



CABLE JOINTS, CABLE TERMINATIONS, CABLE GLANDS, CABLE CLEATS
FEEDER PILLARS, FUSE LINKS, ARC FLASH, CABLE ROLLERS, CUT-OUTS

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Electrical Product Catalogue

Opportunity through Innovation



Company Information

Ellis Patents was founded in York in the North of England in the early 1960's to design and manufacture specialised electrical cable and pipe fixings.

The Company moved to its present 3-acre site at Rillington, near Malton in North Yorkshire, in 1974 and has continually expanded through the development of new products and investment in new technology. Today the modern factory of some 2000 sqm provides an up-to-date and efficient environment for the production of plastic injection mouldings, tool making, assembly, stock holding and packaging.

At the beginning of 2002 Ellis Patents acquired EDL Cable Supports Ltd. and relocated it from Rugeley in Staffordshire to Rillington. EDL is now fully integrated with the Ellis Patents business thus offering one of the most comprehensive range of specialist cable cleats from a single source.

Ellis Patents sells to customers worldwide and to market sectors, which include Power Generation, Oil & Gas (offshore and onshore), Construction and HVAC.

Operations

To achieve optimum performance and to react to customer demands production is carried out 24 hours a day, 5 days per week. Many of the production machines are fitted with robots and all are monitored in real time for performance and efficiency by a computerised factory management system. In addition the integrated order processing, stock control and purchase ordering systems combine to create an accurate production forecasting system, which has provided the company with an enviable reputation for delivery adherence.

Quality

Ellis Patents has been accredited to BS EN ISO 9002 for several years and has constantly developed quality systems to maintain its position at the forefront of industry standards. The company is fully represented on appropriate committees involved in drafting relevant European standards.

Development & Innovation

Concentration on product design and the development of innovative solutions to meet customer needs is part of the culture at Ellis Patents. The full time design department receives ongoing investment to ensure its CAD facilities (and CAM facilities in the tool room) are state-of-the-art. Rapid prototyping and bespoke solutions are the norm.

The Company is constantly seeking to develop new and innovative products and also to improve existing products, thus ensuring the company is at the forefront of technology within its industrial sector.

Customer Service

Ellis Patents prides itself on its ability to respond to customer needs. Whether at the initial design stage for the development of new products, the ordering of existing products or at the point of despatch, our customer services staff provide an exemplary level of service.

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Why use cable cleats for securing cables?

Cable cleats are designed to fix, retain and support cables. In addition, where short-circuit faults are anticipated, correct cleating will result in the containment of the cables during a fault and enable the circuit to be restored once the fault has been repaired.

When adjacent cables carrying three phase current suffer a short circuit fault, the induced magnetic fields result in the cables experiencing significant opposing forces, a safe installation requires well designed and thoroughly tested cable cleats.

Short circuits and short circuit testing

Short circuit current is given either as a “peak” or an “rms” value. The peak current is the maximum current experienced by any of the phases and it occurs once within the first few milliseconds of the start of the fault. The rms current is a calculated value for the initial cycles of the fault. The relationship between peak current and rms current varies from installation to installation.

The forces experienced by a cleat during a short circuit are a function of short circuit current, cleat spacing and the distance between the cable centres (in the case of trefoil arrangements this is the cable diameter). When comparing short circuit test results for different products all three factors must be taken into consideration to compare the relative aggressiveness of the tests. The following formula taken from the draft Cenelec standard for cable cleats prEN 50368 calculates the force experienced by a cleat with cables arranged in trefoil formation:

$$F_t = \frac{0.17 \times i_p^2}{S}$$

Where:

- F_t = maximum force on the cable conductor in trefoil formation for a three phase short-circuit (N/m)
- i_p = the peak short-circuit current (kA)
- S = the cable diameter (m)

This formula gives the static load instantaneously created by the short circuit, however the phase changes of the alternating current mean that the forces on the cable and their direction are changing continuously. No simple formula and no static test can assess the effect of these dynamic forces. The ultimate proof of any product to withstand a short-circuit is to undertake a short-circuit test.

Ellis Patents carry out short circuit tests on a regular basis at various testing stations including The British Short Circuit Testing Station, Hebburn (BSTS). This comprehensive testing program enables us to produce empirical results when developing new products as well as to ensure that our existing products meet the appropriate International Standards. Recent tests have been conducted in accordance with the requirements of the current draft European Standard.

Ellis Patents are happy to allow their cable cleats to be subjected to any comparative tests with competitors' products.

Copies of test reports and video footage of tests on CD Rom are available on request.

The selection of trefoil cable cleats

When the cable diameter and anticipated maximum fault level are known it is easy to select a cleat and the appropriate spacing to give the most economical installation. However, other constraints such as space on the ladder or the need to fit the base before the strap may mean other alternatives must be considered.

The following tables give recommended cleat spacing along the cable run for the Ellis Patents range of cleats for more popular cable sizes at different peak fault levels.

Cleat spacing (mm)	CABLE OD = 33mm Peak fault level kA		
	Vulcan	Vari-cleat	Emperor
300	98	105	186
450	92	98	152
600	85	91	132
900	80	85	107
1200	74	79	93

Cleat spacing (mm)	CABLE OD = 38mm Peak fault level kA		
	Vulcan	Vari-cleat	Emperor
300	106	113	200
450	98	105	166
600	92	98	144
900	84	90	117
1200	79	84	102

Cleat spacing (mm)	CABLE OD = 43mm Peak fault level kA		
	Vulcan	Vari-cleat	Emperor
300	113	120	200
450	103	110	166
600	98	104	144
900	90	96	117
1200	84	90	102

Table of Cleat Features

	Aluminium Trefoil Cleats	2 Hole Cable Clamps + Surround for Triplex cable	Vulcan	Vari-cleat	Emperor	Atlas
Material	Aluminium	LSF Nylon	316 Stainless Steel	316 Stainless Strap/Aluminium Base	316 Stainless Steel	Galvanised Mild Steel
Liner	No	Not Required	LSF Liner	Optional Silicone Liner	LSF Liner	LSF Liner
Range Take	Small	Yes	Yes	Yes	Yes	Yes
Single Cable Cleating	No	38-135mm	33-153mm	36-215mm	34-72mm	38-130mm
Trefoil Cable Cleating	22.2-66.5mm	Yes with SFT	23-85mm	21-118mm	24-128mm	24-102mm
Quad Cables	No	No	Yes	Yes	No	Yes
Bundles	No	No	Yes	Yes	No	No
Specials Availability	No	No	Yes	No	Yes	Yes
Suitability for Triplex Cable	No	Yes with SFT	Yes with SFT	No	Yes with SFT	No
Max Short Circuit Withstand (Peak)	68 kA	77kA	See table above	See table above	See table above	154 kA
Cost	££	£	££	£££	£££	£££
Features	Traditional product	Inexpensive, suitable for corrosive atmospheres	Compact & economical	Separate base for ease of fitting	High strength, easy to use	Mechanically strong

Further details regarding specific cleat details can be found on the relevant pages of this brochure.

LSF Materials

Our LSF plastics contain no halogen or phosphorus components and, in the event of fire, emit low smoke & fumes. We use 2 grades as appropriate:

- LSF Nylon - A rigid plastic with VL94 accreditation to V0 at 1.6mm and a Limited Oxygen index of 31%
- LSF Polymeric - A fire resistant flexible plastic to BS 7878:7 and DIN VDE 0207 Part 24 Type HM2 (Germany) and a Limited Oxygen index of 35%

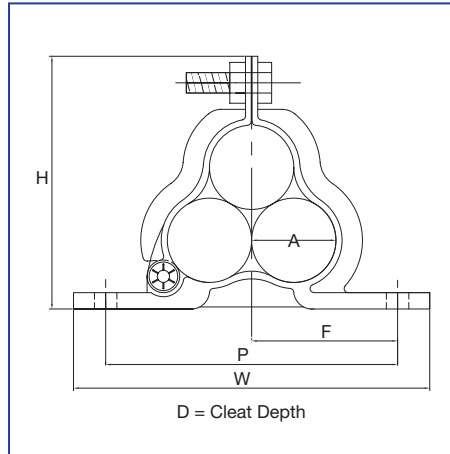


Aluminium Trefoil Cleats

Aluminium alloy castings to BS 1490: 1988. LM6. Natural finish with plated mild steel fasteners.
Black polyester powder coated finish either with or without stainless steel fasteners available to order.

200 series for cables 22.2 - 50.8mm dia.

One hinge, two hole fixing.



Part No.	Cable dia. range A	Dimensions (mm)					Fixing hole clearance Dia.	Weight g
		H	W	D	P	F		
TCA207	22.2-25.4	92.0	143.0	38.0	111.0	58.7	2 x 11	286
TCA208	25.5-28.6	96.8	149.0	38.0	117.5	61.9	2 x 11	293
TCA209	28.7-31.7	109.5	155.5	38.0	124.0	65.0	2 x 11	297
TCA210	31.8-34.9	112.7	162.0	38.0	130.0	68.3	2 x 11	302
TCA211	35.0-38.1	119.0	168.0	38.0	136.5	71.5	2 x 11	351
TCA212	38.2-41.3	123.8	174.5	38.0	143.0	74.6	2 x 11	365
TCA213	41.4-44.5	128.6	181.0	38.0	149.0	77.8	2 x 11	370
TCA214	44.6-47.6	139.7	187.5	38.0	155.5	81.0	2 x 11	392
TCA215	47.7-50.8	142.9	193.5	38.0	162.0	84.2	2 x 11	344

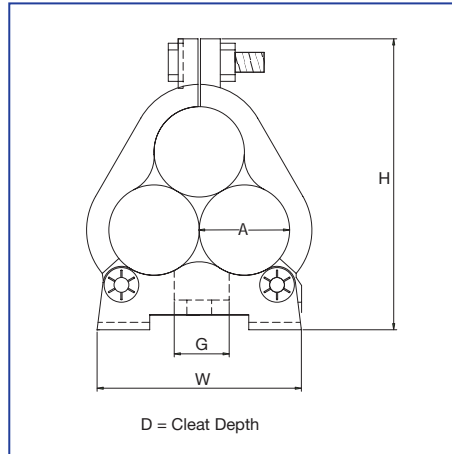
300 series for cables 50.9 - 66.5mm dia. (Heavy Duty Design)

Two hinges, two hole fixing.

Part No.	Cable dia. range A	Dimensions (mm)				Fixing hole clearance Dia.	Weight g
		H	W	D	P		
TCA300	50.9-54.0	156.0	200.0	52.0	168.0	2 x 13	680
TCA301	54.1-57.2	160.3	200.0	52.0	168.5	2 x 13	700
TCA302	57.3-60.3	166.7	208.0	52.0	176.0	2 x 13	725
TCA303	60.4-63.5	172.0	208.0	52.0	176.0	2 x 13	740
TCA304	63.6-66.5	177.0	213.0	53.0	180.0	2 x 13	790

500 series for cables 24.0 - 60.3mm dia.

