

After Sales  
Service



# Service Carding and Nonwoven

No limits in processing fibers



# No Limits in Processing Fibers





Graf is the world's leading supplier of clothing for carding and combs for combing machines in the short- and long-staple spinning industry, as well as for producers and machine builders for nonwovens. The company's core competency lies in its ability to process textile fibers of any kind, using the precise processing of steels and elastomers to manufacture high-tech components like flexible flats and metallic clothing for flat- and roller cards.

Working from five manufacturing locations worldwide, Graf's high level of vertical integration and local support helps customers achieve superior quality and performance across the full spectrum of fiber processing. Graf + Cie AG, headquartered in Rapperswil (Switzerland), is a subsidiary of the Rieter Group.



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# Smart and Flexible Service Packages

## Helping customers to maximize their carding investment

### Highlights

- 40 worldwide service stations enable on-site dismantling and fitting
- Short downtimes thanks to the use of experienced assembly and service teams
- Option for customers to manage inhouse or use Graf technical consultants
- Graf's competent support, combined with high-quality products make Graf the ideal fiber processing partner



### Clothing service extends lifetimes many times over

Flexible flat clothing produced with the highest precision has a much bigger impact on the carding quality than cylinder clothing. The number of neps in the card sliver is mainly influenced by the state of the flat clothing. Regular servicing of the flexible flat clothing not only maintains a consistently low number of neps, but also pays off economically.

### Ultimate flexibility

Graf offers a wide range of Swiss engineered high standard service machines. This enables customers to decide whether they want to carry out the service themselves or have the service carried out by Graf experts, while they concentrate on their core business. Four solution packages cover a wide range of applications, with the aim of extending card component lifetime and therefore reducing machine downtimes to a minimum.

### Individual and sustainable solutions for nonwoven

Today's roller cards place the highest demands on the clothing and their maintenance. To ensure trouble-free operation in the nonwoven manufacturing plant, you can always call upon Graf's worldwide service network with our qualified service specialists. This considerably reduces downtimes and the resulting high costs.

Furthermore, the choice of the right clothing is of key importance to high productivity, quality and economic efficiency. The many facets involved in rollers and specific applications in the nonwoven industry requires experienced specialists. Graf's qualified and long-term experienced technical consultants competently advise and support customers in selecting the application-specific clothing, and work closely with customers to develop a solution that aligns perfectly with their requirements and exceed their expectations.

## Service package solutions

### 1 Designed for rewinding and grinding/activation of card clothing

This package resharpens all card clothing and readjusts each tooth back into nearly original condition, which leads to a longer product lifetime.

Requirements	Purpose of machine
GAV	Metallic wire mounting equipment
TSG	Traversing resharpening device
ASG	Doffer grinding device
ROD	Roller clothing appliance

### 2 Equalizing and grinding of flats on card

Flat equalizing after 15 t and consistent grinding over the product lifetime, which leads to an optimal carding gap and sharp tooth tips.

Requirements	Purpose of machine
DSW 40 – 60"	Flat grinding roller
DEW 40 – 60"	Flat equalizing roller

### 3 Flat service in workshop with stripping, end shoe milling and clipping of flat bars

Flat maintenance for constant and perfect in-shape and newly clipped flat sets, ensuring consistent quality.

Requirements	Purpose of machine
DAM 35	Flex Flat Stripping & Clipping Machine
DSM 20/1	Flat grinding machine
DKF 10	Flat end milling machine
ESM 150	Flat shoe milling device

