Plug-in solution

As some customers wish to install the epoxy insulator inside the GIS in the factory and to fill the GIS with gas on site and then complete the installation before the cable head is fitted, Prysmian has developed a special epoxy resin insulator version in which the outer part of the top connector is directly embedded. The insulator can be installed into the GIS in the factory and the enclosure can be filled with SF6 at any time as it is fully sealed.

The cable head is locked in place but can be removed at any time as it is fully sealed.

Plug-in type

170 kV Gas Immersed Sealing End

Gas Immersed

Prysmian HV Accessories product portfolio features a complete range of terminations for direct connections to Gas Insulated Switchgears based on EPR pre-moulded complete range of terminations for direct connection.

Within the stress cones, the cable ends are encased in a specially designed in-house manufactured epoxy resin. Prysmian’s 7 Insulators that is to be pre-positioned directly inside the GIS enclosure and fastened to its final position by a retaining flange. The long standing experience in dealing with all major worldwide transformer manufactures has allowed Prysmian to develop a comprehensive range of GIS enclosure and state-of-the-art plug-in solutions. Furthermore, all pre-moulded stress cones undergo factory testing to check for manufacturing defects.

Prysmian can also provide solutions for non-standard interference over the cable insulation and to follow the enhanced design criteria. This ensures that, once the termination is assembled, its reliability can be compared to that of the cable it is fitted on.

Prysmian stress cones are designed to fit with controlled final position by a retaining flange.

Sealing End

Plug-in type

170 kV Gas Immersed Sealing End

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**About us**

Prysmian Cables & Systems is a world-class multinational company. Founded in 1872 as “Ditta Pirelli & C.”, it has achieved a leading position for more than a century of operations in its two key international markets—“Energy Cables and Systems” and “Telecom Cables & Systems.”

Prysmian Cables and Systems is the world’s largest manufacturer of power and telecommunications cables, with 52 manufacturing facilities in 21 countries in five continents and a market share in excess of 10%.

Prysmian Energy Cables and Systems is a global solutions provider, offering a wide range of integrated solutions, such as cable systems, system design and engineering, project management, installation and post-sale services.

Prysmian Energy Cables and Systems concentrates on continuous product innovation and on achieving a competitive edge by focusing on research and development. This is done through Prysmian’s own R&D centres and by co-operating with universities, scientific institutions, and above all, our customers. Prysmian’s world-wide organisation makes and delivers advanced technological solutions to customers anywhere in the world.

Prysmian started manufacturing insulated cables for electric power distribution around 1880 and soon afterwards initiated the development of the first cable accessories.

Prysmian’s very long and successful experience in HV and EHV cable systems have lead to the development of a comprehensive range of accessories for extruded dielectric cables.

A relentless R&D effort focused on rubber compounds, dielectric cables, and on electrical design has created accessories for extruded cable systems. Prysmian’s one-piece pre-moulded sleeves and stress cones are completely manufactured in-house.

Prysmian has achieved a leading position for HV polymeric cables from 72.5 kV up to 525 kV and adopt the same design at all voltage classes.

The origin of the current product range of accessories for HV polymeric cables dates back to 1978 when Prysmian, strong of its very long and successful experience in Fluid Filled cable systems developed its first generation of accessories for extruded cable systems.

These accessories are based on pre-moulded electrical components, stress cones for terminations and one-piece sleeves for joints.

Prysmian HV Accessories quality system complies with the international standards (IEC 60859 part I) and certified individually.

The moulding process has been refined thanks to the long-standing presence of Prysmian in the rubber industry, each single moulding is mechanically and electrically tested in the factory (the applied electrical test parameters are stricter than those established by the international standards) and certified individually.

Prysmian HV Accessories quality system complies with both (ISO 9001 and ISO 14001) standards. Prysmian HV accessories based on EPR mouldings represent a highly reliable solution that is considered a key component in the safe operation of a HV cable system.

The reliability of its HV accessories has made Prysmian the worldwide market leader in terms of design and quality and all major power Utilities consider Prysmian products the benchmark in terms of performance and service.

