

## Outdoor Termination (EB-A)



**Outdoor termination** is available for the connection of underground cable and overhead line. Taihan can supply the conventional termination with the synthetic oil and the plug-in type termination without the synthetic oil.

**Prefabricated type termination** consists of an epoxy insulator, EPR stress relief cone and a set of compression device to maintain the interfacial pressure between the stress relief cone and cable core.

**Slip-on type termination** is equipped with silicone rubber stress cone. The interface pressure stability is achieved by self-elasticity of the stress cone. The stress cone guarantees a sufficient positive pressure to control the electric field concentration under any service condition. Electrical separation between cable metallic sheath and supporting structure is ensured by station post insulators.

The conventional terminations are filled with insulation oil up to a level where the electric field is substantially reduced.

**Plug-in type termination** adopts the plug-in type GIS termination inside the hollow insulator for easy installation. Instead of using the synthetic oil, SF6 gas shall be filled inside the hollow insulator.

**Dry type termination** is equipped with single piece termination body with pre-molded stress relief cone and sheds. It has simple structure and can be installed vertically and horizontally because there is no insulation oil.

The outdoor termination is available both porcelain and composite (polymeric) hollow insulator with several different creepage distance.

All types of outdoor termination have high reliability because all main insulation components are carried out routine test in the factory in accordance with IEC standard.

### Outdoor Termination (EB-A)

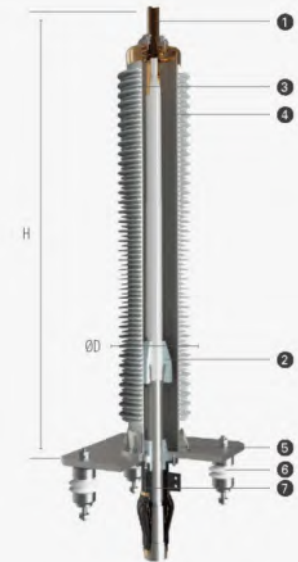
66kV - 161kV  
220kV - 275kV  
330kV - 500kV

### Outdoor Termination (EB-A)

## Slip-on Type

No.	Description	Material
1	Conductor Sleeve	Copper or Aluminum
2	Stress Relief Cone	Silicone Rubber
3	Hollow Insulator	Polymeric or Porcelain
4	Compound	Polybutene Oil
5	Sealing Unit	Silicone Rubber
6	Post Insulator	Porcelain or Epoxy
7	Lower Metal Case	Aluminum

Rated Voltage	H [mm]	ØD [mm]	Creepage Distance [mm]
66kV-69kV	Max. 1890	Max. 355	Max. 5215
110kV-161kV	Max. 2650	Max. 355	Max. 8300
220kV-275kV	Max. 4250	Max. 600	Max. 12600
330kV-500kV	Max. 6250	Max. 780	Max. 23100

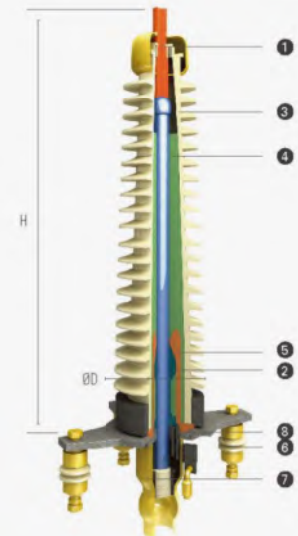


### Outdoor Termination (EB-A)

## Prefabricated Type

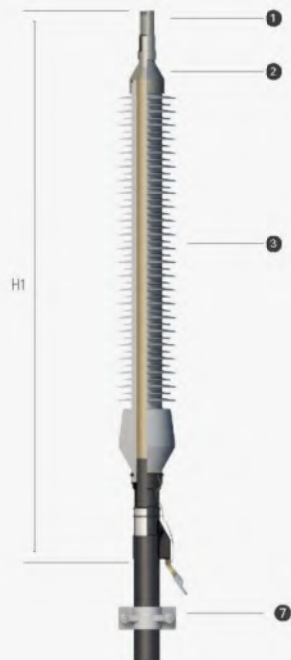
No.	Description	Material
1	Conductor Sleeve	Copper or Aluminum
2	Stress Relief Cone	EPR
3	Hollow Insulator	Polymeric or Porcelain
4	Compound	Silicone Oil
5	Epoxy Support	Epoxy
6	Post Insulator	Porcelain or Epoxy
7	Lower Metal Case	Aluminum or Copper
8	Compression Ring	Stainless Steel

