

SHACKLES

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 [page 190] applied to the pin will ensure a longer service life.

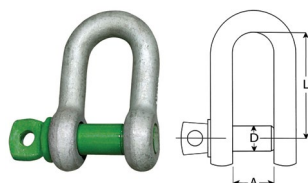
Why buy your shackles from Flints?

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

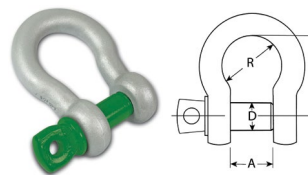
The Green Pin® shackles listed on this page are made by Van Beest, a company established over 90 years ago in the Netherlands to supply the dredging industry. Their top quality certified shackles are now used worldwide in many safety conscious industrial sectors. Please note, Van Beest make their shackles to a metric tonne [t], but mark them with a capital T - don't get confused! All Van Beest shackles listed here are supplied with a Certificate of Thorough Examination and are registered on Flints' lifting database. Van Beest safety design factor is 6 to 1, and they are suitable to be used in a temperature range from -20°C to +200°C



Green Pin® D-Shackles The body and pins are made from high-tensile Grade 6 steel which is quenched and tempered. The finish is hot-dipped 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.

Green Pin D-Shackle			WLL	code	price
pin Ø D	jaw width A	height L1			
8 mm	12 mm	26 mm	0.5 t	WIR2101GP	£4.01
10 mm	13 mm	32 mm	0.75 t	WIR2102GP	£4.39
11 mm	17 mm	38 mm	1 t	WIR2104GP	£5.77
13 mm	19 mm	44 mm	1.5 t	WIR2105GP	£6.03



Green Pin® Bow Shackles The bows and pins are made from high-tensile Grade 6 steel which is quenched and tempered. The finish is hot-dipped 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

Green Pin Bow Shackle				WLL	code	price
pin Ø D	jaw width A	height L1	Ø R			
8 mm	12 mm	33 mm	20 mm	0.5 t	WIR2092GP	£4.25
10 mm	13.5 mm	37 mm	22 mm	0.75 t	WIR2093GP	£4.53
11 mm	17 mm	42 mm	26 mm	1 t	WIR2094GP	£5.13
13 mm	20 mm	49 mm	29 mm	1.5 t	WIR2095GP	£6.34
16 mm	22 mm	60 mm	32 mm	2 t	WIR2096GP	£7.82
19 mm	27 mm	74 mm	43 mm	3.25 t	WIR2097GP	£10.90



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.

Green Pin Bow Shackle				WLL	code	price
pin Ø D	jaw width A	height L1	Ø R			
6 mm	9.5 mm	25 mm	16 mm	0.33 t	WIR2091B	£4.24
8 mm	12 mm	33 mm	20 mm	0.5 t	WIR2092B	£3.93
10 mm	13.5 mm	37 mm	22 mm	0.75 t	WIR2093B	£4.75
11 mm	17 mm	42 mm	26 mm	1 t	WIR2094B	£5.55
13 mm	20 mm	49 mm	29 mm	1.5 t	WIR2095B	£6.77
16 mm	22 mm	60 mm	32 mm	2 t	WIR2096B	£10.23
19 mm	27 mm	74 mm	43 mm	3.25 t	WIR2097B	£12.36
22 mm	31 mm	87 mm	51 mm	4.75 t	WIR2099B	£17.15

CROSBY SHACKLES



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.

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].





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 1 t size which will be endlessly useful for future use.



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



Bow Shackle G209	pin	WLL	code	price
	nominal size diameter jaw width			
	4 - 5 mm	6.35 mm 9.65 mm	0.33 t	CRO2091 £5.79
	6 mm	7.87 mm 11.9 mm	0.5 t	CRO2092 £5.97
	8 mm	9.65 mm 13.5 mm	0.75 t	CRO2093 £5.88
	10 mm	11.2 mm 16.8 mm	1 t	CRO2094 £6.80
	11 - 12 mm	12.7 mm 19.1 mm	1.5 t	CRO2095 £7.59
	13 mm	16 mm 20.6 mm	2 t	CRO2096 £9.66
	16 mm	19.1 mm 26.9 mm	3.25 t	CRO2097 £12.60
	19 mm	22.4 mm 31.8 mm	4.75 t	CRO2099 £17.23

