

CBM
TECHNOLOGY
owner of the Galmar brand
GALMAR



Earthing and lightning protection

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About CBM Technology company

CBM Technology Sp. z o.o. is a manufacturer of earthing and lightning protection systems. Our main products are copper-bonded steel earthing rods, wires and tapes. CBM Technology Sp. z o.o. is also the owner of the Galmar brand and purchased its assets, including production lines, machinery and technologies which ensure the high quality of our products.

We have been developing our products for many years and therefore we can offer products which satisfy each and every need of our customers:

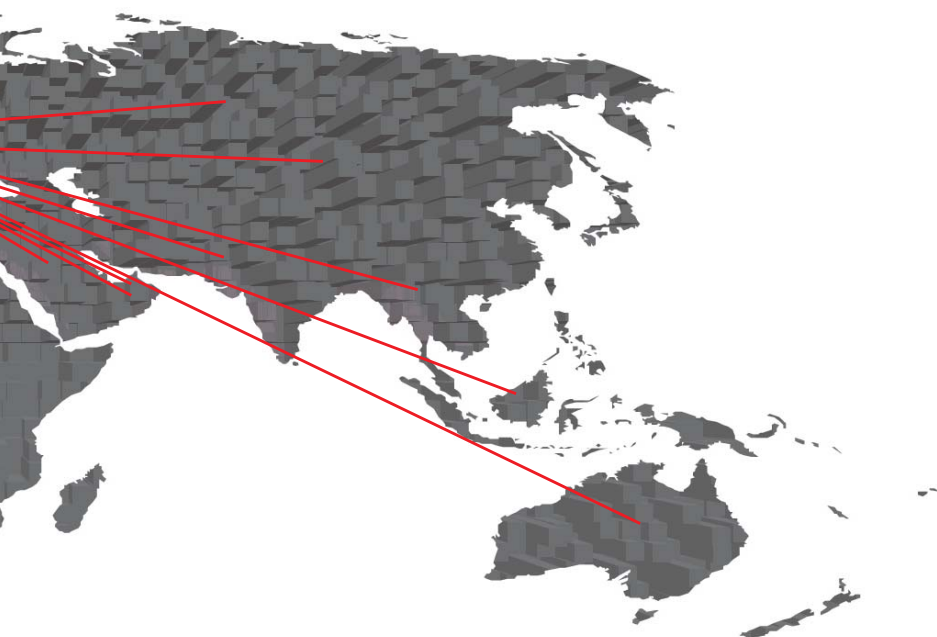
- 1989 – Robert Marciniak develops, in laboratory conditions, a technology of bonding of thick copper layers (0.250 mm) on earthing rods by means of an electrolytic method,
- 1991 – an automatic production line for earthing rods is launched,
- 2007 – Robert Marciniak launches the first in the world automatic, fully computerized line for copper bonding of tapes and wires to be used in earthing and lightning protection systems.



Copper-bonded steel earthing rods, wires and tapes have 30-year corrosion resistance and, in terms of quality and price, they can be placed between copper products and galvanised steel products. Our products meet both European and International Standards such as IEC/EN 62305-3; IEC/EN 62561-2; HD 60364-5-54; EN 50522.

Due to Robert Marciniak's extensive activity on global markets, our products are available in such countries as Algeria, Saudi Arabia, Australia, Belarus, Belgium, China, Denmark, Egypt, Estonia, Finland, France, the Netherlands, Kuwait, Libya, Lithuania, Latvia, Malaysia, Morocco, Germany, Norway, Oman, Pakistan, Poland, Portugal, the Czech Republic, Russia, the United States of America, Sudan, Sweden, Thailand, Tunisia, Ukraine, Great Britain, and the United Arab Emirates.

From its very beginning, the company's main aim was to improve quality of its products and provide its customers with wide technical support. This can be achieved thanks to the combination of long-standing experience and innovation introduced by young engineers.



Earthing system

Vertical copper-bonded earth rod/grounding rod – 250 micron

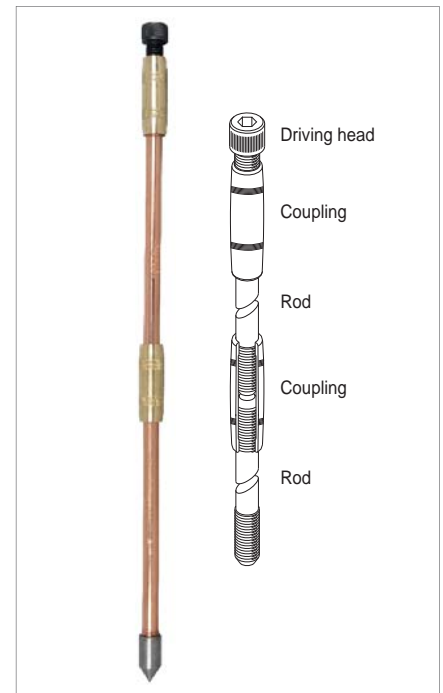
They are made of molecularly bonded 99.9% pure electrolytic copper onto a low carbon steel core. The steel core is a bar drawn to the required diameter. The rods are highly resistant to corrosion and because the steel used has a high tensile strength 600 N/mm², they can be driven by vibrohammers to great depths. The copper jacket is **0.250 mm** thick at all points and it ensures a life expectancy of greater than 30 years.

The threads at the tips of a rod are rolled after copper bonding process, and both steel and copper are rolled into the thread, making it exceptionally strong.

Connection of the rods using threaded coupling comply with the requirements of IEC/EN 62561-2 „Lightning protection components (LPC). Requirements for conductors and earth electrodes”.

Threaded earth rods dimensions

Cat. no.	Type of thread inch	Diameter of rod mm	Length of thread mm	Rod length		Material
				feet	m	
G100 01	9/16	12.7	30	4	1.2	steel copper-bonded to thickness of 0.250 mm
G100 02				5	1.5	
G100 03				6	1.8	
G100 04				8	2.4	
G100 05				10	3	
G100 11	5/8	14.2	30	4	1.2	
G100 12				5	1.5	
G100 13				6	1.8	
G100 14				8	2.4	
G100 15				10	3	
G100 21	3/4	17.2	34	4	1.2	
G100 22				5	1.5	
G100 23				6	1.8	
G100 24				8	2.4	
G100 25				10	3	
G100 80	1	23	34	8	2.4	
G100 81				10	3	



Threaded coupling

Threaded coupling with counted bore for protecting the rod threads from damage

Cat. no.	Type of thread inch	Coupling length mm	Material
G104 01	9/16	70	brass
G104 02	5/8	70	
G104 03	3/4	80	



These couplings are made of high grade material for higher strength with counted bore for protecting the rod threads from damage (hexagonal shape)

Cat. no.	Type of thread inch	Coupling length mm	Material
G104 11	9/16	70	bronze
G104 12	5/8	70	
G104 13	3/4	80	



Driving head

Suitable for both manual and power hammering. Can be re-used for many times

Cat. no.	Type of thread inch	Material
G108 01	9/16	steel
G108 02	5/8	
G108 03	3/4	



Tip

Pointed hardened steel tip

Cat. no.	Type of thread inch	Material
G106 01	9/16	steel
G106 02	5/8	
G106 03	3/4	



Tip for threaded copper-bonded earth rod

Tip is to carry percussive hammer oscillations on driving head for threaded copper-bonded earth rod (for hammers with SDS-Max fitting only)

Cat. no.	Tip for driving head with thread type inch	Kind of driving head
G109 07	9/16	without a hole
G109 08	9/16	with a hole
G109 01	5/8; 3/4	with a hole

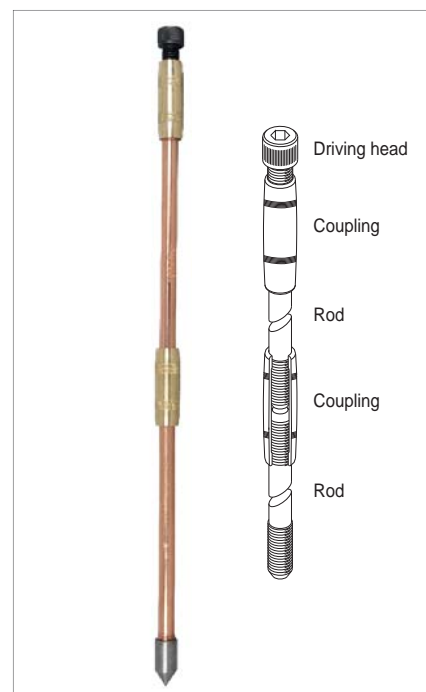


Vertical copper-bonded earth rod/grounding rod – 100 micron

Manufactured from high tensile low carbon steel by molecularly bonding 99.9% pure electrolytic copper, these earth rods have copper coating thickness 100 µm. Each rod is treated with benzol triazole derivatives to prevent oxidation of copper bonding. The threads are formed by roll threading process which ensure strength and maintain the molecularly bonded copper along the full length of the threads. The rods can be deep driven manually or by using power hammer.

Threaded earth rod dimensions

Cat. no.	Type of thread inch	Diameter of rod mm	Length of thread mm	Rod length		Material
				feet	m	
G100 01G100	9/16	12.7	30	4	1.2	steel copper-bonded to thickness of 0.100 mm
G100 02G100				5	1.5	
G100 03G100				6	1.8	
G100 04G100				8	2.4	
G100 11G100	5/8	14.2	30	4	1.2	
G100 12G100				5	1.5	
G100 13G100				6	1.8	
G100 14G100				8	2.4	
G100 15G100	3/4	17.2	34	10	3	
G100 21G100				4	1.2	
G100 22G100				5	1.5	
G100 23G100				6	1.8	
G100 24G100				8	2.4	
G100 25G100				10	3	



Vertical copper-bonded earth rod, unthreaded

They are made by molecularly bonding 99.9% pure electrolytic copper onto a low carbon steel core. The steel core is a bar drawn to the required diameter. The rods are highly resistant to corrosion, and because the used steel has a high tensile strength 600 N/mm², they can be driven by vibrohammers to great depths. The copper jacket is 0.250 mm thick at all points and it ensures a life expectancy of greater than 30 years.

Connection of the rods using unthreaded coupling comply with the requirements of IEC/EN 62561-2 „Lightning protection components (LPSC). Requirements for conductors and earth electrodes“. This type of rods is intended to be driven at the depth of 4 metres maximum.

Unthreaded earth rods dimensions

Cat. no.	Diameter of rod mm	Rod length		Material
		feet	m	
G000 01	12.7	4	1.2	steel copper-bonded to thickness of 0.250 mm
G000 03		5	1.5	
G000 06		6	1.8	
G000 07		8	2.4	
G000 08		10	3	
G000 44	14.2	4	1.2	
G000 11		5	1.5	
G000 48		6	1.8	
G000 13		8	2.4	
G000 35		10	3	
G000 16	17.2	4	1.2	
G000 19		5	1.5	
G000 20		6	1.8	
G000 21		8	2.4	
G000 23		10	3	
G000 50	23	8	2.4	
G000 51		10	3	



Unthreaded coupling

Unthreaded coupling dimensions

Cat. no.	Diameter of rod mm	Material
G104 04	12.7	brass
G104 07	14.2	
G104 10	17.2	



Unthreaded coupling dimensions

Cat. no.	Diameter of rod mm	Material
G104 16BG	12.7	bronze
G104 14BG	14.2	
G104 15BG	17.2	



Tup

Tups for unthreaded earth rod dimensions

Cat. no.	Diameter of rod mm	Material
G109 04	12.7	steel
G109 05	14.2	
G109 06	17.2	



Vertical copper-bonded earth rod unthreaded with tip

They are made by molecularly bonding 99.9% pure electrolytic copper onto a low carbon steel core. The copper jacket is 0.250 mm thick at all points. Steel has a high tensile strength 600 N/mm². One end of the rod is pointed to facilitate driving manually.

