LIGHTNING PROTECTION INTERNATIONAL PTY LTD

LIGHTNING PROTECTION AND EARTHING SOLUTIONS

Comprehensive Lightning, Surge Protection & Earthing Solutions **www.lpi.com.au**

The LPI story

Lightning Protection International Pty Ltd (LPI) is a fully Australian owned manufacturer and supplier of direct strike lightning protection, transient voltage surge suppression, and earthing / grounding solutions.

For many years, LPI has been providing specialist lightning protection advice to customers in some of the most lightning prone areas of the world. Our personnel have extensive experience in risk management, system design, training, installation, certification, and commissioning of systems in a wide variety of industry groups.

LPI maintains a third party Quality Management System to AS/NZS ISO 9001:2008.

LPI's range of products and services are exported from its head office and research facility (in Tasmania, Australia) and via regional offices worldwide.

The company has been recognised within Australia for its outstanding export successes and has been awarded several prestigious export awards.

LPI's 4-Step Approach to Lightning Protection

It is the strategic aim of our company to be able to provide a complete packaged solution. LPI has identified 4 key steps when considering the complete approach to lightning protection, ask for our LPI 4 Step approach to lightning protection.

Our system design approach includes:

1. Definition and provision of area protection
2. Creation of a bonded earthing system
3. Protection of mains power lines
4. Protection of signal, data and communication lines

Active in Industry

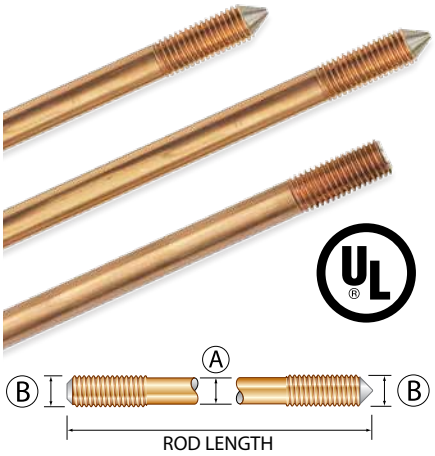
EXPORT AWARD WINNER

Australian Standard

bsi. ISO 9001 Quality Management

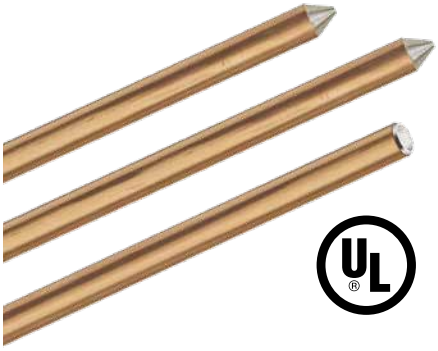
Approvals: IEEE IEC

EARTH RODS



Threaded Copperbonded Earth Rods - CBER						
Earth Rod Length (m)	Rod Diameter (mm) A.	Thread Diameter (Inches) B.	Thread Diameter (mm) B.	Weight per rod (Kg)	Bundle Size	Ordering Code
1.2	14.3	5/8" UNC	15.3	1.54	10	CBER1214
3.0	14.3	5/8" UNC	15.3	3.84	10	CBER3014
1.2	17.3	3/4" UNC	19	1.92	10	CBER1217
3.0	17.3	3/4" UNC	19	5.73	10	CBER3017

- *Standards: UL 467*



Unthreaded Copperbonded Earth Rods - UTCBER				
Earth Rod Length (m)	Rod Diameter (mm)	Weight per Rod (kg)	Bundle Size	Ordering Code
1.5	12.7	1.52	10	UTCBER1512
1.5	14.3	1.92	10	UTCBER1514
2.4	14.3	3.07	10	UTCBER2414
3.0	17.3	5.73	10	UTCBER3017

- *Standards: UL467*

Solid Stainless Steel Earth Rods

LPI's solid stainless steel earth rods are manufactured using 316 grade stainless steel and are highly resistant to corrosion. Stainless steel rods are best used for earthing installations where the problem of galvanic corrosion may take place between dissimilar metals buried in close proximity to each other. All solid stainless steel earth rods manufactured by LPI are supplied with external threads.

316 Solid Stainless Steel Earth Rods					
Earth Rod Length (m)	Rod Diameter (mm)	Thread Diameter (Inches) B.	Weight per Rod (kg)	Bundle Size	Ordering Code
1.2	15.8	5/8" UNC	1.50	10	SSER1215
2.0	15.8	5/8" UNC	3.00	10	SSER2015
3.0	15.8	5/8" UNC	3.50	10	SSER3015
1.2	19	¾" UNC	1.95	10	SSER1219
2.0	19	¾" UNC	3.32	10	SSER2019
3.0	19	¾" UNC	4.9	10	SSER3019

EARTH ROD FITTINGS

Fittings for Threaded Earth Rods - LEH & PH		
Description	Weight Kg	Ordering Code
Coupling for Threaded Earth Rod 5/8"	0.13	LEH-58R
Coupling for Threaded Earth Rod 3/4"	0.13	LEH-34R
Driving Stud for Threaded Earth Rod 5/8"	0.10	PH-58
Driving Stud for Threaded Earth Rod 3/4"	0.15	PH-34

- *Couplings are manufactured using high strength copper alloy*
- *Driving studs are manufactured using high strength carbon steel*
- *Standard: UL 467*

EARTH ROD FITTINGS

Fittings for Unthreaded Earth Rods - LEHC		
Description	**Weight Kg**	**Ordering Code**
Compression Coupling for Unthreaded Earth Rod 12 mm	0.13	LEHC-12R
Compression Coupling for Unthreaded Earth Rod 14 mm	0.13	LEHC-58R
Compression Coupling for Unthreaded Earth Rod 17 mm	0.13	LEHC-34R

- *Couplings are manufactured using high strength copper alloy*
- *Standard: UL 467*

Fittings for Threaded Stainless Steel Earth Rods - LEH & PH		
Description	**Weight Kg**	**Ordering Code**
Coupling for Threaded Stainless Steel Earth Rod 5/8"	0.11	LEH-58-SS
Coupling for Threaded Stainless Steel Earth Rod 3/4"	0.15	LEH-34-SS
Driving Stud for Threaded Stainless Steel Earth Rod 5/8"	0.35	PH-58
Driving Stud for Threaded Stainless Steel Earth Rod 3/4"	0.35	PH-34

- *Couplings are manufactured using 316 stainless steel*
- *Driving Studs are manufactured using high strength carbon steel*

MECHANICAL CLAMPS

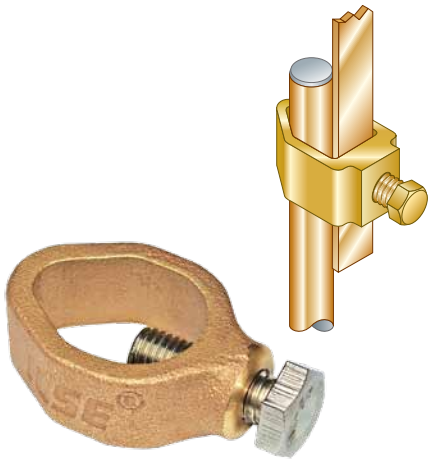
LPI offers a wide selection of mechanical clamps suitable for use with a combination of rod sizes and conductors or tapes. LPI clamps provide the ability for the user to install a conductive and mechanically secure connection between earth rods and conductors whilst limiting the effects of corrosion.

Rod to Tape Clamp

LPI'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.

Rod to Tape Clamp			
Suits:	14-17 mm Rods, Tape 25 x 3 mm		
Material:	UNS C84400 (high strength copper alloy)		
Weight	**Box Qty.**	**Ordering Code**	**Description**
90 g	50	RTC253	Rod to Tape Clamp, 25 x 3 mm Tape

- *All Rod Clamps supplied with 316 stainless steel fasteners*

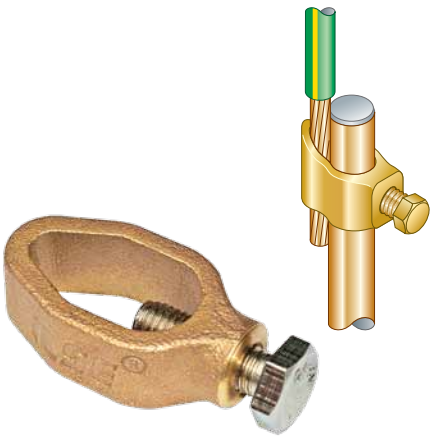


Rod to Cable Clamp

LPI's rod to cable clamp is suitable for clamping earth rods to cable. The rod to cable clamp is manufactured from high strength copper alloy.

Rod to Cable Clamp			
Suits:	14-17 mm Rods, Cable 35 mm2 - 120 mm2		
Material:	UNS C84400 (high strength copper alloy)		
Weight	**Box Qty.**	**Ordering Code**	**Description**
90 g	50	RCC35120	Rod to Cable Clamp, 14-17 mm Rods 35-120 mm2 Cable

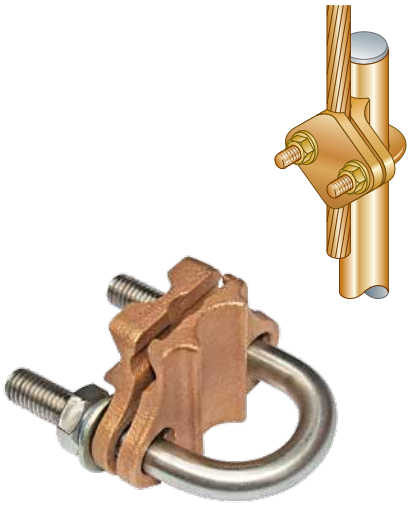
- *All rod clamps supplied with 316 stainless steel fasteners*



MECHANICAL CLAMPS

U-Bolt Rod Clamp

LPI's U-bolt rod clamps are suitable for connecting round conductors to an earth rod. All U-bolt clamps are manufactured from high strength copper alloy.



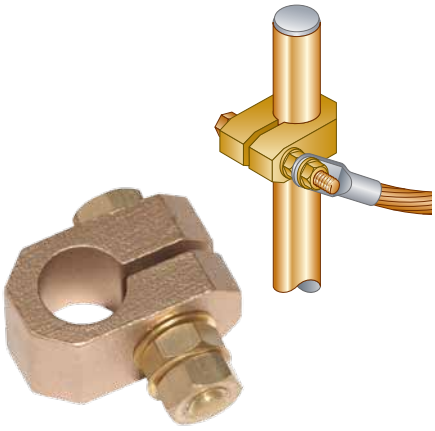
U-Bolt Rod Clamp			
Suits:	14 -16 mm Rods, Cable 35 mm^2 - 120 mm^2		
Material:	UNS C84400 (high strength copper alloy)		Fastener - 316 S/S
Weight	**Box Qty.**	**Ordering Code**	**Description**
160 g	10	UBRC35120	U-Bolt Rod Clamp, to suit 14-16 mm Rods and 35 mm^2 - 120 mm^2 cable
Suits:	14-19 mm Rods, Cable 35 mm^2 - 120 mm^2,		Tape 25 mm x 3 mm
Material:	UNS C84400 (high strength copper alloy)		Fastener - 316 S/S
Weight	**Box Qty.**	**Ordering Code**	**Description**
250 g	10	UBRCT35120	U-Bolt Rod Clamp, to suit 14-19 mm Rods and 35 mm^2 - 120 mm^2 cable or 25 mm x 3mm Tape
Suits:	14-19 mm Rods, Cable 120 mm^2 - 300 mm^2		
Material:	UNS C84400 (high strength copper alloy)		Fastener - 316 S/S
Weight	**Box Qty.**	**Ordering Code**	**Description**
320 g	10	UBRC120300	U-Bolt Rod Clamp, to suit 14-19 mm Rods and 120 mm^2 - 300 mm^2 cable

• All clamps supplied with 316 stainless steel fasteners

MECHANICAL CLAMPS AND BONDS

Split Connector Clamp Type B

Suitable for connecting threaded and unthreaded rods to cable via a lug clamp.

