GUNKUL

Smart Energy in Action

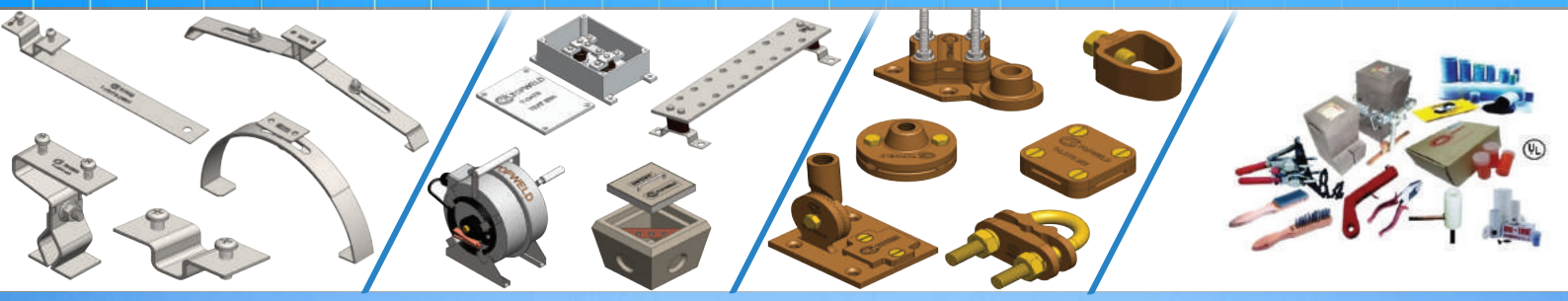
Price List -2018

Grounding Equipment

Lightning Equipment

C-Clamp

Exothermic Welding



TOPWELD®

Gunkul Engineering Public Company Limited

ISO9001
QUALITY MANAGEMENT SYSTEM

Certificate of Approval
This is to certify that

G.K. ASSEMBLY CO., LTD.

Address of premises : 110/9-10 Moo 2, Chongtanom Road, Mahasawad, Bangkruat District, Nonthaburi 11130, Thailand

has been assessed and found to be conforming to the requirements of TIS 9001-2552 (ISO 9001:2008)

for the scope :
As detailed in the accompanying schedule

Date of Issue 26th September 2015
Valid Until 25th September 2018
First Issued Date 26th September 2003

(Mrs. Punnee Angsusingha)
President
Management System Certification Institute (Thailand)

ISO9001
QUALITY MANAGEMENT SYSTEM

Certificate of Approval
This is to certify that

G.K. ASSEMBLY CO., LTD.

for the scope :
1. Design and development and manufacture of electrical power system of :
1.1 fabricated metal parts for electrical
1.2 fabricated plastic parts and plastic injection mold
1.3 luminaries for road and street lighting
1.4 Photo electric control set for luminaires for road and street lighting
1.5 Preformed wire products
1.6 low tension fuse switches
1.7 Electrical connectors
1.8 lighting protection equipment
1.9 Cable spacer with snap fix
1.10 Barrier
1.11 Animal protection devices
1.12 D cartridge fuse (aerial fuse holder)
1.13 Live part cover of electrical systems
2. Manufacture of :
2.1 Electrical power system for meter cabinet
2.2 Telecommunications outside plant such as telephone hardware and accessories, cable connecting devices and cable network devices
2.3 Pole climbing equipment such as safety belt, safety strap (pole strap)
3. Manufacture of assembling :
3.1 Manufacture of Light-Emitting Diode type 613 by assembling
3.2 Electricity metering equipment (a.c) (Electronic metering type)

Attachment to Certification of Approval of Quality Management System No. DMS03189/784

Date of Issue 26th September 2015
Valid Until 25th September 2018
First Issued Date 26th September 2003

(Mrs. Punnee Angsusingha)
President
Management System Certification Institute (Thailand)

Quality Management

Four main components, quality planning, quality insurance , quality control and quality improvement, are consistent. Neither the quality product and service quality are realized, we control the all process to achieve q quality product and service. The quality standards must be continually developed in order to meet the market requirements and competitive prices.

Quality Assurance by Certification (ISO 9001 : 2008)

The good quality management leads the organization to the accomplishment. All product and service quality are guaranteed by ISO 9001 : 2008 standard.

Customer Service
Gunkul Engineering Public Company Limited
Tel : (662) 242-5800 Ext. 5963, 5964
Website : www.gunkul.com
E-mail : saowaros.pou@gunkul.com

Awards

The grounding and lightning Protection Product under **TOPWELD** brand is continually developed and researched by the electrical specialist. We realize the important and the damage for lightning strike, so we provide and supply the material specification , design and installation as the following standards namely UL486 , UL 467 , IEEE80 , NFPA 780 , IEC 62305 series.

APEA 2016 Outstanding Category

โล่ประกาศเกียรติคุณ เป็นผู้มีคุณูปการต่อโรงเรียนวัดน้อยนพคุณ อย่างต่อเนื่อง สมควรได้รับการยกย่องเชิดชูเกียรติ

โล่เกียรติคุณเฉลิมพระเกียรติสมเด็จพระเทพรัตนราชสุดาฯ (GKP) เพื่อแสดงว่าเป็นสถานประกอบการที่มีความมุ่งมั่น ดำเนินการโครงการสถานประกอบการปลอดภัย

โล่เกียรติคุณเฉลิมพระเกียรติสมเด็จพระเทพรัตนราชสุดาฯ (GKA) เพื่อแสดงว่าเป็นสถานประกอบการที่มีความมุ่งมั่น ดำเนินการโครงการสถานประกอบการปลอดภัย

โล่เกียรติคุณโรงเรียนเทศบาลปลายบางวัดโคนอนราษฎร์บำรุง ผู้มีคุณูปการต่อการจัดการศึกษาของโรงเรียน

โล่เกียรติคุณกรมพัฒนาฝีมือแรงงาน กระทรวงแรงงาน ได้รับการคัดเลือกเป็นสถานประกอบกิจการดีเด่น ด้านการส่งเสริมการพัฒนาฝีมือแรงงาน

โล่เกียรติคุณมาตรฐานการป้องกันและแก้ไขปัญหายาเสพติด (GKA) ได้ตามเกณฑ์มาตรฐานการป้องกันและแก้ไขปัญหายาเสพติดในสถานประกอบการ

โล่เกียรติคุณด้านการบริหารและคุ้มครองความปลอดภัย งานสัปดาห์ความปลอดภัยในการทำงานแห่งชาติ

โล่เกียรติคุณ CSR -DIW Award 2015 มาตรฐานความรับผิดชอบของผู้ประกอบการอุตสาหกรรมต่อสังคม

โล่เกียรติคุณ CSR -DIW Award 2015 มาตรฐานความรับผิดชอบของผู้ประกอบการอุตสาหกรรมต่อสังคม

โล่เกียรติคุณกรมพัฒนาฝีมือแรงงาน มาตรฐานความรับผิดชอบของผู้ประกอบการอุตสาหกรรมต่อสังคม

ใบรับรอง ISO9001

ใบรับรอง ISO9001

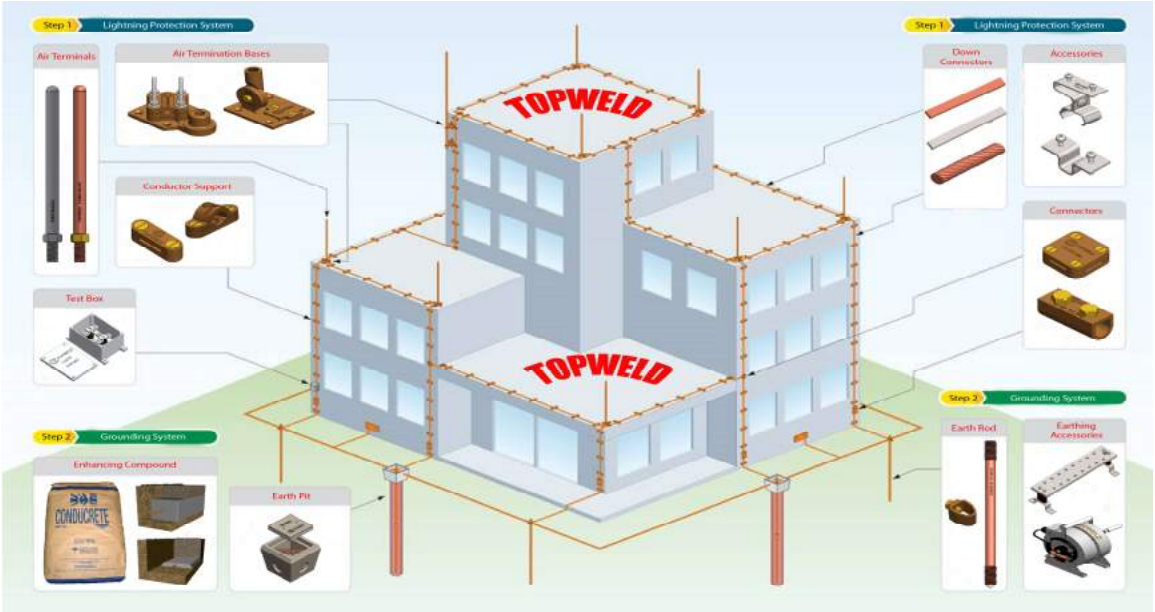
ใบอนุญาต หลอด แอล อี ดี ที่มีอุปกรณ์รับหลอดในตัว

โล่เกียรติคุณจากสถานีตำรวจนครบาลสามเสน ผู้ทำประโยชน์ด้านสนับสนุนกิจกรรม ของสถานีตำรวจนครบาลสามเสน

KTB SME ดีดดาว

SET AWARDS 2015 Outstanding CEO Awards CEO of Compay listed on SET Sopacha Dhumrongpiyawut President GUNKUL PCL

Lightning protection systems



Hundreds of devices, including lightning rods and charge transfer systems, are used to mitigate lightning damage and influence the path of a lightning flash . A lightning rod (or lightning protector) is a metal strip or rod connected to earth through conductors and a grounding system, used to provide a preferred pathway to ground if lightning terminates on a structure. The class of these products are often called a "finial" or "air terminal". A lightning rod or "Franklin rod" in honor of its famous inventor, Benjamin Franklin, is simply a metal rod, and without being connected to the lightning protection system, as was sometimes the case in the old days, will provide no added protection to a structure. Other names include "lightning conductor", "arrester", and "discharger"; however, over the years these names have been incorporated into other products or industries with a stake in lightning protection. Lightning arrester, for example, often refers to fused links that explode when a strike occurs to a high voltage overhead power line to protect the more expensive transformers down the line by opening the circuit. In reality, it was an early form of a heavy duty surge protection device (SPD). Modern arresters, constructed with metal oxides, are capable of safely shunting abnormally high voltage surges to ground while preventing normal system voltages from being shorted to ground.

NFPA 780
Standard for The Installation of Lightning Protection System

IEC 62305-3
Protection Against Lightning Part 3: Physical Damage to Structures and Life Hazard

UL 96A
Installation Requirements for Lightning Protection System

Grounding & Lightning Protection System

TOPWELD Price List

Figure	Cat No.	Description	Price
	Standard Ground Rod Single Type (UL-Listed)		
	T-GR588	Copper Bond Rod dia. 14.2 mm. (5/8"), Length 8 ft.	**810.00**
	T-GR5810	Copper Bond Rod dia. 14.2 mm. (5/8"), Length 10 ft.	**890.00**
	T-GR348	Copper Bond Rod dia. 17.2 mm. (3/4"), Length 8 ft.	**1,730.00**
	T-GR3410	Copper Bond Rod dia. 17.2 mm. (3/4"), Length 10 ft.	**1,800.00**
	Standard Ground Rod Single Type		
	T-GR128	Copper Bond Rod dia. 12.7 mm. (1/2"), Length 8 ft.	**650.00**
	T-GR1210	Copper Bond Rod dia. 12.7 mm. (1/2"), Length 10 ft.	**770.00**
	T-GR585	Copper Bond Rod dia. 14.2 mm. (5/8"), Length 5 ft.	**570.00**
	T-GR586	Copper Bond Rod dia. 14.2 mm. (5/8"), Length 6 ft.	**730.00**
	T-GR345	Copper Bond Rod dia. 17.2 mm. (3/4"), Length 5 ft.	**1,150.00**
	T-GR346	Copper Bond Rod dia. 17.2 mm. (3/4"), Length 6 ft.	**1,500.00**
	Sectional Ground Rod Screw Type (UL-Listed)		
	T-GRS588	Copper Bond Rod dia. 14.2 mm. (5/8"), Length 8 ft.	**830.00**
	T-GRS5810	Copper Bond Rod dia. 14.2 mm. (5/8"), Length 10 ft.	**910.00**
	T-GRS348	Copper Bond Rod dia. 17.2 mm. (3/4"), Length 8 ft.	**1,750.00**
	T-GRS3410	Copper Bond Rod dia. 17.2 mm. (3/4"), Length 10 ft.	**1,820.00**
	Sectional Ground Rod Screw Type		
	T-GRS128	Copper Bond Rod dia. 12.7 mm. (1/2"), Length 8 ft.	**670.00**
	T-GRS1210	Copper Bond Rod dia. 12.7 mm. (1/2"), Length 10 ft.	**790.00**
	T-GRS585	Copper Bond Rod dia. 14.2 mm. (5/8"), Length 5 ft.	**590.00**
	T-GRS586	Copper Bond Rod dia. 14.2 mm. (5/8"), Length 6 ft.	**750.00**
	T-GRS345	Copper Bond Rod dia. 17.2 mm. (3/4"), Length 5 ft.	**1,170.00**
	T-GRS346	Copper Bond Rod dia. 17.2 mm. (3/4"), Length 6 ft.	**1,520.00**
	Couplings Ground Rod For Screw Type		
	T-GRC 12	For Ground Rod Screw type 1/2"	**220.00**
	T-GRC 58	For Ground Rod Screw type 5/8"	**280.00**
	T-GRC 34	For Ground Rod Screw type 3/4"	**340.00**
	Tip for Screw Type Ground Rod		
	T-GRT 12	For Ground Rod Screw type 1/2"	**60.00**
	T-GRT 58	For Ground Rod Screw type 5/8"	**80.00**
	T-GRT 34	For Ground Rod Screw type 3/4"	**100.00**
	Driving Stud for Screw Type Ground Rod		
	T-GRDSS 12	For Ground Rod Screw type 1/2"	**50.00**
	T-GRDSS 58	For Ground Rod Screw type 5/8"	**60.00**
	T-GRDSS 34	For Ground Rod Screw type 3/4"	**80.00**

