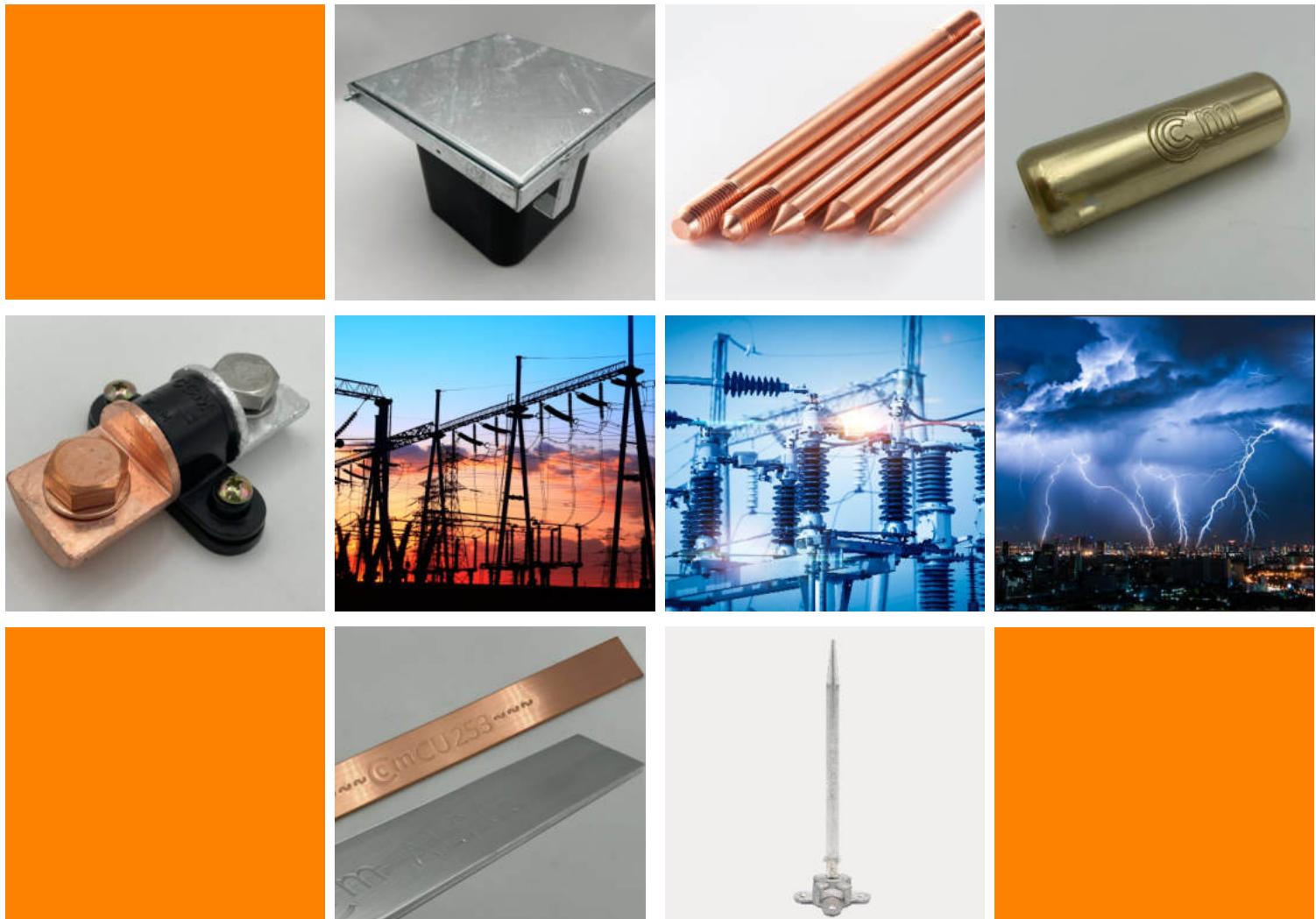




Lightning Protection



CATALOGUE

VISIT CCM ON LINE ccm.sg



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Choo Chiang Marketing Pte Ltd
10 Woodlands Loop S(738388)
+65 63685922
www.choochiang.com
info@choochiang.com

cm



Product Description:

Whether in industrial, commercial, or residential settings, our CCM Lightning Protection System is your top choice for ensuring exceptional safety for your facilities, property, and personnel. We are committed to creating a secure environment for you, reducing the risk of lightning strikes and preventing unforeseen losses.

Key Features:

Efficient Lightning Protection: Equipped with advanced lightning sensing technology, the system can automatically trigger protective measures as the risk of lightning increases, minimizing the threat of lightning strikes.

Durable Materials: All components are crafted from durable materials to ensure long-term stable operation, impervious to adverse weather conditions.

Easy Installation: With its streamlined design, the installation process is quick and requires no extensive construction, enabling completion without disrupting normal operations.