D-Shackle G210	pin	WLL	code	price
	nominal size diameter jaw width			
	6 mm	7.87 mm 11.9 mm	0.5 t	CRO2102 £7.38
	8 mm	9.65 mm 13.5 mm	0.75 t	CRO2103 £7.38
	10 mm	11.2 mm 16.8 mm	1 t	CRO2104 £6.96
	11 - 12 mm	12.7 mm 19.1 mm	1.5 t	CRO2105 £7.85
	13 mm	16 mm 20.6 mm	2 t	CRO2106 £10.07
	16 mm	19.1 mm 26.9 mm	3.25 t	CRO2107 £13.20
	19 mm	22.4 mm 31.8 mm	4.75 t	CRO2109 £17.62

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



Black Bow Shackle	pin	WLL	code	price
	nominal size diameter jaw width			
	10 mm	11.2 mm 16.8 mm	1 t	CRO2094B £7.35
	11 - 12 mm	12.7 mm 19.1 mm	1.5 t	CRO2095B £8.85
	13 mm	16 mm 20.6 mm	2 t	CRO2096B £12.51
	16 mm	19.1 mm 26.9 mm	3.25 t	CRO2097B £17.36
	19 mm	22.4 mm 31.8 mm	4.75 t	CRO2099B £23.58

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



Bolt Bow Shackle G2130	pin	WLL	code	price
	nominal size diameter jaw width			
	8 mm	9.65 mm 13.5 mm	0.75 t	CRO21303 £12.13
	10 mm	11.2 mm 16.8 mm	1 t	CRO21304 £12.51
	11 - 12 mm	12.7 mm 19.1 mm	1.5 t	CRO21305 £13.05
	13 mm	16 mm 20.6 mm	2 t	CRO21306 £13.20
	16 mm	19.1 mm 26.9 mm	3.25 t	CRO21307 £19.30
	19 mm	22.4 mm 31.8 mm	4.75 t	CRO21309 £26.55

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.



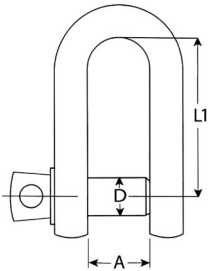
✓ Choose these Sling Saver Shackles whenever you need to anchor Synthetic Round Slings to Pad Eyes etc. [page 190]

SAFETY	Min Breaking Load	Safety factor	WLL
	14,750 kg	5 to 1	2,950 kg

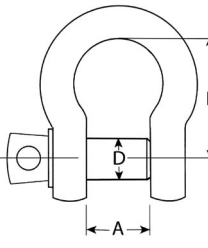
Sling Saver	width	jaw width	WLL	code	price
	50 mm	26.9 mm	2,950 kg	CROS281	£23.01

GALVANISED COMMERCIAL SHACKLES

Galvanised Commercial Pattern D-Shackles
 An economical general purpose D-shackle. Not to be used for lifting purposes.

Galvanised D-Shackles		code	price
	pin Ø D	L1 x A	
	5 mm	20 x 10 mm	WIR201 £0.42
	6 mm	27 x 14 mm	WIR202 £0.54
	8 mm	35 x 17 mm	WIR203 £0.79
	10 mm	43 x 18 mm	WIR204 £1.04
	12 mm	53 x 27 mm	WIR205 £1.30
	16 mm	74 x 34 mm	WIR206 £2.48
20 mm	86 x 38 mm	WIR207 £4.46	

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.

Galvanised Bow Shackles		code	price
	pin Ø D	L1 x A	
	5 mm	22 x 10 mm	WIR210 £0.53
	6 mm	29 x 13 mm	WIR211 £0.64
	8 mm	34 x 17 mm	WIR212 £0.70
	10 mm	44 x 18 mm	WIR213 £0.92
	12 mm	57 x 25 mm	WIR214 £1.48
	16 mm	75 x 32 mm	WIR215 £2.90
20 mm	88 x 40 mm	WIR216 £4.79	

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 167.

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.

Strip Stainless Shackle		code	price
pin Ø	width	length	
5 mm	10 mm	29 mm	BAR310 £4.29

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.

Twisted Stainless Shackles		code	price
pin Ø	int width	L1	kN kgf
5 mm	10 mm	30 mm	9.1 kN 927 kg
6 mm	12 mm	36 mm	13.2 kN 1,345 kg
8 mm	16 mm	48 mm	23.7 kN 2,416 kg

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.