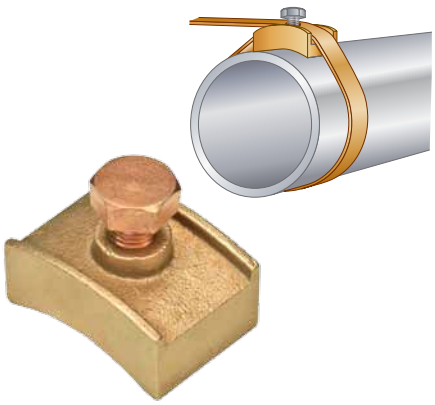


Split Connector Clamp - Type B		
Thread Diameter	**Weight Kg**	**Ordering Code**
5/8" UNC	0.15	SCGB58
3/4" UNC	0.15	SCGB34

• Gunmetal casting to BS 1400
• Other clamp types available upon request

Watermain Pipe Bond

The watermain pipe bond is designed for the bonding of metallic water main pipes and copper tape to the earthing or lightning protection system.



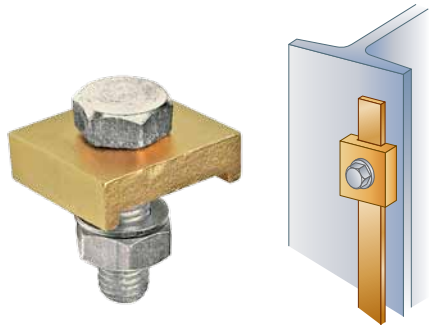
Watermain Pipe Bond	
Ordering Code	**WPB25**
Description:	Watermain Pipe Bond
Material:	Gunmetal
Tape Size:	25 mm x 3 mm

MECHANICAL CLAMPS AND BONDS

B-Bond

The B-Bond is for bonding of flat copper tape to steel structures.

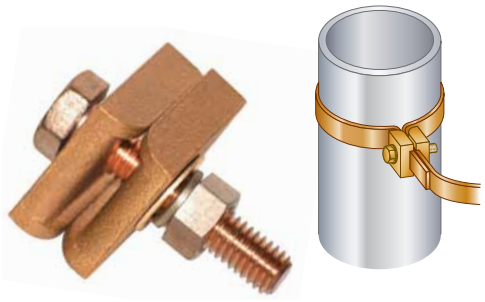
B-Bond	
Ordering Code	**BB25**
Description:	B-Bond
Material:	Gunmetal
Tape Size:	25mm x 3 mm
Bolt Size:	M10



RWP Bond

The RWP bond is for the bonding of flat copper tape to rainwater pipes and handrails.

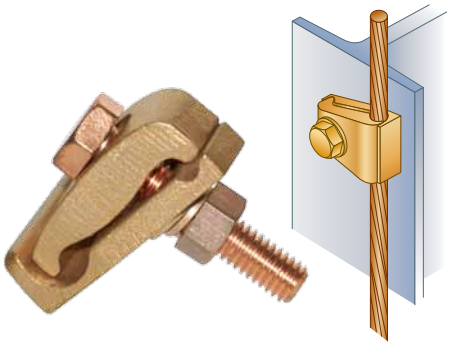
RWP Bond	
Ordering Code	**RWP25**
Description:	Rain Water Pipe Bond
Material:	Gunmetal
Tape Size:	25 mm x 3 mm



Tower Earth Clamp

The Tower Earth Clamp is used for bonding of copper cables or wires to steel structures.

Tower Earth Clamp	
Ordering Code	**TEC120**
Description:	Tower Earth Clamp
Material:	Gunmetal
Conductor Size:	70 -120 mm2
Channel Thickness:	Up to 10 mm



EARTH BONDING AND ATTACHMENT POINTS

Rebar Clamps

Rebar Clamps are designed for the connection of cable to rebar.

Rebar Clamps					
Ordering Code	**Weight**	**Material**	**Maximum Cable Size**	**Rebar Size**	**Fastners**
REBC70	300 g	Copper Alloy	70 mm^2	8-18	316 SS
REBC100	750 g	Copper Alloy	100 mm^2	18-36	316 SS

EARTH BONDING AND ATTACHMENT POINTS

Earth Boss

The Earth Boss is designed for welding to steel structures such as tanks and vessels.

Earth Boss - Mild Steel		
Ordering Code	**EB3035**	**EB5012**
Description:	Earth Boss	Earth Boss
Material:	Mild Steel	Mild Steel
Fastners:	316 Stainless Steel	316 Stainless Steel
Length:	30 mm	50 mm
Diameter:	35 mm	50 mm
Thread Diameter:	M12	M12
Weight:	0.30 kg	0.60 kg

Earth Boss - 316 Stainless Steel	
Ordering Code	**EB5012-SS316**
Description:	Earth Boss
Material:	316 Stainless Steel
Fastners:	316 Stainless Steel
Length:	50 mm
Diameter:	50 mm
Thread Diameter:	M12
Weight:	0.80 kg

- *Other sizes available upon request*

EARTH POINTS

Earth Points

LPI earth points are designed for use in reinforced concrete foundations and offer a convenient earth system connection point. Earth points supplied with tails allows for earthing to the building frame (foundations or rebar) in a safe and simple method.

The use of LPI earth points enables the installer to locate the complete earthing system within the structure and provides a location free from possible damage or unauthorised disconnection. LPI earth points are manufactured from a copper alloy and provide a current carrying capacity equal to that of the conductor or stud. Earth points will not corrode or loosen over time.

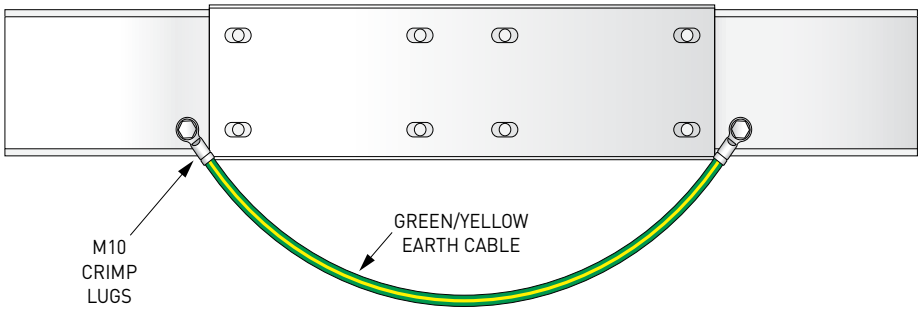
Earth Points						
Number of Holes	**Thread**	**Weight**	**Stem Diameter**	**Material**	**Description**	**Ordering Code**
1	M12	300 g	11 mm	UNS-C38000 (High Strength Copper Alloy)	Earth Point, 1 Hole, M12	EP1M12
2	M12	190 g	10.5 mm	UNS-C38000 (High Strength Copper Alloy)	Earth Point, 2 Hole, M12	EP2M12
4	M12	340 g	10.7 mm	UNS-C38000 (High Strength Copper Alloy)	Earth Point, 4 Hole, M12	EP4M12

EARTH POINTS

Earth Points					
Number of Holes	**Thread**	**Weight**	**Rebar Detail**	**Description**	**Ordering Code**
1	M12	810 g		EP1M12 with pre-welded 500 mm PVC insulated 70 mm² Cable	EP1M1257T
1	M12	860 g	100 mm length x 10 mm diameter Rebar	EP1M12 with pre-welded 500 mm PVC insulated 70 mm² Cable and Rebar	EP1M1257TR
2	M12	700 g		EP2M12 with pre-welded 500 mm PVC insulated 70 mm² Cable	EP2M1257T
2	M12	750 g	100 mm length x 10 mm diameter Rebar	EP2M12 with pre-welded 500 mm PVC insulated 70 mm² Cable and Rebar	EP2M1257TR
4	M12	950 g		EP4M12 with pre-welded 500 mm PVC insulated 70 mm² Cable	EP4M1257T
4	M12	1000 g	100 mm length x 10 mm diameter Rebar	EP4M12 with pre-welded 500 mm PVC insulated 70 mm² Cable and Rebar	EP4M1257TR

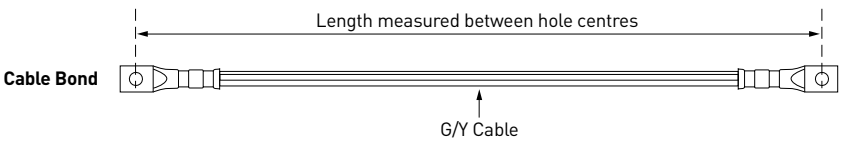
• *Other cable sizes available upon request*

FLEXIBLE CABLES



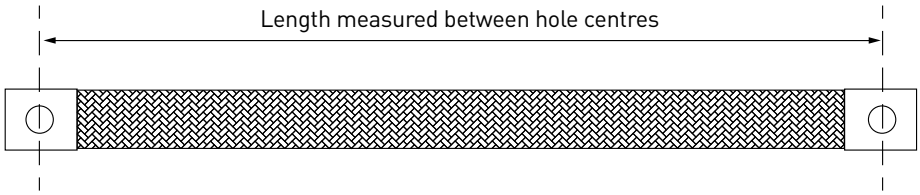
LPI offers an extensive range of cable earth bonds and flexible tinned copper braids for the electrical earthing of cable ladder, conveyors, handrails, metal cladding, water pipes, fences and gates.

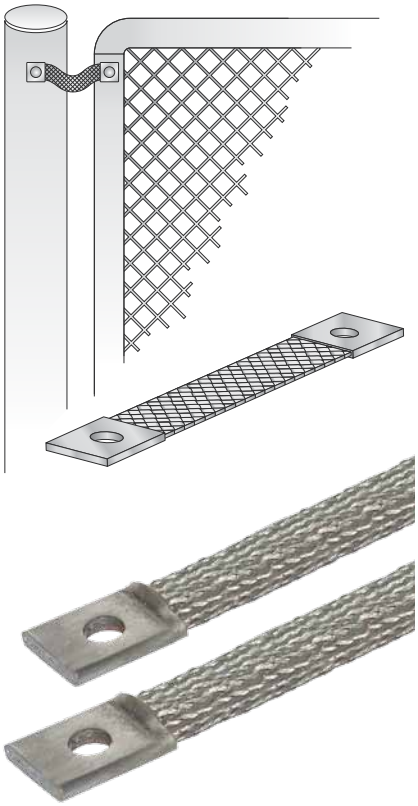
Ordering Information	
LPI Ordering Code:	ESXXX-YY XXX = Cable Length YY = Cable Diameter
All bonding cables supplied with M10 Crimp Lug and M10 stainless steel fasteners.	