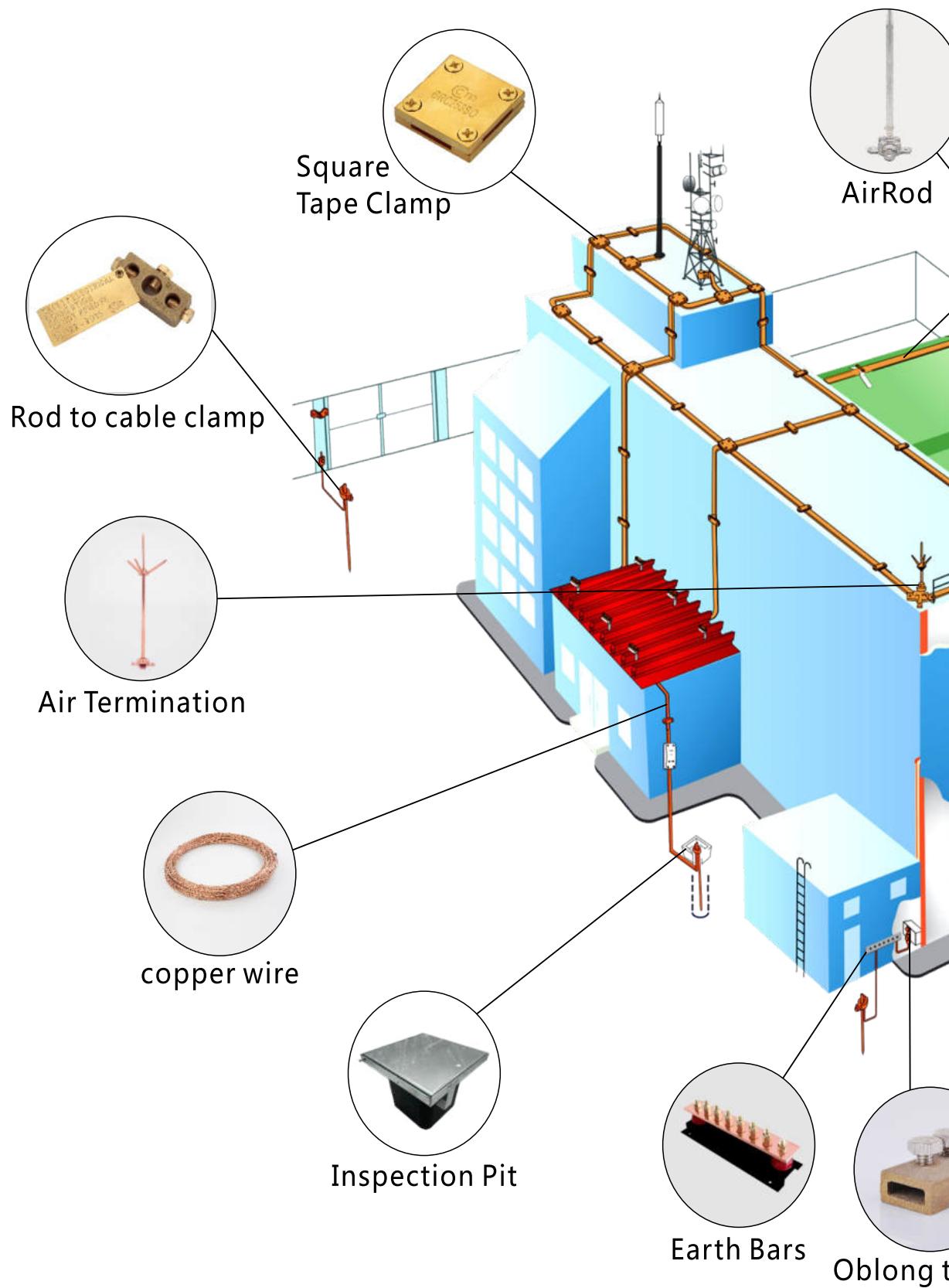
Customizability: We offer various configuration options to suit different applications and environments, catering to your specific needs.

