

Shackles

These simple devices are used to connect wires, chains or ropes to each other or to anchoring points. They consist of a U-shaped body and a pin, and are generally made of steel or stainless steel.

Choosing the correct shackle depends on the application:

- To join a single wire, chain or rope to an anchor point choose a **D-Shackle**.
- To join more than one wire, chain or rope to an anchor point choose a **Bow Shackle**.

Bow and D-Shackles can be supplied with Screw Pins, Clevis Pins or Bolts:

Screw Pins are by far the most common type used on stage. They are chosen when the shackle needs to be frequently fastened and unfastened. If the shackle is being left for long periods the pin should be secured with seizing wire to prevent it from accidentally unscrewing.

Clevis Pin shackles are generally used to connect directly to pulleys. We do not sell this type of shackle separately. The pins are secured with a split pin.

Bolt Type shackles are useful when frequent inspection is difficult. The nut is secured with a split pin. This type of shackle has the advantage that the pin can rotate slightly under load without it unscrewing making it a very secure shackle. They are not so convenient for frequent usage and are generally used for permanent installations. They are often called Anchor Shackles.

What is a lifting shackle?

For lifting operations you should choose a "Lifting Shackle". These are shown in our catalogue with the "Hook Symbol". A lifting shackle will be a steel shackle which either complies with the European Standard BS EN 13889 or the US Federal Specification RR-C-271b [which would meet the EN standard]. It was the influence of the oil industry that made US Fed Spec. shackles so popular. Hopefully, an international standard will be agreed in the future. All lifting shackles must be marked with their WLL, manufacturer's name or symbol, traceability code and grade mark. They should also have a CE mark. They should be supplied with either a Report of Thorough Examination or a EC Declaration of Conformity and instructions for use. You will notice that pins on Lifting Shackles are all slightly fatter than the material that makes the body of the shackle. This is because the modern WLL allows the load to be applied to the centre of the pin. Older legislation required the load to be evenly spread along the pin. Care should be taken to ensure these old shackles are no longer in service.

Please be aware that lifting shackles are marked with a Working Load Limit in kg [or tonnes] but Karabiners used for personal protection equipment are marked with the Breaking Load in kN.

Shackle Care

It is very important that the shackle is able to move freely in the axial direction of the load. Lifting shackles should be inspected before use and at six-monthly intervals [or in accordance to an examination scheme]. If the shackle is to be exposed to corrosion a little Anhydrous Lanolin applied to the pin will ensure a longer service life.

Why buy your shackles from Flints?

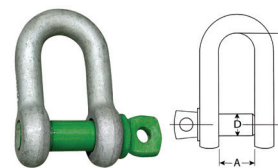
Flints registers every lifting shackle sold on our database. In the highly unlikely situation that there was a product recall we would be able to immediately contact you and advise you to withdraw the batch. Flints is a full member of the Lifting Equipment Engineers Association and we are British Standards ISO:9001 approved. Our staff frequently attend training courses, professional development symposiums and visit specialist trade shows to ensure we are able to offer up-to-date and reliable advice.



GREEN PIN® SHACKLES

Green Pin® D Shackles

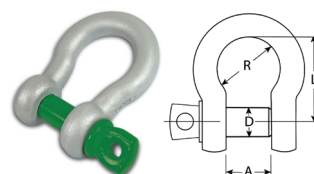
The body and pins are made from high-tensile Grade 6 steel which is quenched and tempered. The finish is hotdipped galvanised with a green painted bolt. Marked with WLL, batch mark and CE mark. In accordance with EN 13889 and meets performance requirements of US Fed. Spec. RR-C-271 Type IVB Class 2, Grade A.



code	WLL	jaw width A	height L1	pin Ø D	price
WIR2101GP	0.5t	12mm	26mm	8mm	£4.19
WIR2102GP	0.75t	13mm	32mm	10mm	£4.60
WIR2104GP	1t	17mm	38mm	11mm	£6.02
WIR2105GP	1.5t	19mm	44mm	13mm	£6.31

Green Pin® Bow Shackles

The bows and pins are made from high-tensile Grade 6 steel which is quenched and tempered. The finish is hotdipped galvanised with a painted green bolt. Marked with WLL, batch mark and CE mark. In accordance with EN 13889 and meets performance requirements of US Federal Specification RR-C-271 Type IVA Class 2, Grade A.