### 4 For startup, provides all services needed to put flat card back into operation

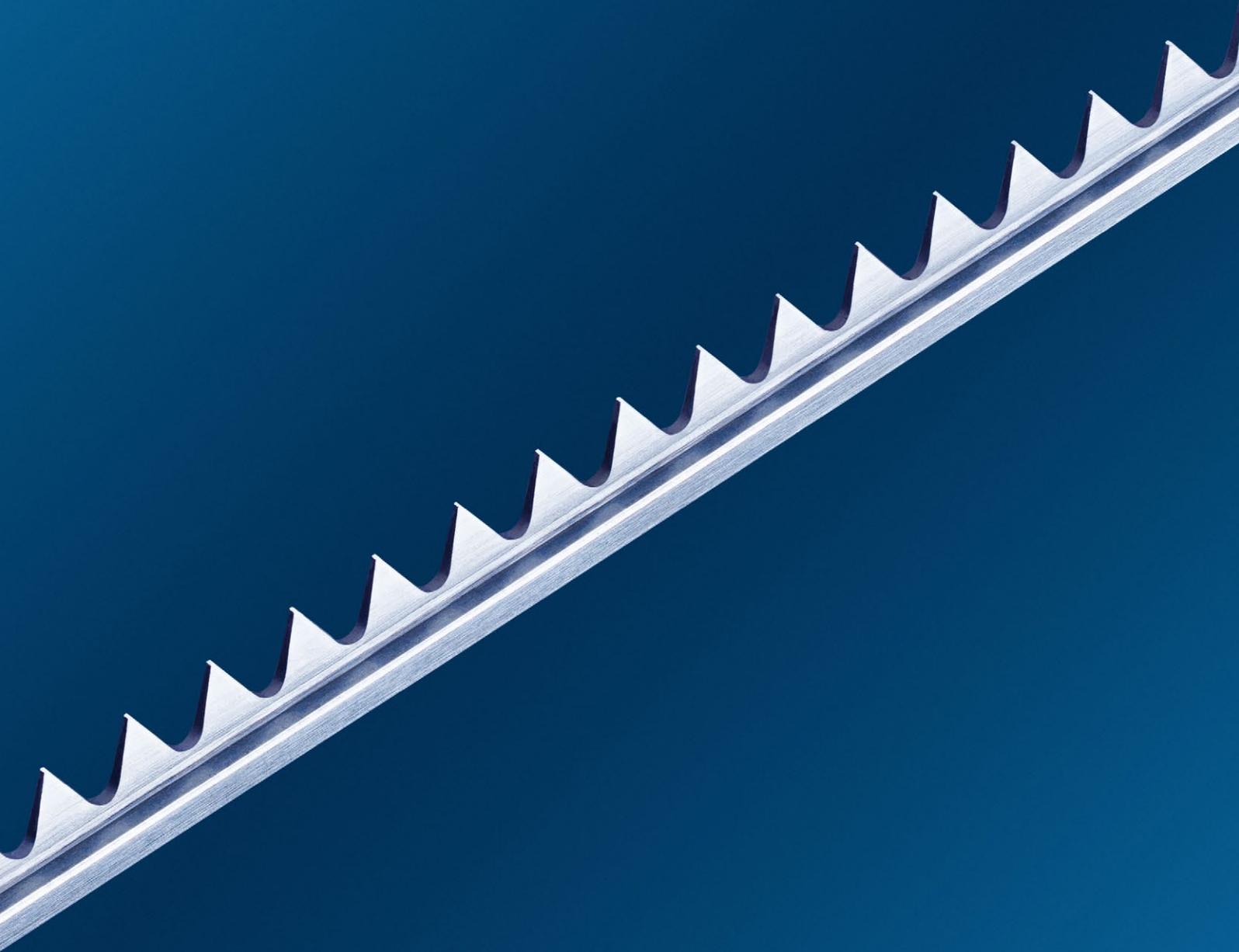
Smooth card restart and optimum conditions to achieve the desired quality.

Requirements	Purpose of machine
Service technician	Final setting and restart

## Global service footprint – Graf supports customers worldwide



# Rewinding, Grinding/ Activating



# GAV – Metallic Wire Mounting Equipment

GAV is the abbreviation for the versatile mounting device for standard and interlinked metallic card clothing for all known roller card types. The modular system allows the ideal combination, depending on the needs.

## Product details

- Tensioning device, dressing, and pre-bending rollers
- Choice between press-on roller or press-on finger for wire mounting
- Lateral pressure, using rope and weight with return safeguard, guarantees tight-fitting of individual wire threads
- Drive unit consists of a reversible drive motor with hydrostatic variator and electric remote control
- Stepless selection of required speed from 0 – 200 RPM
- Universal clamping sprocket with three-jaw chuck, adjustable for shaft diameters from 30 – 120 mm
- Reelstand with shaft and run-off brake for new clothing coils
- Mounting tools comprising soldering bit, soldering material, and chisel included in basic equipment
- CE conformity

## Customer advantages

- Fine adjustment of the tensioning device allows even inexperienced operators to correctly set the mounting tension based on the base width and the type of roller card.
- Purposeful array of dressing and pre-bending rollers ensures that even clothing with small base widths stand upright.