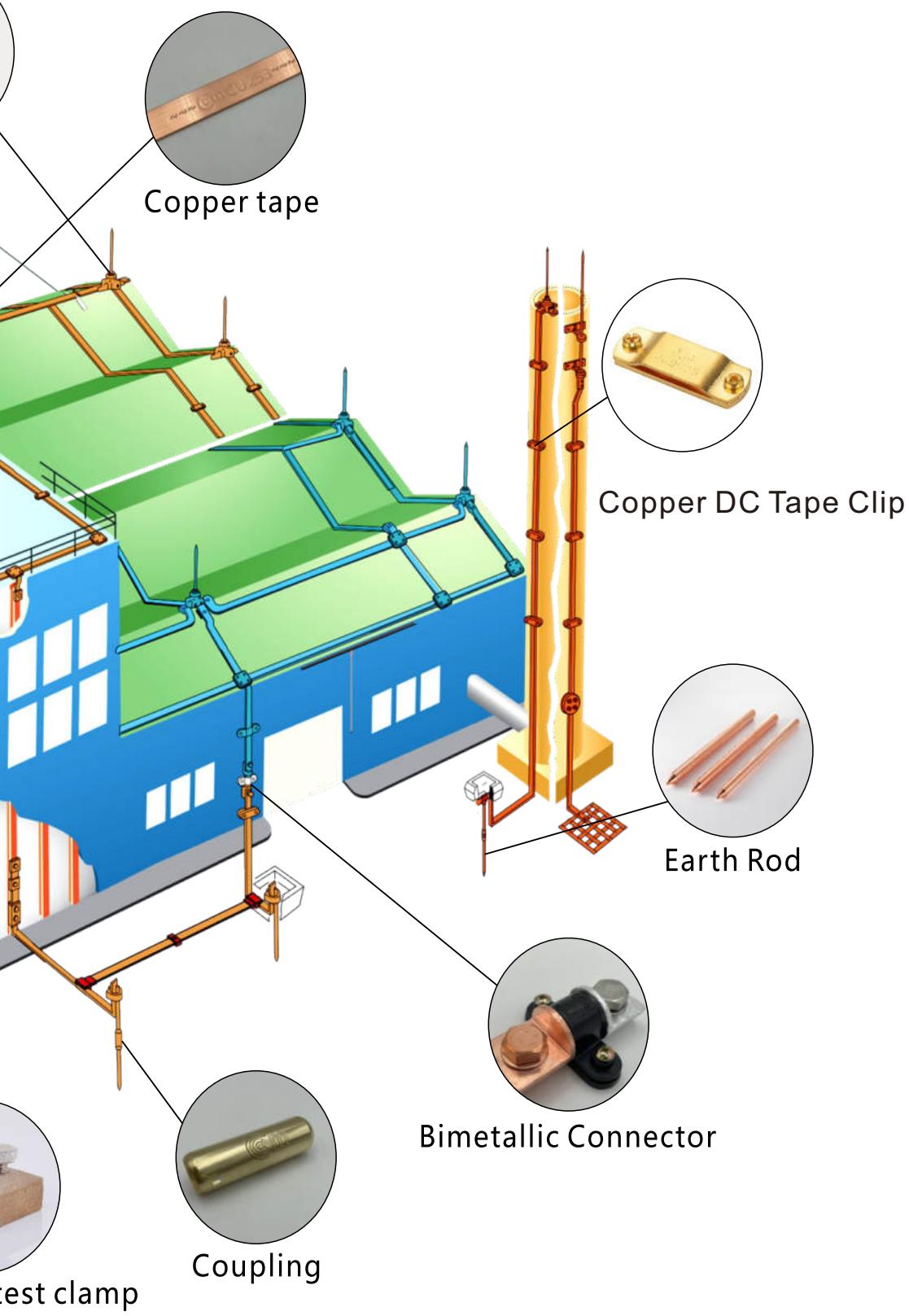
Applicable Areas:

Industrial Facilities: Safeguard factories, warehouses, and other critical facilities, preventing production interruptions and equipment damage from lightning strikes. **Commercial Buildings:** Ensure the safety of office buildings, shopping centers, and other public spaces, reducing potential risks to personnel. **Residential Areas:** Protect residential neighborhoods, offering household safety and mitigating threats to home equipment and occupants.

Why Choose Us: Our Advanced Lightning Protection System is the culmination of years of research and development, incorporating the latest technology and engineering practices. Our professional team will ensure that your facilities receive optimal protection, providing a secure environment for your property and personnel.

No matter your requirements, our Advanced Lightning Protection System will be your dependable choice. Contact our sales team to learn more and let us join you in safeguarding your safety.





Earthing & Lightning Protection System



CONNECT



CONNECTION

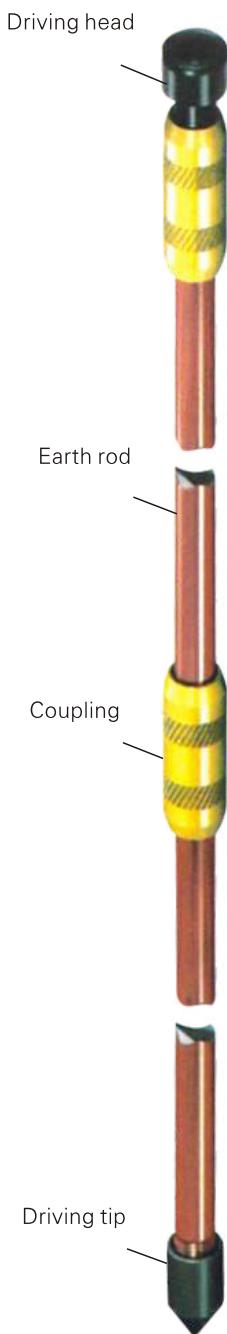
CCM TEST REPORT



Copper Bonded Earth Rods

- It has characteristics as below:

- Thickness of the copper layer is more than 0.254mm.
- The advantages are good tensile strength more than 600N/mm²
- Our ground rods can be bended through a 30 or 90 or 135 degrees angle, and the rods will be no evidence of cracking or splitting of the steel or the copper cladding.
- Good in anticorrosion that usage-life is more than 50 years or more, constant low resistance and good plasticity which had the characteristics of copper as well as steel.

