

# Magnetic field device MGFE

The device generates strong and precisely controlled magnetic fields in magnetic field cables, for the controlled magnetization or demagnetization of steel parts. By using a microprocessor-based control and power electronics, precisely adjustable and reproducible magnetic field sequences are made possible.

## **Technical data MGFE-70:**

- Supply: 3x380...480VAC 50/60Hz, 16A..32A (at 16A reduced power)
- Output tension: ~400VAC
- Repeatability of current profile: better than 99.5% (at 50% of the maximum current)
- Dimensions WxHxL: ~680x530x380mm
- Weight: ~24kg (without power cable and magnetic field cables)
- Mobility: Rollable case with pull-out handle

*(MGFE-30 single phase supply 1x200...240VAC on request)*

## **Magnetic field cables:**

- Different conductor cross sections and lengths (compromise weight handling/heating):
  - Magnetic field cable EK-L-15-11: Ø cable 16mm, weight ~10kg, length 15m
  - Magnetic field cable EK-L-8-11: Ø cable 16mm, weight ~6kg, length 8m
  - Connection adapter EKK-ML-11
- Maximum theoretical field strength with 4x EK-L-15 and winding diameter 500mm: approx. 90kA/m (30'000AW). (by a factor 1,5 lower, when using function magnetization)
- Extension of magnetic field cables by coupling

## **Other coil systems:**

- Tunnel coils of the SSM series
- Special coils

## **Technological function demagnetization:**

- Low frequency sine wave pulse demagnetization with 1Hz for high penetration depth
- Progressive frequency sine wave pulse
- Pulse length between 1s and 30s, depending on needed application
- Setting of all relevant process parameters (amplitude, pulse duration, rate of field increase and decrease etc.)
- Further technological field control functions for special applications

## **Technological function DC magnetization:**

- Adjusting the polarity, amplitude and duration of the DC sequence

## **Technological function magnetic symmetry:**

- Adjustment of the residual magnetism in fluxing direction

## **Typical application fields:**

- NDT (MPI, ECT)
- Rotating equipment
- Mechanical engineering, tool manufacturing
- Steel industry, supply parts
- Welding
- R&D



# Application examples

