

RECENT DEVELOPMENT

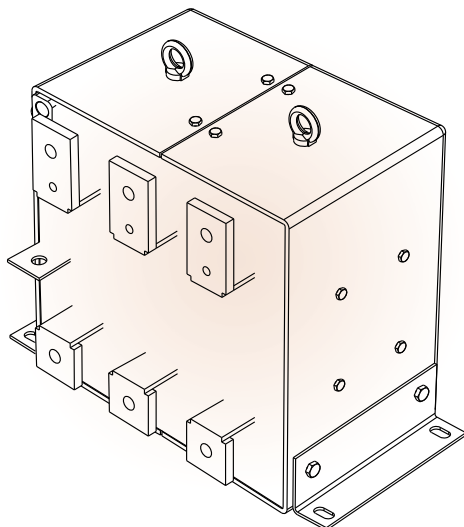
THE “COLD CHOKE” ENSURES LESS POWER LOSS AND COOLS THE SURROUNDINGS!

THE INNOVATION

- New configuration of the integral water cooling reduces the output power losses within the control cabinet to a minimum
- At certain values for the inlet temperature of the cooling medium the choke can even cool the surroundings

THE BENEFITS TO YOU

- Smaller cabinet, because there is no need for additional cooling equipment such as fans or air-water heat exchangers
- In some cases, complete elimination of the control cabinet if appropriate connection arrangements are made
- Solid construction of casting compound within the housing provides the ideal basis for use in rail vehicles and protects the windings and core during transport and installation
- Cost saving and maintenance-free due to the elimination of fans or air-water heat exchangers



Output choke of a 300kW inverter. Winding and core completely encapsulated, only the connection lugs, the earth connection and the water connections are visible. WxHxD: approx. 300x330x250mm Weight: approx. 65kg

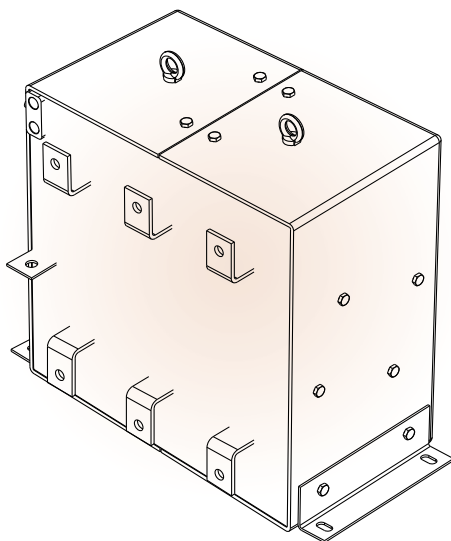
THE DESIGN

- Iron core with air gaps and a winding of copper or aluminium
- Flexible arrangement of cooling elements within the choke
- If the iron losses are high the iron core can be preferentially cooled, otherwise the windings are preferentially cooled
- Installation: Direct connection between the components of the choke and the cooling system ensures continuous heat transfer
- The choke is encapsulated within an aluminium housing by means of a PU resin with low thermal conductivity
- The cooling elements are internally piped, so that all that is needed is to connect the inlet and outlet for the cooling medium
- Electrical connections are executed as flat terminal lugs or as stranded cables
- The choke design ensures good protection against mechanical damage and against the ingress of moisture

THE MEASUREMENTS

Laboratory measurements under operating conditions have confirmed the “cold choke” performance:

- Compared to air-cooled chokes of the same electrical ratings (with surface temperatures of 120 °C) the surface temperature of the cold chokes was 55 °C, only 5K higher than the temperature of the cooling medium



Line choke of a 300kW inverter. Winding and core completely encapsulated, only the connection lugs, the earth connection and the water connections are visible. WxHxD: approx. 435x445x280mm Weight: approx. 160kg