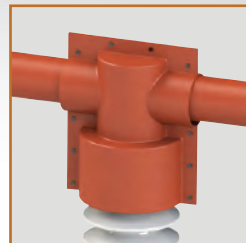
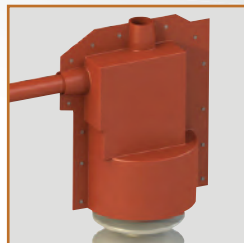
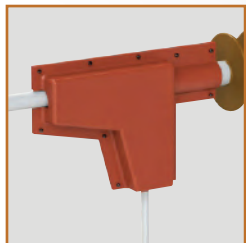


INSULATION ENHANCEMENT PRODUCTS



Gala Insulation Enhancement Products such as Heat Shrinkable Tubes, Tapes, Sheets, Pre-moulded Protection Covers, etc. provide a long term, cost effective and easy to install retrofit solution to eliminate power outages caused by bird and animals.

Electrical Distribution equipment with bare bus bars, conductors and connections is always at risk to having phases or phase to ground accidentally bridged. As well as the obvious problems caused to the network, such events can also endanger protected wildlife. Birds and animals often enter substations and interfere with overhead lines causing faults by bridging air clearances.

Substation equipment is vulnerable to flashovers caused by accidental bridging of phases, or phase to earth. Usually made by birds, animals, vegetation or airborne debris, flashovers can be very expensive in terms of damage to equipment, reduced reliability and in some cases even electrocution of protected species. Almost any event of this nature can be prevented by insulating the strategically vulnerable bare metalwork with a combination of Gala Insulation Enhancement Products.

Gala Insulation Enhancement Products (IEP) are the combination of Heat Shrinkable Tubes, Tapes, Sheets & Preformed components which are having the following Features & Benefits:

High Die-electric strength

Meets ANSI C37.20.2 standards

Highly resistant to UV rays and Ozone

High insulation factors

Extreme temperature resistance

Prevent conductor from Chemical Corrosion effected by strong acid, alkali, salt, etc.

Suitable for any shapes or connections

Cost effective and easy to use

Many standard sizes available in stock

Design assistance and CAD drawings

In-house tooling and die shop

Custom design possible as per specifications



Substation without IEP Products



Substation installed with IEP Products



Substation installed with IEP Products



Substation installed with IEP Products

Overhead Line Cover:



Insulcover is a Wrap Around Line Cover that provides retrofit insulation for Overhead Conductors to help prevent electrical outages caused by trees or wildlife coming into the contact with distribution lines. It is manufactured from high quality Non-tracking Cross-linked Polyolefin material. Gala Overhead Line Covers can be used in many applications upto 66 kV.

Insulcover is designed to insulate existing bare lines without costly conductor replacement expenditure or additional line hardware.

Installation is easy by using the Split Insulation Tube Tool which remains stationary at single location.

Features & Benefits :

- ❖ High Di-electric strength
- ❖ Excellent UV stabilized & Weather resistant
- ❖ Tracking & Erosion resistant
- ❖ Prevent Conductor from Chemical corrosion effected by strong acid, alkali, salt, etc.
- ❖ Halogen free
- ❖ Insulcover is available in four sizes that covers conductors up to 800 sq. mm.
- ❖ GOC comes with Mastic for high voltage applications