FLEXIBLE BRAIDS

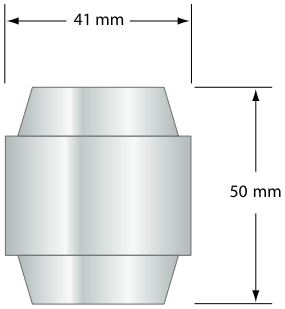
Tinned Copper Flexible Braids					
Length	**Material**	**Weight**	**Hole Size**	**Ordering Code**	**Description**
200 mm	Tinned Copper Braid	90 g	Ø13 mm	FL5TFC200C	Tinned flexible connector, 25 x 3.5, 200 mm long
300 mm	Tinned Copper Braid	120 g	Ø13 mm	FL5TFC300C	Tinned flexible connector, 25 x 3.5, 300 mm long
400 mm	Tinned Copper Braid	150 g	Ø13 mm	FL5TFC400C	Tinned flexible connector, 25 x 3.5, 400 mm long





INSULATORS

Insulator				
Length (mm)	**Diameter (mm)**	**Thread Size**	**Weight Kg**	**Ordering Code**
50	41	M10	0.15	IL10
50	41	M12	0.15	IL12



EARTH ENHANCING COMPOUNDS

Due to varying soil conditions from one site to the next the installation of earthing conductors alone are typically insufficient in achieving a low resistance earth.

The application of earth enhancing compounds around the conductors in an earthing system aids significantly in achieving the desired low level resistivity levels required for an effective earthing system.

LPI RESLO-20

LPI RESLO-20 is a low resistance, non corrosive earth enhancing compound which is supplied in easy to handle 20 kg bags.

Recommended Bags of RESLO-20 required for backfilling typical trench installation		
Width of Trench (mm)	**Length of Trench - 5 m**	**Length of Trench - 10 m**
300	1	2

Recommended Bags of RESLO-20 required for backfilling Earth Rod installation			
Diameter of Hole (mm)	**Depth of Hole - 1800 mm**	**Depth of Hole - 2400 mm**	**Depth of Hole - 3000 mm**
75	1	1	1
125	1	1	2
175	2	2	3

GRIP

LPI GRIP (Ground Resistance Improvement Powder) is a premium product designed to dramatically reduce soil resistivity in the poorest soil conditions.

When GRIP is mixed with water and poured onto the earthing system and surrounding soil the powder and water react to form a gelatinous mass which will not reduce, contract or separate from the surrounding earthing system.

Recommended 10 kg Kits of GRIP required for backfilling typical trench installation		
Width of Trench (mm)	**Length of Trench - 30 m in Good Soil Conditions**	**Length of Trench - 30 m in Poor Soil Conditions**
300	1	4

Recommended 10 kg Kits of GRIP required for backfilling Earth Rod installation			
Diameter of Hole (mm)	**Depth of Hole - 1800 mm**	**Depth of Hole - 2400 mm**	**Depth of Hole - 3000 mm**
75	1	1	1
125	1	1	2
175	2	3	3

Benefits:

- Significantly reduces earth resistance
- Long lasting treatment with no maintenance required
- Effective under varying soil conditions
- Minimal seasonal changes in resistance values
- Easy to handle and install
- Does not adversely affect soil

- Ordering Code – RESLO-20
- RESLO-20 solidifies and dries and does not wash away
- Effective under varying soil conditions
- No maintenance required
- Independently tested by Australian University
- Significantly reduces earth resistance

- Ordering Code – GRIP-10 and GRIP-40
- Premium enhancing compound specifically designed for use in difficult sites which contain excessive sand or rocky ground
- Available in 10 kg or 40 kg kits
- Does not wash away
- Hydroscopic by nature
- Not affected by seasonal rains or floods
- Non corrosive
- Safe and easy to handle

EARTH ENHANCING COMPOUNDS

SRIM-20

LPI SRIM is a carbon based earth enhancing compound which is supplied in 20 kg bags. Designed for use in all soil conditions SRIM offers an economical solution to improve and maintain the integrity of any earthing system.

Recommended Bags of SRIM required for backfilling typical trench installation		
Width of Trench (mm)	**Length of Trench - 5 m**	**Length of Trench - 10 m**
300	1	2

Recommended Bags of SRIM required for backfilling Earth Rod installation			
Diameter of Hole (mm)	**Depth of Hole - 1800 mm**	**Depth of Hole - 2400 mm**	**Depth of Hole - 3000 mm**
75	1	1	1
125	1	1	2
175	2	2	3

- Ordering Code – SRIM-20
- Carbon based earth enhancing compound
- Supplied in 20 kg bag
- Effective in all soil conditions
- Very low resistivity
- Non corrosive
- No maintenance required

EARTH PITS

Earth pits provide a secure and user friendly access point for maintenance purposes and the periodic measuring of electrical resistance of a buried earthing system.

In order to complete routine measurements of electrical resistance simply remove the lid from the installed earth pit and connect a lead from the resistance meter to the earthing conductor.

LPI® Polymer Earth Pit

LPI® polymer earth pit provides the user with a light weight pit which offers a high weight carrying capacity.

Polymer Earth Pit	
Ordering Code	**EPIT-P**
Description:	Polymer Earth Pit
Material:	Polymer
Dimension:	250 mm (top) x 180 mm (base) x 210 mm (deep)
Weight:	1.9 kg
Strength:	Withstand up to 5 tonnes

CONDUCTORS

Bare Tape				
Conductor Size (mm)	Weight per metre	Material	Standard Coil Size (metres)	Ordering Code
25 x 3	0.67 kg	Copper	50	FL6T253C
25 x 3	0.67 kg	Tinned Copper	50	FL6T253TC
25 x 3	0.63 kg	Stainless Steel 316	4m length	FL6T253SS4
25 x 3	0.17 kg	Aluminium	50	FL6T253A

• *Alternative sizes are available upon request.*

COMPRESSION CLAMPS

Copper C Connectors

The LPI C connector range are manufactured from high purity copper profiles. The C connectors are specifically designed for applications requiring corrosion resistant and high current jointing or tapping of buried copper earth grids. C connectors are designed to allow for cable connections to be formed without the need to cut the main cable.

C Connectors		
Ordering Code	Conductor Range	
	Run	Tap
SACC 35-35	10-35 mm^2	10-35 mm^2
SACC 70-35	35-70 mm^2	10-35 mm^2
SACC 70-70	35-70 mm^2	35-70 mm^2
SACC 120-120	95-120 mm^2	95-120 mm^2
SACC 150-70	95-150 mm^2	0-70 mm^2

• *Contact LPI for appropriate crimp dies*

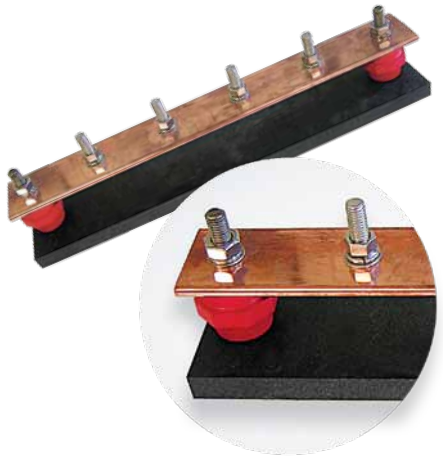
EARTH BARS & DISCONNECT LINKS

LPI offers a wide selection of earth bars and disconnect links which provide a single point earthing and bonding location. All earth bars and disconnect links are supplied with a plastic "non-corrosive" base suitable for exposed installation.

Earth Bars and Disconnect Links

Correct bonding is essential to create an equipotential earth plane between service earths and equipment under fault or transient conditions. The equipotential plane ensures that voltage differentials are not created between earths under fault conditions and ensures the safety of all personnel and equipment.

Base and Overall Dimensions					
Description	Overall Length mm	Width mm	Height mm	Weight kg	Ordering Code
6 Way	400	80	98	2.10	EB400
8 Way	500	80	98	2.60	EB500
10 Way	600	80	98	3.20	EB600
12 Way	700	80	98	3.70	EB700
14 Way	800	80	98	4.20	EB800
16 Way	900	80	98	4.70	EB900
18 Way	1000	80	98	5.20	EB1000
20 Way	1100	80	98	5.80	EB1100



Earth Bars with Single Disconnect Link

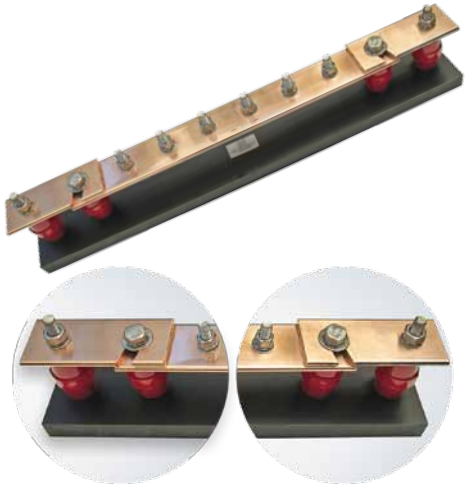
The LPI® earth bar with single disconnect link provides the user with the ability to establish a temporary break in the connection to earth, allowing for inspection and testing of the earthing system.

Base and Overall Dimensions					
Description	Overall Length mm	Width mm	Height mm	Weight kg	Ordering Code
Single	125	80	98	0.60	DL-1251
6 Way	475	80	98	2.80	DL-4751
8 Way	575	80	98	3.40	DL-5751
10 Way	675	80	98	4.00	DL-6751
12 Way	775	80	98	4.60	DL-7751
14 Way	875	80	98	5.20	DL-8751
16 Way	975	80	98	5.70	DL-9751
18 Way	1075	80	98	6.30	DL-10751
20 Way	1175	80	98	6.90	DL-11751

Earth Bars with Twin Disconnect Link

The LPI® earth bar with twin disconnect link provides the user with the ability to establish a temporary break in the connection to earth, allowing for inspection and testing of the earthing system.

Base and Overall Dimensions					
Description	Overall Length mm	Width mm	Height mm	Weight kg	Ordering Code
6 Way	550	80	98	3.30	DL-5502
8 Way	650	80	98	3.90	DL-6502
10 Way	750	80	98	4.50	DL-7502
12 Way	850	80	98	5.10	DL-8502
14 Way	950	80	98	5.70	DL-9502
16 Way	1050	80	98	6.30	DL-10502
18 Way	1150	80	98	6.90	DL-11502
20 Way	1250	80	98	7.50	DL-12502



CONVENTIONAL LIGHTNING PROTECTION

Key Benefits

- Compliance to International Standards such as IEC 62305, British Standard BS EN 62305 and Australian / New Zealand Standard AS/NZ 1768-2007.
- Wide range of air terminals, bases, conductors, connectors and fasteners in copper and aluminium.
- Precision manufacturing allows for easy assembly and installation.

Product Description

The principle components of LPI's flat tape conventional lightning protection system include:

Air Termination Network – The primary function of an air terminal or air termination network, is to capture the lightning strike to a preferred point, so as to ensure that the discharge current can be safely directed via the downconductors to the dedicated earthing system.

