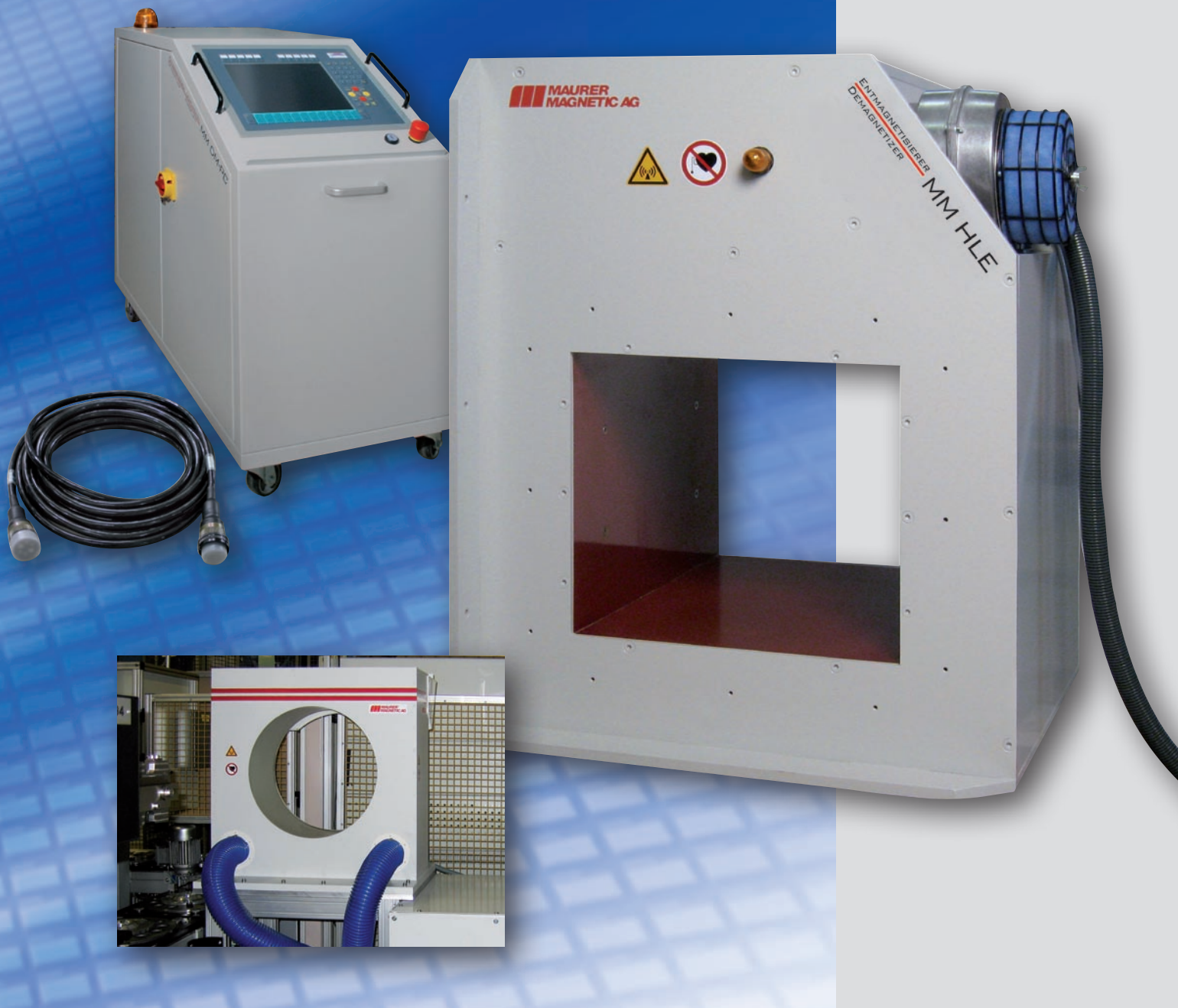


# Product Program High-Performance Demagnetizers



**FMT**<sup>®</sup> Field Multiplier Technology<sup>®</sup>

**CFT**<sup>®</sup> Constant Field Technology<sup>®</sup>

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# State-of-the-Art technology to meet future requirements

Maurer-Degaussing®-Technology



The high-performance demagnetizers are the most powerful products in Maurer Magnetic's demagnetizer line. The patented Maurer Degaussing Technology has been perfectly implemented into these products, and demagnetizes any parts. Magnetically hard materials, interior components of shielded parts, or large volumes of bulk materials are completely demagnetized by the magnetic field, which reaches field strengths of up to 400 kA/m in powerful coils. Fully flexible cable coils even ensure the demagnetization of large parts that weigh up to 50 tons.

## Functionality

The fully-automatic demagnetization process demagnetizes the material within a few seconds with a powerful degaussing field pulse. The unit's operation can be manual or integrated into an automated production process.

