



Degaussing Devices and Systems

Solutions for degaussing of ferromagnetic parts
in industrial production processes

Customizing with Excellence





OVER 50 YEARS OF
Excellence

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VALLON – Customizing with Excellence

For more than five decades, VALLON has developed and produced degaussing devices and systems. As one of the leading specialists in this field, the company offers, based on its extensive experience, a most competitive product portfolio meeting industrial top standards.

The production portfolio comprises conventional 50- and 60-Hz coils and degaussing yokes for through-feed processing as well as efficient solutions for pulse degaussing in combination with VALLON Low Frequency Generators. Free degaussing tests as well as trainings and assistance in start-up complete the range of services.

- ✓ More than 50 years of experience
- ✓ Diverse, high-performance product range for customer-specific solutions
- ✓ In-house application laboratory for customer specific degaussing solutions
- ✓ Quality “Made in Germany” – our quality management system is certified in accordance with ISO 9001:2015
- ✓ Environmental protection – Our Environmental Management System is certified according to ISO 14001:2015

Disruptive Factor Residual Magnetism

Customized degaussing solutions from VALLON eliminate the disruptive factor with lasting results

Residual magnetism in production processes is a widespread phenomenon in many branches of industry; it affects product quality and complicates machining processes for single components as well as for complete products.

VALLON solutions are especially useful in the following branches of industry and sectors: Automotive, engineering, conveying and automation technology, steel industry, aerospace, energy and infrastructure.



Processing of ferro-magnetic parts by machining, grinding as well as by transforming processes create chips, abrasions and production remnants. These tend to stick at surfaces which causes an adverse impact on quality.



Subsequent to magnetic particle crack detection, the components are strongly magnetized and therefore have to be degaussed.



There are high standards implemented when it comes to the production of modern motors and gears. Residual magnetism in components made of ferromagnetic steel have many negative effects during different stages of production processes.



The deflection of the arc affects welding processes or can make them entirely impossible.



Finest metallic particles stick to the workpieces – a fact that makes it impossible to achieve the necessary technical cleanliness during the industrial cleaning process.



Magnetized semi-finished products complicate manufacturing processes in different phases. Consequently, it is important to observe standards and comply with limit values regarding the allowed residual magnetism of a semi-finished product.



Eddy current crack detection and magnet-inductive material testing are negatively influenced and lead to pseudo rejections.



During galvanisation (nickel, chrome, zinc, etc.) and other coating processes, undesired particle inclusions occur.

Everything from a Single Source

VALLON manufactures degaussing solutions individually and customized – stand-alone or integrated

Best Advice right from the Start

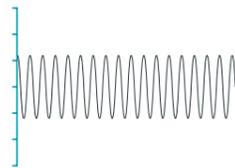
VALLON offers a wide variety of technical options from a single source. Our specialists are there for you from an initial project outline to an individual and fully developed solution – fast and equally efficient.

Free Testing with your Products

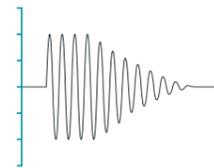
After an initial meeting, a next step is usually to do free tests in our VALLON application laboratory, or alternatively at the customer's site. We consider all relevant parameters for working out a customized and cost-effective degaussing solution.

Maximum Flexibility

Every problem calls for the right choice of components. Our vast portfolio of degaussing coils, yokes and low-frequency generators offers maximum flexibility with regards to dimensions and performance. Depending on the customer application, degaussing is performed continuously or using a pulse degaussing method.



Continuous degaussing as through-feed process



Degaussing with pulse method

Stand-alone or integrated

VALLON offers degaussing lines as stand-alone solutions, combined with a feeding system for cleaning systems, or fully integrated in production and feeding lines.

Assembly, Commissioning and Training

Experienced service engineers perform the initial installation and start-up. Subsequently, an operator training, tailored to your specific applications is done. This creates ideal conditions for achieving best degaussing results.



Customizing with Excellence



Customer Satisfaction is Top Priority for us at VALLON

You will receive everything from a single source, from the first consulting session and free degaussing tests in our in-house application laboratory to assembly, user training, and service. VALLON supervises the entire process and supports you with maximum technical expertise.

