

# DSW & DEW Mounting Instruction

Flat Grinding and Equalizing Roller

Edition: January 2021/pg

Superior Performance

# Mounting Instruction DSW & DEW

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Original mounting instruction  
english

## Document history

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02.2024	V 2.00	René Pfiffner	Electrical diagram replaced from S.18 / M.27	Manuel Koch



Premium Swiss Quality



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## EC Declaration of incorporation

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Rapperswil,

Graf + Cie AG declare that the product:

**Designation:** Flat Grinding and Equalizing Roller  
**Type:** DSW & DEW

Serial-No.: -----

Machine -No.: -----

fulfils the following relevant provisions:

2006/42/EC (EC Machinery Directive)  
including their modifications

Reference to the harmonised standards:

EN 60204-1 Safety of machines – Electrical equipment of machines,  
Part 1: General requirements

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Graf + Cie AG

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## 1. Safety

## 1. Safety

### 1.1 Symbols in the document

#### Example of a note on safety

#### Caution!



When the main switch turned on, the machine could be started at any time, resulting in injury.



The main switch must be switched off and secured with a padlock.

#### 1 Signal word

"Danger", "Warning", "Caution", "Important" classify the safety precautions.

#### 2 Risk

*Description of the risk situation The potential consequences of the damage are also described.*

*The description of the risk involved is emphasized by a symbol.*

#### 3 Directions for avoiding danger

*Description of what needs to be done or avoided in order to prevent accidents and damage occurring. The direction for avoiding danger can be emphasised by a command or prohibition symbol.*

It is absolutely essential to observe the safety precautions.  
Safety precautions are classified and highlighted by signal words.  
The example shows a safety precaution indicated by the signal word "Danger".

#### DANGER

Maximum danger level. This is used in the case of risks where there are very far-reaching consequences, with fatal injuries, irreversible or incurable injuries and very serious but curable injuries "DANGER" is only used when damage is highly likely to occur due to improper behavior.

#### WARNING

Second highest level of danger used for risks where there are far-reaching consequences, the same as at maximum danger level. Unlike maximum level, "WARNING" is used where the probability of damage occurring in the case of improper behavior is only slight.

#### CAUTION

Moderate level of danger is used in the case of risks where the consequences are less serious, completely curable injuries to only slight injuries with short absence from work. Also used for damage to property with far-reaching consequences.

#### IMPORTANT

Low level of danger is used when there is a risk of slight damage to property.

## Danger symbols



General hazard area



Risk of hand injury



Risk of injury due to part of the body being pulled in



Risk of injury due to being pulled in



Hazardous voltage



Electric shock from capacitor



Risk of stumbling



Heavy lifting



### Prevention symbols



**Use eye protection**



**Wear protective footwear**



**No admittance**



**Shut down power before working on the installation**



**Switch off via the main switch and secure switch with a padlock**



**Press EMERGENCY STOP button**



**Do not touch**



**Wear safety gloves**



**No admittance to unauthorized personnel**

### **1.2 Legal stipulations**

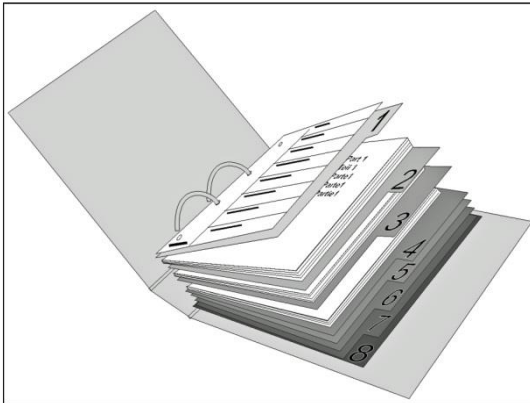
#### **1.2.1 Liability**

Graf has issued this mounting instruction to the best of its knowledge and belief. Graf cannot accept any liability for possible editorial deficiencies and errors within this mounting instruction. Graf reserves the right to implement changes at any time in the mounting instruction or on the device described therein without prior advice. No part of this Mounting Instruction may be reproduced, transferred, altered or translated in any way without the prior written consent of Graf + Cie AG Rapperswil. The attaching of foreign parts may effect the characteristics of the device and its safety. Graf cannot accept any responsibility for any damage caused by such parts. The English edition is relevant for the contents of this mounting instruction.

## 1.3 General notes on safety

### 1.3.1 Safety precautions

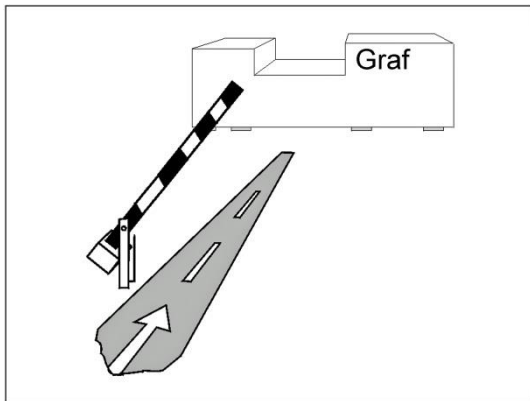
#### Availability of the operating instructions



All sets of instructions, especially documents relating to safety, must be kept in a place where the staff can consult them freely.

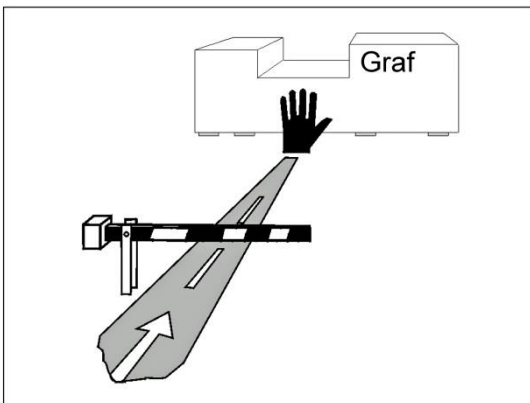
**Only those who have access to correct information can work safely and efficiently.**

#### Access available only for trained and authorized persons.



Appropriate measures are to be taken to ensure that only authorized or trained personnel have access to the machinery.

#### No admittance to unauthorized persons



Appropriate structural and organizational measures must be taken to ensure that untrained persons have no access to the machinery.

## Regional safety regulations

Local safety regulations and laws in force in the individual countries must be observed.

## Obligatory notification

Should an accident occur on a machine or should it become clear that operating a machine constitutes a potential danger, Graf + Cie AG, CH-8640 Rapperswil, must be informed immediately in writing.

**Graf + Cie AG declines all liability for any damage that may occur due to failure to observe this regulation.**

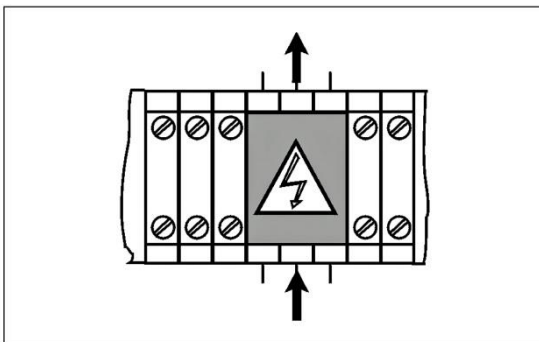
## Work on electric components

With the machine shut down, turn off the main switch and secure with a padlock.

Only qualified electricians may work and carry out checks in the electric and electronic areas. For operational checks and troubleshooting in test operating mode, it may be necessary to work with live voltage on certain units. This kind of work demands particular care and attention, with instruments and tools in perfect working order.

In order to guarantee correct operating process the sensors must not be actuated during normal running.

### External voltage

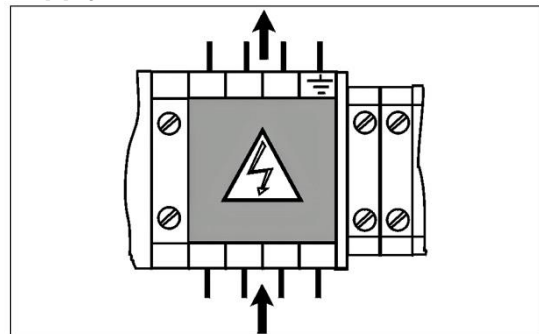


Certain circuits may still be carrying live voltage even when the main or safety switch is off.

These circuits are marked at the terminals according to the diagram.

Particular care and attention is required in this area.

### Supply line



The supply line to the main switch is live even when the main switch is off.

The terminals of the supply line are marked according to the diagram.

Particular care and attention is required in this area.

## Covers that are tightly screwed down

Covers that are tightly screwed down, as well as inspection windows and piping, must not be removed unless operating conditions on the machine are safe.

Operating conditions on the machine are not safe unless the following requirements are met. The main switch or safety switch must be turned off and secured with a padlock. In addition, no components must be moving.

The covers must be put back in place before the machine is put back into operation again.

### **Maintenance work**

Observe the maintenance regulations of the machine concerned.  
During maintenance work, turn off the main or safety switch and secure with a padlock.  
This prevents the machine being inadvertently switched on by a third person.

### **Auxiliary agents and tools**

Auxiliary agents such as ladders, hoisting devices etc. must be in perfect condition.  
Tools and other auxiliary agents must not be deposited on machines that are running.  
Falling objects may cause accidents or damage.  
Whenever chemicals such as solvents are used, the instructions of the manufacturer concerned must be observed.  
If work is carried out in which the danger of eye injury is not fully excluded, protective goggles must be worn.  
This applies particularly to cleaning jobs involving compressed air.  
Oil or grease residue on the floor is to be removed immediately.

### **Practical clothing**

For operating reasons, it is not possible to secure all rotating or moving parts of a machine for the purpose of preventing accidents. The risk of accidents in such areas can be considerably reduced by wearing appropriate clothing.  
Do not wear loose clothing (wide open sleeves, scarves, ties etc.)  
Long hair must be specially protected. Always wear a cap.  
Always wear protective goggles for grinding work.  
Do not wear rings on your fingers or wristwatches.  
Do not carry tools in open breast pockets. These objects might drop out or fall into the machine.

### **Work on buildings and installations in the vicinity of the machine**

If it is necessary to carry out such work, the machine must be shut down. This applies particularly if it is necessary to work above the machine.  
Do not climb onto the machine or use it as "scaffolding".

### **Alterations to machines and appliances**

The machines are constructed in accordance with the state of the art.  
The machines are tested and approved only in their original versions.  
Installing parts made by other manufacturers may alter the characteristics of a machine and impair its operating reliability. Graf + Cie AG declines all liability for any damage of this nature.

### **Disposal**

In the event that the machine is to be permanently put out of operation, the statutory rules in the relevant country, concerning reutilization, recycling and waste disposal, must be observed.  
Any oil, grease or batteries in the machine must be disposed of in a proper manner.

### **Think safe.**

For reasons related to operability, productivity etc. it is not possible to eliminate completely all sources of danger.

Particularly in such cases, the overestimating of one's own abilities or presumptuous thinking along the lines of: "Nothing can happen to me?", are the greatest sources of risk.

Daily routine jobs also demand constant attention.

**Thinking safe reduces the risk of injury and is therefore never a waste of time.**

### **Fireproofing textile machines**

#### **Type of danger**

Localized fires may result from various textile processes due to the ignition of fibres, fly or fibre dust, especially where cotton comes into contact with heated bearings, sparks from metallic impurities and electric sparks.

Such fires on our textile machines may cause slight damage to property or the environment and there is a low probability of personal injury by burning or inhalation of toxic smoke.

Accordingly, manually operated fire extinguishers must be provided in the spinning mill suitable for combatting fires of the following categories:

Fire classification A:

Solid materials, mainly of an organic nature, which would normally burn when exposed to glowing heat, such as textiles (fibers, fly or fiber dust), compound materials containing rubber.

Fire classification B:

Liquid or liquefying materials, such as oil, grease, paint, resin, wax, plastic.

Suitable extinguishing agents must be supplied according to this division into fire classifications. These may be, for example:

water, with or without additives, for reducing the surface tension for instance.

foam

powder

quenching gases e.g. carbon dioxide, nitrogen, argon and mixtures

The use of powder extinguishers of this fire classification is also permitted to extinguish fires on low-voltage equipment. To reduce subsequent damage due to soiling, however, we strongly recommend the use of quenching gases.

Number, size and distribution of extinguishing agents must be determined in conjunction with the regional offices responsible for fire safety.

Furthermore, the personnel must be instructed in the use of the fire extinguishing equipment, escape routes, etc., in accordance with local regulations.

**Every operator of textile machinery must actively support fire-protection and firefighting in his/her company.**

## 1.4 Machine identification

### Manufacturer

Graf + Cie AG  
Bildastrasse 6  
Postfach  
CH-8640 Rapperswil

Tel. +41-(0)55-221-7111  
Fax +41-(0)55-221-7233

### 1.4.1 Name plate

The information contained in this mounting instruction refers to the Flat Grinding Roller DSW or Flat Equalizing Roller DEW with the following particulars:

<b>Graf + Cie AG</b>			
Bildastrasse 6, 8640 Rapperswil Switzerland			
Type:	Year:		
Serial-No.:	Machine-No.:		
Current:	A	Pre-Fuse:	A
Voltage:	V/AC	Hz	

- Machine type
- Year of make
- Serial number
- Machine number
- Current (Ampere)
- Pre-Fuse (Ampere)
- Voltage (Volt/Alternating current)
- Hertz

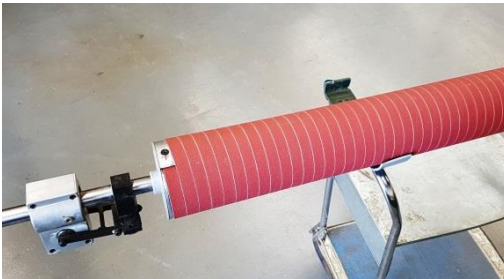
The above details have to be indicated on possible enquiries for spare parts.  
The name plate is placed on the traversing gear box.

### 1.5 Machine description

#### 1.5.1 Flat grinding roller DSW & DEW



DSW – Flats grinding roller  
**with emery fillet *Silicarbo No.7***  
For the re-sharpening of the back radius (life time of emery fillet approximately 15–20 sets).



DEW – Flats equalizing roller  
**with emery fillet *Cubitron 3M***  
For the initial equalizing of flats after a run-in time of approx. 15 tons. (life time of emery fillet approximately 10–15 sets).

Graf + Cie AG has manufactured a service machine for the equalizing and re-sharpening of flat clothing on the card, referred to as DEW and DSW for short.

**It is the aim of this mounting instruction to inform you as the operator of the proper use and safe application of the device.**

#### 1.5.2 Intended application

The intended application of the DEW & DSW is for the equalization and the re-sharpening of flat clothing directly on the card.

The DEW & DSW must be used only in combination with the supports as supplied by Graf and for the pre-determined types of cards. The supports are designed to guarantee the ideal position for the intended operation.

Any use exceeding the intended application is considered improper. Graf + Cie AG cannot be held responsible for any possible damage resulting from improper application; such risks are at the sole responsibility of the operator.



## 1.6 Technical data

Motor rating	0.75 kW
Motor speed	1400 r.p.m.
Weight of drive	15 kg
Speed of roller	800 r.p.m.
Weight without drive	28 kg
Total weight	43 kg
Supply voltage / frequency (drive)	Please refer to type plate on DSW or DEW drive

## 1.7 Emissions

Noise nuisance < 80 dB

## 1.8 Commissioning

Service equipment supplied by Graf + Cie AG must only be installed and taken into operation by Graf's own personnel or else by personnel authorized by Graf to do so. Should the assembly of new or existing plant be carried out by a third party, however, Graf + Cie AG declines all liability.

## 1.9 Decommissioning

- Put the machine into a safe state.
- Disconnect the power supply.
- Protect the machine from misuse.
- Secure the machine in such a way that If it is not in operation, there is no risk of injury to any person.
- The machine-specific regulations with regard to decommissioning must be observed.
- The machine must be suitably protected against soiling and corrosion.
- These regulations, and particularly the safety regulations, must be adhered to most exactly.

### **1.10 Putting back into operation**

All elements affecting safety must be tested to ensure that they are in perfect operating condition.

The machine-specific regulations with regard to re-commissioning must be observed. These regulations, and particularly the safety regulations, must be adhered to most exactly.

### **1.11. Disposal**

The environmentally friendly disposal of equipment, electronic components, recyclable materials and other components of the re-sharpening device is governed by national and regional laws. For detailed information on the correct disposal please contact the local authorities responsible.

## 2. General

## 2. General

Re-sharpening the flat clothing with DSW on the card by means of an emery roller allows to almost maintaining the originally pointed tooth shape. The dismantling and transportation of the flat-bars is unnecessary.

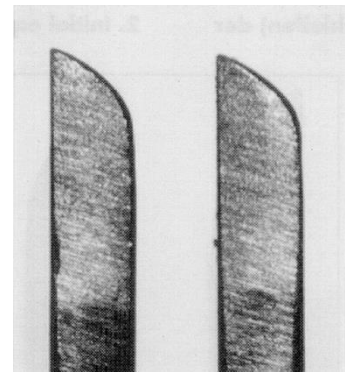
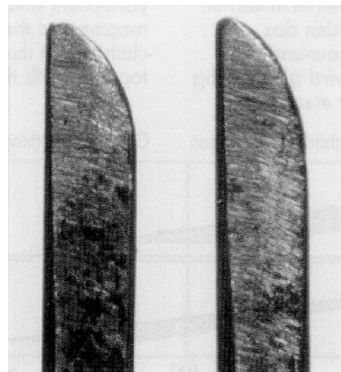
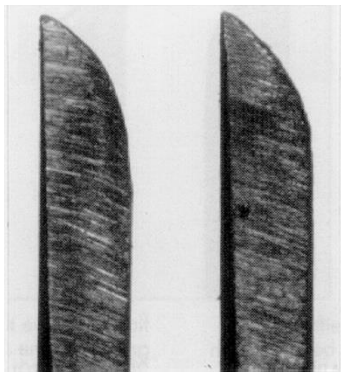
Equalizing the flat clothing with DEW roller on the card by means of an emery roller is narrowing the variation of an entire flats clothing set. So that the carding gap on the machine can be precisely adjusted.

The grinding process must be checked, using a magnifying glass with at least 30-fold magnification.

**Original tooth shape**

**Tooth points with wear**

**Re-sharpened tooth points**



### 2.1 Connection

#### Caution!



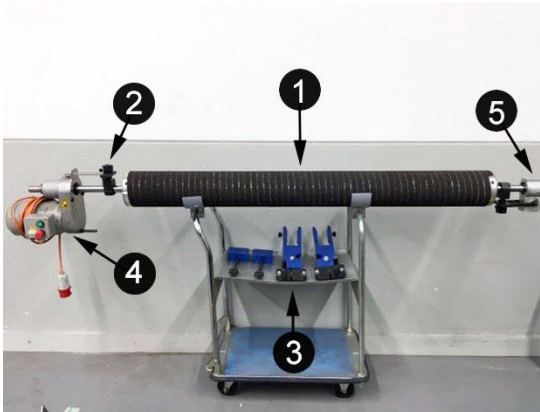
Place cables so that nobody will stumble over them. The connecting cables must be installed so that they cannot be squeezed or damaged in any other way.

#### DANGER!

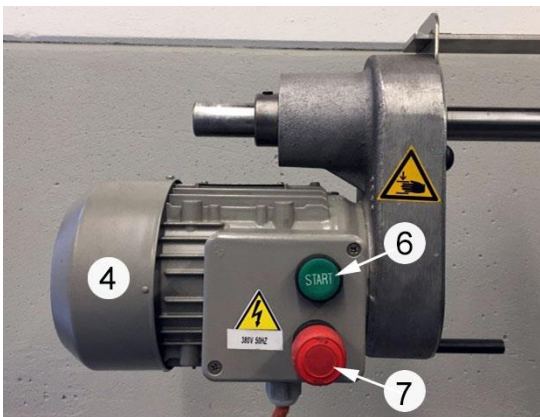


The cable of the drive must be fitted with a plug according to the country's regulation. This plug is not part of the delivery scope.

## 2.2 Scope of delivery DSW and DEW



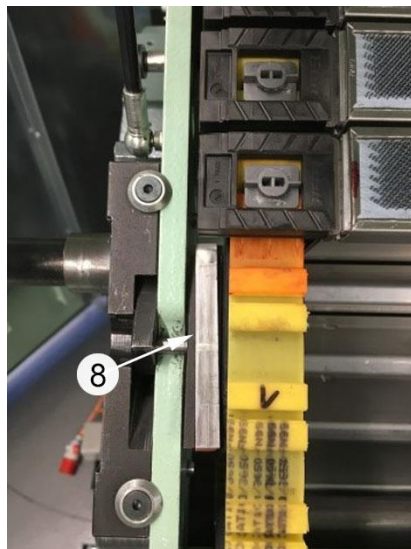
- Grinding roller (1) with needle bearing and in-feed device (2) with anti-rotation device.
- Attachment supports and weights (3) specified according to carding machine.
- Driver motor (4).
- Traversing gear box (5).



