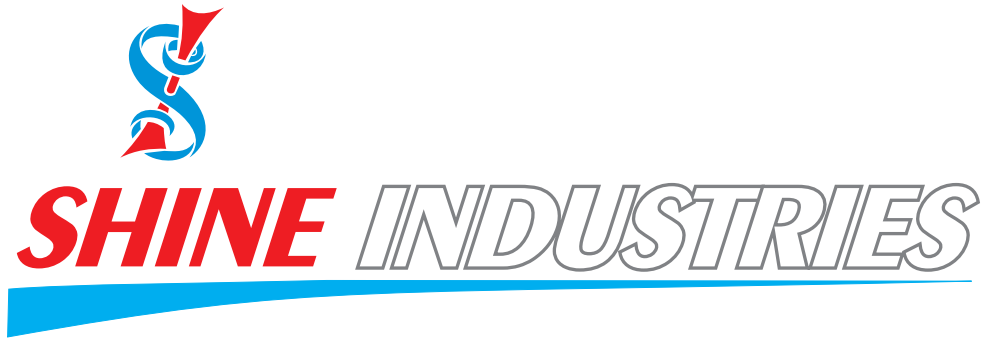


POWER CABLE ACCESSORIES



SHINE INDUSTRIES



AN ISO 9001: 2015 CERTIFIED COMPANY

THE COMPANY

Shine Industries is managed by entrepreneurs and professionals rich in Experience for Designing, Developing Manufacturing and Exporting of **POWER CABLE ACCESSORIES**.

Shine Industries is based on the pillars of its strong objective and best utilization of skills by mapping the best policies & process on work place.

THE PRODUCTS

Shine Industries manufactures and distributes complete range of

Power Cable Accessories for

- Power Control Systems
- Telecom Industry
- Specific Customer Requirements
- Electrical Distribution Systems
- Transmission & Generation Utilities
- Switchgear & Control Panel

QUALITY ASSURANCE

Shine Industries strives to give quality products which exceed the expectations and ensure complete satisfaction of the esteemed customers on a continuous and regular monitored basis. Amar Industries quality system has already been accredited ISO 9001 : 2015.

MISSION STATEMENT

We are moving ahead with the mission that "**SHINE INDUSTRIES**" will prove to be a better source of newer strategies required due to changed industries environment to all its esteemed customers. In the near future, our sole aim is to be the first and last name to rely upon, when it comes to quality Cable Accessories thus expansion of the business in the nearing years is our prime motive.

CLIENTELE LIST INCLUDES

TATA POWER DDL

BSES RAJDHANI

ADANI ELECTRICITY MUMBAI LTD.

UGVCL

DGVCL

PGVCL

MEGAWIN SWITCHGEAR

JYOTI LTD.

STELMEC LTD.

L & T HYDROCARBON

NARAYAN POWERTECH

STERLITE POWER TRANSMISSION LIMITED

VILRIDA – LITHUANIA

HAITHANH POWER SYSTEM – VIETNAM

CABLE TERMINAL BOOT FOR RMU

Pre-molded elbow boots applied for RMU connections with the function of protecting, insulating, and sealing. They are also used to reduce the clearances between phase to phase and phase to ground. RMU boots have outstanding behaviors from the weathering resistance and electrical properties. They can withstand normal and surge voltages induced during the operational life of termination systems. The installation of cold-applied boots is very quick and simple they do not need any taping of the bushing or the termination.



Features: -

- Easy to Fit
- Suitable for Cables with Cross Section from 25 sq./mm to 400 sq./mm
- Fits Sector Shaped Cables
- Facilitates Direct Voltage Testing
- Re - Open able and Re - Usable
- Economically Viable Solution for 11 kV and 22 kV

Ordering Reference	kV Rating	Impulse Voltage	Suitable for Cables
SI – 300	24 kV	125 kVp	up to 300 sq.mm
SI – 400	24 kV	125 kVp	up to 400 sq.mm

UN-SCREENED SILICONE BUSHING BOOT

The Unscreened Separable Connector is a right-angled adapter designed to fit over standard MV Cable Terminations when used with equipment bushings to Type C according to EN 50180 and EN 50181. The body and termination are not screened and therefore during operation the surfaces will be considered live and must not be touched.