Two hinges, centre hole fixing.

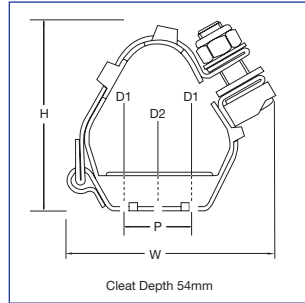


Part No.	Cable dia. range A	Dimensions (mm)				Fixing hole clearance Dia.	Weight g
		H	W	D	G		
TCA501	24.0-25.4	87.3	61.9	45.0	20.6	1 x 9	232
TCA502	25.5-27.0	92.0	63.5	45.0	20.6	1 x 9	251
TCA503	27.1-28.6	96.8	63.5	45.0	20.6	1 x 9	245
TCA504	28.7-30.0	100.0	73.0	45.0	22.2	1 x 11	291
TCA505	30.1-31.7	104.7	73.0	45.0	22.2	1 x 11	284
TCA506	31.8-33.3	111.1	76.2	45.0	22.2	1 x 11	328
TCA507	33.4-34.9	114.3	79.4	45.0	22.2	1 x 11	352
TCA508	35.0-36.5	117.5	82.5	45.0	22.2	1 x 11	338
TCA509	36.6-38.1	120.6	85.7	45.0	28.5	1 x 11	356
TCA510	38.2-39.7	123.8	88.9	45.0	28.5	1 x 11	356
TCA511	39.8-41.3	127.0	92.0	45.0	28.5	1 x 11	370
TCA512	41.4-42.9	130.2	95.2	45.0	28.5	1 x 11	364
TCA513	43.0-44.5	131.8	98.4	45.0	28.5	1 x 11	380
TCA514	44.6-46.0	136.5	104.8	45.0	28.5	1 x 11	440
TCA515	46.1-47.6	139.7	107.9	45.0	28.5	1 x 13	460
TCA516	47.7-49.2	148.4	109.5	45.0	28.5	1 x 13	480
TCA517	49.3-50.8	150.8	109.5	45.0	28.5	1 x 13	460
TCA518	50.9-52.4	152.4	112.7	45.0	28.5	1 x 13	460
TCA519	52.5-54.0	154.0	114.3	45.0	28.5	1 x 13	500
TCA520	54.1-55.6	155.5	117.5	45.0	28.5	1 x 13	480
TCA521	55.7-57.2	157.0	120.6	45.0	28.5	1 x 13	460
TCA522	57.3-58.7	160.3	123.8	45.0	28.5	1 x 13	520
TCA523	58.8-60.3	163.5	127.0	45.0	28.5	1 x 13	560

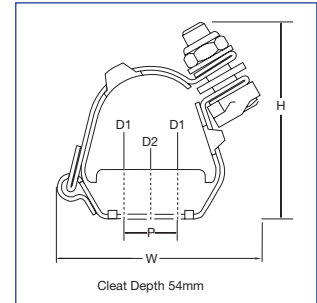
Emperor Cable Cleats

Emperor cable cleats are available for trefoil and single cable applications where the highest levels of short circuit withstand are required. The unique patented design allows rapid installation. Manufactured in type 316 stainless steel the Emperor cleats offer ultimate protection against the harshest environmental conditions. To protect and cushion the cables during short circuit conditions, the cleat is supplied with an integral LSF Zero Halogen Polymeric liner and base pad. Recommended fixing methods include using either two 10mm bolts or a single 12mm bolt (available as extras). A Retention Strap (see page 12 for details) can be fitted between wider spaced cleats for a more economical installation.

Trefoil



Single



Selection table for Trefoil Cable Application

Part No.	Cable Range		Dimensions					Weight g
	Min Dia. mm	Max Dia. mm	W mm	H mm	P mm	D1 mm	D2 mm	
ER23-28	23	28	96	83	25	10.2	12.2	425
ER27-32	27	32	97	88	25	10.2	12.2	440
ER30-35	30	35	99	91	25	10.2	12.2	445
ER33-38	33	38	103	95	25	10.2	12.2	460
ER36-42	36	42	124	100	50	10.2	12.2	600
ER40-46	40	46	125	106	50	10.2	12.2	605
ER44-50	44	50	130	117	50	10.2	12.2	630
ER48-55	48	55	132	121	50	10.2	12.2	640
ER51-58	51	58	136	128	50	10.2	12.2	650
ER55-62	55	62	160	135	75	10.2	12.2	810
ER59-66	59	66	163	143	75	10.2	12.2	825
ER63-70	63	70	166	151	75	10.2	12.2	850
ER67-74	67	74	169	158	75	10.2	12.2	850
ER71-78	71	78	172	165	75	10.2	12.2	890
ER74-82	74	82	177	171	75	10.2	12.2	890
ER77-85	77	85	183	177	75	10.2	12.2	905
ER82-88	82	88	191	187	75	10.2	12.2	805
ER88-96	88	96	207	203	75	10.2	12.2	850
ER96-103	96	103	221	218	75	10.2	12.2	940
ER103-111	103	111	237	235	75	10.2	12.2	950
ER111-119	111	119	253	250	75	10.2	12.2	1010
ER119-128	119	128	265	275	75	10.2	12.2	1220

Selection table for Single Cable Application

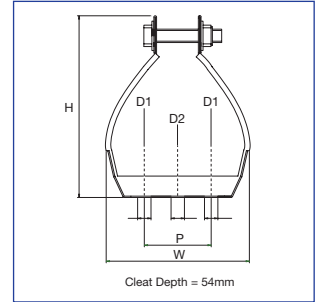
Part No. ES - Cable Dia in mm				Dimensions					Weight g
W mm	H mm	P mm	D1 mm	D2 mm					
ES34	ES35	ES36	ES37	87	84	25	10.2	12.2	400
ES36	ES39	ES40	ES41	91	89	25	10.2	12.2	400
ES42	ES43	ES44		92	90	25	10.2	12.2	400
ES45	ES46	ES47	ES48	96	93	25	10.2	12.2	420
ES49	ES50	ES51		97	94	25	10.2	12.2	420
ES52	ES53	ES54	ES55	99	98	25	10.2	12.2	430
ES56	ES57	ES58		100	99	25	10.2	12.2	420
ES59	ES60	ES61	ES62	103	102	25	10.2	12.2	450
ES63	ES64	ES65		104	103	25	10.2	12.2	430
ES66	ES67	ES68	ES69	109	101	25	10.2	12.2	460
ES70	ES71	ES72		110	102	25	10.2	12.2	440

Specials above 72mm available on request

Vulcan Range-taking Cable Cleats

Vulcan cable cleats are available for trefoil, single, quad and bundled cable applications where moderate levels of short circuit withstand are required. The unique compact design allows easy installation where space is limited. Manufactured in type 316 stainless steel they offer ultimate protection against the harshest environmental conditions. To protect and cushion the cables during short circuit conditions, the cleat comes with an integral LSF Zero Halogen Polymeric liner and base pad. Recommended fixing methods include using either one or two 10mm bolts (available as extras). A Retention Strap (see page 12 for details) can be fitted between wider spaced cleats for a more economical installation.

Vulcan cable cleats are supplied with an A4 clamping bolt and an A2 Nyloc nut. For offshore use we recommend the use of an A4 Nyloc nut, which should be specified at the time of ordering.



Selection table for Trefoil & Single Application

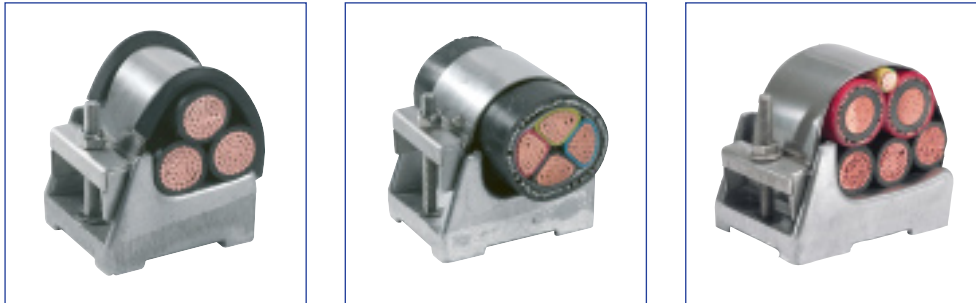
Part No.	Trefoil Cable Range		Single Cable Range		Dimensions					
	Min Dia. mm	Max Dia. mm	Min Dia. mm	Max Dia. mm	W(max) mm	H(max) mm	P mm	D1 mm	D2 mm	Weight g
VRT-01	23	28	33	50	67	93	25	10.2	10.2	290
VRT-02	27	32	43	58	73	101	25	10.2	10.2	290
VRT-03	30	36	49	64	78	107	25	10.2	10.2	300
VRT-04	33	38	55	70	84	113	25	10.2	10.2	300
VRT-05	36	42	58	75	95	118	50	10.2	10.2	390
VRT-06	40	46	63	84	100	125	50	10.2	10.2	390
VRT-07	44	50	73	90	108	135	50	10.2	10.2	400
VRT-08	48	55	83	100	118	144	50	10.2	10.2	410
VRT-09	51	58	88	104	122	149	50	10.2	10.2	420
VRT-10	55	62	88	110	136	154	75	10.2	10.2	540
VRT-11	59	66	90	115	140	163	75	10.2	10.2	550
VRT-12	63	70	100	125	148	171	75	10.2	10.2	560
VRT-13	67	74	107	132	156	178	75	10.2	10.2	570
VRT-14	71	78	120	145	164	187	75	10.2	10.2	580
VRT-15	74	82	125	150	172	193	75	10.2	10.2	590
VRT-16	77	85	132	153	178	199	75	10.2	10.2	600

Selection table for Quad Cable Application

Part No.	Quad Cable Range		Dimensions					
	Min Dia. mm	Max Dia. mm	W(max) mm	H(max) mm	P mm	D1 mm	D2 mm	Weight g
VRQ-01	23	25	68	105	25	10.2	10.2	300
VRQ-02	26	27	69	105	25	10.2	10.2	260
VRQ-03	28	32	75	110	25	10.2	10.2	300
VRQ-04	33	42	98	140	25	10.2	10.2	370
VRQ-05	43	47	111	142	50	10.2	10.2	420
VRQ-06	48	50	113	146	50	10.2	10.2	360
VRQ-07	51	57	123	164	50	10.2	10.2	380
VRQ-08	58	63	163	174	50	10.2	10.2	520
VRQ-09	64	70	172	183	50	10.2	10.2	550

Vari-cleat

Vari-cleat cable cleats are available for trefoil single and bundled cable applications where moderate levels of short circuit withstand are required. The unique patented compact design allows the separate over-strap to be installed after the cables have been positioned. The base is cast in aluminium (optional polyester or Kelvar coatings are available on request). The over-strap is manufactured from type 316 stainless steel (a silicone LSF liner is available on request). Recommended fixing methods include using either 8mm, 10mm or 12mm bolts (available as extras). A Retention Strap (see page 12 for details) can be fitted between wider spaced cleats for a more economical installation.