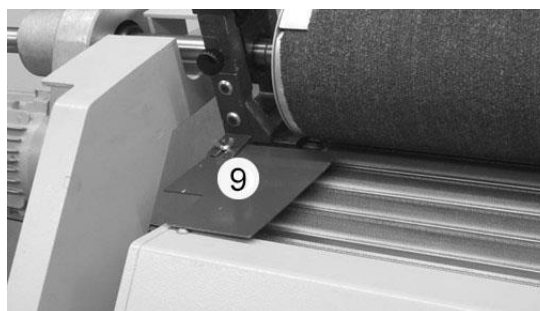
- Drive motor (4) with Start button (6) and Emergency stop button (7).



The operator is responsible to press the emergency stop button if it is necessary.



- Flat press-on device (8)



- Cover plates (9)

Card specific items, like supports and others, are added individual.

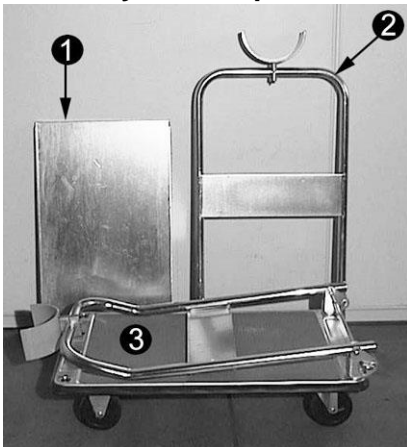
## 2.3 Accessories

### Transport truck



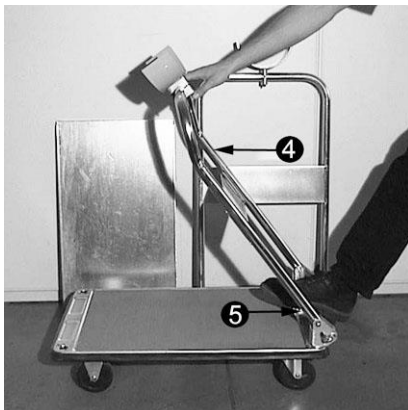
- For the transportation of the device to the card.

### Assembly of transport truck

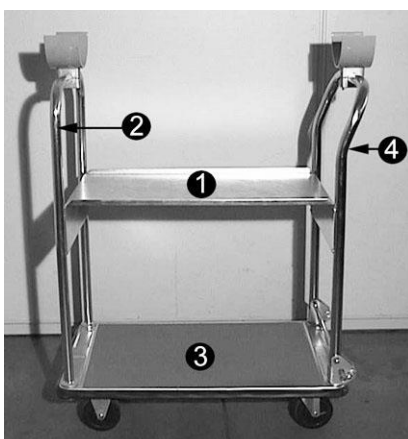


- The transport truck consists of 3 parts:

Plate (1)  
Handle (2)  
Support (3)

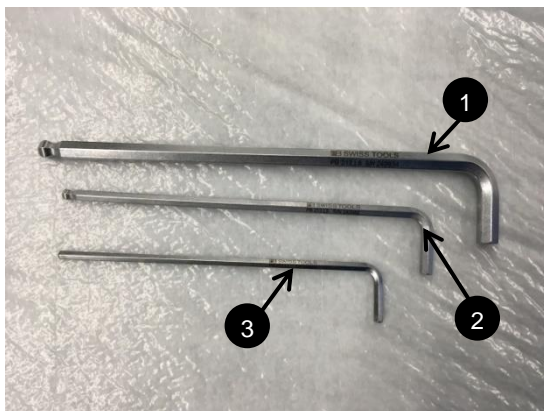


- Lift up handle by the support (4) while holding down fixing rod (5).



- Insert frame (2) into the holes prepared on the support (3).
- Insert plate (1) between the two frames (2/4).

### Tools



- Tools that you need for grinding roller. Allen key 8 mm (1), 5 mm (2) and 4 mm (3).
- You need additional tools for the supports according to the card.

### 3. Preparation



## 3. Preparation

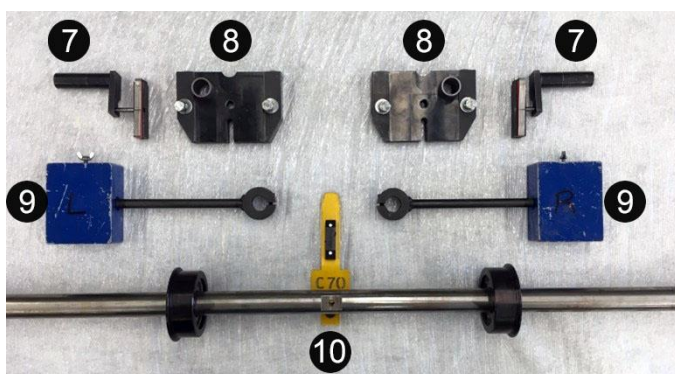
### 3.1 Rieter

In the following chapter is the preparation of the Rieter cards is explained.



Overview installed DSW (on C70).

1. Drive motor
2. Anti-rotation device
3. Supports
4. Grinding roller
5. Traversing gear box
6. Weight for compensation device



7. Flat pressing device left and right
8. Side shield left and right
9. Weight for flat pressing device
10. Compensation device according to card type

### 3.1.2 Rieter card C80

#### Special scope of delivery for Rieter C80

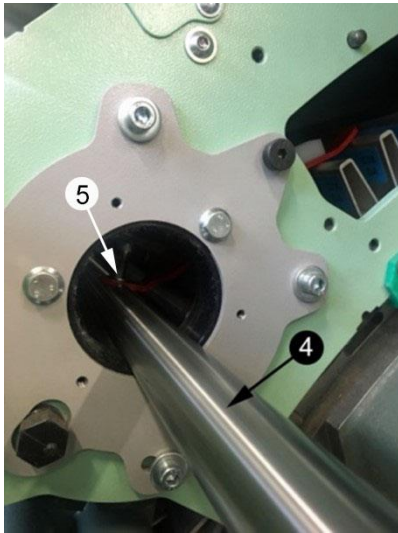


- Transport belt brake left and right with its weight.

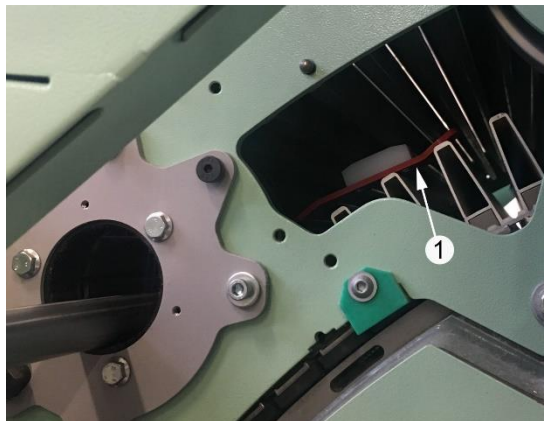


- Compensation device for C80 with supports.

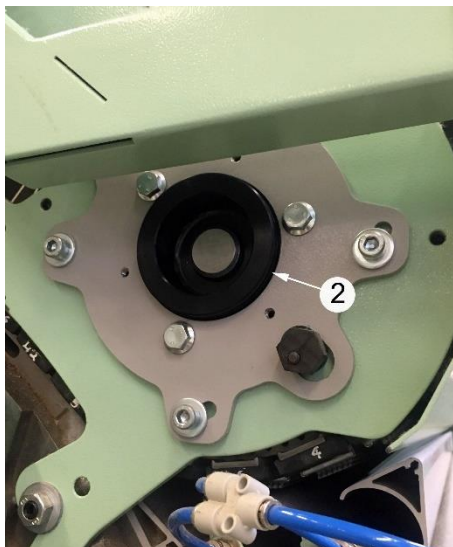
### Installation of compensation device:



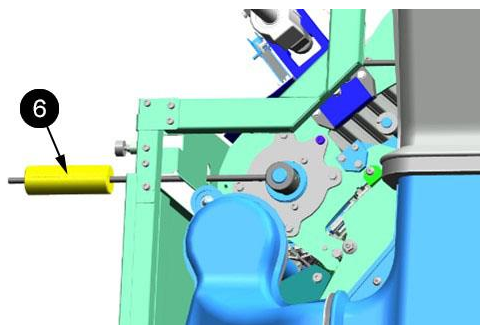
- Insert shaft (4) so that the compensation lever (5) can be mounted.



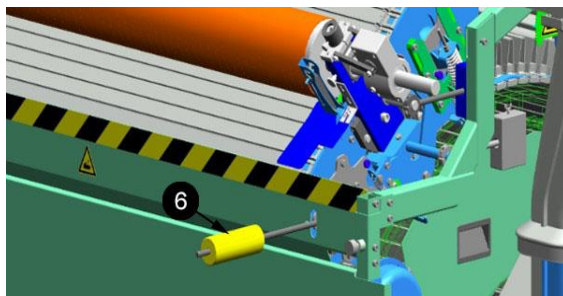
- Firmly attach compensation lever (1) into the notch provided, this is possible without removing the flats.



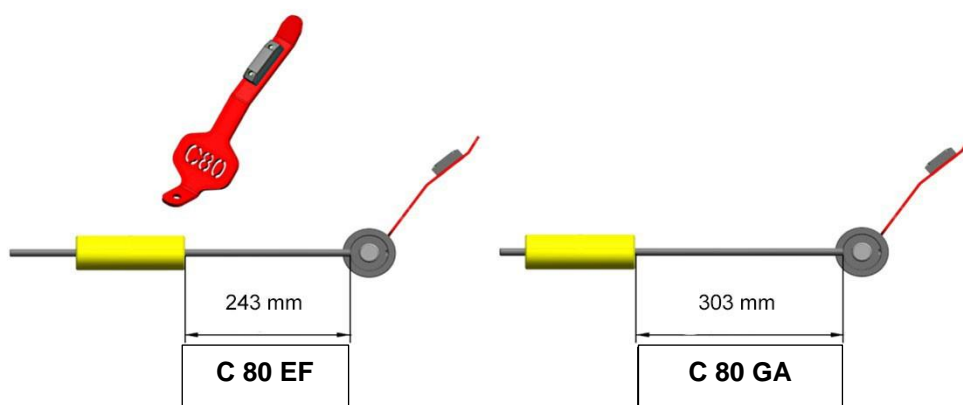
- Install supports (2) left and right.



- Install weight (6) depending on flat type.
- The front part of the C80 don't need to be disassembled.
- Guide the shaft on which the weight is mounted from the inside through the opening provided on the plate.

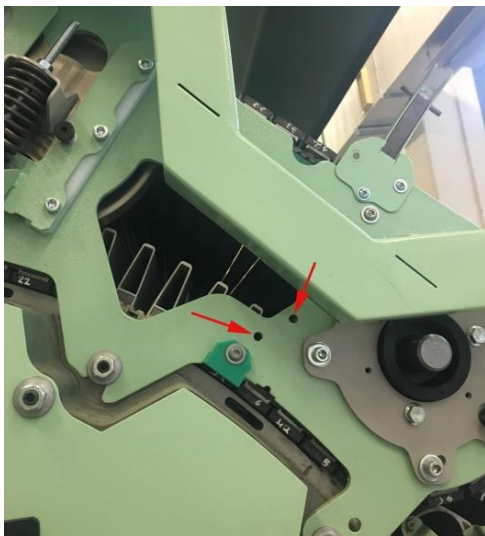


Weight position for flat type:

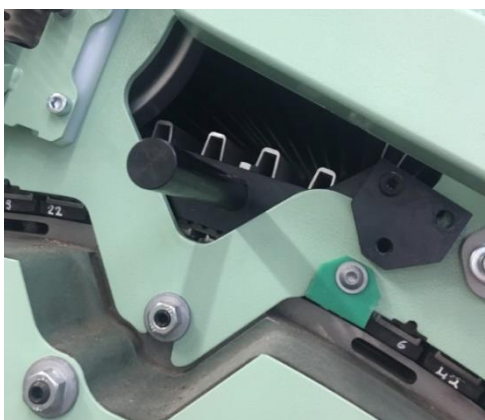


### Installation of transport belt brake

The number of flats as well as the active carding area has increased compared to Rieter C70. For this reason, a transport belt brake is necessary.



- Mounting position and threaded holes as shown in the picture.



- Position the brake as shown. The shaft in which the weight is mounted must face out of the card.



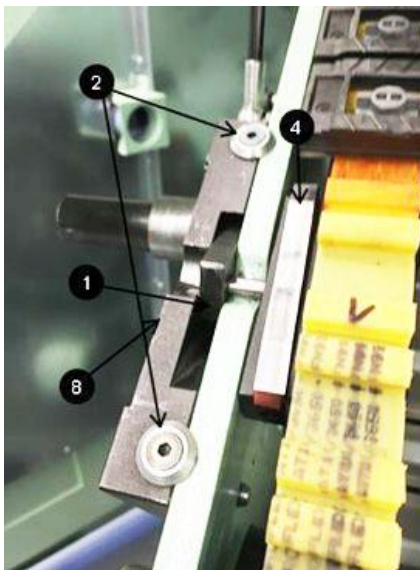
- Mount the blue weight horizontally.
- **MOUNT THE BRAKES ON BOTH SIDES.**



## Installation of flat pressing device to the card frame; left and right hand side



- Remove 3 flat bars in the position as illustrated in picture on the left, proceeding as follows.
- Use pliers to slide the clips to the center of the flat end heads, then pull out clips.
- Remove flats.



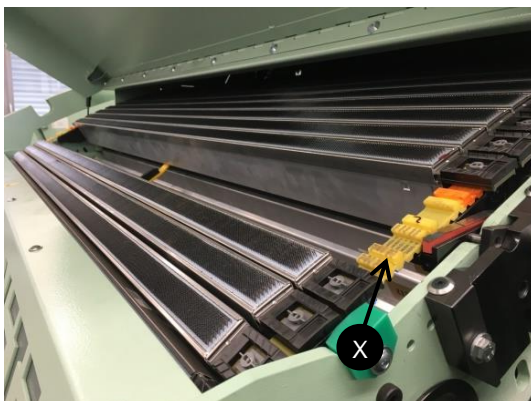
- Fit guide (1) to the side shield with both washers (2) being positioned on the upper part of the side shield.
- Fasten with the hexagon head screws (8).

**Caution!**



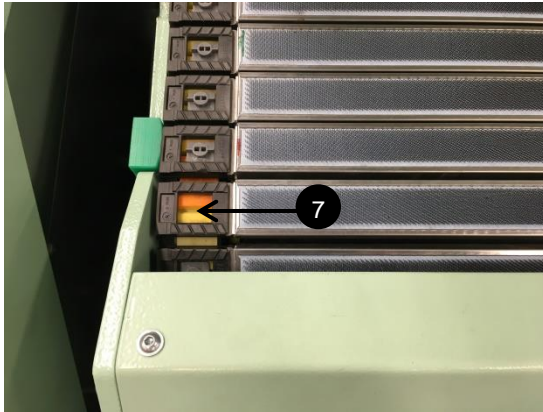
- Make sure that the clamping piece (4) remains mobile when the screw (8) is fastened.

## Attach supports for grinding roller



- Re-install the 3 flats .

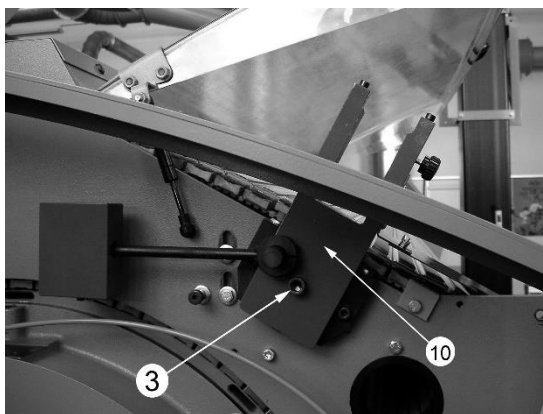
These are easiest to install where the transport belt is free (X).



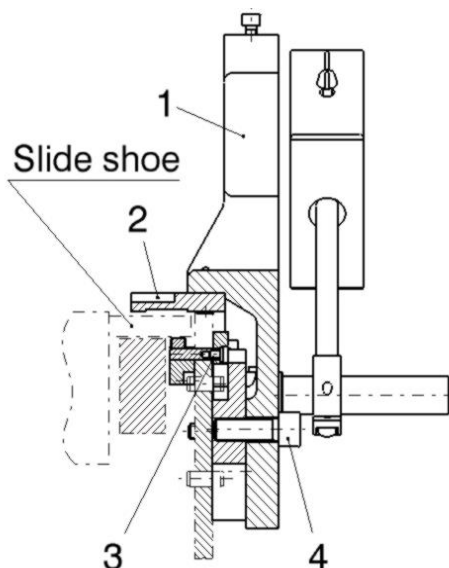
- The flat safety devices (7) have to be in place at the flat redirection.



- Check minimum distance of 0.5 mm with a feeler gauge.



- Install support (10) for grinding roller on left- and right hand side, using the Allen head screws (3).

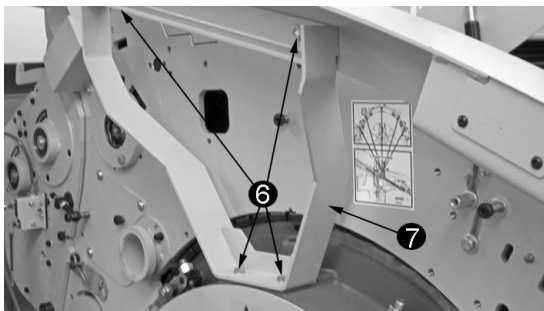


**IMPORTANT:** Please make sure that the slide shoe of the flat bar has at least a gap of 0.2 mm to the pressure plate (2).

**The clamping piece (3) is screwed on and must be replaced after too much wear.**

If the required minimum distance of 0.2 mm cannot be achieved, use the screw (4) by pushing up the grinding roller support.

### 3.1.3 Rieter Card C60 / C70 / C72 / C75

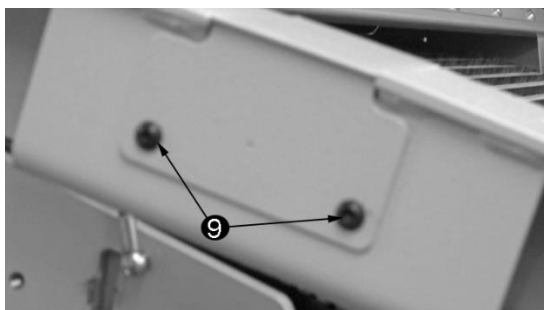


- Loosen screws (6) to remove reinforcement frame (7).

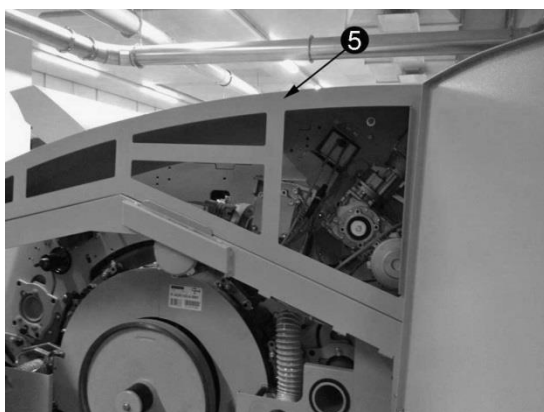
**Caution!**



Reinforcing frame (7) needs to be removed only if the year of manufacture of the DSW is between 2005 and 2014.



- Loosen the two screws (9) to remove the cover plate.



- Remove side hood (5) on right hand side.