Key Pin Shackles with Bar		code	price
pin Ø	int width	L1	kN kgf
6 mm	15 mm	48 mm	13.2 kN 1,346 kg
8 mm	20 mm	64 mm	23.7 kN 2,416 kg

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

Stainless Bow Shackles		code	price
pin Ø D	jaw width	L1 R	kN kgf
4 mm	8 mm	16 mm 14 mm	5.8 kN 591 kg
5 mm	10 mm	20 mm 17 mm	9.1 kN 927 kg
6 mm	12 mm	24 mm 21 mm	13.2 kN 1,129 kg
8 mm	16 mm	32 mm 28 mm	23.7 kN 2,415 kg
10 mm	20 mm	40 mm 35 mm	37.8 kN 3,853 kg
12 mm	24 mm	48 mm 42 mm	54.9 kN 5,596 kg

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.

Stainless D-Shackles		code	price
pin Ø	jaw width	L1	kN kgf
4 mm	8 mm	16 mm	5.8 kN 591 kg
5 mm	10 mm	21 mm	9.1 kN 927 kg
6 mm	12 mm	25 mm	13.2 kN 1,346 kg
8 mm	16 mm	36 mm	23.7 kN 2,416 kg
10 mm	20 mm	41 mm	37.8 kN 3,853 kg
12 mm	24 mm	48 mm	54.9 kN 5,596 kg

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.

Stainless Hex Head D-Shackles		code	price
pin Ø	jaw width	L1	kN kgf
8 mm	16 mm	32 mm	23.7 kN 2,416 kg
10 mm	20 mm	40 mm	37.3 kN 3,853 kg

Stainless Long D-Shackles Marine-grade 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.

Stainless Long Pattern D-Shackles		code	price
pin Ø	jaw width	L1	kN kgf
4 mm	8 mm	32 mm	5.8 kN 591 kg
5 mm	10 mm	40 mm	9.1 kN 927 kg
6 mm	12 mm	48 mm	13.2 kN 1,346 kg
8 mm	16 mm	64 mm	23.7 kN 2,416 kg

CARBINE HOOKS & OTHER SNAPS

CARBINE HOOKS AND SNAP HOOKS



Central carbine shows eyelet



Carbine [Snap] Hooks These simple connecting hooks with a spring-loaded gate enable a very quick connection of light loads. Commercial snap hooks could fail if subjected to heavy loads. They can find a use as a sacrificial weak point in certain rope assemblies. The 50 mm snap hook is one of our biggest selling connectors. Not to be used for lifting purposes. Some sizes now available in Black, and one with a screwgate for extra security.



Carbine [Snap] Hooks	finish	code	price	100+
Ø C x length A gate opening B				
3 x 30 mm 5 mm	Stainless	WIR3113SS	£0.76	£0.68
4 x 40 mm 6 mm	Stainless	WIR3114SS	£0.77	£0.69
4 x 40 mm 6 mm	Black	WIR228B	£1.05	-
5 x 50 mm 6.5 mm	BZP	WIR220	£0.91	£0.60
5 x 50 mm 7 mm	Black	WIR229B	£1.19	-
6 x 60 mm 7.5 mm	BZP	WIR221	£1.01	£0.69
+Eyelet 6 x 60 mm 7.5 mm	BZP	WIR261	£1.34	£0.87
+Eyelet 6 x 60 mm 7.5 mm	Black	WIR227B	£1.59	-
7 x 70 mm 9 mm	BZP	WIR222	£1.13	£0.74
8 x 80 mm 10.5 mm	BZP	WIR223	£1.33	£0.88
8 x 80 mm 10 mm	Black	WIR230B	£2.40	-
10x100 mm 12.5 mm	BZP	WIR224	£2.07	£1.05
11 x120 mm 15.5 mm	BZP	WIR225	£2.60	£1.33

Screwgate Carbine Hooks	finish	code	price
Ø C x length A gate opening B			
+Eyelet 6 x 60 mm 7.5 mm	Black	WIR226B	£1.25



Stainless Steel Screwgate Carbine Hooks Suitable for heavier loads. The screwgate prevents accidental opening. Also available with a captive eye, ideal for use with lanyards etc. as it will prevent the carbine hook getting lost. Not for lifting purposes.