The boots are manufactured from a highly insulating and anti-tracking silicone rubber-based material with excellent insulation properties and weathering properties for a durable long-life installation. The boot allows fitting over standard heat shrink or cold applied terminations. The pre-molded shape ensures full contact over the Type C bushing, thus improving its ability to eliminate unwanted leakage currents.



Features: -

- Removable & Re-installable for convenient maintenance.
- No specialized tool required.
- Compact profile provides for greater air clearance.
- Suitable to be used for all indoor terminations.
- Non tracking elastomeric housing offers excellent erosion resistance, dielectric properties & environmental properties.

Ordering Reference	kV Rating	Impulse Voltage	Suitable for Cables
SIRB-01	24 kV	125 kVp	up to 300 sq.mm

FLEXIBLE BUSHING BOOT

The Flexible insulating boot is cold applied boot to provide increased insulation between phase to phase and phase to ground for medium voltage switchgear and transformer cable boxes where the air clearances are not sufficient for normal operation and to prevent electrical flashover due to high humidity or rodents.

The boots are manufactured from a highly insulating and anti-tracking silicone rubber-based material with excellent insulation properties and weathering properties for a durable long-life installation. The boot allows fitting over standard heat shrink or cold applied terminations. The boots are installed easily without a special tool.



Features: -

- Kits designed to cover a wide range of cable sizes. 35 sq.mm – 400 sq.mm
- Flexible Structure covers right-angled or straight installation in a single design
- Suits bushing diameter Range from 46mm – 70mm.
- Special Collar applied suit for smaller bushing diameter 31mm – 45mm.
- Removable & Re-installable for convenient maintenance.

Ordering Reference	kV Rating	Bushing Diameter	Suitable for Cables
SIBB 01	17.5	31 - 45	Up to 35-400 sq.mm
SIBB 02	17.5	46 - 70	Up to 35-400 sq.mm
	24		Up to 35-300 sq.mm

SILICONE CABLE TERMINAL BOOT

Silicone Cable Terminal Protector Boot can be used in the Ring main units having Bushing of 'C' type interface. Modern switchgear where compactness is often achieved through use of Insulating SF6 Gas. Cable Terminal Protector is extremely well suited for this kind of Switchgear. It can accommodate cross section up to 400 Sq.mm.



Terminal Boots applied for switchgear and transformer connections with the function of protecting, insulating, and sealing. They are also used to reduce the clearances between phase to phase and phase to ground. Such boots have outstanding behaviors from the weathering resistance and electrical properties.

Features: -

- High performance insulation material
- Outstanding track resistance
- Environmental and erosion resistance
- Connection can be energized immediately after installation
- Unlimited shelf life
- Suitable for Cables with Cross Section from 25 sq./mm to 300 sq./mm

Cable Terminal Protector	kV Rating	Impulse Voltage	Suitable for Cables
SITB-01	15 kV	95kVp	up to 400 sq.mm

TRANSFORMER CABLE TERMINAL BOOT

Transformer Cable Terminal Boot is an insulating barrier which can be used to prevent flashover caused by reptiles, birds, animals in HT Bushing of Transformers. The boot provides phase to phase to earth insulation to power cable termination in distribution transformers etc., The Boots are manufactured from Electrically Insulated, anti-tracking, UV Resistant, High temperature and weather resistant EPDM Rubber.



Features :

- Easy and fast to install, no special tools or heat needed.
- Adapts to a wide range of cable size up to 400 sq.mm.
- Outstanding weathering, UV, Ozone, chemicals, fungi resistance.
- Outstanding water repelling (Hydrophobic).
- Low cost and easy for maintenance, and reusable.



Ordering Reference	kV Rating	Impulse Voltage	Suitable for Cables
SI - 300 (TR)	24 kV	125 kVp	up to 400 sq.mm
SI - 300 (V)	24 kV	125 kVp	up to 400 sq.mm

LV BUSHING BOOTS FOR TRANSFORMERS

LV Bushing Boot are made from Silicone Rubber. They are used to protect the LV Distribution Transformers. They are suitable for 63kVA, 100kVA, 200kVA, 250kVA & 500kVA. Such boots have outstanding behaviours from the weathering resistance and electrical properties.

The installation of these boots is very quick and simple they don't need any taping of the bushing or the termination. They are easy to fit and are re-usable and re-openable. Bushing Boots are applied for over transformer connections with the function of protecting, insulating, and sealing.



