

Technical Details

The design and the manufacturing of converter meanwhile are more than 60 years a profession of the company. Intensive research and development and a number of patented constructions offer a technically fully developed, practically orientated product to our customers.

Because of our long run experience and the usage of most modern calculation, design and production methods and a flexible development concept we can supply tailor-made converter solutions for every operating field. These possibilities are completed by extensive and high grade production control, which guarantee your satisfaction with our product.

Hitzinger converter are available in every desired design for use in industry, on airports, on ships or for offshore applications and have proofed themselves under most unfavourable climatic and heaviest mechanical and electrical conditions all over the world.

Power range

- **Power:** 10 to 2000 kVA
- **Voltage:** up to 11000 V
- **Frequency:** 16 2/3 to 800 Hz

Design

All Hitzinger converters are designed as brushless rotating field machines. The stators are mounted inside a rugged, welded steel housing and protected against twisting. The rotors, standard equipped with damper windings, and the exciter rotor are shrunk onto the shaft and in addition protected with wedges against twisting. The three phase exciter machine is designed as a loose mounted alternator and situated at the air inflow side.

The fan mounted at the air outflow side is exactly dimensioned. For all framesizes a sheet metal construction depending on the direction of rotation is used, which is torsional vibration proof, very powerful and silent.

The terminal block are mounted on the converter and allow an easy connection of the machine. The cable entry is equipped with a blank flange, which optionally can be equipped with cable or PG screws. The terminal normally consists of 4 poles but it is also possible to supply 6 or more poles.

Electrical Design

When dimensioning and designing the converter we pay utmost attention to a high mechanical stability, a long operating life and an efficiency optimized design. Because of our flexibility of design we are in the position to fulfill specific needs of our customer.

The stators and rotors consist of laminated dynamo sheet metals. The stators are pressed into the alternator housing and welded and so they withstand the forces at short circuits.

The rotors are shrunk onto the shaft and equipped with damper windings for 100% unbalanced load, parallel operation and for an asynchronous start up of the motor. The field winding is protected against centrifugal forces with supports.

The isolation corresponds to class F acc. VDE 0530. All windings are vacuum-pressure impregnated with a two components resin. This process guarantees a complete soaking of the windings and an almost pore-free structure with an optimal stiffness of the coil. The main stator is exposed to an additional dipping process and protected with a salt- fungus- and wear resistant, elastic coat. ("dip and bake").

The three phase exciter machine consist of one external.pole alternator. The exciter winding is mounted onto the shaft. The silicon rectifier bridge, the overvoltage suppressor, the start-up thyristor and the ignition unit are mounted at the polished section of the shaft and so easy of acces.