Screwgate Carbine Hooks	Min BL	code	price	10+
Ø C x length A gate opening B kN kgf				
6 x 60 mm 8 mm	5.1 kN 520 kg	WIR3136SS	£1.58	£1.42
+Eyelet 6 x 60 mm 8 mm	5.1 kN 520 kg	WIR3146SS	£2.19	£1.72
8 x 80 mm 9 mm	7.8 kN 795 kg	WIR3138SS	£2.33	£2.10
+Eyelet 8 x 80 mm 9 mm	7.8 kN 795 kg	WIR3148SS	£3.61	£2.88
10 x 100 mm 12 mm	11.8 kN 1,203 kg	WIR31310SS	£3.60	£3.24
+Eyelet 10 x 100 mm 12 mm	11.8 kN 1,203 kg	WIR31410SS	£4.67	£3.71

SPECIALISED SPRING HOOKS



Spring Hooks to Crue The end can be squeezed closed to form a permanent connection onto a chain link. Black powder coated. A zinc-coated version is also available, please ask for a quote.

Spring Hooks	code	price
60 mm	WIR482	£2.45
75 mm	WIR483	£2.11



Swivel Spring Hooks A useful clip for attaching small accessories. Black powder coated. Zinc-coated are also available, please ask for a quote.

Swivel Spring Hooks	code	price
50 mm	WIR400	£1.91
75 mm	WIR401	£2.52



S-Biners Black, made of stainless steel, these double-ended karabiners are for securing small tools, keys, loop pins etc. to a belt or screw eye. They are surprisingly useful. However, although they are made from stainless steel, they are not suitable for marine use. Available in two sizes.

S-Biners	length	Min BL	code	price
Size 3	67 mm	11 kg	SAFSB30301	£3.53
Size 4	89 mm	33 kg	SAFSB40301	£4.83



Lockable S-Biners Black, made of stainless steel, these S-biners have two hinged gates that can be locked independently. The patent-pending SlideLock™ design is simple but clever: there is a hook and the gate pops over that; there is a notch in the body of the S-biner and when the plastic slider fits into the notch the gate is good and locked. Not suitable for marine use. Available in two sizes.

Lockable S-Biners	length	Min BL	code	price
Size 2	49.9 mm	4.5 kg	SAFLSB201R3	£3.63
Size 4	90 mm	34 kg	SAFLSB401R3	£5.02



Wichard Snap Hooks A smooth patented design made from special marine-grade stainless steel that will deform before breaking. Designed by Wichard. These are the genuine article stamped with the logo. This design of snap is very quick to use and can be useful if an attachment needs to be made by performers during a show. Available in three lengths.

Snap Hooks	hole Ø	body Ø	Min BL	code	list	price
50 mm	6 mm	8 mm	300 kg	WIR2480	£10.96	£9.87
75 mm	10 mm	12 mm	700 kg	WIR2481	£17.77	£16.00
100 mm	13 mm	16 mm	1,500 kg	WIR2482	£33.97	£30.58

QUICK RELEASE SNAP SHACKLES

Wichard use high resistance 17.4 PH forged stainless steel [magnetic] on these snap shackles which will deform before breaking and will never break suddenly. Designed for marine use. N.B. Different safety standards apply. Wichard is renowned for their quality and innovation, please beware of imitations.



Wichard Quick Release Snap Shackle "HR" This patented design allows the shackle to open immediately by means of a control line.

SAFETY	Breaking Load	Safety Factor	WLL
	2,000 kg	1.56 to 1	1,280 kg

Wichard Quick Release Snap Shackle				code	list	price
overall length	weight	Ø inside release	inside swivel bail			
90 mm	100 g	16 mm	23 mm	WIRWD2774	£69.62	£67.83



Wichard Fixed Eye Snap Shackle "HR" The plunger is set captive into the hook and cannot become dislodged. We can supply other sizes and types of snap shackles.

SAFETY	Breaking Load	Safety Factor	WLL
	2,500 kg	2.08 to 1	960 kg

Wichard Fixed Eye Snap Shackle				code	list	price
overall length	weight	Ø inside release	inside lower eye			
50 mm	42 g	16 mm	10 mm	WIRWD2471	£32.61	£31.70

KEY RING ATTACHMENTS



Detachable Key Ring Useful if you're a stage manager. A simple press and the keys you need are separated from the rest. We found that at 18.5 kg the split ring pulled apart but the connection still held, so pretty strong, but that's uncertified. Split ring Ø: 25 mm

Detachable Key Ring	code	price	100+
40 mm [ex split rings]	WIRKR30N	£1.15	£0.99



Bit Pits We really love these - allows the user to keep on hand a little hex bit, and not lose it in a pocket. Held in place with a magnet, and attached to a key ring.