Vertical copper-bonded earth rod unthreaded with tip

Cat. no.	Diameter of rod mm	Rod length		Material
		feet	m	
G000 38M	14.2	3.28	1	steel copper-bonded to thickness of 0.250 mm
G000 11M		5	1.5	
G000 14M		6.56	2	
G000 35M		10	3	
G000 64M	17.2	3.28	1	
G000 19M		5	1.5	
G000 22M		6.56	2	
G000 23M		10	3	



Vertical copper-bonded forged rod with sealing-strengthening bush

The 99.9% pure electrolytic copper bonded onto a drawn steel to a thickness of min 0.250 mm forms molecular and inseparable connection with the steel. The steel core has a high tensile strength of 600 N/mm².

One end of the rod has decreased diameter by hot forging what guarantees the same thickness of the copper layer on the whole length of the rod. The other end has a hole which enables the connection between the rods to increase the length.

The connection of the rods is protected by sealing bush made of stainless steel which provides an additional mechanical strength to the connection. The bush levels potential deformations of the feather key that form during the grounding. The rod pin is made by hot forging what hardened the bolt. Therefore there is no need to use the tip.

Connection of the rods comply with the requirements of IEC/EN 62561-2 „Lightning protection components (LPSC). Requirements for conductors and earth electrodes”.

To drive the forged rod into the ground, the driving stud and tup for mechanical driving or tup for hand driving must be used.

The bush advantage:

- sealing the pin-feather key connection,
- strengthening the mechanical connection,
- eliminating the potential feather key deformations.

Vertical copper-bonded forged rod with sealing-strengthening bush

Cat. no.	Diameter of rod mm	Length m	Material
G000 72	14.2	1.2	steel copper-bonded to thickness of 0.250 mm, sealing-strengthening steel bush
G000 75		1.5	
G000 95	16	1.5	
G000 86	17.2	1.2	
G000 85		1.5	



Driving stud for forged rod

Driving stud is to transfer the vibrations from the tup to earth rod. It should be placed in the feather key of the rod and should be beaten using the hammer

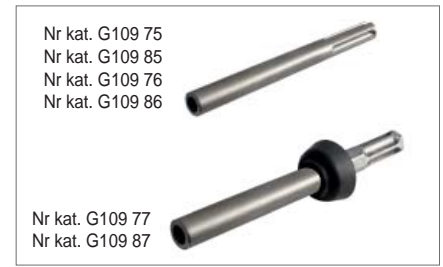
Cat. no.	Diameter of rod mm	Material
G108 75	14.2; 16	steel
G108 85	17.2	



Tup for forged rod

Tup for forged rod transfers vibrations from the percussive hammer or hand hammer onto earth rod core through the driving stud placed in the feather key of the rod

Cat. no.	Diameter of rod mm	Application
G109 75	14.2; 16	for mechanical driving using hammers with SDS-Max fastening
G109 76		for hand driving
G109 77		for mechanical driving with Hilti TE 905 and TE 1000
G109 85	17.2	for mechanical driving using hammers with SDS-Max fastening
G109 86		for hand driving
G109 87		for mechanical driving with Hilti TE 905 and TE 1000



Vertical stainless steel earth rod

Due to high resistance to corrosion, stainless steel earth rods are used in applications where soil is aggressive, pH value is below 3 or above 8. In such conditions, applications of these types of rods guarantee constant resistance for many years.

Connection of the rods using coupling dowel comply with the requirements of IEC/EN 62561-2 „Lightning protection components (LPSC). Requirements for conductors and earth electrodes”. This type of rods is intended to be driven at the depth of 3 metres maximum.

Stainless steel earth rod dimensions

Cat. no.	Diameter mm	Length m	Material
G102 01	15	1.2	stainless steel
G102 02	15	3	
G102 03	16	1.2	
G102 04	16	3	
G102 05	20	1.2	
G102 06	20	3	



Driving head

Suitable for both manual and power hammering. Can be re-used for many times

Cat. no.	Thread diameter	Outside diameter mm	Material
G108 52	M8	13	stainless steel
G108 53	M10	15	
G108 54	M10	20	



Internal coupling dowel

Internal coupling dowel is used to join two rods

Cat. no.	Thread diameter	Material
G104 52	M8	copper
G104 53	M10	
G104 54	M8	brass
G104 55	M10	
G104 56	M8	stainless steel
G104 57	M10	



Tip

These tips enable the rod to be driven easily

Cat. no.	Thread diameter	Outside diameter mm	Material
G106 52	M8	13	stainless steel
G106 53	M10	15	
G106 54	M10	20	



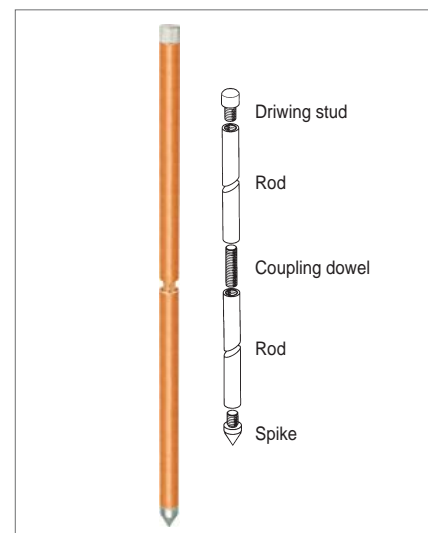
Vertical copper earth rod

Due to high resistance to corrosion, solid copper earth rods are used in applications where soil is aggressive. In such conditions, applications of these types of rods guarantee constant resistance for many years.

Connection of the rods using coupling dowel comply with the requirements of IEC/EN 62561-2 „Lightning protection components (LPSC). Requirements for conductors and earth electrodes“. This type of rods is intended to be driven at the depth of 3 metres maximum.

Solid copper earth rod dimensions

Cat. no.	Rod diameter mm	Length m	Material
G101 10	12.7	1.2	copper
G101 11		1.5	
G101 12		1.8	
G101 13		2.4	
G101 14		3	
G101 15	14	1.2	
G101 16		1.5	
G101 17		1.8	
G101 18		2.4	
G101 19		3	
G101 20	15	1.2	
G101 21		1.5	
G101 22		1.8	
G101 23		2.4	
G101 24		3	
G101 28	16	1.2	
G101 26		1.5	
G101 27		1.8	
G101 25		2.4	
G101 29		3	
G101 40	19	1.2	
G101 41		1.5	
G101 42		1.8	
G101 43		2.4	
G101 44		3	
G101 45	20	1.2	
G101 46		1.5	
G101 47		1.8	
G101 48		2.4	
G101 49		3	



Driving head

Suitable for both manual and power hammering. Can be re-used for many times

Cat. no.	Thread diameter	Outside diameter mm	Material
G108 52	M8	13	stainless steel
G108 53	M10	15	
G108 54	M10	20	



Internal coupling dowel

Internal coupling dowel is used to join two rods

Cat. no.	Thread diameter	Material
G104 52	M8	copper
G104 53	M10	
G104 54	M8	brass
G104 55	M10	
G104 56	M8	stainless steel
G104 57	M10	



Tip

These tips enable the rod to be driven easily

Cat. no.	Thread diameter	Outside diameter mm	Material
G106 52	M8	13	stainless steel
G106 53	M10	15	
G106 54	M10	20	



Solid copper earth rod externally threaded

Pure copper earth rods for use where extreme soil condition such as high salt or moisture content demands high corrosion resistance and exceptionally long life of rods. Solid copper earth rods are made from high conductivity hard drawn copper to BS2874 C101. Threads are formed by roll threading process to ensure extra strength of the connection

Cat. no.	Rod diameter mm	Thread diameter inch	Length m	Material
G101 05	14.2	5/8	1.2	copper
G101 06	17.2	3/4		



Threaded coupling

Threaded coupling with counted bore for protecting the rod threads from damage

Cat. no.	Diameter of rod inch	Material
G104 01	9/16	brass
G104 02	5/8	
G104 03	3/4	



These couplings are made of high grade material for higher strength with counted bore for protecting the rod threads from damage (hexagonal shape)

Cat. no.	Type of thread inch	Coupling length mm	Material
G104 11	9/16	70	bronze
G104 12	5/8	70	
G104 13	3/4	80	



Driving head

Suitable for both manual and power hammering. Can be re-used for many times

Cat. no.	Type of thread inch	Material
G108 01	9/16	steel
G108 02	5/8	
G108 03	3/4	



Tip

Pointed hardened steel tip

Cat. no.	Type of thread inch	Material
G106 01	9/16	steel
G106 02	5/8	
G106 03	3/4	



Tup for threaded earth rod

Tup is to carry percussive hammer oscillations on driving head for threaded earth rod (for hammers with SDS-Max fitting only)

Cat. no.	Tup for driving head with thread type inch	Kind of driving head
G109 07	9/16	without a hole
G109 08	9/16	with a hole
G109 01	5/8; 3/4	with a hole



Inspection pit

Enable to control rod – earthing conductor connections with no problems as well as to make time earth resistance measurements.