Downconductors – The purpose of a downconductor is to provide a low impedance path from the air termination to the earthing system so that the lightning current can be safely conducted to earth without the development of excessively large voltages. Downconductor routes should be as direct as possible to earth, avoiding sharp bends or turns so as to minimize the risk of sideflashing where impedance / inductance is increased under impulse conditions.

Earthing System – Each downconductor must have a separate earthing system with provision made for the disconnection of each downconductor from the earthing system for testing purposes. In accordance with International standards the resistance to earth of the lightning protection system measured at any point, should be less than 10 ohms. It is recommended that all individual lightning earths be bonded together to minimize earth voltage potential rise, in turn all lightning earths should be bonded to surrounding facility earths.

Bonding to avoid Sideflashing - It is recommended that all metal work including handrails, metal cladding, metal roofs, water pipes, gas pipes, air conditioning units be bonded to the lightning protection system.

Design Concept

The Rolling Sphere Method exists as the most common design method adopted by lightning protection standards throughout the world. The Rolling Sphere method is based on the electrogeometric model which links the "striking distance" to the peak current delivered by a lightning strike. When designing using the rolling sphere method, an imaginary sphere of typically 45 metres is rolled over the structure to be protected. All points of the structure that make contact with the sphere are nominated as points on the structure that require protection, all unaffected areas of the structure are considered protected.

CONVENTIONAL AIR TERMINALS

FL1 Series - Air Terminals

Length	Nominal Diameter	Tip	Material	Conductivity	Weight Kg	Thread	Product Code	Description
1 m	14 mm	Pointed	OC-ETP Copper	99.98 % IACS	1.37	M16	FL1ATP1016C	Air Terminal, Pointed, 1 m x 14 mm Copper
2 m	14 mm	Pointed	OC-ETP Copper	99.98 % IACS	2.74	M16	FL1ATP2016C	Air Terminal, Pointed, 2 m x 14 mm Copper
1 m	15 mm	Pointed	A96061 Aluminium		0.42	M16	FL1ATP1016A	Air Terminal, Pointed, 1 m x 15 mm Aluminium
2 m	15 mm	Pointed	A96061 Aluminium		0.84	M16	FL1ATP2016A	Air Terminal, Pointed, 2 m x 15 mm Aluminium
1 m	14 mm	Blunt	OC-ETP Copper	99.98 % IACS	1.37	M16	FL1ATB1016C	Air Terminal, Blunt, 1 m x 14 mm Copper
2 m	14 mm	Blunt	OC-ETP Copper	99.98 % IACS	2.74	M16	FL1ATB2016C	Air Terminal, Blunt, 2 m x 14 mm Copper
1 m	15 mm	Blunt	A96061 Aluminium		0.42	M16	FL1ATB1016A	Air Terminal, Blunt, 1 m x 15 mm Aluminium
2 m	15 mm	Blunt	A96061 Aluminium		0.84	M16	FL1ATB2016A	Air Terminal, Blunt, 2 m x 15 mm Aluminium

CONVENTIONAL AIR TERMINAL BASES

FL2 Series - Air Terminal Bases						
Suits		**Material**	**Weight**	**Box Qty**	**Product Code**	**Description**
M16 Air Terminal	Tape 25 x 3 mm	UNS-C38000 (high strength copper alloy)	290 g	10	FL2ATB16C	Air Terminal Base M16 Copper
M16 Air Terminal	Tape 25 x 3 mm	UNS-A13600 (high strength aluminium alloy)	90 g	10	FL2ATB16A	Air Terminal Base M16 Aluminium
M16 Air Terminal	Tape 25 x 3 mm	UNS-C38000 (high strength copper alloy)	370 g	10 (5 pairs)	FL2FMS16C	Air Terminal Base with Vertical Adaptor, M16 Copper
M16 Air Terminal	Tape 25 x 3 mm	UNS-A13600 (high strength aluminium alloy)	120 g	10 (5 pairs)	FL2FMS16A	Air Terminal Base with Vertical Adaptor, M16 Aluminium

Each product comes with:
- *316 Stainless steel fasteners*
- *4 fixing holes suit M6 or 14 gauge fastener (not included)*

DOWNCONDUCTOR FIXINGS & CONNECTIONS

FL3 Series - Down Conductor Fixings					
Suits	**Material**	**Weight**	**Box Qty**	**Product Code**	**Description**
Tape 25 x 3 mm	UNS-C38000 (high strength copper alloy)	43 g	50	FL3DCTC253C	Tape Clamp, Copper
Tape 25 x 3 mm	UNS-A13600 (high strength aluminium alloy)	14 g	50	FL3DCTC253A	Tape Clamp, Aluminium
Tape 25 x 3 mm	Plastic - Brown	10 g	50	FL3PTCB253	Tape Clip, Brown Plastic
Tape 25 x 3 mm	Plastic - Grey	10 g	50	FL3PTCG253	Tape Clip, Grey Plastic

Each product comes with fixing hole to suit M6 or 14 gauge fastener (not included) FL3DCTC products come with 316 stainless steel fasteners

DOWNCONDUCTOR FIXINGS & CONNECTIONS

FL4 Series - Down Conductor Connectors					
Suits	**Material**	**Weight**	**Box Qty**	**Product Code**	**Description**
Tape 25 x 3 mm	UNS-C38000 (high strength copper alloy)	43 g	10	FL4STC253C	Square Tape Clamp, Copper
Tape 25 x 3 mm	UNS-A13600 (high strength aluminium alloy)	14 g	10	FL4STC253A	Square Tape Clamp, Aluminium
Tape 25 x 3 mm	UNS-C38000 (high strength copper alloy)	10 g	5	FL4OTC253C	Oblong Test Clamp, Copper
Tape 25 x 3 mm	UNS-A13600 (high strength aluminium alloy)	10 g	5	FL4OTC253A	Oblong Test Clamp, Aluminium

FL4STC products come with:
- 316 stainless steel fasteners
- Fixing hole to suit M6 or 14 gauge fastener (not included)

FL5 SERIES - OTHER ACCESSORIES

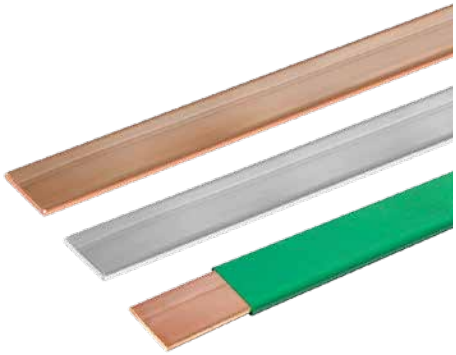
Bi-Metallic Connector						
Suits	**Fasteners**	**Material**	**Weight**	**Box Qty**	**Product Code**	**Description**
Tape 25 x 3 mm (Cu/Al)	2 x M10 316 SS	Copper / Aluminium	220 g	5	FL5BMC253	Bi-metallic Connector

Tinned Copper Flexible Connector					
Length	**Material**	**Weight**	**Hole Size**	**Product Code**	**Description**
200 mm	Tinned Copper Braid	90 g	Ø13 mm	FL5TFC200C	Tinned flexible connector, 25 x 3.5, 200 mm long
300 mm	Tinned Copper Braid	120 g	Ø13 mm	FL5TFC300C	Tinned flexible connector, 25 x 3.5, 300 mm long
400 mm	Tinned Copper Braid	150 g	Ø13 mm	FL5TFC400C	Tinned flexible connector, 25 x 3.5, 400 mm long

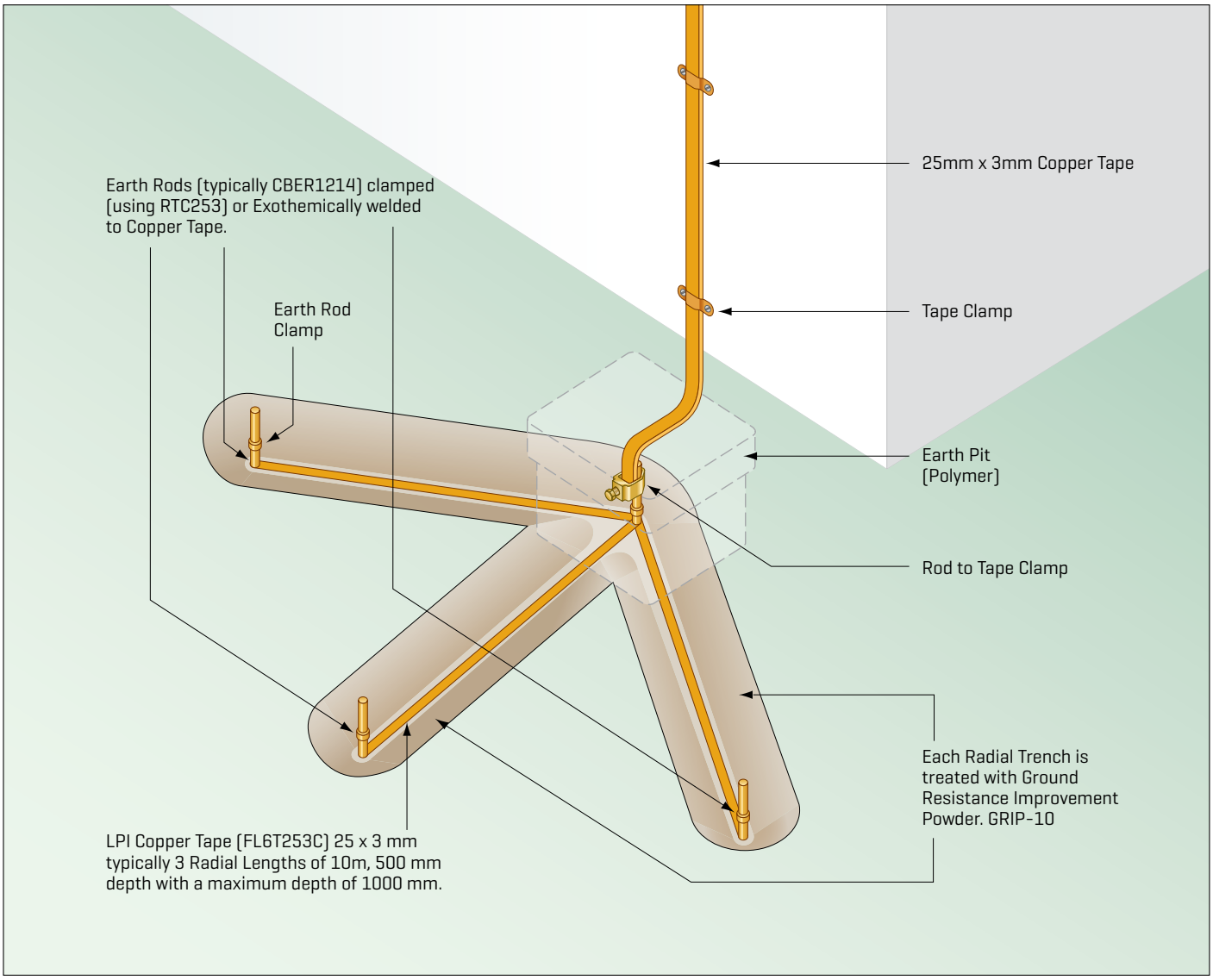
FL6 SERIES - DOWNCONDUCTORS

Conductors				
Conductor Size (mm)	**Weight per metre**	**Material**	**Standard Coil Size (metres)**	**Ordering Code**
25 x 3	0.67	Copper	50	FL6T253C
25 x 3	0.67	Tinned Copper	50	FL6T253TC
25 x 3	0.63	Stainless Steel 316	4 m length	FL6T253SS4
25 x 3	0.17	Aluminium	50	FL6T253A
25 x 3	0.70	Copper PVC Coated	25	FL6T253CPVC

• *Alternative sizes are available upon request.*



Recommended Lightning Earthing Arrangement



EARLY STREAMER EMISSION AIR TERMINALS

LPI® Stormaster ESE

Key Benefits

- Complies to standard NF C 17-102 (2011)
- Tested in high voltage laboratory
- Easy to install
- Cost effective

Product Description

The LPI Stormaster ESE range of terminals provides a safe and efficient system for the protection of your facility from direct lightning strikes. The LPI Stormaster ESE terminal captures the lightning energy at a preferred point. The energy is conveyed to ground via a downconductor(s). When the energy enters the dedicated lightning earth, it is safely dissipated without risk to personnel and equipment.