Bit Pit	code	price	5+
holds one hex bit	TOLBPBHS	£6.99	£6.00

SOMETHING FOR THE DOG



Swivel Harness Snap Hook Your dog will recognise these.

Swivel Snap Hook WLL	code	price
one labrador	WIR3364349	£2.83

S-HOOKS



S Hooks Stainless Steel A good quality hook, suitable for hanging items from rods and wires or as a link for light loads on small chains. 316-grade stainless steel. Suitable for marine use.

S Hooks	internal height	wire gauge	code	price	100+
	24 mm	3 mm	WIR4353SS	£0.21	£0.19
	32 mm	4 mm	WIR4354SS	£0.34	£0.31
	40 mm	5 mm	WIR4355SS	£0.49	£0.45
	48 mm	6 mm	WIR4356SS	£0.72	£0.65
	64 mm	8 mm	WIR4358SS	£1.52	£1.37

QUICK LINKS

QUICK LINKS [MAILLON RAPIDES]



Maillon Rapides EN12275 :1998 and EN362 If you are wondering why Quick



Links are often called by their French name, "Maillon Rapides", it's because they are made by a very safety-conscious family firm in France. We have expanded our range of these reliable connectors which are suitable for PPE. Each connector is supplied with user instructions [in English!]. They are all galvanised mild steel except the PPEGO107 which is stainless steel. Breaking load is 5 x WLL [major axis].



Standard Pattern Black



Long opening Pattern



Delta Pattern [also in black]

Standard Pattern Black

Standard pattern black			WLL	code	price
type	bar Ø	gate opening			
PPENZ08N	8 mm	11 mm	700 kg	WIR250B	£5.42
PPENZ10N	10 mm	12 mm	1,100 kg	WIR251B	£6.91

Long Opening Pattern

Long opening pattern [stainless steel version shown]			WLL	code	price
type	bar Ø	gate opening			
SS→PPEGO107	7 mm	16 mm	800 kg	WIR246SS	£10.75
PPEGOZ07	7 mm	16 mm	500 kg	WIR246	£3.71
PPEGOZ10	10 mm	20.5 mm	1,000 kg	WIR245	£5.66

Delta Pattern The black 8 mm Delta is the preferred connector to link the Petzl Absorbica to the Jane Lanyard [page 333].

Delta pattern [triangular shape for 3-way loading]			WLL	code	price
type	bar Ø	gate opening			
Black→PPEDZ08N	8 mm	10 mm	550 kg	WIR252B	£6.46
PPEDZ10	10 mm	12 mm	900 kg	WIR247	£5.87
PPEGZ12	12 mm	15 mm	1,100 kg	WIR249	£8.75

Any unit that has arrested a falling weight should be replaced immediately.

COMMERCIAL QUICK LINKS



Commercial Quick Links These are untested quick links which are not suitable for lifting purposes but make a useful lightweight and secure fastening for small chains and accessories.

Commercial Quick Links		code	price	100+
finish	bar Ø			
BZP	3.5 mm	WIR230	£0.62	£0.49
BZP	4 mm	WIR231	£0.63	£0.42
BZP	5 mm	WIR232	£0.79	£0.53
Black	5 mm	WIR232B	£0.88	£0.80
BZP	6 mm	WIR233	£0.91	£0.61
Black	6 mm	WIR233B	£0.92	£0.82
Black	7 mm	WIR234B	£1.16	£1.05

KARABINERS

Standards

Connectors used for work positioning and fall arrest should comply with EN 362 which states a minimum strength of 15 kN along the major axis with the gate closed and unlocked and 20 kN for the gate closed and locked. The mountaineering standard EN 12275 exceeds the requirements of EN 362.

Take care

Please ensure that lines connecting karabiners do not get twisted or tangled, especially around the latch, as it is possible, in very rare circumstances, for a twisted line to disengage the safety button and twist the gate to the open position. It is good practice to ensure all lines to any fittings [shackle, rigging screw, lanyard connectors etc.] pull in the required direction along the major axis before applying loads.

