grade 3
- **Finish** : electro-galvanized or selfcoloured
- **Note** : not to be used for lifting applications



diameter bow	diameter pin	diameter eye	width inside	length inside	width bow	weight per 100 pcs
a mm	b mm	c mm	d mm	e mm	f mm	kg
5	5	10	10	20	15	1.54
6	6	12	12	24	18	2.66
8	8	16	16	32	24	6.29
10	10	20	20	40	30	12.3
11	11	22	22	44	33	16.4
12	12	24	24	48	36	21.2
14	14	28	28	56	42	33.7
16	16	32	32	64	48	50.3
20	20	40	40	80	60	98.3
22	22	44	44	88	66	131
25	25	50	50	100	75	192
28	28	56	56	112	84	270
32	32	64	64	128	96	403
38	38	76	76	152	114	674
45	45	90	90	180	135	1120
50	50	100	100	200	150	1536
57	57	114	114	228	171	2276
65	65	130	130	260	195	3375

WARNING

DO NOT EXCEED WORKING LOAD LIMIT.
USE ONLY G80 & G100 COMPATIBLE COMPONENTS FOR OVERHEAD LIFTING.

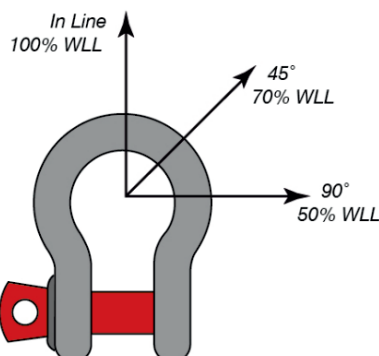


General

Shackles are used in lifting static systems as removable links to connect wire rope, chain and other fittings.

Shackle Loading

The Working Load Limit on a shackle varies according to the angle of the load.



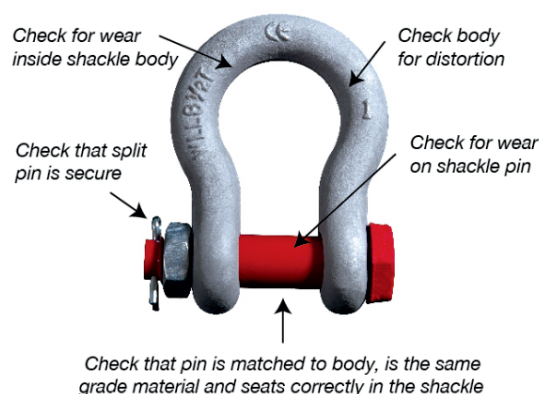
Inspection Before Use

WARNING

- Lifting equipment should be inspected before each use.

The pre-use check for shackles should ensure that:

- The body of the shackle and pin are both compatible and are of the same grade and material.
- All markings are clearly legible.
- The pin is the correct type for the shackle body.
- The threads of the pin and the shackle body are in good order and function correctly.
- The body and pin are not damaged in any way and are free from distortion, nicks, gouges, cracks and excessive wear and corrosion. (Recommended maximum wear allowance is 10%).
- For 'Safety pin' shackles ensure that the nuts and split pins are fitted and in good condition.



Marking

Shackles designed and tested in accordance with EN13889+A1-2008 should be marked with the following

- WLL.
- Manufactures identification.
- Grade of material.
- Identification mark or batch number to cross reference the shackle to the manufacturers test certificate.

Care In Use

WARNING

- Shackles should always be used in line with good lifting and rigging practice and as per the manufacturers recommendations.
- Incorrect shackle use could result in a dangerous situation that could cause property damage, serious injury or death.
- When using shackles in multi-leg slings, due consideration should be given to the effect of the angle between the legs. As the included angle increases so to does the load in the sling leg and the shackle.
- Shackles should never be used on a sling with an included angle in excess of 120°.

- With a screw pin shackle ensure that the pin is firmly screwed into the shackle eye. The collar of the pin should be fully seated on the shackle eye. The pin can be locked using a small spanner or tommy bar. When using a safety pin shackle ensure that the nut and split pin are attached and in good condition.
- Ensure that the pin is of the correct length so that it penetrates the full depth of the screwed eye and allows the collar of the pin to bed on the surface of the shackle eye.
- If the shackle pin does not seat correctly this indicates that the pin may be bent, the thread is not correct or compatible or the pinholes are not aligned correctly. The shackle should not be used under these circumstances.
- Never replace a shackle pin with a bolt. The original shackle pin is specifically designed for the purpose and a bolt may not be suited to the WLL of the shackle.
- Safety pin shackles must never be used if the nut and split pin are not in place.
- Select the correct type of shackle for the intended use and application. Shackles should be fitted to the load in a manner that allows the shackle to be loaded along its centre line. Shackles should never be loaded in such a way that inappropriate bending forces are induced.
- To avoid eccentric loading of the shackle a loose spacer may be used in either end of the shackle pin or a shackle with a smaller jaw width should be used. Do not reduce the width between the shackle jaws by welding washers or spacers to the inside face of the eyes or by closing the jaws, as this will have an adverse affect on the mechanical properties of the shackle.
- If a shackle is being used to secure the top block of a sheave block or "handy billy" arrangement it should be noted that the hoisting effort used to pull down on the load rope also needs to be allowed for when selecting the shackle WLL.
- The WLL of shackles is affected at high temperatures therefore the WLL's should be reduced by 10% for temperatures between 200 and 300°C and by 25% for temperatures between 300 and 400°C. Grade S Shackles should not be used at all for temperatures above 400°C.
- Do not attempt to weld or apply heat to shackles.