

WIRE ROPE

HANDLING STEEL WIRE ROPE

Unreeling and Uncoiling Wire Rope

When removing wire rope from the reel on which it was received, or from the coil if it is a coil shipment, it is imperative that the reel or coil rotates as the rope unwinds. Attempts to unwind rope from stationary coils or reels will result in kinking the rope, and once a kink is formed the rope at that point is ruined beyond repair.

Unreeling

If the rope is to be unwound from a reel, there are three correct methods of unreeling:

- The reel may be mounted on a shaft supported by two jacks. The rope is then pulled from the reel by operators holding the end of the rope and walking away from the reel which rotates as the rope unwinds. This is the common approved method of unreeling wire rope. Care should be taken to avoid over-running.
- The reel may be mounted on a turntable. It is then unwound in the same manner as described above. Care must be exercised to keep the rope from dropping below the lower reel head. Again avoid over-running.
- The end of the rope may be held and the reel rolled along the ground.

Uncoiling

If the rope is to be removed from a coil, there is only one correct method of uncoiling. The end of the rope should be held and the coil rolled on the ground like a hoop.

Terminations

- Wire Rope terminations should be suitable for their purpose and should have a strength of not less than 80% of the minimum breaking load of the rope. Any free end of the rope should be seized to prevent unlaying.
- The ends of any wire rope other than that on a lifting device, hoist or winch should be fixed to the suspension point with a thimble eye splice or ferrule secured eye termination or bulldog grip fixing (to DIN1142) or other rope coupling device giving a strength of not less than 80% of the breaking load of the wire rope.
- The ends of any wire rope feeding onto a reeling winch should be fastened onto the winch drum in the manner specified by the manufacturer and in addition should preferably have at least three turns left on the drum when the suspended item is at its lowest level, and in no circumstances less than two turns.

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Copies of the complete code are available for purchase from Flint Hire & Supply [see page 3.72].

Wire Rope Assemblies - Crimping Charges

The charges below are for non-tested wire rope assemblies. To price, use the codes below plus the cost of the wire and thimbles if required [see page 2.17]. Soft eyes complying with BS EN 13411-3 must have a length 15x the diameter of the wire rope and the width of the eye should be half its length. See below for assemblies suitable for lifting purposes.

Crimping Charge [hard or soft eye]	code	price
3-5mm wire rope [plus cost of thimble if req.]	WIRDRIIFT35	£1.90
5-8mm wire rope [plus cost of thimble if req.]	WIRDRIIFT58	£2.35



For lifting purposes the assemblies need proof loading and issuing with an EC Declaration of Conformity. The loading and documentation will add between £2.50 - £5.00 to the cost of each wire rope.

Proof Load and Certification Charge	code	price
3-8mm wire	WIRPLCC	£POA

This page was updated 12/04/12

GALVANISED WIRE ROPE [TO BS302]



Galvanised Wire Rope- BS 302 The wire ropes that we stock are tested and certificates can be supplied on request. The standard wire rope used in the theatre is 6x19 fibre core which refers to six bundles of nineteen strands set around a fibre core. We also stock 7x19 wire ropes which refers to six bundles of nineteen strands set around a steel core rather than a fibre core. These cables are preferred when the wire is running over sheaves as the cable is less liable to deform under load.



When choosing a wire rope multiply the weight to be lifted by the recommended safety factor. In general industry five times is the norm but in theatre eight or ten times are sometimes specified. If working with sets of wire ropes always replace all the lines rather than just one.



6x19 Galvanised Wire Rope [Fibre Core]

Galvanised Wire Rope		code	1m	100m	1000m
diameter	mean breaking load				
3mm	490kg	WIR011	£0.44	£34.00	£232.00
4mm	880kg	WIR013	£0.56	£46.00	£310.00
5mm	1380kg	WIR015	£0.69	£59.00	£380.00
6mm	1990kg	WIR017	£0.79	£69.00	£440.00
8mm	3540kg	WIR019	£0.99	£89.00	£730.00



7x19 Galvanised Construction Wire Rope [Steel Core]

Construction Wire Rope		code	1m	100m	1000m
diameter	mean breaking load				
3mm	540kg	WIR023	£0.44	£34.00	£232.00
4mm	960kg	WIR024	£0.56	£46.00	£310.00
5mm	1500kg	WIR025	£0.69	£59.00	£380.00
6mm	2160kg	WIR026	£0.79	£69.00	£440.00
8mm	4110kg	WIR028	£0.99	£89.00	£730.00

A wide variety of other ropes are available to order. Please phone for a quote if you require special cables.

Low Rotation Wire Rope These ropes are specially wound in contrary directions to reduce rotation to a minimum. If using these wires with wedge sockets ensure the tail exceeds 20 times the diameter of the rope. Available to order only.

PVC COVERED WIRE ROPE



PVC Covered Black Wire Rope A 6x19 galvanised standard wire rope with a black PVC sheath, useful for hiding suspension lines. It is essential that the PVC sheath is removed where terminations are made.

Black PVC Covered W.R.	mean breaking load	code	1m	100m
3mm wire covered to 4mm	490kg	WIR032	£0.73	£63.00
4mm wire covered to 5mm	880kg	WIR034	£0.82	£72.00
5mm wire covered to 6mm	1380kg	WIR036	£1.00	£89.00
6mm wire covered to 7mm	1990kg	WIR037	£1.26	£106.00

BLACK WIRE ROPE

Black Wire Rope [Steel Core] These matt black flexible steel core wire ropes are suitable for use as running rigging whereas the PVC coated cables listed above should not be used with pulleys.