Pit G114 04 can be mounted in different kind of hardened surfaces (recommended for areas with setts because of specially designed reinforced flange). Pit G114 02 can be mounted in surfaces hardened with concrete or asphalt

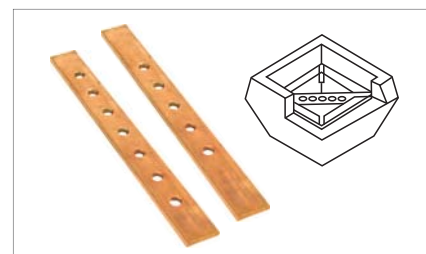
Cat. no.	Length x width x height x depth mm	Material
G114 01	320 x 320 x 190 x 115	concrete
G114 02	258 x 258 x 215 x 160	plastic pit with hardened cover
G114 04	260 x 215 x 210 x 110	plastic pit with hardened cover



Earth bar for concrete pit

Earth bars are used for fitting into slots provided in the earth pit where multiple connections are required to the earth rod

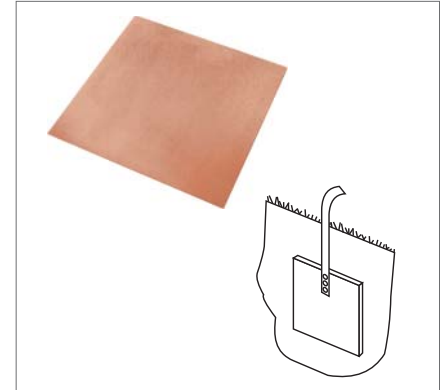
Cat. no.	No. of holes	Length x width x thickness mm	Material
G119 66	5	300 x 30 x 6	copper
G119 67	7	300 x 30 x 6	
G119 68	12	300 x 30 x 6	



Earth plate

Earth plates are used where rods are unsuitable and provide the long lasting alternative against earth rods

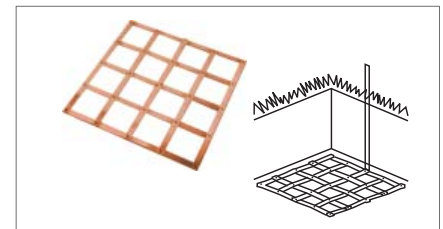
Cat. no.	Length x width x thickness mm	Material
G112 10	500 x 500 x 1.5	copper
G112 11	500 x 500 x 3	
G112 12	600 x 600 x 1.5	
G112 13	600 x 600 x 3	
G112 14	900 x 900 x 1.5	
G112 15	900 x 900 x 3	
G112 16	1000 x 1000 x 1.5	
G112 17	1000 x 1000 x 3	steel copper-bonded
G112 10S	500 x 500 x 1.5	
G112 11S	500 x 500 x 3	
G112 12S	600 x 600 x 1.5	
G112 13S	600 x 600 x 3	
G112 14S	900 x 900 x 1.5	
G112 15S	900 x 900 x 3	
G112 16S	1000 x 1000 x 1.5	
G112 17S	1000 x 1000 x 3	



Earth plate – lattice copper

Lattices earth mats are usable as an alternative to earth plates

Cat. no.	Lattice size mm	Conductor size mm	No. of strips	Material
G112 30	500 x 500	25 x 3	5 x 5	copper
G112 31	600 x 600	25 x 3	5 x 5	
G112 32	900 x 900	25 x 3	5 x 5	
G112 33	900 x 900	50 x 6	7 x 7	
G112 34	1000 x 1000	25 x 3	5 x 5	
G112 35	1000 x 1000	60 x 6	7 x 7	



CBM Resistivity

CBM Resistivity is fine powder which increases surface area of earth electrode thus reducing resistance to earth.

Before using needs to be mixed with Portland cement before using in following proportion:

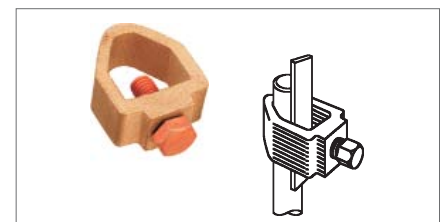
CBM Resistivity : cement
3 : 1



Rod to tape clamp

Rod to tape clamp – suitable for use with copper or copper-bonded steel tape

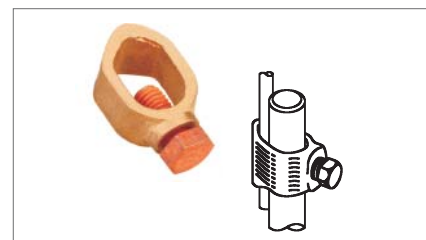
Cat. no.	Rod diameter mm	Tape width mm	Material
G103 08	12-20	25	naval brass or gunmetal, copper bolt
G103 09	12-20	31	
G103 10	12-20	38	
G103 19	12-20	50	



Rod to conductor clamp

Rod to cable clamp – suitable for use with circular copper conductor

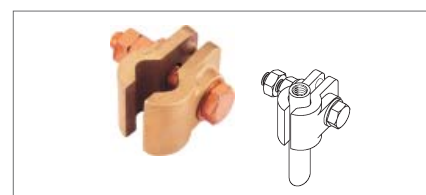
Cat. no.	Dimensions			Material
	rod St/Cu		wire/cable mm ²	
	inch	mm		
G103 00	1/2	12.7	16-70	naval brass or gunmetal, copper bolt
G103 01	5/8	14.2	16-70	
G103 02	3/4	17.2	35-95	
G103 03	–	20	50-150	
G103 04	–	25	70-240	



Rod to cable clamp

Rod to cable clamps used to connect cable lug to earth rod

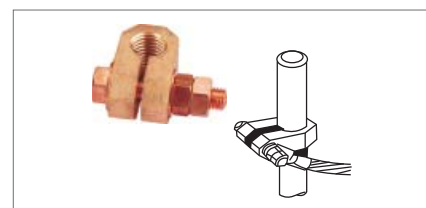
Cat. no.	Rod diameter mm	Material
G105 19	12-20	naval brass or gunmetal, copper bolt



Split connector clamp for threaded rod

Used with threaded rods, suitable for connecting earth rod with cable lugs

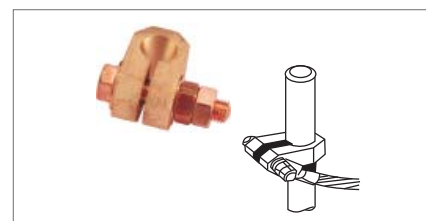
Cat. no.	Dimensions			Conductor material	Material
	rod St/Cu		cable mm ²		
	inch	mm			
G105 16	9/16	12.7	35-95	St/Cu or Cu	naval brass or gunmetal, copper bolt
G105 17	5/8	14.2			
G105 18	3/4	17.2			



Split connector clamp for unthreaded rod

Used with unthreaded rods, suitable for connecting earth rod with cable lugs

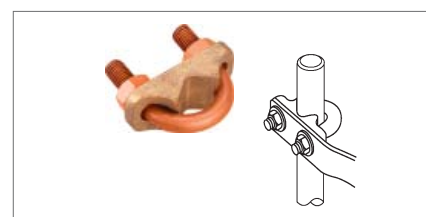
Cat. no.	Dimensions			Conductor material	Material
	rod St/Cu		cable mm ²		
	inch	mm			
G105 10	9/16	12.7	35-95	St/Cu or Cu	naval brass or gunmetal, copper bolt
G105 11	5/8	14.2			
G105 12	–	15			
G105 13	–	16			
G105 14	–	17.2			
G105 15	–	20			



„U” bolt rod clamp

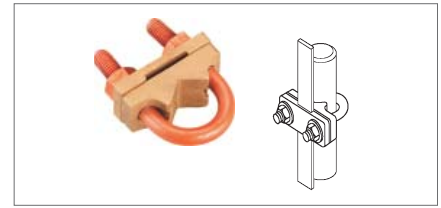
„U” bolt rod clamp enables to connect earth rod to copper or copper-bonded steel tape. „U” bolt threaded M10

Cat. no.	Rod diameter mm	Tape width mm	Material
G103 82	15-25	25-50	naval brass or gunmetal, copper bolt



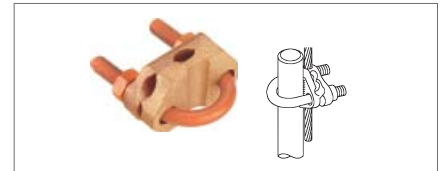
„U” bolt rod clamp enables to connect vertical copper or copper-bonded steel tape to copper-bonded steel rod. „U” bolt threaded M10

Cat. no.	Rod diameter mm	Tape width mm	Material
G103 83	15-25	25	naval brass or gunmetal, copper bolt
G103 80	15-25	50	



„U” bolt rod to cable clamp enables to connect earth rod to cable

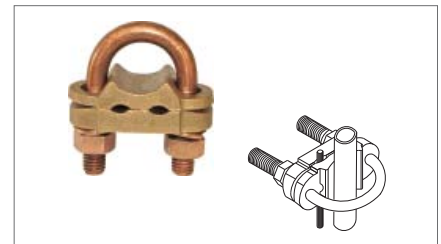
Cat. no.	Dimensions		Conductor material	Material
	rod St/Cu mm	cable mm ²		
G103 97	15-25	35-185	St/Cu or Cu	naval brass or gunmetal, copper bolt
G103 98	16-25	70-300		



„U” bolt pipe to two cables clamp

„U” bolt pipe to two cables clamp is used for two universal parallel or 90° connection of cable to pipe. It can be also used for fence post grounding connection

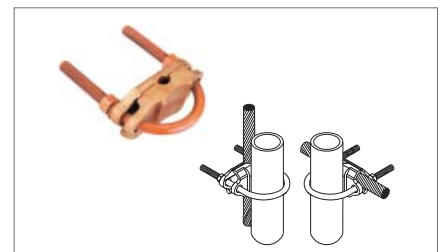
Cat. no.	Dimensions			Conductor material	Material
	rod St/Cu		cable mm ²		
	inch	mm			
G105 20	1/2	12.7	35-95	St/Cu or Cu	naval brass or gunmetal, copper bolt
G105 21	3/4	17.2			
G105 22	1	–			
G105 23	1 1/2	–			
G105 24	2	–			
G105 25	2 1/2	–			
G105 26	3	–			
G105 27	4	–			
G105 28	5	–			
G105 29	6	–			



„U” bolt pipe to cable clamp

„U” bolt pipe to cable clamp is used for universal parallel or 90° connection of cable to pipe. It is used also for fence post grounding connection

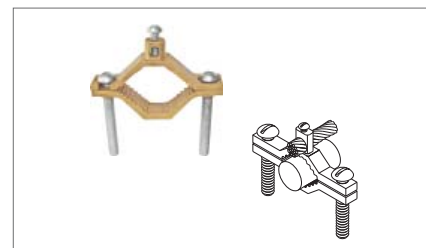
Cat. no.	Dimensions			Conductor material	Material
	rod St/Cu		cable mm ²		
	inch	mm			
G105 30	1/2	12.7	35-95	St/Cu or Cu	naval brass or gunmetal, copper bolt
G105 31	3/4	17.2			
G105 32	1	–			
G105 33	1 1/2	–			
G105 34	2	–			
G105 35	2 1/2	–			
G105 36	3	–			
G105 37	4	–			
G105 38	5	–			
G105 39	6	–			



Water pipe ground clamp

These clamps used to bonding ground conductor to water pipe, copper tube and rebar. It cast from high strength electrolytic bronze to provide reliable grounding connection

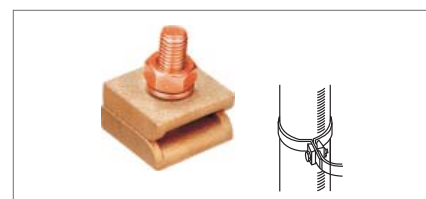
Cat. no.	Pipe dimensions		Conductor dimensions		Material
	inch	mm	size	diameter mm	
G105 40	1/2-1	13-25	#10 SOL-2 Str	2.58-7.4	bronze
G105 41	1 1/4-2	32-51	#10 SOL-2 Str	2.58-7.4	
G105 42	2 1/2-4	64-114	#10 SOL-2 Str	2.58-7.4	



RWP bond

Rainwater pipe bonds are used for bonding tapes to rainwater pipes and hand rails

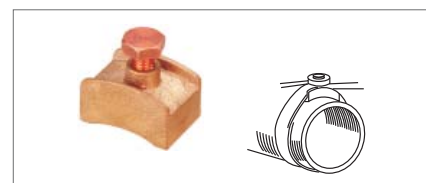
Cat. no.	Tape width mm	Bolt size	Material
G105 43	25	M10	naval brass or gunmetal, copper bolt



Watermain pipe bond

These types of bonds are used for bonding pipes into the earthing or lightning protection system. Watermain pipe bond are used for bonding tape to large diameter pipes