The Stormaster ESE range of terminals have been fully tested in accordance with NF C 17-102 (2011) in a high voltage laboratory.

Stormaster ESE Principles

The Stormaster Early Streamer Emission air terminal uses the naturally occurring electrical field to complete the timely release of an upward leader. This process provides for a safe and efficient method of controlling dangerous lightning energy at a preferred point.

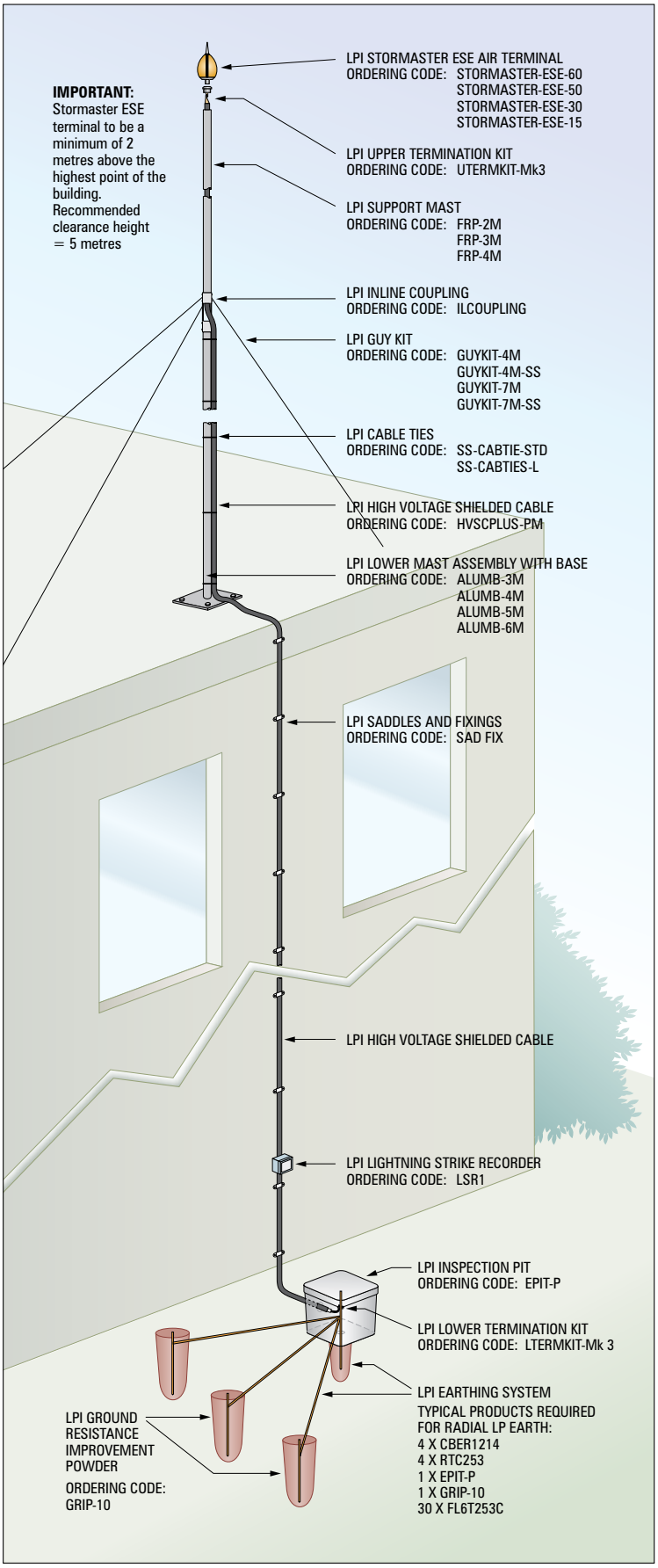
As a thunder storm gathers overhead the ambient electrical field surrounding the Stormaster ESE begins to rise in voltage. Upon the approach of a down leader towards the protected area there is a rapid increase in the electric field which initiates the triggering of an upward streamer from the Stormaster ESE terminal. The concept of earlier streamer emission allows for a larger or enhanced area of protection to be provided by the Stormaster ESE in comparison to a conventional rod.

With the release of the upward streamer from the finial tip earlier than other competing structural points, the Stormaster ESE terminal becomes a preferred point for the capture of the lightning discharge within the protected area.

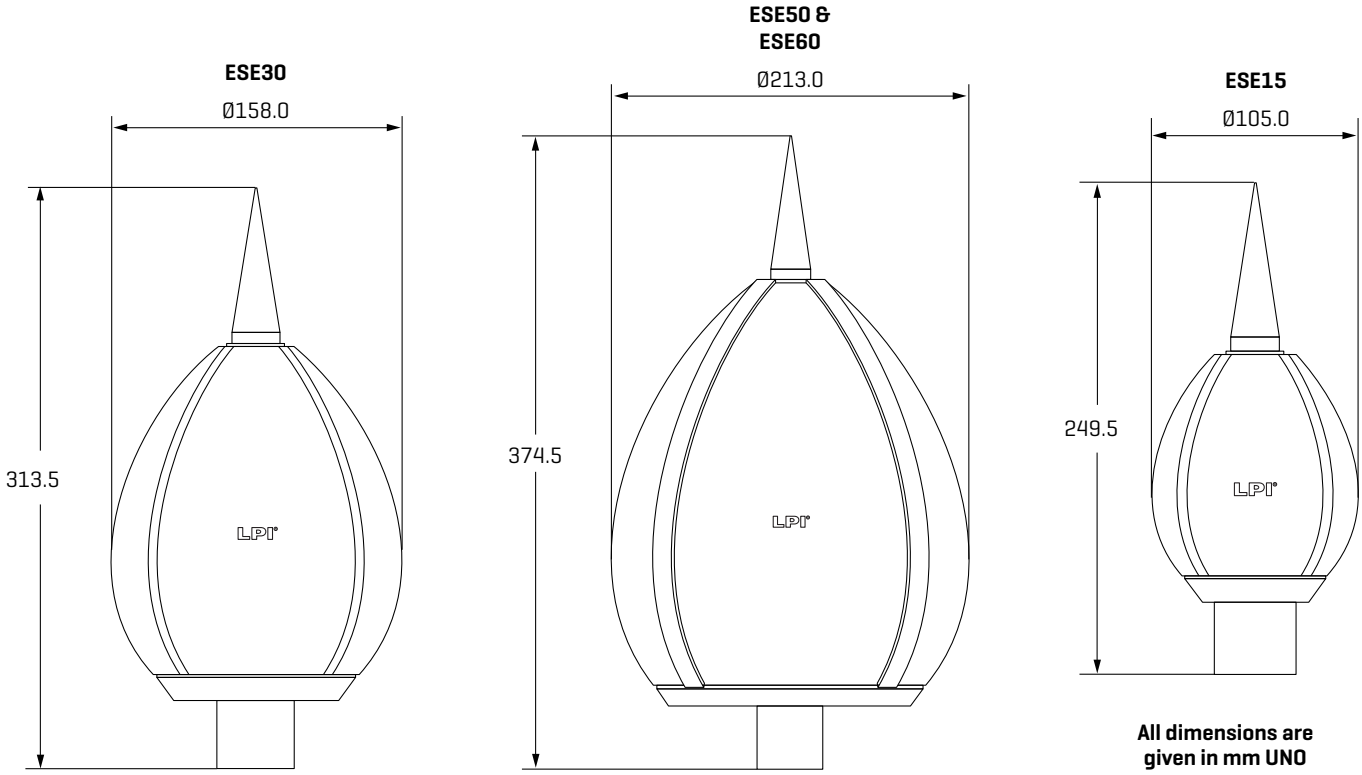
Certified Performance

As one of the leading companies in the field of lightning protection, LPI has invested heavily in field and laboratory testing as part of its on-going commitment to research and development.

Throughout the product development of the Stormaster ESE terminals the proto-type models were subjected to intense testing under high voltage conditions. Following further refinements the Stormaster terminals were subjected to final testing by an independently accredited test laboratory which completed testing in full compliance with the French National Standard NF C 17-102 (2011). The final testing on the Stormaster ESE terminals showed effective performance as defined in the French National Standard.



LPI® STORMASTER ESE TERMINALS



All dimensions are given in mm UNO

LPI® Stormaster ESE Air Terminal				
Ordering Code	**Material**	**Weight (KG)**	**Colour**	**Insulation Material**
STORMASTER-ESE-15	Anodized aluminium	0.713	Gold	UV rated evoprene
STORMASTER-ESE-30	Anodized aluminium	0.963	Gold	UV rated evoprene
STORMASTER-ESE-50	Anodized aluminium	1.67	Gold	UV rated evoprene
STORMASTER-ESE-60	Anodized aluminium	1.67	Gold	UV rated evoprene

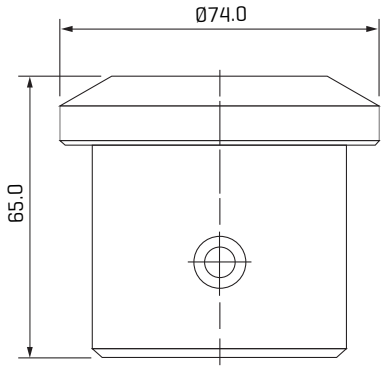
LPI® Stormaster ESE Air Terminal				
Ordering Code	**Material**	**Weight (KG)**	**Colour**	**Insulation Material**
STORMASTER-ESE-15-SS	Stainless steel	0.921	Silver	UV rated evoprene
STORMASTER-ESE-30-SS	Stainless steel	1.45	Silver	UV rated evoprene
STORMASTER-ESE-50-SS	Stainless steel	2.58	Silver	UV rated evoprene
STORMASTER-ESE-60-SS	Stainless steel	2.58	Silver	UV rated evoprene

* For connection to 2" GI Pipe add "GI" to end of Ordering Code
(See page 20 for more detail)

LPI® Stormaster ESE Terminals

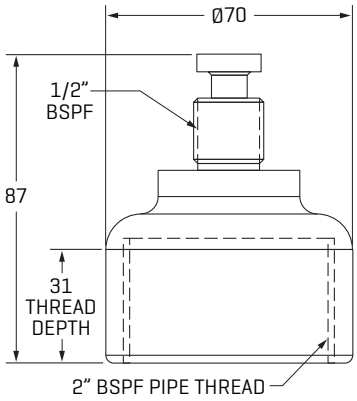
Standard Adaptor

- For use with FRP mast & HVSC Plus downconductor
- Lug Connection to HVSC Plus completed with upper termination



GI Adaptor

- Threaded GI adaptor
- Female thread 2 inch BSP for connection to GI pipe



LPI® Stormaster ESE Tester

- Spark-over tester designed for testing the Stormaster ESE range of terminals
- Portable tester
- Visual identification of terminal operation
- Rechargeable batteries

LPI® Stormaster ESE Tester	
Ordering Code	**STORMASTER-ESE-TESTER**
Description:	LPI® Stormaster terminal tester
Construction:	Aluminium enclosure
Charger operating voltage:	100 – 240 V
Batteries:	4 x 1.2 V rechargeable NiCad batteries
Dimension:	295 mm x 70 mm x 70 mm
Weight:	2.5 kg

LPI® Upper Termination Kit

LPI® Upper termination kit is designed for use with the LPI HVSC Plus downconductor. The upper termination kit provides all accessories for the high voltage termination of the HVSC Plus downconductor to the Stormaster ESE terminal.