Black Wire Rope		code	1m	100m	
diameter	constr	mean breaking load			
2mm	7 x 7	260kg	WIR092	£0.64	£51.00
3mm	7 x 7	580kg	WIR093	£1.52	£121.00
4mm	7 x 7	960kg	WIR094	£1.83	£145.00
5mm	7 x 19	1500kg	WIR095	£1.89	£152.00
6mm	7 x 19	2160kg	WIR096	£2.29	£183.00

STAINLESS WIRE ROPE AND MICRO CABLES



Stainless Steel Flexible Wire Ropes These flexible cables are 316 marine grade stainless steel. They are suitable for running over sheaves or for forming thimble eyes. Ideal where high strength is required or when the cables are being used for display purposes. The cables over 3mm Ø are suitable for use with Sta Lok terminations [see page 2.20]. Unlike galvanised wire, stainless wire will show no telltale signs of wear such as rust streaks, but as no cables last for ever it is a wise precaution to enforce a schedule of replacement depending on the wires application.

new size

Flexible Stainless Steel Wire Rope			code	1m	100m
diameter	type	mean breaking load			
1.5mm	7x7	155kg	WIR050	£0.52	£40.00
2mm	7x7	240kg	WIR051	£0.56	£43.00
2.5mm	7x7	375kg	WIR054	£0.70	£54.00
3mm	7x19	510kg	WIR056	£0.78	£60.00
4mm	7x19	900kg	WIR055	£1.22	£74.00
5mm	7x19	1400kg	WIR057	£1.74	£139.00
6mm	7x19	2080kg	WIR058	£2.46	£195.00



2.16



Non-Flexible Stainless Steel Wire Ropes These wire ropes are most typically used for standing rigging and handrailing applications. They have a smoother appearance and are relatively stiff. They are NOT suitable for running over sheaves or for forming thimble eyes. Terminations are normally made by roll swaging [which we can arrange] or by using Sta-Lok type terminations which can be fitted on site. It is much easier fitting Sta-locks to these cables than to the flexible cables which require a castelated insert which can be a bit fiddly!

new size

Non-Flexible Stainless Steel Wire Rope			code	1m	100m
diameter	type	mean breaking load			
3mm	1x19	720kg	WIR081	£0.90	£72.00
4mm	1x19	1280kg	WIR082	£1.40	£112.00
5mm	1x19	2000kg	WIR083	£2.16	£173.00
6mm	1x19	2880kg	WIR084	£3.94	£295.00



Micro Cables Very fine 316 grade stainless micro cables for use as invisible suspension and control wires. Flints can provide brass ferrules to fit these wires and we now have a special ratcheting crimping tool [p 2.18] and the small Nicopress tool [p 2.22] which makes a good crimp using the 0.26mm ferrules on the 0.51mm wire. Now also available with a fine clear nylon covering.

Micro Cables			code	100m drum
diameter	constr	mean breaking load		
0.26mm	1x3	6.5kg	WIR047	£29.38
0.51mm	1x7	29.0kg	WIR048	£33.00
1mm	7x7	60.0kg	WIR049	£35.00
0.75mm Nylon covered	1x7	34kg	WIR048N	£44.00
1.05mm Nylon covered	7x7	79kg	WIR049N	£78.00



Lifting Equipment Engineers Association
Here are Flints staff undertaking practical assessments at LEEA training centre covering thorough examination of lifting accessories [wire rope slings, chain slings, textile slings, and loose gear- shackles, eyebolts, rigging screws etc.] All passed with credit or distinction!

WIRE ROPE CUTTERS



FELCO
SWISS MADE



Felco Cutters For steel wire rope, a range of cutters from Felco of Switzerland, these top quality tools give a nice clean cut every time. Replacement blades also available [except for C7]. Please note that the maximum wire sizes listed below should be taken as the absolute maximum. For comfortable working Flints would recommend the C7 up to 4mm, C9 up to 6mm, C12 up to 8mm and the C16 up to 12mm. The C16 size is available to hire see page 3.76.

Felco	type	cuts up to	length	code	each
	C7	7mm soft wire rope	190mm	TOL1900	£43.50
	C9	9mm soft wire rope	320mm	TOL1901	£103.00
	C12	12mm soft wire rope	500mm	TOL1902	£164.00
	C16	16mm soft wire rope	630mm	TOL1903	£240.81
	Spare Blades			code	each
	C9	Spare blade only [pair]		TOL1901B	£61.30
	C12	Spare blade only [pair]		TOL1902B	£98.26
	C16	Spare blade only [pair]		TOL1903B	£107.73



Gripple Wire Rope Cutter An economical yet very serviceable tool that will cut wire ropes up to 5mm diameter.

Gripple Wire Rope Cutter	code	each
	TOL1904	£39.95

new



Ratchet Wire Rope Cutter
Using the ratchet principle these cutters can cut through wire ropes up to 10mm Ø. Very little effort is required and the tool is operated single handed which is a great safety feature when working at height.

Ratchet Wire Rope Cutter	code	each
	TOLKS10	£198.00



new



Shoot-it Wire Rope Cutter This machine will instantly and effortlessly cut wire ropes up to 12mm in diameter and rod rigging up to

10mm. Primarily designed as an emergency tool for cutting away the rigging from dismasted yachts. Uses Hilti cartridges to propel a cutting knife through the wire. Can be used single handed.

Shoot-it Wire Rope Cutter	code	each
Cutter including 20 shots	TOL12R22	£322.00
spare cartridges [per 10]	TOL12TC	£5.46

Please don't confuse wire cutters with bolt cutters! Never exceed the manufacturers wire rope size. You will ruin them trying to cut high tensile bolts!

TERMINATIONS

THIMBLES

Used for making hard eyes in wire and fibre ropes. It is important that the correct size thimble is used to ensure the correct curvature. We now source our galvanised thimbles from a highly respected German manufacturer [DIN EN ISO9001] - an old established family firm. This ensures that the thimbles are of the highest possible standard. Wire rope thimbles have rounded ends.



Galvanised Wire Rope Thimbles [DIN 6899 type BF] Used for making hard [thimble] eyes in galvanised wire rope. *The diameter in the table refers to the maximum size of bolt or shackle pin that will pass through the thimble.

Galvanised Thimble diameter*	code	each	per 100
3mm	12mm WIR122A	£0.20	£17.00
4mm	13mm WIR122B	£0.24	£21.00
5mm	14mm WIR123	£0.30	£25.00
6mm	16mm WIR125	£0.34	£29.00
8mm	20mm WIR127	£0.53	£46.00



Stainless Steel Thimbles (AISI316 Grade) Used for making thimble eyes in fibre ropes or stainless steel wire rope Only suitable for 7x7 and 7x19 flexible construction wire rope.