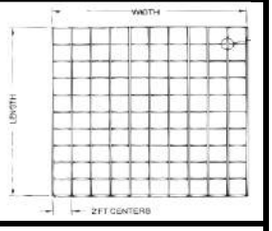
Figure	Cat No.	Description	Price
	Driving For Single Type		
	T-GRDS 12	For Ground Rod Standard type 1/2"	**60.00**
	T-GRDS 58	For Ground Rod Standard type 5/8"	**80.00**
	T-GRDS 34	For Ground Rod Standard type 3/4"	**100.00**
	CONDUCRETE : Conductive Conducrete For Grounding		
	T-DM-100	Conducrete For Grounding 25 kg. / 55 lbs	**3,800.00**
	**Signal Reference Grid (SRG)**		
	T-M-6124-G	Cable To Floor Pedestals	**On Request**
	T-M-6164	Signal Reference Grip (SRG) Conections	**On Request**
	T-M-2763	Cable to Signal Reference Grid (SRG) Conections	**On Request**
		* Other size is also available upon request	
	Rod to Cable Clamp		
	T-GRC-1295	Rod dia. 1/2" (12.7 mm.), Cable size 16 - 95 sq.mm.	**180.00**
	T-GRC-5850	Rod dia. 5/8" (14.2 mm.), Cable size 16 - 50 sq.mm.	**220.00**
	T-GRC-58120	Rod dia. 5/8" (14.2 mm.), Cable size 70 - 120 sq.mm.	**230.00**
	T-GRC-3450	Rod dia. 3/4" (17.2 mm.), Cable size 16 - 50 sq.mm.	**260.00**
	T-GRC-34120	Rod dia. 3/4" (17.2 mm.), Cable size 70 - 120 sq.mm.	**270.00**
	Rod to Cable Lug Clamp		
	T-GRL 12	Groun Rod dia. 1/2" (12.7 mm.)	**270.00**
	T-GRL 58	Groun Rod dia. 5/8" (14.2 mm.)	**360.00**
	T-GRL 34	Groun Rod dia. 3/4" (17.2 mm.)	**450.00**
	Rod Parallel to Cable Clamp		
	T-GRP-172-50	Ground Rod dia. 5/8" (14.2 mm.), 3/4" (17.2 mm.), and	**750.00**
		Cable size 16 - 50 sq.mm.	
	T-GRP-172-120	Rod dia. 5/8" (14.2 mm.), 3/4" (17.2 mm.), and Cable	**900.00**
		Cable size 70 - 120 sq.mm.	
	T-GRP-172-300	Rod dia. 5/8" (14.2 mm.), 3/4" (17.2 mm.), and Cable	**1,100.00**
		Cable size 150 - 300 sq.mm.	
	Ground Rod To Tape Clamp		
	T-GRT 58-2512	Rod dia. 5/8" (14.2 mm.), Max Tape size 25 x 12 mm.	**180.00**
	T-GRT 58-2618	Rod dia. 5/8" (14.2 mm.), Max Tape size 26 x 18 mm.	**220.00**
	T-GRT 58-302	Rod dia. 5/8" (14.2 mm.), Max Tape size 30 x 2 mm.	**270.00**
	T-GRT 34-2512	Rod dia. 3/4" (17.2 mm.), Max Tape size 25 x 12 mm.	**190.00**
	T-GRT 34-2618	Rod dia. 3/4" (17.2 mm.), Max Tape size 26 x 18 mm.	**230.00**
	T-GRT 34-302	Rod dia. 3/4" (17.2 mm.), Max Tape size 30 x 2 mm.	**280.00**

Figure	Cat No.	Description	Price
	U Bolt Rod or Pipe To Tape Clamp		
	T-GUT 172-254	Ground Rod dia. 5/8" (14.2 mm.), 3/4" (17.2 mm.) and	**600.00**
		Max. Tape size 25 x 4 mm.	
	T-GUT 38-254	Pipe dia. 1" (31 mm.), 1 1/4" (38 mm.), and Max. Tape	**1,300.00**
		size 25 x 4 mm.	
	T-GUT 50-254	Pipe dia. 1 1/2" (50 mm.), and Max. Tape 'size 25 x 4 mm.	**1,500.00**
	Ground Clamp Bonding For Cable To Flat Surface		
	T-GMS 2	Cable size 25 - 50 sq.mm.	**330.00**
	T-GMS 3	Cable size 70 - 120 sq.mm.	**460.00**
	T-GMS 4	Cable size 150 - 240 sq.mm.	**700.00**
	Ground Clamp Bonding For Cable To Flat Surface		
	T-GM 2	Cable size 25 - 50 sq.mm.	**460.00**
	T-GM 3	Cable size 70 - 120 sq.mm.	**600.00**
	T-GM 4	Cable size 150 - 240 sq.mm.	**900.00**
	Ground Clamp Bonding For Two Cable to Flat Surface		
	T-GHS 2	Cable size 25 - 50 sq.mm.	**420.00**
	T-GHS 3	Cable size 70 - 120 sq.mm.	**560.00**
	T-GHS 4	Cable size 150 - 240 sq.mm.	**800.00**
	Ground Clamp Bonding For Two Cable to Flat Surface		
	T-GH 2	Cable size 25 - 50 sq.mm.	**560.00**
	T-GH 3	Cable size 70 - 120 sq.mm.	**840.00**
	T-GH 4	Cable size 150 - 240 sq.mm.	**1,100.00**
	One Hole Cable Grip		
	T-GOCG 35	Cable size 25 - 35 sq.mm.	**40.00**
	T-GOCG 70	Cable size 50 - 70 sq.mm.	**45.00**
	T-GOCG 120	Cable size 95 - 120 sq.mm.	**60.00**
	T-GOCG 185	Cable size 150 - 185 sq.mm.	**190.00**
	T-GOCG 300	Cable size 240 - 300 sq.mm.	**260.00**
	Ground Clamp		
	T-GC 50-70	Cable size 50 - 70 sq.mm.	**50.00**
	T-GC 95-120	Cable size 95 - 120 sq.mm.	**60.00**
	T-GC 150-185	Cable size 150 - 185 sq.mm.	**250.00**
	T-GC 240-300	Cable size 240 - 300 sq.mm.	**320.00**
	Ground Clamp One Hole with Anchor Bolt Washer		
	T-GC 95-120-M625	Cable size 95 - 120 sq.mm. with Stainless Bolt M6x25 mm.,	**120.00**
		and Stainless Drop-In Anchors size M6x25 mm.	
	T-GC 150-185-M825	Cable size 150 - 185 sq.mm. with Stainless Bolt M8x25 mm.,	**350.00**
		and Stainless Drop-In Anchors size M8x25 mm.	
	T-GC 240-300-M825	Cable size 240-300 sq.mm. with Stainless Bolt M8x25 mm.,	**420.00**
		and Stainless Drop-In Anchors size M8x25 mm.	

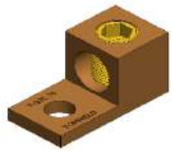
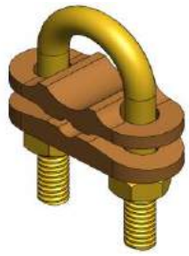
Figure	Cat No.	Description	Price
	Conductor to Rebar Clamp		
	T-GCTRC	Cable size 16 - 70 sq.mm., Rebar size 8 - 18 mm.	**700.00**
	**Terminal Lug, Socket Type**		
	T-GTL 35	Cable size 16 - 35 sq.mm.	**90.00**
	T-GTL 70	Cable size 50 - 70 sq.mm.	**110.00**
	T-GTL 120	Cable size 95 - 120 sq.mm.	**250.00**
	T-GTL 185	Cable size 150 - 185 sq.mm.	**320.00**
	T-GTL 300	Cable size 240 - 300 sq.mm.	**400.00**
	Clamp Connector Screw Type		
	T-GCST 35	Cable run size 16 - 35 sq.mm., and Tap 6 - 35 sq.mm.	**70.00**
	T-GCST 70	Cable run size 50 - 70 sq.mm., and Tap 6 - 70 sq.mm.	**100.00**
	T-GCST 120	Cable run size 95 - 120 sq.mm., and Tap 6 - 120 sq.mm.	**150.00**
	T-GCST 185	Cable run size 150 - 185 sq.mm., and Tap 6 - 185 sq.mm.	**270.00**
	T-GCST 300	Cable run size 240 - 300 sq.mm., and Tap 6 - 300 sq.mm.	**380.00**
	Split Bolt Connector		
	T-GSBC 35	Cable run size 16 - 35 sq.mm., and Tap 6 - 35 sq.mm.	**220.00**
	T-GSBC 70	Cable run size 50 - 70 sq.mm., and Tap 6 - 70 sq.mm.	**460.00**
	T-GSBC 120	Cable run size 95 - 120 sq.mm., and Tap 6 - 120 sq.mm.	**900.00**
	T-GSBC 185	Cable run size 150 - 185 sq.mm., and Tap 6 - 185 sq.mm.	**1,350.00**
	T-GSBC 300	Cable run size 240 - 300 sq.mm., and Tap 6 - 300 sq.mm.	**3,000.00**
	Ground Clamp Connectors ForCable Connection To Rod Or Pipe		
	T-GCRP1-50	Ground Rod dia. 5/8"(14.2 mm.), 3/4" (17.2 mm.) and Cable	**750.00**
		size 16 - 50 sq.mm.	
	T-GCRP1-120	Ground Rod dia. 5/8"(14.2 mm.), 3/4" (17.2 mm.) and Cable	**800.00**
		size 70 - 120 sq.mm.	
	T-GCRP1-300	Ground Rod dia. 5/8"(14.2 mm.), 3/4" (17.2 mm.) and Cable	**850.00**
		size 150 - 300 sq.mm.	
	T-GCRP1-231-50	Ground Rod dia. 1" (23.1 mm.) and Cable size 16-50 sq.mm.	**1,000.00**
	T-GCRP1-231-120	Ground Rod dia. 1"(23.1 mm.) and Cable size 70-120 sq.mm.	**1,050.00**
	T-GCRP1-1-120	Pipe dia. 1" (33.4 mm.), 1 1/2" (48.3 mm.) and Cable size	**1,150.00**
		70 - 120 sq.mm.	
	T-GCRP1-1-300	Pipe dia. 1" (33.4 mm.), 1 1/2" (48.3 mm.) and Cable size	**1,200.00**
		150 - 300 sq.mm.	
	T-GCRP1-2-120	Pipe dia. 2" (60.3 mm.), 2 1/2" (73 mm.) and Cable size	**1,300.00**
		70 - 120 sq.mm.	
	T-GCRP1-2-300	Pipe dia. 2" (60.3 mm.), 2 1/2" (73 mm.) and Cable size	**1,350.00**
		150 - 300 sq.mm.	
	T-GCRP1-3-120	Pipe dia. 3" (88.9 mm.), 3 1/2" (101.6 mm.) and Cable size	**1,450.00**
		70 - 120 sq.mm.	
	T-GCRP1-3-300	Pipe dia. 3" (88.9 mm.), 3 1/2" (101.6 mm.) and Cable size	**1,500.00**
		150 - 300 sq.mm.	
	T-GCRP1-4-120	Pipe dia. 4" (114.3 mm.), and Cable size 70 - 120 sq.mm.	**1,600.00**
	T-GCRP1-4-300	Pipe dia. 4" (114.3 mm.), and Cable size 150 - 300 sq.mm.	**1,650.00**