Rated Voltage	H [mm]	ØD [mm]	Creepage Distance [mm]
110kV-161kV	Max. 2650	Max. 355	Max. 8300
220kV-275kV	Max. 2750	Max. 560	Max. 8800

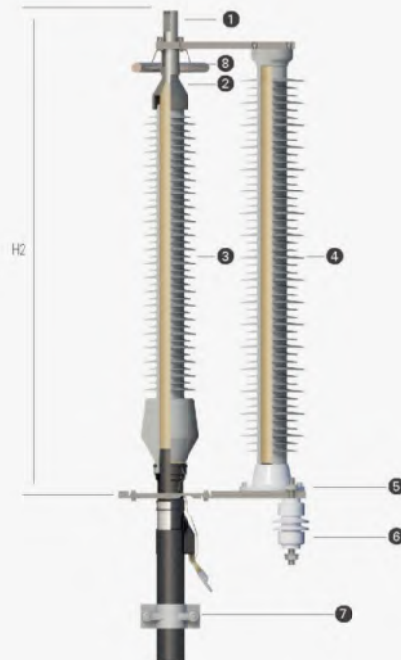


# Dry Type

## Flexible Type



## Self Supporting Type



### Features

- Single piece termination body with Pre-molded stress relief cone and sheds
- Easy Installation (Vertical or Horizontal position)
- No Oil
- Tested in accordance to IEC 60840, 62067 and IEEE48
- Apply corona ring from 132kV to 230kV

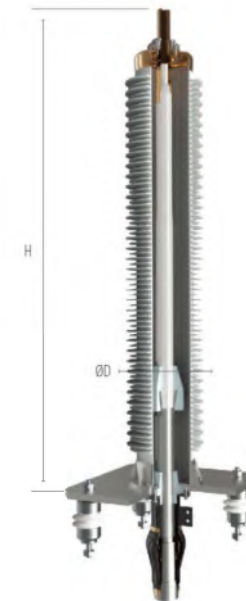
No.	Description	Material
1	Conductor Sleeve	Copper or Aluminum
2	Sealing Cap	Silicone Rubber
3	Rubber Housing	Silicone Rubber
4	Composite insulator	Silicone Rubber & Aluminum
5	Mounting metal	Aluminum
6	Post Insulator	Porcelain or Epoxy
7	Cable Cleat	Aluminum or STS
8	Corona ring (132kV-230kV)	Aluminum

Rated Voltage	H1 [mm]	H2 [mm]	Creepage Distance [mm]	Option (Corona ring)
60-69kV	1600	-	2250	X
110-115kV	2250	2000	3900	
132-138kV	2510	2270	4710	0
150-161kV	2645	2470	5270	
220-230kV	3400	2970	8360	

# Slip-on Type

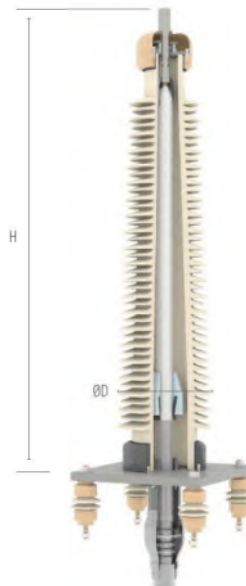
## Composite Bushing

Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EACS-6C-S01	33 - 56	1150	350	2250
EACS-13C-S01	53 - 61	1800	378	5280
EACS-13C-S02	62 - 73			
EACS-13C-S03	74 - 86			
EACS-13C-S04	87 - 106			
EACS-13C-N01	53 - 61	2200	378	6720
EACS-13C-N02	62 - 73			
EACS-13C-N03	74 - 86			
EACS-13C-N04	87 - 106			
EACS-13C-F01	53 - 61	2600	378	8150
EACS-13C-F02	62 - 73			
EACS-13C-F03	74 - 86			
EACS-13C-F04	87 - 106			



## Porcelain Bushing

Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EAPS-6C-S01	33 - 56	1250	350	2430
EAPS-13C-S01	53 - 61	1900	410	3800
EAPS-13C-S02	62 - 73			
EAPS-13C-S03	74 - 86			
EAPS-13C-S04	87 - 106			
EAPS-13C-N01	53 - 61	2200	446	6000
EAPS-13C-N02	62 - 73			
EAPS-13C-N03	74 - 86			
EAPS-13C-N04	87 - 106			
EAPS-13C-F01	53 - 61	2600	446	7100
EAPS-13C-F02	62 - 73			
EAPS-13C-F03	74 - 86			
EAPS-13C-F04	87 - 106			