Stainless Steel Thimble	code	each
Max bolt or shackle pin* gauge		
2mm 9mm 1mm	BW110002	£0.24
3mm 10mm 1mm	BW110003	£0.31
4mm 11mm 1.2mm	BW110004	£0.46
5mm 12mm 1.2mm	BW110005	£0.48
6mm 13mm 1.5mm	BW110006	£0.53
8mm 20mm 2.7mm	BW110008	£1.51
10mm 21mm 3mm	BW110010	£2.81
12mm 23mm 3mm	BW110012	£3.27
14mm 26mm 3mm	BW110014	£3.99
16mm 37mm 3mm	BW110016	£4.31
20mm 40mm 4mm	BW110020	£12.35
22mm 44mm 5mm	BW110022	£15.62



Hot Dip Galvanised Fibre Rope Thimbles BS464. For use with traditional cordage. For stainless steel fibre rope thimbles see below.

Fibre Rope Thimble	code	each	code	each
8mm	WIR130	£0.45	19/20mm WIR135	£3.24
10mm	WIR131	£0.66	22mm WIR136	£3.60
13mm	WIR132	£0.87	25/26mm WIR137	£6.84
16mm	WIR134	£1.80		



Nylon Fibre Rope Thimbles A lighter and quieter option for use with braided and three strand fibre ropes.

Nylon Thimbles	code	each	code	each
4mm	WIRED804	£0.41	12mm WIRED812	£0.69
6mm	WIRED806	£0.43	14mm WIRED814	£0.82
8mm	WIRED808	£0.52	16mm WIRED816	£1.08
10mm	WIRED8010	£0.61		

This page was updated 27/04/12

FERRULES

Also referred to as crimps and swages. Used for making permanent terminations to wire ropes in conjunction with a hand or hydraulic press. Flints are now main agents for Nicopress Ferrules. See p 2.22.



Brass Ferrules These ferrules are too small for conventional crimpers. A substitute crimper can be made by drilling downwards through the jaws of a pair of pliers and using a vise to apply pressure.

Not suitable for lifting purposes. Flints trials have found a good termination can be made using the Nicopress 17-BA tool [p.22]

Brass Ferrules for Micro Cables	code	per 100
0.26mm [see p 2.22 for Nicopress Tool]	WIR112	£5.04
0.51mm	WIR113	£5.87
1mm	WIR114	£12.10

new



DIN Copper Ferrules [to DIN EN13411-3]. Suitable for stainless steel wire ropes. The stainless ropes in our catalogue are wire core so choose from the wire core column. BS ferrules to order.

Copper Ferrules for stainless ropes	code	each	per 100
Fibre Core wire core diameter pressed			
1mm N/A 3mm	WIR114EN	£0.08	£6.20
1.5mm 1mm 3,8mm	WIR115EN	£0.09	£6.60
2mm 1.5mm 4mm	WIR116EN	£0.07	£5.30
2.5mm 2mm 5mm	WIR119EN	£0.12	£7.70
3mm 2.5mm 6mm	WIR117EN	£0.13	£10.60
3.5mm 3mm 7mm	WIR120EN	£0.23	£18.10
4mm 3.5mm 8mm	WIR118EN	£0.32	£24.20
4.5mm 4mm 9mm	WIR124EN	£0.44	£34.10
5mm 4.5mm 10mm	WIR125EN	£0.54	£41.80
6mm 5mm 12mm	WIR126EN	£0.75	£57.20
6.5mm 6mm 13mm	WIR127EN	£1.03	£79.20



British Standard Aluminium Ferrules [To BS5281]. For use with galvanised wire ropes. British Standard ferrules have a thicker wall than DIN standard ferrules but are shorter.

Aluminium Ferrules	code	each	per 100
Fibre core Steel core diameter pressed			
2.5mm 2mm 6mm	WIR102	£0.08	£6.00
3mm 2.5mm 7mm	WIR101	£0.11	£7.00
3.5mm 3mm 8mm	WIR104	£0.12	£9.00
4mm 3.5mm 9mm	WIR103	£0.17	£11.00
4.5mm 4mm 10mm	WIR106	£0.18	£13.00
5mm 5mm 11mm	WIR105	£0.23	£18.00
6mm 6mm 13mm	WIR107	£0.28	£25.00
8mm 8mm 18mm	WIR109	£0.74	£63.00

new



DIN Standard Aluminium Ferrules. [DIN EN13411-3] For use with galvanised wire ropes. DIN standard ferrules have a thinner wall than BS ferrules but are longer when pressed.

Aluminium Ferrules	code	each	per 100
Fibre core Steel core diameter x length pressed			
2.5mm 2mm 5x12mm	WIR102EN	£0.06	£4.40
3mm 2,5mm 6x14mm	WIR101EN	£0.07	£5.00
3.5mm 3mm 7x16mm	WIR104EN	£0.08	£6.30
4mm 3,5mm 8x18mm	WIR103EN	£0.10	£7.90
4.5mm 4mm 9x20mm	WIR106EN	£0.14	£11.20
5mm 4,5mm 10x23mm	WIR105EN	£0.18	£13.90
6mm 5mm 12x27mm	WIR107EN	£0.22	£17.20
6.5mm 6mm 13x29mm	WIR108EN	£0.30	£23.10
8mm 7mm 16x36mm	WIR109EN	£0.41	£31.40
9mm 8mm 18x40mm	WIR110EN	£0.54	£41.30

NICOPRESS SYSTEM

new



Nicopress A well proven system which has been used to terminate wires in the aviation industry for over 50 years. Nicopress is ideally suited to hand crimping onsite. The ferrules are zinc plated copper.

Nicopress Oval Ferrules [copper] code each per 100
Wire diameter nom Ø mm before compression / after compression

1/32"	0,79mm	NIC271B	1/4" - 5/16"	a	£0.08	£6.00
3/64"	1,39mm	NIC2811B4	3/8" - 7/16"	d	£0.15	£13.00
1/16"	1,58mm	NIC2811B	3/8" - 7/16"	c, d	£0.15	£13.00
3/32"	2,38mm	NIC2826	3/8" - 7/16"	c, d, e	£0.22	£19.00
1/8"	3,17mm	NIC283M	9/16" - 3/4"	e, f	£0.43	£41.00
5/32"	3,97mm	NIC284B	5/8" - 1"	f	£0.51	£46.00
3/16"	4,76mm	NIC286	3/4" - 1"	e, f	£1.38	£124.00

Nicopress Stops [copper] code

Wire diameter	nom Ø mm	before compression / outside diameter	code	each
1/32"	0,79mm	1/4" - 5/16"	TOL190	£18.00
1/16"	1,58mm	3/8" - 7/16"	TOL191	£20.00

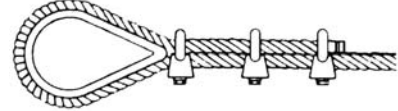
Nicopress Tools. Flints can order Nicopress Tools, the

We've moved to a nice big space on page 2.22!