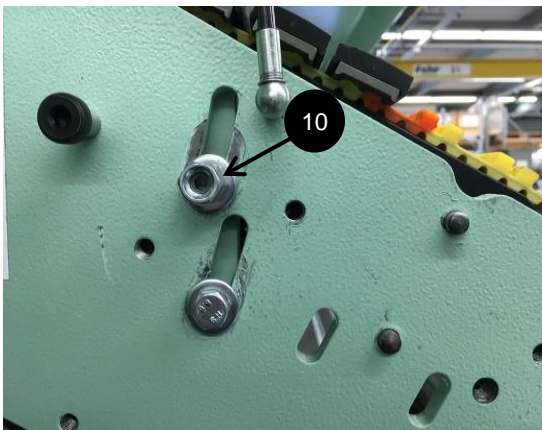
## Dismantling of flats:



- Remove 3 flat bars in the position as illustrated in picture on the left, proceeding as follows.
- Use pliers to slide the clips to the center of the flat end heads, then pull out clips.
- Remove flats

## Tightening of the flat bars on the front panel C70, version 0

(Prevents collisions between the flats and the aluminum cover plate on the front panel of the card)

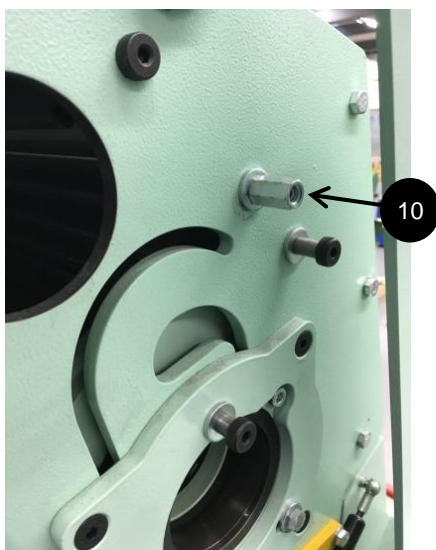


- according to Rieter Mounting Instruction

## Tightening of the flat bars on the front panel C70, version 1

(Prevents collisions between the flats and the aluminum cover plate on the front panel of the card)

- Release tension of the flats by loosening the screws (10) on the left- and right hand side
- Use spanner as shown in picture 2 to push up the flats (tightened) and fasten screw (10).



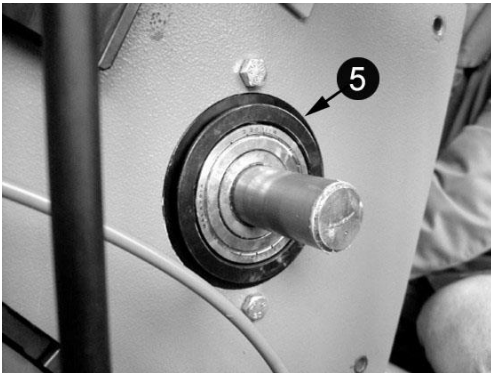
**Caution!**



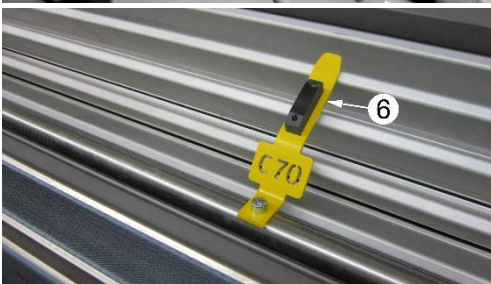
Flats must be re-sharpened in tightened position only! Following the re-sharpening process the tension of the flats need to released by following the reversed order.



- Insert shaft (4) for the lever of the compensation device.



- Install supports (5) left and right.

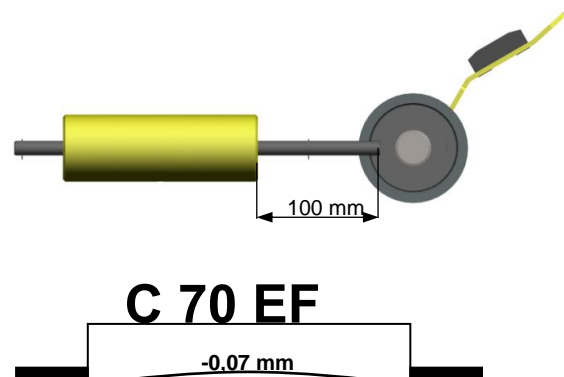
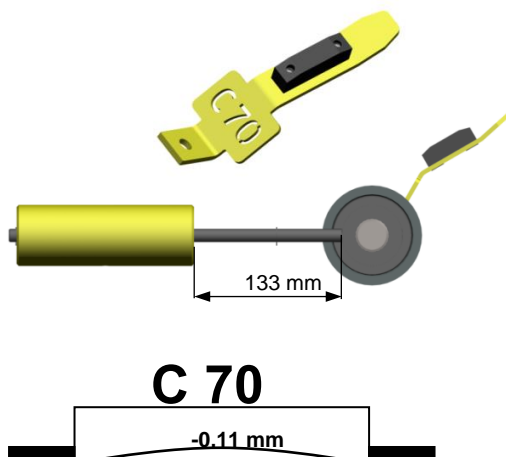


- Firmly attach compensation lever (6).

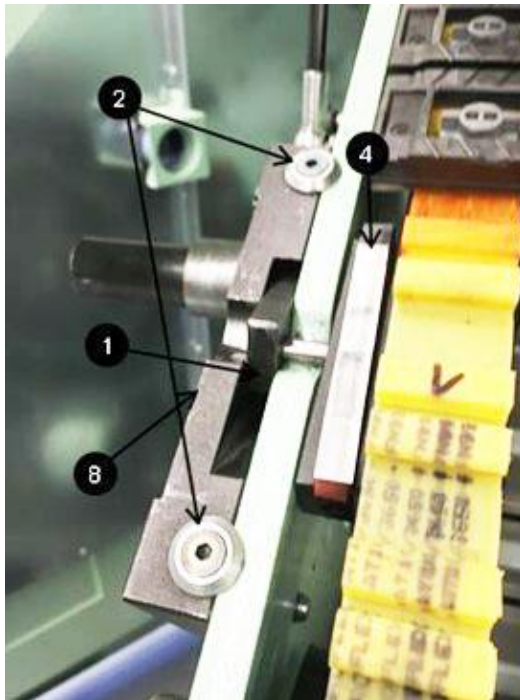


- Install weight (7) depending on flat type as soon as the flats are re-inserted.

Weight position for flat type:



## Installation of flat pressing device to the card frame; left and right hand side



- Fit guide (1) to the side shield with both washers (2) being positioned on the upper part of the side shield.
- Fasten by means of the hexagon head screws (8).

**Caution!**



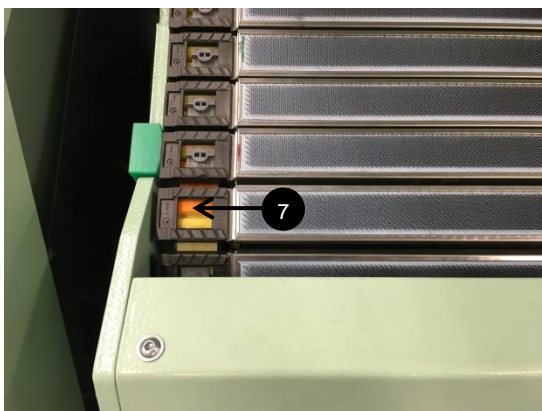
- Make sure that the clamping piece (4) remains mobile when the screw (8) is fastened.

## Attach supports for grinding roller



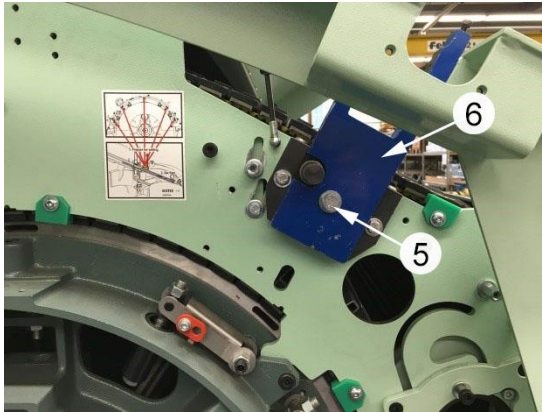
- Re-install the 3 flats.

These are easiest to install where the transport belt is free (X).



- The flat safety devices (7) have to be in place at the flat redirection.

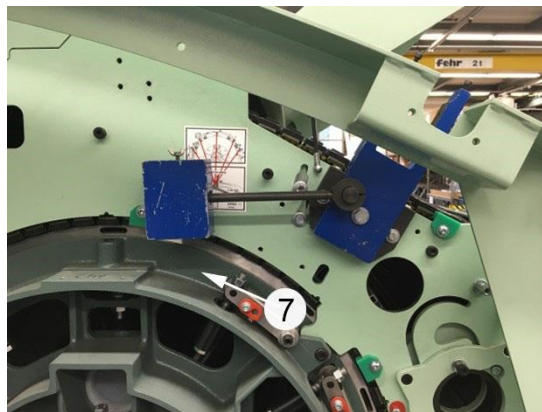




- Install support (6) for grinding roller on left- and right hand side, using the Allen head screws (5).



- Check minimum distance of 0.5 mm with a feeler gauge.

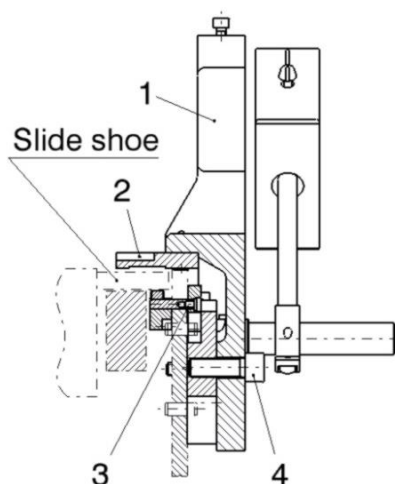


- Install the weight lever (7) with weights on both sides.

**Caution!**



- Please make sure that the weight lever are horizontal. It can be lead to incorrect contact of the clamping piece with the flats.



**IMPORTANT:** Please make sure that the slide shoe of the flat bar has at least 0.2 mm of play to the pressure plate (2). See picture. **The clamping piece (3) is screwed on and must be replaced after excessive wear.**

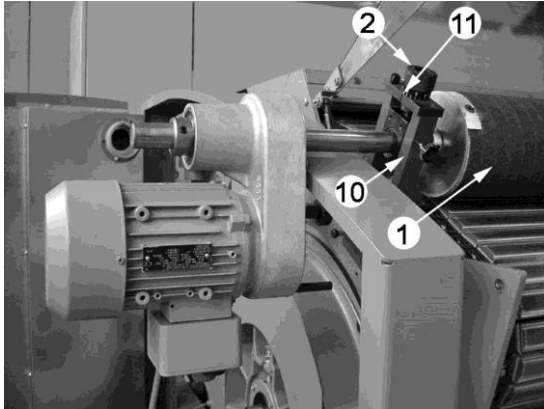
If the required minimum distance of 0.2 mm cannot be achieved, use the whole play of the screw (4) by pushing up the grinding roller support.

## Insert grinding roller

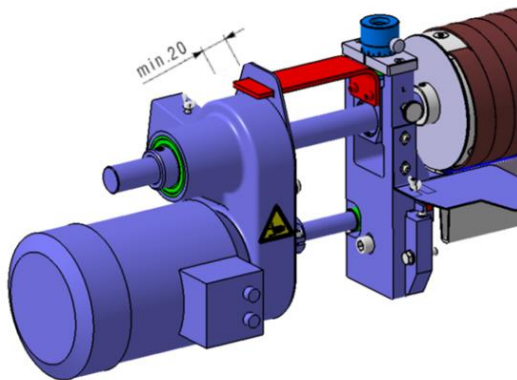
**Caution!**



When installing the grinding roller, make sure that you are wearing protective footwear, safety gloves and eye protection.



- Position the grinding roller (1) with in-feed device in the bearing support (10) with the indent (11) facing outwards.
- Mount the grinding roller with a crane to avoid injury when lifting by hand.
- Assure that grinding roller does not rest on flat clothing (lift off using knurled screw) prior to fastening of the hexagon socket screws (2).
- Fasten hexagon socket screws (2).



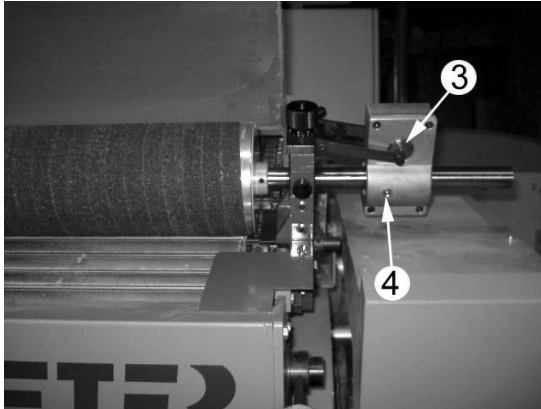
- Make sure that the anti-rotation device is minimum 20 mm in the designated plate.

**Caution!**



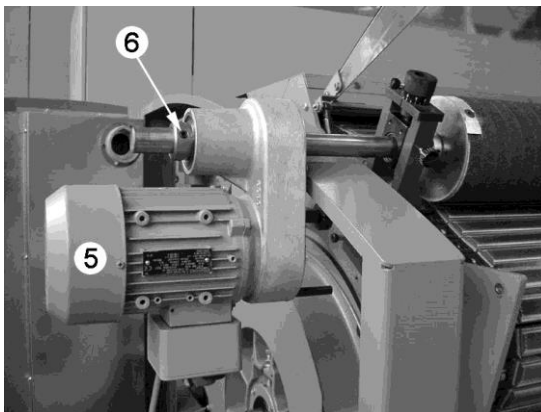
- When the anti-rotation device isn't installed the drive can rotate an coast injury.
- Reattach the weight (8) for the compensation rod (Only for Rieter C60/70/72/75/80).





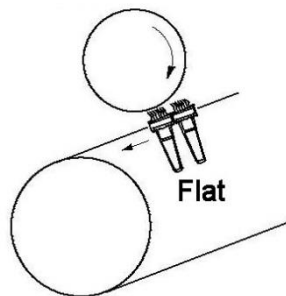
## Centering of the grinding roller

- Turn grinding roller until eccentric (3) is in center position. Hexagon socket screw in top most or bottom most position. Remove synthetic cover (4).

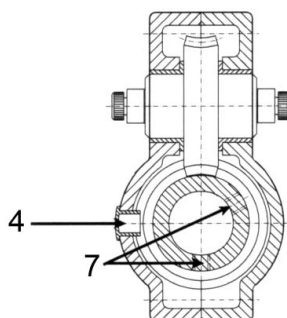


- Unfasten both hexagon socket screws (7) (see drawing below).
- Centre roller on both sides across the flat width.
- Fasten hexagon socket screws (7) (see drawing below).
- Attach synthetic cover (4).
- Slip-on drive motor (5) and secure by fastening hexagon socket screws (6).

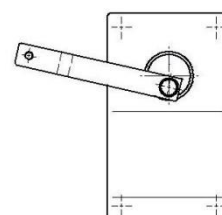
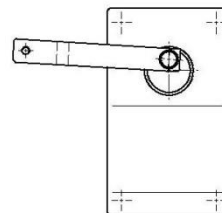
## Rotation Grinding roller



Drawing 1



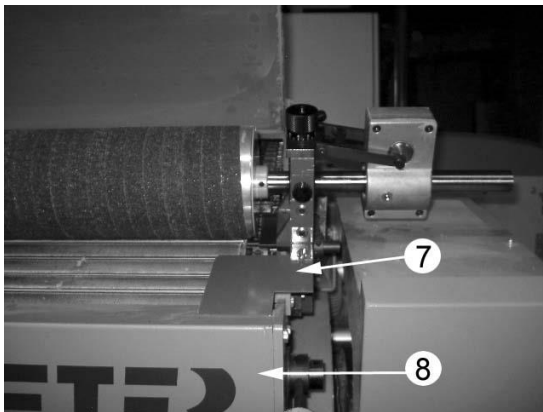
- Check sense of rotation of the grinding roller and, if necessary, change it as illustrated in the picture.
- When adjusting the grinding roller, assure that it is positioned above the clothing and not above the gap between two flats.



Drawing 2



- Set the grinding roller parallel to the flat clothing at 8/1000" (0,2 mm) on both sides.



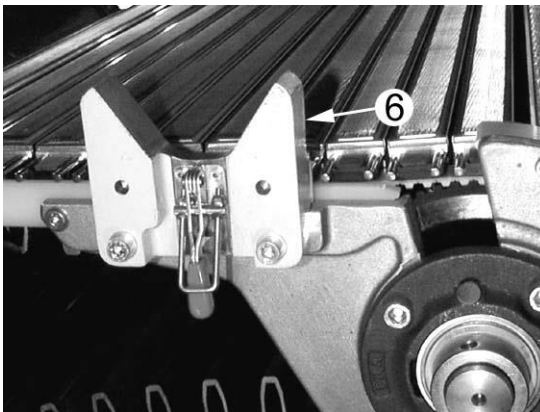
**Caution!**



- The cover plate (7 and 8) must be installed before starting to grind the clothing.

## 3.2 Trützschler

### 3.2.1 TC10 / 40" and TC11 / TC15 / TC19i / 51"

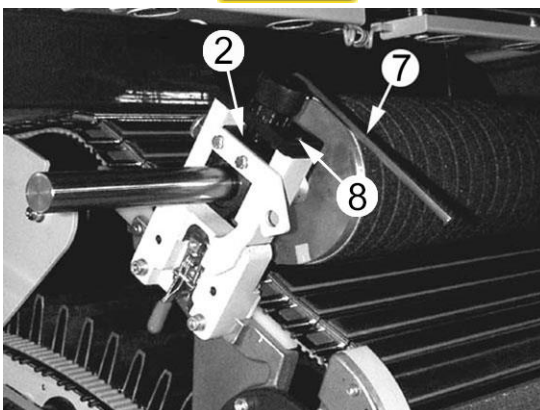


- The Supports (6) are supplied by Trützschler.

**Caution!**

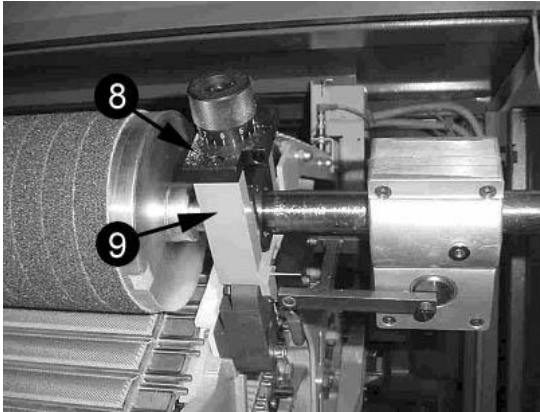


Only the card specific supports supplied by Trützschler guarantee the correct position of the regrinding device.

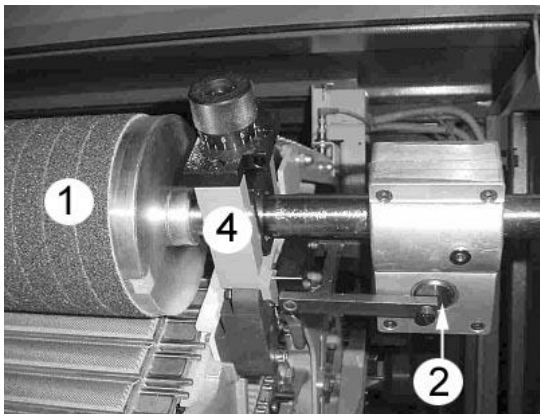


- Move the feed slide (2) all the way up against the plate (8) turning the hexagonal wrench (7) clockwise.

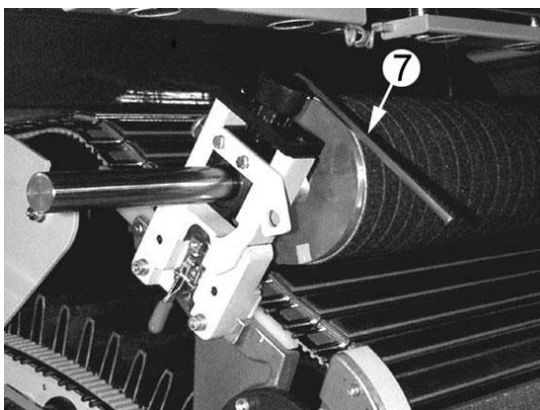
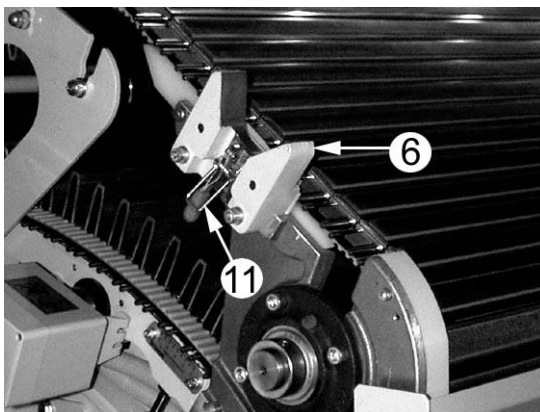




- Fix the plate (8) to the roller bearing (9) using the M6x8 hexagon socket.



