DALEX SCHWEISSTECHNIK

MIDDLE FREQUENCY TECHNOLOGY

METHOD

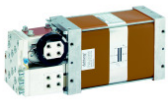
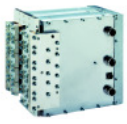
In a special inverting controller, the 3-phase mains voltage is rectified and re-formed into a 1000 Hz. alternating voltage. Afterwards this voltage is transferred to a compact, tightly-coupled transformer and rectified again on the secondary side. A direct current is thereby created for welding, which as a result of the 1000 Hz, can be rapidly and exactly regulated.

APPLICATION AREAS

- Short-time welding (e. g. ring projection), partly as replacement for capacitor discharge welding machines
- Welding of galvanised sheets
- Bonding different materials such as non-ferric metals
- Welding of coated materials
- Use in transformer hand guns, robot guns and special free-standing welding machines

ADVANTAGES

- Small weight-saving transformers for application in welding guns and industrial robots
- Very low inductive losses via high-quality direct current (suitable for large secondary windows)
- Better control possibilities, reactions can take place inside a time span of 1 ms.
- Rapid upslope speed and thereby a high energy input in a very short time
- Symmetrical mains supply loading
- Low own impedance
- Low cooling-water requirements
- Series connection of all cooling circuits
- Secondary protective switching above size MF 180
- Diodes max. loading in pairs
- High performance with low size

TECHNICAL DATA					
Power rating at 20 % ED	80 up to 90 kVA	160 kVA up to 180 kVA	250 kVA up to 300 kVA	500 kVA	700 up to 1000 kVA
Idling direct voltage*	6.3 up to 8.3 V	8.0 up to 10.2 V	11.8 up to 16.0 V	11.8 V*	8.4 up to 9.4 V*
Mains voltage	500 V, 1000..1200 Hz	500 V, 1000..1200 Hz	500 V, 1000..1200 Hz	500 V, 1000..1200 Hz	500 V, 1000..1200 Hz
Mains voltage inverter	400 V, 50 Hz	400 V, 50 Hz	400 V, 50 Hz	400 V, 50 Hz	400 V, 50 Hz
Weight	17 kg	26,5 kg	33 kg	54,5 kg	167 kg
Cooling water reqd.	6 l/min.	6 l/min.	6 l/min.	8 l/min.	24 l/min.
Dimensions	241 x 150 x 108	329 x 160 x 127	389 x 160 x 127	402 x 200 x 162	465 x 330 x 440
Secondary circuit	Cu silver-plated	Cu silver-plated	Cu silver-plated	Cu silver-plated	Cu silver-plated
No. diodes	2 pcs.	4 pcs.	4 i.e. 6 pcs.	6 pcs.	10 pcs.

*other idling voltages upon request

MIDDLE FREQUENCY TRANSFORMERS

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