LPI® Upper Termination Kit	
Ordering Code	**UTERMKIT-MK3**
Description:	Upper Termination Kit Mark 3
Maximum voltage:	>500 kV 1.2/50 µs impulse
Operating temperatures:	- 20°C to + 85°C
Pack dimensions:	70 mm x 70 mm x 1250 mm
Weight:	1 kg
Contents:	Instruction, Semi-conducting tape, crimp lug, heat shrink tube, insulated friction cutting tool, insulation tape

MOUNTING ACCESSORIES

LPI® FRP Support Mast

LPI® Fibreglass Reinforced Plastic (FRP) mast is an insulated and water resistant mounting pole which is designed to provide the necessary electrical isolation and mounting strength at the position where the high voltage upper termination between the HVSC Plus downconductor and LPI Stormaster terminal is completed.

LPI® FRP Support Mast	
Description	**Fibreglass Reinforced Pole (FRP)**
Colour:	Black
Material :	Fibreglass
Construction type:	Pre-impregnated reinforced epoxy resin laminate (flame retardant)
Resin tensile strength:	70 MPa
Resin tensile modulus:	2.9 GPa
Resin tensile strain:	2.7%
Resin poisson ratio:	0.35

LPI® FRP Support Mast		
Ordering Code	**Weight**	**Dimensions**
FRP-2M	2.7 kg	Length 2000 mm, Outer diameter 68 mm, Inner diameter 60 mm
FRP-3M	4.3 kg	Length 3000 mm, Outer diameter 68 mm, Inner diameter 60 mm
FRP-4M	5.3 kg	Length 4000 mm, Outer diameter 68 mm, Inner diameter 60 mm

LPI® Inline Coupling

LPI® Inline coupling is a purpose-designed coupling which enables clamping of the FRP mast to the aluminium lower mast. The inline coupling provides 3 guy anchoring points and provides an exit point for the HVSC Plus.

LPI® Inline Coupling	
Ordering code	**ILCOUPLING**
Description:	Inline coupling
Material:	Cast aluminium
Dimension:	550 mm x 150 mm x 120 mm
Weight:	2.7 kg
Anchoring points:	3
Max. clamping torque:	55 kg/cm

MOUNTING ACCESSORIES

LPI® Guy Kit

LPI® non-conductive and stainless steel guy kits are provided in variable lengths to suit specific mast and terminal heights. The purpose designed guying kits are designed for anchoring from a guy ring or an inline coupling.

LPI® Guy Kit		
Ordering Code	**GUYKIT-4M**	**GUYKIT-7M**
Description:	Stainless steel fittings and non conductive synthetic guy wire kits	
Material:	DYNEEMA® is an UHMWPE* fibre, non conductive, UV stabilised, moisture resistant, chemical inert	
Application:	Designed to provide additional stabilizing/securing of mast arrangement where deemed necessary	
Diameter:	4 mm	
Tensile yield strength:	560 kg	
Weight:	0.46 kg	0.53 kg

*UHMWPE – Ultra-High Molecular Weight Polythene

LPI® Guy Kit		
Ordering Code	**GUYKIT-4M-SS**	**GUYKIT-7M-SS**
Description:	Stainless steel guy wire kits	
Material:	Stainless steel, grade 316	
Application:	Designed to provide additional stabilizing/securing of mast arrangement from the inline coupling only	
Diameter:	3.2 mm	
Tensile yield strength:	450 kg	
Weight:	0.8 kg	1.2 kg

Stainless steel guy kits are not to be used at top section of mast or with guy ring and should be anchored from the inline coupling.

LPI® Guy Ring

LPI® guy ring provides 3 guy points for mounting between the top section of the FRP mast and the Stormaster ESE terminal.

LPI® Guy Ring	
Ordering Code	**Guy Ring**
Material:	Cast aluminium
Dimension:	110 mm x 110 mm x 10 mm
Weight:	0.12 kg
Guy hole diameter:	10 mm

MOUNTING ACCESSORIES

LPI® Lower Mast Assembly

LPI® uses an aluminium mast as the lower mast assembly due to its high strength and light weight characteristics.

LPI® Lower Mast Assembly	
Description	**Aluminium Mast**
Colour:	Silver
Material:	Aluminium
Inside diameter:	61.9 mm
Outside diameter:	69.9 mm

LPI® Lower Mast Assembly				
Length	**3 Metres**	**4 Metres**	**5 Metres**	**6 Metres**
Weight:	7 kg	9 kg	11.7 kg	14.4 kg
	8 kg (with base)	10 kg (with base)	12.7 kg (with base)	15.4 kg (with base)
No base:	ALUM-3M	ALUM-4M	ALUM-5M	ALUM-6M
With base:	ALUMB-3M	ALUMB-4M	ALUMB-5M	ALUMB-6M
With GI male adaptor:	ALUM3M-MGI	ALUMB4M-MGI	ALUMB5M-MGI	ALUMB6M-MGI

LPI® Stormaster GI terminals suitable for use with locally supplied 2" male threaded GI pipe.

LPI® Cantilevering Saddles

Purpose designed stainless steel saddles for cantilevering the aluminium mast of 69.9 mm outer diameter to flat vertical surface.

LPI® Cantilevering Saddles	
Ordering Code	**CANTSAD**
Description:	70 mm saddles for mounting of aluminium mast (3 per set)
Material:	Stainless steel
Weight:	180 g per saddle, 540 g per set
Dimension:	130 mm (L) x 70 mm (W) x 1.2 mm (D)
Hole fixing diameter:	8 mm

LPI® U-Bolt

LPI® U-Bolt set is specifically designed to allow for the secure clamping of aluminium or FRP mast to tower section or handle rail.

LPI® U-Bolt	
Ordering Code	**U-Bolt**
Description:	U-Bolt, 2 per set
Material:	U-Bolt: stainless steel, Plate: aluminium
Weight:	0.75 kg per U-Bolt, 1.5 kg per set
Dimension:	80 mm diameter, 170 mm length

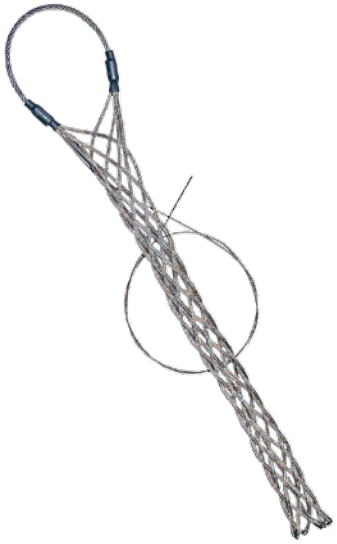
MOUNTING ACCESSORIES

LPI® Mounting Bracket

LPI® Offset brackets are designed for the offset cantilevering of aluminium support masts.

LPI® Mounting Bracket	
Ordering Code	**Mounting Bracket**
Description:	Offset bracket
Colour:	Silver
Material:	Stainless steel, 316
Nominal clamping OD:	70 mm
Weight	1 kg

LPI® Cable Sock



LPI® Cable Sock	
Ordering Code	**Cable Sock**
Description:	Cable sock for HVSC Plus support
Material:	Two-ply galvanised steel wire strand
To grip cable diameter:	28-40 mm
Grip length:	600 mm
Max. pull approx, (kn)	24

LPI® Cable sock is designed for the mounting support of the HVSC Plus downconductor when installing a free standing mast arrangement.

DOWNCONDUCTORS

LPI® High Voltage Shielded Cable

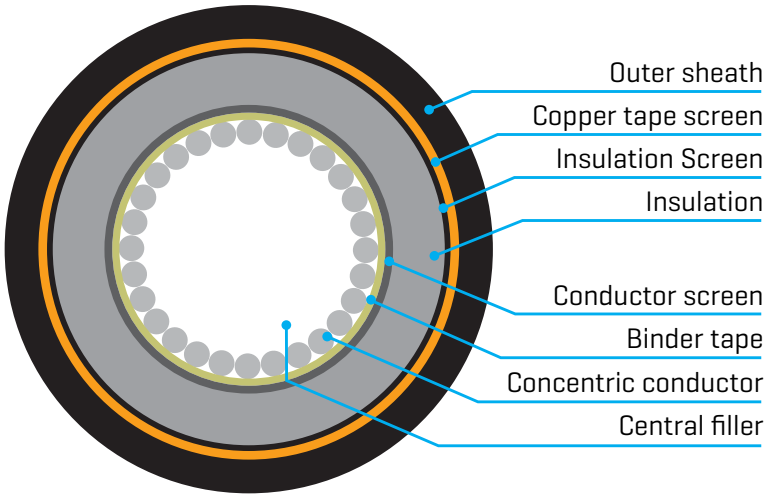
LPI's "High Voltage Shielded Cable" (HVSC Plus) is a purpose-designed, high-integrity, low-impedance cable that is used to safely convey lightning currents to earth with minimal risk of side flashing or structure electrification. The design of the HVSC Plus incorporates carefully selected dielectric components to ensure optimum performance under the impulse or "transient" voltages and currents imposed by lightning discharges.

LPI's new HVSC Plus provides improved features as a dedicated insulated lightning downconductor:

- Double the voltage withstand performance of past versions;
- 35% reduction in the mass per unit length of the cable;
- Improved manufacturing consistency via a continuous "triple extrusion" process;
- Reduced voltage stress via thin, semi-conductive screen layers; and
- Improved material parameters and performance.

The design of the cable is based on the optimisation of all of the key parameters associated with dealing with lightning discharges and the consequent voltage and current transients, including impedance, inductance, capacitance, insulation thickness (withstand voltage) and all of the relevant lightning statistics, plus practical aspects such as size, flexibility and mass.