For information on newtons and kN please see the information box on page 162.

STEEL GENERAL PURPOSE KARABINERS TO EN362



Screwgate



Twistlock



Foin D Karabiners 25 kN Economical steel connectors which comply to EN 362 for use in work positioning or fall arrest. Available with Twistlock or the very popular screwgate.

Overall height: 105 mm, overall width: 57 mm.

Foin D Karabiners		Min BL	code	price
type	weight	gate opening	major axis when closed	
Twistlock	190 g	16 mm	25 kN SAF4247	£21.58
Screwgate	180 g	18 mm	25 kN SAF4249	£7.89



Offset D Screwgate Karabiner

45 kN [C812] These steel karabiners are suitable for fall arrest and work positioning purposes.

CE marked to EN 362:2004/B 45 kN.

45 kN along the major axis

Offset D Screwgate [C812]		Min BL	code	price
weight	gate opening	major axis when closed		
235 g	18 mm	45 kN	SAFC812	£15.90



Captive Eye Karabiners 50 kN [KH301SG]

This steel karabiner is fitted with a screwgate. Suitable for fall arrest and work positioning. CE Marked to EN 362:2004/T 50 kN.

✓ Ideal for use as a robust end connector for a lanyard

50 kN along the major axis

Captive Eye [KH301SG]		Min BL	code	price
weight	gate opening	major axis when closed		
240 g	18 mm	50 kN	SAFKH301SG	£18.65

ALLOY GENERAL PURPOSE KARABINERS



OK Screw Lock Black M33ASLN

Ideal for use with pulleys and hauling systems. The symmetrical oval aluminium H profile frame facilitates pulley use; ideal for clipping anchors [easy to flip over]. The compact shape is easy to use with one hand. Keylock System ensures a snag-free body/gate interface. CE EN 362, EAC.

✓ Great with Fixe and Pro Traxion Pulleys and Ascension Rope Clamps

✓ Red band visual warning indicates if karabiner is not fully locked



OK Screw Lock Black		Min BL	code	price
weight	gate opening	major axis	open gate	short axis
70 g	22 mm	25 kN	7 kN	8 kN
			PETM33ASLN	£12.20



Convert your karabiner to a pulley. See the Ultralegere sheave on page 221. Or you can buy a pulley-karabiner like the Petzl ROLLCLIP on page 186



Am'D Ball Lock Karabiner

The D-ball system offers a quicker one-handed operation. The D-ball system is easy to use indoors but not so good with cold gloved hands where a screwgate or twistlock would be preferred. Now fitted with an alloy barrel.

CE marked EN 362 and EN 12275 type B/K.

Am'D Ball Lock		Min BL	code	price
weight	gate opening	major axis when closed		
75 g	22 mm	28 kN	PETM34ABL	£16.88



Am'D Screw Lock Karabiner

A multipurpose karabiner for connecting devices to a harness or to use at the end of a lanyard. Asymmetric shape for exceptional weight to strength ratio. When loaded the karabiner is oriented in the optimal working axis. CE marked EN 362 and EN 12275 type B.

Am'D Screw Lock		Min BL	code	price
weight	gate opening	major axis	open gate	minor axis
70 g	22 mm	28 kN	8 kN	7 kN
			PETM34ASL	£14.80

Any unit that has arrested a falling weight should be replaced immediately.

HMS KARABINERS



HMS Strike Triple Karabiner A matt black triple-locking karabiner ideal for use in belay systems. Height: 100 mm, width: 70 mm. Complies to EN 362:2004, EN 12275.

HMS Strike Triple Black		Min BL			code	price
weight	gate opening	major axis	open gate	minor axis		
74 g	21 mm	22 kN	7 kN	8 kN	SAF88262	£17.50

What does HMS mean?

Well, it means Halbmastwurf-sicherung! This is the German name for a Munter Hitch [Italian Hitch] which is similar to half a clove hitch and is used for controlled descent in belay systems. The wider shape of the karabiner is useful in this application to prevent bunching.

