

RE + DN

High-performance rod/tube demagnetizer



- > The special coil module generates extremely high field strengths in continuous operation
- > Optimized to demagnetize bars and tubes
- > The demagnetizing frequency is adjusted in the factory to the expected wall thicknesses of the parts and to the conveying speed
- > The power module generates a high magnetic field strength even at a higher demagnetizing frequency
- > A high demagnetization performance is achieved from the forced coil cooling at 100 % switch-on time
- > Field strengths exceeding 190 kA/m are reached using pulse demagnetizing
- > The coil is housed in a rugged cast metal enclosure, which largely shields the stray fields



Maurer Magnetic

Magnetically pure

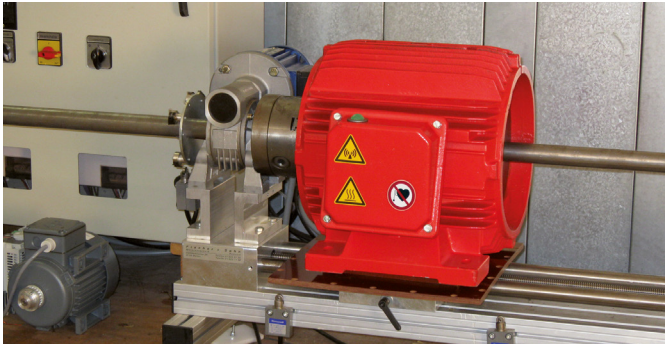
Series RE demagnetizers combine new technologies and a rugged design with maximum performance and cost-effectiveness. As compared to conventional continuous flow systems, which typically reach a field strength of 10–30 kA/m, the RE demagnetizing coils reach values of 60–90 kA/m. This corresponds to up to 10 times higher performance. Coils designed for continuous operation are especially well suited to efficiently demagnetize large volumes of rods or tubing material. Furthermore, the Maurer Degaussing® power modules also allow a pulse demagnetization capable of reaching field strengths that exceed 190 kA/m. Materials of different diameters can be successfully demagnetized without having to adjust process parameters and without any

performance loss. Integration into automated production systems is extremely easy thanks to the standard control interfaces.

In 2001, Maurer Magnetic developed the Maurer Degaussing® demagnetizing process, for which a patent was applied for. With our many years of experience and the expertise we have acquired over time, our technology has been continuously enhanced, while our new relevant patents supplement it. Our in-house production also allows us to implement customer demands quickly and unimpeded, while ensuring our quality standards at the same time.

Applications

Powerful coils for hard industrial applications



The material is transported at a constant speed through the coil during demagnetization. The demagnetizing process is the result of a continuous material flow through the coil.

Suitable for high material throughput and solid material

The RE coil modules allow rods or tubes to be demagnetized with throughput speeds of up to 3 m/s. Thanks to forced air cooling directly inside the coil, very high magnetic field strengths can be generated without directly overheating.

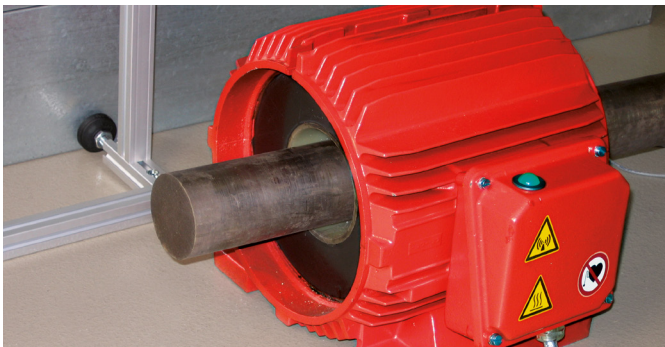
When stopping production while material still remains in the coil, the stepped shut-down sequence coming from the Maurer Degaussing® process must be activated to prevent very rapid, overheating of the material. This has to be done manually or via the integrated interface.

What demagnetizing with RE + DN means for you:

- > The ability to meet the customer's residual magnetism limits
- > Demagnetize larger material quantities (rods and continuous material)

Range of parts

- > Semi-finished products in large quantities
- > Components after a crack test (alternating and direct current crack testing)
- > Continuous production of rods and tubes



Efficiently and consistently demagnetizes with an up to 90% degree of filling.



Especially suited to demagnetize rods, tubes, profiles and even individual parts. The demagnetization process at the end of the rod is terminated with a decreased Maurer Degaussing® pulse.