- Subsequently, place grinding roller (1) together with drive for transverse movement (2) and the grinding roller bearings (4) into the grinding roller supports (6). Fix it with the clamping levers (11).
- Slide drive motor on to right hand shaft of the roller, and plug in to receptacle on card.



- With fine adjustments screws left and right set the grinding roller parallel to the flat tops. Using a hexagonal wrench (7).

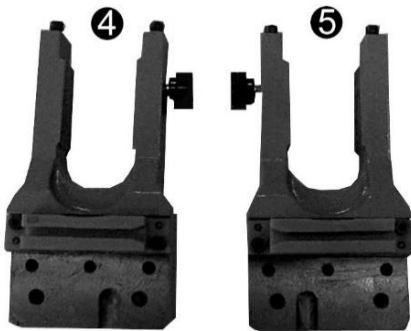
**Caution!**



- Using the setting gauge 8/1000", set grinding roller parallel to flat tops. Make sure the gauge moves freely and is not squeezed.



## 3.2.2 Trütschler DK760 – TC08 with aluminum bars

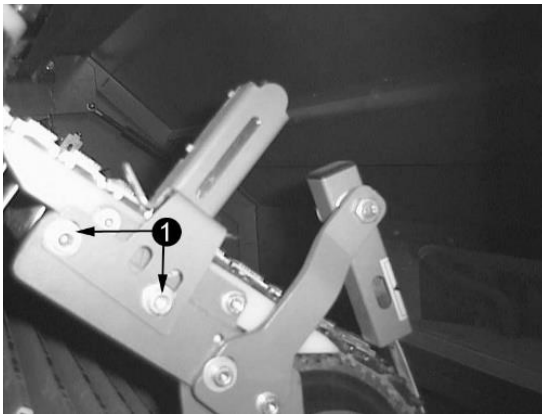


- The grinding brackets (4) and (5) are card specific.

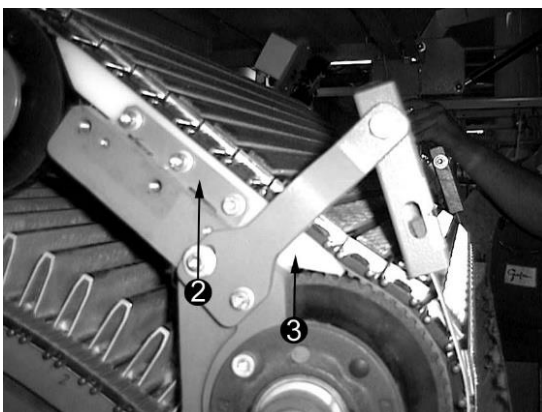
**Caution!**



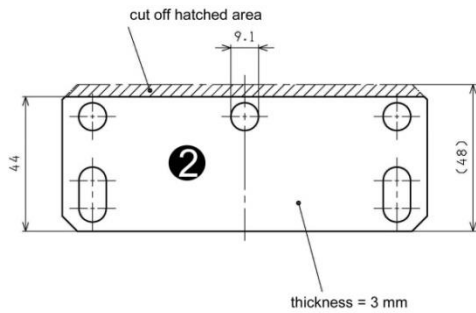
The modification of the guide of the flat belt needs to be carried out once only and only on **DK760** and **DK803.1** cards. It must be carried out before installing the emery grinding roller.



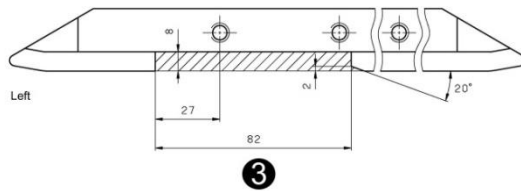
- Loosen the two screws (1) and remove holder for graphite blocks.



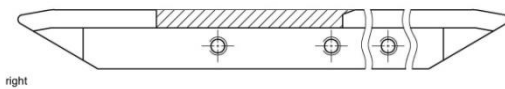
- Remove plate (2) together with belt guide (3) on both sides.
- Separate left and right belt guide (3) by removing the two countersunk screws (2).



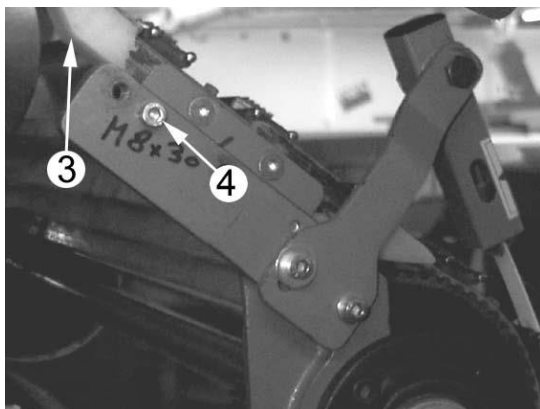
- Reduce width 48 mm of plate (2) to 44 mm. This has no effect on the card.



- Mill out hatched area of left and right belt guide (3) according to sketch.



- Screw modified belt guides (3) back onto shortened plates (2) using the counter-sunk screws.



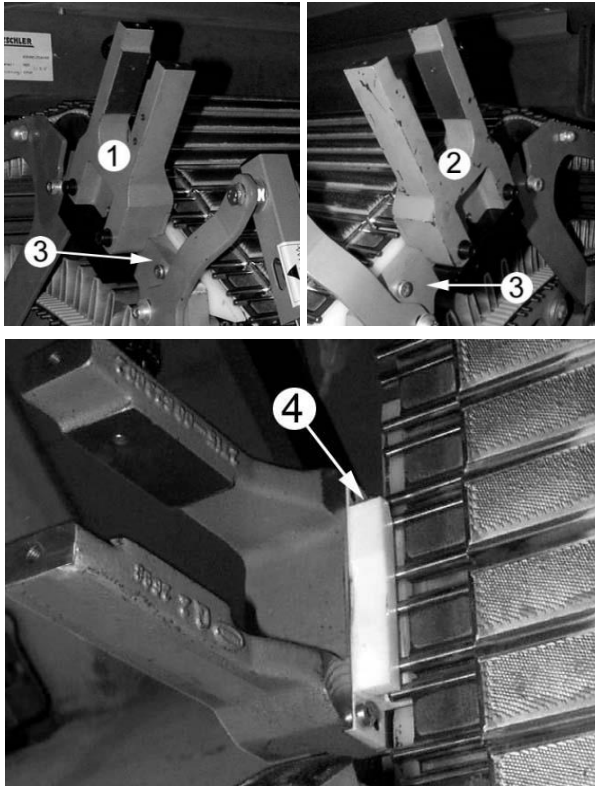
- Re-install plate together with belt guide (3) on card, using a socket head cap screw M8x30 (4) instead of the counter-sunk screw.

## Installation of the emery roller supports

**Caution!**



Only the card-specific supports supplied by Graf assure the correct position for resharpening device.

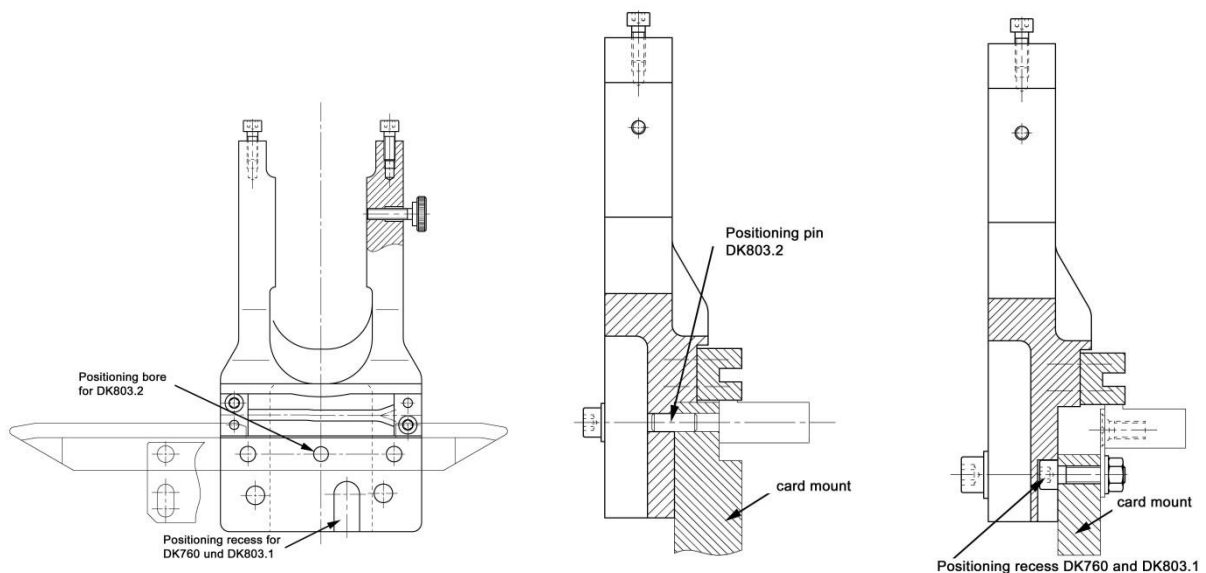


- Remove covers as far as necessary as well as the flats positioned in the recess of the flat belt guide.
- Attach both emery roller supports (1) and (2) left and right on to the extensions on the flat deflection (3) in front above the doffer.
- Make sure that the flats move in at the funnel-shaped end of the flat guide (4).
- Replace the previously removed flat-irons.

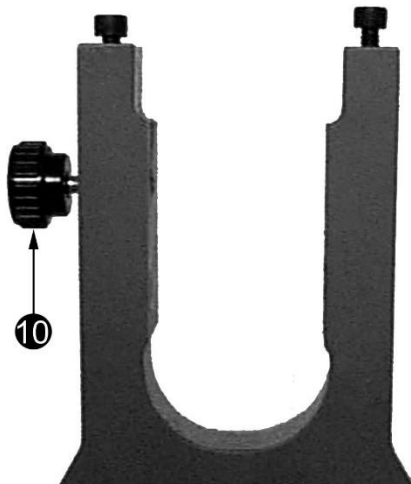
**Caution!**



Turn flats in working direction, making sure the flat-ends are running properly in the guides of the grinding brackets.



Ins/screws heads of the card mounts must fit into the respective holes/recesses.



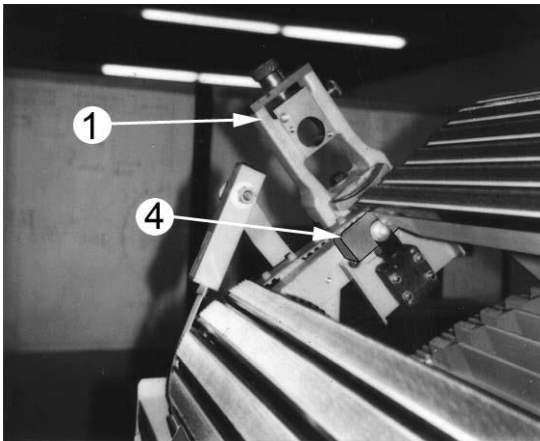
- The emery roller supports are installed correctly if the knurled screws (10) are facing to the back (licker-in-side) of the card.

### 3.2.3 Trützschler DK760 with cast iron bars

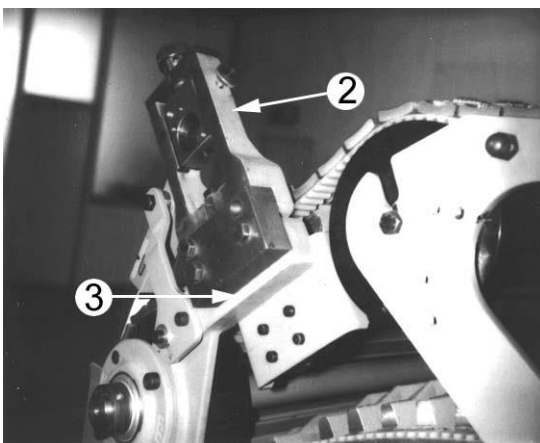
**Caution!**



Only the card-specific supports supplied by Graf assure the correct position for resharpening device.

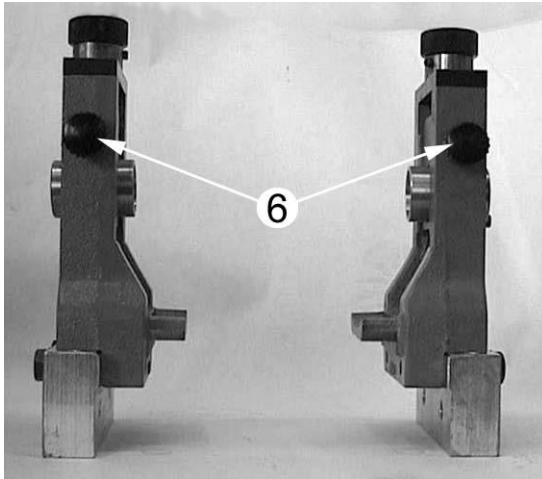


- Remove covers as far as necessary.



- Attach both supports (1) and (2) left and right for the emery roller with the press-on device (4) to the support (3).

=> Use screws supplied for this purpose.



- The emery roller supports are installed correctly if the knurled screws (6) are facing to the back (lickerin-side) of the card.

## Preparation of the grinding roller before installation

**Caution!**



If the flat cleaning device is positioned on the lickerin-side of the card the emery roller supports have to be installed on the doffer side and vice versa.

## DSW with motor drive



- If a motor is used to drive the DSW, it must be installed on the DSW drive shaft (length=390mm) before the DSW is positioned on the card.
- The gear (7) is always located on the right hand side of the drive motor, regardless whether the grinding roller is installed on the lickerin- or the doffer-side of the card.

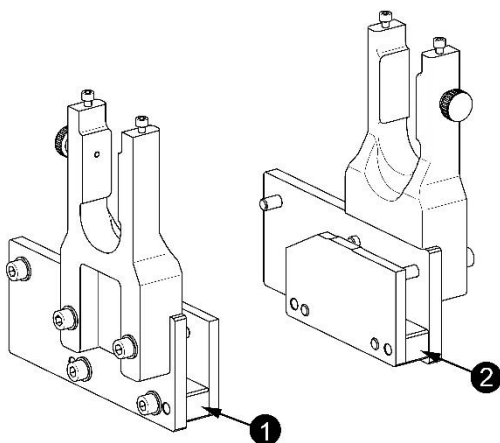
## 3.3 Crosrol

### 3.3.1 Crosrol MK6 and MK7

**Caution!**

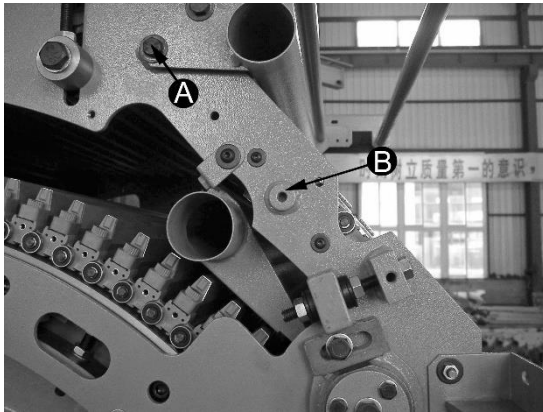


Only card specific grinding brackets delivered by Graf will grant the correct grinding position.



- Holders Pos. 1 + 2 (L + R) will be complete delivered, ready for use.





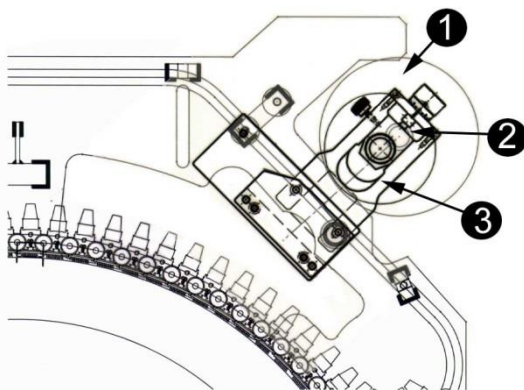
- Fixation of holders has to be made on Pos. A + B. Further existing screw on Pos. B has to be removed on left and right side. Now complete holders (1 + 2) can be fixed on pos. A + B.

**Caution!**

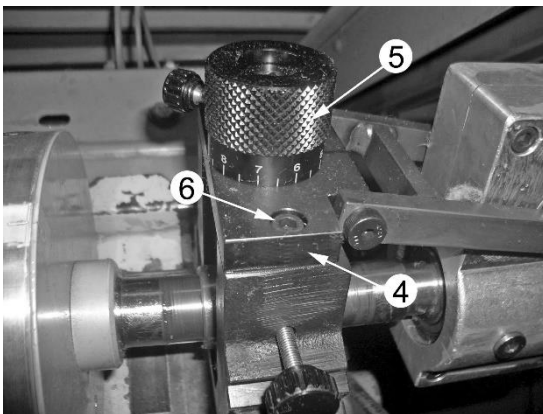


- After finishing the grinding process the screws should be reattached.

## Attachment of Grinding Roller



- Now, Flat Grinding Roller (1) can be placed into the holders (3) on the right a left side into the bearing holders (2). The cover plates (4) with fine adjustments screws have to be fixed again. With fine adjustments screws (5) right and left the Flat Grinding Roller (1) has to be set away from the flats. Now fixation screws (6) L + R can be fastened.

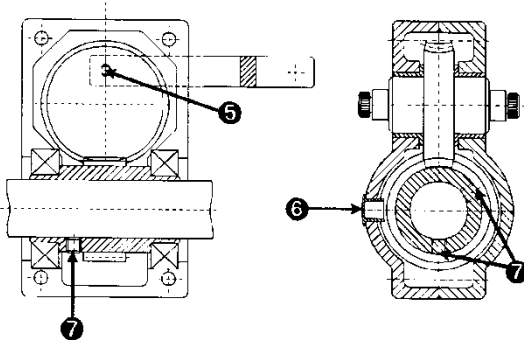


- The traversing gear box has to be on the right side of the card, seen in direction of material flow!

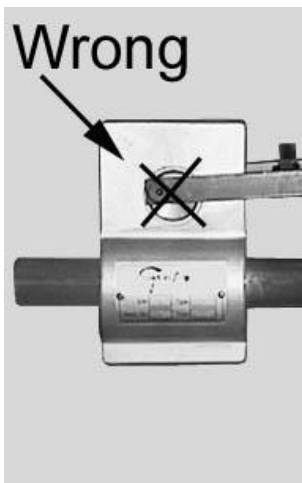
## Caution!



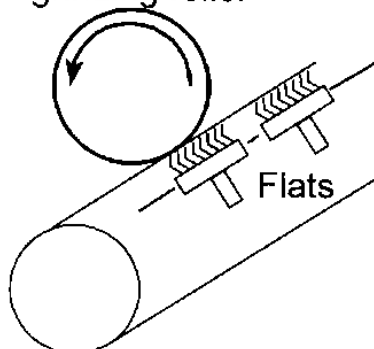
Prior to first grinding, the grinding roller must be centred in relation to the clothing width as per following instruction:



- Turn grinding roller manually until stud (5) is exactly above the centre.
- Remove seal (6).
- Loosen the 2 set-screws (7) in the interior of the gear-box by means of a hexagonal wrench.
- Centre roller so that the rims of the roller protrude the clothing exactly the same distance on both ends.
- Re-tighten the 2 set screws in the gear box (7).
- Slide drive motor over the shaft-end and tighten.
- Check for sense of rotation of grinding roller by briefly depressing the switch. Change polarity of supply wires if necessary (☞ see adjacent sketch).
- Set the grinding roller parallel to the flat clothing at 8/1000" (0.2 mm) on both sides.



Direction of rotation  
grinding roller



## Caution!



When the grinding roller rotate in wrong direction it can damage the flats.



Electric installations are dangerous and should only be carried out by specialist personnel.



## 4. Flat grinding

## 4. Flat grinding

### 4.1 Preparation for grinding

#### Warning!!

- Check:
- Are all screws fastened all tools and loose items outside the danger area of the card?
  - Have all the safety covers been installed?
  - Are all the doors on the card closed?
  - Erect a clearly visible barrier around the card on which the maintenance and re-sharpening process is taking place. There must be at least 1.5 m distance to the hazardous zone. The barrier must not be overstepped, if so the operator must stop the machine immediately. Protective glasses have to be worn during the re-sharpening process and both hands have to be kept outside the danger area.



**Safety distance to the DSW/DEW 1.5 m**



### 4.2 Grinding process

#### Caution!



The grinding intensity of new emery fillet is substantially higher and decreases with increased use.

