

SECTION **3** SHACKLES



# SHACKLES

## INSTRUCTIONS FOR USE CAUTIONS AND WARNINGS

### General

Commercial shackles are not to be used for lifting purposes.

Should extreme circumstances or shock loadings be applicable, this must be taken into account on selecting product to be used.

The Working Load Limit (WLL) should be applied in a straight pull. Do not exceed working load limit.

Side-Loading should be avoided as the products are not designed for this purpose. If side-loading is unavoidable, the following reduction factors must be taken into account:

### SIDE LOADING REDUCTION FOR SCREW PIN AND SAFETY 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 vertical to the pin.

It is required that the shackle be regularly inspected and that such inspection should take place as a minimum in accordance with the standards given in the country and all relevant requirements of the rigging Code of Practice. This is necessary, because the products in use may be affected by wear, misuse or over loading with resulting deformation and alteration of the steel structure.

### Safe use of shackles

Shackles should be inspected before use to ensure that;

- the body of the shackle and pin are both identifiable as being of the same quality;
- all markings are readable;
- the pin is of the correct type;
- the threads of the pin and body are undamaged;
- the body and the pin are not distorted or unduly worn;
- the body and the pin are free from nicks, gouges, and cracks

Ensure that the pin is correctly screwed into the shackle eye, i.e tighten finger tight, then lock using a small tommy bar or suitable tool so that the collar of the pin is fully seated on the shackle eye.

Ensure that the pin is of the correct length so that it penetrates the full depth of the shackle eye and allows the collar of the pin to bed on the surface of the shackle eye.

Incorrect seating of the pin may be due to a bent pin, too tight fitting thread or misalignment of pin holes. Do not use a shackle pin with a bolt, other than one designed for the purpose, as it may not be suitable for the loads imposed.

It is important in the case of shackles fitted with a bolt, nut and split cotter pin that the length of the plan portion of the bolt is such that the nut will jam on the inner end of the thread or on the eyes of the shackle, never use a bolt type shackle in operation without using a split cotter pin.

### Usage

Select the correct type of shackle for a particular application.

Shackles should be fitted to the load in the manner that allows the shackle body to take the load in a true line along its centre-line; and not in such a way that bending loads are induced, other than those for which the shackles is designed.

When using shackles in conjunction with multi-leg slings, due consideration should be given to the effect of the angle between the legs of the sling. As the angle increases so does the load in the sling leg and consequently in any shackle attached to that leg.

To avoid eccentric loading of the shackle a loose spacer may be used on 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 faces of the eyes or by closing the jaws, as this will have an adverse affect on the mechanical properties of the shackle.

When a shackle is used to secure the top block of a set of rope blocks the load on this shackle is increased by the value of the hoisting effort.

Avoid applications where due to movement (e.g. Of the load or rope) the shackle pin can rotate and possibly be unscrewed.

Finished shackles may not be heat treated because this may affect the Working Load Limit and the material structure.


Shackles in use should be subject to thorough examination by a competent person at least every 6 months.