✓ Choose Bow shackles when the lift is from more than one rope

code	WLL	jaw width A	height L1	pin Ø D	Ø R	price
WIR2092GP	0.5t	12mm	33mm	8mm	20mm	£4.29
WIR2093GP	0.75t	13.5mm	37mm	10mm	22mm	£4.53
WIR2094GP	1t	17mm	42mm	11mm	26mm	£5.15
WIR2095GP	1.5t	20mm	49mm	13mm	29mm	£6.36
WIR2096GP	2t	22mm	60mm	16mm	32mm	£9.45
WIR2097GP	3.25t	27mm	74mm	19mm	43mm	£10.94

Black Green Pin® Theatre Shackles

Made from high-tensile Grade 6 steel, quenched and tempered, and hot dipped-galvanised to the same standard as the Green Pin® Bow Shackles above. Painted matt black. Marked with WLL, batch, and CE Mark. Cert: EN13889, RR-C-271 Type IVA Class 2, Grade A.



code	WLL	jaw width A	height L1	pin Ø D	Ø R	price
WIR2091B	0.33t	9.5mm	25mm	6mm	16mm	£4.43
WIR2092B	0.5t	12mm	33mm	8mm	20mm	£4.81
WIR2093B	0.75t	13.5mm	37mm	10mm	22mm	£5.37
WIR2094B	1t	17mm	42mm	11mm	26mm	£5.80
WIR2095B	1.5t	20mm	49mm	13mm	29mm	£7.08
WIR2096B	2t	22mm	60mm	16mm	32mm	£10.68
WIR2097B	3.25t	27mm	74mm	19mm	43mm	£12.92
WIR2099B	4.75t	31mm	87mm	22mm	51mm	£21.10

CROSBY® SHACKLES

A range of forged shackles that have been quenched and tempered to give strength and resilience, to meet the requirements of USA Federal Specifications with the Working Load Limit permanently shown on every shackle. Look out for the Red Pin, the mark of Crosby quality.

Crosby® are the major US manufacturer of rigging products. Contracts around the world state "Crosby® or equal" as their name is synonymous with quality. From their extensive range of products we have listed a selection of items that we think will be most useful for theatre applications. We are able to supply the entire range of Crosby® Fittings. Please call us if there is anything you require. NB: WLL stands for Working Load Limit and is defined as the maximum mass or force which the product is authorised to support in general service. Crosby® Shackle safety design factor is 6 to 1.



Screw Pin Shackles Bow G209 and D-Shackle G210

These meet the requirements of the Federal Specification RR-C-271D Type IVB, Grade A, Class 2. Even if you are lifting relatively light items it is often worth choosing the very popular 1t size which will be endlessly useful for future use.

✓ Choose Bow shackles when the lift is from more than one rope



Bow G209	WLL	jaw width	nominal size	pin Ø	price
CR02091	0.33t	9.65mm	4-5mm	6.35mm	£6.25
CR02092	0.5t	11.9mm	6mm	7.87mm	£6.31
CR02093	0.75t	13.5mm	8mm	9.65mm	£6.23
CR02094	1t	16.8mm	10mm	11.2mm	£7.19
CR02095	1.5t	19.1mm	11-12mm	12.7mm	£8.03
CR02096	2t	20.6mm	13mm	16mm	£10.20
CR02097	3.25t	26.9mm	16mm	19.1mm	£13.30
CR02099	4.75t	31.8mm	19mm	22.4mm	£18.20
D-Shackle G210	WLL	jaw width	nominal size	pin Ø	price
CR02102	0.5t	11.9mm	6mm	7.87mm	£7.81
CR02103	0.75t	13.5mm	8mm	9.65mm	£7.81
CR02104	1t	16.8mm	10mm	11.2mm	£7.36
CR02105	1.5t	19.1mm	11mm	12.7mm	£8.30
CR02106	2t	20.6mm	13mm	16mm	£10.70
CR02107	3.25t	26.9mm	16mm	19.1mm	£13.90
CR02109	4.75t	31.8mm	19mm	22.4mm	£18.60

Tonnes, tons, short tons, tuns?

