

## SE + DN

Demagnetizing prior to industrial parts cleaning



- > Reliably reduces residual magnetism of bulk, layer material and settled material, preventing ferromagnetic particles from adhering to surfaces, which otherwise are not washed off during parts cleaning
- > Especially designed for the high residual magnetism requirements relating to safe washing processes
- > As compared to continuous flow systems, the SE coil reaches a field strength that is multiple times higher thanks to pulse demagnetization
- > The coil openings are optimized for common laundry basket sizes and a productive and efficient demagnetizing
- > Two demagnetizing coils (Helmholtz coil) are combined in order to efficiently and reliably demagnetize even long baskets with only one demagnetizing pulse
- > Space-saving integration, because no discharge run is needed

# Maurer Magnetic

## Magnetically pure

Today, cleaning system manufacturers only guarantee residual soiling targets up to a specific residual magnetism limit for ferromagnetic components, making it necessary to integrate powerful demagnetizing processes into the technical process. Maurer Magnetic is positioned for this sector with its SE+DN series. The performance capability depends on the current requirements of the cleaning system manufacturers. The SE series is designed for general demagnetization. The requirements of the demagnetizing performance are higher in cases where the demands are increased because limit values need to be observed. For fine and ultra-fine cleaning, residual

magnetism values of  $< 2 \text{ A/cm}$  are critical. Here, we recommend the high-performance VE or HLE series.

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

### Cleanliness under control



SE+DN in a fully automated production line

#### Demagnetizing as process preparation prior to industrial cleaning processes

The effect of residual magnetism that is too high is that an attraction force acts upon ferromagnetic dirt particles. The magnetic attraction forces increase disproportionately closer to the component surface, which makes cleaning even more difficult despite modern and efficient washing processes. The cleaning methods are not able to effectively remove these particles. So, process reliability can only be achieved by demagnetizing the parts before they are cleaned.

#### What demagnetizing with SE + DN means for you:

- > None or only very little magnetic adhesion of ferromagnetic particles
- > Cleanliness in the washing processes
- > Lower energy consumption

#### Range of parts

- > Directly in the infeed conveyor for smaller washing systems
- > Containers and laundry baskets made of non-magnetic material
- > Long laundry baskets using the Helmholtz arrangement
- > Individual parts before electron beam welding



Active demagnetizing pulse for demagnetizing a box with bulk material



Especially suited for demagnetizing parts inside of non-metallic (non-ferromagnetic) laundry baskets or containers

# 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 pulse mode; continuous 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 a trigger sensor for autonomous pulse triggering comes standard
- > Two power module types available
- > Operating status lights
- > Intuitive, reliable operation
- > Demagnetization in pulse mode
- > Robust design suitable for industrial applications
- > Versatile system

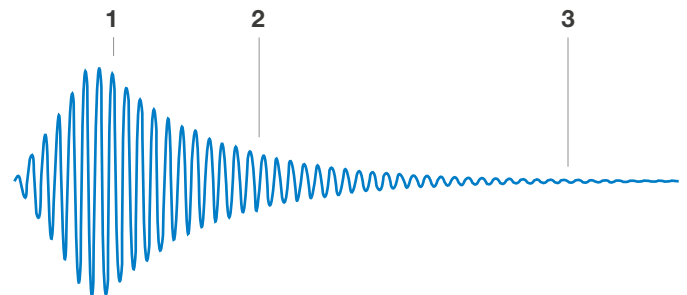


The power module is also available for integration into existing switch cabinets. Please refer to the “DN-Integration” brochure for more information.

## Maurer Degaussing® technology

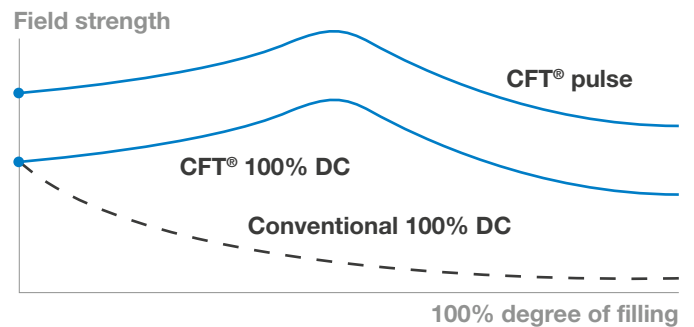
The Maurer Degaussing® process works with pulse demagnetization patented by Maurer. The intensity, amount and precision of the polarity reversals, and the frequency are implemented in an optimum manner by the Maurer-Degaussing® procedure. This package enables demagnetisation that cannot be performed 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		SE3	SE4	SE5	SE6	SE7	SE8	SE9	SE10	SE11
External dimensions <sup>1</sup> (mm)	W	491	491	591	591	661	801	801	951	951
	H	365	465	415	565	415	465	615	465	665
	D	250	250	250	250	250	250	250	250	250
Active opening (mm)	W	250	250	350	350	420	560	560	710	710
	H	250	350	300	450	300	350	500	350	550
	D	210	210	210	210	210	210	210	210	210
Weight	kg	36	41	52	58	55	65	70	68	71
Maximum field strength <sup>2</sup>	kA/m	50	40	55	45	50	40	35		30

Coil module in Helmholtz arrangement		SE33	SE44	SE55	SE66	SE77	SE88	SE99	SE1010	SE1111
External dimensions <sup>1</sup> (mm)	W	491	491	591	591	661	801	801	951	951
	H	365	465	415	565	415	465	615	465	665
	D	500	500	500 – 540	500 – 540	500 – 540	500 – 540	500 – 540	500 – 540	500 – 540
Active opening (mm)	W	250	250	350	350	420	560	560	710	710
	H	250	350	300	450	300	350	500	350	550
	D	460	460	460 – 500	460 – 500	460 – 500	460 – 500	460 – 500	460 – 500	460 – 5000
Weight	kg	72	82	104	116	110	130	140	136	142
Maximum field strength <sup>2</sup>	kA/m	55	45	60	50		40		45	40

Degree of protection IP

52

Cycle time

1 pulse/40s

Demagnetizing frequency

Hz Designed customer-specific

Power module		DN 1100	DN 1850
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 <sup>3,4</sup>	A	52	80
Internal fuse	A	20	
Suitability for automation		Ja	

### 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
- > UL approved material

<sup>1</sup> Approximations, <sup>2</sup> Effective value lower by a factor of 1.41, <sup>3</sup> In continuous operation it is 1.5 times lower

\* All informations are without guarantee