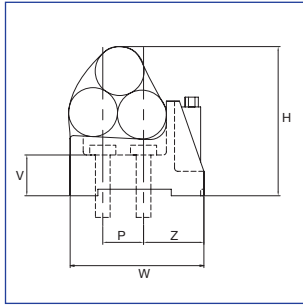
Selection table for Single & Trefoil Applications

Part No.	Suffix See Below 1,2+3	Cable Range no liner		Cable Range with liner		Fixing Holes
		Trefoil Dia.	Single Dia.	Trefoil Dia.	Single Dia.	
		mm	mm	mm	mm	
VC-AN1-		21-24	36-43	19-22	31-38	2 x M8
VC-AN2-		22-26	41-48	21-24	36-43	2 x M8
VC-AN3-		24-28	44-51	23-26	39-46	2 x M8
VC-AN4-		26-30	49-54	25-29	44-51	2 x M8
VC-BN1-		29-33	51-59	27-31	46-54	2 x M8
VC-BN2-		30-35	55-63	29-33	50-58	2 x M8
VC-BN3-		32-37	60-68	30-36	55-63	2 x M8
VC-BN4-		34-38	64-70	33-38	59-68	2 x M8
VC-CN1-		37-42	68-76	35-40	63-71	2 x M8
VC-CN2-		39-44	72-81	37-42	67-76	2 x M8
VC-CN3-		42-47	76-85	39-45	71-80	2 x M8
VC-CN4-		44-48	81-87	44-48	76-86	2 x M8
VC-DN1-		47-53	86-96	47-51	81-91	2 x M8 + 1 x M10
VC-DN2-		50-56	91-100	49-54	86-95	2 x M8 + 1 x M10
VC-DN3-		54-59	96-105	52-57	91-100	2 x M8 + 1 x M10
VC-DN4-		56-60	101-106	55-60	96-106	2 x M8 + 1 x M10
VC-EN1-		59-63.5	105-112	58-62	100-107	2 x M8 + 1 x M10
VC-EN2-		62-67	111-118	61-66	106-113	2 x M8 + 1 x M10
VC-EN3-		65-70	118-125	64-69	113-120	2 x M8 + 1 x M10
VC-EN4-		68-74	125-132	67-73	120-127	2 x M8 + 1 x M10
VC-FN1-		71-76	125-140	69-74	120-135	3 x M12
VC-FN2-		74-80	132-145	72-78	128-140	3 x M12
VC-FN3-		78-84	139-152	76-82	134-147	3 x M12
VC-FN4-		82-88	148-160	80-86	143-155	3 x M12
VC-GN1-		84-91	145-160	82-89	140-155	3 x M12
VC-GN2-		88-95	155-170	86-93	150-165	3 x M12
VC-GN3-		92-99	165-180	90-97	160-175	3 x M12
VC-GN4-		96-103	175-190	94-101	170-185	3 x M12
VC-HN1-		98-106	170-190	96-104	165-185	3 x M12
VC-HN2-		102-110	180-200	100-108	175-195	3 x M12
VC-HN3-		106-114	190-205	104-112	185-200	3 x M12
VC-HN4-		110-118	200-215	108-116	195-210	3 x M12

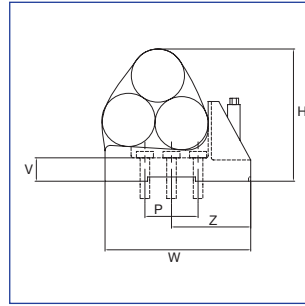
Suffix 1	Suffix 2	Suffix 3
A No liner	N Natural	0 Standard Holes
B Lined	P Polyester - Black	
C Heavy Duty No liner	K Kelvar	
D Heavy Duty Lined	C Kelvar & Flange Nut	

Vari-cleat

Cleat Dimensions in mm



Base Sizes
AN, BN & CN



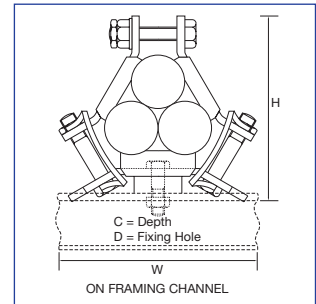
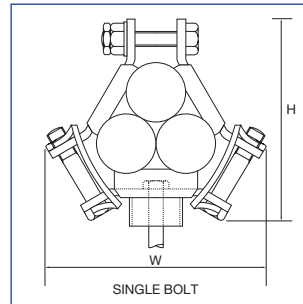
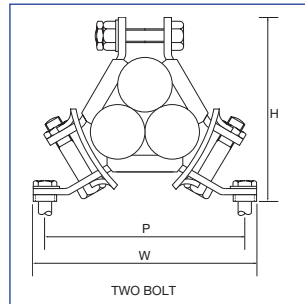
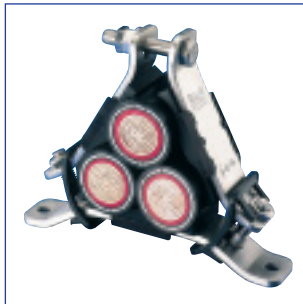
Base Sizes
DN, EN, FN GN & HN

Dimension table

Part No.	Base Fixing Thickness	Trefoil		Single		Cleat Mounting		Base Width	Weight g
	V	H	W	H	W	P	Z		
VC-AN1-	25	80	82	78	82	25	37	74	373
VC-AN2-	25	84	82	80	82	25	37	74	373
VC-AN3-	25	88	83	84	82	25	37	74	373
VC-AN4-	25	92	86	87	82	25	37	74	373
VC-BN1-	22	94	97	89	97	25	38	74	430
VC-BN2-	22	97	97	93	97	25	38	74	430
VC-BN3-	22	101	100	98	97	25	38	74	430
VC-BN4-	22	105	104	102	97	25	38	74	430
VC-CN1-	19	105	117	101	117	25	49	76	490
VC-CN2-	19	109	117	105	117	25	49	76	490
VC-CN3-	19	115	118	111	117	25	49	76	490
VC-CN4-	19	121	124	117	117	50	49	76	490
VC-DN1-	19	126	138	121	138	50	74	78	610
VC-DN2-	19	132	141	126	138	50	74	78	610
VC-DN3-	19	138	147	131	138	50	74	78	610
VC-DN4-	19	144	153	135	138	75	74	78	610
VC-EN1-	16	147	163	139	163	75	86	80	730
VC-EN2-	16	154	167	145	163	75	86	80	730
VC-EN3-	16	160	174	152	163	75	86	80	730
VC-EN4-	16	167	181	159	164	75	86	80	730
VC-FN1-	14	170	187	169	193	90	98	82	880
VC-FN2-	14	177	194	173	189	90	98	82	880
VC-FN3-	14	185	201	181	193	90	98	82	880
VC-FN4-	14	193	210	187	195	90	98	82	880
VC-GN1-	14	197	217	186	215	114	110	82	970
VC-GN2-	14	205	225	196	215	114	110	82	970
VC-GN3-	14	213	233	206	217	114	110	82	970
VC-GN4-	14	221	240	214	219	114	110	82	970
VC-HN1-	17.5	229	247	218	240	136	123	84	1170
VC-HN2-	17.5	237	255	229	243	136	123	84	1170
VC-HN3-	17.5	245	263	234	245	136	123	84	1170
VC-HN4-	17.5	252	271	244	245	136	123	84	1170

Atlas Range Taking Cable Cleats

Atlas cable cleats are available for trefoil and single cable applications where high levels of short circuit withstand are required. As well as providing the cables with significant mechanical support, the unique patented design provides a choice of one bolt, two bolt or framing channel fixing options. Manufactured in galvanised steel all cleats are supplied with a stainless steel top bolt to eliminate eddy currents. To protect and cushion the cables during short circuit conditions, the cleat comes with integral LSF Zero Halogen Polymeric pads. For Intermediate Strap type AS please contact our sales office.



Selection table for Trefoil Cable Applications

Part No.	Cable Dia. Range mm	Dimensions												Weight g	
		Two Bolt					Single Bolt				Framing Channel				
		W mm	H mm	C mm	P mm	D mm	W mm	H mm	C mm	D mm	W mm	H mm	C mm	D mm	
AR2-A31-	24-26	170	121	54	150	10.2	144	130	54	10.2	144	125	54	10.2	930
AR2-A32-	26-30	170	122	54	150	10.2	144	130	54	10.2	144	125	54	10.2	930
AR2-A33-	30-35	170	133	54	150	10.2	157	141	54	10.2	157	136	54	10.2	970
AR2-A34-	35-40	170	134	54	150	10.2	158	142	54	10.2	158	137	54	10.2	930
AR3-A35-	40-45	198	158	54	175	10.2	185	165	54	10.2	185	160	54	10.2	1200
AR3-A36-	45-50	198	160	54	175	10.2	187	167	54	10.2	187	162	54	10.2	1200
AR4-A37-	50-55	214	174	54	200	10.2	204	182	54	12.2	204	177	54	12.2	1300
AR4-A38-	55-60	214	179	54	200	10.2	210	187	54	12.2	210	182	54	12.2	1300
AR4-A39-	60-66	214	185	54	200	10.2	217	193	54	12.2	217	188	54	12.2	1300
AR5-A61-	66-71	250	225	54	225	10.2	254	225	54	12.2	254	220	54	12.2	1800
AR5-A62-	71-76	250	226	54	225	10.2	255	226	54	12.2	255	221	54	12.2	1800
AR5-A63-	76-82	250	230	54	225	10.2	260	230	54	12.2	260	225	54	12.2	1800
AR8-A64-	82-92	285	250	54	225	10.2	N/A				N/A			2100	
AR8-A65-	92-102	285	250	54	225	10.2	N/A				N/A			1900	

To order please add fixing suffix: Two Bolt - TB Single Bolt - SB Framing Channel - FC