Features :

- Easy and fast to install, no special tools or heat needed.
- Adapts to a wide range of cable and busbar.
- Outstanding weathering, UV, Ozone, chemicals, fungi resistance.
- Outstanding water repelling (Hydrophobic).
- Low cost and easy for maintenance, and reusable.

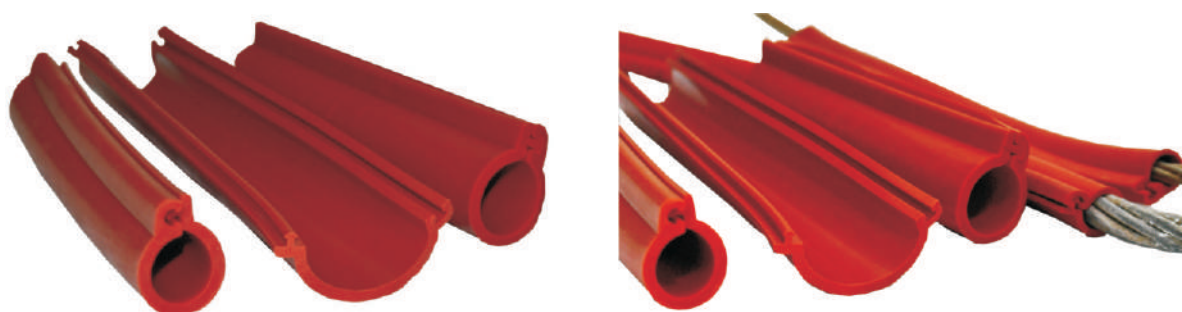
Ordering Reference	Transformer Rating	kV Rating
SILT-001	63 & 100 kVa	22 kV
SILT-002	200 kVa	22 kV
SILT-003	500 kVa	22 kV

SILICONE OVERHEAD INSULATION SLEEVE

Overhead Line Insulation Sleeve is made of silicone rubber and widely applied in transformer station protections or railway catenary system and performs effectively in cross line. These covers are designed to insulate existing bare lines without costly conductor replacement expenditure or additional line hardware

Features

- Prevent short circuit resulted from birds, insects or foreign objects lapping and protect power distribution outer insulation.
- Effectively prevent power failure from short circuit caused by foreign object lapping.
- Significantly delay outdoor metal rusty.
- Avoid personal electrical shock accident to some extent



Ordering Reference

Sleeve Diameter (mm)	Φ 12	Φ 15	Φ 16.5	Φ 18	Φ 22	Φ 28	Φ 32
Suitable up to ACSR Conductor	RABBIT	DOG	COYOTE	WOLF	PANTHER	GOAT	MOOSE