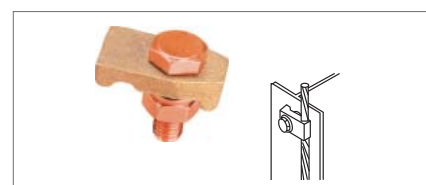
Cat. no.	Tape width mm	Bolt size	Material
G105 44	25	M10	naval brass or gunmetal, copper bolt



Tower earth clamp single plate

Tower earth clamps are designed for bonding copper conductor to metal surfaces

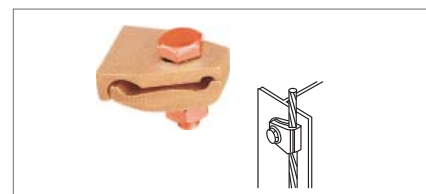
Cat. no.	Conductor size mm ²	Channel thickness mm	Bolt size	Material
G105 45	16-70	10	M10	naval brass or gunmetal, copper bolt
G105 46	70-120	10	M10	
G105 47	120-185	10	M12	
G105 48	185-240	10	M12	



Tower earth clamp double plate

Tower earth clamps are designed for bonding copper conductor to metal surfaces

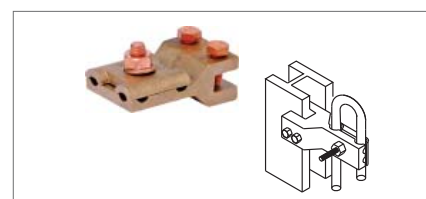
Cat. no.	Conductor size mm ²	Channel thickness mm	Bolt size	Material
G105 49	16-70	10	M10	naval brass or gunmetal, copper bolt
G105 50	70-120	10	M10	
G105 51	120-185	10	M12	
G105 52	185-240	10	M12	



Metalwork bond

Metalwork bond is designed for bonding to all types of metal structures up to 13 mm thickness

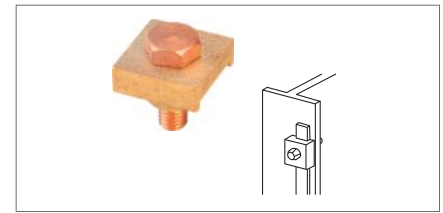
Cat. no.	Conductor size mm ²	Bolt size	Material
G115 48	35-50	M10	naval brass or gunmetal, copper bolt



B bond

B bonds are used for bonding tape to metal structure

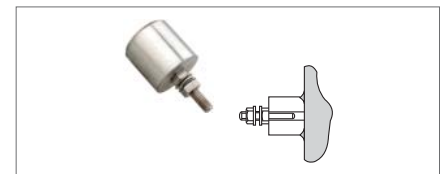
Cat. no.	Tape width mm	Bolt size	Material
G105 53	25	M10	naval brass or gunmetal, copper bolt



Earth boss

Earth boss are welded to steel weasels, tanks and structures to provide an earth point to connect to the main earthing system. Wrap the bond and connection with Denso tape. Continuous fillet weld of 5 mm is recommended

Cat. no.	Diameter mm	Length mm	Stud size mm	Material
G105 54	30	30	10 x 40	steel
G105 55	30	40	10 x 50	
G105 56	40	40	10 x 50	
G105 57	50	50	10 x 60	
G105 58	30	30	10 x 40	stainless steel
G105 59	30	40	10 x 50	
G105 60	40	40	10 x 50	
G105 61	50	50	10 x 60	



Eye bolt

These eye bolts can be directly screwed onto earth rods, thereby offering a ststic discharge unit

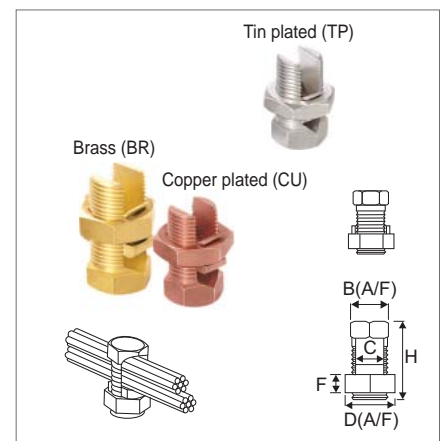
Cat. no.	Thread diameter inch	Material
G105 62	9/16	naval brass or gunmetal
G105 63	5/8	
G105 64	3/4	



Split bolt connector/line tap

Split bolt connectors are used couple a range of stranded or solid circular conductors and no specialised tool is required for installation

Cat. no.	Size mm ²	H mm	C mm	B A/F mm	D A/F mm	F mm	Material
G107 14	6	19.85	4	12.70	13.35	4.80	tin plated or copper plated high strength copper alloy
G107 15	10	26.75	4.70	12.70	19	5.60	
G107 16	16	26	5.70	12.70	19	5.60	
G107 17	25	28	7.30	16	19	5.60	
G107 18	35	35	7.80	18.50	24	6.35	
G107 19	50	42	9.70	24.10	27.20	8.65	
G107 20	70	44.50	11.50	24.10	27.20	8.65	
G107 21	95	50	14.40	26.50	35.40	9.40	
G107 22	120	57.50	16.20	30	35.40	12	
G107 23	150	57.50	16.20	30	35.40	12	
G107 24	185	57.50	18.20	31.75	38	12	
G107 25	240	72.50	22	40	48.20	14.25	
G107 26	300	72.50	24	42	50	14.25	
G107 27	400	76.50	26	48	56	16	
G107 28	500	80	30	55	65	16	



Earth bonding point

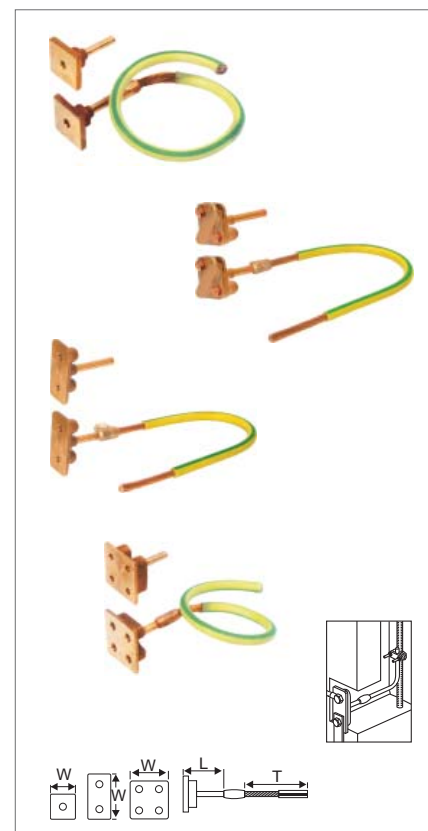
Earth bonding points are used for proving earthing continuity and a multiple bonding point, these bonding points are available with one, two and four hole connections. When cast into concrete they connect the re-bar to the main earthing or lightning protection system. These are also available with variety of tail lengths to suit different applications the tail ends are of 70 mm² yellow green pvc coated stranded cable which are pre welded by exothermic welding method.

Bonding point with tail

Cat. no.	No. of holes	Length mm	Width mm	Length of the tail mm	Material
G105 65	1	80	49	–	naval brass or gunmetal, copper
G105 66	1	80	49	500	
G105 67	2	80	80	–	
G105 68	2	80	80	500	
G105 69	2	80	80	1000	
G105 70	2	80	80	1500	
G105 71	2	80	80	3000	
G105 72	4	80	64	–	
G105 73	4	80	64	500	
G105 74	4	80	64	1000	
G105 75	4	80	64	3000	

Bonding point for tape

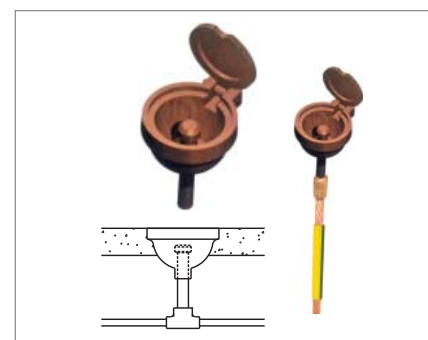
Cat. no.	No. of holes	Length mm	Width mm	Length of the tail mm	Material
G105 76	2	80	54	–	naval brass or gunmetal, copper
G105 77	2	80	54	500	
G105 78	2	80	54	1000	
G105 79	2	80	54	1500	
G105 80	2	80	54	3000	



Static earth receptacle

Static earth receptacle are used for sating into runways and roadways to provide a static discharge point roadways to provide a static discharge point for aircraft, fuel tankers. These receptacles are used in open areas or any where a temporary earthing point may be required such as airfields or petrol stations. These are also available with welded tails of different length

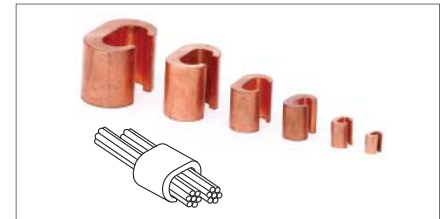
Cat. no.	Length of the tail m	Material
G107 10	0.5	naval brass or gunmetal, copper
G107 11	1	
G107 12	13	
G107 13	30	



Crimp connector type „C”

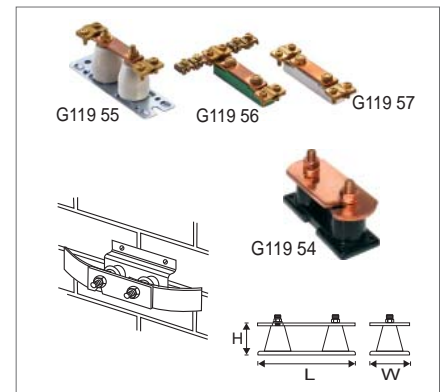
„C” crimp connectors are used to produce very robust joints. They are ideal for use in situations where exothermic welding is not appropriate and periodic disconnection is not required. These are used for parallel or tap connections of copper cables, hydraulic crimping tool with special dies are required for installation

Cat. no.	Dimensions		Material
	conductor I mm ²	conductor II mm	
G121 01	10	1.5-10	copper
G121 02	16	4-16	
G121 03	25	4-10	
G121 04	25	16-25	
G121 05	35	10-16	
G121 06	35	25-35	
G121 07	50	16-25	
G121 08	50	35-50	
G121 09	70	25-35	
G121 10	70	50-70	
G121 11	95	16-25	
G121 12	95	35-50	
G121 13	95	70-95	
G121 14	120	50-70	
G121 15	120	95-120	
G121 16	150	70-95	
G121 17	150	120-150	
G121 18	185	95-120	
G121 19	185	150-185	
G121 20	240	120-150	
G121 21	240	185-240	
G121 22	300	240-300	



Disconnecting links

Cat. no.	L mm	W mm	H mm	Material
G119 54	125	50	48	copper
G119 55	125	50	48	
G119 56	125	50	48	
G119 57	125	50	48	



Ground clamp and bar

These clamps and connectors are used for clamping cables, braids and strips to pipes

