Air-Core Reactors

Application

Bree's Air-Core Reactor has several applications, though it stands out as a current limiter in electrical circuit equipment. Its characteristics include the ability to work with many levels of nominal currents and BIL values in environments with a high degree of pollution.

One of the greatest competitive edges of the Bree Reactor is the possibility of project customization, as the equipment is produced to precisely meet the actual need of the electrical system.

Our Own Laboratory

Bree is a 100% Brazilian company and has its own laboratory that allows it to conduct all routine and type tests for Reactors.

As a result, Bree is capable of testing and certifying all of its Reactors, assuring good-quality production and a reliable supply.

- Our own laboratory and manufacturing plant are located in the state of Paraná.
- We are a company with ISO 9001, ISO 14001, and ISO 45001 certification.

Discover our Reactor portfolio

Neutral Grounding Reactor

It enables current limitation in a phase-to-ground fault and a temporary reduction in overvoltages formed from the instantaneous cutoff of the fault current, which increases the service life of circuit breakers.

Shunt Reactor

It performs compensation of the capacitive effects of transmission lines or systems operating on a low load or empty. It thus allows the grid voltage to be controlled, thus reducing electrical losses in systems with capacitive effects.

Inrush Reactor

It is connected in series to the capacitor bank to limit the inrush current in order to avoid the effects of overvoltage and overcurrent on the electrical system, as well as preserve the service life of the switching equipment.

Harmonic Filter Reactor

Passive harmonic filters are equipment used to reduce harmonic distortion in an electrical system. These filters are built from passive components, such as solenoid coils, reactors, and capacitors.

Short-Circuit Current Limiting Reactor

It is one of the most effective short-circuit current limiting devices. It reduces the stress on busbars, insulators, break switches, and other high-voltage devices. Using the current limiting reactor with an air core is the most practical, cost-saving way to limit current.

The current limiting reactors must be installed in distribution or transmission systems in which the calculated potential short-circuit current exceeds the breaking capacity of the associated elements.

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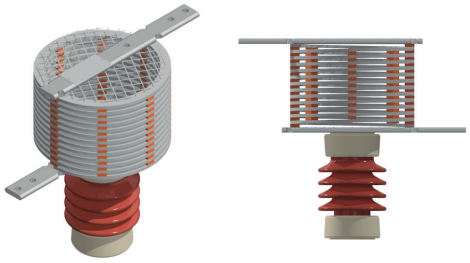
Design Features

Meet the main designs of Bree Reactors:

Profile Reactor

Used in applications such as inrush and short-circuit current limiters. It is optimal for when the reactor design requires small inductances and a large capacity to conduct nominal or short-circuit current.

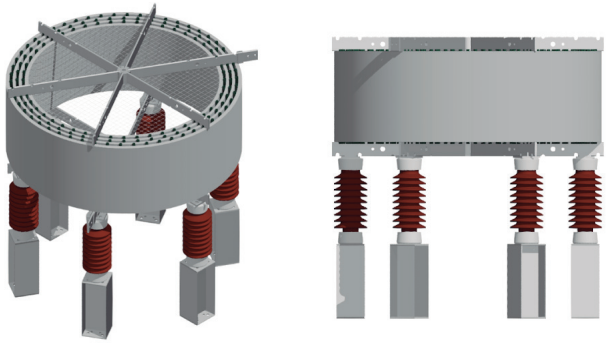


Wire Reactor

Because it has a smaller cross section, it is recommended for applications requiring a higher level of voltage, as it assures better insulation quality and mechanical robustness in physically large projects. These designs are only limited by the current capacity that they can conduct, whether load or short-circuit current.

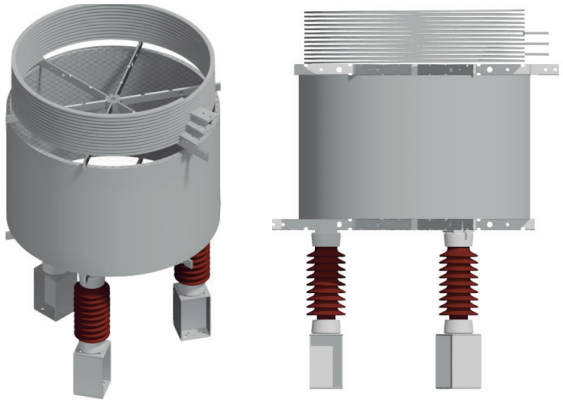
Multi-Cylinder Reactor

In order to optimize projects with wire reactors, the solution used are wire reactors in multiple cylinders. As the reactor is designed with multiple parallel cylinders, the reactor design increases the capacity to conduct current, raises mutual inductance, and thus provides a more compact and robust project.



Hybrid Reactor

The hybrid reactor is the customized solution from Bree to meet the need for a fine tuning of profile, wire, or multi-cylinder reactors for perfect tuning to the application circuit.



Accessories

Bird screen

With aims to protect the equipment and local wildlife, all Bree reactors for outdoor applications have bird screens made of fiber glass and epoxi resin.

Insulators

All Bree reactors are sized to meet the basic insulation level and mechanical voltage support, and are equipped with project-specific insulators that meet the actual needs of the environment where the equipment will be installed.

Pedestals (optional)

The pedestal is used to adjust the minimum axial distance from the cross joint, as well as to make sure that the ground influence from the base on the reactor performance is kept to a minimum.

Taps (optional)

Taps are used to perform the fine tuning of the equipment, which varies according to the application needs.

Corona protection (optional)

It is used in projects with a nominal operating voltage equal to or higher than 245kV.

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