# RISK MANAGEMENT

RISK MANAGEMENT	TERMINOLOGY	FOR ADDITIONAL SUPPORT
<b>DEFINITION</b>	<b>WORKING LOAD LIMIT (WLL)</b>	 <p>P.O. Box 3128 Tulsa Oklahoma 74101 Phone: (918) 834-4611 Fax: (918) 832-0940 1-800-777-1555 Web: www.thecrosbygroup.com E-Mail: crosbygroup@thecrosbygroup.com</p> <p><b>BLOCKS &amp; FITTINGS FOR WIRE ROPE &amp; CHAIN</b></p> <p>CROSBY® FITTINGS LEBUS® McKISSICK® WESTERN NATIONAL</p>
COMPREHENSIVE SET OF ACTIONS THAT REDUCES THE RISK OF A PROBLEM, A FAILURE, AN ACCIDENT	THE MAXIMUM MASS OR FORCE WHICH THE PRODUCT IS AUTHORIZED TO SUPPORT IN A PARTICULAR SERVICE.	
<p>ASME B30.9 REQUIRES THAT SLING USERS SHALL BE TRAINED IN THE SELECTION, INSPECTION, CAUTIONS TO PERSONNEL, EFFECTS OF ENVIRONMENT, AND RIGGING PRACTICES. SLING IDENTIFICATION IS REQUIRED ON ALL TYPES OF SLINGS</p> <p>ASME B30.26 REQUIRES THAT RIGGING HARDWARE USERS SHALL BE TRAINED IN THE SELECTION, INSPECTION, CAUTIONS TO PERSONNEL, EFFECTS OF ENVIRONMENT, AND RIGGING PRACTICES. ALL RIGGING HARDWARE TO BE IDENTIFIED BY MANUFACTURER WITH NAME OF TRADEMARK OR MANUFACTURER.</p> <p>REFER TO THE CROSBY GROUP CATALOG AND OTHER PRODUCT APPLICATION INFORMATION.</p>	<b>PROOF TEST</b>	
	A TEST APPLIED TO A PRODUCT SOLELY TO DETERMINE INJURIOUS MATERIAL OR MANUFACTURING DEFECTS.	
	<b>ULTIMATE STRENGTH</b>	
	THE AVERAGE LOAD OR FORCE AT WHICH THE PRODUCT FAILS OR NO LONGER SUPPORTS THE LOAD.	
<b>DESIGN FACTOR</b>	AN INDUSTRIAL TERM DENOTING A PRODUCT'S THEORETICAL RESERVE CAPABILITY; USUALLY COMPUTED BY DIVIDING THE CATALOG ULTIMATE LOAD BY THE WORKING LOAD LIMIT. GENERALLY EXPRESSED AS A RATIO, e.g. 5 TO 1.	
	<b>Load Rated</b>	

# PLANNING AND RESPONSIBILITIES

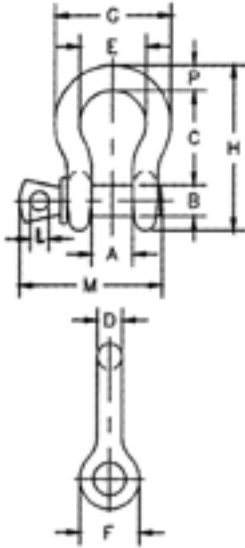
<p>PLAN EVERY LIFT, INCLUDE THE FOLLOWING QUESTIONS WITH THE QUESTIONS YOUR EXPERIENCE PROVIDES:</p> <ol style="list-style-type: none"> <li>1. WHO IS RESPONSIBLE (COMPETENT) FOR THE RIGGING?</li> <li>2. HAS COMMUNICATIONS BEEN ESTABLISHED?</li> <li>3. IS THE RIGGING IN ACCEPTABLE CONDITION?</li> <li>4. IS THE RIGGING APPROPRIATE FOR LIFTING?</li> <li>5. DOES THE RIGGING HAVE PROPER IDENTIFICATION?</li> <li>6. DOES ALL GEAR HAVE KNOWN WORKING LOAD LIMITS?</li> <li>7. WHAT IS THE WEIGHT OF THE LOAD?</li> <li>8. WHERE IS THE LOAD'S CENTER OF GRAVITY?</li> <li>9. WHAT IS THE SLING ANGLE?</li> <li>10. WILL THERE BE ANY SIDE OR ANGULAR LOADING?</li> <li>11. ARE THE SLINGS PADDED AGAINST SHARP CORNERS?</li> <li>12. ARE THE WORKING LOAD LIMITS ADEQUATE?</li> <li>13. IS THE LOAD RIGGED TO THE CENTER OF GRAVITY?</li> <li>14. IS THE HITCH APPROPRIATE FOR THE LOAD?</li> <li>15. IS A TAG LINE REQUIRED TO CONTROL LOAD?</li> <li>16. WILL PERSONNEL BE CLEAR OF SUSPENDED LOADS?</li> <li>17. IS THERE ANY POSSIBILITY OF FOULING?</li> <li>18. WILL THE LOAD LIFT LEVEL AND BE STABLE?</li> <li>19. ANY UNUSUAL ENVIRONMENTAL CONCERNS?</li> <li>20. ANY SPECIAL REQUIREMENTS?</li> </ol> <p>THE RIGGING MUST BE USED WITHIN MANUFACTURER'S RECOMMENDATIONS AND INDUSTRY STANDARDS THAT INCLUDE OSHA, ASME, ANSI, API AND OTHERS.</p>	<p><b>USER RESPONSIBILITY</b></p> <ol style="list-style-type: none"> <li>1. UTILIZE APPROPRIATE RIGGING GEAR SUITABLE FOR OVERHEAD LIFTING.</li> <li>2. UTILIZE THE RIGGING GEAR WITHIN INDUSTRY STANDARDS AND THE MANUFACTURER'S RECOMMENDATIONS.</li> <li>3. CONDUCT REGULAR INSPECTION AND MAINTENANCE OF THE RIGGING GEAR.</li> <li>4. PROVIDE EMPLOYEES WITH TRAINING TO MEET OSHA AND ASME (B30.9, B30.26, ETC.) REQUIREMENTS.</li> </ol> <p><b>MANUFACTURERS RESPONSIBILITY</b></p> <ol style="list-style-type: none"> <li>1. PRODUCT AND APPLICATION INFORMATION</li> <li>2. PRODUCT THAT IS CLEARLY IDENTIFIED NAME OR LOGO LOAD RATING AND SIZE TRACEABILITY</li> <li>3. PRODUCT PERFORMANCE WORKING LOAD LIMIT DUCTILITY FATIGUE PROPERTIES IMPACT PROPERTIES</li> <li>4. PRODUCT TRAINING AND TRAINING RESOURCES</li> </ol> 
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### CROSBY G-209 “RED PIN” BOW SHACKLE

