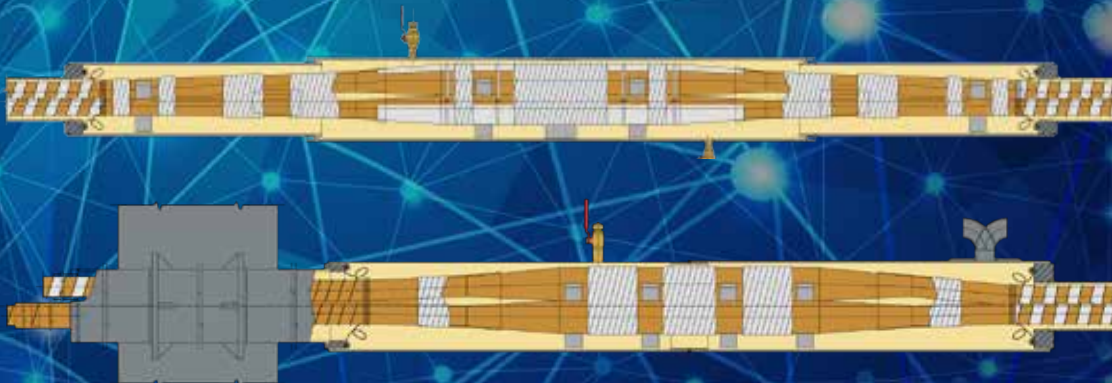
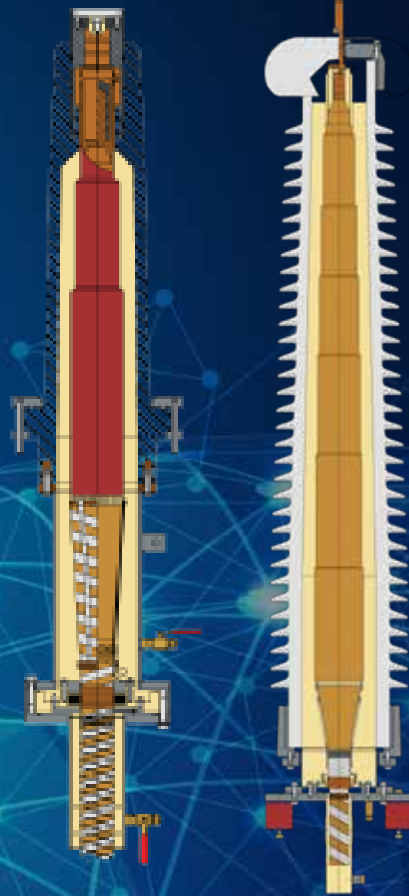


- **NORMAL JOINTS**
- **TERMINATIONS**
- **TRIFURCATING JOINTS**
- **MISCELLANEOUS COMPONENTS**



hvGrid-tech is a market leader in design and manufacture of cable accessories and engineering solutions for high pressure fluid filled (HPFF)/high pressure pipe type (HPPT) cable systems offering a complete range of accessories from 69kV to 345kV with over 50 years of successful operating history.

hvGrid-tech originated as the EHV Cable Accessory Division of Canada Wire & Cable (CW&C) in the early 1960's and has continued to develop, manufacture and supply high voltage cable accessories worldwide as a primary supplier or on an OEM replacement basis.

As a competence centre for HPFF/HPPT cable system accessories and engineering services, hvGrid-tech supports and enables HPFF/HPPT cable system operators to maximize the performance and operating life of their cable systems. Our HPFF/HPPT cable accessory offerings include a complete range of joints, terminations, trifurcating assemblies, semi-stop assemblies, and miscellaneous ancillary components.

hvGrid-tech's accessory designs can be tailored to work on any HPFF/HPPT cable, and hence can serve as replacement or spare parts for any HPFF/HPPT cable system applications regardless of the original cable and/or accessory manufacturer. All hvGrid-tech cable accessories are supplied with comprehensive and detailed installation instructions, which can be supplied in a variety of languages to suit the specific market requirements.

ACCESSORIES FOR HPFF/HPPT CABLE SYSTEMS INCLUDE:

Normal Joints

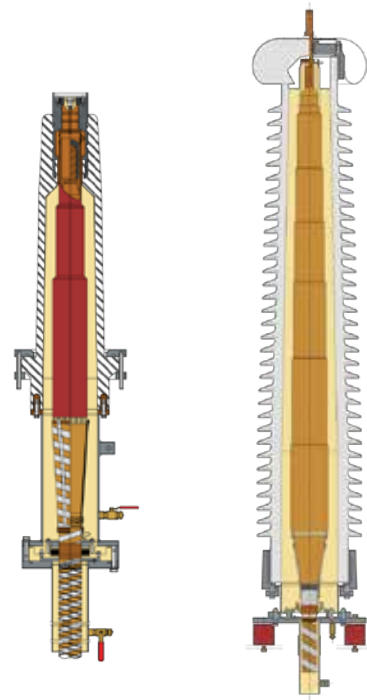
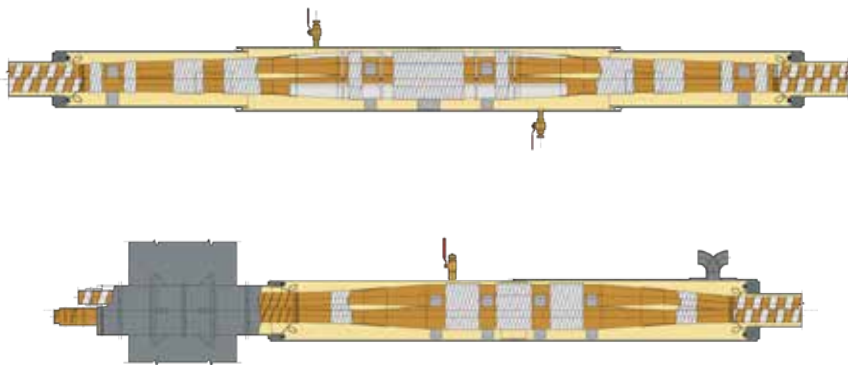
- Conductor sizes up to 4500 kcmil
- Stranded and segmental conductors
- Aluminum and copper conductors
- Electrical Kraft paper or PPLP insulation
- Custom joints for dissimilar cable cross sections and conductor sizes
- Custom extended body joints to replace failed/damaged joints

Terminations

- Outdoor or GIS Type
- Stranded and segmental conductors
- Aluminum and copper conductors
- Stress cone or condenser cone
- Custom baseplates to match any existing mounting designs c/w integrated semi-stop assemblies

Miscellaneous Components

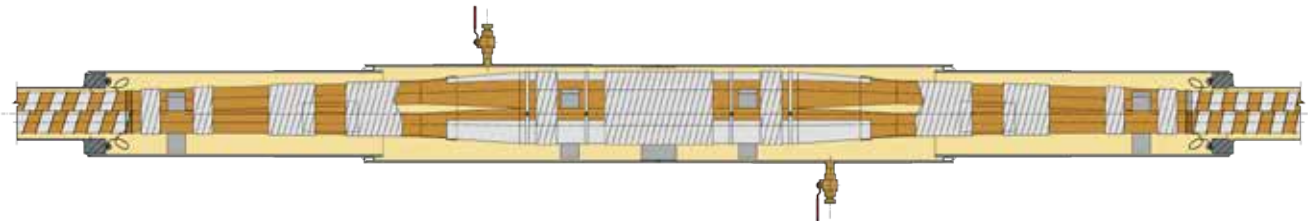
- Trifurcating assemblies – with or without joints
- Joint casings
- Bi-metallic stems
- Impregnated paper rolls



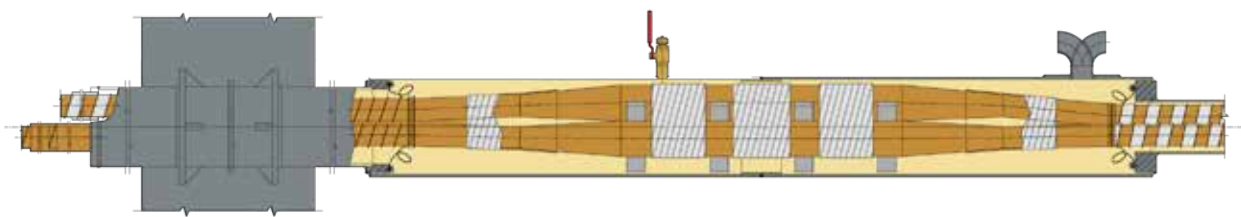
Joins for HPFF/HPPT Cable Systems 69 kV - 345 kV

hvGrid-tech designs and manufactures Joints for High Pressure Fluid Filled/High Pressure Pipe Type (HPFF/HPPT) cables based upon a proven design with over 50 years of service around the world in operating voltage from 69 kV up to 345 kV.

All hvGrid-tech standard design Normal Joints and Trifurcating Joints are designed to meet IEEE Standard 404 requirements for a wide range of standard and custom applications, and can be supplied with steel joint casings and reducing flanges to meet any installation configuration.