Selection table for Single Cable Applications

Part No.	Cable Dia. Range mm	Dimensions												Weight g	
		Two Bolt					Single Bolt				Framing Channel				
		W mm	H mm	C mm	P mm	D mm	W mm	H mm	C mm	D mm	W mm	H mm	C mm	D mm	
AR2-A11-	38-41	170	128	54	150	10.2	144	136	54	10.2	144	131	54	10.2	950
AR2-A12-	41-47	170	129	54	150	10.2	144	136	54	10.2	144	131	54	10.2	930
AR2-A13-	47-55	170	140	54	150	10.2	157	147	54	10.2	157	142	54	10.2	940
AR2-A14-	55-63	170	141	54	150	10.2	158	148	54	10.2	158	143	54	10.2	930
AR3-A15-	63-70	198	164	54	175	10.2	185	172	54	10.2	185	167	54	10.2	1200
AR3-A16-	70-79	198	166	54	175	10.2	187	173	54	10.2	187	168	54	10.2	1200
AR4-A17-	79-87	214	180	54	200	10.2	204	188	54	12.2	204	183	54	12.2	1300
AR4-A18-	87-95	214	186	54	200	10.2	210	193	54	12.2	210	188	54	12.2	1300
AR4-A19-	95-104	214	192	54	200	10.2	217	199	54	12.2	217	197	54	12.2	1300
AR5-A51-	104-112	250	231	54	225	10.2	254	231	54	12.2	254	226	54	12.2	1700
AR5-A52-	112-120	250	232	54	225	10.2	255	232	54	12.2	255	227	54	12.2	1700
AR5-A53-	120-130	250	237	54	225	10.2	260	237	54	12.2	260	232	54	12.2	1700

To order please add fixing suffix: Two Bolt - TB Single Bolt - SB Framing Channel - FC

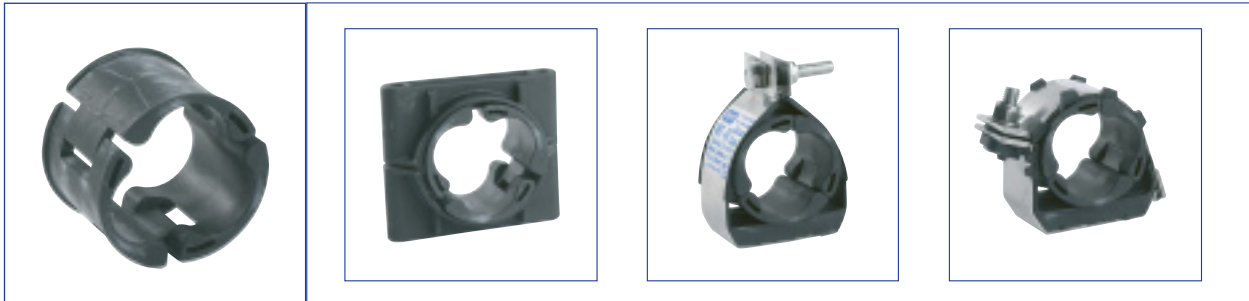
Retention Strap

Retention Straps are designed for use with any of the Ellis Patents ranges of trefoil cleats. When Retention Straps are adopted, cleats can be spaced more widely than normal. The less expensive Retention Strap can be fitted at mid-intervals between cleats to restrain cables in the event of a short-circuit. No facility is provided for fixing to ladder rungs. To protect and cushion cables during short-circuit conditions, the Retention Strap is fitted with an integral LSF Zero Halogen Polymeric liner. Manufactured to order for specific cable diameter ranges, retention straps can provide a more economical solution in the case of major projects.



Triplex Cable Surround

Manufactured from LSF Zero Halogen Polymeric material. The Triplex Cable Surround product can be used incorporated within a single cable cleat to secure three single core cables which are spirally twisted together (triplex cable). The surround overcomes the twist in the cable to allow cleating at any point along the length.



Part No.	Triplex Cable Range		Width	Weight g
	Min Dia. mm	Max Dia. mm		
SFT31	28	34	62	87.0
SFT36	33	39	62	113.4
SFT43	39	47	62	140.0

Matrix Cable Cleat

The Matrix cable cleat provides a space saving solution to the problems of cleating multiple cable runs to cable ladder or steel frameworks. The cleat is made to order as a special to suit particular applications and any number of rows and columns can be accommodated.

The steel frameworks can be supplied in hot dipped galvanised steel, Type 316 stainless steel or duplex steel UNSS 32760. The plastic cable support pads are produced in LSF Zero Halogen Polymeric material.

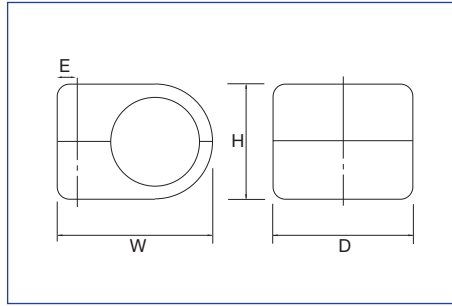
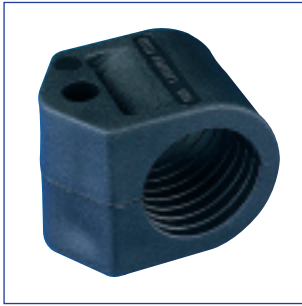
Please contact our sales office for further information.



One & Two Hole Cableclamps

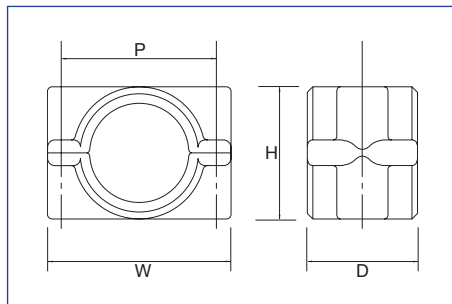
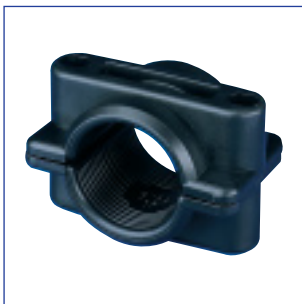
Available in Black Polypropylene (B) or Black Flame Retardant Zero Halogen Phosphorus Free Nylon (LSF)

One Hole Cableclamp



Part No.	Material Suffix	Cable Dia. Range mm	Dimensions				Fixing Hole clearance mm	Pack Qty	Weight g	
			W mm	H mm	D mm	E mm			B	LSF
1H-10	B or LSF	10-13	34.5	18.0	44.0	11.1	10	100	14	20
1H-11	B or LSF	13-16	37.8	21.6	44.0	11.1	10	100	18	25
1H-12	B or LSF	16-19	41.5	25.0	44.0	11.1	10	100	22	30
1H-13	B or LSF	19-23	44.7	28.4	44.0	11.1	10	100	25	34
1H-14	B or LSF	23-27	49.5	33.0	44.0	11.1	10	100	30	41
1H-15	B or LSF	27-32	54.0	38.0	44.0	11.1	10	100	37	48
1H-16	B or LSF	32-38	59.5	44.0	44.0	11.1	10	100	45	61
1H-17	B or LSF	38-46	66.5	50.0	44.0	11.1	10	50	52	70
1H-18	B or LSF	46-51	78.0	60.0	44.0	11.1	10	50	66	86

Two Hole Cableclamp

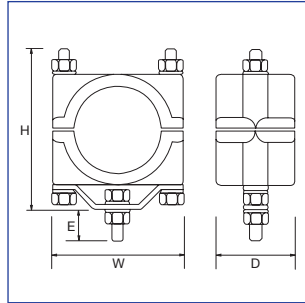
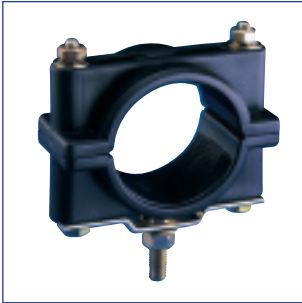


Part No.	Material Suffix	Cable Dia. Range mm	Dimensions				Fixing Hole mm	Pack Qty	Weight g	
			W mm	H mm	D mm	P mm			B	LSF
2H-07	B or LSF	38-46	80.0	60.0	40.0	60.0-64.0	10	25	57	74
2H-08	B or LSF	46-51	100.0	66.0	60.0	76.0-83.0	10	25	128	160
2H-09	B or LSF	51-57	100.0	70.0	60.0	76.0-83.0	10	25	136	181
2H-10	B or LSF	57-64	100.0	75.0	60.0	76.0-83.0	10	25	139	188
2H-11	B or LSF	64-70	134.0	85.0	62.5	108.5-115.0	10	15	237	320
2H-1200	B or LSF	70-76	135.0	92.0	63.0	108.5-115.0	10	15	244	329
2H-1201	B or LSF	76-83	146.0	100.0	63.0	109.0-116.0	10	10	283	382
2H-1202	B or LSF	83-90	146.0	103.0	63.5	109.0-116.0	10	10	272	355
2H-131	B or LSF	90-97	165.0	138.0	80.0	128.0-134.0	12	5	450	593
2H-132	B or LSF	97-105	165.0	143.0	80.0	128.0-134.0	12	5	408	527
2H-141	B or LSF	105-112	170.0	148.0	90.0	136.0-141.0	12	5	486	660
2H-142	B or LSF	112-120	170.0	156.0	90.0	136.0-141.0	12	5	462	600
2H-151	B or LSF	120-128	190.0	165.0	100.0	155.0-160.0	12	5	tba	tba
2H-152	B or LSF	128-135	190.0	174.0	100.0	155.0-160.0	12	5	710	934

Framing Channel Washer (91-W on page 25) should be used when attaching 2H Cable Clamps to framing channel. This range is currently under review and will gradually be replaced with a new improved design designated 2F- which does not require a framing channel washer

Heavy Duty Single Bolt Fixing Cableclamp

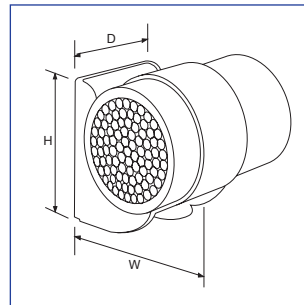
The two hole cableclamp assembly provides a means of securing cables with outside diameters of between 46mm to 90mm using a single bolt fixing support bracket and a two hole cableclamp. The assembly is supplied complete with a support bracket frame in zinc plated mild steel, a 12mm (M12) fixing bolt, nut and washer and a two hole cableclamp (in Black PP or LSF Nylon) as per required cable diameter range.