Anchor Shackle with Screw Collar Pin.  
Safety Factor: 6:1  
Finish: Galvanised

Standard: Generally to U.S. Federal Spec. RR-C-271  
Tested & Certified. Conformance Certificates Available.



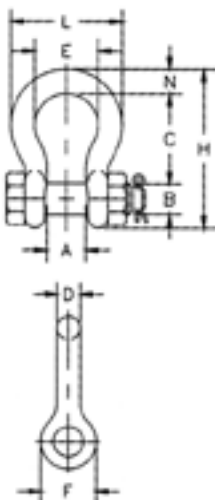
Product Code	Part No.	WLL (Ton)	Weight ea (kg)	A	B	C	D	E	F (mm)	G	H	L	M	P
02216009	1018393	0.75	0.09	13.5	9.65	31.0	7.85	21.3	19.1	37.3	53.0	5.60	42.2	7.85
02216011	1018419	1.00	0.14	16.8	11.2	36.6	9.65	26.2	23.1	45.2	63.0	6.35	51.5	9.65
02216013	1018437	1.50	0.17	19.1	12.7	42.9	11.2	29.5	26.9	51.5	74.0	7.85	60.5	11.2
02216016	1018455	2.00	0.33	20.6	20.6	47.8	12.7	33.3	30.2	58.5	83.5	9.65	68.5	12.7
02216019	1018473	3.25	0.62	26.9	19.1	60.5	16.0	42.9	38.1	74.5	106	11.2	85.0	17.5
02216022	1018491	4.75	1.07	31.8	22.4	71.5	19.1	51.0	46.0	89.0	126	12.7	101	20.6
02216026	1018516	6.50	1.64	36.6	25.4	84.0	22.4	58.0	53.0	102	148	12.7	114	24.6
02216028	1018534	8.50	2.28	42.9	28.7	95.5	25.4	68.5	60.5	119	167	14.2	129	26.9
02216032	1018552	9.50	3.36	46.0	31.8	108	29.5	74.0	68.5	131	190	16.0	142	31.8



### CROSBY G-2130 “RED PIN” SAFETY BOW ANCHOR SHACKLES

Safety Anchor Shackle with Nut Bolt & Split Pin.  
Safety Factor: 6:1  
Finish: Galvanised

Standard: Generally to U.S. Federal Spec. RR-C-271  
Tested & Certified. Conformance Certificates Available.