Mini Ratchet Crimper The smallest position fits 1mm and 5mm DIN ferrules. In other positions fit 2mm and 2.5mm. Ideal for small stainless display wires.

WIRE ROPE GRIPS [DOGS]



rope size	no. of rope grips	rope tail length
3-5mm	3	150mm
6mm	3	180mm
8mm	4	280mm
10mm	4	320mm



Commercial Galvanised Wire Rope Grips [DIN741] Provide a simple and effective means of making a loop or a thimble eye in wire rope. Consists of U bolt, bridge and two hex nuts. The U bolt should be fitted over the non load bearing [short] tail of the loop, the bridge over the load bearing longer part. [Remembered by the mnemonic "Never saddle a dead horse"]. The hex nuts should be tightened equally, using a nutspinner or a torque wrench. For heavier loads use grips to DIN1142 or Crosby Grips.

Commercial Galvanised Wire Rope Grips	code	each	per 100
Grip Size	Rope Size		
1/8"	3-4mm	WIR161	£0.16 £8.00
3/16"	5mm	WIR163	£0.18 £10.00
1/4"	6mm	WIR165	£0.20 £12.00
5/16"	8mm	WIR167	£0.25 £13.50
3/8"	10mm	WIR169	£0.30 £18.00

Dogs to ISO DIN 1142	code	each	per 100
Wire diameter	Torque		
5mm	2Nm	WIR163D	£0.20 £16.00
6mm	3.5Nm	WIR165D	£0.26 £20.80
8mm	6Nm	WIR167D	£0.40 £32.00
10mm	9Nm	WIR169D	£0.42 £33.60

Stainless Steel Wire Rope Grips	code	each
2mm	WIR160	£1.08
3mm	WIR1601	£1.26
4mm	WIR1602	£1.32
5mm	WIR1603	£1.18
6mm	WIR1604	£1.44
8mm	WIR1605	£1.51
10mm	WIR1606	£1.68

Any PVC covering to wire rope must be stripped before applying dogs.

HAND CRIMPERS

HIRED



Hand Crimpers For steel wire rope. Create your own finished ropes either with a hard [thimble] eye or a soft eye, this simple compression tool facilitates the use of ferrules to give your wire rope a professional finish. Please note that sizes used for ferrules relate to Standard A size. The figures in brackets relate to DIN ferrules which have a thinner wall than British Standard. We do not recommend this tool for terminating lifting wires as it is difficult to achieve a compressed ferrule with the exact recommended final dimensions to achieve maximum loading.

Type	Fits Ferrules	handle	code	price
TSC1	BS 1.5, 2, 3, 4mm (DIN 2, 2.5, 3.5, 4.5mm)	24"	TOL1920	£107.00
TSC2	BS 1.5, 2.5, 3.5, 4.5mm (DIN 2, 3, 4, 5mm)	24"	TOL1921	£107.00
TSC3	BS 1.5, 2, 5, 6mm (DIN 2, 2.5, 6.5mm)	36"	TOL1922	£140.00

For hire details see page 3.76

HAND HYDRAULIC CRIMPERS



Hydraulic Crimper D31 Hand held, single handed operation, weighs only 1.5kg, rotating die head, complete with carry case. Develops 35kN force. It is crucial that the die is correctly matched to the ferrule. Suitable for DIN ferrules only.

Manual Hydraulic Crimper D31	code	each		
	TOL1923	£468.75		
Die No	Steel core	Fibre core	code	each
1	1mm	1mm	TOL1924	£91.00
2	1.5mm	2mm	TOL1925	£91.00
2.5	2mm	2.5mm	TOL1926	£91.00
3	2.5mm	3mm	TOL1927	£91.00
3.5	3mm	3.5mm	TOL1928	£91.00

Please enquire regarding larger die sizes and bench mounted hydraulic presses.



Forged Crosby Wire Rope Grips [G450] The Federal Specification FF-C-450 Type 1 Class 1 covers wire rope grips which are 6mm and over. This specification exceeds ISO DIN 1142. The Crosby clips 6mm upwards comply with the specification and the smaller grips would comply if the specification had a wider scope. Each forged base has a product identification code. The clips are individually bagged with full instructions and they are fitted with a red u bolt for instant visual recognition.

Forged Crosby Wire Rope Grips G450		code	each
Wire Diameter	No. of Grips	Torque	Turnback
3-4mm	3	6.1Nm	83mm
5mm	3	10.2Nm	95mm
6-7mm	3	20.3Nm	120mm
8mm	3	40.7Nm	133mm
10mm	3	61Nm	165mm

Larger sizes available to order.

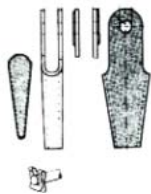
NUT SPINNERS AND TORQUE WRENCHES



Nutspinners A selection of nutspinners used for tightening the nuts on wire rope grips can be seen on page 3.24.

Torque Wrenches In order to achieve the manufacturers stated loading wire rope grips should be tightened to the correct torque. Suitable torque wrenches are shown on page 2.21.

SPECIALIST TERMINATIONS



Wedge Sockets These open wedge sockets are made according to DIN 15315. They are the preferred terminations in many industrial sectors and are popular in the theatre industry. Prices include wedge, socket and pin. On US Federal approved wedge sockets the advice is to never put a wire rope grip securing the dead end to the standing loaded wire rope however on these DIN15315 wedge sockets the advice is to put one cable grip across the dead and live parts with the saddle on the loaded wire. When using wedge sockets in conjunction with Flints Hanging Clamps [see page 2.02] you will need to use the Hanging Clamp Toggle as the jaw width of the wedge sockets will not fit over the clamp itself.

Wedge Sockets		code	each
Nominal Size	Wire Rope Diameter		
5	4-5mm	WIR5WS	£9.10
6.5	5-6.5mm	WIR65WS	£9.98
8	6-8mm	WIR8WS	£12.49



Klein Haven Grips These grips allow a temporary hauling line or tackle to be attached to a steel wire rope. Ideal for rigging catenary wires or for making adjustments to flown pieces without derigging. Not to be used for permanent anchorage.