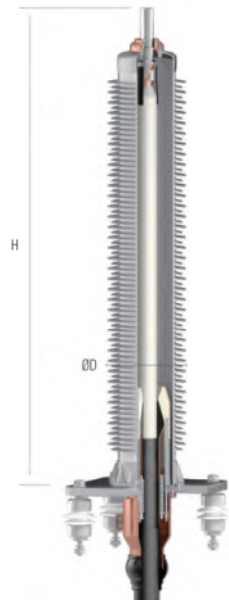


## Prefabricated Type

### Composite Bushing

Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EACP-13C-S01	51 - 63	1800	378	5280
EACP-13C-S02	54 - 66			
EACP-13C-S03	71 - 73			
EACP-13C-S04	77 - 79			
EACP-13C-S05	90 - 93			
EACP-13C-N01	51 - 63	2200	378	6720
EACP-13C-N02	54 - 66			
EACP-13C-N03	71 - 73			
EACP-13C-N04	77 - 79			
EACP-13C-N05	90 - 93			
EACP-13C-F01	51 - 63	2600	378	8150
EACP-13C-F02	54 - 66			
EACP-13C-F03	71 - 73			
EACP-13C-F04	77 - 79			
EACP-13C-F05	90 - 93			

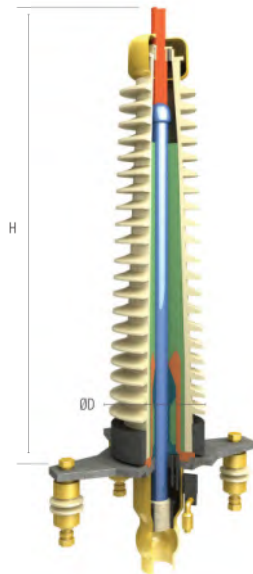
\* All of cable diameters between Ø60 and Ø104 are also available



### Porcelain Bushing

Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EAPP-13C-S01	51 - 63	1900	410	3800
EAPP-13C-S02	54 - 66			
EAPP-13C-S03	71 - 73			
EAPP-13C-S04	77 - 79			
EAPP-13C-S05	90 - 93			
EAPP-13C-N01	51 - 63	2200	446	6000
EAPP-13C-N02	54 - 66			
EAPP-13C-N03	71 - 73			
EAPP-13C-N04	77 - 79			
EAPP-13C-N05	90 - 93			
EAPS-13C-F01	51 - 63	2600	446	7100
EAPS-13C-F02	54 - 66			
EAPS-13C-F03	71 - 73			
EAPS-13C-F04	77 - 79			
EAPS-13C-F05	90 - 93			

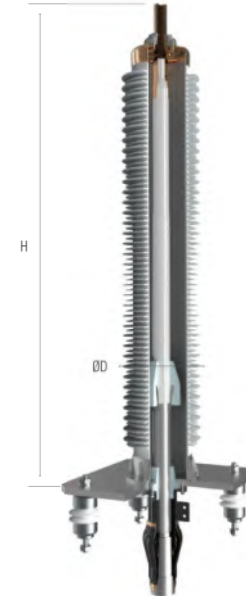
\* All of cable diameters between Ø60 and Ø104 are also available



## Slip-on Type

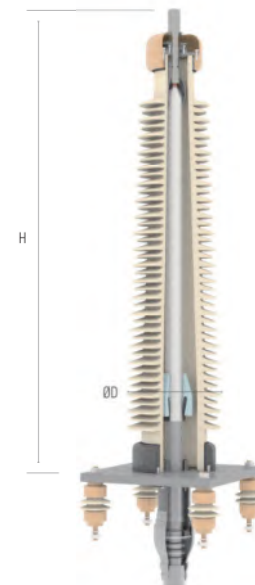
### Composite Bushing

Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EACS-24C-N01	73 - 87	2685	505	9100
EACS-24C-N02	88 - 102			
EACS-24C-N03	102 - 122			
EACS-24C-F01	73 - 87	4220	616	13000
EACS-24C-F02	88 - 102			
EACS-24C-F03	102 - 122			
EACS-24C-F04	123 - 130			



### Porcelain Bushing

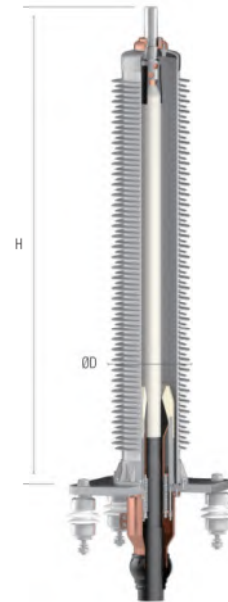
Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EAPS-24C-S01	73 - 87	2725	556	8700
EAPS-24C-S02	88 - 102			
EAPS-24C-S03	102 - 122			
EAPS-24C-N01	73 - 87	3705	560	11000
EAPS-24C-N02	88 - 102			
EAPS-24C-N03	102 - 122			