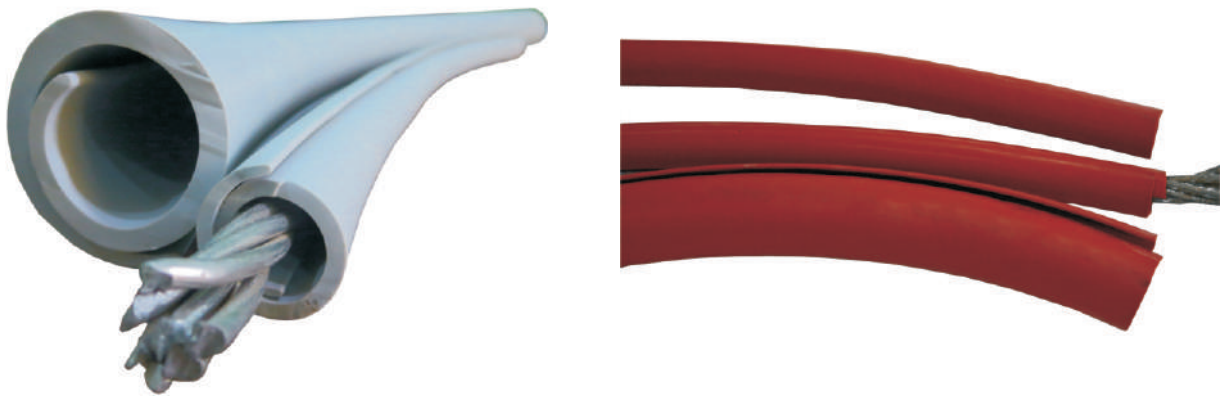
Technical Data

Sr. No	Properties	Value	Standard
Physical			
1	Tensile Strength	11 N/mm ² (MPA)(min.)	ASTM D 412-06a
2	Ultimate Elongation	200% (Min.)	ASTM D 412-06a
3	Water Absorption	0.5 % (max.)	ASTM D570
Thermal			
4	Heat Shock (250°C for 30 Mins.)	No Cracking or flowing	ESI 09-11
5	Thermal Aging (120°C, 500h)		
a.	a. Tensile Strength change	2.5 N/mm ² (MPA)(Min.)	ASTM D 412-06a
b.	b. Elongation at break change	150% (Min.)	ASTM D 412-06a
Electrical			
6	Dielectric Strength	12 kV/mm (min.)	ASTM D149
7	Volume Resistivity	1X10 ¹⁵ Ohm.cm (min.)	ASTM D257

WRAP SILICONE OVERHEAD INSULATION SLEEVE

Wrap Overhead Line Insulation Sleeve is made of silicone rubber and is self-locking type which doesn't require any tool for locking, there is no chance for the sleeves to open. Insulating the bare metal fittings with a wraparound cover and the conductor with a wraparound sleeve approx. 1.5m from the nest in both directions offers both the bird and the power system long-term security.

Prevent short circuit resulted from birds, insects or foreign objects lapping and protect power distribution outer insulation. These covers provide a layer of electrical insulation for phase-to-phase and phase-to-ground protection from bird and animal contact.



Ordering Reference

Sleeve Diameter (mm)	Φ 12	Φ 15	Φ 16.5	Φ 18	Φ 22	Φ 28	Φ 32
Suitable up to ACSR Conductor	RABBIT	DOG	COYOTE	WOLF	PANTHER	GOAT	MOOSE

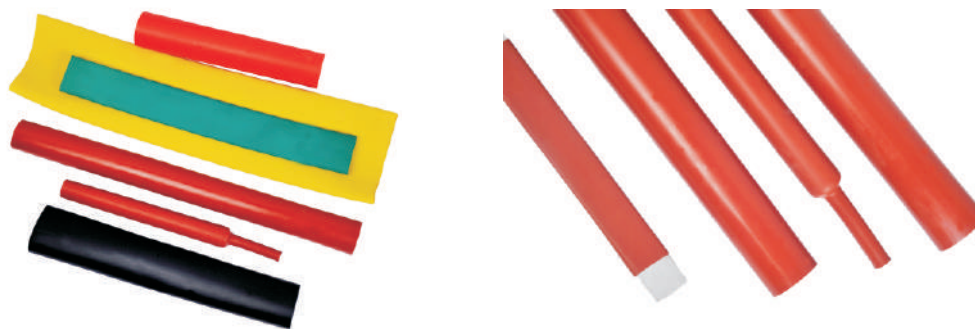
Technical Data

Sr. No	Properties	Value	Standard
Physical			
1	Tensile Strength	11 N/mm ² (MPA)(min.)	ASTM D 412-06a
2	Ultimate Elongation	200% (Min.)	ASTM D 412-06a
3	Water Absorption	0.5 % (max.)	ASTM D570
Thermal			
4	Heat Shock (250°C for 30 Mins.)	No Cracking or flowing	ESI 09-11
5	Thermal Aging (120°C, 500h)		
a.	a. Tensile Strength change	2.5 N/mm ² (MPA)(Min.)	ASTM D 412-06a
b.	b. Elongation at break change	150% (Min.)	ASTM D 412-06a
Electrical			
6	Dielectric Strength	12 kV/mm (min.)	ASTM D149
7	Volume Resistivity	1X10 ¹⁵ Ohm.cm (min.)	ASTM D257

HEAT SHRINKABLE SLEEVES/TUBES

Heat Shrinkable Sleeves provide insulation enhancement to bus-bar systems up to 36kv and protect them against flashover and accidental induced discharge. The use of bus-bar tubing allows equipment designers the freedom to reduce air spacing between busbar, such as in manufacture of switchgear cabinets where space is at a premium.

Heat Shrinkable tubes are manufactured from high quality non-tracking, non-halogen, cross-linked based polymer which has excellent performance in high voltage environments & reduces the noxious and corrosive effects in fire situation.