Generally we distinguish two different grinding processes. On one hand we speak of **grinding** and on the other hand of **equalizing**.

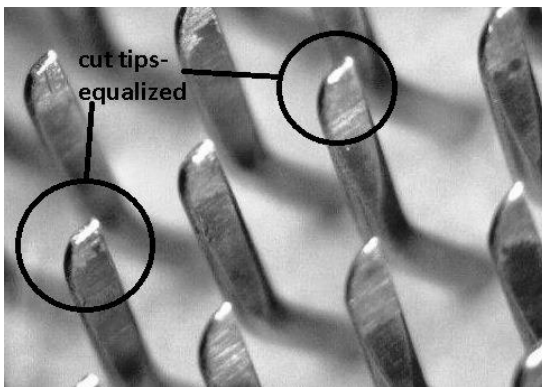
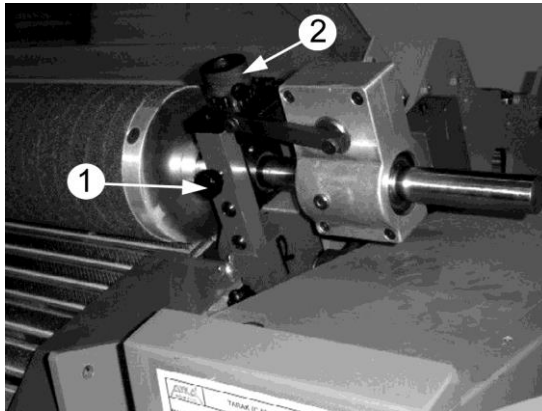
By **equalizing** with **DEW** individual peaks of the clothing are cut in order to have a narrow variation in the entire flats set. That is necessary to be able to precisely adjust the carding gap.

When **grinding** with **DSW** we renew the back radius. This is only possible if we apply enough pressure on the tips so that they bend in grinding direction.

## 4.2.1 Equalizing (with DEW)

After the revolving flats have been replaced and mounted on the card, the flats need to be equalized. **This should be done on the card after a run-in time of 15 tons**, in order to enable a proper setting of the revolving flat to cylinder.

### Procedure:



- Check if there is no collision and that the card area is safe.
- Start flat motion.
- Start drive motor and manually hold in position until the roller has reached operation speed.
- Loosen knurled screws (1) on both sides and carefully lower grinding roller by turning the feed screw (2) until the roller lightly touches the clothing.
- Set scale to "Zero" on both sides, fasten knurled screw (1) and mark flat.
- Grind for one full revolution to ensure that there are no high points.
- Loosen the knurled screw (1) on both sides and lower the grinding roller **around 0,1mm** by turning the feed screw (2).
- Equalize **two full revolutions**.

### Attention

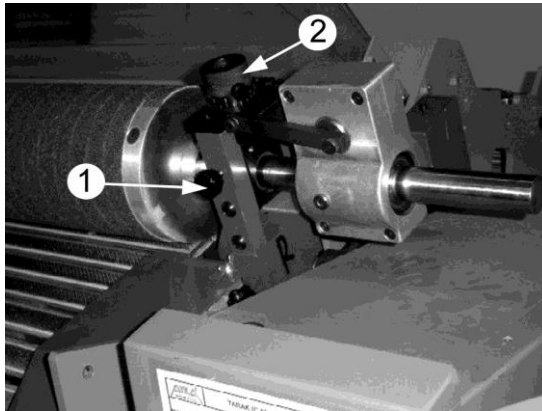


- Following the equalizing process, the setting between flat clothing's and cylinder need to be checked and adjusted if necessary.
- If an emergency occurs, stop the machine immediately by "Stop button" or unplug from power.
- If a person comes closer to the barrier as shown in previous pictures, stop the machine immediately.
- The operator is responsible for the safety area and the safety of himself.
- The operator is not allowed to leave the machine while running or plugged in power as well as to constantly supervise the working safety area.

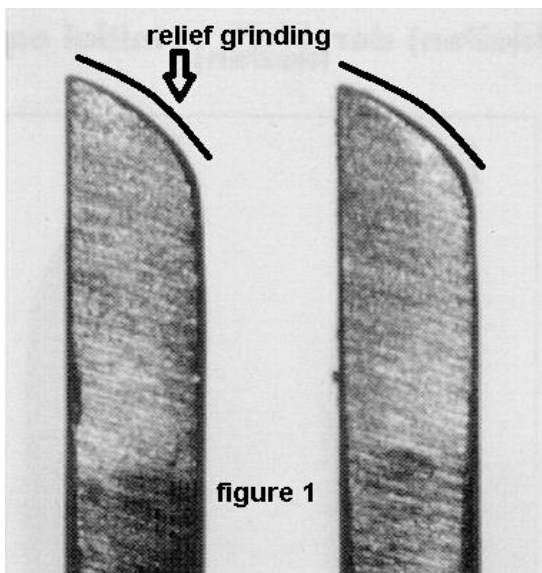
## 4.2.2 Grinding (with DSW)

After several tons of production on the cards the tips of the revolving flats are rounded and worn, while the carding quality sinks unmistakable. In order to increase the carding quality again, the tips have to be re-sharpened.

### Procedure:



- Check if there is no collision and that the card area is safe.
- Start flat motion.
- Start drive motor and manually hold in position until the roller has reached operating speed.
- Loosen knurled screws (1) on both sides and carefully lower finding roller by turning the feed screw (2) until the roller very lightly touches the clothing.



- Set scale to "Zero" on both sides, fasted knurled screw (1) and mark flat.
- Grind one full revolution to ensure that there are no high points.
- Depending on degree of wear of the clothing (roundness of the tooth points) and the condition of the emery fillet (new or used) lower the feed screw (2) between **1 and 3 long divisions (0.1 to 0.3 mm)** by means of the hexagonal key. Tighten the knurled screw (1) and grind **one revolution.**

- Use microscope to check condition of tooth points, if necessary feed in by 1½–2 divisions mark and grind for one revolution. The tooth points must not have any curve on the carding edge.

**Attention!**

- Following the re-sharpening process the setting between flat clothing's and cylinder need to be checked and adjusted if necessary.
- If an emergency occurs, stop the machine immediately by "Stop button" or unplug from power.
- If a person comes closer to the barrier as shown in previous picture, stop the machine immediately.
- The operator is responsible for the safety area and the safety of himself.
- The operator is not allowed to leave the machine while running or plugged in power as well as to constantly supervise the working safety area.

## 5. Maintenance

## 5. Maintenance

### 5.1 Replacing the emery fillet SILICARBO No.7

**Caution!**

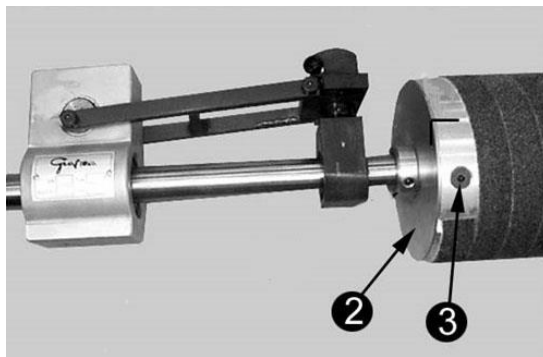


To prevent the emery fillet from cracking and the emery grains from flaking off during the mounting process, store the fillet in a room with at least 70 % humidity for approx. 24 hours or wrap in a damp cloth and store overnight.

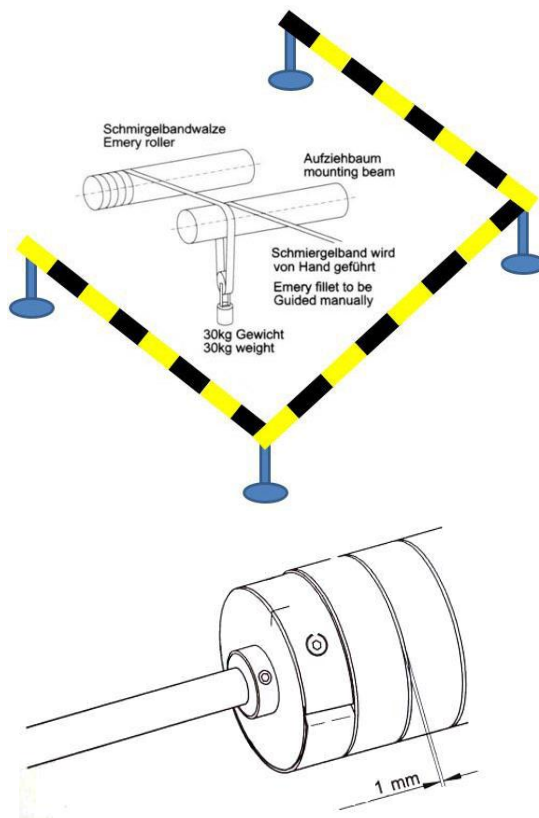


**Caution!**

Incorrect handling can lead to trapping of fingers or breakage of the grinding fillet. The safety barrier must be set up during work.



- Place emery roller in ROD35 or ROD35/1 or the three-jaw-chuck of a lathe.
- Loosen the set-collars (2) left and right and remove the disc-shaped covers.
- Loosen the clamps (3) and wind off old fillet.
- Position the mounting beam according to sketch in front of the lathe and sling fillet around beam.
- Clamp fillet at the start and wind with 30 kg tension.
- When mounting the emery fillet, ensure that there is a gap of approx. 1 mm between the windings.
- At the end of the roller, maintain the tension and secure fillet with the clamp and cut the emery fillet.
- Observing the markings, replace the two discs left and right, push set-collar against the disc and tighten.







- If a person comes closer to the barrier as shown in previous picture, stop winding immediately.



- The operator is responsible for the safety area and the safety of himself.

- The operator is not allowed to leave the machine while running or plugged in power as well as to constantly supervise the working safety area.

**Caution!**

Make sure that the cover disks are aligned to the markings in order to prevent imbalance during rotation.

**Life time of the emery fillet:**

The emery fillet must be replaced after grinding 15 to 20 sets, depending on how much had to be ground off.

## 5.2 Replacing the emery fillet CUBITRON 3M

See 1.5.1

**Caution!**

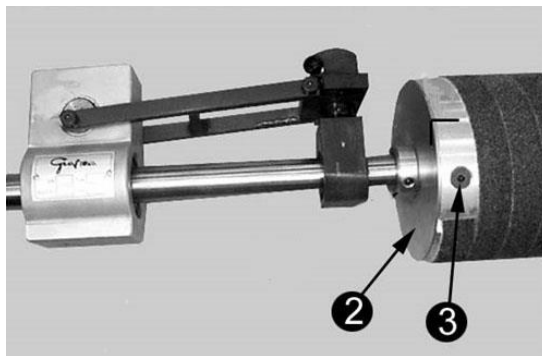


- The CUBITRON 3M emery fillet can be mounted dry. It does not need to be moistened.

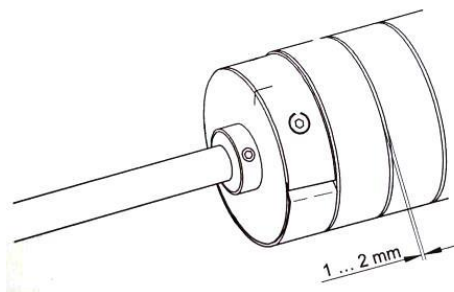
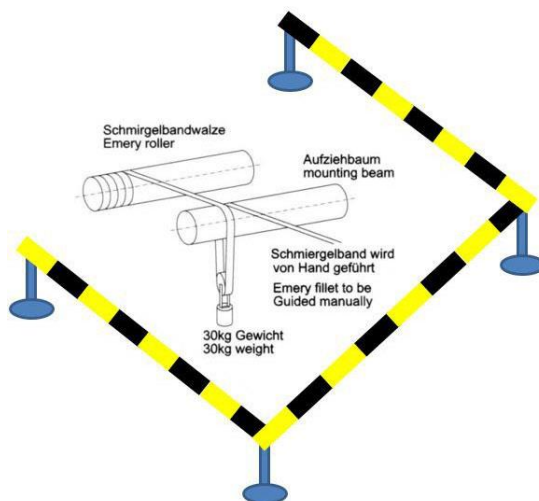


**Caution!**

Incorrect handling can lead to trapping of fingers or breakage of the grinding fillet. The safety barrier must be set up during work.



- Place emery roller in ROD or the three-jaw-chuck of a lathe.
- Loosen the set-collars (2) left and right and remove the disc-shaped covers.
- Loosen the clamps (3) and wind off old fillet.
- Position the mounting beam according to sketch in front of the lathe and sling fillet around beam.
- Clamp fillet at the start and wind with 30 kg tension.
- When mounting the emery fillet, ensure that there is a gap of 1 to 2 mm between the windings.
- At the end of the roller, maintain the tension and secure fillet with the clamp and cut the emery fillet.
- Observing the markings, replace the two discs left and right, push set-collar against the disc and tighten.





- If a person comes closer to the barrier as shown in previous picture, stop winding immediately.



- The operator is responsible for the safety area and the safety of himself.



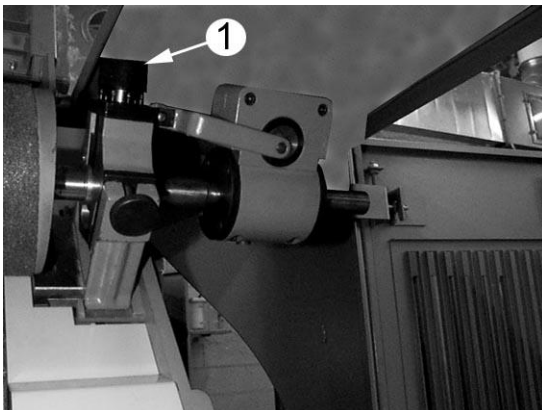
### Caution!

Make sure that the cover disks are aligned to the markings in order to prevent imbalance during rotation.

### Life time of the emery fillet:

The emery fillet must be replaced after grinding approximately 10 sets, depending on how much had to be ground off.

## 5.3 Lubrication



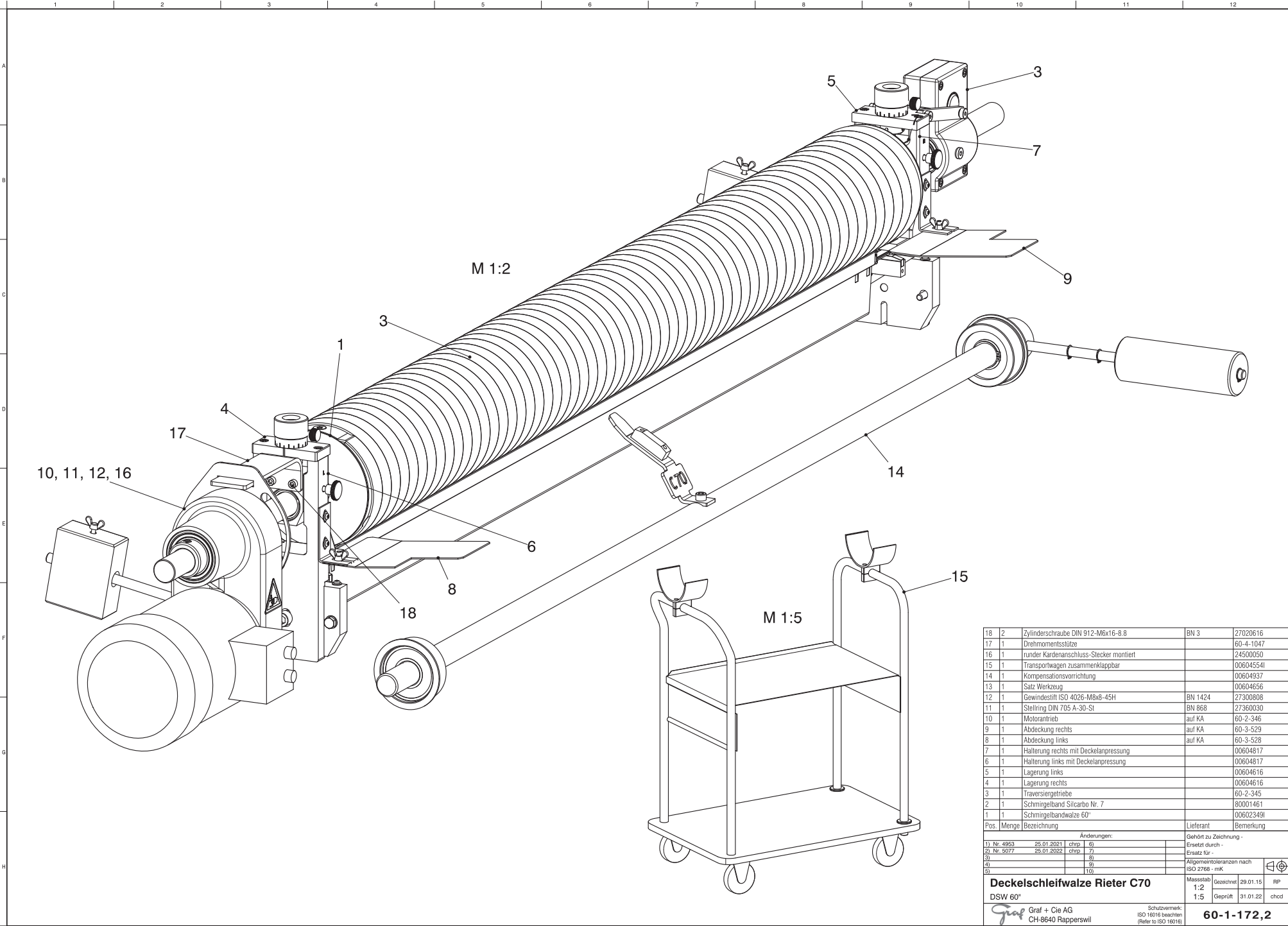
- Before each grinding, lubricate the bearing through the lubricating hole in the feed spindle (1) with a few drops of ordinary machine oil.
- All other bearings are lubricated for life and need no further maintenance.

### Caution!

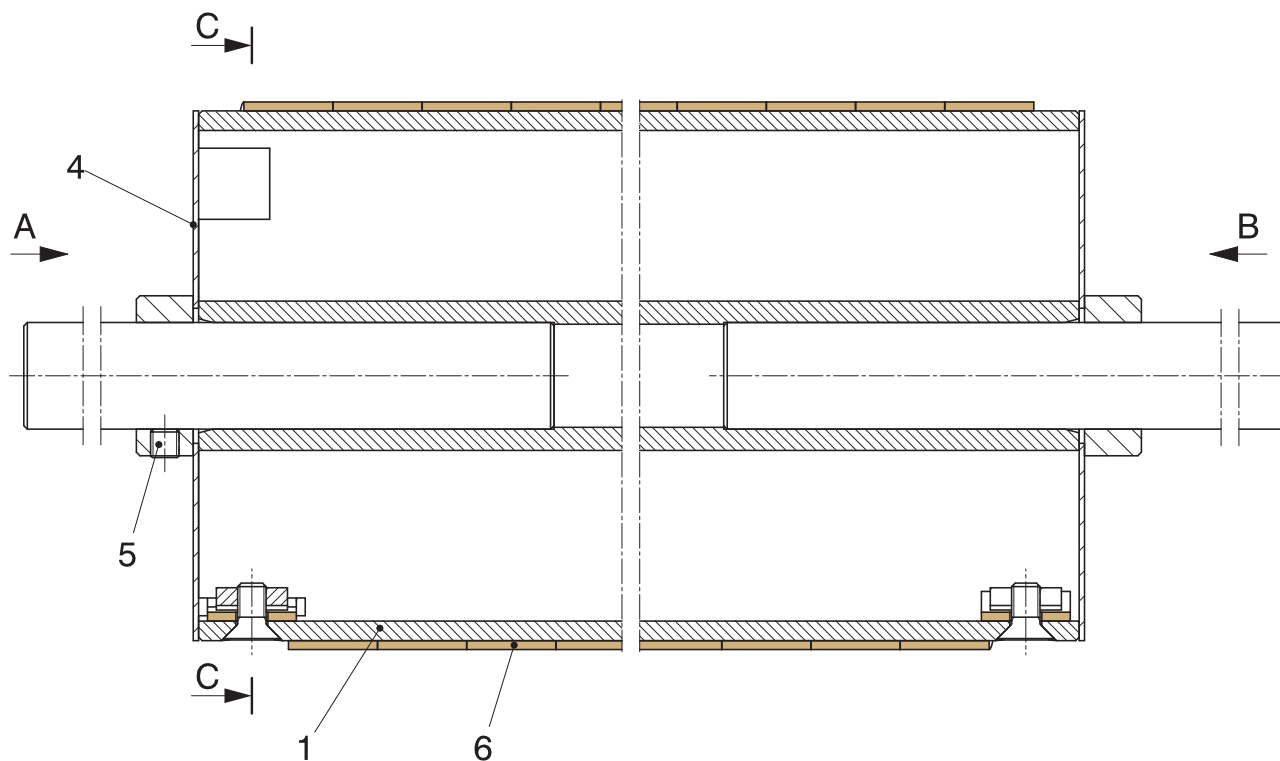


If the spindle is not lubricated, it can be damaged.

