

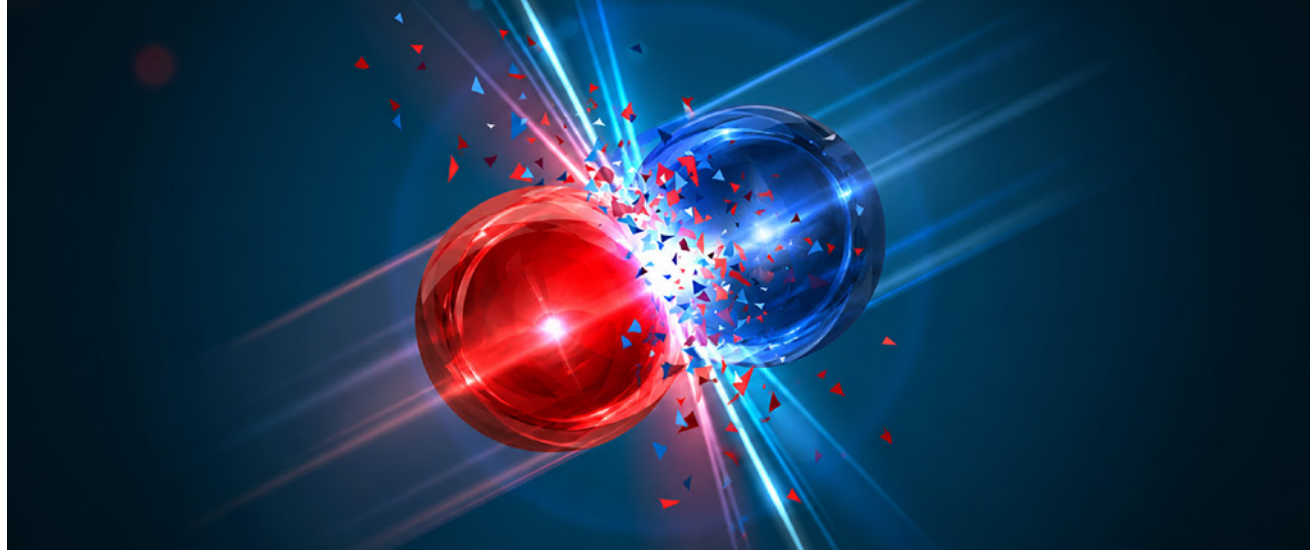


TURNKEY HTS SYSTEMS **THE SOLUTION FOR FUSION**

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PIONEERS IN
ELECTRIC POWER



THE CHALLENGE

Fusion reactors require **powerful superconducting magnets** to confine the plasma and enable sustained fusion. These magnets must generate **extremely high magnetic fields** while carrying enormous currents, often under demanding mechanical, thermal, and electromagnetic conditions.

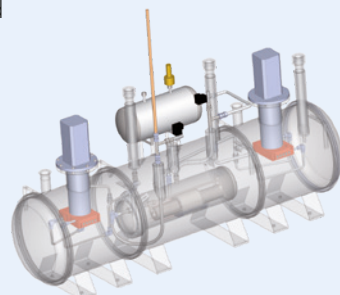
Make your life easier by choosing systems and conductors that were made to solve these problems.

THE SOLUTION HTS SYSTEMS FROM VESC

- **Turn-key systems** that are made to your specifications
- From **design and engineering to installation and commissioning**
- System connects at the **cryogenic level**, including **cooling systems**
- From **concept to completion**: we are with you every step of the way!

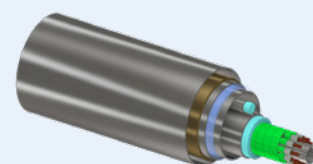
CURRENT LEADS FOR HTS MAGNETS

- Efficient, gas-cooled current leads
- Industrially tested and applied
- Temperature ranges from 4 to 77K
- Up to 200 kA



ICE®Wire

- Composite HTS conductors
- Industrially tested and applied
- Temperature ranges from 4 to 77K



YOUR BENEFITS

MULTIPLE DEGREES OF FREEDOM

Our systems are tailored to specific current, temperature and magnetic field requirements. The composition and geometry of the conductors can be adapted to suit a wide range of operating scenarios.

SAVE TIME AND MONEY

Reduce the development time and cost of your project with proven HTS systems. Predefined structures and a controlled production process result in a shorter time-to-market.

EXCEPTIONAL SCALABILITY

An optimized production process allows excellent scaling capabilities to quickly ramp up production.

PEACE OF MIND

No need to worry about high Lorentz forces, reliability or safety concerns. We will take care of it and let you focus on more important matters.

ABOUT VISION ELECTRIC SUPER CONDUCTORS

VESC develops **superconducting power systems** for the demanding electrical and cryogenic environments of fusion.

From **high-current current leads to HTS conductors**, we help fusion developers simplify the interface between their superconducting magnets and the power infrastructure that supports them.

Our goal is simple: reduce engineering complexity, shorten project timelines and provide reliable, industrially scalable solutions for tomorrow's fusion plants.

SUPERCONDUCTORS SAVE ENERGY AND COSTS

Superconductors conduct currents **without electrical losses**.

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

Save up to 90 % of the energy needed by conventional systems through a superconductive system and reduce your operational expenses.



OUR VALUE TO YOU

- Fast development cycles reduce time-to-market
- Reduce material costs and scope 3 emissions
- Increase efficiency and decrease CO₂ footprint
- Reduce operating costs and lower total cost of ownership

SERVICE AND KNOW-HOW FOR YOUR PROJECT

We deliver the following services for all high current, high power and superconductor systems!

- Basic, design and detail engineering
- Tender specifications
- Temperature, stress and force modelling
- Cross-section optimization and thermal load calculation
- Definition of materials and equipment
- Installation and operations manual creation
- Risk analysis, assessment and remedy measures
- Production and installation
- Maintenance and operational supervision

