POWER RESISTORS

- Neutral Grounding Resistors
- Generator Neutral Grounding & Leads Cubicles
- Inverter Braking Resistors
- Motor Starting & Control Resistors
- Cubicle Heaters
- Harmonic Filter Resistors
- Current Limiting Resistors
- RC Filters

REACTORS

- Current Limiting Reactors
- Neutral Grounding Reactors
- Shunt Reactors
- Harmonic Filtering Reactors
- Motor Starting Reactors
- Electric Arc Furnace Reactors
- Smoothing Reactors
- Line and Load Reactors
- Test Laboratory Reactors

TESTING SYSTEMS

- Turn-key Short Circuit Laboratories
- High Current Injection Test Sets
- R - L - C Load Banks

CURRENT LIMITING REACTORS

Current Limiting Reactors reduce short circuit levels to meet the system needs and reduce stresses on busses, insulators, circuit breakers and other high voltage devices. They are connected between the neutral of a system and earth for limiting the line to ground current under system fault conditions. They are also used as load sharing reactors for balancing the current in parallel circuits. Hilkar's current limiting reactors are manufactured up to 420 kV. These reactors are designed in a way to withstand the rated and fault currents for a certain period of time.

INRUSH CURRENT LIMITING REACTORS (DAMPING REACTORS) :

Inrush current limiting reactors are series connected with capacitors in order to limit the inrush currents that occur during their switching operations.

ADVANTAGES

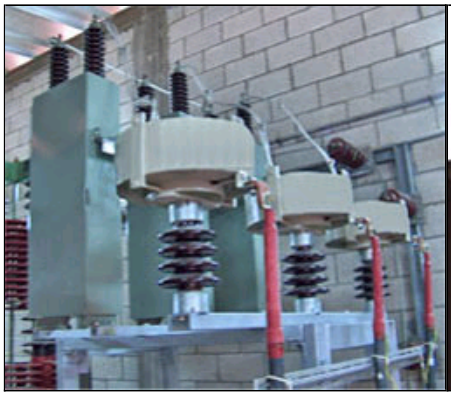
- Increases equipment and capacitor life
- Perfect mechanical strength to withstand high short-circuit forces.
- Limited temperature rise enables longer lifetime.
- Special surface protection against UV and pollution class IV areas.
- Maintenance-free design

STANDARD

EN 60289 or depending on customer requirements.

FEATURES

- Air core
- Dry type
- Side by side, delta or vertical arrangement depending on space availability
- Outdoor and indoor
- Single phase or three phase
- Enclosures are available on demand
- Elevated support stands are available
- Suitable corona rings are provided with reactors over 170 kV in order to eliminate visible corona
- Aluminum or copper winding
- RAL 7032 or other colors
- - 40 ºC / + 55 ºC ambient temperature range
- F class (155 ºC) or customer specific design
- Taps are available on demand
- Fiberglass spacers are used in order to provide ease of cooling
- AN (air-natural) cooling method



INSULATION

. F class (155 ºC) film insulation or epoxy resin reinforced fiberglass.
. Epoxy based paint & insulating varnish.

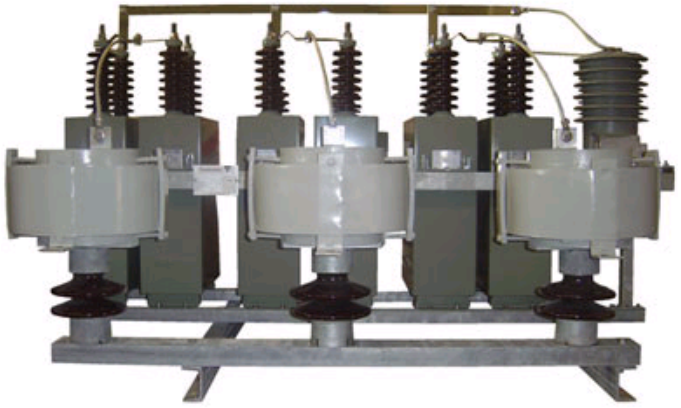
INSTALLATION

The height and the diameter of the reactor can be adjusted to customer specific needs in order to meet unusual space requirements.

Complete installation guidelines are provided with the reactors in order to meet required magnetic clearances on close metallic structures. Each reactor is supplied with an INSTALLATION GUIDELINES that specifies minimum magnetic clearances for the reactor.

SUPPORT STANDS

Aluminum, hot dip galvanized steel or concrete support stands are designed for specific applications.



Irrush Current Limiting of Power Capacitors

LOSSES

All Hilkar Electric reactors are computer designed in order to minimize investment and operating losses.

TESTS

All the routine tests are performed in accordance with EN 60289 or other standards depending on customer request. Type test reports are available on request. All the test reports are submitted to customer.

Basic testing program includes some or all of the following tests:

- Routine Tests (Inductance, Resistance, One Minute AC Insulation Voltage Withstand Test and Impulse Voltage Withstand Test)
- Short Circuit Withstand Test
- Temperature Rise Test
- Sound Level Test
- Seismic Test

QUALITY ASSURANCE

Hilkar maintains a complete quality assurance program including ISO 9001 and other major industry standards in it's manufacturing plant.

TECHNICAL SUPPORT

Hilkar provides complete technical assistance to contractors and end customers for applications, design, calculations and field installation. All Hilkar reactors are custom designed for different applications by considering the voltage, current, inductance, size, loss characteristics that are required to provide the most efficient design at the most economical prices.