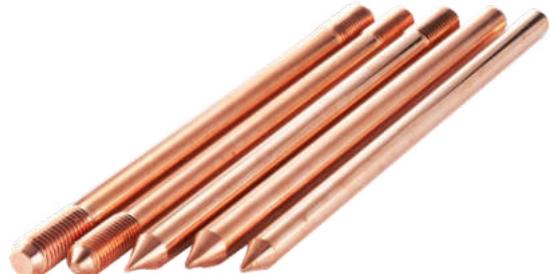


- Note

- Diameter standard is 11mm, 12.5mm, 14.2mm and 17.2mm, the thread size for 1/2", 9/16", 5/8" and 3/4" and also can make metric standard.
- We can supply you earth rods with much more thickness of copper layer such as 25 microns, 50 microns, 100 microns, 127 microns, 254 microns, 330 microns and etc.
- Also, we can supply you earth rod with two ends thread, Un-thread but with one end point tone end thread and the other end point.
- The length of earth rod as your request.

- Formula of calculating for single earth rod

$$R = \frac{\rho}{2\pi L} \left(\ln \frac{8L}{d} - 1 \right) \quad (d \ll L)$$



R: Earthing resistance of single earth rod(Ω)

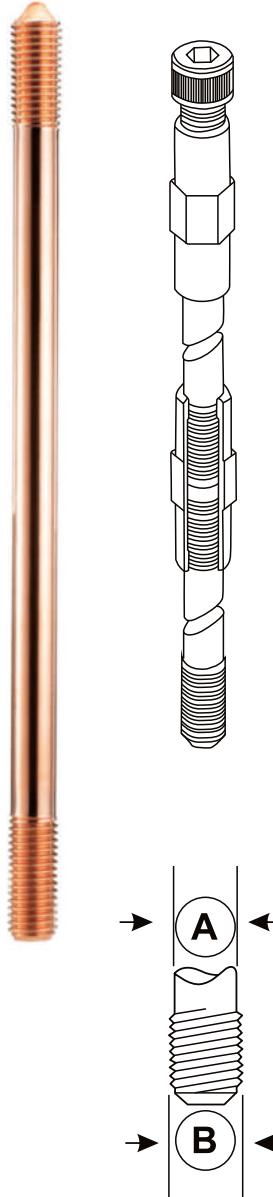
p: Earthing resistance rate after revised(Ω-m)

L: Length of earth rod(m)

d: Diameter of earth rod(m)