Klein Haven Grips	code	wire sizes	latch	price
	WIR160410	1.52mm-6.35mm	No	£48.15
	WIR160420L	3.18mm-12.70mm	Yes	£69.98

AUTOMATIC DEADENDS [BULLETS]



Automatic Deadends [Bullets] These wire terminations are guaranteed to hold 90% of the rated breaking strength of the wire, without slipping, or breaking the strands if used with 1x7 construction wire rope. Once in service they won't let go yet they can be re-tensioned, if necessary during installation. Not suitable on fibre core wire ropes. Full instruction sheets are supplied with the product or a PDF can be downloaded from our website - flints.co.uk/safety

Strandwise Automatic Deadends	code	price each	per 10
wire size			
3.5mm-5.4mm	WIR5199	£12.38	£109.90
5.4mm-6.8mm	WIR5200	£13.17	£117.00
6.8mm-8mm	WIR5201	£17.36	£154.20

REUTLINGER WIRE ROPE HOLDERS



Reutlinger Black Wire Rope Holders

"Black Wire Rope Holders" seemed a bit of a dull name for such a fantastic product so we asked our staff if they could think of a better one. I rather liked: "Dogs Nomor" which would have fitted in well with "Slip Nomor" but, currently running at favourite, is: "Ferret Grip" because- it won't let go until you tell it, and it's small enough to keep in your pocket!

So what makes these gizmos so fantastic?

They are black zinc coated wire grips specially suited for stage applications. The holder has passed testing for the TUV/GS seal and for BGV C1 and is CE marked and is issued with a CE Declaration of Conformity. [The TUV certificate can be downloaded from our website]. They will fit 4 or 5mm diameter wire ropes giving safe working loads of 80kg [on 4mm Ø] and 130kg [on 5mm Ø].

- ✓ No tools are needed to fit the grip!
- ✓ Just press down the sprung plunger and it will slide along the wire. Release it and it will grip.
- ✓ Protected against accidental release by hand tightening the knurled nut on the top.
- ✓ Available in three types: eye, fork and M12 thread.



Eye Type Holder Ø 25mm. Length 87mm. Coupling thread M12. Exterior ring diameter 54mm. Interior ring diameter 30mm.

Eye type	wire diameter	code	each	per 25
	4-5mm	SAF50SVF	£24.70	£508.00



Fork Type Fitted with spring clip clevis pin [no tools needed!] Holder Ø 25mm. Length 102mm. Fork length 41mm, Fork width 14mm, Bolt Ø 14mm.

Fork type	wire diameter	code	each	per 25
	4-5mm	SAF50SVF	£27.50	£569.75



M12 Thread Type Can be fitted directly to trunion arms, hook clamps etc. Holder Ø 25mm. Length 51mm. Coupling Thread M12, Thread length 18mm

Thread type	wire diameter	code	each	per 25
	4-5mm	SAF50SVT	£20.00	£415.00

MINIATURE DISPLAY WIRE ROPE FITTINGS

new



Miniature Wire Rope Fittings These smart and unobtrusive fittings fit wire ropes from 1.5-2.5mm diameter or 2-3mm diameter. When the cap is depressed the fittings slide along the wire and grip when the cap is released. To prevent accidental release they are fitted with a safety cap. There are many other types of fittings available- please ask our rigging manager if you are unable to find what you need. The WLLs are assuming stainless steel wire rope, working loads are slightly higher using galvanised wires.

Type	Fits wire	static WLLs	thread/depth	code	each
25V	1.5-2.5mm 7x7	20kg (1.5mm) 48kg (2.5mm)	M8x6mm	WIR193000241	£6.36
25V	1.5-2.5mm 7x7	20kg (1.5mm) 48kg (2.5mm)	M10x6mm	WIR193000251	£6.36
30V	2-3mm 7x7	32kg (2mm) 56kg (3mm)	M8x8mm	WIR193000301	£6.87
30V	2-3mm 7x7	32kg (2mm) 56kg (3mm)	M10x8mm	WIR193000302	£6.87

READY MADE SMALL STAINLESS WIRE ROPES

new



Ready Made Small Wire Ropes

These 7x7 stainless steel cables are ideal for use with the fittings listed above. The cylindrical stop fits inside the ceiling fixing shown below. Use them for display purposes or wire suspended shelving etc. Flints can, of course, make up wire ropes to your specifications.

Length	wire diameter	end type	code	each
1m	2.5mm 7x7	Thread M5	WIRM51	£10.60
2m	2.5mm 7x7	Thread M5	WIRM52	£11.62
3m	2.5mm 7x7	Thread M5	WIRM53	£12.64
5m	2.5mm 7x7	Thread M5	WIRM55	£14.68
1m	2mm 7x7	Cylindrical sleeve	WIR196207100	£2.44
2m	2mm 7x7	Cylindrical sleeve	WIR196207200	£3.52
3m	2mm 7x7	Cylindrical sleeve	WIR196207300	£3.98
5m	2mm 7x7	Cylindrical sleeve	WIR19620750	£5.46

CEILING ATTACHMENTS

new



Ceiling Attachment This unobtrusive fitting can be screwed with a 6mm screw or machine screw to a ceiling or wall. The end cap unscrews and a wire with a cylindrical stop can be inserted [see above]. Sold as body and end cap complete.

Length	wire diameter	thread	code	each
23mm	2mm 7x7	cap thread M13	WIRCAM13	£2.86

WIRE ROPE STOPPERS

new size



Wire Rope Stoppers

316 marine grade stainless steel stoppers suitable for supporting display shelves hung on wires. The stopper has a slot to take the wire so they can be inserted directly onto the wire without unreeving. Can also be used either side of track runners or bobbins on wire reeved curtain tracks such as T60 to convert them to master runners.

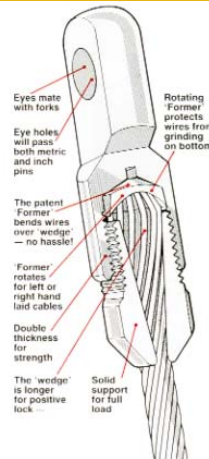
Wire Rope Stoppers	diameter	code	price	per 25
	2mm	WIR190	£4.40	£99.00
	3-4mm	WIR191	£4.93	£111.00
	5-6mm	WIR192	£5.38	£121.00

STA-LOK TERMINATIONS

Sta-Lok Terminations Sta-lok are a British company who specialise in manufacturing top quality stainless steel wire terminations and rigging screws for marine and architectural use.