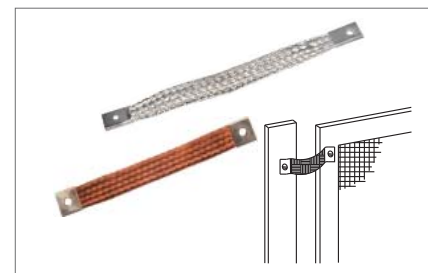
Cat. no.	Item	Material
G118 19	GR – clamp	naval brass or gunmetal, copper
G118 20	GTC – clamp	
G118 21	GH – clamp	
G118 22	GU – clamp	



Flexible braid bond

Flexible copper braids are suitable for earth bonding of fences, gates, doors. Where flexibility is required or the bond is subject to movements. Other materials, sizes and types of braid can be made to order

Cat. no.	Cross section of the braid mm ²	Center to center dist. of fixing hole mm	Braid dimensions mm	Hole diameter mm	Material
G118 24	35	150	25 x 3.5	12	copper
G118 25	35	200	25 x 3.5	12	
G118 26	35	250	25 x 3.5	12	
G118 27	35	300	25 x 3.5	12	
G115 61	35	400	25 x 3.5	12	
G118 29	35	150	25 x 3.5	12	tinned copper
G118 30	35	200	25 x 3.5	12	
G118 31	35	250	25 x 3.5	12	
G118 32	35	300	25 x 3.5	12	
G118 33	35	400	25 x 3.5	12	

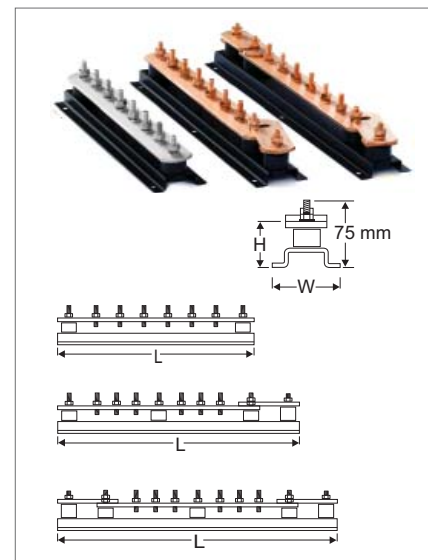


Earth bar and disconnecting link

Earth bars are an efficient and convenient solution for providing a common earth point to connect to the main earthing system. Integral disconnecting links are provided for isolation at the time of testing. These earth bars come in variety of specifications and sizes to suit different applications, the standard sizes are shown in the table with many variations. Other sizes and variations can be made to order.

Earth bars dimensions

Terminals	W mm	H mm	Material	L (Link-0) mm	Cat. no.	L (Link-1) mm	Cat. no.	L (Link-2) mm	Cat. no.
4	90	48	copper	300	G119 12	375	G119 26	450	G119 40
6	90	48		400	G119 13	475	G119 27	550	G119 41
8	90	48		500	G119 14	575	G119 28	650	G119 42
10	90	48		650	G119 15	725	G119 29	800	G119 43
12	90	48		750	G119 16	825	G119 30	900	G119 44
14	90	48		850	G119 17	925	G119 31	1000	G119 45
16	90	48		950	G119 18	1025	G119 32	1100	G119 46
18	90	48		1050	G119 19	1125	G119 33	1200	G119 47
20	90	48		1200	G119 20	1275	G119 34	1350	G119 48
22	90	48		1300	G119 21	1375	G119 35	1450	G119 49
24	90	48		1400	G119 22	1475	G119 36	1550	G119 50
26	90	48		1500	G119 23	1575	G119 37	1650	G119 51
28	90	48		1650	G119 24	1725	G119 38	1800	G119 52
30	90	48		1750	G119 25	1825	G119 39	1900	G119 53



Lightning system

Taper pointed air rod

Air termination network is the point of connection of lightning strike to the protection system and taper pointed air rods are used for this application. These can be used with or without multipoint. The taper pointed air rods on one side have taper of less than 5 deg. for a perfect taper fit with multiple and on the other side has suitable threads for fixing into terminal base, flat saddle, ridge saddle, air rod base, rod brackets and air rod couplings.

Taper pointed air rods dimensions

Cat. no.	Rod length m	Rod diameter mm	Thread diameter mm	Material
G115 17	0.3	10	10	copper
G115 28	0.5	10	10	
G115 18	0.8	10	10	
G115 19	0.5	15	16	
G115 20	1	15	16	
G115 30	1.2	15	16	
G115 31	1.5	15	16	
G115 21	2	15	16	
G115 11	3	15	16	
G115 19SS	0.5	15	16	
G115 20SS	1	15	16	
G115 30SS	1.2	15	16	
G115 31SS	1.5	15	16	
G115 21SS	2	15	16	
G115 12SS	3	15	16	



Multipoint – taper

Suitable only with copper taper pointed air rods

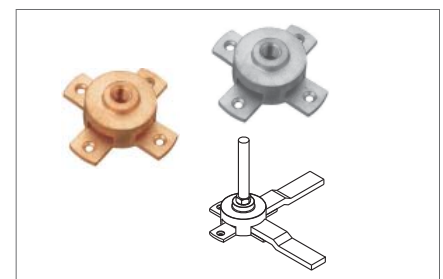
Cat. no.	Material
G115 22	copper
G115 22SS	stainless steel



Air terminal base – tape

These are used for fixing air rods onto the flat roof surfaces and to accommodate tape for the protection system. The threads are suitable for air rods

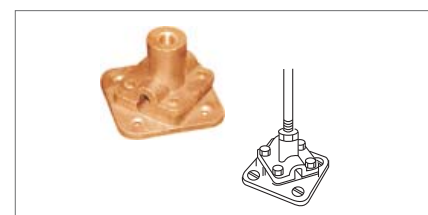
Cat. no.	Thread diameter	Max. tape size mm	Material
G115 40	10 mm	30 x 6	gunmetal or naval brass
G115 37	16 mm	30 x 6	
G115 38	5/8"	30 x 6	
G115 39	3/4"	30 x 6	
G115 40SS	10 mm	30 x 6	stainless steel
G115 37SS	16 mm	30 x 6	
G115 38SS	5/8"	30 x 6	
G115 39SS	3/4"	30 x 6	



Flat saddle – type „C”

These are used for fixing air rods onto the flat roof surfaces and to accommodate circular conductors and cables to the protection system. The threads are suitable for air rods

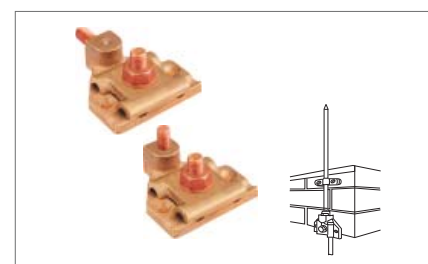
Cat. no.	Conductor size mm ²	Rod diameter mm	Thread diameter mm	Material
G115 23M	50-70	15	16	gunmetal
G115 23N	95	15	16	or naval brass



Air rod base – cable

These are used for fixing air rods horizontally or vertically and to accommodate circular conductors and cables to the protection system. The threads are suitable for air rods

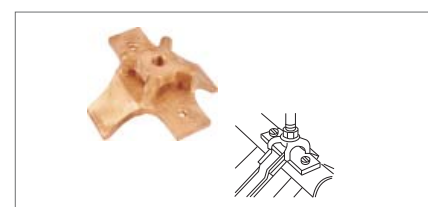
Cat. no.	Base assembly	Conductor diameter mm	Thread diameter mm	Material
G115 26	vertical	8	10	gunmetal
G115 27	horizontal	8	10	or naval brass



Ridge saddle

These are also air rod bases mainly used for fixing air rods on ridges and to accommodate circular conductors and cables to the protection system. The threads suitable for air rods

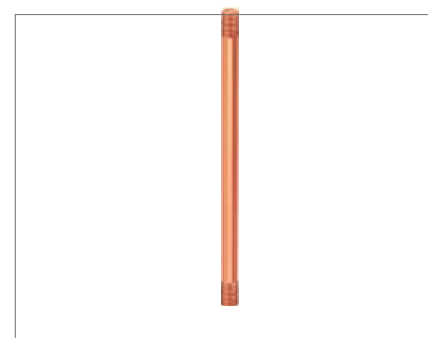
Cat. no.	Rod diameter mm	Thread type	Max. tape size mm	Material
G115 25	15	M16	30 x 6	gunmetal or naval brass
G115 94	14.2	5/8"	30 x 6	
G115 95	17.2	3/4"	30 x 6	



Elevation rod

We offer several options for lightning arrestors and multipoint with elevation rod is an economical option to suit different climatic conditions. Several designs and available in multipoint

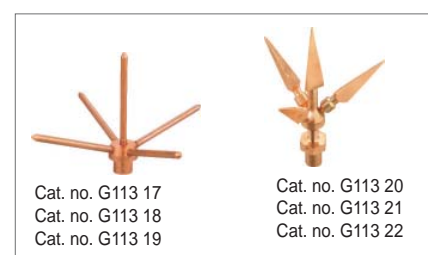
Cat. no.	Rod length m	Rod diameter mm	Thread diameter	Material
G113 10	0.5	15	16 mm	hight conductive copper alloys
G113 11	1	15	16 mm	
G113 12	1.5	15	16 mm	
G113 13	0.5	14.2	5/8"	
G113 14	1	14.2	5/8"	
G113 15	0.5	17.2	3/4"	
G113 16	1	17.2	3/4"	



Multipoint – threaded

Suitable only with threaded copper elevation rod

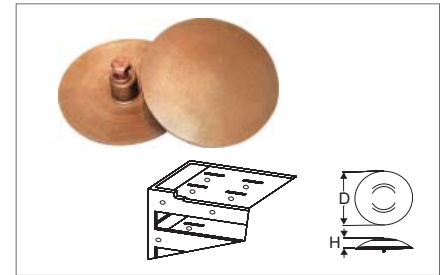
Cat. no.	Thread diameter	Material
G113 17	16 mm	copper
G113 18	5/8"	
G113 19	3/4"	
G113 20	16 mm	gunmetal or naval brass
G113 21	5/8"	
G113 22	3/4"	



Strike pad

Strike pad is used where it is not possible or preferred not to be fix conductors on the roof or side of the building. Applications like ware houses or multistory car park building, where the conductors are laid into the tarmac, or the side of the building but not possible to run the conductor outside

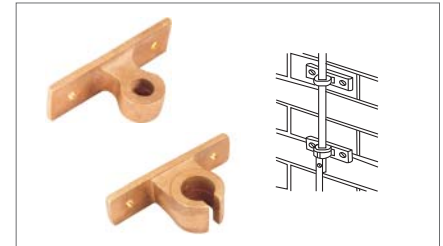
Cat. no.	D mm	H mm	Max. tape size mm	Material
G113 23	110	20	30 x 6	gunmetal or naval brass



Rod bracket – side mounting bracket

Rod brackets are mainly used where it is not possible to fit a saddle on the roof, so the air rod has to be fitted on the wall or to the side of the building or chimney. The rod to tape/cable coupling is used to secure air terminal to tape or cable

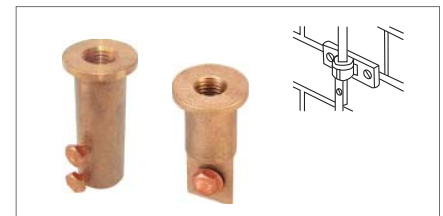
Cat. no.	Rod diameter mm	Material
G113 24	15-20	gunmetal or naval brass