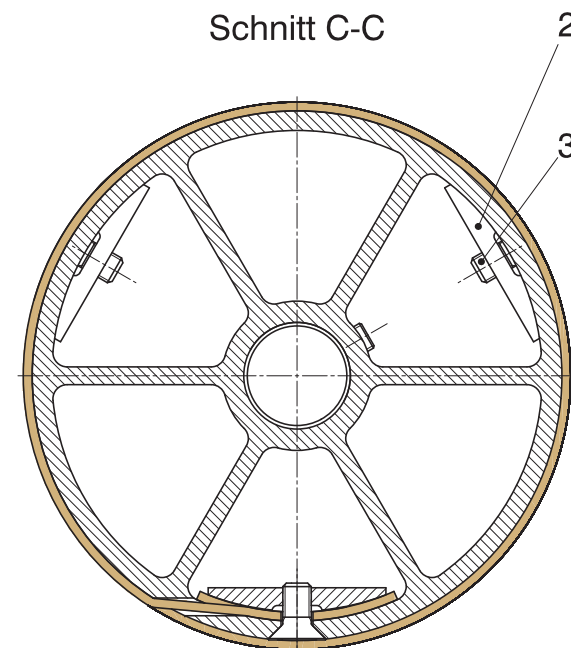
## 6. Attachment



18	2	Zylinderschraube DIN 912-M6x16-8.8	BN 3	27020616	
17	1	Drehmomentsstütze		60-4-1047	
16	1	runder Kardananschluss-Stecker montiert		24500050	
15	1	Transportwagen zusammenklappbar		00604554i	
14	1	Kompensationsvorrichtung		00604937	
13	1	Satz Werkzeug		00604656	
12	1	Gewindestift ISO 4026-M8x8-45H	BN 1424	27300808	
11	1	Stellring DIN 705 A-30-St	BN 868	27360030	
10	1	Motorantrieb	auf KA	60-2-346	
9	1	Abdeckung rechts	auf KA	60-3-529	
8	1	Abdeckung links	auf KA	60-3-528	
7	1	Halterung rechts mit Deckelanpressung		00604817	
6	1	Halterung links mit Deckelanpressung		00604817	
5	1	Lagerung links		00604616	
4	1	Lagerung rechts		00604616	
3	1	Traversiergetriebe		60-2-345	
2	1	Schmirgelband Silcarbo Nr. 7		80001461	
1	1	Schmirgelbandwalze 60"		00602349i	
Pos.	Menge	Bezeichnung	Lieferant	Bemerkung	
Änderungen:			Gehört zu Zeichnung -		
1)	Nr. 4963	25.01.2021	chp	6)	Ersetzt durch -
2)	Nr. 5077	25.01.2022	chp	7)	Ersetzt für -
3)				8)	Allgemeintoleranzen nach ISO 2768 - mK
4)				9)	
5)				10)	
Deckelschleifwalze Rieter C70			Massstab 1:2 1:5	Gezeichnet 29.01.15 Geprüft 31.01.22	RP chod
DSW 60"					
Graf + Cie AG CH-8640 Rapperswil			Schutzvermerk: ISO 16018 beschriften (Refer to ISO 16018)		
			60-1-172,2		

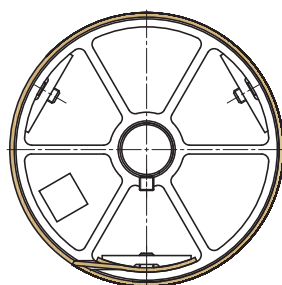


Schnitt C-C



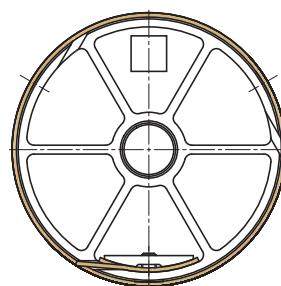
Vista A  
Ansicht A  
Massstab: 1:2

1 Intagli +  
1 fori  
1 Schlitz +  
1 Senkloch



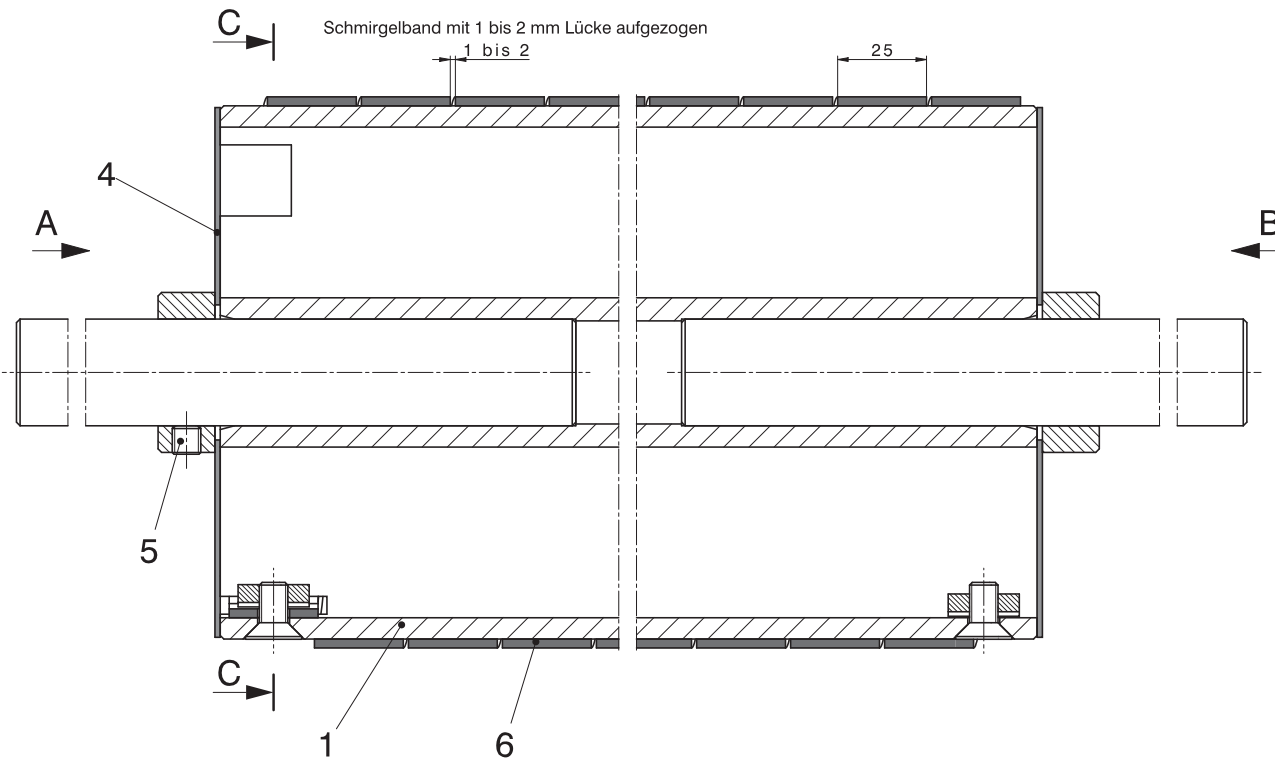
Vista B  
Asicht B  
Massstab: 1:2

3 Intagli +  
3 fori  
3 Schlitz +  
3 Senkloch

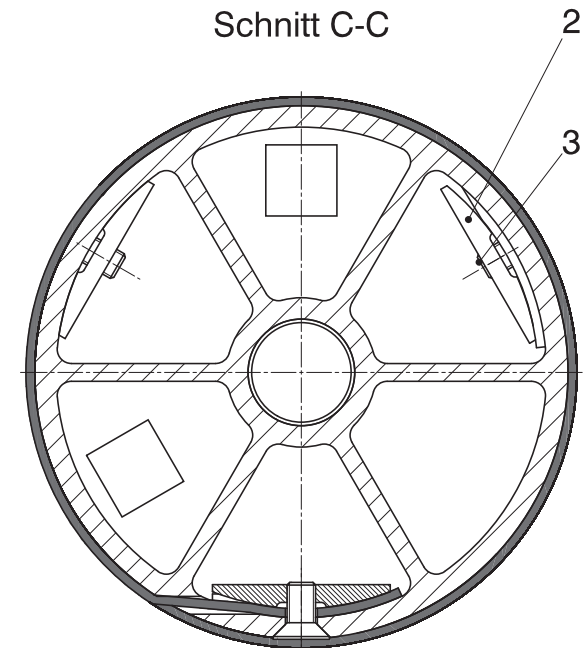


Achtung:  
dynamisches Auswuchten Gütestufe G2,5  
zulässige Restwucht je Ebene 5g  
Wuchtdrehzahl  $n=1020$  1/min

35m	20m	6	Schmirgelband Silcarbo Nr. 7	auf KA	80001461	
2	2	5	Gewindestift DIN 913-M8x8-45H	BN 24	27300808	
2	2	4	Deckscheibe DSW / ASW		60-4-618	
4	4	3	Senkschraube DIN 7991-M8x16-10.9	BN 20	27170816	
4	4	2	Bride		50-4-991	
1	-	1	Rohr	auf KA	60-2-350	
-	1	1	Rohr	auf KA	60-2-342	
Menge		Pos.	Bezeichnung	Lieferant	Bemerkung	
I		Änderungen:			Gehört zu Zeichnung -	
60°	40°	1) Nr. 835	06.08.98	RP 6)	Ersetzt durch -	
		2) Nr. 2674	27.04.07	Hb 7)	Ersatz für -	
		3) Nr. 3324	18.07.12	Ig 8)	Allgemeintoleranzen nach	
		4) Nr. 3412	21.01.13	RP 9)	ISO 2768 - mK	
		5) Nr. 3751	12.09.14	RP 10)		
<b>Schmirgelbandwalze</b>				Massstab	Gezeichnet 07.11.12 Ig	
DSW						1:1
Graf + Cie AG CH-8640 Rapperswil				Schutzvermerk: ISO 16016 beachten (Refer to ISO 16016)		
				<b>60-2-349,5</b>		



Schnitt C-C

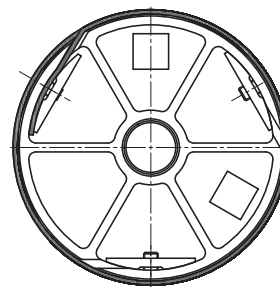
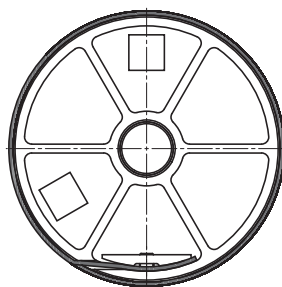


Vista A  
Ansicht A  
Massstab: 1:2

1 Intagli +  
1 fori  
1 Schlitz +  
1 Senkloch

Vista B  
Asicht B  
Massstab: 1:2

3 Intagli +  
3 fori  
3 Schlitz +  
3 Senkloch



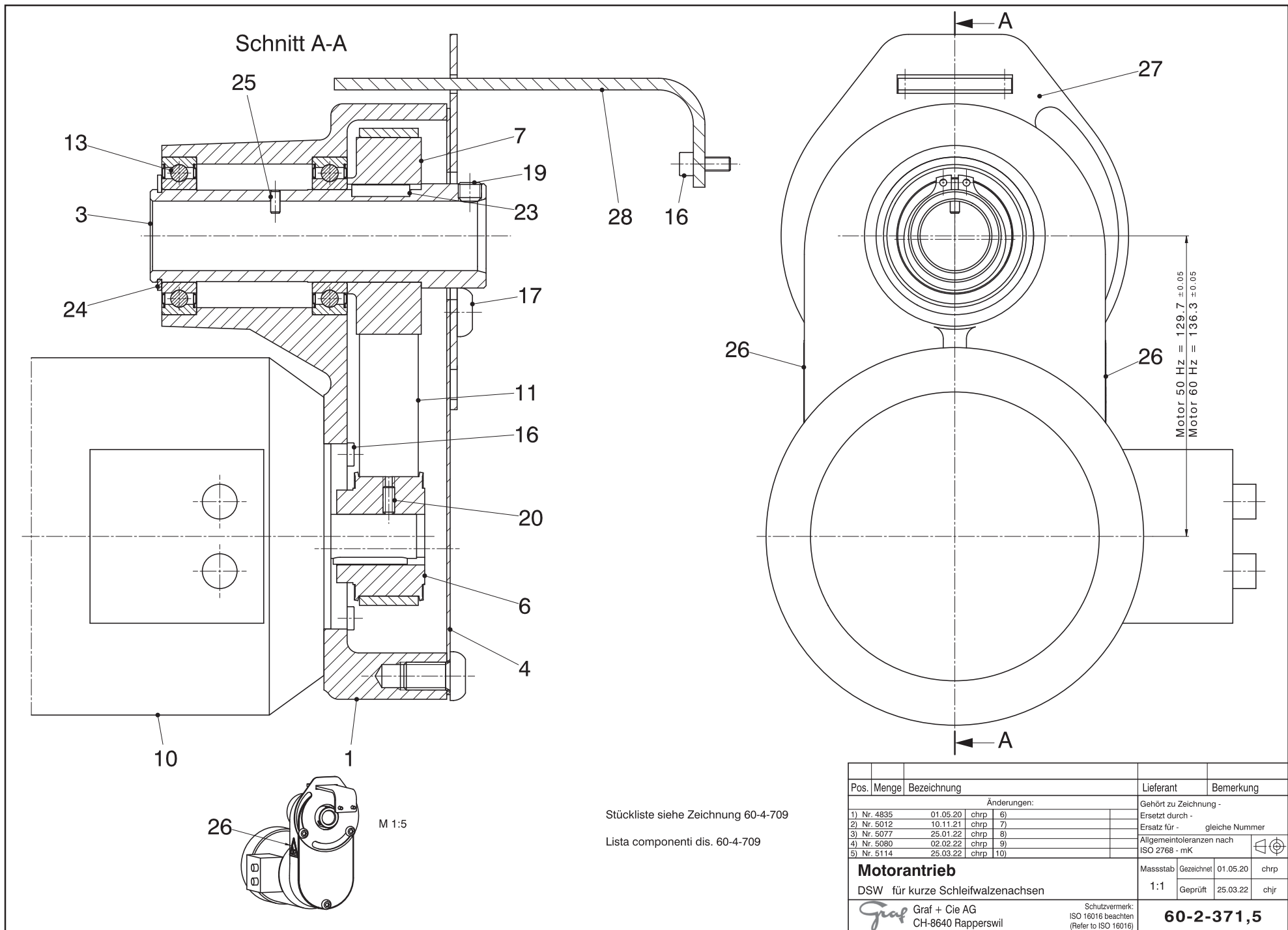
Achtung:  
dynamisches Auswuchten Gütestufe G2,5  
zulässige Restwucht je Ebene 5g  
Wuchtdrehzahl  $n=1020$  1/min

6	30m	Schmirgelband Cubitron II 3M 984F P 80+	auf KA	80001464
5	2	Gewindestift ISO 4026-M8x8-45H	BN 1424	27300808
4	2	Deckscheibe DSW / ASW		60-4-618
3	4	Senkschraube ISO 14581-M8x16-8.8	BN 4851	27170816
2	4	Bride		50-4-991
1	1	Rohr 60° Rieter C60		60-2-350II
Pos.	Menge	Bezeichnung	Lieferant	Bemerkung
Änderungen:				
1) Nr. 4353	09.08.17	yf	6)	Gehört zu Zeichnung -
2)			7)	Ersetzt durch -
3)			8)	Ersatz für -
4)			9)	Allgemeintoleranzen nach
5)			10)	ISO 2768 - mK
<b>Deckel - Egalisierung - Walze 60"</b>			Massstab	Gezeichnet 13.07.17 str
DEW			1:1	Geprüft 09.08.17 str
Graf + Cie AG CH-8640 Rapperswil			Schutzvermerk: ISO 16016 beachten (Refer to ISO 16016)	
			<b>60-2-474,1</b>	





1	1	1	1	Drehmomentstütze	27					60-4-1047	
1	1	1	1	Einstellblech	26					60-3-627	
2	2	2	2	Warnung vor Handverletzungen 3000372	25	Gr. 50mm				25910300	
1	1	1	1	Si-Ring As	24	40x1.75	471			27280040	
1	1	1	1	Fed-Keil A	23	5/5x25	6885A			2734050525	
					22						
-	1	-	1	Gew-Sti In-6kt	20	M5x12	913			27300512	
1	-	1	-	Gew-Sti In-6kt	20	M5x8	913			27300508	
2	2	2	2	Gew-Sti In-6kt	19	M10x8	913			27301008	
					18						
3	3	3	3	Linsenschraube In-6kt	17	M12x20	BN 19			27221220	
6	6	6	6	Zyl-Schr In-6kt	16	M6x16	912			27020616	
					15						
					14						
2	2	2	2	Rillenkugellager	13	6008-2RS		SKF		2660082RS	
					12						
1	1	1	1	Zahnriemen	11	187 L 100		UIKER		2506187L100	
1	1	1	1	Drehstrom-Motor	10	auf KA				29.....C	
					9						
					8						
1	1	1	1	Zahnriemenpulley z=28	7					60-4-620	
1	-	1	-	Zahnriemenpulley z=14	6					60-4-434	
-	1	-	1	Zahnriemenpulley z=17	6					60-4-365	
					5						
1	1	1	1	Deckel	4					60-3-359	
1	1	-	-	Hohlwelle ø28.57	3					60-3-367	
-	-	1	1	Hohlwelle ø30	3					60-3-356	
					2						
1	-	1	-	Gehaeuse	1					60-2-347	
-	1	-	1	Gehaeuse	1					60-2-343	
Stueck				Gegenstand	Pos.	Werkstoff	VSM	Modell	Bemerkung		
III	II	I		Aenderungen:				Gehoert zu Zeichnung 60-2-346			
60 Hz / ø28.57	50 Hz / ø28.57	60 Hz / ø30	50 Hz / ø30	1) Nr. 894	04.11.98	RP	6) Nr. 5114	25.03.22	chrp	Ersetzt durch	
				2) Nr. 971	10.02.99	RP	7)		Ersatz fuer		
				3) Nr.2405	27.10.05	RP	8)				
				4) Nr.4729	14.10.19	chrp	9)				
				5) Nr.5012	19.08.21	chrp	10)				
Motorantrieb						Massstab	Gezeichnet	30.03.98	RP		
DSW						%	Geprueft	25.03.22	chjr		
Graf + Cie AG,Rapperswil						60-4-621,6					