Withstand Voltage of ≥ 500kV



Product Ordering Code: HVSCPLUS-PM or HVSCPLUS-500

Physical Specifications of HVSC Plus	
Mass per unit length	1.34 kg/m
Construction	Triple extruded
Concentric conductor material	Aluminium
Concentric conductor XSA	≥50 mm^2
Insulation	5 mm (nominal) of XLPE
Metallic screen	Copper tape
Outer sheath	3 mm (nominal) of PVC, UV stabilised
Cable diameter	36 mm
Min. bending radius before installation	430 mm
Min. bending radius after installation	358 mm


MONASH University

Test Report

HVSC Plus has been tested by a certified, independent high voltage laboratory located at Monash University Australia.

This Test Report is available on request to info@lpi.com.au or on our web site www.lpi.com.au

Electrical Specifications of HVSC Plus	
Conductor DC resistance @ 20°C	0.641 /km
Conductor DC resistance @ 90°C	0.821 Ω/km
Insulation resistance @ 20°C	5000 MΩ
Inductance	93 nH/m
Capacitance	285 pF/m
Impedance	18 Ω
Withstand voltage (1.2/50 µs impulse)	≥500 kV

DOWNCONDUCTORS

LPI® Copper Tape

LPI® 25 mm x 3 mm soft drawn copper tape is manufactured using the latest, European developed extrusion technologies. LPI® FL6T253C is a high-quality tape which provides our customers with a guaranteed copper purity of 99.95%. FL6T253C is ideal for use as a conventional means of conveying lightning energy to ground.

LPI® Copper Tape	
Ordering Code	**FL6T253C**
Description:	Copper tape 25 x 3 mm (soft drawn)
Material:	99.95% Copper
Dimension:	25.00 mm (Width) x 3.00 mm (Thickness)
Weight:	0.67 kg per metre
Electrical conductivity:	Minimum 100% I.A.C.S
Standard:	BS1432
Tensile strength:	210 - 250 N/mm²
Package:	Supplied in pancake coil form (50 m per coil)

NFC 17-102 (2011)/EN 50164-2 has a requirement for copper and aluminium downconductors to have a cross-sectional area of 50 mm.

LPI® Aluminium Tape

LPI® Aluminium Tape	
Ordering Code	**FL6T253A**
Description:	Aluminium tape 25 x 3 mm (soft drawn)
Material:	Aluminium
Dimension:	25.00 mm (Width) x 3.00 mm (Thickness)
Weight:	0.2 kg per metre
Electrical conductivity:	>60% I.A.C.S
Package:	Supplied in pancake coil form (50 m per coil)

NFC 17-102 (2011)/EN 50164-2 has a requirement for copper and aluminium downconductors to have a cross-sectional area of 50 mm.

LPI® Stranded Copper Cable

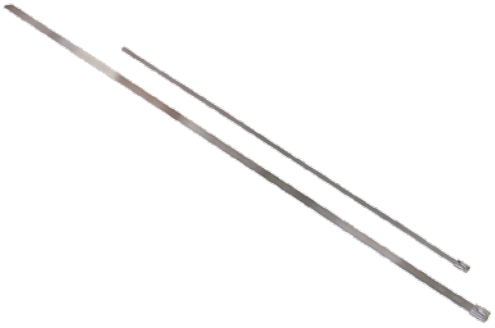
LPI® soft drawn stranded copper cable is ideal for use as a conventional means of conveying lightning energy to ground. The cable is manufactured in compliance to BS6360

LPI® Stranded Copper Cable	
Ordering Code	**SCC70**
Description:	Stranded copper cable 70 mm2
Material:	Copper
Cross section/diameter:	70 mm2/ 2.14 mm Dia
Weight:	0.62 kg per metre
Stranding No.	19

MOUNTING ACCESSORIES

LPI® Cable Ties

LPI® Cable ties are designed for securing the HVSC Plus downconductor to structures and mast assembly.

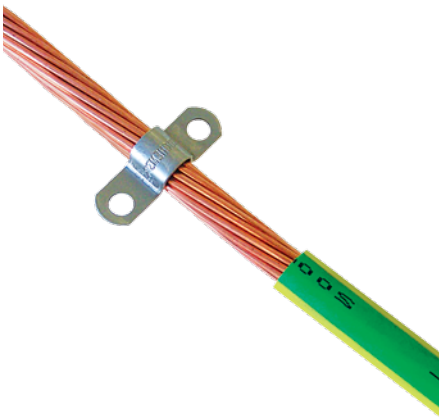


LPI® Cable Ties		
Ordering Code	**SS-CABTIE-STD**	**SS-CABTIES-L**
Description:	Cable ties	
Material:	Stainless steel	
Length:	360 mm	520 mm
Width:	7.9 mm	
Weight	10 g	10 g

LPI® Saddles and Fixings

LPI® SAD FIX are specially designed for securing of HVSC Plus downconductor to structures.

LPI® Saddles and Fixings	
Ordering Code	**SAD FIX**
Description:	Saddles and fixings
Material:	Stainless steel, grade 304
Dimension:	90 mm Length, 1.2 mm thickness
Fixing hole diameter:	7 mm
Weight:	40 g



LPI® Saddles and Fixings	
Ordering Code	**SAD FIX-70**
Description:	Saddles to suit 70 mm2 cable
Material:	Stainless steel, grade 316
Dimension:	44 mm Length, 1 mm thickness
Fixing hole diameter:	7 mm
Weight:	5 g

LPI® D.C Tape Clip

LPI® D.C Tape Clips are designed for the securing of copper or aluminium tape to structures.

LPI® DC Tape Clip		
Ordering Code	**FL3DCTC253C**	**FL3DCTC253A**
Description:	D.C tape clip to suit 25 mm x 3 mm tape	
Material:	High strength copper alloy	High strength aluminium alloy
Conductor size:	25 x 3 mm	
Weight:	43 g	17 g

MOUNTING ACCESSORIES

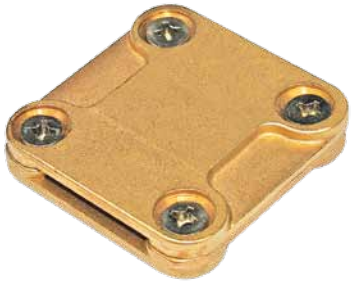
LPI® Plastic Tape Clip

LPI® Plastic tape clips are designed for securing of copper and aluminium tape to structures.

LPI® Plastic Tape Clip		
Ordering Code	**FL3PTCB253**	**FL3PTCG253**
Description:	Plastic tape clip to suit 25 mm x 3 mm tape	
Material:	Plastic	
Conductor size:	25 x 3 mm	
Weight:	10 g	10 g
Colour:	Brown	Grey

LPI® Square Tape Clamp

LPI® Square Tape Clamp		
Ordering Code	**FL4STC253C**	**FL4STC253A**
Description:	Square tape clamp to suit 25 mm x 3 mm tape	
Material:	High strength copper alloy	High strength aluminium alloy
Conductor size:	25 x 3 mm	
Weight:	168 g	78 g



LPI® Square tape clamps are designed to allow for the 2 and 4 way routing of copper and aluminium downconductors.

LPI® Oblong Test Clamp

LPI® Oblong Test Clamp		
Ordering Code	**FL4OTC253C**	**FL4OTC253A**
Description:	Oblong test clamp to suit 25 mm x 3 mm tape	
Material:	High strength copper alloy	High strength aluminium alloy
Conductor size:	25 x 3 mm	
Weight:	126 g	118 g

LPI® Beam Clamp and Cable Support

LPI® Beam Clamp and Cable Support	
Ordering Code	**BEAM CLAMP / CABLE SUPPORT - HVSC**
Description:	Beam clamp and cable support
Material:	Stainless steel, polymer
Dimension:	60 mm x 60 mm x 50 mm
Fixing hole diameter:	38 mm
Weight:	180 g

LPI® Beam clamp and cable support are specifically designed for the securing of the HVSC Plus downconductor to tower legs.

MOUNTING ACCESSORIES

LPI® Lightning Strike Recorder

LPI® Lightning Strike Recorder (LSR1) is a lightning strike counter. The LSR1 is simply mounted at any location along the downconductor route. Its purpose is to record the number of strikes captured and conveyed by the downconductor.

LPI® Lightning Strike Recorder	
Ordering Code	**LSR1**
Description:	Lightning strike recorder
Current sensitivity:	1500 A 8/20 µs impulse
Operating range:	Min. 1500 A and Max. 220 kA 8/20 µs
Display:	Mechanical 7 digits display (not re-settable)
Dimension:	100 mm (B) x 100 mm (H) x 55 mm (D)
Weight:	0.57 kg
Mounting:	Releasable UV resistant plastic cable ties suitable for up to ø40 mm cable or 50 x 5 mm flat tape
Construction:	Polycarbonate enclosure
Colour:	Light grey & blue
Environment:	IP 67 (IEC 529)
Operating temperature:	-15°C to 65°C

LPI® Lightning Strike Recorder Tester

LPI® Lightning strike recorder tester is a high-current injection device designed to trigger a reading on an LPI Lightning Strike Recorder (LSR1).

LPI® Lightning Strike Recorder Tester	
Ordering Code	**LSR1-TESTER MKII**
Description:	Lightning strike recorder tester
Impulse output:	2 kA peak simulated lightning impulse
Open circuit output:	55 Volts
Time between impulses:	20 seconds
Display:	Red "Testing" LED indicator
Dimensions:	190 mm (L) x 100 mm (W) x 35 mm (H)
Mounting:	Portable unit, no mounting required
Construction:	Polycarbonate Enclosure, IP 30 rating
Colour:	Light grey
Weight:	0.58 kg
Working temperature:	-15°C to 65°C
Batteries:	8 x AA 2000 mAh NiMH rechargeable Recharge time up to 16 hours

MOUNTING ACCESSORIES

LPI® Lower Termination Kit

LPI® Lower termination kit provides accessories and tools for the termination of the HVSC Plus lower end to the dedicated lightning earth.