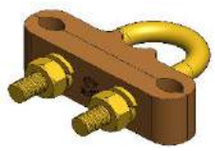
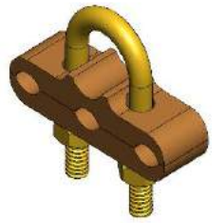
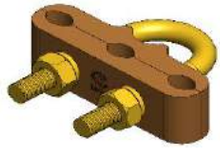
Figure	Cat No.	Description	Price
	**Ground Clamp Connectors ForTwo Cable Connection To Rod Or Pipe**		
	T-GCRP2-50	Ground Rod dia. 5/8"(14.2 mm.), 3/4" (17.2 mm.) and Cable	**800.00**
		size 16 - 50 sq.mm.	
	T-GCRP2-120	Ground Rod dia. 5/8"(14.2 mm.), 3/4" (17.2 mm.) and Cable	**850.00**
		size 70 - 120 sq.mm.	
	T-GCRP2-300	Ground Rod dia. 5/8"(14.2 mm.), 3/4" (17.2 mm.) and Cable	**900.00**
		size 150 - 300 sq.mm.	
	T-GCRP2-231-50	Ground Rod dia. 1" (23.1 mm.) and Cable size 16-50 sq.mm.	**1,200.00**
	T-GCRP2-231-120	Ground Rod dia. 1"(23.1 mm.) and Cable size 70-120 sq.mm.	**1,250.00**
	T-GCRP2-1-120	Pipe dia. 1" (33.4 mm.), 1 1/2" (48.3 mm.) and Cable size	**1,500.00**
		70 - 120 sq.mm.	
	T-GCRP2-1-300	Pipe dia. 1" (33.4 mm.), 1 1/2" (48.3 mm.) and Cable size	**1,550.00**
		150 - 300 sq.mm.	
	T-GCRP2-2-120	Pipe dia. 2" (60.3 mm.), 2 1/2" (73 mm.) and Cable size	**2,000.00**
		70 - 120 sq.mm.	
	T-GCRP2-2-300	Pipe dia. 2" (60.3 mm.), 2 1/2" (73 mm.) and Cable size	**2,100.00**
		150 - 300 sq.mm.	
	T-GCRP2-3-120	Pipe dia. 3" (88.9 mm.), 3 1/2" (101.6 mm.) and Cable size	**2,400.00**
		70 - 120 sq.mm.	
	T-GCRP2-3-300	Pipe dia. 3" (88.9 mm.), 3 1/2" (101.6 mm.) and Cable size	**2,450.00**
		150 - 300 sq.mm.	
	T-GCRP2-4-120	Pipe dia. 4" (114.3 mm.), and Cable size 70 - 120 sq.mm.	**2,800.00**
	T-GCRP2-4-300	Pipe dia. 4" (114.3 mm.), and Cable size 150 - 300 sq.mm.	**2,900.00**
 	**Ground Clamp Connectors ForThree Cable Connection To Rod Or Pipe**		
	T-GCRP3-50	Ground Rod dia. 5/8"(14.2 mm.), 3/4" (17.2 mm.) and Cable	**1,000.00**
		size 16 - 50 sq.mm.	
	T-GCRP3-120	Ground Rod dia. 5/8"(14.2 mm.), 3/4" (17.2 mm.) and Cable	**1,050.00**
		size 70 - 120 sq.mm.	
	T-GCRP3-300	Ground Rod dia. 5/8"(14.2 mm.), 3/4" (17.2 mm.) and Cable	**1,150.00**
		size 150 - 300 sq.mm.	
	T-GCRP3-231-50	Ground Rod dia. 1" (23.1 mm.) and Cable size 16-50 sq.mm.	**1,300.00**
	T-GCRP3-231-120	Ground Rod dia. 1"(23.1 mm.) and Cable size 70-120 sq.mm.	**1,350.00**
	T-GCRP3-1-120	Pipe dia. 1" (33.4 mm.), 1 1/2" (48.3 mm.) and Cable size	**1,600.00**
		70 - 120 sq.mm.	
	T-GCRP3-1-300	Pipe dia. 1" (33.4 mm.), 1 1/2" (48.3 mm.) and Cable size	**1,700.00**
		150 - 300 sq.mm.	
	T-GCRP3-2-120	Pipe dia. 2" (60.3 mm.), 2 1/2" (73 mm.) and Cable size	**2,200.00**
		70 - 120 sq.mm.	
	T-GCRP3-2-300	Pipe dia. 2" (60.3 mm.), 2 1/2" (73 mm.) and Cable size	**2,300.00**
		150 - 300 sq.mm.	
	T-GCRP3-3-120	Pipe dia. 3" (88.9 mm.), 3 1/2" (101.6 mm.) and Cable size	**2,600.00**
		70 - 120 sq.mm.	
	T-GCRP3-3-300	Pipe dia. 3" (88.9 mm.), 3 1/2" (101.6 mm.) and Cable size	**2,700.00**
		150 - 300 sq.mm.	
	T-GCRP3-4-120	Pipe dia. 4" (114.3 mm.), and Cable size 70 - 120 sq.mm.	**3,000.00**
	T-GCRP3-4-300	Pipe dia. 4" (114.3 mm.), and Cable size 150 - 300 sq.mm.	**3,100.00**

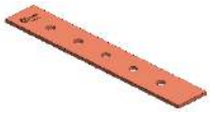
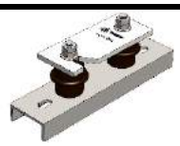
Figure	Cat No.	Description	Price
	Earth Boss		
	T-GEB	Stainless Earth Boss dia. 50 mm., Length 45 mm.	**600.00**
	Beam Clamp		
	T-GBC 35-120	Cable size 35 - 120 sq.mm.	**900.00**
	T-GBC 150-240	Cable size 150 - 240 sq.mm.	**1,100.00**
	Static Earth Receptacle		
	T-GSER	Static Earth Receptacle rod dia. 12.7 mm.	**2,100.00**
	PVC Test Box		
	T-GPVCTB	PVC Test Box size L.200 x W.150 x H.100 mm.	**1,900.00**
	Aluminium Test Box		
	T-GATB	Aluminium Test Box size L.260 x W.163 x H.77 mm.	**2,300.00**
	Concrete Inspection Pit		
	T-GCIPB	Concrete Pit size L.330 x W.330 x H.254 mm.	**1,500.00**
		* Other size is also available upon request	
	**Ground Bar Pit**		
	T-GBP-5	Bar Pit Size L.315 x W.50.8 x T.6.35 mm. Ø Hole M10 , 5 Hole	**520.00**
	T-GBP-7	Bar Pit Size L.315 x W.50.8 x T.6.35 mm. Ø Hole M10 , 7 Hole	**520.00**
	Earth Point		
	T-GEP1	Earth Point 1 Hole	**500.00**
	T-GEP2	Earth Point 2 Holes	**800.00**
	T-GEP4	Earth Point 4 Holes	**1,000.00**
	Earth Point Tail Type		
	T-GEPT1-70-500	1 Hole, Cable size 70 sq.mm. and Cable Length 500 mm.	**On Request**
	T-GEPT2-70-500	2 Holes, Cable size 70 sq.mm. and Cable Length 500 mm.	**On Request**
	T-GEPT2-70-1000	2 Holes, Cable size 70 sq.mm. and Cable Length 1000 mm.	**On Request**
	T-GEPT4-70-500	4 Holes, Cable size 70 sq.mm. and Cable Length 500 mm.	**On Request**
	T-GEPT4-70-1000	4 Holes, Cable size 70 sq.mm. and Cable Length 1000 mm.	**On Request**
		* Other size is also available upon request	
	**Disconnecting Link**		
	T-GDL-253	Disconnecting Link size L.200 X W.50 X H.90 mm.	**1,000.00**

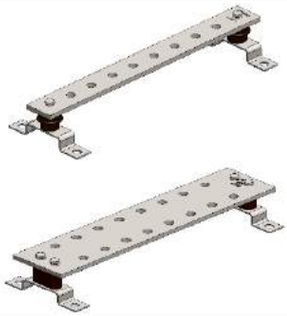
Figure	Cat No.	Description	Price
	Ground Bar		
	T-GB-6	Dimension L.355.6 X W.50.8 X H.71.75 mm., No. of Hole 6	**3,000.00**
	T-GB-8	Dimension L.455 X W.50.8 X H.71.75 mm., No. of Hole 8	**3,600.00**
	T-GB-12	Dimension L.660 X W.50.8 X H.71.75 mm., No. of Hole 12	**4,600.00**
	Ground Bar		
	T-GB-6D	Dimension L.355.6 X W.101.6 X H.74.9 mm., No. of Hole 12	**5,700.00**
	T-GB-8D	Dimension L.457 X W.101.6 X H.74.9 mm., No. of Hole 16	**6,400.00**
	T-GB-12D	Dimension L.760 X W.101.6 X H.74.9 mm., No. of Hole 24	**10,000.00**
	**Power Ground Station**		
	T-GSPS-6	Dimension Bar 50.8 x 350 x 6.35 mm., No. of Hole 6	**1,300.00**
	T-GSPS-8	Dimension Bar 50.8 x 440 x 6.35 mm., No. of Hole 8	**1,850.00**
	T-GSPS-12	Dimension Bar 50.8 x 610 x 6.35 mm., No. of Hole 12	**2,300.00**
	T-GSPS-6D	Dimension Bar 101.6 x 350 x 6.35 mm., No. of Hole 12	**2,550.00**
	T-GSPS-8D	Dimension Bar 101.6 x 440 x 6.35 mm., No. of Hole 16	**3,350.00**
	T-GSPS-12D	Dimension Bar 101.6 x 610 x 6.35 mm., No. of Hole 24	**4,200.00**
	Communication Ground Station		
	T-GSCS-200	Dimension Bar 101.6 x 200 x 6.35 mm., No. of Hole 6	**1,400.00**
	T-GSCS-300	Dimension Bar 101.6 x 300 x 6.35 mm., No. of Hole 11	**2,100.00**
	T-GSCS-400	Dimension Bar 101.6 x 400 x 6.35 mm., No. of Hole 15	**2,900.00**
	T-GSCS-450	Dimension Bar 101.6 x 450 x 6.35 mm., No. of Hole 18	**3,000.00**
	T-GSCS-600	Dimension Bar 101.6 x 600 x 6.35 mm., No. of Hole 24	**4,250.00**
	Tin Plated Copper Flexible Braid Bond (1 Hole)		
	T-LFB1-25300	Cross Section 25 sq.mm., Length 300 mm., Amp Rating 150 A	**800.00**
	T-LFB1-35300	Cross Section 35 sq.mm., Length 300 mm., Amp Rating 200 A	**900.00**
	T-LFB1-50300	Cross Section 50 sq.mm., Length 300 mm., Amp Rating 250 A	**1,100.00**
	T-LFB1-50356	Cross Section 50 sq.mm., Length 356 mm., Amp Rating 250 A	**1,800.00**
	T-LFB1-70300	Cross Section 70 sq.mm., Length 300 mm., Amp Rating 290 A	**1,500.00**
	T-LFB1-95300	Cross Section 95 sq.mm., Length 300 mm., Amp Rating 350 A	**1,800.00**
	T-LFB1-120300	Cross Section 120 sq.mm., Length 300 mm., Amp Rating 400 A	**2,200.00**
		* Other size is also available upon request	
	Tin Plated Copper Flexible Braid Bond (2 Hole)		
	T-LFB2-25300	Cross Section 25 sq.mm., Length 300 mm., Amp Rating 150 A	**1,500.00**
	T-LFB2-35300	Cross Section 35 sq.mm., Length 300 mm., Amp Rating 200 A	**1,700.00**
	T-LFB2-50300	Cross Section 50 sq.mm., Length 300 mm., Amp Rating 250 A	**2,000.00**
	T-LFB2-70300	Cross Section 70 sq.mm., Length 300 mm., Amp Rating 290 A	**2,300.00**
	T-LFB2-95300	Cross Section 95 sq.mm., Length 300 mm., Amp Rating 350 A	**2,800.00**
	T-LFB2-120300	Cross Section 120 sq.mm., Length 300 mm., Amp Rating 400 A	**3,200.00**
		* Other size is also available upon request	
	T-LFB2-150386	Cross Section 150 sq.mm., Length 386 x Width.31.8 mm. , 3 Layer,	**3,500.00**
		Coss Section 150 sq.mm., Amp Rating 700 A	