## Technical data

Rating GAV drive	1.5 kW
Weight GAV drive	89 kg
Rating butt welder	2.0 kW
Weight butt welder	15 kg
Rating stripping reel	0.75 kW
Weight stripping reel	4 kg



# TSG – Traversing Resharpener Device

The activating and resharpener of high-performance metallic card clothing calls for high demands on the maintenance personnel. It is challenging, even for experts, to resharpen these fine clothing burr-free with conventional grinding equipment. The new pneumatic take-down from grinding/activating ensures an even better-controlled process and thus a perfect shape of the card clothing for the highest demands. Designed to accommodate working widths ranging from 40 to 60 inches.

## Product details

- Traversing grinding head with stationary ceramic stone
- Pneumatic controlled grinding/activating pressure for easy handling
- Linear unit with drive motor and toothed belt for the traversing motion
- Two different traversing speeds for cylinder and doffer are preset and can be selected on the control box
- The traversing movements are monitored by a counter
- Easy and straightforward to operate even by unskilled personnel
- Maintenance-free grinding device
- CE conformity

## Customer advantages

- Precisely defined pneumatic pressure prevents excessive grinding.
- Suitable for all high production and most conventional cards.
- Burr-free activation of tooth points on cylinder and doffer wires ensures optimum carding results.
- Controlled, minute abrasion enables multiple resharpener, contributing to an extended lifetime.
- Even activation of tooth points across the entire card width.

## Technical data

Motor rating	0.09 kW
Supply voltage	230 V, 50/60 Hz, 1 phase
Pressure of resharpener stone	1 Newton
Traversing speed cylinder	6 m/min
Traversing speed doffer	1 m/min
Total weight	23 kg



# ASG – Doffer Grinding Device

The new ASG doffer grinding device is designed to activate and sharpen doffer wires on all Rieter 60 inches cards from C60 to C81 high production cards safely, burr-free and cost-efficiently. Only a correctly treated doffer wire assures the optimal transfer of the fibers from the cylinder to the doffer from the very beginning. The best possible quality in the card sliver is therefore guaranteed.

## Product details

- Manual traversing movement
- Lightweight aluminum construction and chromium guide rails are corrosion-resistant and maintenance-free
- Integrated safety guard protects against accidents during the sharpening process
- Ball-bearing roller guides
- CE conformity

### Technical data

Weight	4.7 kg
Length	1 610 mm

### Customer advantages

- Uniform, optimal grinding pattern
- Reproducible sharpening
- Easy operation and installation
- Constant grinding pressure (spring-loaded)
- Visible and open work area
- Increased work safety



# ROD – Roller Clothing Appliance

The ROD roller can be used to mount, depending on the configuration, standard clothing thread by thread and in grooves or in an interlinked form. It can also recloth cleaning and polishing rollers with a diameter of up to 700 mm and a working width of 1 600 mm. For the extended version of the roller card, it can handle rollers up to 5.5 meters in length.

## Product details

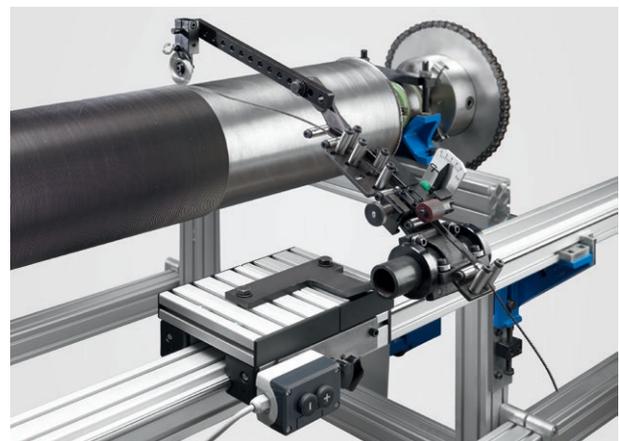
- Mounting frame made from aluminum profile
- Feed slide with upper part, wire tensioning device, and press-in rollers for clothing groove-wound rollers
- Device for mounting flexible clothing
- Large and small V-shaped bearing brackets to suit all roller bearings
- GAV drive and GAV arm are not part of ROD
- CE conformity