LPI® Lower Termination Kit	
Ordering Code	**LTERMKIT-MK3**
Description:	Lower termination kit
Pack Dimensions:	270 mm (B) x 100 mm (H) x 40 mm (D)
Weight:	515 g
Contents:	1 x 95 mm crimp lug 1 x waterproofing tape 1 x earth rod clamp 2 x warning labels 1 x insulation friction cutting tool

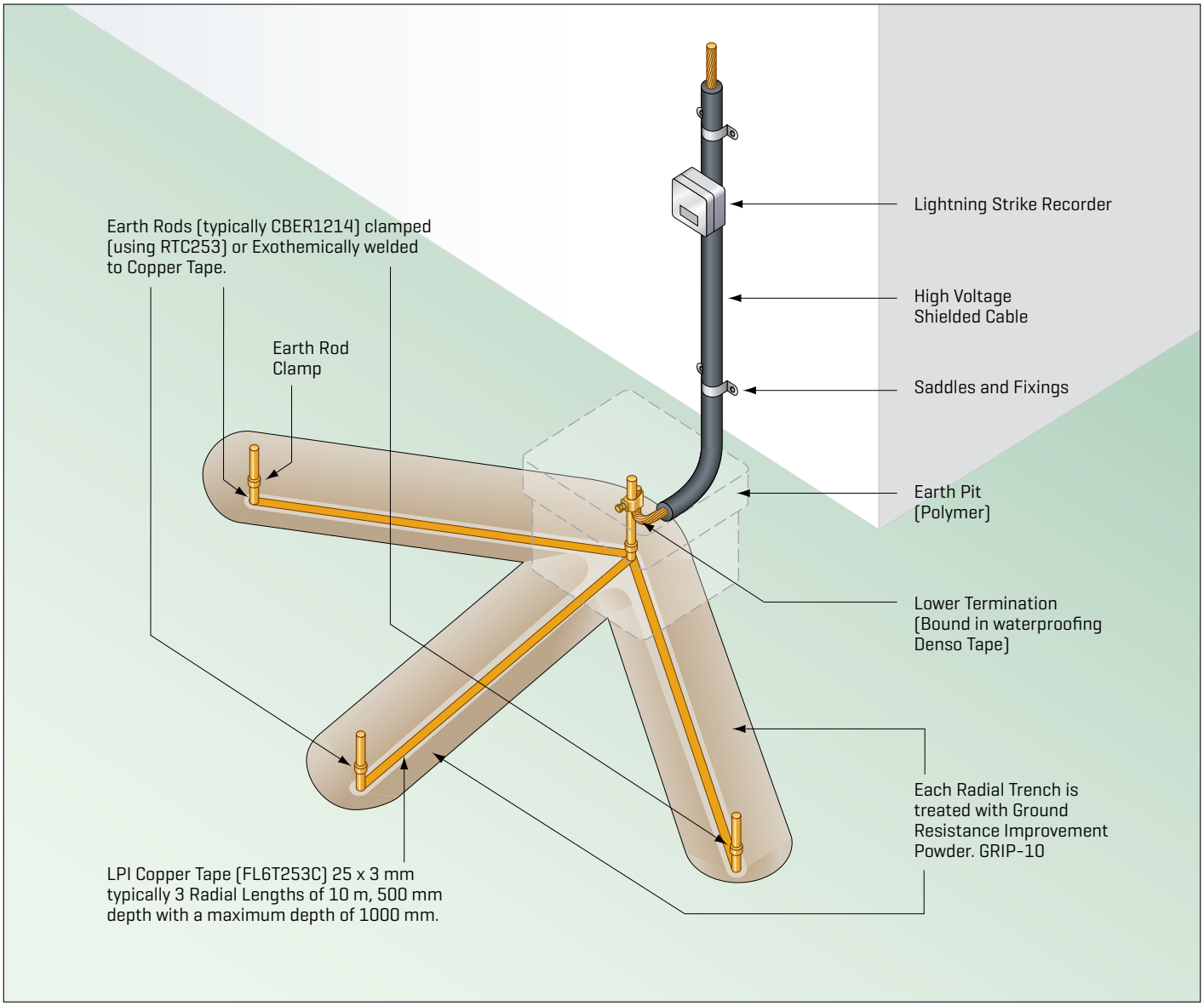
Suitable for use with conventional downcoductors as required.

LPI® Denso Tape

Denso Tape is used to waterproof earthing installations and prevent corrosion.

LPI® Denso Tape		
Ordering Code	**DENSO-25mm**	**DENSO-50mm**
Description:	Waterproofing tape	Waterproofing tape
Material:	Synthetic fabric, impregnated and coated with a neutral petrolatum compound	
Pack:	25 mm x 10m	50 mm x 10m
Weight:	400 g	800 g

LIGHTNING EARTHING INSTALLATION

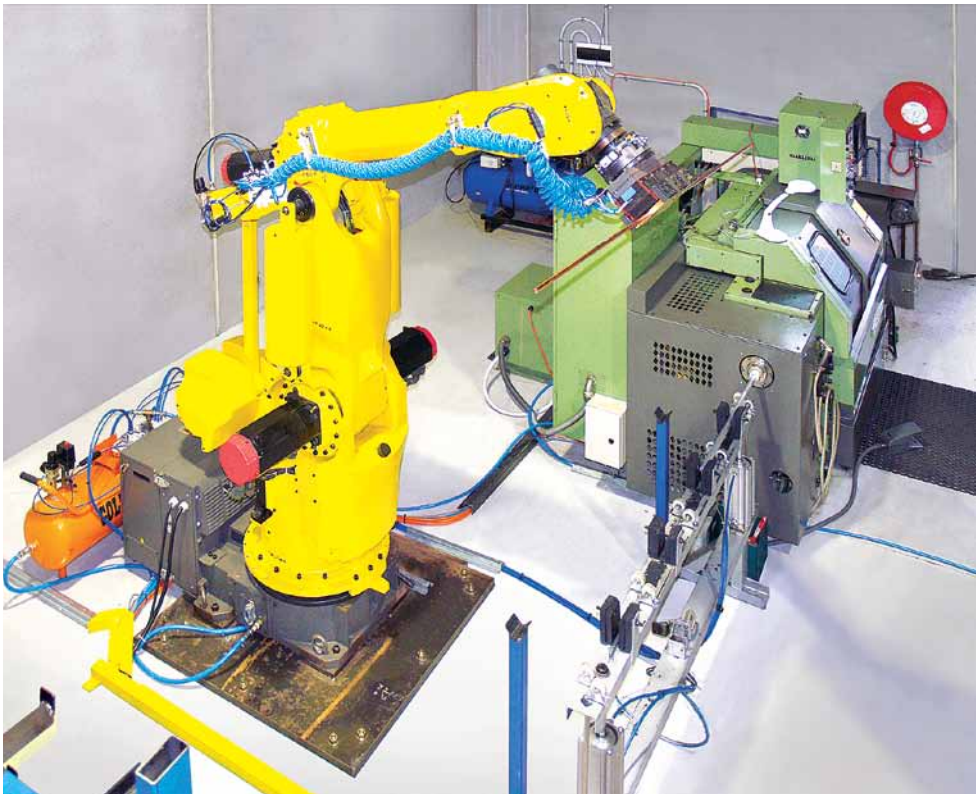


Manufacturing Capabilities and Certification

LPI products are manufactured to the highest standard through modern manufacturing processes to a certified management system that complies with the requirements of AS/NZ ISO 9001:2008.

The scope of certification encompasses the design, manufacture, assembly, sales, installation and commissioning of lightning and surge protection equipment and earthing materials.

bsi. ISO 9001 Quality Management



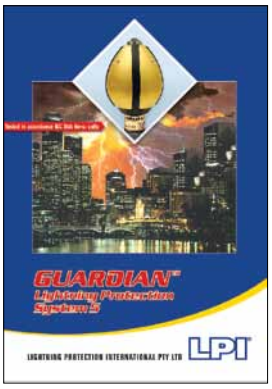
LPI Consultancy Services

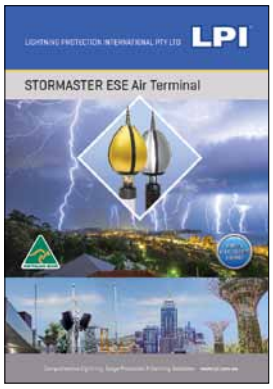
For many decades, the principals and senior management of LPI have been providing specialist lightning protection advice to customers in some of the most lightning prone areas of the world.

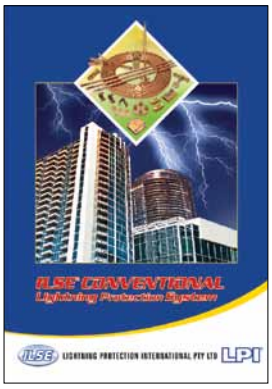
Using LPI's 4 Step Approach to Lightning Protection, our engineers work together with clients and contractors to conduct site surveys, risk assessments and system designs with recommended improvements required to minimise risks presented by lightning.

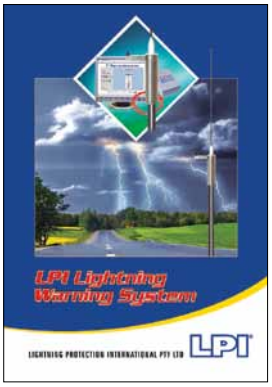
Notes:

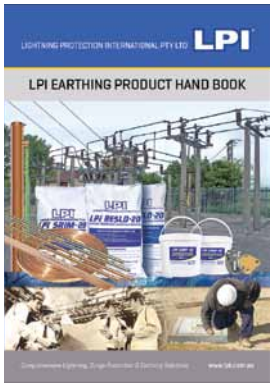
Together with the products and systems shown in this catalogue, LPI also has available a number of publications and CD-ROM covering their entire range of Lightning Protection and Surge and Transient Protection products and systems. If you would like further information on any of these products, please contact Lightning Protection International Pty Ltd or your nearest LPI Distributor, or visit: **www.lpi.com.au**

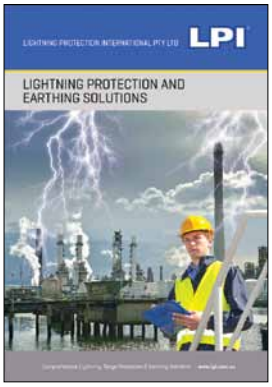


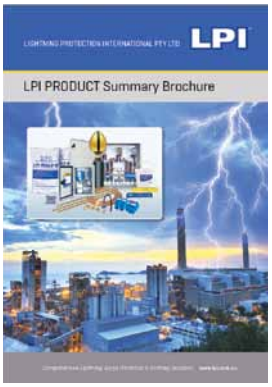


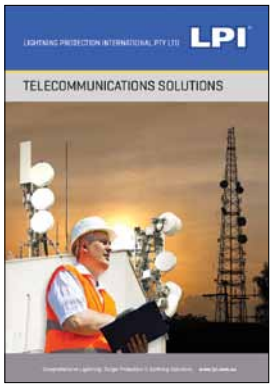


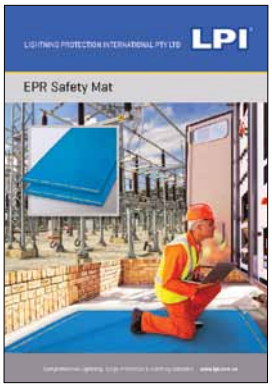












Disclaimer

- LPI maintains a policy of on-going product development
- Specifications are subject to change without notice
- Application detail, illustrations and schematic drawings are representative only and should be used as guides
- It should be noted that 100% (100 percent) protection for direct strike lightning, lightning detection and surge and transient protection equipment is not possible and cannot be provided due to the lightning discharge process being a natural atmospheric event

LPI Offices LPI Customers

LPI proudly services customers from the following countries:

- Afghanistan
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- Bahrain
- Bangladesh
- Bhutan
- Brunei
- Burundi
- Cambodia
- Chile
- China (PRC)
- Colombia
- Dominican Republic
- Ecuador
- El Salvador
- Fiji
- Gabon
- Guatemala
- Haiti
- Hong Kong
- India
- Indonesia
- Iran
- Iraq
- Japan
- Jordan
- Kenya
- Kuwait
- Laos
- Macau
- Madagascar
- Malaysia
- Maldives
- Mauritius
- Mexico
- Myanmar
- Nepal
- New Zealand
- Nicaragua
- Nigeria
- Oman
- Papua New Guinea
- Peru
- Philippines
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- Rwanda
- Samoa
- Saudi Arabia
- Seychelles
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- South Korea
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- Taiwan
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