SPECIAL PURPOSE KARABINERS



Omni Triact M37 TL Type C812 This is the recommended connector for use with any harness having two attachment points. Snag-free keylock system. They are suitable for fall arrest and work positioning purposes. These conform to EN 362 and EN 12275 type H. **15 kN strength in ALL directions**

Omni Triact M37 TL		Min BL			code	price
weight	gate opening	major axis	open gate	short axis		
92 g	21 mm	20 kN	7 kN	15 kN	PETM37TL	£25.08



Revolver A277 Locksafe Karabiner Suitable for fall protection, rescue, rope access and arborist purposes. The built-in sheave makes this a great choice for deviating lines. Fitted with a very neat revolving sheave for emergency use. Approved to EN 362:2004 B.

Revolver A277 Locksafe		Min BL			code	price
weight	gate opening	major axis	open gate	minor axis		
70 g	15 mm	24 kN	8 kN	8 kN	WIRA277	£27.55



Twister is a compact lightweight connector that has an integrated swivel feature, making it very useful when there is a need to manage twisting cables or when it is necessary to rotate the load relative to the anchor. The Twister can be used as a connector on fall arresters as it can remain captive on a system yet allows rotation by the user and is quick, easy and secure when connected. Fitted with "Super Safe" Lift, turn, open gate. CE0120 EN 362 04T.

Twister Karabiner		Min BL			code	price
weight	gate opening	major axis				
142 g	15 mm	27 kN			SAFKH255SS	£30.96



Kong Ovalone DNA Twistlock Karabiner Special "helical" karabiner that allows the 90 rotation of the connected article. Smooth circular profile. CE EN 362/B.

Kong Ovalone DNA Twistlock		Min BL			code	price
weight	gate opening	major axis	open gate	minor axis		
215 g	19 mm	40 kN	12 kN	15 kN	TOL414110	£24.55

PULLEY KARABINERS

These Petzl ROLLCLIP pulley-karabiners would be a valuable addition to any rigger's kit. The two types are differentiated not only by their shape, but also by the gate opening direction. The Petzl ROLLCLIP A opens "downwards" with the opening next to the roller, and the Petzl ROLLCLIP Z opens "upwards" with the opening away from the roller. The H cross-section of both improves the strength-to-weight ratio, and protects markings from abrasion. Highly compact and lightweight solution compare to carrying a pulley and a shackle/connector.



ROLLCLIP A designed to be used as a pulley that is pre-attached to an anchor point prior to installing the rope. It can be locked into position on the anchor using a CAPTIV positioning bar, which also favours the loading along the major axis and limits the risk of flipping. The sheave is mounted on sealed ball bearings for excellent efficiency. The gate opens "downwards" - next to the roller for easy installation of the rope. TRIACT-lock for peace of mind.

SPECIFICATION: Material: Aluminium, Rope Ø: 7-13 mm, Sheave Ø: 18 mm, Max. Working Load: 2 x 2 = 4 kN, Efficiency: 85%. Certification: CE EN 362, EN 12275, EN 12278, EAC.



ROLLCLIP Z Designed to be used as a fast movable connection to an anchor point or device. It would be ideal for using as a positioning aid on a horizontal line by inverting it and placing the roller on the line; the item can then hang below and easily dragged into horizontally into position. Screwlock with red security band for easy visual check if unlocked.

SPECIFICATION: Material: Aluminium, Rope Ø: 7-13 mm, Sheave Ø: 18 mm, Max. Working Load: 2 x 2 = 4 kN, Efficiency: 85%. Certification: CE EN 362, EN 12278, EAC.

Petzl ROLLCLIP		Min BL			code	price	
weight	gate opening	major axis	open gate	minor axis			
A	115 g	22 mm	25 kN	7 kN	8 kN	PETP74TL	£40.00
Z	105 g	21 mm	25 kN	7 kN	8 kN	PETP75SL	£36.50

ULTRALIGHT KARABINERS



Attache 3D This ultralight HMS karabiner weighs just 56 g. The H-profile D frame is lighter and thinner than expected. It's recently come back into stock, and as it's my favourite lightweight karabiner, I'm very glad it's back in! Certification: CE EN 362, CE EN 12275 type H, UIAA. **✓ When weight matters this is a great choice.**

Attache 3D		Min BL			code	price
weight	gate opening	major axis	open gate	short axis		
56 g	24 mm	22 kN	6 kN	7 kN	PETM38ASL	£13.24



Spirit Curved Gate This ultralight smooth action sports karabiner has a bent [non-locking] gate to make clipping a breeze. Certification: CE EN 12275 type B, UIAA 121. **✓ For rapid [non-locking] attachment – not for PPE**