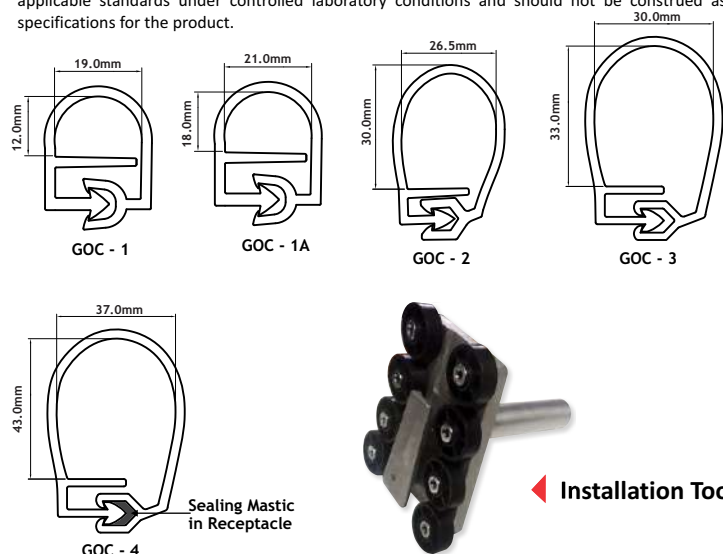
Technical Specification*

PROPERTY	VALUE	TEST METHOD
Tensile Strength	10 N/mm ² (Mpa) (min.)	ASTM D638
Ultimate Elongation	400 % (min)	ASTM D638
Density	1.20 ± 0.2 gm/cm ³	ASTM D792
Hardness	40 ±5 Shore D	ASTM D2240
Water absorption	0.5 % (max.)	ASTM D570
Accelerated ageing	(90°C for 7 Days)	ASTM D2671
a. Tensile Strength	± 25% Variation	ASTM D638
b. Ultimate Elongation	± 25% Variation	ASTM D638
Low Temperature Flexibility	No Cracking	ASTM D2671
(-40°C for 4 hrs.)		
Continuous Temperature Limit	-45 to +105°C	IEC 216
Dielectric Strength	20 KV/mm. (min)	ASTM D149
Volume Resistivity	1 x 10 ¹⁴ Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150
Resistant to Tracking & Erosion	No Tracking, Erosion or Flame failure up to 3.25 kV for 20 min.	ASTM D2303

* The above mentioned values are typical analytical values obtained on material when tested as per applicable standards under controlled laboratory conditions and should not be construed as specifications for the product.

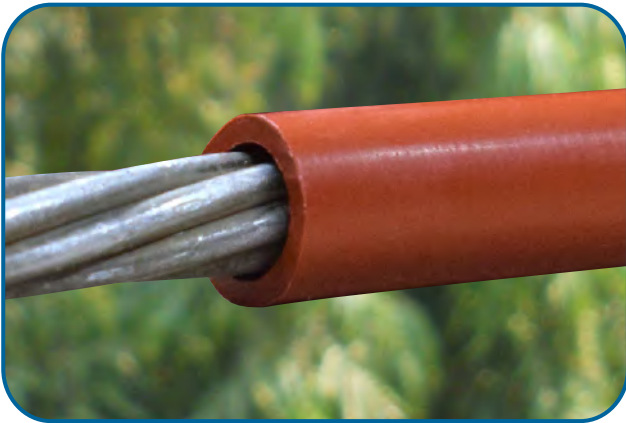
Selection Chart:

Gala Code	Conductor Size Sq. mm.	Conductor Size in Dia. (mm)	Packaging (Mtr./Roll)
GOC 1	≤ 99	upto 10	30
GOC 1A	upto 185	upto 15	30
GOC 2	upto 300	upto 22	30
GOC 3	upto 400	upto 28	30
GOC 4	upto 800	upto 38	30



◀ Installation Tool

Overhead Line Tube:



Overhead Line Tube is a Medium Voltage Line Cover that provides insulation for overhead conductors to help prevent electrical outages caused by trees or wildlife coming into the contact with distribution lines. It is manufactured from high quality Non-Tracking Polyolefin material.

Technical Specification*

PROPERTY	VALUE	TEST METHOD
Tensile Strength	10 N/mm ² (Mpa) (min.)	ASTM D638
Ultimate Elongation	500 % (min)	ASTM D638
Density	1.20 ± 0.2 gm/cm ³	ASTM D792
Hardness	30 ±5 Shore D	ASTM D2240
Water absorption	0.5 % (max.)	ASTM D570
Accelerated ageing	(90°C for 7 Days)	ASTM D2671
a. Tensile Strength	± 25% Variation	ASTM D638
b. Ultimate Elongation	± 25% Variation	ASTM D638
Low Temperature Flexibility	No Cracking	ASTM D2671
(-40°C for 4 hrs.)		
Continuous Temperature Limit	-45 to +105°C	IEC 216
Dielectric Strength	20 kV/mm. (min)	ASTM D149
Volume Resistivity	1 x 10 ¹⁴ Ohm.cm (min)	ASTM D257
Dielectric constant	5 (max.)	ASTM D150
Resistant to Tracking & Erosion	No Tracking, Erosion or Flame failure up to 3.25 kV for 20 min.	ASTM D2303

* The above mentioned values are typical analytical values obtained on material when tested as per applicable standards under controlled laboratory conditions and should not be construed as specifications for the product.

Selection Chart:

Gala Code	Internal Dia. mm (Min.)	Conductor Dia. mm (±10%)	Packaging (Mtr./Roll)
GOT-M 18	18.0 mm	2.2	50
GOT-M 25	25.0 mm	2.5	50
GOT-M 35	35.0 mm	2.5	50

Overhead Line Cover - Silicone:



Gala Silicon Overhead Line Covers are made from high quality non-tracking silicon rubber that are designed for field installation over bare conductors. These covers provide a layer of electrical insulation for Phase-to-Phase and Phase-to-Ground protection from bird and animals. The GSOC provides electrical insulation, UV resistance and tracking resistance.