Product Code	Part No.	WLL (Ton)	Weight ea (kg)	A	B	C	D	E	F (mm)	H	L	N
02216108	1019466	0.50	0.50	11.9	7.85	28.7	6.35	19.8	15.5	46.7	32.5	6.35
02216109	1019468	0.75	0.10	13.5	9.65	31.0	7.85	21.3	19.1	53.0	37.3	7.85
02216111	1019470	1.00	0.15	16.8	11.2	36.6	9.65	26.2	23.1	63.0	45.2	9.65
02216113	1019471	1.50	0.22	19.1	12.7	42.9	11.2	29.5	26.9	74.0	51.5	11.2
02216116	1019472	2.00	0.36	20.6	16.0	47.8	12.7	33.3	30.2	83.5	58.5	12.7
02216119	1019490	3.25	0.62	26.9	19.1	60.5	16.0	42.9	38.1	106	74.5	17.5
02216122	1019515	4.75	1.23	31.8	22.4	71.5	19.1	51.0	46.0	126	89.0	20.6
02216126	1019533	6.50	1.79	36.6	25.4	84.0	22.4	58.0	53.0	148	102	24.6
02216128	1019551	8.50	2.28	42.9	28.7	95.5	25.4	68.5	60.5	167	119	26.9
02216132	1019579	9.50	3.75	46.0	31.8	108	28.7	74.0	68.5	190	131	31.8
02216135	1019597	12.00	5.31	51.5	35.1	119	31.8	82.5	76.0	210	146	35.1
02216138	1019613	13.50	7.18	57.0	38.1	133	35.1	92.0	84.0	233	162	38.1
02216142	1019631	17.00	9.43	60.5	41.4	146	38.1	98.5	92.0	254	175	41.1
02216151	1019659	25.00	15.4	73.0	51.0	178	44.5	127	106	313	225	57.0
02216157	1019677	35.00	23.7	82.5	57.0	197	51.0	146	122	348	253	61.0
02216170	1019695	55.00	44.6	105	70.0	267	66.5	184	145	453	327	79.5

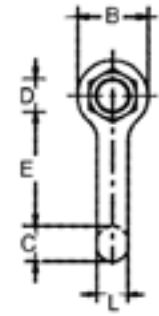
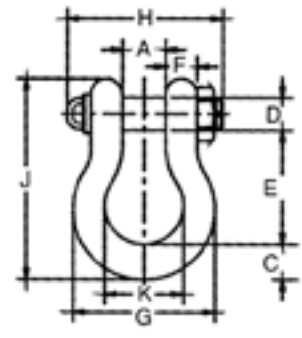
▲ FOR MORE INFORMATION ON THESE SHACKLES OR ANY OTHER CROSBY PRODUCTS, PLEASE REFER TO WEB SITE – [www.thecrosbygroup.com](http://www.thecrosbygroup.com)

Remember, “When buying Crosby, you’re buying more than product, you’re buying Quality.”

### CROSBY G-2140 “PIN BOW SHACKLES”

Safety Anchor Shackle with Nut Bolt & Split Pin.  
Safety Factor: 6:1  
Finish: Forged Alloy Steel.  
Standard: Generally to U.S. Federal Spec. RR-C-271

Product Code	Part No.	WLL (ton)	Weight ea (kg)	A	B	C	D	E	F (mm)	G	H	J	K	L
02216204	1021174	85	43.5	105	145	79.0	71.0	267	66.5	327	344	453	184	69.0
02216205	1021192	120	81	127	165	92.0	82.5	330	76.0	365	419	546	200	79.0
02216206	1021218	150	120	133	203	105	95.5	372	95.5	419	483	625	229	92.0



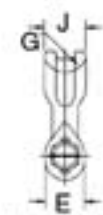
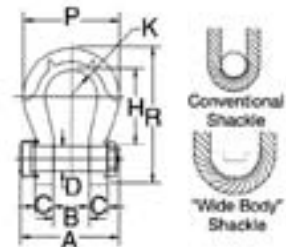
### CROSBY G-2160 “RED PIN” WIDE BODY BOW SHACKLE

Widebody Bow Shackle with Nut Bolt & Weld on Handle.  
Safety Factor: 6:1  
Finish: Forged Alloy Steel.