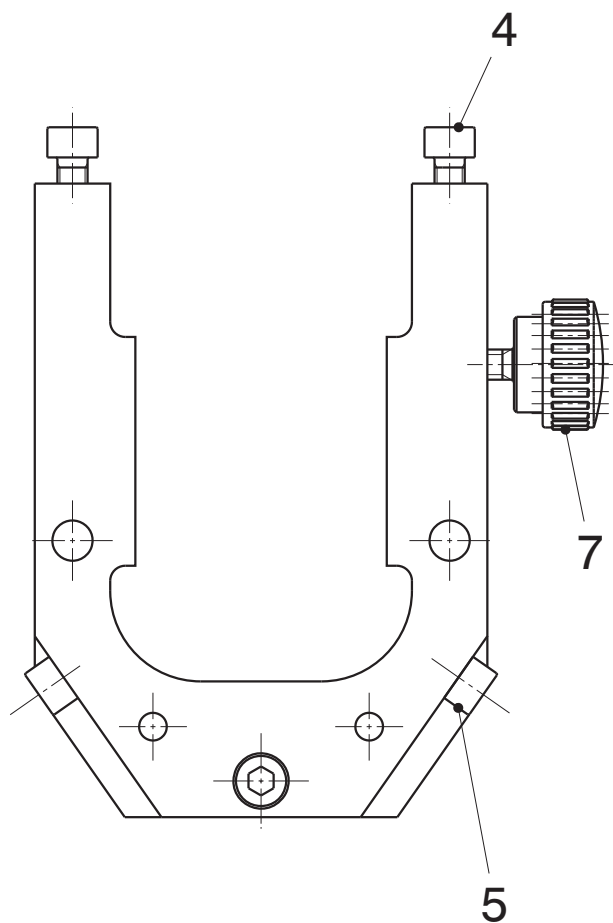
1	1	Drehmomentstütze	28				60-4-1047
1	1	Einstellblech	27				60-3-627
2	2	Warnung vor Handverletzungen 3000372	26	Gr. 50mm			25910300
1	1	Spann-Sti Shwe	25	4x10	BN 879		27270410
1	1	Si-Ring As	24	40x1.75	471		27280040
1	1	Fed-Keil A	23	5/5x25	6885A		2734050525
			22				
-	1	Gew-Sti In-6kt	20	M5x12	913		27300512
1	-	Gew-Sti In-6kt	20	M5x8	913		27300508
2	2	Gew-Sti In-6kt	19	M10x8	913		27301008
			18				
3	3	Linsenschraube In-6kt	17	M12x20	BN 19		27221220
6	6	Zyl-Schr In-6kt	16	M6x16	912		27020616
			15				
			14				
2	2	Rillenkugellager	13	6008-2RS		SKF	2660082RS
			12				
1	1	Zahnriemen	11	187 L 100		UIKER	2506187L100
1	1	Drehstrom-Motor	10	auf KA			29.....C
			9				
			8				
1	1	Zahnriemenpulley z=28	7				60-4-620
1	-	Zahnriemenpulley z=14	6				60-4-434
-	1	Zahnriemenpulley z=17	6				60-4-365
			5				
1	1	Deckel	4				60-3-359
1	1	Hohlwelle	3				60-3-387
			2				
1	-	Gehaeuse	1				60-2-347
-	1	Gehaeuse	1				60-2-343
Stueck		Gegenstand	Pos.	Werkstoff	VSM	Modell	Bemerkung
I		Aenderungen:			Gehoert zu Zeichnung 60-2-371		
60 Hz / ø30	50 Hz / ø30	1) Nr. 2405 27.10.05		RP	6)	Ersetzt durch	
		2) Nr. 4835 01.05.20		chrp	7)	Ersatz fuer	
		3) Nr. 5012 10.11.21		chrp	8)	Blatt 1/1	
		4) Nr. 5114 25.03.22		chrp	9)		
		5)			10)		
Motorantrieb				Masstab	Gezeichnet	15.11.99	RP
DSW für kurze Schleifwalzenachsen				%	Geprueft	25.03.22	chjr
Graf + Cie AG, Rapperswil				60-4-709,4			



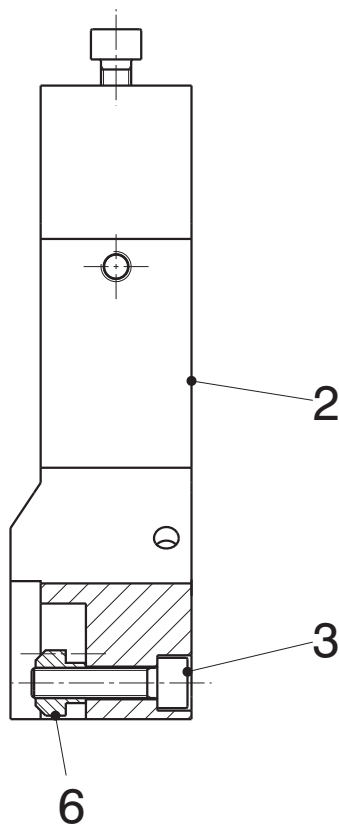




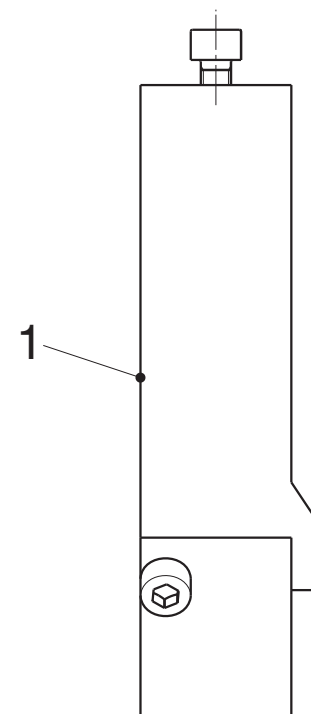
28	4	Scheibe DIN 125 A-8-140 HV	BN 715	27100008
27	2	Flügelschraube DIN 316-M5x50-St	BN 276	981805050
26	2	Rändelschraube DIN 464-M6x20	BN 1452	274410620
25	2	Flügelmutter DIN 315-M5-St	BN 208	27080005
24	2	Zylinderschraube BN 20697-M4x6-10.9	BN 20697	270510406
23	8	Linsenschraube eco-fix-M5x12-4.8	BN 5128	27222512
22				
21	8	Zylinderschraube DIN 912-M6x16-8.8	BN 3	27020616
20	4	Sechskantschraube DIN 931-M8x35-8.8	BN 57	27010835
19	2	Zylinderschraube DIN 912-M12x35-8.8	BN 3	27021235
18	1	Sechskant-Stiftschlüssel SW 10	BRC	25160010
17	2	Glissa-Lager 20E7/25r7x30	ALADIN	2691202530
16	1	Abdeckung rechts	auf KA	
15	1	Abdeckung links	auf KA	
14	1	Druckplatte rechts	auf KA	
13	1	Druckplatte links	auf KA	
12	1	Führung links		60-4-821
11	1	Führung rechts		60-4-819
10	1	Anpress-Schuh links komplett		60-4-992
9	1	Anpress-Schuh rechts komplett		60-4-993
8	2	Haltewinkel		60-4-836
7	2	Gewichtstange		60-4-571
6	2	Gewicht		60-4-835
5	1	Druckhebel links		60-3-554
4	1	Druckhebel rechts		60-3-555
3				
2	1	Lager links		60-2-385
1	1	Lager rechts		60-2-386
Pos.	Menge	Bezeichnung	Lieferant	Bemerkung
Änderungen:			Gehört zu Zeichnung - 60-2-390	
1) Nr. 2040	08.03.04	RP	6) Nr. 4221	21.10.16 RP
2) Nr. 2668	04.04.07	Hb	7)	
3) Nr. 2850	02.12.08	Hb	8)	
4) Nr. 3432	25.01.13	RP	9)	
5) Nr. 4009	09.09.15	RP	10)	
Halterung links und rechts mit Deckelanpressung DSW Rieter 60"			Ersetzt durch -	
			Ersatz für - gleiche Nummer	
			Allgemeintoleranzen nach ISO 2768 - mK	
			Massstab	Gezeichnet
			1:1	Geprüft
			09.09.15	RP
			07.11.16	av
Graf + Cie AG CH-8640 Rapperswil			Schutzvermerk: ISO 16016 beachten (Refer to ISO 16016)	
			60-4-817,6	



links



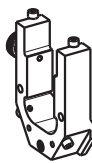
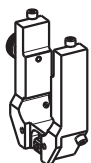
rechts



links


rechts

M 1:5



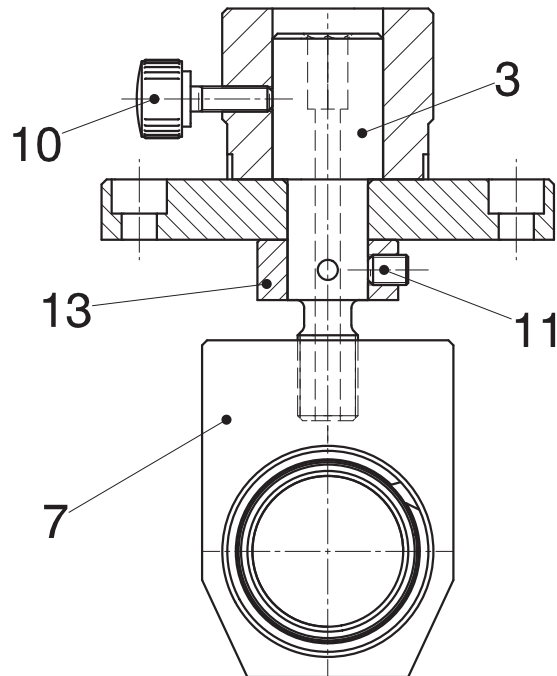
Stückliste siehe Zeichnung 60-4-798  
LISTA COMPONENTI DIS. 60-4-798

Artikel-Nr. 00604798  
ARTICOLO NR. 00604798

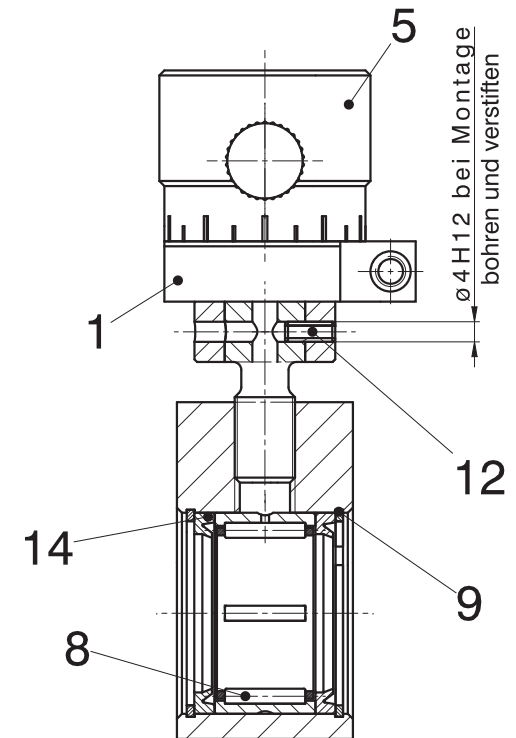
Pos.	Menge	Bezeichnung					Lieferant	Bemerkung		
Änderungen:							Gehört zu Zeichnung -			
1)	Nr. 1886	11.06.03	RP	6)			Ersetzt durch -			
2)	Nr. 4300	27.03.17	RP	7)			Ersatz für - gleiche Nummer			
3)	Nr. 4575	11.10.18	udm	8)			Allgemeintoleranzen nach			
4)	Nr. 4790	13.02.20	chrp	9)			ISO 2768 - mK			
5)				10)						
<b>Halterung links und rechts</b>							Massstab	Gezeichnet	13.02.20	chrp
DSW Trützschler TC10, TC11, TC15 und TC19i							1:1	Geprüft	14.02.20	chcd
 Graf + Cie AG CH-8640 Rapperswil							Schutzvermerk: ISO 16016 beachten (Refer to ISO 16016)		<b>60-3-436,4</b>	


7	2	Rändelschraube B.193/25p M6x25	ELESA	81E112562
6	2	Mutter für T-Nuten DIN 508-M6-10	BN 46110	27520006
5	4	Zylinderschraube DIN 912-M6x10-8.8	BN 3	27020610
4	4	Zylinderschraube DIN 912-M6x20-8.8	BN 3	27020620
3	2	Zylinderschraube DIN 912-M6x25-8.8	BN 3	27020625
2	1	Schmigelwalzenlager links		903-00.910.004
1	1	Schmigelwalzenlager rechts		903-00.910.003
Pos.	Menge	Bezeichnung	Lieferant	Bemerkung
Änderungen:			Gehört zu Zeichnung - 60-3-436	
1) Nr. 1886	11.06.03	RP 6)	Ersetzt durch -	
2) Nr. 4300	28.03.17	RP 7)	Ersatz für - gleiche Nummer	
3) Nr. 4790	13.02.20	chrp 8)	Blatt 1/1	
4)		9)		
5)		10)		
<b>Halterung links und rechts</b>			Massstab	Gezeichnet 13.02.20 chrp
DSW Trützscher TC10, TC11, TC15 und TC19i				Geprüft 14.02.20 chcd
 <b>Graf + Cie AG</b> CH-8640 Rapperswil			Schutzvermerk: ISO 16016 beachten (Refer to ISO 16016)	
			<b>60-4-798,3</b>	

Ausführung links

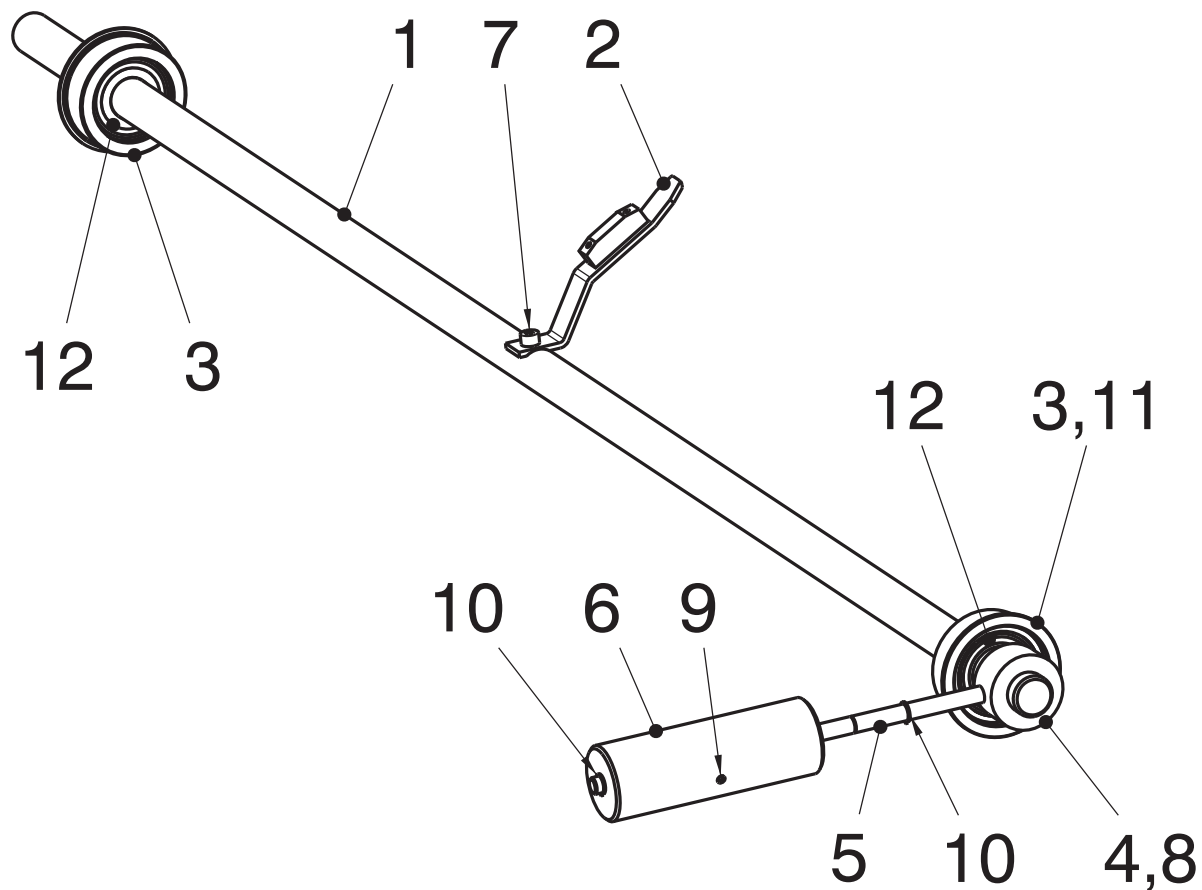


Ausführung rechts



Pos.	Menge	Bezeichnung				Lieferant		Bemerkung	
Änderungen:						Gehört zu Zeichnung 60-4-616			
1)	Nr. 804	20.05.98	RP	6)		Ersetzt durch -			
2)	Nr. 842	31.08.98	RP	7)		Ersatz für -			
3)	Nr. 4575	22.10.18	udm	8)		Allgemeintoleranzen nach ISO 2768 - mK			
4)				9)					
5)				10)					
<b>Lagerung mit Zustellschlitten</b>						Massstab	Gezeichnet	22.10.18	udm
DSW Trützschler, Marzoli und Bonino						1:1	Geprüft	30.10.18	jr
 Graf + Cie AG CH-8640 Rapperswil						Schutzvermerk: ISO 16016 beachten (Refer to ISO 16016)		<b>60-3-354,3</b>	

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			17					
	1	6kt-Stiftschlüssel	16	sw 5			25160005	
	1	6kt-Stiftschlüssel	15	sw 8			25160008	
	4	Dichtring	14	G30x40x4			81A209960	
	2	Stellring	13	Ø16xM6/28	705A		27360016I	
	2	Spann-Sti Shwe	12	4x10	BN879		27270410	
	2	Gew-Sti In-6kt	11	M6x8	913		27300608	
	2	Rändelschraube B.193/15p	10	M5x16		ELESA	274410516	
	4	Sprengring	9	BR 40		INA	81A500040	
	2	Nadellager	8	NK 30/20		INA	81C811229	
	2	Führung	7				60-4-617	
	1	Platte	6				60-4-568	
	2	Drehknopf mit Skala	5				60-4-479	
			4					
	2	Spindel	3				60-4-377	
			2					
	1	Getriebe-Halter	1				60-3-355	
Stück		Gegenstand		Pos.	Werkstoff	VSM	Modell	Bemerkung
II	I	Änderungen:				Gehört zu Zeichnung 60-3-354		
		1)Nr. 806 27.05.98	RP	6)		Ersetzt durch		
		2)Nr. 842 31.08.98	RP	7)		Ersatz für		
		3)		8)		Blatt 1/1		
		4)		9)				
		5)		10)				
Lagerung mit Zustellschlitten					Masstab	Gezeichnet	26.02.98	RP
DSW für Achsdurchmesser Ø30					%	Geprüft		
Graf + Cie AG, Rapperswil					60-4-616, 2			



12	2	Rillenkugellager 6306-2Z	SKF	81C811655
11	1	Sicherungsring DIN 471-30x1.5	BN 818	27280030
10	2	Sicherungsring DIN 471-12x1	BN 818	27280012
9	1	Gewindestift ISO 4026-M8x20-45H	BN 1424	27300820
8	1	Gewindestift ISO 4026-M10x12-45H	BN 1424	27301012
7	1	Zylinderschraube DIN 912-M8x16-8.8	BN 3	27020816
6	1	Gewicht 2,8 kg		60-4-946
5	1	Hebel		60-4-945
4	1	Hebelführung		60-4-944
3	2	Lagerhülse		60-4-943
2	1	Belastungshebel Rieter C70		60-4-939
1	1	Hauptwelle		60-3-518
Pos.	Menge	Bezeichnung	Lieferant	Bemerkung

#### Änderungen:

1)	Nr. 3075	26.11.10	Hb	6)
2)	Produktion Rieter	08.11.13	RP	7)
3)	Nr. 4234	09.11.16	RP	8)
4)	Nr. 4737	31.10.19	chrp	9)
5)				10)