The term **Sta-Lok** is often associated with their easy-to-fit wire terminations which can be fitted directly to wires onsite but they also manufacture a huge range of other fittings which can be supplied already swaged onto the wire. The fittings need be matched to the correct wire construction, feel free to phone our rigging manager to discuss your needs.

STA-LOK TYPE FITTINGS



Sta-Lok Fittings

These terminations can be fitted onsite using just a couple of spanners. They are a good choice if the wire needs a plain end to be fed through holes, as in handrail posts. They can also be used when the exact length of the wire can not be pre-determined. Sta-Lok terminations are

stronger than the wire rope. They are made to Lloyds Register of Shipping Certificate No YSC QA 108. They can even be re-used by simply replacing the wedge. Full fitting instructions are supplied with each terminal. If the wires do not need to follow tight curves or run around pulleys then it is best to choose a 1x19 construction stainless wire. These stiffer wires are suited for handrailing and rigging applications and the Sta-loks are easier to fit. The choice of fittings is huge, we list only a small sample selection to suit small 1x19 construction stainless steel wires [see page 2.16].



Sta-Lok Eyes

Hole diameters 6.5 and 8mm. Thickness 5 and 5.8mm.

Eye for 3mm 1x19 ss wire	STL03303	£14.71
Eye for 4mm 1x19 ss wire	STL03304	£15.91



Sta-Lok Toggle Fork

This is the best termination as it offers full articulation in two planes.

Toggle for 4mm 1x19 ss wire	STL05004	£25.75
Toggle for 5mm 1x19 ss wire	STL05005	£28.86



Sta-Lok Fork

Useful for direct connection to pad eyes [see page 2.27] etc.

Fork for 3mm 1x19 ss wire	STL03403	£17.57
Fork for 4mm 1x19 ss wire	STL03404	£20.50



Sta-Lok Studs

Short studs are also available in left hand threads [Left code change R to L].

M6 Thread x 56mm right [3mm wire]	STL03603M6R	£23.00
M8 Thread x 59mm right [4mm wire]	STL03604M8R	£17.55
M10 Thread x 67mm right [5mm wire]	STL03605M10R	£20.78



Sta-Lok Connector

To join two wires. Connector for 4mm 1x19 ss wire STL07204 £30.69

For Sta-Lok rigging screws see page 2.27.

Please phone for full details and exact dimensions.

ROLL SWAGED TERMINATIONS BY STA-LOK



316 grade stainless steel

Roll Swaged Terminals

All of the types of fittings shown on the facing page can also be supplied as roll swaged terminations. Swaged fittings are pressure rolled onto your stainless steel wires to provide a visually clean appearance. They are considerably cheaper than self assembly Sta-loks and so provide an economical solution to

marine, display and handrail rigging. If the line length can not be pre-determined then consider using a roll swage on one end and a Sta-lok on the other. The prices below give an indication of costs on 4mm wire. Rigging screws can also roll swaged directly to your wire [see page 2.27]. Please phone our rigging manager for a tailored quotation.

Sta-Lok Roll Swage Terminations	code	each
Fork [as shown left]	STL03504	£9.42
Strap Toggle Fork [as shown right]	STL03804	£8.12
Stud [M6 left or right] [as shown centre]	STL05104M6L [R]	£4.29

4mm 1x19 SS wire costs about £1.40 per m., roll swaging costs about £1.61 each so a 5m wire with studs each end would cost about £18.80.

TORQUE WRENCHES



new size



Torque Wrenches To obtain efficiency ratings of 80% of the breaking load of the wire rope, dogged terminations have to be properly tightened and retightened after proof loading. Use the Edelrid Torque Wrench for DIN1142 dogs from 5-10mm. The other wrench covers the torques for the larger dogs that we stock. For sockets and socket adapters see page 3.33.

Torque Wrenches	code	each
Type	Torque	Drive
Edelrid Torque Wrench	1-20Nm	1/4" drive
Roebuck Professional	20-100Nm	1/2" drive

STOCK BLACK DRIFTS



new



Each wire is individually identified, CE marked, and printed with the SWL

A range of stock 5mm diameter black wire drifts supplied with appropriate certification. Available thimble eye both ends or thimble eye one end and 100mm soft loop on the other end. SWL is 250kgs.

Length	thimble eye both ends	soft and thimble eye	each	per 10
1m	WIRHE1M	WIRSE1M	£14.80	£125.00
2m	WIRHE2M	WIRSE2M	£15.84	£134.00
3m	WIRHE3M	WIRSE3M	£16.87	£142.00
4m	WIRHE4M	WIRSE4M	£17.96	£152.00
5m	WIRHE5M	WIRSE5M	£19.01	£160.00
6m	WIRHE6M	WIRSE6M	£20.03	£169.00
7m	WIRHE7M	WIRSE7M	£21.08	£178.00
8m	WIRHE8M	WIRSE8M	£22.09	£187.00
10m	WIRHE10M	WIRSE10M	£23.03	£204.00

GRIPPLE



Gripple Lockable - Innovative lockable system for securing wire rope - quickly!

The Lockable Gripple makes catenary* and bracing wire rope installation easier and faster. Working on the same principle as the standard Gripple, but with the additional feature of locking screws for extra security under outdoor conditions.



- ✓ Simple push fit assembly.
- ✓ Automatic locking wedges.
- ✓ Easy tensioning.
- ✓ Secure locking screws.
- ✓ The Lockable Gripple can be used with steel core and stainless steel core wire rope.

- ✓ Ideal for overhead catenary wires* and promenade lighting*, aerial and marquee bracing, shade cloth bracing, tree bracing.
- ✓ Exhibition Hall displays.

Note: Safety factor on the Gripple Lockable is 4:1. Locking screws should always be used. Never tension with locking screws in place. Do not re-use, for single use only. Always ensure 200mm tail is left protruding from the Gripple prior to tensioning. When installing around a structure, the distance between the Gripple and the structure should equal or exceed the width of the structure. Load ratings are based on a vertical suspension. When hanging at angles the load rating are reduced. Do not use at an angle exceeding 60° as the load rating is reduced by 50%.