From Small to Large

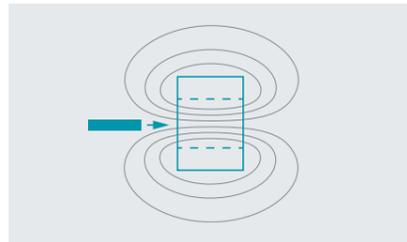
VALLON offers degaussing of parts in most different dimensions and shapes: single pieces, bulk goods in baskets or workpieces positioned in product carriers



Coils

VALLON has a wide range of coil sizes allowing customized and cost-effective solutions

Degaussing coils create an alternating magnetic field in the sense of their passage axis. As the field lines of the coil run parallel to the transport direction, degaussing coils are best suited for oblong workpieces placed horizontally. Coils are the best choice also for workpieces arranged horizontally or in inclined position in trays.



Magnetic Flux within Degaussing Coils

	Active opening	Connection	Nominal current leff	Pro-tection class	Procedure	Application	
Small Coils EM Series Three pre-defined sizes available for small parts and tools	40 x 20 mm 100 x 50 mm 100 x 100 mm	Mains power supply	< 2 A	IP42	→ □	- □ □ □ □ For example, for small steel parts or hand-operated tools (pins, screw drivers or measuring tools).	
Round Coils EM Series Customer-specific sizes, especially for oblong-shaped semi-finished products	Ø 30–120 mm	Mains power supply or Low Frequency Generator	< 10 A < 30 A	IP44 or better	→ □	- □ □ □ □ For example, tubes, bars and semi-finished products as well as small longish parts, also small drills, milling cutters or thread taps as well as other hand-operated tools.	
Rectangular Coils VEM Series Customer-specific sizes, for small to medium-sized parts	60 x 60 to 760 x 450 mm (Variable depth)	Mains power supply or Low Frequency Generator	10–225 A	IP54	→ ⚡	- □ □ □ □ For example, tubes, bars and semi-finished products as well as turned and milled parts. Best suited for the feeding system of a cleaning plant as well as for the integration in production lines or in a conveying systems.	
Tunnel Coils, EM and VEM Series Customer-specific sizes, especially for oblong-shaped semi-finished products processed at high transport speed > 1 m/s	Ø 30–120 mm 60 x 60 to 360 x 360 mm (Variable depth)	Mains power supply or Low Frequency Generator	5–225 A	IP44 or better	→ □	- □ □ □ □ For example, tubes, bars and steel, being processed at high transport speeds (> 1 m/s).	
Rotary Coils EMR Series Customer-specific sizes, for ring-shaped / spiral-shaped parts	60 x 60 to 360 x 360 mm	Low Frequency Generator	< 30 A	IP44 or better	→ □	- □ □ □ □ For example, ring- / spiral-shaped parts (tubular springs, piston rings or open ring segments etc.). Packed as a roll or stacked ring packet.	
High Performance Coils C Series Customer-specific sizes, for medium-sized thick-walled parts	210 x 160 to 710 x 710 mm	Low Frequency Generator	< 120 A	IP44 or better	→ ⚡	- □ □ □ □ For example, thick-walled tubes, bars and steel profiles as well as massive semi finished goods. Best suited for the feeding system of a cleaning plant as well as for the integration in production lines or in a conveying systems.	
High Performance Coils A Series Customer-specific sizes, for very large thick-walled parts or complex massive parts	210 x 160 to 3,000 x 2,000 mm	Low Frequency Generator	120–225 A	IP44 or better	→ ⚡	- □ □ □ □ For example, hardened steels, large massive semi-finished products, workpieces and goods. Ideally suited for the feeding system of a cleaning plant as well as for the integration in production lines or in a conveying systems.	

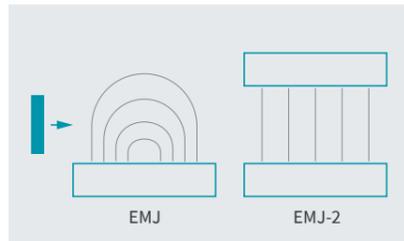
Procedure → Continuous degaussing ⚡ Pulse degaussing

Application - Single parts □ Parts positioned in a product carrier □ Bulk goods □ Euro pallet

Yokes

Degaussing yokes for a vast range of applications

Degaussing yokes create a very strong alternating magnetic field directly at the surface, emerging vertically. Therefore, yokes are ideally suited for bar-shaped parts arranged vertically as well as for workpieces lying flat. Generally, we offer three different classes of yokes: small yokes EMJ, high-performance yokes EMJ as well as high-performance twin yokes EMJ-2 for multi-layer workpieces individually positioned in trays.