Figure	Cat No.	Description	Price
	Tin Plated Copper Flexible Braid Bond (Round Type)		
	T-LFBR1-25300	Cross Section 25 sq.mm., Length 300 mm.	**On Request**
	T-LFBR1-35300	Cross Section 35 sq.mm., Length 300 mm.	**On Request**
	T-LFBR1-50300	Cross Section 50 sq.mm., Length 300 mm.	**On Request**
	T-LFBR1-70300	Cross Section 70 sq.mm., Length 300 mm.	**On Request**
	T-LFBR1-95300	Cross Section 95 sq.mm., Length 300 mm.	**On Request**
	T-LFBR1-120300	Cross Section 120 sq.mm., Length 300 mm.	**On Request**
		* Other size is also available upon request	
Pole Tapered with HDG.	**Lightning Pole (Pole Tapered with HDG.)**		
	T-LPT-3000-70	Height 3 M. with copper conductor 70 sq.mm.	**28,000.00**
	T-LPT-6000-70	Height 6 M. with copper conductor 70 sq.mm.	**48,000.00**
	T-LPT-9000-70	Height 9 M. with copper conductor 70 sq.mm.	**80,000.00**
	T-LPT-12000-70	Height 12 M. with copper conductor 70 sq.mm.	**100,000.00**
	T-LPT-15000-70	Height 15 M. with copper conductor 70 sq.mm.	**140,000.00**
		* Other size is also available upon request	
Straight Pipe with HDG.	**Lightning Pole (Straight Pipe with HDG.)**		
	T-LPS-2000-70	Height 2 M. with copper conductor 70 sq.mm.	**14,000.00**
	T-LPS-3000-70	Height 3 M. with copper conductor 70 sq.mm.	**16,000.00**
	T-LPS-5000-70	Height 5 M. with copper conductor 70 sq.mm.	**28,000.00**
	T-LPS-6000-70	Height 6 M. with copper conductor 70 sq.mm.	**32,000.00**
	T-LPS-9000-70	Height 9 M. with copper conductor 70 sq.mm.	**45,000.00**
	T-LPS-12000-70	Height 12 M. with copper conductor 70 sq.mm.	**72,000.00**
	T-LPS-15000-70	Height 15 M. with copper conductor 70 sq.mm.	**95,000.00**
		* Other size is also available upon request	
	Multi Point Air Terminal		
	T-LMPAT 58	Multi Point dia. 5/8"	**420.00**
	T-LMPAT 34	Multi Point dia. 3/4"	**420.00**
	Elevation Air Terminal		
	T-LEAT-58-300	Air Terminal dia. 15 mm. (5/8"), Length 300 mm.	**560.00**
	T-LEAT-58-500	Air Terminal dia. 15 mm. (5/8"), Length 500 mm.	**860.00**
	T-LEAT-58-600	Air Terminal dia. 15 mm. (5/8"), Length 600 mm.	**1,030.00**
	T-LEAT-58-1000	Air Terminal dia. 15 mm. (5/8"), Length 1,000 mm.	**1,650.00**
	T-LEAT-58-1500	Air Terminal dia. 15 mm. (5/8"), Length 1,500 mm.	**2,340.00**
	T-LEAT-58-2000	Air Terminal dia. 15 mm. (5/8"), Length 2,000 mm.	**3,290.00**
	T-LEAT-34-300	Air Terminal dia. 19 mm. (3/4"), Length 300 mm.	**800.00**
	T-LEAT-34-500	Air Terminal dia. 19 mm. (3/4"), Length 500 mm.	**1,230.00**
	T-LEAT-34-600	Air Terminal dia. 19 mm. (3/4"), Length 600 mm.	**1,500.00**
	T-LEAT-34-1000	Air Terminal dia. 19 mm. (3/4"), Length 1,000 mm.	**2,370.00**
	T-LEAT-34-1500	Air Terminal dia. 19 mm. (3/4"), Length 1,500 mm.	**3,270.00**
	T-LEAT-34-2000	Air Terminal dia. 19 mm. (3/4"), Length 2,000 mm.	**4,420.00**

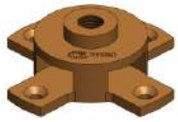
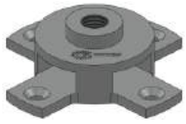
Figure	Cat No.	Description	Price
	Air Terminal (Copper)		
	T-LBAT-58-300	Air Terminal dia. 15 mm. (5/8"), Length 300 mm.	**560.00**
	T-LBAT-58-500	Air Terminal dia. 15 mm. (5/8"), Length 500 mm.	**860.00**
	T-LBAT-58-600	Air Terminal dia. 15 mm. (5/8"), Length 600 mm.	**1,030.00**
	T-LBAT-58-1000	Air Terminal dia. 15 mm. (5/8"), Length 1,000 mm.	**1,650.00**
	T-LBAT-58-1500	Air Terminal dia. 15 mm. (5/8"), Length 1,500 mm.	**2,340.00**
	T-LBAT-58-2000	Air Terminal dia. 15 mm. (5/8"), Length 2,000 mm.	**3,290.00**
	T-LBAT-34-300	Air Terminal dia. 19 mm. (3/4"), Length 300 mm.	**800.00**
	T-LBAT-34-500	Air Terminal dia. 19 mm. (3/4"), Length 500 mm.	**1,230.00**
	T-LBAT-34-600	Air Terminal dia. 19 mm. (3/4"), Length 600 mm.	**1,500.00**
	T-LBAT-34-1000	Air Terminal dia. 19 mm. (3/4"), Length 1,000 mm.	**2,370.00**
	T-LBAT-34-1500	Air Terminal dia. 19 mm. (3/4"), Length 1,500 mm.	**3,270.00**
	T-LBAT-34-2000	Air Terminal dia. 19 mm. (3/4"), Length 2,000 mm.	**4,420.00**
	Air Terminal (Aluminium)		
	T-LBAT-58-300A	Air Terminal dia. 15 mm. (5/8"), Length 300 mm.	**410.00**
	T-LBAT-58-500A	Air Terminal dia. 15 mm. (5/8"), Length 500 mm.	**630.00**
	T-LBAT-58-600A	Air Terminal dia. 15 mm. (5/8"), Length 600 mm.	**750.00**
	T-LBAT-58-1000A	Air Terminal dia. 15 mm. (5/8"), Length 1,000 mm.	**1,220.00**
	T-LBAT-58-1500A	Air Terminal dia. 15 mm. (5/8"), Length 1,500 mm.	**1,710.00**
	T-LBAT-58-2000A	Air Terminal dia. 15 mm. (5/8"), Length 2,000 mm.	**2,430.00**
	T-LBAT-34-300A	Air Terminal dia. 19 mm. (3/4"), Length 300 mm.	**580.00**
	T-LBAT-34-500A	Air Terminal dia. 19 mm. (3/4"), Length 500 mm.	**900.00**
	T-LBAT-34-600A	Air Terminal dia. 19 mm. (3/4"), Length 600 mm.	**1,100.00**
	T-LBAT-34-1000A	Air Terminal dia. 19 mm. (3/4"), Length 1,000 mm.	**1,740.00**
	T-LBAT-34-1500A	Air Terminal dia. 19 mm. (3/4"), Length 1,500 mm.	**2,400.00**
	T-LBAT-34-2000A	Air Terminal dia. 19 mm. (3/4"), Length 2,000 mm.	**3,230.00**
	**Tape Saddle**		
	T-LTS 58	Thread size 15 mm. (5/8"), Copper Tape size 25 x 3 mm.	**570.00**
	T-LTS 34	Thread size 19 mm. (3/4"), Copper Tape size 25 x 3 mm.	**590.00**
	**Aluminum**		
	T-LTS 58A	Thread size 15 mm. (5/8"), Aluminum Tape size 25 x 4 mm.	**480.00**
	T-LTS 34A	Thread size 19 mm. (3/4"), Aluminium Tape size 25 x 4 mm.	**500.00**
	Flat Saddle		
	T-LFS-58	Thread size 15 mm. (5/8"), Tape 25x3 mm., Cable 25-120 sq.mm.	**680.00**
	T-LFS-34	Thread size 19 mm. (3/4"), Tape 25x3 mm., Cable 25-120 sq.mm.	**700.00**
	Ridge Saddle		
	T-LRDS-58	Thread size 15 mm. (5/8"), Tape 25x3 mm., Cable 25-120 sq.mm.	**870.00**
	T-LRDS-34	Thread size 19 mm. (3/4"), Tape 25x3 mm., Cable 25-120 sq.mm.	**890.00**

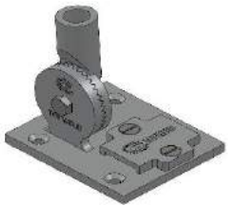
Figure	Cat No.	Description	Price
	Round Saddle		
	T-LRS 58-70	Thread size 15 mm. (5/8"), Cable size 50 - 70 sq.mm.	**830.00**
	T-LRS 58-120	Thread size 15 mm. (5/8"), Cable size 95 - 120 sq.mm.	**880.00**
	T-LRS 34-70	Thread size 19 mm. (3/4"), Cable size 50 - 70 sq.mm.	**860.00**
	T-LRS 34-120	Thread size 19 mm. (3/4"), Cable size 95 - 120 sq.mm.	**900.00**
	Floor Saddle		
	T-LFRS 58	Thread size 15 mm. (5/8"), Cable size 50 - 120 sq.mm.	**700.00**
	T-LFRS 34	Thread size 19 mm. (3/4"), Cable size 50 -120 sq.mm.	**720.00**
	Cross Cable Saddle		
	T-LCCS 58	Thread size 15 mm. (5/8"), Cable size 50 - 120 sq.mm.	**800.00**
	T-LCCS 34	Thread size 19 mm. (3/4"), Cable size 50 - 120 sq.mm.	**820.00**
	Adjustable Saddle		
	For Cable		
	T-LASC 58	Thread size 15 mm. (5/8"), Cable size 50 - 70 sq.mm.	**900.00**
	T-LASC 58-120	Thread size 15 mm. (5/8"), Cable size 95 - 120 sq.mm.	**950.00**
	T-LASC 34	Thread size 19 mm. (3/4"), Cable size 50 - 70 sq.mm.	**920.00**
	T-LASC 34-120	Thread size 19 mm. (3/4"), Cable size 95 - 120 sq.mm.	**970.00**
	For Tape		
	T-LAST 58-253	Thread size 15 mm. (5/8"), Copper Tape size 25 x 3 mm.	**1,000.00**
	T-LAST 34-253	Thread size 19 mm. (3/4"), Copper Tape size 25 x 3 mm.	**1,010.00**
	**Aluminum**		
	T-LAST 58-254A	Thread size 15 mm. (5/8"), Aluminum Tape size 25 x 4 mm.	**820.00**
	T-LAST 34-254A	Thread size 19 mm. (3/4"), Aluminium Tape size 25 x 4 mm.	**840.00**
	Wall Saddle		
	T-LWS 58	Thread size 15 mm. (5/8"), Cable size 50 - 120 sq.mm.	**700.00**
	T-LWS 34	Thread size 19 mm. (3/4"), Cable size 50 - 120 sq.mm.	**720.00**

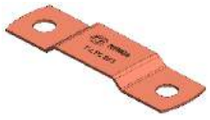
Figure	Cat No.	Description	Price
	Cable Saddle		
	T-LCS 35	Cable size 25 - 35 sq.mm.	**70.00**
	T-LCS 70	Cable size 50 - 70 sq.mm.	**80.00**
	T-LCS 120	Cable size 95 - 120 sq.mm.	**120.00**
	T-LCS 185	Cable size 150 - 185 sq.mm.	**170.00**
	T-LCS 300	Cable size 240 - 300 sq.mm.	**230.00**
	Cable Cross Clamp		
	T-LCCC 35-120	Cable size 35 - 120 sq.mm.	**530.00**
	Tee Clamp		
	T-LTC 70	Cable size 50 - 70 sq.mm.	**270.00**
	T-LTC 120	Cable size 95 - 120 sq.mm.	**330.00**
	Cable Test Connector		
	T-LCTC 35-120	Cable size 35 - 120 sq.mm.	**500.00**
	Bi-Metallic Connector		
	T-LBMC	Connector Copper and Aluminum	**1,000.00**
	Cable-Tape Test Connector		
	T-LCTT 70-253	Cable size 70 sq.mm., Copper Tape size 25 x 3 mm.	**500.00**
	T-LCTT 95-253	Cable size 95 sq.mm., Copper Tape size 25 x 3 mm.	**540.00**
	T-LCTT 120-253	Cable size 120 sq.mm., Copper Tape size 25 x 3 mm.	**690.00**
	Cable to Tape Clamp		
	T-LCTC 70-253	Cable size 35-70 sq.mm., Copper Tape size 25x3 mm.	**490.00**
	T-LCTC 120-253	Cable size 95-120 sq.mm., Copper Tape size 25x3 mm.	**620.00**
	Tape Test Connector		
	T-LTTC 256	Maximum Copper Tape size 26 x 8 mm.	**400.00**
	T-LTTC 518	Maximum Copper Tape size 51 x 8 mm.	**760.00**
	Aluminium		
	T-LTTC 256A	Maximum Aluminium Tape size 26 x 8 mm.	**360.00**
	T-LTTC 518A	Maximum Aluminium Tape size 51 x 8 mm.	**720.00**
	**Tape Clip**		
	T-LTC 253	Copper Tape size 25 x 3 mm.	**40.00**
	T-LTC 254	Copper Tape size 25 x 4 mm.	**50.00**
	T-LTC 304	Copper Tape size 30 x 4 mm.	**60.00**
	T-LTC 506	Copper Tape size 50 x 6 mm.	**90.00**