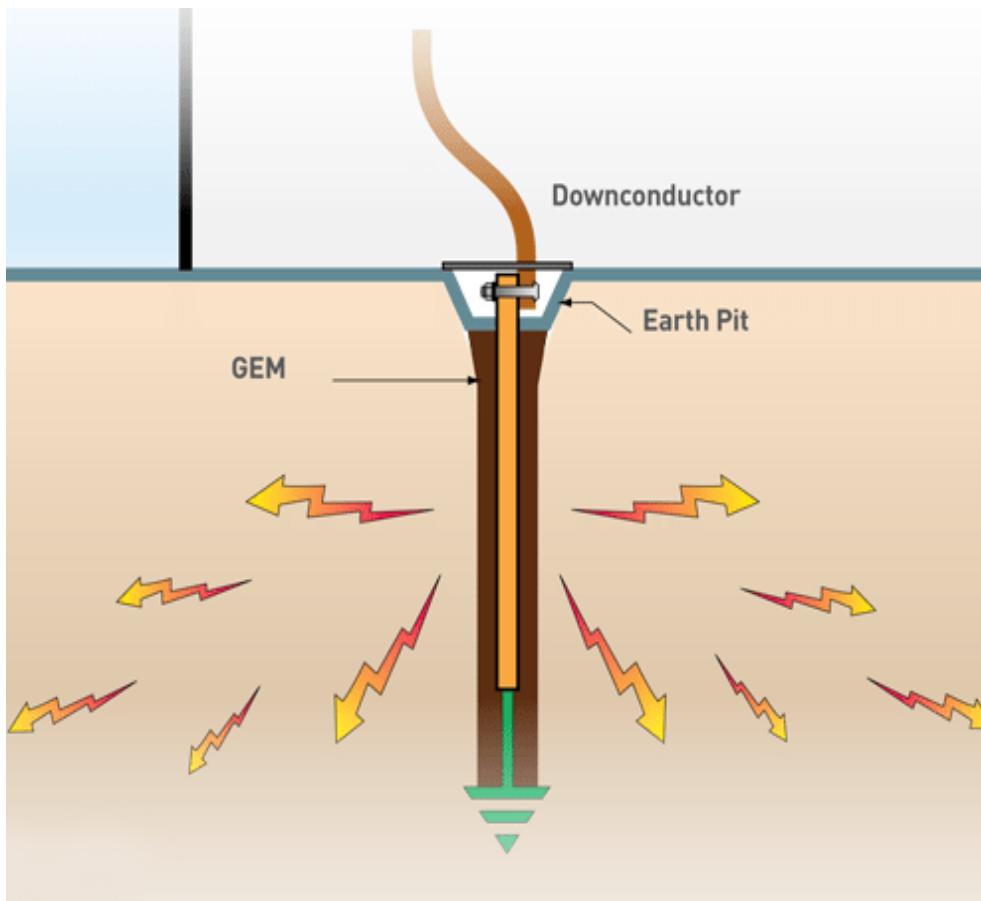
Threaded Copper Bonded Earth Rods

- Copper bond earth rods probably offer the installer the best and most economical earth rods available. They are made by molecularly bonding 99.9% pure electrolytic copper onto a low-carbon steel core.
- Confusion often arises between thread and shank diameters for threaded rods. The thread rolling process, used by quality rod manufacturers, raises the surface of the rod so that the thread diameter (B) is greater than the shank diameter (A).
- Copper thickness standard 254 microns. (others plating copper thickness as your requested)
- Earth rods to IEC 62561-2:2018 standard
- Other dimensions of the earth rod can be customized as your requested.



Product Dimensions

Model No.	NoMinal diameter	Length	Thread 'B'	Shank "A"	Weight each
ER586	14.2mm	1800mm	5/8"	14.2mm	2.29kg



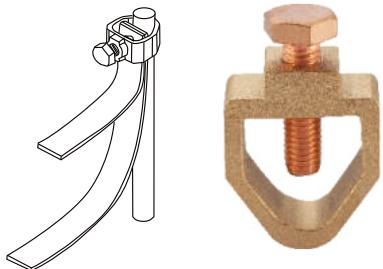


Coupling

Model No.	Length	Suitable for Rod Dia
ERS58	70mm	16mm(5/8")

Tape to Rod Clamp

- CCM'S rod to tape clamp is suitable for clamping earth rods to tape. The rod to tape clamp is manufactured from high strength copper alloy.

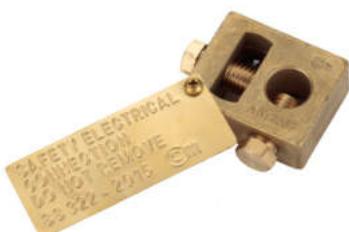


Earth Rod Clamp A Tape to Rod

Suits: Tape 25X3mm
Material: Copper Alloy

Model No.	Nominal rod diameter		Max.conductor	Weight each
	Inch	mm		
RTC16A	5/8"	16mm	26x12mm	0.129kg

Earth Rod Clamp A



Warning Label - SAFETY ELECTRICAL CONNECTION
 DO NOT REMOVE
 SS 322-2015

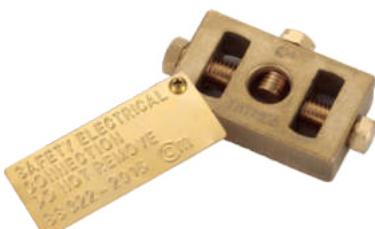
Earth Rod Clamp B



Model No.	Cable Size	Rode size	Material
BRC16-25	16-25sqmm	5/8"	Copper Alloy
BRC50	35-50sqmm	5/8"	Copper Alloy
BRC70	70sqmm	5/8"	Copper Alloy
BRC95	95sqmm	5/8"	Copper Alloy

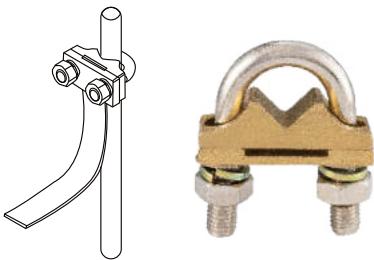
Warning Label - SAFETY ELECTRICAL CONNECTION
 DO NOT REMOVE
 SS 322-2015