Provides Insulation Enhancement upto 765 kV

Technical Specification*

PROPERTIES	TEST METHOD	TYPICAL VALUE
Physical		
Tensile Strength	ASTM-D-638	7 N/mm ² (Min.)
Elongation	ASTM-D-638	300% (Min.)
Water Absorption	ASTM-D-570	0.5 (Max)
Low Temp. Install at 0°C	-	Installable without difficulty
Thermal:		
Air Ageing	ASTM-D-2671	150°C for 168 hrs.
Tensile Strength	ASTM-D-638	3.5 N/mm ² (Min.)
Elongation	ASTM-D-638	150% (Min.)
Electrical :		
Di-electric Strength	ASTM-D-149	>130 kV / cm
Volume Resistance	ASTM-D-257	1x10 ¹³ Ohm cm (Min)
Tracking and Erosion Resistance	ASTM-D-2303	No tracking or erosion to top surface or flame failure after 1 hr. at 2.5 kV 1 hr. at 2.75 kV 1 hr. at 2.5 kV 1 hr. at 3.0 kV 20 min. at 3.25 kV

* The above mentioned values are typical analytical values obtained on material when tested as per applicable standards under controlled laboratory conditions and should not be construed as specifications for the product.

Selection Chart:

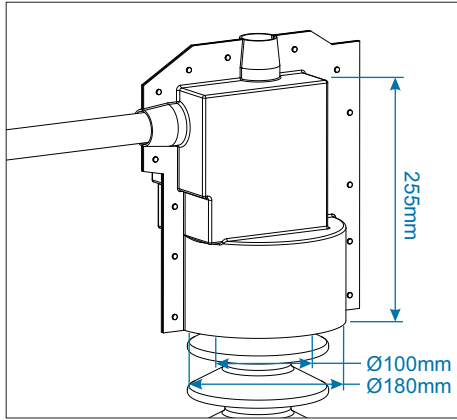
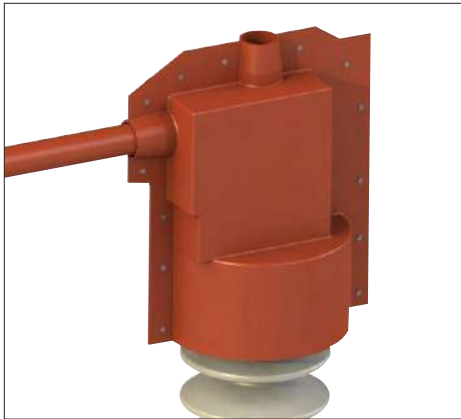
Gala Code	Use Range (mm)	Colour	Supplied Length (Mtr.)
GSOC-15	15	Grey / Red	15
GSOC-20	20	Grey / Red	15
GSOC-32	32	Grey / Red	15

Bus Connection Insulating Covers (Reusable):

Gala Bus Connection Insulating covers are designed to protect energized conductors or busbar from flashovers due to contact from birds, squirrels and other wildlife. GPFIC parts are made from a UV stable, track resistant, high performance material to ensure years of reliable service.

A variety of different shapes and sizes are available to cover circuit breaker bushings, bus standoff insulators, capacitors, transformer bushings, voltage regulators, potential transformers and more. Installation can be made quickly in the field by trimming the entry and exit holes to the required dimensions. The GPFIC covers can be re-entered for other maintenance needs and then reused, thus lowering overall lifetime costs.

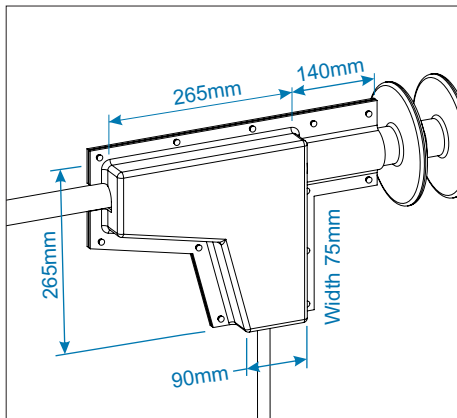
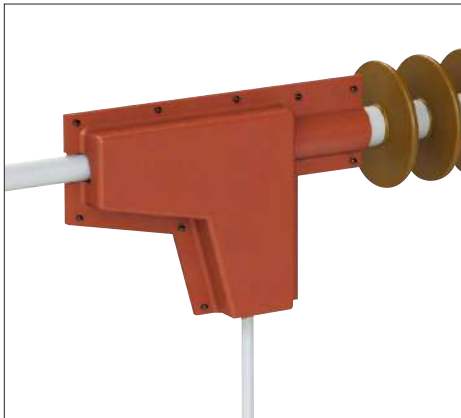
Bus Connection Insulating Cover:



Product Code: GPS 1099

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 100 mm opening on the bottom side.