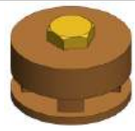
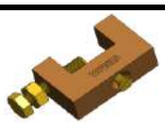
Figure	Cat No.	Description	Price
	**Screw Down Test Clamp**		
	T-LSDT 253	Copper Tape size 25 x 3 mm.	**1,250.00**
	Tape Support		
	T-LTS 253	Copper Tape size 25 x 3 mm.	**75.00**
	T-LTS 304	Copper Tape size 30 x 4 mm.	**150.00**
	T-LTS 324	Copper Tape size 32 x 4 mm.	**180.00**
	T-LTS 404	Copper Tape size 40 x 4 mm.	**200.00**
	T-LTS 405	Copper Tape size 40 x 5 mm.	**220.00**
	T-LTS 505	Copper Tape size 50 x 5 mm.	**250.00**
	T-LTS 506	Copper Tape size 50 x 6 mm.	**270.00**
	Aluminium		
	T-LTS 253A	Aluminium Tape size 25 x 3 mm.	**55.00**
	T-LTS 254A	Aluminium Tape size 25 x 4 mm.	**60.00**
	Square Tape Support		
	T-LSTS 253	Copper Tape size 25 x 3 mm.	**310.00**
	T-LSTS 304	Copper Tape size 30 x 4 mm.	**430.00**
	T-LSTS 405	Copper Tape size 40 x 5 mm.	**540.00**
	T-LSTS 505	Copper Tape size 50 x 5 mm.	**600.00**
	Aluminium		
	T-LSTS 253A	Aluminium Tape size 25 x 3 mm.	**240.00**
	T-LSTS 254A	Aluminium Tape size 25 x 4 mm.	**250.00**
	**Bar Holefast**		
	T-LBH	Bar Holefast For Steel Plate	**200.00**
	Back Plate Holdfast		
	T-LBPH	Back Plate Holdfast	**360.00**
	Aluminium		
	T-LBPH-A	Back Plate Holdfast	**300.00**
	Tape Clamp		
	T-LTC 253	Copper Tape size 25 x 3 mm.	**380.00**
	Ground Wire Support		
	T-LGWS 35-120	For Cable size 35 - 120 sq.mm.	**130.00**
	T-LGWS 253	For Copper Tape size 25 x 3 mm.	**170.00**
	Supporting (Porcelain)		
	T-LSP	White Color	**60.00**

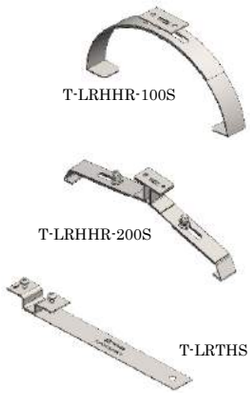
Figure	Cat No.	Description	Price
	Support (Bakelite)		
	T-LSB	Black Color	**30.00**
	Metal Sheet Clamp		
	T-LMSC-1S	Stainless Steel	**110.00**
	T-LMSC-2S	Stainless Steel	**110.00**
	T-LMSC-3S	Stainless Steel	**60.00**
	T-LMSC-4S	Stainless Steel	**230.00**
		* Other type is also available upon request	
	**Roof Holders**		
	<u>For Hip or Ridge Tileds</u>		
	T-LRHHR-100S	Stainless Steel	**450.00**
	T-LRHHR-200S	Stainless Steel	**450.00**
	<u>For Tile Sheet</u>		
	T-LRTHS-205SF	Stainless Steel	**330.00**
	T-LRTHS-405SF	Stainless Steel	**360.00**
	Steel Plate For Saddle		
	T-LSPS-BS525	Steel Plate with Stainless Steel Bolt JP size M5x25 mm.	**740.00**
		For Saddle	
	Stainless Steel Bolt For Support		
	T-BS26	Stainless Steel Bolt Taper Head size 1/4" x 3/4"	**12.00**
	T-BS525	Stainless Steel Bolt JP size M5x25 mm.	**16.00**
	T-BSN1/4	Stainless Steel Nut 1/4"	**3.00**
	Stranded Copper Conductor		
	T-SCC 016	Cable size 16 sq.mm.	**On Request**
	T-SCC 025	Cable size 25 sq.mm.	**On Request**
	T-SCC 035	Cable size 35 sq.mm.	**On Request**
	T-SCC 050	Cable size 50 sq.mm.	**On Request**
	T-SCC 070	Cable size 70 sq.mm.	**On Request**
	T-SCC 095	Cable size 95 sq.mm.	**On Request**
	T-SCC 120	Cable size 120 sq.mm.	**On Request**
	T-SCC 150	Cable size 150 sq.mm.	**On Request**
	T-SCC 185	Cable size 185 sq.mm.	**On Request**
	T-SCC 240	Cable size 240 sq.mm.	**On Request**

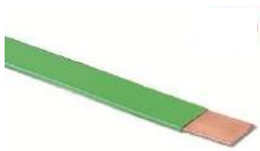
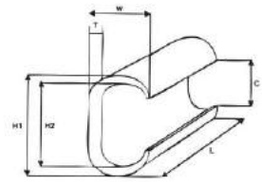
Figure	Cat No.	Description	Price
	Tape Conductors : Copper Tape		
	T-LCT 253	Copper Tape size 25 x 3 mm. (75 sq.mm.)	**On Request**
	T-LCT 254	Copper Tape size 25 x 4 mm. (100 sq.mm.)	**On Request**
		* Other size is also available upon request	
	Tape Conductors : Tinned Copper Tape		
	T-LTCT 253	Tin Copper Tape size 25 x 3 mm. (75 sq.mm.)	**On Request**
	T-LTCT 254	Tin Copper Tape size 25 x 4 mm. (100 sq.mm.)	**On Request**
		* Other size is also available upon request	
	Tape Conductors : Aluminium Tape		
	T-LAT 253	Aluminium Tape size 25 x 3 mm. (75 sq.mm.)	**On Request**
	T-LAT 254	Aluminium Tape size 25 x 4 mm. (100 sq.mm.)	**On Request**
		* Other size is also available upon request	
	**Tape Conductors : PVC Covered Copper Tape**		
	T-LCT 253P	PVC Covered Copper Tape size 25 x 3 mm.	**On Request**
	T-LCT 254P	PVC Covered Copper Tape size 25 x 4 mm.	**On Request**
		* Other size is also available upon request	
	Tape Conductors : PVC Covered Aluminium Tape		
	T-LAT 253P	PVC Covered Aluminium Tape size 25 x 3 mm.	**On Request**
	T-LAT 254P	PVC Covered Aluminium Tape size 25 x 4 mm.	**On Request**
		* Other size is also available upon request	
	Circular Conductors : Solid Copper		
	T-CC-8	Solid Copper Conductors dia. 8 mm. (50 sq.mm.)	**On Request**
	T-CC-9.5	Solid Copper Conductors dia. 9.5 mm. (70 sq.mm.)	**On Request**
		* Other size is also available upon request	
	Annealed Copper - Clad Steel 7 Wire Strand		
	T-ACCS7-50	Conductors 1/0 AWG. (50 sq.mm.)	**On Request**
	T-ACCS7-70	Conductors 7 No. 7 AWG. (70 sq.mm.)	**On Request**
		* Other size is also available upon request	
	Annealed Copper - Clad Steel Single Wire		
	T-2AWG	Conductors 2 AWG. (33.62 sq.mm.)	**On Request**
	T-ACCS-50	Conductors Dia. 8 mm. (50 sq.mm.)	**On Request**
	T-ACCS-70	Conductors Dia 10 mm. (78 sq.mm.)	**On Request**
		* Other size is also available upon request	

Figure	Cat No.	Description	Price
	Static Discharge Reels		
	SDR-VCT 1015	Conductor VCT 1 Core , 10 sq.mm. , Length 15 M.	**On Request**
	SDR-VCT 1020	Conductor VCT 1 Core , 10 sq.mm. , Length 20 M.	**On Request**
	SDR-VCT 1610	Conductor VCT 1 Core , 16 sq.mm. , Length 10 M.	**On Request**
	SDR-VCT 1615	Conductor VCT 1 Core , 16 sq.mm. , Length 15 M.	**On Request**
	SDR-VCT 1620	Conductor VCT 1 Core , 16 sq.mm. , Length 20 M.	**On Request**
	SDR-VCT 1625	Conductor VCT 1 Core , 16 sq.mm. , Length 25 M.	**On Request**
	SDR-VCT 1630	Conductor VCT 1 Core , 16 sq.mm. , Length 30 M.	**On Request**
	SDR-VCT 3510	Conductor VCT 1 Core , 35 sq.mm. , Length 10 M.	**On Request**
	SDR-VCT 3515	Conductor VCT 1 Core , 35 sq.mm. , Length 15 M.	**On Request**
	SDR-VCT 3520	Conductor VCT 1 Core , 35 sq.mm. , Length 20 M.	**On Request**
	SDR-VCT 3525	Conductor VCT 1 Core , 35 sq.mm. , Length 25 M.	**On Request**
	SDR-VCT 3530	Conductor VCT 1 Core , 35 sq.mm. , Length 30 M.	**On Request**
		* Other size is also available upon request	
	Hard Draw Bus Bar		
	T-HDBB304	Bus Bar size W. 30 mm. x T. 4 mm. , Length 5 M.	**On Request**
	T-HDBB324	Bus Bar size W. 32 mm. x T. 4 mm. , Length 5 M.	**On Request**
	T-HDBB305	Bus Bar size W. 30 mm. x T. 5 mm. , Length 5 M.	**On Request**
	T-HDBB325	Bus Bar size W. 32 mm. x T. 5 mm. , Length 5 M.	**On Request**
	T-HDBB405	Bus Bar size W. 40 mm. x T. 5 mm. , Length 5 M.	**On Request**
	T-HDBB505	Bus Bar size W. 50 mm. x T. 5 mm. , Length 5 M.	**On Request**
	Conductors Railway		
	PVC Covered Galvanized Steel Wire		
	T-RWPVCG 4-0	Galvanized Steel Wire Ø 4 mm. Orange color PVC	**160.00**
		UV Stabilizer OD. 12 mm. Coil Size 100 M.	
	Cadmium Bronze Wire with Tin Plating		
	T-RWCB3/16	Cadmium Bronze OD. 3/16" (Length on request)	**340.00**
	Cadmium Bronze Wire with Tin Plating for Rail Head Bond		
	T-RWCBH3/16-7.5	Cadmium Bronze OD. 3/16" - 7 1/2" Length	**170.00**
	Cadmium Bronze Wire with Tin Plating for Switch Bond		
	T-RWCBS3/16-18	Cadmium Bronze OD. 3/16" - 18" Length	**340.00**
	Cadmium Bronze Wire with Tin Plating for Jumper Bond		
	T-RWCBJ3/16-18	Cadmium Bronze OD. 3/16" - 18" Length	**340.00**
	Cadmium Bronze Wire with Tin Plating for Rail Web Bond		
	T-RWCBW3/16-4	Cadmium Bronze OD. 3/16" - 4 1/8" Length	**170.00**

C-Type Copper Compression Connectors



(ZIT-154~ZIT-700)

(ZIT-11~ZIT-122)

Cat. No.	Dimensions mm.						Installation		Total Sectional area of applicable wire sq.mm.	Price
	H1	H2	w	L	T	C	# of Crimps	S		
ZIT-11	9.5	6.3	6.2	12	1.6	4.0	2	7	7.5-11	**20.00**
ZIT-16	11.5	7.8	7.8	13	2.0	5.0	2	8	11.5-16	**25.00**
ZIT-20	12.8	8.4	9.7	13	2.9	5.1	1	8	14-20	**30.00**
ZIT-26	14.7	10.2	10.9	16	3.2	6.5	1	8	21.26	**35.00**
ZIT-44	19.0	13.4	14.4	20	4.0	8.5	1	8	27-44	**40.00**
ZIT-60	21.0	15.4	15.1	22	4.0	9.7	2	11	45-60	**55.00**
ZIT-76	24.4	17.3	17.6	22	5.0	10.8	2	11	61-76	**70.00**
ZIT-98	27.8	20.8	18.8	25	5.0	13.8	2	11	77-98	**90.00**
ZIT-122	29.8	22.1	21.2	26	5.5	13.5	2	12	99-122	**135.00**
ZIT-154	34.0	25.7	24.4	28	6.0	17.0	3	8.5	123-154	**150.00**
ZIT-190	37.0	28.5	25.4	35	6.0	17.4	3	10.5	155-190	**195.00**
ZIT-240	40.0	30.2	28.5	40	7.0	19.0	3	13	191-240	**230.00**
ZIT-288	44.5	34.7	31.1	45	7.0	22.3	3	14.5	241-288	**250.00**
ZIT-365	47.5	37.7	34.0	50	7.0	22.3	3	16	289-365	**360.00**
ZIT-450	57.0	42.5	41.0	60	10.0	28.0	3	18.5	366-450	**650.00**
ZIT-560	62.0	46.0	45.0	65	11.0	31.0	3	20	451-560	**850.00**
ZIT-700	68.0	51.0	49.5	70	12.0	34.0	3	21	561-700	**1,000.00**