## Modular configuration

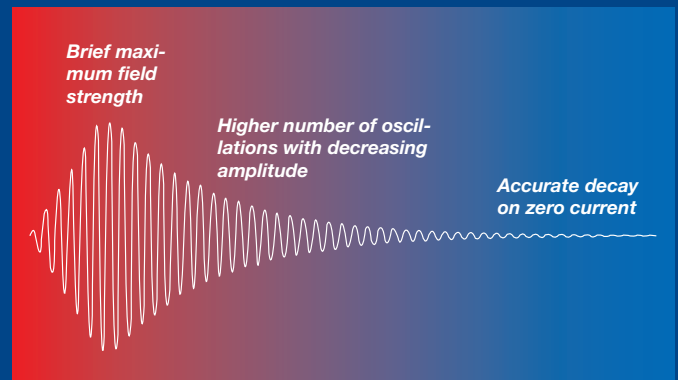
The demagnetization system is modularly structured into the MM DM power modules, the MM HLE coil modules or other special coils. This means all demagnetizers can be implemented extremely flexibly. Thanks to the fact that the coil is separate from the MM DM power module, operators do not suffer undue exposure to the electromagnetic field. Various coil modules can be operated without adjustment using a mobile MM DM power module.

## Reliability in our solutions

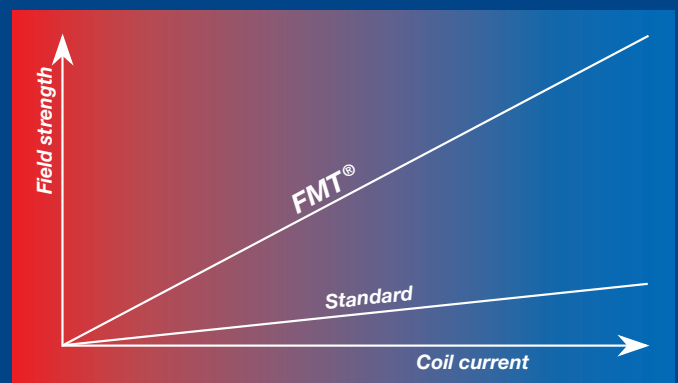
The field strength factor necessary to demagnetize the parts is predetermined by tests and experience. This allows choosing or designing the optimal coil and power module, taking into consideration each customer's specific situation.

## Characteristics

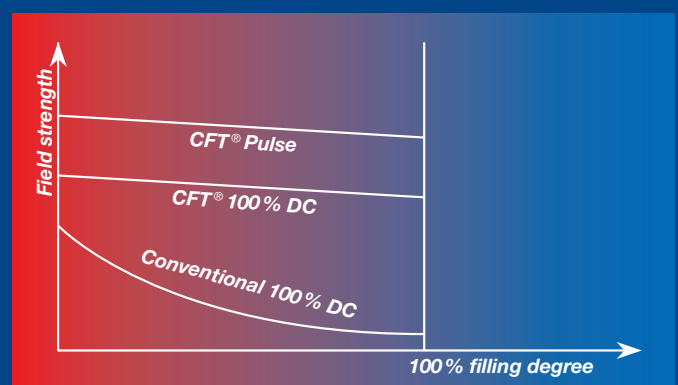
- Process-safe demagnetization of even the most difficult magnetic parts
- Productive demagnetization of large volumes of bulk material or massive individual parts
- Demagnetization down to the level of earth's magnetic field
- Degaussing field strength of up to 400 kA/m
- Ready for process automation
- Power factor correction



Intensity, number and precision in the process of decreasing pole reversals, and the choice of the frequency. These parameters are optimally set with our demagnetizing devices.



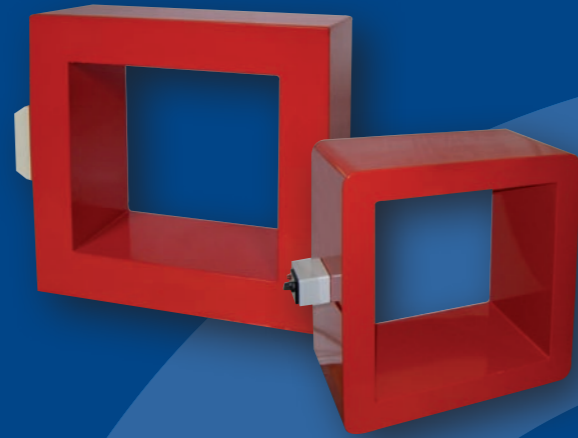
FMT® (Field Multiplier Technology®)  
High levels of field strength at moderate coil current



The CFT® (Constant Field Technology®) keeps the magnetic field constantly raised, regardless of the filling degree of the coil. More power available with pulse mode. CFT® patented technology.

### Demagnetization with CT-UDM universal coils

Different kinds of parts can be demagnetized with CT-UDM coils. The parts are placed inside the coil and are demagnetized within a few seconds. Universal coils are generally used in addition to other coils, such as cable coils or the MM HLE coil.



### Demagnetization with the MM HLE high-performance coils

The MM HLE high-performance coils are generally used in industrial environments and automated production lines. The active opening and the field strength are tailor made.

Typical applications are:

- Demagnetization
- at the beginning of washing processes
- in preparation for welding work
- for compliance with technical requirements



### Demagnetization with cable coils

Large parts are demagnetized using flexible cables. The cables must be wrapped around the part to be demagnetized. The degaussing pulse removes the magnetism from the part.