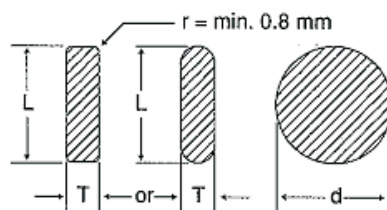
Features

- Reduce Bus-bar clearance.
- Solve the problem of insulation among Busbar in Bus Duct.
- Halogen free, flame retardant.
- High dielectric strength.
- High resistance to tracking, aging & corrosion.
- It can be offered in constant length.

Technical Data

Sr. No	Properties	Value	Standard
Physical			
1	Tensile Strength	11 N/mm ² (MPa)(min.)	ASTM D 412-06a
2	Ultimate Elongation	450% (Min.)	ASTM D 412-06a
3	Longitudinal Change	-10% (Max.)	ASTM D2671
4	Density	1.15 ± 0.2 gm/cm ³	ASTM D792
5	Hardness	45 ± 10 Shore D	ASTM D2240
6	Water Absorption	0.5 % (max.)	ASTM D570
Thermal			
7	Accelerated Ageing for 120°C for 400 Hrs		
	Tensile Strength	9 N/mm ² (Mpa) (min.)	ESI 09-13
	Ultimate Elongation	400 % (Min.)	ESI 09-13
8	Heat Shock (250°C for 30 Mins.)	No Cracking or flowing	ESI 09-11
9	Shrink Temperature	125°C	IEC 216
10	Continuous Temperature limit	-40°C to + 110°C	IEC 216
Electrical			
11	Dielectric Strength	22 kV/mm. (Min.)	ASTM D149
12	Volume Resistivity	1 x 10 ¹⁵ Ohm.cm	ASTM D257
13	Dielectric Constant	5 (Max.)	ASTM D150
Flammability			
14	Flammability	Pass	UL-94 (V-1)

HEAT SHRINK SLEEVES SELECTION CHART



Size	Inside diameter as supplied D (mm), min.	Inside diameter after shrunk D1 (mm), max.	Suitable for Bus-bar	
			Rectangular bars L+T(mm)	Round bars d(mm)
SMW 15/6	15	6	12~18	7~12
SMW 25/10	25	10	15~24	10~16
SMW 30/12	30	12	22~38	16~25
SMW 40/16	40	16	30~45	20~30
SMW 50/20	50	20	36~65	25~40
SMW 65/26	65	26	52~70	35~45
SMW 75/30	75	30	55~95	40~60
SMW 85/34	85	34	60~100	45~65
SMW 100/40	100	40	70~130	50~80
SMW 120/48	120	48	90~165	70~100
SMW 150/60	150	60	105~160	80~130
SMW 180/70	180	70	125~235	90~150

Clearance Reduction Chart

Round sectional up to 24 kV

Rectangular sectional up to 24 kV

Rated Voltage (KV)	Minimum Clearance Required (mm) SMW		Rated Voltage (KV)	Minimum Clearance Required (mm) SMW	
	Electrode to Electrode	Electrode to Ground		Electrode to Electrode	Electrode to Ground
12	55	65	12	65	75
24	100	130	24	120	150
36	160	210	36	200	285

Round sectional up to 36 kV

Rectangular sectional up to 36 kV

Rated Voltage (KV)	Minimum Clearance Required (mm) SHW		Rated Voltage (KV)	Minimum Clearance Required (mm) SHW	
	Electrode to Electrode	Electrode to Ground		Electrode to Electrode	Electrode to Ground
12	30	40	12	40	50
24	60	90	24	70	110
36	100	160	36	145	190