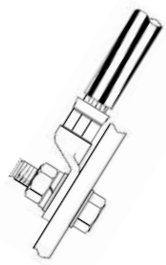
Figure	Cat No.	Description	Price
	**Copper Lugs High Voltage One-Hole Long Barrel**		
	ZIC 8-6 S	Connector size # 8 AWG (10 mm^2) , Stud size 1/4"	**60.00**
	ZIC 8-12 S	Connector size # 8 AWG (10 mm^2) , Stud size 1/2"	**160.00**
	ZIC 6-6 S	Connector size # 6 AWG (16 mm^2) , Stud size 1/4"	**70.00**
	ZIC 6-12 S	Connector size # 6 AWG (16 mm^2) , Stud size 1/2"	**170.00**
	ZIC 4-6 S	Connector size # 4 AWG (25 mm^2) , Stud size 1/4"	**75.00**
	ZIC 4-12 S	Connector size # 4 AWG (25 mm^2) , Stud size 1/2"	**190.00**
	ZIC 2-8 S	Connector size # 2 AWG (35 mm^2) , Stud size 5/16"	**100.00**
	ZIC 2-12 S	Connector size # 2 AWG (35 mm^2) , Stud size 1/2"	**200.00**
	ZIC 1-8 S	Connector size # 1 AWG (35 mm^2) , Stud size 5/16"	**120.00**
	ZIC 1-12 S	Connector size # 1 AWG (35 mm^2) , Stud size 1/2"	**220.00**
	ZIC 1/0-8 S	Connector size # 1/0 AWG (50 mm^2) , Stud size 5/16"	**130.00**
	ZIC 1/0-12 S	Connector size # 1/0 AWG (50 mm^2) , Stud size 1/2"	**240.00**
	ZIC 2/0-10 S	Connector size # 2/0 AWG (70 mm^2) , Stud size 3/8"	**135.00**
	ZIC 2/0-12 S	Connector size # 2/0 AWG (70 mm^2) , Stud size 1/2"	**260.00**
	ZIC 3/0-12S	Connector size # 3/0 AWG (95 mm^2) , Stud size 1/2"	**280.00**
	ZIC 4/0-12 S	Connector size # 4/0 AWG (120 mm^2) , Stud size 1/2"	**300.00**
	ZIC 250-12 S	Connector size # 250 MCM (120 mm^2) , Stud size 1/2"	**360.00**
	ZIC 300-12 S	Connector size # 300 MCM (150 mm^2) , Stud size 1/2"	**390.00**
	ZIC 350-12 S	Connector size # 350 MCM (185 mm^2) , Stud size 1/2"	**420.00**
	ZIC 400-16 S	Connector size # 400 MCM (185 mm^2) , Stud size 1/2"	**500.00**
	ZIC 500-16 S	Connector size # 500 MCM (240 mm^2) , Stud size 1/2"	**580.00**
	ZIC 600-16 S	Connector size # 600 MCM (300 mm^2) , Stud size 1/2"	**880.00**
	ZIC 750-16 S	Connector size # 750 MCM (400 mm^2) , Stud size 1/2"	**1,160.00**
	ZIC 800-16 S	Connector size # 800 MCM (400 mm^2) , Stud size 1/2"	**1,240.00**
	ZIC 100-16 S	Connector size # 1000 MCM (500 mm^2) , Stud size 1/2"	**1,720.00**
	ZIC 1250-20 S	Connector size #1250 MCM (630 mm^2) , Stud size 3/4"	**2,000.00**
	ZIC 1500-20 S	Connector size # 1500 MCM (800 mm^2) , Stud size 3/4"	**2,600.00**
	ZIC 2000-20 S	Connector size # 2000 MCM (1000 mm^2) , Stud size 3/4"	**3,760.00**
	Copper Lugs High Voltage Two-Hole Long Barrel		
	ZLC 8-6 DN	Connector size # 8 AWG (10 mm^2) , Stud size 1/4"	**100.00**
	ZLC 8-12 D	Connector size # 8 AWG (10 mm^2) , Stud size 1/2"	**240.00**
	ZLC 6-6 DN	Connector size # 6 AWG (16 mm^2) , Stud size 1/4"	**110.00**
	ZLC 6-12 D	Connector size # 6 AWG (16 mm^2) , Stud size 1/2"	**250.00**
	ZLC 4-6 DN	Connector size # 4 AWG (25 mm^2) , Stud size 1/4"	**130.00**
	ZLC 4-12 D	Connector size # 4 AWG (25 mm^2) , Stud size 1/2"	**260.00**
	ZLC 2-8 DN	Connector size # 2 AWG (35 mm^2) , Stud size 5/16"	**160.00**
	ZLC 2-12 D	Connector size # 2 AWG (35 mm^2) , Stud size 1/2"	**310.00**
	ZLC 1-8 DN	Connector size # 1 AWG (35 mm^2) , Stud size 5/16"	**190.00**
	ZLC 1-12 D	Connector size # 1 AWG (35 mm^2) , Stud size 1/2"	**320.00**
	ZLC 1/0-12 DN	Connector size # 1/0 AWG (50 mm^2) , Stud size 1/2"	**340.00**
	ZLC 2/0-12 DN	Connector size # 2/0 AWG (70 mm^2) , Stud size 1/2"	**360.00**
	ZLC 3/0-12 DN	Connector size # 3/0 AWG (95 mm^2) , Stud size 1/2"	**380.00**
	ZLC 4/0-12 DN	Connector size # 4/0 AWG (120 mm^2) , Stud size 1/2"	**400.00**
	ZLC 250-12 DN	Connector size # 250 MCM (120 mm^2) , Stud size 1/2"	**440.00**
	ZLC 300-12 DN	Connector size # 300 MCM (150 mm^2) , Stud size 1/2"	**480.00**
	ZLC 350-12 DN	Connector size # 350 MCM (185 mm^2) , Stud size 1/2"	**520.00**
	ZLC 400-12 DN	Connector size # 400 MCM (185 mm^2) , Stud size 1/2"	**560.00**
	ZLC 500-12 DN	Connector size # 500 MCM (240 mm^2) , Stud size 1/2"	**790.00**
	ZLC 600-12 DN	Connector size # 600 MCM (300 mm^2) , Stud size 1/2"	**1,160.00**
	ZLC 750-12 DN	Connector size # 750 MCM (400 mm^2) , Stud size 1/2"	**1,360.00**
	ZLC 800-12 DN	Connector size # 800 MCM (400 mm^2) , Stud size 1/2"	**1,480.00**
	ZLC 1000-12 DN	Connector size # 1000 MCM (500 mm^2) , Stud size 1/2"	**1,960.00**

Figure	Cat No.	Description	Price
	Copper Lugs High Voltage One-Hole Long Barrel 900 Pad		
	ZAC 8-6 S	Connector size # 8 AWG (10 mm^2) , Stud size 1/4"	**80.00**
	ZAC 8-12 S	Connector size # 8 AWG (10 mm^2) , Stud size 1/2"	**180.00**
	ZAC 6-6 S	Connector size # 6 AWG (16 mm^2) , Stud size 1/4"	**110.00**
	ZAC 6-12 S	Connector size # 4 AWG (16 mm^2) , Stud size 1/2"	**190.00**
	ZAC 4-6 S	Connector size # 4 AWG (25 mm^2) , Stud size 1/4"	**90.00**
	ZAC 4-12 S	Connector size # 4 AWG (25 mm^2) , Stud size 1/2"	**210.00**
	ZAC 2-8 S	Connector size # 2 AWG (35 mm^2) , Stud size 5/16"	**120.00**
	ZAC 1-12 S	Connector size # 2 AWG (35 mm^2) , Stud size 1/2"	**220.00**
	ZAC 1-8 S	Connector size # 1 AWG (35 mm^2) , Stud size 5/16"	**140.00**
	ZAC 1-12 S	Connector size # 1 AWG (35 mm^2) , Stud size 1/2"	**240.00**
	ZAC 1/0-8 S	Connector size # 1/0 AWG (50 mm^2) , Stud size 5/16"	**150.00**
	ZAC 1/0-12 S	Connector size # 1/0 AWG (50 mm^2) , Stud size 1/2"	**260.00**
	ZAC 2/0-10 S	Connector size # 2/0 AWG (70 mm^2) , Stud size 3/8"	**150.00**
	ZAC 2/0-12 S	Connector size # 2/0 AWG (70 mm^2) , Stud size 1/2"	**280.00**
	ZAC 3/0-12 S	Connector size # 3/0 AWG (95 mm^2) , Stud size 1/2"	**320.00**
	ZAC 4/0-12 S	Connector size # 4/0 AWG (120 mm^2) , Stud size 1/2"	**340.00**
	ZAC 250-12 S	Connector size # 250 MCM (120 mm^2) , Stud size 1/2"	**400.00**
	ZAC 300-12 S	Connector size # 300 MCM (150 mm^2) , Stud size 1/2"	**430.00**
	ZAC 350-12 S	Connector size # 350 MCM (185 mm^2) , Stud size 1/2"	**460.00**
	ZAC 400-16 S	Connector size # 400 MCM (185 mm^2) , Stud size 5/8"	**540.00**
	ZAC 500-16 S	Connector size # 500 MCM (240 mm^2) , Stud size 5/8"	**660.00**
	ZAC 600-16 S	Connector size # 600 MCM (300 mm^2) , Stud size 5/8"	**940.00**
	ZAC 750-16 S	Connector size # 750 MCM (400 mm^2) , Stud size 5/8"	**1,240.00**
	ZAC 800-16 S	Connector size # 800 MCM (400 mm^2) , Stud size 5/8"	**1,440.00**
	ZAC 1000-16 S	Connector size # 1000 MCM (500 mm^2) , Stud size 5/8"	**2,000.00**
	ZAC 1500-20 S	Connector size # 1500 MCM (800 mm^2) , Stud size 3/4"	**2,800.00**
	ZAC 2000-20 S	Connector size # 2000 MCM (1000 mm^2) , Stud size 3/4"	**3,960.00**
	Copper Lugs High Voltage TWO-Hole Long Barrel 900 Pad		
	ZAC 8-6 DN	Connector size # 8 AWG (10 mm^2) , Stud size 1/4"	**120.00**
	ZAC 8-12 D	Connector size # 8 AWG (10 mm^2) , Stud size 1/2"	**260.00**
	ZAC 6-6 DN	Connector size # 6 AWG (16 mm^2) , Stud size 1/4"	**130.00**
	ZAC 6-12 D	Connector size # 6 AWG (16 mm^2) , Stud size 1/2"	**270.00**
	ZAC 4-6 DN	Connector size # 4 AWG (25 mm^2) , Stud size 1/4"	**150.00**
	ZAC 4-12 D	Connector size # 4 AWG (25 mm^2) , Stud size 1/2"	**280.00**
	ZAC 2-8 DN	Connector size # 2 AWG (35 mm^2) , Stud size 5/16"	**180.00**
	ZAC 2-12 D	Connector size # 2 AWG (35 mm^2) , Stud size 1/2"	**330.00**
	ZAC 1-8 DN	Connector size # 1 AWG (35 mm^2) , Stud size 5/16"	**210.00**
	ZAC 1-12 D	Connector size # 1 AWG (35 mm^2) , Stud size 1/2"	**340.00**
	ZAC 1/0-12 DN	Connector size # 1/0 AWG (50 mm^2) , Stud size 1/2"	**380.00**
	ZAC 2/0-12 DN	Connector size # 2/0 AWG (70 mm^2) , Stud size 1/2"	**400.00**
	ZAC 3/0-12 DN	Connector size # 3/0 AWG (95 mm^2) , Stud size 1/2"	**420.00**
	ZAC 4/0-12 DN	Connector size # 4/0 AWG (120 mm^2) , Stud size 1/2"	**440.00**
	ZAC 250-12 DN	Connector size # 250 MCM (120 mm^2) , Stud size 1/2"	**480.00**
	ZAC 300-12 DN	Connector size # 300 MCM (150 mm^2) , Stud size 1/2"	**520.00**
	ZAC 350-12 DN	Connector size # 350 MCM (185 mm^2) , Stud size 1/2"	**560.00**
	ZAC 400-12 DN	Connector size # 400 MCM (185 mm^2) , Stud size 1/2"	**600.00**
	ZAC 500-12 DN	Connector size # 500 MCM (240 mm^2) , Stud size 1/2"	**870.00**
	ZAC 600-12 DN	Connector size # 600 MCM (300 mm^2) , Stud size 1/2"	**1,240.00**
	ZAC 750-12 DN	Connector size # 750 MCM (400 mm^2) , Stud size 1/2"	**1,440.00**
	ZAC 800-12 DN	Connector size # 800 MCM (400 mm^2) , Stud size 1/2"	**1,560.00**
	ZAC 1000-12 DN	Connector size # 1000 MCM (500 mm^2) , Stud size 1/2"	**2,040.00**
	ZAC 1500-12 DN	Connector size # 1500 MCM (800 mm^2) , Stud size 1/2"	**3,100.00**
	ZAC 2000-12 DN	Connector size # 2000 MCM (1000 mm^2) , Stud size 1/2"	**4,360.00**