Cutting-edge technology

For best possible demagnetizing



This power module includes the power, interface and control elements of the demagnetizing system. The connection cables between the coil module and the power module are pluggable. By default, the power module is configured in continuous mode; pulse operation is also available as an option.

Power Module DN1100–1850

- > Patented pulse demagnetizer, guaranteeing highest possible material demagnetization
- > Can be easily connected into automated production lines thanks to 24 V I/O interface
- > Interface for trigger sensor for autonomous switch-on and switch-off available as standard
- > Two power module types available
- > Operating status lights
- > Intuitive, reliable operation
- > Demagnetization in pulse mode
- > Robust design suitable for industrial applications
- > Versatile system

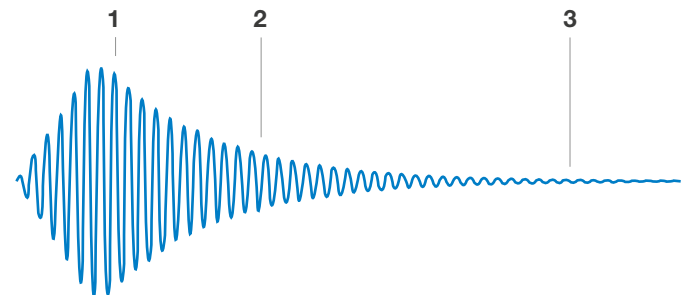


The power module is also available for integration into existing switch cabinets. Please refer to the “DN-Integration” brochure for more information.

Maurer Degaussing® technology

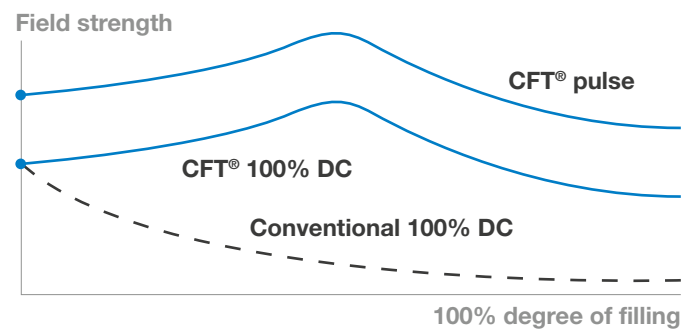
The Maurer Degaussing® process works with pulse demagnetization patented by Maurer. The intensity, amount and precision of the polarity reversals, and the frequency are implemented in an optimum manner by the Maurer-Degaussing® procedure. This package enables demagnetisation that cannot be performed with conventional methods:

1. Short-term high magnetic field strength
2. High number of monotonically decreasing vibrations
3. Run-out exactly to zero magnetic field



CFT® – Constant Field Technology

The patented CFT® (Constant Field Technology) keeps the magnetic field consistently high at the productive frequency regardless of the coil fill level. The power is increased further in pulse mode.



Technical data*

Coil module		RE 50	RE 110	RE 220	RE 300
External dimensions ¹ (mm)	W	415	525	645	725
	H	310	445	550	625
	D	325	415	535	615
Active opening (mm)	D	50	110	220	300
	D	200	200	200	200
Weight	kg	63	88	122	153
Degree of protection IP		50			
Maximum field strength ^{2,3}	kA/m	86	91	69	60
Duty cycle		S1, 100%			
Demagnetizing frequency	Hz	Designed customer-specific			

Power module		DN 1100	DN1850
External dimensions (mm)	W	600	
	H	600	
	D	350	
Power supply	VAC Hz	3PE 380 – 480 50/60	
Weight	kg	45	50
Degree of protection IP		51	
Peak current ^{3,4}	A	35	53
Internal fuse		20	
Suitability for automation		Yes	

Options

- > Base
- > Process monitoring
- > Safety function STO (Safe Torque Off)
- > Power selection (3 levels)
- > Shielding chamber
- > Power module as an integration variant
- > Fieldbus coupler WAGO or Beckhoff
- > Field Compensation⁵
- > Pulsed operation UL approved material

Delivery includes

- > RE + DN (optional base)



¹ Approximations, ² Higher field strengths can be generated in pulse mode, ³ Effective value lower by a factor of 1.41,

⁴ In continuous operation it is 1.5 times higher, ⁵ For compensation of static fields (e.g. geomagnetic field)

* All informations are without guarantee

