



DISTRIBUTION GRIDS

EMISSION FREE COMPACT HIGH POWER

PIONEERS IN
ELECTRIC POWER

VISION[®] ELECTRIC
Super Conductors



THE CHALLENGE

Urbanization, e-mobility, hyperscale data centers - there are many reasons why extensive use of electrical energy is increasing and raises the overall demand, especially in bigger cities.

The current medium voltage solutions which are used since many years in the distribution grids are often unable to cover the increasing need for these energy demands.

With the currently common technology there are two approaches to handle this situation. One possibility is to boost the current strength and to accept high power losses. The other possibility is to build new lines and grids which are often limited by building density within the cities or given infrastructure and results in complex and expensive civil engineering and traffic disturbance.





The global electricity demand is continuously rising. Power grids are facing new challenges from decentralization and renewables. The modernization of electricity distribution grids is a challenging task for the operating companies. In addition to the expansion of high- and medium-voltage grids especially in agglomerations the capacity of the distribution grids must be continuously increased.

The best solution for these challenges are superconducting cable systems.

THE SOLUTION

Now, there is a mind-breaking and game-changing technology available that combines a very compact design at medium voltage transmission with much higher power than conventional cables:

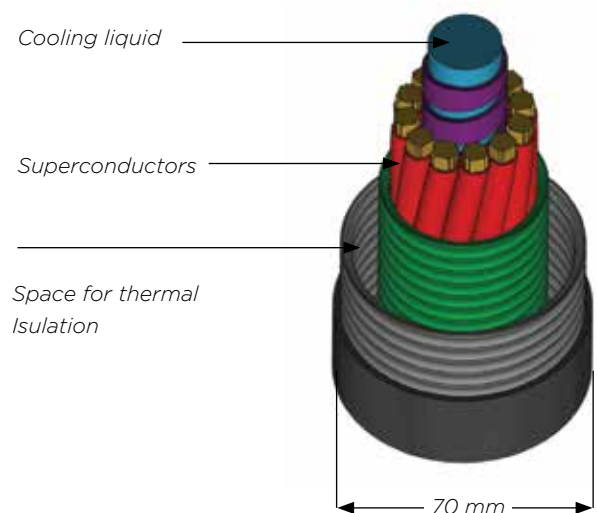
ICE[®]CABLE

ICE[®]CABLE is a superconducting system that delivers high power with medium voltage in an ultra compact size and with no thermal emissions.

Superconductors are future-proof, sustainable and open up new opportunities for you.

ICE[®]CABLE will enable you to meet the rising electricity demand by building new electricity lines faster at lower civil engineering costs and minimal impact to the urban infrastructure. Alternatively it is possible to use existing ductwork to renew the underground cable system with high power, emission-free and modular superconducting cables.

A quick construction and modular replacement makes this solution best in dense urban areas and where more electrical capacity is needed.



Superconductors are smaller, lighter and more efficient compared to conventional technologies.

They offer economic advantages, have a low environmental impact and no energy losses.

BENEFITS



Build your power grid system faster with modular elements



Reduce environmental impact and CO₂ footprint



Reduce your logistics efforts and save material



Use existing infrastructure, save space and costs

The requirements for the construction and operation of power grids are changing.

ICE[®]CABLE is the ideal technology to meet the actual and future challenges of modern distribution grids.

Situation in the past:

- Energy flow from HV (Producer) to MV/LV (Consumer)
- power sharing in meshes by impedances, not actively controlled

Present and future requirements:

- Omnidirectional energy flow
- Producers and Consumers in all voltage levels with changing roles
- Controlled power sharing by **ICE[®]CABLE**

SUPERCONDUCTORS DON'T WASTE ENERGY

Below their critical temperature superconductors carry very high currents without electrical losses.

This property allows the design and construction of highly efficient, ultra compact and lightweight energy transmission systems.

Comparing an entire conventional busbar system with a superconductor system, up to 90% of the energy can be saved.

ABOUT VISION ELECTRIC SUPERCONDUCTORS

We are pioneers in the field of efficient power transmission. We are curious, brave and sustainable.

VISION ELECTRIC SUPER CONDUCTORS is the avantgarde in the development of applications based on superconductor technology. Our core competence is the loss-free and safe transport of high currents.

We take care of your whole project: starting from the design and construction to the commissioning and maintenance, we deliver turnkey solutions.

We have decades of experience in the field of plant engineering. We deliver best quality - made in Germany.