THREE CONDUCTOR NORMAL JOINT ASSEMBLY



THREE CONDUCTOR TRIFURCATING JOINT ASSEMBLY

DESIGN FEATURES - JOINTS FOR HPFF/HPPT CABLE SYSTEMS 69 KV - 345 KV

Cable Type	High Pressure Fluid Filled/High Pressure Pipe Type (HPFF/HPPT)
Cable Insulation	Electrical Kraft Paper or Polypropylene Laminated Paper (PPLP)
Conductor Material / Type	Copper or Aluminum / Stranded or Segmental
Conductor Size	Up to 4500kcmil (2250mm ²)
Electrical Stress Relief	Factory designed/field installed impregnated paper roll stress relief. Stress relief profile template included
Operating Hydraulic Pressure	Nominal operating pressures up to 200 psig (1379kPa) and maximum transient pressures up to 300psig (2068kPa)
Dielectric Fluids	Designed and manufactured for compatibility with a wide range of dielectric fluids
Cable Cross Sections	Custom joints for dissimilar cable cross sections and conductor sizes
Replacement Joints	Custom extended body joints to replace failed or damaged joints and/or cables
Joint Casing (Optional)	Custom designed Normal and Trifurcating Joint Casings for any installation application
Joint Kit Components	Impregnated paper rolls, stress control design template, compression dies, spiders are included in all joint kits

hvGrid-tech can design and supply custom Normal and Trifurcating Joints for any HPFF/HPPT cable requirement, including dissimilar cable cross sections, dissimilar cable constructions, as well extended body joints to replace a localized joint or cable failure. All Joint Kits are supplied with detailed installation instructions, which can be provided in a variety of languages.

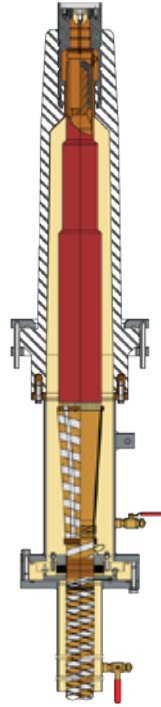
hvGrid-tech designs and manufactures Terminations for High Pressure Fluid Filled/High Pressure Pipe Type (HPFF/HPPT) cables based upon a proven design with over 50 years of service around the world in operating voltage from 69 kV up to 345 kV.

GIS TYPE TERMINATION

GIS Type Terminations are designed to meet IEEE Standard 48 requirements and are available for gas insulated switchgear (GIS) applications in operating voltages from 138 kV up to 230 kV.

The GIS Termination utilizes a cast epoxy bushing specifically designed to be mounted within a metal clad switchgear and the inner construction is similar to that of an Outdoor Termination. The Termination - GIS interface and the associated components are designed in accordance with IEC 60859. All GIS Terminal kits include an integrated Semi-Stop Assembly.

All hvGrid-tech standard design Outdoor Terminations and GIS Terminations utilize a gasketed stainless steel body with a stainless steel pipe stub for field coupling to the riser pipe.

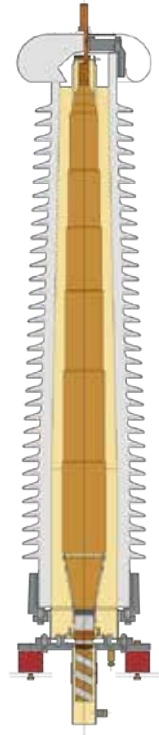


OUTDOOR TERMINATION

Outdoor Type Terminations are designed to meet IEEE Standard 48 requirements, utilizing a porcelain bushing that can be supplied with standard or extended creepage insulators used for demanding environmental locations. Outdoor Terminations are available in operating voltages from 69 kV up to 345 kV.

Optional items include diffusion chambers, external filter bypass assemblies, 4-hole NEMA pad or universal type aerial lugs, and cast epoxy or porcelain mounting insulators.

All Outdoor Termination kits include an integrated Semi-Stop Assembly.



DESIGN FEATURES - TERMINATIONS FOR HPFF/HPPT CABLES 69 KV - 345 KV

Cable Type	High Pressure Fluid Filled/High Pressure Pipe Type (HPFF/HPPT)
Cable Insulation	Electrical Kraft Paper or Polypropylene Laminated Paper (PPLP)
Conductor Material / Type	Copper or Aluminum / Stranded or Segmental
Conductor Size	Up to 4500kcmil (2250mm ²)
Electrical Stress Relief	Stress Cone or Capacitance Type Condenser Cone
Operating Hydraulic Pressure	Nominal operating pressures up to 200 psig (1379kPa) and maximum transient pressures up to 300 psig (2068kPa)
Dielectric Fluids	Designed and manufactured for compatibility with a wide range of dielectric fluids

hvGrid-tech custom designs and supplies Terminations that match a variety of mounting arrangements. This allows our Terminations to be a compatible replacement for any brand or manufacturer. All Termination Kits are supplied with detailed installation instructions, which can be provided in a variety of languages.



hvGrid-tech Inc.

1310 Kerrisdale Boulevard, Units 5/6
Newmarket, ON Canada L3Y 8V6
905.888.7771

www.hvgrid-tech.com



ISO 9001:2015
CERTIFIED

hvGrid-tech is an ISO 9001-2015
certified company.