BUS-BAR JOINT SHROUDS/BOOTS

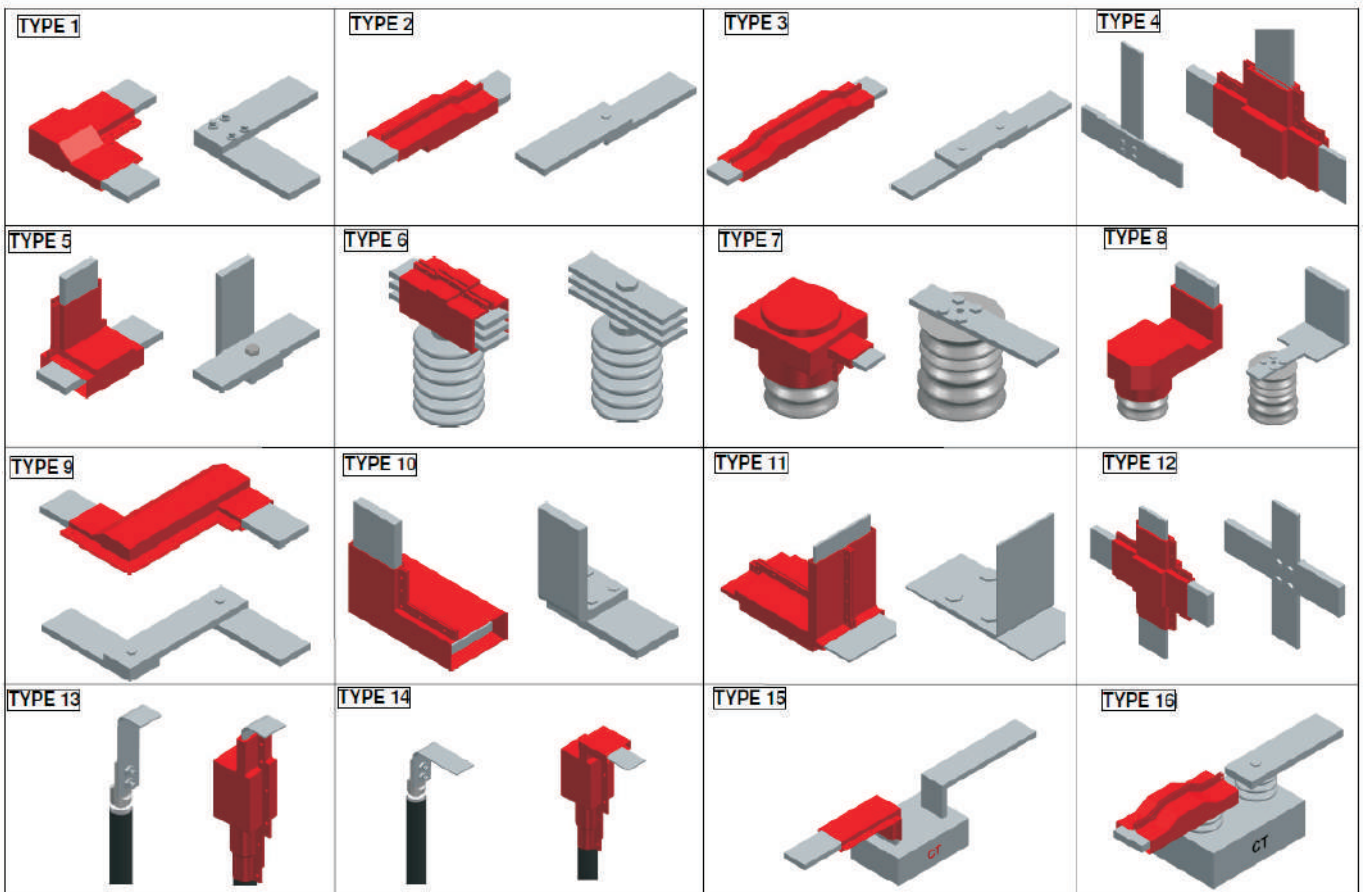
Insulating the bus bar & Switchgear joints is very unmanageable and exceptional job owing to a very exceptional job owing to a very complex and varied profile of the joints in the layouts that are of much customized nature. Because of this majority of the joints are left open without insulations. Therefore, in many advanced countries & some Indian MNCs have made it mandatory to use flexible shrouds made of PVC Plastisol's for insulation of joints.

Features

- Suitable for insulating bus bar joints. (Tee, elbow, etc.).
- Provides significant reduction in air clearances.
- Excellent thermal & electrical properties.
- Good for indoor & outdoor applications.



