Magnetic field device MGFE-70

The new 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:**
- **Supply:** 3x380...480VAC 50/60Hz, 16A..32A (at 16A reduced power)
- **Output tension:** ~400VAC
- **Dimensions WxHxL:** ~680x530x380mm
- **Weight:** ~22kg (without power cable and magnetic field cables)
- **Mobility:** Rollable case with pull-out handle

**Technological function demagnetization:**
- Low frequency sine pulse demagnetization below 1Hz for high penetration depth (frequency automatically selected with magnetic field cables)
- Typical pulse length between 10s and 30s, depending on needed precision
- 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 amplitude and duration of the DC sequence
- Setting options: DC sequence of constant amplitude; DC sequence of variable amplitude

**Repeatability of current profile:** better than 99.5% (at 50% of the maximum current)

**Magnetic field cables:**
- Different conductor cross sections and lengths (compromise weight handling/heating):
  - Magnetic field cable EK-M-17: Ø cable 14,8mm, weight ~7kg, length 17m
  - Magnetic field cable EK-L-15: Ø cable 17,2mm, weight ~9kg, length 15m
  - Connection adapter EKK-ML
- 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)
- Use of shielded magnetic field cables with electrical protection function (in case of cable jacket damage)
- Extension of magnetic field cables by coupling

**Typical application fields:**
- NDT (MT, ET)
- Rotating equipment
- Mechanical engineering, tool manufacturing
- Steel industry, supply parts
- Welding
- R&D