**Stress cone basics**

The origin of the current product range of accessories for HV polymeric cables dates back to 1978 when Prysmian, strong of its very long and successful experience in Fluid Filled cable systems developed its first generation of accessories for extruded cable systems.

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**GIS Terminations**

**Additional features**

Following the latest developments in cable design and review of a full system approach the Prysmian terminations can include upon request:

- Optimal fibre management
- Partial discharge sensor

**GIS Terminations available from 72,5 kV up to 525 kV**

<table>
<thead>
<tr>
<th>Voltage (kV)</th>
<th>U_max (kV)</th>
<th>kV</th>
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<th>kV</th>
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</table>

**Recommended equipment**

- SF6 IMMERSED SEALING ENDS
- SF6 IMMERSED SEALING ENDS

**Legend**

1. Connection interface
2. Top connector
3. Spring clamp module
4. EPR stress cone
5. Epoxy resin insulator
6. Top connector
7. Connection interface
Plug-in solution

As some customers wish to install the epoxy insulator inside the GIS in the factory and/or to fill the GIS with SF6 on site and then complete the installation before the cable head is fitted, Prysmian has developed a special epoxy resin insulator version in which the outer part of the top connector is directly embedded. The insulator can be installed into the GIS in the factory and the enclosure can be filled with SF6 at any time as it is fully sealed.

The cable head is locked in place but can be removed by turning the epoxy insulator by 90°.
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Prysmian started manufacturing insulated cables for electric power distribution around 1880 and soon afterwards initiated the development of the first cable accessories.

Prysmian’s very long and successful experience in HV cable systems have lead to the development of a comprehensive range of accessories for extruded cable systems. These accessories are based on pre-moulded electrical components, i.e. stress cones for terminations and one-piece sleeves for joints.

Pre-moulded sleeves and stress cones are currently available for HV polymeric cables from 72.5 kV up to 525 kV and adopt the same design at all voltage classes.

Thanks to its outstanding electrical and mechanical properties, ethylene-propylene rubber (EPR) has been favoured for the rubber mouldings manufacture. After a thorough research on rubber compounds properties, Prysmian developed a proprietary formulation with superior characteristics that is manufactured in-house, which guarantees an unsurpassed reliability of the products.

The mechanical properties of Prysmian special compounds ensure a constant pressure at the cable/moulding interface during the entire lifetime of the accessories, whilst the electrical design has been optimised to minimise the electrical stress concentrations in the same area, which guarantees an unsurpassed reliability of the products.

The moulding process has been refined thanks to the long-standing presence of Prysmian in the rubber industry, each single moulding is mechanically and electrically tested in the factory (the applied electrical test parameters are stricter than those established by the international standards) and certified individually.

Prysmian’s R&D effort focused on rubber compounds as well as on electrical design has created accessories for all applications, based on pre-moulded and factory tested joint sleeves and termination stress cones that are recognised worldwide for their unsurpassed reliability.

The origin of the current product range of accessories for HV polymeric cables dates back to 1978 when Prysmian, strong of its very long and successful experience in Fluid Filled cable systems developed its first generation of accessories for extruded cable systems. These accessories are based on pre-moulded electrical components, i.e. stress cones for terminations and one-piece sleeves for joints.

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Prysmian HV Accessories quality system complies with both IEC 60859 and ISO 4041 standards. Prysmian HV accessories based on EPR mouldings represent a highly reliable solution that is considered a key component in the safe operation of a HV cable system.

The reliability of its HV accessories has made Prysmian the worldwide market leader in terms of design and quality and all major power Utilities consider Prysmian products the benchmark in terms of performance and service.

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SF6 IMMERSION SEALS

GIS Terminations available from 72,5 kV up to 525 kV

> Additional features
Following the latest developments in cable design and review of a full system approach the Prysmian terminations can include upon request:

- Optical fibres management
-Partial discharge sensor

SF6 IMMERSION ENDS
Plug-in solution

As some customers wish to install the epoxy insulator inside the GIS in the factory and/or to fill the GIS with gas on site and then complete the installation before the cable head is fitted, Prysmian has developed a special epoxy resin insulator version in which the outer part of the top connector is directly embedded. The insulator can be installed into the GIS in the factory and the enclosure can be filled with SF6 at any time as it is fully sealed.

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