Magnetic flux of yokes and double yokes

	Active width	Connection	Nominal current leff	Pro-tection class	Procedure	Application	
Small Yokes EMJ Series Customer-specific sizes, for small workpieces and tools	50–100 mm	Mains power supply	< 10 A	IP55		 For example, small steel parts or hand-operated tools (pins, screw drivers or measuring tools).	
High Performance Yokes EMJ Series Customer-specific sizes, for small to medium-sized workpieces	< 1,200 mm	Mains power supply or Low Frequency Generator	8–64 A	IP55		 For example, gear wheels, bearing rings, saw blades, sheet metal parts as well as flat milling / drilling parts. Ideally suited for the feeding system of a cleaning plant as well as for the integration in production lines or in a conveying systems.	
High Performance Yokes EMJ-2 Series Customer-specific sizes, for small to medium-sized workpieces	< 1,200 mm	Mains power supply or Low Frequency Generator	8–64 A	IP55		 For example, gear wheels, bearing rings, saw blades, sheet metal parts as well as flat milling / drilling parts. Ideally suited for the feeding system of a cleaning plant as well as for the integration in production lines or in a conveying systems.	

Procedure Continuous degaussing Pulse degaussing

Application Single parts Parts positioned in a product carrier Bulk goods

Low Frequency Generators

Quality and performance adapted to applications

Low Frequency Generators create a low frequency current for the power supply of coils and yokes. Depending on the dimensions and mass of the workpiece, a lower frequency of the alternating magnetic field is required. Massive workpieces and filled baskets need to be degaussed with a very strong permanent or pulsed alternating magnetic field. For optimum flexibility and cost-effectiveness, VALLON therefore offers low frequency generators in four different levels of performance.



Low Frequency Generators EG2422/EG2422P
for coils EM/VEM and yokes EMJ

Nominal output current*
20–60 A

Low Frequency Generator EG2422S
for high performance coils C series

Nominal output current*
20–120 A

Low Frequency Generator EG2440
for high performance coils A series

Nominal output current*
30–150 A

Low Frequency Generator EG2450
for high performance coils A series

Nominal output current*
45–225 A

* The amount of the nominal output current depends on the coil and the yoke resp.

Customizing with Excellence



Quality “Made in Germany”

The name VALLON represents quality “Made in Germany”. The implementation of our quality principles is achieved by means of a uniform quality management system which meets highest standards; thus, we ensure durability and reliability of every product.

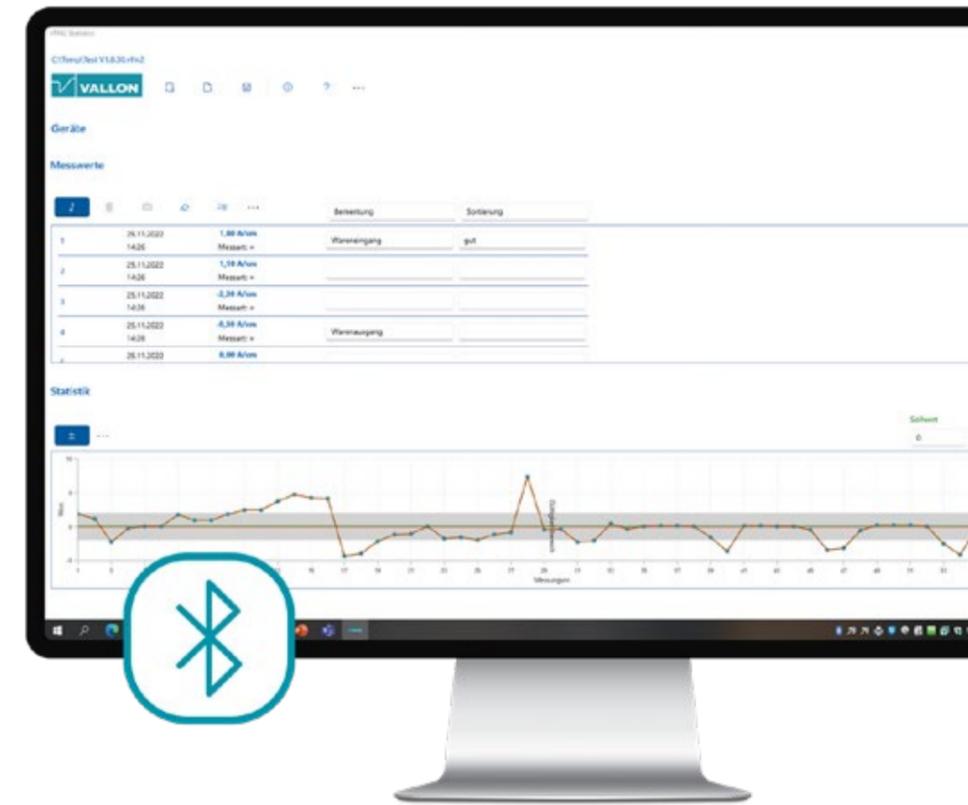
Field Strength Meter VFM2

For measuring the magnetic field strength / flux density of DC and alternating fields



The VFM2 field strength meter VFM2 is ideal for use in industry and production to measure the static magnetic field strength / flux density on surfaces of ferromagnetic parts. For the reliable localization of the so-called „residual magnetism“, an alarm limit value can be set individually for each of the five switchable measuring units and if reached indicated acoustically and visually. In combination with the automatic peak memory function, larger surface areas can be checked safely and quickly.