Part No.	Material Suffix	Support Bracket Material	Cable Dia. Range mm	W mm	H mm	D mm	E mm	Weight g	
								B	LSF
2HAS-08	B or LSF	Z	46-51	100.0	107.0	60.0	38.0	420	450
2HAS-09	B or LSF	Z	51-57	100.0	107.0	60.0	38.0	430	470
2HAS-10	B or LSF	Z	57-64	100.0	107.0	60.0	38.0	440	480
2HAS-11	B or LSF	Z	64-70	134.0	117.0	62.5	38.0	570	650
2HAS-1200	B or LSF	Z	70-76	135.0	127.0	63.0	38.0	570	660
2HAS-1201	B or LSF	Z	76-83	146.0	137.0	63.0	38.0	610	710
2HAS-1202	B or LSF	Z	83-90	146.0	137.0	63.5	38.0	600	690

Elite Range Taking Cable Cleat

Practical and easy to install. Screw fix to wall, skirting or tray. Large range-take with only four sizes of cleat to cover cables from 9.5mm to 52.0mm. Fully releasable strap, allowing ease of re-installation. Available in Black Polypropylene (B), White Polypropylene (W) or Black Nylon (LSF)

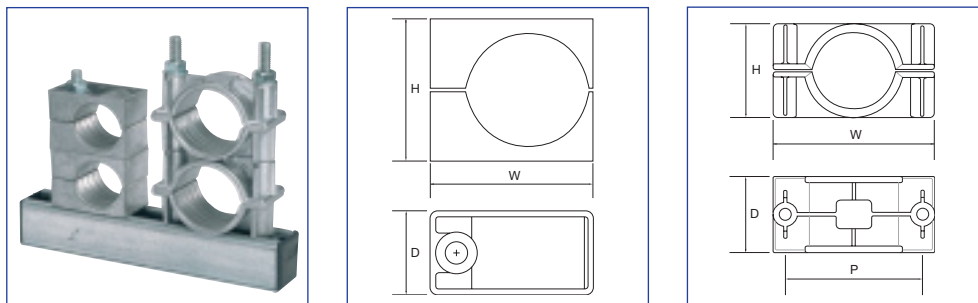


Part No.	Material Suffix	Cable Range		Dimensions				Pack Qty	Weight g	
		Min dia. mm	Max dia. mm	H mm	D mm	W(max) mm	Fixing Hole mm		B/W	LSF
15-1	B,W or LSF	9.5	16.0	37.0	25.0	27.0	6.0	100	6.0	8.0
15-2	B,W or LSF	15.0	25.0	37.0	32.0	36.0	6.0	50	8.0	10.9
15-3	B,W or LSF	23.0	37.0	48.0	36.0	48.0	6.0	50	15.0	18.1
15-4	B,W or LSF	34.0	52.0	65.0	40.0	63.0	6.0	25	20.0	25.5

One & Two Hole Cableclamps - Aluminium

Cast aluminium alloy cable cleats are designed for higher specification projects which call for an all metal product, installed in operating temperature of -60degC to +100degC

Available as standard in plain LM6 aluminium to BS 1490 for dry industrial use or outdoor unpolluted areas, the product can be epoxy coated for use in harsh environments, such as sea air conditions.



One Hole Cableclamp

Part No.	Cable Range		Dimensions			Fixing Hole mm	Pack Qty	Item Weight g
	Min Dia. mm	Max Dia. mm	W mm	H mm	D mm			
1G-11N	13	16	44	34	43	M10	50	80
1G-12N	16	19	48	36	43	M10	50	91
1G-13N	19	22	50	38	43	M10	50	98
1G-14N	22	26	53	40	43	M10	50	100
1G-15N	26	33	59	44	43	M10	25	120
1G-16N	33	39	65	50	43	M10	25	132
1G-17N	39	45	71	56	43	M10	25	152
1G-18N	45	51	78	63	43	M10	25	168
1G-19N	51	58	84	73	43	M10	10	202
1G-20N	58	65	91	80	43	M10	10	189
1G-21N	65	71	97	89	43	M10	10	253

Two Hole Cableclamp

Part No.	Cable Range		Dimensions				Fixing Hole mm	Pack Qty	Item Weight g
	Min Dia. mm	Max Dia. mm	W mm	H mm	D mm	P mm			
2G-09N	51	57	96	68	49	76	M10	25	208
2G-10N	57	64	96	75	49	76	M10	25	220
2G-11N	64	70	134	84	64	114	M10	10	376
2G-1200N	70	76	134	90	64	114	M10	10	392
2G-1201N	76	83	142	96	64	114	M12	10	451
2G-1202N	83	89	142	102	64	114	M12	5	550
2G-131N	89	95	154	114	76	126	M12	5	650
2G-132N	95	101	154	120	76	126	M12	5	750
2G-141N	101	108	169	134	76	140	M12	5	1100
2G-142N	108	114	169	140	76	140	M12	5	1450

Specials:

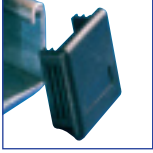
For cable diameters above 114mm please contact our sales office

Framing Channel Accessories

Framing Channel End Caps

Manufactured in Black or White Polypropylene (PP), Black or White LDPE (PE).

The range of end caps accommodate the different dimensional specifications of framing channel the 'EC' type end cap is a spring fit whilst the 'Gripper' type end cap is provided with fins which bend and deform into the channel. The end caps are supplied with a panel which can include customers' corporate logo or name.



Part No.	Description	Size mm	Material Suffix	Colour	Pack Qty	Weight g
91-ECLB	'EC' type channel end cap	41 x 41	PP	Black	500	7.3
91-ECLW	'EC' type channel end cap	41 x 41	PP	White	500	7.3
91-ECSB	'EC' type channel end cap	41 x 21	PP	Black	500	3.2
91-ECSW	'EC' type channel end cap	41 x 21	PP	White	500	3.2
91-JGLB	'Gripper' type channel end cap	41 x 41	PE	Black	500	9.4
91-JGLW	'Gripper' type channel end cap	41 x 41	PE	White	500	9.4
91-JGSB	'Gripper' type channel end cap	41 x 21	PE	Black	500	4.4
91-JGSW	'Gripper' type channel end cap	41 x 21	PE	White	500	4.4

Butterfly Clip

Manufactured in Black Nylon 66 (NY) the butterfly clip fits into framing channel (41mm wide x any depth) and provides a support for cable ties (up to 10mm in width) to strap cables and cable bundles run at right angles to the channel. The butterfly clip is supplied without a cable tie, but one can be provided on request.



Part No.	Material Suffix	Pack Qty	Weight g
91-BC	NY	100	3.8

Thermal Spacer

Manufactured in Black Polypropylene (PP) the thermal spacer ensures separation of the cable on cable ladder or tray and is available in two heights, 75mm and 50mm. The spacer is provided with a range of fitting options for conventional framing channel, ladder rungs with reduced return flanges and also for fitting to cable tray using a plain hole. A slotted hole is also provided for running heat detection cable.



Part No.	Height above ladder rung	Material	Pack Qty	Weight g
91-TSL1	75mm	PP	100	19.5
91-TS7.5	50mm	PP	100	14.7

Cable Fixings

Single Way Fixing Cable Cleat

Robust single fixing cleat for securing armoured power cables. Size range 9mm to 35mm in diameter. Available in Black Acetal (A), Black Polypropylene (B) & Grey Flame Retardant Polypropylene (FR)



Part No.	Material Suffix	Cable Dia. mm	Fixing Hole mm	Pack Qty	Weight g
10-034	B or FR	9.0	3	500	0.8
10-042	B or FR	10.6	4	500	1.9
10-046	B or FR	11.7	4	500	2.8
10-053	B or FR	13.5	4	500	2.8
10-056	B or FR	14.2	4	500	3.1
10-061	B or FR	15.5	4	200	3.1
10-065	B or FR	16.5	4	200	4.8
10-072	B or FR	18.2	4	500	4.2
10-083	B or FR	21.1	6	200	7.7
10-098	B or FR	24.8	4 x 6	200	6.4
10-106	B or FR	27.0	6	200	7.5
10-120	A	31.0	6	100	15.8
10-138	A	35.0	6	100	23.0

2 Way Single Fixing Cable Cleat

Two way version of the single fixing cable cleat for installation to flat surfaces. Size range 9.4mm to 14.2mm in diameter.



Part No.	Material Suffix	Cable Dia. mm	Fixing Hole mm	Pack Qty	Weight g
2W37	B	9.4	4	500	2.2
2W42	B or FR	10.6	4	200	3.3
2W46	B or FR	11.7	4	500	3.6
2W53	B or FR	13.5	4	500	4.0
2W56	B or FR	14.2	4	200	5.0

3 & 4 Way Double Fixing Cable Cleat

Three way version of a double fixing cable cleat for installation to flat surfaces. Size range 11.7mm to 14.2mm.



Part No.	Material Suffix	Cable Dia. mm	Fixing Hole mm	Pack Qty	Weight g
3W46	B or FR	11.7	4	200	8.7
3W56	B or FR	14.2	4	200	9.3
4W10	B	4 x 15	4	100	9.5

Single Way Heavy Duty Radiused Pole Cleat

Heavy duty cleats (to fit single, 2 & 3 way cables) designed to run power cables down wooden electricity supply poles. The curvature of the cleats mounting surface is appropriate for 200mm diameter poles.



Part No.	Material Suffix	Cable Dia. mm	Fixing Hole mm	Pack Qty	Weight g
35-04	B	27.6	8	100	13.0
35-06	B	31.2	8	100	12.0
35-065	B	33.5	8	100	18.5
35-07	B	36.0	8	100	14.0
35-08	B	37.8	8	100	16.0
35-10	B	41.5	8	100	26.0
35-12	B	44.6	8	100	25.0
35-22	B	49.2	8	100	23.0
35-26	B	53.5	8	50	25.0
35-30	B	56.6	8	50	27.0
35-34	B	61.6	11	50	53.0
35-42	B	72.5	11	25	84.0

Two Way Heavy Duty Radiused Pole Cleat



Part No.	Material Suffix	Cable Dia. mm	Fixing Hole mm	Pack Qty	Weight g
2WP04	B	11.7	4	200	6.1
2WP06	B	13.2	4	200	5.4
2WP10	B	16.5	4	200	6.5
2WP15	B	19.1	8	200	7.3

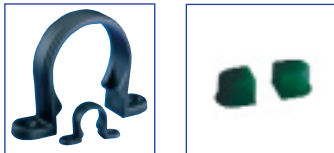
Three Way Heavy Duty Radiused Pole Cleat



Part No.	Material Suffix	Cable Dia. mm	Fixing Hole mm	Pack Qty	Weight g
3WP04	B	11.7	6.35	200	8.0
3WP06	B	13.2	6.35	200	8.2
3WP10	B	16.5	6.35	200	9.8
3WP15	B	19.2	6.35	200	12.5
3WP20	B	21.7	6.35	200	13.7
3WP2	B	15.0	6.35	200	10.7
3WN05	B	24.0	6.35	200	11.9

Single Way Snap on Saddle Clip

Single way two bolt fixing snap on saddle clip for securing armoured power cables, telecommunications cables, steel, copper and uPVC tube and plastic waste and vent pipe. The shoulders of the saddle clip hold the cable or pipe away from the mounting surface. Size range 7.5mm to 90mm in diameter.