- Crosby products meet or exceed all requirements of ASME B30.26 including identification, ductility, design factor, proof load and temperature requirements.
- All 2160 shackles are individually proof tested and magnetic particle inspected. Crosby certification available at time of order.
- Greatly improves wearability of wire rope slings.
- Can be used to connect High Strength Synthetic Web Slings, High Strength Synthetic Round Slings or 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%.



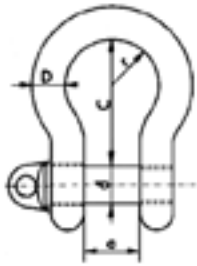
Product Code	Part No.	WLL (ton)	Weight ea (kg)	A	B +/- 6.35	C	D +/- .5	E	G (mm)	H	J	K	P	R
02216301	1021575	30	11.3	197	60.5	35.1	41.4	90.4	51.0	165	79.5	63.5	232	279
02216302	1021584	40	15.9	230	73.2	44.5	51.0	102	58.7	205	95.3	76.2	270	346
02216303	1021593	55	32.2	264	82.5	51.0	57.4	118	66.8	238	114	88.9	237	394



⚠ FOR MORE INFORMATION ON THESE SHACKLES OR ANY OTHER CROSBY PRODUCTS, PLEASE REFER TO WEB SITE – [www.thecrosbygroup.com](http://www.thecrosbygroup.com)

Remember, “When buying Crosby, you’re buying more than product, you’re buying Quality.”

30 through 300 metric tons      400 through 1250 metric tons

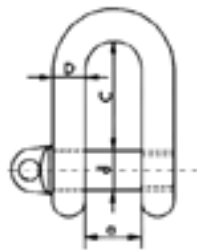


## "GREEN PIN" HI-LOAD BOW SHACKLES

Anchor Shackle with Screw Collar Pin  
Safety Factor: 6:1 Finish: Galvanised

Standard: Generally to U.S. Federal Spec. RR-C-271  
Tested & Certified. Test Certificates Available.

Product Code	WLL (ton)	Body Dia. D (mm)	Pin Dia. d (mm)	Inside Width a (mm)	Inside Length C (mm)	Bow Width 2r (mm)	Approx Weight (kg)
02325006	0.33	5.0	6	9.5	19.0	16	0.02
02325008	0.50	7.0	8	12.0	29.0	20	0.06
02325009	0.75	9.0	10	13.5	32.0	21	0.11
02325011	1.00	10.0	11	17.0	36.5	26	0.15
02325013	1.50	11.0	13	18.5	43.0	29	0.21
02325016	2.00	13.5	16	22.0	47.5	32	0.37
02325019	3.25	16.0	19	27.0	60.5	43	0.65
02325022	4.75	19.0	22	31.0	71.5	51	1.06
02325026	6.50	22.0	26	36.0	84.0	58	1.56
02325028	8.50	25.0	28	43.0	95.0	68	2.32
02325032	9.50	28.0	32	47.0	108.0	75	3.28
02325035	12.00	32.0	35	51.0	119.0	83	4.51
02325038	13.50	35.0	38	57.0	133.0	92	5.93
02325042	17.00	38.0	42	60.0	146.0	99	7.89
02325051	25.00	45.0	50	74.0	178.0	126	13.40
02325057	35.00	50.0	57	83.0	197.0	138	18.85
02325065	42.50	57.0	65	95.0	222.0	160	26.06
	55.00	65.0	70	105.0	266.5	180	37.86
	85.00	75.0	80	127.0	330.0	190	
	120.00	90.0	95	146.0	381.0	238	



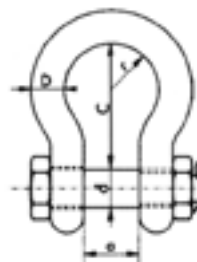
## "GREEN PIN" HI-LOAD DEE SHACKLES

Chain Shackle with Screw Collar Pin  
Safety Factor: 6:1 Finish: Galvanised

Standard: Generally to U.S. Federal Spec. RR-C-271  
Tested & Certified. Test Certificates Available.