Gehört zu Zeichnung -

Ersetzt durch -

Ersatz für - gleiche Nummer

Allgemeintoleranzen nach  
ISO 2768 - mK



## Kompensations-Vorrichtung C70

DSW Rieter C70

Massstab	Gezeichnet	08.11.13	RP
1:1	Geprüft	31.10.19	chcd



Graf + Cie AG  
CH-8640 Rapperswil

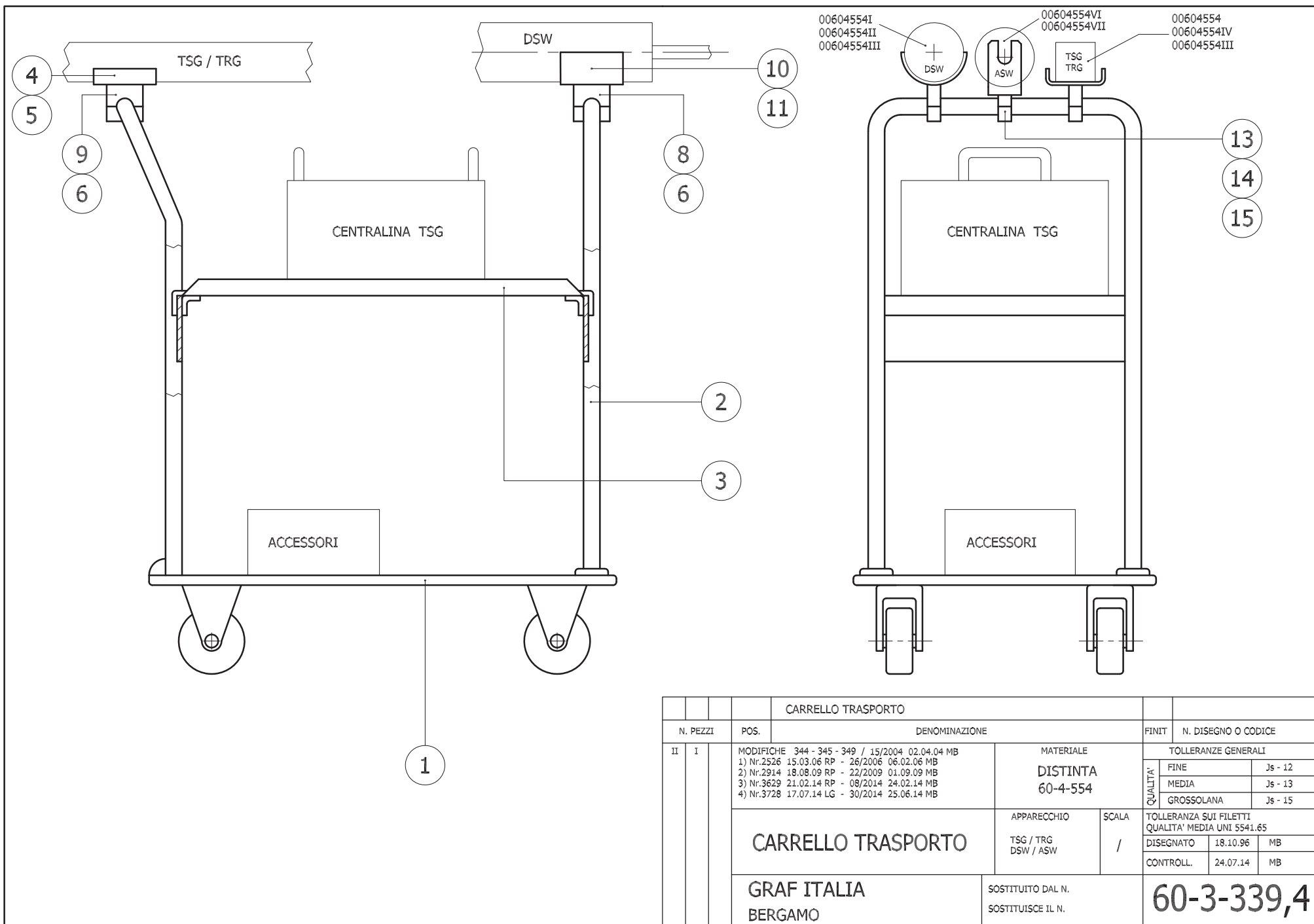
Schutzvermerk:  
ISO 16016 beachten  
(Refer to ISO 16016)

**60-4-937,4**









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1	-		-	-	-	-	-	15	SUPPORTO COMPLETO Ø26			60 - 4 - 791
1	-		-	-	-	-	-	14	SUPPORTO COMPLETO Ø25			60 - 4 - 789
-	1		-	-	-	-	-	13	SUPPORTO SPAZZOLA			60 - 3 - 492
								12				
-	-		-	-	2	-	-	11	SUPPORTO PER MOLA CROSROL			3962 - 001
-	-		-	2	-	2	-	10	SUPPORTO PER MOLA			3897 - 001
-	-		1	2	1	1	1	9	SUPPORTO Ø26			3903 - 801
-	-		1	2	1	1	1	8	SUPPORTO Ø25			3902 - 801
								7				
-	-		4	8	4	4	4	6	VITE TSEI M 6x12			

## Spare and wear parts DSW / DEW

Pos.	Qty	Item description	Item No.	Qty per machine
<b>Schleifwalze siehe Zeichnung 60-2-349 / 60-2-474</b>				
<b>Grinding roller see drawing 60-2-349 / 60-2-474</b>				
6	65m	Schleifband Silcarbo Nr.7 Emery fillet Silcarbo No.7	80001461	1
6	55m	Schleifband Silcarbo Nr.7 Emery fillet Silcarbo No.7	80001462	1
6	56m	Schleifband Cubitron 3M Emery fillet Cubitron 3M	80001463	1
6	65m	Schleifband Cubitron 3M Emery fillet Cubitron 3M	80001464	1
<b>Halterungen siehe Zeichnung 60-1-172 / 60-3-354</b>				
<b>Supports see drawing 60-1-172 / 60-3-354</b>				
6 / 7	1	Halterung links und rechts Rieter 60" Support left and right Rieter 60"	00604817	1
6 / 7	1	Halterung links und rechts Trützscher TC10, TC11, TC15, TC19 und TC19i Support left and right Trützscher TC10, TC11, TC15, TC19 und TC19i	00604798	1
6	1	Prismenadapter links Trützscher TC10, TC11, TC15, TC19 und TC19i Support left Trützscher TC10, TC11, TC15, TC19 und TC19i	990300910007	1
7	1	Prismenadapter rechts Trützscher TC10, TC11, TC15, TC19 und TC19i Support right Trützscher TC10, TC11, TC15, TC19 und TC19i	990300910006	1
6 / 7	1	Halterung links und rechts Saurer JSC228 Gussdeckel Support left and right Saurer JSC228 cast iron flat bars	00602484	1
6 / 7	1	Halterung links und rechts Saurer JSC228 Aludeckel, JSC230, JSC326, JSC328 Support left and right Saurer JSC 228 alu flats, JSC 230, JSC236 and JSC 328	109.739	1
6 / 7	1	Halterung links und rechts Qingdao JWF1211 Support left and right Qingdao JWF1211	00602485	1
6 / 7	1	Halterung links und rechts Qingdao JWF1211A und JWF1213 Support left and right Qingdao JWF1211A und JWF1213	00602488	1
6 / 7	1	Halterung links und rechts Trützscher DK715, DK740, Zhengzhou FA224, FA225, FA225B Gussdeckel und FA221A/B/C/D Support left and right Trützscher DK715, DK740, Zhengzhou FA224, FA225, FA225B cast iron flat bars and FA221A/B/C/D	00604602	1
6 / 7	1	Halterung links und rechts Trützscher DK760 Gussdeckel Support left and right Trützscher DK760 cast iron flat bars	00604603	1
6 / 7	1	Halterung links und rechts Trützscher DK760 Aludeckel bis DK803 1. Serie Zhengzhou FA221D Aludeckel, FA221E Aludeckel, FA224D, FA225 Aludeckel, FA225B Aludeckel, JWF1202 Aludeckel Support left and right Trützscher DK760 alu flat bars up to DK803 1. serie Zhengzhou FA221D alu flat bars, FA221E alu flat bars, FA224D, FA225 alu flat bars, FA225B alu flat bars, JWF1202 alu flat bars	00604594	1
6 / 7	1	Halterung links und rechts für Trützscher ab DK803 2. Serie bis TC08 und Zhengzhou ab JWF1204 Support left and right Trützscher from DK803 2. Serie up to TC08 and Zhengzhou from JWF1204	00602489	1
6 / 7	1	V-Lager Rieter und Lakshmi 40" Karden	00604631	1

		V-bearing Rieter and Lakshmi 40" cards		
-	1	Satz für Rieter C4 bis C51 und Lakshmi Karden zu V-Lager Set for Rieter C4 up to C51 and Lakshmi cards to V-bearing	00603297	1
6 / 7	1	Halterung links und rechts mit Zustellung Crosrol MK5 Support left and right with Crosrol MK5 adjustment	00604590	1
6 / 7	1	Halterung links und rechts Crosrol MK6, MK7 und MK8 (MK7 mit MK5 Gussdeckel) Support left and right Crosrol MK6, MK7 and MK8 (MK7 with MK5 cast iron flat bars)	00604903	1
6 / 7	1	Halterung links und rechts Marzoli C501 und C601 Support left and right Marzoli C501 and C601	00604702	1
6 / 7	1	Halterung links und rechts Marzoli C701 Support left and right Marzoli C701	4149801	1
6 / 7	1	Halterung links und rechts mit Deckelanpressung 1°22' Anbausatz Qingdao FA201, FA201B, FA232A Support left and right with press-on unit 1°22' Mounting kit Qingdao FA201, FA 201B and FA232A	00604572 00604687	1
6 / 7	1	Halterung links und rechts mit Deckelanpressung 0°50'□ Anbausatz Qingdao FA203A, FA203C = FA1203, FA231A, JWF1203 Support left and right with press-on unit 0°50' Mounting kit Qingdao FA201, FA 201B and FA232A	00604884 00604883	1
6 / 7	1	Lagerung links und rechts mit Zustellschlitten zu diversen Halterungen Bearing left and right with adjustment slide for various supports	00604616	1
8	1	Nadellager NK 30/20 Needle bearing NK 30/20	81C811229	2
14	1	Dichtring G30x40x4 Sealing ring G30x40x4	81A209960	4

**Diverses siehe Zeichnung 60-1-172 / 60-2-390 / 60-4-937**

**Various see drawing 60-1-172 / 60-2-390 / 60-4-937**

3	1	Traversiergetriebe Traverse gear	00602345	1
15	1	Transportwagen Transport truck	00604554I	1
14	1	Kompensationsvorrichtung Rieter C70 (C60) Compensation device Rieter C70 (C60)	00604937	1
2	1	Belastungshebel Rieter C70 (in 00604937 enthalten) Load lever Rieter C70 (included in 00604937)	00604939	1
-	1	Belastungshebel Rieter C60 Load lever Rieter C60	00604938	1
-	1	Satz Antriebs-Teile Rieter C60 zu Kompenstationvorrichtung Set of drive parts Rieter C60 to compensation device	00604912	1
14	1	Kompensationsvorrichtung Rieter C80 Compensation device Rieter C80	006041046	1
-	1	Tranportriemen-Bremse Rieter C80 Transport belt brake Rieter C80	00600002	1
-	1	Kompensationsvorrichtung Rieter C4 Compensation device Rieter C4	00603403	1
-	1	Anpress-Schuh Rieter C4 Press-on shoe Rieter C4	00604714	2
10	1	Anpress-Schuh links komplett zu Rieter 60" Press-on shoe left complete for Rieter 60"	00604992	1



9	1	Anpress-Schuh rechts komplett zu Rieter 60" Press-on shoe right complete for Rieter 60"	00604993	1
-	1	Schaumstoffplatte mit Blech Foam plate with sheet metal	006041000	2
13	1	Druckplatte links Rieter C60 und C70 Pressure plate left Rieter C60 und C70	00604822	1
14	1	Druckplatte rechts Rieter C60 und C70 Pressure plate right Rieter C60 und C70	00604823	1
13	1	Druckplatte links Rieter C80 Pressure plate left Rieter C80	00604982	1
14	1	Druckplatte rechts für Rieter C80 Pressure plate right Rieter C80	00604983	1
-	1	Führung links Polidur zu Halterung von Zhengzhou JWF1204, JWF1206, JWF1212, JWF1216 40" und 48" Guide left polidur for support of Zhengzhou JWF1204, JWF1206, JWF1212, JWF1216 40" and 48"	00603621	1
-	1	Führung rechts Polidur zu Halterung von Zhengzhou JWF1204, JWF1206, JWF1212, JWF1216 40" und 48" Guide right polidur for support of Zhengzhou JWF1204, JWF1206, JWF1212, JWF1216 40" and 48"	00603622	1
9 / 10	1	Anpress-Schuh Qingdao JWF1213 und Saurer JSC228 Gussdeckel Press-on shoe Qingdao JWF1213 and Saurer JSC228 cast iron flat bars	006041037	2
9 / 10	1	Anpress-Schuh Qingdao JWF1211 Press-on shoe Qingdao JWF1211	006041051	2
13	1	Druckplatte links Saurer JSC228 Gussdeckel Pressure plate left Saurer JSC228 cast iron flat bars	006041038	1
14	1	Druckplatte rechts Saurer JSC228 Gussdeckel Pressure plate right Saurer JSC228 cast iron flat bars	006041039	1
13	1	Druckplatte links Qingdao JWF1211 und JWF1213 Pressure plate left Qingdao JWF1211 and JWF1213	006041052	1
14	1	Druckplatte rechts Qingdao JWF1211 und JWF1213 Pressure plate right Qingdao JWF1211 and JWF1213	006041053	1
-	1	Anpress-Schuh, Druckhebel links und rechts inkl. Schrauben für Rieter 60" Press-on shoe, pressure lever left and right incl. Screws for Rieter 60"	006041045	1
9 / 10	1	Anpress-Schuh Trützschler DK740, Qingdao FA203 und FA231 Press-on shoe Trützschler DK740, Qingdao FA203 und FA231	00604563	2
9 / 10	1	Anpress-Schuh Trützschler DK760 Gussdeckel Press-on shoe Trützschler DK760 cast iron flat bars	00604583	2
9 / 10	1	Anpress-Schuh Marzoli C501, C601 und C701 Press-on shoe Marzoli C501, C601 und C701	00604706	2
13	1	Druckplatte links Marzoli C501 und C601 Pressure plate left Marzoli C501 und C601	00604708	1
14	1	Druckplatte rechts Marzoli C501 und C601 Pressure plate right Marzoli C501 und C601	00604707	1
13	1	Druckplatte links Marzoli C701 Pressure plate left Marzoli C701	4148001	1
14	1	Druckplatte rechts Marzoli C701 Pressure plate right Marzoli C701	4147001	1
13	1	Druckplatte links Qingdao FA203 und FA231 Pressure plate left Qingdao FA203 und FA231	00604885	1
14	1	Druckplatte rechts Qingdao FA203 und FA231 Pressure plate right Qingdao FA203 und FA231	00604886	1

9 / 10	1	Anpress-Schuh JSC228, JSC230, JSC326 und JSC328 Press-on shoe JSC228, JSC230, JSC326 und JSC328	109.730	2
13	1	Druckplatte links JSC228, JSC230, JSC326 und JSC328 Pressure plate left JSC228, JSC230, JSC326 and JSC328	109.732	1
14	1	Druckplatte rechts JSC228, JSC230, JSC326 und JSC328 Pressure plate right JSC228, JSC230, JSC326 and JSC328	109.731	1
-	1	Führung links Polidur zu Halterung für Trützscher DK760 mit Aludeckel bis TC08 Guide left polidur for support of Trützscher DK760 with alu flat bars up to TC08	3884001	1
-	1	Führung rechts Polidur zu Halterung für Trützscher DK760 mit Aludeckel bis TC08 Guide right polidur for support of Trützscher DK760 with alu flat bars up to TC08	3885001	1

**Motorantrieb siehe Zeichnung 60-2-346 / 60-2-371**

**Drive see drawing 60-2-346 / 60-2-371**

10	1	Motorantrieb 50 Hz / ø30 Motor drive 50 Hz / ø30	00604632	1
10	1	Motorantrieb 60 Hz / ø30 Motor drive 60 Hz / ø30	00604632I	1
10	1	Motorantrieb 50 Hz / ø28.57 Motor drive 50 Hz / ø28.57	00604632II	1
10	1	Motorantrieb 60 Hz / ø28.57 Motor drive 60 Hz / ø28.57	00604632III	1
10	1	Motorantrieb 50 Hz / ø30 Marzoli Aludeckel, Qingdao JWF1213 und Saurer JSC326 Motor drive 50 Hz / ø30 Marzoli alu flat bars, Qingdao JWF1213 and Saurer JSC326	00604632IV	1
10	1	Motorantrieb 60 Hz / ø30 Marzoli Aludeckel, Qingdao JWF1213 und Saurer JSC326 Motor drive 60 Hz / ø30 Marzoli alu flat bars, Qingdao JWF1213 and Saurer JSC326	00604632V	1
10	1	Drehstrom-Motor 3-Phasen, 440 Volt, 50 Hz Motor drive 3-Phase, 440 Volt, 50 Hz	29011440050C	1
10	1	Drehstrom-Motor 3-Phasen, 440 Volt, 60 Hz Motor drive 3-Phase, 440 Volt, 60 Hz	896030057	1
10	1	Drehstrom-Motor 3-Phasen, 560 Volt, 50 Hz Motor drive 3-Phase, 560 Volt, 50 Hz	29011456050C	1
10	1	Drehstrom-Motor 1-Phasen, 230 Volt, 50 Hz Motor drive 1-Phase, 230 Volt, 50 Hz	29011423050C	1
10	1	Drehstrom-Motor 1-Phasen, 230 Volt, 60 Hz Motor drive 1-Phase, 230 Volt, 60 Hz	29011423060C	1
27 / 28	1	Drehmomentstütze Torque support	006041047	1
6	1	Zahnriemenscheibe z=17 / 50 Hz Toothed belt pulley z=17 / 50 Hz	00604365	1
6	1	Zahnriemenscheibe z=14 / 60 Hz Toothed belt pulley z=14 / 60 Hz	00604434	1
11	1	Zahnriemen zu Antrieb 187 L 100 Toothed belt to drive 187 L 100	2506187L100	1
-	1	Runder Kardenanschlusstecker Circular shaped plug for card connection	24500050	1
-	1	Schuko-Stecker für Kardenanschluss Schuko plug for card connection	24500092	1

1		AS-BUILT	BAT			
0		ISSUED FOR CONSTRUCTION	BAT			
REV	DATE		DESIGNED	VERIFIED	APPROVED	

CONTRACT

DIAGRAM  
GI006A22

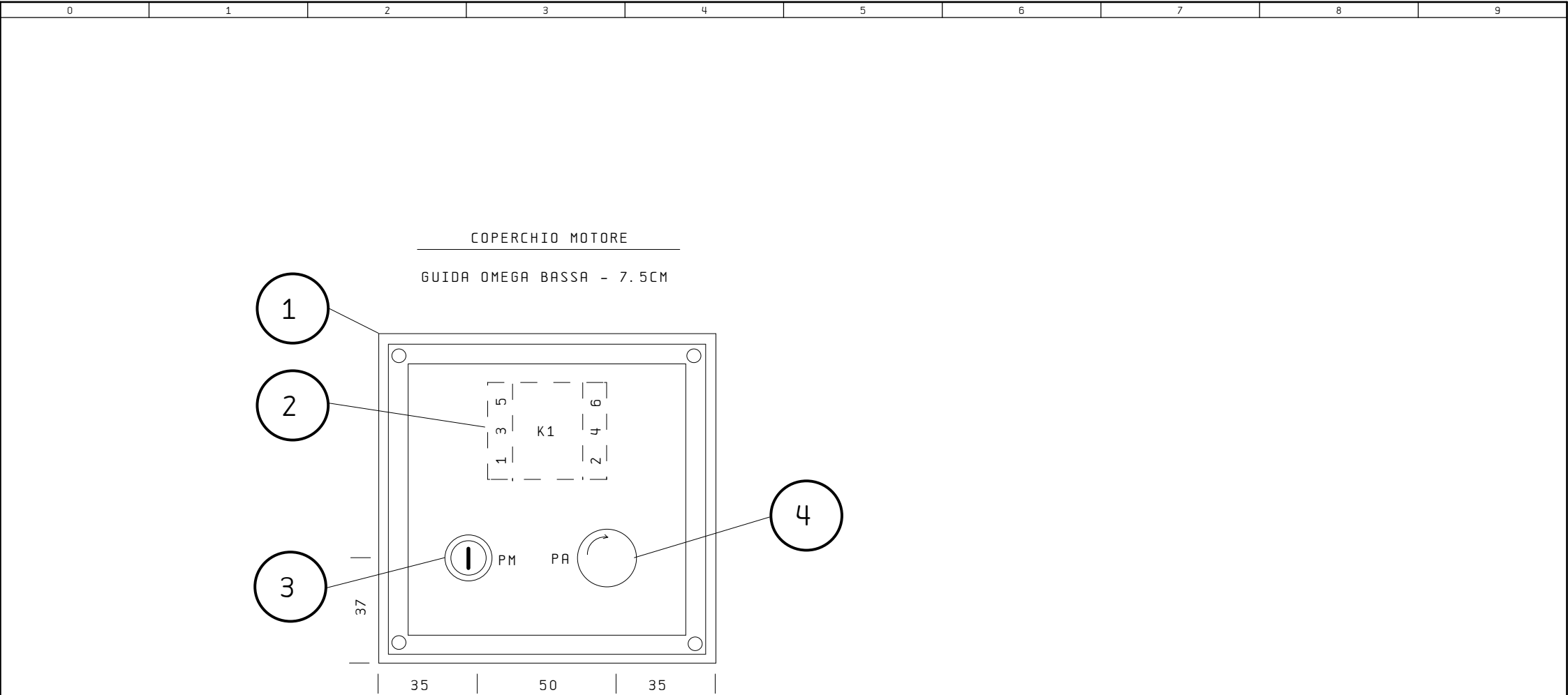
PROJED

REGULATION

DESCRIPTION	WIRING DIAGRAM DSW-DEW	CUSTOMER	GRAF ITALIA Via Zanica 47/49 24126 - BERGAMO
DESTINATION		DESIGNER	
		BUILDER	Elettromeccanica Frigeni Walter & C snc Via Petrarca 19 24052 Azzano San Paolo - BERGAMO

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