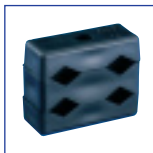
Part No.	Material Suffix	Cable Dia. mm	Fixing Hole mm	Pack Qty	Weight g
90-M095	B or FR	7.5	3.75	500	1.8
90-M120	B or FR	12.0	3.75	500	2.4
90-01	B or FR	12.7	3.75	500	2.2
90-02	B or FR	15.0	3.75	500	2.4
90-03	B or FR	17.5	4.0	500	3.3
90-075	B or FR	19.0	4.0	500	3.6
90-04	B or FR	23.0	4.0	500	3.2
90-04.1	B or FR	24.2	4.0	500	3.1
90-05	B or FR	25.4	4.0	500	4.3
90-06	B or FR	27.5	5.0	500	5.3
90-07	B or FR	31.7	5.0	200	6.8
90-08	B or FR	34.0	5.0	200	6.7
90-09	B or FR	38.1	5.0	100	6.8
90-10	B or FR	42.0	5.0	200	8.7
90-11	B or FR	42.6	5.0	200	9.5
90-12	B or FR	44.4	5.0	100	7.4
90-13	B or FR	48.7	5.0	200	10.4
90-14	B or FR	53.9	5.0	100	14.4
90-143	B or FR	55.0	6.0	100	tba
90-15	B or FR	60.5	6.0	100	25.8
90-19	B or FR	75.0	7.5	50	40.8
90-24**	B	88.9	10.0	25	70.7
90-S	B	Saddle Clip Spacer*			1.2

** This item is supplied with a base plate

*Spacer suitable for use with all saddle clips (except part no 90-24). Provides additional separation of the cable or pipe from the mounting surface of approximately 12.5mm.

2 Way Cleat and Spacer

Range-taking two way stacking cleat for securing armoured power cables on poles and flat surfaces. Size range 6.35 to 19.1mm in diameter.

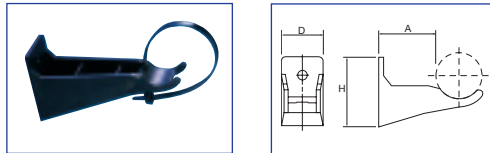


Part No.	Material Suffix	Cable Dia. mm	Fixing Hole mm	Pack Qty	Weight g
E272	B or FR	11.1-19.1	10.0	200 pairs	22.7
E272S	B or FR	11.1-19.1	10.0	200	15.1
E273	B or FR	6.35-12.0	6.63	400 pairs	11.4
E273S	B or FR	6.35-12.0	6.63	200	7.2

S = Spacer

ABC Wall Cleat

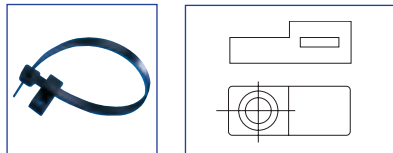
The ABC wall cleat (tested to ESI standards 43-14) provides a simple solution to the problem of fixing vertical and horizontal aerial bundled cable to walls and other surfaces.



Part No.	Material Suffix	A mm	H mm	D mm	Fixing Hole	Pack Qty	Weight g
115-010	B	10	47	31	6	100	12
115-050	B	50	59	37	6	100	27
115-100	B	100	72	43	6	25	54
115-125	B	125	80	48	6	25	74

Cable Tie Base

The cable tie base accommodates cable tie widths up to 10mm. This product is supplied without a cable tie, but one can be provided on request.



Part No.	Material Suffix	Fixing Hole mm	Pack Qty	Weight g
115-001	NY	6	100	2.5

Universal Cleat

Designed to fit a special framework (not shown, but can be supplied on request). The framework enables multiple cables (e.g. 4 x 3, 5 x 3) to be cleated with the 30U-1 cleat ensuring separation between each cable. The whole assembly can be secured to supporting steelwork.



Part No.	Material Suffix	Cable Dia. mm	Pack Qty	Weight g
30U-1	B	23.8-38.1	50 pairs	89

Earthing Strip Clips

Plastic Self-locking cleat for PVC coated, bare copper or aluminium earthing strip.
Available in Black Polypropylene (B) or Grey Flame Retardant Polypropylene (FR).



Metric Sizes

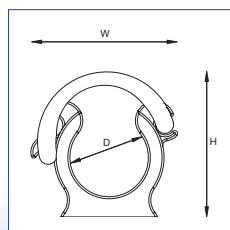
Part No.	Material Suffix	Strip Size mm	Hold Off mm	Length mm	Fixing Hole (slotted)mm	Pack Qty	Weight g
70-04	B or FR	20 x 4	17	55	11 x 8	100	15
70-06	B or FR	20 x 6	16	55	11 x 8	100	16
70-07	B or FR	25 x 6	16	55	11 x 8	100	14
70-08	B or FR	50 x 4	18	87	11 x 8	100	28
70-09	B or FR	40 x 6	16	87	11 x 8	100	28
70-10	B or FR	50 x 6	15	87	11 x 8	100	26
70-11	B or FR	40 x 4	18	87	11 x 8	100	28
70-12	B or FR	50 x 10	11	87	11 x 8	100	24
70-14	B or FR	60 x 6	18	97	11 x 8	100	31
70-16	B or FR	80 x 6	19	118	11 x 8	50	15

Imperial Sizes

Part No.	Material Suffix	Strip Size mm	Hold Off mm	Length mm	Fixing Hole (slotted)mm	Pack Qty	Weight g
60-04	B or FR	1" x 1/8"	5/16"	2"	7/16" x 5/16"	100	12
60-05	B or FR	1 1/4" x 1/8"	3/8"	2 5/8"	7/16" x 5/16"	100	21
60-06	B or FR	1 1/4" x 3/16"	5/16"	2 5/8"	7/16" x 5/16"	100	20
60-08	B or FR	1 1/2" x 3/16"	5/16"	2 5/8"	7/16" x 5/16"	100	20
60-10	B or FR	1 1/2" x 1/8"	3/8"	2 5/8"	7/16" x 5/16"	100	20
60-15	B or FR	2" x 1/8"	1/4"	3 1/8"	7/16" x 5/16"	100	24
60-26	B or FR	1" x 1/8"	3/4"	2 1/8"	7/16" x 5/16"	100	16
60-27	B or FR	1" x 3/16"	5/8"	2 1/8"	7/16" x 5/16"	100	16
60-28	B or FR	1 1/2" x 3/16"	5/8"	2 7/8"	7/16" x 5/16"	100	25
60-32	B or FR	1 1/4" x 1/4"	5/8"	3"	7/16" x 5/16"	100	25
60-34	B or FR	1 1/2" x 1/8"	3/4"	3"	7/16" x 5/16"	100	tba
60-36	B or FR	1 1/2" x 1/4"	5/8"	3"	7/16" x 5/16"	100	24
60-37	B or FR	1 1/2" x 3/8"	3/8"	2 7/8"	7/16" x 5/16"	100	23
60-38	B or FR	1 3/4" x 1/8"	3/4"	3 3/8"	7/16" x 5/16"	100	tba
60-39	B or FR	1 3/4" x 1/4"	5/8"	3 3/8"	7/16" x 5/16"	100	27
60-40	B or FR	2" x 1/8"	3/4"	3 3/8"	7/16" x 5/16"	100	30
60-42	B or FR	2" x 1/4"	5/8"	3 3/8"	7/16" x 5/16"	100	25
60-44	B or FR	2" x 3/8"	3/8"	3 3/8"	7/16" x 5/16"	100	24

Cable Conduit Clip

Manufactured in Black or White Nylon this surface mounted Conduit Clip complete with integral hinged overstrap is suitable for 20mm and 25mm Conduit.



Part No	Material Suffix	D mm	H mm	W mm	Fixing Hole mm	Stand off	Pack Qty	Weight g
CC20B	B or W	20	35	35	4	5	100	tba
CC25B	B or W	25	40	40	4	5	100	tba

Jointers' Tools

Cable Core Twisters

Used to manipulate bare or insulated cable cores and to align the cores prior to jointing. Produced in Nylon (International Orange).



3 Core

Part No.	Cores	Core Size Range	Pack	Weight g
110-95C	3	70mm ² Bare x 95mm ² Bare	10	54
110-X01C	3	95mm ² Bare x 95mm ² Ins	10	51
110-120C	3	70mm ² Bare x 120mm ² Bare	10	51
110-120IC	3	70mm ² Ins x 120mm ² Ins	10	49
110-X06C	3	120mm ² Bare x 120mm ² Ins	10	48
110-X07C	3	185mm ² Bare x 185mm ² Ins	10	148
110-240C	3	185mm ² Bare x 240mm ² Bare	10	146
110-300C	3	185mm ² Bare x 300mm ² Bare	10	147
110-300IC	3	185mm ² Ins x 300mm ² Ins	10	139
110-X08C	3	300mm ² Bare x 300mm ² Ins	10	138
110-X09C	3	70mm ² Bare x 70mm ² Ins	10	53
110-X10C	3	95mm ² Bare x 185mm ² Bare	10	154
110-X11C	3	95mm ² Ins x 185mm ² Ins	10	149

4 Core

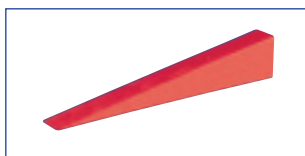
Part No.	Core	Core Size Range	Pack	Weight g
110-41C	4	95mm ² Bare x 95mm ² Ins	10	51
110-42C	4	185mm ² Ins x 240mm ² Ins	10	142
110-43C	4	185mm ² Bare x 240mm ² Bare	10	150
110-44C	4	185mm ² Ins x 300mm ² Ins	10	141
110-X02C	4	185mm ² Bare x 300mm ² Bare	10	146
110-X14C	4	95mm ² Bare x 185mm ² Bare	10	155
110-X15C	4	95mm ² Ins x 185mm ² Ins	10	149

3 & 4 Core

Part No.	Cores	Core Size Range	Pack	Weight g
110-X03C	3 & 4	3C 95mm ² Ins x 4C 95mm ² Ins	10	50
110-X04C	3 & 4	3C 185mm ² Ins x 4C 185mm ² Ins	10	145
110-X05C	3 & 4	3C 300mm ² Ins x 4C 240mm ² Ins	10	135
110-X12C	3 & 4	3C 300mm ² Bare x 4C 300mm ² Bare	10	141
110-X13C	3 & 4	3C 300mm ² Ins x 4C 300mm ² Ins	10	134

Cable Core Wedge

Used to prise apart and to separate the cores of cables. Produced in Nylon (International Orange).



Part No	Length	Width	Nominal Lift	Material	Pack Qty	Weight g
110-1NYC	150	25	15	C	10	41
110-2NYC	225	25	25	C	10	65
110-3NYC	225	25	38	C	10	89
110-4NYC	150	13	25	C	10	32

Cable Core Guard

Used to provide separation between a cable core which is being cut and neighbouring cores. Produced in Nylon (International Orange).