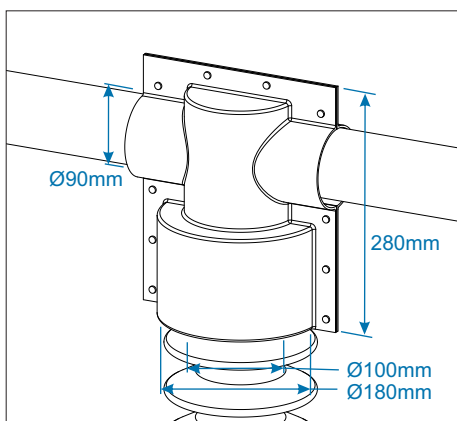
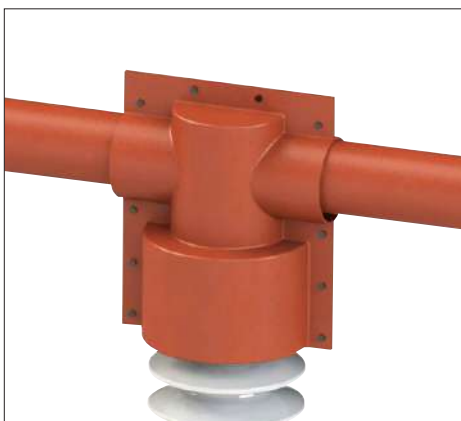
Bus Connection Insulating Cover:



Product Code: GPS 1178

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 40 mm opening on left and bottom side.

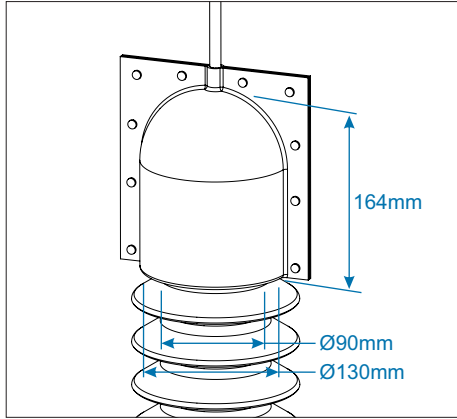
Bus Connection Insulating Cover:



Product Code: GPS 1167

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 90 mm opening on left and right sides and 100 mm on bottom side.

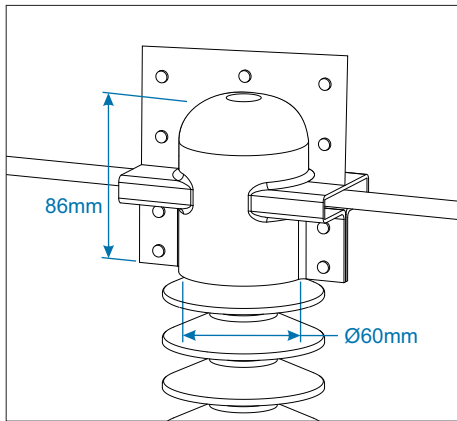
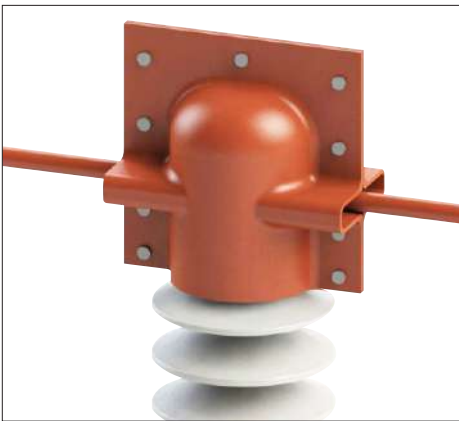
Bus Connection Insulating Cover:



Product Code: GPS 1165

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material. No opening, must be field cut on conductor side.

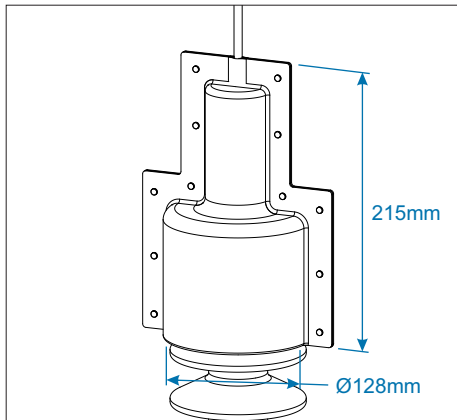
Bus Connection Insulating Cover:



Product Code: GPS 1158

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 50x10 mm opening on Bus bar side.