### Customer advantages

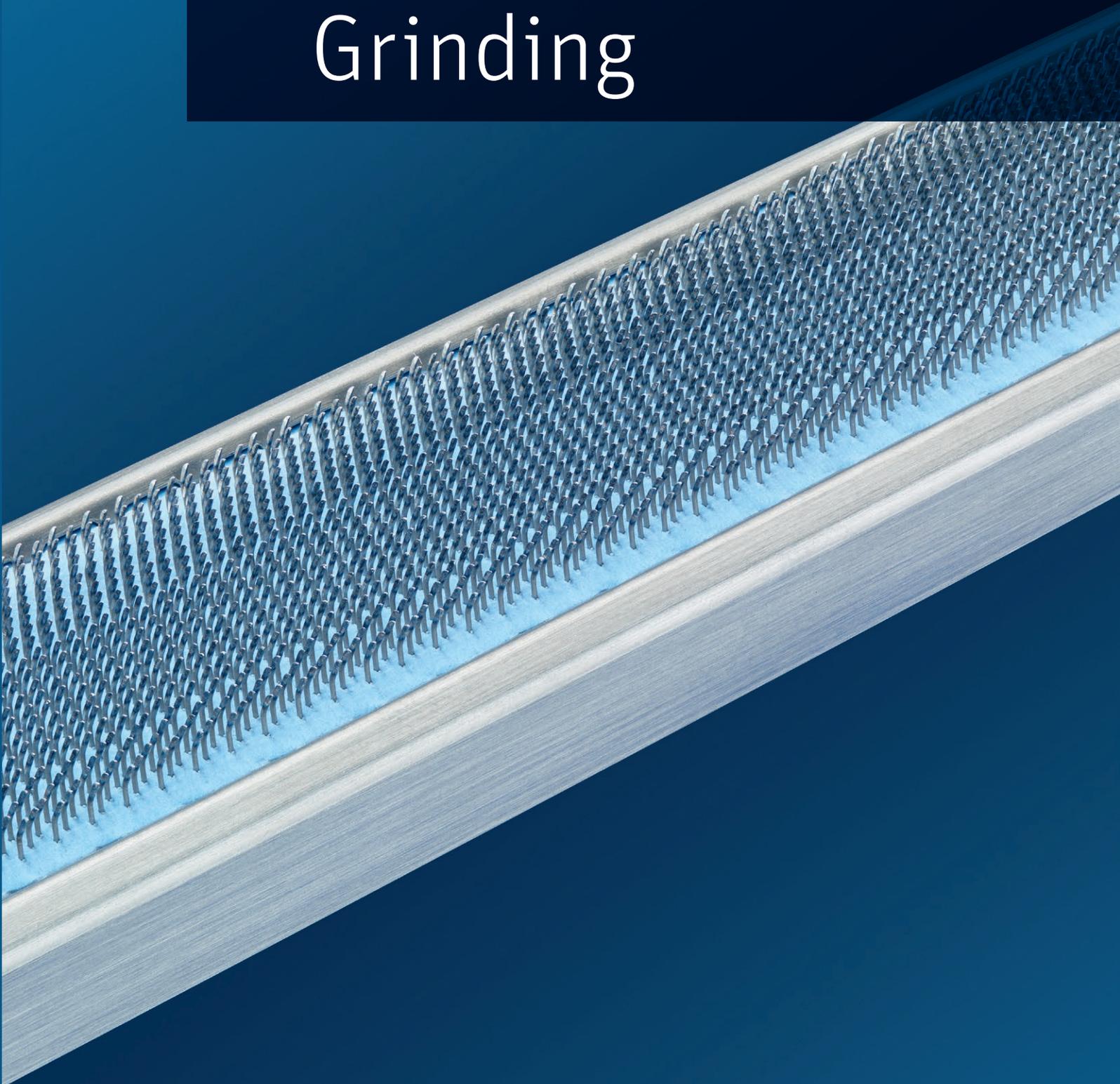
- Designed for easy, efficient, and safe recloth of all surface-wound rollers with either standard or interlinked clothing.
- The modular system allows the use of existing GAV parts (upper part, drive unit).
- With the necessary accessories, mounting flexible fillets onto cleaning and polishing rollers is straightforward.