TAPE TO ROD TO TAPE CLAMP



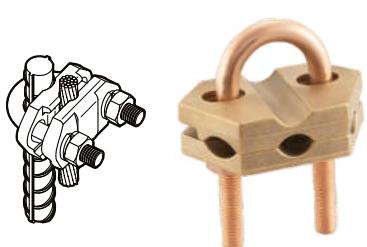
Model No.	Tape size	Rode size	Material
TRT2558	4(3x25mm)	5/8"	Copper Alloy

Warning Label - SAFETY ELECTRICAL CONNECTION
 DO NOT REMOVE
 SS 322-2015



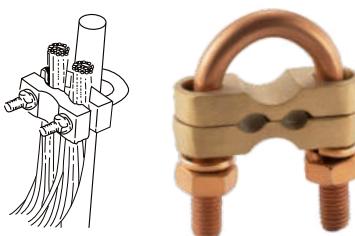
U-Bolt Rod To Tape Clamp(Double Plates)

Model No.	Hole centres	Dod Dia(in.:mm)	Weight
URC-2-16	25mm	5/8":16	0.30kg
URC-2-20	25mm	3/4" :20	0.34kg



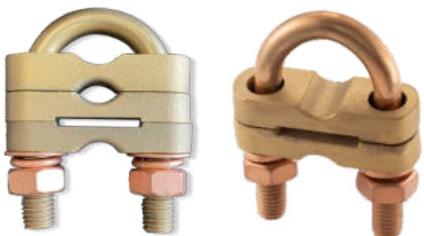
U-Bolt Rod To Cable Clamp

Model No.	Dod Dia(in.:mm)	Conductor	Weight
URCC140	5/8":16	16-95mm ²	0.33kg
URCC160	3/4":20	16-70mm ²	0.33kg



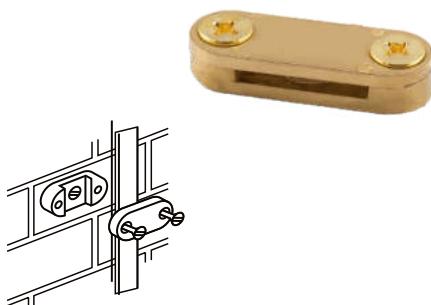
U-Bolt Rod Clamp

Model No.	Dod Dia(in.:mm)	No.of Conductors	Conductor Size	Tape Size
UC301	16mm(5/8")-19mm(3/4")	1	50-95mm ²	—
UC302	16mm(5/8")-19mm(3/4")	2	50-70mm ²	—
UC303	16mm(5/8")-19mm(3/4")	3	50-70mm ²	—
UC304	16mm(5/8")-19mm(3/4")	5	50-70mm ²	—
UC305	16mm(5/8")-19mm(3/4")	3	50-120mm ²	—
UC306	16mm(5/8")-19mm(3/4")	2	70-120mm ²	—



U-Bolt Rod To Cable and Tape Clamp

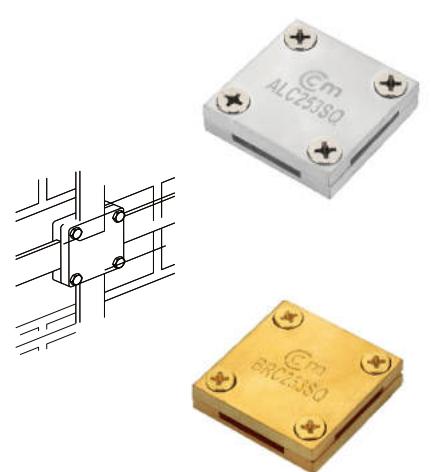
Model No.	Dod Dia(in.:mm)	No.of Conductors	Conductor Size	Tape Size
UC307	16mm(5/8")-19mm(3/4")	1	70-120mm ²	25x3mm
UC308	16mm(5/8)-19mm(3/4")	—	—	25x3mm

Bare Copper DC Tape Clip

Model No.	Tape Size	Material
CDC203	20x3mm	Copper/brass
CDC253	25x3mm	Copper/brass
CDC305	30x5mm	Copper/brass
CDC404	40x4mm	Copper/brass
CDC504	50x4mm	Copper/brass

Bare Aluminum DC Tape Clip

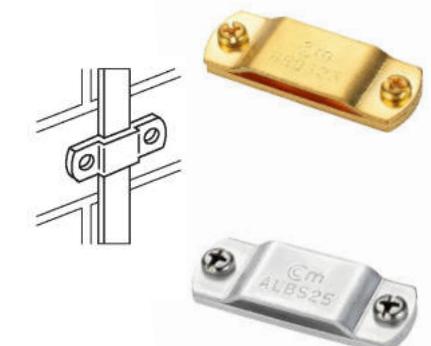
Model No.	Tape Size	Material
ADC203	20x3mm	Aluminum
ADC253	25x3mm	Aluminum
ADC506	50x6mm	Aluminum