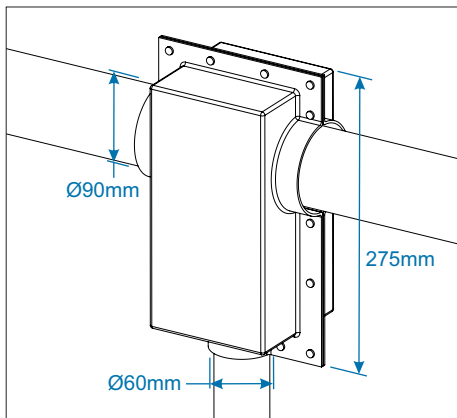
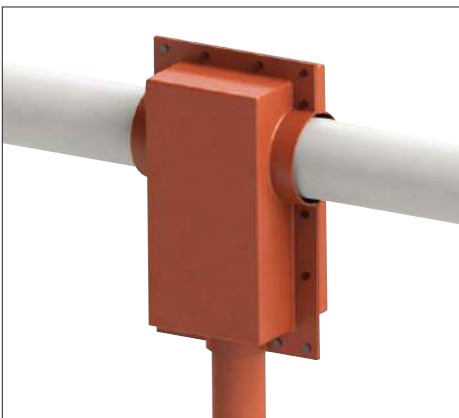
Bus Connection Insulating Cover:



Product Code: GPS 1070

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 116 mm opening on bottom side.

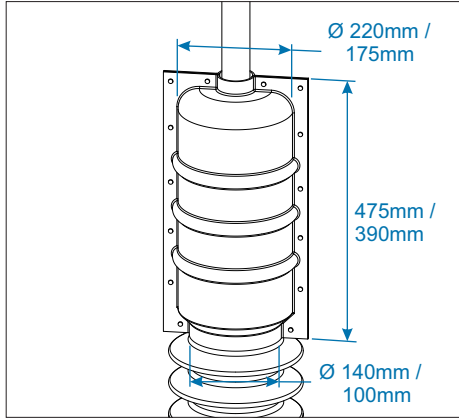
Bus Connection Insulating Cover:



Product Code: GPS 1163

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 90 mm opening on left and right sides and 60 mm on bottom side.

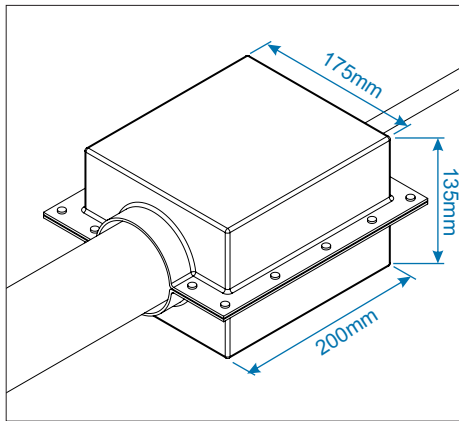
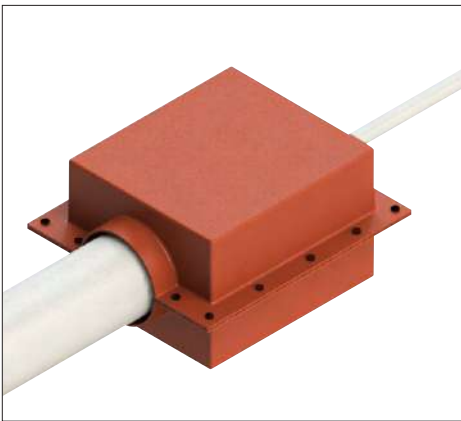
Bus Connection Insulating Cover:



Product Code: GPS 1166,
GPS 1196

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material. No opening, must be field cut on conductor side.

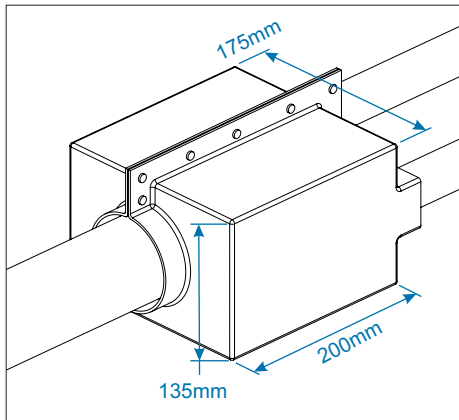
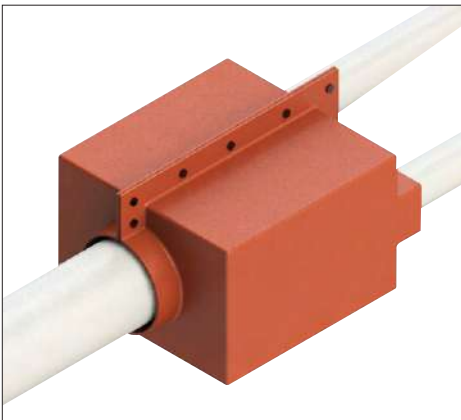
Bus Connection Insulating Cover:



Product Code: GPS 1164

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 90 mm opening on Conductor side.