### Technical data

Weight complete basic equipment	281 kg
Weight mounting frame	192 kg
Weight GAV drive	89 kg
Rating GAV drive	1.5 kW



# Flat Equalizing/ Grinding



# DSW – Flat Grinding Roller

The flexible flat clothing produced with the highest precision have a much higher impact on the carding quality than the cylinder clothing. The number of neps in the card sliver is mainly influenced by the state of the flat clothing. Graf has developed the DSW flat grinding roller for grinding flat clothing. The roller makes it possible to grind clothing economically, efficiently, and with the required precision. Flat clothing can be resharpened with the DSW up to 4 times, thus contributing to a large degree to constant nep values and the yarn quality. Designed to accommodate working widths ranging from 40 to 60 inches.

## Product details

- Lightweight aluminum roller with feed slide and fine adjustment
- Card-specific supports for the attachment of the grinding roller
- A traverse gear ensures even abrasion in the resharpening process as well as even wear of the emery fillet
- Maintenance-free three-phase AC motor
- Includes a transport truck
- CE conformity

### Customer advantages:

- The grinding roller is clothed with an emery fillet.
- Tooth points are resharpened from the back.
- Flat clothing can be efficiently resharpened multiple times.
- It leads to a noticeable improvement in the consistency of nep values in the yarn.

### Technical data

Rating drive motor	0.75 kW
Motor speed	1 400 RPM
Weight of motor drive	15 kg
Grinding roller speed	800 RPM
Weight without drive	28 kg



# DEW – Flat Equalizing Roller

The flexible flat clothing produced with the highest precision has a much more significant impact on the carding quality than the cylinder clothing. The number of neps in the card sliver is mainly influenced by the state of the flat clothing. Graf has developed the DEW equalizing roller for equalizing flat clothing economically, efficiently, and with the required precision. Designed to accommodate working widths ranging from 40 to 60 inches.

## Product details

- Lightweight aluminum roller with feed slide and fine adjustment
- Card-specific supports for the attachment of the equalizing roller
- A traverse gear ensures even abrasion in the resharpening process as well as even wear of the emery fillet
- Maintenance-free three-phase AC motor
- Includes a transport truck.
- CE conformity

### Customer advantages:

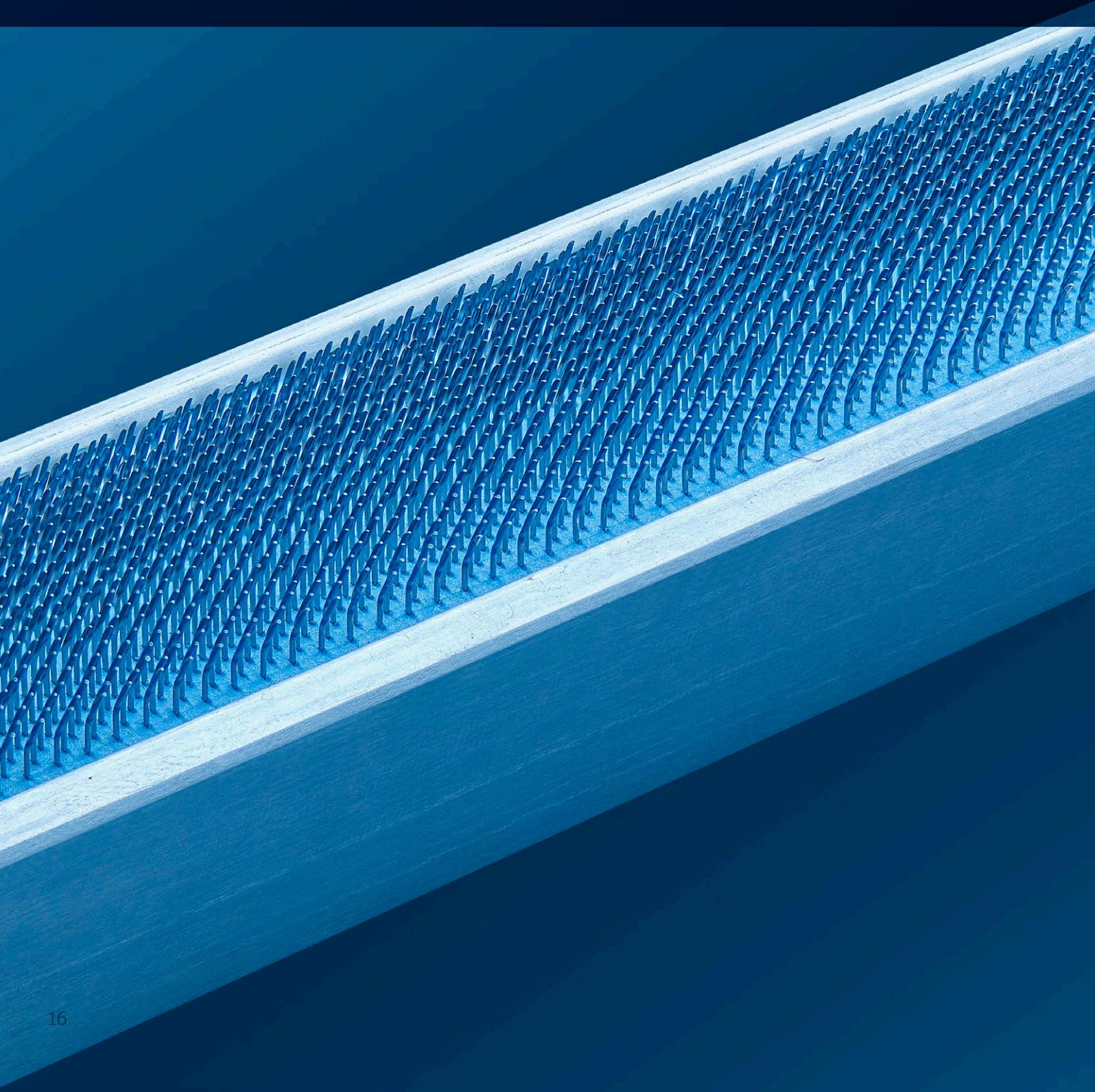
- Equalizing roller is clothed with a new emery fillet.
- Activating with DEW after approximately 15 tons to achieve superior quality.
- Noticeable improvement in the consistency of neps and values in yarn.