Note: a metric tonne is a lower case t NOT an upper case T which is an imperial ton. They are both pronounced "tun". They are different weights!!! A metric tonne [t] is 1,000 kg but an imperial ton [T] is 2,240 lb or 1,016 kg if it is a "long ton" but if the item comes from America it could be a short ton which is just 907 kg. A tun is a unit of liquid capacity equivalent to 252 gallons – but let's not go there.

No wonder we have safety factors!

BLACK CROSBY® BOW SHACKLES

Screw Pin Shackle Bow in Black Finish S-209T

These shackles are produced by Crosby® to their exacting standards to provide the theatre industry with a fully certified shackle which is unobtrusive in the grid. They are proving to be very popular.

✓ Choose these shackles for rigs within sightlines



code	WLL	jaw width	nominal size	pin Ø	price
CR02094B	1t	16.8mm	10mm	11.2mm	£7.79
CR02095B	1.5t	19.1mm	11-12mm	12.7mm	£9.38
CR02096B	2t	20.6mm	13mm	16mm	£13.20
CR02097B	3.25t	26.9mm	16mm	19.1mm	£18.40
CR02099B	4.75t	31.8mm	19mm	22.4mm	£24.90

BOLT TYPE ANCHOR SHACKLES

Bolt Type Shackles Bow G2130 and D-Shackle G2150 [Anchor Shackles]

These shackles have the most secure pin design. Meets the requirements of the U.S. Federal Specification RR-C-271D Type IVB, Grade A, Class 3.

✓ Choose these Bolt Shackles when the shackle pin is difficult to frequently inspect, typically permanently rigged applications



code	WLL	jaw width	nominal size	pin Ø	price
CR021303	0.75t	13.5mm	8mm	9.65mm	£12.90
CR021304	1t	16.8mm	10mm	11.2mm	£13.20
CR021305	1.5t	19.1mm	11-12mm	12.7mm	£13.80
CR021306	2t	20.6mm	13mm	16mm	£13.90
CR021307	3.25t	26.9mm	16mm	19.1mm	£20.50
CR021309	4.75t	31.8mm	19mm	22.4mm	£28.00

CROSBY® SLINGSAVER SHACKLES

Crosby® Sling Saver Shackles [S-281]

Designed to eliminate the bunching of slings caused by conventional shackles allowing 100% of the slings rated WLL to be achieved.

✓ Choose these Sling Saver Shackles whenever you need to anchor Synthetic Round Slings to Pad Eyes etc. [page 210]



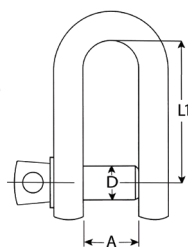
SAFETY	Min Breaking Load		Safety Factor	WLL
	14,750kg		5 to 1	2,950kg
code	WLL	width	jaw width A	price
CROS281	2950kg	50mm	26.9mm	£24.20

SHACKLES

GALVANISED COMMERCIAL SHACKLES

Galvanised Commercial Pattern D-Shackles

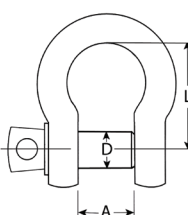
An economical general purpose D-shackle. Not to be used for lifting purposes.



code	pin Ø D	A width	L1 height	price
WIR201	5mm	10mm	22mm	£0.42
WIR202	6mm	14mm	29mm	£0.54
WIR203	8mm	17mm	34mm	£0.79
WIR204	10mm	18mm	44mm	£1.04
WIR205	12mm	27mm	57mm	£1.30

Galvanised Commercial Pattern Bow Shackles

An economical general purpose bow shackle. Bow shackles are used when more than one rope needs to be attached. Not to be used for lifting purposes.



code	pin Ø D	A width	L1 height	price
WIR210	5mm	10mm	22mm	£0.53
WIR211	6mm	13mm	29mm	£0.64
WIR212	8mm	17mm	34mm	£0.70
WIR213	10mm	18mm	44mm	£0.92
WIR214	12mm	25mm	57mm	£1.48

STAINLESS STEEL SHACKLES

All the Stainless Steel Shackles listed in this section are 316 grade. AISI 316 is the grade suitable for marine use due to its high corrosion resistance. For more information on stainless steel see page 186.