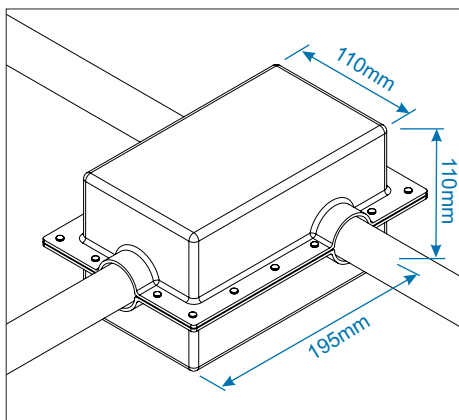
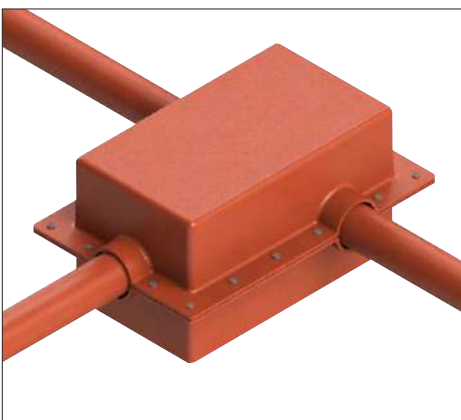
Bus Connection Insulating Cover:



Product Code: GPS 1162

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 90 mm opening on Conductor side.

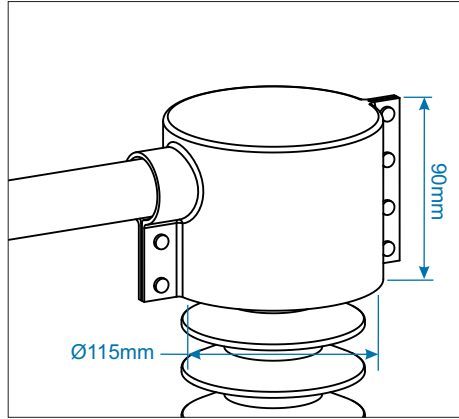
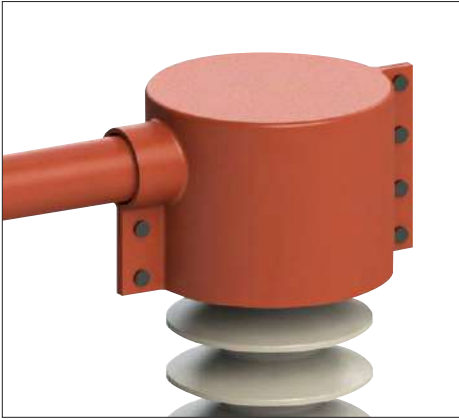
Bus Connection Insulating Cover:



Product Code: GPS 1102

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 35 mm opening on Conductor side.

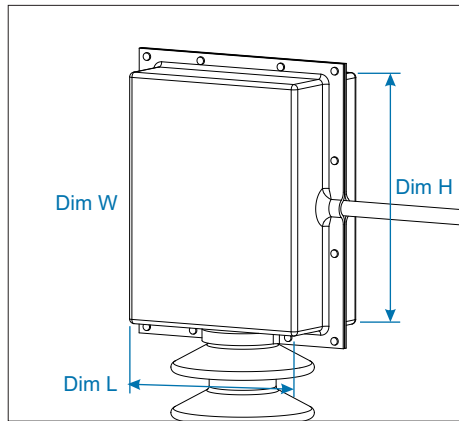
Bus Connection Insulating Cover:



Product Code: GPS 1137

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 35 mm opening on Conductor side.

Bus Connection Insulating Cover:

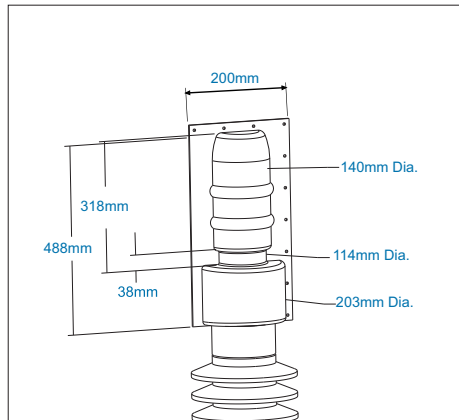


Product Code: GPS 1160
GPS 1161

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material. No opening, must be field cut.