*If being used for catenary purposes, a full understanding of the forces imposed by applying weight to wires stretched between two horizontal points is needed. Very high loads can be imposed by adding weight to long wires stretched between two points. The loads can be greatly reduced by allowing the wire to sag by 10° or more from the horizontal. If in doubt seek the advice of a structural engineer.

Use a 5.5mm nutspinner to lock off the Gripples from 2-5mm and an 8mm nutspinner to lock the 6mm version [see pages 3.24].

Gripple	Fits wire	Max vert.WLL	code	each	quantity	price
2mm	2mm 7x7	70kg	WIR182L	£6.08	per 20	£97.20
3mm	3mm 7x7, 7x19	150kg	WIR183L	£6.08	per 20	£97.20
4mm	4mm 7x19	300kg	WIR184L	£6.59	per 20	£105.20
5mm	5mm 7x19	400kg	WIR185L	£6.59	per 20	£105.20
6mm	6mm 7x19	500kg	WIR186L	£10.30	per 20	£163.80
Gripple key size A				WIR18GK	£1.84	

(One supplied free in every bag)



Gripple Torq Tensioning Tool

Make tensioning really easy with this special tool. Just insert the Gripple into the powerful jaws and squeeze the handles to pull the wire through to the desired tension. Wt. 1.4kg

Tensioning Tool	code	each
Tool	WIR18TT	£77.98
Replacement cams	WIR18RC	£7.21

Everything in this catalogue can be bought online at flints.co.uk. You can also download the latest version of the catalogue in handy sections.

GRIPPLE C-CLIP



Gripple C-Clip Creates a vertical suspension from 6mm catenary wires, angled up to 60° from horizontal.



- ✓ Ready to use kit
- ✓ No tools needed
- ✓ Up to 10 times faster
- ✓ Adjustable and releasable
- ✓ To suspend from 6mm wire rope
- ✓ Ideal for use with Gripple catenary kits
- ✓ Self-locking mechanism
- ✓ 45kg SWL with a 5:1 safety factor
- ✓ Independently certified

6mm C-Clip	Length of wire	code	each
	1m	WIRCClip61	£6.06
	5m	WIRCClip65	£7.87
	10m	WIRCClip610	£10.14

2.21a

SECTION TWO

NICOPRESS

Nicopress A well proven system which has been used to terminate wires in the aviation industry for over 55 years. The Nicopress ferrules have a distinctive shape which neatly separates the wires. The system is ideally suited to hand crimping wires in theatres, outdoor events, or at the boatyard. The tools are a great improvement on the hand crimpers designed for BS and DIN ferrules because the crimping head is slightly reduced in thickness at the point of contact with the ferrule so far more pressure is exerted. The action of the tools is very positive and each of the larger tools is supplied with detailed instructions plus a check gauge to ensure the ferrule is correctly compressed. The ferrules that we stock are mainly zinc or tin plated copper and they are suitable for galvanised steel or stainless steel. We also stock stop sleeves in copper which are suitable for both stainless and galvanised wires. Flints have now had a small tool and ferrules developed for crimping our very small stainless micro cables - ideal for invisible display, animatronics and micro control cables.



new



NICOPRESS TOOLS

Nicopress Tools Flints can order in any Nicopress tool, the ones listed below are held in stock but our range is growing!

Now for micro cables too!



A

17-BA

Type 17-BA Suitable for crimping 0.26mm, 0.52mm and 0.75mm wire ropes using oval sleeve types 161A, 162A, and 271B plus stop type 87132. Supplied complete with instructions.

2.21b

new



B

17-B4B

Type 17-B4B Suitable for crimping 0.75mm, 1mm and 1.2mm wire ropes using oval sleeve types 27-1-B, 28-11-B4, 428-15-VB4 and also stop sleeves type 871-12-B4. Supplied complete with instructions.



C

D

32-VCVG and
33V-CGB4

Type 32-VCVG Suitable for crimping 1.5mm, 2mm and 2.5mm wire ropes using oval sleeves type 281C, 4282VC, 282G, and 4283VG. Also fits the 1.5mm stop sleeve types 871-1-C. Supplied complete with instructions and check gauge.

For stop sleeves



H

51-MJ

Type 51-MJ - Suitable for stop sleeves for 2.5mm, 3mm, 3.5mm, 4mm and 5mm wire ropes using stop types 87117J, 87118J, 87119M and 87120M. Can also be used on Type 283M oval sleeves for 3-3.5mm wires. Supplied complete with instructions and check gauge.



E

F

64-CGMP and 63V-XPM

Type 64-CGMP Suitable for crimping 1.5mm, 2mm, 2.5mm, 3mm and 3.5mm wire ropes using oval sleeve types 281C, 4282VC, 282G, 4283VG, 283M and 4284VM Also suitable for 1.5mm stops type 8711C. Can be supplied with a powerful cable cutter giving very clean results on wire rope up to 5mm Ø. Supplied complete with instructions and check gauge.



Type 64 and Type 63 can be fitted with wire cutters

Type 63V-XPM Suitable for crimping 3mm, 3.5mm, 4mm and 5mm wire ropes using oval sleeve types 283M, 4284VM, 284P, 4285VP, 286X and 4286VX. Also available with a wire cutter. Supplied complete with instructions and check gauge.



G

510

Type 510 with head fitted

Ideal for workshop use

Type 510 Bench Mount. If you are workshop based, it is easier to crimp with bench mounted tools as you can hold the assembly in one hand while making the compression with the other hand. This bench mount will take the heads Type 63V-XPM, Type 64-CGMP and Type 51-MJ. The picture shows the bench mount with a head fitted.

Flints can supply all Nicopress Products for wires up to 14mm diameter

If you have not used the Nicopress system before we would recommend you do a couple of trial crimps first using an offcut of wire to familiarise yourself with the method before undertaking the task in hand.