Square Tape Clamp

Model No.	Tape Size	Material
ALC253SQ	25x3mm	Aluminum

Square Tape Clamp

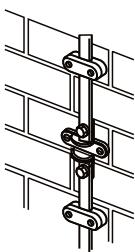
Model No.	Tape Size	Material
BRC253SQ	25x3mm	Copper/brass

Copper Tape Clip

Model No.	Tape Size	Material
BRBS25	25x3mm	Copper/brass

Aluminum Tape Clip

Model No.	Tape Size	Material
ALBS25	25x3mm	Aluminum



Bi-metallic Connector

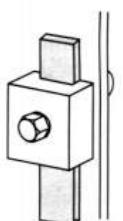
Model No.	Tape Size
BMC20	25x3mm Aluminum Tape to 25x3mm Copper Tape

- For joining aluminium to copper.
Particularly useful where an aluminium lightning protection system needs to be earthed using copper.



Copper Tape Connector

Model No.	Tape Size
BMCC25	25x3mm Copper Tape to 25x3mm Copper Tape



3/8" Gunmetal B Bond

Model No.	Conductor	Material
GMBB25	25x3mm	Brass



3/8" ALUM B BOND

Model No.	Conductor	Material
ALBB25	25x3mm	Aluminum



GUNMETAL ROUND TEST CLAMP

Model No.	Conductor	Material
GMTC175	26x12mm	Copper/brass



Copper Tape(Cu 99.9%)

Model No.	Dimensions	Material
CU253	25x3mm	Oxygen-free copper



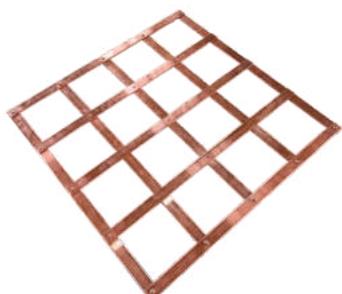
Aluminum Tape(Alu 99.9%)

Model No.	Dimensions	Material
AL253	25x3mm	Aluminum



Earth Plate

Model No.	Size	Material
EP615	600mmx600mmx1.5mm	Solid Copper
EP930	900mmx900mmx3mm	Solid Copper



Earth Mat

Model No.	Size	Material
EM630	600mmx600mmx3mm	High conductive copper
EM930	900mmx900mmx3mm	High conductive copper



EARTH PITS

- CCM'S earth inspection pit facilitates periodic inspection of the connection for corrosion and regular maintenance, to ensure the safety of personnel and equipment from earth fault currents and the high currents injected into the earth by a lightning protection system

9"X9" HD GALV'D EARTH CHAMBER

Model No.	Standard Specification	Material	Size
ERIP99	IEC62561-5:2017 EN 62561-5:2017 BSEN 62561-5:2017	Base: HI Grade Polymer Cover & Frame :Hot-dipped Galvanized Steel	L250XW250 XH200mm



CCM TLB125-40 TEST LINK BOX

Model No.	Material	Size
TLB125-40	Alumium & Galvanised steel	125mmx125mmx40mm



Polymer Earth Pit

Material	Dimension	Weight	Packing	Strength
Polymer	300mmx300mmx210mm	1.75kg/pc	carton Box	5000Kg



Resin Earth Pit

Material	Dimension	Weight	Packing	Strength
Resin	280mmx280mmx180mm	5kg/pc	Wooden Case	5000Kg

Air Termination (complete set)

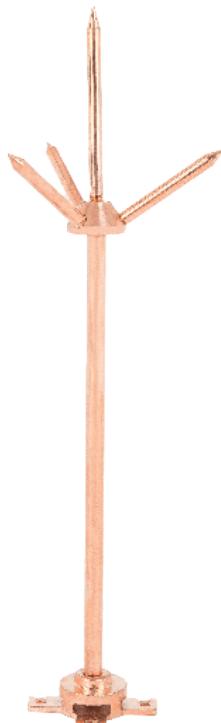


Model No.	Rod Length	Rod Dia.	Thread Dia.	Material
ATA300	300mm	16mm	5/8"	Aluminum
ATC300	300mm	16mm	5/8"	Copper

Air Termination Base

Model No.	Material	Terminal Thread	Conductor Width
AL-16	Aluminum Alloy	5/8"	25mm
CU-16	Copper Alloy	5/8"	25mm

Air Termination (complete set)



Model No.	Rod Length	Rod Dia.	Thread Dia.	Material
ATC314	300mm	14mm	5/8" or 14mm	Copper/Brass
ATC514	500mm	14mm	5/8" or 14mm	Copper/Brass
ATC1014	1000mm	14mm	5/8" or 14mm	Copper/Brass
ATC515	500mm	15mm	5/8" or M16	Copper/Brass
ATC1015	1000mm	15mm	5/8" or M16	Copper/Brass
ATC1515	1500mm	15mm	5/8" or M16	Copper/Brass
ATC516	500mm	16mm	M16	Copper/Brass
ATC1016	1000mm	16mm	M16	Copper/Brass
ATC1516	1500mm	16mm	M16	Copper/Brass
ATC2016	2000mm	16mm	M16	Copper/Brass