### MM DM power modules



### Demagnetization with the MM HLE high-performance coil integrated into a protective housing

We recommend using the protective housing in manual working environments for the MM HLE high-performance coil. The housing protects operators and other personnel from unwanted exposure to the electromagnetic field. The active opening of the coil is available horizontally or vertically on customer's request.



### Customer-specific solutions

Multiple-stage demagnetization for complex welded structures.



Removing magnetism from parts for electron beam welding application. Compensation for the earth's field is done by using 3D-Helmholtz coils.



Continuous demagnetization of bars/tubes at transportation speeds of up to 3m/s with the MM RE110 coil.

Demagnetization of completely assembled transmission parts for the automotive industry by a powerful degaussing field pulse.



# Power modules

The MM DM power modules contain the power electronics, interface and control processor of the demagnetization system. The power module is detachable from the coil module. Three different standard power modules are available, each with a different range of features.

In cases where standard solutions are not suitable, customer-specific power modules can be designed. For example for your interface needs, specific power requirements, emergency OFF requirements, etc.

Type	MM DM-P	MM DM-PC	MM DM
Available performance	MM DM 110, DM 140, DM 200, DM 240		DM 36...DM 400
Maximum current	110...240 A		36...400 A
Exterior dimensions W x H x D	550 x 1060 x 1150 mm		variable
Mobility	Power module cabinet movable on 4 rollers		–
Line power supply	3 x 380...440 VAC 50 / 60 Hz, 63A-CEE fuse		3 x 380...440 VAC 50 / 60 Hz, fuse variable
Protection class	IP 50	IP 50	variable
Manipulation	Control switches	PC with touch screen	Control switches
Interface	15-Pin D-Sub 24 V I/O	15-Pin D-Sub 24 V I/O	15-Pin D-Sub 24 V I/O
Ready for automation	(yes)	(yes)	yes
Pulse monitoring	–	yes	–
Operation features	Pulse activation Manual switches Indicator lamps 10 power levels	Pulse activation PC with touch screen Indicator lamps Continuous power level	Pulse activation Indicator lamps Display
No. of demagnetization programs <sup>1</sup>	4	Unlimited <sup>4</sup>	1
Offset settings <sup>2</sup>	Preset	yes	Preset
Continuous demagnetization <sup>3</sup>	–	yes	yes
Automatic detection of connected coil	yes	(yes)	–

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<sup>1</sup> The demagnetization program defines the frequency and the form of the degaussing pulse.

<sup>2</sup> The offset settings superimpose a static field on the demagnetization process, e.g. to compensate the earth's magnetic field. Offset works only with cable and universal coils.

<sup>3</sup> During continuous demagnetization, the degaussing field stays at constant amplitude. This is typically used to demagnetize very long parts.

<sup>4</sup> With the MM DM-PC, four demagnetization programs can be selected through the 15-PIN D-Sub interface; or an unlimited number manually.

# Coil modules

The strong magnetic field required to demagnetize the object is created by the coil modules. Our wide range of coil modules allows us to offer a standardized and efficient solution in various applications.

High-performance coil module	MM HLE
Active opening W x H	100 x 100 up to 1000 x 1000 mm
Field strength, peak <sup>1</sup>	Typically 100 kA/m up to 400 kA/m
Pulse rate	Typically 2 up to 6 pulses / min.
Demagnetization frequency	Typically 10 up to 30 Hz
Protection class	IP 41

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## Protective housing for MM HLE coil module

Exterior dimensions W x H x D	1990 x 1615 x 1080 mm
Max. coil-active opening MM VE	520 x 520 mm

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## Cable coils to demagnetize large parts

<b>Degaussing cable K5/6-15*</b>	Weight ~5 kg, length 15 m, may be interconnected several times (max. recommended length 45 m)
<b>Degaussing cable K8/10-30*</b>	Weight ~40 kg, length 30 m, may be interconnected several times (max. recommended length 150 m)

\* other lengths on request

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## Universal coils CT-UDM

Coil module	CT6-UDM	CT7-UDM	CT8-UDM
Active opening W x H	400 x 400 mm	550 x 550 mm	750 x 550 mm
Max. field strength, peak <sup>1</sup>	Up to 75 kA/m	Up to 50 kA/m	Up to 50 kA/m

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## Coils to demagnetize bars/tubes

Coil module	MM RE 50	MM RE 110	MM RE 220
Active opening diameter	50 mm	110 mm	220 mm
Max. field strength, peak <sup>1</sup>	at 30 % duty cycle up to 125 kA/m	at 30 % duty cycle up to 95 kA/m	at 30 % duty cycle up to 90 kA/m
Optional	Compensation coil to compensate static fields (e.g. the earth's field), air cooling		

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## Customer-specific coil modules

In cases where standardized solutions are not suitable, customer-specific solutions can be created.

Coil size	Coils with active openings of several meters in size can be realized
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<sup>1</sup> Divide by 1,41 to obtain RMS value

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Magnetizing & Demagnetizing Technology



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