Figure	Cat No.	Description	Price
	Copper Lugs High Voltage Four-Hole Long BarrelCopper Splices Long Barrel		
	ZFC 250-12-4N	Connector size # 250 MCM (120 mm^2) , Stud size 1/2"	**2,500.00**
	ZFC 300-12-4N	Connector size # 300 MCM (150 mm^2) , Stud size 1/2"	**2,800.00**
	ZFC 350-12-4N	Connector size # 350 MCM (185 mm^2) , Stud size 1/2"	**2,800.00**
	ZFC 400-12-4N	Connector size # 400 MCM (185 mm^2) , Stud size 1/2"	**2,900.00**
	ZFC 500-12-4N	Connector size # 500 MCM (240 mm^2) , Stud size 1/2"	**2,900.00**
	ZFC 600-12-4N	Connector size # 600 MCM (300 mm^2) , Stud size 1/2"	**3,200.00**
	ZFC 750-12-4N	Connector size # 750 MCM (400 mm^2) , Stud size 1/2"	**3,200.00**
	ZFC 800-12-4N	Connector size # 800 MCM (400 mm^2) , Stud size 1/2"	**3,200.00**
	ZFC 1000-12-4N	Connector size # 1000 MCM (500 mm^2) , Stud size 1/2"	**3,600.00**
	ZFC 1250-12-4N	Connector size #1250 MCM (630 mm^2) , Stud size 1/2"	**3,600.00**
	ZFC 1500-12-4N	Connector size # 1500 MCM (800 mm^2) , Stud size 1/2"	**3,600.00**
	ZFC 2000-12-4N	Connector size # 2000 MCM (1000 mm^2) , Stud size 1/2"	**4,000.00**
	Copper Splices Long Barrel		
	ZIP 8 L	Connector size # 8 AWG (10 mm^2)	**100.00**
	ZIP 6 L	Connector size # 4 AWG (16 mm^2)	**120.00**
	ZIP4 L	Connector size # 4 AWG (25 mm^2)	**140.00**
	ZIP 2 L	Connector size # 2 AWG (35 mm^2)	**160.00**
	ZIP 1 L	Connector size # 1 AWG (35 mm^2)	**180.00**
	ZIP 1/0 L	Connector size # 1/0 AWG (50 mm^2)	**200.00**
	ZIP 2/0 L	Connector size # 2/0 AWG (70 mm^2)	**210.00**
	ZIP 3/0 L	Connector size # 3/0 AWG (95 mm^2)	**220.00**
	ZIP 4/0 L	Connector size # 4/0 AWG (120 mm^2)	**250.00**
	ZIP 250 L	Connector size # 250 MCM (120 mm^2)	**260.00**
	ZIP 300 L	Connector size # 300 MCM (150 mm^2)	**300.00**
	ZIP 350 L	Connector size # 350 MCM (185 mm^2)	**330.00**
	ZIP 400 L	Connector size # 400 MCM (185 mm^2)	**350.00**
	ZIP 500 L	Connector size # 500 MCM (240 mm^2)	**460.00**
	ZIP 600 L	Connector size # 600 MCM (300 mm^2)	**650.00**
	ZIP 750 L	Connector size # 750 MCM (400 mm^2)	**760.00**
	ZIP 800 L	Connector size # 800 MCM (400 mm^2)	**840.00**
	ZIP 1000 L	Connector size # 1000 MCM (500 mm^2)	**1,020.00**
	ZIP 1500 L	Connector size # 1500 MCM (800 mm^2)	**1,440.00**
	ZIP 2000 L	Connector size # 2000 MCM (1000 mm^2)	**2,160.00**

Model EP-410

EP-410	
Applicable Range Cu/Al (mm^2)	250
Force at die face (Short ton)	11.4 - 12.5
Ram Stroke (mm)	25
Reservoir Capacity (cc)	124
Withstand Voltage (kV/1min)	20
Weight (kg)	6.2
Price / ราคา	**84,000.00**

Model EP-431

EP-431	
Applicable Range Cu/Al (mm^2)	250
Force at die face (Short ton)	11.4 - 12.5
Ram Stroke (mm)	31
Reservoir Capacity (cc)	145
Withstand Voltage (kV/1min)	20
Weight (kg)	6.4
Price / ราคา	**84,500.00**

Model EP-510C

EP-510C	
Applicable Range Cu/Al (mm^2)	380
Force at die face (Short ton)	13
Ram Stroke (mm)	42
Reservoir Capacity (cc)	200
Withstand Voltage (kV/1min)	20
Weight (kg)	7.8
Price / ราคา	**91,000.00**

UC-6B

UC-6B	
Output force (Metric ton)	5.6
Jaw Opening (mm)	32
Length (mm)	565
Weight (kg)	5
Price / ราคา	**78,000.00**

ND58O

Low cost ND58O accept a wide range of insert dies, making them suitable for installing a wide range of compression fitting for over head line construction fixed dies D3 & O for ND58O insert dies are securely locked in position by individually operated spring-loaded push pins positive action of the tools ensures constant crimp-height for each compression.

ND58O	
Die	0 & D3 & 5/8”
Price / ราคา	**35,000.00**

EP-50

DIN 46235 TERMINALS

HEXAGONAL DIES FOR EP TYPE

EP 60 DIES & ADAPTER

EP

EP-520 & EP-1000

MODEL : EP-50

Applicable Range	Up to 120mm^{2}Cu Lug	Price / ราคา
Force at die face	5.2 metric ton	44,500.00
Ram Stroke	10mm to 15 mm adjustable	
Reservior Capacity	Approx. 60 cc	
Dimensions	130 x372 mm	
Hydraulic oil	SHELL TELLUS T-15 or equal	
Case	Steel carrying case	

Dies for Din 46235 Terminals — 3,750.00

Model		K6/8	K10/12	K14/16	K18/20
Range	Cu	10-16	25-35	50-70	95-120
	Al	-	16-25	35-50	70-95

HEXAGONAL DIE FOR EP TYPE
For copper & Aluminium Terminals Suitable for DIN 46235 Terminals

Die No.	Cable Size Al/Cu (mm^2)	Price / ราคา
K6	Cu 10	3,500.00
K8	Cu 16	3,500.00
K10	Cu 25 / Al 16	3,500.00
K12	Cu 35 / Al 25	3,500.00
K 14	Cu 50 / Al 30	3,500.00
K16	Cu 70 / Al 50	3,500.00
K18	Cu 95 / Al 70	3,500.00
K20	Cu 120 / Al 95	3,500.00
K22	Cu 150 / Al 120	3,500.00
K25	Cu 185 / Al 150	3,500.00
K28	Cu 240 / Al 185	3,500.00
K32	Cu 300/ Al 240	3,500.00
K34	Cu 400 / Al 300	3,500.00

EP 60 DIES & ADAPTER
ALCOA TYPE DIES (HEXAGONAL)

Cable Size Al/Cu (mm^2)	Price / ราคา
Cu 300	12,000.00
Cu 400	12,000.00
Cu 500	12,000.00
Cu 630	12,000.00
Cu 800	12,000.00
Cu 1000	12,000.00
AAC 400	12,000.00
ACSR 477	12,000.00
ACSR 795	12,000.00
ACSR 1272	12,000.00
ADAPTER EP60 S FOR EP 410 DIES	12,000.00

Die for H Taps for Tools Model EP

Size (inch)	Price / ราคา
HT41G (UBG)	5,900.00
HT41AK (UO)	5,900.00
HT41V (UD)	5,900.00
HT41X (UD3)	5,900.00
HT41AJ (UN)	5,900.00

Dies for EP-520 & EP-1000

Cable Size Al/Cu (mm^2)	Price / ราคา
240	11,500.00
300	11,500.00
400	11,500.00
500	11,500.00

Model: EP-150A

SPECIFICATION			Price ราคา
Force at die face		90kN	60,000.00
Applicable range		up to 150sq.mm.	
Die	Nest	Rotary	
	Indentor	14, 22, 38-70, 80-150sq.mm.	
Size		512 (L) mm	
Weight		7.8 kg (less battery)	
Standard Accessories			
Dedicated Indentor: 14, 22, 38-70, 80-150sq.mm., Carrying case			

No.15B

No.16B

Model	Type	Output (ton)	Weight (kg)	Length (mm)	Applicable Range	Dies	Standard Accessories	Price ราคา
No.15B	Hand hydraulic	6	3	465	T11-T122	T11*,T16*,T20,T26,T44, T60,T76,T98,T122	1. Plastic case 2. Dies-7sets	**62,000.00**
No.16B	Hydraulic Head	12	4.1	284	T20-T365	T20*,T26*,T44*,T60* T76*,T98*,T122*,T154, T190,T240,T288,T365	1. Plastic case 2. Dies-5sets	**92,000.00**
Optional dies		For No. 15B					Unit price/Set	**5,400.00**
Optional dies		For No. 16B					Unit price/Set	**9,800.00**
(*)Marks show OPTIONAL DIES (Available on request)								

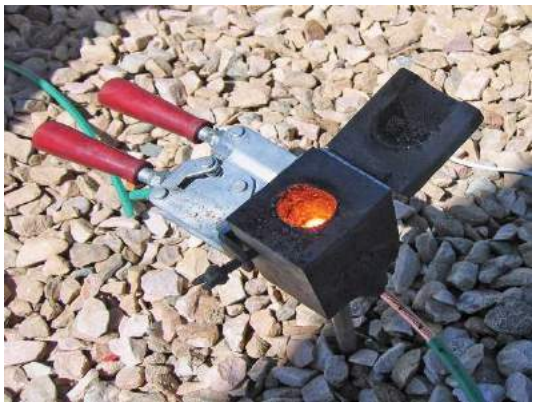
Exothermic Welding

TOPWELD Price List

Requirements of Grounding Connection

Around 80% of all power quality problems are related to grounding, bonding. Poor joint between conductor are often the cause of electrical failures however our safety and foundation of power quality, an property of connection has to possess the following qualities.

1. Withstand overload conditions with out melting, not loosen or failing
2. Long service life. Will not deteriorate or corrode when subjected to weather such as misty salt, humidity, PH-Value.
3. The connector temperature should remain lower than the conductor when conducting electrical current.
4. Perfect contact and electrical continuity.



Qualities of Exothermic Welding

- It has a best electrical conductivity than the compression connector.
- Not corrode oxide or degrade with time and is resistant to corrosive surrounding.
- It is able to withstand repeated electrical discharges.
- Stable low resistance.
- It has higher mechanical and than the compression connector .
- Permanent Connections Used in Substation Grounding.
- The most common connections not only between copper cables but also for welding tapes and metallic pieces made of brass, stainless steel, and copper bond steel ground rods.

Exothermic Welding Process

TOPWELD® Exothermic Welding System is the use of exothermic chemical reactions as heat flux generated by a molecular chemical reaction between copper oxide and aluminium while welding must use a handle clamp clamps on graphite mold to safety position and contain any weld required. The exothermic reaction creates an intense miniature furnace with temperatures exceed 2,500° C. instantly producing molten metal which flows into the weld cavity, filling any available space. Moments later the mold must be cleaned immediately and preparation for the next weld.

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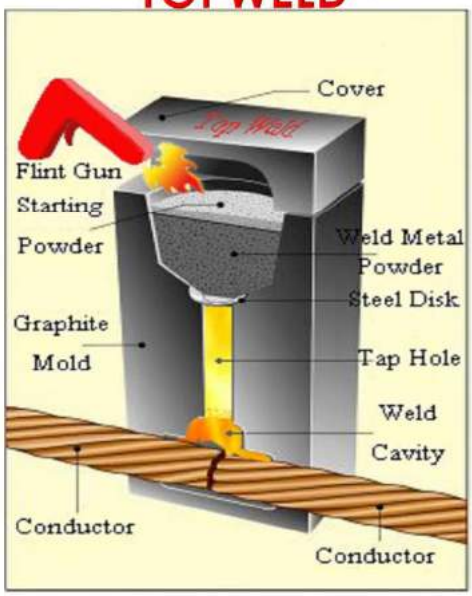
TOPWELD®



SAFETY INSTRUCTIONS

A. Only **TOPWELD** manufactured equipment and materials should be used to make Exothermic welding connections.

B. Do not connect items except as detailed in instruction

C. Do not use broken the graphite mold which could cause leakage.

D. Do not alter equipment or material without **TOPWELD** authorization.

E. Make connections in conformance with **TOPWELD** instructions and all governing codes.

F. Ignition temperatures are in excess of 400°C for welding material.

G. The **TOPWELD** welding procedures will minimize risk of burns and fire caused by hot molten material spillage. In case of fire, use of water or CO.

H. Avoid moisture and contaminants in mold and materials being welded.

I. Base material thickness must be sufficient for the weight of metal powder in order to prevent melt-through and leakage of hot molten metal.