Types of Joint Shrouds



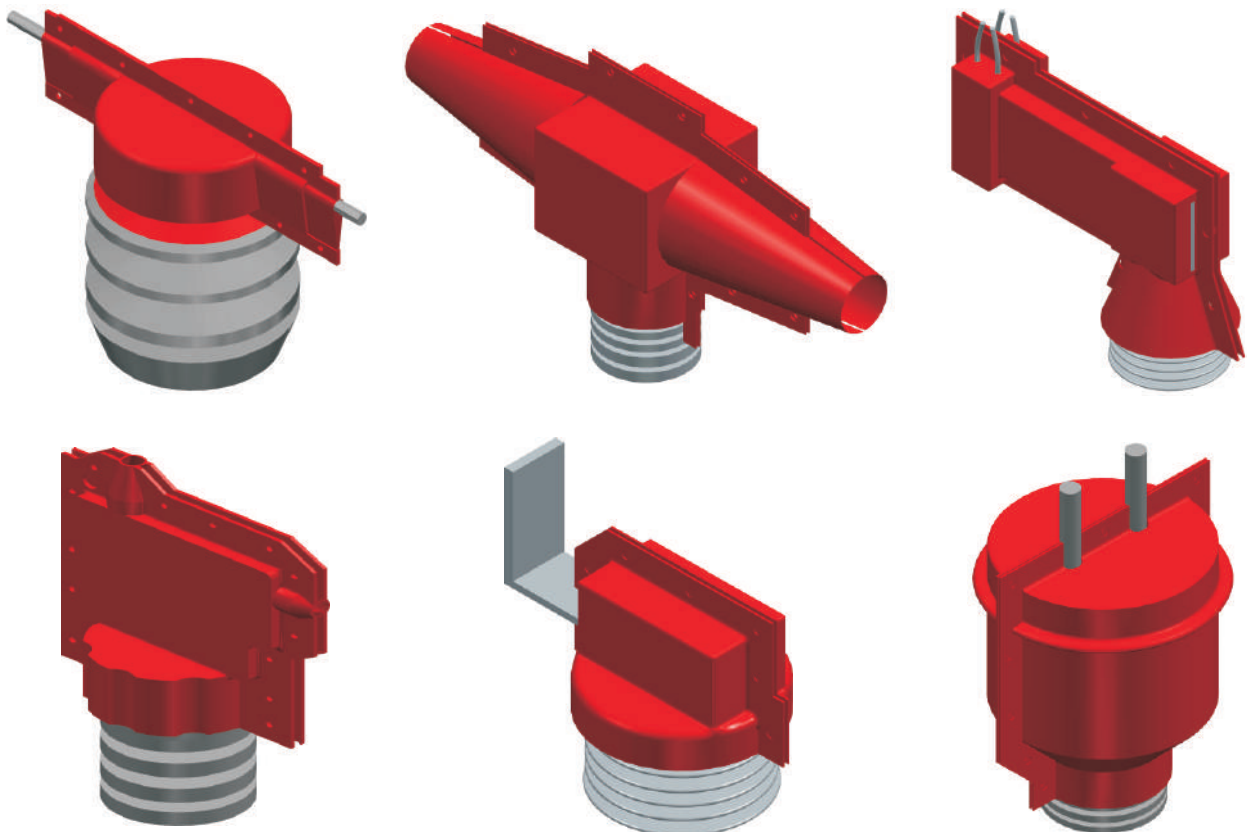
SUBSTATION JOINT SHROUDS

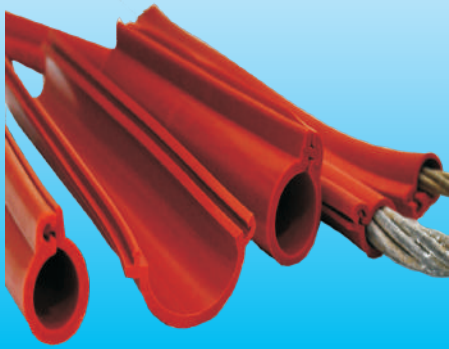
Substation equipment is vulnerable to flashovers caused by accidental bridging of phases, or phase to earth. Usually made by birds, animals, vegetation or airborne debris, flashovers can be very expensive in terms of damage to equipment, reduced reliability and in some cases even electrocution of protected species. Substation Shrouds are used 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.



Features :

- Easily mountable & Re-usable.
- Cost effective solution to time consuming insulation tape.
- Provides significant reduction in air clearances.
- Ensures electrical safety and helps prevent voltage related injuries during maintenance.
- Excellent thermal & electrical properties.





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