**⚠ AVAILABLE TO 120TON WLL ON IDENT BASIS.**

Product Code	WLL (ton)	Body Dia. D (mm)	Body Dia. d (mm)	Inside Width a (mm)	Inside Length C (mm)	Approx Weight (kg)
02326009	0.75	9.0	10	13.5	27	0.11
02326011	1.00	10.0	11	17.0	31	0.15
02326013	1.50	11.0	13	19.0	37	0.21
02326016	2.00	13.5	16	20.5	43	0.37
02326019	3.25	16.0	19	27.0	51	0.65
02326022	4.75	19.0	22	32	59	1.06
02326026	6.50	22.0	25	36.5	73	1.56
02326028	8.50	25.0	28	43.0	85	2.32
02326032	9.50	28.0	32	46.0	90	3.28
02326035	12.0	32.0	35	51.5	94	4.51
02326038	13.5	35.0	38	57.0	115	5.93
02326042	17.00	38.0	42	60.0	127	7.89



## "GREEN PIN" HI-LOAD SAFETY BOW ANCHOR SHACKLES

Safety Anchor Shackles with Nut Bolt & Split Pin  
Safety Factor: 6:1 Finish: Galvanised

Standard: Generally to U.S. Federal Spec. RR-C-271  
Tested & Certified. Test Certification Available.

Product Code	WLL (ton)	Body Dia. D (mm)	Pin Dia. d (mm)	Inside Width a (mm)	Inside Length C (mm)	Bow Width 2r (mm)	Approx Weight (kg)
02329013	1.50	11.0	13	19.0	43.0	29	0.25
02329016	2.00	13.5	16	20.5	47.5	32	0.44
02329019	3.25	16.0	19	27.0	60.5	43	0.79
02329022	4.75	19.0	22	32.0	71.5	51	1.26
02329026	6.50	22.0	25	36.5	84.0	58	1.88
02329028	8.50	25.0	28	43.0	95.0	68	2.78
02329032	9.50	28.0	32	46.0	108.0	75	3.87
02329035	12.0	32.0	35	51.5	119.0	83	5.26
02329038	13.50	35.0	38	57.0	133.0	92	6.94
02329042	17.00	38.0	42	60.0	146.0	99	8.79
02329051	25.00	45.0	50	73.0	178.0	126	14.99
02329065	42.50	57.0	65	95.0	222.0	160	29.01
02329070	55.00	65.0	70	105.0	266.5	180	41.05
02329080	85.00	75.0	80	127.0	330.0	190	62.24
02329095	120	90.0	95	146.0	381.0	238	110

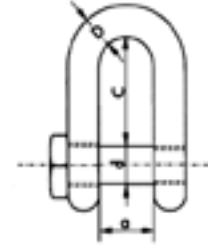
### “GREEN PIN” HI-LOAD DEE TRAWL SHACKLES

Material: High Tensile Steel

Safety Factor: 6:1

Finish: Galvanised

Product Code	WLL (ton)	Body Dia. D (mm)	Pin Dia. d (mm)	Inside Width a (mm)	Inside Length C (mm)
02314216	2.00	13	16	22	43
02314219	3.25	16	19	27	51
02314222	4.75	19	22	31	59
02314225	6.50	22	25	36	73
02314228	8.50	25	28	43	85
02314232	9.50	28	32	47	90
02314235	12.00	32	35	51	94
02314238	13.50	35	38	57	115
02314242	17.00	38	42	60	127
	25.00	45	50	74	149