Strip Stainless Shackle

Useful in conjunction with our small stainless wire ropes. This design of shackle is used in the heads of some Barton Pulleys.



code	pin Ø D	width	length	price
BAR310	5mm	10mm	29mm	£4.43

Twisted Stainless Shackles

Occasionally a normal shackle will not sit neatly and a twisted shackle is required. More often than not this applies when they are used with webbing around the pin as with Jack Stays which need to lie flat on the ground.



code	pin Ø D	A width	L1 height	min BL KN	min BL KGF	price
WIR1625SS	5mm	10mm	30mm	9.1kN	927kg	£0.92
WIR1626SS	6mm	12mm	36mm	13.2kN	1345kg	£1.13
WIR1628SS	8mm	16mm	48mm	23.7kN	2416kg	£1.95

Key Pin Shackles with Bar

A useful shackle because it can be incorporated into a splice and will not get lost. The pin is also captive and requires no tool to fasten. Widely used on yacht halyards but also used by sound engineers for rigging microphones in tricky positions.

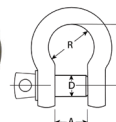


code	pin Ø D	A width	L1 height	min BL KN	min BL KGF	price
WIR1676SS	6mm	15mm	48mm	13.2kN	1346kg	£2.02
WIR1678SS	8mm	20mm	64mm	23.7kN	2416kg	£2.65

Stainless Steel Bow Shackles

Marine-grade shackles suited for use with our stainless wire rope. The smart appearance of these shackles also lends them to handrailing and display applications.

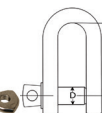
✓ Choose Bow shackles when the lift is from more than one rope



code	pin Ø D	A width	L1 height	R internal Ø	min BL KN	price
WIR1214SS	4mm	8mm	16mm	14mm	5.8kN	£0.80
WIR1215SS	5mm	10mm	20mm	17mm	9.1kN	£1.18
WIR1216SS	6mm	12mm	24mm	21mm	13.2kN	£1.16
WIR1218SS	8mm	16mm	32mm	28mm	23.7kN	£1.63
WIR12110SS	10mm	20mm	40mm	35mm	37.8kN	£2.28
WIR12112SS	12mm	24mm	48mm	42mm	54.9kN	£3.20

Stainless Steel D-Shackles

Marine grade shackles suited for use with our stainless wire rope. The smart appearance of these shackles also lends them to handrailing and display applications.



code	pin Ø D	A width	L1 height	min BL KN	min BL KGF	price
WIR1224SS	4mm	8mm	16mm	5.8kN	591kg	£0.87
WIR1225SS	5mm	10mm	21mm	9.1kN	927kg	£0.86
WIR1226SS	6mm	12mm	25mm	13.2kN	1346kg	£1.04
WIR1228SS	8mm	16mm	36mm	23.7kN	2416kg	£1.80
WIR12210SS	10mm	20mm	41mm	37.8kN	3853kg	£1.95
WIR12212SS	12mm	24mm	48mm	54.9kN	5596kg	£2.95

Stainless Hex Head D-Shackles

Marine-grade shackles ideal for use when an ordinary screw pin would be liable to catch on fittings. Typically used joining chain to rope but their clean appearance lends them to handrailing and display applications.



code	pin Ø D	A width	L1 height	min BL KN	min BL KGF	price
WIR1268SS	8mm	16mm	32mm	23.7kN	2416kg	£1.89
WIR12610SS	10mm	20mm	40mm	37.3kN	3853kg	£2.60

Stainless Long D-Shackles

Marinegrade shackles in a long pattern suited to reaching anchoring holes which are set a long distance from the edge, typically plastic sheets etc., where a good edge distance helps maintain strength.



code	pin Ø D	A width	L1 height	min BL KN	min BL KGF	price
WIR1614SS	4mm	8mm	32mm	5.8kN	591kg	£0.85
WIR1615SS	5mm	10mm	40mm	9.1kN	927kg	£0.95
WIR1616SS	6mm	12mm	48mm	13.2kN	1346kg	£1.60
WIR1618SS	8mm	16mm	64mm	23.7kN	2416kg	£1.85