Part No	Nominal Lift	Pack	Weight g
120-CG1C	23mm	10	57

Cable Core Stripper

Used to remove insulation and sheathing from live armoured power cables. The tool has an exceptionally strong tough polymeric blade and a unique handle moulded in a softer plastic material to provide a cushion when a hammer is used to initiate a cut in the cable sheath.



Part No	Nominal Lift	Pack	Weight g
120-CS	90mm	10	183

Cable Core Spreader

Used to hold apart the cores of cable when jointing cables. Produced in Natural Nylon.

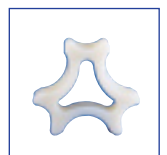


3 & 4 Way

Part No	Core	Core Size Range	Pack Qty	Weight g
120-VNY	3	240 - 300mm ²	100	45
120-WNY	3	185mm ²	100	38
120-YNY	3	95 - 150mm ²	100	30
120-ZNY	3	95mm ²	100	24
120-UNY	4	Universal	100	37
120-15	4	Universal	100	10
120-20	4	Universal	100	12

Cable Core Former

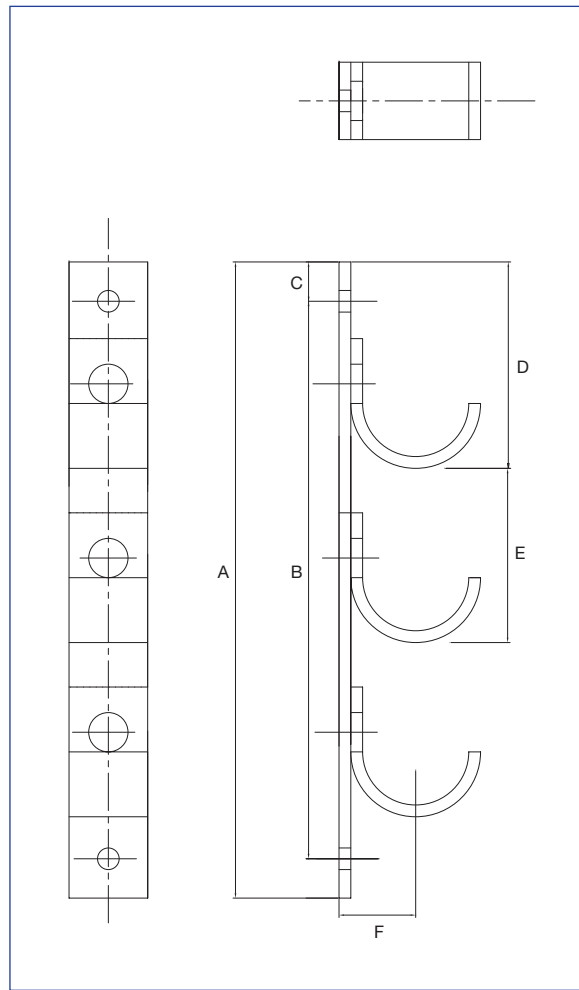
Holds the cores of a three core cable apart whilst a joint is being made. The central hole provides a facility for positioning a mastic bung. Produced in Natural Nylon.



Part No	Core Separation Distance	Pack Qty	Weight g
120-F	32mm - 58mm	10	44.1

Cable Hangers

Fabricated from mild steel flat bar, hot dipped galvanised to BS 729 : 1971 (1986) after manufacture.
Special designs available on request e.g. Girder Hanging, 90° Twist, Side by Side cables



Part No.	Ways	Dimensions mm						Material Size		Fixing holes dia.	Pack Qty	Weight g
		A	B	C	D	E	F	Width	Thickness			
CH1W1	1	145	105	20	105	-	37	40	6	11	1	500
CH2W1	2	235	195	20	105	90	37	40	6	11	1	900
CH3W1	3	325	285	20	105	90	37	40	6	11	1	1300
CH4W1	4	415	375	20	105	90	37	40	6	11	1	1700
CH5W1	5	505	465	20	105	90	37	40	6	11	1	2100
CH6W1	6	595	555	20	105	90	37	40	6	11	1	2500
CH1W2	1	170	130	20	130	-	50	50	6	13	1	820
CH2W2	2	295	255	20	130	125	50	50	6	13	1	1480
CH3W2	3	420	380	20	130	125	50	50	6	13	1	2240
CH4W2	4	545	505	20	130	125	50	50	6	13	1	2980
CH5W2	5	670	630	20	130	125	50	50	6	13	1	3710
CH6W2	6	795	755	20	130	125	50	50	6	13	1	4440
CH1W3	1	185	145	20	145	-	62	50	6	13	1	980
CH2W3	2	345	305	20	145	160	62	50	6	13	1	1900
CH3W3	3	505	465	20	145	160	62	50	6	13	1	2820
CH4W3	4	665	625	20	145	160	62	50	6	15	1	3600
CH5W3	5	825	785	20	145	160	62	50	6	15	1	4660
CH6W3	6	985	945	20	145	160	62	50	6	15	1	5600

Size 1 for cables up to 50mm Diameter

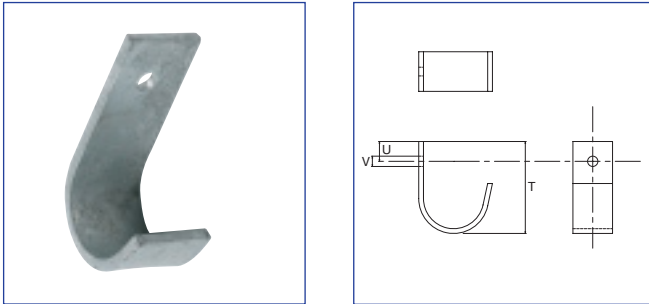
Size 2 for cables 51 - 75mm Diameter

Size 3 for cables 76 - 100mm Diameter

Suspension Hooks

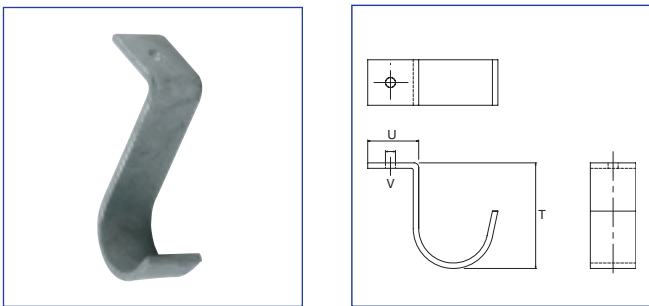
Fabricated from mild steel flat bar, hot dipped galvanised to BS 729 : 1971 (1986) after manufacture.
Special designs available on request, see example on page 26

Type A



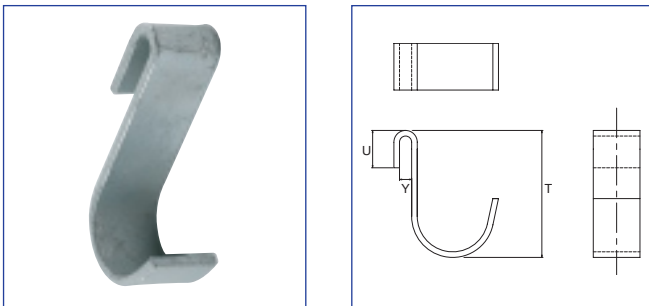
Part No.	Max cable dia.	Dimensions mm			Material Size		Pack Qty	Weight g
		T	U	V	Width	Thickness		
SHA1	50	105	25	11	40	6	1	320
SHA2	75	120	25	13	50	6	1	490
SHA3	100	155	25	13	50	6	1	640

Type B



Part No.	Max cable dia.	Dimensions mm			Material Size		Pack Qty	Weight g
		T	U	V	Width	Thickness		
SHB1	50	125	55	11	40	6	1	440
SHB2	75	140	60	13	50	6	1	680
SHB3	100	150	60	13	50	6	1	780

Type C

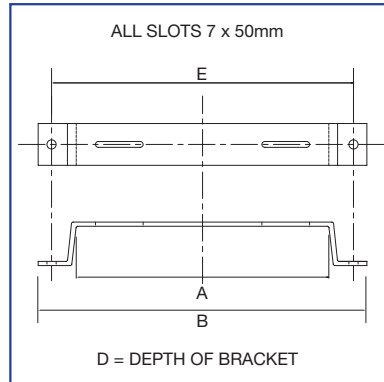
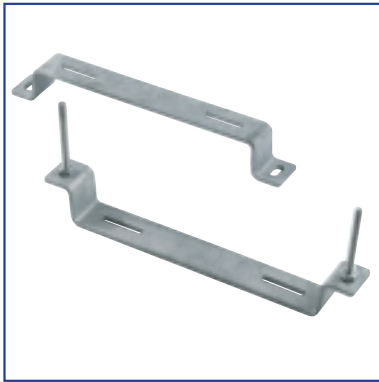


Part No.	Max cable dia.	Dimensions mm			Material Size		Pack Qty	Weight g
		T	U	Y	Width	Thickness		
SHC1	50	125	40	13	40	6	1	460
SHC2	75	140	45	13	50	6	1	700
SHC3	100	150	45	13	50	6	1	780

Cable Tray Accessories

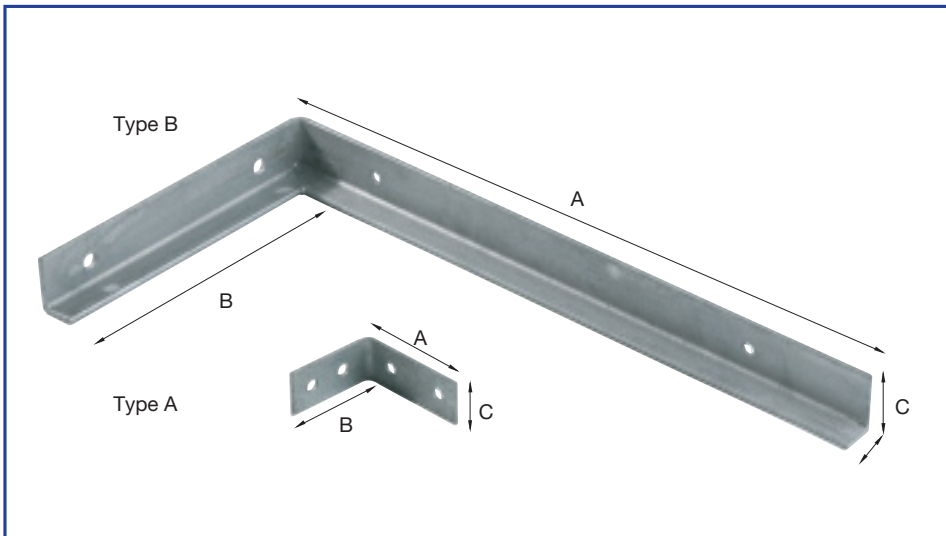
Cable Tray Support Brackets - Stand Off type

All support brackets made from mild steel, hot dipped galvanised to BS 729 : 1971 (1986) after manufacture.