### “GREEN PIN” HI-LOAD BOW TRAWL SHACKLES

Material: High Tensile Steel

Finish: Galvanised

Safety Factor: 6:1

Product Code	WLL (Ton)	Body Dia. D (mm)	Pin Dia. d (mm)	Inside Width a (mm)	Inside Length C (mm)	Width of Bow 2r (mm)
	2.00	13	16	22	51	32
	3.25	16	19	27	64	43
02314322	4.75	19	22	31	76	51
02314326	6.50	22	25	36	83	58
02314328	8.50	25	28	43	95	68
02314332	9.50	28	32	47	108	75
02314335	12.00	32	35	51	115	83
02314338	13.50	35	38	57	133	92
02314342	17.00	38	42	60	146	99
02314351	25.00	45	50	74	178	126

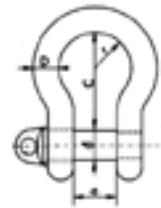


### “YELLOW PIN” HI-LOAD BOW SHACKLES

Grade(s) Anchor Shackle with Screw Collar Pin  
Safety Factor: 5:1  
Finish: Galvanised

Standard: Grade(s) Complies with Standard AS2741  
Tested & Certified. Test Certificates Available.

Product Code	WLL (ton)	Body Dia. D (mm)	Pin Dia. d (mm)	Inside Width a (mm)	Inside Length C (mm)
02325508	0.5	6	8	12	29
02325509	0.75	8	10	13	31
02325511	1	10	11	17	37
02325513	1.5	11	13	18	43
02325516	2	13	16	21	48
02325519	3.25	16	20	27	60
02325522	4.75	20	22	30	72



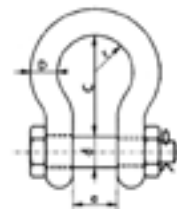
### “YELLOW PIN” HI-LOAD SAFETY BOW ANCHOR SHACKLES

Grade(s) Safety Anchor Shackle with  
Screw Collar Pin  
Safety Factor: 5:1

Standard: Grade(s) Complies with Standard AS2741  
Tested & Certified. Test Certificates Available.

**⚠ GRADE (S) SHACKLES : DIMENSIONS AND MASSES ARE SUBJECT TO COMMERCIAL TOLERANCES AND DESIGN CHANGES WITHOUT NOTICE.**

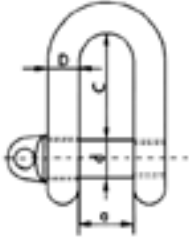
Product Code	WLL (ton)	Body Dia. D (mm)	Pin Dia. d (mm)	Inside Width a (mm)	Inside Length C (mm)
02329516	2	13	16	21	48
02329519	3.25	16	20	27	61
02329522	4.75	19	22	32	72
02329526	6.5	22	26	34	84
02329528	8.5	25	30	43	95



## LARGE DEE SHACKLES BS 3032

Material: High Tensile Steel  
Finish: Self Colour or Galvanised

Standard: Generally to BS 3032:Table 2  
Test & Certified. Test Certificates Available.

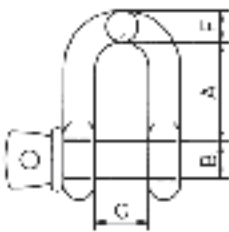


Product Code Self Colour	Product Code Galvanised	WLL (Ton)	Body Dia D (mm)	Pin Dia d (mm)	Inside Width a (mm)	Inside Length C (mm)	Approx Weight (kg)
02301109	02302109	0.25	6	10	13	25	0.11
02301113	02302113	0.50	10	13	19	38	0.17
02301116	02302116	0.75	13	16	29	54	0.35
02301119	02302119	1.50	16	19	32	64	0.66
02301122	02302122	2.00	19	22	38	73	1.02
02301126	02302126	3.00	22	25	44	83	0.57
02301129	02302129	3.75	25	28	51	95	2.30
02301132	02302132	5.00	28	32	54	105	3.20
02301135	02302135	6.00	32	35	60	114	4.30
02301138		7.00	35	38	67	127	5.40
02301144		9.50	38	45	70	137	6.80
02301148		11.25	42	48	76	146	8.70
02301151		13.00	45	51	83	156	11.00
02301157		14.25	48	54	92	178	14.30
		16.25	51	57	98	187	20.00
		18.00	54	60	105	197	26.38
		20.00	57	64	108	210	28.27
		25.00	64	73	121	235	35.00
		30.00	70	79	133	260	49.03
		35.00	76	86	146	279	63.56