Nicopress Tools	type	tool length	No of grooves	wire diam.	suits ferrule type NIC...	suit stop type NIC...	wt	supplied with check gauge	code	each	per five [price each]
A Micro Cable Tool	17-BA	210mm	2 [A, B]	0.26mm 0.52mm 0.75mm	161A 162A 271B	87132	0.3kg	No	NIC17BA	£49.92	£42.45
B Small Wires Tool	17-B4B	210mm	2 [B, B4]	0.75mm 1 and 1.2mm	271B 2811B4,42815VB4	87112B4	0.3kg	No	NIC17B4B	£51.90	£46.12
C Medium Hand Tool	32-VCVG	292mm	2 [C, G]	1.5 and 2mm 2.5mm	281C & 4282VC 282G & 4283VG	8711C (1.5mm only)	1.1kg	Yes	NIC32VCVG	£154.46	£127.20
D Medium Hand Tool	33V-CGB4	292mm	3 [B-4, C, G]	1 and 1.2mm 1.5 and 2mm 2.5mm	2811B4, 42815VB4 281C, 4282VC 282G, 4283VG		1.1kg	Yes	NIC33CGB4	£177.02	£148.40
H Tool for Stop Sleeves	51-MJ	463mm	2 [M, J]	2.5mm 3mm 3 and 3.5mm 4mm 5mm	283M	87117J 87118J 87119M 87120M	2.4kg	Yes	NIC51MJ	£215.20	£189.89
F Large Tool 63	63V-XPM	508mm	3 [X, P, M]	3 and 3.5mm 4mm 5mm	283M, 4284VM 284P, 4285VP 286X, 4286VX		2.7kg	Yes	NIC63VXPM	£246.26	£208.95
Type 63 with cutter	63V-XPMCT	508mm	3 [X, P, M]	As above	As above		3.2kg	Yes	NIC63VXPMCT	£297.71	£252.60
Type 63 head only	63HEAD		3 [X, P, M]	As above	As above		1.1kg	Yes	NIC63HEAD	£176.80	£138.63
E Large Tool 64	64CGMP		4 [C, G, M, P]	1.5 and 2mm 2.5mm 3 and 3.5mm	281C, 4282VC 282G, 4283VG 283M, 4284VM	8711C (1.5mm only)	2.7kg	Yes	NIC64CGMP	£278.27	£236.11
Type 64 with cutter	64CGMPCT	508mm	4 [C, G, M, P]	As above	As above		3.2kg	Yes	NIC64CGMPCT	£297.74	£252.63
Type 64 head only	64HEAD		4 [C, G, M, P]	As above	As above			Yes	NIC64HEAD	£176.80	£138.63
G Type 510 Bench Handle	510	533mm					2.7kg	Yes	NIC510	£199.00	£161.88

NICOPRESS MICRO FERRULES (SLEEVES)

new size

Nicopress Micro Ferrules These ferrules have been developed to provide an effective means of securing a loop in micro cables. The ferrules are round in shape and made from copper. They can be easily compressed by using the Type 17BA tool. The combination of this economically priced tool and these micro ferrules solves a very old problem concerning the termination of stainless steel micro cables. Tests show that these terminations exceed the strength of the wire. Ideal for invisible control and display wires.



Nicopress Oval Ferrules	stranding	presses required	sleeve lengths	tool	codes	each	per 100
0.26mm	1x3	3	10mm	A	NIC161A	£0.06	£5.00
0.52mm	1x7	3	10mm	A	NIC162A	£0.07	£6.00

Developed for Flints

NICOPRESS FERRULES (SLEEVES)



Nicopress Ferrules These ferrules are made from copper plated with zinc or tin. For stainless steel wire ropes choose the tin plated ones but for galvanised wire rope choose the zinc plated ferrules.



Nicopress Oval Ferrules				codes		sleeve lengths	tool	each	per 100
Suits metric wires	Stranding	Imperial wire Ø	Nom Ø mm	Zinc Plt	Tin Plt.[*SS]	before / after compression			
0.75mm	1x7	1/32"	0.79mm	NIC271B		6mm / 8mm	A	£0.08	£6.00
1 and 1.2mm	1x7, 7x7	3/64"	1.19mm	NIC2811B4	NIC42815VB4	9.5mm / 11mm	B, D	£0.20	£18.00
1.5 and 2mm	7x7, 7x19	1/16"	1.59mm	NIC281C	NIC4282VC	9.5mm / 11mm	C,D,E	£0.21	£19.00
2.5mm	7x7, 7x19	3/32"	2.38mm	NIC282G	NIC4283VG	9.5mm / 11mm	C,D,E	£0.22	£19.00
3 and 3.5mm	7x7, 7x19	1/8"	3.17mm	NIC283M	NIC4284VM	14mm / 19mm	E,F	£0.48	£43.00
4mm	7x7, 7x19	5/32"	3.97mm	NIC284P	NIC4285VP	16mm / 22mm	F	£0.60	£50.00
5mm	7x7, 7x19	3/16"	4.76mm	NIC286X	NIC4286VX	24mm / 30mm	F	£1.40	£125.00
6mm	7x7, 7x19	1/4"	6.35mm	NIC2810F6	NIC4288VF6	28.5mm / 38mm	To order only	£1.92	£169.00

NICOPRESS STOPS

new

Nicopress Stops The stops are unplated copper and are suitable for stainless and galvanised steel wire ropes.



Nicopress Stops [plain copper]				code	sleeve dims.	tool	typical strength*	each	per 100
Suits metric wires	Stranding	Imperial wire Ø	Nom Ø mm		length / outside diameter		* Using galvanised cable		
0.75mm	1x7	1/32"	0.79mm	NIC87132B	6mm / 3mm	A	54kg	£0.22	£14.00
1 and 1.2mm	7x7	3/64"	1.19mm	NIC87112B4	5.5mm / 4mm	B	108kg	£0.21	£13.00
1.5mm	7x7, 7x19	1/16"	1.58mm	NIC8711C	11mm / 5mm	E, C	195kg	£0.21	£13.00
2.5mm	7x7, 7x19	3/32"	2.38mm	NIC87117J	8mm / 8mm	H	272kg	£0.32	£20.00
3 and 3.5mm	7x7, 7x19	1/8"	3.17mm	NIC87118J	8mm / 8mm	H	408kg	£0.35	£21.00
4mm	7x7, 7x19	5/32"	3.97mm	NIC87119M	8mm / 10.7mm	H	544kg	£0.45	£30.00
5mm	7x7, 7x19	3/16"	4.76mm	NIC87120M	8mm / 10.7mm	H	725kg	£0.50	£35.00

(before compression)

Three sizes are colour coded to help with identification