### Technical data

Rating drive motor	0.75 kW
Motor speed	1 400 RPM
Weight of motor drive	15 kg
Roller speed	800 RPM
Weight without drive	28 kg



# Flat Stripping & Clipping/ Milling/Measurement



# DAM 35 – Flex Flat Stripping & Clipping Machine

The automated DAM 35 flex flat 2-in-1 clipping and stripping machine enables even smaller and medium spinning mills to clip and strip their own aluminum or cast iron bars economically, efficiently, and with the highest precision. DAM 35 provides a stable carding gap and allows for a fast changeover.

## Product details

- Fully automated and enhanced clipping and stripping process
- Multi-flat design roll suitable for all types of flat bars
- Extremely robust construction featuring ground guide beams
- Clipping rails equipped with electro-pneumatically operated roller units specific to the flat type in question
- Vertical clamping of the flat clothing using 6 pressure cylinders
- CE conformity

### Customer advantages:

- Contributes to maintaining a precise and stable carding gap
- 2-in-1 machine capable of stripping and clipping flexible flats of any type
- Swift changeover between different flat types
- Enhances workplace safety

### Technical data

Compressed air pressure	5 – 6 bar
Rating drive motor	0.74 kW
Speed of mounting slide	4 m/min
Weight	650 kg



# DSM 20/1 – Flat Grinding Machine

Burr-free flat clothing, equalized straight with utmost precision are imperative to achieve best possible carding results. For this reason, Graf has developed the DSM 20/1 grinding machine which let all spinning mill equalize or sharpen their flat clothing economically, efficiently and with the precision required today. Designed to accommodate working widths ranging from 40 to 60 inches.

## Product details

- Very sturdy machine bed
- Card-specific grinding plates to match the inclination of the flat seatings
- Precision anti-friction slide and ingenious design of traversing motions of both the grinding roller and the flat bar
- Combined control device, optionally available, allows the straightness of flat clothings to be measured accurately
- CE conformity

### Customer advantages:

- Easy conversion from 40 to 60 inches flats
- Precisely straight flat clothing following initial equalizing
- Ideal setting of the carding gap and therefore highest carding quality achievable

### Technical data

Rating motor drive	1.1 kW
Speed of grinding roller	1 410 RPM
Number of strokes of slide	50/min
Rating gear motor	0.18 kW
Weight DSM 20/1	610 kg



# DKF 10 – Flat End Milling Machine

The seatings of the cast iron/aluminum flat bars (plastic glide shoes) have to be re-milled from time to time since they are subject to wear and run-in to a varying degree. To allow the milling of the seatings with the precision required, Graf has developed the semi-automatic flat end milling machine DKF 10. Designed to accommodate working widths ranging from 40 to 60 inches.