The integrated Bluetooth® data interface and the optionally available evaluation software VFM2 STATISTICS enable single and series measurements and simplify the statistical evaluation of measured values. Alternatively, the measured values can also be transmitted directly to a customer's quality data acquisition system.



Evaluation Software VFM2 STATISTICS

For the field strength meter VFM2



VFM2 STATISTICS is a PC evaluation software for the VFM2 field strength meter for the wireless transmission and reception of measurement values via the Bluetooth® interface of the VFM2 field strength meter as well as logging and statistical evaluation. The individual measured values and measurement series can be supplemented with project data and comments as well as images for clear documentation. Measurement reports can be generated from one or more measurement series, exported in CSV file format, printed out or digitally processed if required.

Solution Concepts

VALLON degaussing solutions for the production process

VALLON's customized degaussing solutions are used by the most diverse industrial sectors all over the world. VALLON degaussing concepts enable a reliable and reproducible elimination of the interference factor residual magnetism.

Typical examples are massive and large parts on Euro pallets, hard metals in different shapes, baskets with bulk goods, individually positioned technical parts in trays, sintered parts, parts in stainless steel containers, and many more.



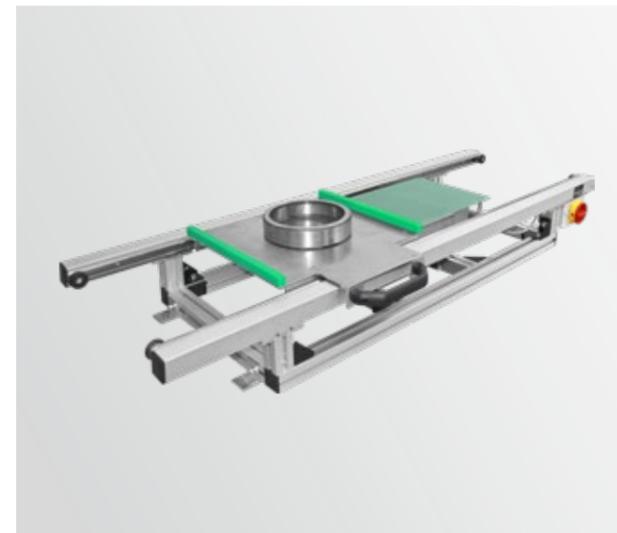
Degaussing line EMS with separate Low Frequency Generator EG2440 and A series high-performance coil on motor-driven carrier for semi-finished products or tools on Euro pallet.



Degaussing line EMS with separate Low Frequency Generator EG2450 and A series high-performance coil on motor driven carrier for massive semi finished products and large forming tools.



Degaussing line EMS with separate Low Frequency Generator EG2422S and C series high-performance coil on motor driven carrier for tubes, bars and shafts.



Degaussing line EJW with EMJ high-performance yoke and hand operated slide for flat single workpieces and goods carriers.

Our specialists use the mobile degaussing station EG2422K for degaussing parts of the most diverse dimensions and shapes, directly at the production site.





Degaussing system EJT with high-performance twin yoke and integrated Low Frequency Generator EG2422 for flat workpieces, semi-finished products and vertically orientated individual parts – single or in goods carriers or containers.



Degaussing line EMT with A series high-performance coil and Low Frequency Generator EG2440 for workpieces as bulk goods or as multi-layered workpieces individually positioned in trays and containers. Ideally suited for the feeding system of a cleaning plant.



Degaussing line EJT with EMJ high-performance yoke and integrated Low Frequency Generator EG2422 for wound steel band rings, bearing rings or tins.



Mobile degaussing station EJT with EMJ high-performance yoke for small and flat workpieces (for example for roller bearings, bolts, gearwheels, connection rods, cams, hard metal cutting inserts and screws) up to a height of 30 mm.



Mobile degaussing system EMT-P with rectangular VEM coil and integrated Low Frequency Generator EG2422P for very hard parts made of tool steel, hard metal as well as for bulk goods or individually positioned parts in goods carriers.



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