## “EXCEL” STAINLESS STEEL DEE SHACKLES

Material: 316 Stainless Steel

Safety Factor: 5:1

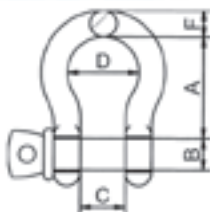


Product Code	WLL (Ton)	Pin Dia B (mm)	Inside Length A (mm)	Inside Width C (mm)	Approx Weight (kg)
02488010	0.60	10	38	20	0.11
02488012	0.90	12	50	25	0.25
02488016	1.50	16	52	24	0.40
02488020	2.50	20	65	28	0.60
02488022	3.00	22	72	30	0.90
02488025	4.00	25	78	32	1.10

## “EXCEL” STAINLESS STEEL BOW SHACKLES

Material: 316 Stainless Steel

Safety Factor: 5:1



Product Code	WLL (Ton)	B (mm)	A (mm)	C (mm)	Approx Weight (kg)
02489010	0.60	10	36	20	0.11
02489012	0.90	12	47	25	0.25
02489016	1.50	16	47	25	0.37
02489020	2.50	20	60	28	0.65
02489022	3.00	22	67	30	1.00
02489025	4.00	25	84	36	1.70

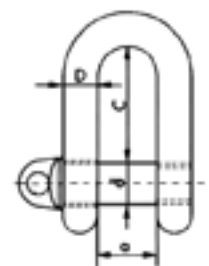
## COMMERCIAL DEE SHACKLES – GALVANISED

Material: Mild Steel

Finish: Hot Dip Galvanised

**⚠ SHACKLES: DIMENSIONS & MASSES ARE SUBJECT TO COMMERCIAL TOLERANCES AND DESIGN CHANGES WITHOUT NOTICE. NOT SUITABLE FOR LIFTING APPLICATIONS.**

Product Code	Product Code (Display Pack)	Pin & Body Dia d & D (mm)	Inside Width a (mm)	Inside Length C (mm)	Approx Weight per 100pce (kg)
02300005	02300905	5	10	19	1.9
02300006	02300906	6	12	24	3.4
02300008	02300908	8	16	32	7.0
02300009	02300909	10	20	40	13.0
02300013	02300913	12	25	48	24.0
02300016		16	32	64	50.0
02300019		20	38	76	80.0
02300022		22	44	85	130.0



## COMMERCIAL DEE SHACKLES – STAINLESS STEEL

Material: Stainless Steel (AISI 316)

Finish: Electro-Polished

**⚠ SHACKLES: DIMENSIONS & MASSES ARE SUBJECT TO COMMERCIAL TOLERANCES AND DESIGN CHANGES WITHOUT NOTICE. NOT SUITABLE FOR LIFTING APPLICATIONS.**

Product Code	Pin & Body Dia (mm)	Working Load (mm)	Inside Width	Overall Length (mm)	Approx Weight (kg)
09568405	5	.04	10	32	.02
09568406	6	.10	13	36	.03
09568408	8	.20	16	48	.06
09568410	10	.30	20	58	.12
09568412	12	.50	25	70	.19
09568416	16	.80	31	95	.41



## COMMERCIAL DEE TRAWL SHACKLES

Material: Stainless Steel

Finish: Self Colour

**⚠ SHACKLES: DIMENSIONS & MASSES ARE SUBJECT TO COMMERCIAL TOLERANCES AND DESIGN CHANGES WITHOUT NOTICE. NOT SUITABLE FOR LIFTING APPLICATIONS.**

Product Code	Pin & Body Dia d & D (mm)	Inside Width a (mm)	Inside Length C (mm)	Approx Weight per 100 pcs (kg)
02314006	6	12	24	3.4
02314009	10	20	40	13
02314013	12	25	49	24
02314016	16	32	64	50
02314019	20	38	76	80
02314022	22	44	85	130
02314026	25	51	100	200
02314028	28	56	106	300
02314032	32	64	122	430