## Prefabricated Type

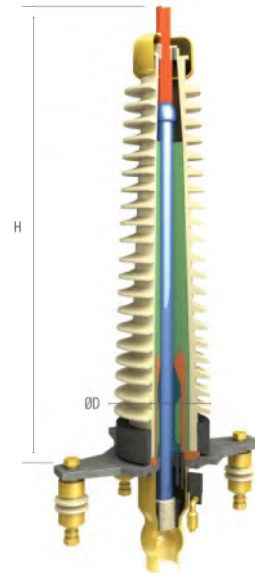
### Composite Bushing

Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EACP-24C-N01	59 - 71	2685	505	9100
EACP-24C-N02	72 - 74			
EACP-24C-N03	75 - 77			
EACP-24C-N04	78 - 80			
EACP-24C-N05	82 - 84			
EACP-24C-N06	85 - 87			
EACP-24C-N07	88 - 90			
EACP-24C-N08	91 - 93			
EACP-24C-N09	94 - 96			
EACP-24C-N10	97 - 99			
EACP-24C-N11	100 - 102			
EACP-24C-N12	103 - 105			
EACP-24C-N13	106 - 108			
EACP-24C-N14	110 - 112			
EACP-24C-N15	113 - 115			
EACP-24C-N16	116 - 118			



### Porcelain Bushing

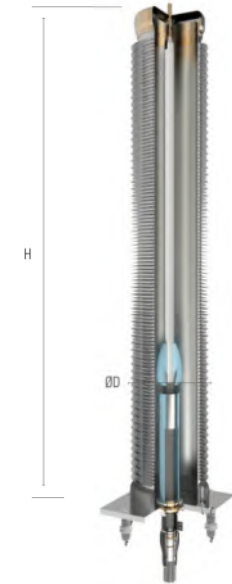
Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EAPP-24C-N01	59 - 71	2725	556	8700
EAPP-24C-N02	72 - 74			
EAPP-24C-N03	75 - 77			
EAPP-24C-N04	78 - 80			
EAPP-24C-N05	82 - 84			
EAPP-24C-N06	85 - 87			
EAPP-24C-N07	88 - 90			
EAPP-24C-N08	91 - 93			
EAPP-24C-N09	94 - 96			
EAPP-24C-N10	97 - 99			
EAPP-24C-N11	100 - 102			
EAPP-24C-N12	103 - 105			
EAPP-24C-N13	106 - 108			
EAPP-24C-N14	110 - 112			
EAPP-24C-N15	113 - 115			
EAPP-24C-N16	116 - 118			



## Slip-on Type

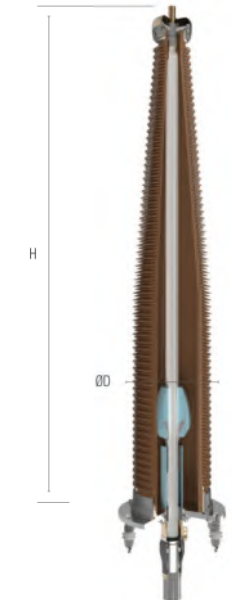
### Composite Bushing

Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EACS-40C-N01	87 - 106	5225	784	19000
EACS-40C-N02	107 - 120			
EACS-40C-N03	121 - 138			
EACS-40C-F01	87 - 106	6225	784	23100
EACS-40C-F02	107 - 120			
EACS-40C-F03	121 - 138			



### Porcelain Bushing

Product No.	XLPE Diameter [mm]	H [mm]	ØD [mm]	Creepage Distance [mm]
EAPS-40C-N01	87 - 106	4832	750	17000
EAPS-40C-N02	107 - 120			
EAPS-40C-N03	121 - 138			
EAPS-40C-F01	87 - 106	5225	810	18755
EAPS-40C-F02	107 - 120			
EAPS-40C-F03	121 - 138			



## Conical Type Composite Insulator



Product No.	H [mm]	ØD [mm]	Creepage Distance [mm]
EACC-40C-N01	4230	496	16200
EACC-40C-N02	4605	495	17800
EACC-40C-N03	4647	493	15990

## Rupture Disc

If there are failures in outdoor terminations, there are severe explosions of termination. These are caused by maximum short-circuit currents, which are too high.

**Rupture disc terminations** are designed to prevent major parts of the termination from flying into the surrounding area when an internal power arc at the fault point. Specially around stress cone, with max. short-circuit currents occurs.