Product Dimensions:
GPS 1160: H-400mm, L-450mm, W-250mm
GPS 1161: H-600mm, L-450mm, W-250mm

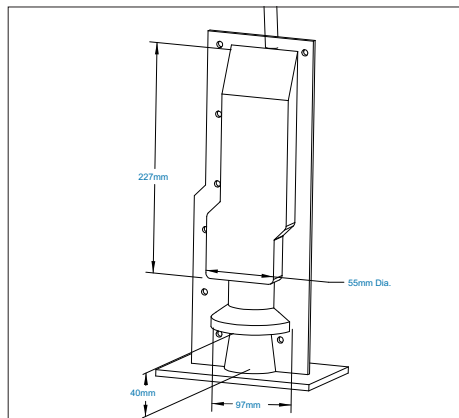
Bus Connection Insulating Cover:



Product Code: GPS 1212

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 40 mm opening on bottom side. No opening on Conductor side, must be field cut.

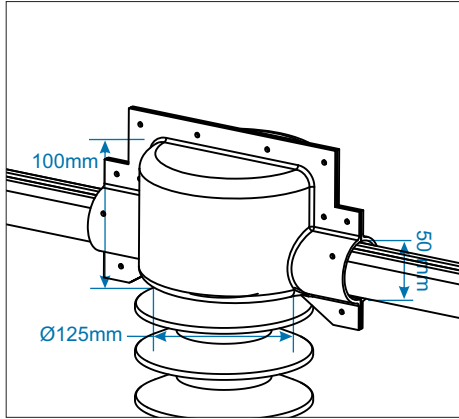
Bus Connection Insulating Cover:



Product Code: GPS 1211

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 35 mm opening on bottom side. No opening on Conductor side, must be field cut.

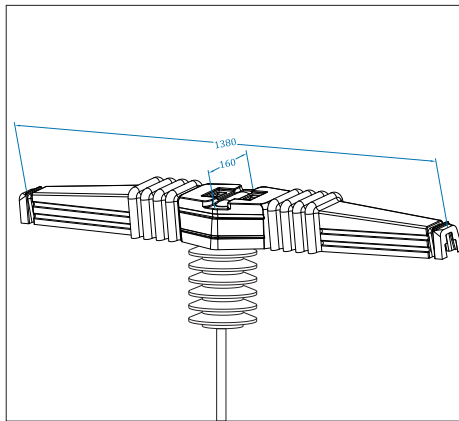
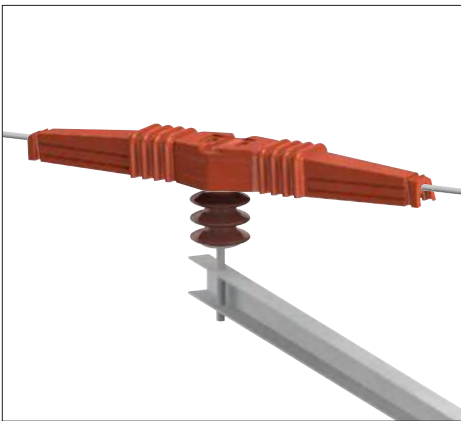
Bus Connection Insulating Cover:



Product Code: GPS 1197

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material having 50 mm opening on Conductor side and 125 mm on bottom side.

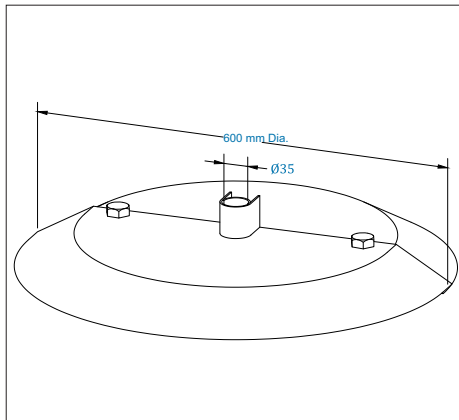
Bus Connection Insulating Cover:



Product Code: GPS 1213

Gala Pre-formed Insulation Cover made from High-quality Polyolefin material. No opening, must be field cut.