Air rod to tape/cable coupling

These are used in conjunction with the rod brackets. The air rod is screwed in to the threads provided and the tape and cable is secured by the bolts provided. The threads are suitable for air rods

Cat. no.	Rod diameter mm	Thread diameter	Conductor diameter	Material
G118 34	15	16 mm	25 x 3 mm	gunmetal or naval brass
G118 35	15	16 mm	50-70 mm ²	
G118 36	15	16 mm	95 mm ²	
G118 37	14.2	5/8"	25 x 3 mm	
G118 38	14.2	5/8"	50-70 mm ²	
G118 39	14.2	5/8"	95 mm ²	
G118 40	17.2	3/4"	25 x 3 mm	
G118 41	17.2	3/4"	50-70 mm ²	
G118 42	17.2	3/4"	95 mm ²	



Hard drawn copper bar

These are extruded from high grade copper cathode of purity 99.99% purity. These are available in various sizes in standard length of 4 m

Cat. no.	Conductor size mm	Material
G110 50	25 x 3	copper
G110 51	25 x 6	
G110 52	38 x 6	
G110 53	50 x 6	
G110 54	50 x 10	
G110 55	75 x 6	
G110 56	100 x 6	



Copper-bonded steel tape

Steel tape is molecularly bonded in electrolytic process with copper of thickness 0.070 mm. Copper coating protects against corrosion throughout the tens of years. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

Cat. no.	X x Y mm	Standard coil size m	Material
G110 72(60M)	20 x 3	60	steel copper-bonded to thickness of 0.070 mm
G110 73(40M)	25 x 3	40	
G110 74(30M)	25 x 4	30	
G110 79(40M)	30 x 3	40	
G110 75(30M)	30 x 4	30	
G110 81(20M)	40 x 4	20	



Copper-bonded steel wire

Steel wire is molecularly bonded in electrolytic process with copper of thickness 0.070 mm. Copper coating protects against corrosion throughout the tens of years. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

Cat. no.	Diameter mm	Standard coil size m	Material
G111 49	\varnothing 8	acc. to order	steel copper-bonded to thickness of 0.070 mm
G111 49(20M)	\varnothing 8	20	
G111 49(60M)	\varnothing 8	60	
G111 49(80M)	\varnothing 8	80	
G111 50(20M)	\varnothing 10	20	
G111 50(50M)	\varnothing 10	50	
G111 49G250	\varnothing 8	acc. to order	steel copper-bonded to thickness of 0.250 mm



Tinned copper-bonded steel tape

Steel tape is molecularly bonded in electrolytic process with copper of thickness 0.070 mm and tin. Tin protective coating increases the corrosion resistance in every kind of aggressive soil and also protects against theft. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

Cat. no.	X x Y mm	Standard coil size m	Material
G110 91(60M)	20 x 3	60	tinned copper-bonded steel, copper thickness min. 0.070 mm
G110 92(40M)	25 x 3	40	
G110 93(30M)	25 x 4	40	
G110 94(30M)	30 x 3.5	30	
G110 95(30M)	30 x 4	30	
G110 96(30M)	40 x 4	30	



Tinned copper-bonded steel wire

Steel wire is molecularly bonded in electrolytic process with copper of thickness 0.070 mm and tin. Tin protective coating increases the corrosion resistance in every kind of agresive soil and also protects against theft. **Sale unit is kilogram, the tolerance of weight ±5%**

Cat. no.	Diameter mm	Standard coil size m	Material
G111 80	∅ 8	acc. to order	tinned copper-bonded steel, copper thickness min. 0.070 mm
G111 80(20M)	∅ 8	20	
G111 80(60M)	∅ 8	60	
G111 80(80M)	∅ 8	80	
G111 81	∅ 10	acc. to order	
G111 81(20M)	∅ 10	20	
G111 81(50M)	∅ 10	50	



Copper tape

The main important component of any earthing or lightning protection system is the actual conductor. Copper tape is manufactured from finest quality cathodes of purity 99.99%. These tapes is annealed for ease of use with radiused edges and are oxygen free (oxygen 5 ppm). High conductivity copper tape to EN 13601. **Sale unit is kilogram, the tolerance of weight ±5%**

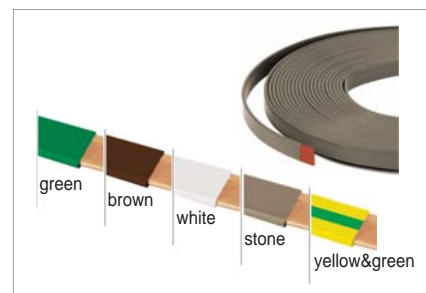
Cat. no.	X x Y mm	Standard coil size m	Material
G110 38(100M)	12.5 x 1.5	100	copper
G110 39(100M)	12.3 x 3	100	
G110 40(50M)	20 x 1.5	50	
G110 02(100M)	20 x 3	100	
G110 41(50M)	25 x 1.5	50	
G110 03(50M)	25 x 3	50	
G110 11(50M)	25 x 4	50	
G110 12(25M)	25 x 6	25	
G110 65(50M)	30 x 2	50	
G110 42(50M)	30 x 3	50	
G110 58(25M)	30 x 4	25	
G110 59(25M)	30 x 5	25	
G110 60(50M)	31 x 3	50	
G110 61(25M)	31 x 6	25	
G110 62(50M)	38 x 3	50	
G110 63(25M)	38 x 5	25	
G110 64(25M)	38 x 6	25	
G110 67(25M)	40 x 3	25	
G110 18(25M)	40 x 4	25	
G110 68(25M)	40 x 5	25	
G110 69(25M)	40 x 6	25	
G110 20(25M)	50 x 3	25	
G110 70(25M)	50 x 5	25	
G110 22(20M)	50 x 6	20	



PVC covered copper tape

PVC covered copper tapes are similar to the bare copper tapes but covered with PVC for aesthetic purpose to blend the down conductor into the building. Other colours can be made to order: black, brown, green, stone, white, yellow&green. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

Cat. no.	X x Y mm	Standard coil size m	Colour of PVC	Material
G110 03(25M)GR	25 x 3	25	gray	PVC insulated copper
G110 03(25M)GRE	25 x 3	25	green	
G110 03(25M)BR	25 x 3	25	brown	
G110 03(25M)WH	25 x 3	25	white	
G110 03(25M)ST	25 x 3	25	stone	
G110 03(25M)YG	25 x 3	25	yellow&green	



Tinned copper tape

High conductivity copper tape to EN 13601, electrolytically tinned. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

Cat. no.	X x Y mm	Standard coil size m	Material
G110 25(50M)	25 x 3	50	tinned copper
G110 26(25M)	25 x 6	25	
G110 98(25M)	50 x 3	25	
G110 99(20M)	50 x 6	20	



Aluminium tape

Bare aluminium tapes are made of high grade aluminium as per BS 2898-1350. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

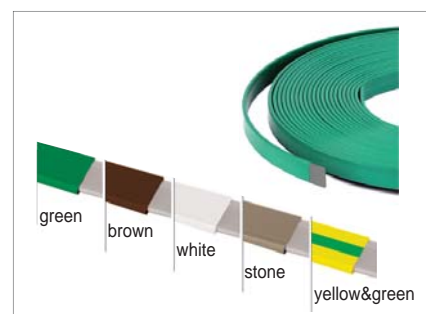
Cat. no.	X x Y mm	Standard coil size m	Material
G110 85(50M)	25 x 3	50	aluminium
G110 86(50M)	25 x 6	50	
G110 87(50M)	50 x 3	50	
G110 88(50M)	50 x 6	50	



PVC covered aluminium tape

These are similar to bare aluminium tapes but covered with 1mm thick PVC sleeve. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

Cat. no.	X x Y mm	Standard coil size m	Colour tape	Material
G110 85(50M)GR	25 x 3	50	gray	PVC insulated aluminium
G110 85(50M)GRE	25 x 3	50	green	
G110 85(50M)BR	25 x 3	50	brown	
G110 85(50M)WH	25 x 3	50	white	
G110 85(50M)ST	25 x 3	50	stone	
G110 85(50M)YG	25 x 3	50	yellow&green	



Bare copper stranded conductor

These bare copper stranded conductors are soft drawn, and used in earthing and lightning protection system. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

Cat. no.	Conductor size mm ²	Stranding quantity/mm	Material
G111 06	6	7/1.04	copper
G111 90	10	7/1.4	
G111 07	16	7/1.7	
G111 08	25	7/2.14	
G111 09	35	7/2.52	
G111 10	50	19/1.78	
G111 11	70	19/2.14	
G111 12	95	19/2.52	
G111 13	120	37/2.03	
G111 14	150	37/2.25	
G111 15	185	37/2.52	
G111 91	240	61/2.52	



PVC covered copper conductor

These are similar to bare copper stranded conductors and are soft drawn and covered with PVC yellow green which resembles grounding conductor, and used in earthing and lightning protection system. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

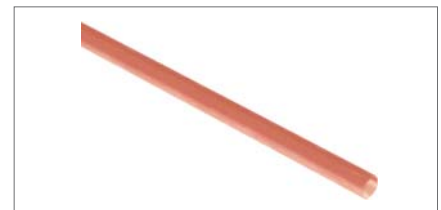
Cat. no.	Conductor size mm ²	Stranding quantity/mm	Material
G111 16	16	7/1.7	copper
G111 17	25	7/2.14	
G111 18	35	7/2.52	
G111 19	50	19/1.78	
G111 20	70	19/2.14	
G111 21	95	19/2.52	
G111 22	120	37/2.03	
G111 23	150	37/2.25	
G111 24	185	37/2.52	
G111 25	240	61/2.25	
G111 26	300	61/2.52	
G111 27	400	61/2.85	



Solid circular conductor

These solid circular conductor is used in lightning protection application. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

Cat. no.	Diameter		Standard coil size m	Material
	mm	mm ²		
G111 03(50M)	8	50	50	copper



PVC covered solid circular conductor

High conductivity copper conductor in UV stabilized PVC. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

Cat. no.	Diameter		Standard coil size m	Colour range	Material
	mm	mm ²			
G111 03(50M)BL	8	50	50	black	copper
G111 03(50M)GR	8	50	50	grey	
G111 03(50M)ST	8	50	50	stone	
G111 03(50M)WH	8	50	50	white	
G111 03(50M)BR	8	50	50	brown	



Flexible copper braid

Flexible copper braids are suitable for earth bonding of fences, gates, doors. Where flexibility is required or the bond is subject to movements. Other materials, sizes and types of braid can be made to order. **Sale unit is kilogram, the tolerance of weight $\pm 5\%$**

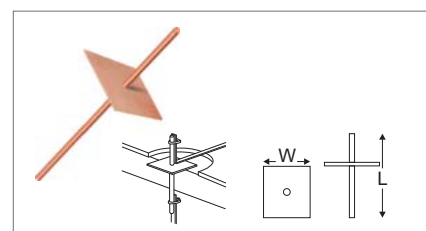
Cat. no.	X x Y mm	Size mm ²	Standard coil size m	Material
G111 51(100M)	12 x 1	6	100	copper
G111 52(100M)	15 x 1.5	10	100	
G111 53(100M)	19 x 2.5	16	100	
G111 54(100M)	25 x 3.5	35	100	
G111 55(50M)	32 x 6	70	50	
G111 56(50M)	50 x 6	150	50	



Puddle flange

The puddle flange is used where the lightning conductors must pass through a waterproof membrane in roofs. The flats are made waterproof by applying glue, cement, specialised roofing materials

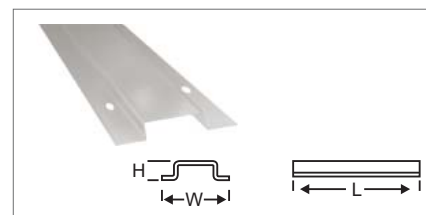
Cat. no.	L mm	W mm	Material
G119 06	600	150	copper



Anti vandal down conductor guard

Hot-dip galvanized steel guard to protect down conductor against destruction

Cat. no.	Conductor size mm	Size L x W x H mm	Material
G119 07	25 x 3	2000 x 60 x 15	hot dip galvanized steel
G119 08	25 x 3	3000 x 60 x 15	hot dip galvanized steel

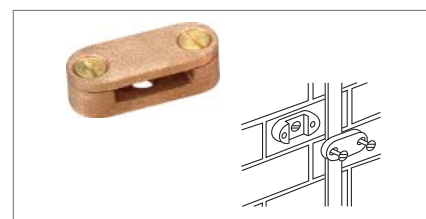


DC tape clip

Metallic DC clips are used to secure the flat conductor to the building. It is recommended to use DC clips at 1 m distance. The tape fits into the clip and is secured by two countersunk screws. These clips can be fastened to the building by recommended csk woodscrew 1 1/2" x no 10 plugs.