## Product details

- Exchangeable milling templates allow for superior precision and fast switching between the different flat types
- Pneumatic clamping device for all types of flat bars
- Automatic lowering and lifting of the milling head
- Automatic control of milling and return motion
- Optimum feed speed during the milling process
- Selection of two speeds offers the choice of either HSS or carbide-tipped milling cutters
- Milling of the hollow (if required) in one process
- Economical and efficient in application
- CE conformity

### Customer advantages:

- Universal application for all types of cast iron and aluminum flat bars
- Fast switching to different flat types

### Technical data

Compressed air pressure	6 bar
Motor rating	1.1 kW
Spindle speed HSS	260 RPM
Spindle speed HM	430 RPM
Spindle speed plastics milling machine	1 250 RPM
Rating feed motor	0.25 kW
Weight	435 kg



# ESM 150 – Flat Shoe Milling Device

The seatings of the synthetic flat shoes of the aluminum flat bars have to be remilled/replaced from time to time since they are subject to wear and run-in to varying degrees. Graf offers a compact and simple machine for this purpose. Independent and precise single-step milling of the flat shoes of all Rieter 60 inches cards from C60 to C81 cards.

## Product details

- Reworking the flat shoes in a single clamping step of the flats allows the shoes to be restored very accurately and rapidly
- Flat shoe milling device is compact and space-saving
- CE conformity

### Technical data

Length	1 990 mm
Width	490 mm
Height	450 mm
Weight	210 kg
Power supply	220 V/400 V

### Customer advantages:

- Milling flat of shoes with single-step clamping of the flat bar
- Setting behavior of the flats is significantly improved thanks to the milling
- Low capital costs
- Easy operation
- Compact, slim machine



# Accessories from a Single Source



# Accessories from a Single Source

Improved quality ensured by precise settings

A complete range for improved product quality. Optimal quality requires continuous checks and maintenance. Graf clothing is no exception. This is why Graf offers a complete range of necessary tools, from the simple setting gauge through to special polishing systems and the entire set-up of flats. Accessories are available for the following areas: flat gauges/ gauges, grinding, cleaning, polishing and microscope.

## Setting

Original Graf setting gauges are products of high technical precision to allow optimal carding quality. The setting gauges are designed to match the cards of various manufacturers.

**Eight-blade gauges**



**Single flat gauge**



## Polishing and cleaning

The original Graf accessories for the polishing and cleaning of clothing are well-proven high-quality products that contribute to an excellent carding quality.

**Polishing sponge with holder**

For the cleaning of newly mounted card clothing



**Carborundum  
Hand grinding stone with holder**

For equalizing newly mounted clothing and resharpening



**Miraclo  
Hand grinding stone with holder**

For dressing and repairing damaged clothing



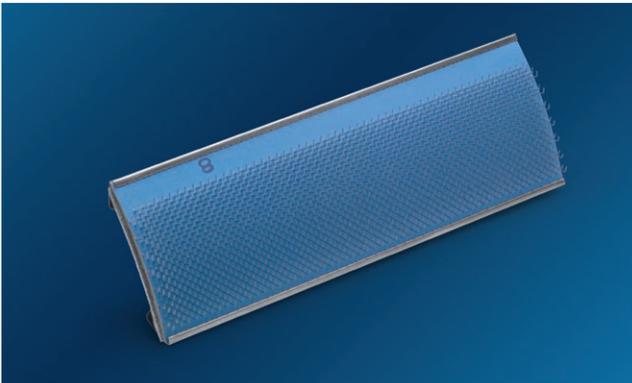
**Bronze or copper wire brush (with holder)**

For cleaning newly mounted or resharpened metallic card clothing



**Hand stripping card**

Replacement clothing for hand stripping card without holder



**Hand stripping card with clamping device and curved or straight handle**

For removing wood- and seed-coat particles from metallic card clothing and for general cleaning purposes



**Clothing cleaner**

For scraping coarse residues from clothing and for circular combs



**WiFi digital Microscope**

For the precise analysis of clothing





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