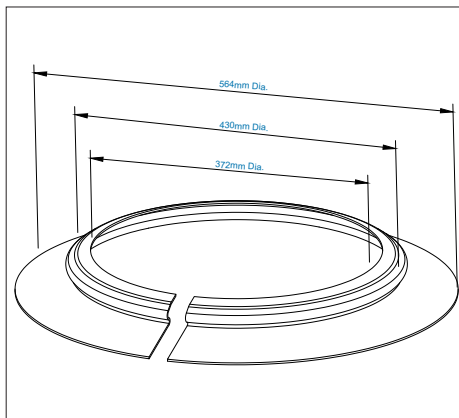
High Voltage Insulator Protection Cover:



Product Code: GPS 1214

Gala Pre-formed High Voltage Insulator Protection Cover made from High-quality Polyolefin material having 600 mm diameter. It protects High voltage Insulators from the damages caused by bird excretion.

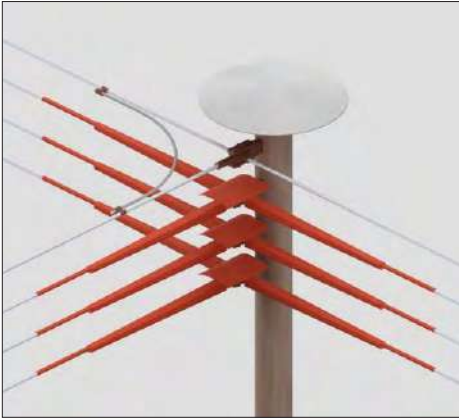
High Voltage Wraparound Creepage Extenders:



Product Code: GHCE 1

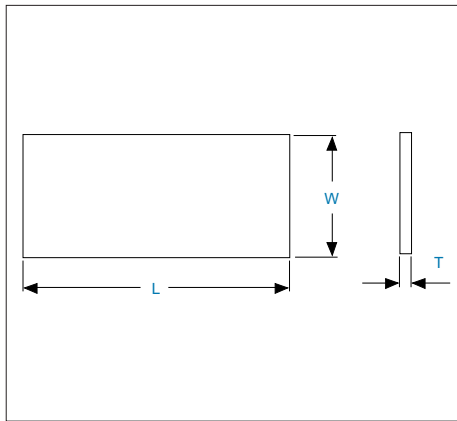
Gala Pre-formed High Voltage Wraparound Creepage Extenders made from High-quality Polyolefin material having 564 mm outer diameter.

Combined use of Insulation Enhancement Products:



By using a combination of products distribution towers can be protected from flash-overs and outages caused by birds. Can reduce the number of incidents and save protected wildlife. Regardless of the applications it is possible to create a Gala Insulation Enhancement solution for any accidental contacts or bridging problem.

Bus Connection Insulating Cover:



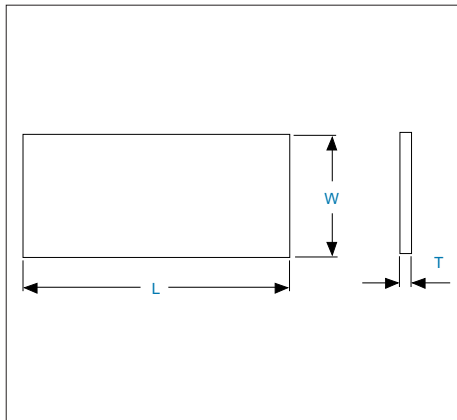
Product Code: GBBS-3
GBBS-5

Gala GBBS sheets are Non-shrinkable sheets designed to secure and insulate the underside of structures where there are reduced clearances.

Product Dimensions:

GBBS-3: W-850mm, T-3.0mm, L-15 Mtr.
GBBS-5: W-850mm, T-5.0mm, L-15 Mtr.

Heat Shrinkable High Voltage Busbar Tapes:



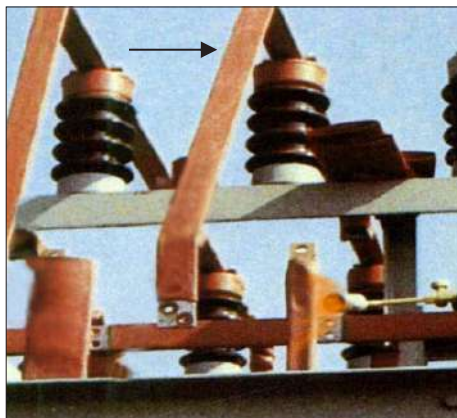
Product Code: GMT-2L

Gala Bus Tape is Heat Shrink Tape designed for insulating and protecting Bus Bar Connections, where tubing can not be used.

Product Dimensions:

W-50mm, T-1.0mm, L-15 Mtr.

Heat Shrinkable Insulation Sleeves:



Product Code: GMB / GHB

Gala Bus Tube is Heat Shrink Sleeve designed to insulate Bus Bar systems & to protect against accidental flash-over.