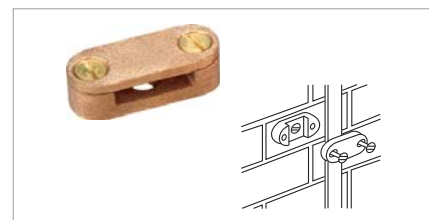
DC tape clip use with bare copper

Cat. no.	Conductor size mm	Material
G115 08	25 x 3	gunmetal or naval brass
G115 41	25 x 6	
G115 42	28 x 5	
G115 43	30 x 2	
G115 44	31 x 3	
G115 52	31 x 6	
G115 53	38 x 3	
G115 54	38 x 6	
G115 55	50 x 3	
G115 06	50 x 6	



DC tape clip use with PVC covered bare copper

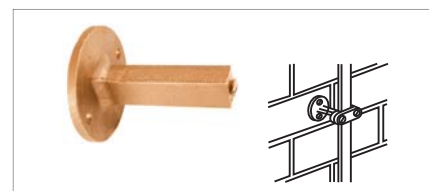
Cat. no.	Conductor size mm	Material
G115 59	25 x 3	gunmetal or naval brass



Holders, distance and fastening clamp

Back plate holdfast stem increasing distance from wall clamps. For use with saddle (cat. no. G115 06 and G115 08)

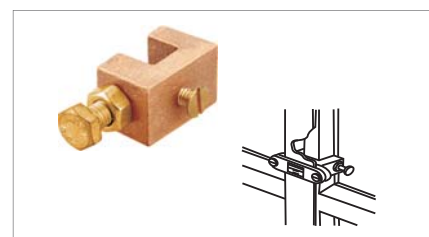
Cat. no.	Conductor material	Material
G115 57	St/Cu or Cu	gunmetal or naval brass



Glazing bar hold fast

Glazing bar hold fast can be used to secure DC clip onto any projection or extension like steel frames, girders, angles, window frames

Cat. no.	Max. glazing bar width mm	Material
G115 58	12	gunmetal or naval brass



Non metallic DC tape clip

Non-metallic DC tape clips are made from high grade polypropylene and UV stabilized to prevent degradation or braking in cold weather. The two piece design with a connection link will ensure no lost are dropped lids, the unique locking design provides easy installation and rigid pull off loads. These are made in six colors to match the PVC covered tapes, these can also be used for bare copper tapes. Color with the order

Cat. no.	Conductor size mm	Tape type	Material
G115 03	25 x 3	bare copper	polypropylene
G115 04	25 x 6		
G115 05	25 x 3	PVC covered	

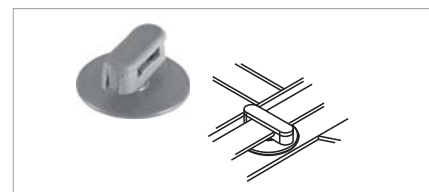


Glue down DC tape clip

Glue down DC tape clip is ideal to secure conductors to surfaces that cannot be penetrated by screw and can be used on all surfaces with suitable adhesive to that surface. Manufactured from high grade plastic and UV stabilized.

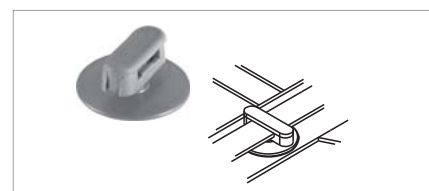
Glue down DC tape clip use with bare tape

Cat. no.	Conductor size mm	Color	Material
G118 43	25 x 3	brown	UV stabilized plastic
G118 44	25 x 3	grey	



Glue down DC tape clip use with PVC covered tape

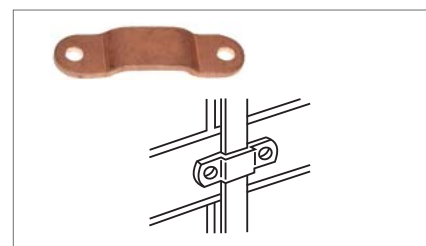
Cat. no.	Conductor size mm	Color	Material
G118 45	25 x 3	brown	UV stabilized plastic
G118 46	25 x 3	grey	



Tape clip

These are used to flush the tape with building surface. These are fixed using two screws and plugs

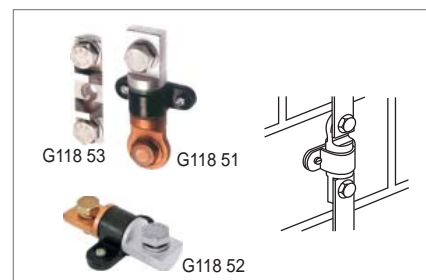
Cat. no.	Conductor size mm	Material
G118 47	25 x 3	copper
G118 48	25 x 6	
G118 49	50 x 3	
G118 50	50 x 6	



Bi-metallic connector – tape to tape

Bi-metallic connectors are used to connect aluminum tape to copper tape, in order to prevent dissimilar contact and avoid galvanic action it is always recommended to use aluminum copper bi-metallic connectors

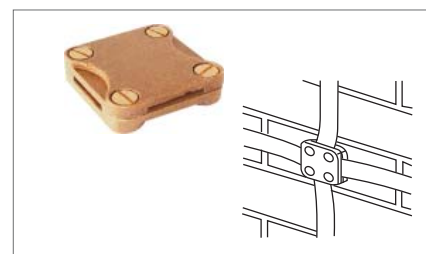
Cat. no.	Tape size mm	Material
G118 51	25 x 3 – Cu to 25 x 3 – Al / vertical	copper and aluminium
G118 52	25 x 3 – Cu to 25 x 3 – Al / horizontal	
G118 53	25 x 3 – 25 x 3	



Square tape clamp

Square tape/junction clamps are used for crossing over tapes or for T joints or for making straight through joints in a network of tapes. These camps can be fastened to the building by recommended csk woodscrew 1 1/2" x no 10 plugs

Cat. no.	Conductor size mm	Material
G118 54	25 x 3	gunmetal or naval brass
G118 55	25 x 6	
G118 56	28 x 5	
G118 57	30 x 2	
G118 58	31 x 3	
G118 59	31 x 6	
G118 60	38 x 3	
G118 61	38 x 6	
G118 62	50 x 3	
G118 63	50 x 6	



Oblong test or junction clamp

Oblong test/junction clamps are used for straight through tape joints and also used for disconnecting the earthing or lightning protection system for testing purpose. The tapes can be overlapped and secured by two bolts

Cat. no.	Conductor size mm	Material
G118 64	25 x 3	gunmetal or naval brass
G118 65	25 x 6	
G118 66	31 x 3	
G118 67	31 x 6	
G118 68	38 x 3	
G118 69	38 x 6	
G118 70	50 x 3	
G118 71	50 x 6	

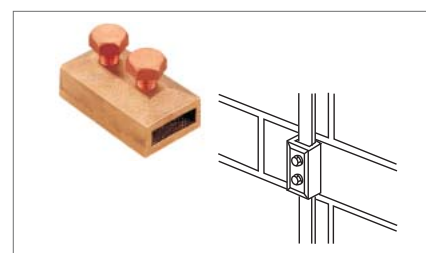
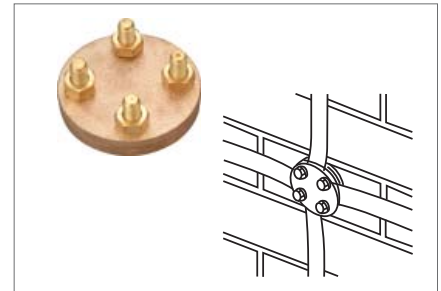


Plate type test clamp

Plate type test clamps are used as T or straight through joints of tapes. These test clamps can also be used as disconnecting joint between the down conductors and the earthing system. The clamp is also suitable in heavy duty applications up to 26 x 12 tape connections

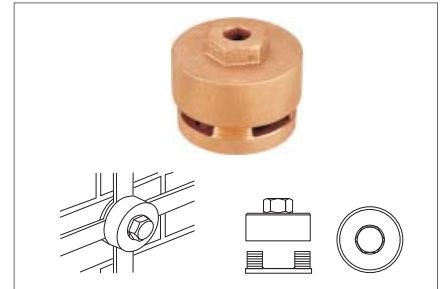
Cat. no.	Max. conductor size mm	Material
G115 86	26 x 12	gunmetal or naval brass



Screw down test clamp

These clamps provide easy access to copper tapes for inspection or testing. The heavy duty lid easily screws on/off the base. Due to easy operation these are not suitable near the ground or with in easy reach of public for security reasons

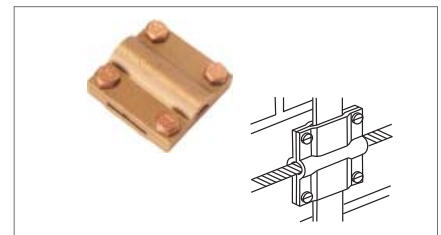
Cat. no.	Max. conductor size mm	Material
G115 87	26 x 8	gunmetal or naval brass



Multi purpose clamp

Multi purpose clamp are suitable for crossing over tapes and cables. These clamps are used to make straight through and T joints in a continuous network

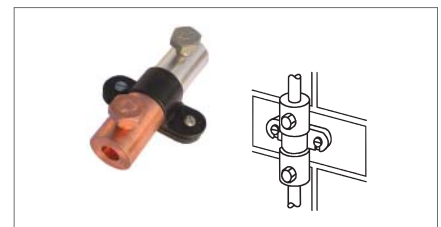
Cat. no.	Conductor size	Tape mm	Material
G115 96	8 mm dia. or 35-50 mm ²	25 x 3	gunmetal or naval brass
G115 97	10 mm dia. or 70-95 mm ²	25 x 3	