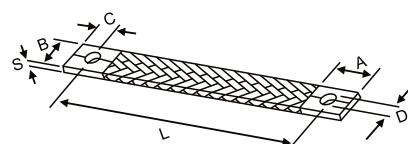
Copper Earthing Strip

- Copper strip terminal
- Single wire Cu ETP UNI 5649-71. Similar to DIN 72333



Model No.	Cross-Section	Wire dia	A	B	C	D	S	L
CGS6-100	6mm ²	0.10mm	13mm	11mm	5mm	7mm	2.0mm	100mm
CGS6-150	6mm ²	0.10mm	13mm	11mm	5mm	7mm	2.0mm	150mm
CGS6-200	6mm ²	0.10mm	13mm	11mm	5mm	7mm	2.0mm	200mm
CGS10-100	10mm ²	0.20mm	23mm	17mm	10mm	9mm	2.0mm	100mm
CGS10-150	10mm ²	0.20mm	23mm	17mm	10mm	9mm	2.0mm	150mm
CGS10-200	10mm ²	0.20mm	23mm	17mm	10mm	9mm	2.0mm	200mm
CGS10-300	10mm ²	0.20mm	23mm	17mm	10mm	9mm	2.0mm	300mm
CGS16-100	16mm ²	0.20mm	23mm	17mm	10mm	9mm	2.5mm	100mm
CGS16-150	16mm ²	0.20mm	23mm	17mm	10mm	9mm	2.5mm	150mm
CGS16-200	16mm ²	0.20mm	23mm	17mm	10mm	9mm	2.5mm	200mm
CGS16-300	16mm ²	0.20mm	23mm	17mm	10mm	9mm	2.5mm	300mm
CGS25-100	25mm ²	0.20mm	23mm	23mm	10mm	9mm	3.2mm	100mm
CGS25-150	25mm ²	0.20mm	23mm	23mm	10mm	9mm	3.2mm	150mm
CGS25-200	25mm ²	0.20mm	23mm	23mm	10mm	9mm	3.2mm	200mm
CGS25-300	25mm ²	0.20mm	23mm	23mm	10mm	9mm	3.2mm	300mm
CGS35-100	35mm ²	0.20mm	23mm	23mm	10mm	9mm	3.4mm	100mm
CGS35-150	35mm ²	0.20mm	23mm	23mm	10mm	9mm	3.4mm	150mm
CGS35-200	35mm ²	0.20mm	23mm	23mm	10mm	9mm	3.4mm	200mm
CGS35-300	35mm ²	0.20mm	23mm	23mm	10mm	9mm	3.4mm	300mm
CGS50-100	50mm ²	0.20mm	30mm	30mm	15mm	11mm	4.5mm	100mm
CGS50-150	50mm ²	0.20mm	30mm	30mm	15mm	11mm	4.5mm	150mm
CGS50-200	50mm ²	0.20mm	30mm	30mm	15mm	11mm	4.5mm	200mm
CGS50-300	50mm ²	0.20mm	30mm	30mm	15mm	11mm	4.5mm	300mm
CGS75-150	75mm ²	0.20mm	30mm	30mm	15mm	11mm	5.0mm	150mm
CGS75-200	75mm ²	0.20mm	30mm	30mm	15mm	11mm	5.0mm	200mm
CGS75-300	75mm ²	0.20mm	30mm	30mm	15mm	11mm	5.0mm	300mm
CGS100-100	100mm ²	0.20mm	35mm	35mm	15mm	13mm	6.0mm	150mm
CGS100-200	100mm ²	0.20mm	35mm	35mm	15mm	13mm	6.0mm	200mm
CGS100-300	100mm ²	0.20mm	35mm	35mm	15mm	13mm	6.0mm	300mm

- The lengths, cross-sectional areas, and drill sizes which are not mentioned in table above, can be manufactured upon request.



Earth Bar



- Earth bars are available in a variety of sizes and specifications. Our standard earth bars are shown in the tables below. Special earth bars manufactured to customer requirements are also available.
- Recommended fixing by countersunk wood screw 1 1/2x No. 12 and No. 12 wall plug

Model No.	No.Terminations	Dimensions		
		L	W	H
EB6	6	300mm	50mm	5mm
EB8	8	370mm	50mm	5mm
EB9	9	410mm	50mm	5mm
EB10	10	440mm	50mm	5mm
EB12	12	500mm	50mm	5mm

Disconnecting Link



- The disconnecting link provides a temporary break in the earth connection to allow inspection and testing of the earth electrode.

Model No.	L	W	H
DLK-120	120mm	45mm	45mm