Figure	Cat No.	Description	Price
	Graphite Mould For Cable, Rod, Bus Bar, Rebar, Steel, Pipe		
	T4	Graphite Mould Type " 4 "	**4,400.00**
	T5	Graphite Mould Type " 5 "	**9,500.00**
	T6	Graphite Mould Type " 6 "	**7,500.00**
	Graphite Mould For Signaling Bond		
	T4	Graphite Mould Type " 4 "	**4,400.00**
	T5	Graphite Mould Type " 5 "	**9,500.00**
	T6	Graphite Mould Type " 6 "	**7,500.00**
	Weld Metal Powder For Cable, Rod, Bus Bar, Rebar, Steel, Pipe		
	15 S	Weld Metal Powder size 15 g.	**75.00**
	25 S	Weld Metal Powder size 25 g.	**80.00**
	32 S	Weld Metal Powder size 32 g.	**90.00**
	45 S	Weld Metal Powder size 45 g.	**125.00**
	65 S	Weld Metal Powder size 65 g.	**150.00**
	90 S	Weld Metal Powder size 90 g.	**220.00**
	115 S	Weld Metal Powder size 115 g.	**275.00**
	150 S	Weld Metal Powder size 150 g.	**345.00**
	200 S	Weld Metal Powder size 200 g.	**425.00**
	250 S	Weld Metal Powder size 250 g.	**495.00**
	500 S	Weld Metal Powder size 500 g.	**940.00**
	Weld Metal Powder For Signaling Bond		
	15 S	Weld Metal Powder size 15 g.	**75.00**
	25 S	Weld Metal Powder size 25 g.	**80.00**
	32 S	Weld Metal Powder size 32 g.	**90.00**
	45 S	Weld Metal Powder size 45 g.	**125.00**
	65 S	Weld Metal Powder size 65 g.	**150.00**
	90 S	Weld Metal Powder size 90 g.	**220.00**
	115 S	Weld Metal Powder size 115 g.	**275.00**
	150 S	Weld Metal Powder size 150 g.	**345.00**
	200 S	Weld Metal Powder size 200 g.	**425.00**
	250 S	Weld Metal Powder size 250 g.	**495.00**
	500 S	Weld Metal Powder size 500 g.	**940.00**
	Handdle Clamp For Mould		
	MC 4	Handdle Clamp Type " 4 "	**3,100.00**
	MC 5	Handdle Clamp Type " 5 "	**3,500.00**

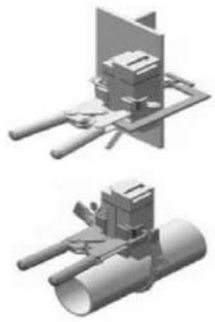
Figure	Cat No.	Description	Price
	**Handdle Clamp With Support**		
	MC4-A 3657	Handdle Clamp Type "4" with Vertical Beam Support	**5,300.00**
	MC5-A 3657	Handdle Clamp Type "5" with Vertical Beam Support	**5,700.00**
	MC4-A 3658	Handdle Clamp Type "4" with Chain Support	**5,100.00**
	MC5-A 3658	Handdle Clamp Type "5" with Chain Support	**5,500.00**
	Support For Mould		
	A 3657	Vertical Beam Support	**2,200.00**
	A 3658	Chain Support / Chain Support Type "CVH"	**2,000.00**
	PK 7	Lock Mould Support	**2,000.00**
	Tool and Accessories For Exothermic Welding		
	T-A 300	Tool and Accessories (Sets) (Tool Box , Wire Cleaning Brush , Flint Gun , Mold Cleaning Brush , Slag Removal Scrapper , Butane Gas , Butane Torch)	**6,980**
	A 302	Tool Box	**3,800.00**
	A 305	Wire Cleaning Brush	**750.00**
	A 306	Bus Bar Cleaning Brush	**570.00**
	A 309	Flint Gun	**500.00**
	A 310	Mold Cleaning Brush	**400.00**
	A 311	Slag Removal Scrapper	**150.00**
	A 312	Butane Gas	**180.00**
	A 313	Butane Torch	**1,200.00**
	A 314	Duct Seal (1 pack : 5 ea.)	**850.00**

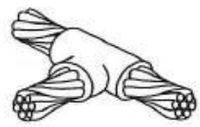
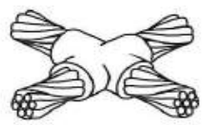
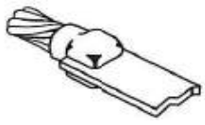
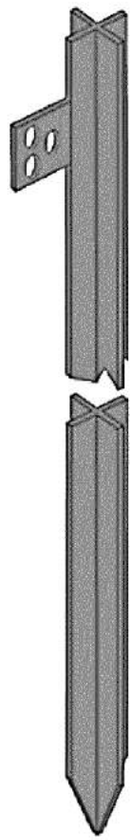
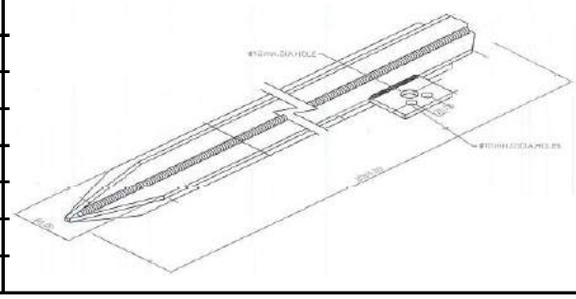
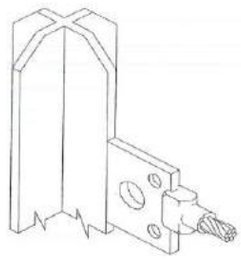
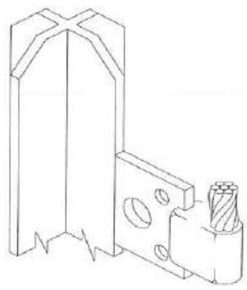
Figure	Cat No.	Description	Price
	One Time Type CC1 : Cable End To End		
	CC1 - Series	Cable Size 16 - 35 sq.mm.	**250.00**
		Cable Size 50 - 70 sq.mm.	**280.00**
		Cable Size 95 - 120 sq.mm.	**280.00**
		Cable Size 150 - 300 sq.mm.	**750.00**
	**One Time Type CC2 : Cable Run & Tap**		
	CC2 - Series	Cable Size 16 - 35 sq.mm.	**260.00**
		Cable Size 50 - 70 sq.mm.	**290.00**
		Cable Size 95 - 120 sq.mm.	**290.00**
		Cable Size 150 - 300 sq.mm.	**800.00**
	**One Time Type CC4 : Cable Cross**		
	CC4 - Series	Cable Size 16 - 35 sq.mm.	**280.00**
		Cable Size 50 - 70 sq.mm.	**300.00**
		Cable Size 95 - 120 sq.mm.	**850.00**
		Cable Size 150 - 300 sq.mm.	**850.00**
	One Time Type GR1 : Cable To Rod		
	GR1 - Series	Cable Size 16 - 35 sq.mm., with Rod Size 5/8", 3/4"	**250.00**
		Cable Size 50 - 70 sq.mm., with Rod Size 5/8", 3/4"	**280.00**
		Cable Size 95 - 120 sq.mm., with Rod Size 5/8", 3/4"	**280.00**
		Cable Size 150 - 300 sq.mm., with Rod Size 5/8", 3/4"	**750.00**
	One Time Type GT2 : Cable Horizontal to Rod		
	GT2 - Series	Cable Size 16 - 35 sq.mm., with Rod Size 5/8", 3/4"	**260.00**
		Cable Size 50 - 70 sq.mm., with Rod Size 5/8", 3/4"	**290.00**
		Cable Size 95 - 120 sq.mm., with Rod Size 5/8", 3/4"	**290.00**
		Cable Size 150 - 300 sq.mm., with Rod Size 5/8", 3/4"	**800.00**
	One Time Type NT3 : Cable Run & Tap To Rod		
	NT3 - Series	Cable Size 16 - 35 sq.mm., with Rod Size 5/8", 3/4"	**280.00**
		Cable Size 50 - 70 sq.mm., with Rod Size 5/8", 3/4"	**300.00**
		Cable Size 95 sq.mm., with Rod Size 5/8", 3/4"	**300.00**
		Cable Size 120 - 300 sq.mm., with Rod Size 5/8", 3/4"	**850.00**
	One Time Type XT4 : Cable Cross To Rod		
	XT4 - Series	Cable Size 16 - 35 sq.mm., with Rod Size 5/8", 3/4"	**300.00**
		Cable Size 50 - 70 sq.mm., with Rod Size 5/8", 3/4"	**350.00**
		Cable Size 95 - 120 sq.mm., with Rod Size 5/8", 3/4"	**900.00**
		Cable Size 150 - 300 sq.mm., with Rod Size 5/8", 3/4"	**900.00**
	**One Time Type CB1 : Cable To Bar**		
	CB1 - Series	Cable Size 16 - 35 sq.mm.	**250.00**
		Cable Size 50 - 70 sq.mm.	**280.00**
		Cable Size 95 - 120 sq.mm.	**280.00**
		Cable Size 150 - 300 sq.mm.	**750.00**

Figure	Cat No.	Description	Price
	Earthing Spike (กราวด์หรอดสี่แฉก)		
	GKA-ETS-2000	Earthing Spike Size 60 x 60 x 5 x 2000 mm.	850.00
		(Material : Mild Steel)	
		Hot Dip Galvanied Not Less Than 85 Microns.	
			

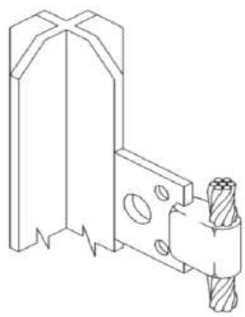
Type of Exothermic Welding



CG 98



CG 99



CG 66

EXTERNAL PROTECTION

Protection radii according to standards UNE 21186 and NF C 17-102

SPECIFICATIONS :

Early Streamer Emission Air Terminal (ESEAT), Pulsating emission lightning conductor, ION-CORONA DAT-CONTROLER, model (M), with gain in time of breakdown AT ,determining a radious of protection of (R) meters, for protection level (L) and insulating between armature superior to the 95%, in weather condition. Tested and certified by the Laboratorio Central Official de Electrotecnia, Madrid (Ministry of Industry)

Equipped with triple insulating system protector,stopped electrostatic charge accumulator, upward streamer electronic generator and multiple spark-gap, Wholly made of stainless steel type AIS-316, no need unnatural power supply

TEST ACCREDITATION AND APPLYING STANDARD

1. ESE Air Terminal Qualification Test, proving the gain in time of breakdown, following Annex C of standard UNE 21 186/96 and NF C 17-102/95
2. Performance test in weather condition, proving that the insulating between armatures,is superior to the 95%, following standard UNE 21 308/89.

For installation purpose, standard must be considered UNE 21 186/96, NF C 17-102/95, UNE 21 185/95y NTE-IPP pararrayos

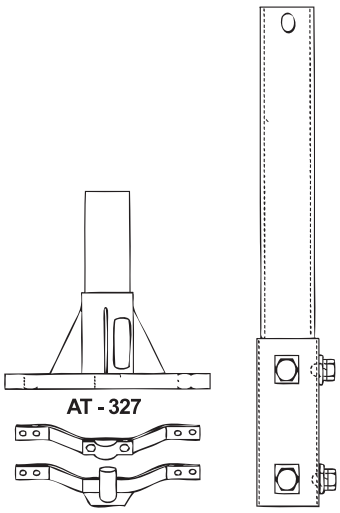
PROTECTION RADIUS (Rp) IN METERS AS CTE SU 8, UNE 21186 and NFC 17102

CTE SU 8	UNE 21186 NFC 17102		DAT CONTROLER® PLUS			
			AT-1515	AT-1530	AT-1545	AT-1560
		h	DC+15	DC+30	DC+45	DC+60
Level 4	Level IV	2	20	28	36	43
		4	41	57	72	85
		6	52	72	90	107
		8	54	73	91	108
		10	56	75	92	109
Level 3	Level III	2	18	25	32	39
		4	36	51	64	78
		6	46	64	81	97
		8	47	65	82	98
		10	49	66	83	99
Level 2	Level II	2	15	22	28	35
		4	30	44	57	69
		6	38	55	71	87
		8	39	56	72	87
		10	40	57	72	88
Level 1	Level I	2	13	19	25	31
		4	25	38	51	63
		6	32	48	63	79
		8	33	49	64	79
		10	34	49	64	79

h: air terminal height over the surface to be protected.

AT-01G
Lightning event counter

AT-1515 DAT PLUS-15	AT-1530 DAT PLUS-30	AT-1545 DAT PLUS-45	AT-1560 DAT PLUS-60
Unit / Price ราคา	Unit / Price ราคา	Unit / Price ราคา	Unit / Price ราคา
96,000.00	109,000.00	129,000.00	156,000.00



Accessories for Fitting

Code	Description	Unit / Price ราคา
AT-101	Adapting piece	3,200.00
AT-327	Flat position base	4,400.00
AT-303	Wall mounted anchoring base	2,500.00
AT-201	Mast 1 m Long	1,600.00
AT-202	Mast 2 m Long	2,500.00
AT-203	Mast 3 m Long	3,200.00
AT-01G	Lightning event counter	25,000.00

INTERNAL PROTECTION

ระบบป้องกันฟ้าผ่าภายใน

OVERVOLTAGES

TRANSIENT

Transient Overvoltages are caused by a short but very high increase of voltage caused by atmospheric electric discharges (lightning) or by machinery switching manoeuvres.

PERMANENT

Permanent overvoltages are those having a relatively long duration (several seconds). The usual causes of tese overvoltages are a defective connection of the neutral or power consumption drops.

PROTECTION FOR POWER SUPPLY LINES

อุปกรณ์ป้องกันฟ้าผ่าสำหรับแหล่งจ่ายไฟฟ้ากำลัง

PROTECTION OF DATA AND COMMUNICATION LINES

อุปกรณ์ป้องกันฟ้าผ่าสำหรับอุปกรณ์สื่อสาร

PREVENTIVE PROTECTION

ระบบตรวจวัดสภาพอากาศ

STORM DETECTOR ATSTROM v2

เครื่องมือตรวจวัดสภาพอากาศ

is a strom detector by atmospheric electric field measurement, fully electronic, with no mobile parts, robust and most highly reliable. The basic configuration of the ATSTROM v2 strom detector is formed by:

Sensor with FCES technology

Workstation

- Software
- Electronic module with 4 contact-free outputs allowing connections to:
  - Visual and sonorous alarms
  - UPS devices
  - Auxiliary power generators
  - Data storage
  - System access through internet
  - Integration of the equipment into the local networks

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