Part No.	To take tray	Dimensions mm				Fixing Hole Dia.	Material size	Pack Qty	Weight g
		A	B	E	D				
SB2	50/75	70	132	108	35	7.5	50 x 2	1	140
SB3	75/100	95	157	133	35	7.5	50 x 2	1	160
SB4	100/150	120	182	158	35	7.5	50 x 2	1	180
SB6	150/225	170	232	208	35	7.5	50 x 2	1	220
SB9	225	227	318	286	52	11	50 x 5	1	780
SB12	300	302	393	361	52	11	50 x 5	1	920
SB18	450	452	543	511	52	11	50 x 5	1	1250
SB24	600	602	693	661	52	11	50 x 5	1	1520

Cable Tray Support Brackets - Cantilever Type



Part No.	Type	To take Tray	Dimensions mm			Fixing holes Dia.	Material size	Pack Qty	Weight g
			A	B	C				
WB2	A	50	65	75	33	8	3	1	90
WB3	A	75	90	75	33	8	3	1	100
WB4	A	100	115	75	33	8	3	1	120
WB6	A	150	165	100	40	11	6	1	465
WB9	A	227	245	125	40	11	6	1	670
WB12	A	300	320	150	50	11	6	1	1070
WB18	B	450	470	230	40 x 25	11	4	1	1350
WB24*	B	600	625	305	40 x 25	11	4	1	2620

*Includes cross member for added strength

Leather Suspenders, Catenary Wire and Accessories

Cable Suspenders

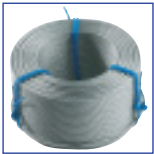
Leather suspenders with hot dipped galvanised mild steel hook and brass eyelet.

Part No.	Length mm	Width mm	Hook	Max Cable dia. mm	Pack Qty	Weight g
CS6	152.4	19	Single	32	100	22
CS7	177.8	19	Single	38	100	22
CS8	203.3	19	Single	48	100	23
CS9	228.6	25.4	Single	54	100	27
CS10	254	25.4	Single	60	100	28
CS12	305	50.8	Double	72	100	64



Catenary Wire

Hot dipped galvanised mild steel wire strand, including steel core for extra strength.



Part No.	Outside dia. mm	Numbers and dia. of strands mm	Maximum load	Coil length m	Pack Qty	Weight Kg
CW30/30	3.0	7 x 1.0	155kg	30	1	11
CW30/50	3.0	7 x 1.0	155kg	50	1	20
CW30/100	3.0	7 x 1.0	155kg	100	1	44
CW48/30	4.8	7 x 1.6	400kg	30	1	31
CW48/50	4.8	7 x 1.6	400kg	50	1	56
CW48/100	4.8	7 x 1.6	400kg	100	1	110
CW60/30	6.0	7 x 2.0	620kg	30	1	42
CW60/50	6.0	7 x 2.0	620kg	50	1	69
CW60/100	6.0	7 x 2.0	620kg	100	1	136

Catenary Wire Grips

Hot dipped galvanised.



Part No.	Size mm	For wire dia. mm	Pack Qty	Weight g
CWG30	3.0	3.0	10	11
CWG48	5.0	4.8	10	16
CWG60	6.0	6.0	10	20

Catenary Wire Ringplates

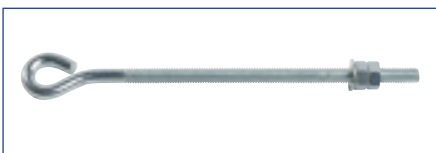
Hot dipped galvanised.



Part No.	Plate size mm	Ring size mm	Pack Qty	Weight g
CWRP50	50 x 50 x 5	8 x 50	1	180

Catenary Wire Eyebolts

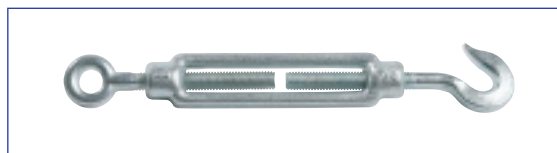
Hot dipped galvanised. Complete with Nuts & Washers



Part No.	Size/overall length mm	Thread length mm	Pack Qty	Weight g
OF-M08-200E-G	M8/200	145	1	70

Catenary Wire Barrel Tensioners

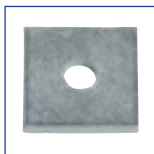
With hook and eye hot dipped galvanised.



Part No.	Size(min/max) mm	Adjustment length mm	Pack Qty	Weight g
CWT100	M8 x 155/235	80	1	160

Cable Cleat Accessories

Framing Channel Washer



It is always recommended that the framing channel washer is used when cleating 2H series two hole cable clamps to framing channel.

Part No.	Size	Material Suffix	Hole Size mm	Pack Qty	Weight g
91-WZ	40 x 40	Mild Steel Zinc Plated	10	100	33
91-WZ-X	40 x 40	Mild Steel Zinc Plated	12	100	33
91-W-2	40 x 40	A2 Stainless Steel	10	100	34
91-W-4	40 x 40	A4 Stainless Steel	12	100	34
91-WG	40 x 40	Mild Steel Galvanised	10	100	37

Trunking Adaptor



Available in Black Polypropylene or Nylon LSF. This maybe used to fit one hole and two hole cable clamps when cables are being installed parallel to the trunking.

Part No.	Material Suffix	Pack Qty	Weight g
91-TA	B	100	5.3
91-TA	LSF	100	7.1

Studs suitable for One & Two Hole Cableclamps

Part No.	Material Suffix	Pack Qty	Weight g
0F-M10-100A-Z	M10 x 100 Althread stud	50	48
0F-M10-125A-Z	M10 x 125 Althread stud	50	60
0F-M10-150A-Z	M10 x 150 Althread stud	50	73
0F-M10-225A-Z	M10 x 225 Althread stud	50	108

Nut

Part No.	Material Suffix	Pack Qty	Weight g
0F-M10-FNUT-Z	M10 Hexagon full nut	100	10.5

Washer

Part No.	Material Suffix	Pack Qty	Weight g
0F-M10-W002-Z	M10 Flat washer	100	2.1

Channel Nuts

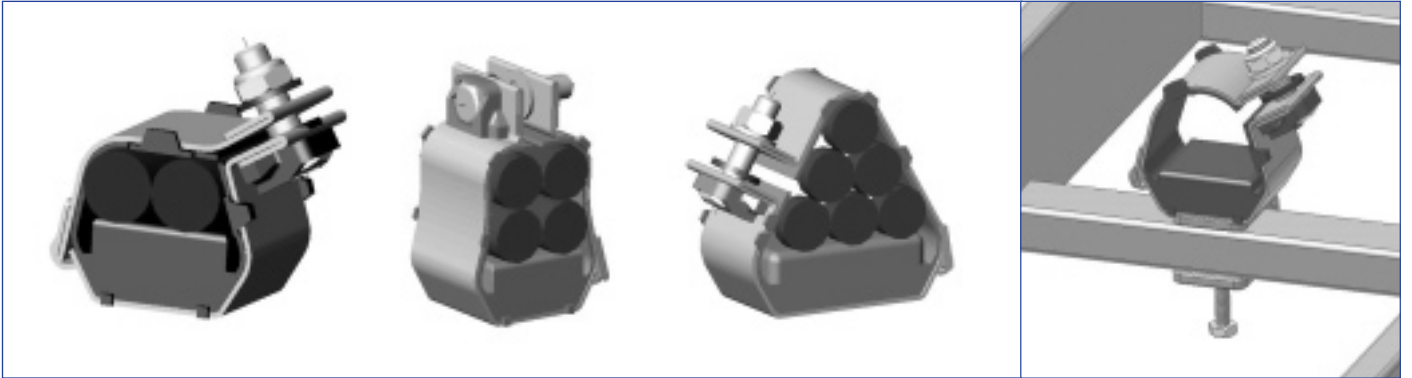
Part No.	Material Suffix	Pack Qty	Weight g
0F-M10-CN00-Z	M10 Channel nut (long spring)	100	38
0F-M10-CN01-Z	M10 Channel nut (short spring)	100	37
0F-M10-CN02-Z	M10 Channel nut (no spring)	100	36

All fixings supplied in Bright Zinc Plated Mild Steel

Special Products

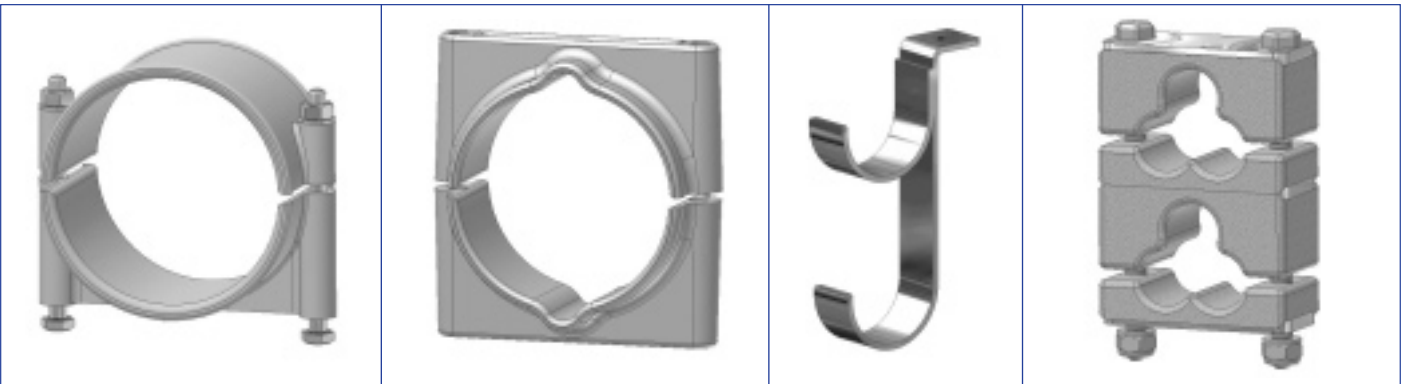
Ellis Patents prides itself on its ability to provide solutions to technical problems. In addition to the standard products shown in this catalogue the company routinely produces bespoke products to meet specific demands. Flexible tooling and modern rapid prototyping processes mean that unique designs can be produced surprisingly quickly and economically, even in relatively small quantities.

Some "typical" examples are given below:



1. Standard Emperor products modified to suit 2,4 and 6 cable applications.

2. Standard Emperor product fitted with a universal base clamp designed to retrofit to three different undrilled ladder rung designs.



3. Cast aluminium two hole clamp outside the standard size range.

4. Cast aluminium two hole clamp designed to accommodate a fibre-optic cable above the power cable.

5. Non-standard cable support bracket.

6. Matrix cleat designed to retain multiple cables in trefoil formation.



7. Cable cleat with combined support saddle for 150mm diameter cable fixed at 8.2m centres.



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