

CAPACITORS FOR INDUCTION FURNACES



TECHNICAL SPECIFICATIONS:

OUTPUT	: Upto 8,400 kVAr.
VOLTAGE	: Upto 4,000 Volts AC.
FREQUENCY	: Upto 20,000 Hz.
TAPPINGS	: Tapped / Untapped.
PHASE	: Single Phase.
COOLING	: Water Cooled.
MOUNTING	: Horizontal / Vertical.
CASING	: Aluminum / Brass.
CASE DESIGN	: Isolated (Dead) / Live Case.
PROTECTION	: Thermal & Over Pressure.
STANDARDS	: IEC & EN:60110-1/2, ISS:9251



... Enhancing the power of Induction !



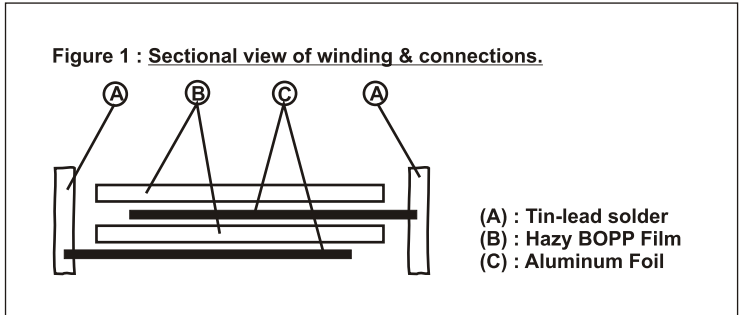
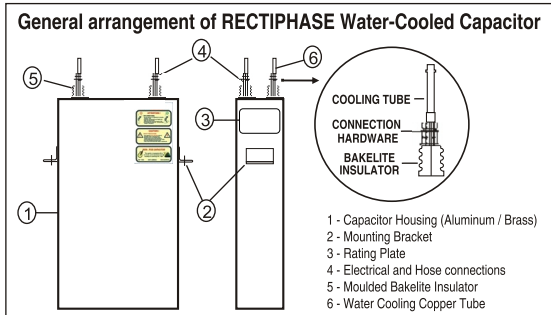
Capacitors for every segment of the Power industry, e.g. MV / HV Power Capacitors, and for special applications such as Induction Heating & Melting, Harmonic filters, High Energy Storage/Discharge, Surge protection, etc. Production of these capacitors are carried out in an ISO-9001:2008 accredited plant.

APPLICATION:

Medium & High Frequency Water-Cooled Capacitors are specially designed for use in Inductive Heating & Melting plants for power factor improvement and for tuning of the circuits for varying inductive loads. For the given application, the performance of these capacitors, demand extreme levels of Reliability, Safety and Life expectancy. Therefore all Capacitors are extensively endurance tested, to comply with international & IEC specifications.

CONSTRUCTION:

After winding of the elements with Hazy BOPP Film (dielectric) interleaved with aluminum foil (electrodes) the connections are made by a special process of soldering the extended / protruding section of the aluminum foil of each element (Ref. Figure 1) guarantying excellent electro- mechanical contact and low tan-delta (Tan δ), resulting in low operating temperature and enhanced operating life. The un-divided (single)/ sub-divided (multiple) sections are connected accordingly to provide for the required single / multiple section Capacitance / kVAR out-puts.



TECHNICAL DATA:	
DIELECTRIC	: Electrical grade hazy BOPP Film.
ELECTRODE	: Aluminum foil.
INSULATING FLUID	: Non-PCB, Biodegradable, non-toxic.
OUT-PUT	: Up to 8400 kVAR.
RATED VOLTAGE	: Up to 4000 Volts AC.
RATED CURRENT	: Not exceeding 4000 Amps.
RATED FREQUENCY	: 50 Hz - 20,000 Hz.
TERMINALS	: Un-Tapped (Double cooled): All terminals water-cooled. Tapped (Single cooled): 2 water-cooled terminals + taps.
TEMPERATURE CATEGORY	: Up to 50°C.
OVERLOAD LIMITS	: Voltage: 1.05 X U_n for maximum 12 hours/day. Current: 1.15 X I_n
TERMINAL INSULATORS	: Electrical grade molded bakelite.
TERMINATIONS	: Extruded Brass, with non-magnetic connection hardware.
PROTECTION	: Thermal & over-pressure cut-off (optional). Residual Voltage: Discharge device is provided only on request.
UNIT MOUNTING	: Horizontal -terminals side wards / Vertical - terminals up wards.
COOLING MEDIUM	: De-mineralized water.
REQUIRED WATER FLOW	: Minimum 5 L/min.
COOLING TUBES	: ½" Electrolytic grade copper tube.
REF STANDARDS	: IEC & EN:60110, ISS: 9251, VDE-0560 (Part-9).

COOLING WATER REQUIREMENTS:

Performance and operating life of these capacitors are determined by the cooling conditions, hence effective heat dissipation is vital to achieve desired operating temperature and life expectancy. Water-cooled capacitors are provided with high thermal conductivity copper cooling coils to facilitate the flow of cooling water. As water-cooling plays a vital role, related parameters such as water quality, required minimum & maximum water flow & pressure, in-let / out-let water temperature, assume critical importance and must be closely monitored to achieve desired results. (Refer instruction manuals & recommendations).

INFORMATION REQUIRED WITH INQUIRY / ORDER:

The following data should be furnished with an inquiry or an order:

- Rated output: kVAR
- Capacitance: C_n
- No of sub-divided sections:
- C_n values of equal / un-equal sub-divided sections:
- Rated voltage: Volts AC
- Rated frequency: Hz
- Cooling: Air / Water. (Single / Double cooled)
- Casing Design: Dead case / Live case.
- Protection: Over-pressure / Thermal cut-off
- Special requirements:

EMERGENCY REPLACEMENTS:

We supply capacitors as replacements for induction furnaces, with every effort to match required dimensions. A sketch, showing terminal arrangements and case dimensions must be provided for evaluating the possibility of such supplies.