Bi metallic connector – cable to cable

Bi metallic connectors are used to connect aluminum lightning protection system to copper earthing network, in order to prevent dissimilar contact and avoid galvanic action it is always recommended to use aluminum copper bi metallic galvanic action it is always recommended to use aluminum copper bi metallic connectors. The cable can be connected directly into the connector

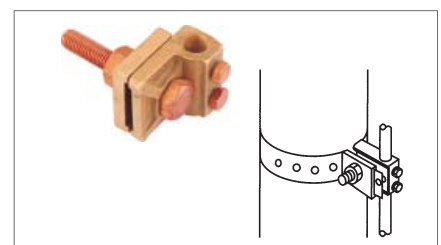
Cat. no.	Conductor size	Material
G118 72	8 mm dia. or 35-50 mm ²	copper and aluminium



Pipe bond

These pipe bond are used for bonding handrails, reinforced bars, pipes, with solid conductors

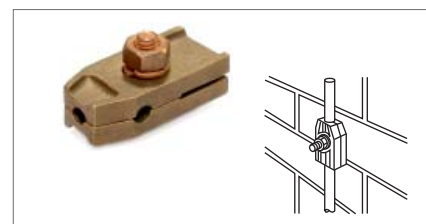
Cat. no.	Conductor size	Tape mm	Material
G118 73	8 mm dia. or 35-50 mm ²	50 x 200	gunmetal or naval brass



Interface test and junction clamp

Junction clamps are suitable to form straight through joints of copper tape to circular conductor or cable for disconnecting or test purpose

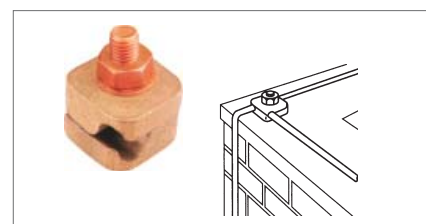
Cat. no.	Conductor size	Tape width mm	Material
G118 74	8 mm dia. or 35-50 mm ²	25	gunmetal
G118 75	10 mm dia. or 70-95 mm ²	25	or naval brass



Square clamp

Square clamp suitable for cross connection of down conductor with horizontal air terminal installed on roof

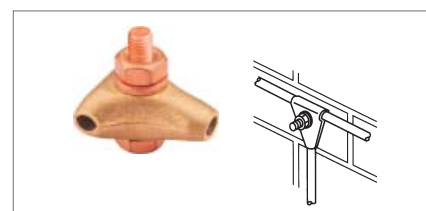
Cat. no.	Conductor size	Material
G118 76	8 mm dia. or 35-50 mm ²	gunmetal
G118 77	10 mm dia. or 70-95 mm ²	or naval brass



Tee clamp

Tee clamp enables triangular connection of conductors

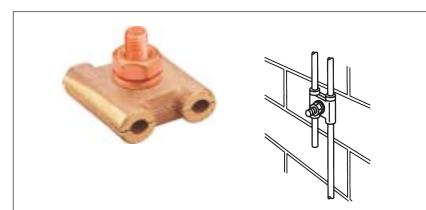
Cat. no.	Conductor size	Material
G118 78	8 mm dia. or 35-50 mm ²	gunmetal
G118 79	10 mm dia. or 70-95 mm ²	or naval brass
G118 80	120 mm ²	



Jointing clamp

Jointing clamps are used for forming straight through joints of circular conductors

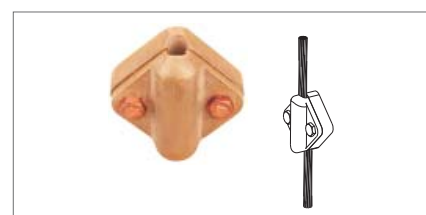
Cat. no.	Conductor size	Material
G118 81	8 mm dia. or 35-50 mm ²	gunmetal
G118 82	10 mm dia. or 70-95 mm ²	or naval brass
G118 83	120 mm ²	



Test clamp

Test clamp is for end to end joints of circular conductors

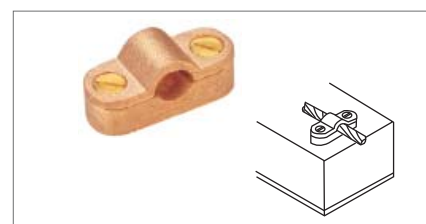
Cat. no.	Conductor size mm	Material
G115 88	35	gunmetal
G115 89	50-70	or naval brass
G115 90	95	



Heavy duty cast cable saddle

Heavy duty cast cable saddle can be used in many application. These can be used as a support for 10 mm diameter air rod or as a heavy duty clip for round conductors. These can be used in conjunction with glazing bar holdfast and back plate holdfast stem

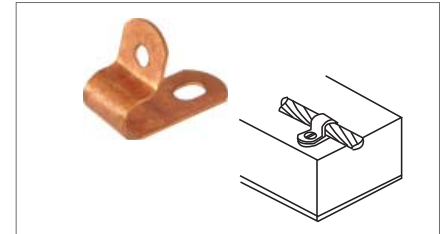
Cat. no.	Conductor size mm ²	Material
G118 84	35-50	gunmetal
G118 85	70-95	or naval brass
G118 86	120	
G118 87	150	
G118 88	185	
G118 89	240	



One hole clip

One hole clips can be used for fixing cables and round conductors. These are supplied in open position for easy installation

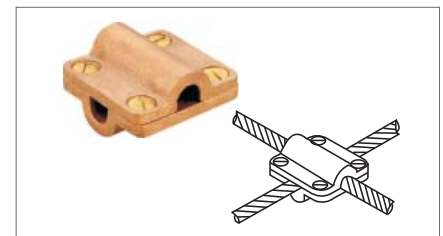
Cat. no.	Conductor size mm	Material
G118 90	25	copper
G118 91	35	
G118 92	50	
G118 93	70	
G118 94	95	
G118 95	120	
G118 96	150	
G118 97	185	
G119 98	240	
G119 99	300	



Square conductor clamp

Square conductor clamp are used for forming straight, through, cross or T joints in cables and round conductors

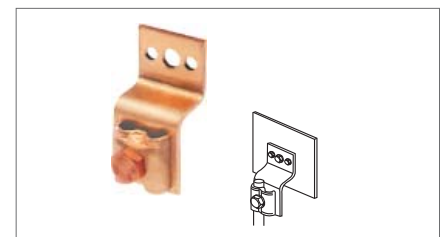
Cat. no.	Conductor size mm	Material
G119 58	35-50	gunmetal or naval brass
G119 59	70-95	
G119 60	120	



Metalwork bonding clamp

This one piece metalwork bonding clamp is designed for bonding round conductors to the metal surfaces. The bond can be fastened by bolts and nuts or by welding onto the metal surface, and then the conductor is fixed

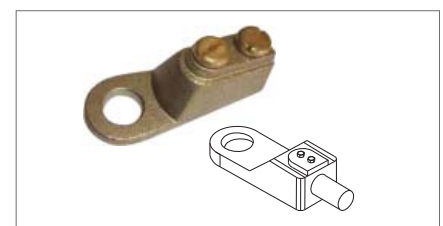
Cat. no.	Conductor size	Material
G119 61	8 mm dia. or 35-50 mm ²	copper



Cable socket

Cable sockets are used to bonding copper conductor to steel work or meal surface

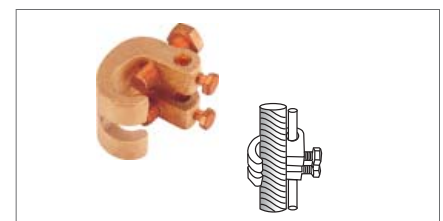
Cat. no.	Conductor size	Palm hole diameter mm	Set screw	Material
G119 62	8 mm dia. or 35-50 mm ²	12	M6 x 12 mm	gunmetal or naval brass
G119 63	10 mm dia. or 70-95 mm ²	12	M6 x 12 mm	



Re-bar clamp

Re-bar clamps are suitable for bonding circular conductors to reinforced bars, steam pipes, hand rails

Cat. no.	Conductor size	Re-bar diameter mm	Material
G119 64	8 mm dia. or 35-50 mm ²	8-18	gunmetal or naval brass
G119 65	8 mm dia. or 35-50 mm ²	18-38	



Insulating tape for wrapping underground joints – Denso type

Denso tape protects underground connections from soil and electrochemical corrosion

Cat. no.	Width mm	Length m	Material
G103 55	30	10	petroleum base natural compound
G103 56	50	10	on a filter carrier





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AC 012

**STOWARZYSZENIE ELEKTRYKÓW POLSKICH
BIURO BADAWCZE DS. JAKOŚCI**

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CERTYFIKAT ZGODNOŚCI

CERTIFICATE OF CONFORMITY

nr Z/12/037/14/A1
No. Z/12/037/14/A1

Dostawca: CBM Technology Sp. z o.o.
(Nazwa i adres) ul. Kasztanowa 2
Supplier: 64-320 Niepruszewo k. Poznania, Poland
(Name and address)

Producent: CBM Technology Sp. z o.o.
(Nazwa i adres) ul. Kasztanowa 2
Manufacturer: 64-320 Niepruszewo k. Poznania, Poland
(Name and address)

Nazwa wyrobu: Uziomy pionowe.
Name of the product: Earth rods.

Typ (model): Uziom stalowy pomiedziowany o średnicy 14,2 mm.
Type (model): Uziom stalowy pomiedziowany o średnicy 16 mm,
Uziom stalowy pomiedziowany o średnicy 17,2 mm.
Earth rod stell-plated conductor of diameter 14,2 mm,
Earth rod stell-plated conductor of diameter 16 mm,
Earth rod stell-plated conductor of diameter 17,2 mm,

Dane techniczne: Długość uziomu pionowego: 1500 mm.
Technical data: Length of earth rods: 1500 mm.
Średnica uziomu pionowego: Ø 14,2 mm; Ø 16 mm, Ø 17,2 mm.
Diameter of earth rods: Ø 14,2 mm, Ø 16 mm, Ø 17,2 mm.

System certyfikacji: 1a według Przewodnika ISO/IEC 67
Certification system: 1a according to ISO/IEC Guide 67

Wymieniony powyżej wyrób spełnia wymagania norm(-y) i/lub dokumentów normatywnych:
Aforesaid product complies with the requirements of the standard(s) and/or normative documents:

Norma(-y) Standard(s)	Raport(-y) z badań nr Test report(s) No.	Wydany(-e) przez Issued by
PN-EN 62561-2:2012 (EN 62561-2:2012)	LA-13.061/13.054/1	SEP - BBJ

Niniejszy certyfikat dotyczy wyłącznie wyrobów mających identyczne właściwości (dane techniczne) jak przedstawiony do badań wzór, i spełniających wymagania ww. norm(-y)i/lub dokumentów normatywnych.
This certificate covers only the products with characteristics (technical data) same as of the tested sample and those complying with the requirements of the aforesaid standard(s) and/or normative documents

Warszawa, 2015-02-10



Kierownik Jednostki Certyfikującej
Certification Body Manager

Zbigniew Brzozowski
Zbigniew Brzozowski

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