Spirit Curved		Min BL			code	price
weight	gate opening	major axis	open gate	short axis		
39 g	25 mm	23 kN	9 kN	8 kN	PETM53B	£8.96

BRAKING KARABINER



Freino This karabiner has an extra friction spur to help control descent. It allows the rope to be quickly redirected over the friction spur and removed with one hand. Ideal for use with the RIG, I'D, Stop and Huit [pages 338-339]. CE EN 362, CE EN 12275 type B, UIAA 121.
 ✓ For extra control during descents

Freino		Min BL		code	price
weight	gate opening	major axis	open gate	short axis	
85 g	15 mm	25 kN	9 kN	10 kN	PETM42 £35.04

BS EN 362

This is the standard relating to Personal Protective Equipment against falls from a height: Connectors.

SCAFFOLD KARABINERS TO EN 362



PETZL MGO OPEN 60 This brilliant connector from Petzl features a gated connection point [like the open ring, page 191] that allows the user to switch the lanyard out to vary the length, or replace if damaged, without replacing the connector. Any unit which has arrested falling weights should be replaced immediately. CE EN 362, EAC
 ✓ Special connection point helps keep the karabiner loaded on the major axis
 ✓ Ergonomic unlocking handle

Petzl MGO Open 60		Min BL		code	price
material	weight	gate opening	major axis		
Aluminium	490 g	63 mm	25 kN	PETMG0060	£54.00



Alloy Scaffold Hooks [captive eye] Tested to 25 kN. 60 mm wide dual action opening for ease of operation. Ergonomically shaped unlocking handle. Available in black. Suitable for fall arrest provided it is used according to instructions. Any unit which has arrested falling weights should be replaced immediately. Conforms to CE EN 362.

Alloy Scaffold Hooks		Min BL		code	price
type	weight	gate opening	major axis when closed		
Standard	455 g	60 mm	25 kN	WIR228	£53.50
Black	455 g	60 mm	25 kN	SAFE3787B	£39.55



Scaffold Carbine This large, tested carbine will clip directly over 50 mm diameter tube making securing lanyards, rigging rope ladders and blocks a quick, safe operation. Also useful for securing tool bags, paint kettles and buckets to scaffold towers. A pin is provided to form a captive eye if it is needed. Suitable for fall arrest provided they are used according to instructions. Any unit which has arrested falling weights should be replaced immediately. CE marked EN 362:2004/T.

Scaffold Carbine		Min BL		code	price
material	weight	fits tube Ø	length		
Steel	744 g	50 mm	35 kN	230 mm	WIR229 £41.31

KONG FROG FAST CONNECTORS



11 mm Ø hole for attachment

Frog with short web stop

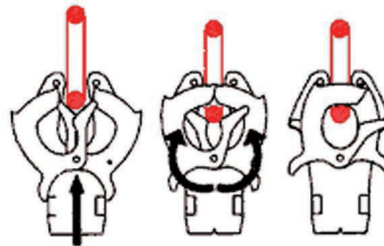


Diagram detailing the mechanism



Kong Frogs These are super fast connectors with a 13 mm jaw width. Just touch the Frog against cable, rope or another connector and the patented end design slams shut instantly grabbing the item and you have a secure connection able to withstand 23 kN! [26 kN for the Kong Frog Cable]. The Kong Frog eliminates fiddling with karabiner gates while trying to make an awkward connection. Use it to reach for a flying wire for brailing purposes. Use it for action onstage when a clean instant pick up is needed. Really well thought out and useful bits of rigging kit. CE Marked.

Conformity: EN 362:2004/A/T, EN 12275.

The Kong Frog comes in two types:

Kong Frog with a short 94 mm web stop which can be used to connect to any karabiner, shackle or brail line.

Kong Frog Cable which has no stop, but does have an 11 mm Ø hole for your own lanyard attachment.

Kong Frogs	weight	jaw width	Min BL	code	price
Kong Frog [with web stop]	75 g	13 mm	23 kN	TOLFROGN	£19.98
Kong Frog Cable	50 g	13 mm	26 kN	TOLFROGC	£22.69

SKY HOOKS



Sky Hook We can't see what use these would be in the theatre but the next time the young apprentice gets asked to order some sky hooks from Flints their line manager will get a shock when the invoice arrives.

Sky Hook with sling	code	price
	PETP06	£14.96