

# AIR CORE REACTORS FOR HVDC

1100 kV / 300 Mvar

Air Core Reactor for HVDC enhance the **reliability and efficiency of DC power** transmission systems.



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# AIR CORE REACTORS FOR HVDC

## CHARACTERISTICS

- Loss-optimized winding designs
- Low noise levels are maintained throughout the life of the reactor
- Specialized solutions for high seismic regions are available
- Highest mechanical and short-circuit strength
- Weatherproof construction with minimum maintenance requirements

Special Surface Treatment

Specialized Solution

Corona Rings

Epoxy-Impregnated  
Fiberglass



# AIR CORE REACTORS FOR HVDC

## APPLICATIONS AREAS

- Converter Reactors for VSC HVDC
- Smoothing reactors
- AC and DC Harmonic Filter Reactors
- AC and DC PLC Noise Filter Reactors

## SUSTAINABILITY

REGENERA® is Trench Group's **Green Quality Label**, awarded to offerings that combine technical excellence with environmental responsibility.

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# MAIN FEATURES



## Converter Reactor

They are used in the Voltage Source Converter (VSC) HVDC scheme. They block harmonic currents limit rate of rise of short circuit current improving controllability of converters.



## Smoothing Reactor

Smoothing reactors are used to reduce the magnitude of the ripple current in the HVDC system. They are required on HVDC transmission lines for system voltages up to 1100 kV.



## AC / DC PLC Noise Filter Reactors

PLC interference noise is caused by the voltage breakdown in converter valves during the firing process. PLC filters are installed to suppress this noise to the required limits.



## AC And DC Harmonic Filter Reactors

AC & DC filter design typically has to meet harmonic filtering and reactive power compensation requirements for different operating conditions and load levels.



## Trench Is Realizing Your Specific Energy Transition Goals

HVDC lines are used for long-distance bulk power transmission as well as back-to-back interconnections between different transmission networks.



## Global Leader In Air Core Reactor Technology

Trench is the world's leading designer and manufacturer of dry-type air-core power inductors for all HVDC applications with over 60 years of field experience.

## PRODUCT APPLICATIONS

# AIR CORE REACTORS FOR HVDC

Enabling HVDC transmission of bulk power across long distances efficiently at a reduced cost.

Trench has been the first supplier worldwide supplying smoothing reactors in air-core technology in the early 1980s. This breakthrough technology is today used in almost all new HVDC projects.



### INSTALLED HVDC REACTORS

HVDC reactors installed at site.



### SMOOTHING REACTOR

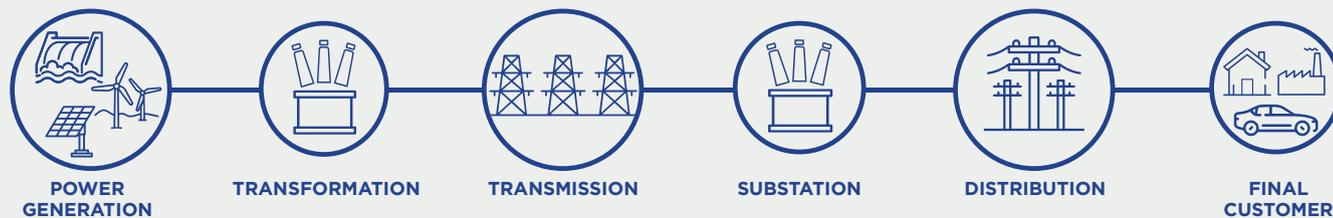
Smoothing reactor for HVDC application.

# THE **FUTURE** OF ENERGY IS **NOW** AND IT'S **EXTRAORDINARY**

## THE CRUCIAL ROLE OF POWER TRANSMISSION

**Our vision** of a sustainable future starts with an eco-friendly portfolio of high voltage products and systems, brought to you by our dedicated team of global innomakers.

**Our mission** is to support our customers, from power generation through transmission and distribution to the electricity consumers, in their transition to clean energy and a greener world.





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