

## 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

## SHUNT REACTORS

Shunt reactors are used in order to compensate capacitive reactive power generated by long and lightly transmission lines, thus allowing the flow of more active power through the system. Shunt reactors are normally connected to the tertiary winding of the main transformer.

In high power and high voltage systems, shunt reactors should be used with RC filters because in such systems switching transient voltages are extremely high and that's why switching devices may be damaged.

### ADVANTAGES

- 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

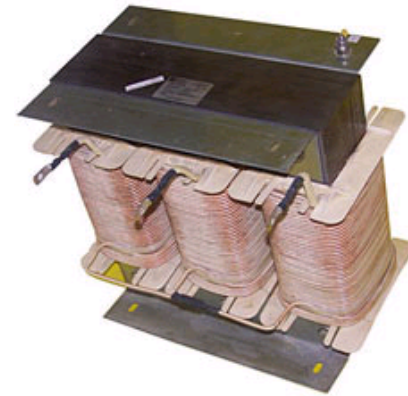
### STANDARD

EN 60289 or depending on customer requirements.

### FEATURES

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

### INSULATION



- . F class (155 °C) 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.

## 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.

